

APPENDIX G

LABORATORY REPORTS





Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 18, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Former Cashmere Mill Site, 0779.02.0403
ARI Job No.: WK02

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted water sample and a trip blank on April 2, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for VOCs, SVOCs, SIM PAHs, NWTPH-HCID, NWTPH-Dx, NWTPH-Dx, and Metals, as requested. 1,2-Dibromoethane aliquots were subcontracted to ALS Environmental in Kelso, WA. All subcontracted results have been included in this report.

The VOC continuing calibration fell outside the 20% control limit low for Methyl tert-Butyl Ether. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

The SVOC continuing calibration fell outside the 20% control limit low for 2,2'-Oxybis(1-Chloropropane) and was out high for 4-Nitrophenol. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

The SVOC surrogate percent recovery of d14-p-Terphenyl fell outside the control limits low for sample **B1-032813**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.



Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WK02

Enclosures

Cheroune Orelro

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W402	Turn-around Requested: Normal turn-around time.	Page: 1 of 1
ARI Client Company: Mail Foster & Alangl. Inc. (MFA)	Phone: 503-201-2518	Date: 03/28/13
Client Contact: Tony Silva; tsilva@mailfstr.com		Ice Present? yes
Client Project Name: Former Cashmere Mill site		No. of Coolers: 2
Client Project #: 0779.02.04/03	Samplers: Tony Silva	Cooler Temps: 4.9, 5.4

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested										Notes/Comments
					NWTPH-HCID	NWTPH-DX Silica Gel cleanup	NWTPH-GX BET X 3021	EDB, EDX, MTBE U.S. EPA 8260	Total metals Arsenic, Chlorine, Copper, Lead	Low level PAHs by 8270 SIM	SVOCs by 8270 All But PAH List				
B1-032813	03/28/13	4:40	Water	26	X	X	X	X	X	X	X				

Comments/Special Instructions Provide PDF Lab report. Provide EQUIS 4 file EDD. Email data to Tony Silva and Erik Naylor enaylor@mailfstr.com	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Tony Silva	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Mail Foster & Alangl Inc.	Company: ARI	Company:	Company:
	Date & Time: 04/01/13 12:00	Date & Time: 4/2/13 10:30	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: Maul Foster & Alang
 COC No(s): _____ (NA)
 Assigned ARI Job No: WK02

Project Name: Former Cashmere Mill Site
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
 Tracking No: 1Z 87V5210390299221 NA
1Z 87V 521 03 9075 3216

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 4.9 5.4
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952
 Cooler Accepted by: JM Date: 4/2/13 Time: 1030

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI..... NA 2/14/13
 Was Sample Split by ARI : YES Date/Time: _____ Equipment: _____ Split by: _____

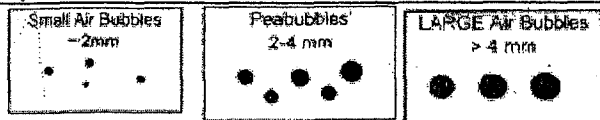
Samples Logged by: JM Date: 4/2/13 Time: 1301

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
 Peabubbles → "pb"
 Large → "lg"
 Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WK02
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Former Cashmere Mill Site

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. B1-032813	WK02A	13-6984	Water	03/28/13 09:40	04/02/13 10:30
2. Trip Blank	WK02B	13-6985	Water	03/28/13	04/02/13 10:30
3. ALS-Trip Blank	WK02C	13-6986	Water	03/28/13	04/02/13 10:30



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



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- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: B1-032813

Page 1 of 1

SAMPLE

Lab Sample ID: WK02A


QC Report No: WK02-Maul Foster & Alongi, Inc

LIMS ID: 13-6984

Project: Former Cashmere Mill Site

Matrix: Water

0779.02.01/03

Data Release Authorized: 

Date Sampled: 03/28/13

Reported: 04/11/13

Date Received: 04/02/13

Instrument/Analyst: NT3/PAB

Sample Amount: 10.0 mL

Date Analyzed: 04/08/13 16:53

Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
1634-04-4	Methyl tert-Butyl Ether	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	103%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	105%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

**Sample ID: Trip Blank
SAMPLE**

Page 1 of 1

Lab Sample ID: WK02B

QC Report No: WK02-Maul Foster & Alongi, Inc

LIMS ID: 13-6985

Project: Former Cashmere Mill Site

Matrix: Water

0779.02.01/03

Data Release Authorized: *[Signature]*

Date Sampled: 03/28/13

Reported: 04/11/13

Date Received: 04/02/13

Instrument/Analyst: NT3/PAB

Sample Amount: 10.0 mL

Date Analyzed: 04/08/13 17:20

Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
1634-04-4	Methyl tert-Butyl Ether	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	100%
Bromofluorobenzene	99.6%
d4-1,2-Dichlorobenzene	98.9%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-040813A	Method Blank	10	102%	101%	98.9%	102%	0
LCS-040813A	Lab Control	10	104%	103%	106%	102%	0
LCSD-040813A	Lab Control Dup	10	99.3%	104%	105%	103%	0
WK02A	B1-032813	10	108%	103%	101%	105%	0
WK02B	Trip Blank	10	106%	100%	99.6%	98.9%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane	(80-120)	(80-130)
(TOL) = d8-Toluene	(80-120)	(80-120)
(BFB) = Bromofluorobenzene	(80-120)	(80-120)
(DCB) = d4-1,2-Dichlorobenzene	(80-120)	(80-120)

Prep Method: SW5030B
Log Number Range: 13-6984 to 13-6985

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-040813A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040813A

QC Report No: WK02-Maul Foster & Alongi, Inc

LIMS ID: 13-6984

Project: Former Cashmere Mill Site

Matrix: Water

0779.02.01/03

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 04/11/13

Date Received: NA

Instrument/Analyst LCS: NT3/PAB

Sample Amount LCS: 10.0 mL

LCS: NT3/PAB

LCS: 10.0 mL

Date Analyzed LCS: 04/08/13 10:07

Purge Volume LCS: 10.0 mL

LCS: 04/08/13 10:33

LCS: 10.0 mL

Analyte	LCS		LCS		LCSD		RPD
	LCS	Spike Added-LCS	Recovery	LCSD	Spike Added-LCSD	Recovery	
1,2-Dichloroethane	10.3	10.0	103%	10.8	10.0	108%	4.7%
Methyl tert-Butyl Ether	8.44 Q	10.0	84.4%	8.59 Q	10.0	85.9%	1.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	104%	99.3%
d8-Toluene	103%	104%
Bromofluorobenzene	106%	105%
d4-1,2-Dichlorobenzene	102%	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-040813A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-040813A

QC Report No: WK02-Maul Foster & Alongi, Inc

LIMS ID: 13-6984

Project: Former Cashmere Mill Site

Matrix: Water

0779.02.01/03

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 04/11/13

Date Received: NA

Instrument/Analyst: NT3/PAB

Sample Amount: 10.0 mL

Date Analyzed: 04/08/13 11:00

Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
1634-04-4	Methyl tert-Butyl Ether	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	101%
Bromofluorobenzene	98.9%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 1 of 2

Sample ID: B1-032813
SAMPLE

Lab Sample ID: WK02A
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized: *mmw*
 Reported: 04/12/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03
 Date Sampled: 03/28/13
 Date Received: 04/02/13

Date Extracted: 04/03/13
 Date Analyzed: 04/05/13 14:44
 Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	0.8 J
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 2 of 2

Sample ID: B1-032813
SAMPLE

Lab Sample ID: WK02A
 LIMS ID: 13-6984
 Matrix: Water
 Date Analyzed: 04/05/13 14:44

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03

CAS Number	Analyte	RL	Result
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
86-74-8	Carbazole	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	23.5%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	72.0%	2-Fluorophenol	61.6%
2,4,6-Tribromophenol	82.9%	d4-2-Chlorophenol	68.0%

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>NBZ</u>	<u>FBP</u>	<u>TPH</u>	<u>DCB</u>	<u>PHL</u>	<u>2FP</u>	<u>TBP</u>	<u>2CP TOT</u>	<u>OUT</u>
MB-040313	66.8%	64.4%	75.2%	57.6%	72.3%	71.2%	79.2%	69.1%	0
LCS-040313	67.6%	73.2%	81.6%	55.6%	71.5%	63.7%	94.1%	69.1%	0
LCSD-040313	62.4%	68.4%	81.2%	53.2%	65.6%	63.2%	92.0%	62.9%	0
B1-032813	67.2%	61.6%	23.5%*	60.8%	72.0%	61.6%	82.9%	68.0%	1

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(50-100)	(34-101)
(FBP) = 2-Fluorobiphenyl	(51-100)	(38-100)
(TPH) = d14-p-Terphenyl	(54-117)	(27-122)
(DCB) = d4-1,2-Dichlorobenzene	(40-100)	(27-100)
(PHL) = d5-Phenol	(15-121)	(16-106)
(2FP) = 2-Fluorophenol	(33-100)	(23-100)
(TBP) = 2,4,6-Tribromophenol	(46-125)	(31-128)
(2CP) = d4-2-Chlorophenol	(46-102)	(33-100)

Prep Method: SW3520C
Log Number Range: 13-6984 to 13-6984

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 2

Sample ID: LCS-040313
LCS/LCSD

Lab Sample ID: LCS-040313
LIMS ID: 13-6984
Matrix: Water
Data Release Authorized: *mmw*
Reported: 04/12/13

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03
Date Sampled: 03/28/13
Date Received: 04/02/13

Date Extracted LCS/LCSD: 04/03/13

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/05/13 13:00

Final Extract Volume LCS: 0.50 mL

LCSD: 04/05/13 13:35

LCSD: 0.50 mL

Instrument/Analyst LCS: NT6/JZ

Dilution Factor LCS: 1.00

LCSD: NT6/JZ

LCSD: 1.00

GPC Cleanup: NO

Analyte	Spike			LCSD			RPD
	LCS	Added-LCS	Recovery	LCS	Added-LCSD	Recovery	
Phenol	16.8	25.0	67.2%	15.8	25.0	63.2%	6.1%
Bis-(2-Chloroethyl) Ether	15.6	25.0	62.4%	14.9	25.0	59.6%	4.6%
2-Chlorophenol	17.9	25.0	71.6%	16.8	25.0	67.2%	6.3%
1,3-Dichlorobenzene	10.4	25.0	41.6%	11.4	25.0	45.6%	9.2%
1,4-Dichlorobenzene	11.0	25.0	44.0%	12.0	25.0	48.0%	8.7%
Benzyl Alcohol	18.1	25.0	72.4%	17.8	25.0	71.2%	1.7%
1,2-Dichlorobenzene	11.5	25.0	46.0%	12.3	25.0	49.2%	6.7%
2-Methylphenol	17.0	25.0	68.0%	16.1	25.0	64.4%	5.4%
2,2'-Oxybis(1-Chloropropane)	13.4 Q	25.0	53.6%	13.0 Q	25.0	52.0%	3.0%
4-Methylphenol	36.2	50.0	72.4%	34.5	50.0	69.0%	4.8%
N-Nitroso-Di-N-Propylamine	15.4	25.0	61.6%	15.3	25.0	61.2%	0.7%
Hexachloroethane	9.6	25.0	38.4%	10.7	25.0	42.8%	10.8%
Nitrobenzene	17.0	25.0	68.0%	16.4	25.0	65.6%	3.6%
Isophorone	18.1	25.0	72.4%	18.1	25.0	72.4%	0.0%
2-Nitrophenol	19.4	25.0	77.6%	18.9	25.0	75.6%	2.6%
2,4-Dimethylphenol	44.2	75.0	58.9%	44.3	75.0	59.1%	0.2%
Benzoic Acid	89.2	138	64.6%	89.8	138	65.1%	0.7%
bis(2-Chloroethoxy) Methane	16.4	25.0	65.6%	16.1	25.0	64.4%	1.8%
2,4-Dichlorophenol	51.3	75.0	68.4%	49.8	75.0	66.4%	3.0%
1,2,4-Trichlorobenzene	12.3	25.0	49.2%	12.9	25.0	51.6%	4.8%
4-Chloroaniline	111	75.0	148%	111	75.0	148%	0.0%
Hexachlorobutadiene	10.8	25.0	43.2%	11.4	25.0	45.6%	5.4%
4-Chloro-3-methylphenol	54.6	75.0	72.8%	54.1	75.0	72.1%	0.9%
Hexachlorocyclopentadiene	31.2	75.0	41.6%	29.7	75.0	39.6%	4.9%
2,4,6-Trichlorophenol	56.5	75.0	75.3%	55.3	75.0	73.7%	2.1%
2,4,5-Trichlorophenol	60.3	75.0	80.4%	58.5	75.0	78.0%	3.0%
2-Chloronaphthalene	21.2	25.0	84.8%	20.5	25.0	82.0%	3.4%
2-Nitroaniline	65.2	75.0	86.9%	64.5	75.0	86.0%	1.1%
Dimethylphthalate	19.6	25.0	78.4%	19.7	25.0	78.8%	0.5%
3-Nitroaniline	140	75.0	187%	143	75.0	191%	2.1%
2,4-Dinitrophenol	100	138	72.5%	104	138	75.4%	3.9%
4-Nitrophenol	76.4 Q	75.0	102%	77.4 Q	75.0	103%	1.3%
2,6-Dinitrotoluene	60.2	75.0	80.3%	59.9	75.0	79.9%	0.5%
2,4-Dinitrotoluene	61.1	75.0	81.5%	62.1	75.0	82.8%	1.6%
Diethylphthalate	22.6	25.0	90.4%	22.8	25.0	91.2%	0.9%
4-Chlorophenyl-phenylether	20.2	25.0	80.8%	19.8	25.0	79.2%	2.0%
4-Nitroaniline	84.2	75.0	112%	88.3	75.0	118%	4.8%
4,6-Dinitro-2-Methylphenol	92.4	138	67.0%	94.3	138	68.3%	2.0%
N-Nitrosodiphenylamine	17.5	25.0	70.0%	16.4	25.0	65.6%	6.5%
4-Bromophenyl-phenylether	18.3	25.0	73.2%	18.1	25.0	72.4%	1.1%
Hexachlorobenzene	16.8	25.0	67.2%	16.5	25.0	66.0%	1.8%
Pentachlorophenol	57.1	75.0	76.1%	58.7	75.0	78.3%	2.8%
Carbazole	23.6	25.0	94.4%	24.0	25.0	96.0%	1.7%
Di-n-Butylphthalate	18.0	25.0	72.0%	17.9	25.0	71.6%	0.6%
Butylbenzylphthalate	19.5	25.0	78.0%	19.8	25.0	79.2%	1.5%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
 Page 2 of 2

Sample ID: LCS-040313
 LCS/LCSD

Lab Sample ID: LCS-040313
 LIMS ID: 13-6984
 Matrix: Water
 Date Analyzed LCS: 04/05/13 13:00
 LCSD: 04/05/13 13:35

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03

Analyte	Spike		LCS		Spike		LCSD	
	LCS	Added-LCS	Recovery	LCS	Added-LCSD	Recovery	RPD	
3,3'-Dichlorobenzidine	51.0	75.0	68.0%	49.2	75.0	65.6%	3.6%	
bis(2-Ethylhexyl)phthalate	19.7	25.0	78.8%	19.7	25.0	78.8%	0.0%	
Di-n-Octyl phthalate	18.9	25.0	75.6%	19.2	25.0	76.8%	1.6%	

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	67.6%	62.4%
2-Fluorobiphenyl	73.2%	68.4%
d14-p-Terphenyl	81.6%	81.2%
d4-1,2-Dichlorobenzene	55.6%	53.2%
d5-Phenol	71.5%	65.6%
2-Fluorophenol	63.7%	63.2%
2,4,6-Tribromophenol	94.1%	92.0%
d4-2-Chlorophenol	69.1%	62.9%

Results reported in µg/L
 RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 1 of 2

Sample ID: MB-040313
METHOD BLANK

Lab Sample ID: MB-040313
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized: *mm*
 Reported: 04/12/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 04/03/13
 Date Analyzed: 04/05/13 12:25
 Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 2 of 2

Sample ID: MB-040313
METHOD BLANK

Lab Sample ID: MB-040313
 LIMS ID: 13-6984
 Matrix: Water
 Date Analyzed: 04/05/13 12:25

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03

CAS Number	Analyte	RL	Result
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
86-74-8	Carbazole	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.8%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	72.3%	2-Fluorophenol	71.2%
2,4,6-Tribromophenol	79.2%	d4-2-Chlorophenol	69.1%

ORGANICS ANALYSIS DATA SHEET
PNA's by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: B1-032813
SAMPLE

Lab Sample ID: WK02A
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized:
 Reported: 04/05/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 Event: 0779.02.01/03
 Date Sampled: 03/28/13
 Date Received: 04/02/13

Date Extracted: 04/03/13
 Date Analyzed: 04/04/13 16:30
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.010	4.8 E
91-57-6	2-Methylnaphthalene	0.010	0.22
90-12-0	1-Methylnaphthalene	0.010	0.31
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	Acenaphthene	0.010	0.42
86-73-7	Fluorene	0.010	0.11
85-01-8	Phenanthrene	0.010	0.080
120-12-7	Anthracene	0.010	< 0.010 U
206-44-0	Fluoranthene	0.010	0.035
129-00-0	Pyrene	0.010	0.055
56-55-3	Benzo (a) anthracene	0.010	0.010
218-01-9	Chrysene	0.010	0.019
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.010	0.082
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 45.3%
 d14-Dibenzo(a,h)anthracene 40.3%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: B1-032813
DILUTION

Lab Sample ID: WK02A
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized: *AB*
 Reported: 04/05/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 Event: 0779.02.01/03
 Date Sampled: 03/28/13
 Date Received: 04/02/13

Date Extracted: 04/03/13
 Date Analyzed: 04/05/13 16:09
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 10.0

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	5.5
91-57-6	2-Methylnaphthalene	0.10	0.24
90-12-0	1-Methylnaphthalene	0.10	0.35
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.42
86-73-7	Fluorene	0.10	0.11
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
132-64-9	Dibenzofuran	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 50.3%
 d14-Dibenzo(a,h)anthracene 35.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-040313	67.3%	71.0%	0
LCS-040313	70.0%	71.0%	0
LCSD-040313	59.7%	59.0%	0
B1-032813	45.3%	40.3%	0
B1-032813 DL	50.3%	35.7%	0

LCS/MB LIMITS QC LIMITS

(MNP) = d10-2-Methylnaphthalene (40-93) (35-94)
(DBA) = d14-Dibenzo(a,h)anthracene (31-115) (26-115)

Prep Method: SW3510C
Log Number Range: 13-6984 to 13-6984



ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
 Page 1 of 1

Sample ID: LCS-040313
LAB CONTROL SAMPLE

Lab Sample ID: LCS-040313
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized: *AB*
 Reported: 04/05/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted LCS/LCSD: 04/03/13
 Date Analyzed LCS: 04/04/13 15:03
 LCSD: 04/04/13 15:32
 Instrument/Analyst LCS: NT11/VTS
 LCSD: NT11/VTS

Sample Amount LCS: 500 mL
 LCSD: 500 mL
 Final Extract Volume LCS: 0.50 mL
 LCSD: 0.50 mL
 Dilution Factor LCS: 1.00
 LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	0.210	0.300	70.0%	0.180	0.300	60.0%	15.4%
2-Methylnaphthalene	0.205	0.300	68.3%	0.178	0.300	59.3%	14.1%
1-Methylnaphthalene	0.208	0.300	69.3%	0.176	0.300	58.7%	16.7%
Acenaphthylene	0.205	0.300	68.3%	0.175	0.300	58.3%	15.8%
Acenaphthene	0.206	0.300	68.7%	0.178	0.300	59.3%	14.6%
Fluorene	0.215	0.300	71.7%	0.186	0.300	62.0%	14.5%
Phenanthrene	0.210	0.300	70.0%	0.174	0.300	58.0%	18.8%
Anthracene	0.211	0.300	70.3%	0.171	0.300	57.0%	20.9%
Fluoranthene	0.223	0.300	74.3%	0.187	0.300	62.3%	17.6%
Pyrene	0.211	0.300	70.3%	0.183	0.300	61.0%	14.2%
Benzo(a)anthracene	0.215	0.300	71.7%	0.184	0.300	61.3%	15.5%
Chrysene	0.220	0.300	73.3%	0.190	0.300	63.3%	14.6%
Benzo(a)pyrene	0.196	0.300	65.3%	0.163	0.300	54.3%	18.4%
Indeno(1,2,3-cd)pyrene	0.220	0.300	73.3%	0.191	0.300	63.7%	14.1%
Dibenz(a,h)anthracene	0.208	0.300	69.3%	0.168	0.300	56.0%	21.3%
Benzo(g,h,i)perylene	0.218	0.300	72.7%	0.189	0.300	63.0%	14.3%
Dibenzofuran	0.202	0.300	67.3%	0.178	0.300	59.3%	12.6%
Total Benzofluoranthenes	0.656	0.900	72.9%	0.576	0.900	64.0%	13.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	70.0%	59.7%
d14-Dibenzo(a,h)anthracene	71.0%	59.0%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: MB-040313
METHOD BLANK

Lab Sample ID: MB-040313
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized: *AS*
 Reported: 04/05/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 04/03/13
 Date Analyzed: 04/04/13 14:34
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.010	< 0.010 U
91-57-6	2-Methylnaphthalene	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	Acenaphthene	0.010	< 0.010 U
86-73-7	Fluorene	0.010	< 0.010 U
85-01-8	Phenanthrene	0.010	< 0.010 U
120-12-7	Anthracene	0.010	< 0.010 U
206-44-0	Fluoranthene	0.010	< 0.010 U
129-00-0	Pyrene	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 67.3%
 d14-Dibenzo(a,h)anthracene 71.0%

ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Extraction Method: SW3510C

Page 1 of 1

Sample ID: B1-032813

SAMPLE

Lab Sample ID: WK02A

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: *AB*

Reported: 04/15/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 03/28/13

Date Received: 04/02/13

Date Extracted: 04/03/13

Date Analyzed: 04/06/13 03:23

Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL

Final Extract Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.025	< 0.025 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	71.6%
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SW8041 LOW LEVEL CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-040313	104%	0
LCS-040313	109%	0
LCSD-040313	110%	0
B1-032813	71.6%	0

LCS/MB LIMITS QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(33-151)

(10-181)

Prep Method: SW3510C
Log Number Range: 13-6984 to 13-6984

ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: LCS-040313

LCS/LCSD

Lab Sample ID: LCS-040313

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: *AS*

Reported: 04/15/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 03/28/13

Date Received: 04/02/13

Date Extracted LCS/LCSD: 04/03/13

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/06/13 01:35

Final Extract Volume LCS: 5.0 mL

LCSD: 04/06/13 02:11

LCSD: 5.0 mL

Instrument/Analyst LCS: ECD1/YZ

Dilution Factor LCS: 1.00

LCSD: ECD1/YZ

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Pentachlorophenol	0.252	0.250	101%	0.250	0.250	100%	0.8%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	109%	110%

Results reported in µg/L

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: MB-040313
METHOD BLANK

Lab Sample ID: MB-040313
 LIMS ID: 13-6984
 Matrix: Water
 Data Release Authorized: *AS*
 Reported: 04/15/13

QC Report No: WK02-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 04/03/13
 Date Analyzed: 04/06/13 00:58
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.025	< 0.025 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	104%
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ORGANICS ANALYSIS DATA SHEET

NWTPH-HCID Method by GC/FID
Extraction Method: SW3510C
Page 1 of 1

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

Matrix: Water

Data Release Authorized: *AR*
Reported: 04/08/13

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-040313 13-6984	Method Blank	04/03/13	04/05/13	1.0	Gas	< 0.25 U
					Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	93.0%
WK02A 13-6984	B1-032813 HC ID: DRO/MOTOR OIL	04/03/13	04/05/13	1.0	Gas	< 0.25 U
					Diesel	> 0.50
					Oil	> 0.50
					o-Terphenyl	81.7%

Reported in mg/L (ppm)

Gas value based on total peaks in the range from Toluene to C12.
Diesel value based on the total peaks in the range from C12 to C24.
Oil value based on the total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130405.b/0405a006.d
Method: /chem3/fid4a.i/20130405.b/hcidfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 04/05/2013
Macro: 21-MAR-2013
Calibration Dates: Gas:05-APR-2013 Diesel:24-JAN-2013 M.Oil:05-APR-2013

ARI ID: WK02MBW1
Client ID:
Injection: 05-APR-2013 11:29
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		32555	1.92
C8	1.205	0.030	858	2308	WATPHD (C12-C24)		31840	1.93
C10	2.949	0.003	130	138	WATPHM (C24-C38)		109057	10.65
C12	3.886	0.001	130	163	AK102 (C10-C25)		43695	2.21
C14	4.562	-0.001	110	36	AK103 (C25-C36)		87659	9.53
C16	5.156	0.012	130	89				
C18	5.682	-0.003	235	286				
C20	6.243	0.011	194	298				
C22	6.777	0.006	134	210	MIN.OIL (C24-C38)		109057	6.39
C24	7.288	0.001	218	586				
C25	7.541	0.009	410	667				
C26	7.775	-0.011	248	446				
C28	8.225	-0.005	841	886				
C32	9.054	0.002	11836	12274				
C34	9.446	0.013	613	1013				
Filter Peak	11.569	0.005	2493	1936				
C36	9.792	-0.009	630	373				
C38	10.166	0.007	980	2029				
C40	10.521	0.011	1241	1355				
o-terph	5.814	-0.001	1159515	848433				
Triacon Surr	8.665	0.002	772678	682802				

Range Times: NW Diesel(3.886 - 7.287) AK102(2.95 - 7.53) Jet A(2.95 - 5.69)
NW M.Oil(7.29 - 10.16) AK103(7.53 - 9.80) OR Diesel(2.95 - 8.23)

Surrogate	Area	Amount	%Rec
o-Terphenyl	848433	41.9	93.0
Triacontane	682802	35.9	79.7

M Indicates the peak was manually integrated

JW
4/5/13

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	19032.6	06-MAR-2013
Gas	16974.2	05-APR-2013
Diesel	16488.8	24-JAN-2013
Motor Oil	10242.7	05-APR-2013
AK102	19795.4	24-JAN-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013

Data File: /chem3/fid4a.i/20130405.b/0405a006.d

Date: 05-APR-2013 11:29

Client ID:

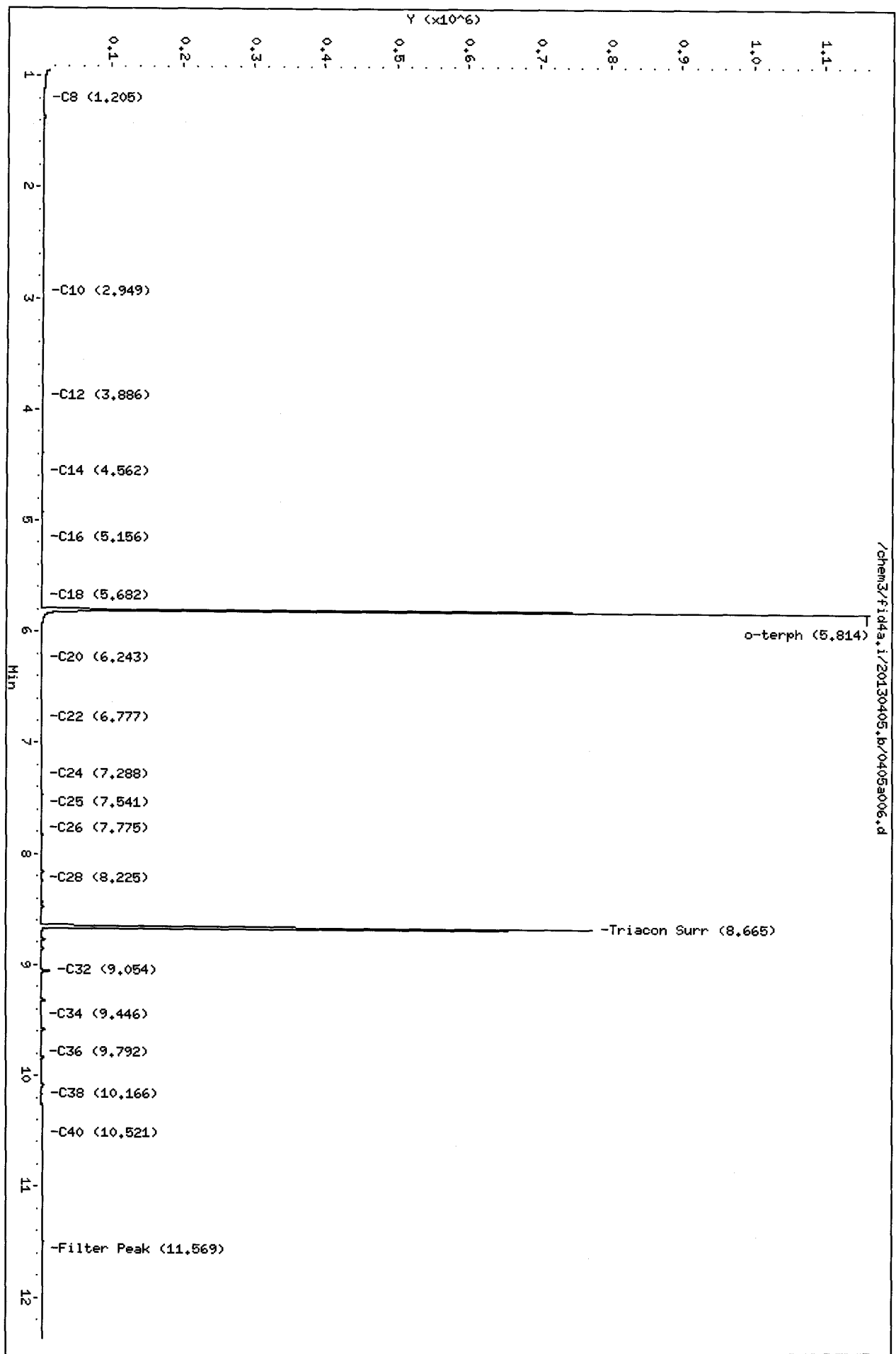
Sample Info: HK02HBM4

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25



/chem3/fid4a.i/20130405.b/0405a006.d

HK02 00001

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130405.b/0405a007.d
Method: /chem3/fid4a.i/20130405.b/hcidfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 04/05/2013
Macro: 21-MAR-2013
Calibration Dates: Gas:05-APR-2013 Diesel:24-JAN-2013 M.Oil:05-APR-2013

ARI ID: WK02A
Client ID:
Injection: 05-APR-2013 11:49
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		613938	36.17
C8	1.150	-0.026	2233	6880	WATPHD (C12-C24)		11940554	724.16
C10	2.950	0.003	3738	3623	WATPHM (C24-C38)		9735571	950.49
C12	3.875	-0.011	9763	15931	AK102 (C10-C25)		13493266	681.64
C14	4.562	-0.001	18519	21343	AK103 (C25-C36)		8391956	911.96
C16	5.137	-0.008	36008	51794				
C18	5.679	-0.006	59530	37262				
C20	6.216	-0.016	76111	97544				
C22	6.767	-0.005	108935	201656	MIN.OIL (C24-C38)		9735571	570.70
C24	7.271	-0.016	201983	368977				
C25	7.525	-0.008	136985	133192				
C26	7.785	-0.001	113298	35500				
C28	8.225	-0.006	73994	34319				
C32	9.045	-0.007	48226	73023				
C34	9.430	-0.003	27607	50281				
Filter Peak	11.591	0.026	5841	4423				
C36	9.805	0.004	18627	13200				
C38	10.148	-0.011	15614	35194				
C40	10.524	0.014	11612	35111				
o-terph	5.815	0.000	999057	745119				
Triacon Surr	8.661	-0.002	671478	641388				

Range Times: NW Diesel(3.886 - 7.287) AK102(2.95 - 7.53) Jet A(2.95 - 5.69)
NW M.Oil(7.29 - 10.16) AK103(7.53 - 9.80) OR Diesel(2.95 - 8.23)

Surrogate	Area	Amount	%Rec
o-Terphenyl	745119	36.8	81.7 M
Triacontane	641388	33.7	74.9 M

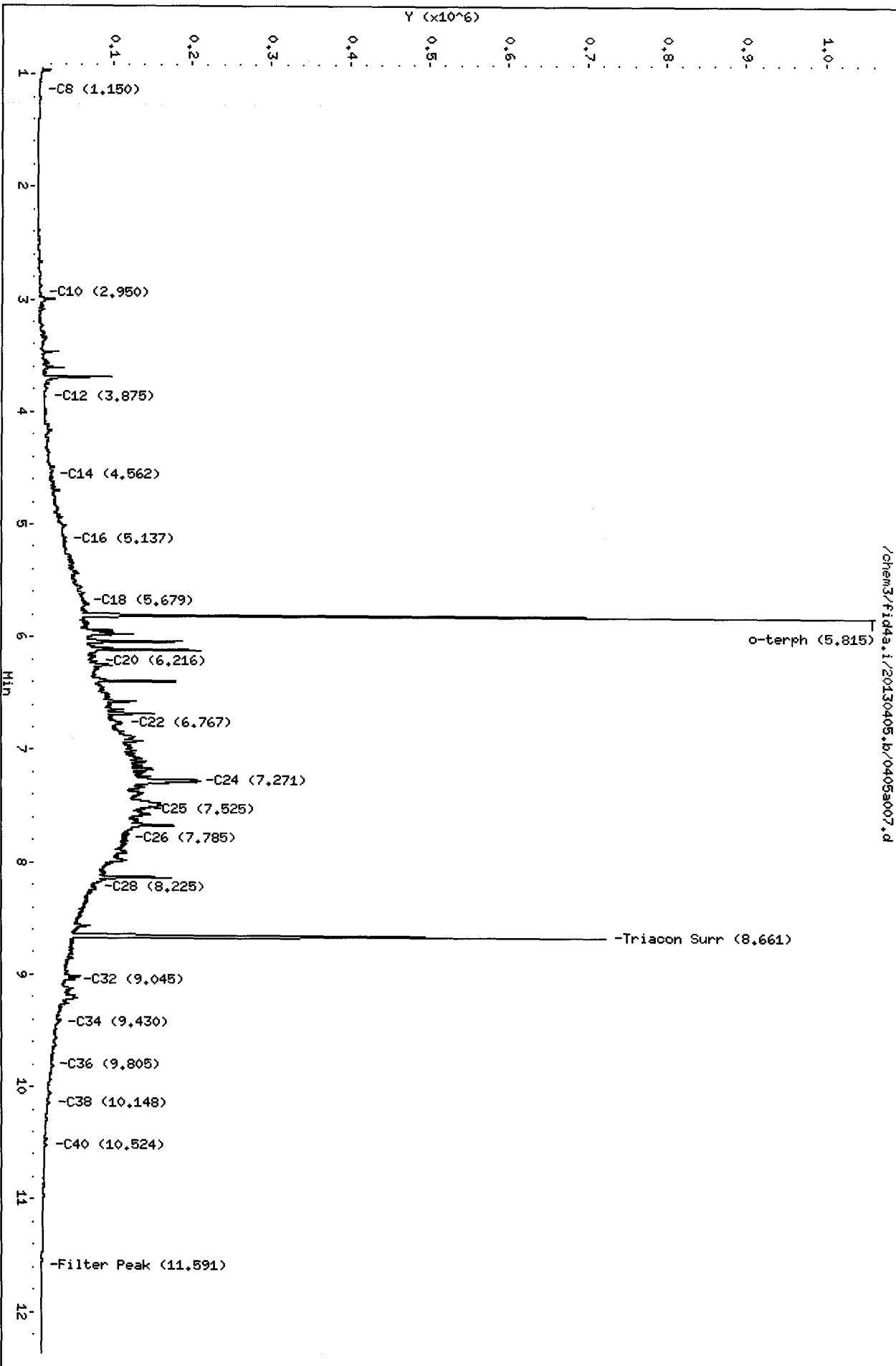
JW
4/5/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	19032.6	06-MAR-2013
Gas	16974.2	05-APR-2013
Diesel	16488.8	24-JAN-2013
Motor Oil	10242.7	05-APR-2013
AK102	19795.4	24-JAN-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013

Data File: /chem3/fid4a.i/20130405.b/0405a007.d
Date: 05-APR-2013 11:49
Client ID:
Sample Info: MK02A
Column phase: RTX-1

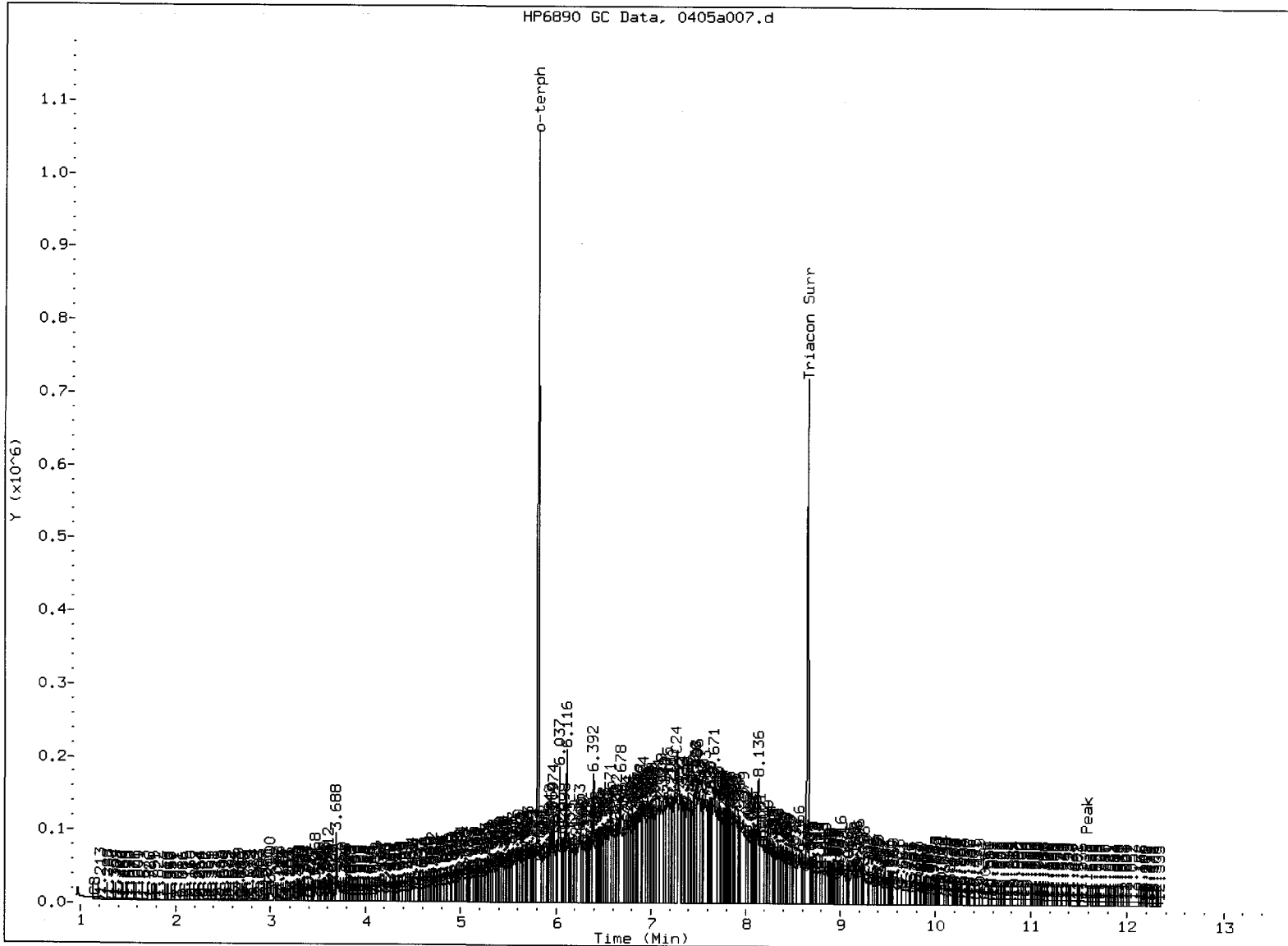
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



/chem3/fid4a.i/20130405.b/0405a007.d

JW
4/5/13

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 4/5/13

HCID SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>O-TER</u>	<u>TOT OUT</u>
MB-040313	93.0%	0
B1-032813	81.7%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(O-TER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 13-6984 to 13-6984

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 04/02/13

ARI Job: WK02
Project: Former Cashmere Mill Site
0779.02.01/03

<u>ARI ID</u>	<u>Client ID</u>	<u>Sample Amt</u>	<u>Final Vol</u>	<u>Prep Date</u>
13-6984-040313MB	Method Blank	500 mL	1.00 mL	04/03/13
13-6984-WK02A	B1-032813	500 mL	1.00 mL	04/03/13

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method:
Page 1 of 1

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

Matrix: Water
Data Release Authorized: *AB*
Reported: 04/08/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-040313 13-6984	Method Blank HC ID: ---	04/03/13	04/04/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 81.6%
WK02A 13-6984	B1-032813 HC ID: DRO/MOTOR OIL	04/03/13	04/04/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.19 0.40 60.8%

Reported in mg/L (ppm)

^aEFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130404.b/0404a006.d
 Method: /chem2/fid9.i/20130404.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 04/05/2013

ARI ID: WK02MBW1
 Client ID:
 Injection: 04-APR-2013 15:42
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	38823	1
C8	1.135	0.018	1345	478	DIESEL (C12-C24)	110325	5.42
C10	2.879	-0.003	211	287	M.OIL (C24-C38)	595420	37.38
C12	3.877	0.000	108	72	AK-102 (C10-C25)	121606	5.06
C14	4.568	-0.003	149	101	AK-103 (C25-C36)	538950	45.26
C16	5.161	-0.002	634	1305			
C18	5.718	-0.009	982	1671			
C20	6.289	-0.001	1077	743			
C22	6.846	0.007	879	825			
C24	7.370	0.006	834	347			
C25	7.611	-0.002	962	1748			
C26	7.864	-0.005	884	401			
C28	8.298	-0.012	1591	3972			
C32	9.081	-0.009	7861	19701			
C34	9.443	0.012	2147	2551	BUNKERC (C10-C38)	709998	76.62
Filter Peak	9.704	-1.793	338031	347589			
C36	----						
C38	10.050	-0.002	3551	5378			
C40	10.337	0.001	4341	1903			
o-terph	5.863	-0.004	1044533	974695			
Triacon Surr	8.721	-0.008	747441	867111			

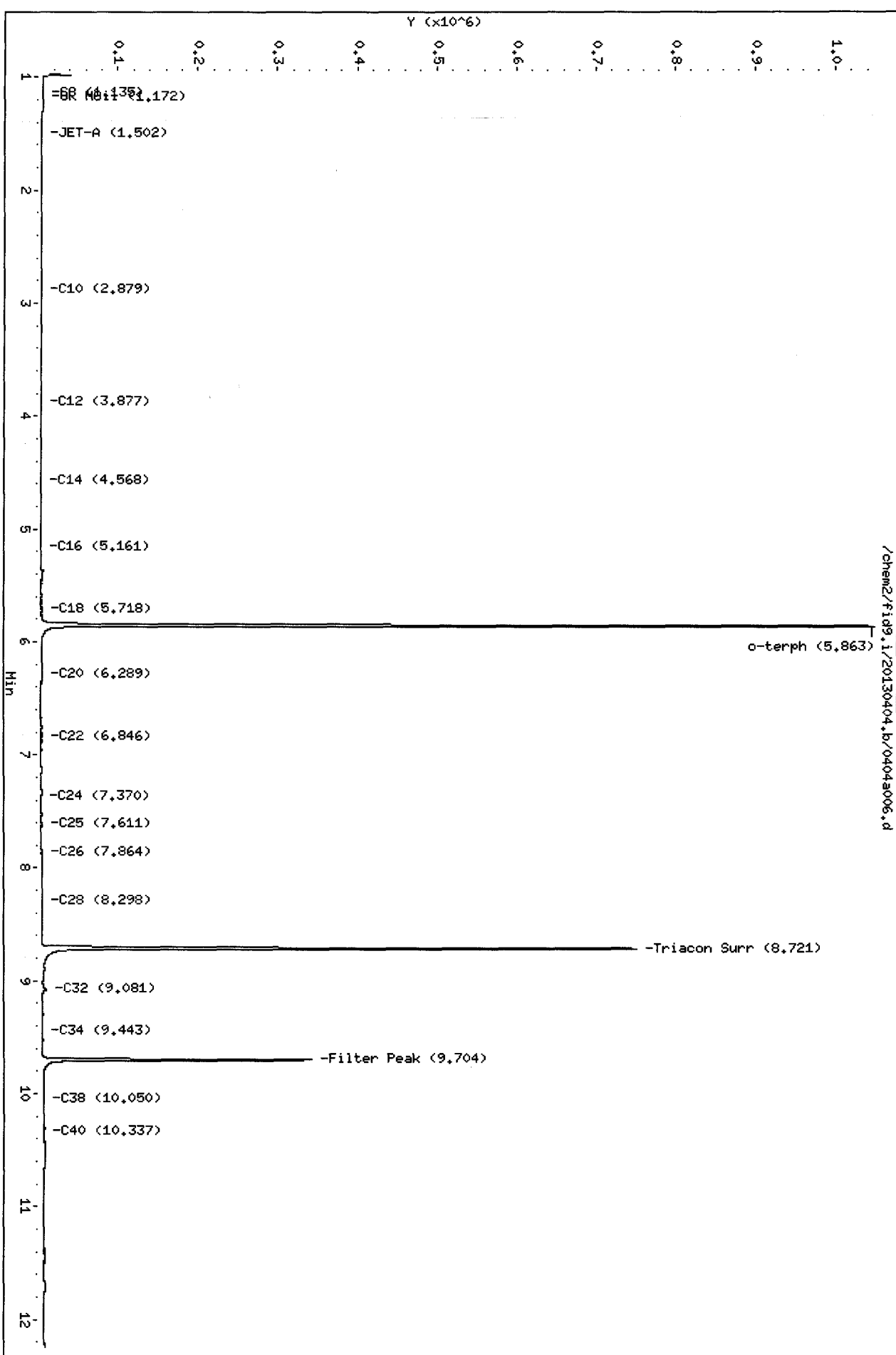
M Indicates manual integration within range.

Range Times: NW Diesel(3.876 - 7.364) AK102(2.88 - 7.61) Jet A(2.88 - 5.73)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.88 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	974695	36.7	81.6
Triacontane	867111	41.6	92.5

JW
4/5/13

Analyte	RF	Curve Date
o-Terph Surr	26543.3	24-JAN-2013
Triacon Surr	20825.0	24-JAN-2013
Gas	34297.9	11-FEB-2013
Diesel	20355.8	24-JAN-2013
Motor Oil	15930.3	24-JAN-2013
AK102	24012.1	24-JAN-2013
AK103	11909.0	30-JAN-2013
Bunker C	9266.7	25-MAR-2013



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Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130404.b/0404a010.d
 Method: /chem2/fid9.i/20130404.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 04/05/2013

ARI ID: WK02A
 Client ID:
 Injection: 04-APR-2013 17:12
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	199218	6
C8	1.099	-0.019	2788	4608	DIESEL (C12-C24)	1970312	96.79 ✓
C10	2.886	0.004	1234	1061	M.OIL (C24-C38)	3167873	198.86 ✓
C12	3.868	-0.008	1381	1757	AK-102 (C10-C25)	2221344	92.51 M
C14	4.568	-0.003	2185	1170	AK-103 (C25-C36)	2740831	230.15 M
C16	5.160	-0.003	5010	5839			
C18	5.717	-0.011	6860	9235			
C20	6.279	-0.012	10411	9335			
C22	6.832	-0.008	14842	21944			
C24	7.360	-0.004	13196	4171			
C25	7.610	-0.003	17005	9998			
C26	7.863	-0.006	17346	16441			
C28	8.309	-0.001	20296	9492			
C32	9.094	0.005	23657	11581			
C34	9.422	-0.008	26799	41210	BUNKERC (C10-C38)	5273242	569.05 M
Filter Peak	9.702	-1.795	95859	73875			
C36	9.753	-0.001	19573	5400			
C38	10.046	-0.007	17297	21851			
C40	10.335	-0.002	13713	6595			
o-terph	5.864	-0.004	890857	725804			
Triacon Surr	8.723	-0.006	692588	645701			

M Indicates manual integration within range.

Range Times: NW Diesel (3.876 - 7.364) AK102 (2.88 - 7.61) Jet A (2.88 - 5.73)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.88 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	725804	27.3	60.8 ✓
Triacontane	645701	31.0	68.9 ✓

JW
4/5/13

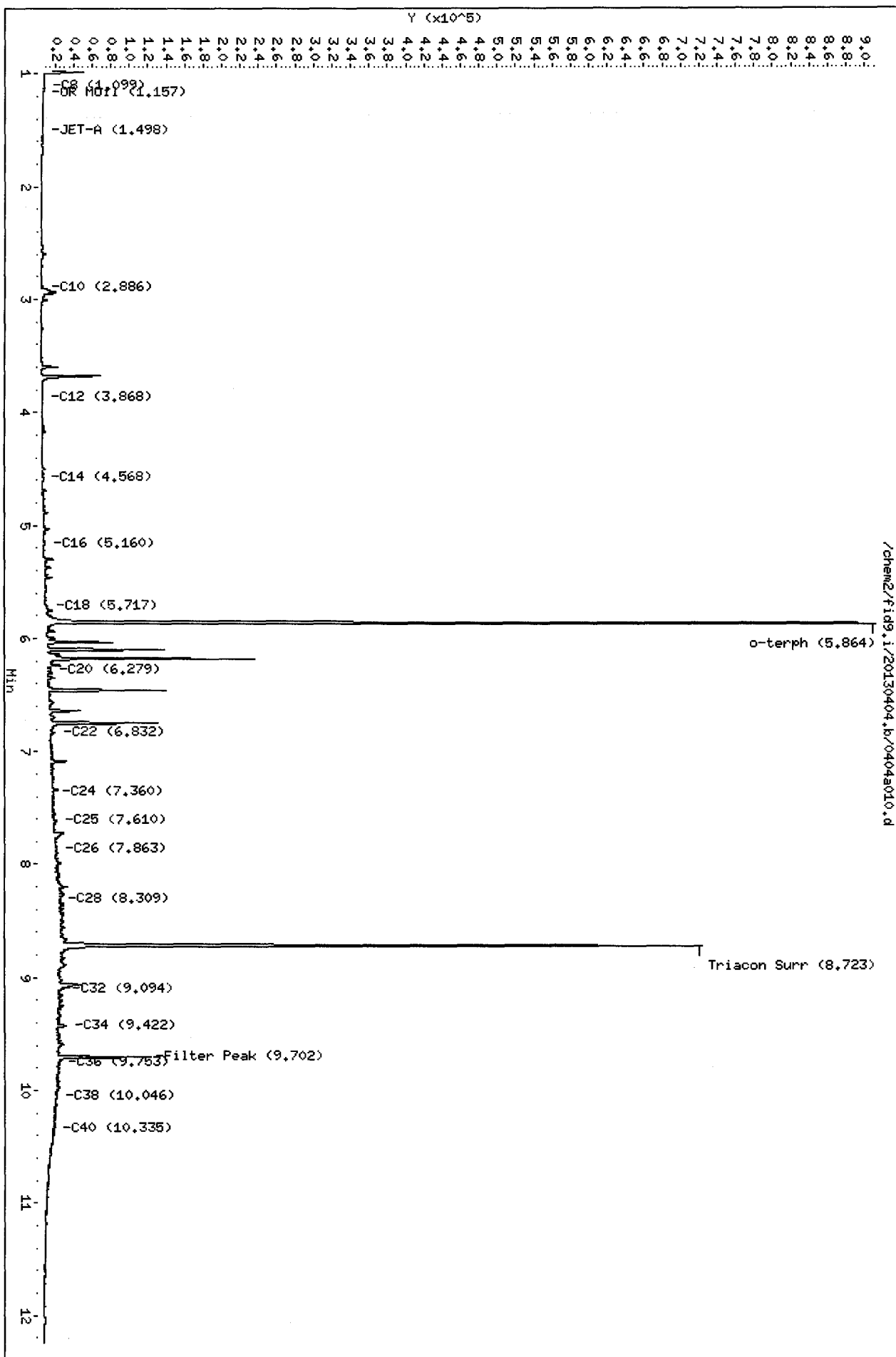
Analyte	RF	Curve Date
o-Terph Surr	26543.3	24-JAN-2013
Triacon Surr	20825.0	24-JAN-2013
Gas	34297.9	11-FEB-2013
Diesel	20355.8	24-JAN-2013
Motor Oil	15930.3	24-JAN-2013
AK102	24012.1	24-JAN-2013
AK103	11909.0	30-JAN-2013
Bunker C	9266.7	25-MAR-2013

Client ID:
Sample Info: MK02A

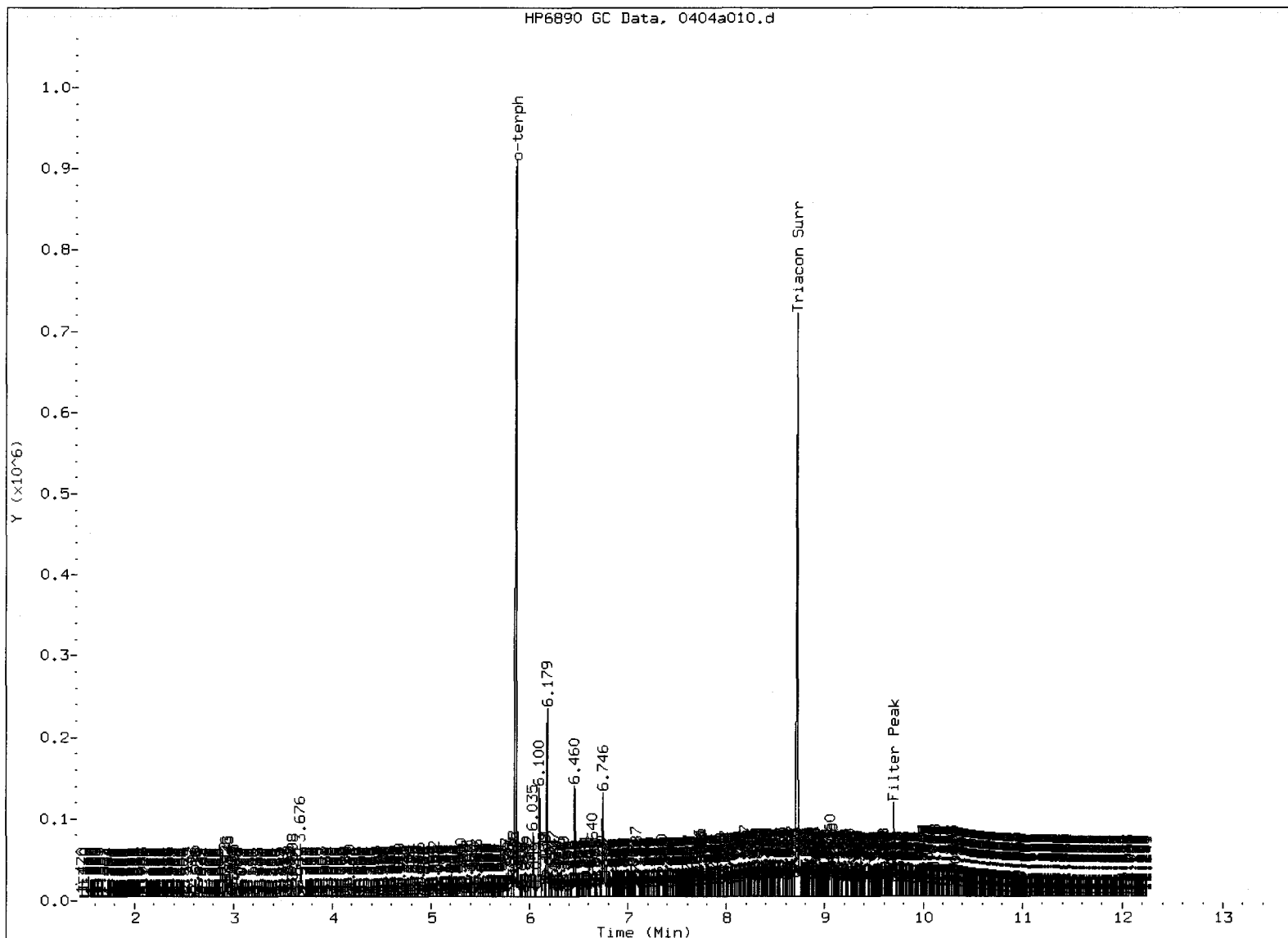
Instrument: fid9.i

Column phase: RTX-1

Operator: JM
Column diameter: 0.25



MK02: 00011



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: SW

Date: 4/5/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-040313	81.6%	0
LCS-040313	77.7%	0
LCSD-040313	75.4%	0
B1-032813	60.8%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3510C
Log Number Range: 13-6984 to 13-6984

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-040313

Page 1 of 1

LCS/LCSD

Lab Sample ID: LCS-040313

QC Report No: WK02-Maul Foster & Alongi, Inc

LIMS ID: 13-6984

Project: Former Cashmere Mill Site

Matrix: Water

0779.02.01/03

Data Release Authorized: *B*

Date Sampled: 03/28/13

Reported: 04/08/13

Date Received: 04/02/13

Date Extracted LCS/LCSD: 04/03/13

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/04/13 16:05

Final Extract Volume LCS: 1.0 mL

LCSD: 04/04/13 16:27

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW

Dilution Factor LCS: 1.00

LCSD: FID/JLW

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dieşel	2.28	3.00	76.0%	2.26	3.00	75.3%	0.9%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	77.7%	75.4%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130404.b/0404a007.d
Method: /chem2/fid9.i/20130404.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 04/05/2013

ARI ID: WK02LCSW1
Client ID:
Injection: 04-APR-2013 16:05
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	5096271	149
C8	1.108	-0.010	13972	20414	DIESEL (C12-C24)	23212731	1140.35 ✓
C10	2.878	-0.004	105599	89889	M.OIL (C24-C38)	413523	25.96 ✓
C12	3.873	-0.003	214414	240042	AK-102 (C10-C25)	26666232	1110.53 M
C14	4.571	0.000	437207	517093	AK-103 (C25-C36)	329181	27.64
C16	5.164	0.002	732002	628147			
C18	5.726	-0.001	561858	630947			
C20	6.287	-0.003	359163	432425			
C22	6.834	-0.006	190604	224858			
C24	7.355	-0.009	41761	57667			
C25	7.605	-0.008	17107	28050			
C26	7.889	0.020	3497	2218			
C28	8.296	-0.014	1401	1701			
C32	9.081	-0.009	6785	10046			
C34	9.437	0.007	47	8	BUNKERC (C10-C38)	27011719	2914.92 M
Filter Peak	9.697	-1.800	139867	142397			
C36	----						
C38	10.050	-0.002	1114	932			
C40	10.335	-0.001	1770	911			
o-terph	5.867	-0.001	1035166	927662			
Triacon Surr	8.721	-0.007	837857	853210			

M Indicates manual integration within range.

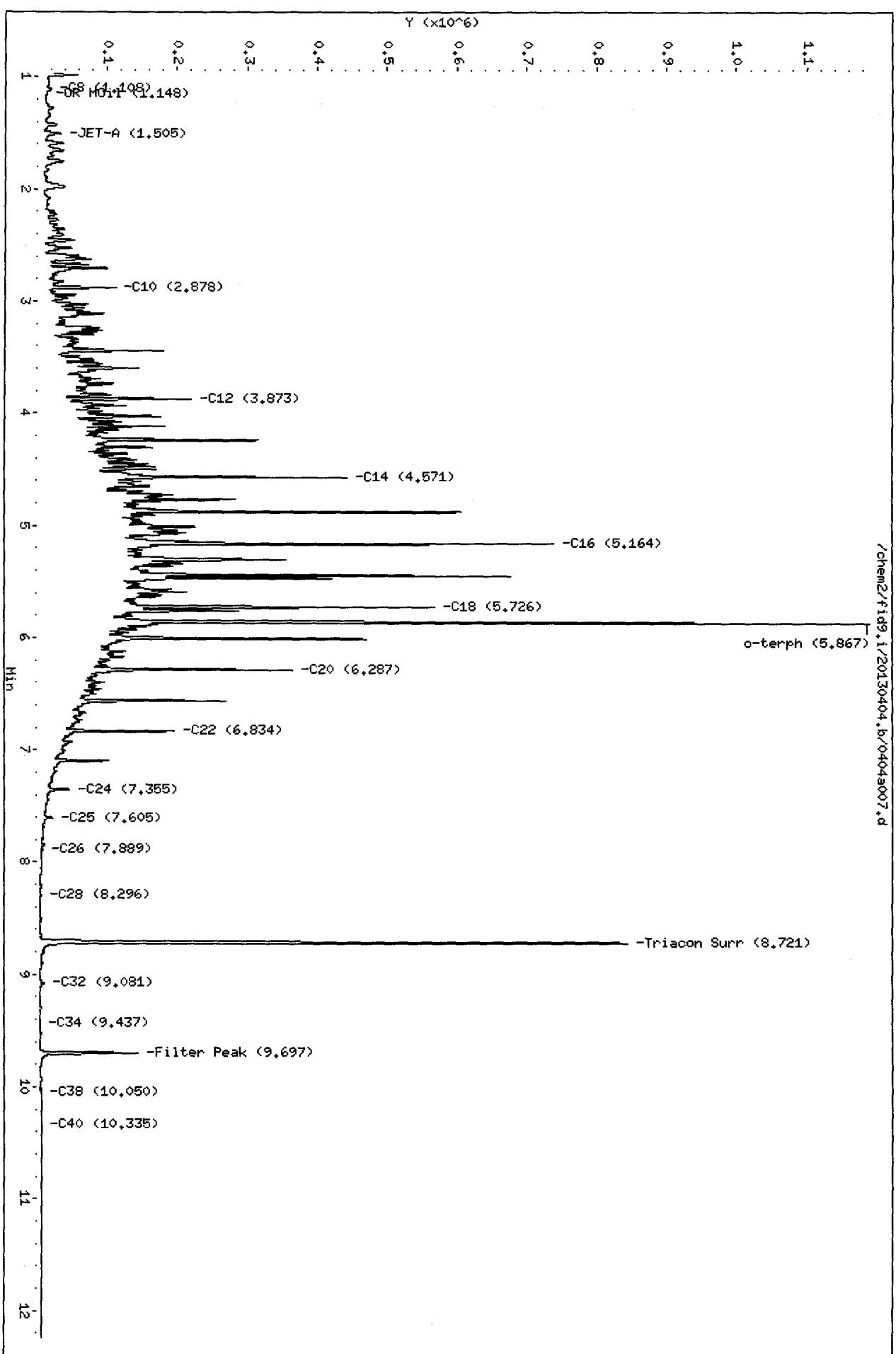
Range Times: NW Diesel(3.876 - 7.364) AK102(2.88 - 7.61) Jet A(2.88 - 5.73)
NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.88 - 8.31)

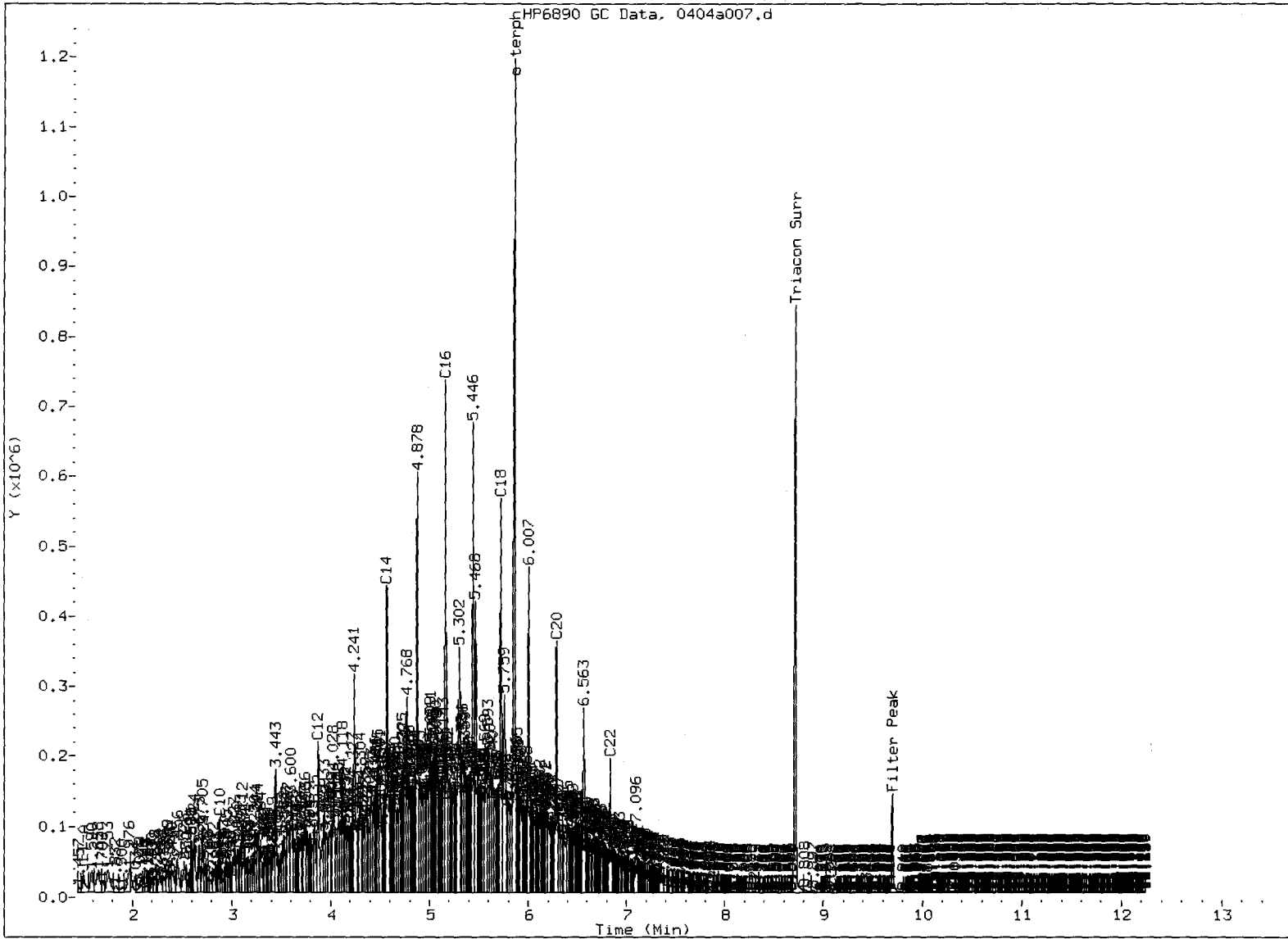
Surrogate	Area	Amount	%Rec
o-Terphenyl	927662	34.9	77.7 ✓
Triacontane	853210	41.0	91.0

JW
4/5/13

Analyte	RF	Curve Date
o-Terph Surr	26543.3	24-JAN-2013
Triacon Surr	20825.0	24-JAN-2013
Gas	34297.9	11-FEB-2013
Diesel	20355.8	24-JAN-2013
Motor Oil	15930.3	24-JAN-2013
AK102	24012.1	24-JAN-2013
AK103	11909.0	30-JAN-2013
Bunker C	9266.7	25-MAR-2013

JW
4/5/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JW

Date: 4/5/17

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130404.b/0404a008.d
 Method: /chem2/fid9.i/20130404.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 04/05/2013

ARI ID: WK02LCSDW1
 Client ID:
 Injection: 04-APR-2013 16:27
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4857685	142
C8	1.107	-0.010	11949	21366	DIESEL (C12-C24)	23035362	1131.64 ✓
C10	2.880	-0.002	98403	106119	M.OIL (C24-C38)	399068	25.05
C12	3.874	-0.002	223040	228969	AK-102 (C10-C25)	26416492	1100.13 M
C14	4.571	0.000	454749	517432	AK-103 (C25-C36)	311592	26.16
C16	5.163	0.001	642227	694407			
C18	5.728	0.000	519668	608722			
C20	6.289	-0.001	359362	406926			
C22	6.836	-0.004	173148	220310			
C24	7.356	-0.008	43447	53614			
C25	7.607	-0.006	16772	27272			
C26	7.879	0.010	2235	825			
C28	8.303	-0.007	1292	1729			
C32	9.082	-0.007	6491	9748			
C34	9.416	-0.014	330	379	BUNKERC (C10-C38)	26745110	2886.15 M
Filter Peak	9.701	-1.796	149946	144137			
C36	9.798	0.045	1219	1643			
C38	10.053	0.001	1216	896			
C40	10.336	-0.001	1953	810			
o-terph	5.869	0.002	1056036	900198			
Triacon Surr	8.726	-0.003	901929	834259			

M Indicates manual integration within range.

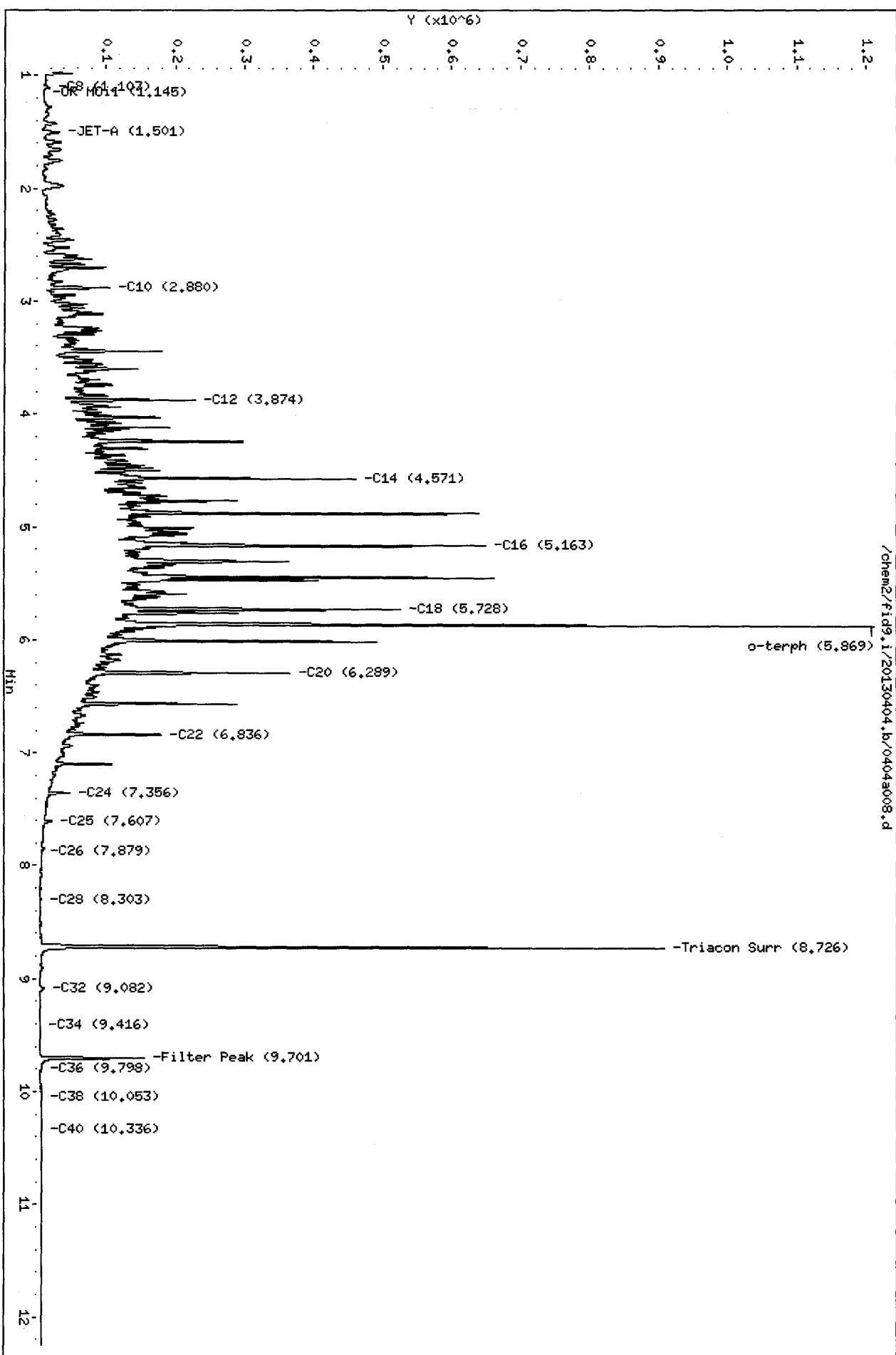
Range Times: NW Diesel (3.876 - 7.364) AK102 (2.88 - 7.61) Jet A (2.88 - 5.73)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.88 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	900198	33.9	75.4 ✓
Triacontane	834259	40.1	89.0

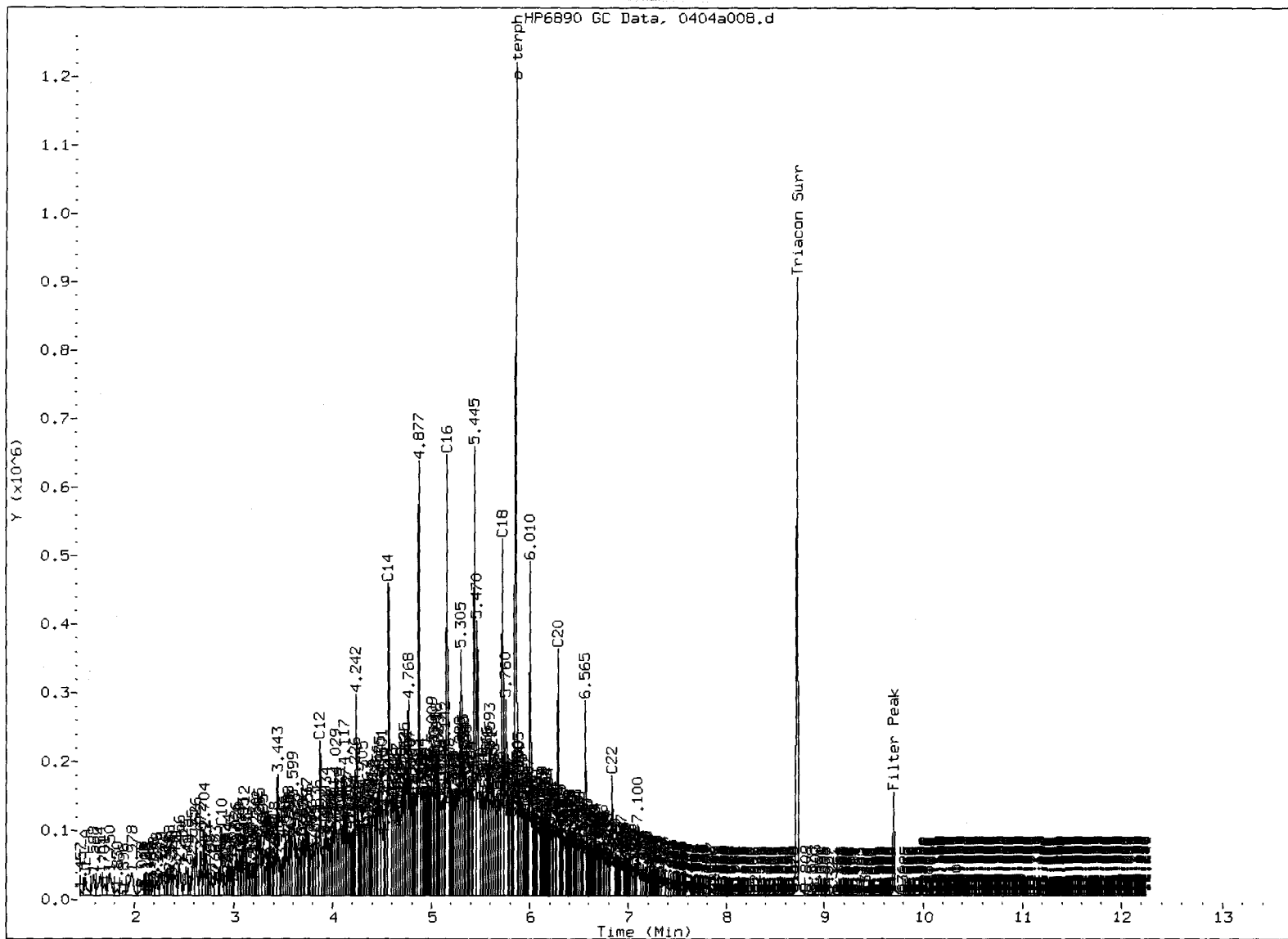
JW
4/5/13

Analyte	RF	Curve Date
o-Terph Surr	26543.3	24-JAN-2013
Triacon Surr	20825.0	24-JAN-2013
Gas	34297.9	11-FEB-2013
Diesel	20355.8	24-JAN-2013
Motor Oil	15930.3	24-JAN-2013
AK102	24012.1	24-JAN-2013
AK103	11909.0	30-JAN-2013
Bunker C	9266.7	25-MAR-2013

/chem2/fig9.i/20130404.b/0404a008.d



JW
4/5/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JW

Date: 4/15/83

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 04/02/13

ARI Job: WK02
Project: Former Cashmere Mill Site
0779.02.01/03

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
13-6984-040313MB1	Method Blank	500 mL	1.00 mL	04/03/13
13-6984-040313LCS1	Lab Control	500 mL	1.00 mL	04/03/13
13-6984-040313LCSD1	Lab Control Dup	500 mL	1.00 mL	04/03/13
13-6984-WK02A	B1-032813	500 mL	1.00 mL	04/03/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: B1-032813

SAMPLE

Lab Sample ID: WK02A

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: 

Reported: 04/04/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 03/28/13

Date Received: 04/02/13

Date Analyzed: 04/03/13 14:09

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	92.0%
Bromobenzene	89.4%

Gasoline Surrogate Recovery

Trifluorotoluene	92.0%
Bromobenzene	89.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WK02
Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc.
Project: Former Cashmere Mill Site
Event: 0779.02.01/03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-040313	95.3%	91.7%	0
LCS-040313	100%	94.5%	0
LCSD-040313	97.1%	94.6%	0
B1-032813	92.0%	89.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-6984 to 13-6984

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: WK02
Matrix: Water

QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
Event: 0779.02.01/03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-040313	95.7%	91.8%	0
LCS-040313	98.6%	94.4%	0
LCSD-040313	96.3%	93.4%	0
B1-032813	92.0%	89.4%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(TFT) = Trifluorotoluene (5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene (15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene (5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene (15 mL PV)	(79-120)	(80-120)

Log Number Range: 13-6984 to 13-6984

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-040313

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040313

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: *B*

Reported: 04/04/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/03/13 09:56

LCSD: 04/03/13 10:25

Instrument/Analyst LCS: PID1/LH

LCSD: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	1.12	1.00	112%	1.07	1.00	107%	4.6%

Reported in mg/L (ppm)

RPD, calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	100%	97.1%
Bromobenzene	94.5%	94.6%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-040313

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040313

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: *AS*

Reported: 04/04/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/03/13 09:56

LCS D: 04/03/13 10:25

Instrument/Analyst LCS: PID1/LH

LCS D: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCS D: 1.0

Analyte	Spike		LCS		Spike		LCS D		RPD
	LCS	Added-LCS	Recovery	LCS D	Added-LCS D	Recovery	LCS D		
Benzene	3.65	3.70	98.6%	3.34	3.70	90.3%	8.9%		
Toluene	38.8	39.6	98.0%	36.0	39.6	90.9%	7.5%		
Ethylbenzene	11.4	11.6	98.3%	10.5	11.6	90.5%	8.2%		
m,p-Xylene	41.3	42.5	97.2%	38.1	42.5	89.6%	8.1%		
o-Xylene	18.6	19.2	96.9%	17.3	19.2	90.1%	7.2%		

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCS D
Trifluorotoluene	98.6%	96.3%
Bromobenzene	94.4%	93.4%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-040313

METHOD BLANK

Lab Sample ID: MB-040313

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: *AB*

Reported: 04/04/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 04/03/13 10:54

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	95.7%
Bromobenzene	91.8%

Gasoline Surrogate Recovery

Trifluorotoluene	95.3%
Bromobenzene	91.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

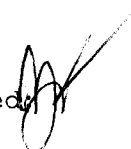
Sample ID: B1-032813

SAMPLE

Lab Sample ID: WK02A

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized: 

Reported: 04/09/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 03/28/13

Date Received: 04/02/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/03/13	6010C	04/08/13	7440-38-2	Arsenic	0.05	0.05	U
3010A	04/03/13	6010C	04/08/13	7440-47-3	Chromium	0.005	0.109	
3010A	04/03/13	6010C	04/08/13	7440-50-8	Copper	0.002	0.074	
3010A	04/03/13	6010C	04/08/13	7439-92-1	Lead	0.02	0.04	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WK02LCS
LIMS ID: 13-6984
Matrix: Water
Data Release Authorized:
Reported: 04/09/13



QC Report No: WK02-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	2.13	2.00	106%	
Chromium	6010C	0.532	0.500	106%	
Copper	6010C	0.512	0.500	102%	
Lead	6010C	2.05	2.00	102%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WK02MB

LIMS ID: 13-6984

Matrix: Water

Data Release Authorized 

Reported: 04/09/13

QC Report No: WK02-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: NA

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/03/13	6010C	04/08/13	7440-38-2	Arsenic	0.05	0.05	U
3010A	04/03/13	6010C	04/08/13	7440-47-3	Chromium	0.005	0.005	U
3010A	04/03/13	6010C	04/08/13	7440-50-8	Copper	0.002	0.002	U
3010A	04/03/13	6010C	04/08/13	7439-92-1	Lead	0.02	0.02	U

U-Analyte undetected at given RL

RL-Reporting Limit



April 18, 2013

Analytical Report for Service Request No: K1302998

Cheronne Oreiro
Analytical Resources, Incorporated
4611 So. 134th Place
Suite 100
Tukwila, WA 98168

RE: Former Cashmere Mill Site/WK02

Dear Cheronne:

Enclosed are the results of the samples submitted to our laboratory on April 03, 2013. For your reference, these analyses have been assigned our service request number K1302998.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3363. You may also contact me via Email at Lisa.Domenighini@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Lisa Domenighini
Project Manager

LD/mj

Page 1 of 12

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**Columbia Analytical Services, Inc. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjllabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Louisiana DHH	Not available	LA110003
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
New Mexico ED	http://www.nmenv.state.nm.us/dwb/Index.htm	-
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon - DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.caslab.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

ALS ENVIRONMENTAL

Client: Analytical Resources, Incorporated
Project: Former Cashmere Mill Site/ WK02
Sample Matrix: Water

Service Request No.: K1302998
Date Received: 04/03/13

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Two water samples were received for analysis at ALS Environmental on 04/03/13. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

EDB and DBCP by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by



SUBCONTRACTOR ANALYSIS REQUEST
 CUSTODY TRANSFER 04/02/13



K1000110

ARI Project: WK02

Laboratory: Columbia Analytical Services Inc.
 Lab Contact:
 Lab Address: 1317 South 13th Street
 Kelso, WA 98626
 Phone: 360-577-7222
 Fax: 360-636-1068

ARI Client: Maul Foster & Alongi, Inc
 Project ID: Former Cashmere Mill Site
 ARI PM: Cheronne Oreiro
 Phone:
 Fax: 206-695-6201
 Email: subdata@arilabs.com

Analytical Protocol: In-house
 Special Instructions:

Requested Turn Around: **04/16/13**
 Email Results (Y/N): **email**

Limits of Liability. Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
13-6984-WK02A	B1-032813	03/28/13 09:40	Water	4	Volatile (Sub)
Special Instructions: EDB					
13-6986-WK02C	ALS-Trip Blank	03/28/13	Water	2	Volatile (Sub)
Special Instructions: EDB					

Carrier	UPS	Airbill	128326950351373484	Date	4/2/13
Relinquished by	<i>[Signature]</i>	Company	ARI	Date	4/3/13 4/2/13
Received by	<i>[Signature]</i>	Company	ALS-IL150	Date	4/3/13
				Time	1530
				Time	1020



PCU *PCU*

Cooler Receipt and Preservation Form

Client / Project: Analytical Resources Service Request K13 DL599
 Received: 4/3/13 Opened: 4/3/13 By: SD Unloaded: 4/3/13 By: SD

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
 2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* NA
 3. Were custody seals on coolers? *NA* *N* If yes, how many and where? 1 - Front
 If present, were custody seals intact? *N* If present, were they signed and dated? *N*

Raw Temp	Corr. Temp	Raw Blank	Corr. Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
0.3	0.1	-	-	0.2	334	NA	128321650351373494		

7. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves*
 8. Were custody papers properly filled out (ink, signed, etc.)? *NA* *Y* *N*
 9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* *NA* *Y* *N*
 10. Were all sample labels complete (i.e analysis, preservation, etc.)? *NA* *Y* *N*
 11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* *NA* *Y* *N*
 12. Were appropriate bottles/containers and volumes received for the tests indicated? *NA* *Y* *N*
 13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* *NA* *Y* *N*
 14. Were VOA vials received without headspace? *Indicate in the table below.* *NA* *Y* *N*
 15. Was C12/Res negative? *NA* *Y* *N*

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

ALS ENVIRONMENTAL

Analytical Results

Client: Analytical Resources, Incorporated
Project: Former Cashmere Mill Site/WK02
Sample Matrix: Water

Service Request: K1302998
Date Collected: 03/28/2013
Date Received: 04/03/2013

EPA Method 504.1

Sample Name: 13-6984-WK02A B1-032813
Lab Code: K1302998-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.010	1	04/10/13	04/10/13	KWG1303404	

Comments: _____

ALS ENVIRONMENTAL

Analytical Results

Client: Analytical Resources, Incorporated
Project: Former Cashmere Mill Site/WK02
Sample Matrix: Water

Service Request: K1302998
Date Collected: 03/28/2013
Date Received: 04/03/2013

EPA Method 504.1

Sample Name: 13-6986-WK02C ALS Trip Blank
Lab Code: K1302998-002
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.011	1	04/10/13	04/10/13	KWG1303404	

Comments:

ALS ENVIRONMENTAL

Analytical Results

Client: Analytical Resources, Incorporated
Project: Former Cashmere Mill Site/WK02
Sample Matrix: Water

Service Request: K1302998
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank
Lab Code: KWG1303404-3
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.010	1	04/10/13	04/10/13	KWG1303404	

Comments:

ALS ENVIRONMENTAL

QA/QC Report

Client: Analytical Resources, Incorporated
Project: Former Cashmere Mill Site/WK02
Sample Matrix: Water

Service Request: K1302998
Date Extracted: 04/10/2013
Date Analyzed: 04/10/2013

Matrix Spike Summary
EPA Method 504.1

Sample Name: 13-6984-WK02A B1-032813
Lab Code: K1302998-001
Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1303404

13-6984-WK02A
B1-032813MS
KWG1303404-1
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	ND	0.261	0.254	103	65-135

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS ENVIRONMENTAL

QA/QC Report

Client: Analytical Resources, Incorporated
Project: Former Cashmere Mill Site/WK02
Sample Matrix: Water

Service Request: K1302998
Date Extracted: 04/10/2013
Date Analyzed: 04/10/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1303404

Lab Control Sample
 KWG1303404-2
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.268	0.250	107	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 24, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Former Cashmere Mill Site, 0779.02.0403
ARI Job No.: WM43

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted one soil sample on April 18, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for SVOCs, NWTPH-Dx, NWTPH-Gx/BETX, and Metals, as requested on the COC.

The SVOC continuing calibration fell outside the 20% control limit low for Hexachlorocyclopentadiene. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WM43

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WM 473	Turn-around Requested: Rush - 24 Hrs.	Page: 1 of 1
ARI Client Company: MFA, Inc.	Phone:	Date: 04/17/13
Client Contact: Tony Silva 503-2092578	No. of Coolers: 1	Ice Present? <input checked="" type="checkbox"/>
Client Project Name:	Cooler Temps: 0.5	

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments	
					Gx BTEX SO3S/8021	Dx + Silica Gel Clean	SVOCS 8270	Metals 6010 As, Cr, Cu, Pb	EDB EDC MTR 8200 if Gx Detected			
G-S-1	04/17/13	13:41	Soil	8	X	X	X	X				Hold Penamby Pen, Amp, U.

Comments/Special Instructions Provide GIS Key to file EDD. Email to Tony and Erik Naylor enaylor@mfafisher.com	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Tony Silva	Printed Name: Taylor ; Grant	Printed Name:	Printed Name
	Company: MFA	Company: ARI	Company:	Company.
	Date & Time: 04/17/13 16:30	Date & Time: 4-18-13 10:00	Date & Time	Date & Time.

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MF A
 COC No(s): _____ (NA)
 Assigned ARI Job No WM43

Project Name _____
 Delivered by Fed-Ex Courier Hand Delivered Other: _____
 Tracking No 2099549578 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc) YES NO
 Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry)... 05
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 4687953
 Cooler Accepted by TS Date 4/18/03 Time 10:00

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI... NA
 Was Sample Split by ARI: YES Date/Time: _____ Equipment _____ Split by: _____
 Samples Logged by TS Date: 4/18/03 Time: 10:00

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By _____ Date _____

Small Air Bubbles -2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WM43
Client: Maul Foster & Alongi, Inc
Project Event: N/A
Project Name: N/A

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. G-S-1	WM43A	13-8197	Soil	04/17/13 13:41	04/18/13 10:00



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: G-S-1
SAMPLE

Lab Sample ID: WM43A
 LIMS ID: 13-8197
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 04/24/13

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project: NA
 NA
 Date Sampled: 04/17/13
 Date Received: 04/18/13

Date Extracted: 04/18/13
 Date Analyzed: 04/18/13 17:56
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 11.06 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 23.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	18	62
111-44-4	Bis-(2-Chloroethyl) Ether	18	< 18 U
95-57-8	2-Chlorophenol	18	< 18 U
541-73-1	1,3-Dichlorobenzene	18	< 18 U
106-46-7	1,4-Dichlorobenzene	18	< 18 U
100-51-6	Benzyl Alcohol	18	< 18 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
95-48-7	2-Methylphenol	18	< 18 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	18	< 18 U
106-44-5	4-Methylphenol	18	330
621-64-7	N-Nitroso-Di-N-Propylamine	18	< 18 U
67-72-1	Hexachloroethane	18	< 18 U
98-95-3	Nitrobenzene	18	< 18 U
78-59-1	Isophorone	18	< 18 U
88-75-5	2-Nitrophenol	90	< 90 U
105-67-9	2,4-Dimethylphenol	36	< 36 U
65-85-0	Benzoic Acid	360	< 360 U
111-91-1	bis(2-Chloroethoxy) Methane	18	< 18 U
120-83-2	2,4-Dichlorophenol	180	< 180 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
91-20-3	Naphthalene	18	74
106-47-8	4-Chloroaniline	240	< 240 U
87-68-3	Hexachlorobutadiene	18	< 18 U
59-50-7	4-Chloro-3-methylphenol	90	< 90 U
91-57-6	2-Methylnaphthalene	18	59
77-47-4	Hexachlorocyclopentadiene	360	< 360 U
88-06-2	2,4,6-Trichlorophenol	90	< 90 U
95-95-4	2,4,5-Trichlorophenol	90	< 90 U
91-58-7	2-Chloronaphthalene	18	< 18 U
88-74-4	2-Nitroaniline	90	< 90 U
131-11-3	Dimethylphthalate	18	< 18 U
208-96-8	Acenaphthylene	18	< 18 U
99-09-2	3-Nitroaniline	90	< 90 U
83-32-9	Acenaphthene	18	< 18 U
51-28-5	2,4-Dinitrophenol	770	< 770 U
100-02-7	4-Nitrophenol	90	< 90 U
132-64-9	Dibenzofuran	18	< 18 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: G-S-1
SAMPLE

Lab Sample ID: WM43A
 LIMS ID: 13-8197
 Matrix: Soil
 Date Analyzed: 04/18/13 17:56

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project: NA
 NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	90	< 90 U
121-14-2	2,4-Dinitrotoluene	90	< 90 U
84-66-2	Diethylphthalate	45	< 45 U
7005-72-3	4-Chlorophenyl-phenylether	18	< 18 U
86-73-7	Fluorene	18	< 18 U
100-01-6	4-Nitroaniline	90	< 90 U
534-52-1	4,6-Dinitro-2-Methylphenol	180	< 180 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
101-55-3	4-Bromophenyl-phenylether	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-86-5	Pentachlorophenol	180	< 180 U
85-01-8	Phenanthrene	18	45
86-74-8	Carbazole	18	< 18 U
120-12-7	Anthracene	18	< 18 U
84-74-2	Di-n-Butylphthalate	18	< 18 U
206-44-0	Fluoranthene	18	27
129-00-0	Pyrene	18	36
85-68-7	Butylbenzylphthalate	18	< 18 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo(a)anthracene	18	< 18 U
117-81-7	bis(2-Ethylhexyl)phthalate	23	< 23 U
218-01-9	Chrysene	18	< 18 U
117-84-0	Di-n-Octyl phthalate	18	< 18 U
50-32-8	Benzo(a)pyrene	18	< 18 U
193-39-5	Indeno(1,2,3-cd)pyrene	18	< 18 U
53-70-3	Dibenz(a,h)anthracene	18	< 18 U
191-24-2	Benzo(g,h,i)perylene	18	< 18 U
90-12-0	1-Methylnaphthalene	18	23
TOTBFA	Total Benzofluoranthenes	36	< 36 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	77.0%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	82.0%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	80.8%	2-Fluorophenol	72.5%
2,4,6-Tribromophenol	76.8%	d4-2-Chlorophenol	68.3%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WM43-Maul Foster & Alongi, Inc
Project:

<u>Client ID</u>	<u>NBZ</u>	<u>FBP</u>	<u>TPH</u>	<u>DCB</u>	<u>PHL</u>	<u>2FP</u>	<u>TBP</u>	<u>2CP</u>	<u>TOT</u>	<u>OUT</u>
MB-041813	73.2%	65.2%	88.4%	64.6%	71.3%	70.0%	63.6%	66.8%	0	
LCS-041813	72.2%	71.4%	85.6%	62.2%	79.9%	71.9%	71.1%	68.8%	0	
G-S-1	77.0%	72.0%	82.0%	62.4%	80.8%	72.5%	76.8%	68.3%	0	

LCS/MB LIMITS QC LIMITS

(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(37-100)	(31-100)

Prep Method: SW3546
Log Number Range: 13-8197 to 13-8197

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 1 of 2

Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
 LIMS ID: 13-8197
 Matrix: Soil
 Data Release Authorized: *mw*
 Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project:
 Date Sampled: 04/17/13
 Date Received: 04/18/13

Date Extracted: 04/18/13
 Date Analyzed: 04/18/13 17:19
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	400	500	80.0%
Bis-(2-Chloroethyl) Ether	385	500	77.0%
2-Chlorophenol	333	500	66.6%
1,3-Dichlorobenzene	330	500	66.0%
1,4-Dichlorobenzene	335	500	67.0%
Benzyl Alcohol	362	500	72.4%
1,2-Dichlorobenzene	337	500	67.4%
2-Methylphenol	350	500	70.0%
2,2'-Oxybis(1-Chloropropane)	361	500	72.2%
4-Methylphenol	746	1000	74.6%
N-Nitroso-Di-N-Propylamine	421	500	84.2%
Hexachloroethane	357	500	71.4%
Nitrobenzene	388	500	77.6%
Isophorone	416	500	83.2%
2-Nitrophenol	346	500	69.2%
2,4-Dimethylphenol	1120	1500	74.7%
Benzoic Acid	1120	2750	40.7%
bis(2-Chloroethoxy) Methane	419	500	83.8%
2,4-Dichlorophenol	1250	1500	83.3%
1,2,4-Trichlorobenzene	415	500	83.0%
Naphthalene	333	500	66.6%
4-Chloroaniline	1060	1500	70.7%
Hexachlorobutadiene	338	500	67.6%
4-Chloro-3-methylphenol	1360	1500	90.7%
2-Methylnaphthalene	378	500	75.6%
Hexachlorocyclopentadiene	766 Q	1500	51.1%
2,4,6-Trichlorophenol	1160	1500	77.3%
2,4,5-Trichlorophenol	1170	1500	78.0%
2-Chloronaphthalene	386	500	77.2%
2-Nitroaniline	1510	1500	101%
Dimethylphthalate	441	500	88.2%
Acenaphthylene	376	500	75.2%
3-Nitroaniline	1340	1500	89.3%
Acenaphthene	390	500	78.0%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 2 of 2

Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
 LIMS ID: 13-8197
 Matrix: Soil
 Date Analyzed: 04/18/13 17:19

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project:

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1700	2750	61.8%
4-Nitrophenol	1130	1500	75.3%
Dibenzofuran	411	500	82.2%
2,6-Dinitrotoluene	1340	1500	89.3%
2,4-Dinitrotoluene	1380	1500	92.0%
Diethylphthalate	441	500	88.2%
4-Chlorophenyl-phenylether	422	500	84.4%
Fluorene	392	500	78.4%
4-Nitroaniline	1400	1500	93.3%
4,6-Dinitro-2-Methylphenol	2300	2750	83.6%
N-Nitrosodiphenylamine	478	500	95.6%
4-Bromophenyl-phenylether	442	500	88.4%
Hexachlorobenzene	378	500	75.6%
Pentachlorophenol	993	1500	66.2%
Phenanthrene	423	500	84.6%
Carbazole	574	500	115%
Anthracene	414	500	82.8%
Di-n-Butylphthalate	484	500	96.8%
Fluoranthene	439	500	87.8%
Pyrene	454	500	90.8%
Butylbenzylphthalate	516	500	103%
3,3'-Dichlorobenzidine	829	1500	55.3%
Benzo(a)anthracene	413	500	82.6%
bis(2-Ethylhexyl)phthalate	501	500	100%
Chrysene	389	500	77.8%
Di-n-Octyl phthalate	434	500	86.8%
Benzo(a)pyrene	421	500	84.2%
Indeno(1,2,3-cd)pyrene	387	500	77.4%
Dibenz(a,h)anthracene	389	500	77.8%
Benzo(g,h,i)perylene	366	500	73.2%
1-Methylnaphthalene	398	500	79.6%
Total Benzofluoranthenes	806	1000	80.6%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.2%
2-Fluorobiphenyl	71.4%
d14-p-Terphenyl	85.6%
d4-1,2-Dichlorobenzene	62.2%
d5-Phenol	79.9%
2-Fluorophenol	71.9%
2,4,6-Tribromophenol	71.1%
d4-2-Chlorophenol	68.8%

Reported in µg/kg (ppb)

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: MB-041813
METHOD BLANK

Lab Sample ID: MB-041813
 LIMS ID: 13-8197
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project: NA
 NA
 Date Sampled: NA
 Date Received: NA

Date Extracted: 04/18/13
 Date Analyzed: 04/18/13 16:42
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: MB-041813
METHOD BLANK

Lab Sample ID: MB-041813
 LIMS ID: 13-8197
 Matrix: Soil
 Date Analyzed: 04/18/13 16:42

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project: NA
 NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	25	< 25 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	73.2%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	88.4%	d4-1,2-Dichlorobenzene	64.6%
d5-Phenol	71.3%	2-Fluorophenol	70.0%
2,4,6-Tribromophenol	63.6%	d4-2-Chlorophenol	66.8%

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned
 Extraction Method: SW3546
 Page 1 of 1



QC Report No: WM43-Maul Foster & Alongi, Inc
 Project:

Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 04/18/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-041813 13-8197	Method Blank HC ID: ---	04/18/13	04/18/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 103%
WM43A 13-8197	G-S-1 HC ID: DIESEL/MOTOR OIL	04/18/13	04/18/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	10 32 82.0%

, Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
 DL-Dilution of extract prior to analysis.
 RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
 Motor Oil range quantitation on total peaks in the range from C24 to C38.
 HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130418.b/0418b013.d
Method: /chem3/fid3b.i/20130418.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WM43MBS1
Client ID:
Injection: 18-APR-2013 14:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		58951	2
C8	0.839	0.000	2319	460	WATPHD (C12-C24)		151146	13.33
C10	2.255	-0.008	376	372	WATPHM (C24-C38)		94346	8.56
C12	3.048	-0.002	2445	1803	AK102 (C10-C25)		165583	12.00
C14	3.627	-0.002	3116	2326	AK103 (C25-C36)		78809	10.77
C16	4.127	-0.002	2421	2423	OR.DIES (C10-C28)		190385	12.38
C18	4.577	-0.003	1564	1041				
C20	5.000	-0.002	1494	1066				
C22	5.398	-0.003	1500	1536				
C24	5.780	0.008	832	211				
C25	5.943	-0.006	1068	885				
C26	6.130	0.003	667	144				
C28	6.436	-0.006	1619	1811	IT.DIES (C10-C24)		162507	11.79
C32	6.985	-0.004	8461	7747				
C34	7.220	-0.004	942	653				
Filter Peak	----							
C36	7.442	-0.001	903	398	BUNKERC (C10-C38)		256853	52.37
o-terph	4.691	0.000	992410	674331	JET-A (C10-C18)		99864	6.94
Triacon Surr	6.736	-0.002	909618	653346				

Range Times: NW Diesel(3.101 - 5.822) NW Gas(0.612 - 3.101) NW M.Oil(5.822 - 7.696)
AK102(2.213 - 5.899) AK103(5.899 - 7.493) Jet A(2.213 - 4.630)

Surrogate	Area	Amount	%Rec
o-Terphenyl	674331	46.5	103.3
Triacontane	653346	42.8	95.0

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130418.b/0418b013.d

Date: 18-APR-2013 14:28

Client ID:

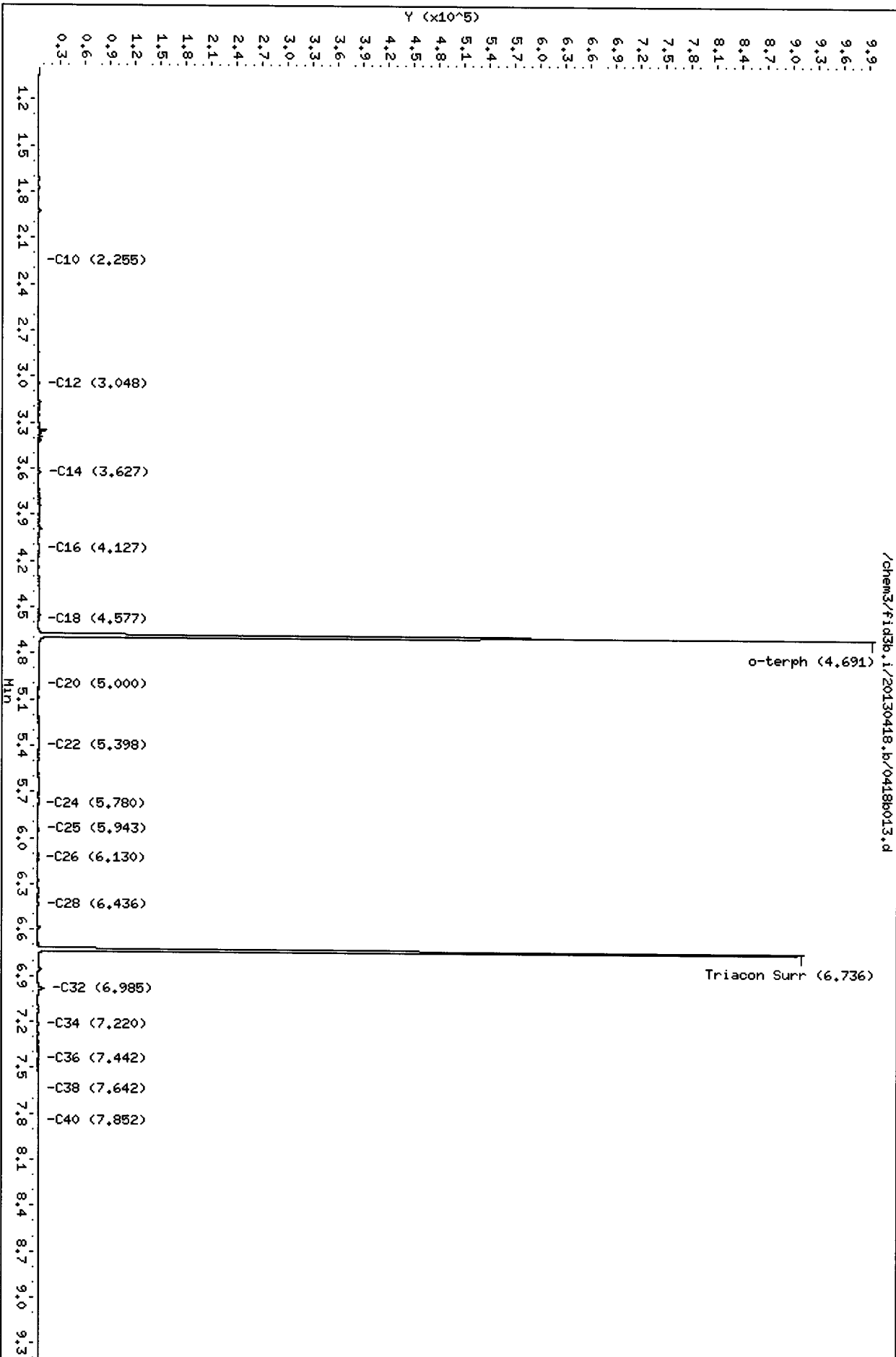
Sample Info: MH43HBS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130418.b/0418b012.d
Method: /chem3/fid3b.i/20130418.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WM43A
Client ID:
Injection: 18-APR-2013 14:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		229727	8
C8	0.843	0.005	3455	7281	WATPHD (C12-C24)		955337	84.24 ✓
C10	2.267	0.004	3570	2662	WATPHM (C24-C38)		2980987	270.31 ✓
C12	3.048	-0.002	4095	3255	AK102 (C10-C25)		1113066	80.70 M
C14	3.628	-0.002	6125	4673	AK103 (C25-C36)		2747647	375.52 M
C16	4.126	-0.003	5523	4876	OR.DIES (C10-C28)		2046871	133.07 M
C18	4.571	-0.009	8135	9931				
C20	4.997	-0.005	9594	8509				
C22	5.403	0.002	11879	5914				
C24	5.775	0.002	21057	21038				
C25	5.945	-0.004	33575	45689				
C26	6.124	-0.003	22036	12252				
C28	6.445	0.004	34353	16510	IT.DIES (C10-C24)		1032812	74.90
C32	6.986	-0.003	37844	35128				
C34	7.219	-0.006	23243	23959				
Filter Peak	----							
C36	7.438	-0.005	19955	13768	BUNKERC (C10-C38)		4013799	818.34
o-terph	4.690	-0.002	817648	535738	JET-A (C10-C18)		337774	23.46
Triacon Surr	6.736	-0.002	716524	524674				

Range Times: NW Diesel(3.101 - 5.822) NW Gas(0.612 - 3.101) NW M.Oil(5.822 - 7.696)
AK102(2.213 - 5.899) AK103(5.899 - 7.493) Jet A(2.213 - 4.630)

Surrogate	Area	Amount	%Rec
o-Terphenyl	535738	36.9	82.0 ✓
Triacontane	524674	34.3	76.3

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130418.b/0418b012.d
Date: 18-APR-2013 14:08

Client ID:
Sample Info: MH43A

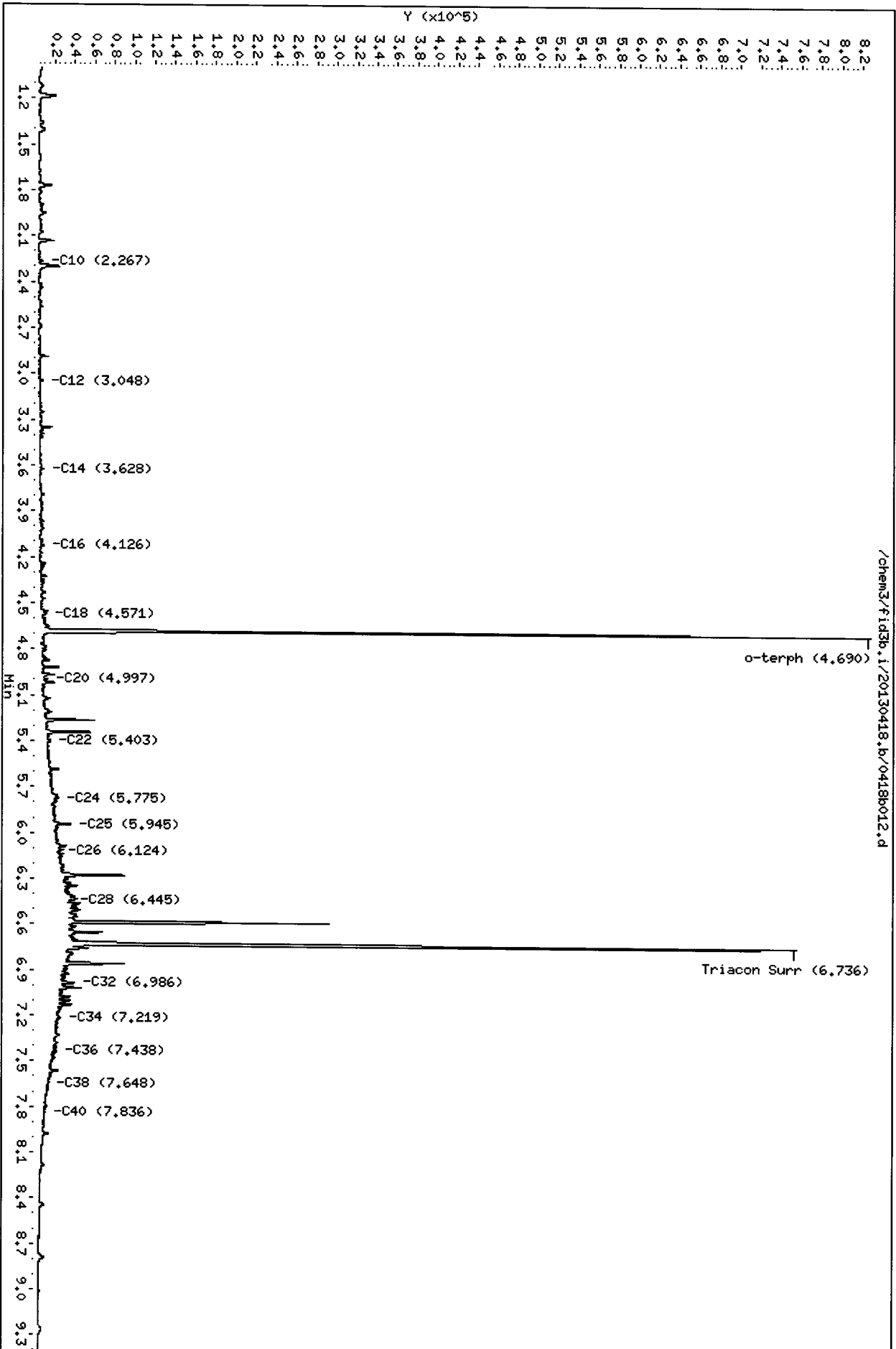
Column phase: RTX-1

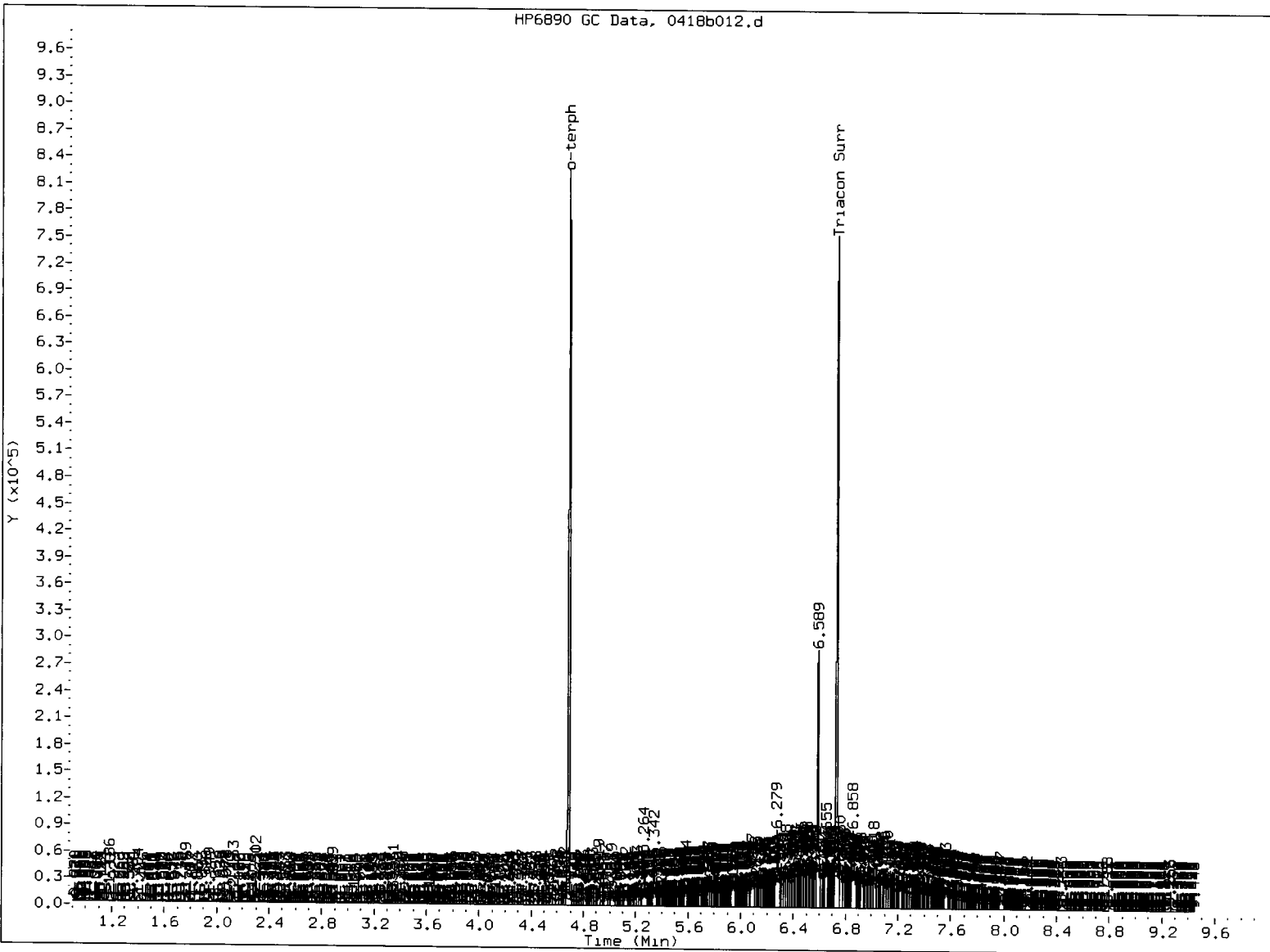
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

Ju
11/15/12





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 4/18/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WM43-Maul Foster & Alongi, Inc
Project:

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-041813	103%	0
LCS-041813	104%	0
G-S-1	82.0%	0

(OTER) = o-Terphenyl

LCS/MB LIMITS QC LIMITS


(50-150) (50-150)

Prep Method: SW3546
Log Number Range: 13-8197 to 13-8197

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1



Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
LIMS ID: 13-8197
Matrix: Soil
Data Release Authorized: 
Reported: 04/18/13

QC Report No: WM43-Maul Foster & Alongi, Inc
Project:

Date Sampled: 04/17/13
Date Received: 04/18/13

Date Extracted: 04/18/13
Date Analyzed: 04/18/13 14:48
Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	141	150	94.0%

TPHD Surrogate Recovery

o-Terphenyl	104%
-------------	------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130418.b/0418b014.d
Method: /chem3/fid3b.i/20130418.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WM43LCSS1
Client ID:
Injection: 18-APR-2013 14:48
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3735489	138
C8	0.852	0.013	6307	12340	WATPHD (C12-C24)		16031663	1413.71 ✓
C10	2.266	0.003	117219	78203	WATPHM (C24-C38)		180189	16.34 ✓
C12	3.051	0.001	182894	175168	AK102 (C10-C25)		18809612	1363.70 M
C14	3.632	0.002	339963	288299	AK103 (C25-C36)		129607	17.71
C16	4.133	0.005	546876	393185	OR.DIES (C10-C28)		18914963	1229.68 M
C18	4.585	0.005	456018	418110				
C20	5.005	0.003	321237	323514				
C22	5.400	-0.001	184115	156531				
C24	5.771	-0.002	48312	53737				
C25	5.944	-0.005	22539	21122				
C26	6.135	0.008	2973	1541				
C28	6.437	-0.005	2122	2626	IT.DIES (C10-C24)		18762692	1360.70
C32	6.983	-0.006	7627	6083				
C34	7.232	0.008	103	35				
Filter Peak	----							
C36	7.446	0.003	177	107	BUNKERC (C10-C38)		18942881	3862.11
o-terph	4.695	0.004	1004257	682497	JET-A (C10-C18)		13971578	970.32
Triacon Surr	6.737	-0.001	978093	649082				

Range Times: NW Diesel(3.101 - 5.822) NW Gas(0.612 - 3.101) NW M.Oil(5.822 - 7.696)
AK102(2.213 - 5.899) AK103(5.899 - 7.493) Jet A(2.213 - 4.630)

Surrogate	Area	Amount	%Rec
o-Terphenyl	682497	47.0	104.5 ✓
Triacantane	649082	42.5	94.4

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130418.b/0418b014.d

Date: 18-APR-2013 14:48

Client ID:

Sample Info: MH43LCSS1

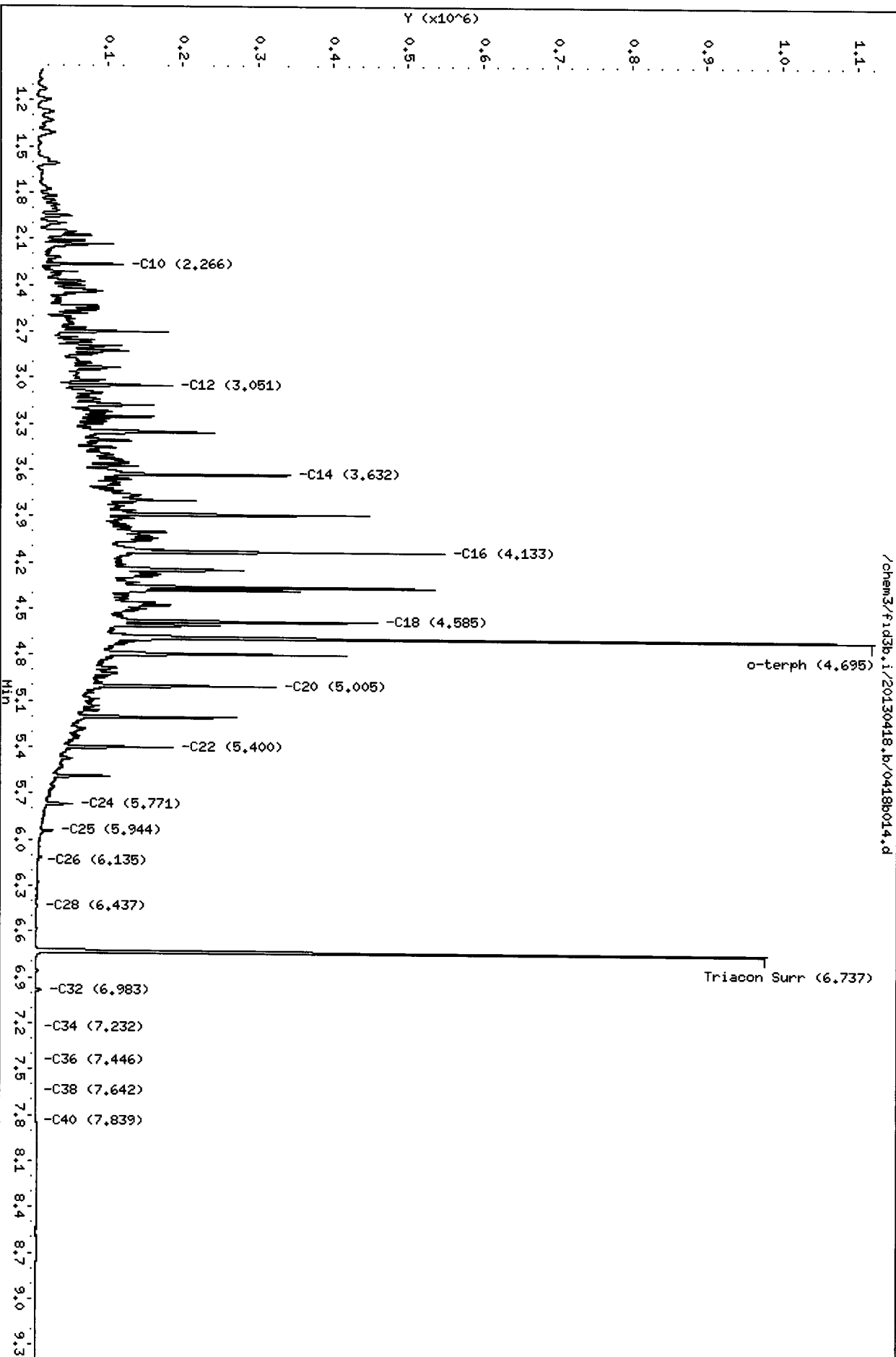
Column phase: RTX-1

Instrument: fid3b.i

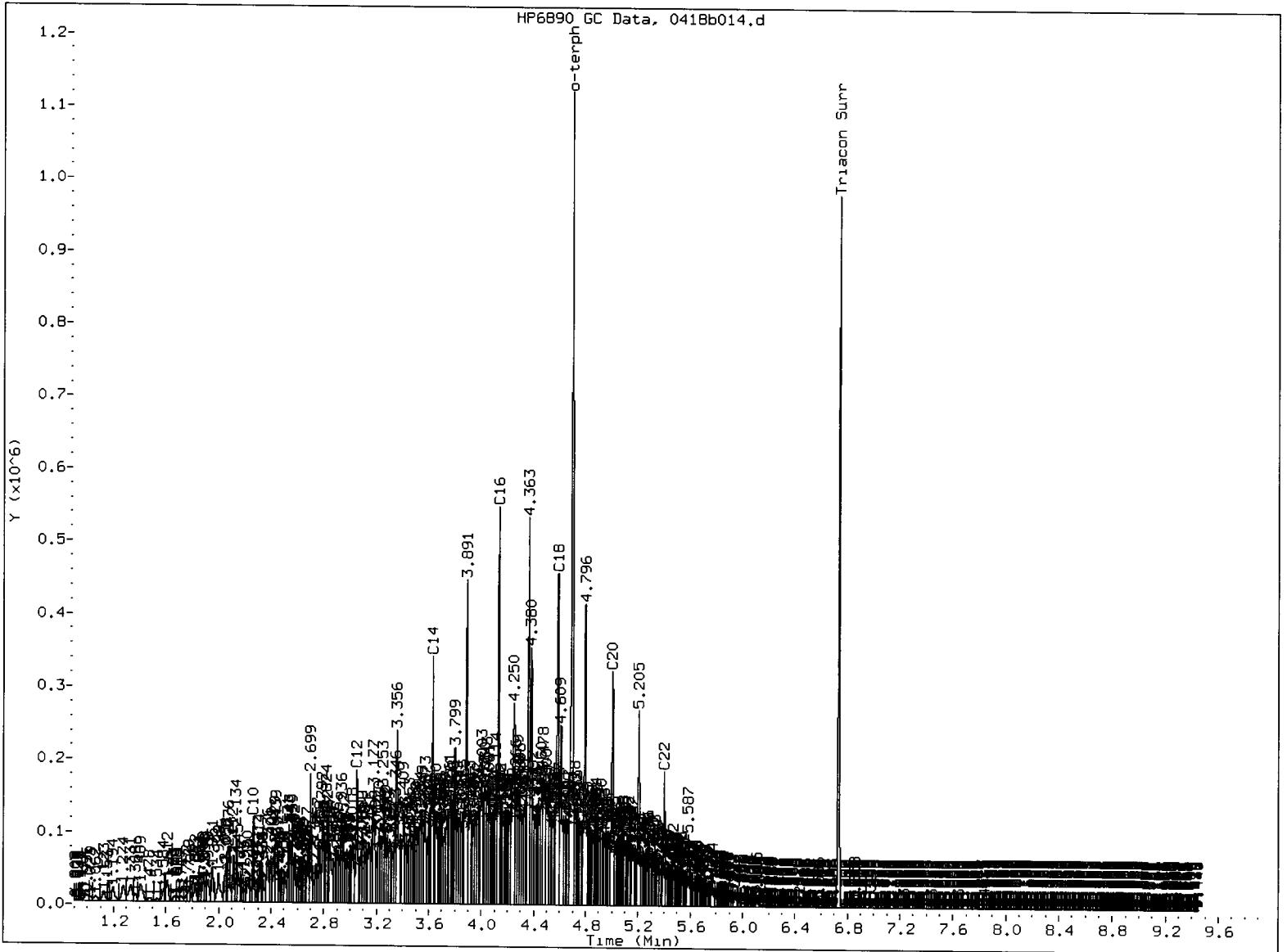
Operator: JM

Column diameter: 0.25

Page 1



JW
4/18/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 4/18/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 04/18/13

ARI Job: WM43
Project:

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-8197-041813MB1	Method Blank	10.0 g	1.00 mL	-	04/18/13
13-8197-041813LCS1	Lab Control	10.0 g	1.00 mL	-	04/18/13
13-8197-WM43A	G-S-1	8.40 g	1.00 mL	D	04/18/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1



Sample ID: G-S-1
SAMPLE

Lab Sample ID: WM43A

LIMS ID: 13-8197

Matrix: Soil

Data Release Authorized: *AB*

Reported: 04/24/13

QC Report No: WM43-Maul Foster & Alongi, Inc

Project: NA

Event: NA

Date Sampled: 04/17/13

Date Received: 04/18/13

Date Analyzed: 04/18/13 18:17

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 61 mg-dry-wt

Percent Moisture: 23.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	< 20 U
100-41-4	Ethylbenzene	20	< 20 U
179601-23-1	m,p-Xylene	41	< 41 U
95-47-6	o-Xylene	20	< 20 U

Gasoline Range Hydrocarbons	8.1	< 8.1 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	82.5%
Bromobenzene	82.0%

Gasoline Surrogate Recovery

Trifluorotoluene	81.8%
Bromobenzene	80.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VC
4/19/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130418a-1.b/0418a019.d ARI ID: WM43A
Data file 2: /chem3/pid1.i/20130418a-2.b/0418a019.d Client ID: G-S-1
Method: /chem3/pid1.i/20130418a-2.b/PIDB.m Injection Date: 18-APR-2013 18:17
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.831	0.001	2839	34794	81.8	TFT(Surr)
15.375	0.000	1833	15334	80.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	10853	0.030
8015C 2MP-TMB (4.16 to 16.20)	723723	7076	0.010
AK101 nC6-nC10 (4.65 to 15.09)	582885	5693	0.010
NWTPHG Tol-Nap (9.76 to 18.90)	375093	12584	0.034

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.839	0.001	3274	82.5	TFT(Surr)
15.383	0.000	7210	82.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.867	0.001	51	0.22N	Toluene J
ND	---	---	---	Ethylbenzene
12.927	0.005	92	0.43N	M/P-Xylene J
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

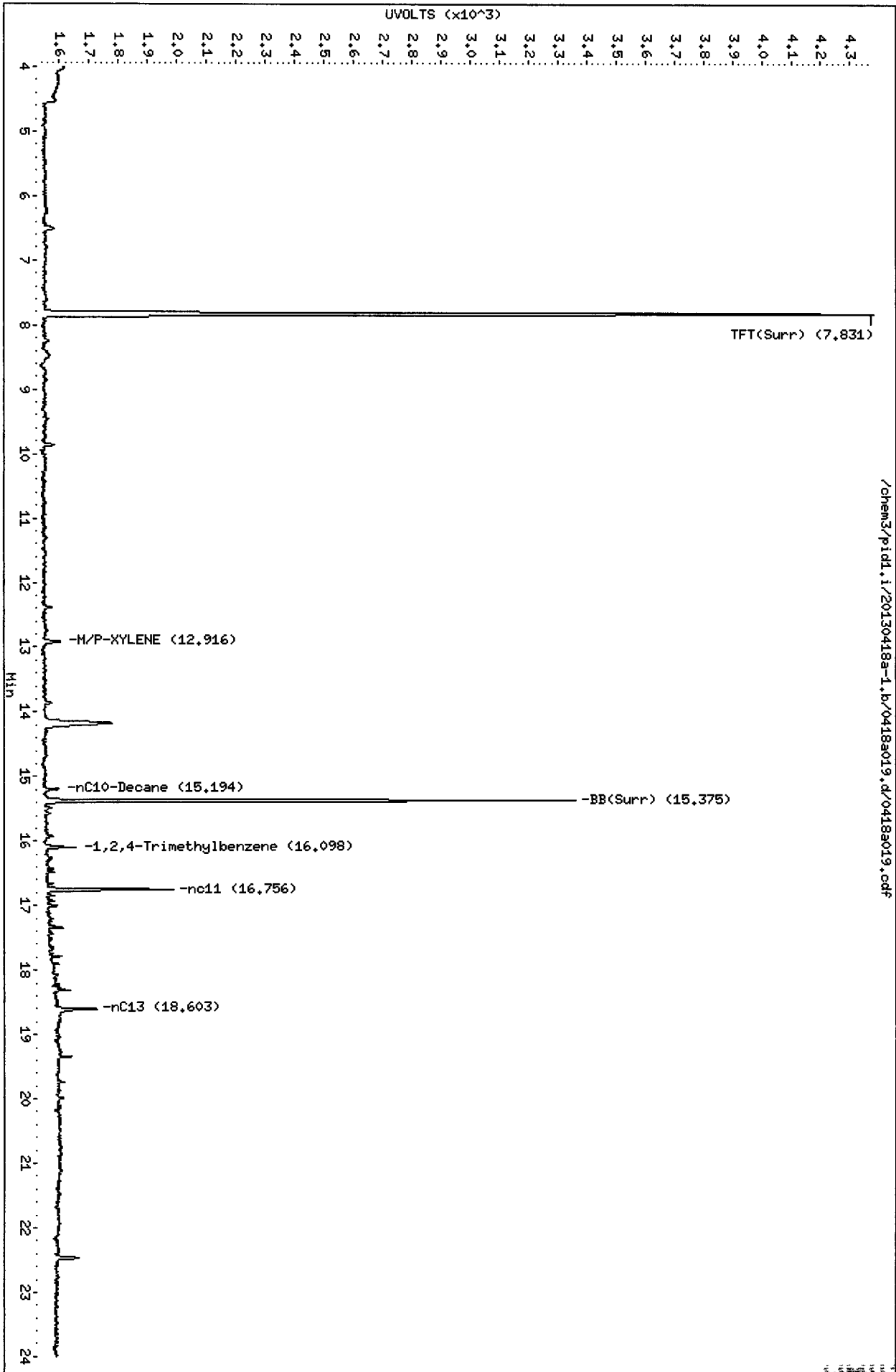
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130418a-1.b/0418a019.d
Date: 18-APR-2013 18:17
Client ID: G-S-1
Sample Info: MH43A

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

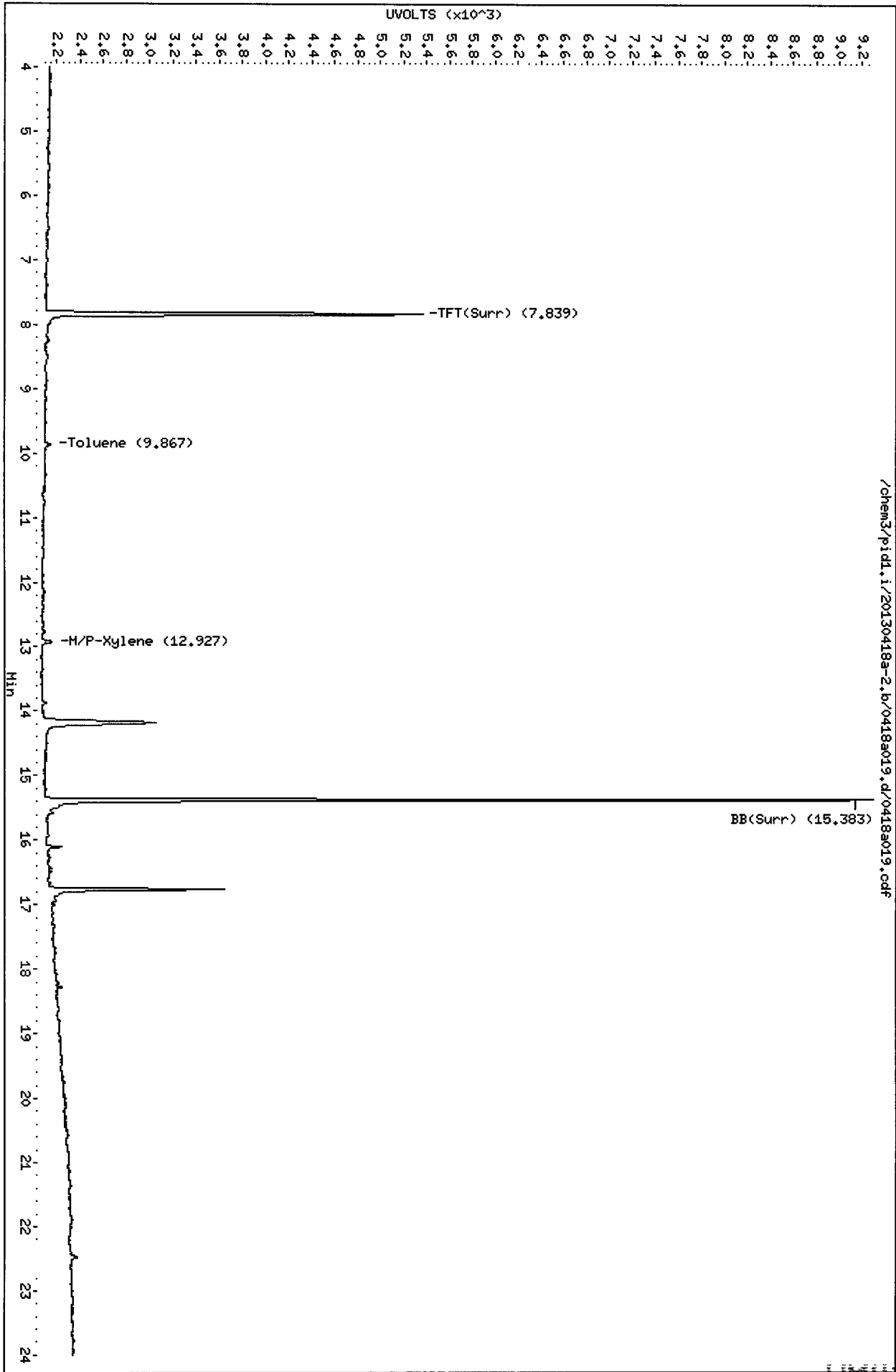
/chem3/pid1.i/20130418a-1.b/0418a019.d/0418a019.cdf



Data File: /chem3/pid1.i/20130418a-2.b/0418a019.d
Date: 18-APR-2013 18:17
Client ID: G-S-1
Sample Info: MH43A

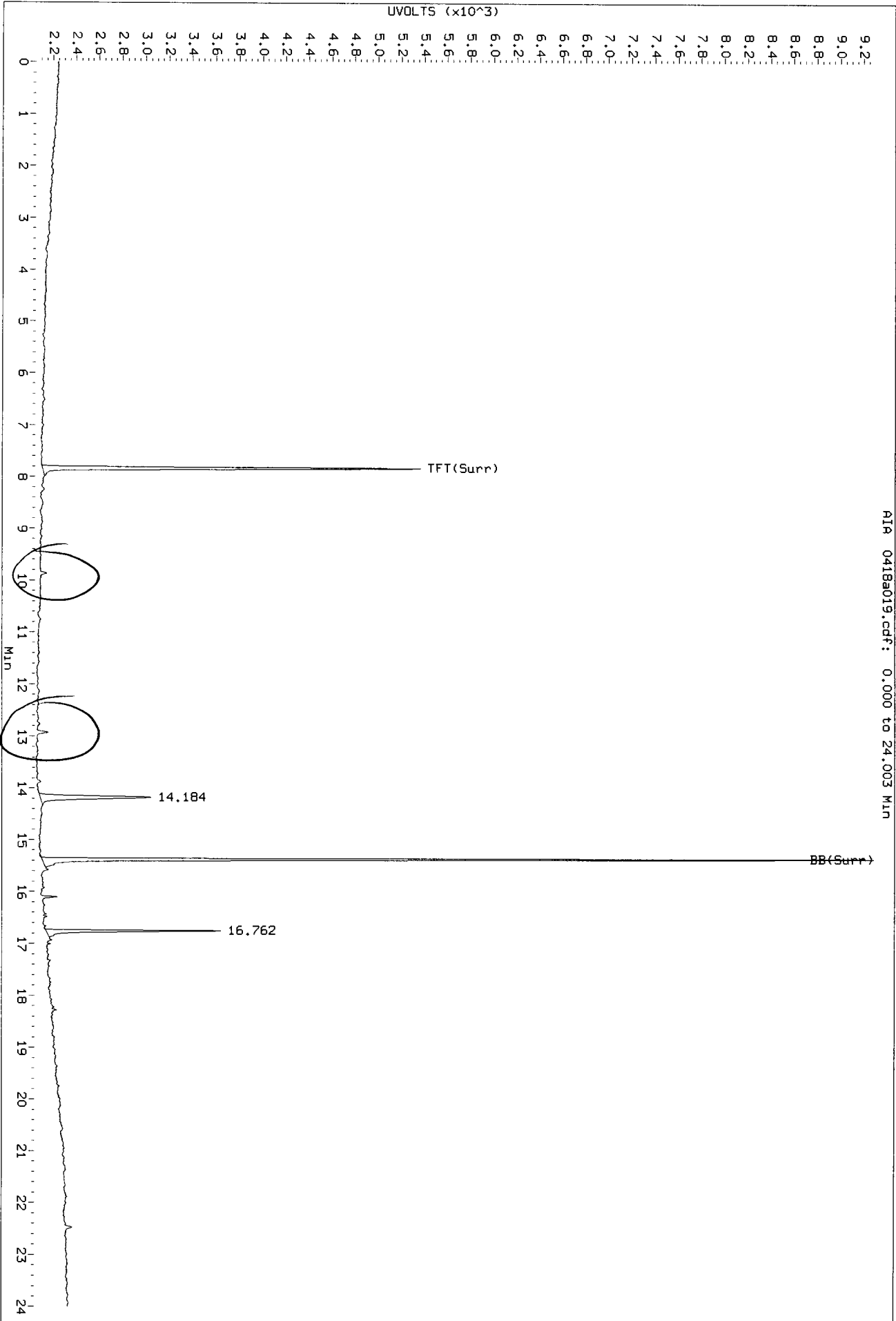
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.1/20130418a-2.b/0418a019.d/0418a019.cdf
Injection Date: 18-APR-2013 18:17
Instrument: pid1.1
Client Sample ID: G-S-1

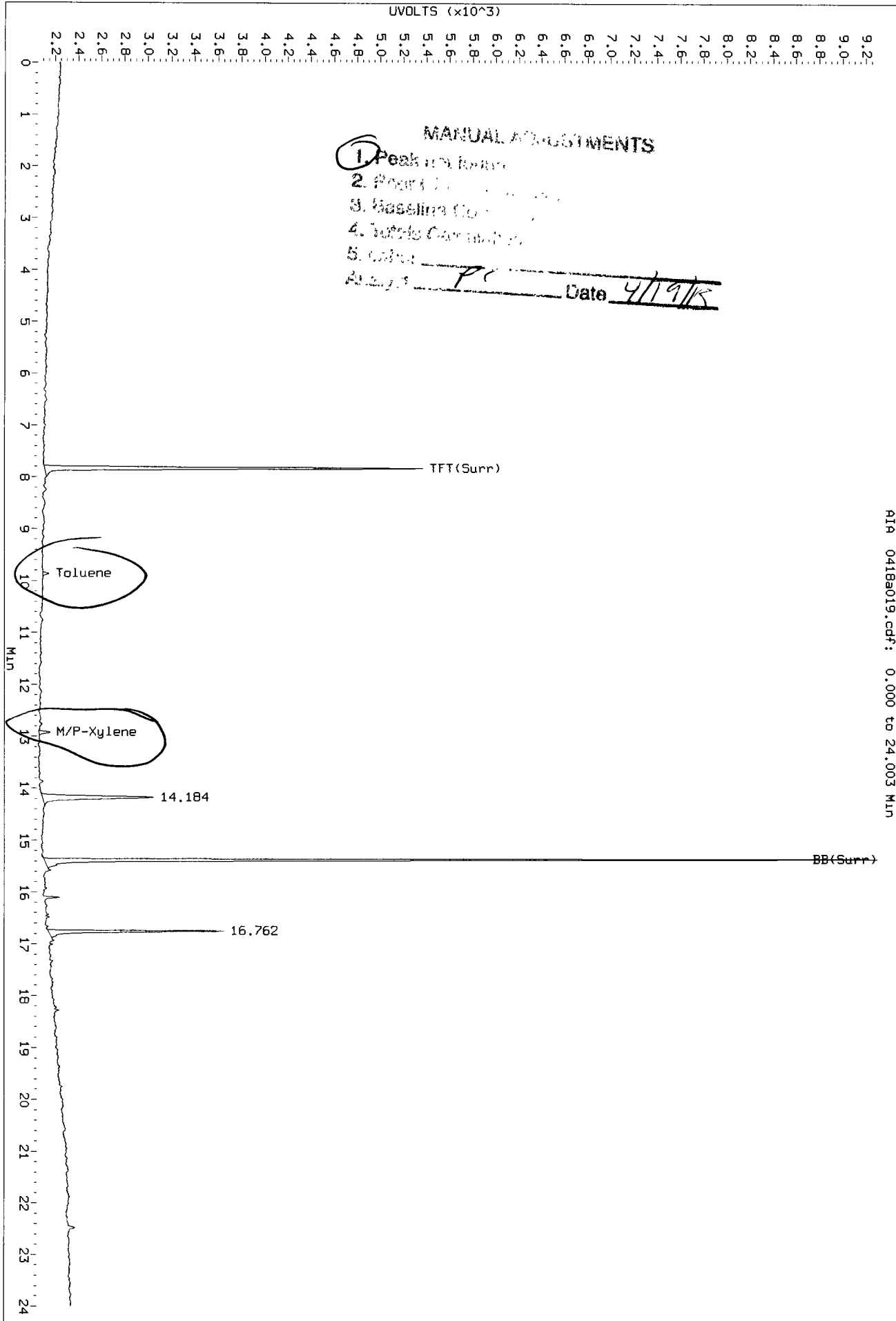
AIA 0418a019.cdf: 0.000 to 24.003 Min



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Data File: /chem3/pid1.1/20130418a-2.b/0418a019.d/0418a019.cdf
Injection Date: 18-APR-2013 18:17
Instrument: pid1.1
Client Sample ID: G-5-1

AIA 0418a019.cdf: 0.000 to 24.003 MIN



MANUAL ADJUSTMENTS

- 1. Peak 10.0
 - 2. Peak 12.5
 - 3. Massline Slope
 - 4. Integrate Compensation
 - 5. Other
- Analyst: PC Date: 4/19/13

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TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WM43
Matrix: Soil

QC Report No: WM43-Maul Foster & Alongi, Inc
Project: NA
Event: NA

Client ID	BFB	TFT	BBZ	TOT OUT
MB-041813	NA	85.5%	84.1%	0
LCS-041813	NA	87.2%	82.3%	0
LCSD-041813	NA	90.3%	85.2%	0
G-S-1	NA	81.8%	80.3%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-8197 to 13-8197

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WM43
Matrix: Soil

QC Report No: WM43-Maul Foster & Alongi, Inc
Project: NA
Event: NA

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-041813	86.7%	86.0%	0
LCS-041813	86.5%	85.2%	0
LCSD-041813	92.5%	88.9%	0
G-S-1	82.5%	82.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-8197 to 13-8197

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: LCS-041813
LAB CONTROL SAMPLE

Lab Sample ID: LCS-041813
 LIMS ID: 13-8197
 Matrix: Soil
 Data Release Authorized: *mw*
 Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc
 Project: NA
 Event: NA
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 04/18/13 16:16
 LCSD: 04/18/13 17:19
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	46.2	50.0	92.4%	44.0	50.0	88.0%	4.9%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	87.2%	90.3%
Bromobenzene	82.3%	85.2%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

Page 1 of 1

Sample ID: LCS-041813

LAB CONTROL SAMPLE

Lab Sample ID: LCS-041813

QC Report No: WM43-Maul Foster & Alongi, Inc

LIMS ID: 13-8197

Project: NA

Matrix: Soil

Event: NA

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 04/19/13

Date Received: NA

Date Analyzed LCS: 04/18/13 16:16

Purge Volume: 5.0 mL

LCS D: 04/18/13 17:19

Instrument/Analyst LCS: PID1/PKC

Sample Amount LCS: 100 mg-dry-wt

LCS D: PID1/PKC

LCS D: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Benzene	166	185	89.7%	178	185	96.2%	7.0%
Toluene	1730	1980	87.4%	1840	1980	92.9%	6.2%
Ethylbenzene	487	580	84.0%	514	580	88.6%	5.4%
m,p-Xylene	1770	2120	83.5%	1880	2120	88.7%	6.0%
o-Xylene	806	960	84.0%	856	960	89.2%	6.0%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCS D
Trifluorotoluene	86.5%	92.5%
Bromobenzene	85.2%	88.9%

PG
4/19/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130418a-1.b/0418a016.d ARI ID: LCS0418A
Data file 2: /chem3/pid1.i/20130418a-2.b/0418a016.d Client ID:
Method: /chem3/pid1.i/20130418a-2.b/PIDB.m Injection Date: 18-APR-2013 16:16
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.830	0.000	3026	41218	87.2	TFT(Surr)
15.375	0.001	1879	16670	82.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	326910	0.913 M
8015C 2MP-TMB (4.16 to 16.20)	723723	653627	0.903 M
AK101 nC6-nC10 (4.65 to 15.09)	582885	536071	0.920 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	346878	0.925 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.838	0.000	3435	86.5	TFT(Surr)
15.383	0.001	7491	85.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.006	0.000	799	3.33	Benzene
9.867	0.001	7915	34.56	Toluene
12.761	0.000	1885	9.74	Ethylbenzene
12.924	0.003	7568	35.44	M/P-Xylene
13.870	0.001	2751	16.13	O-Xylene
ND	---	---	---	MTBE

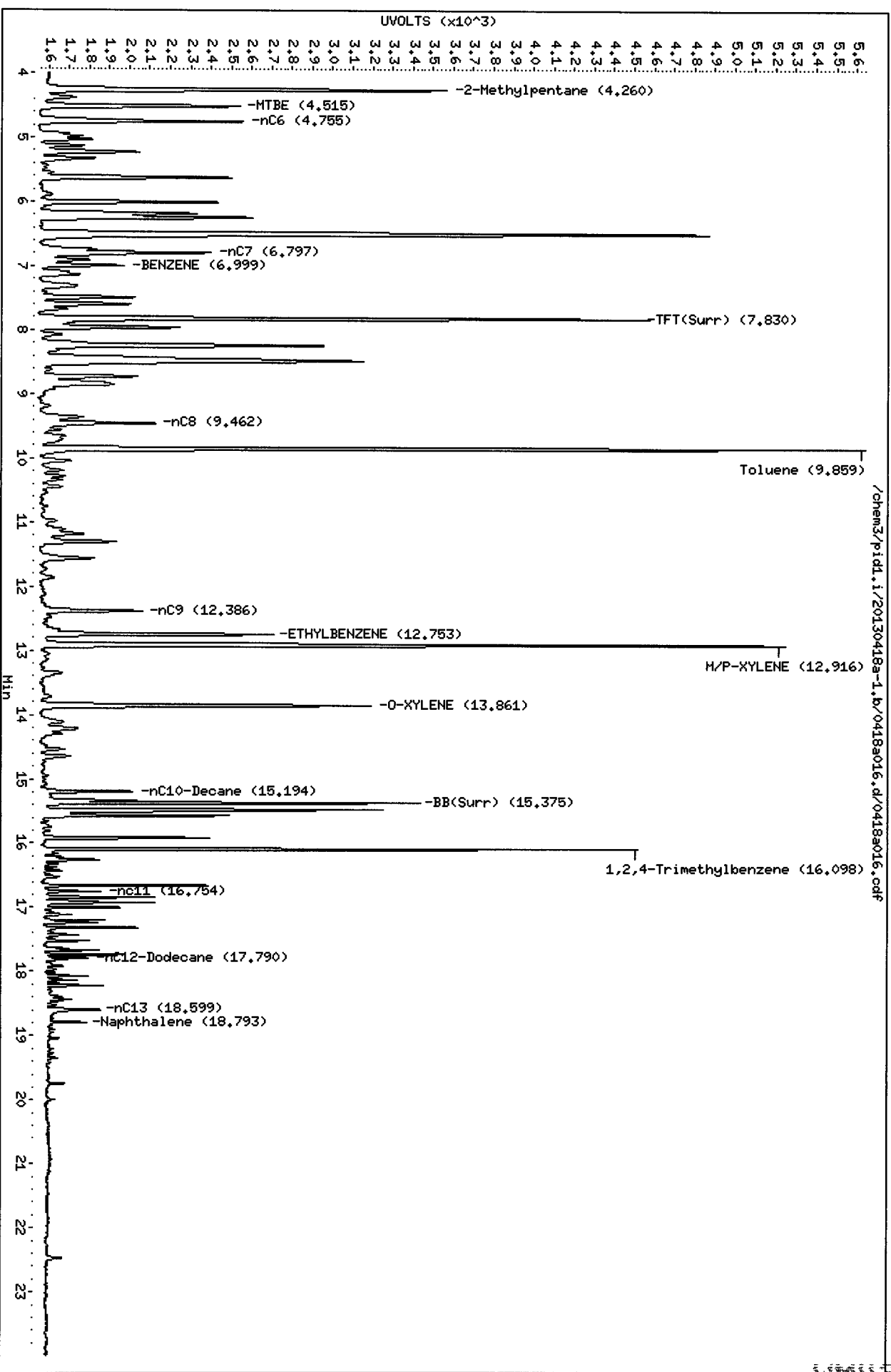
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130418a-1.b/0418a016.d
Date: 18-APR-2013 16:16
Client ID:
Sample Info: LCS0418A

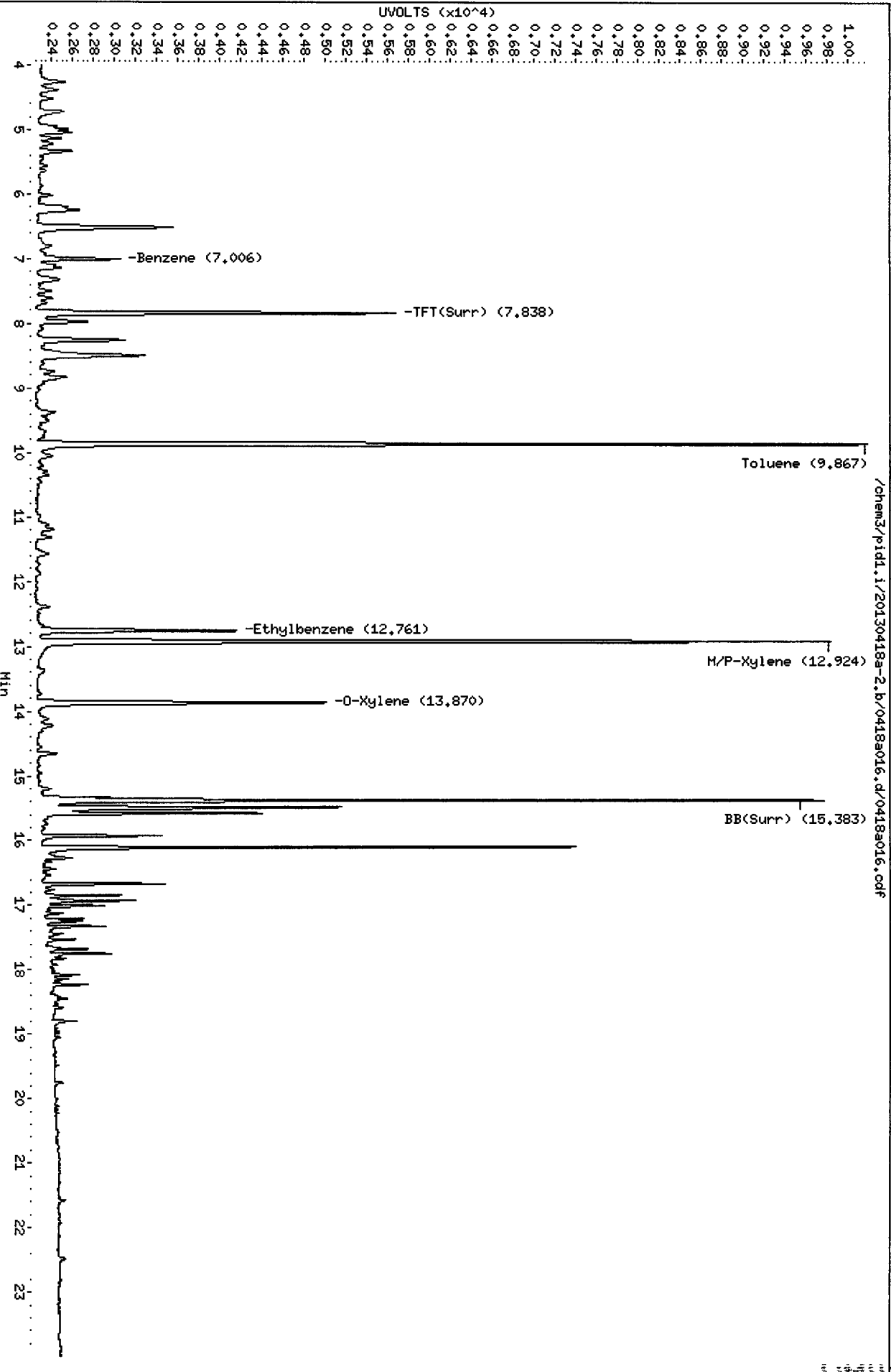
Column phase: RTX 502-2 FID

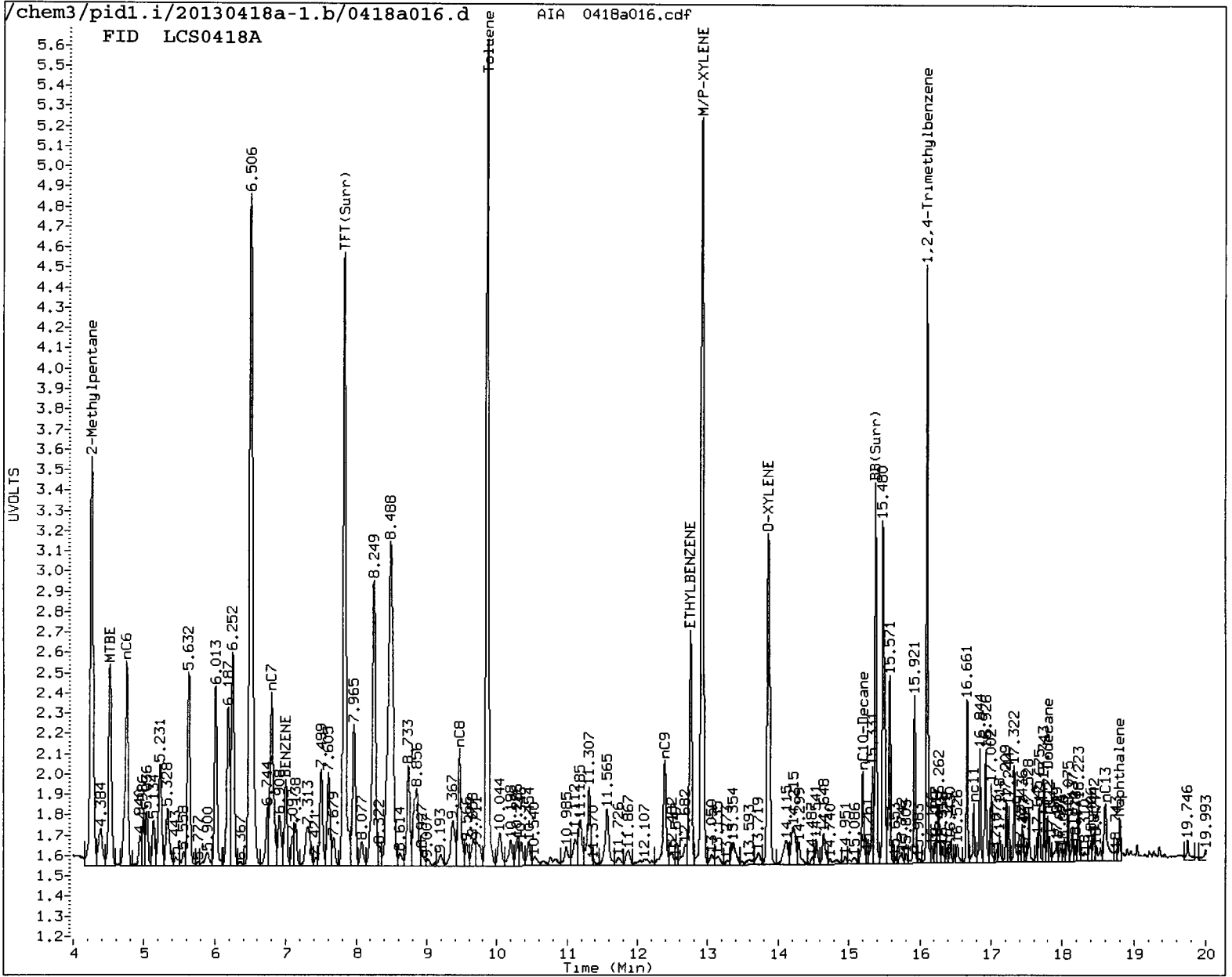
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC

Date: 4/19/15

Analytical Resources Inc.
 BETX/Gas Quantitation Report

ME
4/19/13

Data file 1: /chem3/pid1.i/20130418a-1.b/0418a017.d ARI ID: LCSD0418A
 Data file 2: /chem3/pid1.i/20130418a-2.b/0418a017.d Client ID:
 Method: /chem3/pid1.i/20130418a-2.b/PIDB.m Injection Date: 18-APR-2013 17:19
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.834	0.004	3133	40737	90.3	TFT(Surr)
15.377	0.003	1944	17041	85.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	310228	0.866 M
8015C 2MP-TMB (4.16 to 16.20)	723723	634544	0.877 M
AK101 nC6-nC10 (4.65 to 15.09)	582885	516543	0.886 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	329590	0.879 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.842	0.004	3672	92.5	TFT(Surr)
15.385	0.003	7818	88.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.010	0.004	857	3.57	Benzene
9.871	0.004	8426	36.79	Toluene
12.765	0.004	1990	10.28	Ethylbenzene
12.928	0.006	8023	37.57	M/P-Xylene
13.874	0.005	2921	17.12	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130418a-1.b/0418a017.d
Date: 18-APR-2013 17:19

Client ID:

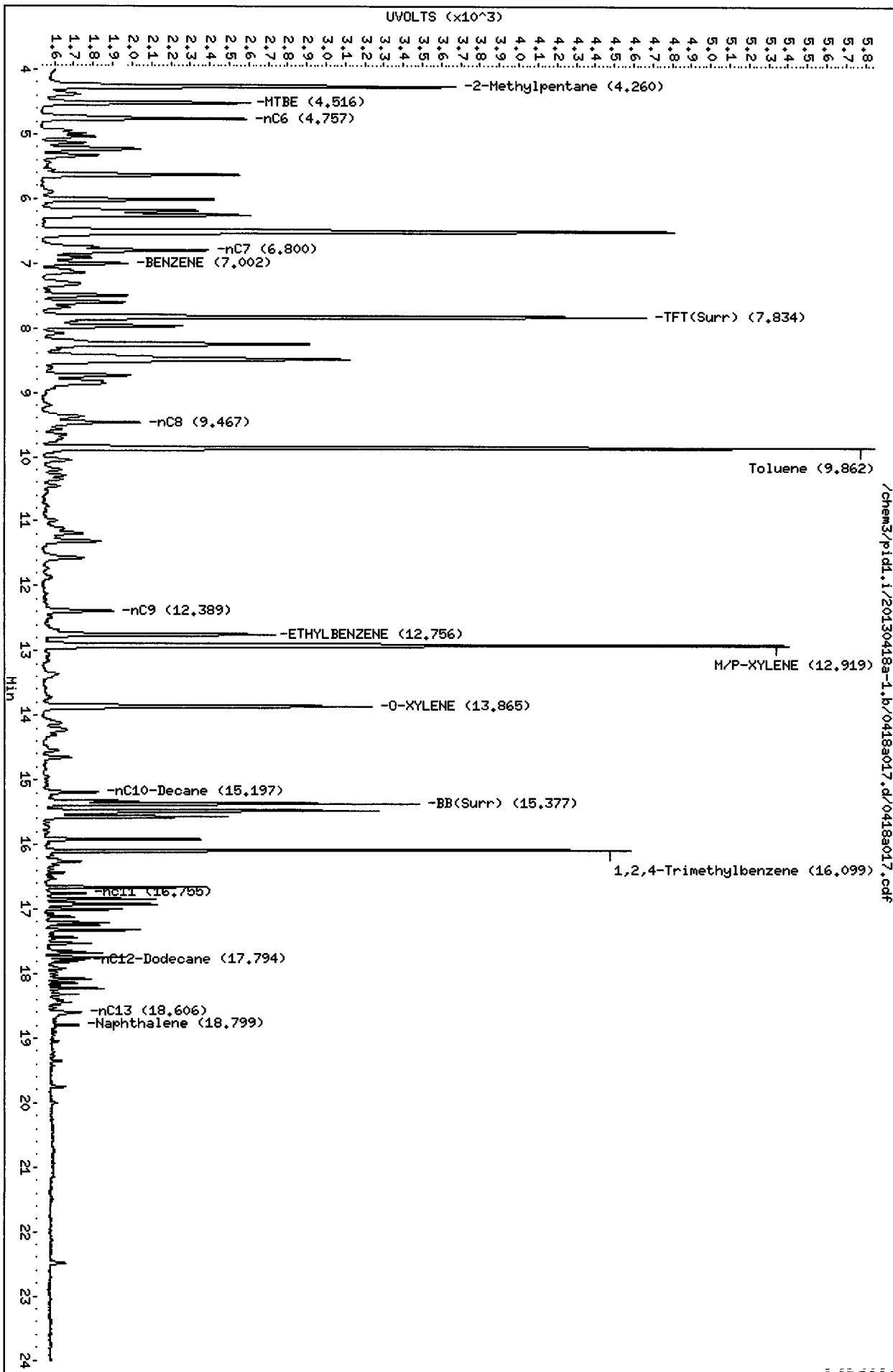
Sample Info: LCSD0418A

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130418a-2.b/0418a017.d

Date: 18-APR-2013 17:19

Client ID:

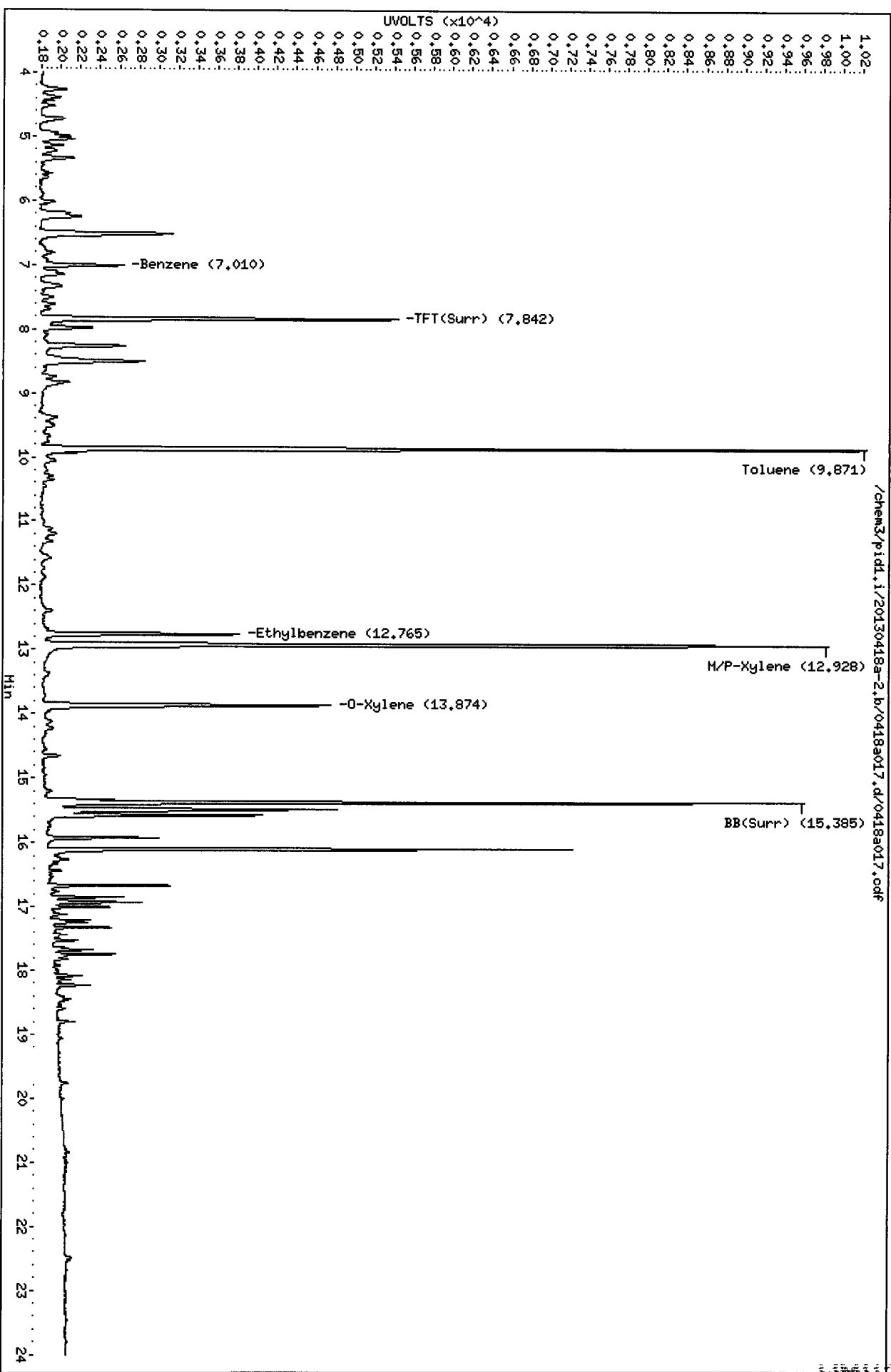
Sample Info: LCSD0418A

Column phases: RTX 502-2 PID

Instrument: pid1.i

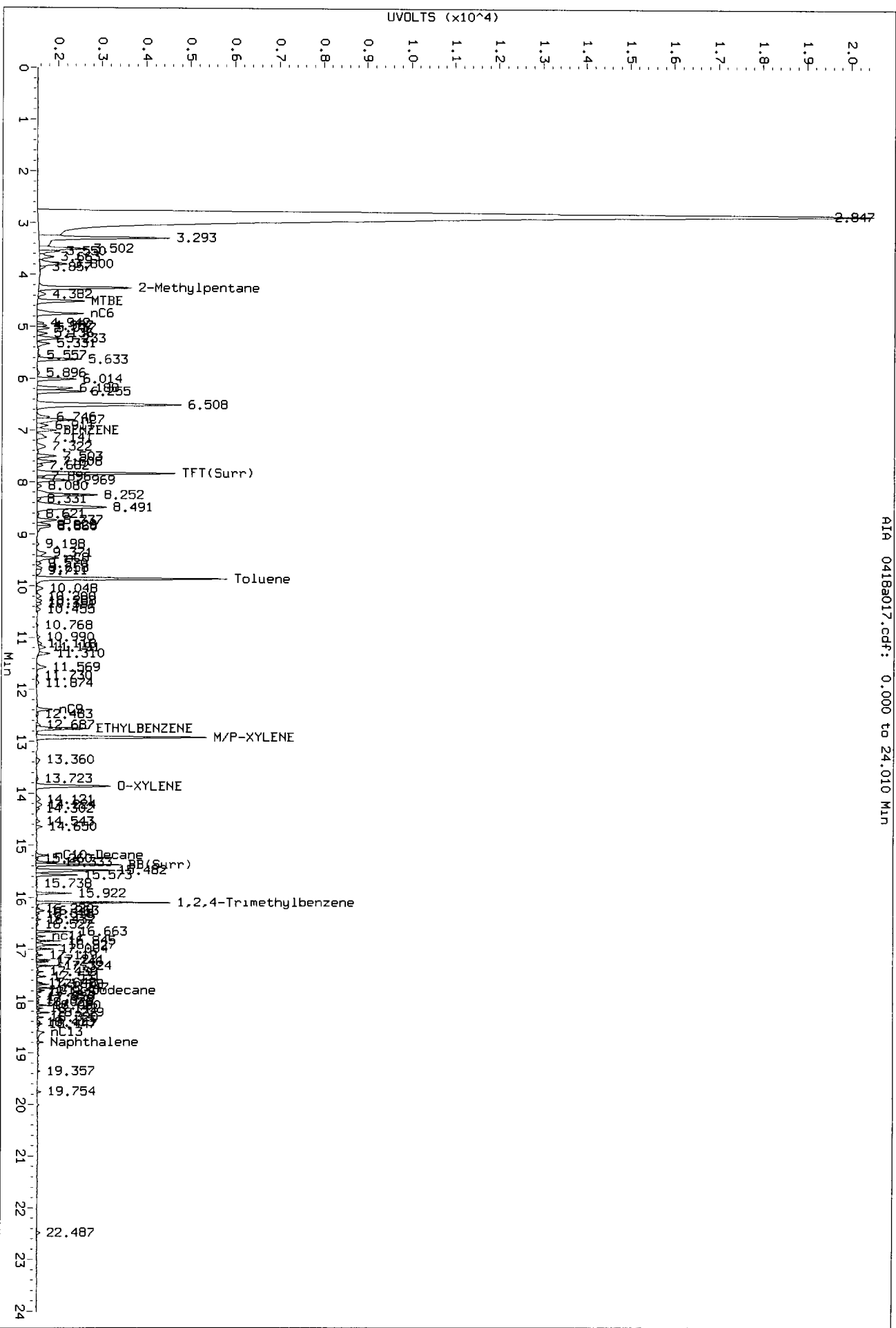
Operator: LH

Column diameter: 0.18



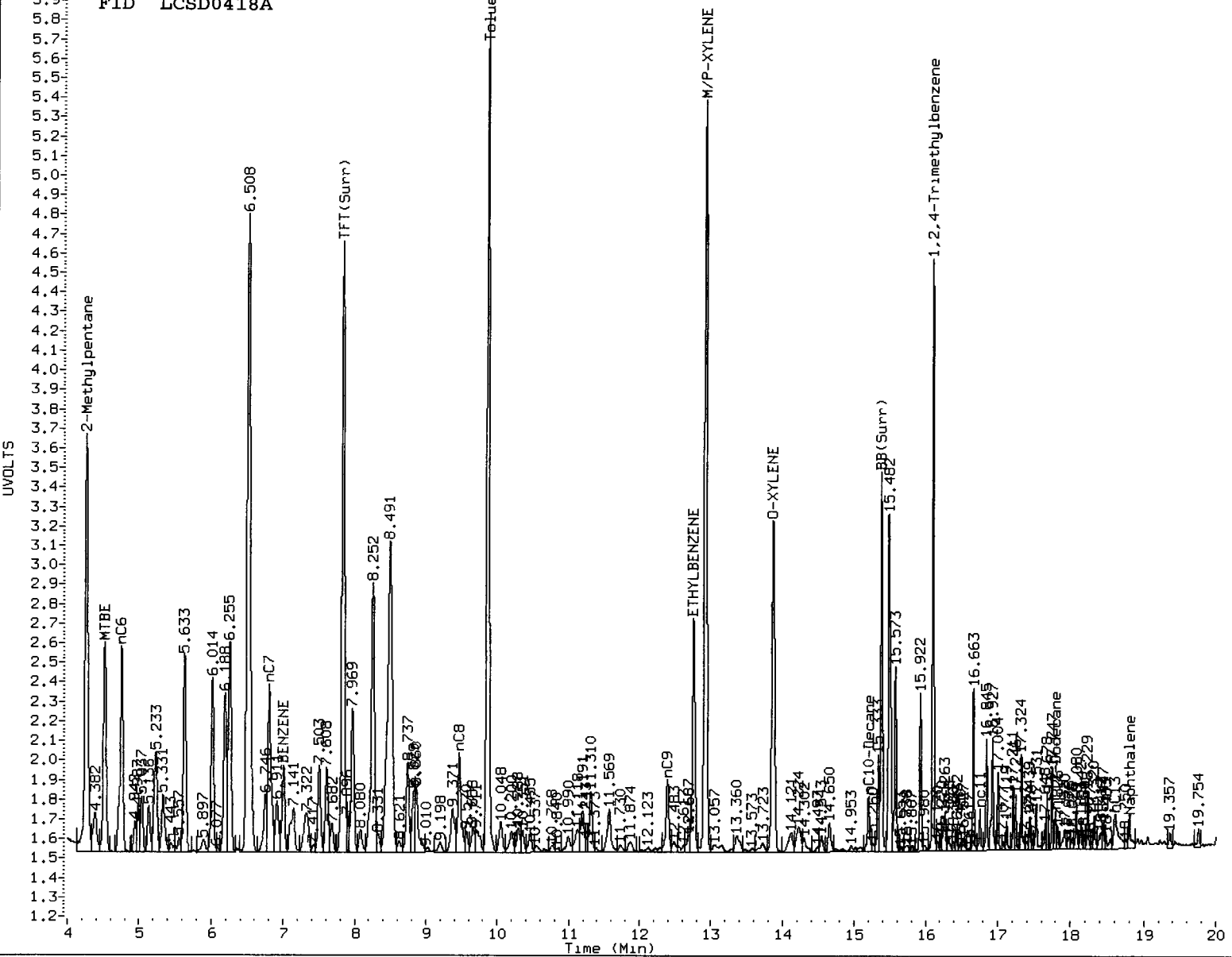
PC
4/19/13

Data File: /chem3/pid1.1/20130418a-1.b/0418a017.d/0418a017.cdf
Injection Date: 18-APR-2013 17:19
Instrument: pid1.1
Client Sample ID:



AIA 0418a017.cdf: 0.000 to 24.010 Min

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MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: PI

Date: 4/19/15

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-041813

METHOD BLANK

Lab Sample ID: MB-041813

LIMS ID: 13-8197

Matrix: Soil

Data Release Authorized: *MW*

Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc

Project: NA

Event: NA

Date Sampled: NA

Date Received: NA

Date Analyzed: 04/18/13 17:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	86.7%
Bromobenzene	86.0%

Gasoline Surrogate Recovery

Trifluorotoluene	85.5%
Bromobenzene	84.1%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PG
4/19/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130418a-1.b/0418a018.d ARI ID: MB0418A
Data file 2: /chem3/pid1.i/20130418a-2.b/0418a018.d Client ID:
Method: /chem3/pid1.i/20130418a-2.b/PIDB.m Injection Date: 18-APR-2013 17:48
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.830	0.000	2967	36117	85.5	TFT(Surr)
15.375	0.000	1919	16024	84.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	1985	0.006
8015C 2MP-TMB (4.16 to 16.20)	723723	6008	0.008
AK101 nC6-nC10 (4.65 to 15.09)	582885	5291	0.009
NWTPHG Tol-Nap (9.76 to 18.90)	375093	3647	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.838	0.000	3442	86.7	TFT(Surr)
15.382	0.000	7561	86.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

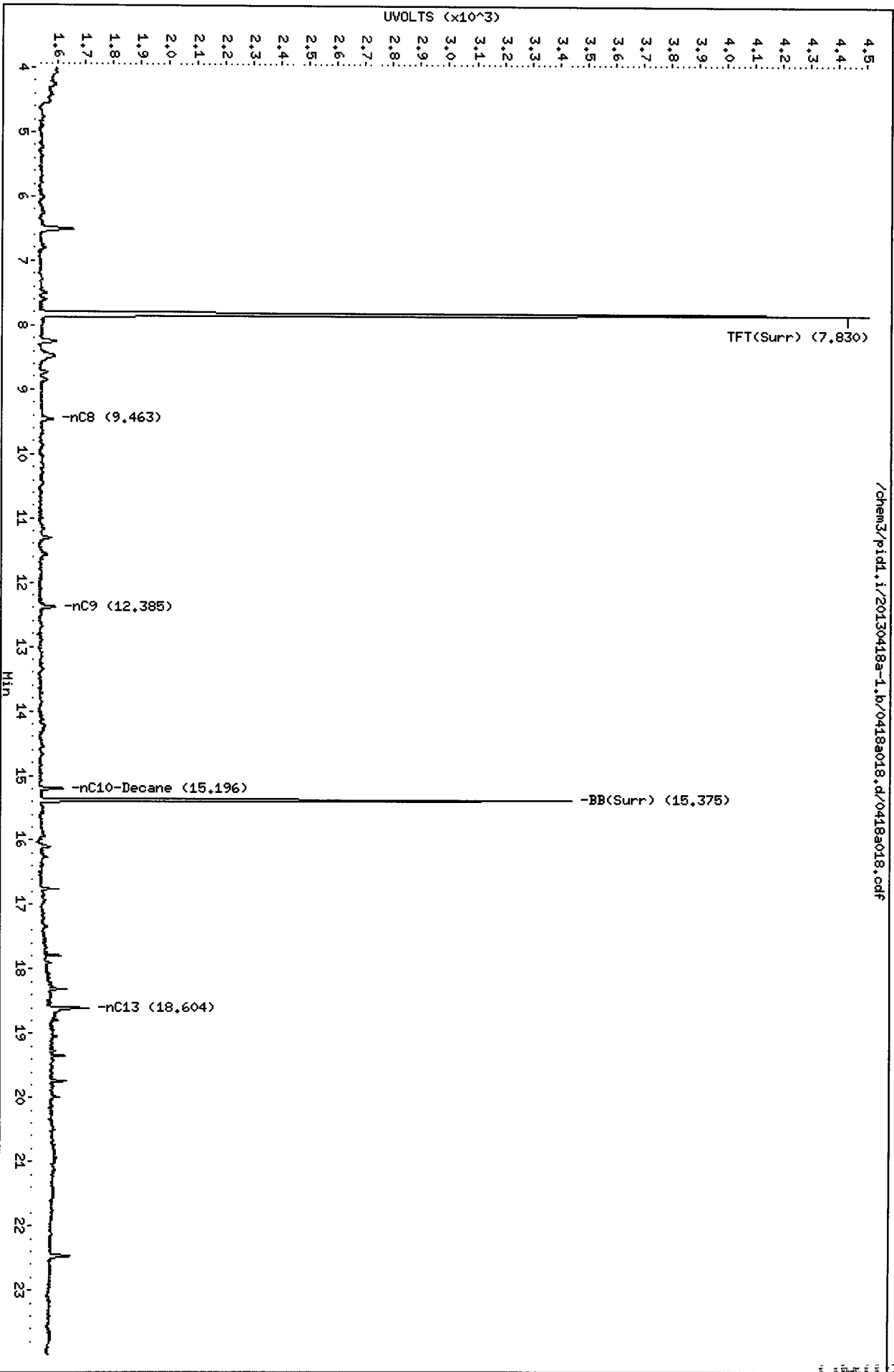
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130418a-1.b/0418a018.d
Date: 18-APR-2013 17:48
Client ID:
Sample Info: HB0418a

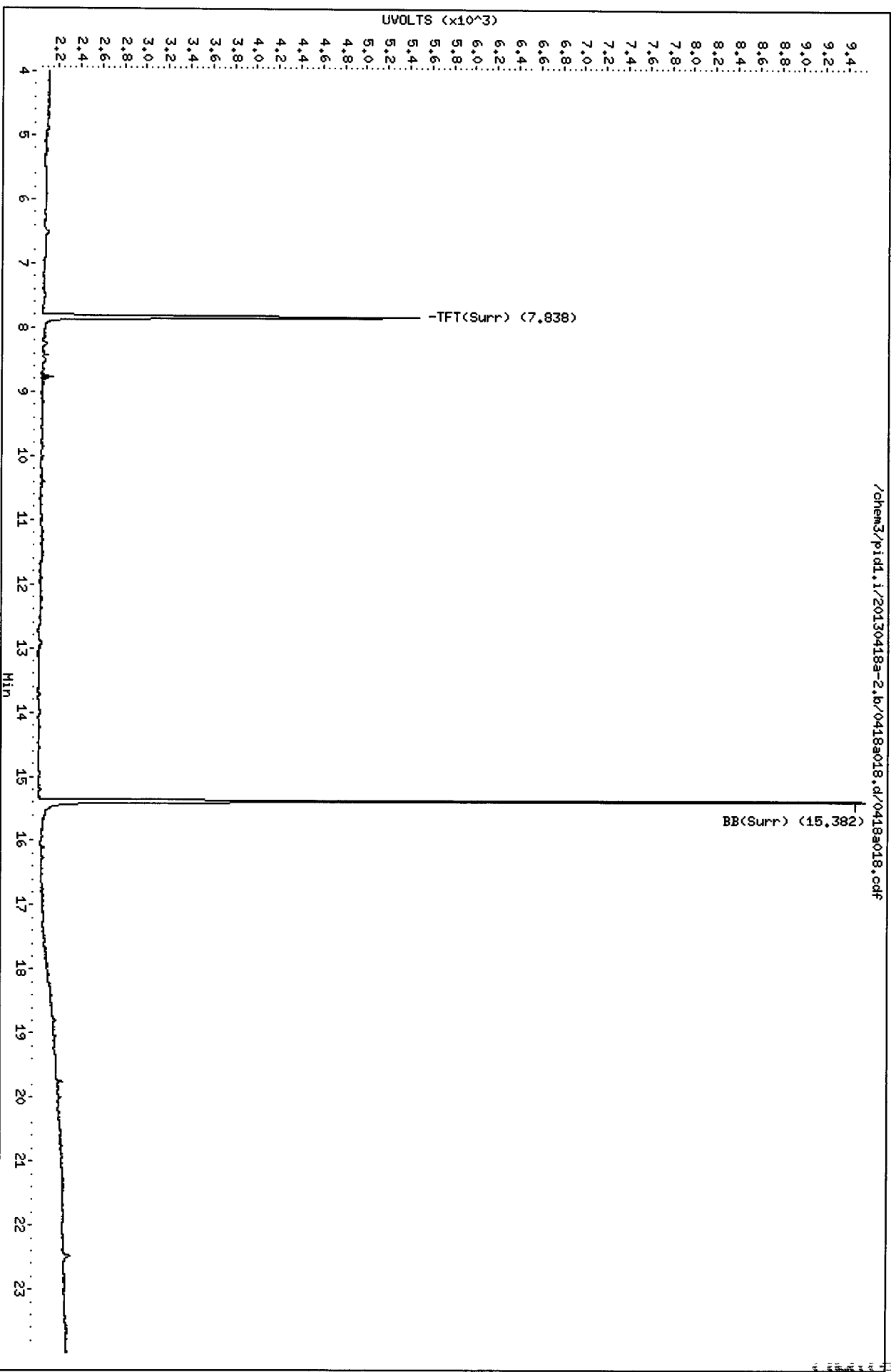
Column phases: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130418a-2.b/0418a018.d
Date: 18-APR-2013 17:48
Client ID:
Sample Info: MB0418a

Instrument: pid1.i
Operator: LH
Column diameter: 0.18
Column phase: RTX 502-2 PID



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

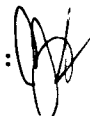
Page 1 of 1

Sample ID: **G-S-1**
SAMPLE

Lab Sample ID: WM43A

LIMS ID: 13-8197

Matrix: Soil

Data Release Authorized: 

Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc
Project:

Date Sampled: 04/17/13

Date Received: 04/18/13

Percent Total Solids: 77.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/18/13	6010C	04/19/13	7440-38-2	Arsenic	6	6	U
3050B	04/18/13	6010C	04/19/13	7440-47-3	Chromium	0.6	42.0	
3050B	04/18/13	6010C	04/19/13	7440-50-8	Copper	0.2	13.3	
3050B	04/18/13	6010C	04/19/13	7439-92-1	Lead	2	6	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

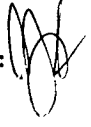
Sample ID: G-S-1

MATRIX SPIKE

Lab Sample ID: WM43A

LIMS ID: 13-8197

Matrix: Soil

Data Release Authorized: 

Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc

Project:

Date Sampled: 04/17/13

Date Received: 04/18/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	6 U	239	245	97.6%	
Chromium	6010C	42.0	118	61.1	124%	
Copper	6010C	13.3	73.7	61.1	98.9%	
Lead	6010C	6	234	245	93.1%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

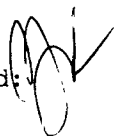
Percent Recovery Limits: 75-125%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS
Page 1 of 1

**Sample ID: G-S-1
DUPLICATE**

Lab Sample ID: WM43A
LIMS ID: 13-8197
Matrix: Soil
Data Release Authorized:
Reported: 04/19/13



QC Report No: WM43-Maul Foster & Alongi, Inc
Project:

Date Sampled: 04/17/13
Date Received: 04/18/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	6 U	6 U	0.0%	+/- 6	L
Chromium	6010C	42.0	52.3	21.8%	+/- 20%	*
Copper	6010C	13.3	15.4	14.6%	+/- 20%	
Lead	6010C	6	4	40.0%	+/- 2	L

Reported in mg/kg-dry

*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WM43LCS
LIMS ID: 13-8197
Matrix: Soil
Data Release Authorized:
Reported: 04/19/13

QC Report No: WM43-Maul Foster & Alongi, Inc
Project:

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	198	200	99.0%	
Chromium	6010C	50.1	50.0	100%	
Copper	6010C	48.3	50.0	96.6%	
Lead	6010C	192	200	96.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1


Lab Sample ID: WM43MB

QC Report No: WM43-Maul Foster & Alongi, Inc

LIMS ID: 13-8197

Project:

Matrix: Soil

Data Release Authorized: 

Date Sampled: NA

Reported: 04/19/13

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	04/18/13	6010C	04/19/13	7440-38-2	Arsenic	5	5	U
3050B	04/18/13	6010C	04/19/13	7440-47-3	Chromium	0.5	0.5	U
3050B	04/18/13	6010C	04/19/13	7440-50-8	Copper	0.2	0.2	U
3050B	04/18/13	6010C	04/19/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation





Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 2, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01/03
ARI Job No.: WO34

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted one soil sample on May 1, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for SVOCs, NWTPH-Dx, NWTPH-Gx/BETX, and Metals, as requested on the COC.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a faint circular stamp or watermark.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WO34

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W034	Turn-around Requested: Rush - 24 Hour	Page: 1 of 1
ARI Client Company: MFA, Inc.	Phone: 503-209-2518	Date: _____ Ice Present? _____
Client Contact: Tony Silva	tsilva@maul.foster.com	No. of Coolers: _____ Cooler Temps: _____

Client Project Name: Cashmere					Analysis Requested										Notes/Comments				
Client Project #: 0779.02.01/03		Samplers: Tony Silva			Gx/BTEX	S03S/8021	Dx + Silica Gel Cleanup	SUOCs	8270	Metals 6010	As, Cr, Cu, Pb	EDB, EDC	MTBE 8260	only if Gx detected					
Sample ID	Date	Time	Matrix	No. Containers															
G-S-2	04-30-13	1445	soil	7	X	X	X	X											

Comments/Special Instructions Please provide GIS key 4-file EDD. Email to Tony Silva and Erik Naylor at MFA.	Relinquished by: (Signature) [Signature]	Received by: (Signature) [Signature]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Tony Silva	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Maul Foster and Mongi	Company: ARI	Company:	Company:
	Date & Time: 04/30/13 15200	Date & Time: 5/1/13 1023	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: W034

Tracking No: K0466847047 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 4.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: AV Date: 5/1/13 Time: 1022

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA _____

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

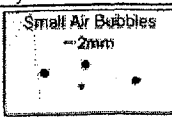
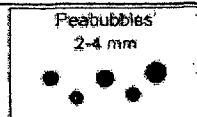
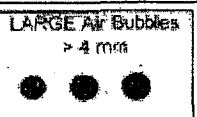
Samples Logged by: AV Date: 5/1/13 Time: 1040

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: W034
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. G-S-2	W034A	13-9300	Soil	04/30/13 14:45	05/01/13 10:22



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

- F Samples were frozen prior to particle size determination

- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: G-S-2
SAMPLE

Lab Sample ID: W034A
 LIMS ID: 13-9300
 Matrix: Soil
 Data Release Authorized: *W*
 Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 04/30/13
 Date Received: 05/01/13

Date Extracted: 05/01/13
 Date Analyzed: 05/02/13 13:49
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.27 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 43.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	540
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	46
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	560
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	650
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	130
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	20	110
77-47-4	Hexachlorocyclopentadiene	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	20	49
51-28-5	2,4-Dinitrophenol	830	< 830 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

Extraction Method: SW3546

Page 2 of 2

Sample ID: G-S-2

SAMPLE

Lab Sample ID: WO34A

LIMS ID: 13-9300

Matrix: Soil

Date Analyzed: 05/02/13 13:49

QC Report No: WO34-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	49	< 49 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	60
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	200
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	290
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	54
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	69
129-00-0	Pyrene	20	290
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo (a) anthracene	20	130
117-81-7	bis (2-Ethylhexyl) phthalate	24	40
218-01-9	Chrysene	20	190
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo (a) pyrene	20	50
193-39-5	Indeno (1,2,3-cd) pyrene	20	< 20 U
53-70-3	Dibenz (a,h) anthracene	20	< 20 U
191-24-2	Benzo (g,h,i) perylene	20	43
90-12-0	1-Methylnaphthalene	20	60
TOTBFA	Total Benzofluoranthenes	39	47

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	65.6%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	67.1%	2-Fluorophenol	64.1%
2,4,6-Tribromophenol	79.3%	d4-2-Chlorophenol	66.3%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: W034-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>NBZ</u>	<u>FBP</u>	<u>TPH</u>	<u>DCB</u>	<u>PHL</u>	<u>2FP</u>	<u>TBP</u>	<u>2CP</u>	<u>TOT</u>	<u>OUT</u>
MB-050113	60.2%	66.2%	82.6%	66.2%	66.5%	65.1%	75.5%	67.6%	0	
LCS-050113	55.2%	59.2%	71.6%	58.6%	62.5%	61.3%	74.7%	61.6%	0	
G-S-2	60.4%	69.6%	65.6%	59.2%	67.1%	64.1%	79.3%	66.3%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(37-100)	(31-100)

Prep Method: SW3546
Log Number Range: 13-9300 to 13-9300

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 1 of 2

Sample ID: LCS-050113
LAB CONTROL

Lab Sample ID: LCS-050113
 LIMS ID: 13-9300
 Matrix: Soil
 Data Release Authorized: *nd*
 Reported: 05/02/13

QC Report No: WO34-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 04/30/13
 Date Received: 05/01/13

Date Extracted: 05/01/13
 Date Analyzed: 05/02/13 13:15
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.00 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	345	500	69.0%
Bis-(2-Chloroethyl) Ether	309	500	61.8%
2-Chlorophenol	285	500	57.0%
1,3-Dichlorobenzene	302	500	60.4%
1,4-Dichlorobenzene	298	500	59.6%
Benzyl Alcohol	341	500	68.2%
1,2-Dichlorobenzene	313	500	62.6%
2-Methylphenol	276	500	55.2%
2,2'-Oxybis(1-Chloropropane)	319	500	63.8%
4-Methylphenol	577	1000	57.7%
N-Nitroso-Di-N-Propylamine	311	500	62.2%
Hexachloroethane	293	500	58.6%
Nitrobenzene	299	500	59.8%
Isophorone	295	500	59.0%
2-Nitrophenol	298	500	59.6%
2,4-Dimethylphenol	846	1500	56.4%
Benzoic Acid	1420	2750	51.6%
bis(2-Chloroethoxy) Methane	325	500	65.0%
2,4-Dichlorophenol	846	1500	56.4%
1,2,4-Trichlorobenzene	307	500	61.4%
Naphthalene	288	500	57.6%
4-Chloroaniline	779	1500	51.9%
Hexachlorobutadiene	300	500	60.0%
4-Chloro-3-methylphenol	1060	1500	70.7%
2-Methylnaphthalene	313	500	62.6%
Hexachlorocyclopentadiene	860	1500	57.3%
2,4,6-Trichlorophenol	1000	1500	66.7%
2,4,5-Trichlorophenol	1060	1500	70.7%
2-Chloronaphthalene	324	500	64.8%
2-Nitroaniline	1190	1500	79.3%
Dimethylphthalate	380	500	76.0%
Acenaphthylene	304	500	60.8%
3-Nitroaniline	1170	1500	78.0%
Acenaphthene	308	500	61.6%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 2 of 2

Sample ID: LCS-050113
LAB CONTROL

Lab Sample ID: LCS-050113
 LIMS ID: 13-9300
 Matrix: Soil
 Date Analyzed: 05/02/13 13:15

QC Report No: WO34-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1590	2750	57.8%
4-Nitrophenol	1030	1500	68.7%
Dibenzofuran	335	500	67.0%
2,6-Dinitrotoluene	1170	1500	78.0%
2,4-Dinitrotoluene	1220	1500	81.3%
Diethylphthalate	370	500	74.0%
4-Chlorophenyl-phenylether	343	500	68.6%
Fluorene	328	500	65.6%
4-Nitroaniline	1290	1500	86.0%
4,6-Dinitro-2-Methylphenol	1740	2750	63.3%
N-Nitrosodiphenylamine	390	500	78.0%
4-Bromophenyl-phenylether	367	500	73.4%
Hexachlorobenzene	321	500	64.2%
Pentachlorophenol	1040	1500	69.3%
Phenanthrene	352	500	70.4%
Carbazole	491	500	98.2%
Anthracene	338	500	67.6%
Di-n-Butylphthalate	399	500	79.8%
Fluoranthene	351	500	70.2%
Pyrene	362	500	72.4%
Butylbenzylphthalate	441	500	88.2%
3,3'-Dichlorobenzidine	585	1500	39.0%
Benzo(a)anthracene	342	500	68.4%
bis(2-Ethylhexyl)phthalate	377	500	75.4%
Chrysene	329	500	65.8%
Di-n-Octyl phthalate	385	500	77.0%
Benzo(a)pyrene	339	500	67.8%
Indeno(1,2,3-cd)pyrene	345	500	69.0%
Dibenz(a,h)anthracene	338	500	67.6%
Benzo(g,h,i)perylene	340	500	68.0%
1-Methylnaphthalene	332	500	66.4%
Total Benzofluoranthenes	685	1000	68.5%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.2%
2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	71.6%
d4-1,2-Dichlorobenzene	58.6%
d5-Phenol	62.5%
2-Fluorophenol	61.3%
2,4,6-Tribromophenol	74.7%
d4-2-Chlorophenol	61.6%

Reported in µg/kg (ppb)

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: MB-050113
METHOD BLANK

Lab Sample ID: MB-050113
 LIMS ID: 13-9300
 Matrix: Soil
 Data Release Authorized: *ad*
 Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/01/13
 Date Analyzed: 05/02/13 12:38
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: MB-050113
METHOD BLANK

Lab Sample ID: MB-050113
 LIMS ID: 13-9300
 Matrix: Soil
 Date Analyzed: 05/02/13 12:38

QC Report No: W034-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	25	< 25 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.2%	2-Fluorobiphenyl	66.2%
d14-p-Terphenyl	82.6%	d4-1,2-Dichlorobenzene	66.2%
d5-Phenol	66.5%	2-Fluorophenol	65.1%
2,4,6-Tribromophenol	75.5%	d4-2-Chlorophenol	67.6%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WO34-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 05/02/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050113 13-9300	Method Blank HC ID: ---	05/01/13	05/01/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 94.0%
WO34A 13-9300	G-S-2 HC ID: DIESEL/MOTOR OIL	05/01/13	05/01/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	8.5 17	260 440 79.4%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130501.b/0501a022.d ARI ID: WO34MBS1
 Method: /chem3/fid4a.i/20130501.b/ftphfid4a.m Client ID: WO34MBS1
 Instrument: fid4a.i Injection: 01-MAY-2013 18:44
 Operator: JR/VTS/JW
 Report Date: 05/02/2013 Dilution Factor: 1
 Macro: 11-APR-2013
 Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		158913	10.23
C8	1.099	0.099	1587	1032	WATPHD (C12-C24)		171190	11.79
C10	2.853	-0.004	1310	1333	WATPHM (C24-C38)		125090	9.20
C12	3.817	-0.004	7052	5777	AK102 (C10-C25)		218941	12.72
C14	4.501	-0.002	4105	2897	AK103 (C25-C36)		102425	11.13
C16	5.083	-0.002	3271	2629				
C18	5.622	-0.001	1679	2300				
C20	6.163	-0.004	1399	2259				
C22	6.702	-0.005	1602	1558	MIN.OIL (C24-C38)		125090	7.33
C24	7.216	-0.006	845	1542				
C25	7.465	-0.004	695	707				
C26	7.726	0.007	504	480				
C28	8.156	-0.007	1294	2221				
C32	8.964	0.013	9969	10085				
C34	9.306	-0.001	669	353				
Filter Peak	11.458	0.005	2855	5767	CREOSOT (C12-C22)		153741	70.46 M
C36	9.646	-0.002	4290	5285				
C38	9.967	-0.008	1224	1986				
C40	10.294	0.000	1453	574				
o-terph	5.761	0.001	939594	815373				
Triacon Surr	8.588	0.004	851582	773816				

Range Times: NW Diesel (3.821 - 7.222) AK102 (2.86 - 7.47) Jet A (2.86 - 5.62)
 NW M.Oil (7.22 - 9.97) AK103 (7.47 - 9.65) OR Diesel (2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	815373	42.3	94.0
Triacontane	773816	42.5	94.5

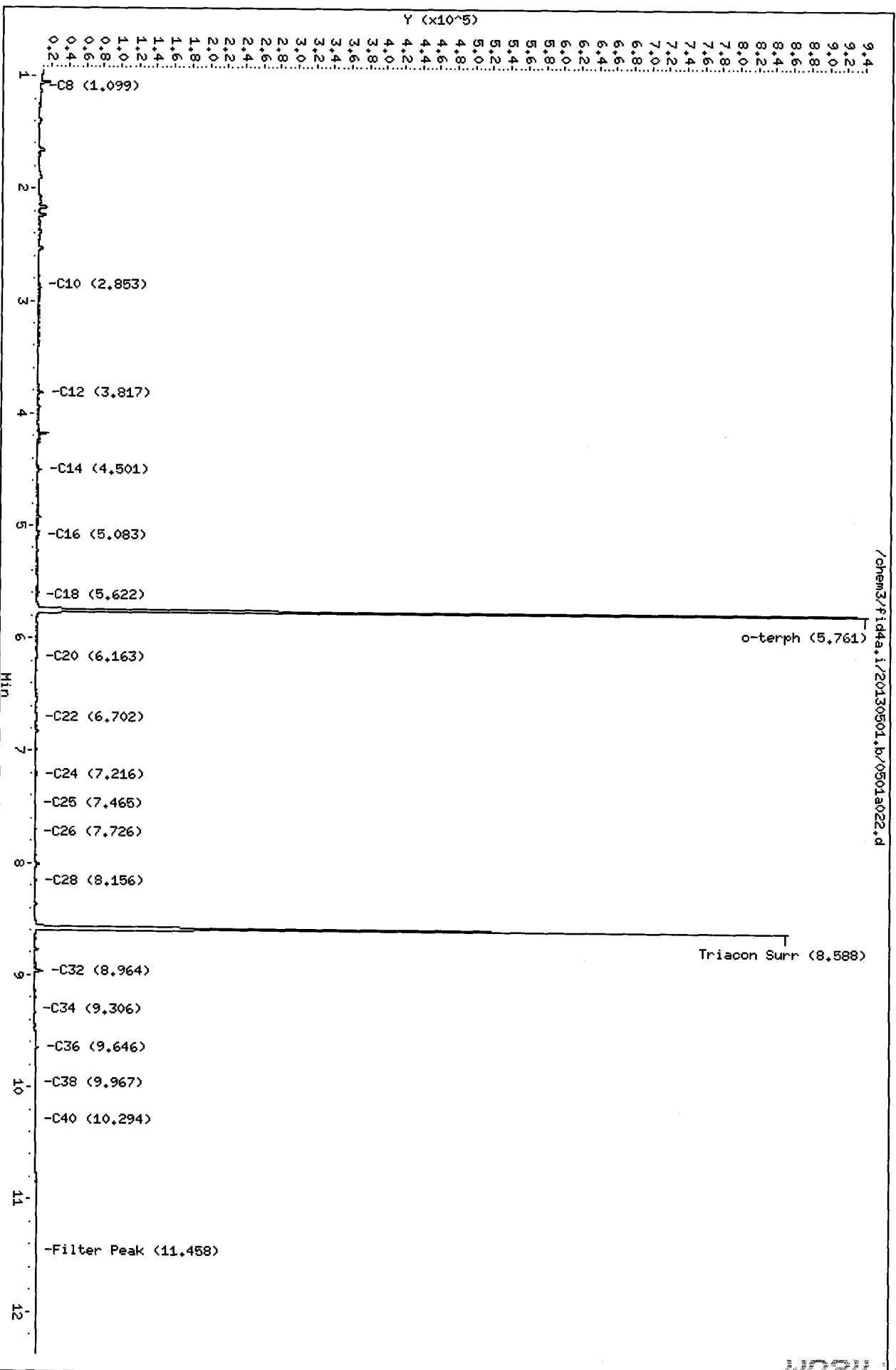
JW
5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130501.b/0501a022.d
Date: 01-MAY-2013 18:44
Client ID: M034HBS1
Sample Info: M034HBS1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



M034HBS1

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130501.b/0501a024.d
Method: /chem3/fid4a.i/20130501.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/02/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO34A
Client ID: G-S-2
Injection: 01-MAY-2013 19:26
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	638408	41.08
C8	----				WATPHD	(C12-C24)	21782502	1500.74 ✓
C10	2.852	-0.006	7450	7167	WATPHM	(C24-C38)	35114687	2581.21 ✓
C12	3.819	-0.002	22284	24580	AK102	(C10-C25)	23312050	1354.19
C14	4.505	0.002	35861	38759	AK103	(C25-C36)	33266331	3615.09
C16	5.087	0.003	64516	62900				
C18	5.622	-0.001	103734	97866				
C20	6.164	-0.004	150493	178078				
C22	6.712	0.005	144111	240504	MIN.OIL	(C24-C38)	35114687	2058.43
C24	7.228	0.006	155018	112425				
C25	7.457	-0.012	164582	151323				
C26	7.712	-0.006	192946	83640				
C28	8.157	-0.006	292343	337908				
C32	8.953	0.001	318831	164281				
C34	9.303	-0.004	207904	332811				
Filter Peak	11.459	0.006	10791	6195	CREOSOT	(C12-C22)	17147650	7859.04 M
C36	9.649	0.002	80785	53346				
C38	9.976	0.001	29071	23970				
C40	10.293	-0.001	19074	49803				
o-terph	5.764	0.004	760642	688563				
Triacon Surr	8.606	0.022	623536	642822				

Range Times: NW Diesel(3.821 - 7.222) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.97) AK103(7.47 - 9.65) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	688563	35.7	79.4 M ✓
Triacontane	642822	35.3	78.5 M

M Indicates the peak was manually integrated

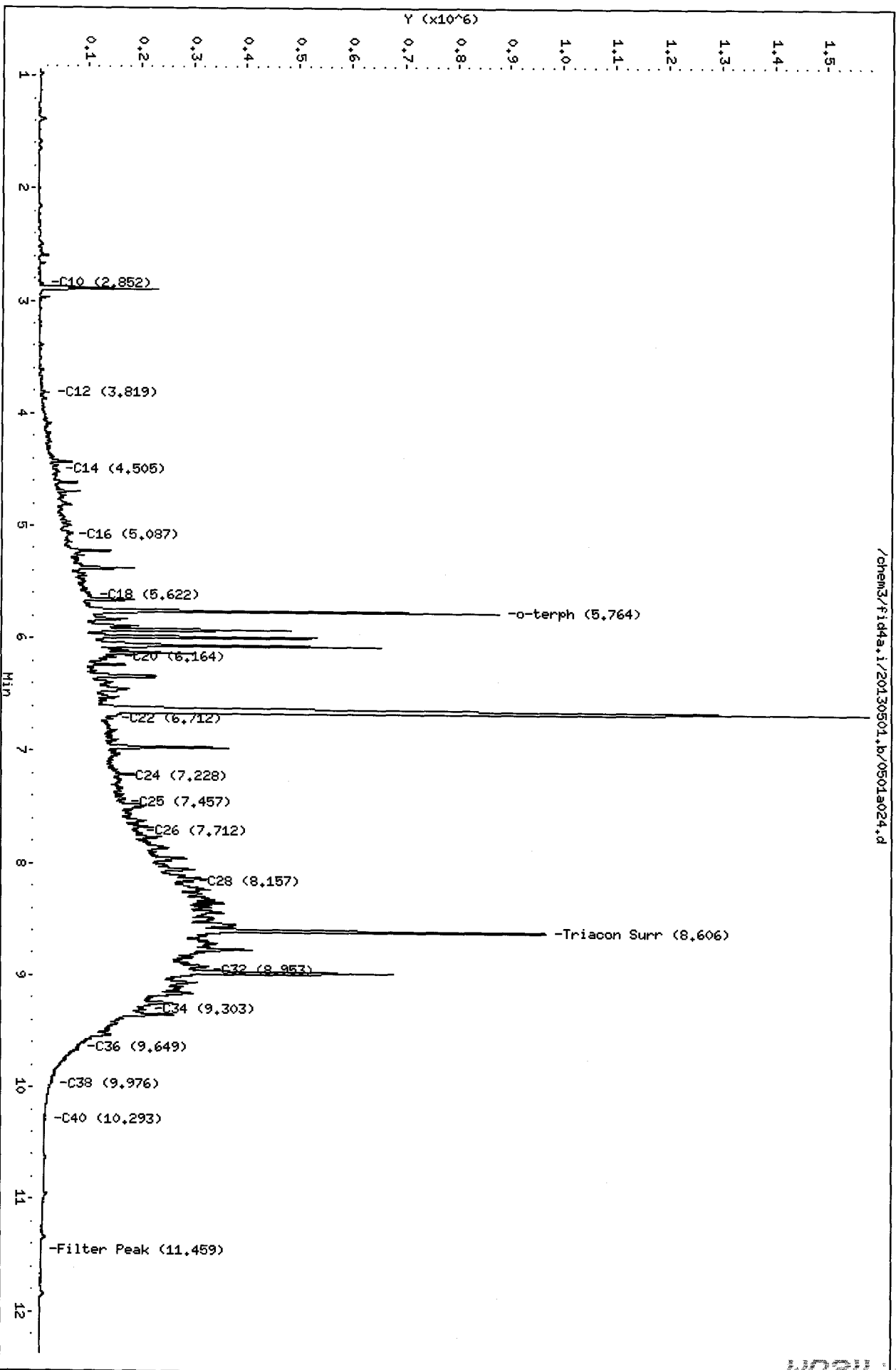
JW
5/2/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130501.b/0501a024.d
Date: 01-MAY-2013 19:26
Client ID: C-S-2
Sample Info: M0340
Column phase: RTX-1

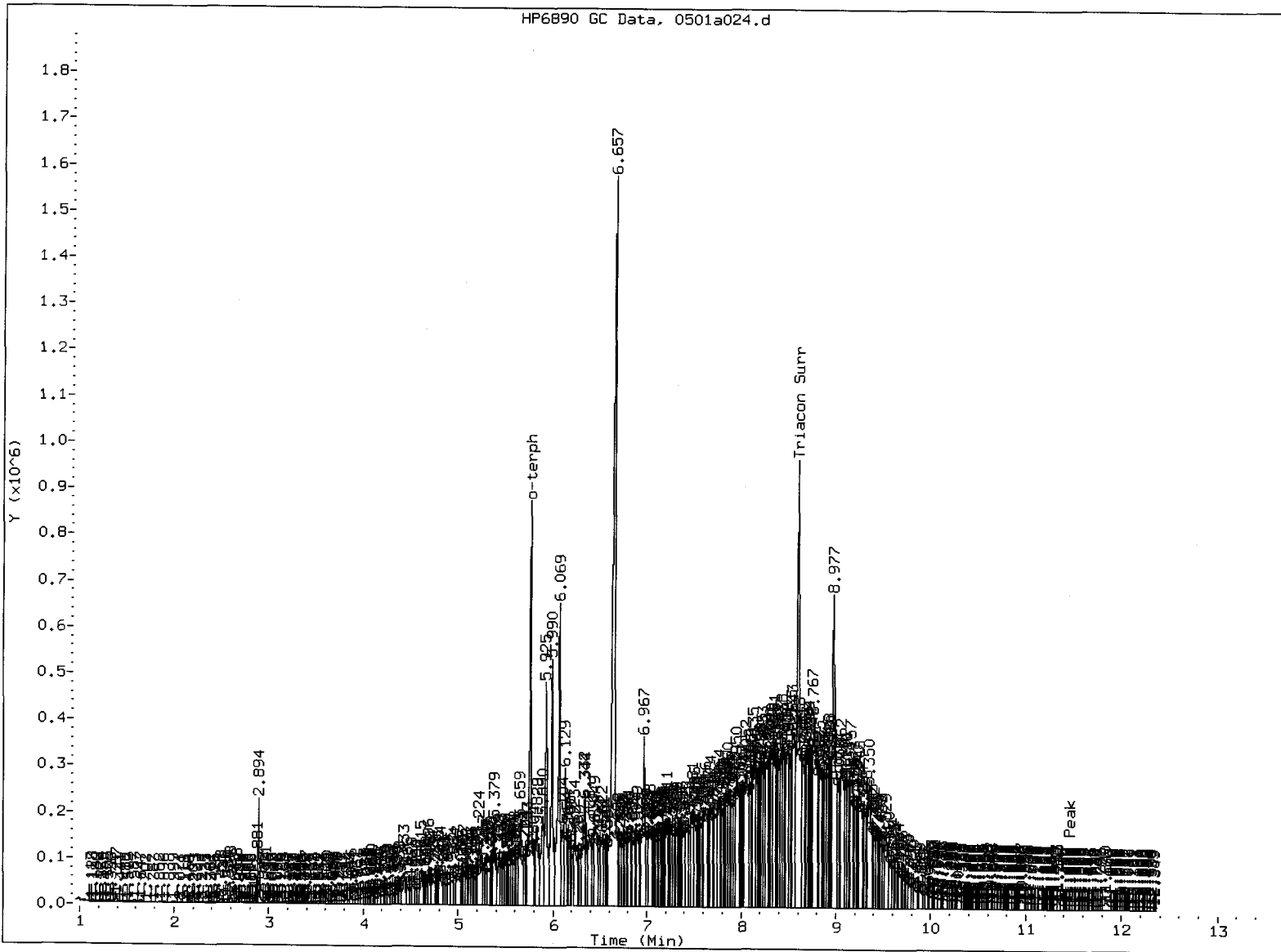
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

ms
10/10



/chem3/fid4a.i/20130501.b/0501a024.d

010000



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/2/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: W034-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050113	94.0%	0
LCS-050113	93.1%	0
G-S-2	79.4%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-9300 to 13-9300

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-050113

Page 1 of 1

LAB CONTROL

Lab Sample ID: LCS-050113

QC Report No: WO34-Maul Foster & Alongi, Inc

LIMS ID: 13-9300

Project: Cashmere

Matrix: Soil

0779.02.01/03

Data Release Authorized: *AS*

Date Sampled: 04/30/13

Reported: 05/02/13

Date Received: 05/01/13

Date Extracted: 05/01/13

Sample Amount: 10.0 g

Date Analyzed: 05/01/13 19:05

Final Extract Volume: 1.0 mL

Instrument/Analyst: FID/JLW

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	129	150	86.0%

TPHD Surrogate Recovery

o-Terphenyl	93.1%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130501.b/0501a023.d
Method: /chem3/fid4a.i/20130501.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/02/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO34LCSS1
Client ID: WO34LCSS1
Injection: 01-MAY-2013 19:05
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	4392808	282.69
C8	----				WATPHD	(C12-C24)	18655002	1285.26
C10	2.855	-0.003	111974	94248	WATPHM	(C24-C38)	241784	17.77
C12	3.821	0.000	198244	219590	AK102	(C10-C25)	21863269	1270.03
C14	4.506	0.004	342140	403510	AK103	(C25-C36)	172912	18.79
C16	5.089	0.005	536818	676922				
C18	5.628	0.005	438659	553543				
C20	6.169	0.001	303303	446069				
C22	6.705	-0.002	160417	179990	MIN.OIL	(C24-C38)	241784	14.17
C24	7.216	-0.005	45397	50242				
C25	7.463	-0.006	19229	32430				
C26	7.700	-0.018	8086	13654				
C28	8.155	-0.008	2177	2456				
C32	8.963	0.012	9069	8455				
C34	9.315	0.008	323	137				
Filter Peak	11.450	-0.003	2027	806	CREOSOT	(C12-C22)	18030590	8263.71 M
C36	9.644	-0.004	4253	4562				
C38	9.973	-0.002	714	1089				
C40	10.308	0.014	909	814				
o-terph	5.764	0.004	875771	807574				
Triacon Surr	8.587	0.002	733660	738434				

Range Times: NW Diesel(3.821 - 7.222) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.97) AK103(7.47 - 9.65) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	807574	41.9	93.1 M
Triacontane	738434	40.6	90.2

M Indicates the peak was manually integrated

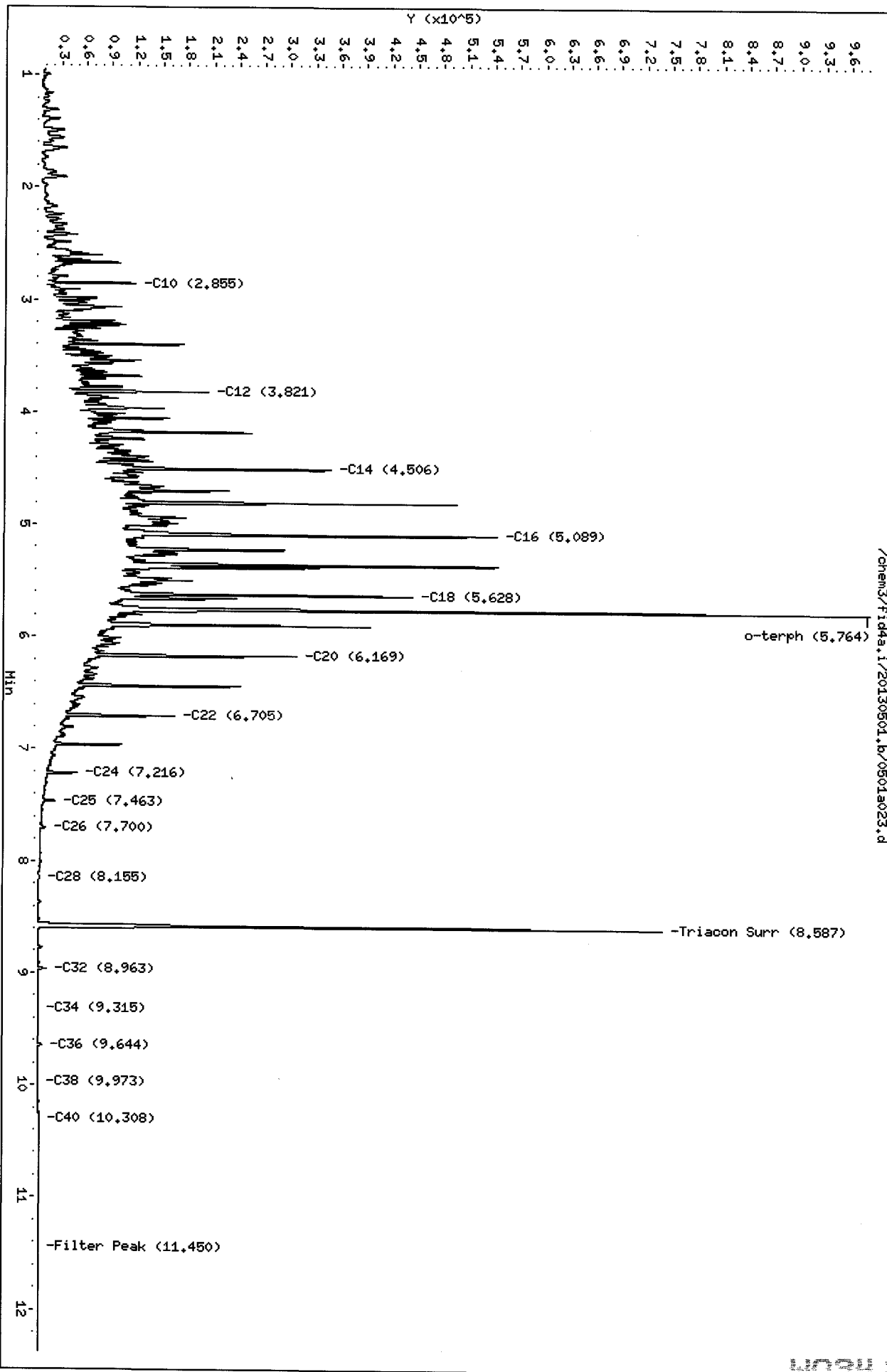
JW
5/2/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

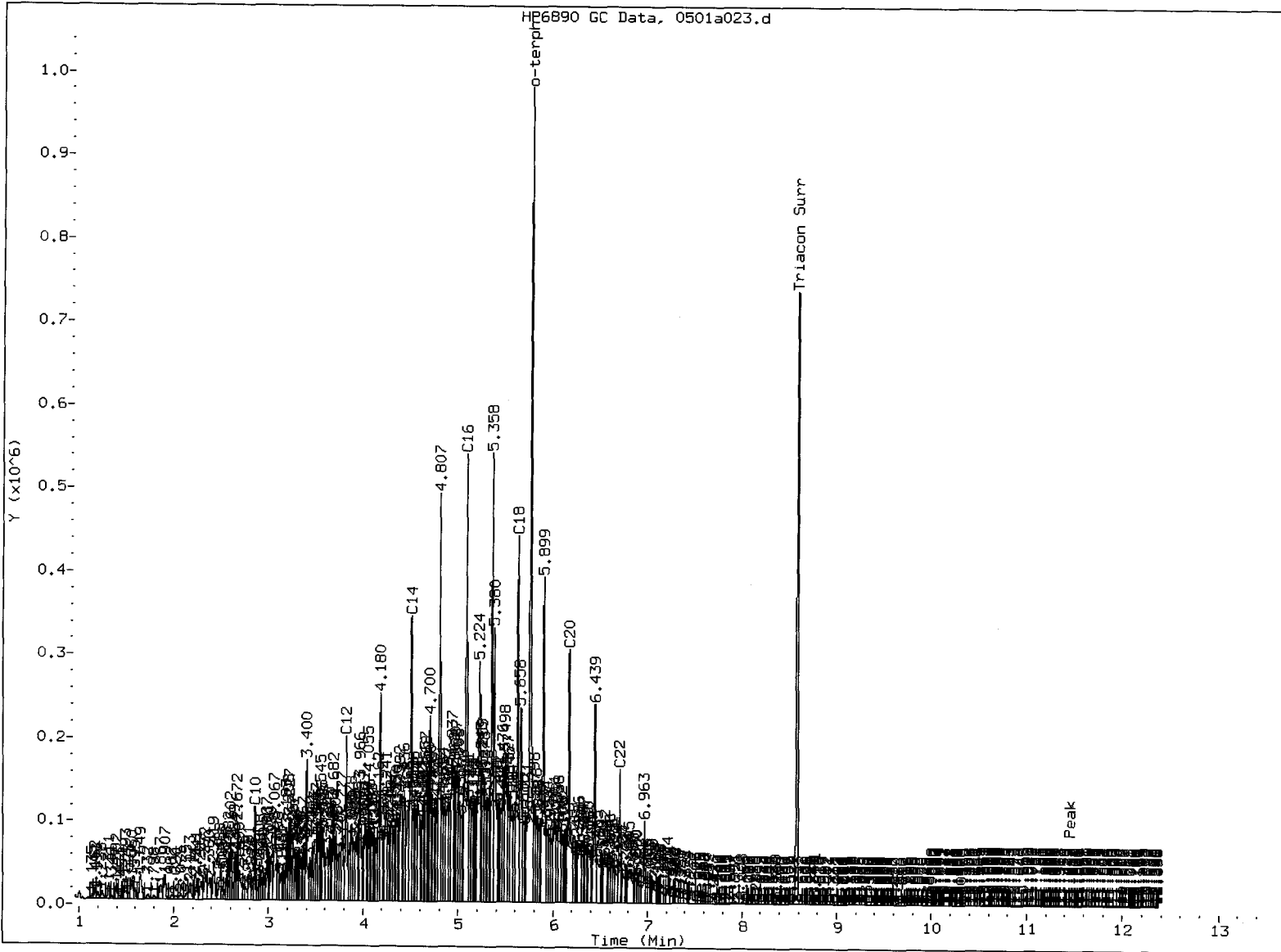
Data File: /chem3/fid4a.i/20130501.b/0501a023.d
Date: 01-MAY-2013 19:05
Client ID: M034LCSS1
Sample Info: M034LCSS1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
5/2/13



/chem3/fid4a.i/20130501.b/0501a023.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/2/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/01/13

ARI Job: W034
Project: Cashmere
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-9300-050113MB1	Method Blank	10.0 g	1.00 mL	-	05/01/13
13-9300-050113LCS1	Lab Control	10.0 g	1.00 mL	-	05/01/13
13-9300-W034A	G-S-2	5.88 g	1.00 mL	D	05/01/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: G-S-2

SAMPLE

Lab Sample ID: W034A

LIMS ID: 13-9300

Matrix: Soil

Data Release Authorized:

Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: 04/30/13

Date Received: 05/01/13

Date Analyzed: 05/01/13 11:23

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 32 mg-dry-wt

Percent Moisture: 43.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	40	< 40 U
108-88-3	Toluene	40	81
100-41-4	Ethylbenzene	40	< 40 U
179601-23-1	m,p-Xylene	79	< 79 U
95-47-6	o-Xylene	40	41

Gasoline Range Hydrocarbons 16 < 16 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	93.0%
Bromobenzene	87.2%

Gasoline Surrogate Recovery

Trifluorotoluene	92.5%
Bromobenzene	87.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AMH 5/2/13

Data file 1: /chem3/pid1.i/20130501-1.b/0501a007.d ARI ID: WO34A
 Data file 2: /chem3/pid1.i/20130501-2.b/0501a007.d Client ID: G-S-2
 Method: /chem3/pid1.i/20130501-2.b/PIDB.m Injection Date: 01-MAY-2013 11:23
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.833	0.004	3209	38609	92.5	TFT(Surr)
15.374	0.002	1985	16814	87.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	5324	0.015
8015C 2MP-TMB (4.16 to 16.20)	723723	3637	0.005
AK101 nC6-nC10 (4.66 to 15.09)	582885	1709	0.003
NWTPHG Tol-Nap (9.76 to 18.89)	375093	5324	0.014

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.841	0.004	3691	93.0	TFT(Surr)
15.382	0.002	7662	87.2	BB(Surr)

SW8021 (PID)

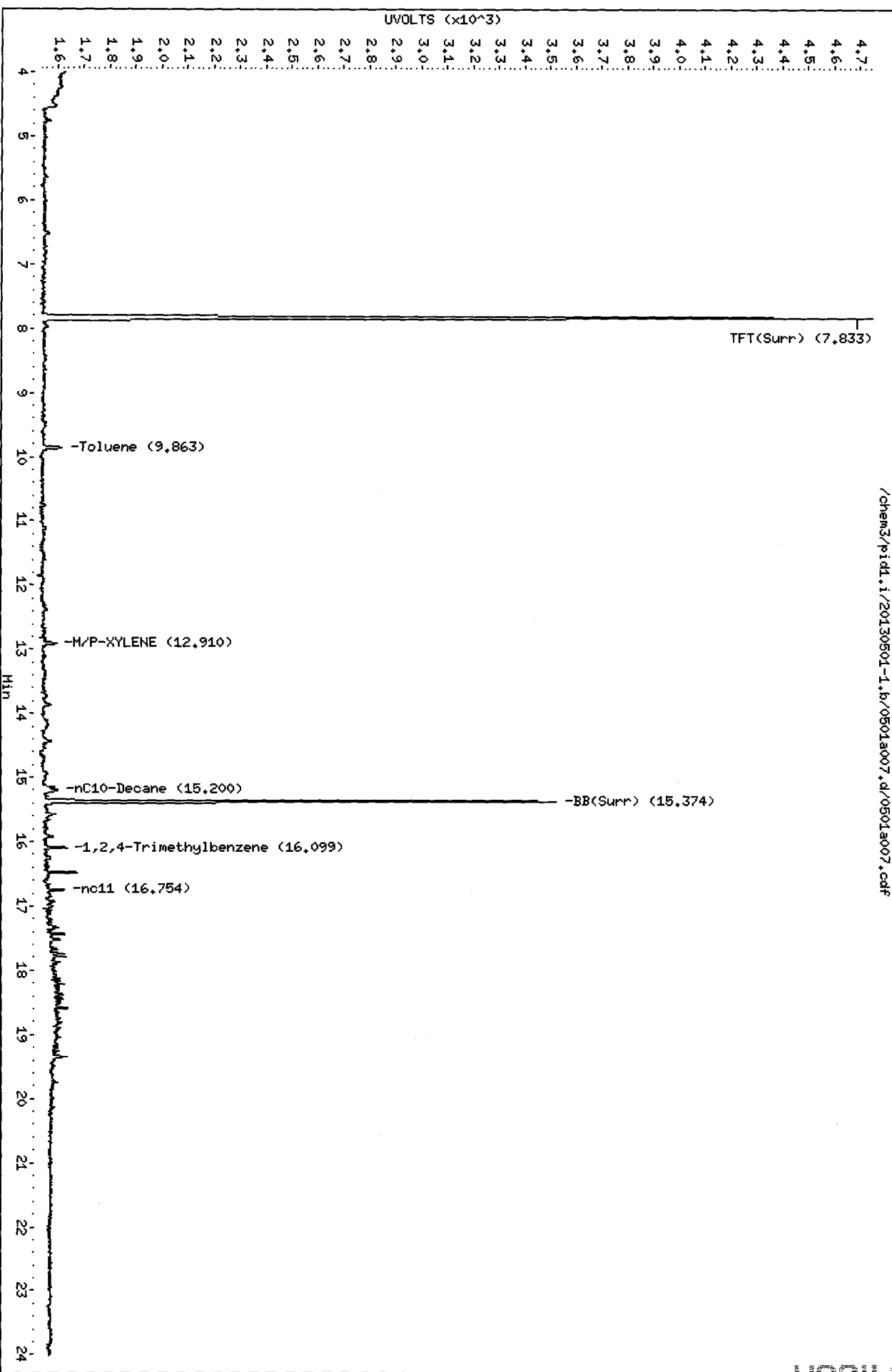
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.870	0.006	117	0.51N	Toluene
12.753	-0.005	22	0.11N	Ethylbenzene
12.917	-0.002	82	0.38N	M/P-Xylene
13.870	0.004	44	0.26N	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130501-1.b/0501a007.d
Date : 01-MAY-2013 11:23
Client ID: G-S-2
Sample Info: M034A
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

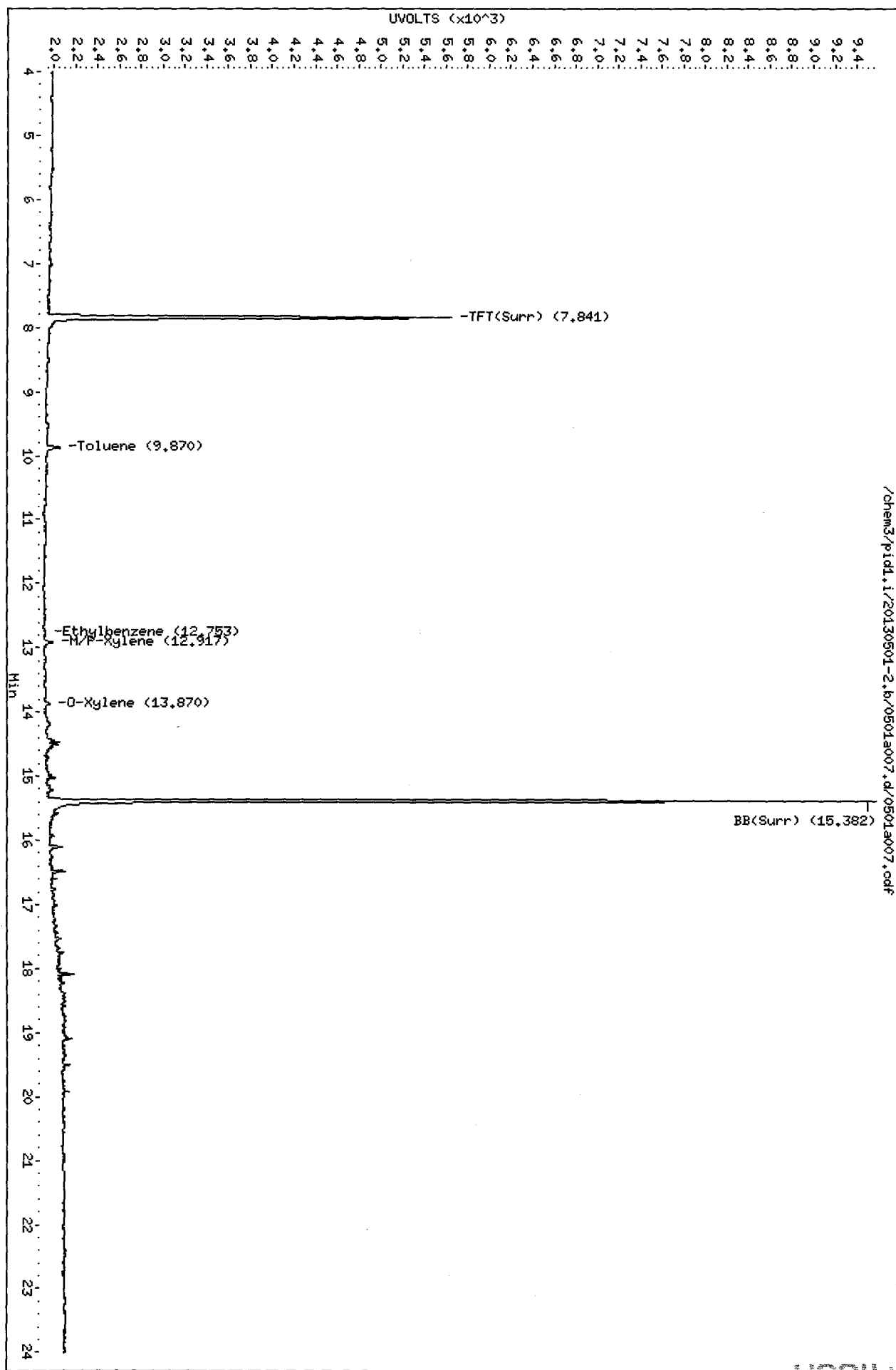
/chem3/pid1.i/20130501-1.b/0501a007.d/0501a007.cdf



Data File: /chem3/pid1.i/20130501-2.b/0501a007.d
Date : 01-MAY-2013 11:23
Client ID: G-S-2
Sample Info: M034A
Column phase: RTX 502-2 PID

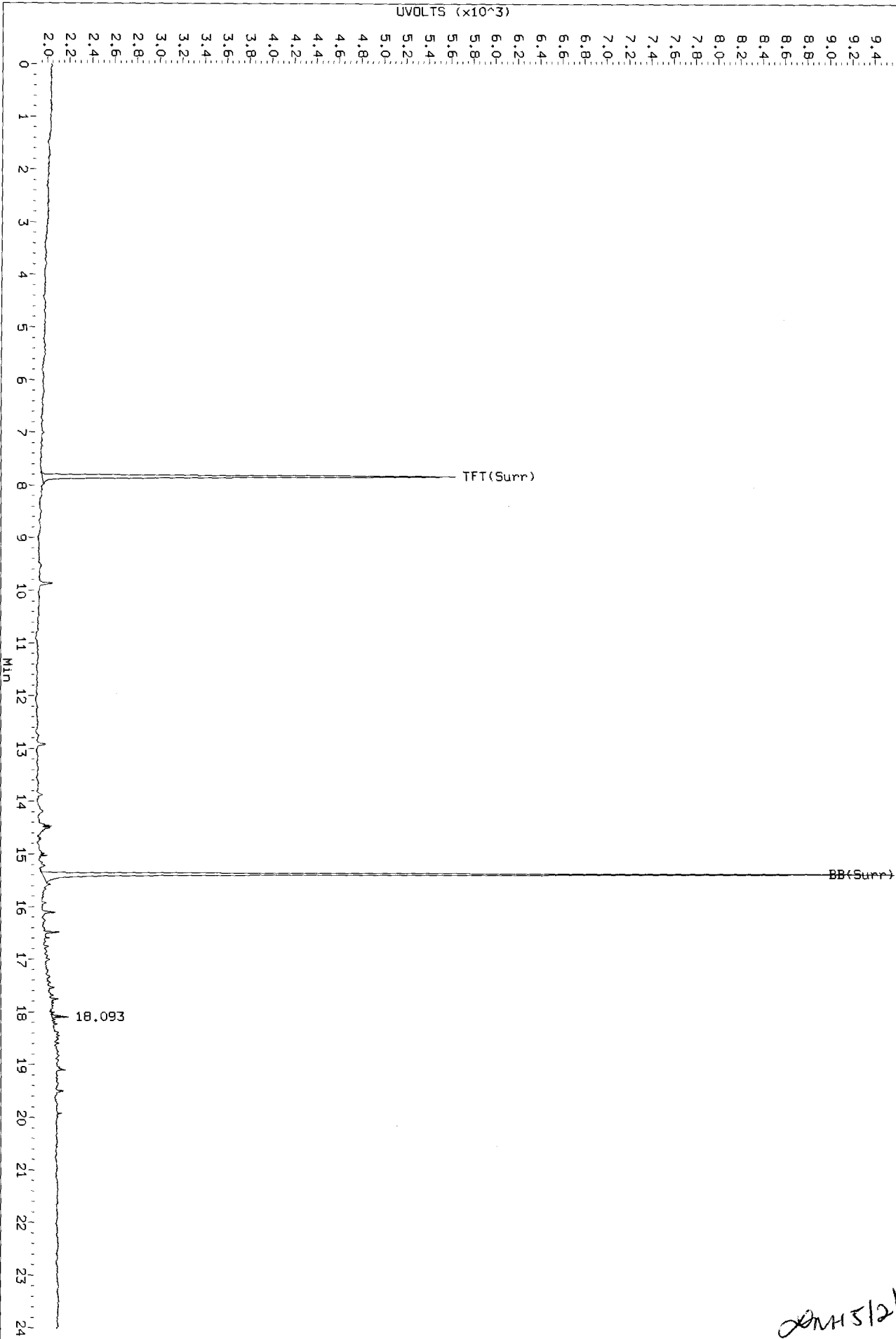
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130501-2.b/0501a007.d/0501a007.cdf



Data File: /chem3/pid1.i/20130501-2.b/0501a007.d/0501a007.cdf
Injection Date: 01-MAY-2013 11:23
Instrument: pid1.1
Client Sample ID: G-5-2

RIR 0501a007.cdf: 0.000 to 24.013 Min

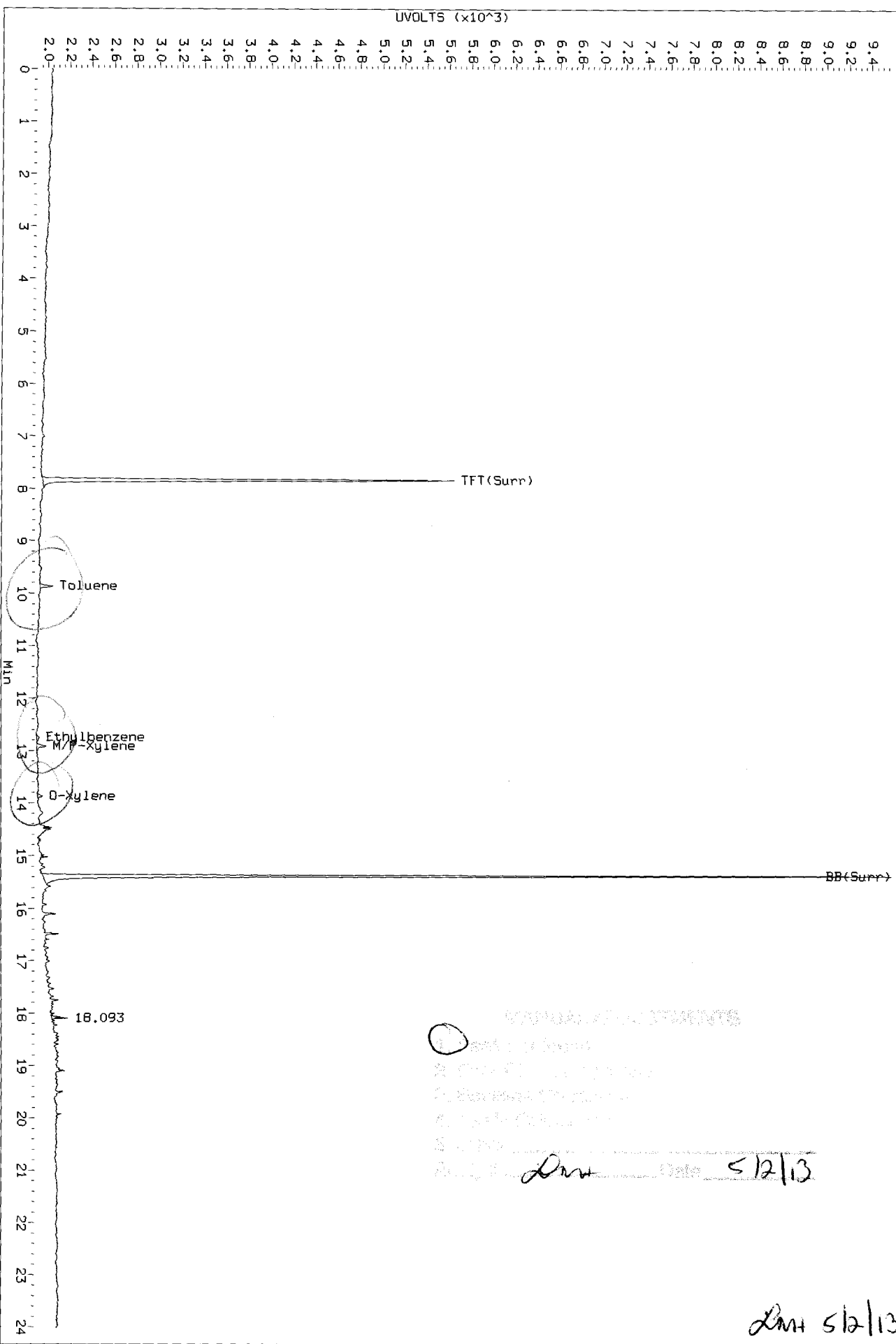


2/15/12

10000 : 4000

Data File: /chem3/pid1.1/20130501-2.b/0501a007.d/0501a007.cdf
Injection Date: 01-MAY-2013 11:23
Instrument: pid1.1
Client Sample ID: G-S-2

AIR 0501a007.cdf: 0.000 to 24.013 Min



QUALITY ASSURANCE

0

DATE 5/12/13

DATE 5/12/13

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: W034
Matrix: Soil

QC Report No: W034-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-050113	NA	87.4%	85.7%	0
LCS-050113	NA	95.1%	90.8%	0
LCSD-050113	NA	92.7%	88.7%	0
G-S-2	NA	92.5%	87.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-9300 to 13-9300

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: W034
Matrix: Soil

QC Report No: W034-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-050113	87.8%	86.9%	0
LCS-050113	95.0%	92.2%	0
LCSD-050113	92.8%	89.6%	0
G-S-2	93.0%	87.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-9300 to 13-9300

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050113

LIMS ID: 13-9300

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/01/13 09:50

LCSD: 05/01/13 10:19

Instrument/Analyst LCS: PID1/LH

LCSD: PID1/LH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS		LCS		LCSD		RPD
	LCS	Spike Added-LCS	Recovery	LCSD	Spike Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	49.4	50.0	98.8%	47.1	50.0	94.2%	4.8%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.1%	92.7%
Bromobenzene	90.8%	88.7%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-050113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050113

LIMS ID: 13-9300

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/01/13 09:50

LCSD: 05/01/13 10:19

Instrument/Analyst LCS: PID1/LH

LCSD: PID1/LH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS		LCS Recovery		LCSD		LCSD Recovery		RPD
	Concentration	Spike Added	Recovery %	Concentration	Concentration	Spike Added	Recovery %		
Benzene	174	185	94.1%	173	185	93.5%	0.6%		
Toluene	1810	1980	91.4%	1800	1980	90.9%	0.6%		
Ethylbenzene	506	580	87.2%	500	580	86.2%	1.2%		
m,p-Xylene	1870	2120	88.2%	1850	2120	87.3%	1.1%		
o-Xylene	842	960	87.7%	842	960	87.7%	0.0%		

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.0%	92.8%
Bromobenzene	92.2%	89.6%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

dmh 5/2/13

Data file 1: /chem3/pid1.i/20130501-1.b/0501a004.d ARI ID: LCS0501
 Data file 2: /chem3/pid1.i/20130501-2.b/0501a004.d Client ID:
 Method: /chem3/pid1.i/20130501-2.b/PIDB.m Injection Date: 01-MAY-2013 09:50
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.830	0.001	3300	45036	95.1	TFT(Surr)
15.373	0.001	2072	18036	90.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	350095	0.978 M
8015C 2MP-TMB (4.16 to 16.20)	723723	696568	0.962 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	567065	0.973 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	370463	0.988 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.838	0.001	3773	95.0	TFT(Surr)
15.381	0.001	8101	92.2	BB(Surr)

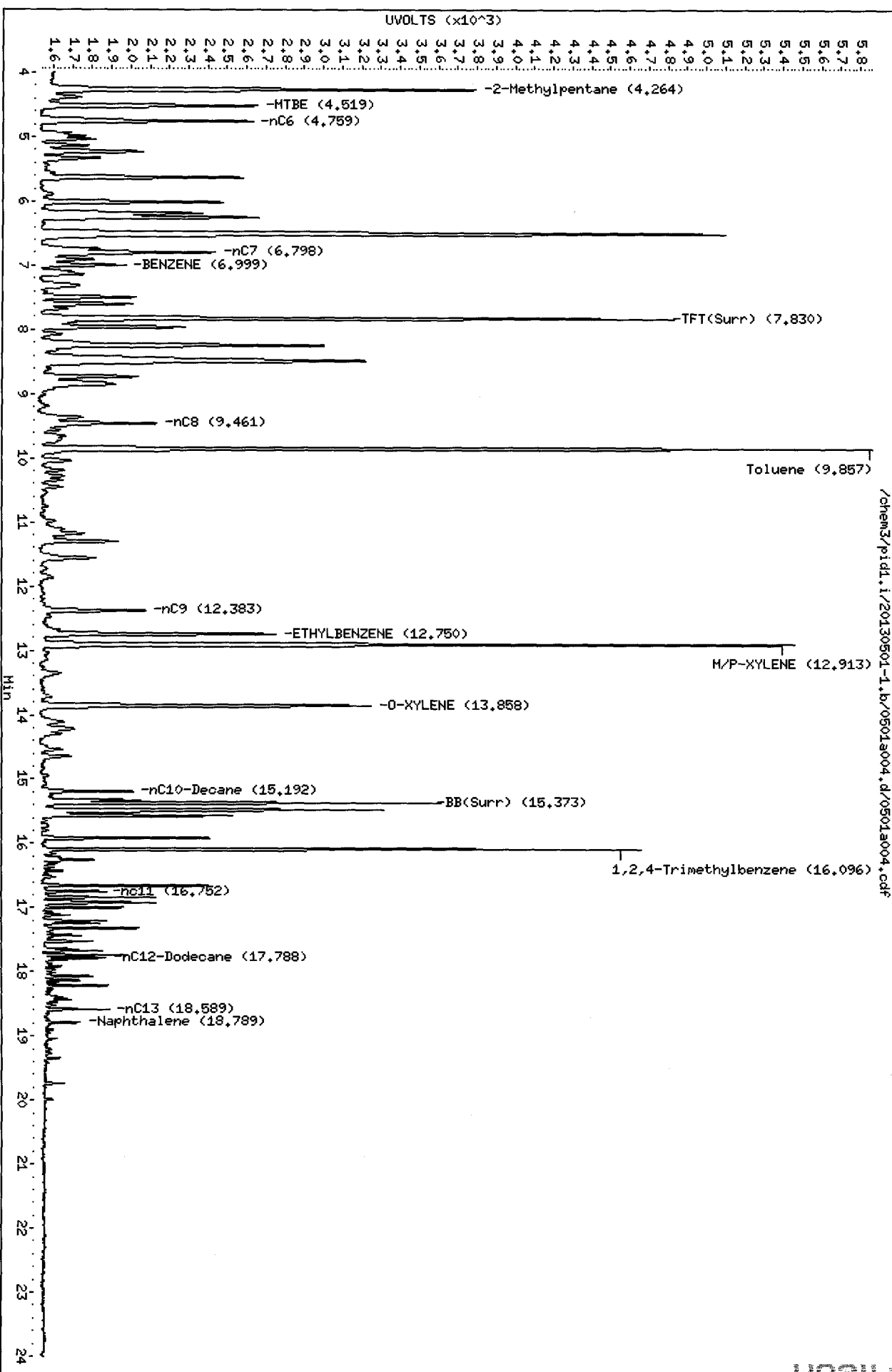
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.007	0.001	835	3.48	Benzene
9.865	0.001	8293	36.21	Toluene
12.759	0.001	1957	10.11	Ethylbenzene
12.922	0.003	7969	37.32	M/P-Xylene
13.867	0.001	2873	16.84	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

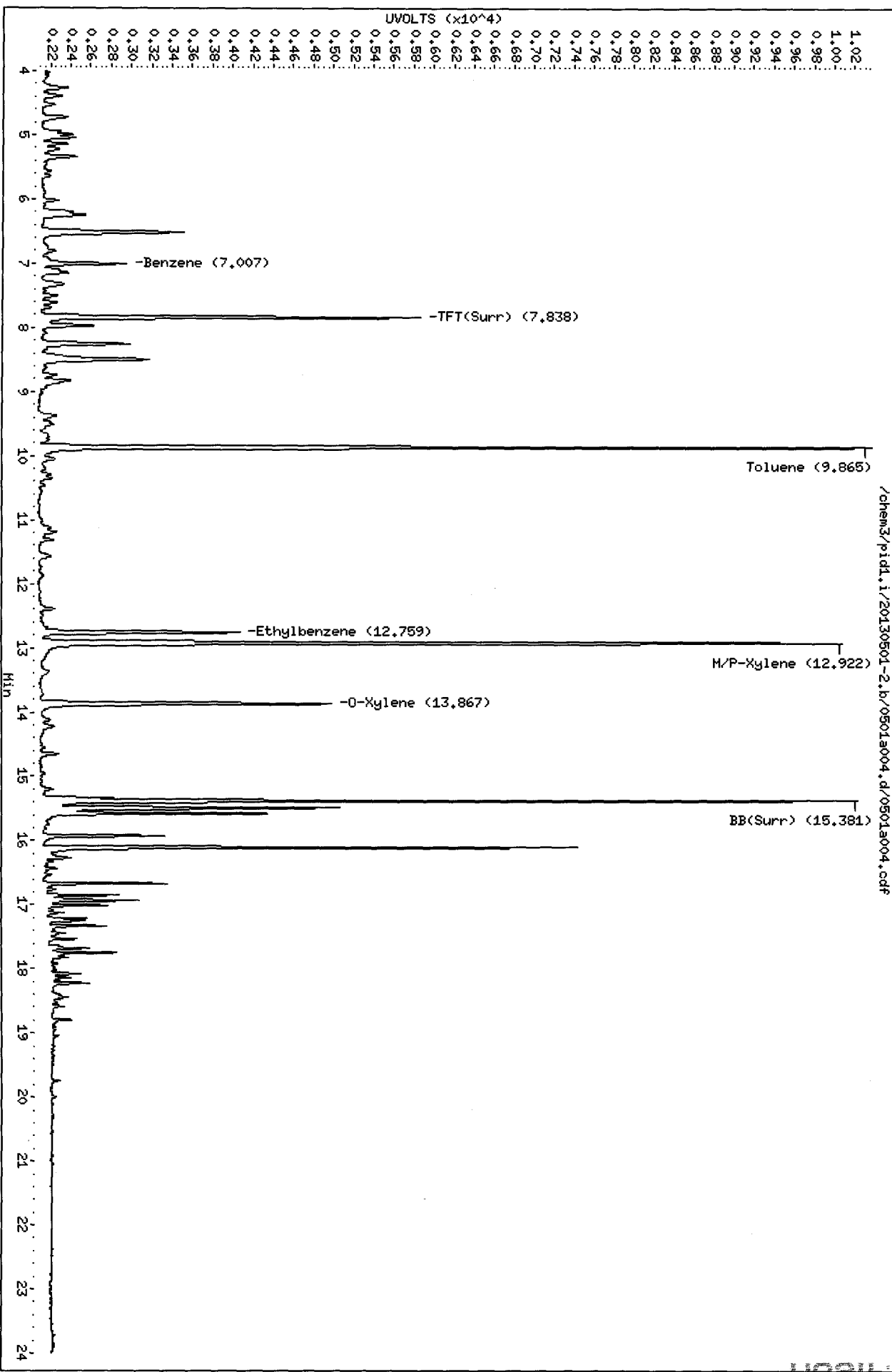
Data File: /chem3/pid1.i/20130501-1.b/0501a004.d
Date: 01-MAY-2013 09:50
Client ID:
Sample Info: LCS0501
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



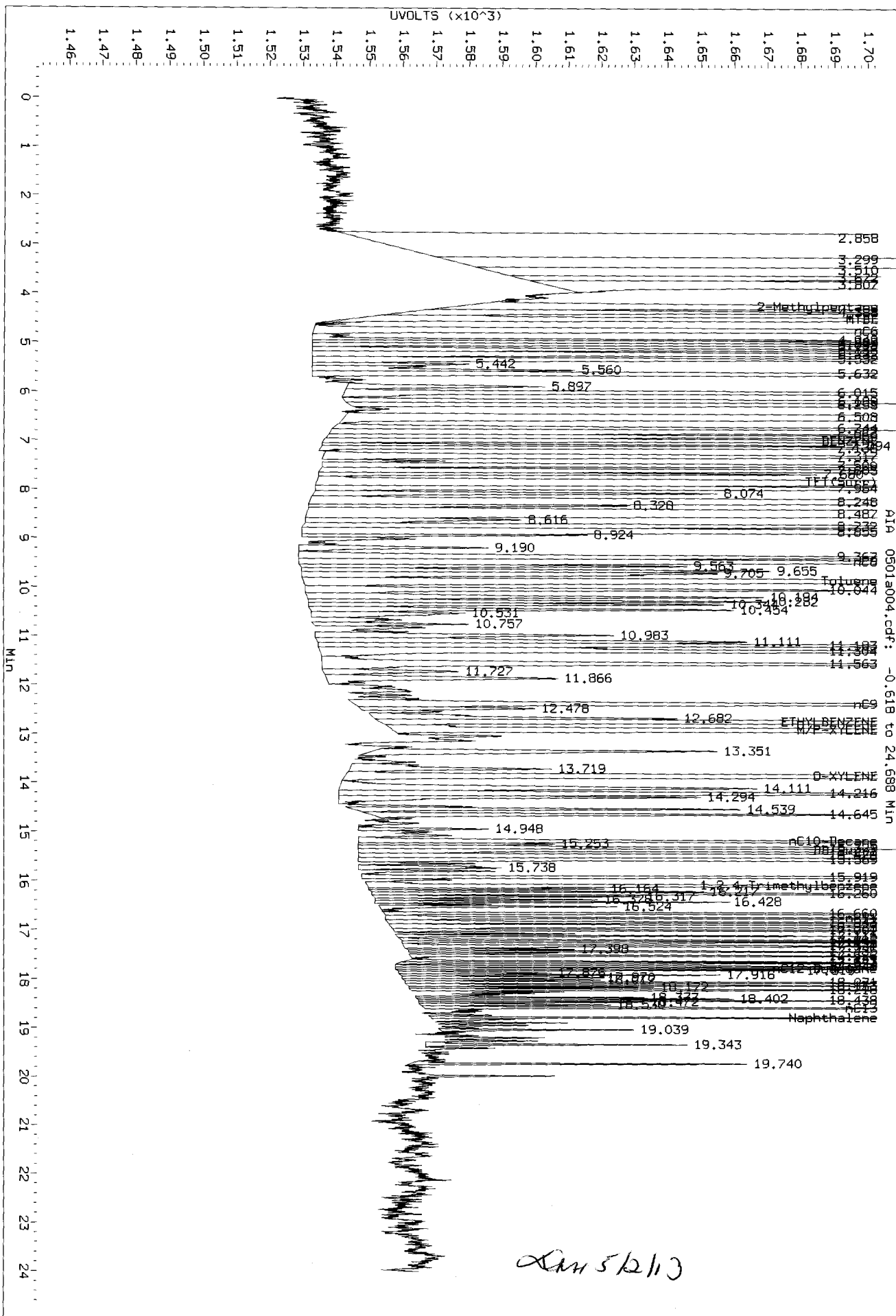
Data File: /chem3/pid1.i/20130501-2.b/0501a004.d
Date : 01-MAY-2013 09:50
Client ID:
Sample Info: LCS0501
Column phase: RTX 502-2 PID

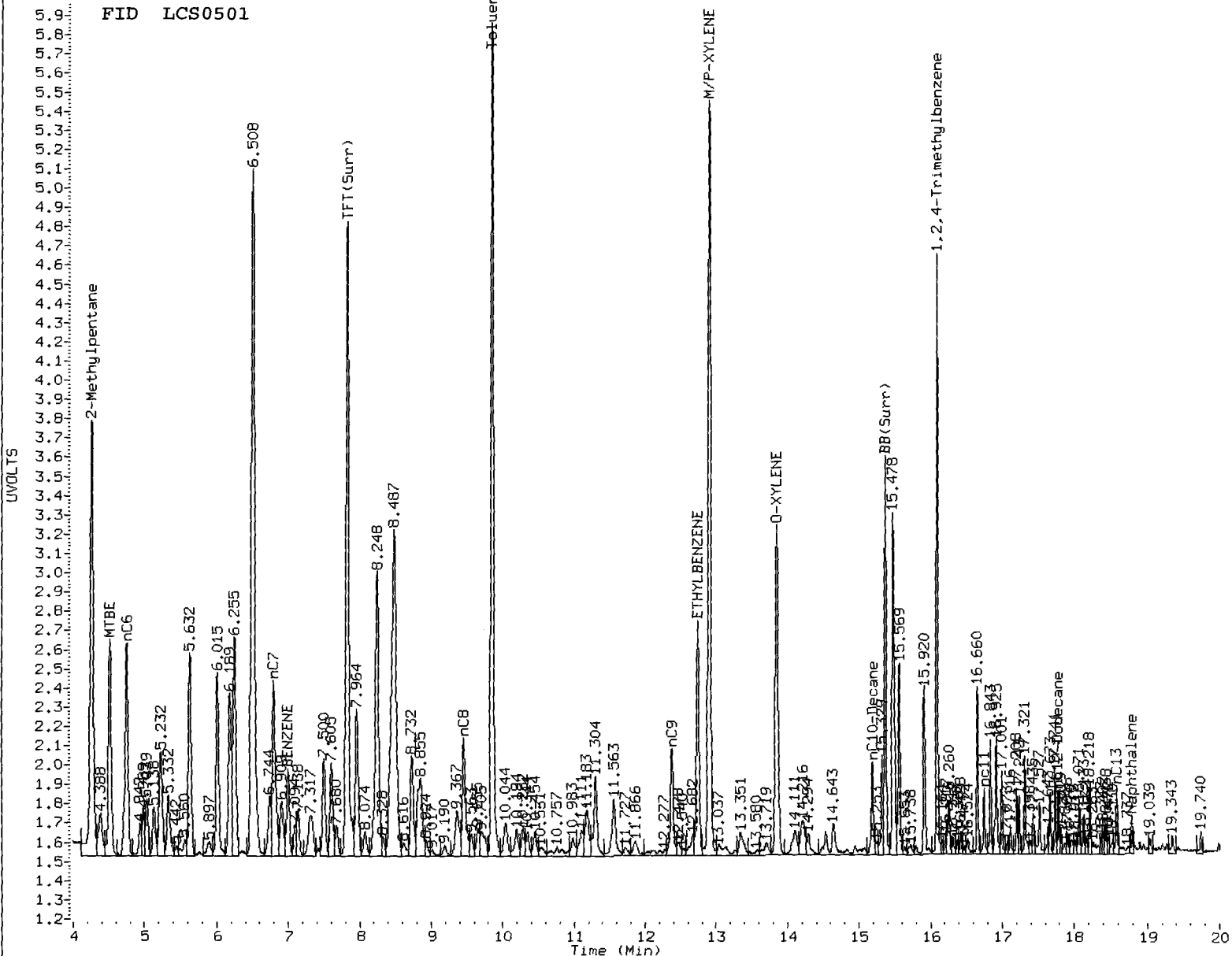
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130501-2.b/0501a004.d/0501a004.cdf

Data File: /chem3/pid1.i/20130501-1.b/0501a004.d/0501a004.cdf
 Injection Date: 01-MAY-2013 09:50
 Instrument: pid1.1
 Client Sample ID:





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: JNAH

Date: 5/2/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

245/2/13

Data file 1: /chem3/pid1.i/20130501-1.b/0501a005.d ARI ID: LCSD0501
 Data file 2: /chem3/pid1.i/20130501-2.b/0501a005.d Client ID:
 Method: /chem3/pid1.i/20130501-2.b/PIDB.m Injection Date: 01-MAY-2013 10:19
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.830	0.001	3217	43821	92.7	TFT(Surr)
15.373	0.001	2024	17659	88.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	334456	0.934 M
8015C 2MP-TMB (4.16 to 16.20)	723723	666062	0.920 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	537054	0.921 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	353302	0.942 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.839	0.002	3685	92.8	TFT(Surr)
15.381	0.001	7877	89.6	BB(Surr)

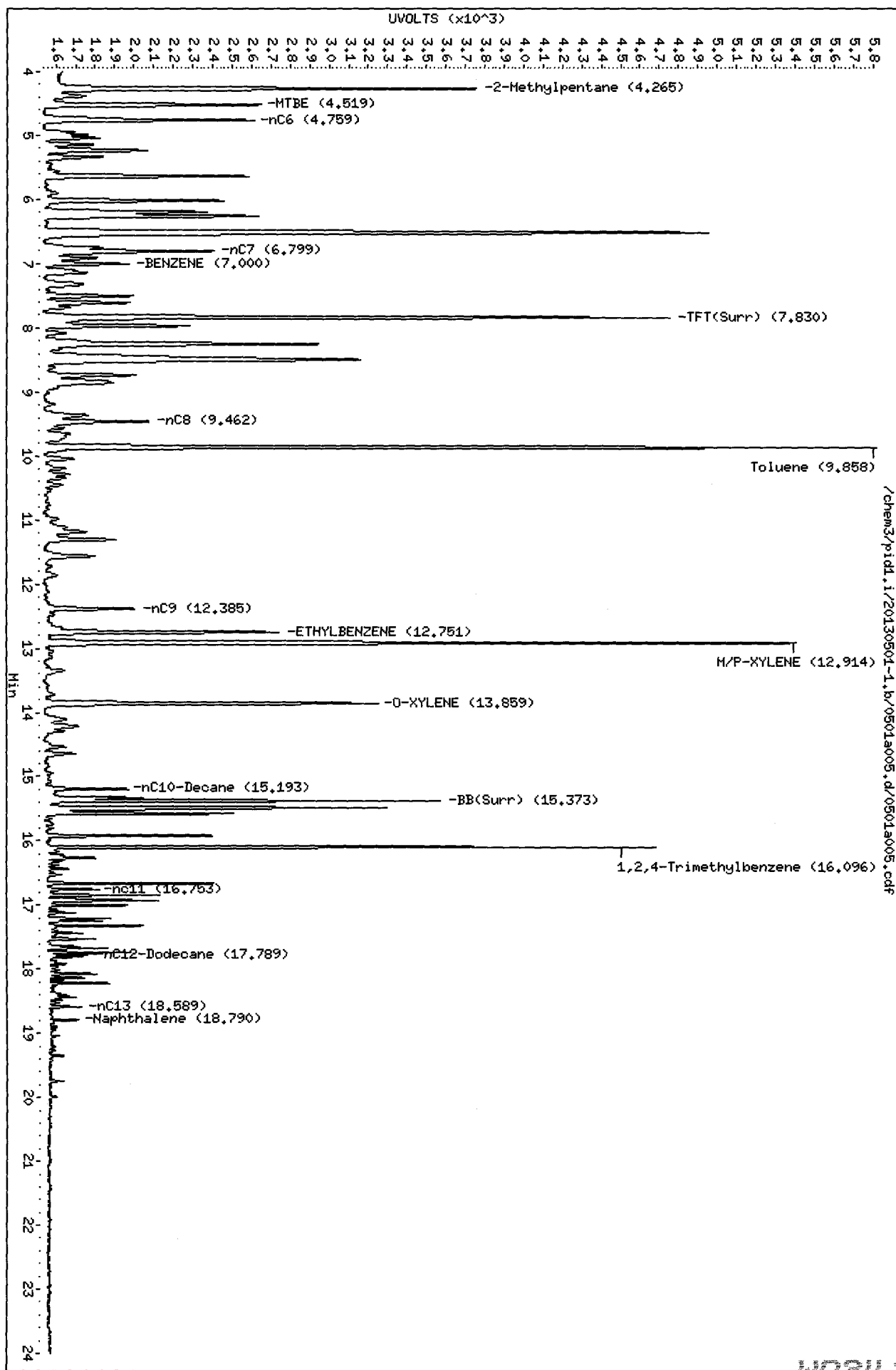
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.007	0.001	831	3.46	Benzene
9.866	0.002	8235	35.96	Toluene
12.759	0.001	1938	10.01	Ethylbenzene
12.923	0.004	7896	36.98	M/P-Xylene
13.868	0.002	2873	16.84	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

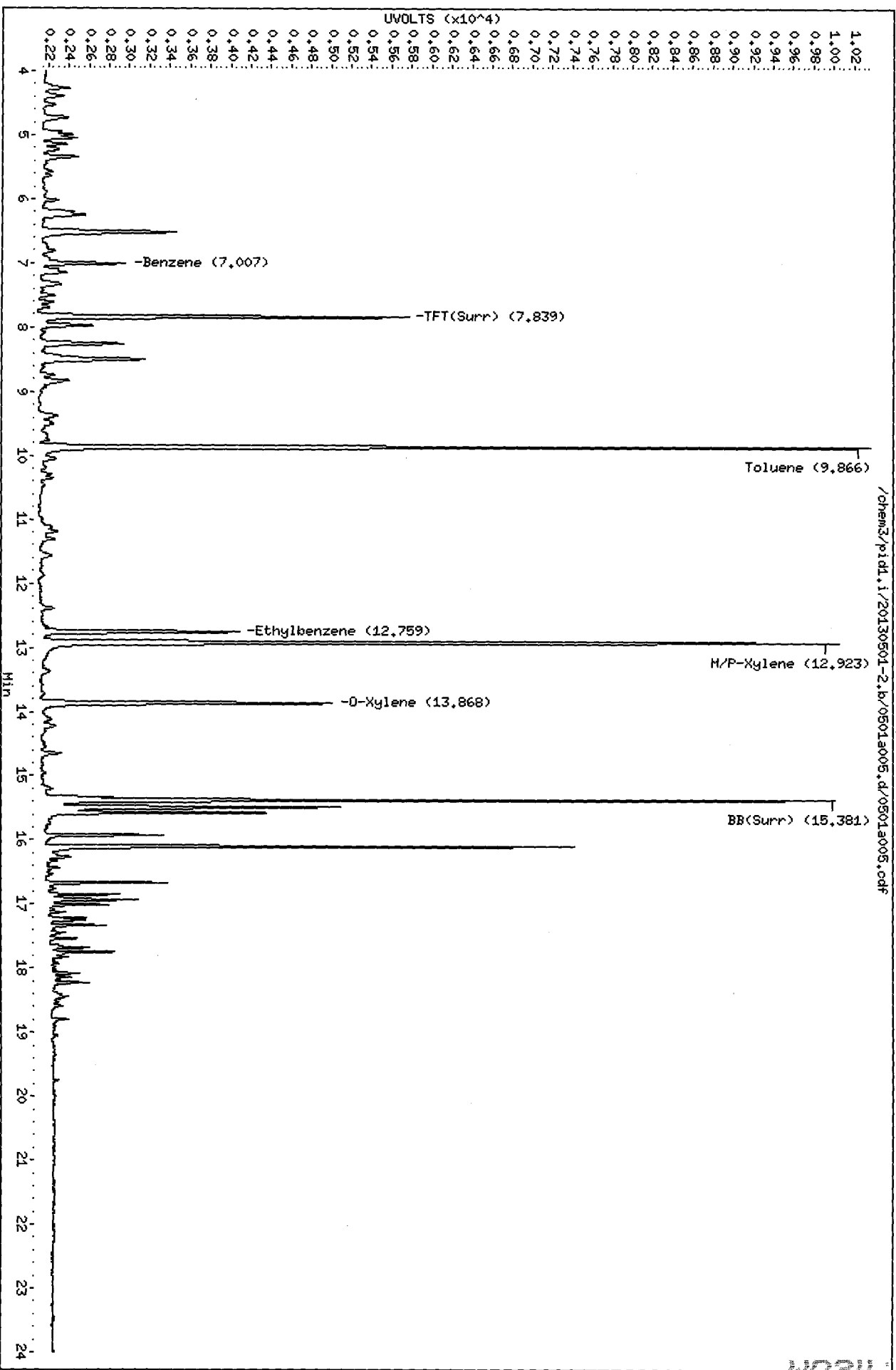
Data File: /chem3/pid1.i/20130501-1.b/0501a005.d
Date: 01-MAY-2013 10:19
Client ID:
Sample Info: LCS0501
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

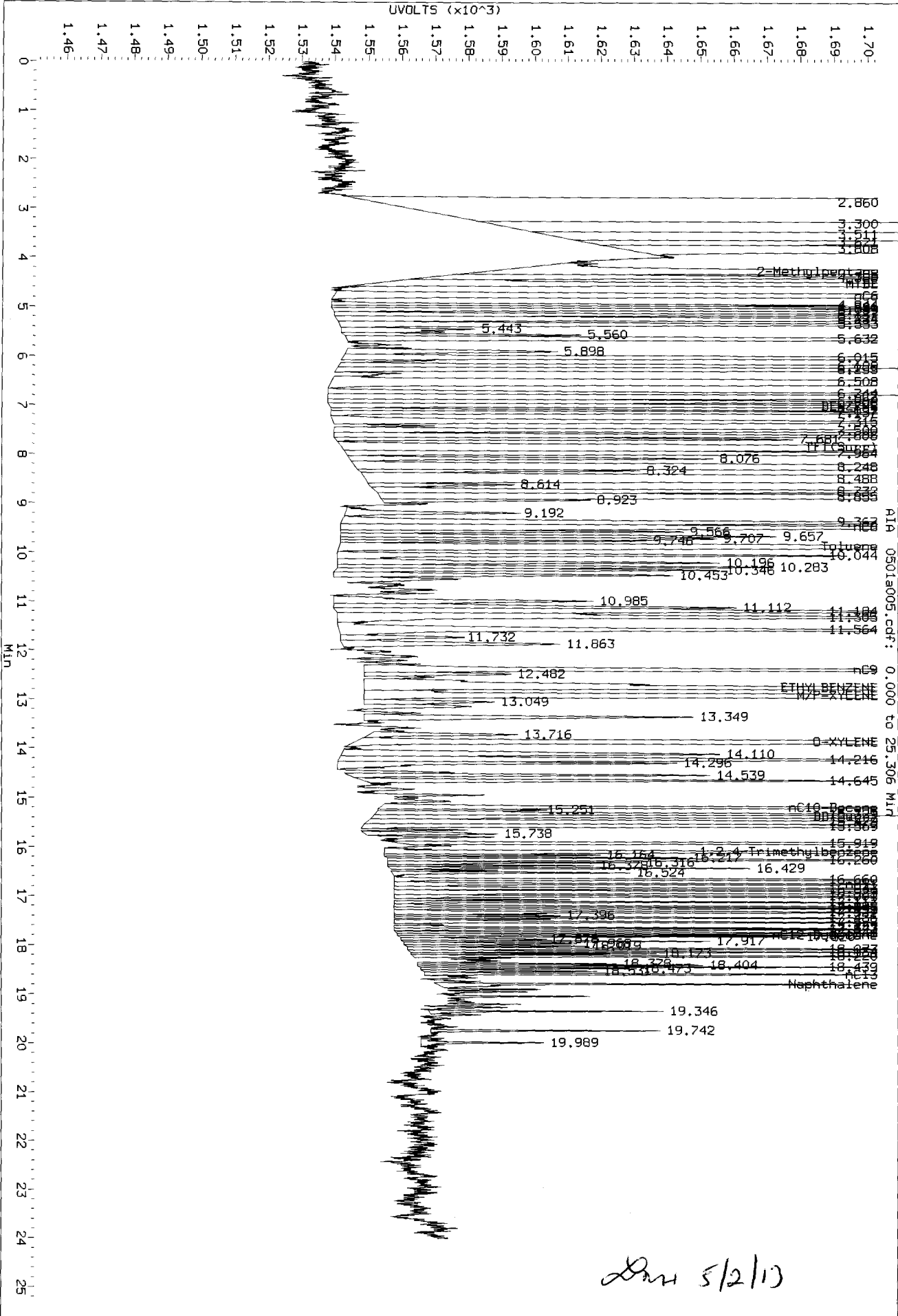


Data File: /chem3/pid1.i/20130501-2.b/0501a005.d
Date: 01-MAY-2013 10:19
Client ID:
Sample Info: LCS0501
Column phase: RTX 502-2 PID

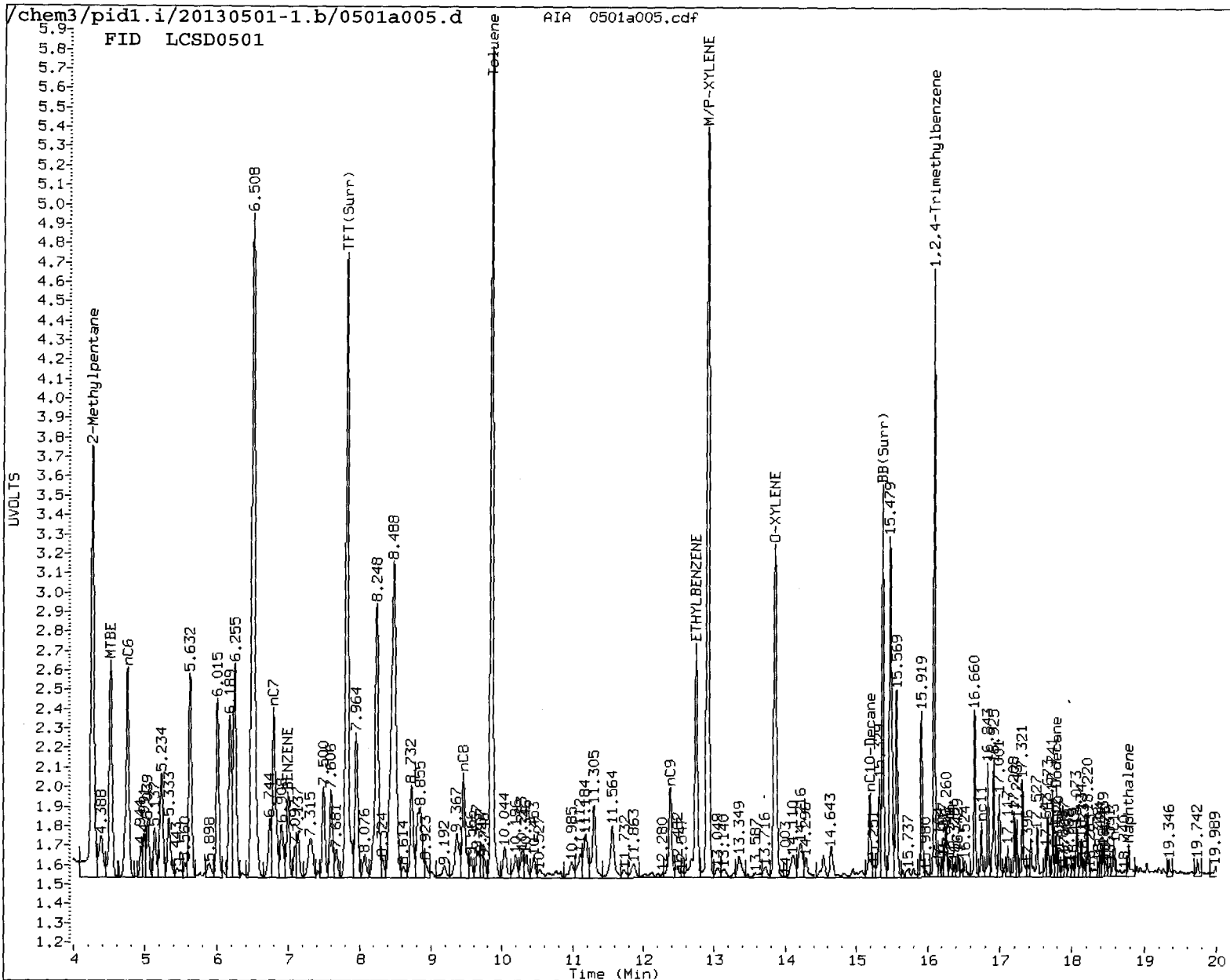
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130501-1.b/0501a005.d/0501a005.cdf
 Injection Date: 01-MAY-2013 10:19
 Instrument: pid1.1
 Client Sample ID:



DM 5/2/13



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: SMH

Date: 5/2/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050113

METHOD BLANK

Lab Sample ID: MB-050113

LIMS ID: 13-9300

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/01/13 10:48

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	87.8%
Bromobenzene	86.9%

Gasoline Surrogate Recovery

Trifluorotoluene	87.4%
Bromobenzene	85.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

2/4 5/2/13

Data file 1: /chem3/pid1.i/20130501-1.b/0501a006.d ARI ID: MB0501
 Data file 2: /chem3/pid1.i/20130501-2.b/0501a006.d Client ID: MB0501
 Method: /chem3/pid1.i/20130501-2.b/PIDB.m Injection Date: 01-MAY-2013 10:48
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.831	0.002	3031	37181	87.4	TFT(Surr)
15.374	0.002	1955	16464	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	2805	0.008
8015C 2MP-TMB (4.16 to 16.20)	723723	4006	0.006
AK101 nC6-nC10 (4.66 to 15.09)	582885	3020	0.005
NWTPHG Tol-Nap (9.76 to 18.89)	375093	2805	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.839	0.003	3485	87.8	TFT(Surr)
15.381	0.001	7641	86.9	BB(Surr)

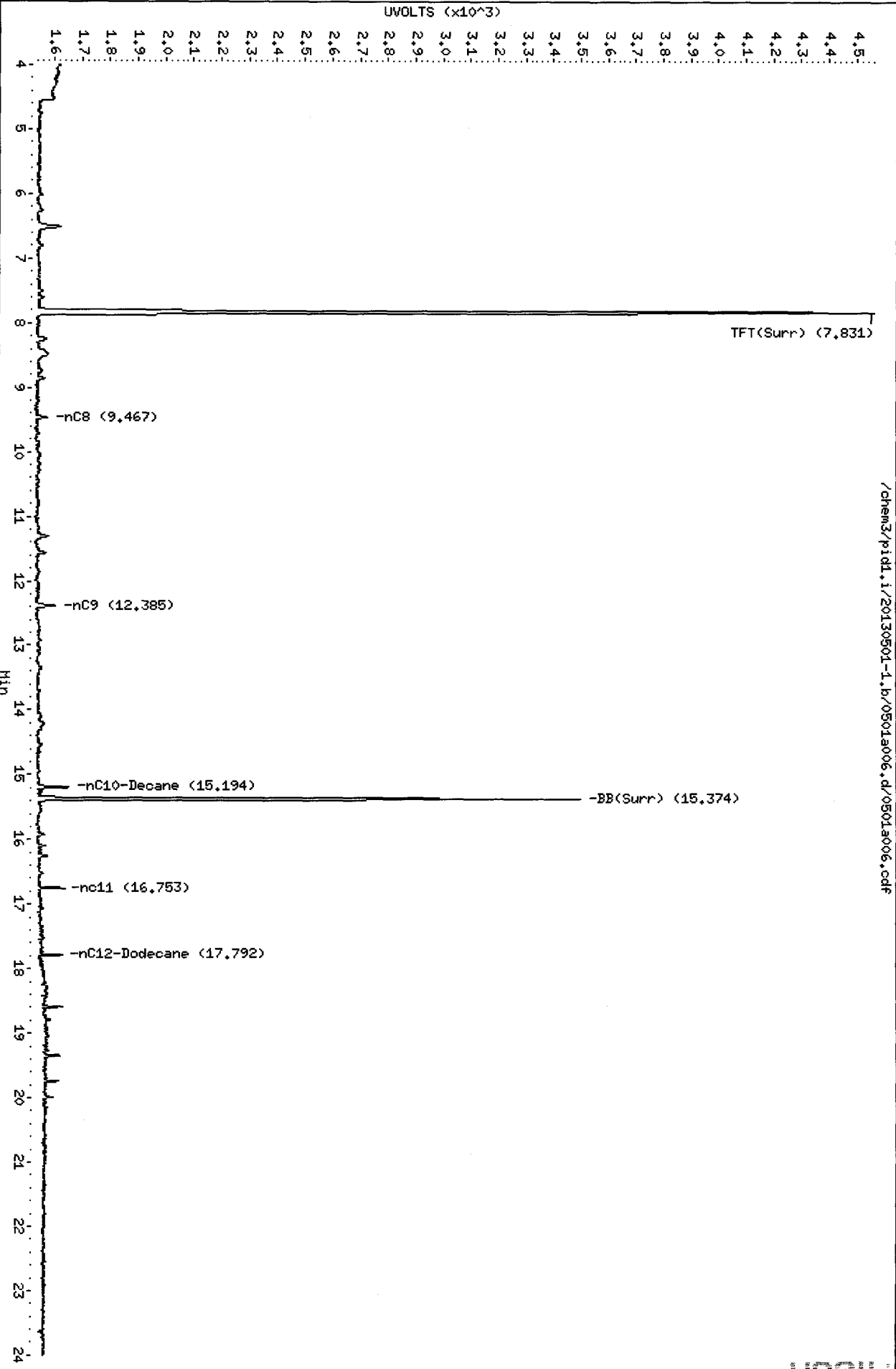
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130501-1.b/0501a006.d
 Date: 01-MAY-2013 10:48
 Client ID:
 Sample Info: MB0501
 Column phase: RTX 502-2 FID

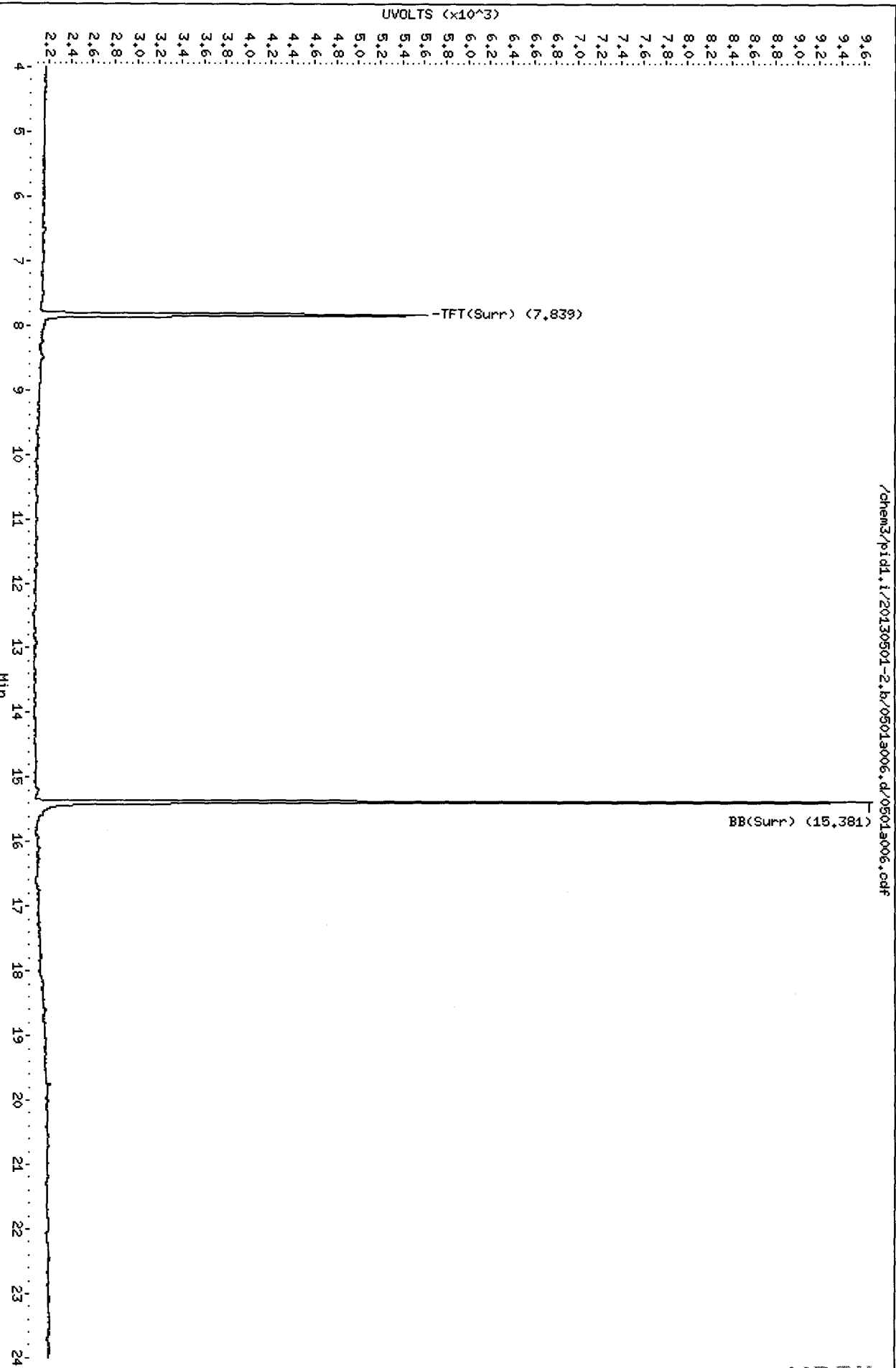
Instrument: pid1.i
 Operator: LH
 Column diameter: 0.18



01-MAY-2013 10:48

Data File: /chem3/pid1.i/20130501-2.b/0501a006.d
Date : 01-MAY-2013 10:48
Client ID: MB0501
Sample Info: MB0501
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: G-S-2
SAMPLE

Lab Sample ID: WO34A
LIMS ID: 13-9300
Matrix: Soil
Data Release Authorized:
Reported: 05/02/13

QC Report No: WO34-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03
Date Sampled: 04/30/13
Date Received: 05/01/13

Percent Total Solids: 49.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/01/13	6010C	05/02/13	7440-38-2	Arsenic	9	9	U
3050B	05/01/13	6010C	05/02/13	7440-47-3	Chromium	0.9	42.4	
3050B	05/01/13	6010C	05/02/13	7440-50-8	Copper	0.4	22.4	
3050B	05/01/13	6010C	05/02/13	7439-92-1	Lead	4	13	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: W034LCS

LIMS ID: 13-9300

Matrix: Soil

Data Release Authorized: 

Reported: 05/02/13

QC Report No: W034-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	200	200	100%	
Chromium	6010C	50.1	50.0	100%	
Copper	6010C	48.5	50.0	97.0%	
Lead	6010C	192	200	96.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WO34MB

LIMS ID: 13-9300

Matrix: Soil

Data Release Authorized: 

Reported: 05/02/13

QC Report No: WO34-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/01/13	6010C	05/02/13	7440-38-2	Arsenic	5	5	U
3050B	05/01/13	6010C	05/02/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/01/13	6010C	05/02/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/01/13	6010C	05/02/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 6, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01/03
ARI Job No.: WO53

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted one soil sample on May 2, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for SVOCs, NWTPH-Dx, NWTPH-Gx/BETX, and Metals, as requested on the COC.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a circular stamp or seal.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WO53

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W053	Turn-around Requested: TZUSH - 24 HR.	Page: 1 of 1
ARI Client Company: MFA, INC.	Phone: 503-209-2518	Date: _____ Ice Present? Y
Client Contact: TONY SILVA TSILVA@MAULFOSTER.COM	No. of Coolers: 1	Cooler Temps: 3.9

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested								Notes/Comments		
					GX/BTEX	S035/8081	Dx &	SILICA GEL CLEAN UP	SVOCs	887D	METALS (ODD) As, Cr, Cu, Pb	EDB TDC		MRB 8860	ONLY IF GX DETECTED
TP-S-POST	05/01/13	1430	SOIL	7											

Comments/Special Instructions PLEASE PROVIDE GIS KEY 4-FILE EDD. EMAIL TO TONY SILVA & ERIC NAYLER AT MFA	Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Relinquished by (Signature): _____	Received by (Signature): _____
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Milkap	Printed Name: _____	Printed Name: _____
	Company: MAULFOSTER & PIERCE	Company: ARI	Company: _____	Company: _____
	Date & Time: 05/01/13 17:00	Date & Time: 5/2/13 1015	Date & Time: _____	Date & Time: _____

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

2009-05-01 10:50:00



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s) _____ (NA)

Delivered by Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No W053

Tracking No. K046 684 7029 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)
 Were custody papers included with the cooler? YES (NO)
 Were custody papers properly filled out (ink, signed, etc) YES (NO)
 Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry) ... 3.9
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952
 Cooler Accepted by: JM Date: 5/2/13 Time: 1015

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)
 What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES (NO)
 Were all bottles sealed in individual plastic bags? YES (NO)
 Did all bottles arrive in good condition (unbroken)? YES (NO)
 Were all bottle labels complete and legible? YES (NO)
 Did the number of containers listed on COC match with the number of containers received? YES (NO)
 Did all bottle labels and tags agree with custody papers? YES (NO)
 Were all bottles used correct for the requested analyses? YES (NO)
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES (NO)
 Were all VOC vials free of air bubbles? (NA) YES (NO)
 Was sufficient amount of sample sent in each bottle? YES (NO)
 Date VOC Trip Blank was made at ARI.. (NA)
 Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 5/2/13 Time: 1045

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By _____ Date _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: W053
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. TP-S-POST	W053A	13-9500	Soil	05/01/13 14:30	05/02/13 10:15



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: TP-S-POST
SAMPLE

Lab Sample ID: W053A
 LIMS ID: 13-9500
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 05/06/13

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/01/13
 Date Received: 05/02/13

Date Extracted: 05/02/13
 Date Analyzed: 05/02/13 22:28
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.24 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 14.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	830	< 830 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: TP-S-POST
SAMPLE

Lab Sample ID: W053A
 LIMS ID: 13-9500
 Matrix: Soil
 Date Analyzed: 05/02/13 22:28

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	49	< 49 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	24	< 24 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	39	< 39 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.4%	2-Fluorobiphenyl	78.0%
d14-p-Terphenyl	89.2%	d4-1,2-Dichlorobenzene	69.4%
d5-Phenol	73.5%	2-Fluorophenol	72.1%
2,4,6-Tribromophenol	97.6%	d4-2-Chlorophenol	75.6%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: W053-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-050213	66.0%	67.2%	91.6%	72.0%	66.9%	71.2%	83.6%	72.8%	0	
LCS-050213	70.2%	76.4%	90.6%	69.0%	76.0%	71.9%	91.7%	75.9%	0	
TP-S-POST	68.4%	78.0%	89.2%	69.4%	73.5%	72.1%	97.6%	75.6%	0	

LCS/MB LIMITS

QC LIMITS

(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(37-100)	(31-100)

Prep Method: SW3546
Log Number Range: 13-9500 to 13-9500

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 1 of 2

Sample ID: LCS-050213
LAB CONTROL

Lab Sample ID: LCS-050213
 LIMS ID: 13-9500
 Matrix: Soil
 Data Release Authorized: *B*
 Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/01/13
 Date Received: 05/02/13

Date Extracted: 05/02/13
 Date Analyzed: 05/02/13 21:51
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	435	500	87.0%
Bis-(2-Chloroethyl) Ether	382	500	76.4%
2-Chlorophenol	342	500	68.4%
1,3-Dichlorobenzene	364	500	72.8%
1,4-Dichlorobenzene	371	500	74.2%
Benzyl Alcohol	400	500	80.0%
1,2-Dichlorobenzene	375	500	75.0%
2-Methylphenol	344	500	68.8%
2,2'-Oxybis(1-Chloropropane)	390	500	78.0%
4-Methylphenol	718	1000	71.8%
N-Nitroso-Di-N-Propylamine	400	500	80.0%
Hexachloroethane	350	500	70.0%
Nitrobenzene	386	500	77.2%
Isophorone	376	500	75.2%
2-Nitrophenol	373	500	74.6%
2,4-Dimethylphenol	1060	1500	70.7%
Benzoic Acid	1310	2750	47.6%
bis(2-Chloroethoxy) Methane	424	500	84.8%
2,4-Dichlorophenol	1060	1500	70.7%
1,2,4-Trichlorobenzene	386	500	77.2%
Naphthalene	375	500	75.0%
4-Chloroaniline	1090	1500	72.7%
Hexachlorobutadiene	385	500	77.0%
4-Chloro-3-methylphenol	1360	1500	90.7%
2-Methylnaphthalene	410	500	82.0%
Hexachlorocyclopentadiene	828	1500	55.2%
2,4,6-Trichlorophenol	1280	1500	85.3%
2,4,5-Trichlorophenol	1340	1500	89.3%
2-Chloronaphthalene	429	500	85.8%
2-Nitroaniline	1500	1500	100%
Dimethylphthalate	484	500	96.8%
Acenaphthylene	406	500	81.2%
3-Nitroaniline	1580	1500	105%
Acenaphthene	422	500	84.4%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 2 of 2

Sample ID: LCS-050213
LAB CONTROL

Lab Sample ID: LCS-050213
 LIMS ID: 13-9500
 Matrix: Soil
 Date Analyzed: 05/02/13 21:51

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1460	2750	53.1%
4-Nitrophenol	1060	1500	70.7%
Dibenzofuran	447	500	89.4%
2,6-Dinitrotoluene	1480	1500	98.7%
2,4-Dinitrotoluene	1520	1500	101%
Diethylphthalate	490	500	98.0%
4-Chlorophenyl-phenylether	442	500	88.4%
Fluorene	428	500	85.6%
4-Nitroaniline	1700	1500	113%
4,6-Dinitro-2-Methylphenol	1910	2750	69.5%
N-Nitrosodiphenylamine	530	500	106%
4-Bromophenyl-phenylether	484	500	96.8%
Hexachlorobenzene	418	500	83.6%
Pentachlorophenol	1300	1500	86.7%
Phenanthrene	457	500	91.4%
Carbazole	659	500	132%
Anthracene	439	500	87.8%
Di-n-Butylphthalate	507	500	101%
Fluoranthene	454	500	90.8%
Pyrene	463	500	92.6%
Butylbenzylphthalate	565	500	113%
3,3'-Dichlorobenzidine	1040	1500	69.3%
Benzo(a)anthracene	441	500	88.2%
bis(2-Ethylhexyl)phthalate	493	500	98.6%
Chrysene	422	500	84.4%
Di-n-Octyl phthalate	505	500	101%
Benzo(a)pyrene	436	500	87.2%
Indeno(1,2,3-cd)pyrene	408	500	81.6%
Dibenz(a,h)anthracene	424	500	84.8%
Benzo(g,h,i)perylene	353	500	70.6%
1-Methylnaphthalene	447	500	89.4%
Total Benzofluoranthenes	863	1000	86.3%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.2%
2-Fluorobiphenyl	76.4%
d14-p-Terphenyl	90.6%
d4-1,2-Dichlorobenzene	69.0%
d5-Phenol	76.0%
2-Fluorophenol	71.9%
2,4,6-Tribromophenol	91.7%
d4-2-Chlorophenol	75.9%

Reported in µg/kg (ppb)

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 1 of 2

Sample ID: MB-050213
METHOD BLANK

Lab Sample ID: MB-050213
LIMS ID: 13-9500
Matrix: Soil
Data Release Authorized: *AB*
Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/13
Date Analyzed: 05/02/13 21:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: No

Sample Amount: 10.00 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: MB-050213
METHOD BLANK

Lab Sample ID: MB-050213
 LIMS ID: 13-9500
 Matrix: Soil
 Date Analyzed: 05/02/13 21:14

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	25	< 25 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%	2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	91.6%	d4-1,2-Dichlorobenzene	72.0%
d5-Phenol	66.9%	2-Fluorophenol	71.2%
2,4,6-Tribromophenol	83.6%	d4-2-Chlorophenol	72.8%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: W053-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Matrix: Soil
Data Release Authorized: *mmw*
Reported: 05/03/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050213 13-9500	Method Blank HC ID: ---	05/02/13	05/02/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 92.0%
W053A 13-9500	TP-S-POST HC ID: DIESEL/MOTOR OIL	05/02/13	05/02/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	12 70 73.4%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130502.b/0502a015.d
Method: /chem3/fid4a.i/20130502.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/02/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: W053MBS1
Client ID:
Injection: 02-MAY-2013 15:13
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		59391	3.82
C8	----				WATPHD (C12-C24)		268392	18.49 ✓
C10	2.850	-0.005	402	536	WATPHM (C24-C38)		216294	15.90 ✓
C12	3.818	-0.003	3620	2543	AK102 (C10-C25)		304977	17.72
C14	4.503	0.000	4698	3440	AK103 (C25-C36)		173607	18.87
C16	5.088	0.002	4813	8689				
C18	5.626	0.001	2020	3034				
C20	6.168	-0.002	1450	2923				
C22	6.709	0.001	1368	1667	MIN.OIL (C24-C38)		216294	12.68
C24	7.218	-0.006	1209	994				
C25	7.468	-0.001	1199	1092				
C26	7.731	0.010	1014	942				
C28	8.163	-0.002	2187	4107				
C32	8.948	-0.007	1711	4186				
C34	9.298	-0.018	1438	2151				
Filter Peak	11.477	0.014	4651	3897	CREOSOT (C12-C22)		240816	110.37 M
C36	9.664	0.002	1484	1075				
C38	9.996	0.000	1764	1222				
C40	10.321	0.000	2173	1081				
o-terph	5.764	0.002	955272	798024				
Triacon Surr	8.607	0.019	721639	734383				

Range Times: NW Diesel(3.821 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.00) AK103(7.47 - 9.66) OR Diesel(2.85 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	798024	41.4	92.0 ✓
Triacotane	734383	40.4	89.7

JD
5/3/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

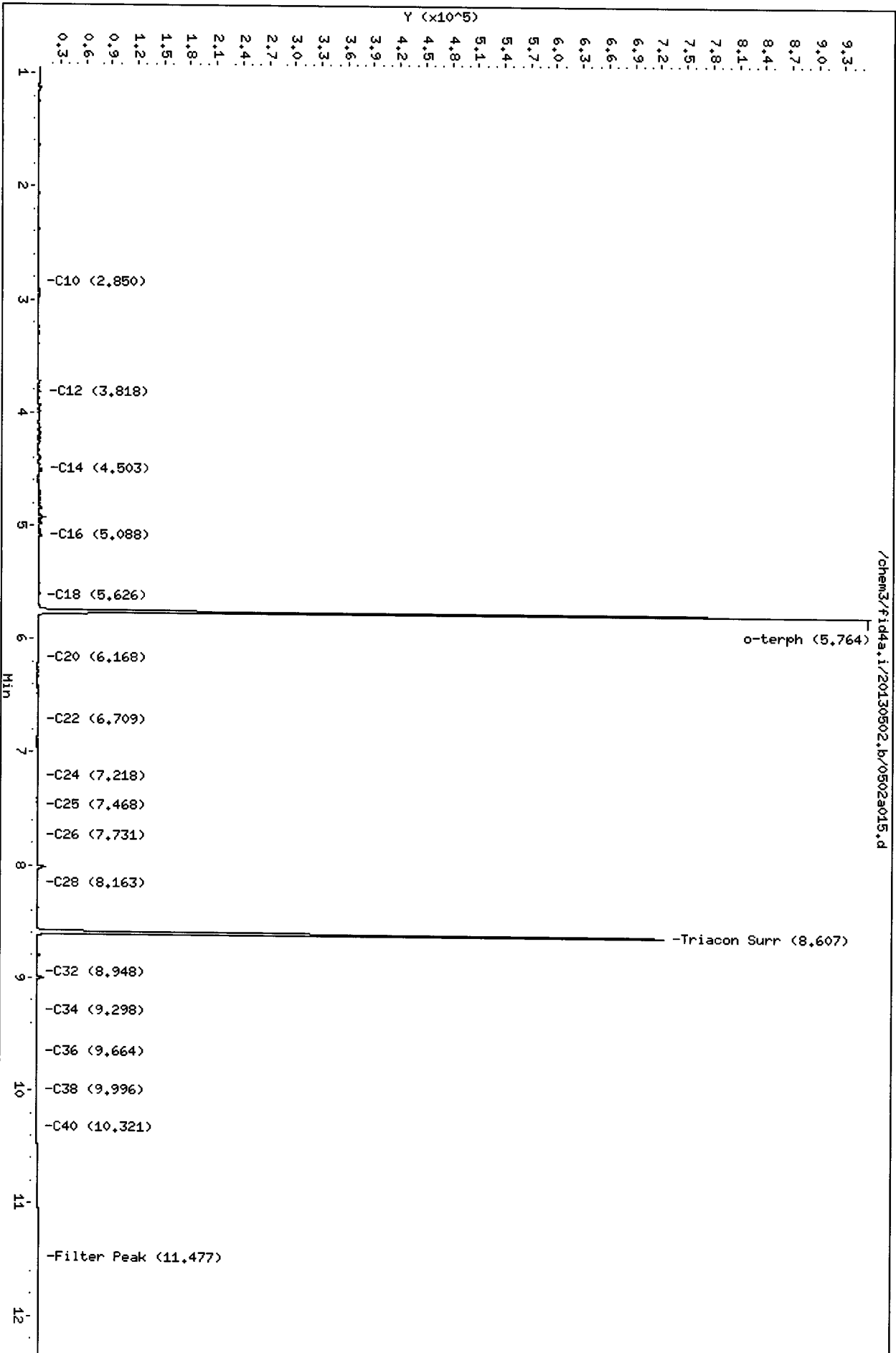
Data File: /chem3/fid4a.i/20130502.b/0502a015.d
Date: 02-MAY-2013 15:13

Client ID:
Sample Info: MOS3HBS1

Column phase: RTX-1

Instrument: fid4a.1

Operator: JR/VTS/JM
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130502.b/0502a017.d
Method: /chem3/fid4a.i/20130502.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/02/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: W053A
Client ID:
Injection: 02-MAY-2013 15:54
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		96720	6.22
C8	----				WATPHD (C12-C24)		1432388	98.69
C10	2.853	-0.002	2238	2095	WATPHM (C24-C38)		8167486	600.37
C12	3.818	-0.003	3817	2779	AK102 (C10-C25)		1645195	95.57
C14	4.501	-0.002	6679	6398	AK103 (C25-C36)		7447102	809.29
C16	5.085	-0.001	4897	6444				
C18	5.624	-0.001	5858	9659				
C20	6.163	-0.008	8627	12437				
C22	6.706	-0.003	13069	32046	MIN.OIL (C24-C38)		8167486	478.78
C24	7.226	0.003	18751	7370				
C25	7.469	-0.001	26458	58460				
C26	7.731	0.010	31717	10541				
C28	8.165	0.000	59727	40639				
C32	8.950	-0.005	73523	68081				
C34	9.315	-0.002	56600	23491				
Filter Peak	11.473	0.009	4185	2502	CREOSOT (C12-C22)		957012	438.61 M
C36	9.651	-0.010	43971	46217				
C38	10.004	0.008	22173	43316				
C40	10.315	-0.005	9229	7853				
o-terph	5.760	-0.002	727410	636962				
Triacon Surr	8.592	0.004	618550	588211				

Range Times: NW Diesel(3.821 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.00) AK103(7.47 - 9.66) OR Diesel(2.85 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	636962	33.0	73.4 M ✓
Triacontane	588211	32.3	71.8 M

M Indicates the peak was manually integrated

JW
5/3/13
5/3/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130502.b/0502a017.d

Date: 02-MAY-2013 15:54

Client ID:

Sample Info: W053A

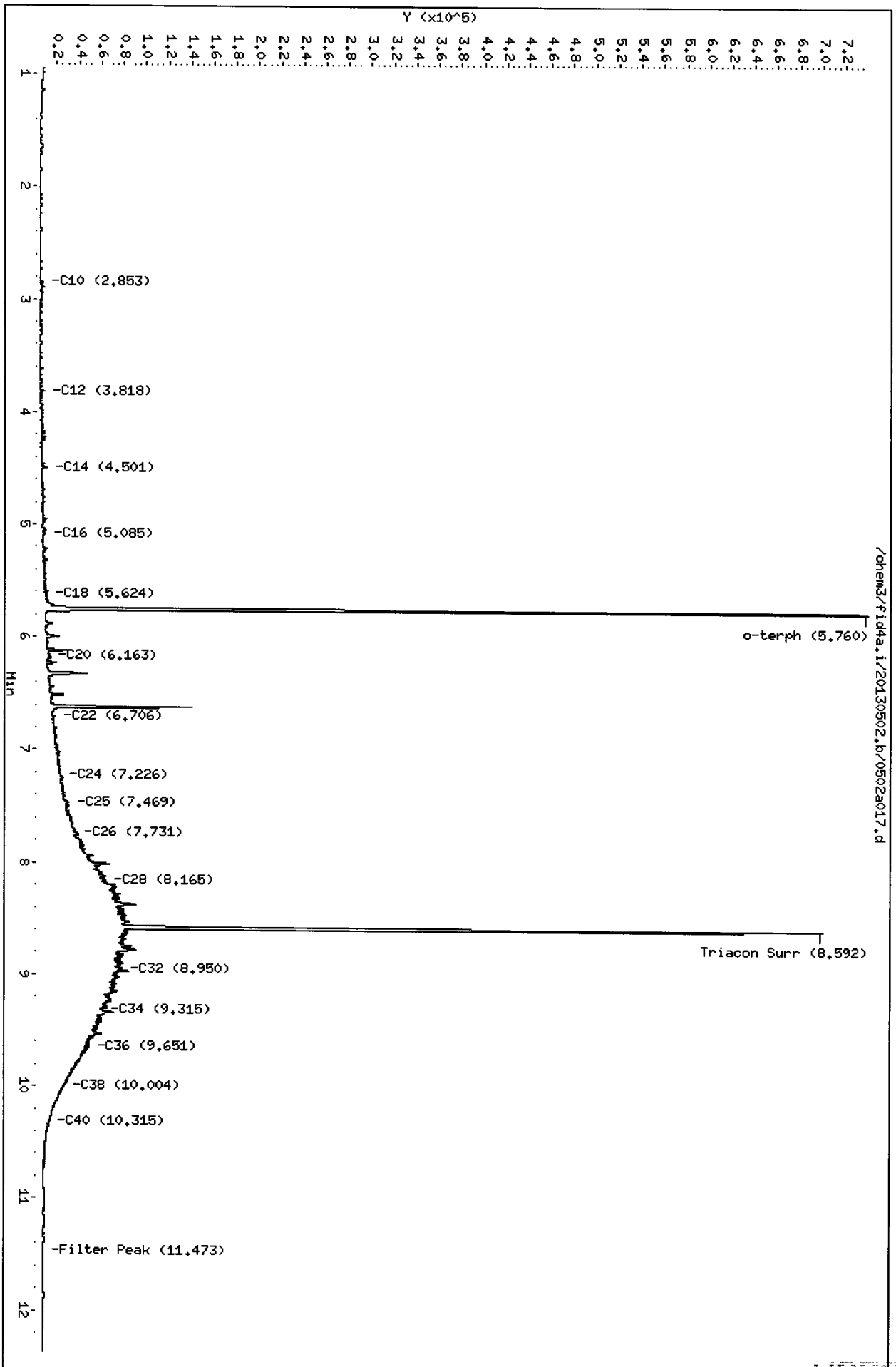
Column phase: RTX-1

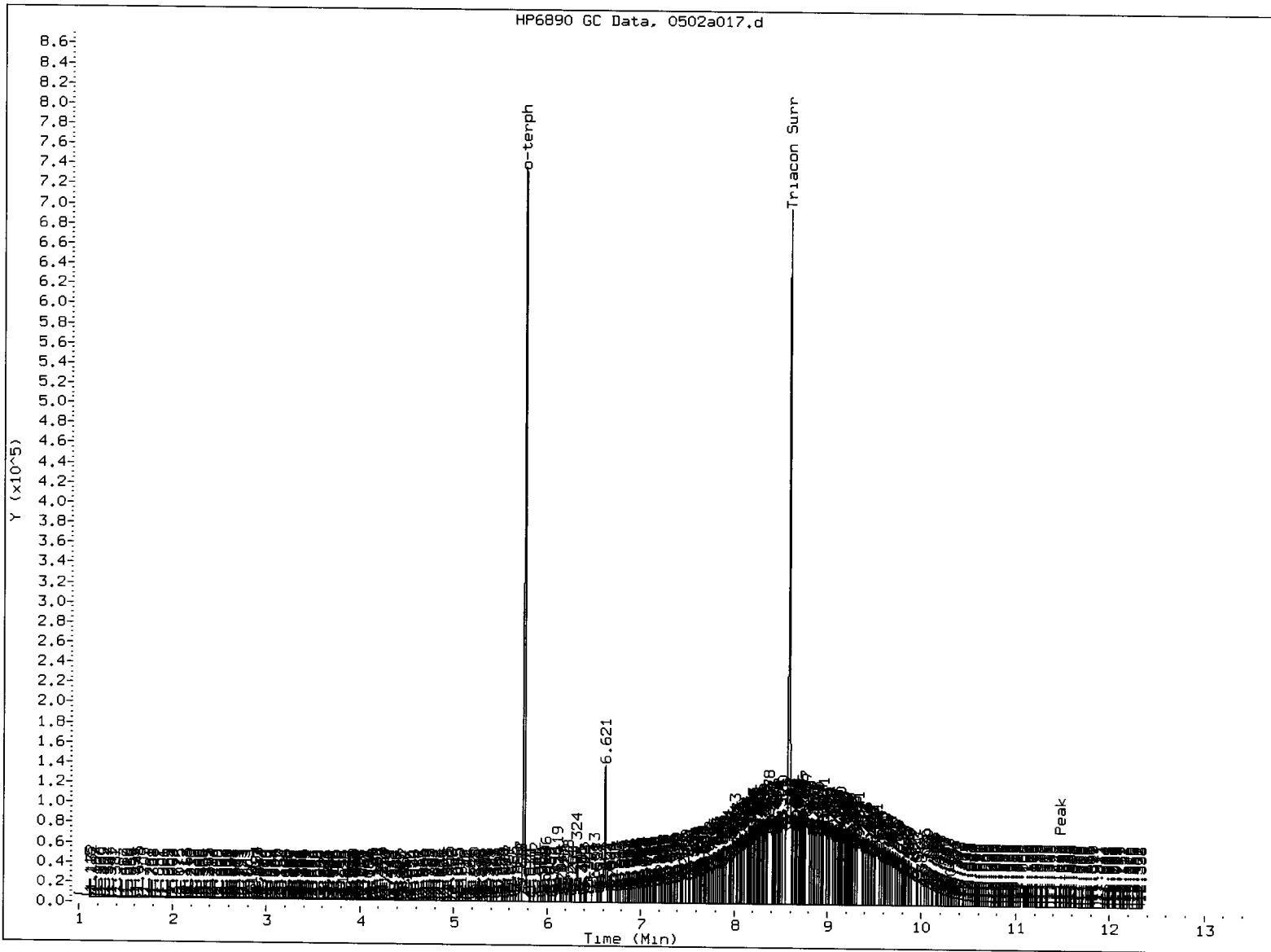
Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25

JW
5/3/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/3/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: W053-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050213	92.0%	0
LCS-050213	90.5%	0
TP-S-POST	73.4%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-9500 to 13-9500



ORGANICS ANALYSIS DATA SHEET
 NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-050213
 LAB CONTROL

Lab Sample ID: LCS-050213
 LIMS ID: 13-9500
 Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/01/13
 Date Received: 05/02/13

Date Extracted: 05/02/13
 Date Analyzed: 05/02/13 15:34
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	122	150	81.3%

TPHD Surrogate Recovery

o-Terphenyl	90.5%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130502.b/0502a016.d
Method: /chem3/fid4a.i/20130502.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/02/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: W053LCSS1
Client ID:
Injection: 02-MAY-2013 15:34
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		4192154	269.77
C8	----				WATPHD (C12-C24)		17713675	1220.41
C10	2.854	-0.001	102010	89598	WATPHM (C24-C38)		247601	18.20
C12	3.821	0.000	182969	206880	AK102 (C10-C25)		20776111	1206.88
C14	4.506	0.003	321158	403158	AK103 (C25-C36)		171024	18.59
C16	5.090	0.005	524201	727164				
C18	5.629	0.004	413207	457001				
C20	6.172	0.002	284467	427942				
C22	6.707	-0.001	157505	196416	MIN.OIL (C24-C38)		247601	14.51
C24	7.220	-0.004	43395	46840				
C25	7.465	-0.004	18647	27950				
C26	7.704	-0.017	7742	11154				
C28	8.159	-0.006	1998	3759				
C32	8.943	-0.012	457	207				
C34	9.321	0.005	456	399				
Filter Peak	11.460	-0.003	3328	1261	CREOSOT (C12-C22)		17091536	7833.33 M
C36	9.657	-0.004	1593	2241				
C38	10.000	0.004	972	785				
C40	10.309	-0.012	1451	1808				
o-terph	5.766	0.004	863061	785179				
Triacon Surr	8.591	0.003	743457	727834				

Range Times: NW Diesel (3.821 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.00) AK103 (7.47 - 9.66) OR Diesel (2.85 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	785179	40.7	90.5 M
Triacotane	727834	40.0	88.9

SW
5/3/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130502.b/0502a016.d

Date: 02-MAY-2013 15:34

Client ID:

Sample Info: M053LCSS1

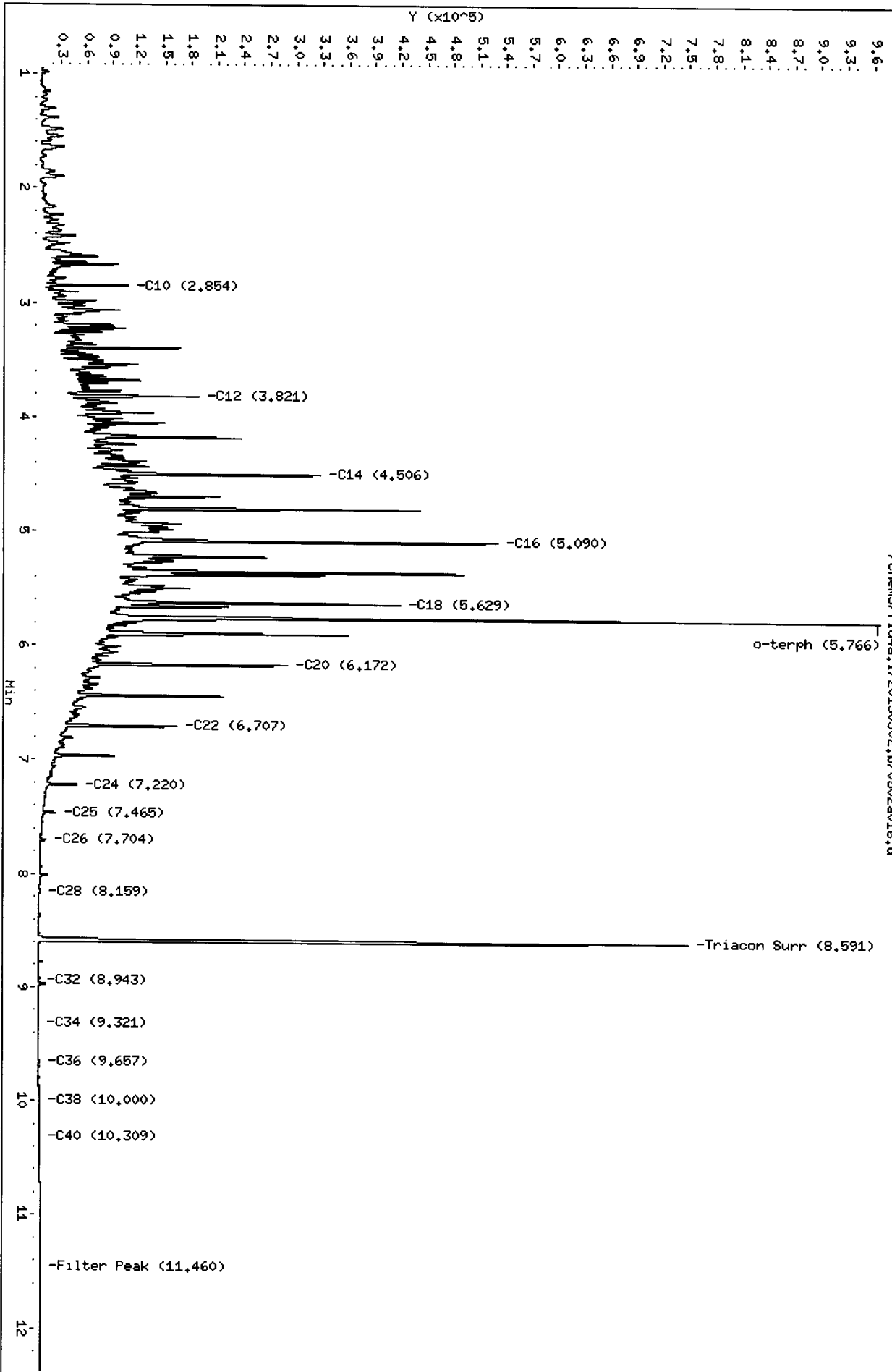
Column phase: RTX-1

Instrument: fid4a.i

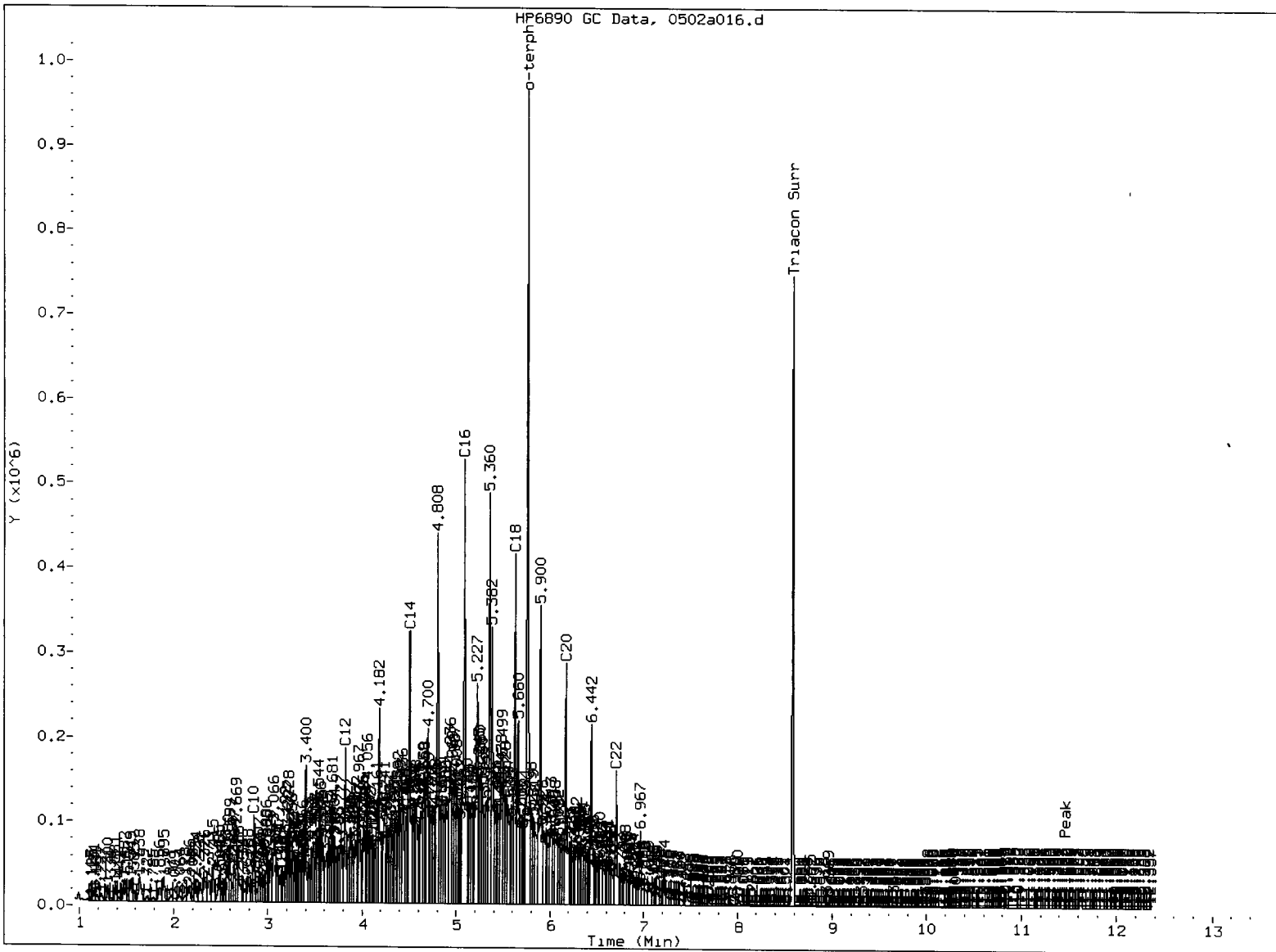
Operator: JR/VTS/JM

Column diameter: 0.25

/chem3/fid4a.i/20130502.b/0502a016.d



rw
5/9/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skipped surrogate

Analyst: JJ Date: 5/3/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/02/13

ARI Job: W053
Project: Cashmere
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-9500-050213MB1	Method Blank	10.0 g	1.00 mL	-	05/02/13
13-9500-050213LCS1	Lab Control	10.0 g	1.00 mL	-	05/02/13
13-9500-W053A	TP-S-POST	8.54 g	1.00 mL	D	05/02/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: TP-S-POST
SAMPLE**

Lab Sample ID: W053A

LIMS ID: 13-9500

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: 05/01/13

Date Received: 05/02/13

Date Analyzed: 05/02/13 12:26

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 14.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	< 16 U	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	31	< 31 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.2	< 6.2 U	---

BETX Surrogate Recovery

Trifluorotoluene	92.3%
Bromobenzene	86.8%

Gasoline Surrogate Recovery

Trifluorotoluene	90.1%
Bromobenzene	86.4%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AC
5/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130502-1.b/0502a007.d ARI ID: WO53A
Data file 2: /chem3/pid1.i/20130502-2.b/0502a007.d Client ID: TP-S-POST
Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 12:26
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.838	0.006	3124	37931	90.1	TFT(Surr)
15.378	0.004	1972	16374	86.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	13888	0.039
8015C 2MP-TMB (4.17 to 16.20)	723723	9884	0.014
AK101 nC6-nC10 (4.66 to 15.09)	582885	9292	0.016
NWTPHG Tol-Nap (9.76 to 18.89)	375093	14581	0.039

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.846	0.006	3664	92.3	TFT(Surr)
15.385	0.004	7632	86.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

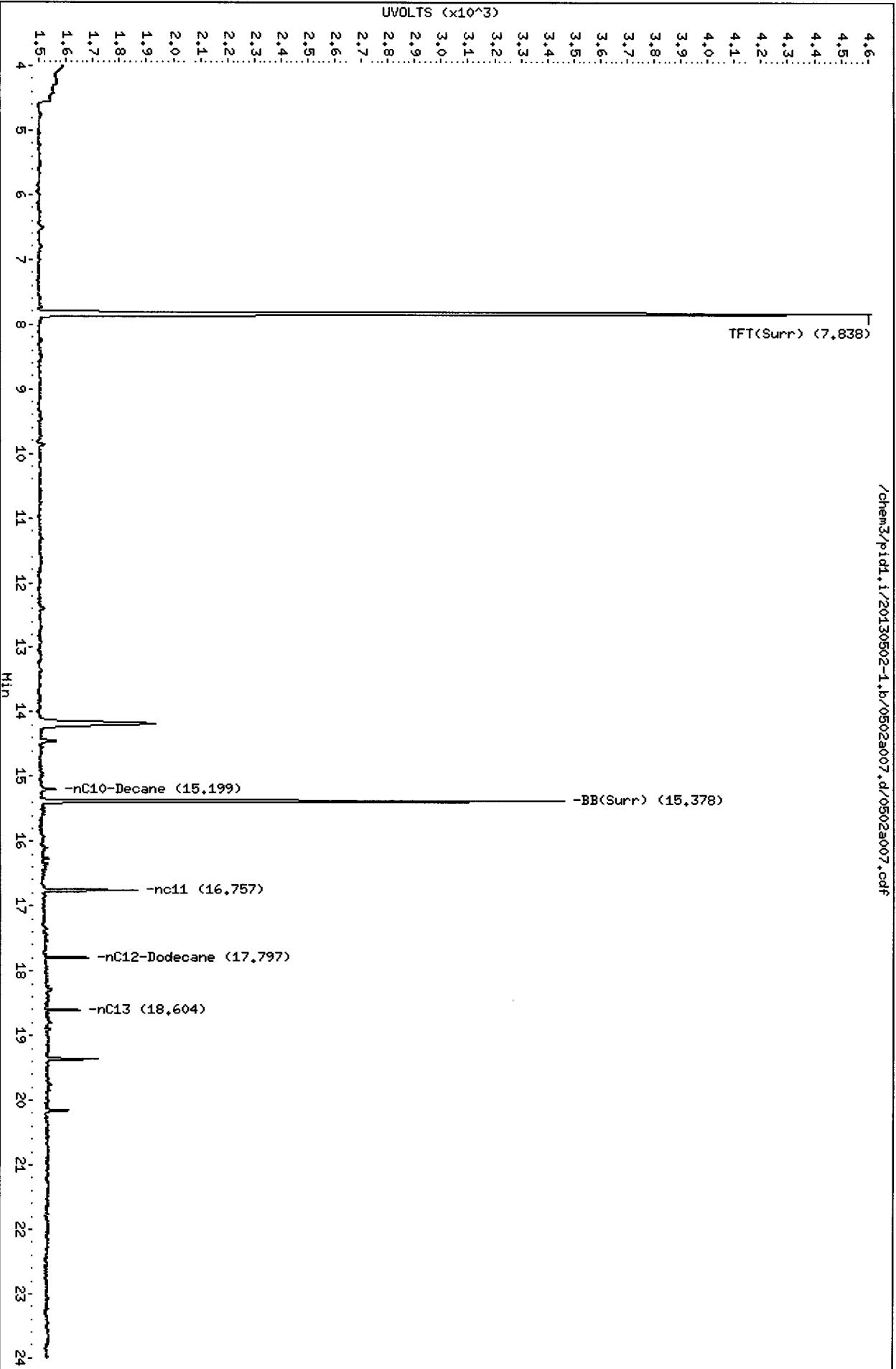
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130502-1.b/0502a007.d
Date: 02-MAY-2013 12:26
Client ID: TP-S-POST
Sample Info: M053A

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

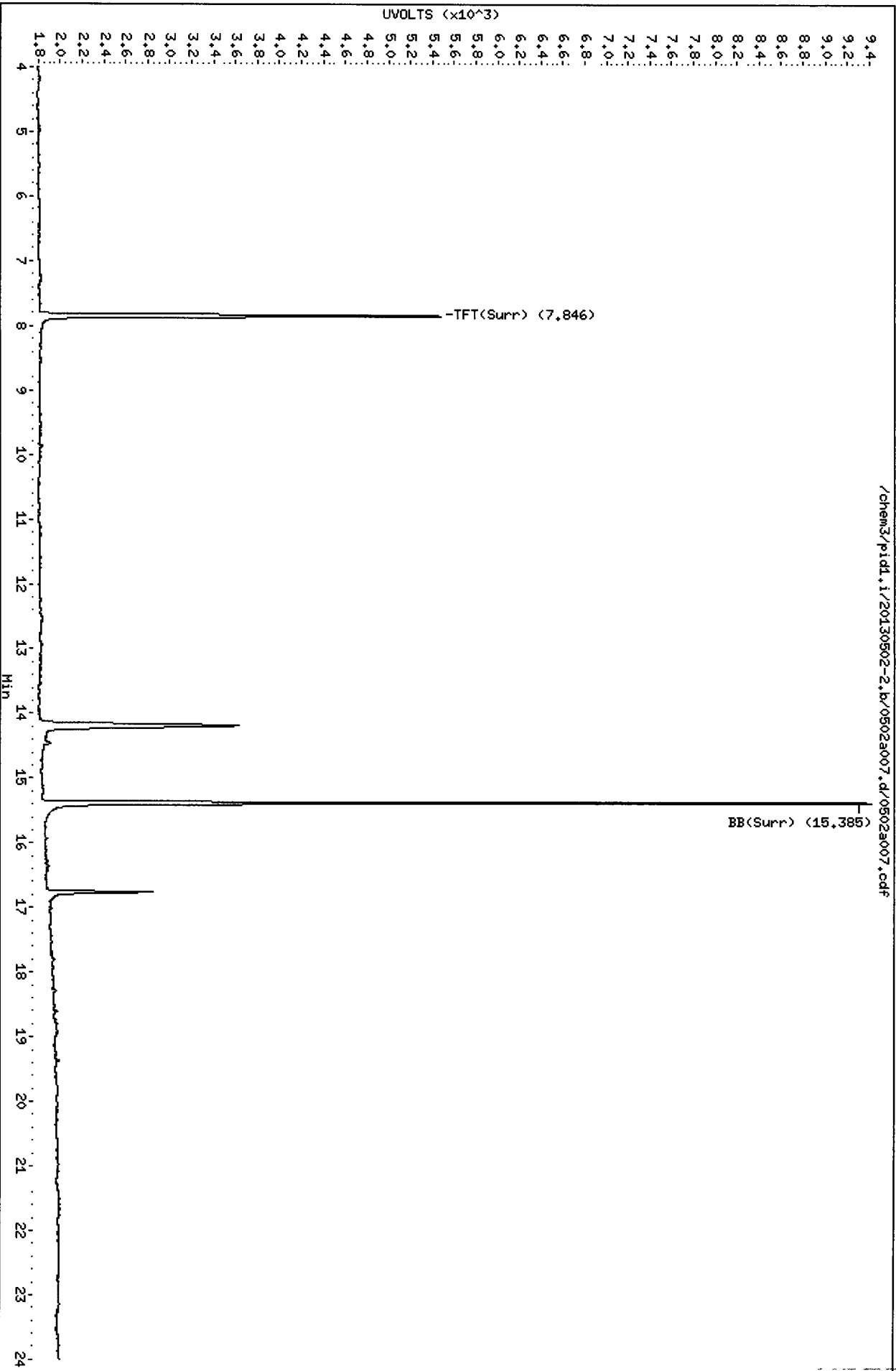
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Data File: /chem3/pid1.i/20130502-2.b/0502a007.d
Date: 02-MAY-2013 12:26
Client ID: TP-S-POST
Sample Info: M053A

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: W053
Matrix: Soil

QC Report No: W053-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	BFB	TFT	BBZ	TOT OUT
MB-050213	NA	85.6%	84.7%	0
LCS-050213	NA	92.6%	87.0%	0
LCSD-050213	NA	88.8%	84.6%	0
TP-S-POST	NA	90.1%	86.4%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-9500 to 13-9500

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: W053
Matrix: Soil

QC Report No: W053-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-050213	85.2%	84.1%	0
LCS-050213	91.5%	87.2%	0
LCSD-050213	87.5%	84.2%	0
TP-S-POST	92.3%	86.8%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-9500 to 13-9500

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050213

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050213

LIMS ID: 13-9500

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/02/13 09:45

LCS D: 05/02/13 10:15

Instrument/Analyst LCS: PID1/PKC

LCS D: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCS D: 100 mg-dry-wt

Analyte	Spike		LCS		Spike		LCS D	
	LCS	Added-LCS	Recovery	LCS D	Added-LCS D	Recovery	RPD	
Gasoline Range Hydrocarbons	46.0	50.0	92.0%	47.4	50.0	94.8%	3.0%	

Reported in mg/kg (ppm)


RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCS D
Trifluorotoluene	92.6%	88.8%
Bromobenzene	87.0%	84.6%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-050213
LAB CONTROL SAMPLE

Lab Sample ID: LCS-050213
 LIMS ID: 13-9500
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/02/13 09:45
 LCSD: 05/02/13 10:15
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	163	185	88.1%	178	185	96.2%	8.8%
Toluene	1710	1980	86.4%	1850	1980	93.4%	7.9%
Ethylbenzene	480	580	82.8%	512	580	88.3%	6.5%
m,p-Xylene	1770	2120	83.5%	1900	2120	89.6%	7.1%
o-Xylene	802	960	83.5%	852	960	88.8%	6.0%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.5%	87.5%
Bromobenzene	87.2%	84.2%

PC
5/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130502-1.b/0502a004.d ARI ID: LCS0502
Data file 2: /chem3/pid1.i/20130502-2.b/0502a004.d Client ID:
Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 09:45
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.832	0.001	3212	43737	92.6	TFT(Surr)
15.374	0.000	1986	17584	87.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	325055	0.908 M
8015C 2MP-TMB (4.17 to 16.20)	723723	651653	0.900 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	529384	0.908 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	345192	0.920 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

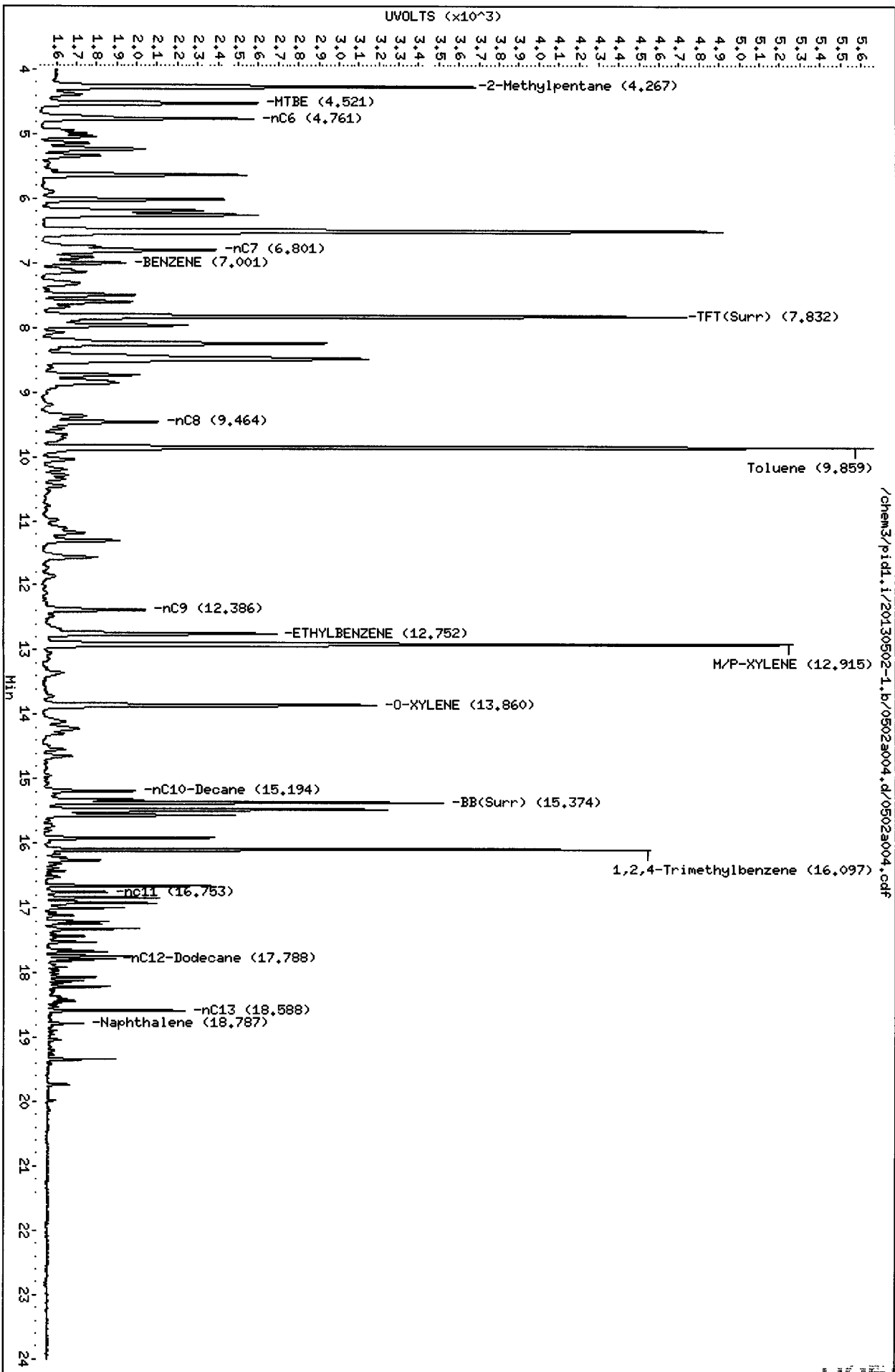
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.840	0.001	3634	91.5	TFT(Surr)
15.382	0.001	7661	87.2	BB(Surr)

SW8021 (PID)

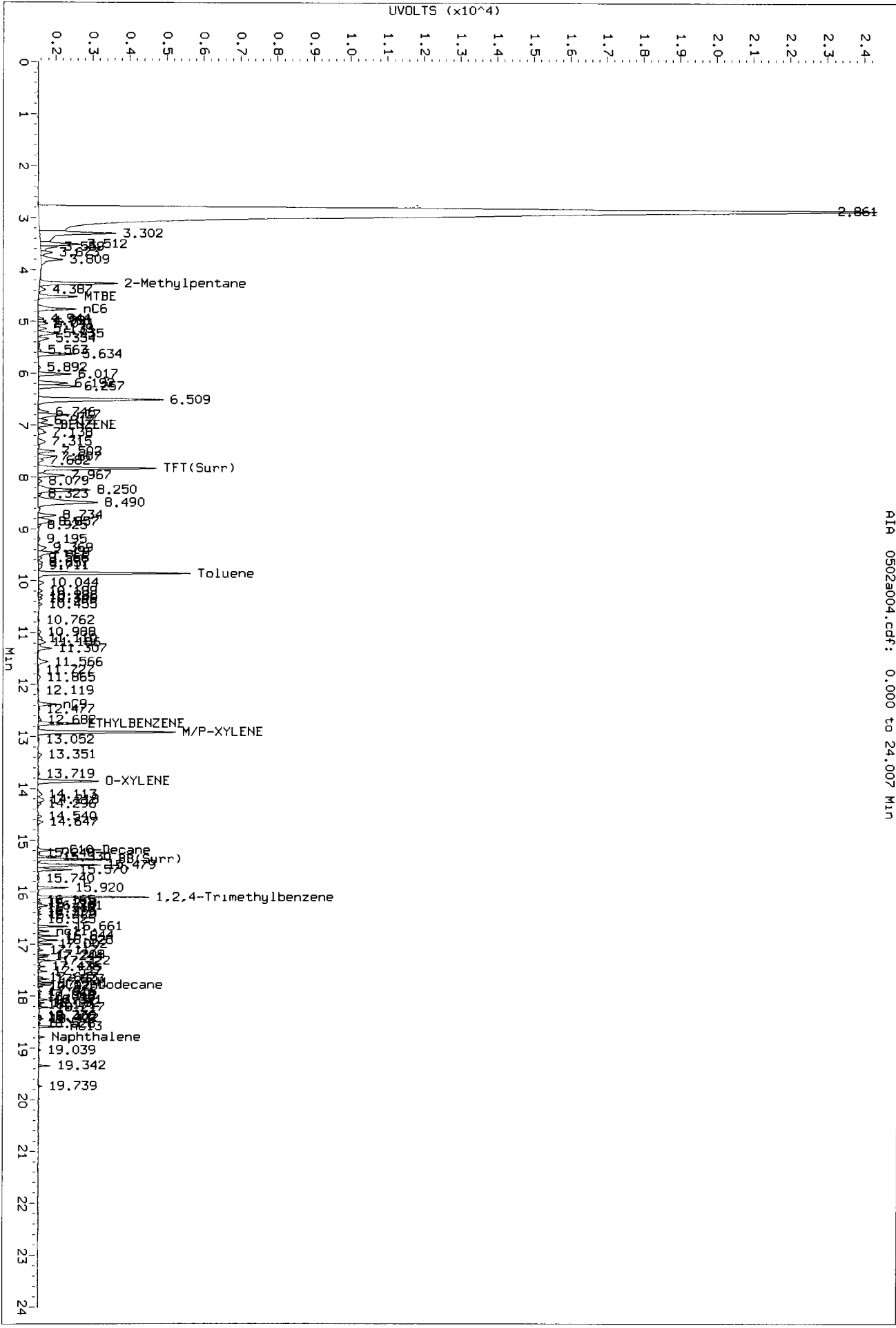
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.009	0.000	783	3.26	Benzene
9.868	0.001	7841	34.24	Toluene
12.761	0.001	1856	9.59	Ethylbenzene
12.924	0.003	7571	35.45	M/P-Xylene
13.869	0.001	2738	16.05	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated



PK
5/3/13

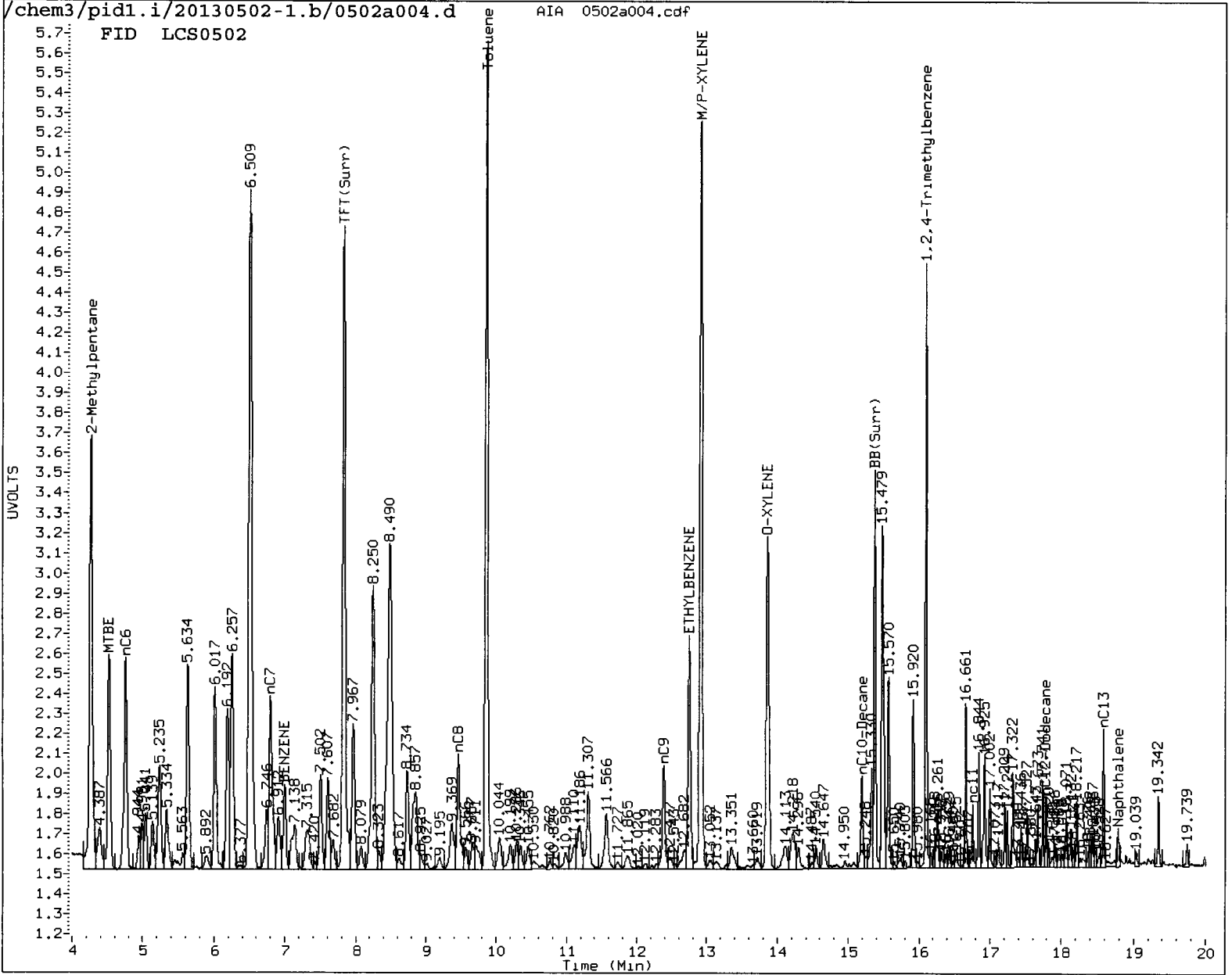
Data File: /chem3/pid1.y/20130502-1.b/0502a004.d/0502a004.cdf
Injection Date: 02-MAY-2013 09:45
Instrument: pid1.1
Client Sample ID:



AIA 0502a004.cdf: 0.000 to 24.007 Min

0502a004.cdf

FID LCS0502



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: YL Date: 5/13/13

Data File: /chem3/pid1.i/20130502-2.b/0502a004.d

Date : 02-MAY-2013 09:45

Client ID:

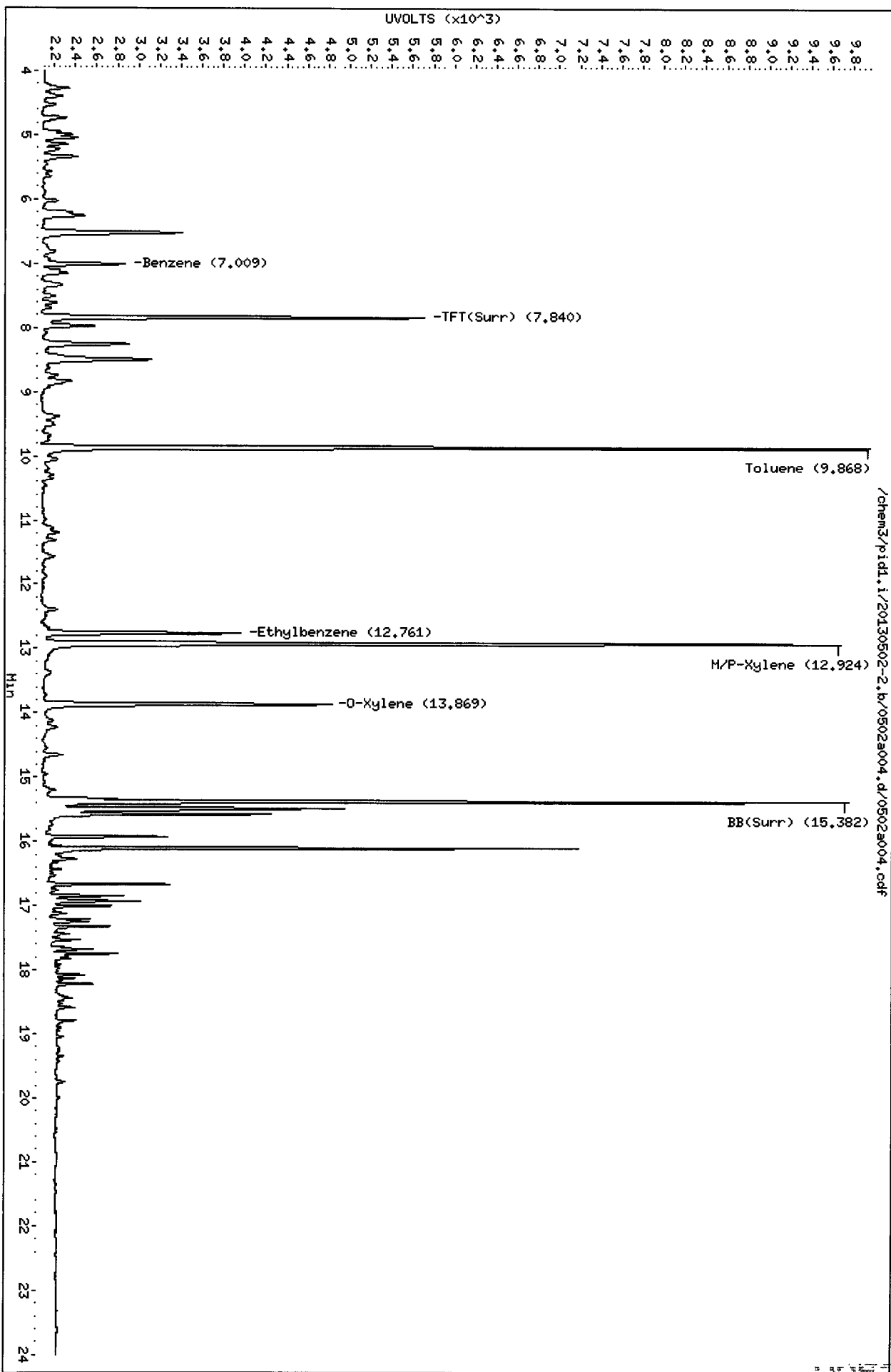
Sample Info: LCS0502

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



PC
5/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130502-1.b/0502a005.d ARI ID: LCSD0502
Data file 2: /chem3/pid1.i/20130502-2.b/0502a005.d Client ID:
Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 10:15
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.832	0.001	3080	41890	88.8	TFT(Surr)
15.374	0.001	1931	16919	84.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	338526	0.945 M
8015C 2MP-TMB (4.17 to 16.20)	723723	676993	0.935 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	547428	0.939 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	355192	0.947 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

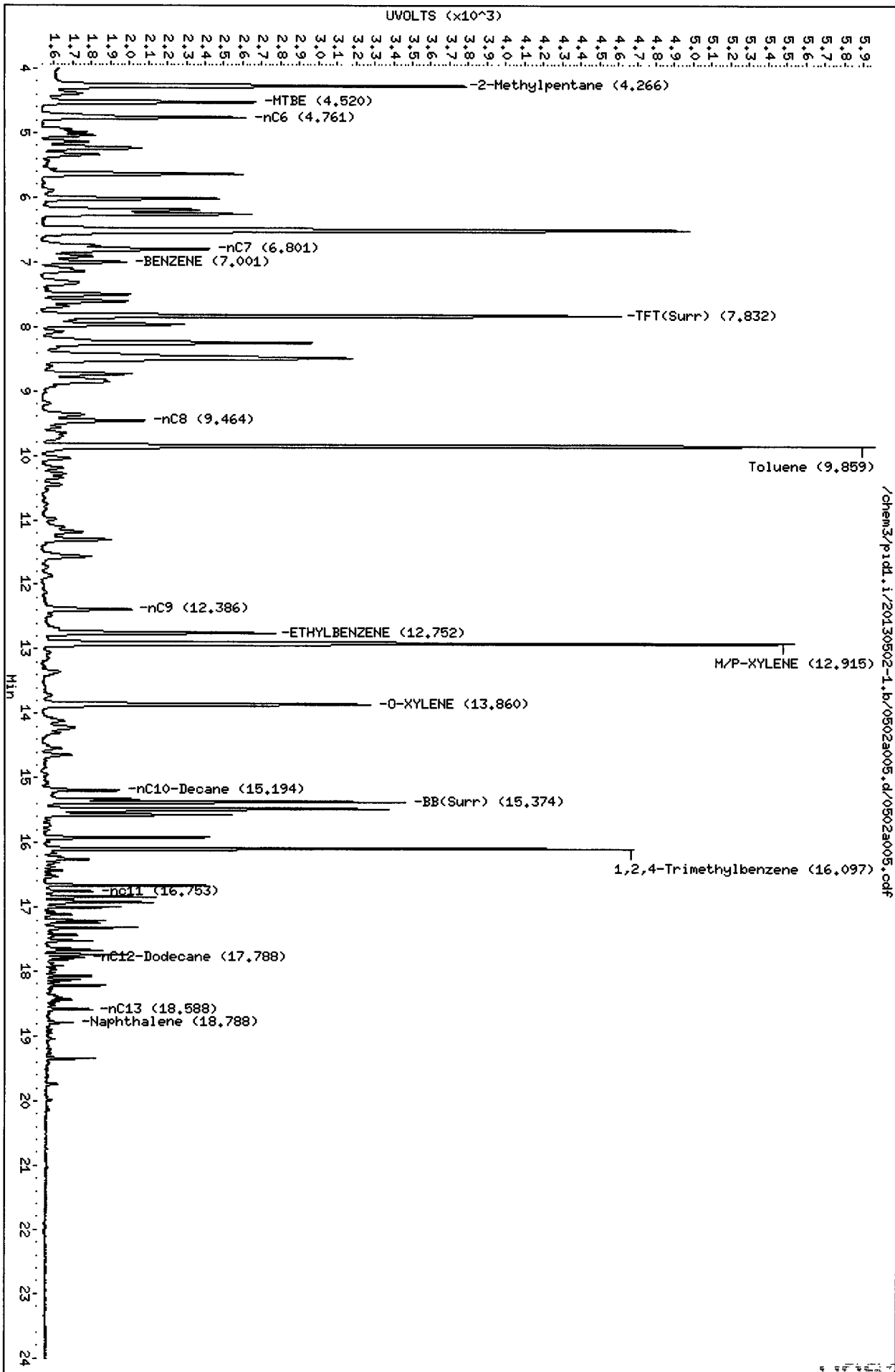
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.840	0.001	3473	87.5	TFT(Surr)
15.382	0.001	7401	84.2	BB(Surr)

SW8021 (PID)

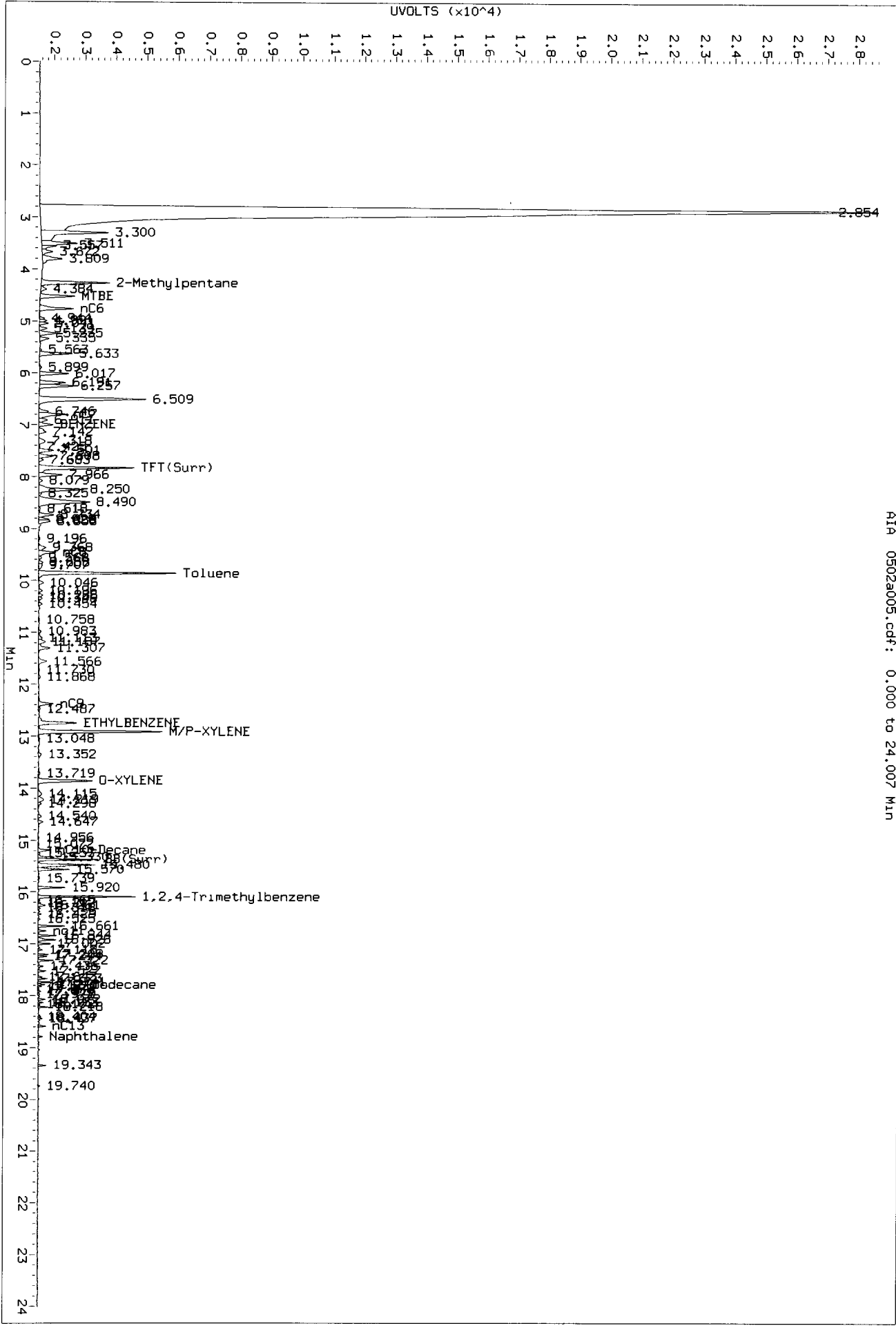
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.009	0.000	851	3.55	Benzene
9.868	0.001	8485	37.05	Toluene
12.761	0.001	1984	10.25	Ethylbenzene
12.924	0.003	8099	37.93	M/P-Xylene
13.869	0.002	2909	17.05	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated



ML
5/13/13

Data File: /chem3/p1d1_1/20130502-1.b/0502a005.d/0502a005.cdf
Injection Date: 02-MAY-2013 10:15
Instrument: p1d1.1
Client Sample ID:



AIA 0502a005.cdf: 0.000 to 24.007 Min

11
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24

Data File: /chem3/pid1.i/20130502-2.b/0502a005.d

Date: 02-MAY-2013 10:15

Client ID:

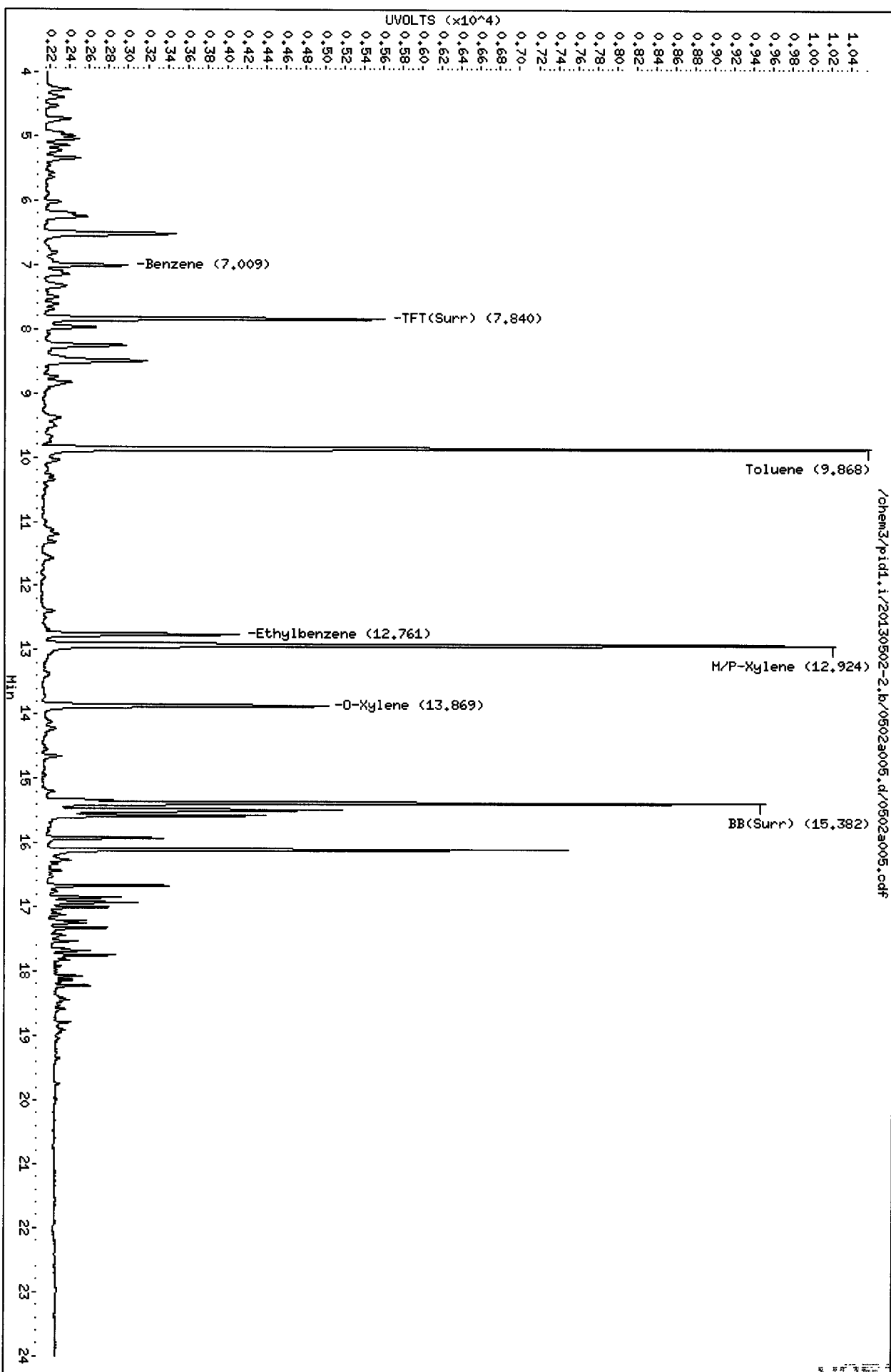
Sample Info: LCSD0502

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050213

METHOD BLANK

Lab Sample ID: MB-050213

LIMS ID: 13-9500

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/02/13 10:44

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	85.2%
Bromobenzene	84.1%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	84.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

VC
 7/13/13

Data file 1: /chem3/pid1.i/20130502-1.b/0502a006.d ARI ID: MB0502
 Data file 2: /chem3/pid1.i/20130502-2.b/0502a006.d Client ID:
 Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 10:44
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.833	0.002	2969	36063	85.6	TFT(Surr)
15.375	0.001	1933	16061	84.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	2744	0.008
8015C 2MP-TMB (4.17 to 16.20)	723723	4187	0.006
AK101 nC6-nC10 (4.66 to 15.09)	582885	3564	0.006
NWTPHG Tol-Nap (9.76 to 18.89)	375093	3280	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.841	0.002	3382	85.2	TFT(Surr)
15.383	0.001	7392	84.1	BB(Surr)

SW8021 (PID)

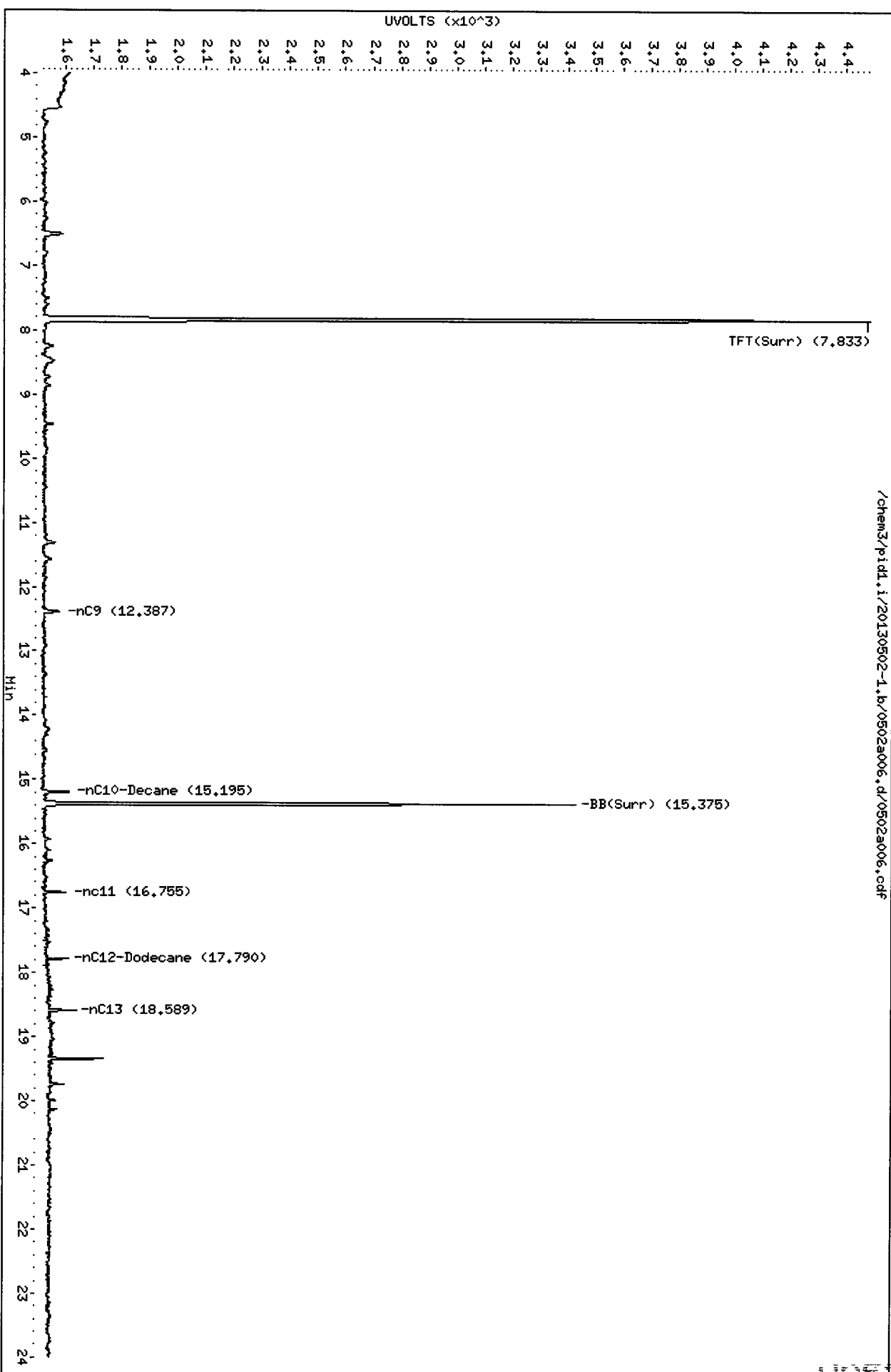
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130502-1.b/0502a006.d
Date: 02-May-2013 10:44
Client ID:
Sample Info: HB0502

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130502-1.b/0502a006.d/0502a006.cdf

Data File: /chem3/pid1.i/20130502-2.16/0502a006.d

Date: 02-MAY-2013 10:44

Client ID:

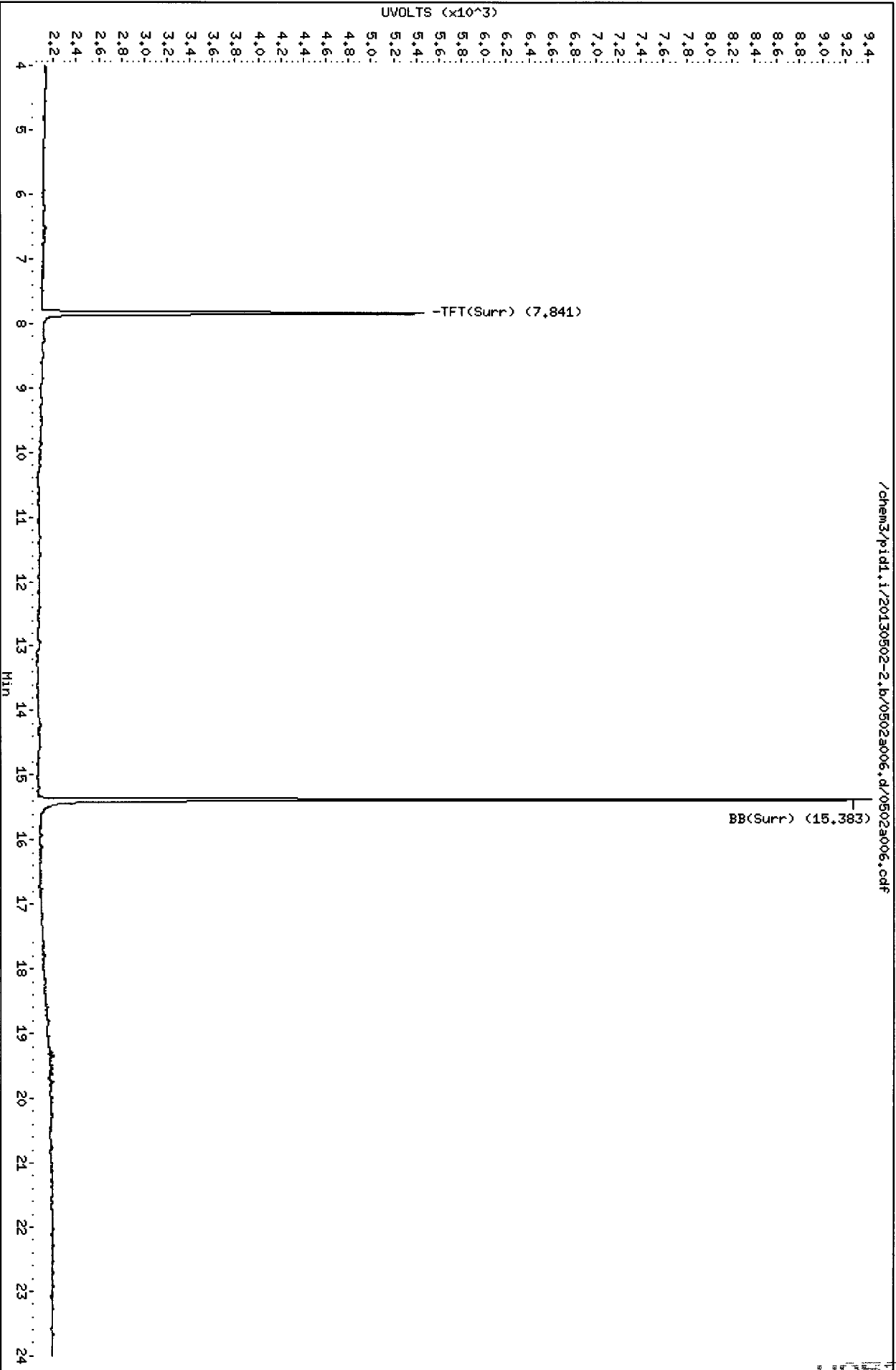
Sample Info: MB0502

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: TP-S-POST
SAMPLE**

Lab Sample ID: W053A

LIMS ID: 13-9500

Matrix: Soil

Data Release Authorized: 

Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: 05/01/13

Date Received: 05/02/13

Percent Total Solids: 84.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/02/13	6010C	05/03/13	7440-38-2	Arsenic	10	10	U
3050B	05/02/13	6010C	05/03/13	7440-47-3	Chromium	1	38	
3050B	05/02/13	6010C	05/03/13	7440-50-8	Copper	0.6	21.6	
3050B	05/02/13	6010C	05/03/13	7439-92-1	Lead	6	6	U

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WO53LCS

LIMS ID: 13-9500

Matrix: Soil

Data Release Authorized: 

Reported: 05/03/13

QC Report No: WO53-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	201	200	100%	
Chromium	6010C	51.2	50.0	102%	
Copper	6010C	48.9	50.0	97.8%	
Lead	6010C	194	200	97.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: W053MB

LIMS ID: 13-9500

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/03/13

QC Report No: W053-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/02/13	6010C	05/03/13	7440-38-2	Arsenic	5	5	U
3050B	05/02/13	6010C	05/03/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/02/13	6010C	05/03/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/02/13	6010C	05/03/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 7, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01/03
ARI Job No.: WP04

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted one soil sample on May 7, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for SVOCs, NWTPH-Dx, NWTPH-Gx/BETX, and Metals, as requested on the COC.

The SVOC continuing calibration was outside the 20% control limit for Benzoic Acid, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitroaniline, 4,6-Dinitro-2-methylphenol, and Pentachlorophenol. Detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WP04

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: <i>W104</i>	Turn-around Requested: <i>TURSH - 84 Hr</i>	Page: <i>1</i> of <i>1</i>
ARI Client Company: <i>MFA, INC.</i>	Phone:	Date:
Client Contact: <i>TONY SILVA TSILVA @ MAULFESTER.COM</i>	No. of Coolers:	Cooler Temps: <i>4.6</i>

Client Project Name: <i>CASHMERE</i>	Analysis Requested						Notes/Comments
Client Project #: <i>0779-02-01/03</i>	Samplers: <i>LINDSEY CROSBY</i>	<i>Gr/Brex</i>	<i>Px + SILVA</i>	<i>SUOCs</i>	<i>MEMS GOLD</i>	<i>EDB, EDC</i>	

Sample ID	Date	Time	Matrix	No. Containers	<i>Gr/Brex</i>	<i>Px + SILVA</i>	<i>SUOCs</i>	<i>MEMS GOLD</i>	<i>EDB, EDC</i>			
<i>G-S-3</i>	<i>5/10/13</i>	<i>1630</i>	<i>S</i>	<i>7</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			

Comments/Special Instructions <i>PLEASE PROVIDE GIS KEY 4-FILE EDD. EMAIL TO TONY SILVA & EMIL NAYLER AT MFA</i>	Relinquished by (Signature): <i>[Signature]</i>	Received by: (Signature): <i>[Signature]</i>	Relinquished by (Signature):	Received by (Signature):
	Printed Name: <i>LINDSEY CROSBY</i>	Printed Name: <i>Jay Lee Streeter</i>	Printed Name:	Printed Name:
	Company: <i>MAULFESTER & BROWN</i>	Company: <i>ARI</i>	Company:	Company:
	Date & Time: <i>5/10/13 1840</i>	Date & Time: <i>5-7-13 1020</i>	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20080514014



Cooler Receipt Form

ARI Client MFA
 COC No(s) _____ (NA)
 Assigned ARI Job No WP04

Project Name: Cashmere
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other _____
 Tracking No 1046 684 7010 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc) YES NO
 Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry)..... 4.6
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952
 Cooler Accepted by: TS Date: 5-7-03 Time: 1020

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI. NA
 Was Sample Split by ARI: YES Date/Time _____ Equipment _____ Split by: _____
 Samples Logged by: TS Date: 5-7-03 Time: 1026

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

WP04: 00000

Sample ID Cross Reference Report



ARI Job No: WP04
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. G-S-3	WP04A	13-9854	Soil	05/06/13 16:30	05/07/13 10:20



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: G-S-3
SAMPLE

Lab Sample ID: WP04A
 LIMS ID: 13-9854
 Matrix: Soil
 Data Release Authorized: *TMM*
 Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/06/13
 Date Received: 05/07/13

Date Extracted: 05/07/13
 Date Analyzed: 05/07/13 22:56
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.35 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 27.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	23
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	97
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	820	< 820 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: G-S-3
SAMPLE

Lab Sample ID: WP04A
 LIMS ID: 13-9854
 Matrix: Soil
 Date Analyzed: 05/07/13 22:56

QC Report No: WP04-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	48	< 48 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	< 19 U
129-00-0	Pyrene	19	< 19 U
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	bis(2-Ethylhexyl)phthalate	24	< 24 U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U
TOTBFA	Total Benzofluoranthenes	39	< 39 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	83.8%	d4-1,2-Dichlorobenzene	62.6%
d5-Phenol	68.0%	2-Fluorophenol	64.3%
2,4,6-Tribromophenol	79.9%	d4-2-Chlorophenol	66.8%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WP04-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>NBZ</u>	<u>FBP</u>	<u>TPH</u>	<u>DCB</u>	<u>PHL</u>	<u>2FP</u>	<u>TBP</u>	<u>2CP</u>	<u>TOT</u>	<u>OUT</u>
MB-050713	52.0%	65.8%	78.0%	72.8%	68.4%	68.4%	72.3%	72.8%	0	
LCS-050713	74.0%	72.4%	92.0%	76.6%	78.5%	77.6%	85.1%	79.5%	0	
G-S-3	64.0%	63.6%	83.8%	62.6%	68.0%	64.3%	79.9%	66.8%	0	

LCS/MB LIMITS QC LIMITS

(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(37-100)	(31-100)

Prep Method: SW3546
Log Number Range: 13-9854 to 13-9854

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 1 of 2

Sample ID: LCS-050713
LAB CONTROL

Lab Sample ID: LCS-050713
 LIMS ID: 13-9854
 Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/06/13
 Date Received: 05/07/13

Date Extracted: 05/07/13
 Date Analyzed: 05/07/13 22:19
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	418	500	83.6%
Bis-(2-Chloroethyl) Ether	381	500	76.2%
2-Chlorophenol	344	500	68.8%
1,3-Dichlorobenzene	378	500	75.6%
1,4-Dichlorobenzene	384	500	76.8%
Benzyl Alcohol	425	500	85.0%
1,2-Dichlorobenzene	389	500	77.8%
2-Methylphenol	344	500	68.8%
2,2'-Oxybis(1-Chloropropane)	397	500	79.4%
4-Methylphenol	717	1000	71.7%
N-Nitroso-Di-N-Propylamine	409	500	81.8%
Hexachloroethane	366	500	73.2%
Nitrobenzene	380	500	76.0%
Isophorone	367	500	73.4%
2-Nitrophenol	360	500	72.0%
2,4-Dimethylphenol	1190	1500	79.3%
Benzoic Acid	1190 Q	2750	43.3%
bis(2-Chloroethoxy) Methane	408	500	81.6%
2,4-Dichlorophenol	1130	1500	75.3%
1,2,4-Trichlorobenzene	448	500	89.6%
Naphthalene	356	500	71.2%
4-Chloroaniline	1020	1500	68.0%
Hexachlorobutadiene	389	500	77.8%
4-Chloro-3-methylphenol	1280	1500	85.3%
2-Methylnaphthalene	390	500	78.0%
Hexachlorocyclopentadiene	422	1500	28.1%
2,4,6-Trichlorophenol	1130	1500	75.3%
2,4,5-Trichlorophenol	1180	1500	78.7%
2-Chloronaphthalene	392	500	78.4%
2-Nitroaniline	1400	1500	93.3%
Dimethylphthalate	422	500	84.4%
Acenaphthylene	344	500	68.8%
3-Nitroaniline	1360 Q	1500	90.7%
Acenaphthene	361	500	72.2%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 2 of 2

Sample ID: LCS-050713
LAB CONTROL

Lab Sample ID: LCS-050713
 LIMS ID: 13-9854
 Matrix: Soil
 Date Analyzed: 05/07/13 22:19

QC Report No: WP04-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1370 Q	2750	49.8%
4-Nitrophenol	1200	1500	80.0%
Dibenzofuran	390	500	78.0%
2,6-Dinitrotoluene	1280	1500	85.3%
2,4-Dinitrotoluene	1360	1500	90.7%
Diethylphthalate	432	500	86.4%
4-Chlorophenyl-phenylether	376	500	75.2%
Fluorene	371	500	74.2%
4-Nitroaniline	1630 Q	1500	109%
4,6-Dinitro-2-Methylphenol	1630 Q	2750	59.3%
N-Nitrosodiphenylamine	450	500	90.0%
4-Bromophenyl-phenylether	417	500	83.4%
Hexachlorobenzene	367	500	73.4%
Pentachlorophenol	1000 Q	1500	66.7%
Phenanthrene	397	500	79.4%
Carbazole	617	500	123%
Anthracene	379	500	75.8%
Di-n-Butylphthalate	478	500	95.6%
Fluoranthene	403	500	80.6%
Pyrene	445	500	89.0%
Butylbenzylphthalate	540	500	108%
3,3'-Dichlorobenzidine	1040	1500	69.3%
Benzo(a)anthracene	408	500	81.6%
bis(2-Ethylhexyl)phthalate	440	500	88.0%
Chrysene	381	500	76.2%
Di-n-Octyl phthalate	453	500	90.6%
Benzo(a)pyrene	382	500	76.4%
Indeno(1,2,3-cd)pyrene	248	500	49.6%
Dibenz(a,h)anthracene	349	500	69.8%
Benzo(g,h,i)perylene	287	500	57.4%
1-Methylnaphthalene	412	500	82.4%
Total Benzofluoranthenes	779	1000	77.9%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	74.0%
2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	92.0%
d4-1,2-Dichlorobenzene	76.6%
d5-Phenol	78.5%
2-Fluorophenol	77.6%
2,4,6-Tribromophenol	85.1%
d4-2-Chlorophenol	79.5%

Reported in µg/kg (ppb)

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: MB-050713
METHOD BLANK

Lab Sample ID: MB-050713
 LIMS ID: 13-9854
 Matrix: Soil
 Data Release Authorized: *mmw*
 Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/07/13
 Date Analyzed: 05/07/13 21:43
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: MB-050713
METHOD BLANK

Lab Sample ID: MB-050713
 LIMS ID: 13-9854
 Matrix: Soil
 Date Analyzed: 05/07/13 21:43

QC Report No: WP04-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	25	< 20 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.0%	2-Fluorobiphenyl	65.8%
d14-p-Terphenyl	78.0%	d4-1,2-Dichlorobenzene	72.8%
d5-Phenol	68.4%	2-Fluorophenol	68.4%
2,4,6-Tribromophenol	72.3%	d4-2-Chlorophenol	72.8%

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

Instrument: nt10.i Date: 07-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R ²

NO Q-FLAGS	

CONTINUING CAL: 07-MAY-2013

Compound	%D

Benzoic acid	-28.6
3-Nitroaniline	22.5
2,4-Dinitrophenol	-38.6
4-Nitroaniline	20.4
4,6-Dinitro-2-methylphenol	-33.7
Pentachlorophenol	-31.4

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WP04-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Matrix: Soil
Data Release Authorized: *MW*
Reported: 05/08/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050713	Method Blank	05/07/13	05/07/13	1.00	Diesel Range	5.0	< 5.0 U
13-9854	HC ID: ---		FID3B	1.0	Motor Oil Range o-Terphenyl	10	< 10 U 96.0%
WP04A	G-S-3	05/07/13	05/07/13	1.00	Diesel Range	6.9	< 6.9 U
13-9854	HC ID: ---		FID3B	1.0	Motor Oil Range o-Terphenyl	14	< 14 U 101%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130507.b/0507b019.d
Method: /chem3/fid3b.i/20130507.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/08/2013
Macro: FID:3B042013

ARI ID: WP04MBS1
Client ID: WP04MBS1
Injection: 07-MAY-2013 15:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	199698	15
C8	0.826	-0.008	4083	3621	WATPHD	(C12-C24)	312517	27.56
C10	2.256	0.001	1595	1710	WATPHM	(C24-C38)	145147	13.16
C12	3.041	0.001	2298	2440	AK102	(C10-C25)	392704	28.47
C14	3.615	-0.004	4107	3121	AK103	(C25-C36)	116352	15.90
C16	4.112	-0.005	3075	3010	OR.DIES	(C10-C28)	429785	27.94
C18	4.571	0.003	2734	1917				
C20	4.994	0.004	2520	1126				
C22	5.396	0.008	1848	691				
C24	5.750	-0.009	2934	2658				
C25	5.941	0.003	1448	811				
C26	6.127	0.012	1537	1489				
C28	6.422	-0.007	1995	2378	IT.DIES	(C10-C24)	388014	28.14
C32	6.972	-0.008	6599	7946				
C34	7.217	0.004	1434	1155	CREOSOT	(C8-C22)	279436	86.42
Filter Peak	----							
C36	7.436	0.006	1505	567	BUNKERC	(C10-C38)	533160	108.70
o-terph	4.675	-0.004	959030	626650	JET-A	(C10-C18)	275871	19.16
Triacon Surr	6.719	-0.009	768544	619235				

Range Times: NW Diesel(3.091 - 5.810) NW Gas(0.608 - 3.091) NW M.Oil(5.810 - 7.685)
AK102(2.206 - 5.888) AK103(5.888 - 7.481) Jet A(2.206 - 4.618)

Surrogate	Area	Amount	%Rec
o-Terphenyl	626650	43.2	96.0
Triacantane	619235	40.5	90.0

JW
5/8/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130507.b/0507b019.d

Date: 07-MAY-2013 15:30

Client ID: MP04HBS1

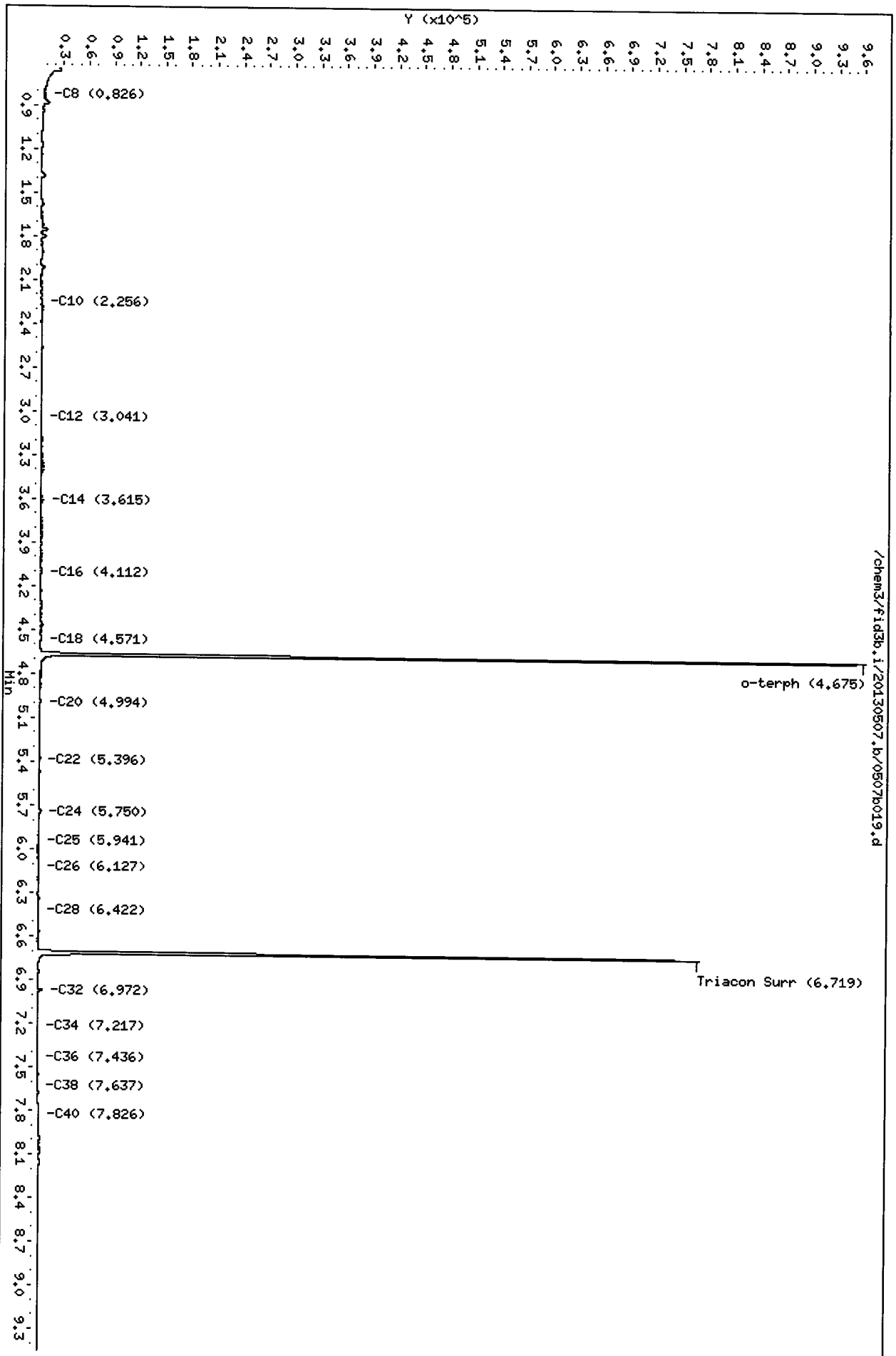
Sample Info: MP04HBS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130507.b/0507b021.d
Method: /chem3/fid3b.i/20130507.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/08/2013
Macro: FID:3B042013

ARI ID: WP04A
Client ID: G-S-3
Injection: 07-MAY-2013 16:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		196509	15
C8	0.831	-0.003	9206	6356	WATPHD (C12-C24)		271509	23.94 ✓
C10	2.257	0.001	479	130	WATPHM (C24-C38)		541037	49.06 ✓
C12	3.045	0.004	753	1045	AK102 (C10-C25)		302780	21.95
C14	3.619	-0.001	3102	2678	AK103 (C25-C36)		482546	65.95
C16	4.119	0.002	2938	4112	OR.DIES (C10-C28)		457829	29.76
C18	4.567	-0.001	3231	3766				
C20	4.990	-0.001	2552	1345				
C22	5.387	-0.002	3669	4761				
C24	5.756	-0.003	3875	3321				
C25	5.935	-0.003	6378	9001				
C26	6.120	0.004	3705	1157				
C28	6.425	-0.004	6908	5856	IT.DIES (C10-C24)		292758	21.23
C32	6.974	-0.006	12363	14699				
C34	7.211	-0.002	4813	3824	CREOSOT (C8-C22)		212187	65.62
Filter Peak	----							
C36	7.431	0.000	4381	3092	BUNKERC (C10-C38)		833794	170.00
o-terph	4.680	0.001	995856	659053	JET-A (C10-C18)		136626	9.49
Triacon Surr	6.725	-0.004	749674	631942				

Range Times: NW Diesel(3.091 - 5.810) NW Gas(0.608 - 3.091) NW M.Oil(5.810 - 7.685)
AK102(2.206 - 5.888) AK103(5.888 - 7.481) Jet A(2.206 - 4.618)

Surrogate	Area	Amount	%Rec
o-Terphenyl	659053	45.4	100.9 ✓
Triacontane	631942	41.4	91.9

500
5/8/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130507.b/0507b021.d

Date: 07-MAY-2013 16:08

Client ID: G-S-3

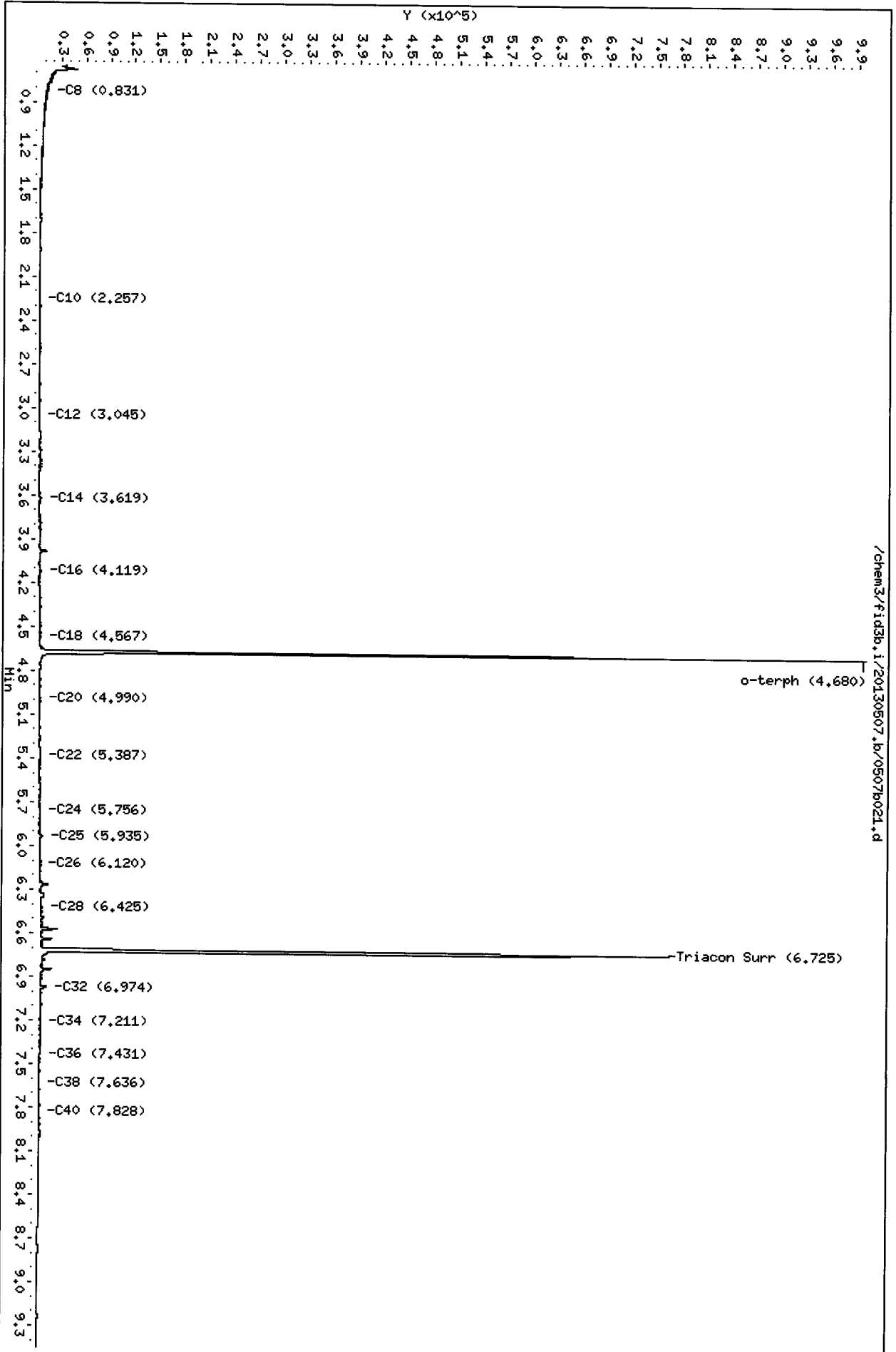
Sample Info: WP044

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WP04-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050713	96.0%	0
LCS-050713	100%	0
G-S-3	101%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-9854 to 13-9854

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-050713

LAB CONTROL

Lab Sample ID: LCS-050713

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: 05/06/13

Date Received: 05/07/13

Date Extracted: 05/07/13

Date Analyzed: 05/07/13 15:49

Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	134	150	89.3%

TPHD Surrogate Recovery

o-Terphenyl	100%
-------------	------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130507.b/0507b020.d
Method: /chem3/fid3b.i/20130507.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/08/2013
Macro: FID:3B042013

ARI ID: WP04LCSS1
Client ID: WP04LCSS1
Injection: 07-MAY-2013 15:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3549026	263
C8	0.834	0.001	6674	12747	WATPHD (C12-C24)		15201283	1340.49 ✓
C10	2.256	0.000	103259	73950	WATPHM (C24-C38)		170668	15.48 ✓
C12	3.041	0.000	183343	168391	AK102 (C10-C25)		17798239	1290.38 M
C14	3.623	0.003	318990	286636	AK103 (C25-C36)		123972	16.94
C16	4.121	0.004	525534	383170	OR.DIES (C10-C28)		17896999	1163.50 M
C18	4.571	0.002	436548	423427				
C20	4.991	0.001	328100	308443				
C22	5.387	-0.001	170714	148439				
C24	5.756	-0.003	42418	42854				
C25	5.933	-0.005	16390	19861				
C26	6.128	0.013	2388	1747				
C28	6.425	-0.005	1738	1453	IT.DIES (C10-C24)		17760339	1288.01
C32	6.974	-0.006	5486	5656				
C34	7.211	-0.002	176	31	CREOSOT (C8-C22)		14684359	4541.52
Filter Peak	----							
C36	7.432	0.001	416	182	BUNKERC (C10-C38)		17931007	3655.81
o-terph	4.681	0.002	956692	656082	JET-A (C10-C18)		13270019	921.60
Triacon Surr	6.724	-0.004	820998	638202				

Range Times: NW Diesel(3.091 - 5.810) NW Gas(0.608 - 3.091) NW M.Oil(5.810 - 7.685)
AK102(2.206 - 5.888) AK103(5.888 - 7.481) Jet A(2.206 - 4.618)

Surrogate	Area	Amount	%Rec
o-Terphenyl	656082	45.2	100.5 ✓
Triacontane	638202	41.8	92.8

JW
5/8/13

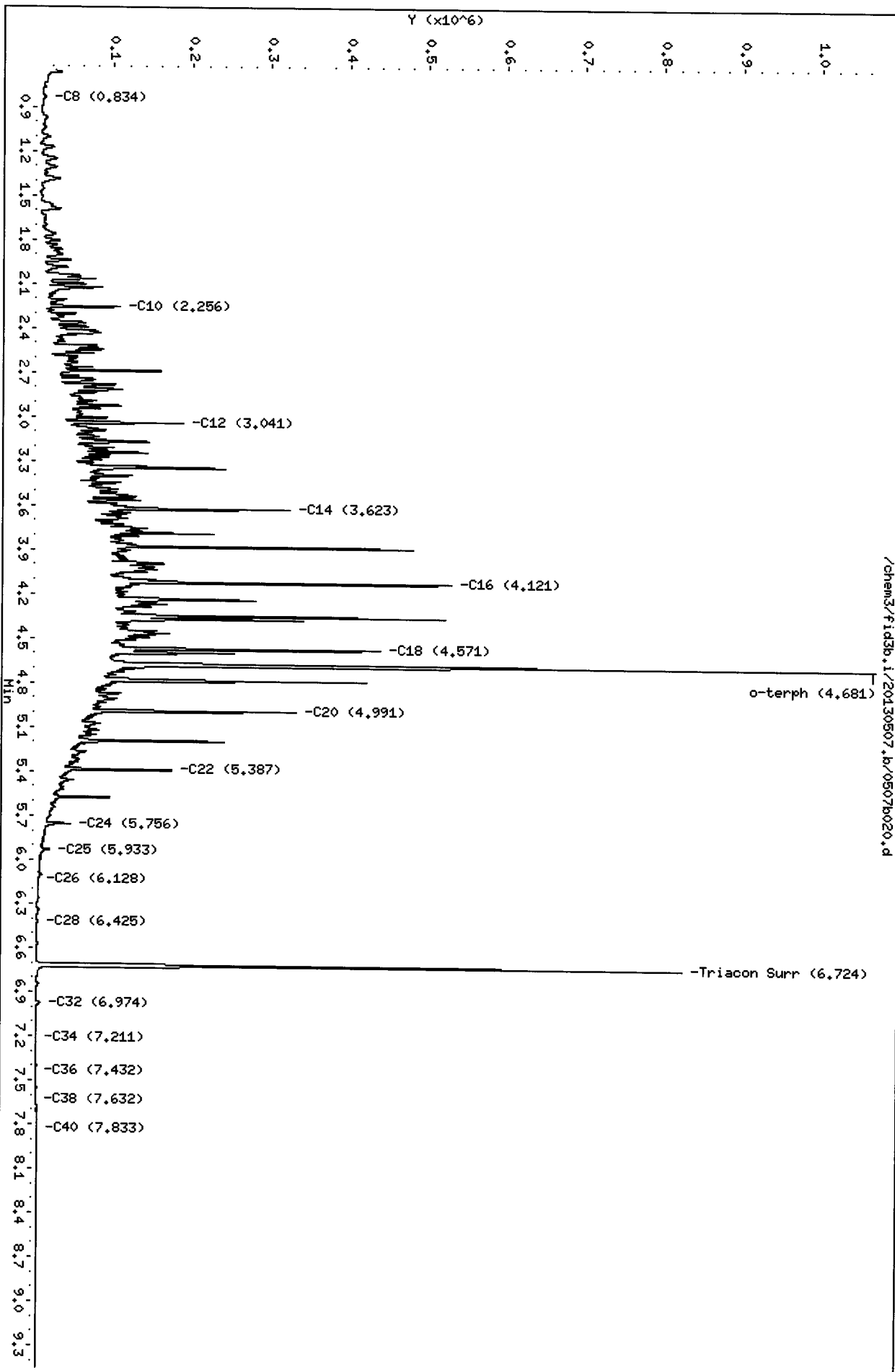
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130507.b/0507b020.d
Date: 07-MAY-2013 15:49
Client ID: WPO4LCSS1
Sample Info: WPO4LCSS1

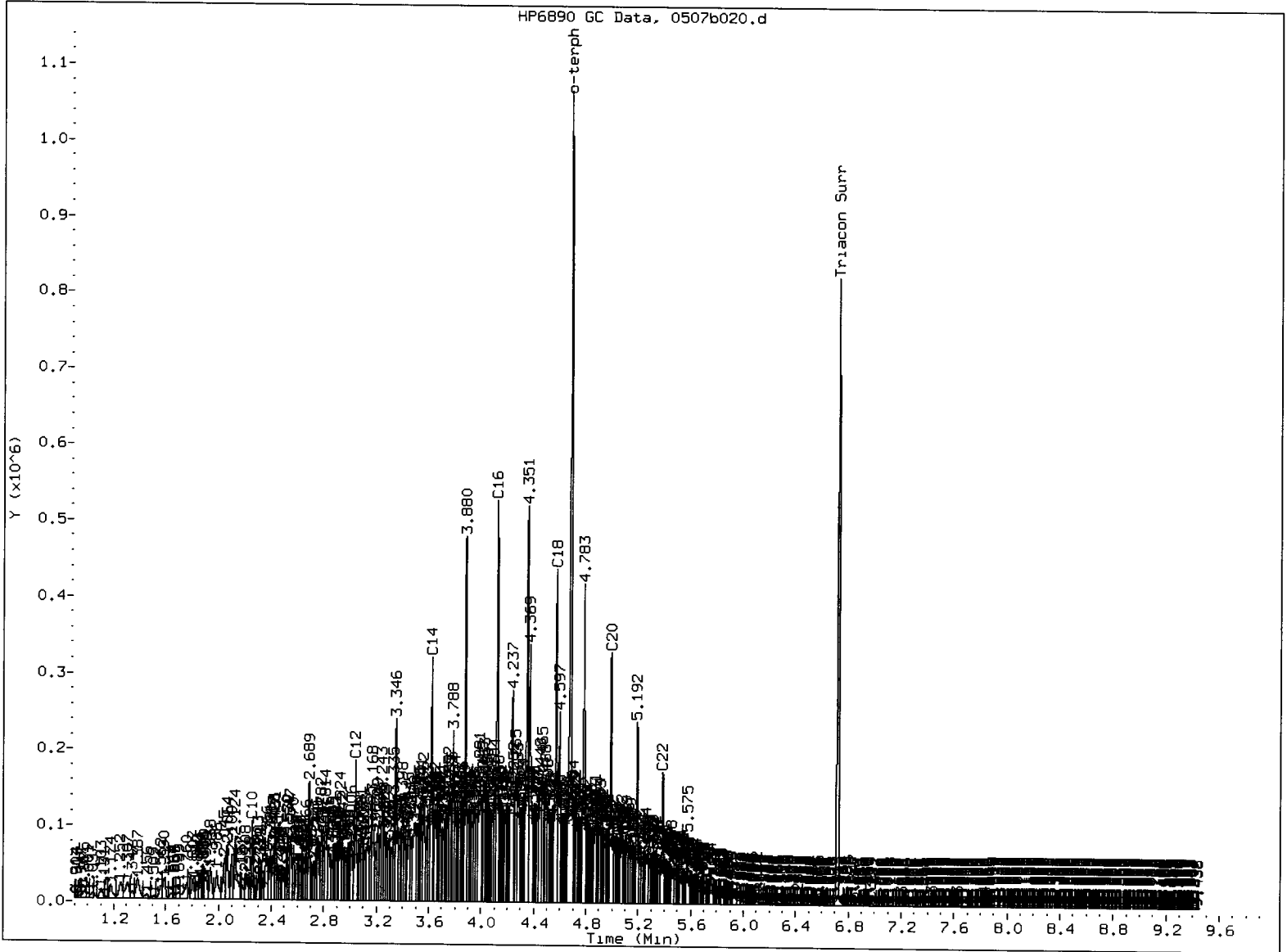
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

Page 1



JLW
5/8/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/8/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/07/13

ARI Job: WP04
Project: Cashmere
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-9854-050713MB1	Method Blank	10.0 g	1.00 mL	-	05/07/13
13-9854-050713LCS1	Lab Control	10.0 g	1.00 mL	-	05/07/13
13-9854-WP04A	G-S-3	7.28 g	1.00 mL	D	05/07/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: G-S-3

SAMPLE

Lab Sample ID: WP04A

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: 05/06/13

Date Received: 05/07/13

Date Analyzed: 05/07/13 16:43

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 53 mg-dry-wt

Percent Moisture: 27.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	24	< 24 U
108-88-3	Toluene	24	< 24 U
100-41-4	Ethylbenzene	24	< 24 U
179601-23-1	m,p-Xylene	47	< 47 U
95-47-6	o-Xylene	24	< 24 U

Gasoline Range Hydrocarbons	9.4	< 9.4 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	90.6%
Bromobenzene	86.9%

Gasoline Surrogate Recovery

Trifluorotoluene	93.9%
Bromobenzene	90.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/8/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130507-1.b/0507a010.d ARI ID: WP04A
Data file 2: /chem3/pid1.i/20130507-2.b/0507a010.d Client ID: G-S-3
Method: /chem3/pid1.i/20130507-2.b/PIDB.m Injection Date: 07-MAY-2013 16:43
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.843	0.002	3257	39718	93.9	TFT(Surr)
15.382	0.001	2054	16940	90.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	9031	0.025
8015C 2MP-TMB (4.17 to 16.20)	723723	7145	0.010
AK101 nC6-nC10 (4.67 to 15.10)	582885	6499	0.011
NWTPHG Tol-Nap (9.77 to 18.90)	375093	9465	0.025

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.850	0.002	3597	90.6	TFT(Surr)
15.389	0.000	7641	86.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130507-1.b/0507a010.d

Date : 07-MAY-2013 16:43

Client ID: G-S-3

Sample Info: MP04A

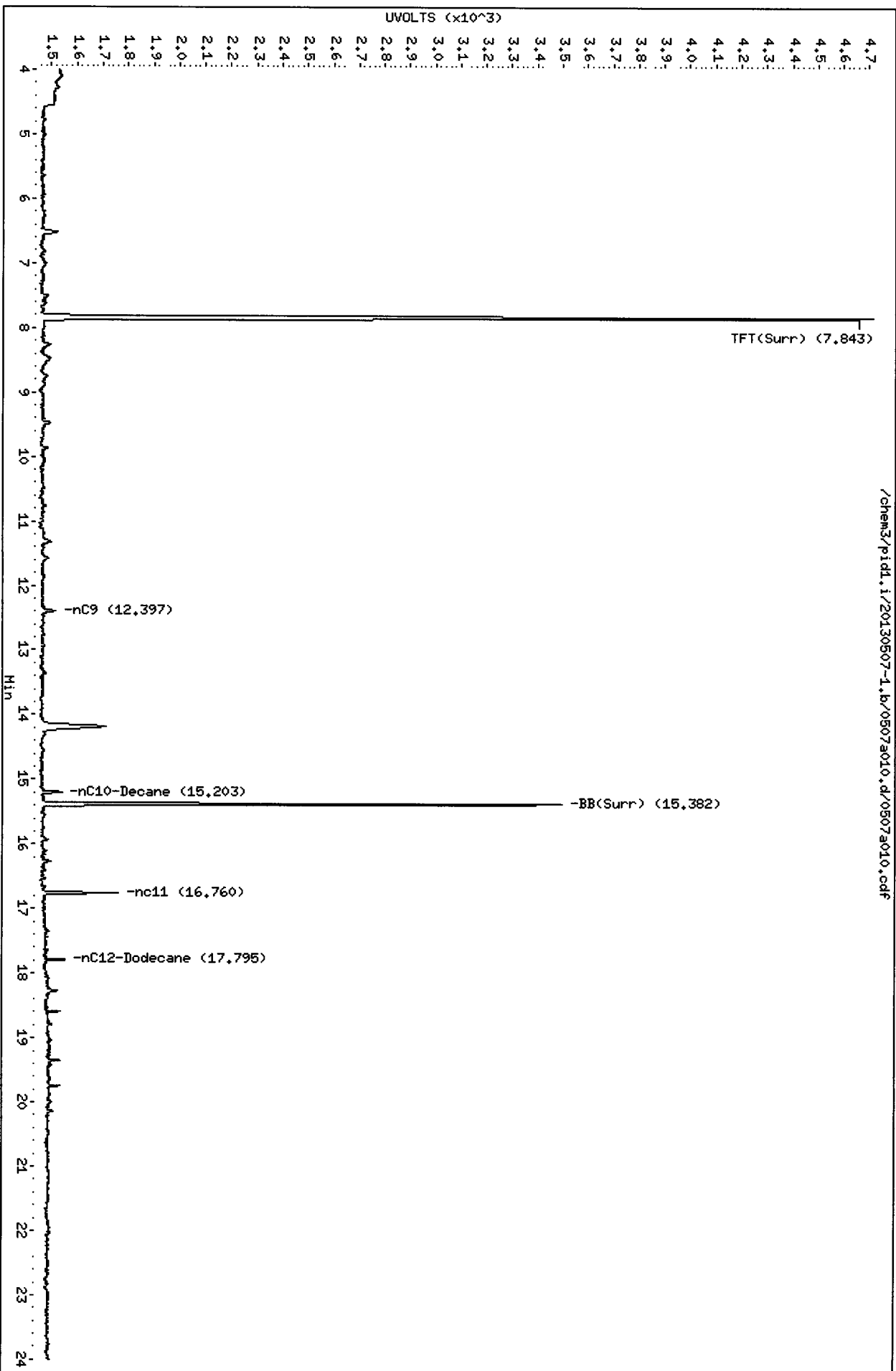
Column Phase: RTX 502-2 F1D

Instrument: pid1.1

Operator: PC

Column diameter: 0.18

Page 1



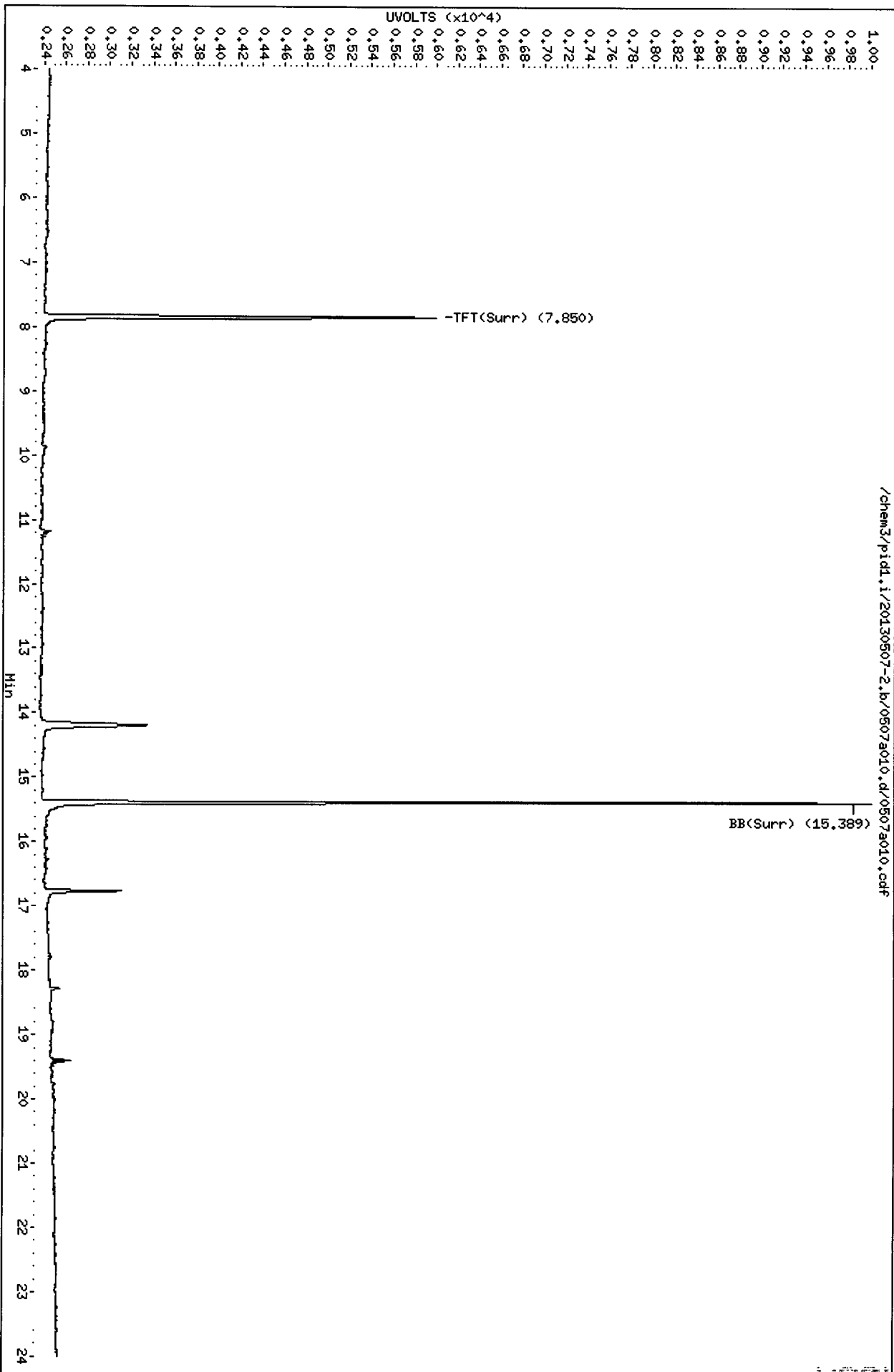
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Data File: /chem3/pid1.i/20130507-2.b/0507a010.d
Date: 07-MAY-2013 16:43
Client ID: G-S-3
Sample Info: MP04A

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130507-2.b/0507a010.d/0507a010.cdf

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP04
Matrix: Soil

QC Report No: WP04-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	BFB	TFT	BBZ	TOT OUT
MB-050713	NA	92.4%	88.9%	0
LCS-050713	NA	93.4%	86.2%	0
LCSD-050713	NA	96.6%	89.0%	0
G-S-3	NA	93.9%	90.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-9854 to 13-9854

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP04
Matrix: Soil

QC Report No: WP04-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-050713	88.8%	85.7%	0
LCS-050713	89.9%	83.9%	0
LCSD-050713	92.2%	86.0%	0
G-S-3	90.6%	86.9%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-9854 to 13-9854

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050713

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/07/13 16:14

LCSD: 05/07/13 14:47

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	LCS		LCSD	LCSD		RPD
		Spike Added	Recovery		Spike Added	Recovery	
Gasoline Range Hydrocarbons	48.8	50.0	97.6%	47.6	50.0	95.2%	2.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	93.4%	96.6%
Bromobenzene	86.2%	89.0%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-050713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050713

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/07/13 16:14

LCSD: 05/07/13 14:47

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	172	185	93.0%	160	185	86.5%	7.2%
Toluene	1790	1980	90.4%	1700	1980	85.9%	5.2%
Ethylbenzene	505	580	87.1%	482	580	83.1%	4.7%
m,p-Xylene	1860	2120	87.7%	1770	2120	83.5%	5.0%
o-Xylene	838	960	87.3%	796	960	82.9%	5.1%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	89.9%	92.2%
Bromobenzene	83.9%	86.0%

PL
5/8/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130507-1.b/0507a009.d ARI ID: LCS0507RE
Data file 2: /chem3/pid1.i/20130507-2.b/0507a009.d Client ID:
Method: /chem3/pid1.i/20130507-2.b/PIDB.m Injection Date: 07-MAY-2013 16:14
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.846	0.006	3240	44085	93.4	TFT(Surr)
15.384	0.004	1967	17338	86.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	348031	0.972 M
8015C 2MP-TMB (4.17 to 16.20)	723723	689248	0.952 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	561292	0.963 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	365928	0.976 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.854	0.005	3569	89.9	TFT(Surr)
15.392	0.003	7371	83.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.022	0.005	828	3.45	Benzene
9.882	0.005	8205	35.83	Toluene
12.775	0.005	1955	10.10	Ethylbenzene
12.938	0.007	7962	37.28	M/P-Xylene
13.884	0.006	2861	16.77	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

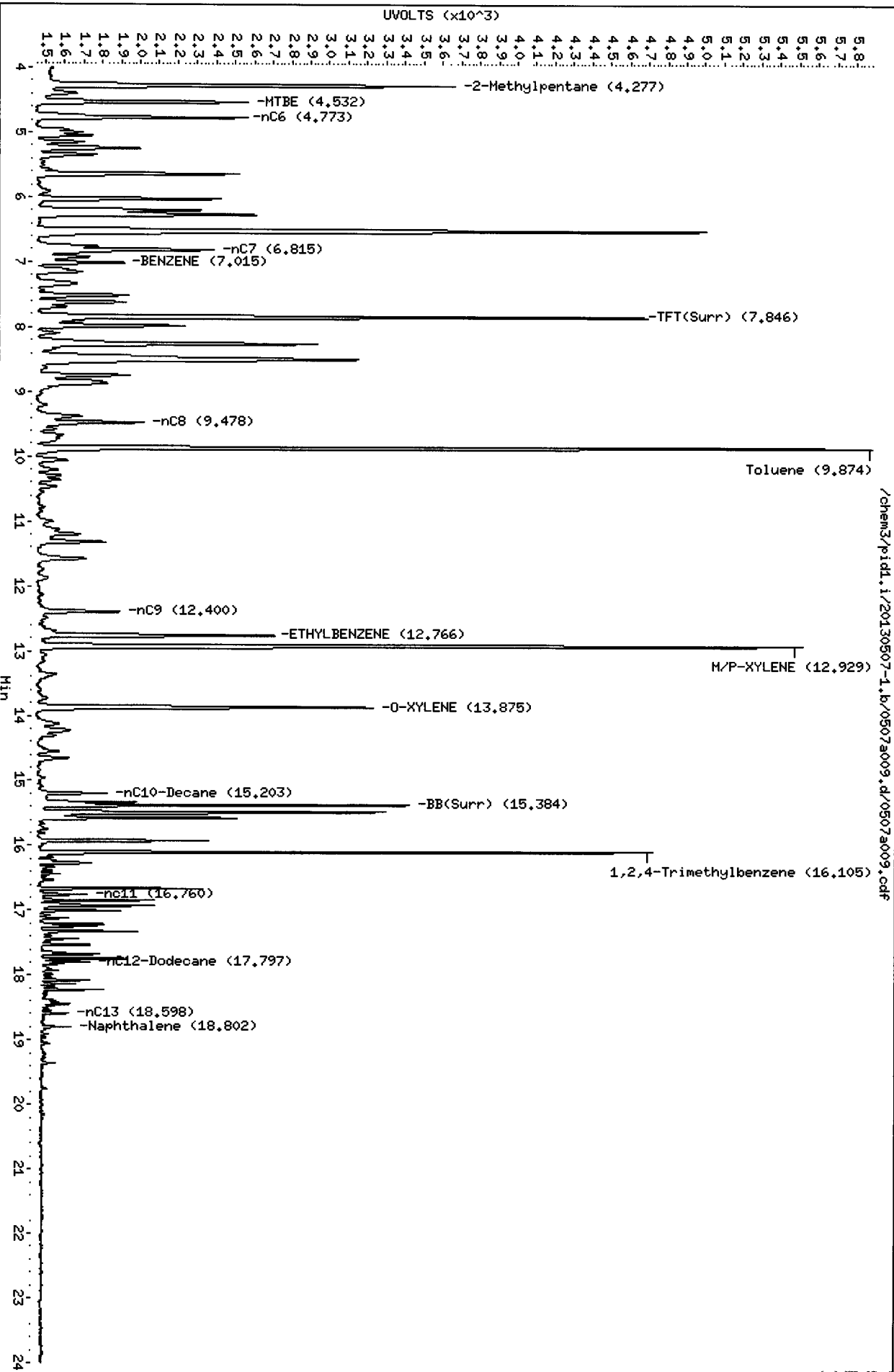
Data File: /chem3/pid1.i/20130507-1.b/0507a009.d
Date: 07-MAY-2013 16:14
Client ID:
Sample Info: LCS0507RE

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Page 1



Data File: /chem3/pid1.i/20130507-2.b/0507a009.d
Date : 07-MAY-2013 16:14

Client ID:

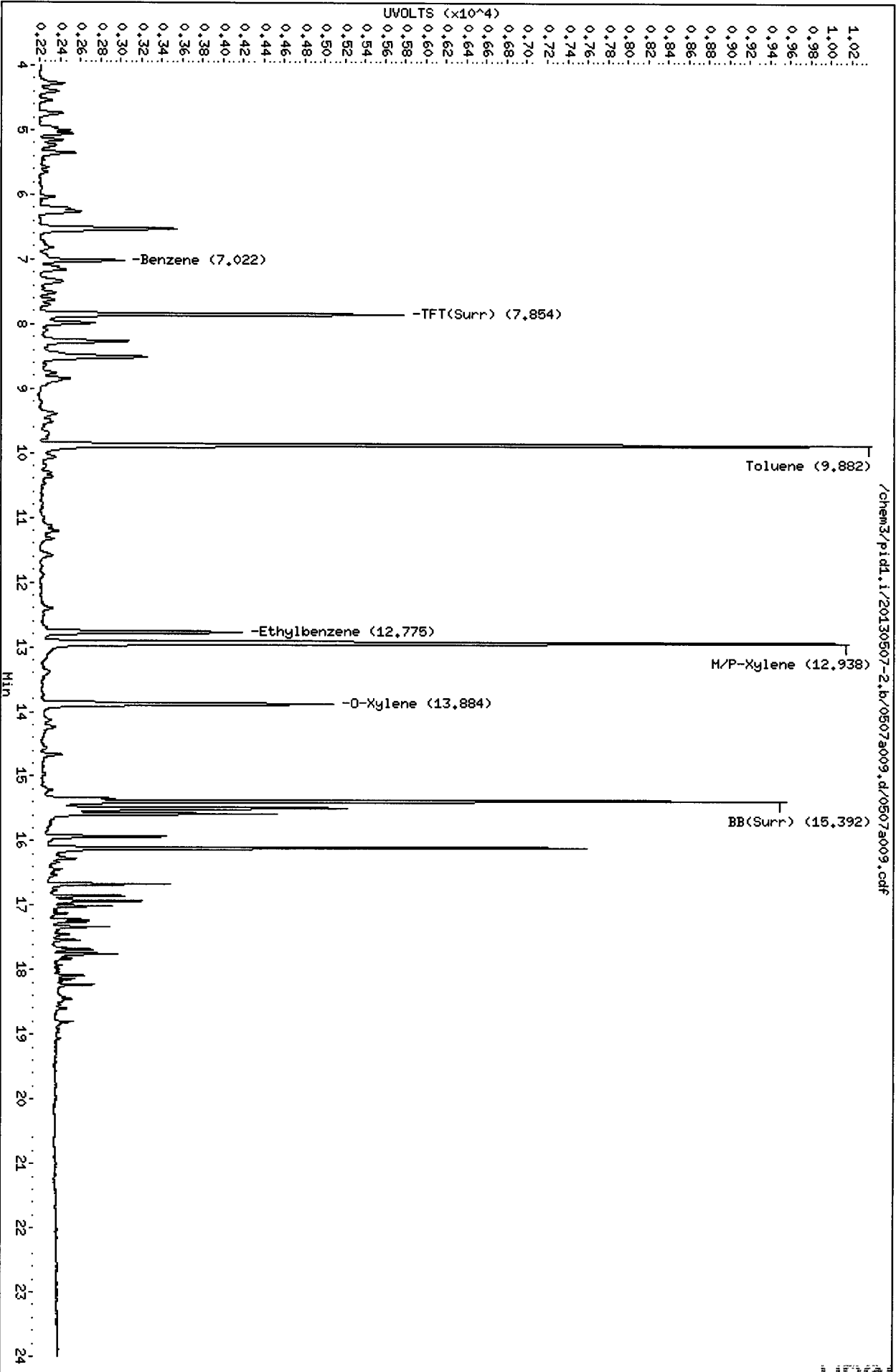
Sample Info: LCS0507RE

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

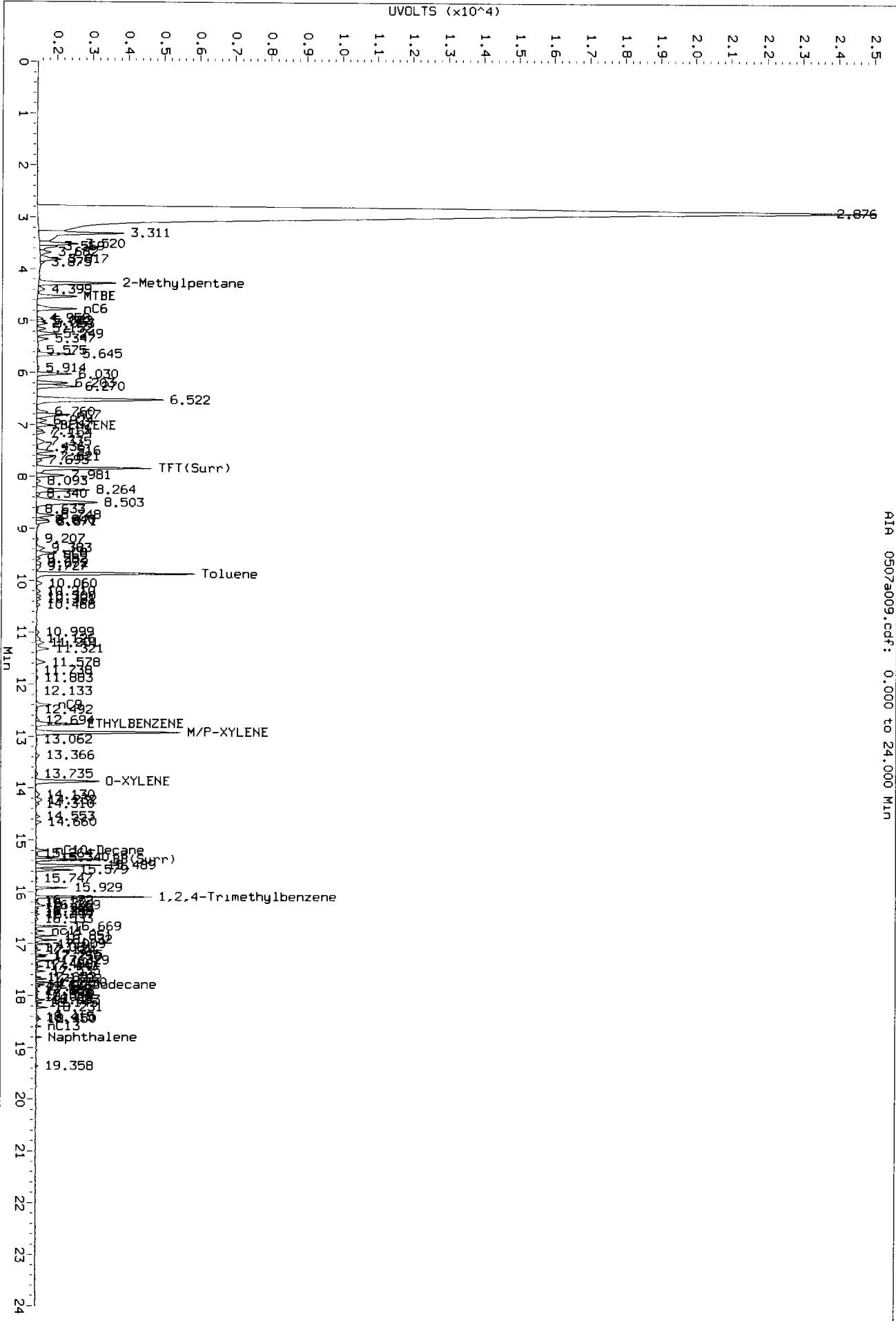
Column diameter: 0.18



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PK
5/8/13

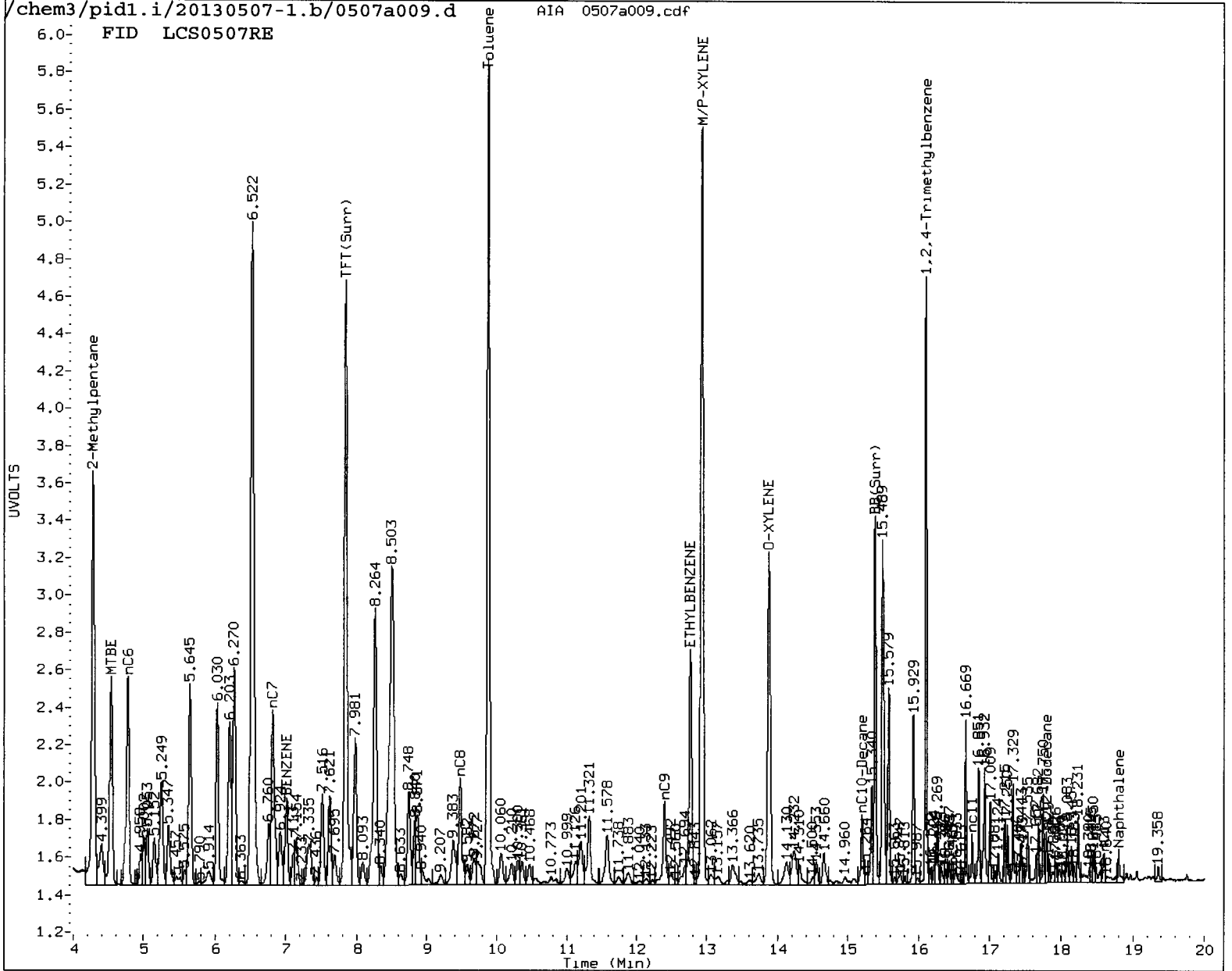
Data File: /chem3/pid1.1/20130507-1.b/0507a009.d/0507a009.cdf
Injection Date: 07-MAY-2013 16:14
Instrument: pid1.1
Client Sample ID:



AIA 0507a009.cdf: 0.000 to 24.000 Min

0507a009.cdf

FID LCS0507RE



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: PC Date: 5/8/13

Small text or artifacts at the bottom right corner of the page.

PL
5/8/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130507-1.b/0507a007.d ARI ID: LCSD0507
Data file 2: /chem3/pid1.i/20130507-2.b/0507a007.d Client ID:
Method: /chem3/pid1.i/20130507-2.b/PIDB.m Injection Date: 07-MAY-2013 14:47
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.840	0.000	3350	45293	96.6	TFT(Surr)
15.381	0.001	2032	17911	89.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	339836	0.949 M
8015C 2MP-TMB (4.17 to 16.20)	723723	667974	0.923 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	544194	0.934 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	357612	0.953 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.848	0.000	3660	92.2	TFT(Surr)
15.389	0.000	7562	86.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.017	-0.001	771	3.21	Benzene
9.876	0.000	7796	34.04	Toluene
12.770	0.000	1868	9.65	Ethylbenzene
12.933	0.002	7565	35.43	M/P-Xylene
13.879	0.000	2717	15.93	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130507-1.b/0507a007.d
Date: 07-MAY-2013 14:47

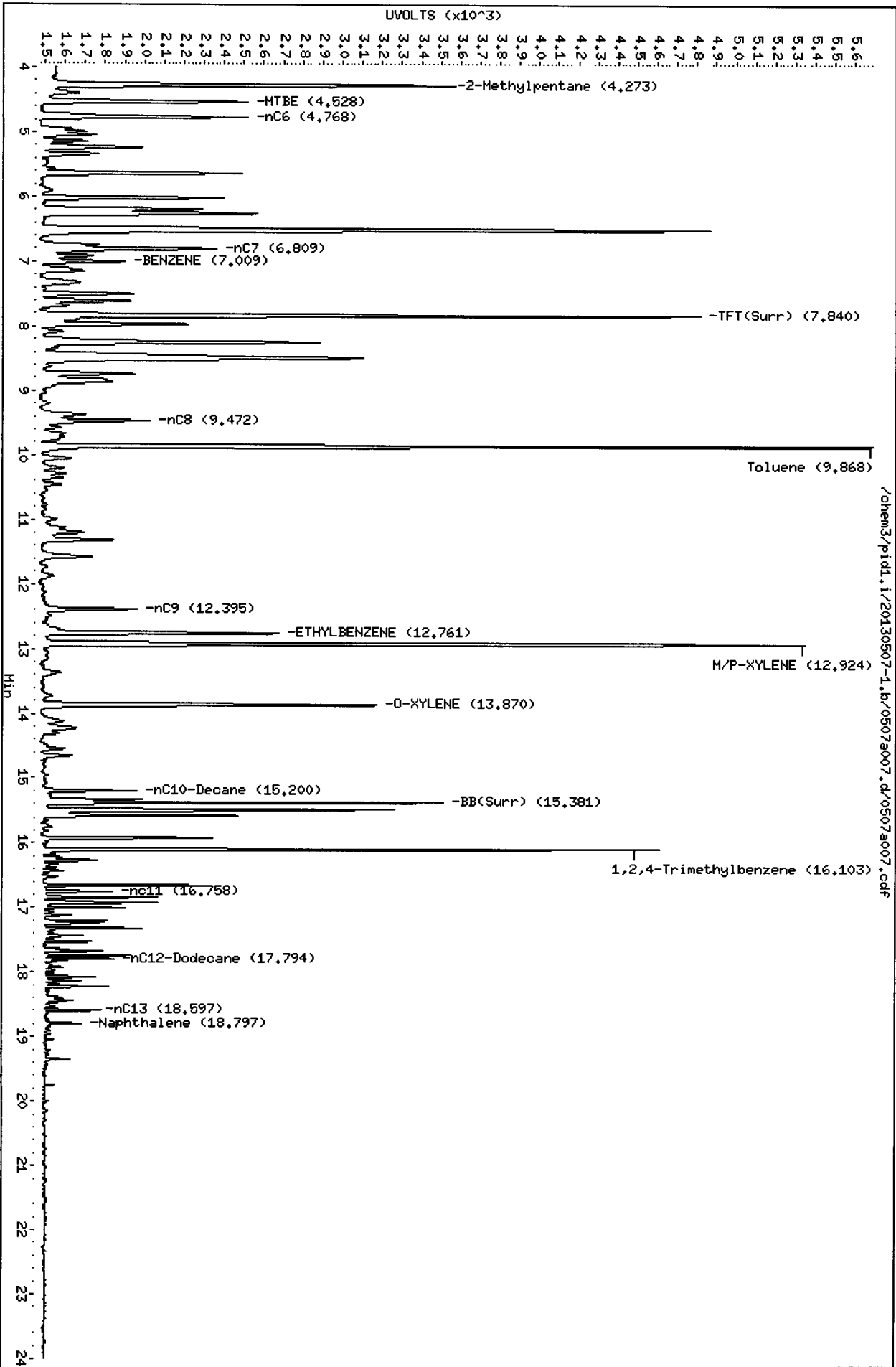
Client ID:
Sample Info: LCSD0507

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Page 1



Data File: /chem3/pid1.i/20130507-2.b/0507a007.d
Date : 07-MAY-2013 14:47

Client ID:

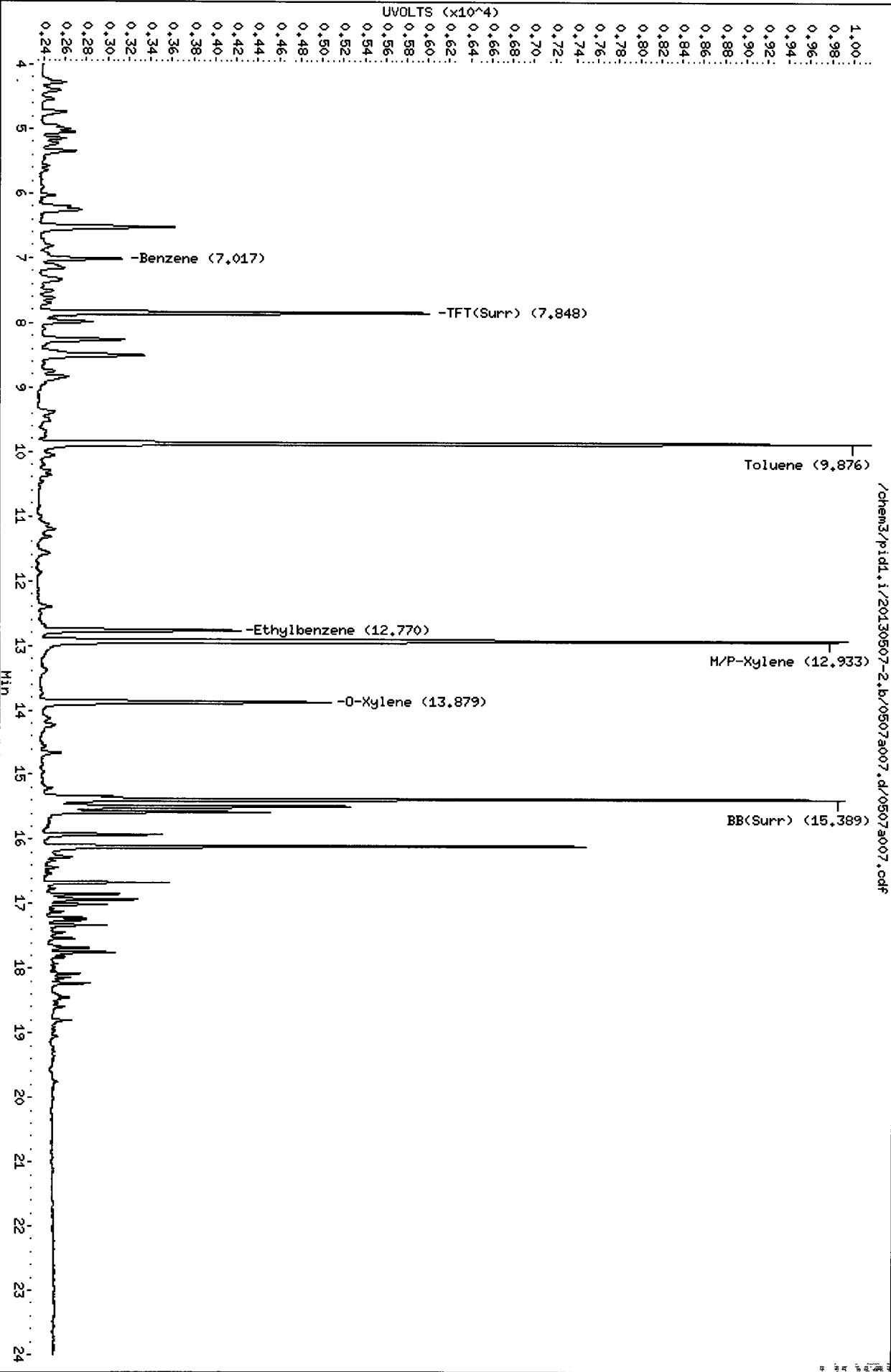
Sample Info: LCSD0507

Column phase: RTX 502-2 PID

Instrument: pid1.i

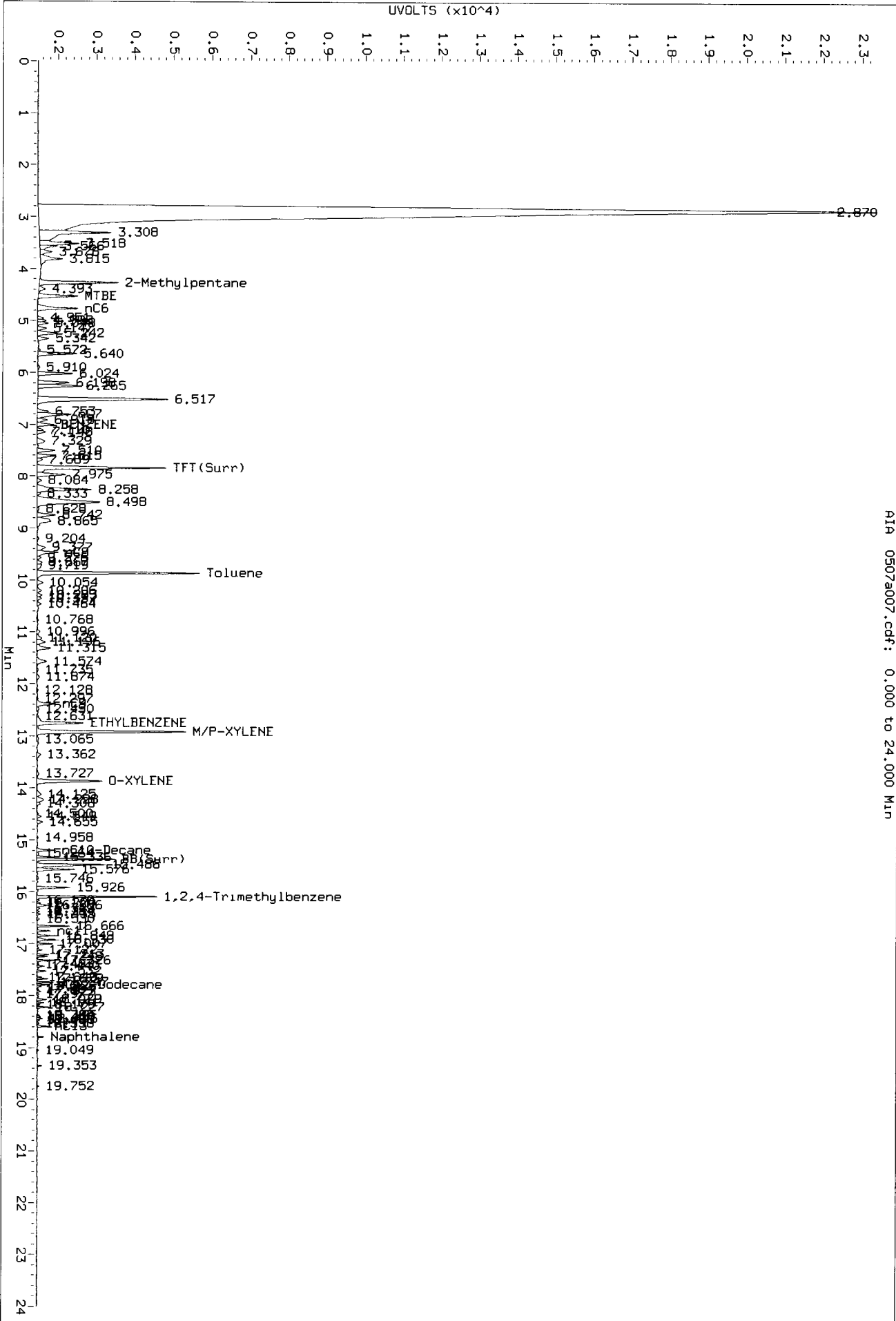
Operator: PC

Column diameter: 0.18



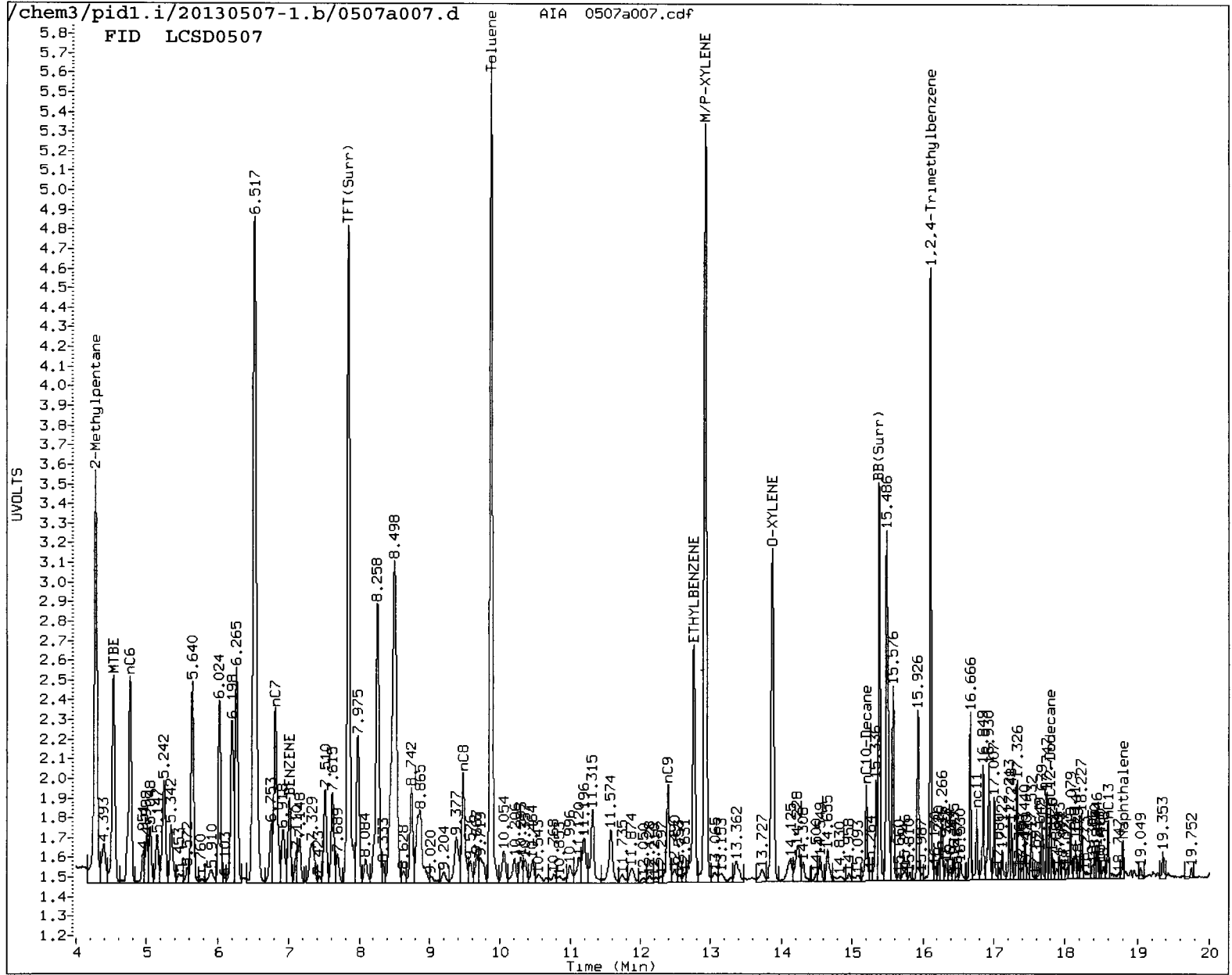
PC
5/8/13

Data File: /chem3/pid1.1/20130507-1.B/0507a007.d/0507a007.cdf
 Injection Date: 07-MAY-2013 14:47
 Instrument: pid1.1
 Client Sample ID:



AIA 0507a007.cdf: 0.000 to 24.000 Min

0507a007.cdf



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: MC

Date: 5/8/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050713

METHOD BLANK

Lab Sample ID: MB-050713

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/07/13 15:17

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.8%
Bromobenzene	85.7%

Gasoline Surrogate Recovery

Trifluorotoluene	92.4%
Bromobenzene	88.9%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

12
5/8/15

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130507-1.b/0507a008.d ARI ID: MB0507
Data file 2: /chem3/pid1.i/20130507-2.b/0507a008.d Client ID:
Method: /chem3/pid1.i/20130507-2.b/PIDB.m Injection Date: 07-MAY-2013 15:17
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.841	0.001	3205	39239	92.4	TFT(Surr)
15.381	0.001	2029	16917	88.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	2881	0.008
8015C 2MP-TMB (4.17 to 16.20)	723723	2426	0.003
AK101 nC6-nC10 (4.67 to 15.10)	582885	1541	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3422	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.850	0.001	3524	88.8	TFT(Surr)
15.389	0.001	7534	85.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130507-1.b/0507a008.d
Date: 07-MAY-2013 15:17

Client ID:

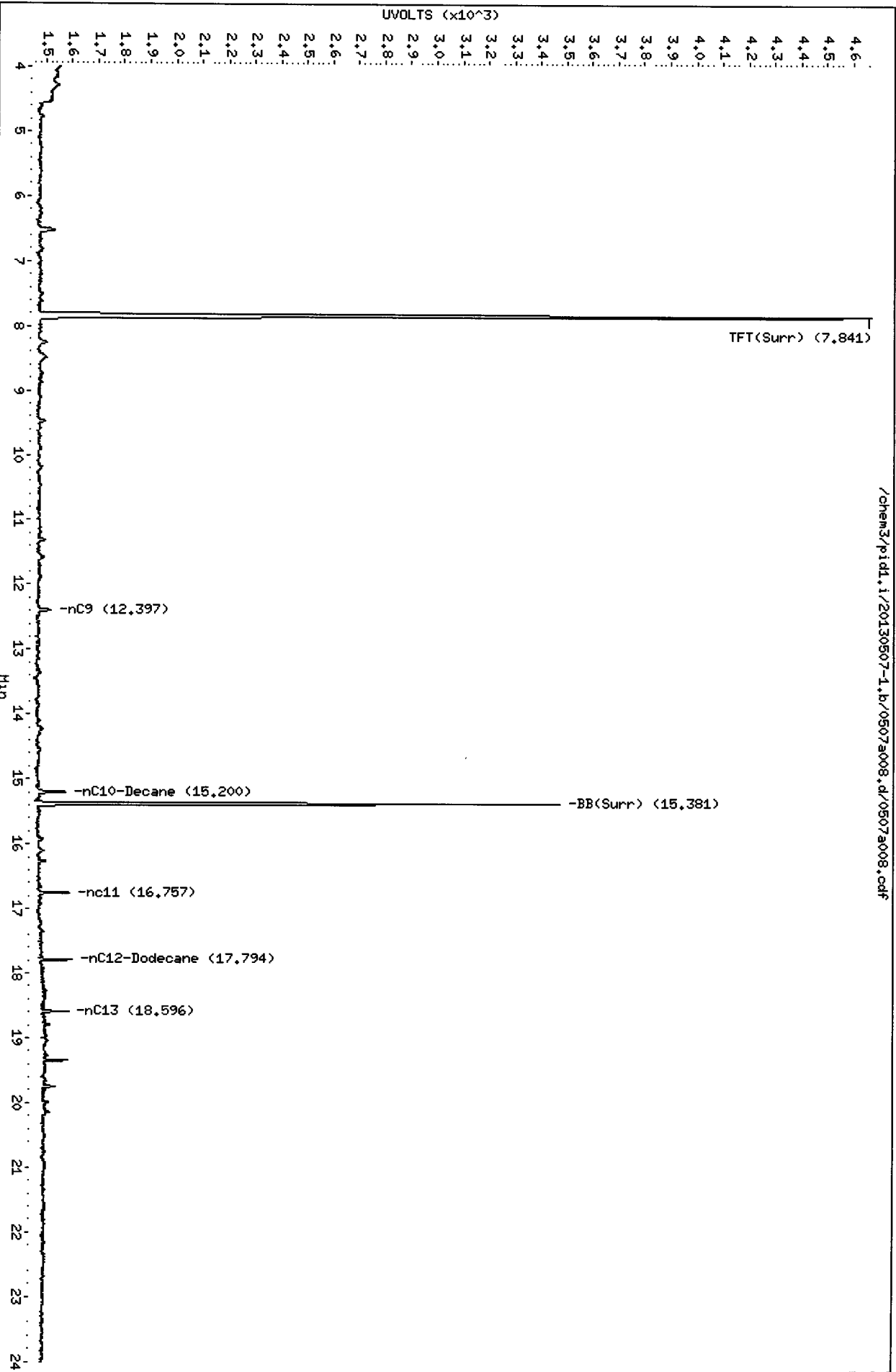
Sample Info: HB0507

Column Phase: RTX 502-2 FID

Instrument: pid1.i

Operator: FC

Column diameter: 0.18



Data File: /chem3/pidd.i/20130507-2.b/0507a008.d
Date: 07-MAY-2013 15:17

Client ID:

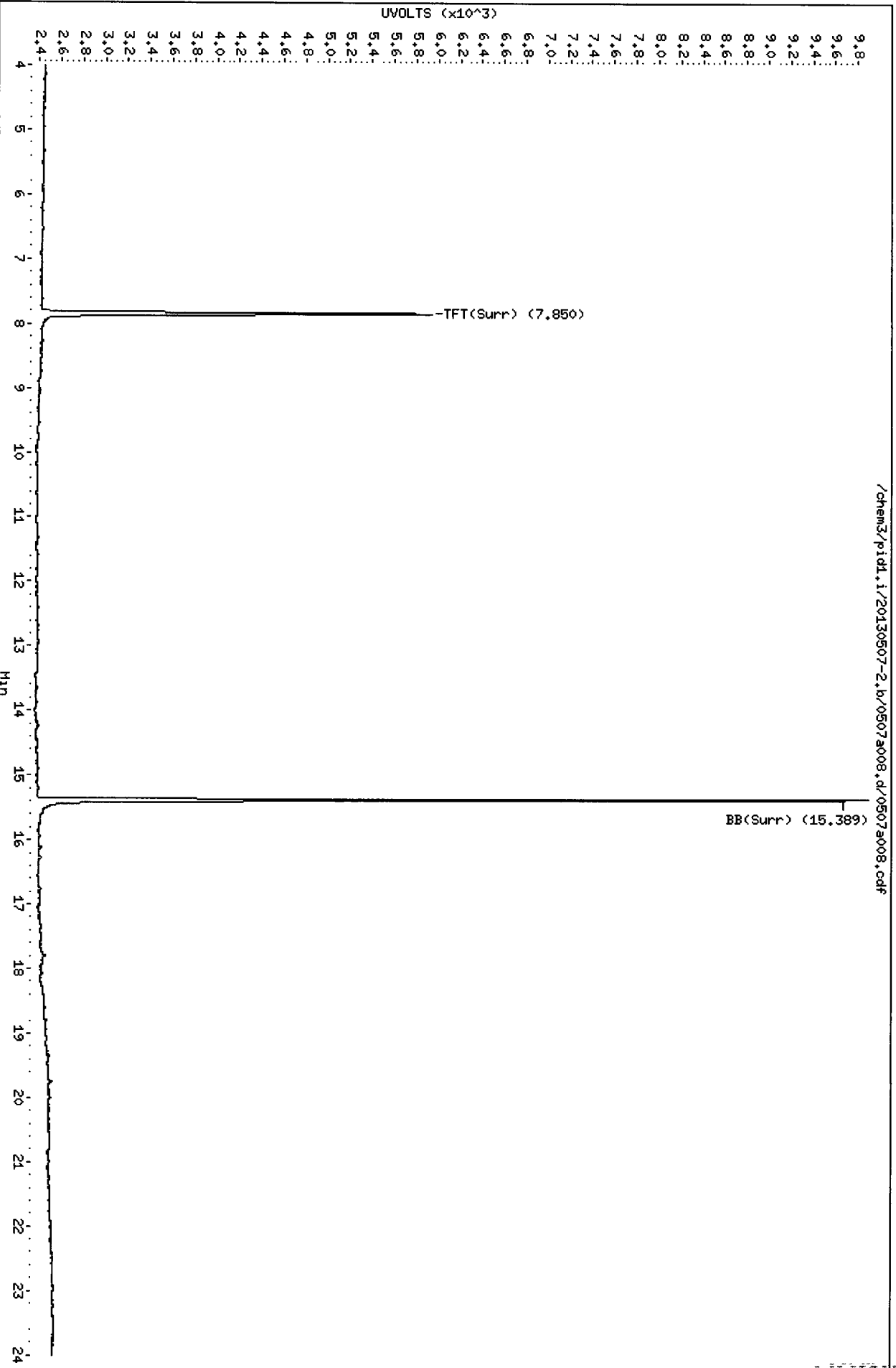
Sample Info: HB0507

Column phase: RTX 502-2 PID

Instrument: pidd.i

Operator: PC

Column diameter: 0.18



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: G-S-3
SAMPLE**

Lab Sample ID: WP04A

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized: 

Reported: 05/08/13

QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: 05/06/13

Date Received: 05/07/13

Percent Total Solids: 82.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/07/13	6010C	05/08/13	7440-38-2	Arsenic	6	6	U
3050B	05/07/13	6010C	05/08/13	7440-47-3	Chromium	0.6	43.0	
3050B	05/07/13	6010C	05/08/13	7440-50-8	Copper	0.2	15.1	
3050B	05/07/13	6010C	05/08/13	7439-92-1	Lead	2	6	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WP04LCS

LIMS ID: 13-9854

Matrix: Soil

Data Release Authorized

Reported: 05/08/13



QC Report No: WP04-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	216	200	108%	
Chromium	6010C	54.1	50.0	108%	
Copper	6010C	51.8	50.0	104%	
Lead	6010C	208	200	104%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: WP04MB


QC Report No: WP04-Maul Foster & Alongi, Inc

LIMS ID: 13-9854

Project: Cashmere

Matrix: Soil

0779.02.01/03

Data Release Authorized: 

Date Sampled: NA

Reported: 05/08/13

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/07/13	6010C	05/08/13	7440-38-2	Arsenic	5	5	U
3050B	05/07/13	6010C	05/08/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/07/13	6010C	05/08/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/07/13	6010C	05/08/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 13, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WP53

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted two soil samples on May 10, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WP53

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WPSY	Turn-around Requested: PUSH - 24 HOUR	Page: 1 of 1
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA	TSILVA@MAULFOSTER.COM	Ice Present? ✓
Client Project Name: CASHMERE	No. of Coolers: 1	Cooler Temps: 4.4

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested								Notes/Comments
					NUSTPH - DX	SILICA GEL	BEX	SDB1	NUSTPH - GX				
STORMPIPE - S - 1	5/9/13	1230	S	5									
STORMPIPE - S - 2	5/9/13	1240	S	5									

Comments/Special Instructions PLEASE PROVIDE GAS KEY 4-FILE EDD. EMAIL TO TONY SILVA & ERIC NAYLER AT MFA	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/9/13 1500	Date & Time: 5/10/13 1020	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WP52 WP53

Tracking No: K046 684 6744 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: Jm Date: 5/10/13 Time: 1020

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: _____ NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: Jm Date: 5/10/13 Time: 1028

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

Analyses not marked on COCs. Assumed both samples need DX & BTEX/GX based on sample jars/vials

By: Jm Date: 5/10/13 Client confirmed analyses through email

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WP53
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. Stormpipe-S-1	WP53A	13-10171	Soil	05/09/13 12:30	05/10/13 10:20
2. Stormpipe-S-2	WP53B	13-10172	Soil	05/09/13 12:40	05/10/13 10:20





Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WP53-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *AB*
Reported: 05/13/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-051013	Method Blank	05/10/13	05/10/13	1.00	Diesel Range	5.0	< 5.0 U
13-10171	HC ID: ---		FID4A	1.0	Motor Oil Range o-Terphenyl	10	< 10 U 104%
WP53A	Stormpipe-S-1	05/10/13	05/11/13	1.00	Diesel Range	550	5000
13-10171	HC ID: DRO/MOTOR OIL		FID3B	100	Motor Oil Range o-Terphenyl	1100	17000 D
WP53B	Stormpipe-S-2	05/10/13	05/10/13	1.00	Diesel Range	5.4	9.0
13-10172	HC ID: DIESEL/MOTOR OIL		FID4A	1.0	Motor Oil Range o-Terphenyl	11	25 102%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a029.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/11/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP53MBS1
Client ID:
Injection: 10-MAY-2013 16:48
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		58411	3.76
C8	----				WATPHD (C12-C24)		404794	27.89 ✓
C10	2.853	-0.001	378	346	WATPHM (C24-C38)		250614	18.42 ✓
C12	3.818	-0.002	6095	5489	AK102 (C10-C25)		445169	25.86
C14	4.501	-0.003	5438	5229	AK103 (C25-C36)		210101	22.83
C16	5.086	-0.001	5159	4932				
C18	5.624	-0.003	3158	2429				
C20	6.167	-0.006	3074	3058				
C22	6.704	-0.007	2704	2801	MIN.OIL (C24-C38)		250614	14.69
C24	7.219	-0.008	2138	3042				
C25	7.469	-0.005	1919	2656				
C26	7.705	-0.018	2186	4317				
C28	8.157	-0.011	2858	4449				
C32	8.972	-0.002	11219	15631				
C34	9.349	-0.001	1752	3812				
Filter Peak	11.437	0.004	2180	2602	CREOSOT (C12-C22)		350857	160.80 M
C36	9.707	-0.002	2231	5604				
C38	10.068	0.008	1430	3767				
C40	10.393	-0.007	1645	3289				
o-terph	5.764	0.001	1119017	903351				
Triacon Surr	8.593	0.001	901009	861038				

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	903351	46.8	104.1
Triacotane	861038	47.3	105.2

JW
5/11/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a029.d

Date: 10-MAY-2013 16:48

Client ID:

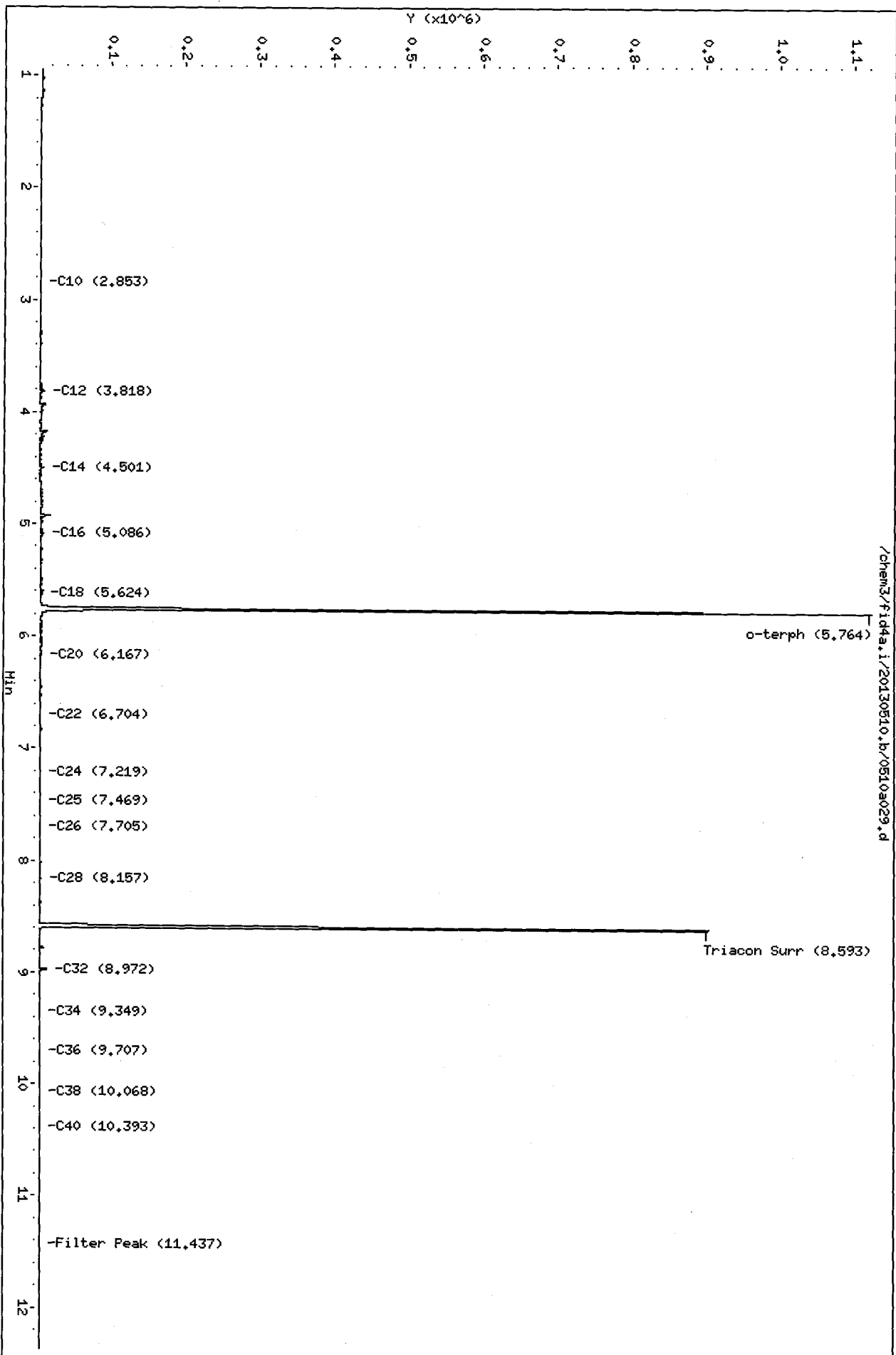
Sample Info: MP53HBS1

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25



MP53HBS1

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b017.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: WP53A
Client ID:
Injection: 11-MAY-2013 17:45
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	122851	9
C8	0.801	-0.005	4897	3662	WATPHD	(C12-C24)	4634035	447.41
C10	2.248	0.000	369	77	WATPHM	(C24-C38)	15282505	1547.93
C12	3.041	-0.010	1100	301	AK102	(C10-C25)	5179580	419.17
C14	3.627	-0.005	2842	2360	AK103	(C25-C36)	14171536	1993.61
C16	4.125	-0.003	4326	1073	OR.DIES	(C10-C28)	11519332	748.88
C18	4.573	-0.003	20832	19026				
C20	4.996	-0.001	38030	19844				
C22	5.392	0.001	74463	31990				
C24	5.759	0.001	123855	78991				
C25	5.929	-0.004	169050	127187				
C26	6.104	-0.004	179175	107933				
C28	6.421	-0.001	205084	52608	IT.DIES	(C10-C24)	4685758	339.82
C32	6.970	0.005	136185	88386				
C34	7.201	0.004	105503	80930	CREOSOT	(C8-C22)	2433451	752.61
Filter Peak	----							
C36	7.415	0.000	70377	31948	BUNKERC	(C10-C38)	19968262	4071.17
o-terph	----				JET-A	(C10-C18)	467677	43.21
Triacon Surr	----							

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacotane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW
5/13/13

Data File: /chem3/fid3b.i/20130511.b/0511b017.d
Date: 11-MAY-2013 17:45

Client ID:

Sample Info: MP53A.100

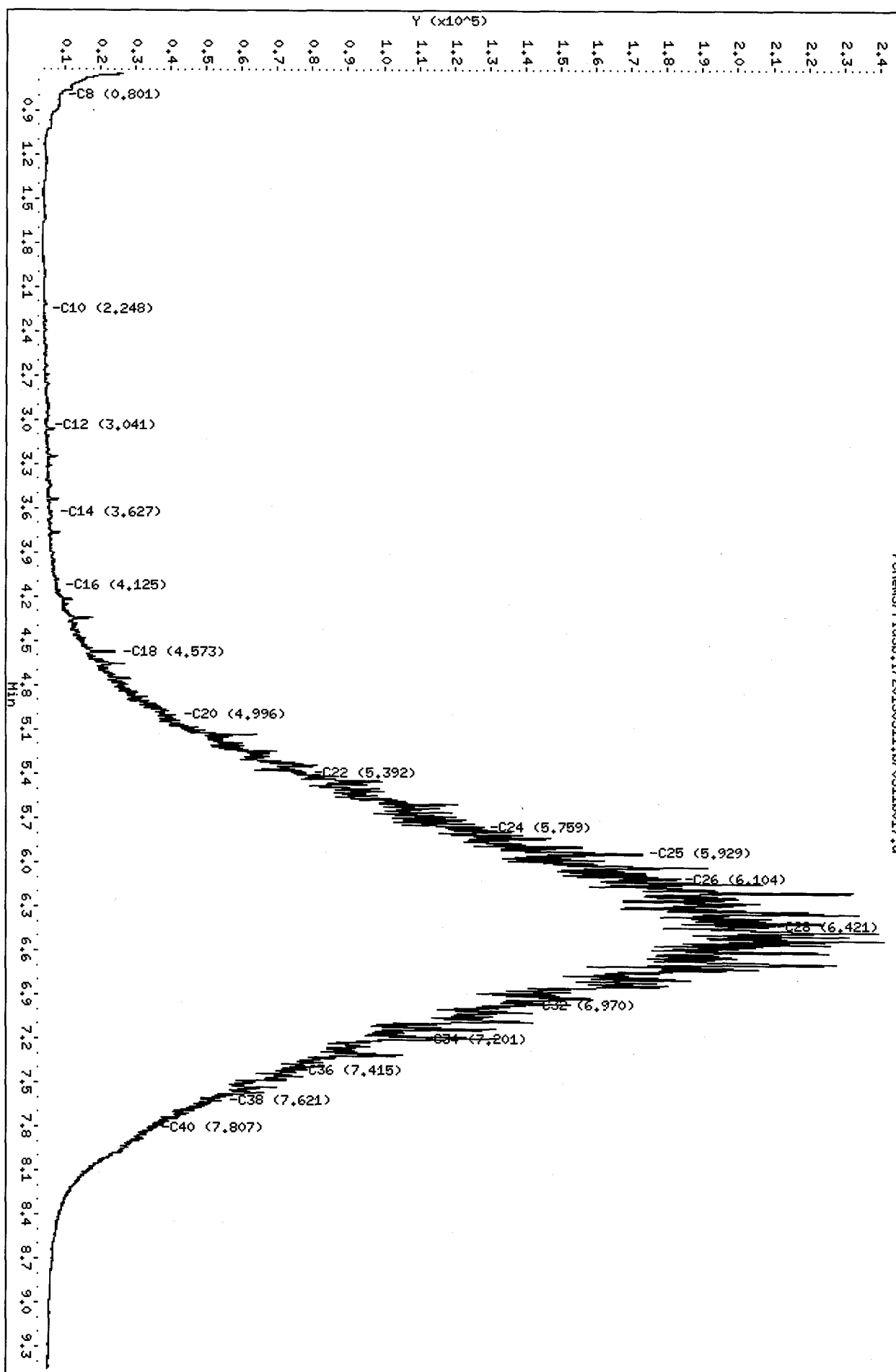
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130511.b/0511b017.d



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a032.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/11/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP53B
Client ID:
Injection: 10-MAY-2013 17:49
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		79898	5.14
C8	----				WATPHD (C12-C24)		1204028	82.95 ✓
C10	2.852	-0.001	710	656	WATPHM (C24-C38)		3098816	227.79 ✓
C12	3.818	-0.002	8547	7538	AK102 (C10-C25)		1390611	80.78
C14	4.501	-0.003	6289	6843	AK103 (C25-C36)		2777533	301.84
C16	5.088	0.001	8207	9877				
C18	5.624	-0.004	6497	9836				
C20	6.169	-0.004	7654	16403				
C22	6.706	-0.005	11607	12733	MIN.OIL (C24-C38)		3098816	181.65
C24	7.239	0.012	17954	32943				
C25	7.470	-0.004	24085	49219				
C26	7.712	-0.011	23754	30595				
C28	8.162	-0.006	26801	64897				
C32	8.961	-0.013	28169	55523				
C34	9.349	0.000	54483	126202				
Filter Peak	11.428	-0.005	6142	5629	CREOSOT (C12-C22)		763368	349.86 M
C36	9.721	0.012	9543	6182				
C38	10.057	-0.003	7955	8555				
C40	10.402	0.002	7442	12634				
o-terph	5.764	0.002	1109198	883786				
Triacon Surr	8.591	-0.002	877901	860829				

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	883786	45.8	101.8 M
Triacontane	860829	47.3	105.1 M

JW
5/11/13

M Indicates the peak was manually integrated

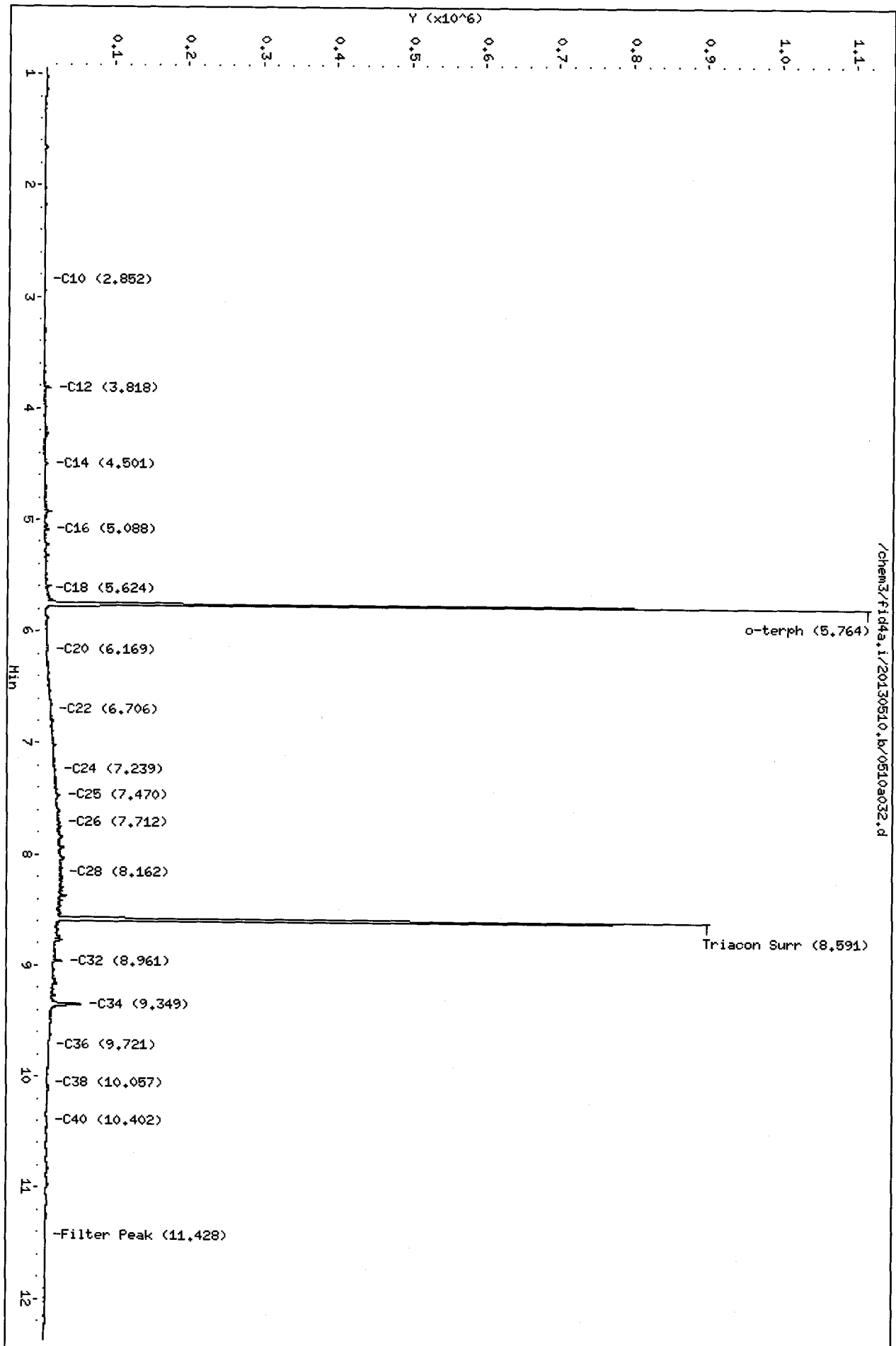
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a032.d
Date: 10-MAY-2013 17:49

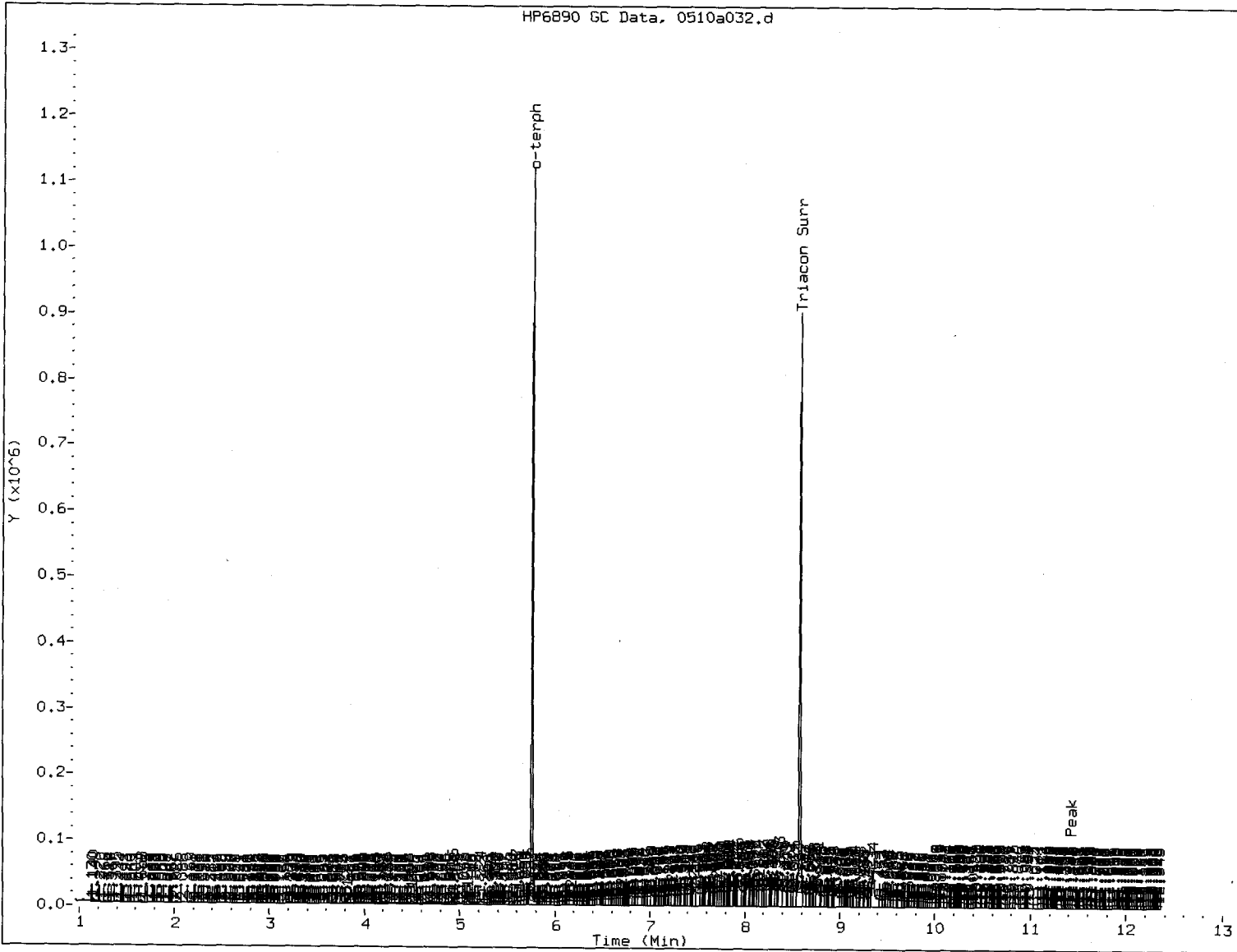
Client ID:
Sample Info: MP53B
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

Handwritten: 20/5/13



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SU

Date: 5/11/17

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WP53-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-051013	104%	0
LCS-051013	106%	0
Stormpipe-S-1	D	0
Stormpipe-S-2	102%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-10171 to 13-10172

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1


Sample ID: LCS-051013

LAB CONTROL

Lab Sample ID: LCS-051013

LIMS ID: 13-10171

Matrix: Soil

Data Release Authorized: 

Reported: 05/13/13

QC Report No: WP53-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/09/13

Date Received: 05/10/13

Date Extracted: 05/10/13

Date Analyzed: 05/10/13 17:08

Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g

Final Extract Volume: 1.0 mL

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	128	150	85.3%

TPHD Surrogate Recovery

o-Terphenyl	106%
-------------	------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a030.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/11/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP53LCSS1
Client ID:
Injection: 10-MAY-2013 17:08
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	4403564	283.38
C8	----				WATPHD	(C12-C24)	18516981	1275.75
C10	2.855	0.001	86617	77413	WATPHM	(C24-C38)	343886	25.28
C12	3.821	0.001	188035	213556	AK102	(C10-C25)	21786986	1265.60
C14	4.507	0.002	324873	399170	AK103	(C25-C36)	258449	28.09
C16	5.090	0.003	483607	453680				
C18	5.629	0.002	488198	505826				
C20	6.172	0.000	270037	308743				
C22	6.708	-0.004	132391	145192	MIN.OIL	(C24-C38)	343886	20.16
C24	7.220	-0.006	44260	72862				
C25	7.466	-0.008	24128	44104				
C26	7.741	0.018	3746	2641				
C28	8.159	-0.008	3803	5723				
C32	8.972	-0.002	9080	11864				
C34	9.341	-0.009	838	1868				
Filter Peak	11.436	0.003	1169	1339	CREOSOT	(C12-C22)	17900563	8204.12 M
C36	9.695	-0.014	1564	2534				
C38	10.052	-0.008	523	1038				
C40	10.403	0.003	488	505				
o-terph	5.767	0.005	1077312	918778				
Triacon Surr	8.594	0.001	902508	861307				

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

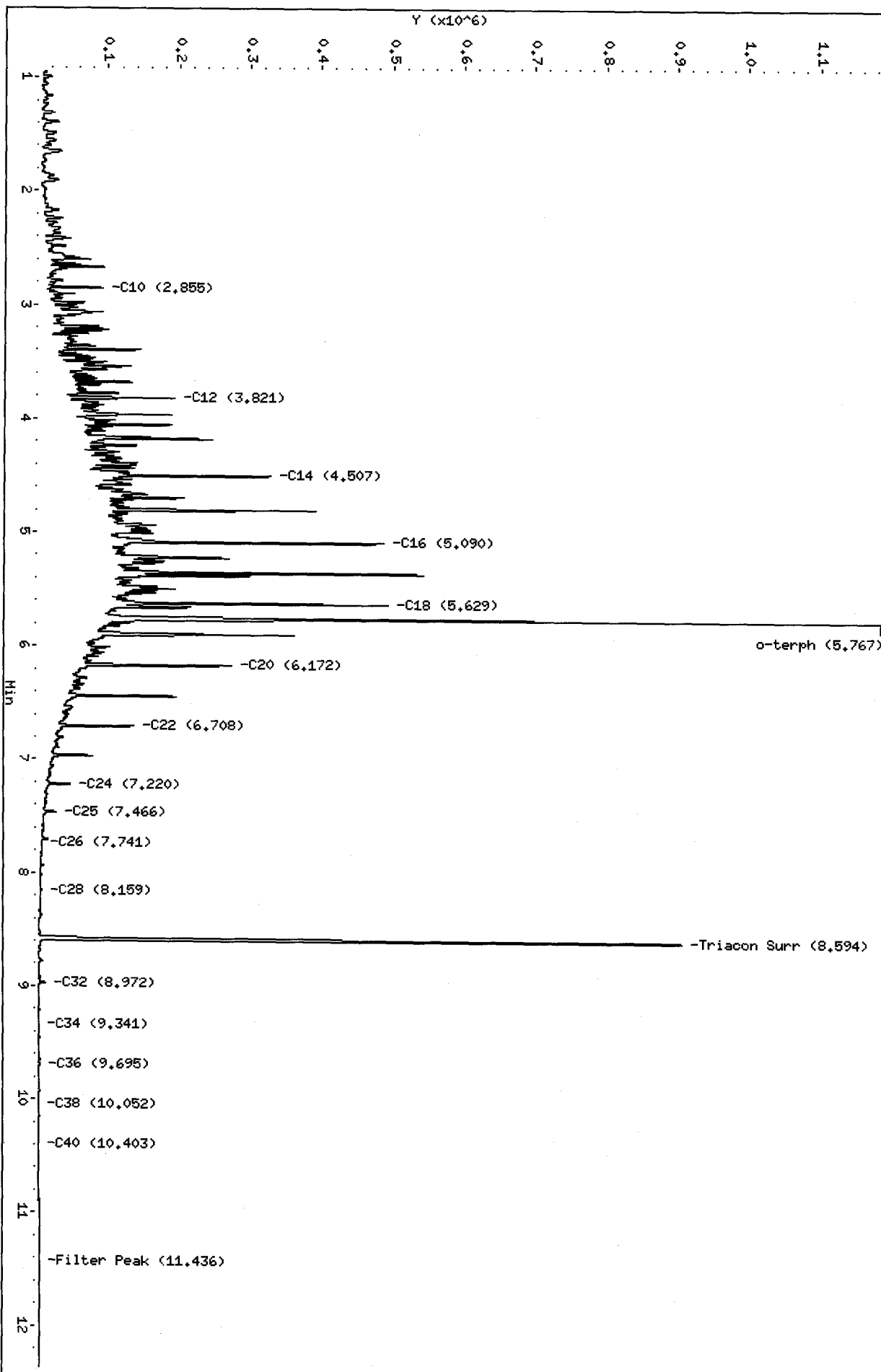
Surrogate	Area	Amount	%Rec
o-Terphenyl	918778	47.6	105.9 M
Triacontane	861307	47.3	105.2

JW
5/11/13

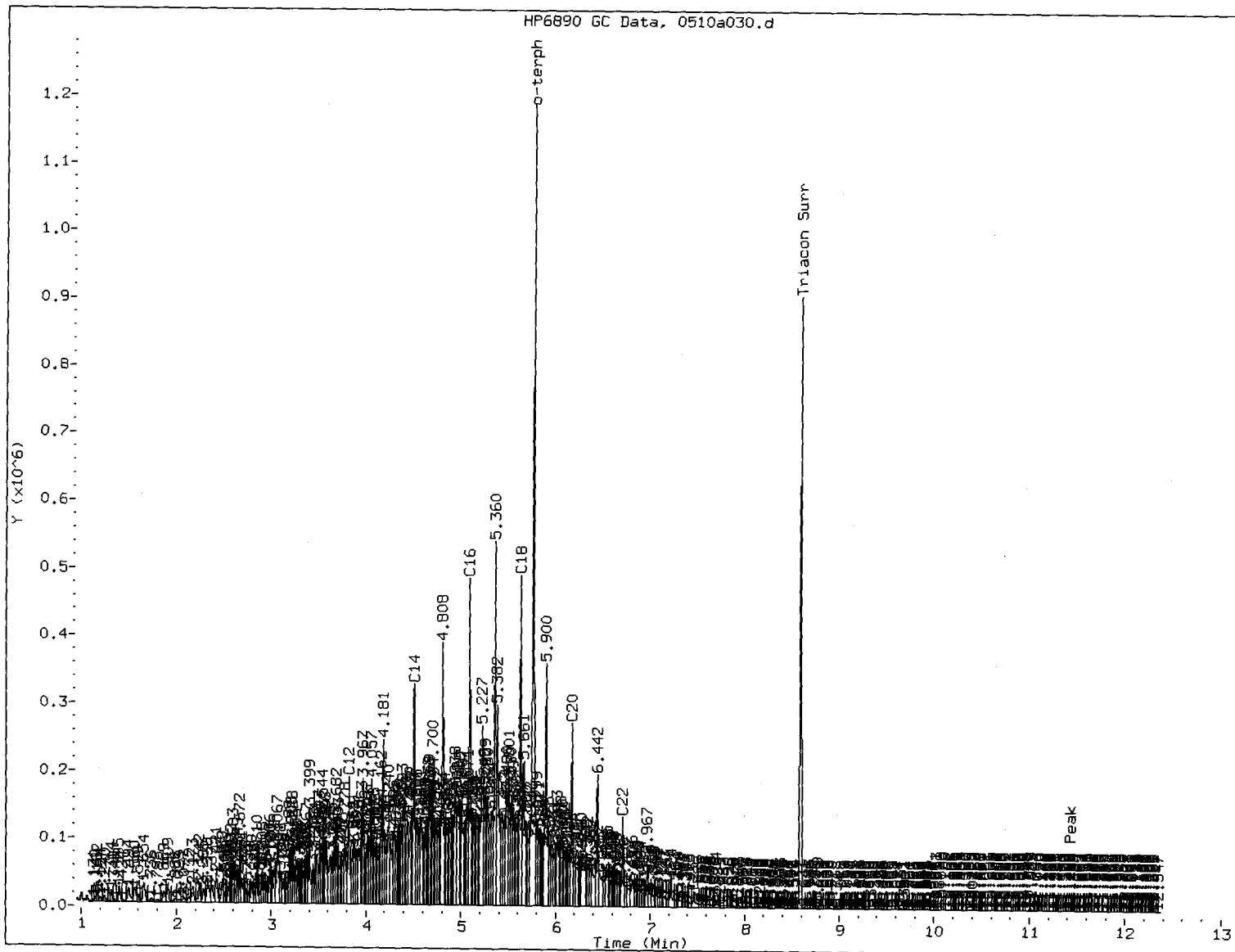
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

/chem3/fid4a.i/20130510.b/0510a030.d



JP
5/11/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW Date: 5/11/12

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/10/13

ARI Job: WP53
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10171-051013MB1	Method Blank	10.0 g	1.00 mL	-	05/10/13
13-10171-051013LCS1	Lab Control	10.0 g	1.00 mL	-	05/10/13
13-10171-WP53A	Stormpipe-S-1	9.02 g	1.00 mL	D	05/10/13
13-10172-WP53B	Stormpipe-S-2	9.21 g	1.00 mL	D	05/10/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: Stormpipe-S-1
SAMPLE**

Lab Sample ID: WP53A

LIMS ID: 13-10171

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/13/13

QC Report No: WP53-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/09/13

Date Received: 05/10/13

Date Analyzed: 05/10/13 14:47

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 75 mg-dry-wt

Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	17
100-41-4	Ethylbenzene	17	28
179601-23-1	m,p-Xylene	33	66
95-47-6	o-Xylene	17	56

Gasoline Range Hydrocarbons 6.6 62 GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	86.7%
Bromobenzene	87.2%

Gasoline Surrogate Recovery

Trifluorotoluene	88.2%
Bromobenzene	91.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
5/13/13

Data file 1: /chem3/pid1.i/20130510-1.b/0510a012.d ARI ID: WP53A
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a012.d Client ID: Stormpipe-S-1
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 14:47
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.004	3060	37688	88.2	TFT(Surr)
15.380	0.002	2092	20759	91.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	251480	0.702 M
8015C 2MP-TMB (4.18 to 16.20)	723723	113859	0.157 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	69396	0.119 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	350170	0.934 M <i>grd</i>

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3442	86.7	TFT(Surr)
15.387	0.001	7661	87.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	0.006	59	0.26N	Toluene
12.747	-0.020	81	0.42N	Ethylbenzene
12.930	0.004	214	1.00	M/P-Xylene
13.877	0.002	144	0.84N	O-Xylene
ND	---	---	---	MTBE

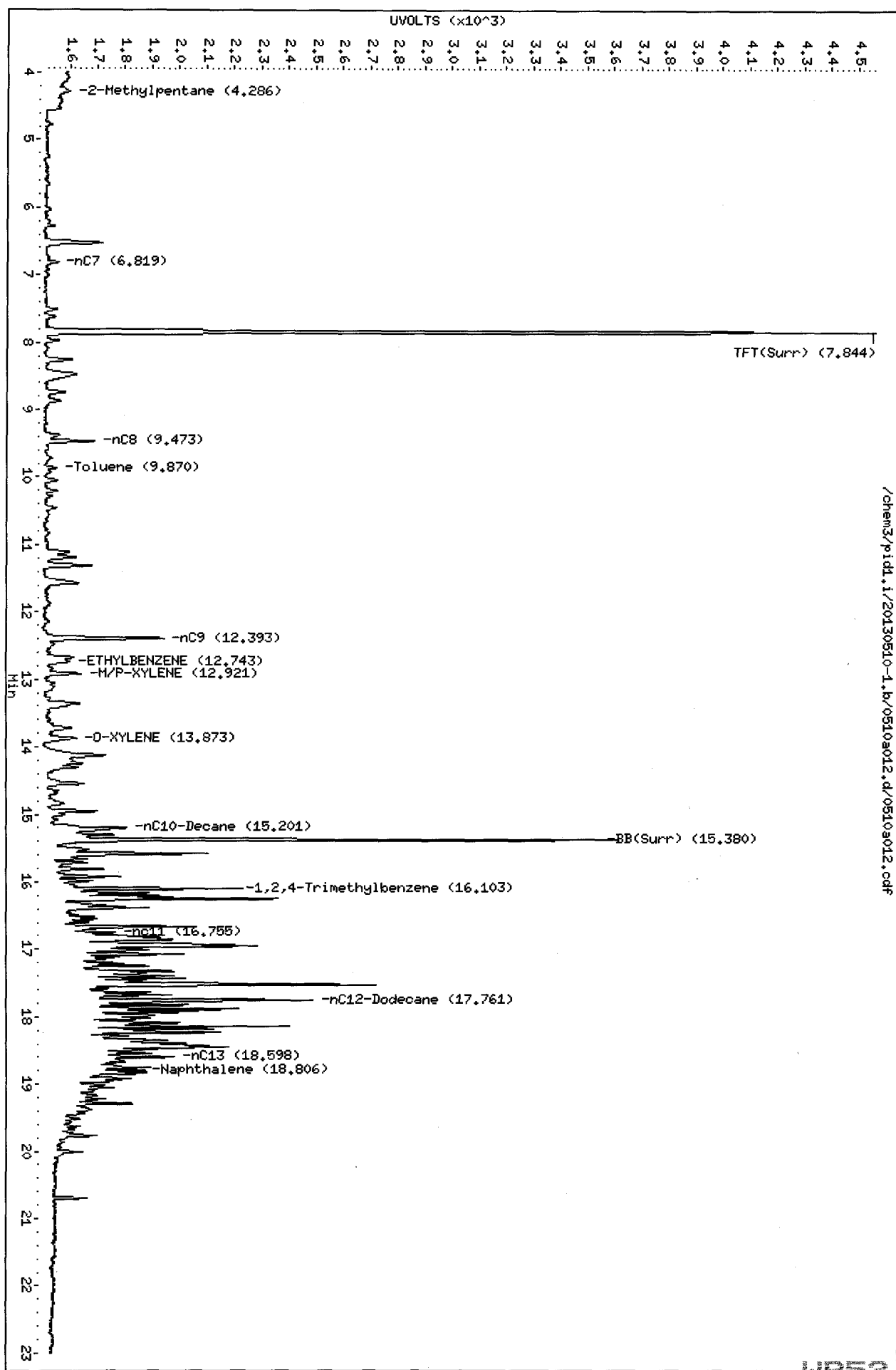
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-1.b/0510a012.d
Date: 10-MAY-2013 14:47
Client ID: Stormpipe-S-1
Sample Info: MP53A

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

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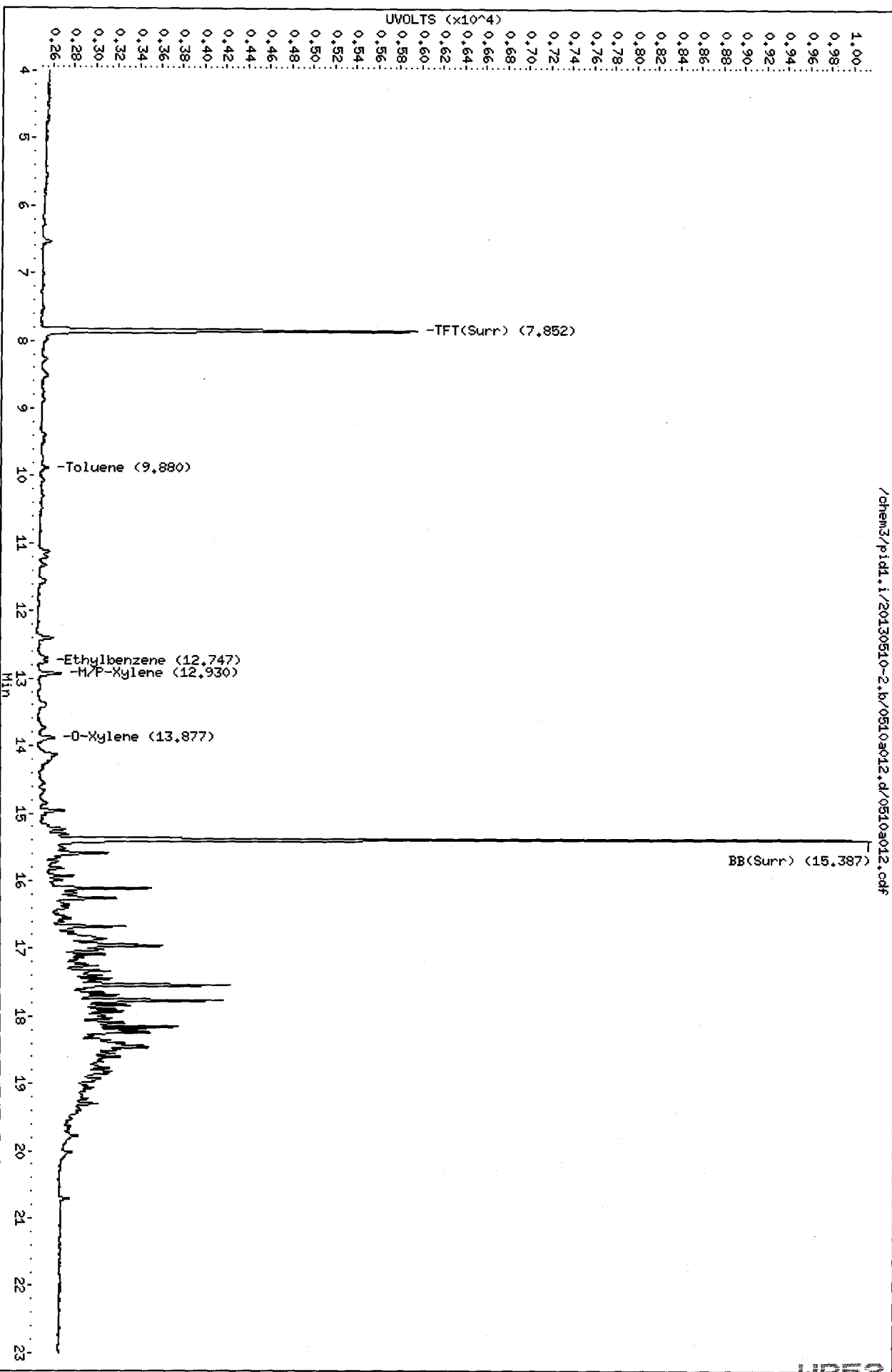


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Date: 10-MAY-2013 14:47
Client ID: Stormpipe-S-1
Sample Info: MP53A

Column phase: RTX 502-2 PID

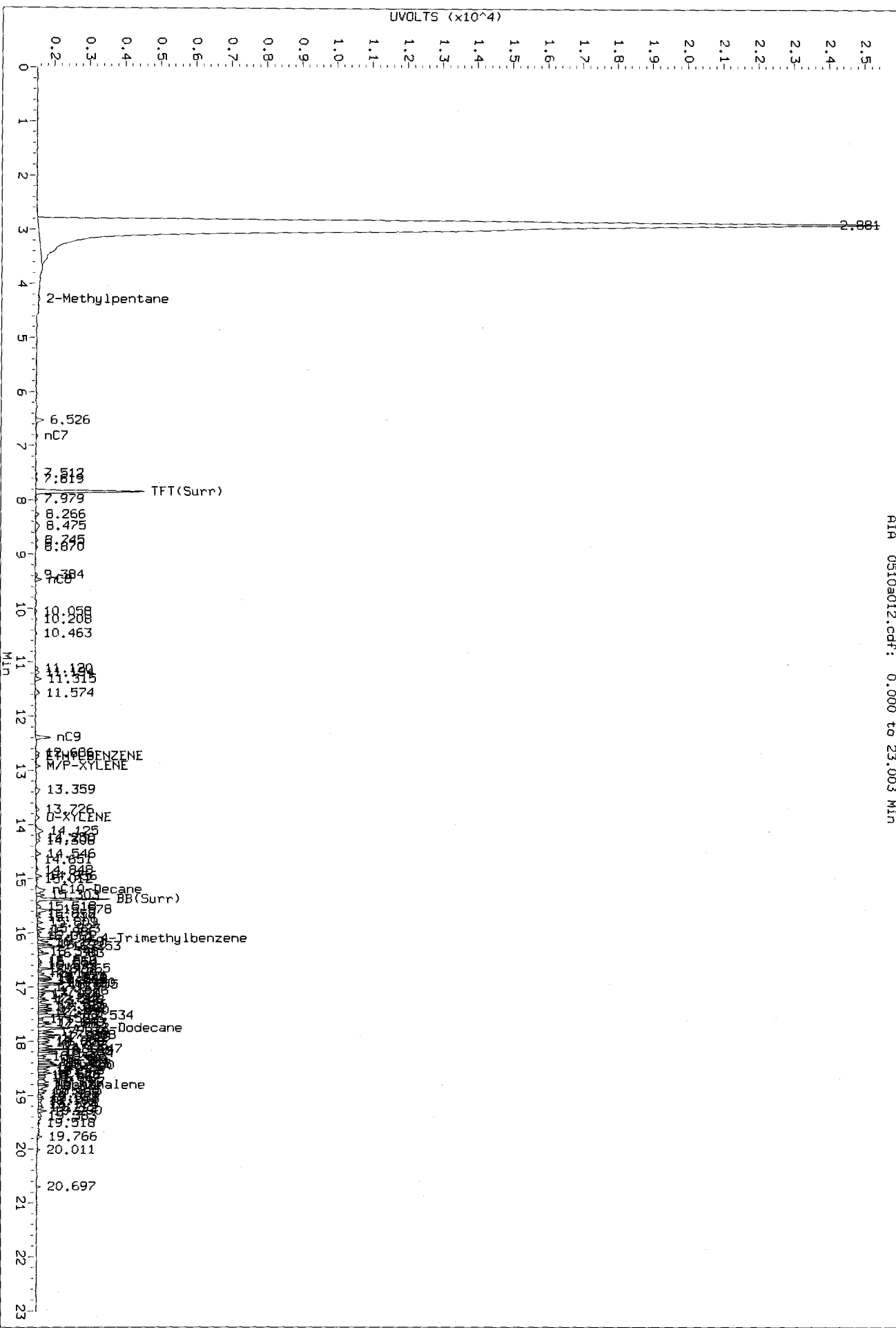
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130510-2.b/0510a012.d/0510a012.cdf



MC
5/13/13

Data File: /chem3/pid1.1/20130510-1.b/0510a012.d/0510a012.cdf
Injection Date: 10-MAY-2013 14:47
Instrument: pid1.1
Client Sample ID: Stormpipe-S-1

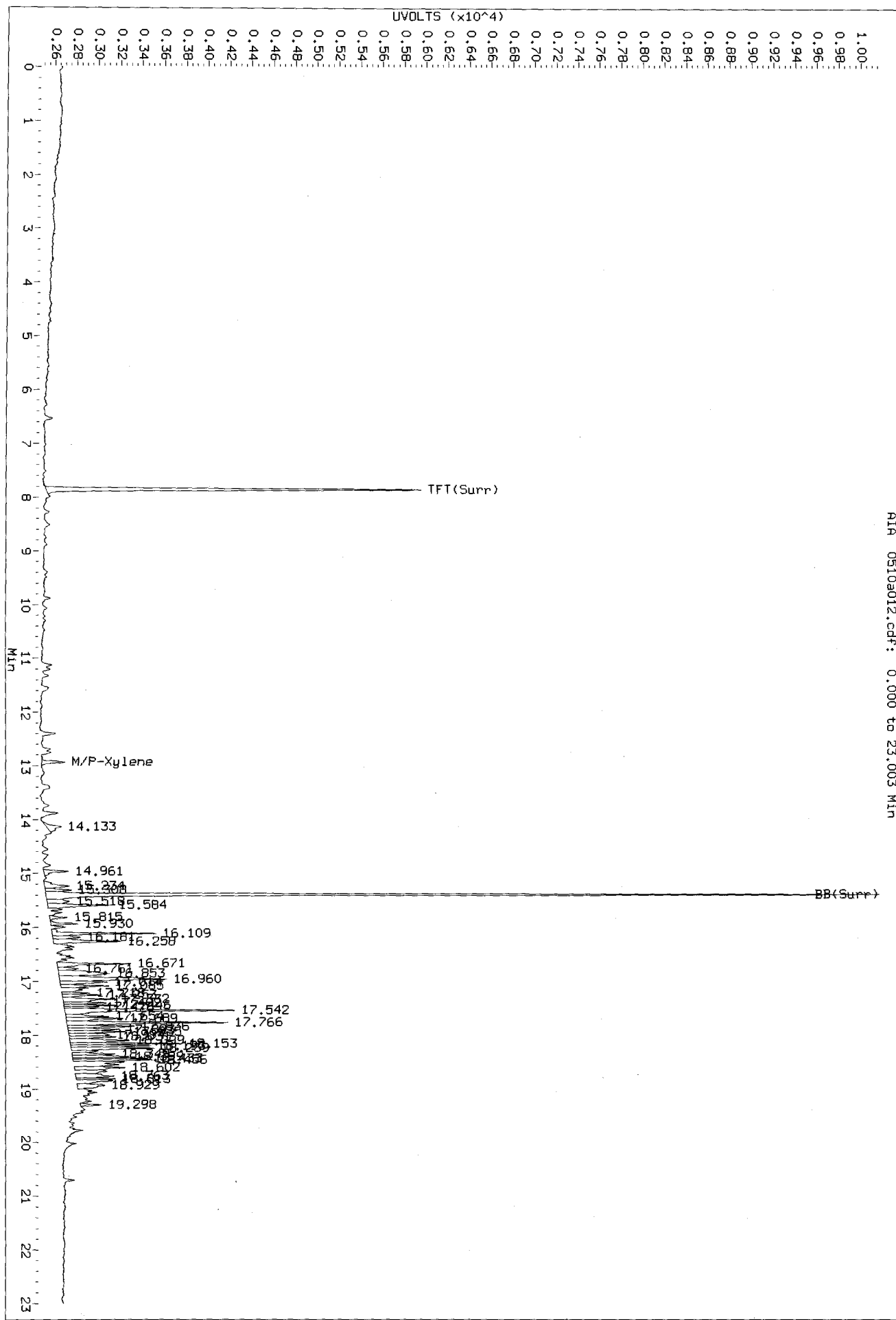


AIA 0510a012.cdf: 0.000 to 23.003 Min

VK
5/13/13

Data File: /chem3/pid1.1/20130510-2.b/0510a012.d/0510a012.cdf
Injection Date: 10-MAY-2013 14:47
Instrument: pid1.1
Client Sample ID: Stormpipe-S-1

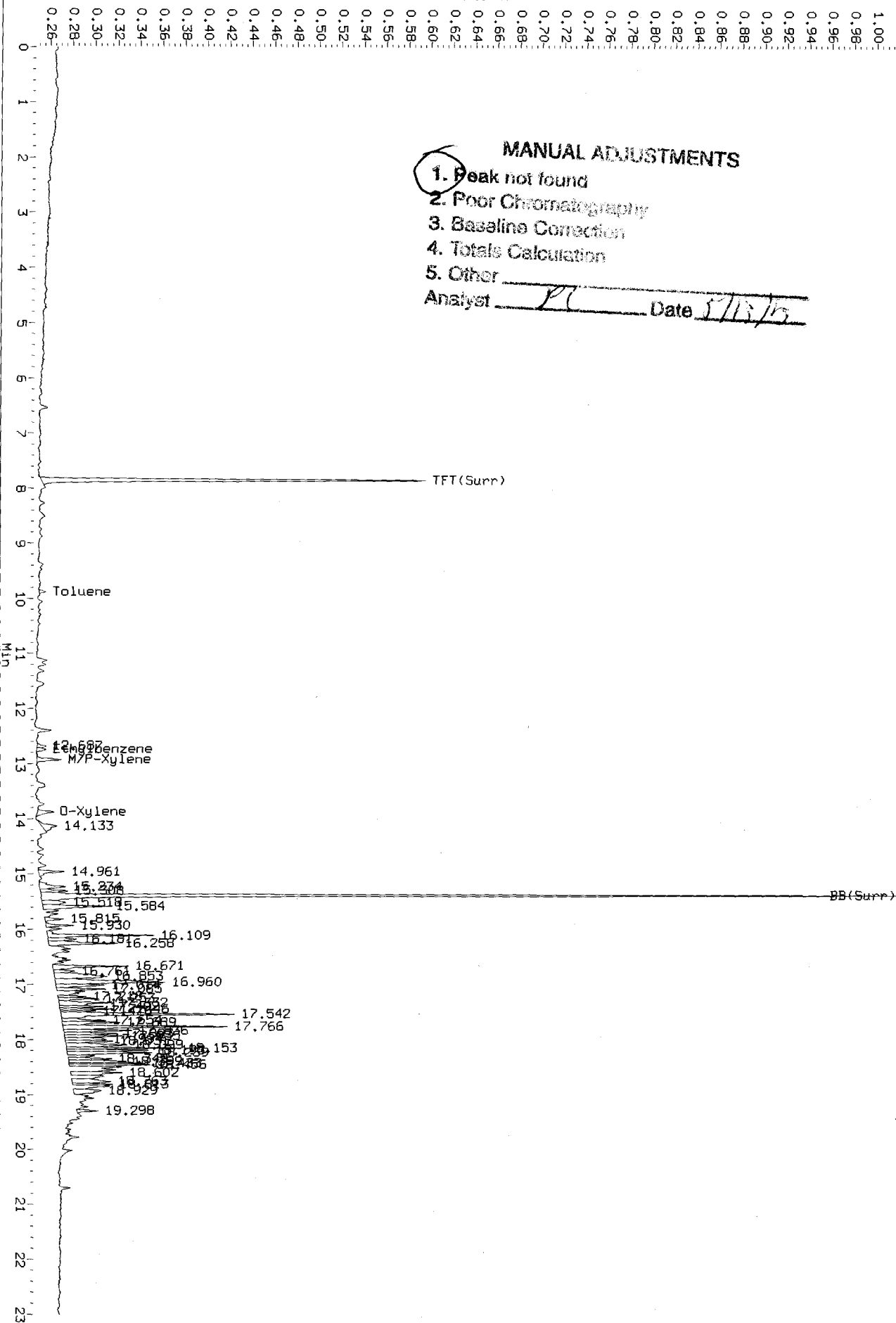
AIR_0510a012.cdf: 0.000 to 23.003 Min



Data File: /chem3/pjdl.1/20130510-2.b/0510a012.d/0510a012.cdf
Injection Date: 10-May-2013 14:47
Instrument: pjdl.1
Client Sample ID: Stormpipe-S-1

AIA 0510a012.cdf: 0.000 to 23.003 Min

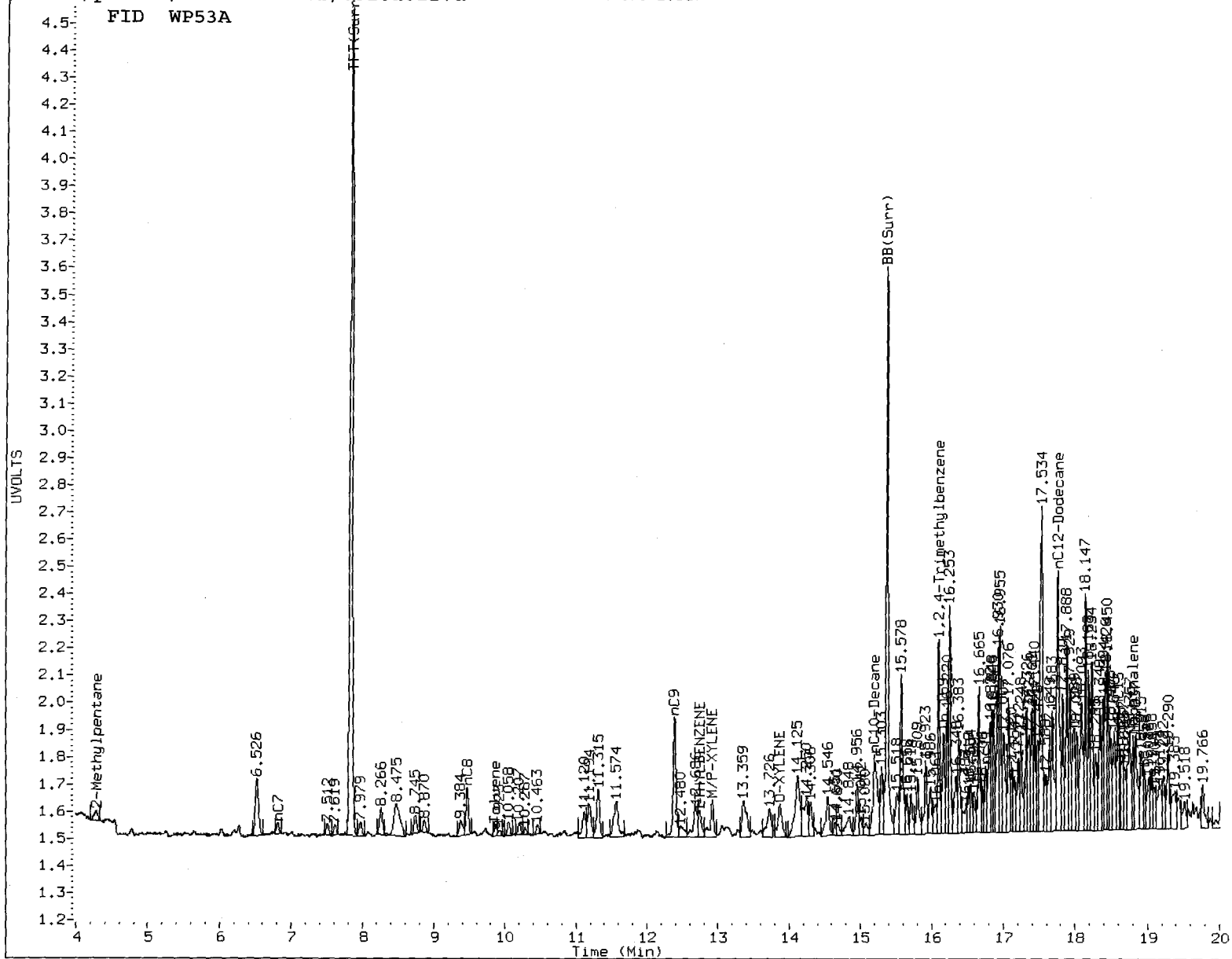
UVOLTS (x10⁴)



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst PC Date 5/13/13



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: PL

Date: 5/13/10

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: Stormpipe-S-2
SAMPLE**

Lab Sample ID: WP53B

LIMS ID: 13-10172

Matrix: Soil

Data Release Authorized:

Reported: 05/13/13

QC Report No: WP53-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/09/13

Date Received: 05/10/13

Date Analyzed: 05/10/13 15:16

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 75 mg-dry-wt

Percent Moisture: 12.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons	6.6	7.6	GAS ID GRO
------------------------------------	------------	------------	-----------------------

BETX Surrogate Recovery

Trifluorotoluene	87.0%
Bromobenzene	87.2%

Gasoline Surrogate Recovery

Trifluorotoluene	88.4%
Bromobenzene	87.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
5/13/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130510-1.b/0510a013.d ARI ID: WP53B
Data file 2: /chem3/pid1.i/20130510-2.b/0510a013.d Client ID: Stormpipe-S-2
Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 15:16
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.004	3065	37679	88.4	TFT (Surr)
15.380	0.002	2001	16797	87.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	42534	0.119
8015C 2MP-TMB (4.18 to 16.20)	723723	28097	0.039
AK101 nC6-nC10 (4.67 to 15.10)	582885	28097	0.048
NWTPHG Tol-Nap (9.77 to 18.90)	375093	43287	0.115

GRU

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3454	87.0	TFT (Surr)
15.387	0.001	7669	87.2	BB (Surr)

SW8021 (PID)

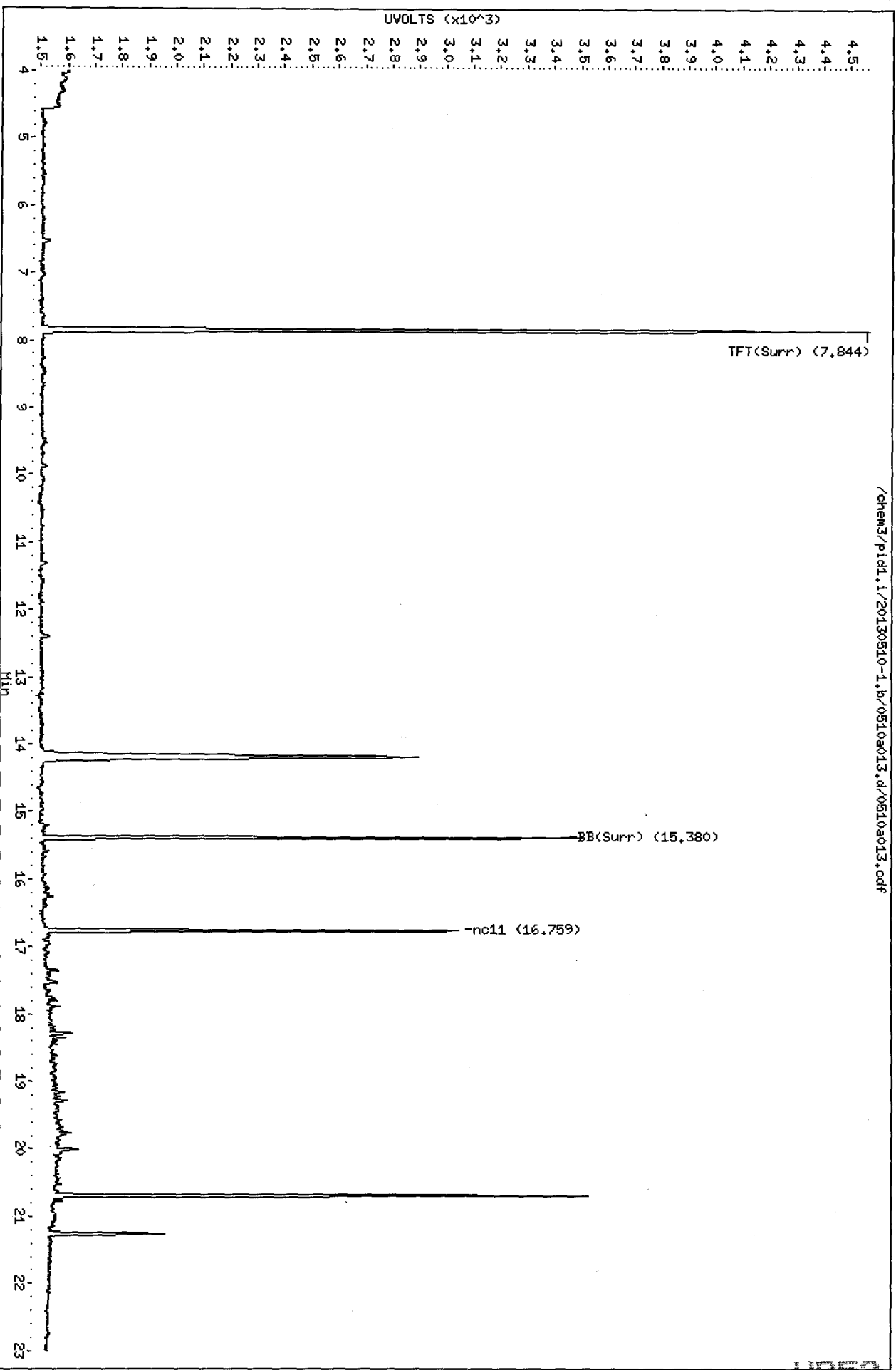
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130510-1.b/0510a013.d
Date: 10-MAY-2013 15:16
Client ID: Stormripe-S-2
Sample Info: MP53B

Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18

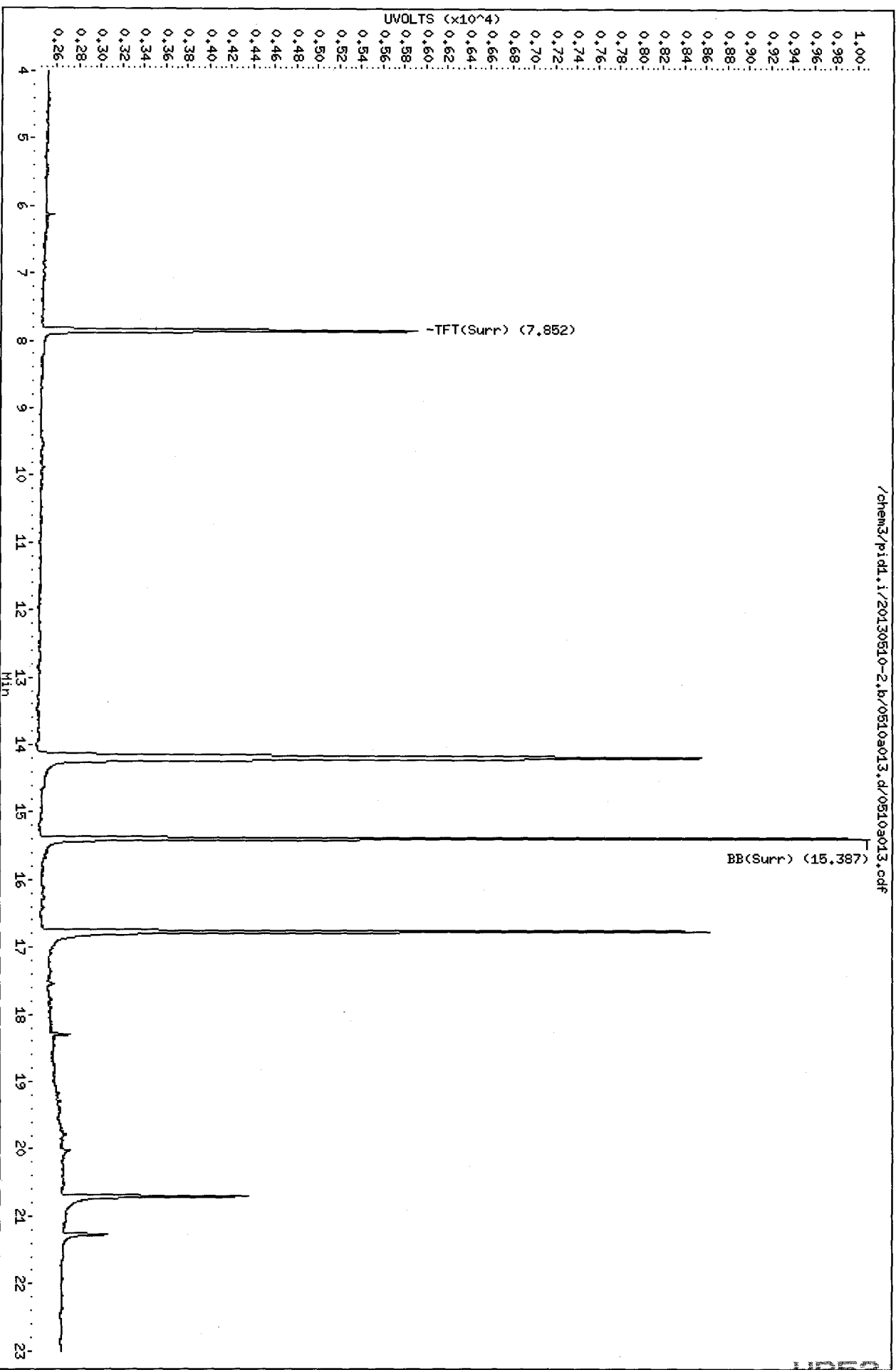


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Data File: /chem3/pidd,i/20130510-2,b/0510a013.d
Date: 10-MAY-2013 15:16
Client ID: Stormpipe-S-2
Sample Info: NPG3B

Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP53
Matrix: Soil

QC Report No: WP53-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	BFB	TFT	BBZ	TOT OUT
MB-051013	NA	85.7%	82.2%	0
LCS-051013	NA	90.4%	83.1%	0
LCSD-051013	NA	89.1%	84.4%	0
Stormpipe-S-1	NA	88.2%	91.7%	0
Stormpipe-S-2	NA	88.4%	87.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-10171 to 13-10172

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP53
Matrix: Soil

QC Report No: WP53-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-051013	84.0%	81.7%	0
LCS-051013	87.9%	83.2%	0
LCSD-051013	86.1%	83.2%	0
Stormpipe-S-1	86.7%	87.2%	0
Stormpipe-S-2	87.0%	87.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10171 to 13-10172

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-051013

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051013

LIMS ID: 13-10171

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/13/13

QC Report No: WP53-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/10/13 10:44

LCSD: 05/10/13 11:13

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike		LCS	LCSD	Spike		RPD
		Added-LCS	Recovery			Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	47.3	50.0	94.6%	46.8	50.0	93.6%	1.1%	

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	90.4%	89.1%
Bromobenzene	83.1%	84.4%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-051013

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051013

LIMS ID: 13-10171

Matrix: Soil

Data Release Authorized:

Reported: 05/13/13

QC Report No: WP53-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/10/13 10:44

LCSD: 05/10/13 11:13

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS			LCSD			RPD
	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	
Benzene	162	185	87.6%	162	185	87.6%	0.0%
Toluene	1690	1980	85.4%	1680	1980	84.8%	0.6%
Ethylbenzene	476	580	82.1%	480	580	82.8%	0.8%
m,p-Xylene	1750	2120	82.5%	1750	2120	82.5%	0.0%
o-Xylene	788	960	82.1%	790	960	82.3%	0.3%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	87.9%	86.1%
Bromobenzene	83.2%	83.2%

MC
5/15/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130510-1.b/0510a004.d ARI ID: LCS0510
Data file 2: /chem3/pid1.i/20130510-2.b/0510a004.d Client ID:
Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 10:44
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.001	3135	42812	90.4	TFT(Surr)
15.379	0.001	1896	17175	83.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	337412	0.942 M
8015C 2MP-TMB (4.18 to 16.20)	723723	679132	0.938 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	551652	0.946 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	355024	0.946 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.001	3489	87.9	TFT(Surr)
15.386	0.000	7314	83.2	BB(Surr)

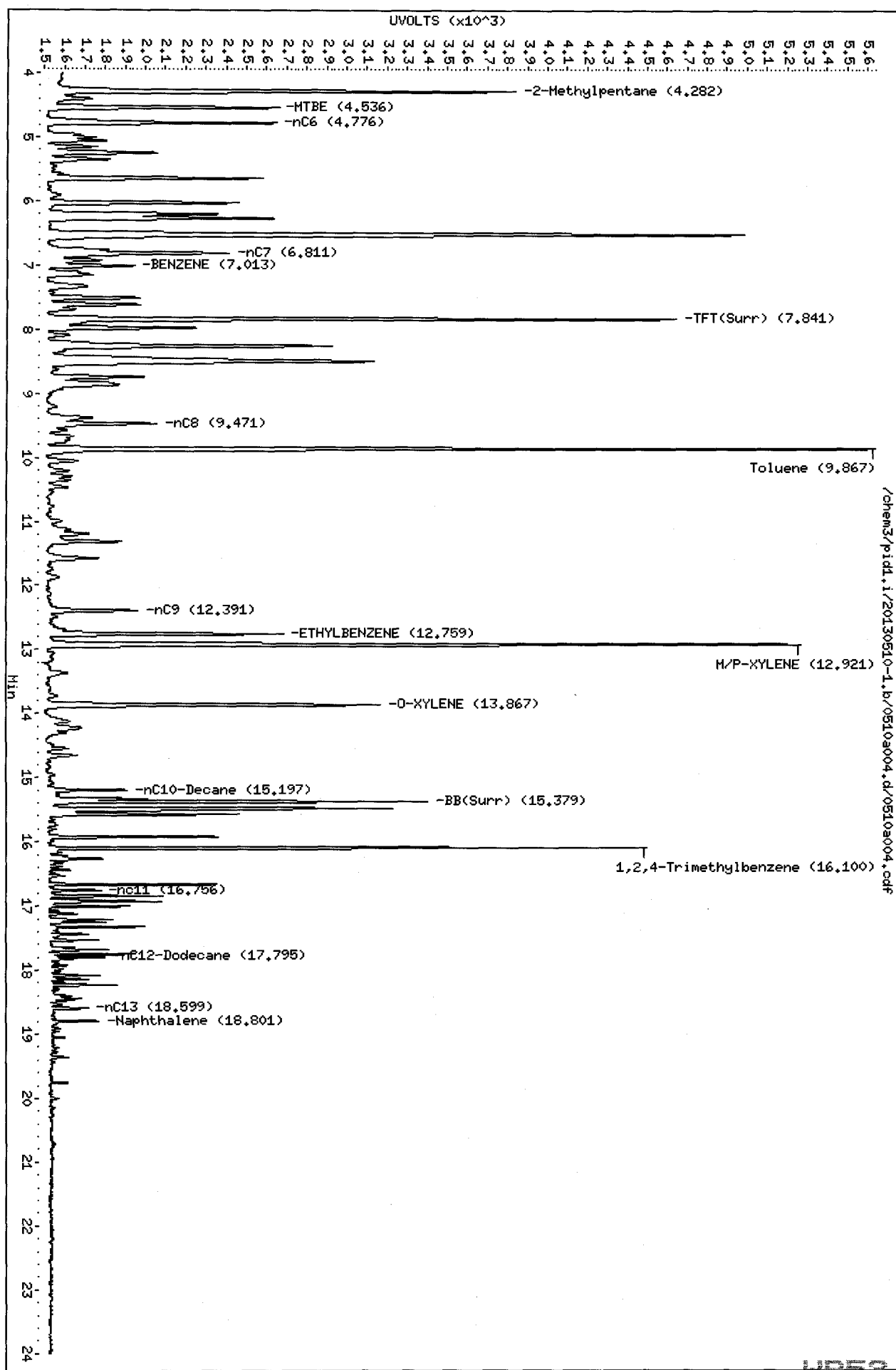
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	0.001	780	3.25	Benzene
9.875	0.001	7738	33.79	Toluene
12.767	0.000	1845	9.53	Ethylbenzene
12.930	0.003	7458	34.92	M/P-Xylene
13.876	0.001	2688	15.76	O-Xylene
ND	---	---	---	MTBE

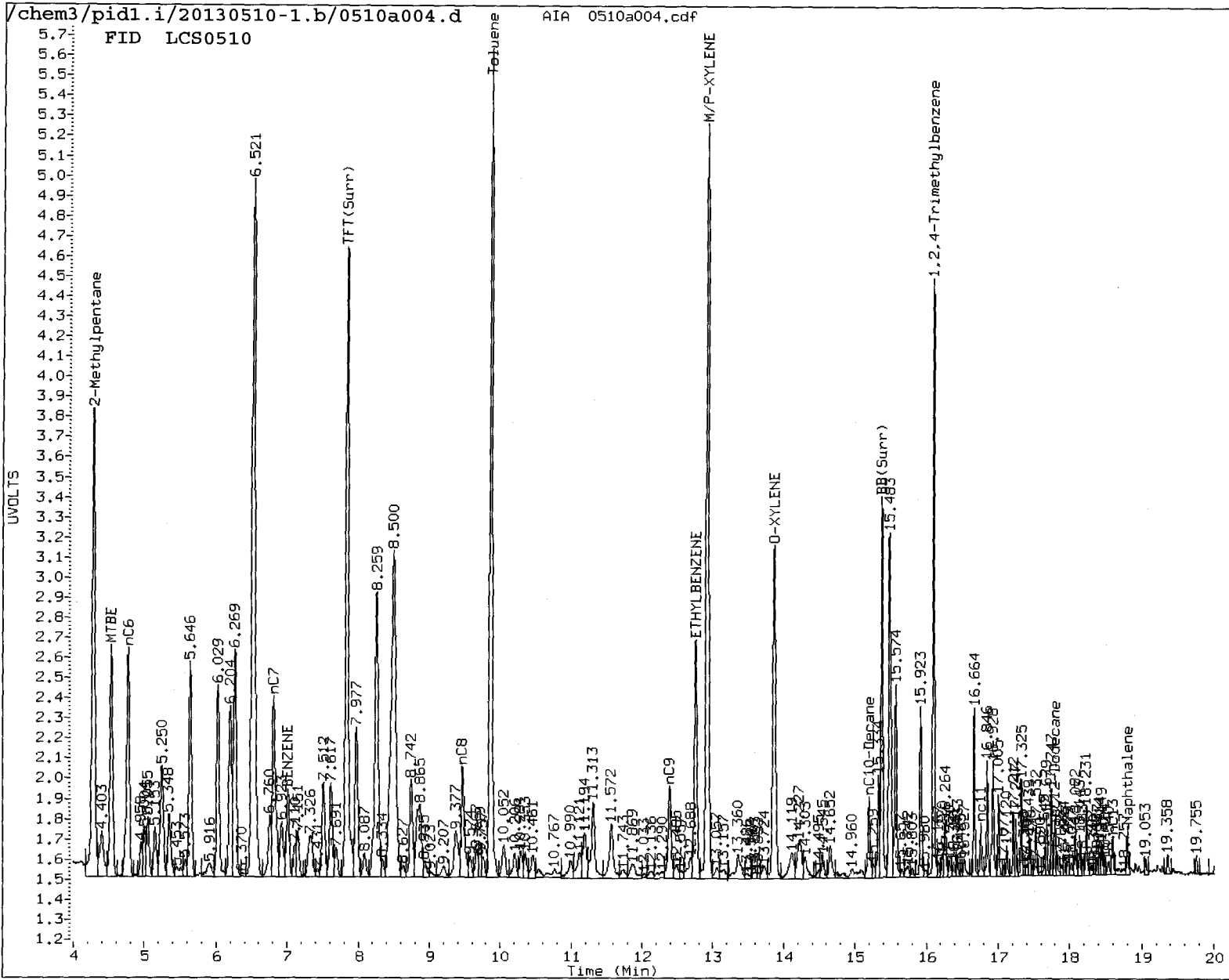
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-1.b/0510a004.d
Date: 10-MAY-2013 10:44
Client ID:
Sample Info: LCS0510
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



000000
000000
000000



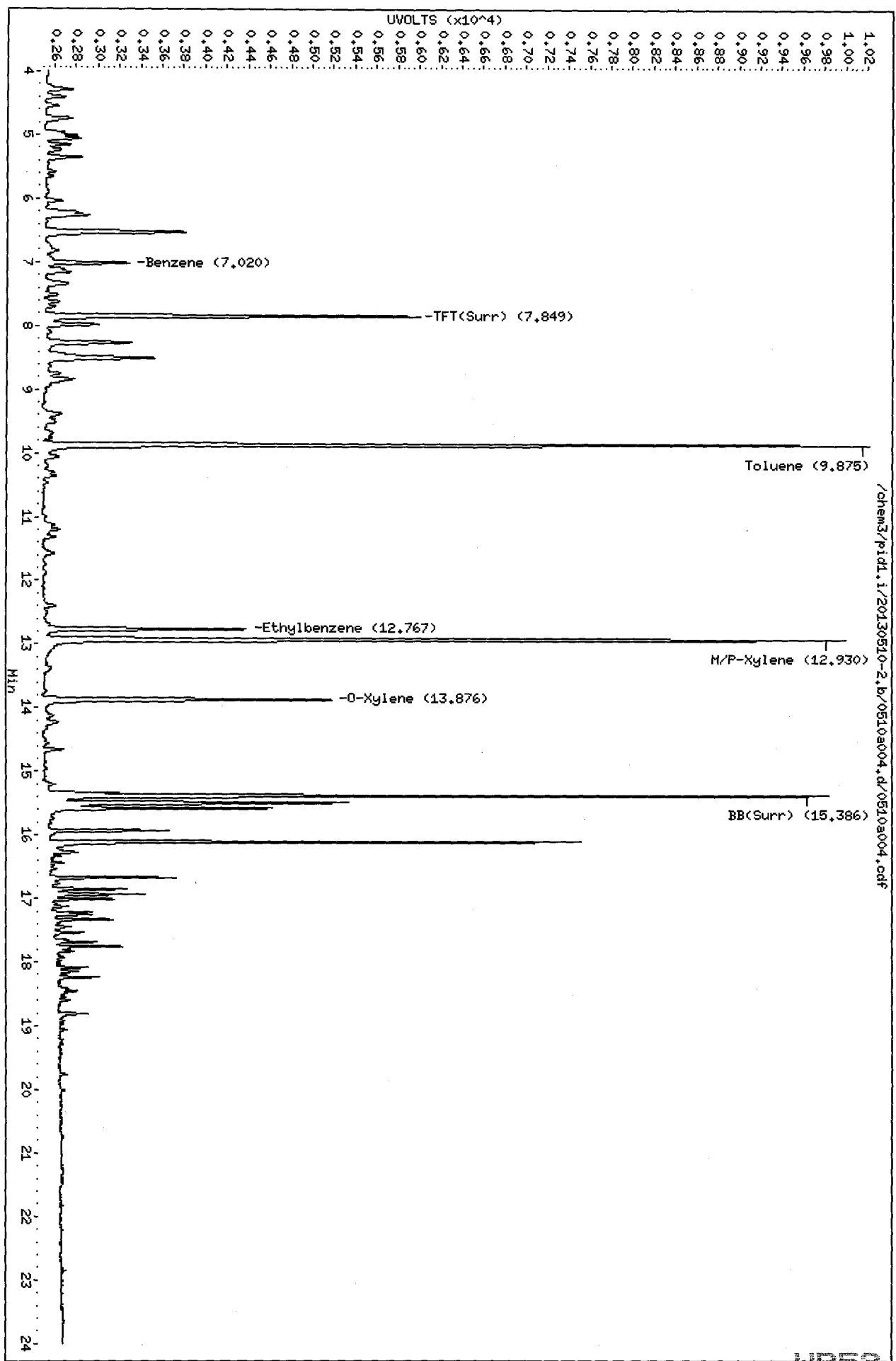
MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other

Analyst: KL Date: 5/13/13

Data File: /chem3/pid1.i/20130510-2.b/0510a004.d
Date: 10-MAY-2013 10:44
Client ID:
Sample Info: LCS0510
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



0510a004.d

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PL
 5/13/13

Data file 1: /chem3/pid1.i/20130510-1.b/0510a005.d ARI ID: LCSD0510
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a005.d Client ID:
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 11:13
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.002	3090	40357	89.1	TFT(Surr)
15.379	0.002	1926	16763	84.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	333767	0.932 M
8015C 2MP-TMB (4.18 to 16.20)	723723	671026	0.927 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	541509	0.929 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	351033	0.936 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.002	3418	86.1	TFT(Surr)
15.386	0.001	7311	83.2	BB(Surr)

SW8021 (PID)

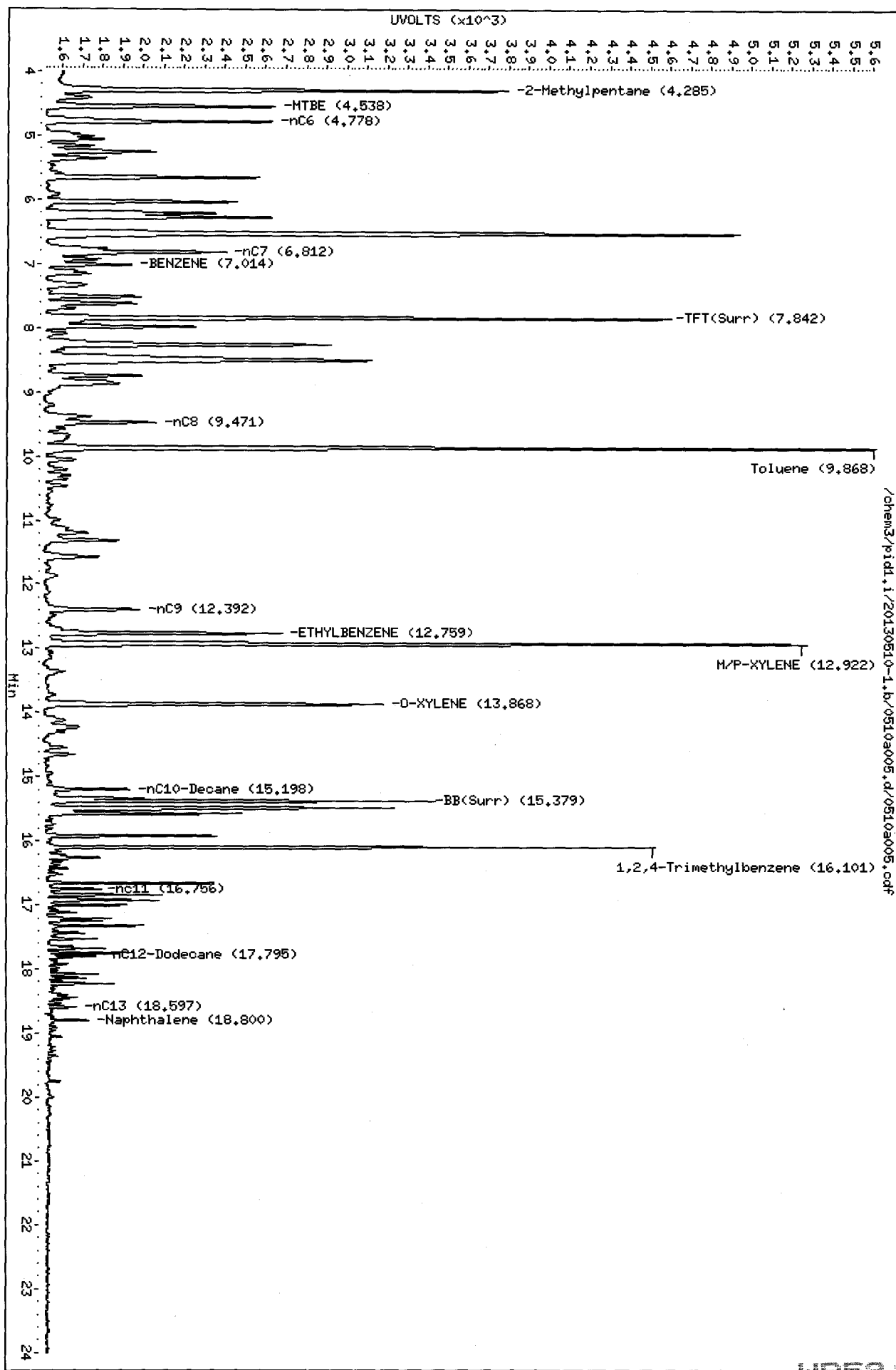
RT	Shift	Response	Amount	Compound
7.021	0.002	779	3.25	Benzene
9.876	0.002	7687	33.57	Toluene
12.768	0.001	1860	9.61	Ethylbenzene
12.931	0.004	7474	35.00	M/P-Xylene
13.876	0.002	2693	15.79	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

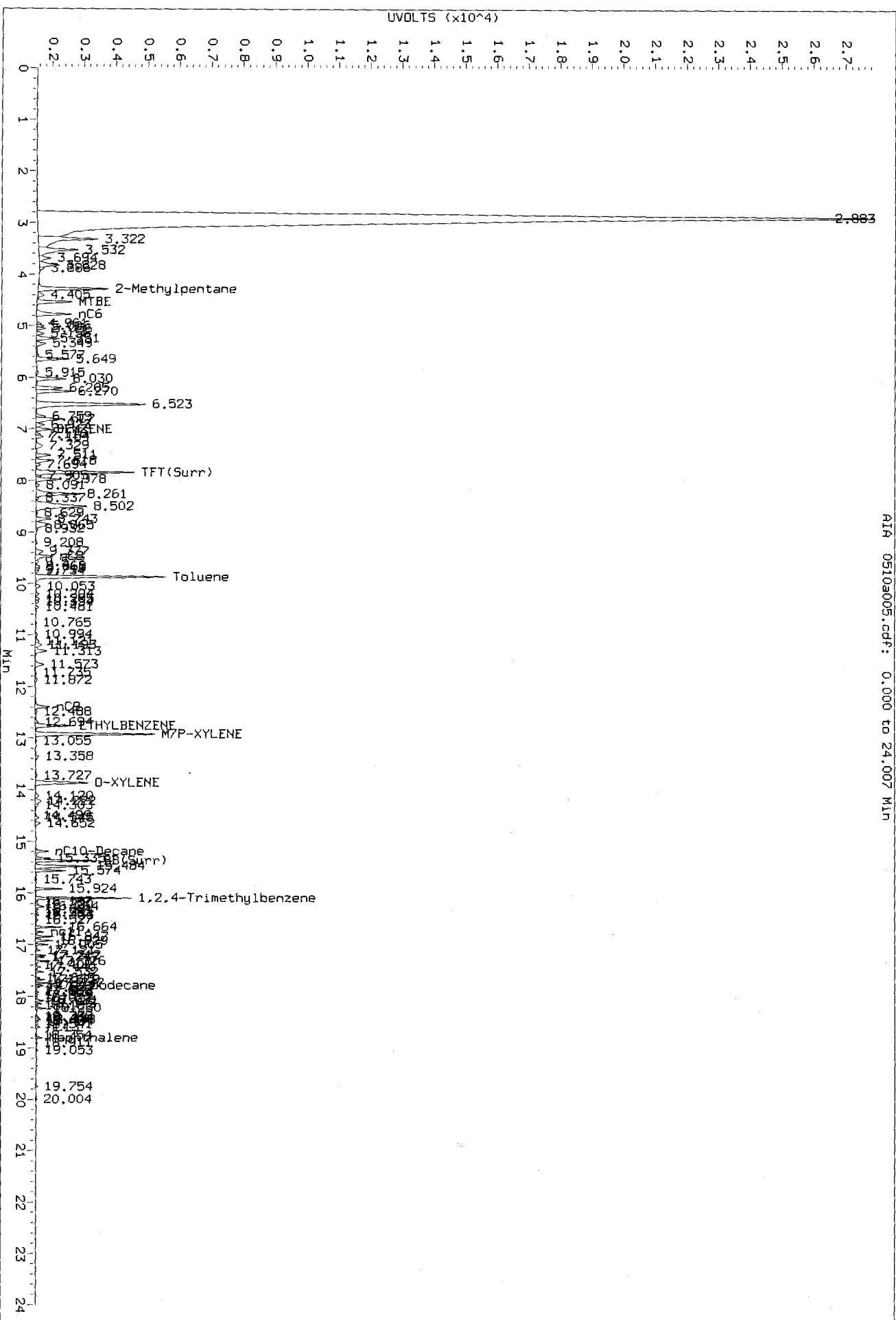
Data File: /chem3/pidd.i/20130510-1.b/0510a005.d
Date: 10-MAY-2013 11:13
Client ID:
Sample Info: LCS0510
Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18

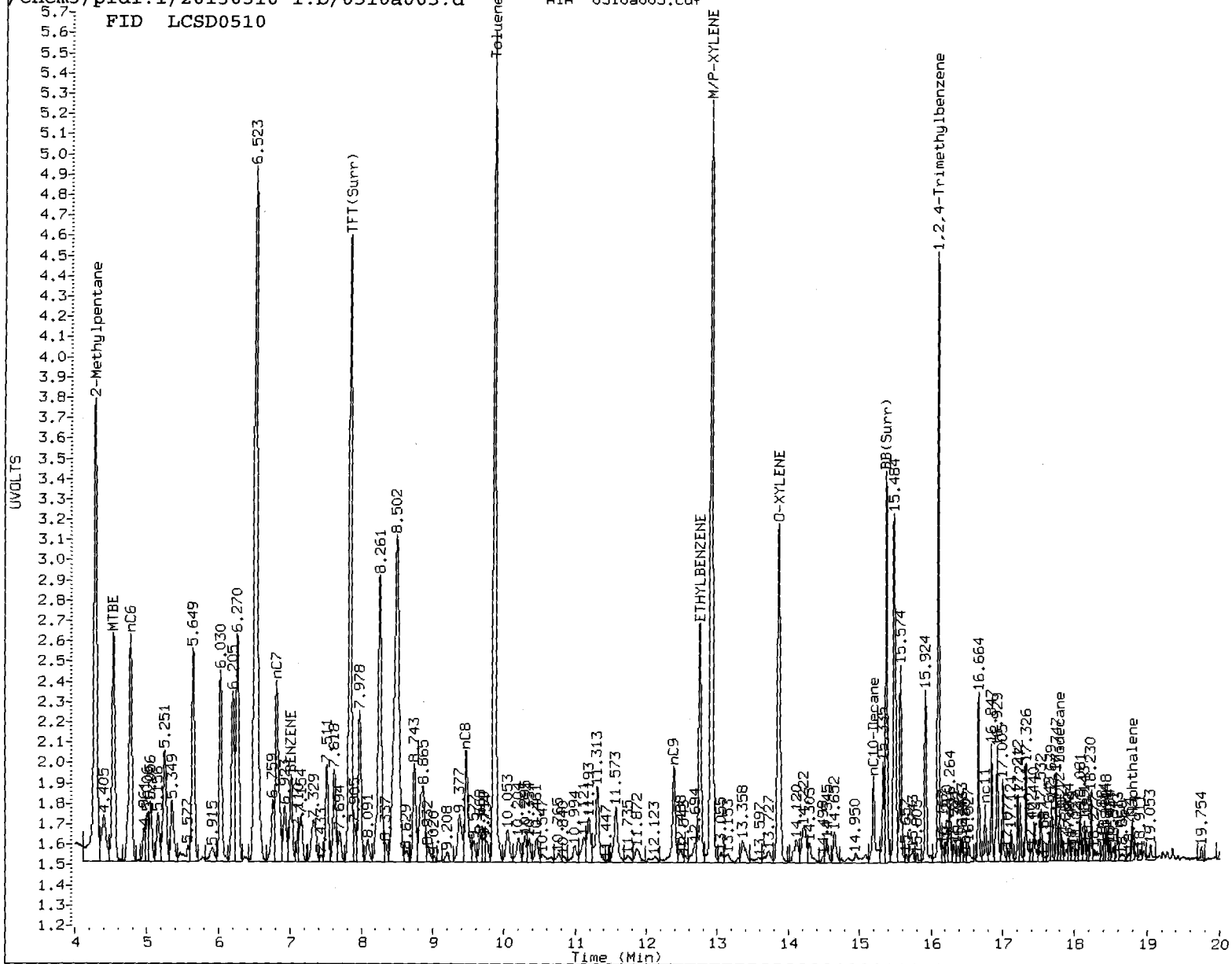


PC
5/13/13

Data File: /chem3/pid1.i/20130510-1.b/0510a005.d/0510a005.cdf
Injection Date: 10-MAY-2013 11:13
Instrument: pid1.i
Client Sample ID:



AIA 0510a005.cdf: 0.000 to 24.007 MIN



MANUAL INTEGRATION

- ① Baseline correction
- ② Poor chromatography
- ③ Peak not found
- ④ Totals calculation

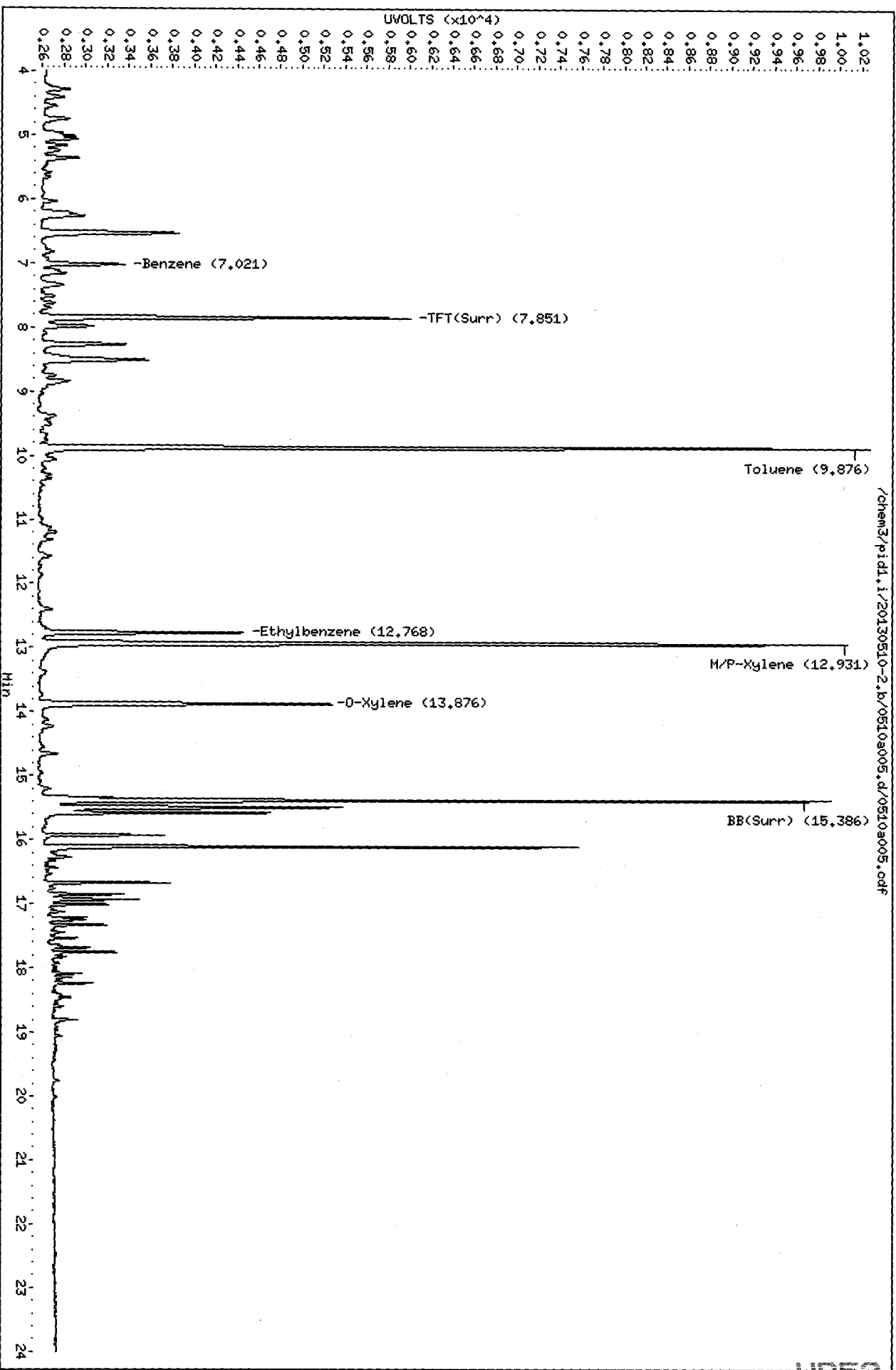
5. Other _____

Analyst: PL

Date: 5/13/13

Data File: /chem3/pid1.i/20130510-2.16/0510a005.d
Date: 10-MAY-2013 11:13
Client ID:
Sample Info: LCSD0510
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130510-2.16/0510a005.d/0510a005.pdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-051013

METHOD BLANK

Lab Sample ID: MB-051013

LIMS ID: 13-10171

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/13/13

QC Report No: WP53-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/10/13 11:43

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	84.0%
Bromobenzene	81.7%

Gasoline Surrogate Recovery

Trifluorotoluene	85.7%
Bromobenzene	82.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 5/13/13

Data file 1: /chem3/pid1.i/20130510-1.b/0510a006.d ARI ID: MB0510
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a006.d Client ID:
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 11:43
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.004	2973	36784	85.7	TFT(Surr)
15.379	0.002	1876	15672	82.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2607	0.007
8015C 2MP-TMB (4.18 to 16.20)	723723	3278	0.005
AK101 nC6-nC10 (4.67 to 15.10)	582885	2554	0.004
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2607	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3333	84.0	TFT(Surr)
15.387	0.001	7181	81.7	BB(Surr)

SW8021 (PID)

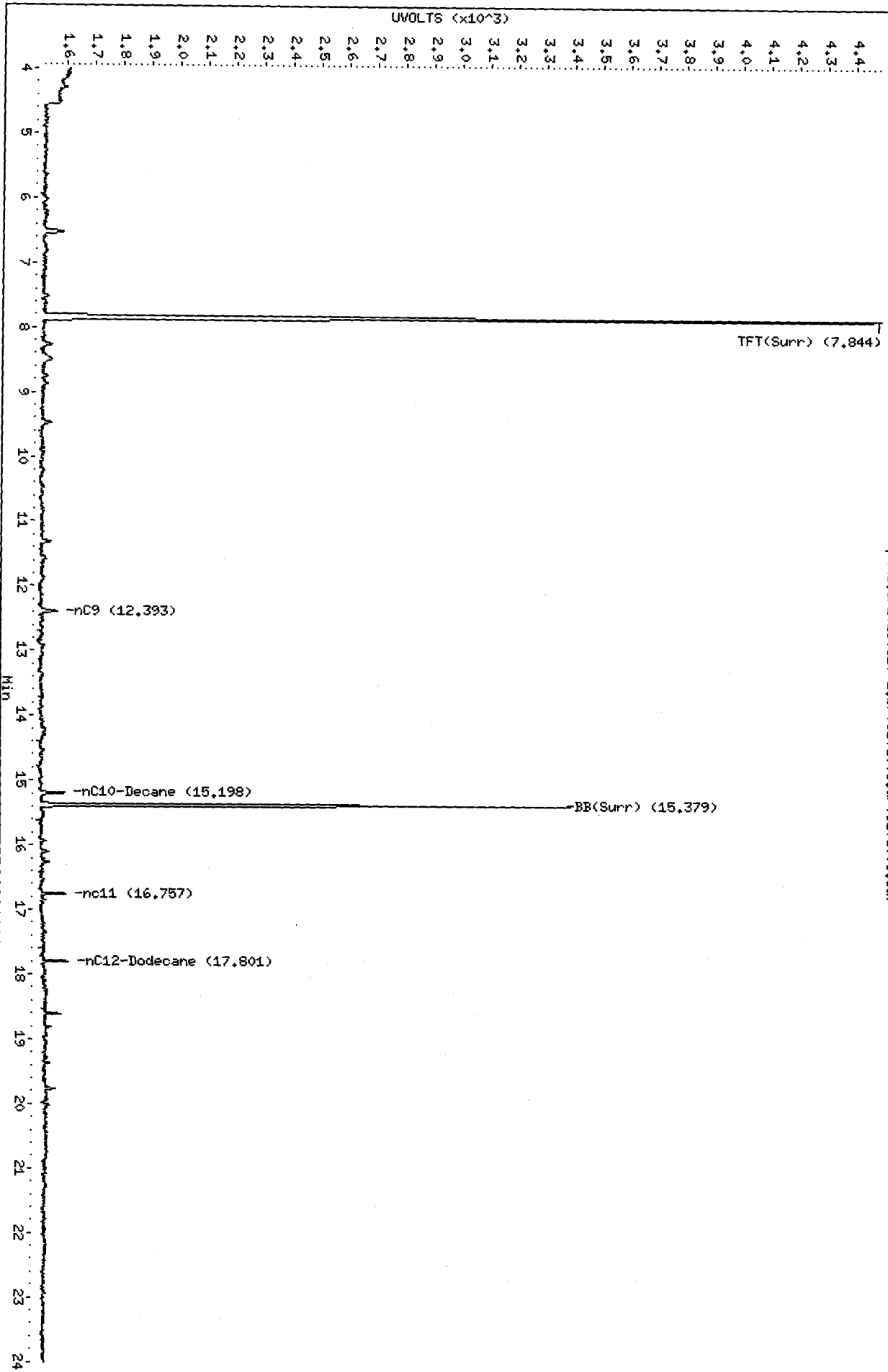
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-1.b/0510a006.d
Date: 10-MAY-2013 11:43
Client ID:
Sample Info: MB0510
Column Phase: RTX 502-2 FID

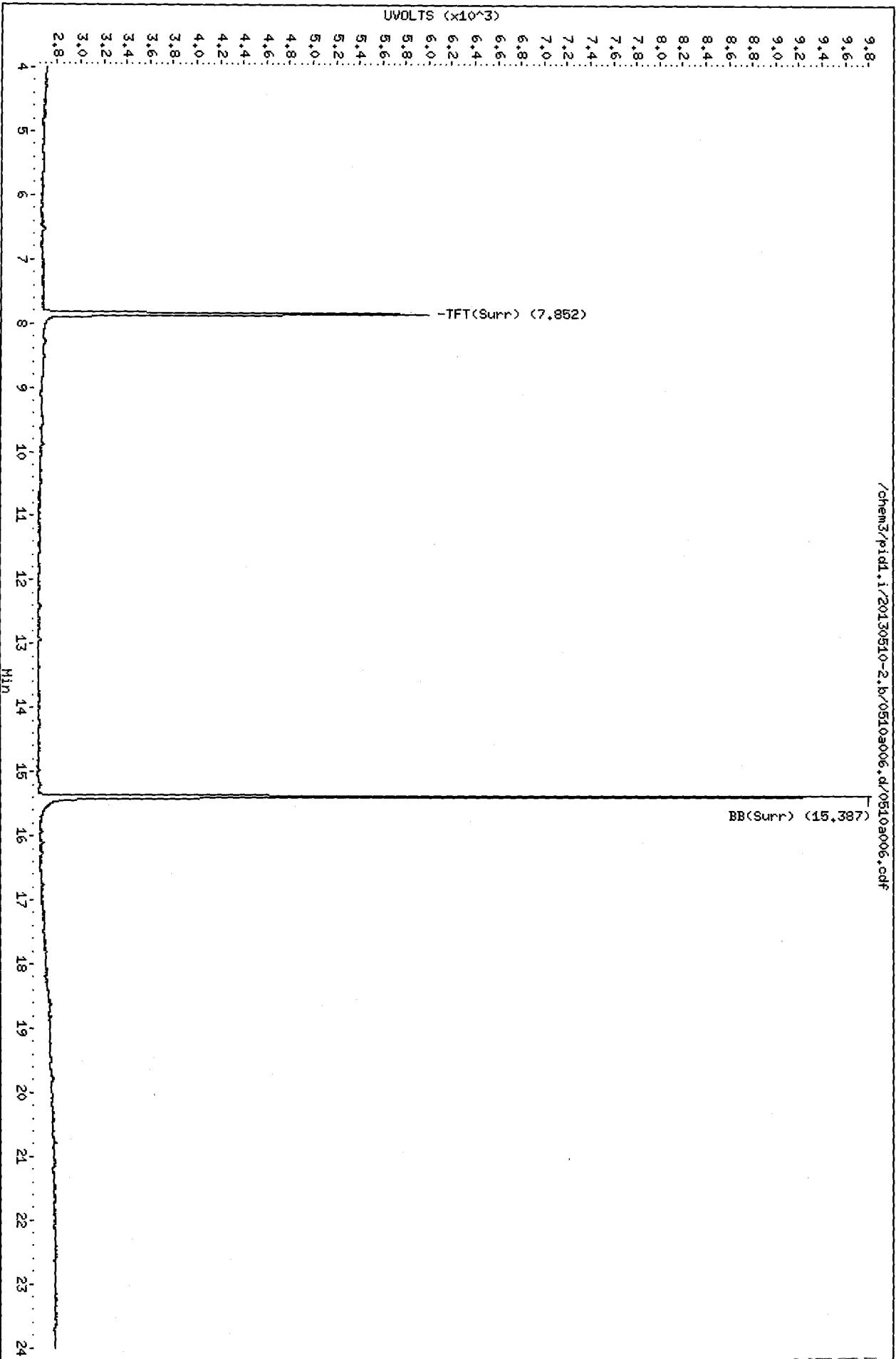
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130510-1.b/0510a006.d/0510a006.cdf



Data File: /chem3/pid1.i/20130510-2.b/0510a006.d
Date: 10-MAY-2013 11:43
Client ID:
Sample Info: MB0510
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18





Analytical Resources, Incorporated

Analytical Chemists and Consultants

May 21, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WQ44 - I

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted two soil samples on May 17, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for SVOCs, NWTPH-Dx, NWTPH-Gx/BTEX, and Metals, as requested on the COC.

The SVOC continuing calibration fell outside the 20% control limit low for Benzoic Acid, Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, and Pentachlorophenol. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

The SVOC LCS/LCSD percent recoveries of Benzoic Acid and the LCS percent recovery of Diethylphthalate were outside the control limits for **LCS-051713**. All other percent recoveries were within control limits. No corrective action was taken.

Isophorone, 2,4-Dimethylphenol, Diethylphthalate, and bis(2-Ethylhexyl)phthalate were present in the SVOC method blank at levels that were greater than 1/2 the reporting limit. All detected results for these compounds have been flagged with a "B" qualifier. No further corrective action was taken.

The BETX LCSD percent recovery of o-Xylene fell outside the control limits low for **LCS-051713**. All other percent recoveries were within control limits. No corrective action was taken.

The duplicate RPD of chromium was outside the control limit for sample **DEBRIS-SP-1**. All relevant data have been flagged with a "*" qualifier on the Form VI. No further corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.


Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WQ44_I

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WQ44	Turn-around Requested: RUSH - 24 Hour	Page: 1 of 1
ARI Client Company: MFA, INC	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAUFOSTER.COM	No. of Coolers:	Ice Present?
Client Project Name: CASHMERE	Cooler Temps:	

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
					X-SILVA GEL CLEANUP	Gr	BTEX	SVOC	METALS As, Cd, Cu, Pb	
DEBRIS - SP-1	5/17/13	0800	S	6	X	X	X	X	X	
DEBRIS - SP-2	5/17/13	0810	S	6	 	 	 	 	 	

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsep	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 16:00	Date & Time: 5/17/13 16:00	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20000: f100M



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WQ44

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? YES (YES) NO

Were custody papers properly filled out (ink, signed, etc.) YES (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.7 0.6 4.1 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 5/17/13 Time: 1600

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) (YES) NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI..... (NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/17/13 Time: 1400 (pre log)

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WQ44
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. DEBRIS-SP-1	WQ44A	13-10634	Soil	05/17/13 08:00	05/17/13 16:00
2. DEBRIS-SP-2	WQ44B	13-10635	Soil	05/17/13 08:10	05/17/13 16:00



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



Analytical Resources, Incorporated
Analytical Chemists and Consultants

- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Analytical Chemists and Consultants

Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: DEBRIS-SP-1
SAMPLE

Lab Sample ID: WQ44A
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/17/13
 Date Received: 05/17/13

Date Extracted: 05/17/13
 Date Analyzed: 05/18/13 18:21
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.90 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 2.00
 Percent Moisture: 13.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	37	< 37 U
111-44-4	Bis-(2-Chloroethyl) Ether	37	< 37 U
95-57-8	2-Chlorophenol	37	< 37 U
541-73-1	1,3-Dichlorobenzene	37	< 37 U
106-46-7	1,4-Dichlorobenzene	37	< 37 U
100-51-6	Benzyl Alcohol	37	< 37 U
95-50-1	1,2-Dichlorobenzene	37	< 37 U
95-48-7	2-Methylphenol	37	< 37 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	37	< 37 U
106-44-5	4-Methylphenol	37	37
621-64-7	N-Nitroso-Di-N-Propylamine	37	< 37 U
67-72-1	Hexachloroethane	37	< 37 U
98-95-3	Nitrobenzene	37	< 37 U
78-59-1	Isophorone	37	< 37 U
88-75-5	2-Nitrophenol	180	< 180 U
105-67-9	2,4-Dimethylphenol	73	< 73 U
65-85-0	Benzoic Acid	730	< 730 U
111-91-1	bis(2-Chloroethoxy) Methane	37	< 37 U
120-83-2	2,4-Dichlorophenol	370	< 370 U
120-82-1	1,2,4-Trichlorobenzene	37	< 37 U
91-20-3	Naphthalene	37	68
106-47-8	4-Chloroaniline	500	< 500 U
87-68-3	Hexachlorobutadiene	37	< 37 U
59-50-7	4-Chloro-3-methylphenol	180	< 180 U
91-57-6	2-Methylnaphthalene	37	29 J
77-47-4	Hexachlorocyclopentadiene	730	< 730 U
88-06-2	2,4,6-Trichlorophenol	180	< 180 U
95-95-4	2,4,5-Trichlorophenol	180	< 180 U
91-58-7	2-Chloronaphthalene	37	< 37 U
88-74-4	2-Nitroaniline	180	< 180 U
131-11-3	Dimethylphthalate	37	< 37 U
208-96-8	Acenaphthylene	37	120
99-09-2	3-Nitroaniline	180	< 180 U
83-32-9	Acenaphthene	37	110
51-28-5	2,4-Dinitrophenol	1,600	< 1,600 U
100-02-7	4-Nitrophenol	180	< 180 U
132-64-9	Dibenzofuran	37	70

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: DEBRIS-SP-1
SAMPLE

Lab Sample ID: WQ44A
 LIMS ID: 13-10634
 Matrix: Soil
 Date Analyzed: 05/18/13 18:21

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	180	< 180 U
121-14-2	2,4-Dinitrotoluene	180	< 180 U
84-66-2	Diethylphthalate	92	< 92 U
7005-72-3	4-Chlorophenyl-phenylether	37	< 37 U
86-73-7	Fluorene	37	83
100-01-6	4-Nitroaniline	180	< 180 U
534-52-1	4,6-Dinitro-2-Methylphenol	370	< 370 U
86-30-6	N-Nitrosodiphenylamine	37	< 37 U
101-55-3	4-Bromophenyl-phenylether	37	< 37 U
118-74-1	Hexachlorobenzene	37	< 37 U
87-86-5	Pentachlorophenol	370	< 370 U
85-01-8	Phenanthrene	37	350
86-74-8	Carbazole	37	95
120-12-7	Anthracene	37	2,000
84-74-2	Di-n-Butylphthalate	37	20 J
206-44-0	Fluoranthene	37	1,100
129-00-0	Pyrene	37	800
85-68-7	Butylbenzylphthalate	37	< 37 U
91-94-1	3,3'-Dichlorobenzidine	280	< 280 U
56-55-3	Benzo (a) anthracene	37	1,000
117-81-7	bis(2-Ethylhexyl)phthalate	46	< 46 U
218-01-9	Chrysene	37	1,800
117-84-0	Di-n-Octyl phthalate	37	< 37 U
50-32-8	Benzo (a) pyrene	37	1,300
193-39-5	Indeno (1,2,3-cd) pyrene	37	580
53-70-3	Dibenz (a,h) anthracene	37	270
191-24-2	Benzo (g,h,i) perylene	37	520
90-12-0	1-Methylnaphthalene	37	< 37 U
TOTBFA	Total Benzofluoranthenes	73	3,000

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	73.6%
d14-p-Terphenyl	88.4%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	69.6%	2-Fluorophenol	64.5%
2,4,6-Tribromophenol	77.6%	d4-2-Chlorophenol	69.9%

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

Extraction Method: SW3546

Page 1 of 2

Sample ID: DEBRIS-SP-2
SAMPLE

Lab Sample ID: WQ44B

LIMS ID: 13-10635

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Extracted: 05/17/13

Date Analyzed: 05/18/13 15:18

Instrument/Analyst: NT10/YZ

GPC Cleanup: No

Sample Amount: 11.19 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Percent Moisture: 11.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	18	< 18 U
111-44-4	Bis-(2-Chloroethyl) Ether	18	< 18 U
95-57-8	2-Chlorophenol	18	< 18 U
541-73-1	1,3-Dichlorobenzene	18	< 18 U
106-46-7	1,4-Dichlorobenzene	18	< 18 U
100-51-6	Benzyl Alcohol	18	< 18 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
95-48-7	2-Methylphenol	18	< 18 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	18	< 18 U
106-44-5	4-Methylphenol	18	62
621-64-7	N-Nitroso-Di-N-Propylamine	18	< 18 U
67-72-1	Hexachloroethane	18	< 18 U
98-95-3	Nitrobenzene	18	< 18 U
78-59-1	Isophorone	18	< 18 U
88-75-5	2-Nitrophenol	89	< 89 U
105-67-9	2,4-Dimethylphenol	36	< 36 U
65-85-0	Benzoic Acid	360	< 360 U
111-91-1	bis(2-Chloroethoxy) Methane	18	< 18 U
120-83-2	2,4-Dichlorophenol	180	< 180 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
91-20-3	Naphthalene	18	150
106-47-8	4-Chloroaniline	240	< 240 U
87-68-3	Hexachlorobutadiene	18	< 18 U
59-50-7	4-Chloro-3-methylphenol	89	< 89 U
91-57-6	2-Methylnaphthalene	18	63
77-47-4	Hexachlorocyclopentadiene	360	< 360 U
88-06-2	2,4,6-Trichlorophenol	89	< 89 U
95-95-4	2,4,5-Trichlorophenol	89	< 89 U
91-58-7	2-Chloronaphthalene	18	< 18 U
88-74-4	2-Nitroaniline	89	< 89 U
131-11-3	Dimethylphthalate	18	< 18 U
208-96-8	Acenaphthylene	18	< 18 U
99-09-2	3-Nitroaniline	89	< 89 U
83-32-9	Acenaphthene	18	230
51-28-5	2,4-Dinitrophenol	760	< 760 U
100-02-7	4-Nitrophenol	89	< 89 U
132-64-9	Dibenzofuran	18	160

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: DEBRIS-SP-2
SAMPLE

Lab Sample ID: WQ44B
 LIMS ID: 13-10635
 Matrix: Soil
 Date Analyzed: 05/18/13 15:18

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	89	< 89 U
121-14-2	2,4-Dinitrotoluene	89	< 89 U
84-66-2	Diethylphthalate	45	< 45 U
7005-72-3	4-Chlorophenyl-phenylether	18	< 18 U
86-73-7	Fluorene	18	170
100-01-6	4-Nitroaniline	89	< 89 U
534-52-1	4,6-Dinitro-2-Methylphenol	180	< 180 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
101-55-3	4-Bromophenyl-phenylether	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-86-5	Pentachlorophenol	180	< 180 U
85-01-8	Phenanthrene	18	580
86-74-8	Carbazole	18	69
120-12-7	Anthracene	18	77
84-74-2	Di-n-Butylphthalate	18	< 18 U
206-44-0	Fluoranthene	18	290
129-00-0	Pyrene	18	240
85-68-7	Butylbenzylphthalate	18	< 18 U
91-94-1	3,3'-Dichlorobenzidine	130	< 130 U
56-55-3	Benzo (a) anthracene	18	49
117-81-7	bis (2-Ethylhexyl) phthalate	22	25 B
218-01-9	Chrysene	18	58
117-84-0	Di-n-Octyl phthalate	18	< 18 U
50-32-8	Benzo (a) pyrene	18	21
193-39-5	Indeno (1,2,3-cd) pyrene	18	< 18 U
53-70-3	Dibenz (a,h) anthracene	18	< 18 U
191-24-2	Benzo (g,h,i) perylene	18	< 18 U
90-12-0	1-Methylnaphthalene	18	44
TOTBFA	Total Benzofluoranthenes	36	48

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.0%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	80.6%	d4-1,2-Dichlorobenzene	63.8%
d5-Phenol	69.7%	2-Fluorophenol	62.8%
2,4,6-Tribromophenol	78.0%	d4-2-Chlorophenol	68.1%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-051713	63.8%	65.0%	74.6%	58.8%	65.3%	61.1%	56.7%	64.3%	0	
LCS-051713	80.2%	74.8%	87.4%	72.2%	79.1%	72.9%	82.5%	76.3%	0	
LCSD-051713	77.8%	74.2%	88.8%	70.8%	75.9%	72.3%	81.1%	72.9%	0	
DEBRIS-SP-1	68.8%	73.6%	88.4%	64.8%	69.6%	64.5%	77.6%	69.9%	0	
DEBRIS-SP-2	69.0%	69.2%	80.6%	63.8%	69.7%	62.8%	78.0%	68.1%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(36-101)	(31-100)

Prep Method: SW3546
Log Number Range: 13-10634 to 13-10635

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

Page 1 of 2

Sample ID: LCS-051713

LCS/LCSD

Lab Sample ID: LCS-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Extracted LCS/LCSD: 05/17/13

Sample Amount LCS: 10.00 g

LCSD: 10.00 g

Date Analyzed LCS: 05/18/13 13:23

Final Extract Volume LCS: 1.0 mL

LCSD: 05/18/13 14:00

LCSD: 1.0 mL

Instrument/Analyst LCS: NT10/YZ

Dilution Factor LCS: 1.00

LCSD: NT10/YZ

LCSD: 1.00

GPC Cleanup: No

Percent Moisture: NA

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCS	Added-LCSD	Recovery	LCSD		
Phenol	369	500	73.8%	379	500	75.8%	2.7%		
Bis-(2-Chloroethyl) Ether	357	500	71.4%	385	500	77.0%	7.5%		
2-Chlorophenol	328	500	65.6%	348	500	69.6%	5.9%		
1,3-Dichlorobenzene	356	500	71.2%	371	500	74.2%	4.1%		
1,4-Dichlorobenzene	364	500	72.8%	387	500	77.4%	6.1%		
Benzyl Alcohol	281	500	56.2%	296	500	59.2%	5.2%		
1,2-Dichlorobenzene	369	500	73.8%	384	500	76.8%	4.0%		
2-Methylphenol	316	500	63.2%	340	500	68.0%	7.3%		
2,2'-Oxybis(1-Chloropropane)	369	500	73.8%	396	500	79.2%	7.1%		
4-Methylphenol	684	1000	68.4%	707	1000	70.7%	3.3%		
N-Nitroso-Di-N-Propylamine	448	500	89.6%	458	500	91.6%	2.2%		
Hexachloroethane	377	500	75.4%	390	500	78.0%	3.4%		
Nitrobenzene	410	500	82.0%	432	500	86.4%	5.2%		
Isophorone	379 B	500	75.8%	398 B	500	79.6%	4.9%		
2-Nitrophenol	338	500	67.6%	354	500	70.8%	4.6%		
2,4-Dimethylphenol	1040 B	1500	69.3%	1150 B	1500	76.7%	10.0%		
Benzoic Acid	132 J	2750	4.8%	142 J	2750	5.2%	7.3%		
bis(2-Chloroethoxy) Methane	414	500	82.8%	428	500	85.6%	3.3%		
2,4-Dichlorophenol	1030	1500	68.7%	1070	1500	71.3%	3.8%		
1,2,4-Trichlorobenzene	376	500	75.2%	394	500	78.8%	4.7%		
Naphthalene	354	500	70.8%	367	500	73.4%	3.6%		
4-Chloroaniline	848	1500	56.5%	891	1500	59.4%	4.9%		
Hexachlorobutadiene	388	500	77.6%	405	500	81.0%	4.3%		
4-Chloro-3-methylphenol	1370	1500	91.3%	1360	1500	90.7%	0.7%		
2-Methylnaphthalene	373	500	74.6%	404	500	80.8%	8.0%		
Hexachlorocyclopentadiene	691 Q	1500	46.1%	732 Q	1500	48.8%	5.8%		
2,4,6-Trichlorophenol	1140	1500	76.0%	1180	1500	78.7%	3.4%		
2,4,5-Trichlorophenol	1200	1500	80.0%	1200	1500	80.0%	0.0%		
2-Chloronaphthalene	394	500	78.8%	420	500	84.0%	6.4%		
2-Nitroaniline	1580	1500	105%	1640	1500	109%	3.7%		
Dimethylphthalate	458	500	91.6%	472	500	94.4%	3.0%		
Acenaphthylene	366	500	73.2%	377	500	75.4%	3.0%		
3-Nitroaniline	1320	1500	88.0%	1360	1500	90.7%	3.0%		
Acenaphthene	374	500	74.8%	410	500	82.0%	9.2%		

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

Page 2 of 2

Sample ID: LCSD-051713

LCS/LCSD

Lab Sample ID: LCS-051713

QC Report No: WQ44-Maul Foster & Alongi, Inc

LIMS ID: 13-10634

Project: Cashmere

Matrix: Soil

0779.02.01-03

Date Analyzed LCS: 05/18/13 13:23

LCSD: 05/18/13 14:00

Analyte	Spike		LCS	Spike		LCS	RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	
2,4-Dinitrophenol	1090 Q	2750	39.6%	1110 Q	2750	40.4%	1.8%
4-Nitrophenol	960	1500	64.0%	970 Q	1500	64.7%	1.0%
Dibenzofuran	404 Q	500	80.8%	418	500	83.6%	3.4%
2,6-Dinitrotoluene	1380	1500	92.0%	1440	1500	96.0%	4.3%
2,4-Dinitrotoluene	1460	1500	97.3%	1520	1500	101%	4.0%
Diethylphthalate	704 B	500	141%	525 B	500	105%	29.1%
4-Chlorophenyl-phenylether	389	500	77.8%	418	500	83.6%	7.2%
Fluorene	375	500	75.0%	403	500	80.6%	7.2%
4-Nitroaniline	1520	1500	101%	1520	1500	101%	0.0%
4,6-Dinitro-2-Methylphenol	1670 Q	2750	60.7%	1710 Q	2750	62.2%	2.4%
N-Nitrosodiphenylamine	490	500	98.0%	494	500	98.8%	0.8%
4-Bromophenyl-phenylether	451	500	90.2%	451	500	90.2%	0.0%
Hexachlorobenzene	397	500	79.4%	405	500	81.0%	2.0%
Pentachlorophenol	472 Q	1500	31.5%	490 Q	1500	32.7%	3.7%
Phenanthrene	422	500	84.4%	440	500	88.0%	4.2%
Carbazole	625	500	125%	625	500	125%	0.0%
Anthracene	411	500	82.2%	415	500	83.0%	1.0%
Di-n-Butylphthalate	514	500	103%	537	500	107%	4.4%
Fluoranthene	439	500	87.8%	447	500	89.4%	1.8%
Pyrene	426	500	85.2%	450	500	90.0%	5.5%
Butylbenzylphthalate	555	500	111%	587	500	117%	5.6%
3,3'-Dichlorobenzidine	723	1500	48.2%	725	1500	48.3%	0.3%
Benzo(a)anthracene	409	500	81.8%	434	500	86.8%	5.9%
bis(2-Ethylhexyl)phthalate	493 B	500	98.6%	506 B	500	101%	2.6%
Chrysene	407	500	81.4%	430	500	86.0%	5.5%
Di-n-Octyl phthalate	487	500	97.4%	503	500	101%	3.2%
Benzo(a)pyrene	422	500	84.4%	443	500	88.6%	4.9%
Indeno(1,2,3-cd)pyrene	429	500	85.8%	454	500	90.8%	5.7%
Dibenz(a,h)anthracene	418	500	83.6%	442	500	88.4%	5.6%
Benzo(g,h,i)perylene	408	500	81.6%	424	500	84.8%	3.8%
1-Methylnaphthalene	394	500	78.8%	417	500	83.4%	5.7%
Total Benzofluoranthenes	850	1000	85.0%	869	1000	86.9%	2.2%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	80.2%	77.8%
2-Fluorobiphenyl	74.8%	74.2%
d14-p-Terphenyl	87.4%	88.8%
d4-1,2-Dichlorobenzene	72.2%	70.8%
d5-Phenol	79.1%	75.9%
2-Fluorophenol	72.9%	72.3%
2,4,6-Tribromophenol	82.5%	81.1%
d4-2-Chlorophenol	76.3%	72.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: MB-051713
METHOD BLANK

Lab Sample ID: MB-051713
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/17/13
 Date Analyzed: 05/18/13 12:46
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	16 J
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	26 J
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: MB-051713
METHOD BLANK

Lab Sample ID: MB-051713
 LIMS ID: 13-10634
 Matrix: Soil
 Date Analyzed: 05/18/13 12:46

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	6,700 E
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	25	57
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.8%	2-Fluorobiphenyl	65.0%
d14-p-Terphenyl	74.6%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	65.3%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	56.7%	d4-2-Chlorophenol	64.3%

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130518.b

Instrument: nt10.i Date: 18-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R ²

NO Q-FLAGS	

CONTINUING CAL: 18-MAY-2013

Compound	%D


Benzoic acid	-64.0
Hexachlorocyclopentadiene	-48.3
2,4-Dinitrophenol	-43.2
4-Nitrophenol	-31.5
4,6-Dinitro-2-methylphenol	-22.1
Pentachlorophenol	-63.4
2,3,4,6-Tetrachlorophenol	-20.2

W 5/2/13

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: 
Reported: 05/21/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-051913	Method Blank	05/19/13	05/19/13	1.00	Diesel Range	5.0	< 5.0 U
13-10634	HC ID: ---		FID9	1.0	Motor Oil Range o-Terphenyl	10	< 10 U 83.2%
WQ44A	DEBRIS-SP-1	05/19/13	05/19/13	1.00	Diesel Range	5.8	16
13-10634	HC ID: DIESEL/MOTOR OIL		FID9	1.0	Motor Oil Range o-Terphenyl	12	53 66.8%
WQ44B	DEBRIS-SP-2	05/19/13	05/19/13	1.00	Diesel Range	5.6	25
13-10635	HC ID: DIESEL/MOTOR OIL		FID9	1.0	Motor Oil Range o-Terphenyl	11	64 73.4%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a006.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44MBS1
 Client ID: WQ44MBS1
 Injection: 19-MAY-2013 16:35
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	105791	3
C8	1.082	-0.008	1818	1412	DIESEL (C12-C24)	288136	15.43
C10	2.865	0.006	496	555	M.OIL (C24-C38)	225475	14.06
C12	3.859	-0.006	101	34	AK-102 (C10-C25)	312903	14.41
C14	4.571	0.010	1400	1947	AK-103 (C25-C36)	188039	16.19
C16	5.155	0.000	1701	2352			
C18	5.720	0.000	2361	683			
C20	6.283	0.002	1772	1051			
C22	6.826	-0.005	1757	1066			
C24	7.356	0.003	1438	1012			
C25	7.592	-0.007	1097	658			
C26	7.862	0.007	1447	1385			
C28	8.299	0.001	1716	1569	IT.DIES (C10-C24)	302595	13.98
C32	9.087	0.012	3110	5389			
C34	9.416	-0.003	1332	659	BUNKERC (C10-C38)	528070	56.99
Filter Peak	11.488	0.000	1743	798			
C36	9.728	-0.011	1602	2569			
C38	10.032	-0.008	1535	1806			
C40	10.326	0.004	1839	1535			
o-terph	5.853	-0.001	1090590	958435			
Triacon Surr	8.712	-0.001	745993	745781	IT.MOIL (C24-C40)	999647	16.41

M Indicates manual integration within range.

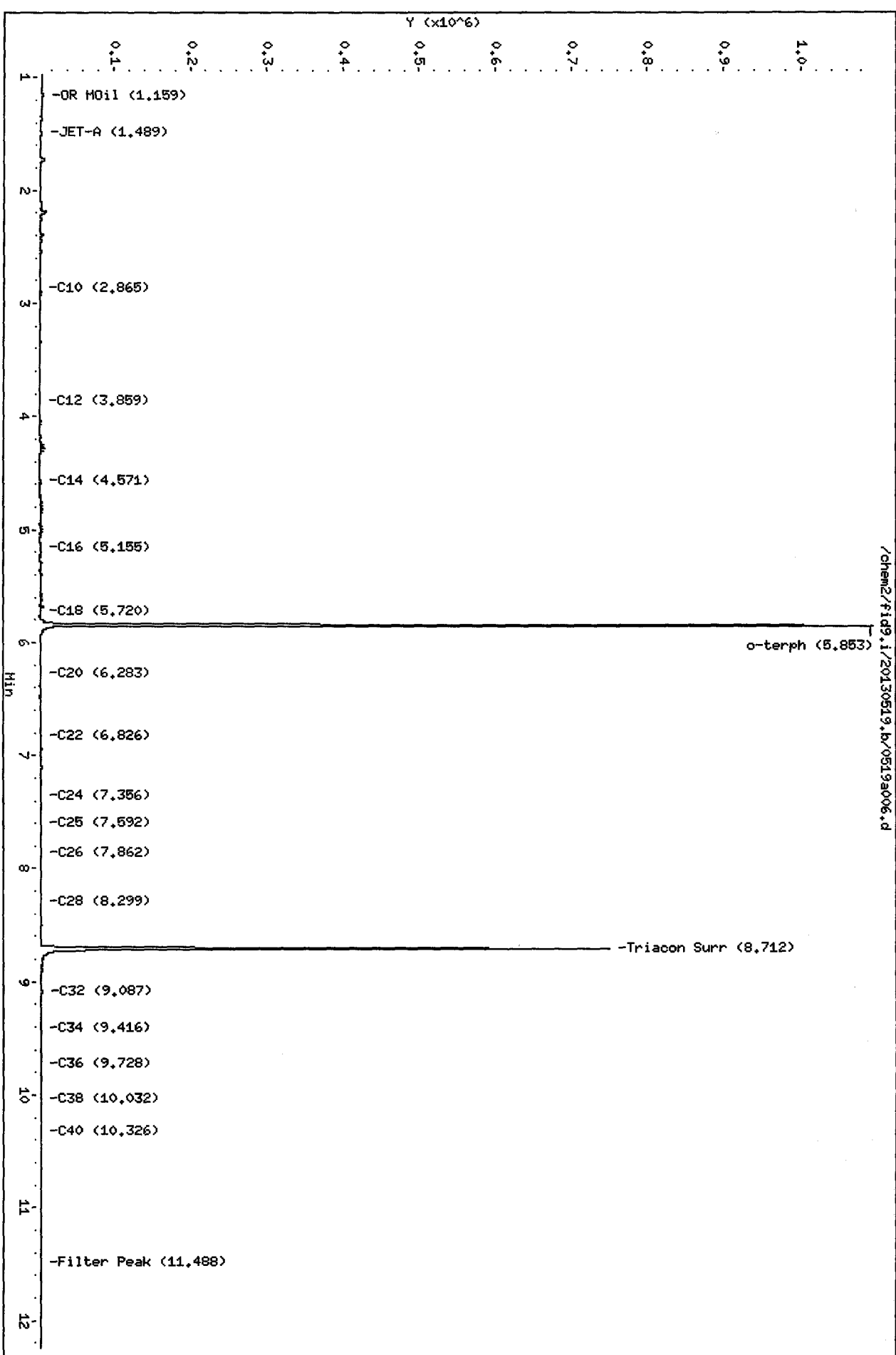
Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	958435	37.4	83.2
Triacontane	745781	39.5	87.7

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/20/13

/chem2/fid9.i/20130519.b/0519a006.d



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a009.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44A
 Client ID: DEBRIS-SP-1
 Injection: 19-MAY-2013 17:42
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	157572	5
C8	1.094	0.004	2975	5902	DIESEL (C12-C24)	2550533	136.54
C10	2.862	0.004	1074	1163	M.OIL (C24-C38)	7397806	461.35
C12	3.867	0.002	1716	2390	AK-102 (C10-C25)	2844410	131.04 M
C14	4.560	-0.001	5130	6481	AK-103 (C25-C36)	6579624	566.34 M
C16	5.149	-0.006	6448	9324			
C18	5.721	0.001	8313	5451			
C20	6.282	0.001	23947	45749			
C22	6.837	0.005	20619	5248			
C24	7.352	0.000	29553	12608			
C25	7.600	0.000	34529	18494			
C26	7.857	0.001	38876	22048			
C28	8.290	-0.007	58832	61451	IT.DIES (C10-C24)	2601541	120.19 M
C32	9.075	0.000	56211	29565			
C34	9.421	0.002	46099	20728	BUNKERC (C10-C38)	9999347	1079.06 M
Filter Peak	11.490	0.003	3234	2048			
C36	9.733	-0.007	40035	40454			
C38	10.035	-0.005	29962	12029			
C40	10.319	-0.003	17814	8274			
o-terph	5.849	-0.005	854338	769777			
Triacon Surr	8.711	-0.002	559735	609178	IT.MOIL (C24-C40)	8344179	499.84 M

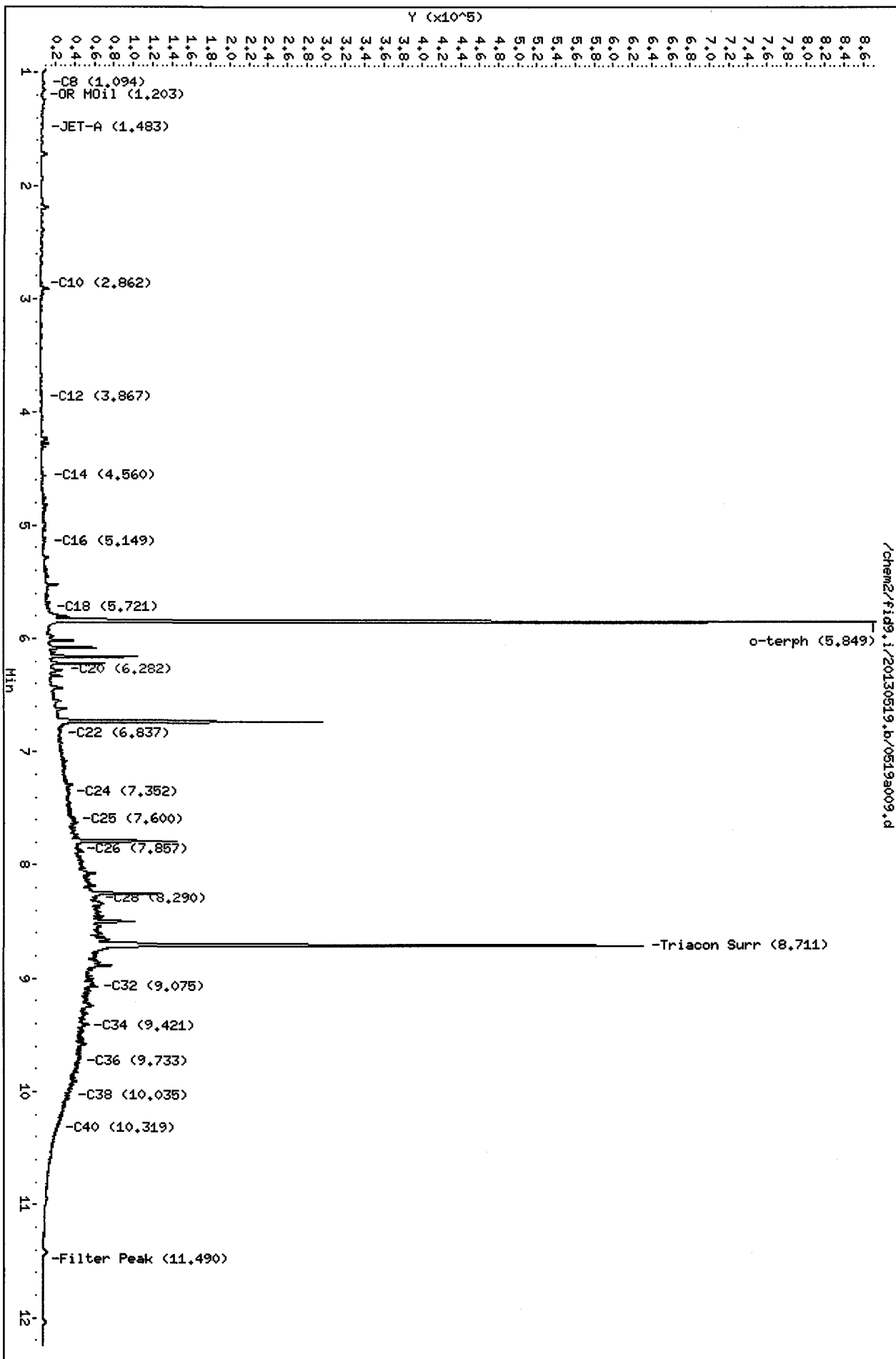
M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

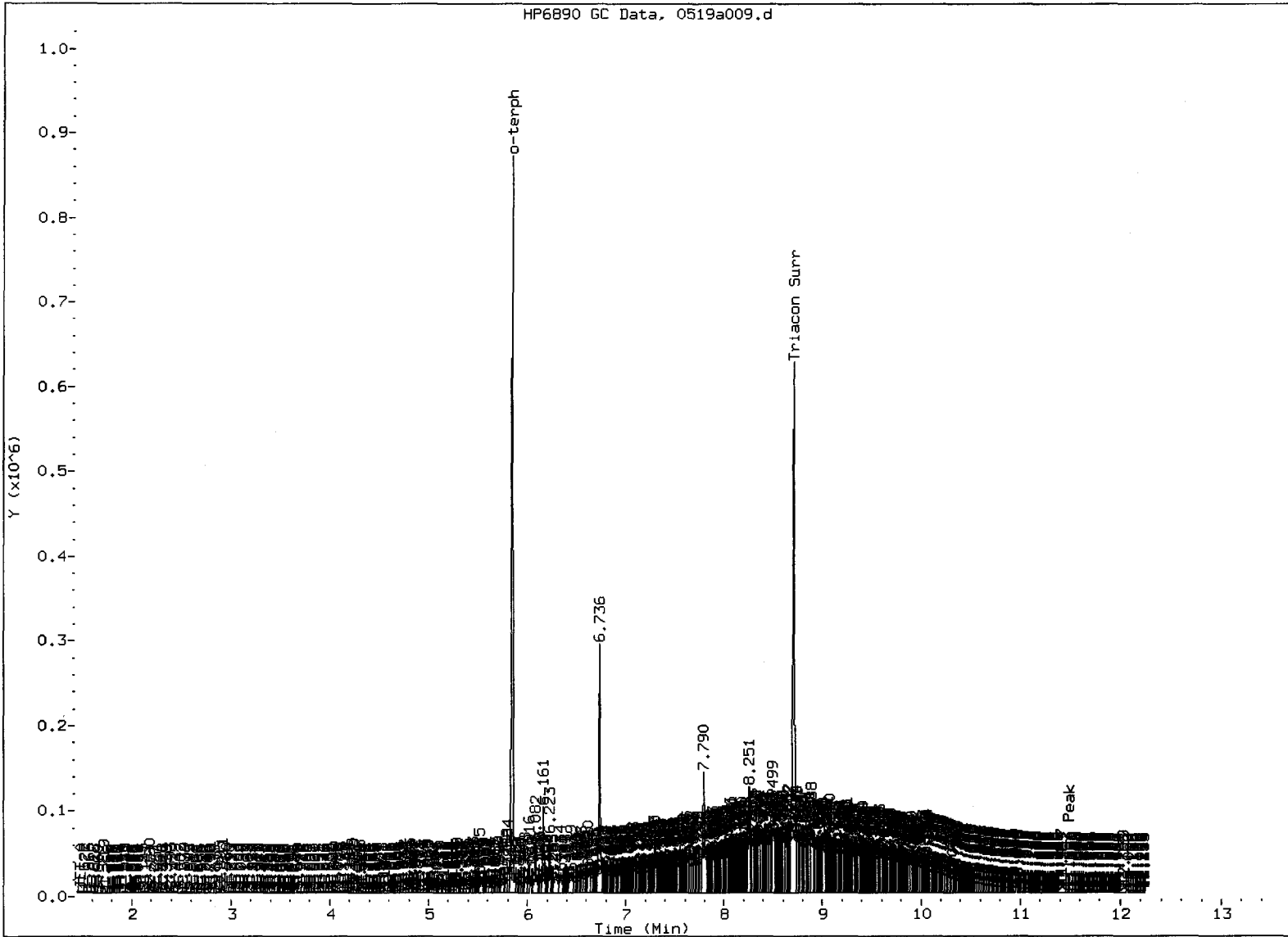
Surrogate	Area	Amount	%Rec
o-Terphenyl	769777	30.1	66.8
Triacontane	609178	32.2	71.6

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

50
SP-13



/chem2/fig9.i/20130519.b/0519a009.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: TW

Date: 5/20/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a010.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44B
 Client ID: DEBRIS-SP-2
 Injection: 19-MAY-2013 18:04
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	158708	5
C8	1.102	0.012	2996	5721	DIESEL (C12-C24)	4075627	218.18 ✓
C10	2.862	0.003	1179	1189	M.OIL (C24-C38)	9180157	572.50 ✓
C12	3.865	0.001	2222	2531	AK-102 (C10-C25)	4459836	205.46 M
C14	4.558	-0.003	8244	9423	AK-103 (C25-C36)	8215617	707.15 M
C16	5.149	-0.005	14569	18418			
C18	5.725	0.005	15406	7517			
C20	6.280	0.000	135643	162100			
C22	6.835	0.004	27717	13630			
C24	7.356	0.004	38894	9136			
C25	7.601	0.001	51205	35252			
C26	7.859	0.004	49752	43170			
C28	8.293	-0.004	73912	36840	IT.DIES (C10-C24)	4126925	190.66 M
C32	9.071	-0.004	70886	74451			
C34	9.413	-0.006	63645	116350	BUNKERC (C10-C38)	13307082	1436.01 M
Filter Peak	11.491	0.004	3541	3578			
C36	9.734	-0.005	48947	48188			
C38	10.041	0.001	32818	16425			
C40	10.322	0.000	20678	6847			
o-terph	5.849	-0.005	975520	845584			
Triacon Surr	8.713	0.000	684145	728014	IT.MOIL (C24-C40)	10278936	617.19 M

M Indicates manual integration within range.

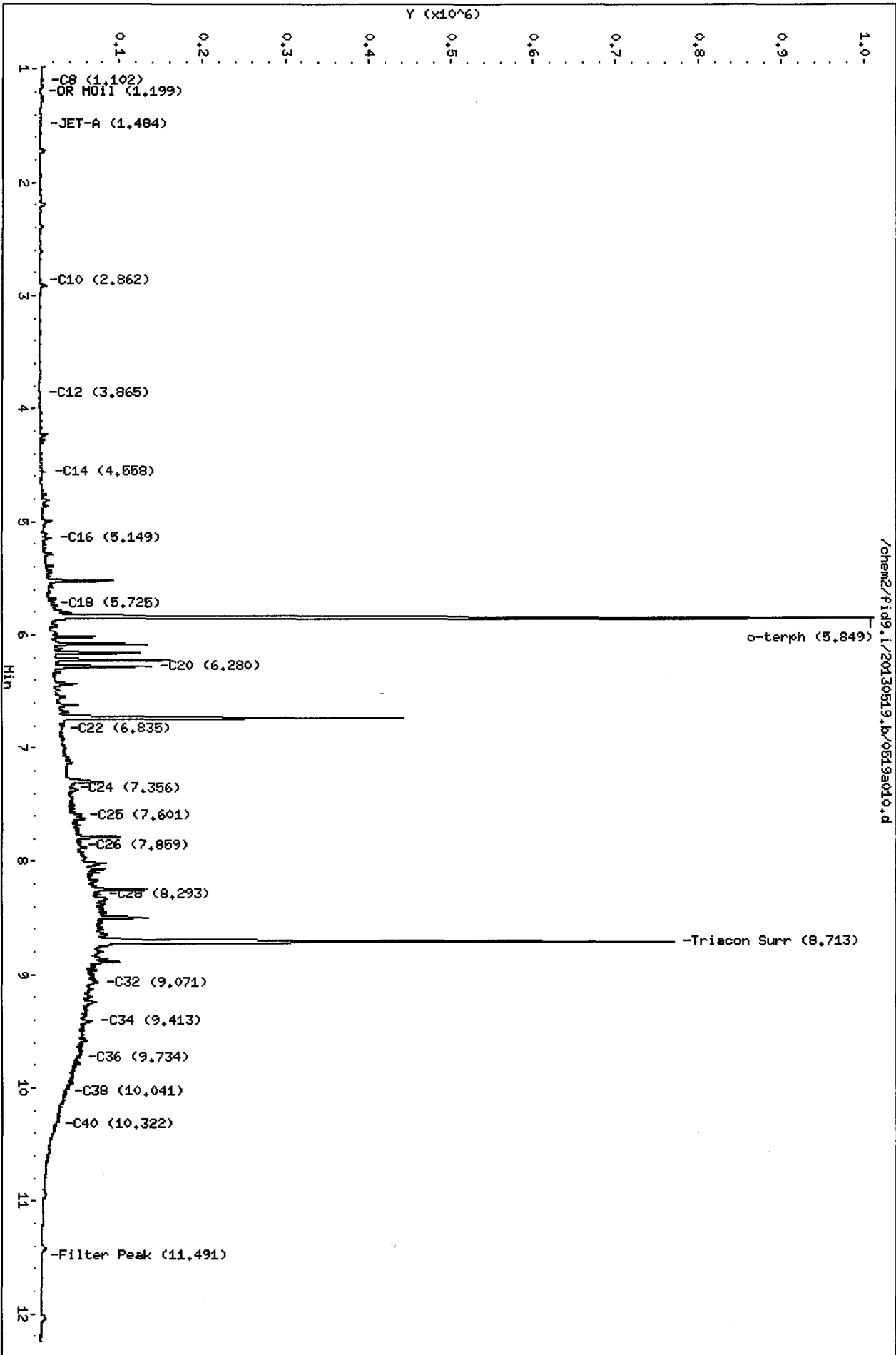
Range Times: NW Diesel (3.864 - 7.352) AK102 (2.86 - 7.60) Jet A (2.86 - 5.72)
 NW M.Oil (7.35 - 10.04) AK103 (7.60 - 9.74) OR Diesel (2.86 - 8.30)

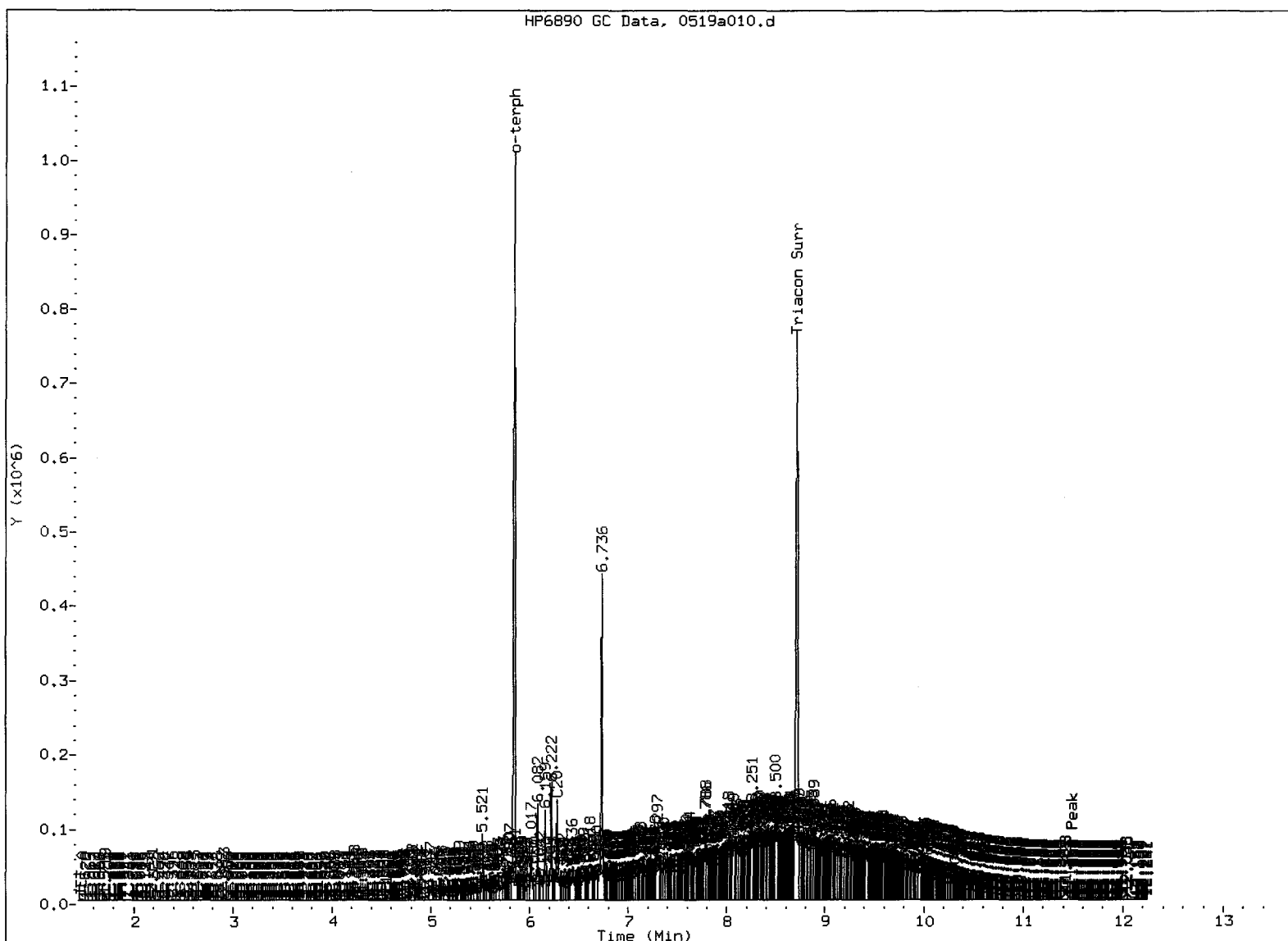
Surrogate	Area	Amount	%Rec
o-Terphenyl	845584	33.0	73.4 ✓
Triacontane	728014	38.5	85.6

By Spills

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JM
5/20





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst:

Date:

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-051913	83.2%	0
LCS-051913	85.9%	0
LCSD-051913	81.3%	0
DEBRIS-SP-1	66.8%	0
DEBRIS-SP-2	73.4%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-10634 to 13-10635

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1



Sample ID: LCS-051913
LCS/LCSD

Lab Sample ID: LCS-051913

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Extracted LCS/LCSD: 05/19/13

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 05/19/13 16:58

Final Extract Volume LCS: 1.0 mL

LCSD: 05/19/13 17:20

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW

Dilution Factor LCS: 1.0

LCSD: FID/JLW

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	119	150	79.3%	119	150	79.3%	0.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	85.9%	81.3%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a007.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44LCSS1
 Client ID: WQ44LCSS1
 Injection: 19-MAY-2013 16:58
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4809123	140
C8	1.095	0.005	10940	19460	DIESEL (C12-C24)	22272836	1192.35
C10	2.860	0.002	85379	87508	M.OIL (C24-C38)	330741	20.63
C12	3.862	-0.003	206971	220992	AK-102 (C10-C25)	25818443	1189.40 M
C14	4.561	0.001	385261	358257	AK-103 (C25-C36)	239528	20.62
C16	5.156	0.001	525313	508272			
C18	5.721	0.002	514208	570241			
C20	6.277	-0.003	279182	412829			
C22	6.825	-0.006	130734	147950			
C24	7.346	-0.006	39066	65008			
C25	7.594	-0.005	20093	30120			
C26	7.872	0.017	4441	2228			
C28	8.293	-0.004	2846	3746	IT.DIES (C10-C24)	25731220	1188.73 M
C32	9.083	0.008	1371	1035			
C34	9.419	0.000	102	36	BUNKERC (C10-C38)	26061961	2812.43 M
Filter Peak	11.492	0.005	725	269			
C36	9.734	-0.005	306	416			
C38	10.040	0.000	284	72			
C40	10.334	0.013	667	455			
o-terph	5.857	0.004	1039500	989662			
Triacon Surr	8.713	0.000	716346	767154	IT.MOIL (C24-C40)	1106524	21.93

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

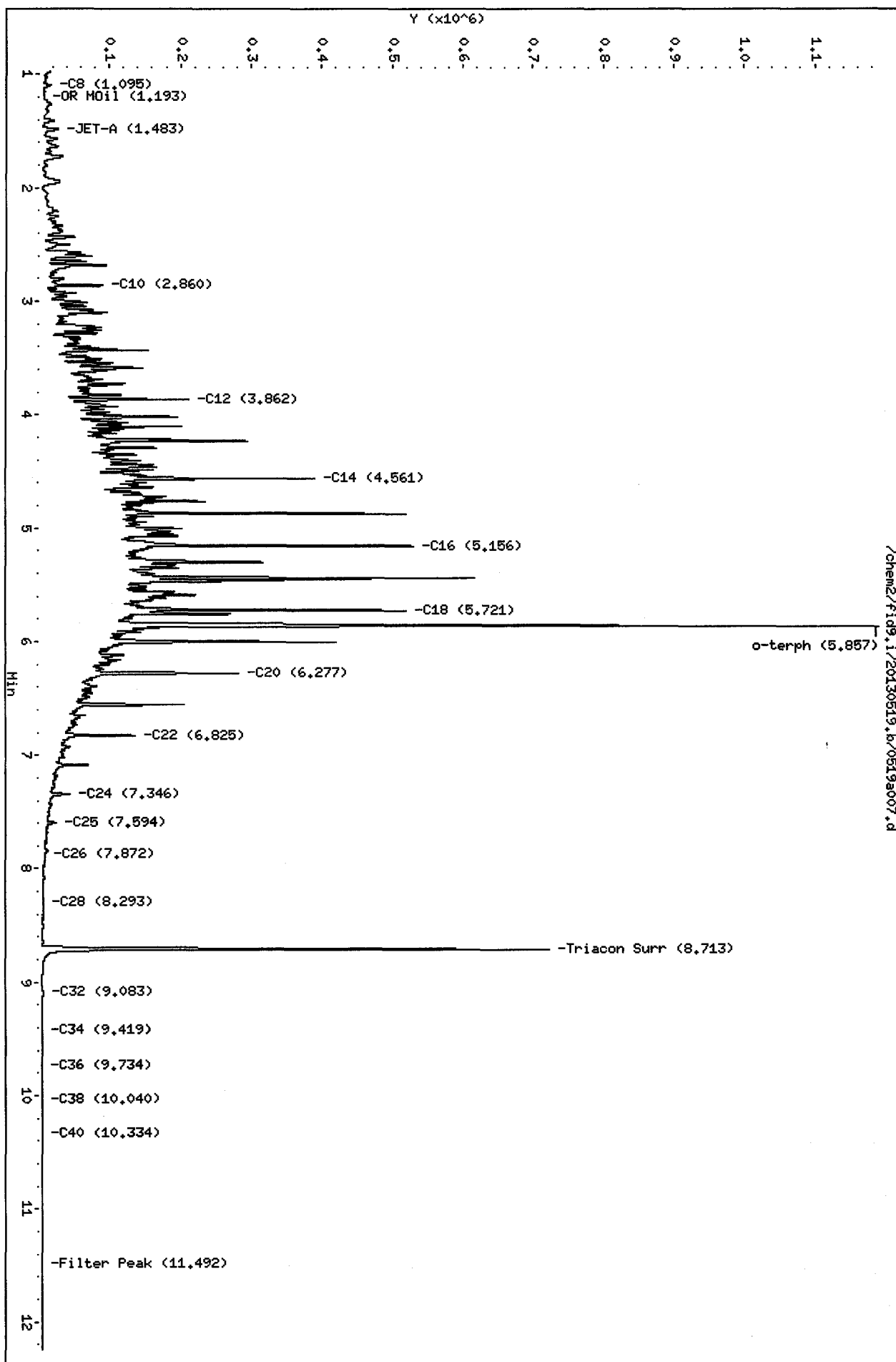
Surrogate	Area	Amount	%Rec
o-Terphenyl	989662	38.6	85.9
Triacontane	767154	40.6	90.2

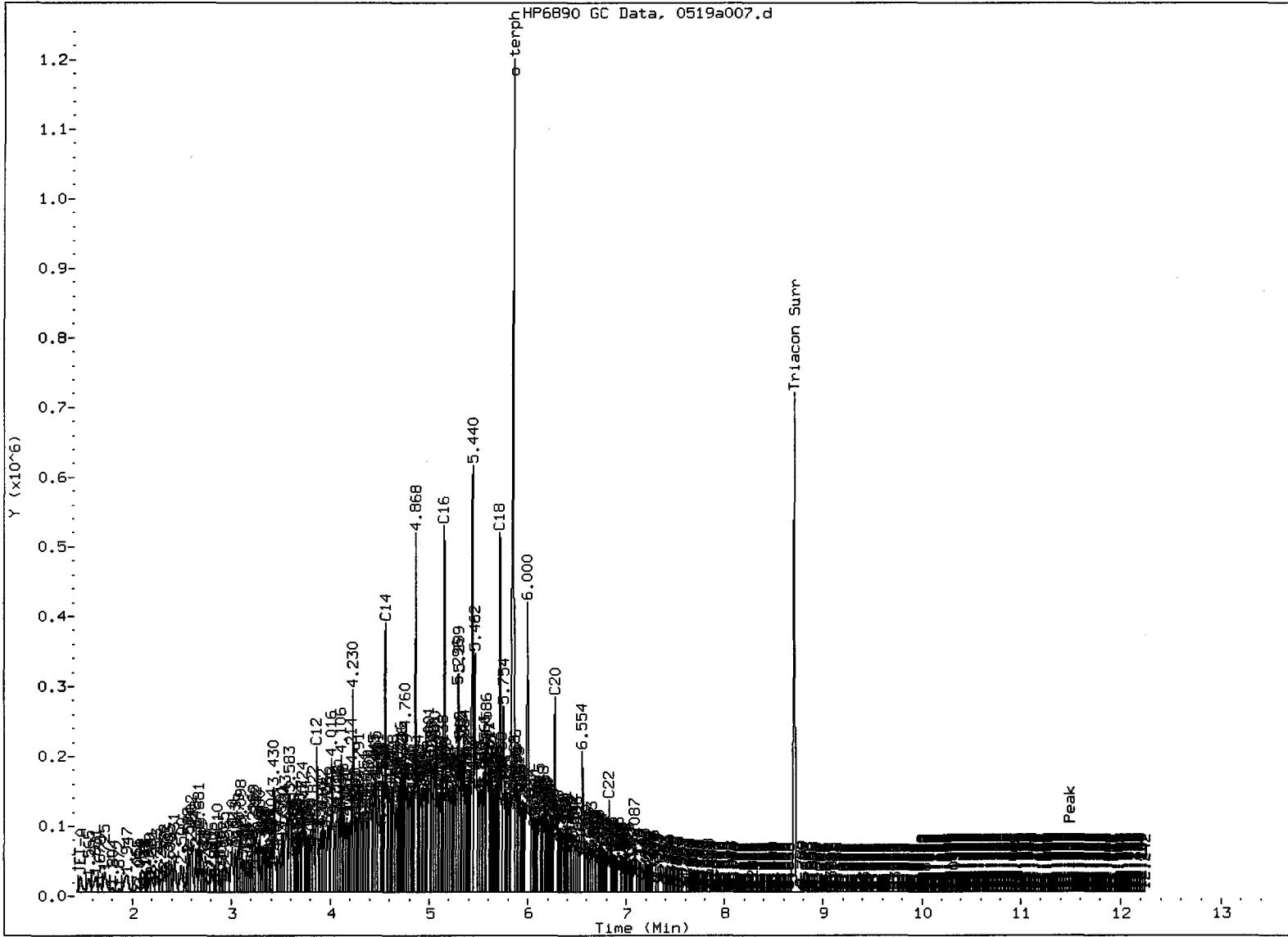
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fig9.i/20130519.b/0519a007.d
Date: 19-MAY-2013 16:58
Client ID: MQ44LCSS1
Sample Info: MQ44LCSS1
Column phase: RTX-1

Instrument: fig9.i
Operator: JM
Column diameter: 0.25

6/2/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JW

Date: 5/20/03

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a008.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44LCSDS1
 Client ID: WQ44LCSDS1
 Injection: 19-MAY-2013 17:20
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4782153	139
C8	1.090	0.000	11868	17768	DIESEL (C12-C24)	22195274	1188.19
C10	2.857	-0.001	84529	89431	M.OIL (C24-C38)	319519	19.93
C12	3.862	-0.002	209368	224880	AK-102 (C10-C25)	25745711	1186.05 M
C14	4.563	0.002	385770	347491	AK-103 (C25-C36)	231590	19.93
C16	5.154	-0.001	520431	488341			
C18	5.722	0.002	508481	585275			
C20	6.281	0.001	292545	385413			
C22	6.824	-0.007	119332	161843			
C24	7.345	-0.007	36446	54860			
C25	7.593	-0.006	17886	34224			
C26	7.836	-0.019	8508	10889			
C28	8.293	-0.004	2665	2739	IT.DIES (C10-C24)	25660609	1185.47 M
C32	9.063	-0.012	837	1056			
C34	9.419	0.000	90	66	BUNKERC (C10-C38)	25980128	2803.60 M
Filter Peak	11.487	0.000	712	167			
C36	9.732	-0.007	359	344			
C38	10.045	0.005	219	139			
C40	10.324	0.003	742	291			
o-terph	5.858	0.004	975812	936606			
Triacon Surr	8.713	0.000	653762	744533	IT.MOIL (C24-C40)	1073252	21.24

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	936606	36.6	81.3
Triacontane	744533	39.4	87.5

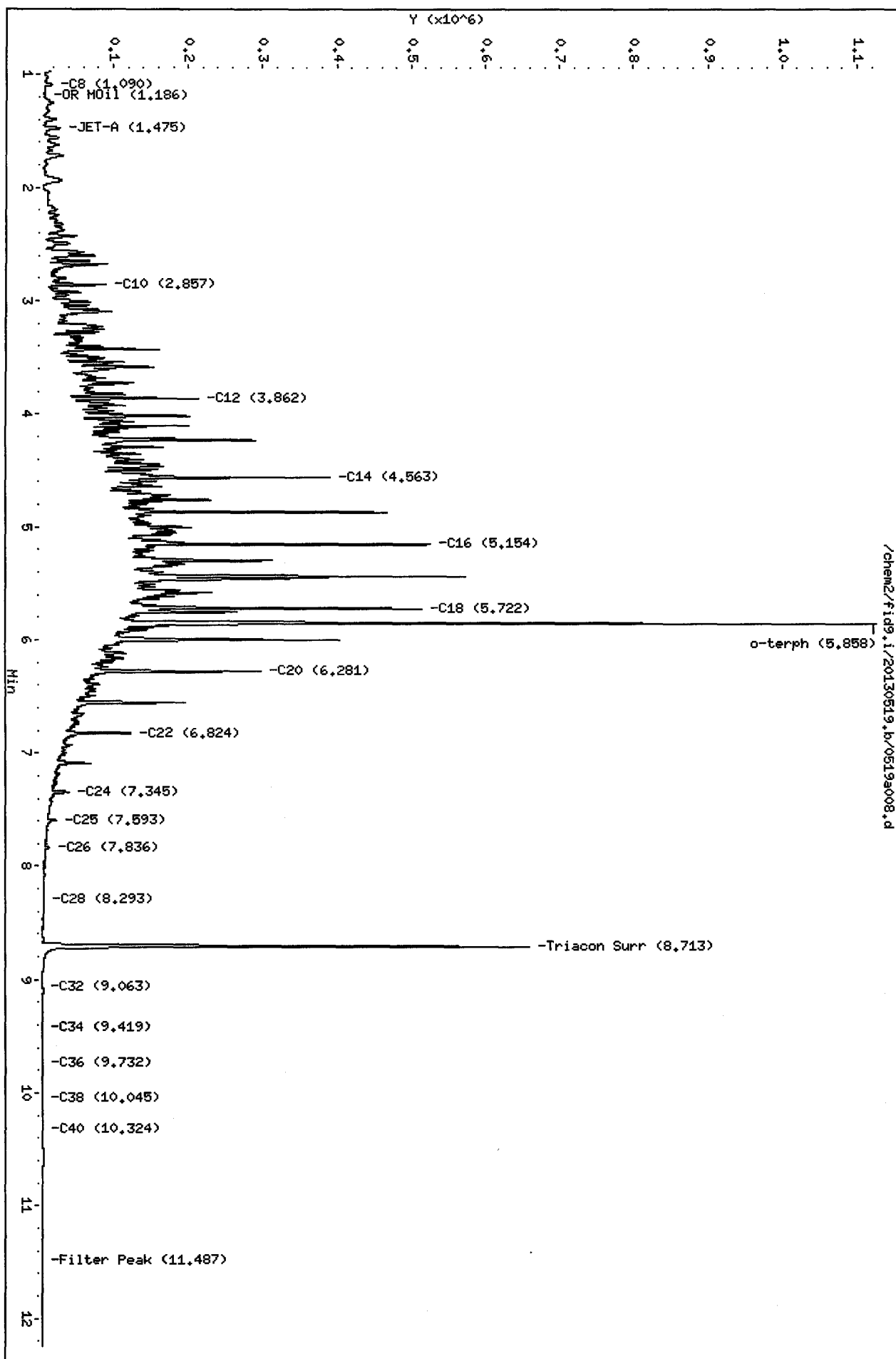
Handwritten: 5/20/13

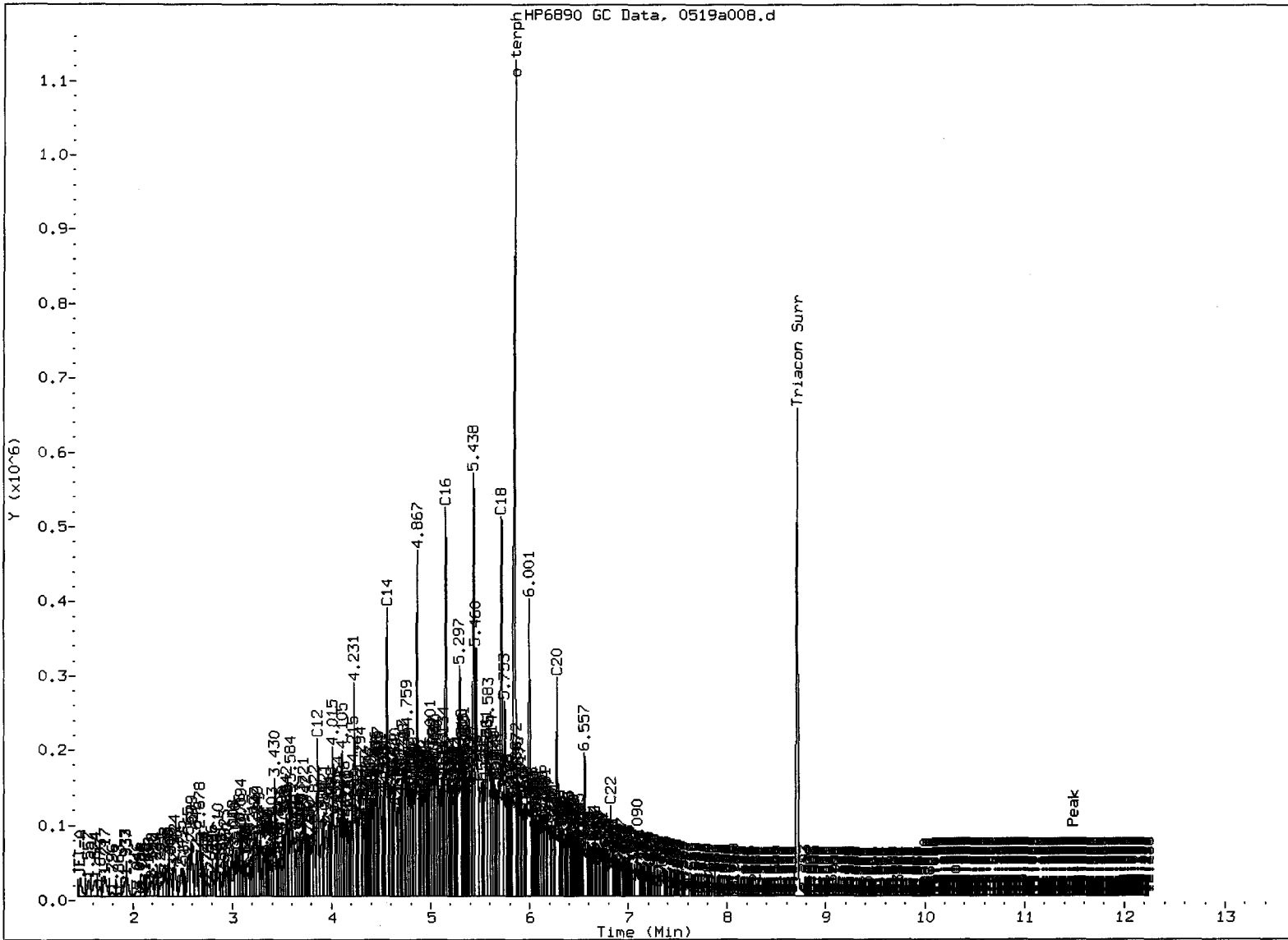
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fid9.i/20130519.b/0519a008.d
Date: 19-MAY-2013 17:20
Client ID: M044LCSDS1
Sample Info: M044LCSDS1
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

30
5/20/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JL

Date: 5/24/10

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ44
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10634-051913MB1	Method Blank	10.0 g	1.00 mL	-	05/19/13
13-10634-051913LCS1	Lab Control	10.0 g	1.00 mL	-	05/19/13
13-10634-051913LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	05/19/13
13-10634-WQ44A	DEBRIS-SP-1	8.70 g	1.00 mL	D	05/19/13
13-10635-WQ44B	DEBRIS-SP-2	8.88 g	1.00 mL	D	05/19/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DEBRIS-SP-1
SAMPLE

Lab Sample ID: WQ44A

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 17:19

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 79 mg-dry-wt

Percent Moisture: 13.4%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	< 16 U	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	32	< 32 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.3	< 6.3 U	---

BETX Surrogate Recovery

Trifluorotoluene	84.7%
Bromobenzene	81.4%

Gasoline Surrogate Recovery

Trifluorotoluene	86.2%
Bromobenzene	83.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

WG
 5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a007.d ARI ID: WQ44A
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a007.d Client ID: DEBRIS-SP-1
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 17:19
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.001	2989	37623	86.2	TFT(Surr)
15.383	0.003	1895	16008	83.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	14767	0.041
8015C 2MP-TMB (4.17 to 16.20)	723723	14058	0.019
AK101 nC6-nC10 (4.67 to 15.10)	582885	9988	0.017
NWTPHG Tol-Nap (9.77 to 18.90)	375093	16355	0.044

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.001	3363	84.7	TFT(Surr)
15.390	0.002	7156	81.4	BB(Surr)

SW8021 (PID)

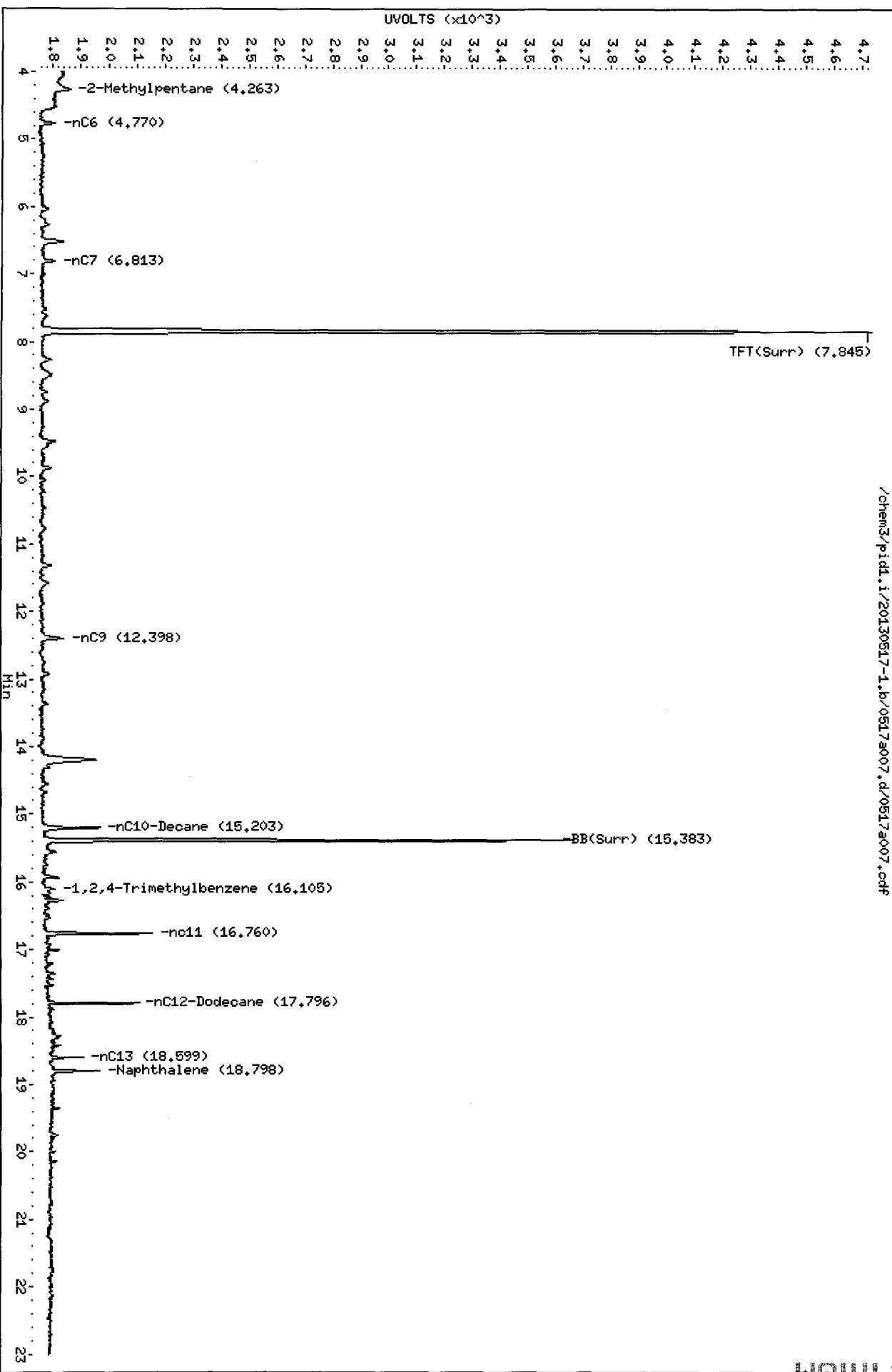
RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.880	0.002	55	0.24N	Toluene
ND	---	---	---	Ethylbenzene
12.937	0.005	42	0.20N	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130517-1.b/0517a007.d
Date: 17-MAY-2013 17:19
Client ID: DEBRIS-SP-1
Sample Info: MQ44A
Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18

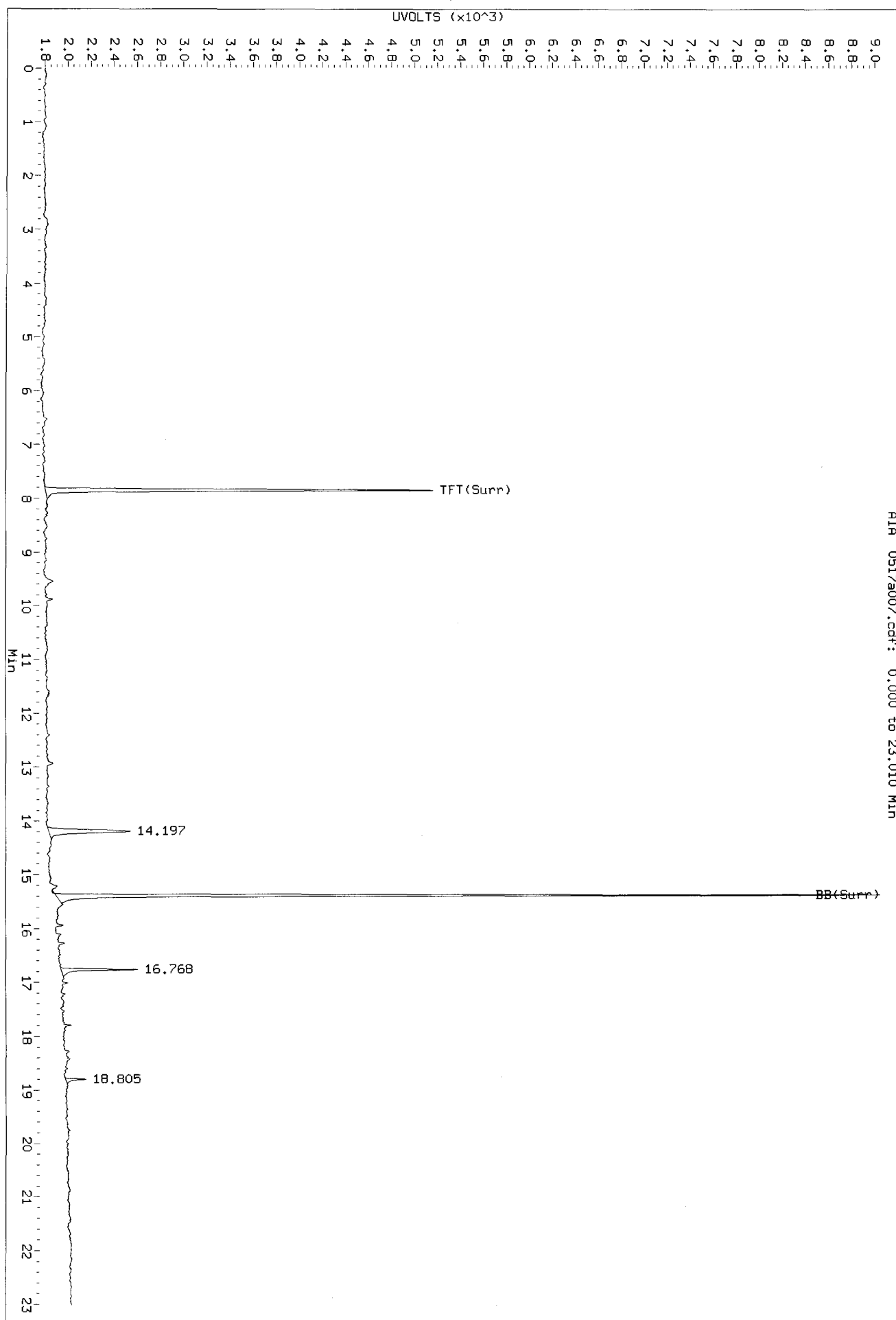
/chem3/pidd.i/20130517-1.b/0517a007.d/0517a007.cdf



PC
5/18/15

Data File: /chem3/pid1.i/20130517-2.b/0517a007.d/0517a007.cdf
Injection Date: 17-May-2013 17:19
Instrument: pid1.1
Client Sample ID: DEBRIS-SP-1

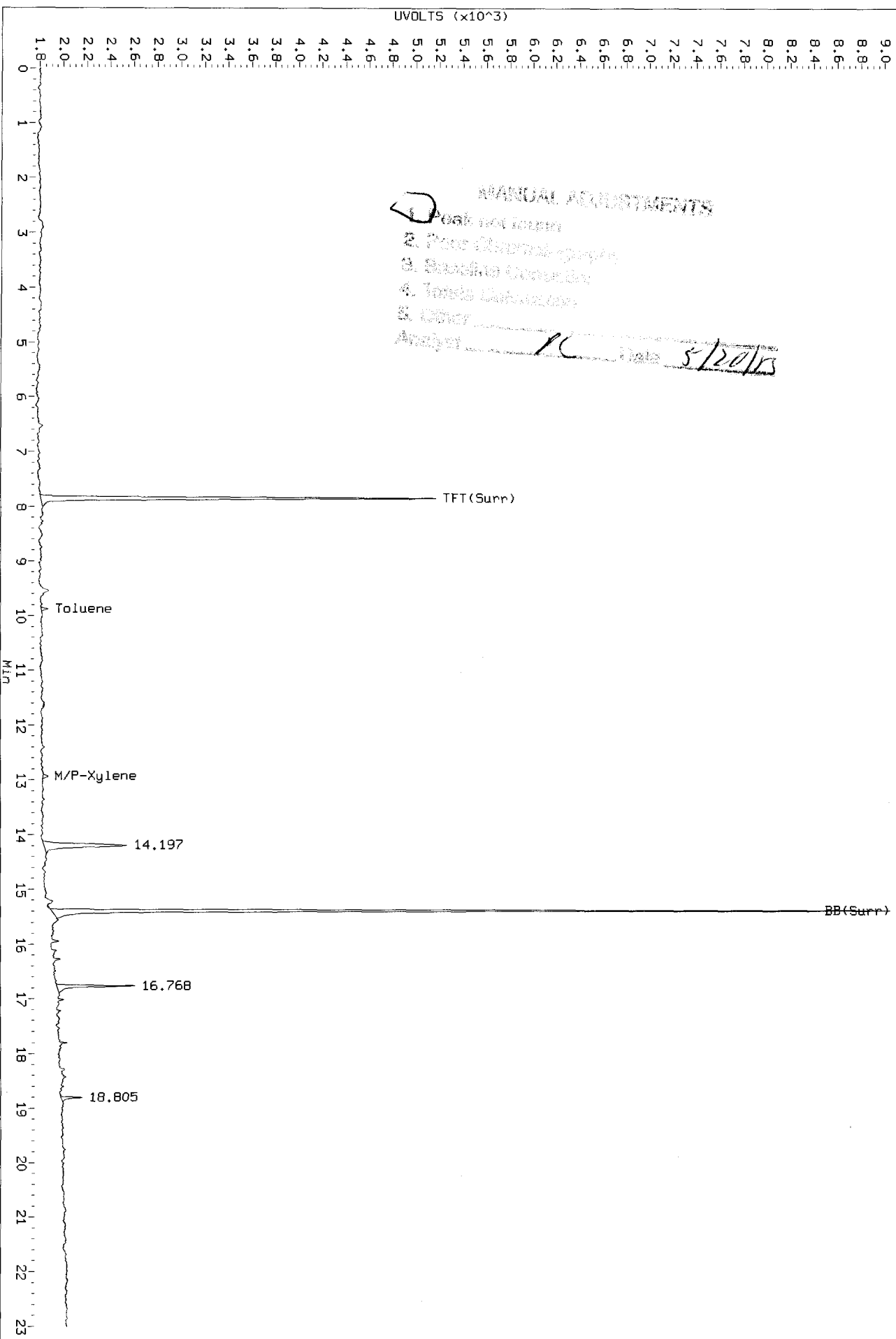
ALA 0517a007.cdf: 0.000 to 23.010 Min



WQ44 : 00039

Data File: /chem3/pid1.1/20130517-2.b/0517a007.d/0517a007.cdf
Injection Date: 17-MAY-2013 17:19
Instrument: pid1.1
Client Sample ID: DEBRIS-SP-1

AIR 0517a007.cdf: 0.000 to 23.010 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DEBRIS-SP-2
SAMPLE

Lab Sample ID: WQ44B

LIMS ID: 13-10635

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 17:49

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 85 mg-dry-wt

Percent Moisture: 11.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	5.9	< 5.9 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	83.4%
Bromobenzene	83.0%

Gasoline Surrogate Recovery

Trifluorotoluene	86.0%
Bromobenzene	86.1%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a008.d ARI ID: WQ44B
Data file 2: /chem3/pid1.i/20130517-2.b/0517a008.d Client ID: DEBRIS-SP-2
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 17:49
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.842	-0.002	2983	37692	86.0	TFT(Surr)
15.381	0.000	1964	16263	86.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	8765	0.024
8015C 2MP-TMB (4.17 to 16.20)	723723	5327	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	4299	0.007
NWTPHG Tol-Nap (9.77 to 18.90)	375093	11628	0.031

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.850	-0.002	3310	83.4	TFT(Surr)
15.388	0.000	7293	83.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.873	-0.005	30	0.13N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

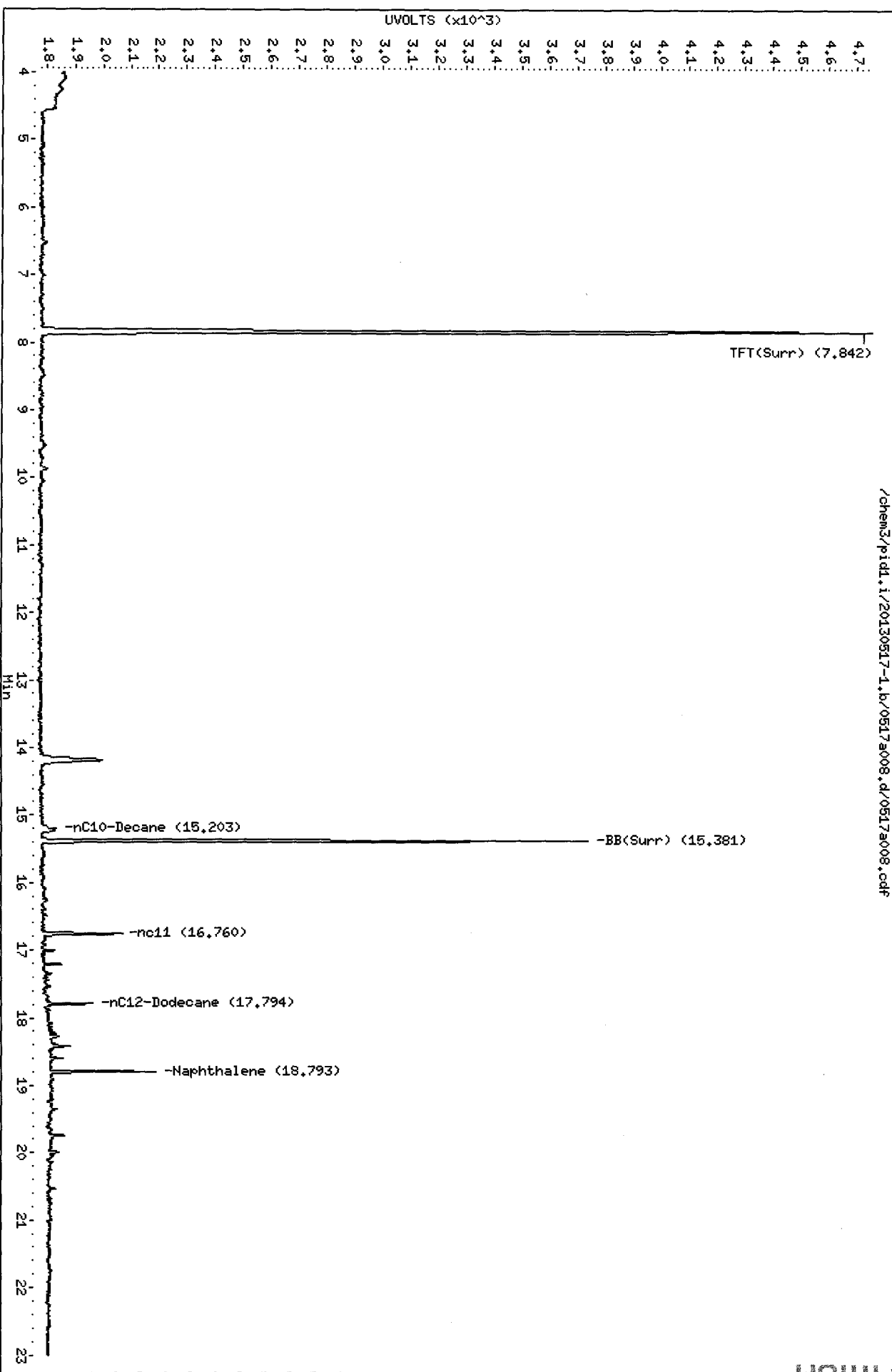
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a008.d
Date: 17-MAY-2013 17:49
Client ID: DEBRIS-SP-2
Sample Info: MQ44B

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130517-1.b/0517a008.d/0517a008.pdf

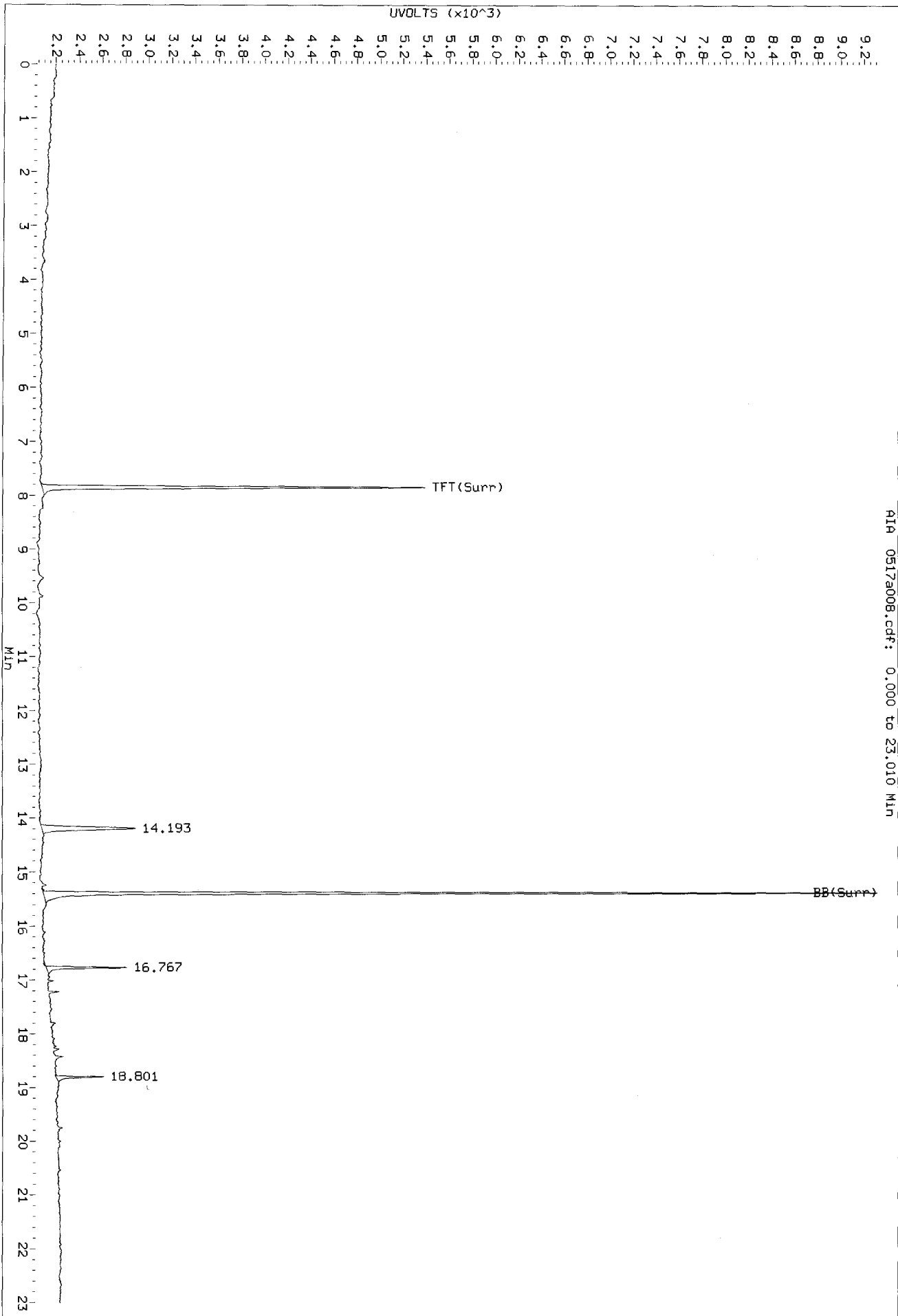


040000 1104

MC
5/18/13

Data File: /chem3/pid1.i/20130517-2.b/0517a008.d/0517a008.cdf
Injection Date: 17-MAY-2013 17:49
Instrument: pid1.1
Client Sample ID: DEBRIS-SP-2

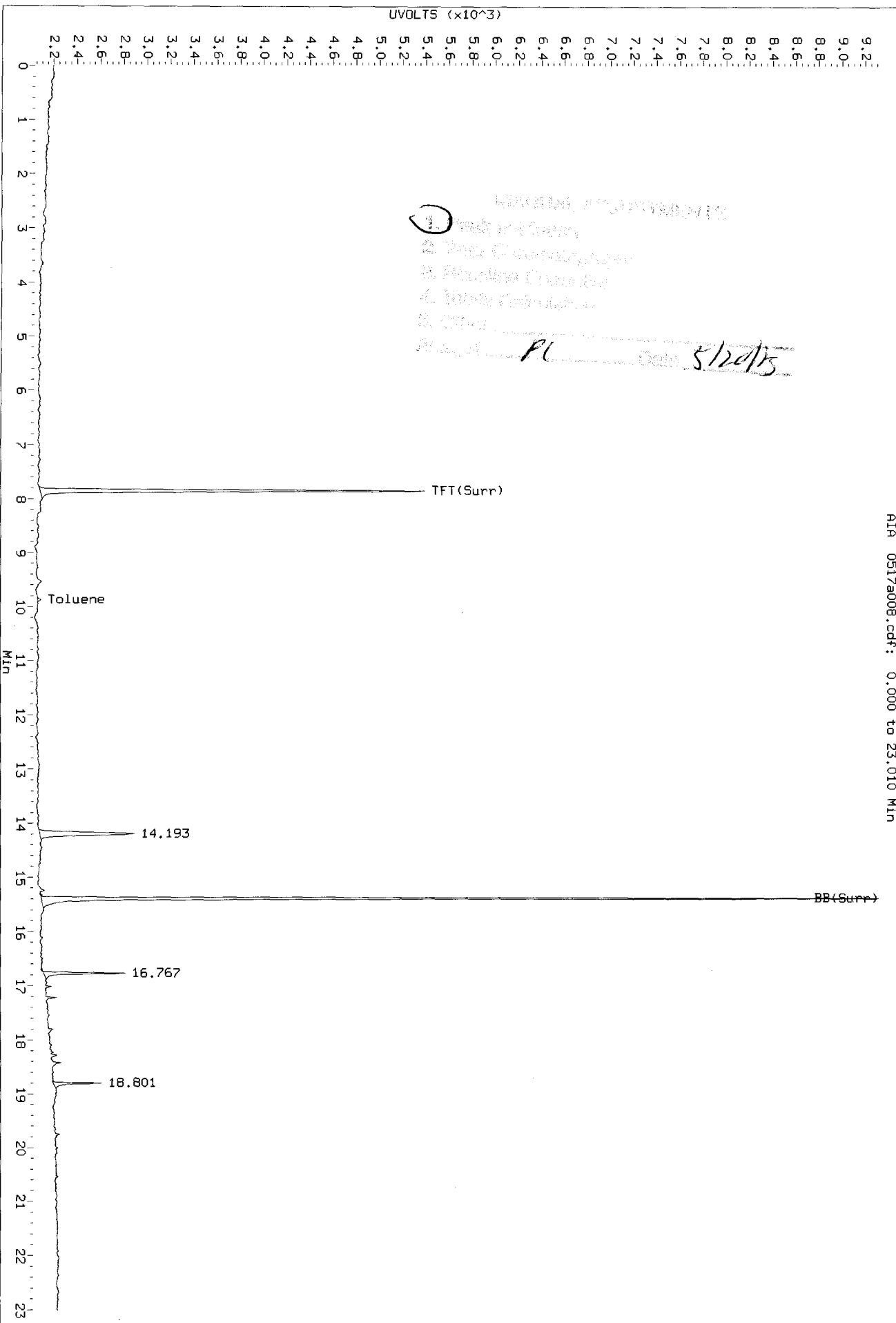
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4400 : 00044

Data File: /chem3/pd1.1/20130517-2.b/0517a008.d/0517a008.cdf
Injection Date: 17-MAY-2013 17:49
Instrument: pd1.1
Client Sample ID: DEBRIS-SP-2

AIR 0517a008.cdf: 0.000 to 23.010 Min



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ44
Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-051713	NA	85.6%	85.3%	0
LCS-051713	NA	91.3%	88.3%	0
LCSD-051713	NA	88.9%	85.7%	0
DEBRIS-SP-1	NA	86.2%	83.0%	0
DEBRIS-SP-2	NA	86.0%	86.1%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-10634 to 13-10635

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ44
Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-051713	82.9%	83.2%	0
LCS-051713	88.2%	85.5%	0
LCSD-051713	84.2%	82.9%	0
DEBRIS-SP-1	84.7%	81.4%	0
DEBRIS-SP-2	83.4%	83.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10634 to 13-10635

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-051713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/17/13 11:37

LCSD: 05/17/13 12:07

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	50.1	50.0	100%	46.2	50.0	92.4%	8.1%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.3%	88.9%
Bromobenzene	88.3%	85.7%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-051713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/17/13 11:37

LCSD: 05/17/13 12:07

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	172	185	93.0%	158	185	85.4%	8.5%
Toluene	1770	1980	89.4%	1620	1980	81.8%	8.8%
Ethylbenzene	516	580	89.0%	466	580	80.3%	10.2%
m,p-Xylene	1840	2120	86.8%	1680	2120	79.2%	9.1%
o-Xylene	832	960	86.7%	765	960	79.7%	8.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	88.2%	84.2%
Bromobenzene	85.5%	82.9%

PC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a004.d ARI ID: LCS0517
Data file 2: /chem3/pid1.i/20130517-2.b/0517a004.d Client ID:
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 11:37
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.846	0.002	3166	44452	91.3	TFT(Surr)
15.383	0.002	2015	17511	88.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	356268	0.995 M
8015C 2MP-TMB (4.17 to 16.20)	723723	721029	0.996 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	580704	0.996 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	375758	1.002 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.854	0.003	3500	88.2	TFT(Surr)
15.390	0.002	7511	85.5	BB(Surr)

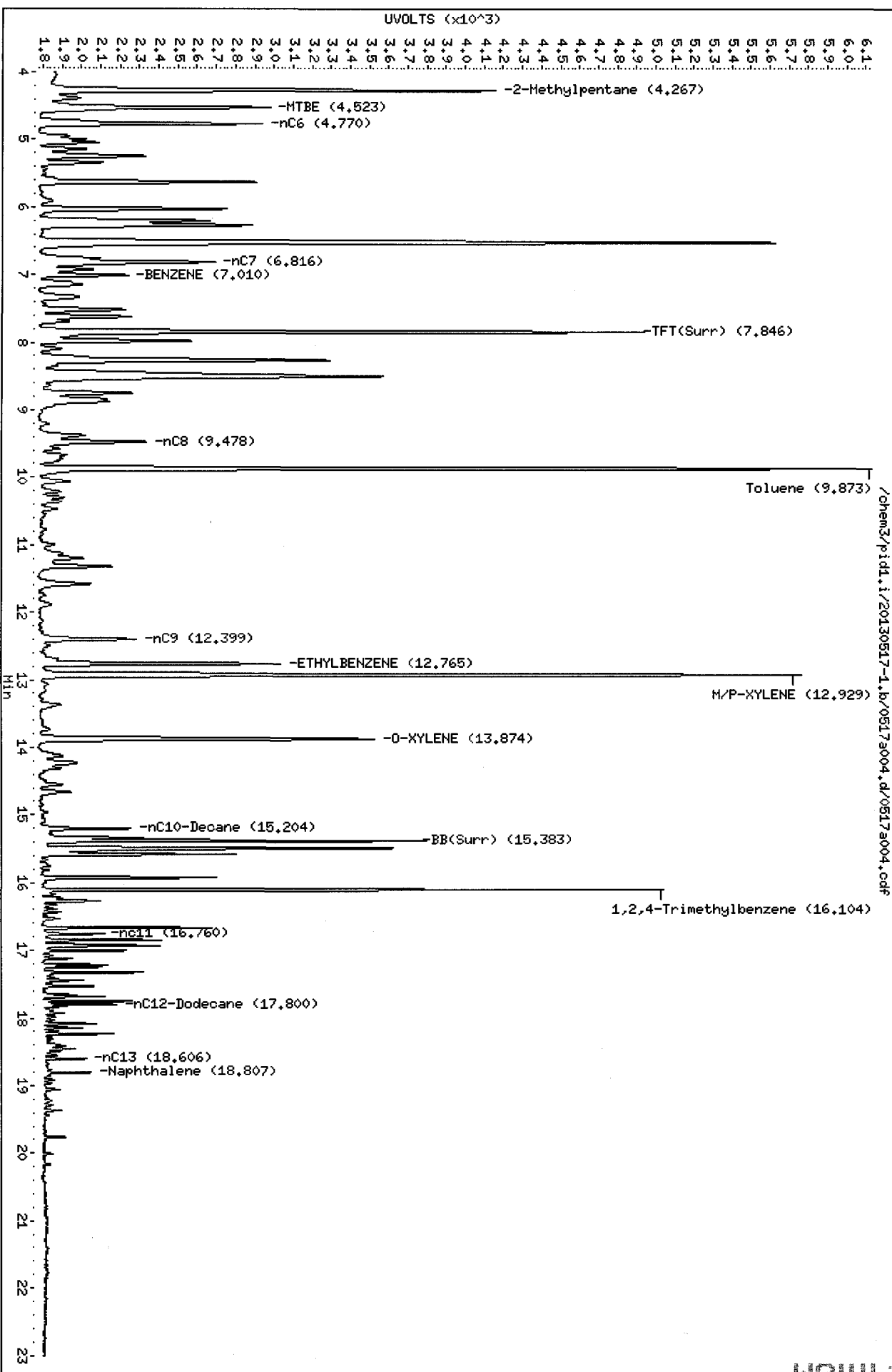
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.018	0.002	826	3.44	Benzene
9.882	0.003	8114	35.43	Toluene
12.774	0.003	1998	10.32	Ethylbenzene
12.937	0.006	7876	36.88	M/P-Xylene
13.883	0.004	2837	16.63	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a004.d
Date: 17-MAY-2013 11:37
Client ID:
Sample Info: LCS0517
Column phase: RTX 502-2 FID

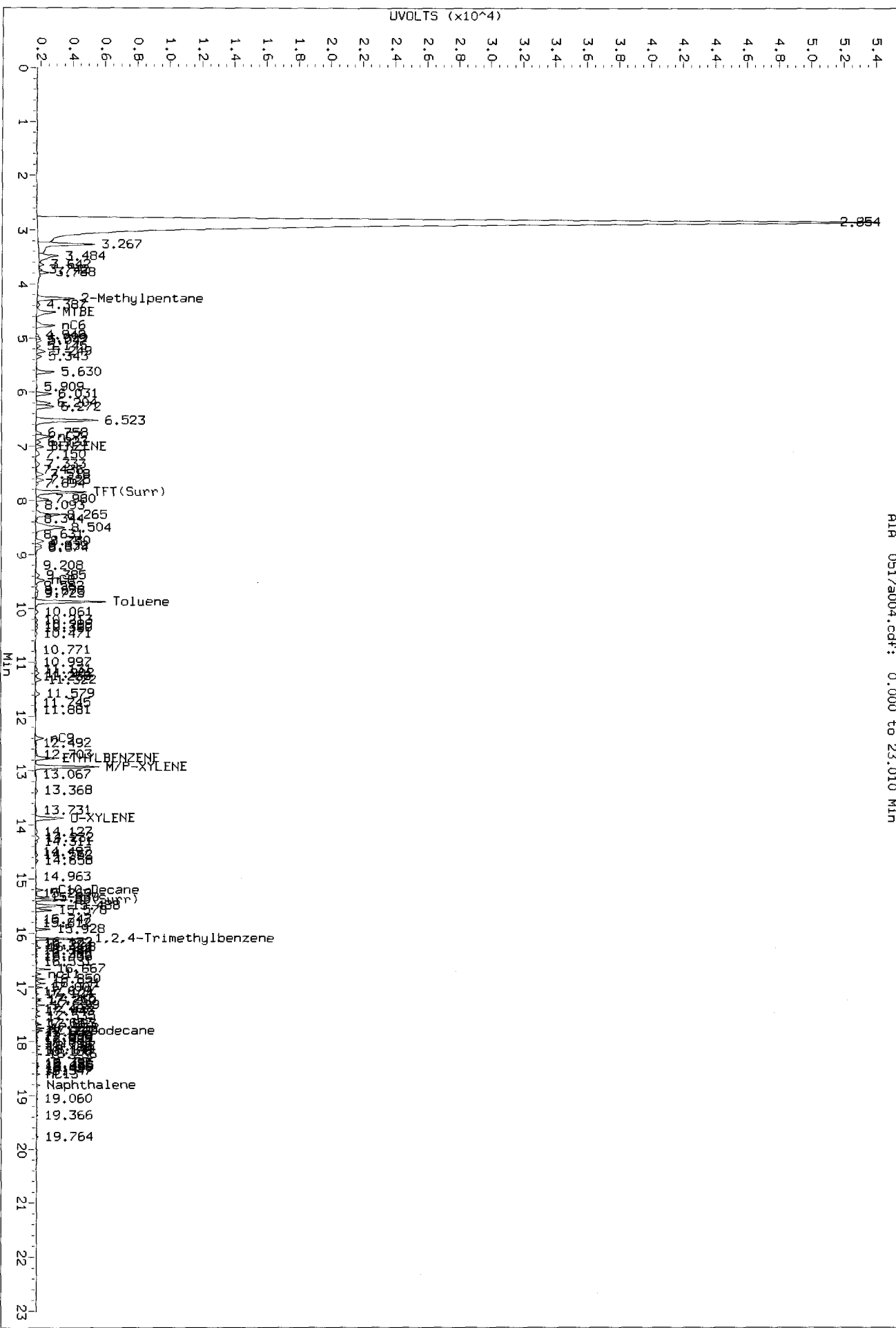
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



0044 : 00051

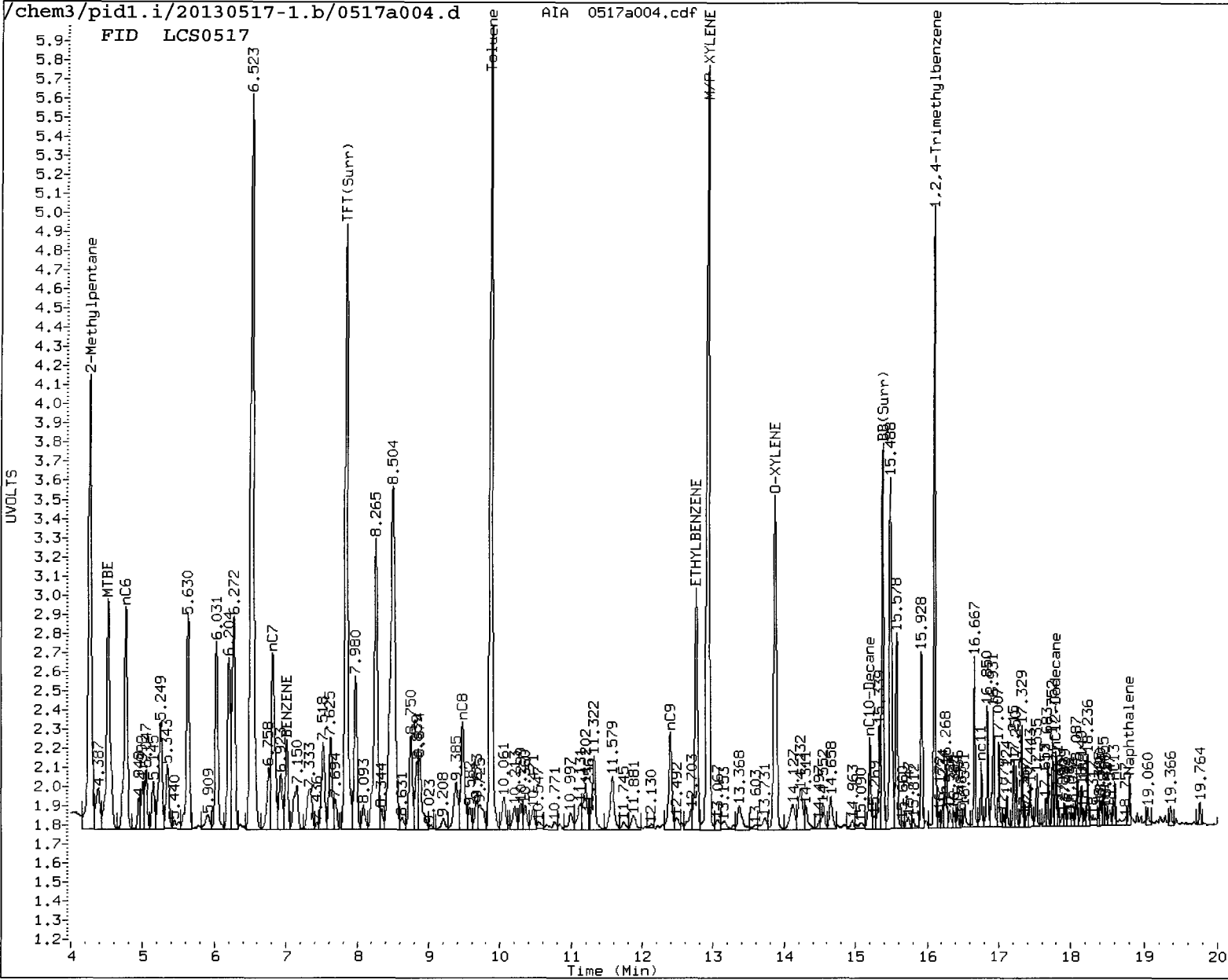
MC
5/20/15

Data File: /chem3/pid1.1/20130517-1.b/0517a004.d/0517a004.cdf
Injection Date: 17-MAY-2013 11:37
Instrument: pid1.1
Client Sample ID:



AIR 0517a004.cdf: 0.000 to 23.010 MIN

FID LCS0517



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: PC

Date: 5/20/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a005.d ARI ID: LCSD0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a005.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:07
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	-0.001	3083	43246	88.9	TFT(Surr)
15.381	0.001	1955	17346	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	329384	0.920 M
8015C 2MP-TMB (4.17 to 16.20)	723723	672432	0.929 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	541268	0.929 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	347058	0.925 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.000	3342	84.2	TFT(Surr)
15.389	0.001	7285	82.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.015	-0.001	757	3.15	Benzene
9.879	0.000	7421	32.41	Toluene
12.771	0.000	1805	9.32	Ethylbenzene
12.934	0.003	7195	33.69	M/P-Xylene
13.880	0.001	2611	15.30	O-Xylene
ND	---	---	---	MTBE

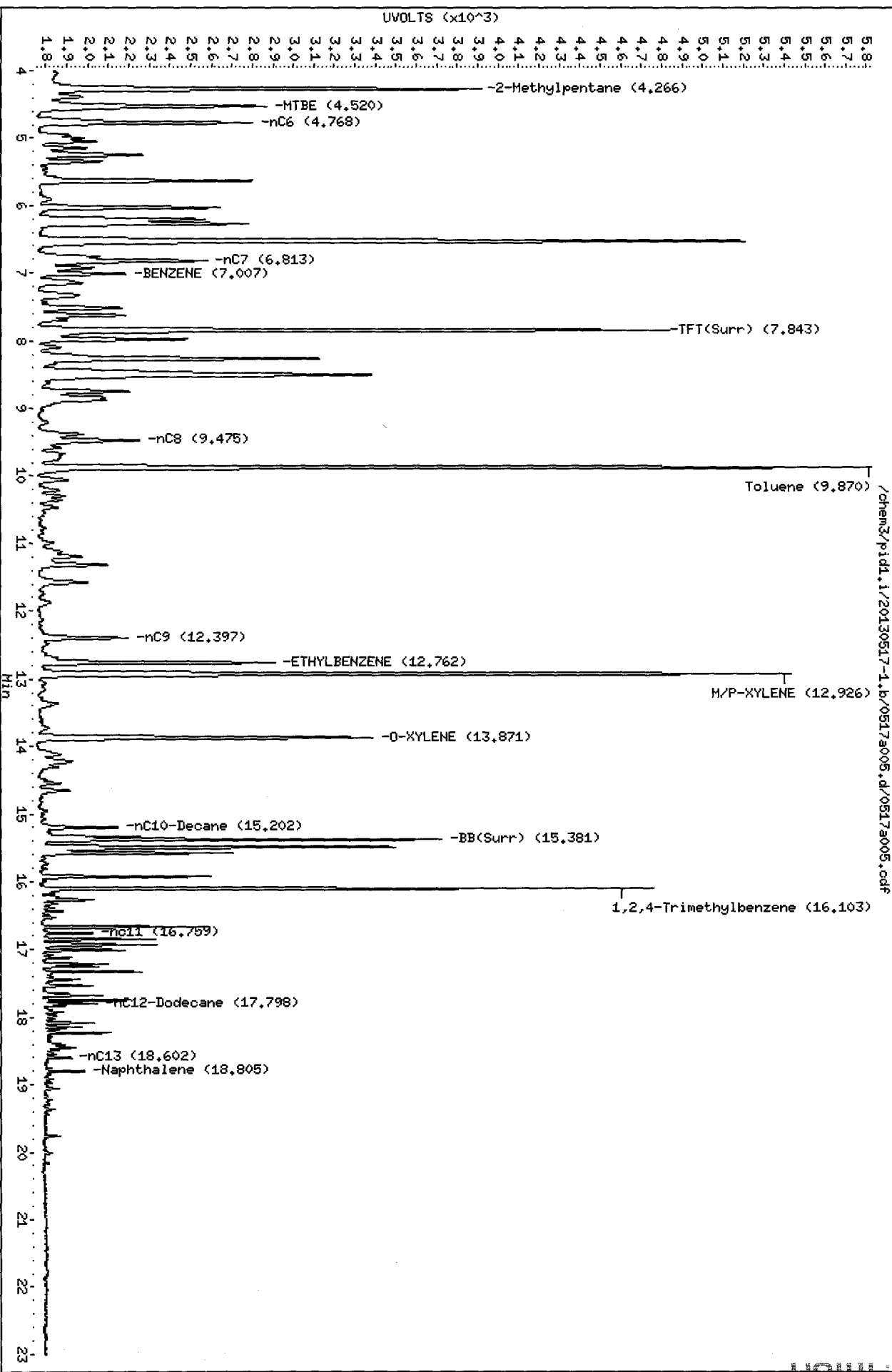
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a005.d
Date: 17-MAY-2013 12:07

Client ID:
Sample Info: LCSID0517

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



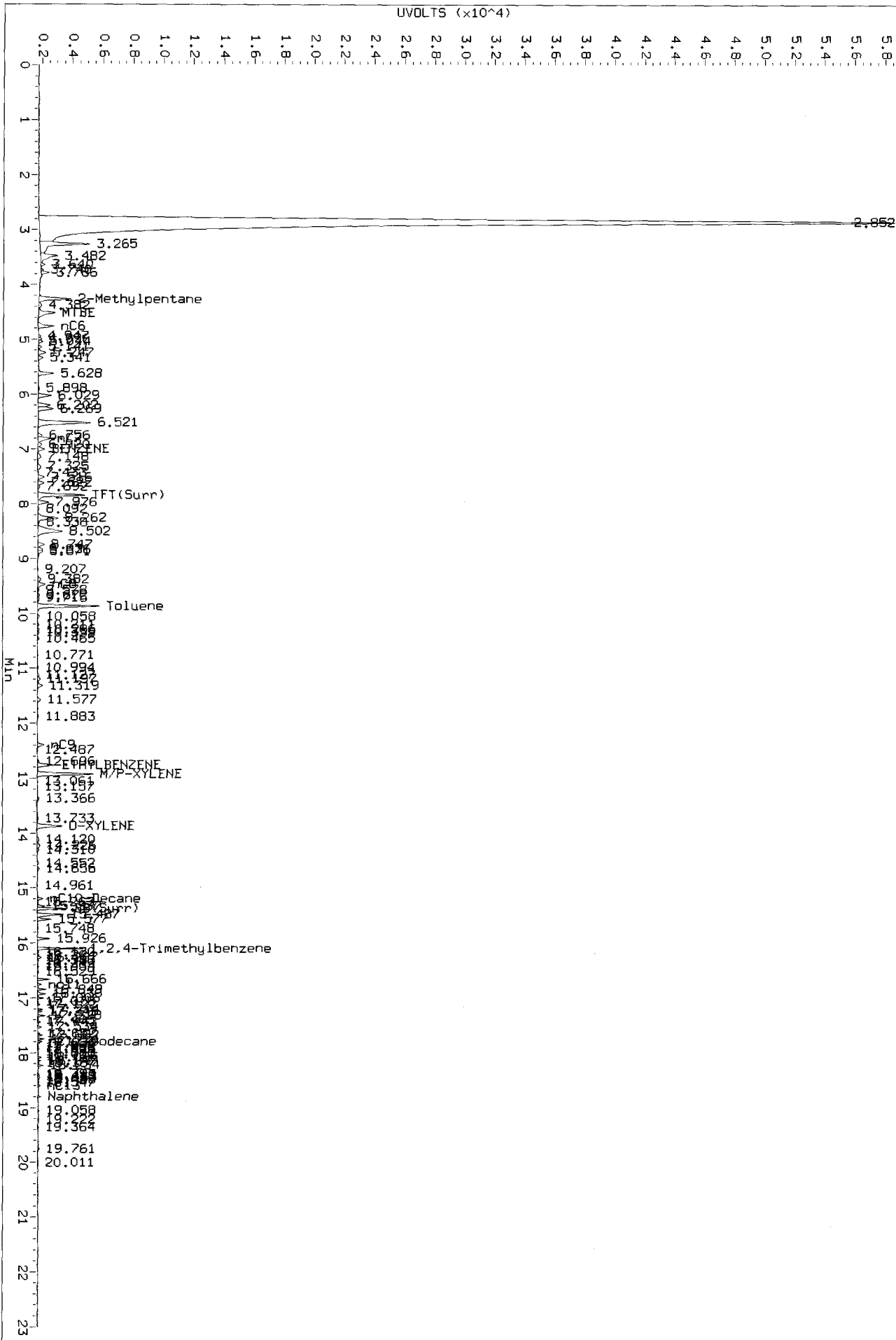
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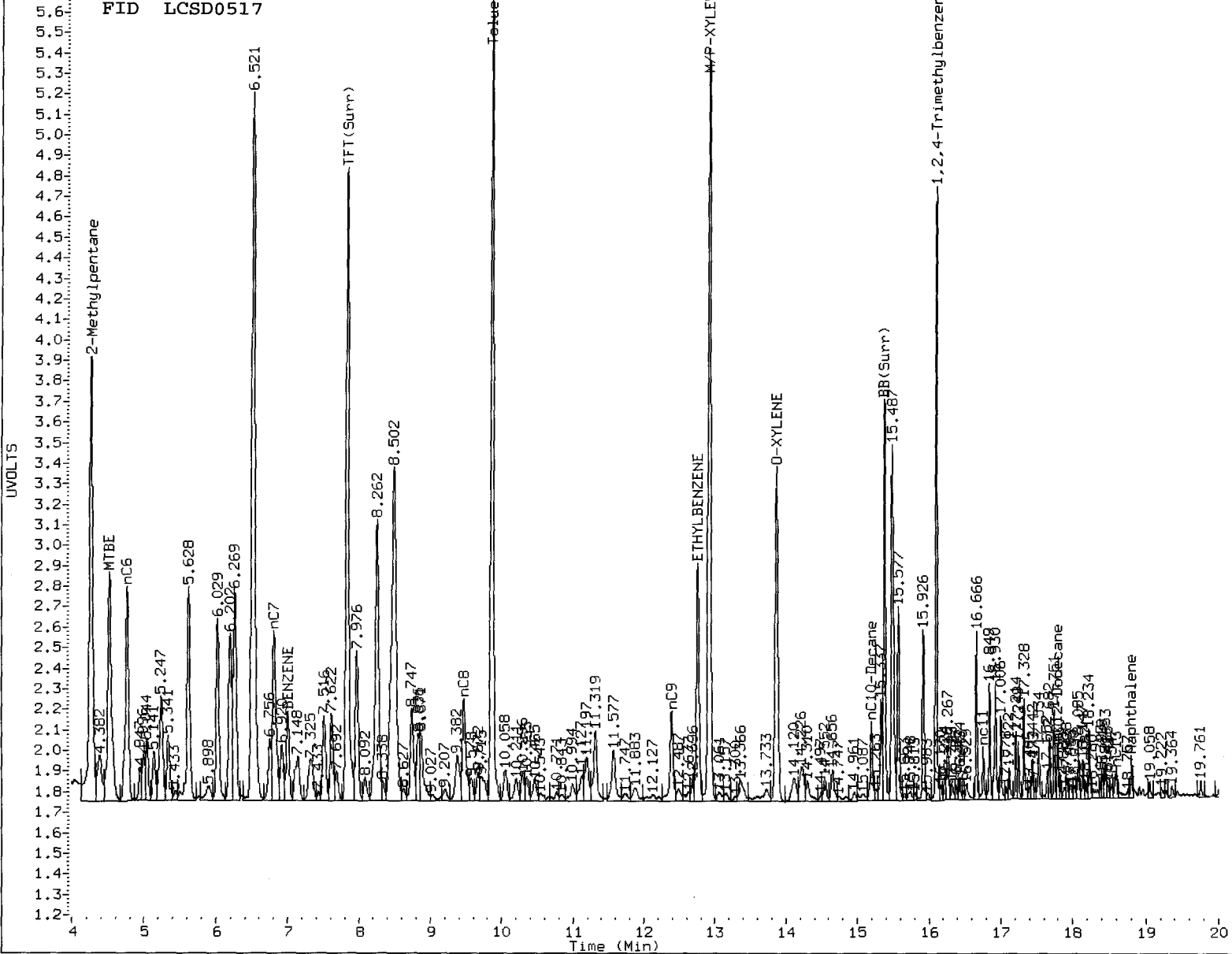
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PC
5/20/13

Data File: /chem3/pid1.1/20130517-1.b/0517a005.d/0517a005.cdf
Injection Date: 17-MAY-2013 12:07
Instrument: pid1.1
Client Sample ID:

AIA 0517a005.cdf: 0.000 to 23.003 Min





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: KC Date: 5/20/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-051713

METHOD BLANK

Lab Sample ID: MB-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *TW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/17/13 12:37

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons 5.0 < 5.0 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	82.9%
Bromobenzene	83.2%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	85.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a006.d ARI ID: MB0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a006.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.000	2968	37734	85.6	TFT(Surr)
15.381	0.001	1947	16457	85.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3253	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	3996	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	3150	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3253	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.001	3292	82.9	TFT(Surr)
15.390	0.001	7317	83.2	BB(Surr)

SW8021 (PID)

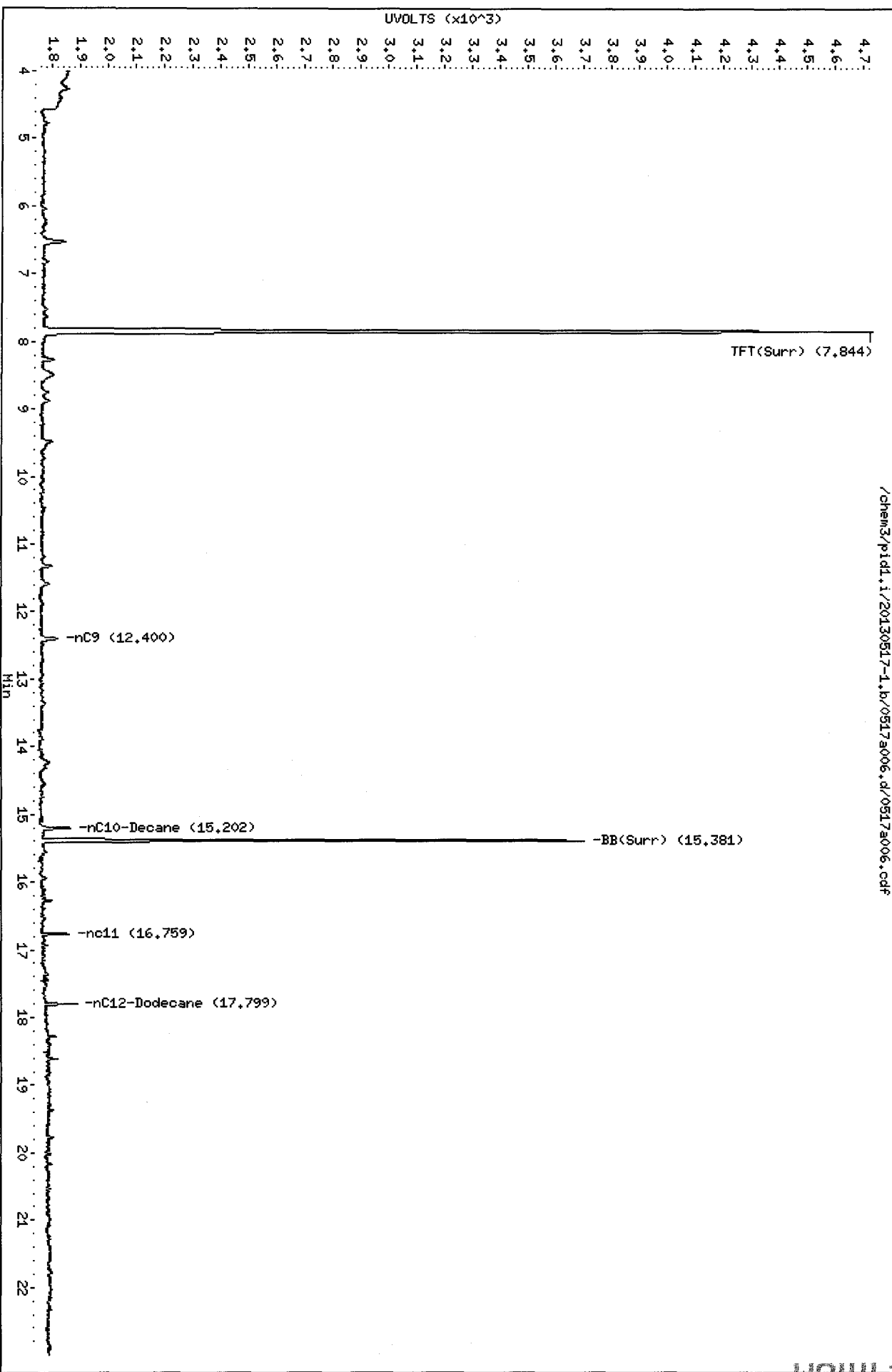
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a006.d
Date: 17-MAY-2013 12:37
Client ID:
Sample Info: HB0517
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130517-1.b/0517a006.d/0517a006.cdf



00050

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1


Sample ID: DEBRIS-SP-1

SAMPLE

Lab Sample ID: WQ44A

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 86.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	6	6	
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.6	46.9	
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	24.8	
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	14	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: DEBRIS-SP-2
SAMPLE

Lab Sample ID: WQ44B

LIMS ID: 13-10635

Matrix: Soil

Data Release Authorized:

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 88.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	5	5	U
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.5	38.3	
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	25.3	
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	12	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

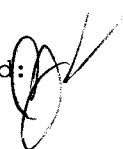
Page 1 of 1

**Sample ID: DEBRIS-SP-1
MATRIX SPIKE**

Lab Sample ID: WQ44A

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	6	234	226	101%	
Chromium	6010C	46.9	93.9	56.4	83.3%	
Copper	6010C	24.8	82.6	56.4	102%	
Lead	6010C	14	234	226	97.3%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

**Sample ID: DEBRIS-SP-1
DUPLICATE**

Lab Sample ID: WQ44A

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	6	6 U	0.0%	+/- 6	L
Chromium	6010C	46.9	35.2	28.5%	+/- 20%	*
Copper	6010C	24.8	22.9	8.0%	+/- 20%	
Lead	6010C	14	13	7.4%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WQ44LCS

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized:

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	211	200	106%	
Chromium	6010C	52.2	50.0	104%	
Copper	6010C	50.7	50.0	101%	
Lead	6010C	202	200	101%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WQ44MB

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	5	5	U
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated

Analytical Chemists and Consultants

May 21, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WQ44 - II

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted four soil samples on May 17, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for SVOCs, NWTPH-Dx, NWTPH-Gx/BTEX, and Metals, as requested on the COC.

The SVOC continuing calibration fell outside the 20% control limit low for Benzoic Acid, Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, and Pentachlorophenol. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

The SVOC LCS/LCSD percent recoveries of Benzoic Acid and the LCS percent recovery of Diethylphthalate were outside the control limits for **LCS-051713**. All other percent recoveries were within control limits. No corrective action was taken.

Isophorone, 2,4-Dimethylphenol, Diethylphthalate, and bis(2-Ethylhexyl)phthalate were present in the SVOC method blank at levels that were greater than ½ the reporting limit. All detected results for these compounds have been flagged with a "B" qualifier. No further corrective action was taken.

The BETX LCSD percent recovery of o-Xylene fell outside the control limits low for **LCS-051713**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WQ44_II

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WQ44	Turn-around Requested: RUSH 2HR	Page: 1 of 1
ARI Client Company: MFA, INC	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAWLFUSTER.COM	No. of Coolers:	Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
					DX-Silica Gen Clean-up	GX	BTEX	SVOC	METALS Ar, ch, Cu, Pb	
POST-SP-1	5/17/13	0930	S	6	X	X	X	X	X	
POST-SP-2		0920								
POST-SP-3		0910								
POST-SP-4		0900								

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CRESBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20000:11100



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WQ44

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.7 0.6 4.1 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 5/17/13 Time: 1600

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/17/13 Time: 1400 (pre log)

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WQ44
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. POST-SP-1	WQ44C	13-10636	Soil	05/17/13 09:30	05/17/13 16:00
2. POST-SP-2	WQ44D	13-10637	Soil	05/17/13 09:20	05/17/13 16:00
3. POST-SP-3	WQ44E	13-10638	Soil	05/17/13 09:10	05/17/13 16:00
4. POST-SP-4	WQ44F	13-10639	Soil	05/17/13 09:00	05/17/13 16:00



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



Analytical Resources, Incorporated
Analytical Chemists and Consultants

- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: POST-SP-1
SAMPLE

Lab Sample ID: WQ44C
 LIMS ID: 13-10636
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/17/13
 Date Received: 05/17/13

Date Extracted: 05/17/13
 Date Analyzed: 05/18/13 15:55
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.55 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 15.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	28
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	82
621-64-7	N-Nitroso-Di-N-Propylamine	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	95	< 95 U
105-67-9	2,4-Dimethylphenol	38	< 38 U
65-85-0	Benzoic Acid	380	< 380 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	82
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	95	< 95 U
91-57-6	2-Methylnaphthalene	19	150
77-47-4	Hexachlorocyclopentadiene	380	< 380 U
88-06-2	2,4,6-Trichlorophenol	95	< 95 U
95-95-4	2,4,5-Trichlorophenol	95	< 95 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	95	< 95 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	95	< 95 U
83-32-9	Acenaphthene	19	310
51-28-5	2,4-Dinitrophenol	810	< 810 U
100-02-7	4-Nitrophenol	95	< 95 U
132-64-9	Dibenzofuran	19	210

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: POST-SP-1
SAMPLE

Lab Sample ID: WQ44C
 LIMS ID: 13-10636
 Matrix: Soil
 Date Analyzed: 05/18/13 15:55

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	95	< 95 U
121-14-2	2,4-Dinitrotoluene	95	< 95 U
84-66-2	Diethylphthalate	47	< 47 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	290
100-01-6	4-Nitroaniline	95	< 95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	Phenanthrene	19	1,200
86-74-8	Carbazole	19	70
120-12-7	Anthracene	19	160
84-74-2	Di-n-Butylphthalate	19	21
206-44-0	Fluoranthene	19	620
129-00-0	Pyrene	19	510
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo (a) anthracene	19	130
117-81-7	bis (2-Ethylhexyl) phthalate	24	29 B
218-01-9	Chrysene	19	140
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	Benzo (a) pyrene	19	70
193-39-5	Indeno (1,2,3-cd) pyrene	19	31
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo (g,h,i) perylene	19	38
90-12-0	1-Methylnaphthalene	19	140
TOTBFA	Total Benzofluoranthenes	38	140


Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	73.8%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	73.3%	2-Fluorophenol	65.5%
2,4,6-Tribromophenol	79.6%	d4-2-Chlorophenol	70.8%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: POST-SP-2
SAMPLE

Lab Sample ID: WQ44D
 LIMS ID: 13-10637
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/17/13
 Date Received: 05/17/13

Date Extracted: 05/17/13
 Date Analyzed: 05/18/13 16:31
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.43 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 16.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	46
621-64-7	N-Nitroso-Di-N-Propylamine	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	38	< 38 U
65-85-0	Benzoic Acid	380	< 380 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	82
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	46
77-47-4	Hexachlorocyclopentadiene	380	< 380 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	71
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	100
51-28-5	2,4-Dinitrophenol	820	< 820 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	77

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: POST-SP-2
SAMPLE

Lab Sample ID: WQ44D
 LIMS ID: 13-10637
 Matrix: Soil
 Date Analyzed: 05/18/13 16:31

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	48	< 48 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	78
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	Phenanthrene	19	270
86-74-8	Carbazole	19	20
120-12-7	Anthracene	19	27
84-74-2	Di-n-Butylphthalate	19	25
206-44-0	Fluoranthene	19	120
129-00-0	Pyrene	19	120
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo (a) anthracene	19	29
117-81-7	bis (2-Ethylhexyl) phthalate	24	32 B
218-01-9	Chrysene	19	39
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
90-12-0	1-Methylnaphthalene	19	28
TOTBFA	Total Benzofluoranthenes	38	< 38 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	73.0%	2-Fluorobiphenyl	78.4%
d14-p-Terphenyl	83.8%	d4-1,2-Dichlorobenzene	71.6%
d5-Phenol	79.2%	2-Fluorophenol	72.3%
2,4,6-Tribromophenol	85.2%	d4-2-Chlorophenol	76.0%

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

Extraction Method: SW3546

Page 1 of 2

Sample ID: POST-SP-3
SAMPLE

Lab Sample ID: WQ44E

LIMS ID: 13-10638

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Extracted: 05/17/13

Date Analyzed: 05/18/13 17:08

Instrument/Analyst: NT10/YZ

GPC Cleanup: No

Sample Amount: 10.42 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Percent Moisture: 15.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	67
621-64-7	N-Nitroso-Di-N-Propylamine	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	38	< 38 U
65-85-0	Benzoic Acid	380	< 380 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	160
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	65
77-47-4	Hexachlorocyclopentadiene	380	< 380 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	180
51-28-5	2,4-Dinitrophenol	820	< 820 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	120

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: POST-SP-3
SAMPLE

Lab Sample ID: WQ44E
 LIMS ID: 13-10638
 Matrix: Soil
 Date Analyzed: 05/18/13 17:08

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	48	< 48 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	110
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	Phenanthrene	19	320
86-74-8	Carbazole	19	50
120-12-7	Anthracene	19	45
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	160
129-00-0	Pyrene	19	140
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo (a) anthracene	19	28
117-81-7	bis (2-Ethylhexyl) phthalate	24	36 B
218-01-9	Chrysene	19	36
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
90-12-0	1-Methylnaphthalene	19	43
TOTBFA	Total Benzofluoranthenes	38	< 38 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.0%	2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	78.0%	d4-1,2-Dichlorobenzene	63.0%
d5-Phenol	67.5%	2-Fluorophenol	58.5%
2,4,6-Tribromophenol	77.3%	d4-2-Chlorophenol	66.9%

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

Extraction Method: SW3546

Page 1 of 2

Sample ID: POST-SP-4
SAMPLE

Lab Sample ID: WQ44F

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Extracted: 05/17/13

Date Analyzed: 05/18/13 17:44

Instrument/Analyst: NT10/YZ

GPC Cleanup: No

Sample Amount: 10.58 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Percent Moisture: 14.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	64
621-64-7	N-Nitroso-Di-N-Propylamine	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	94	< 94 U
105-67-9	2,4-Dimethylphenol	38	< 38 U
65-85-0	Benzoic Acid	380	< 380 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	81
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	94	< 94 U
91-57-6	2-Methylnaphthalene	19	50
77-47-4	Hexachlorocyclopentadiene	380	< 380 U
88-06-2	2,4,6-Trichlorophenol	94	< 94 U
95-95-4	2,4,5-Trichlorophenol	94	< 94 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	94	< 94 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	94	< 94 U
83-32-9	Acenaphthene	19	220
51-28-5	2,4-Dinitrophenol	800	< 800 U
100-02-7	4-Nitrophenol	94	< 94 U
132-64-9	Dibenzofuran	19	140

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: POST-SP-4
SAMPLE

Lab Sample ID: WQ44F
 LIMS ID: 13-10639
 Matrix: Soil
 Date Analyzed: 05/18/13 17:44

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	94	< 94 U
121-14-2	2,4-Dinitrotoluene	94	< 94 U
84-66-2	Diethylphthalate	47	< 47 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	160
100-01-6	4-Nitroaniline	94	< 94 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	Phenanthrene	19	420
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	61
84-74-2	Di-n-Butylphthalate	19	24
206-44-0	Fluoranthene	19	280
129-00-0	Pyrene	19	260
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo (a) anthracene	19	56
117-81-7	bis (2-Ethylhexyl) phthalate	24	24 B
218-01-9	Chrysene	19	69
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	Benzo (a) pyrene	19	20
193-39-5	Indeno (1,2,3-cd) pyrene	19	< 19 U
53-70-3	Dibenz (a,h) anthracene	19	< 19 U
191-24-2	Benzo (g,h,i) perylene	19	< 19 U
90-12-0	1-Methylnaphthalene	19	36
TOTBFA	Total Benzofluoranthenes	38	50

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	79.6%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	69.2%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	81.9%	d4-2-Chlorophenol	66.9%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
POST-SP-1	68.8%	73.8%	80.0%	63.6%	73.3%	65.5%	79.6%	70.8%	0	
POST-SP-2	73.0%	78.4%	83.8%	71.6%	79.2%	72.3%	85.2%	76.0%	0	
POST-SP-3	65.0%	70.0%	78.0%	63.0%	67.5%	58.5%	77.3%	66.9%	0	
POST-SP-4	66.4%	72.4%	79.6%	61.2%	69.2%	58.9%	81.9%	66.9%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(36-101)	(31-100)

Prep Method: SW3546
Log Number Range: 13-10636 to 13-10639

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 1 of 2

Sample ID: LCS-051713
 LCS/LCSD

Lab Sample ID: LCS-051713
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/17/13
 Date Received: 05/17/13

Date Extracted LCS/LCSD: 05/17/13
 Date Analyzed LCS: 05/18/13 13:23
 LCSD: 05/18/13 14:00
 Instrument/Analyst LCS: NT10/YZ
 LCSD: NT10/YZ
 GPC Cleanup: No

Sample Amount LCS: 10.00 g
 LCSD: 10.00 g
 Final Extract Volume LCS: 1.0 mL
 LCSD: 1.0 mL
 Dilution Factor LCS: 1.00
 LCSD: 1.00
 Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	369	500	73.8%	379	500	75.8%	2.7%
Bis-(2-Chloroethyl) Ether	357	500	71.4%	385	500	77.0%	7.5%
2-Chlorophenol	328	500	65.6%	348	500	69.6%	5.9%
1,3-Dichlorobenzene	356	500	71.2%	371	500	74.2%	4.1%
1,4-Dichlorobenzene	364	500	72.8%	387	500	77.4%	6.1%
Benzyl Alcohol	281	500	56.2%	296	500	59.2%	5.2%
1,2-Dichlorobenzene	369	500	73.8%	384	500	76.8%	4.0%
2-Methylphenol	316	500	63.2%	340	500	68.0%	7.3%
2,2'-Oxybis(1-Chloropropane)	369	500	73.8%	396	500	79.2%	7.1%
4-Methylphenol	684	1000	68.4%	707	1000	70.7%	3.3%
N-Nitroso-Di-N-Propylamine	448	500	89.6%	458	500	91.6%	2.2%
Hexachloroethane	377	500	75.4%	390	500	78.0%	3.4%
Nitrobenzene	410	500	82.0%	432	500	86.4%	5.2%
Isophorone	379 B	500	75.8%	398 B	500	79.6%	4.9%
2-Nitrophenol	338	500	67.6%	354	500	70.8%	4.6%
2,4-Dimethylphenol	1040 B	1500	69.3%	1150 B	1500	76.7%	10.0%
Benzoic Acid	132 J	2750	4.8%	142 J	2750	5.2%	7.3%
bis(2-Chloroethoxy) Methane	414	500	82.8%	428	500	85.6%	3.3%
2,4-Dichlorophenol	1030	1500	68.7%	1070	1500	71.3%	3.8%
1,2,4-Trichlorobenzene	376	500	75.2%	394	500	78.8%	4.7%
Naphthalene	354	500	70.8%	367	500	73.4%	3.6%
4-Chloroaniline	848	1500	56.5%	891	1500	59.4%	4.9%
Hexachlorobutadiene	388	500	77.6%	405	500	81.0%	4.3%
4-Chloro-3-methylphenol	1370	1500	91.3%	1360	1500	90.7%	0.7%
2-Methylnaphthalene	373	500	74.6%	404	500	80.8%	8.0%
Hexachlorocyclopentadiene	691 Q	1500	46.1%	732 Q	1500	48.8%	5.8%
2,4,6-Trichlorophenol	1140	1500	76.0%	1180	1500	78.7%	3.4%
2,4,5-Trichlorophenol	1200	1500	80.0%	1200	1500	80.0%	0.0%
2-Chloronaphthalene	394	500	78.8%	420	500	84.0%	6.4%
2-Nitroaniline	1580	1500	105%	1640	1500	109%	3.7%
Dimethylphthalate	458	500	91.6%	472	500	94.4%	3.0%
Acenaphthylene	366	500	73.2%	377	500	75.4%	3.0%
3-Nitroaniline	1320	1500	88.0%	1360	1500	90.7%	3.0%
Acenaphthene	374	500	74.8%	410	500	82.0%	9.2%

ORGANICS ANALYSIS DATA SHEET

PSDDA Semivolatiles by SW8270D GC/MS

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Sample ID: LCSD-051713

LCS/LCSD

Lab Sample ID: LCS-051713

QC Report No: WQ44-Maul Foster & Alongi, Inc

LIMS ID: 13-10634

Project: Cashmere

Matrix: Soil

0779.02.01-03

Date Analyzed LCS: 05/18/13 13:23

LCSD: 05/18/13 14:00

Analyte	Spike		LCS	LCSD	Spike		LCS	RPD
	LCS	Added-LCS	Recovery		Added-LCSD	Recovery		
2,4-Dinitrophenol	1090 Q	2750	39.6%	1110 Q	2750	40.4%	1.8%	
4-Nitrophenol	960	1500	64.0%	970 Q	1500	64.7%	1.0%	
Dibenzofuran	404 Q	500	80.8%	418	500	83.6%	3.4%	
2,6-Dinitrotoluene	1380	1500	92.0%	1440	1500	96.0%	4.3%	
2,4-Dinitrotoluene	1460	1500	97.3%	1520	1500	101%	4.0%	
Diethylphthalate	704 B	500	141%	525 B	500	105%	29.1%	
4-Chlorophenyl-phenylether	389	500	77.8%	418	500	83.6%	7.2%	
Fluorene	375	500	75.0%	403	500	80.6%	7.2%	
4-Nitroaniline	1520	1500	101%	1520	1500	101%	0.0%	
4,6-Dinitro-2-Methylphenol	1670 Q	2750	60.7%	1710 Q	2750	62.2%	2.4%	
N-Nitrosodiphenylamine	490	500	98.0%	494	500	98.8%	0.8%	
4-Bromophenyl-phenylether	451	500	90.2%	451	500	90.2%	0.0%	
Hexachlorobenzene	397	500	79.4%	405	500	81.0%	2.0%	
Pentachlorophenol	472 Q	1500	31.5%	490 Q	1500	32.7%	3.7%	
Phenanthrene	422	500	84.4%	440	500	88.0%	4.2%	
Carbazole	625	500	125%	625	500	125%	0.0%	
Anthracene	411	500	82.2%	415	500	83.0%	1.0%	
Di-n-Butylphthalate	514	500	103%	537	500	107%	4.4%	
Fluoranthene	439	500	87.8%	447	500	89.4%	1.8%	
Pyrene	426	500	85.2%	450	500	90.0%	5.5%	
Butylbenzylphthalate	555	500	111%	587	500	117%	5.6%	
3,3'-Dichlorobenzidine	723	1500	48.2%	725	1500	48.3%	0.3%	
Benzo(a)anthracene	409	500	81.8%	434	500	86.8%	5.9%	
bis(2-Ethylhexyl)phthalate	493 B	500	98.6%	506 B	500	101%	2.6%	
Chrysene	407	500	81.4%	430	500	86.0%	5.5%	
Di-n-Octyl phthalate	487	500	97.4%	503	500	101%	3.2%	
Benzo(a)pyrene	422	500	84.4%	443	500	88.6%	4.9%	
Indeno(1,2,3-cd)pyrene	429	500	85.8%	454	500	90.8%	5.7%	
Dibenz(a,h)anthracene	418	500	83.6%	442	500	88.4%	5.6%	
Benzo(g,h,i)perylene	408	500	81.6%	424	500	84.8%	3.8%	
1-Methylnaphthalene	394	500	78.8%	417	500	83.4%	5.7%	
Total Benzofluoranthenes	850	1000	85.0%	869	1000	86.9%	2.2%	

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	80.2%	77.8%
2-Fluorobiphenyl	74.8%	74.2%
d14-p-Terphenyl	87.4%	88.8%
d4-1,2-Dichlorobenzene	72.2%	70.8%
d5-Phenol	79.1%	75.9%
2-Fluorophenol	72.9%	72.3%
2,4,6-Tribromophenol	82.5%	81.1%
d4-2-Chlorophenol	76.3%	72.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET
 PSDDA Semivolatiles by SW8270D GC/MS
 Extraction Method: SW3546
 Page 1 of 2



Sample ID: MB-051713
 METHOD BLANK

Lab Sample ID: MB-051713
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/17/13
 Date Analyzed: 05/18/13 12:46
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	16 J
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	26 J
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

Lab Sample ID: MB-051713
 LIMS ID: 13-10634
 Matrix: Soil
 Date Analyzed: 05/18/13 12:46

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	6,700 E
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl) phthalate	25	57
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.8%	2-Fluorobiphenyl	65.0%
d14-p-Terphenyl	74.6%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	65.3%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	56.7%	d4-2-Chlorophenol	64.3%

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130518.b

Instrument: nt10.i Date: 18-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R ²

NO Q-FLAGS	

CONTINUING CAL: 18-MAY-2013

Compound	%D

Benzoic acid	-64.0
Hexachlorocyclopentadiene	-48.3
2,4-Dinitrophenol	-43.2
4-Nitrophenol	-31.5
4,6-Dinitro-2-methylphenol	-22.1
Pentachlorophenol	-63.4
2,3,4,6-Tetrachlorophenol	-20.2

W 5/21/13

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 05/21/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ44C 13-10636	POST-SP-1 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	50 230 68.4%
WQ44D 13-10637	POST-SP-2 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	71 410 70.2%
WQ44E 13-10638	POST-SP-3 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	35 160 67.1%
WQ44F 13-10639	POST-SP-4 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	50 380 71.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a006.d
Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 05/20/2013

ARI ID: WQ44MBS1
Client ID: WQ44MBS1
Injection: 19-MAY-2013 16:35
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	105791	3
C8	1.082	-0.008	1818	1412	DIESEL (C12-C24)	288136	15.43
C10	2.865	0.006	496	555	M.OIL (C24-C38)	225475	14.06
C12	3.859	-0.006	101	34	AK-102 (C10-C25)	312903	14.41
C14	4.571	0.010	1400	1947	AK-103 (C25-C36)	188039	16.19
C16	5.155	0.000	1701	2352			
C18	5.720	0.000	2361	683			
C20	6.283	0.002	1772	1051			
C22	6.826	-0.005	1757	1066			
C24	7.356	0.003	1438	1012			
C25	7.592	-0.007	1097	658			
C26	7.862	0.007	1447	1385			
C28	8.299	0.001	1716	1569	IT.DIES (C10-C24)	302595	13.98
C32	9.087	0.012	3110	5389			
C34	9.416	-0.003	1332	659	BUNKERC (C10-C38)	528070	56.99
Filter Peak	11.488	0.000	1743	798			
C36	9.728	-0.011	1602	2569			
C38	10.032	-0.008	1535	1806			
C40	10.326	0.004	1839	1535			
o-terph	5.853	-0.001	1090590	958435			
Triacon Surr	8.712	-0.001	745993	745781	IT.MOIL (C24-C40)	999647	16.41

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

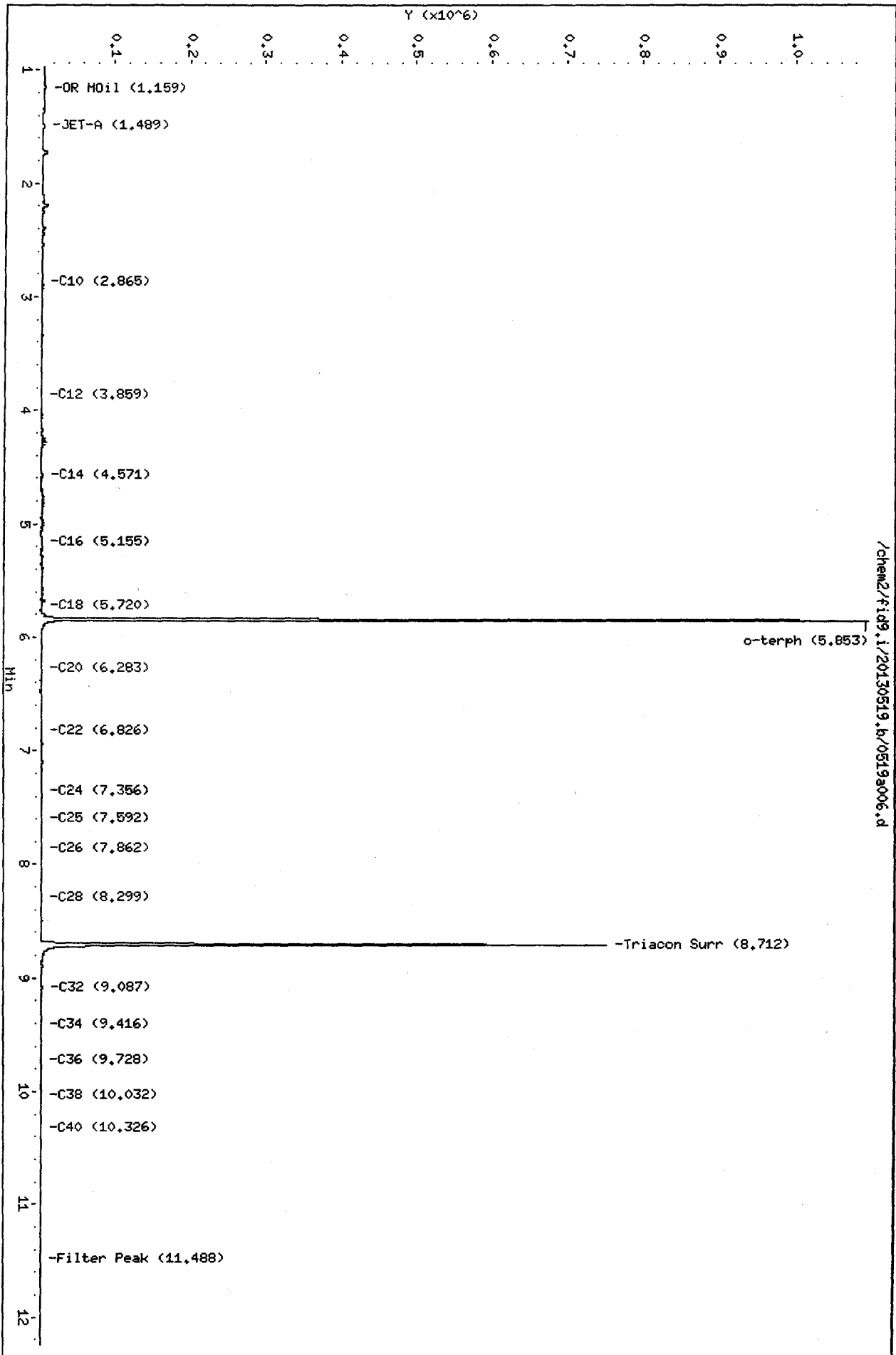
Surrogate	Area	Amount	%Rec
o-Terphenyl	958435	37.4	83.2
Triacontane	745781	39.5	87.7

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/20/13

Data File: /chem2/fid9.i/20130519.b/0519a006.d
Date: 19-MAY-2013 16:35
Client ID: M044HBS1
Sample Info: M044HBS1
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25



M044: 00024

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a011.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44C
 Client ID: POST-SP-1
 Injection: 19-MAY-2013 18:26
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	232701	7
C8	1.092	0.003	3707	7795	DIESEL (C12-C24)	7976661	427.02
C10	2.860	0.001	2321	2399	M.OIL (C24-C38)	31528128	1966.18
C12	3.861	-0.003	6053	6515	AK-102 (C10-C25)	8764813	403.78 M
C14	4.559	-0.001	26728	22178	AK-103 (C25-C36)	28515467	2454.45 M
C16	5.151	-0.003	58077	55293			
C18	5.715	-0.005	62406	72670			
C20	6.285	0.005	146234	230898			
C22	6.826	-0.005	56384	43343			
C24	7.347	-0.005	72813	59870			
C25	7.599	-0.001	99048	73009			
C26	7.852	-0.003	118314	41470			
C28	8.297	0.000	213468	120517	IT.DIES (C10-C24)	8079296	373.25 M
C32	9.077	0.002	301311	71684			
C34	9.422	0.003	283494	237515	BUNKERC (C10-C38)	39607424	4274.17 M
Filter Peak	11.486	-0.001	5287	4594			
C36	9.738	-0.001	179642	161926			
C38	10.036	-0.004	109533	65304			
C40	10.324	0.003	50533	34972			
o-terph	5.855	0.001	882222	788936			
Triacon Surr	8.724	0.011	583890	748436	IT.MOIL (C24-C40)	33412785	2110.80 M

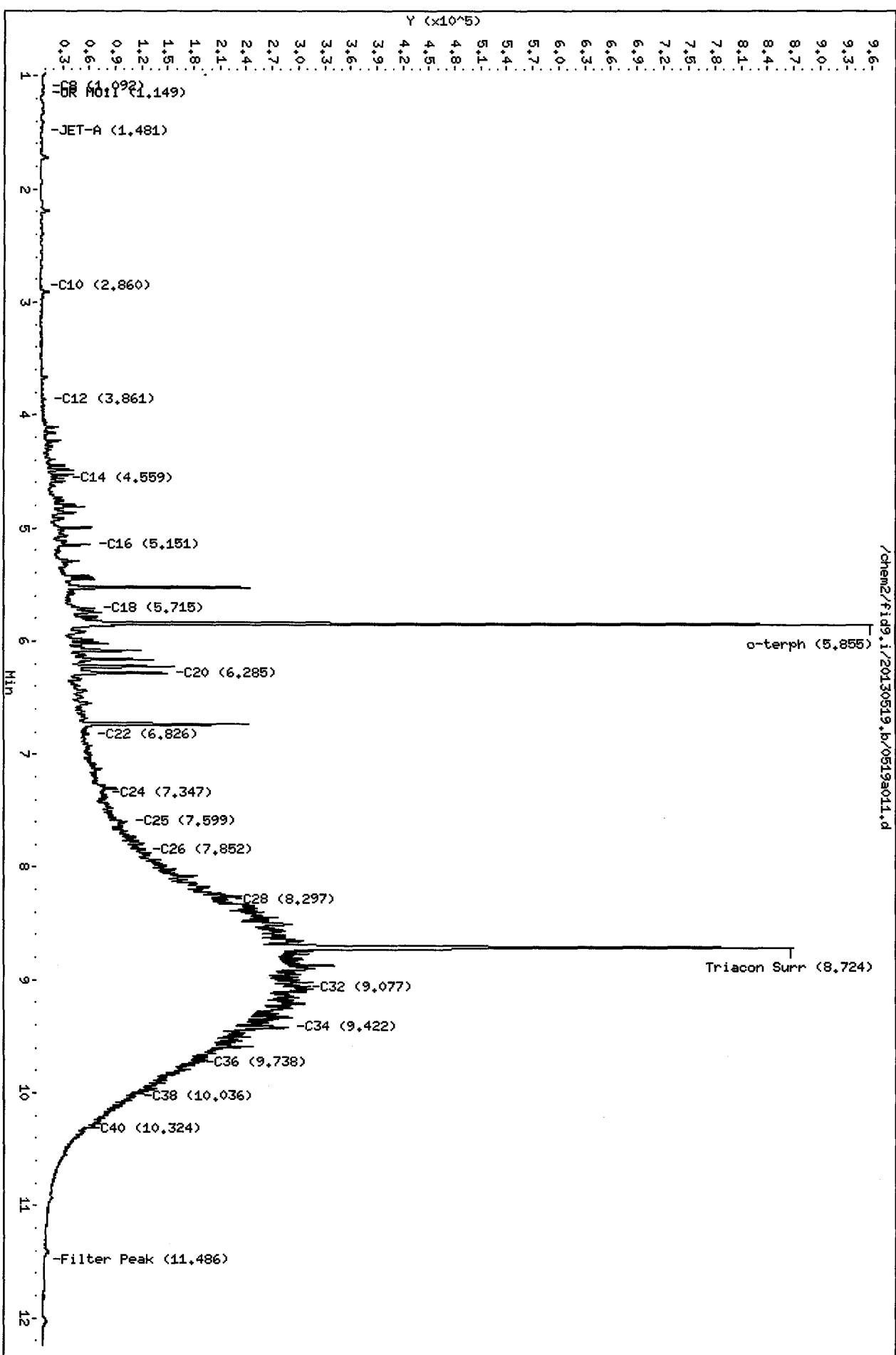
M Indicates manual integration within range.

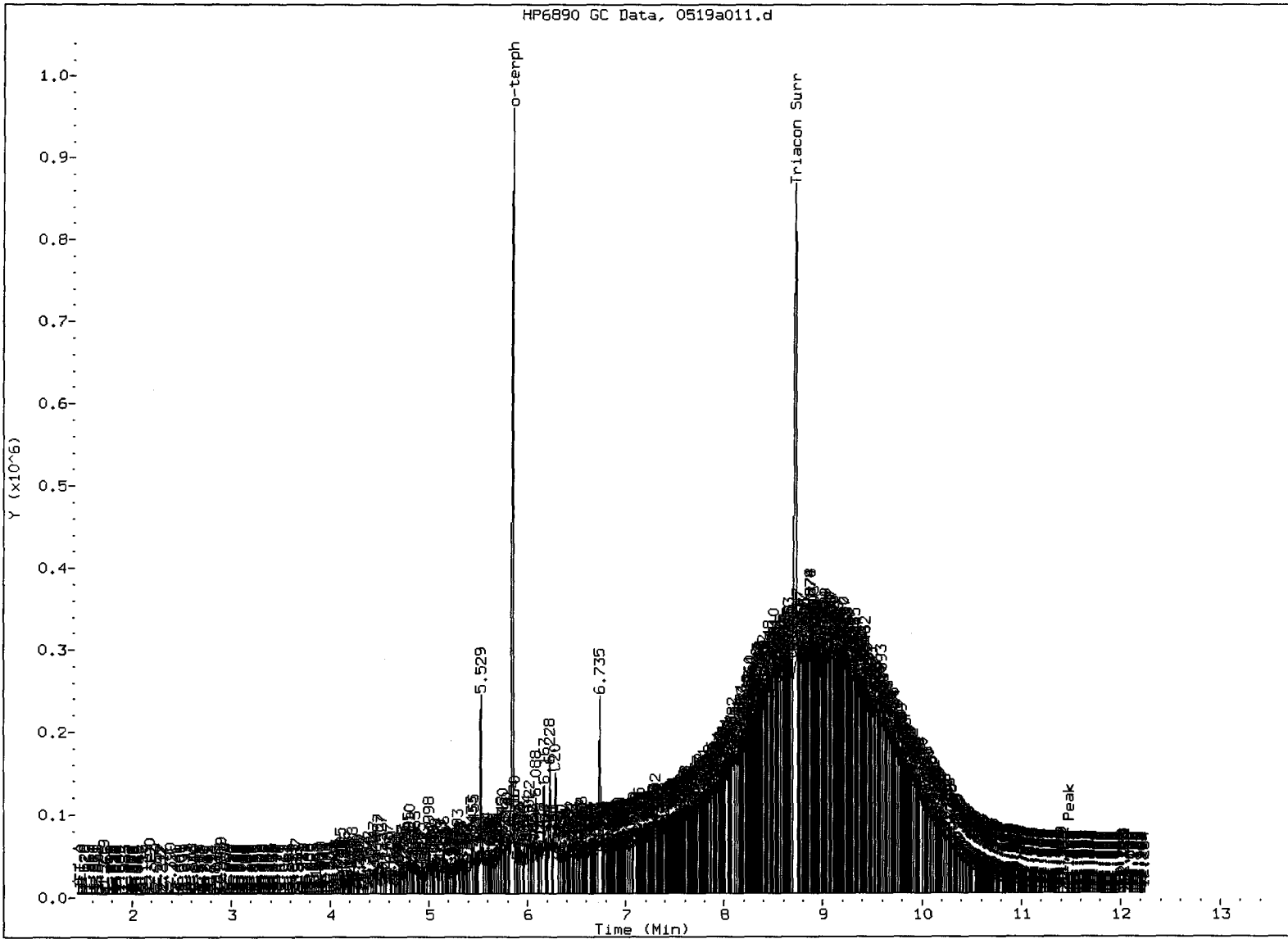
Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	788936	30.8	68.5
Triacontane	748436	39.6	88.0

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Jus
5/20/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst:

Date: 5/24/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a012.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44D
 Client ID: POST-SP-2
 Injection: 19-MAY-2013 18:48
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	218169	6
C8	1.098	0.008	3960	8197	DIESEL (C12-C24)	11205228	599.86
C10	2.860	0.001	3432	3317	M.OIL (C24-C38)	55777179	3478.42
C12	3.863	-0.001	4926	6165	AK-102 (C10-C25)	12494860	575.61 M
C14	4.557	-0.003	13527	13455	AK-103 (C25-C36)	50503669	4347.08 M
C16	5.151	-0.003	25496	33843			
C18	5.715	-0.004	44374	60528			
C20	6.288	0.008	87256	146277			
C22	6.828	-0.003	87175	76461			
C24	7.353	0.001	119175	57568			
C25	7.602	0.003	173558	163155			
C26	7.856	0.001	201922	155231			
C28	8.295	-0.002	385472	336213	IT.DIES (C10-C24)	11297950	521.94 M
C32	9.078	0.003	555112	399888			
C34	9.421	0.002	447881	338964	BUNKERC (C10-C38)	67075129	7238.30 M
Filter Peak	11.488	0.001	7201	5118			
C36	9.744	0.005	345491	230434			
C38	10.045	0.005	186847	127817			
C40	10.321	0.000	77457	50137			
o-terph	5.854	0.001	915513	809024			
Triacon Surr	8.743	0.030	527692	710433	IT.MOIL (C24-C40)	58338975	3724.02 M

M Indicates manual integration within range.

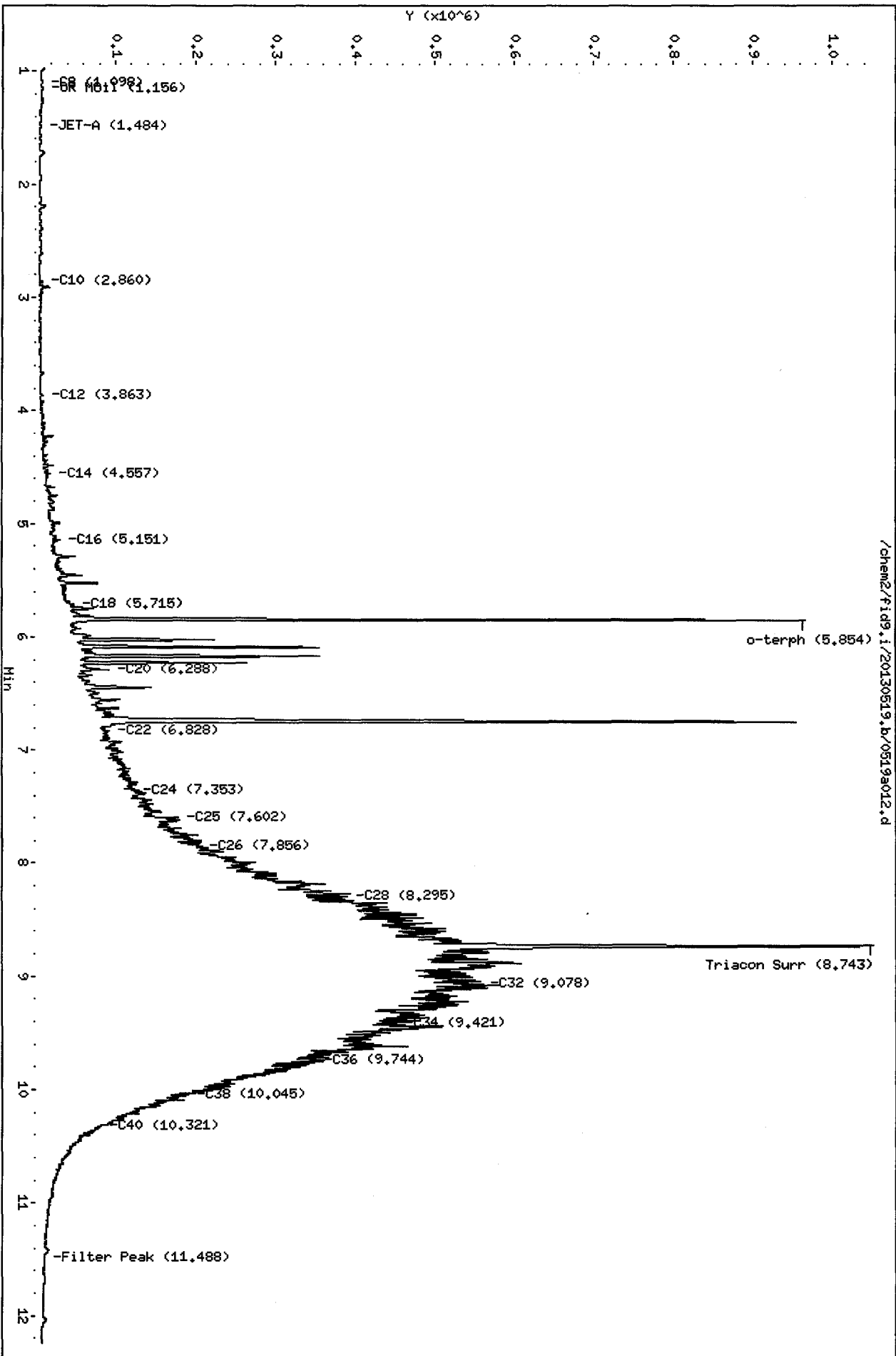
Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	809024	31.6	70.2
Triacontane	710433	37.6	83.5

FW spectra

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JM
5/20/13



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a013.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44E
 Client ID: POST-SP-3
 Injection: 19-MAY-2013 19:11
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	184425	5
C8	1.083	-0.006	3495	6664	DIESEL (C12-C24)	5503506	294.62
C10	2.855	-0.003	4172	3814	M.OIL (C24-C38)	22373441	1395.27
C12	3.864	0.000	2599	3820	AK-102 (C10-C25)	6100058	281.02 M
C14	4.558	-0.002	8931	10509	AK-103 (C25-C36)	20331791	1750.05 M
C16	5.151	-0.004	13532	16936			
C18	5.717	-0.003	20531	24008			
C20	6.285	0.005	46619	76234			
C22	6.837	0.006	39907	26326			
C24	7.347	-0.005	55302	41925			
C25	7.600	0.001	72803	18524			
C26	7.852	-0.003	90374	76324			
C28	8.297	0.000	142891	31200	IT.DIES (C10-C24)	5573802	257.50 M
C32	9.082	0.007	222599	238226			
C34	9.419	0.000	194190	57221	BUNKERC (C10-C38)	27947243	3015.88 M
Filter Peak	11.492	0.005	4776	2172			
C36	9.741	0.002	121077	107343			
C38	10.041	0.002	67651	17294			
C40	10.324	0.003	34765	26351			
o-terph	5.853	-0.001	815316	772994			
Triacon Surr	8.724	0.011	626943	701297	IT.MOIL (C24-C40)	23848169	1495.77 M

M Indicates manual integration within range.

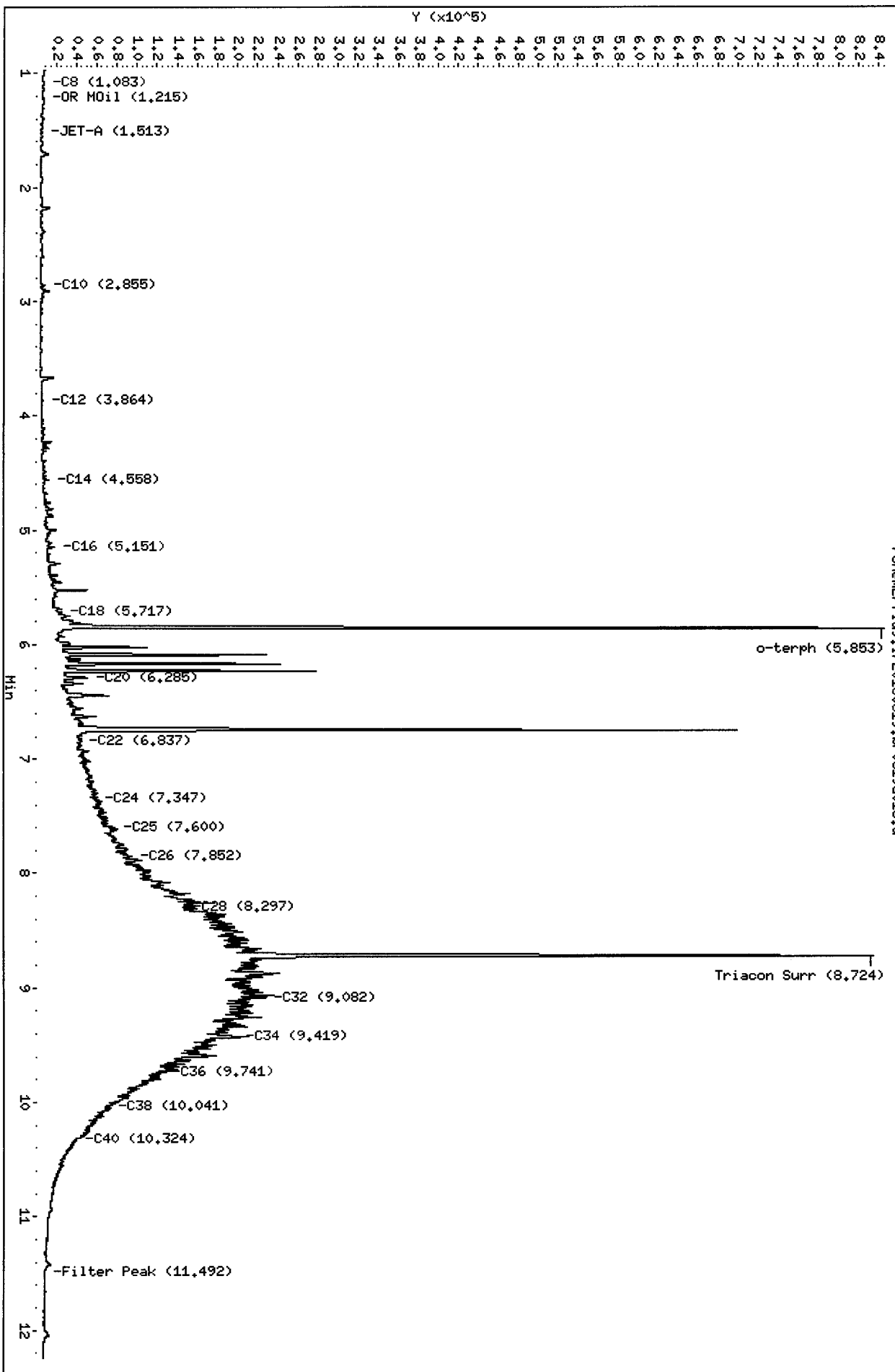
Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	772994	30.2	67.1
Triacontane	701297	37.1	82.5

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

56
5/20/13



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a014.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44F
 Client ID: POST-SP-4
 Injection: 19-MAY-2013 19:33
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	217753	6
C8	1.090	0.000	3047	6113	DIESEL (C12-C24)	8069567	431.99
C10	2.858	-0.001	2875	2892	M.OIL (C24-C38)	51924765	3238.18
C12	3.860	-0.004	3437	4042	AK-102 (C10-C25)	9203572	423.99 M
C14	4.559	-0.002	10944	9582	AK-103 (C25-C36)	47160238	4059.29 M
C16	5.153	-0.002	20314	37626			
C18	5.725	0.005	31173	12218			
C20	6.283	0.003	80808	148739			
C22	6.833	0.002	74868	28042			
C24	7.353	0.001	110850	19892			
C25	7.601	0.002	147152	78416			
C26	7.858	0.002	190463	195989			
C28	8.294	-0.004	346276	326755	IT.DIES (C10-C24)	8144972	376.28 M
C32	9.077	0.001	517831	192155			
C34	9.420	0.001	412864	130289	BUNKERC (C10-C38)	60069738	6482.32 M
Filter Peak	11.494	0.007	6224	5468			
C36	9.730	-0.009	331194	414051			
C38	10.036	-0.004	166584	138067			
C40	10.325	0.004	70121	59850			
o-terph	5.854	0.000	994075	822142			
Triacon Surr	8.741	0.028	568622	799812	IT.MOIL (C24-C40)	54188359	3450.02 M

M Indicates manual integration within range.

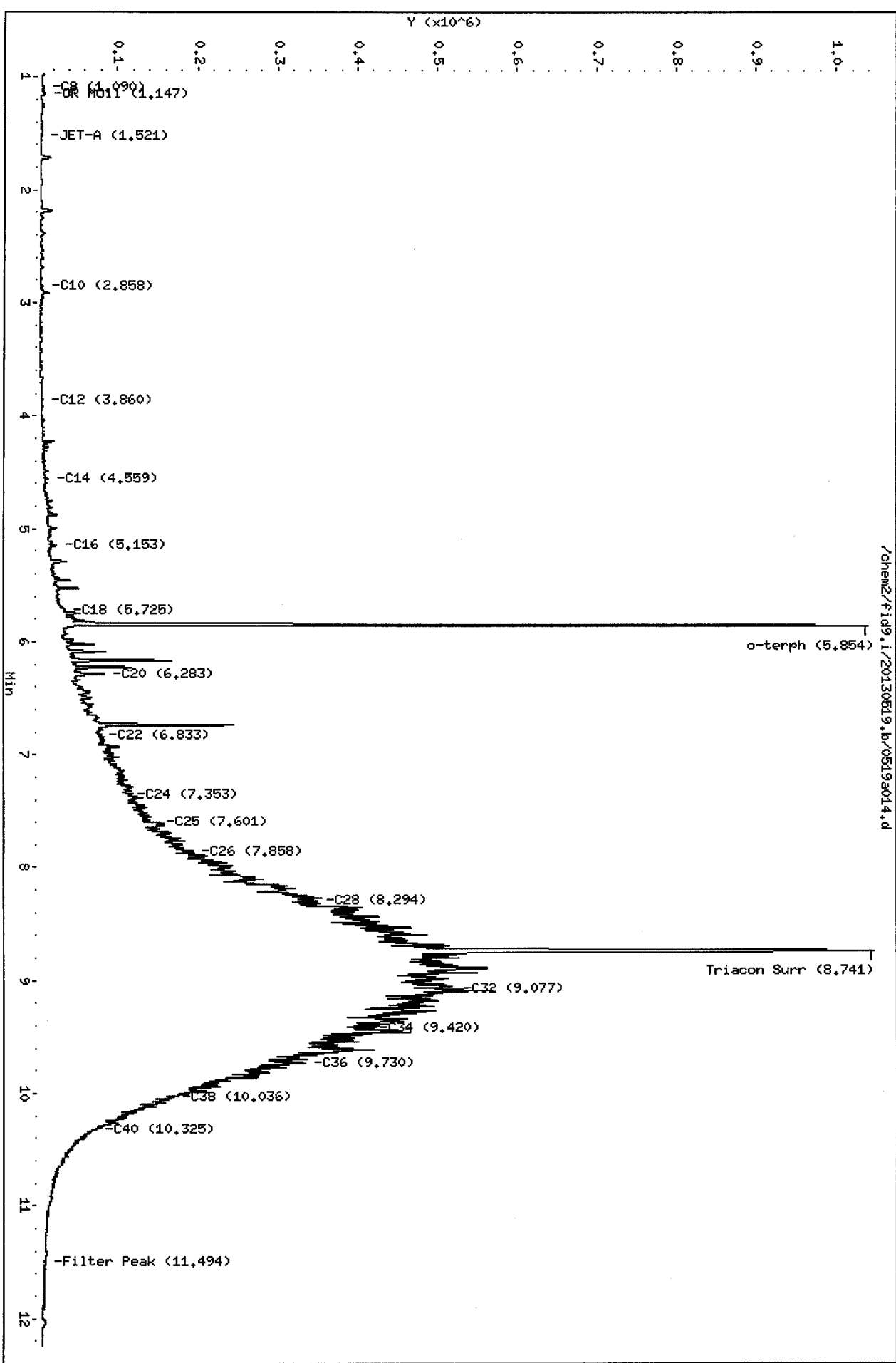
Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

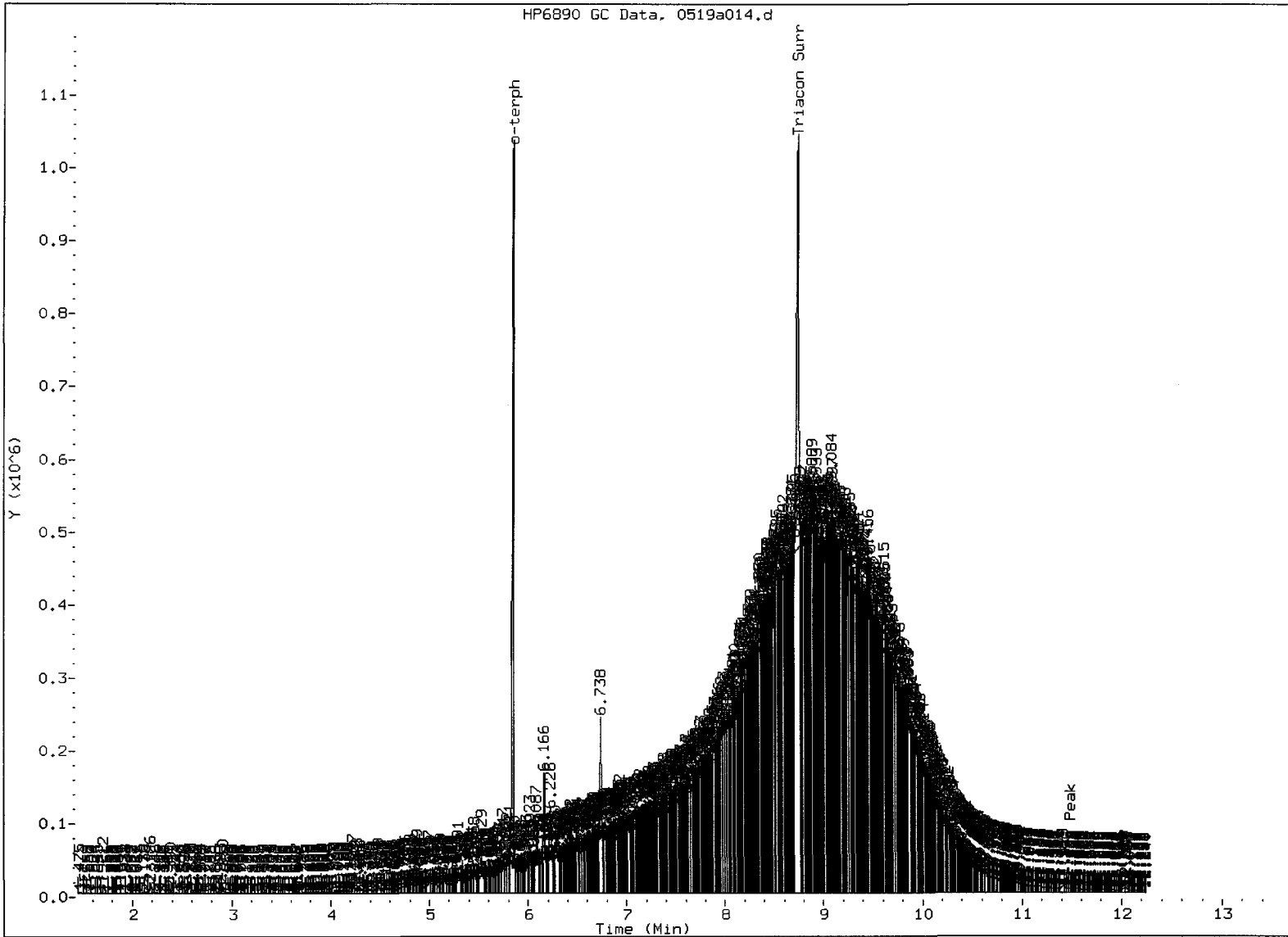
Surrogate	Area	Amount	%Rec
o-Terphenyl	822142	32.1	71.3
Triacontane	799812	42.3	94.0

JW
5/20/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/20/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JW

Date: 5/2/12

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
POST-SP-1	68.4%	0
POST-SP-2	70.2%	0
POST-SP-3	67.1%	0
POST-SP-4	71.3%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-10636 to 13-10639

Sample ID: LCS-051913
 LCS/LCSD

Lab Sample ID: LCS-051913
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/17/13
 Date Received: 05/17/13

Date Extracted LCS/LCSD: 05/19/13
 Date Analyzed LCS: 05/19/13 16:58
 LCSD: 05/19/13 17:20
 Instrument/Analyst LCS: FID/JLW
 LCSD: FID/JLW

Sample Amount LCS: 10.0 g
 LCSD: 10.0 g
 Final Extract Volume LCS: 1.0 mL
 LCSD: 1.0 mL
 Dilution Factor LCS: 1.0
 LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	119	150	79.3%	119	150	79.3%	0.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	85.9%	81.3%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a007.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44LCSS1
 Client ID: WQ44LCSS1
 Injection: 19-MAY-2013 16:58
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4809123	140
C8	1.095	0.005	10940	19460	DIESEL (C12-C24)	22272836	1192.35
C10	2.860	0.002	85379	87508	M.OIL (C24-C38)	330741	20.63
C12	3.862	-0.003	206971	220992	AK-102 (C10-C25)	25818443	1189.40 M
C14	4.561	0.001	385261	358257	AK-103 (C25-C36)	239528	20.62
C16	5.156	0.001	525313	508272			
C18	5.721	0.002	514208	570241			
C20	6.277	-0.003	279182	412829			
C22	6.825	-0.006	130734	147950			
C24	7.346	-0.006	39066	65008			
C25	7.594	-0.005	20093	30120			
C26	7.872	0.017	4441	2228			
C28	8.293	-0.004	2846	3746	IT.DIES (C10-C24)	25731220	1188.73 M
C32	9.083	0.008	1371	1035			
C34	9.419	0.000	102	36	BUNKERC (C10-C38)	26061961	2812.43 M
Filter Peak	11.492	0.005	725	269			
C36	9.734	-0.005	306	416			
C38	10.040	0.000	284	72			
C40	10.334	0.013	667	455			
o-terph	5.857	0.004	1039500	989662			
Triacon Surr	8.713	0.000	716346	767154	IT.MOIL (C24-C40)	1106524	21.93

M Indicates manual integration within range.

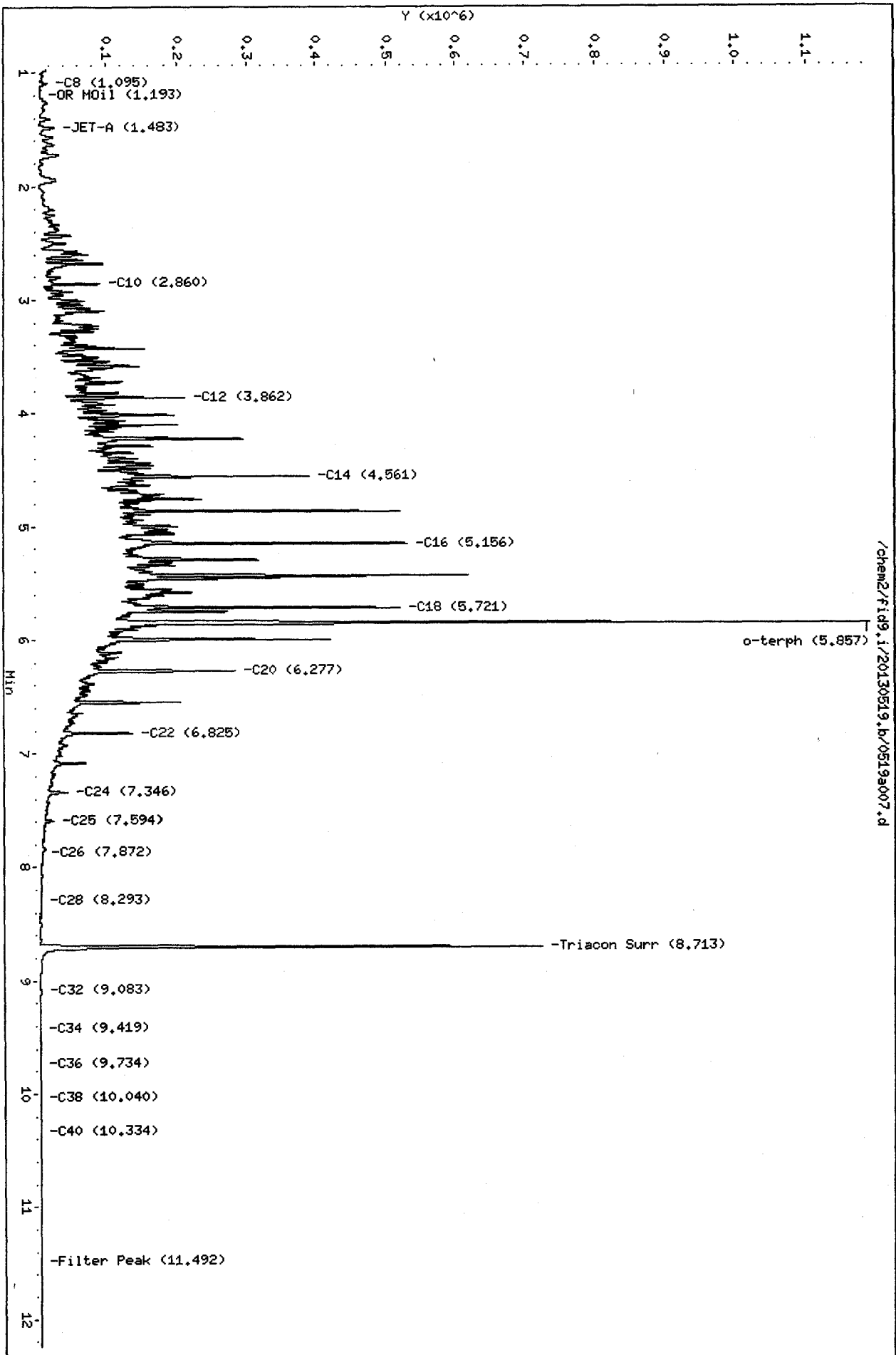
Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	989662	38.6	85.9
Triacontane	767154	40.6	90.2

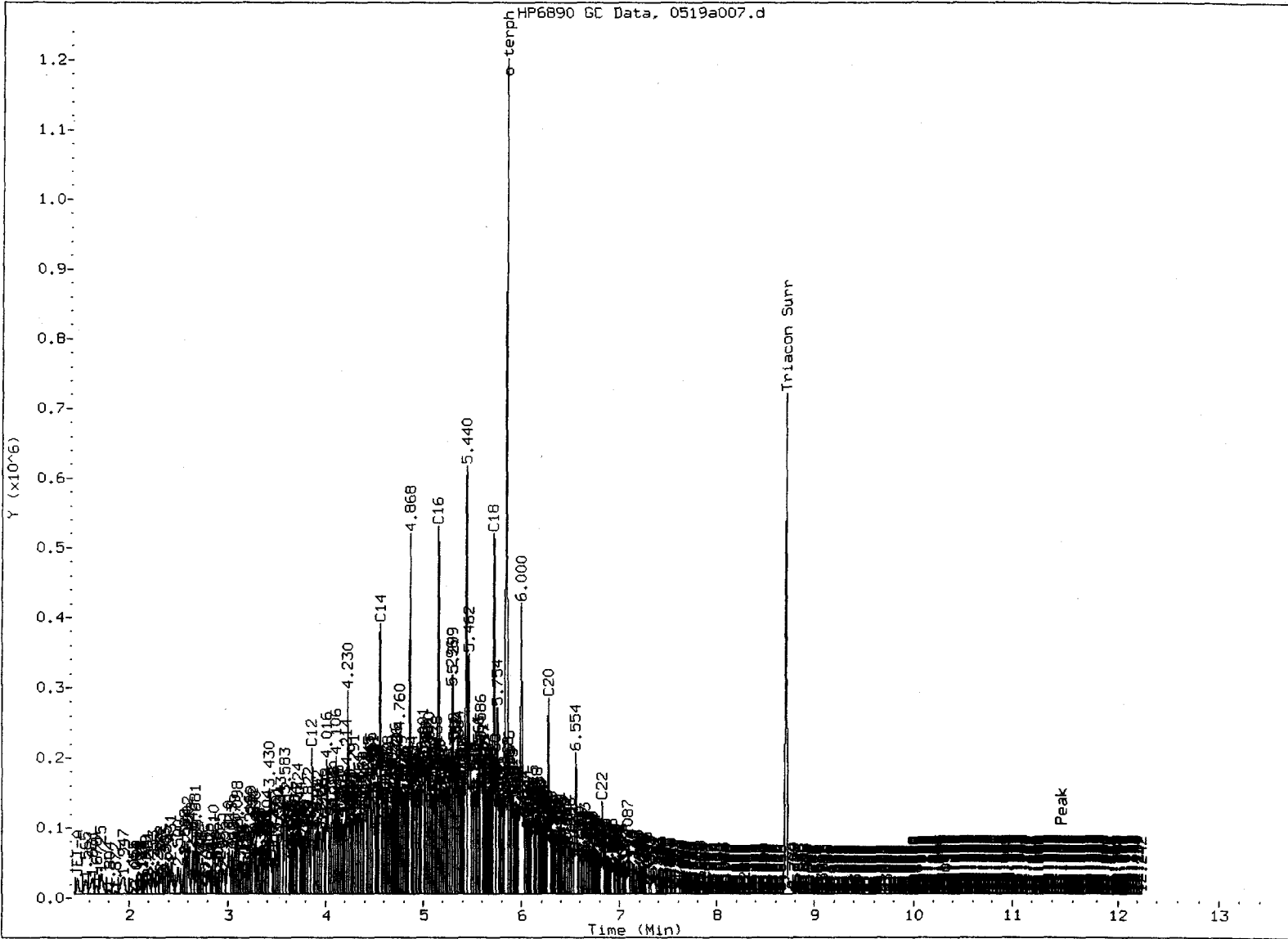
JW
5/20/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JM
5/20/13



/chem2/fid9.1/20130519.b/0519a007.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JD

Date: 5/20/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a008.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44LCSDS1
 Client ID: WQ44LCSDS1
 Injection: 19-MAY-2013 17:20
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4782153	139
C8	1.090	0.000	11868	17768	DIESEL (C12-C24)	22195274	1188.19
C10	2.857	-0.001	84529	89431	M.OIL (C24-C38)	319519	19.93
C12	3.862	-0.002	209368	224880	AK-102 (C10-C25)	25745711	1186.05 M
C14	4.563	0.002	385770	347491	AK-103 (C25-C36)	231590	19.93
C16	5.154	-0.001	520431	488341			
C18	5.722	0.002	508481	585275			
C20	6.281	0.001	292545	385413			
C22	6.824	-0.007	119332	161843			
C24	7.345	-0.007	36446	54860			
C25	7.593	-0.006	17886	34224			
C26	7.836	-0.019	8508	10889			
C28	8.293	-0.004	2665	2739	IT.DIES (C10-C24)	25660609	1185.47 M
C32	9.063	-0.012	837	1056			
C34	9.419	0.000	90	66	BUNKERC (C10-C38)	25980128	2803.60 M
Filter Peak	11.487	0.000	712	167			
C36	9.732	-0.007	359	344			
C38	10.045	0.005	219	139			
C40	10.324	0.003	742	291			
o-terph	5.858	0.004	975812	936606			
Triacon Surr	8.713	0.000	653762	744533	IT.MOIL (C24-C40)	1073252	21.24

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	936606	36.6	81.3
Triacontane	744533	39.4	87.5

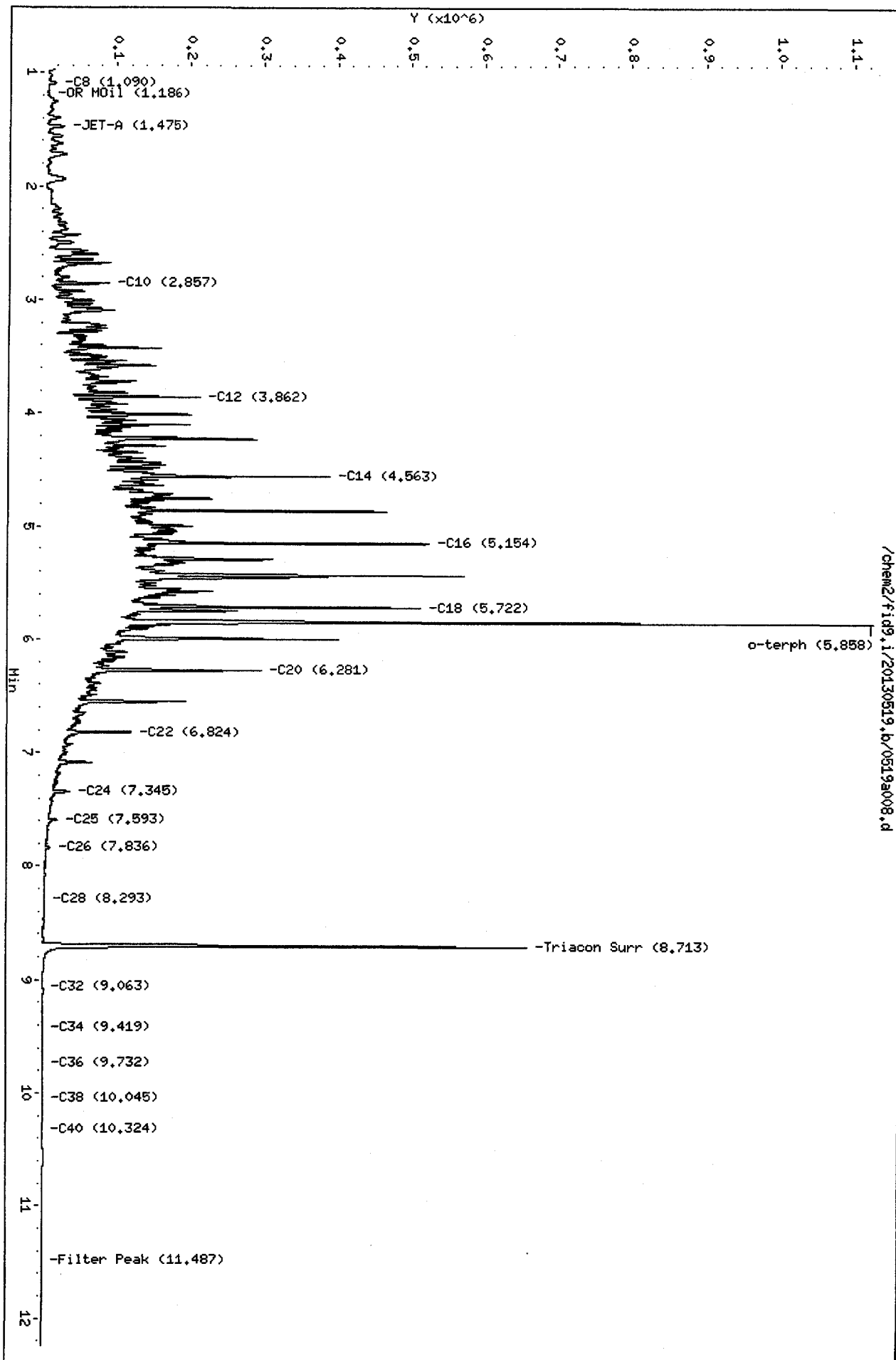
*80
5/20/13*

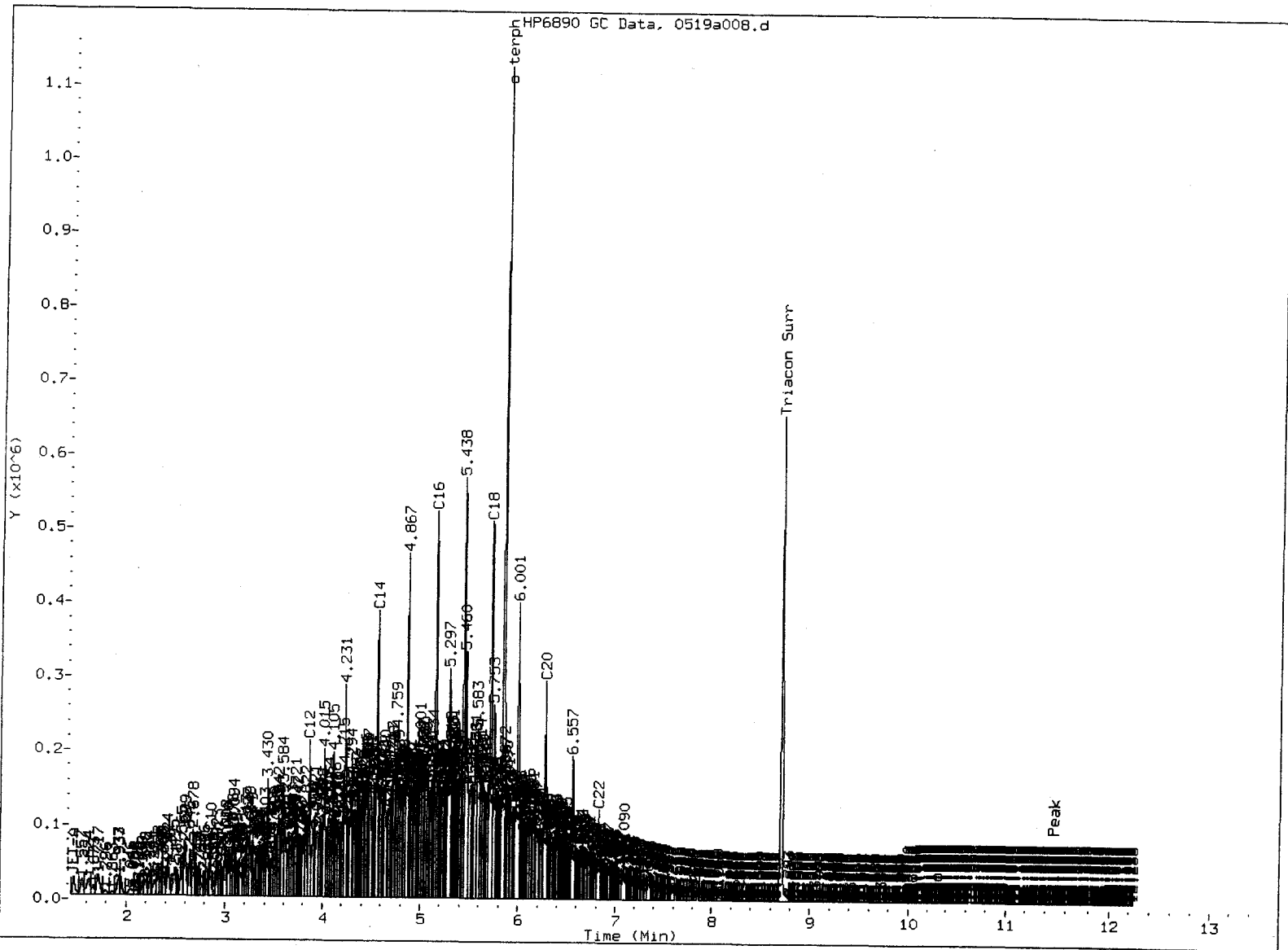
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fid9.i/20130519.b/0519a008.d
Date: 19-MAY-2013 17:20
Client ID: M044LCSDS1
Sample Info: M044LCSDS1
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

Handwritten initials





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JW

Date: 5/20/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ44
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10636-WQ44C	POST-SP-1	8.46 g	1.00 mL	D	05/19/13
13-10637-WQ44D	POST-SP-2	8.43 g	1.00 mL	D	05/19/13
13-10638-WQ44E	POST-SP-3	8.48 g	1.00 mL	D	05/19/13
13-10639-WQ44F	POST-SP-4	8.61 g	1.00 mL	D	05/19/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: POST-SP-1
SAMPLE

Lab Sample ID: WQ44C

LIMS ID: 13-10636

Matrix: Soil

Data Release Authorized: *TNN*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 18:20

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 15.5%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	< 16 U	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	32	< 32 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.5	< 6.5 U	---

BETX Surrogate Recovery

Trifluorotoluene	80.4%
Bromobenzene	80.0%

Gasoline Surrogate Recovery

Trifluorotoluene	83.7%
Bromobenzene	83.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a009.d ARI ID: WQ44C
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a009.d Client ID: POST-SP-1
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 18:20
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	-0.002	2903	36468	83.7	TFT(Surr)
15.381	0.000	1902	15997	83.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	6169	0.017
8015C 2MP-TMB (4.17 to 16.20)	723723	2907	0.004
AK101 nC6-nC10 (4.67 to 15.10)	582885	2907	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	7121	0.019

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	-0.002	3192	80.4	TFT(Surr)
15.388	0.000	7031	80.0	BB(Surr)

SW8021 (PID)

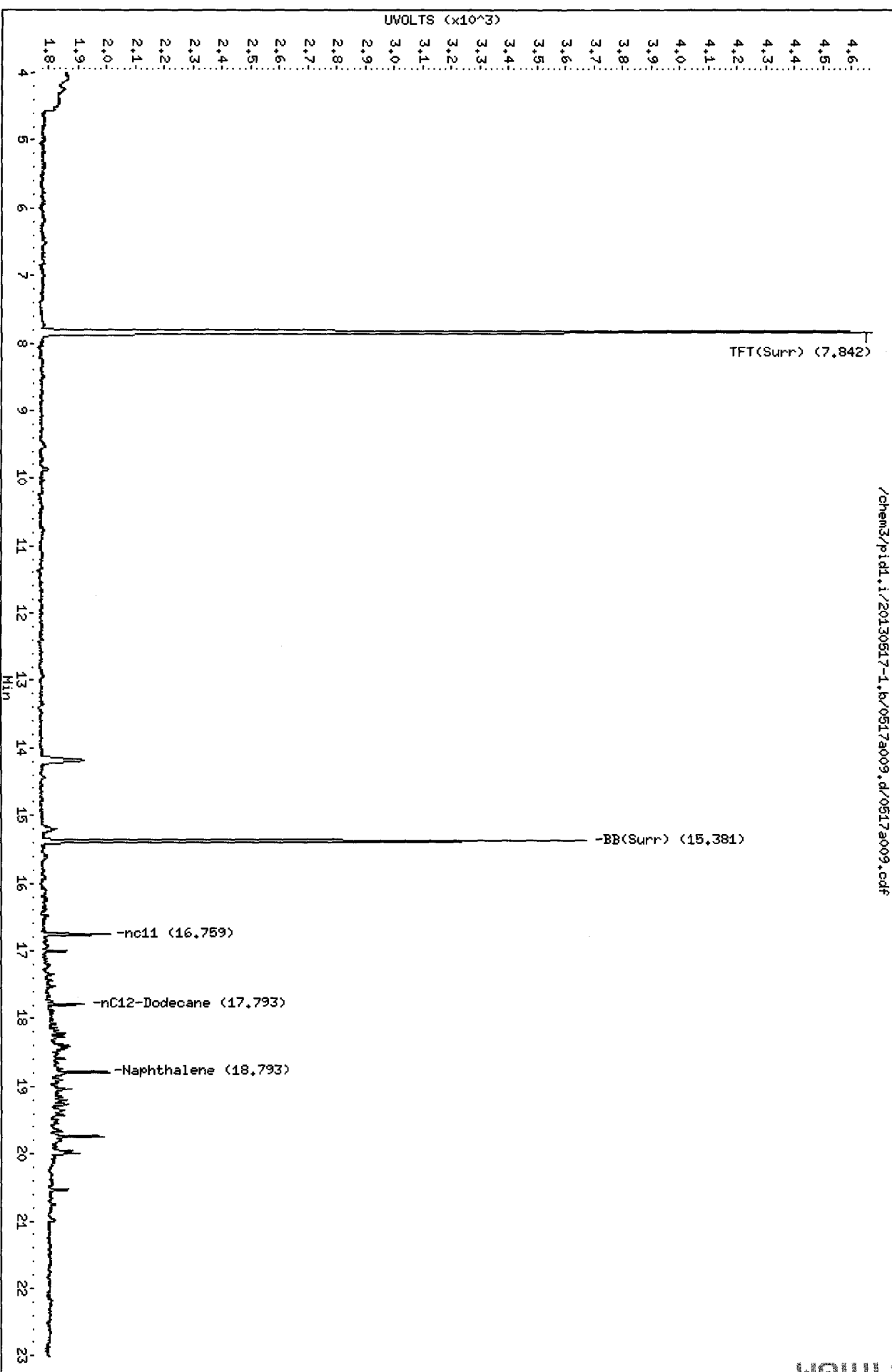
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a009.d
Date: 17-May-2013 18:20
Client ID: POST-SP-1
Sample Info: MQ44C
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130517-1.b/0517a009.d/0517a009.cdf



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: POST-SP-2
SAMPLE

Lab Sample ID: WQ44D

LIMS ID: 13-10637

Matrix: Soil

Data Release Authorized: *WJW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 18:50

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 16.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.6	< 6.6 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	80.8%
Bromobenzene	81.8%

Gasoline Surrogate Recovery

Trifluorotoluene	84.4%
Bromobenzene	84.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

NC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a010.d ARI ID: WQ44D
Data file 2: /chem3/pid1.i/20130517-2.b/0517a010.d Client ID: POST-SP-2
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 18:50
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.000	2926	36985	84.4	TFT(Surr)
15.381	0.001	1929	16235	84.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	5083	0.014
8015C 2MP-TMB (4.17 to 16.20)	723723	2531	0.003
AK101 nC6-nC10 (4.67 to 15.10)	582885	993	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	6997	0.019

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.001	3208	80.8	TFT(Surr)
15.389	0.001	7189	81.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd1.i/20130517-1.b/0517a010.d

Date : 17-MAY-2013 18:50

Client ID: POST-SP-2

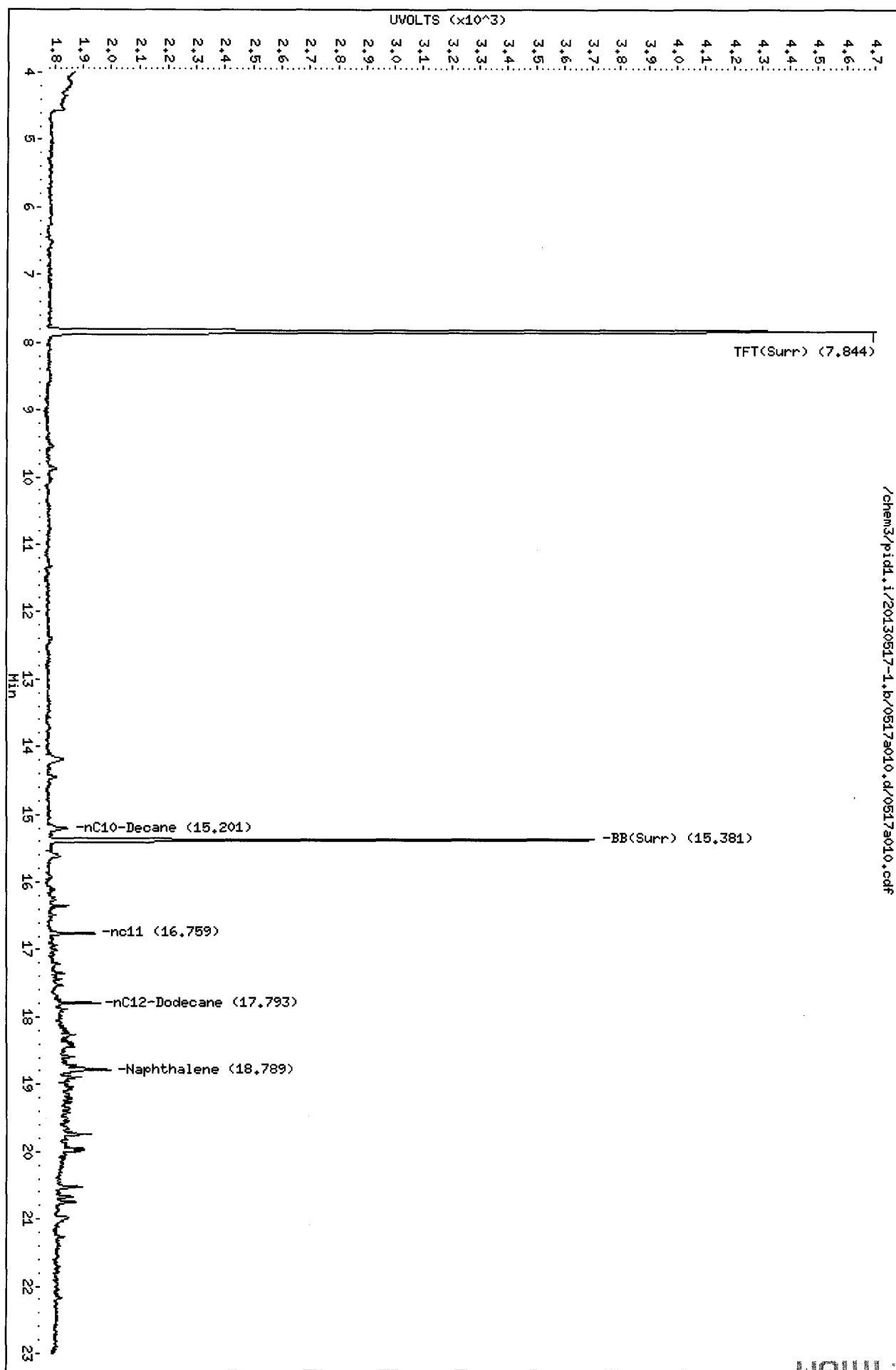
Sample Info: MQ44D

Column phase: RTX 502-2 FID

Instrument: pidd1.i

Operator: PC

Column diameter: 0.18



/chem3/pidd1.i/20130517-1.b/0517a010.d/0517a010.cdf

0044 00051

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: POST-SP-3
SAMPLE**

Lab Sample ID: WQ44E

LIMS ID: 13-10638

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 19:20

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 79 mg-dry-wt

Percent Moisture: 15.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.3	< 6.3 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	78.4%
Bromobenzene	79.4%

Gasoline Surrogate Recovery

Trifluorotoluene	81.9%
Bromobenzene	82.5%

BETX values reported in ug/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a011.d ARI ID: WQ44E
Data file 2: /chem3/pid1.i/20130517-2.b/0517a011.d Client ID: POST-SP-3
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 19:20
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.001	2840	36001	81.9	TFT(Surr)
15.382	0.001	1884	15951	82.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	5691	0.016
8015C 2MP-TMB (4.17 to 16.20)	723723	2991	0.004
AK101 nC6-nC10 (4.67 to 15.10)	582885	2990	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	9223	0.025

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.002	3114	78.4	TFT(Surr)
15.389	0.001	6979	79.4	BB(Surr)

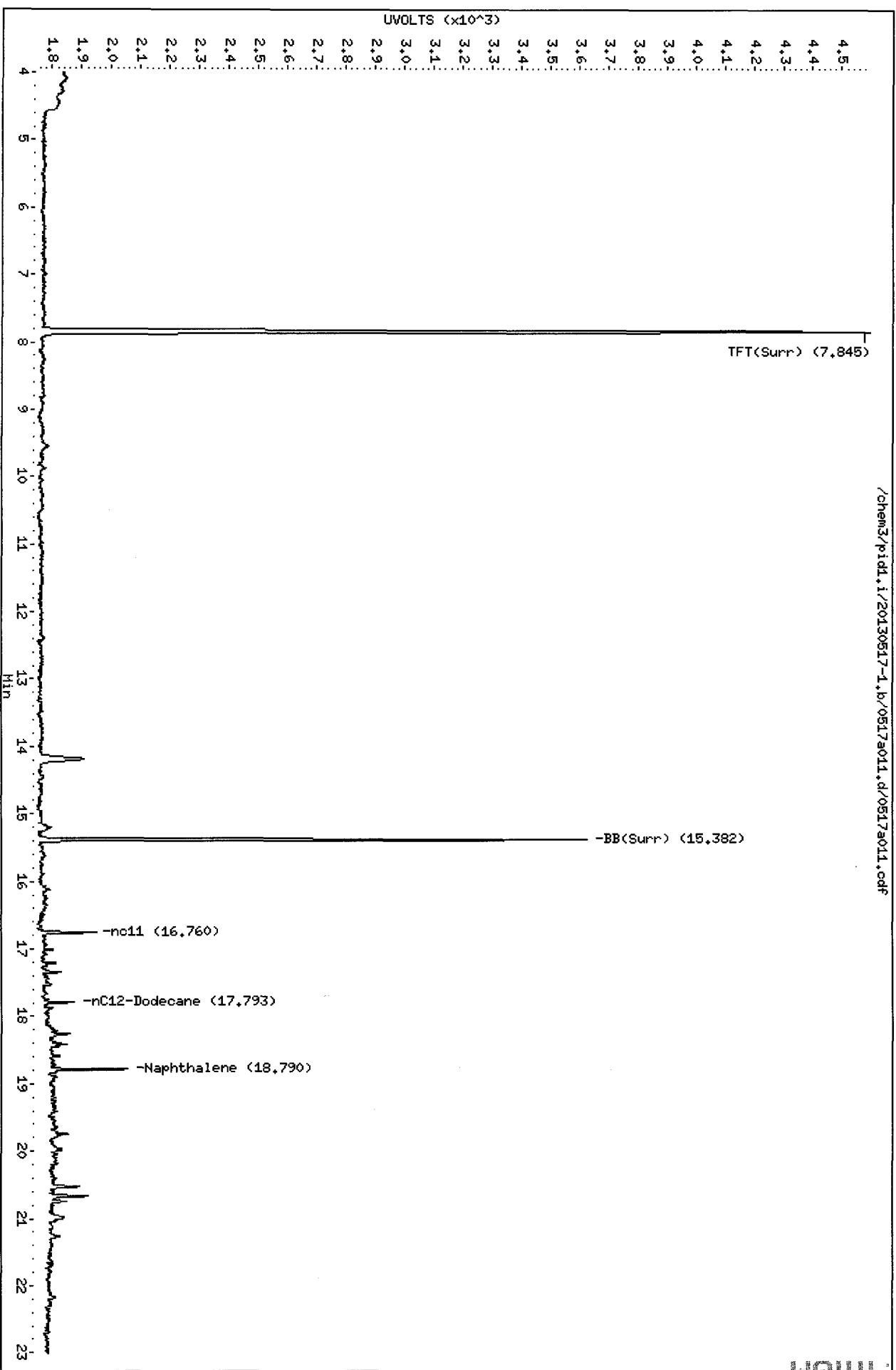
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	0.002	44	0.19N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a011.d
Date: 17-MAY-2013 19:20
Client ID: POST-SP-3
Sample Info: MQ44E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



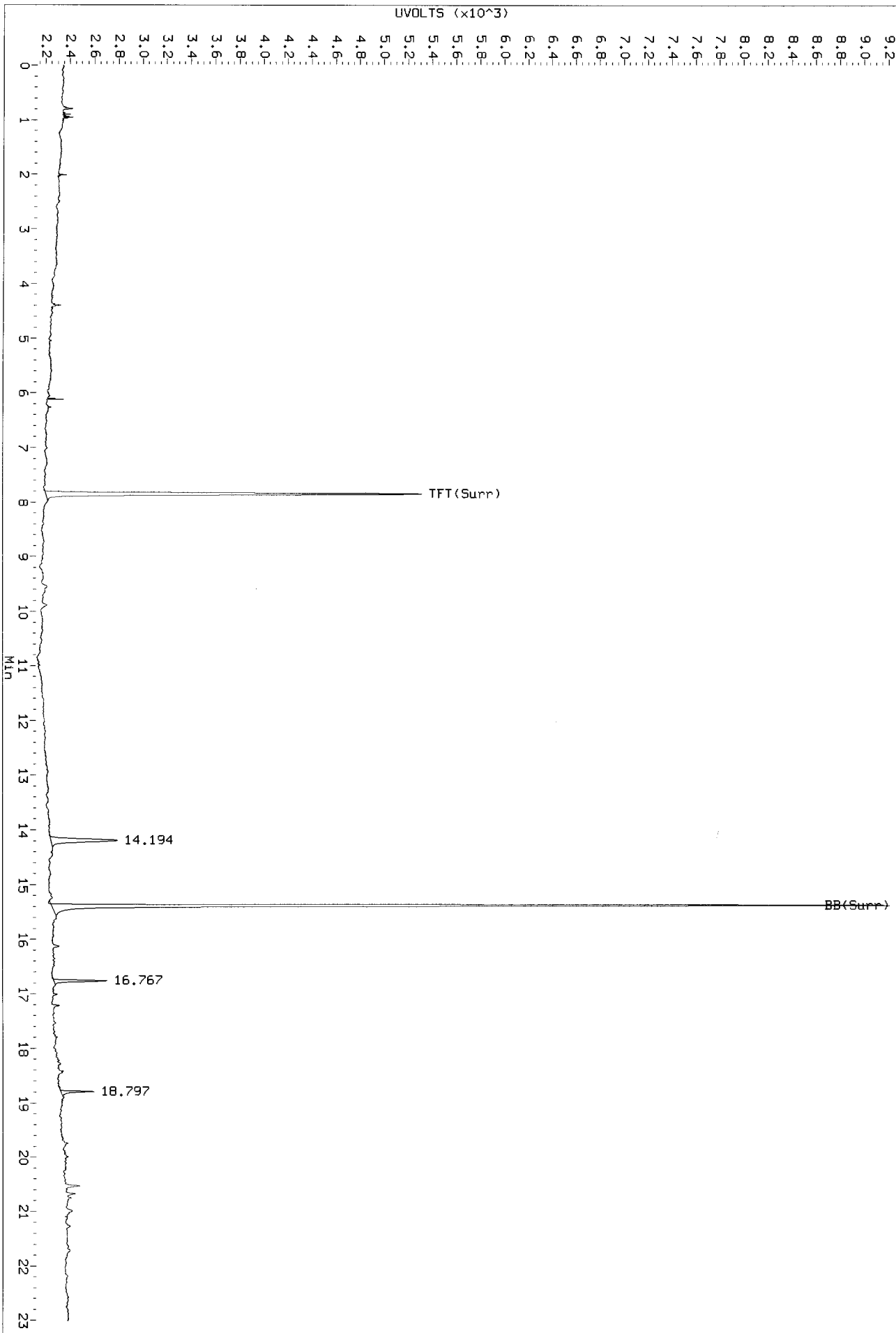
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W0111 : 00054

Data File: /chem3/pid1.i/20130517-2.b/0517a011.d/0517a011.cdf
Injection Date: 17-MAY-2013 19:20
Instrument: pid1.i
Client Sample ID: POST-SP-3

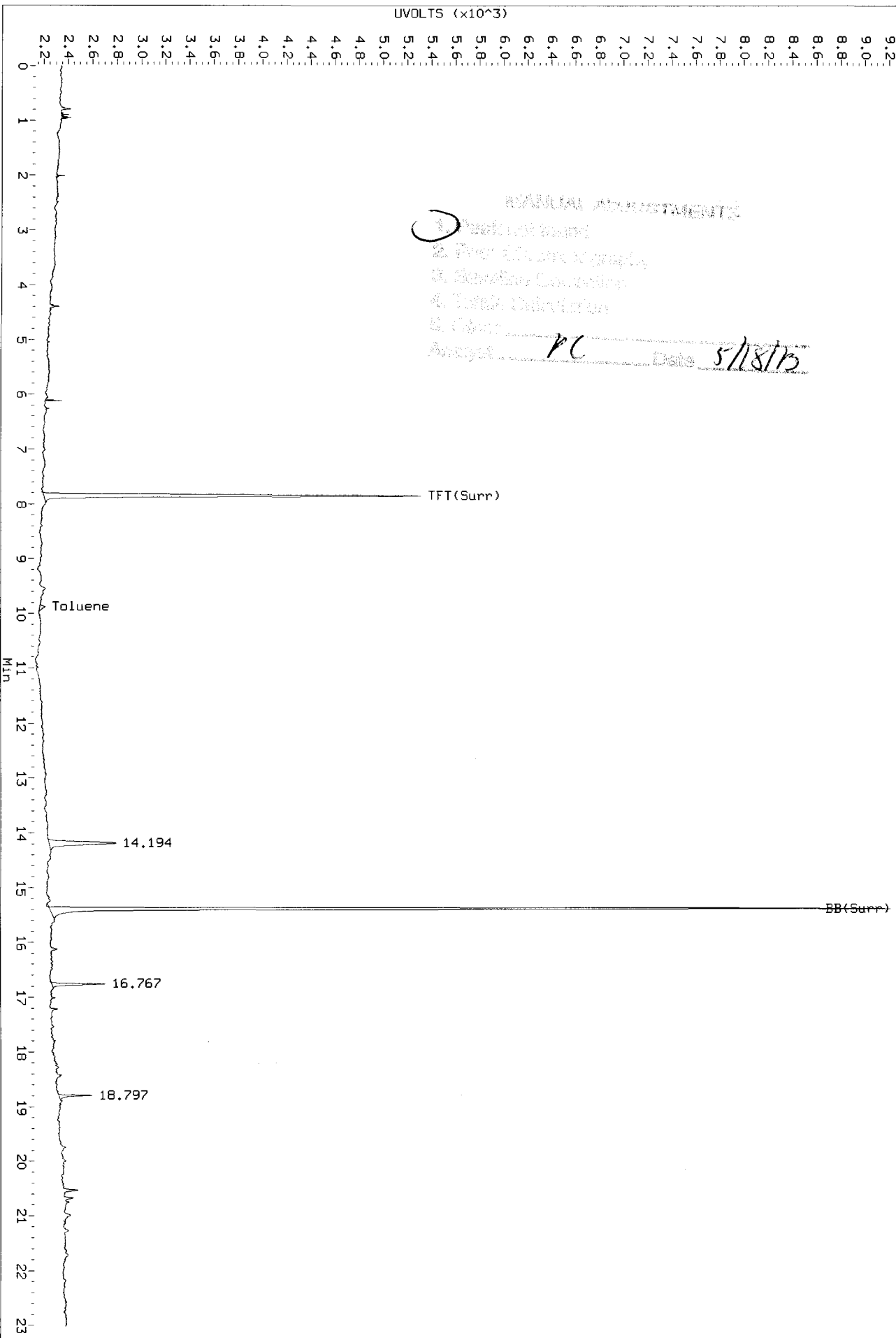
PL
5/18/13

AIA 0517a011.cdf: 0.000 to 23.013 MIN



Data File: /chem3/pid1.i/20130517-2.b/0517a011.d/0517a011.cdf
Injection Date: 17-MAY-2013 19:20
Instrument: pid1.1
Client Sample ID: POST-SP-3

AIA_0517a011.cdf: 0.000 to 23.013 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: POST-SP-4
SAMPLE

Lab Sample ID: WQ44F

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: *W*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 19:50

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 85 mg-dry-wt

Percent Moisture: 14.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	5.9	< 5.9 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	79.7%
Bromobenzene	82.0%

Gasoline Surrogate Recovery

Trifluorotoluene	83.8%
Bromobenzene	85.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a012.d ARI ID: WQ44F
Data file 2: /chem3/pid1.i/20130517-2.b/0517a012.d Client ID: POST-SP-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 19:50
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.002	2906	37063	83.8	TFT(Surr)
15.381	0.001	1951	16432	85.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	2951	0.008
8015C 2MP-TMB (4.17 to 16.20)	723723	602	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	602	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	6730	0.018

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.001	3165	79.7	TFT(Surr)
15.389	0.000	7208	82.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.877	-0.002	52	0.23N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

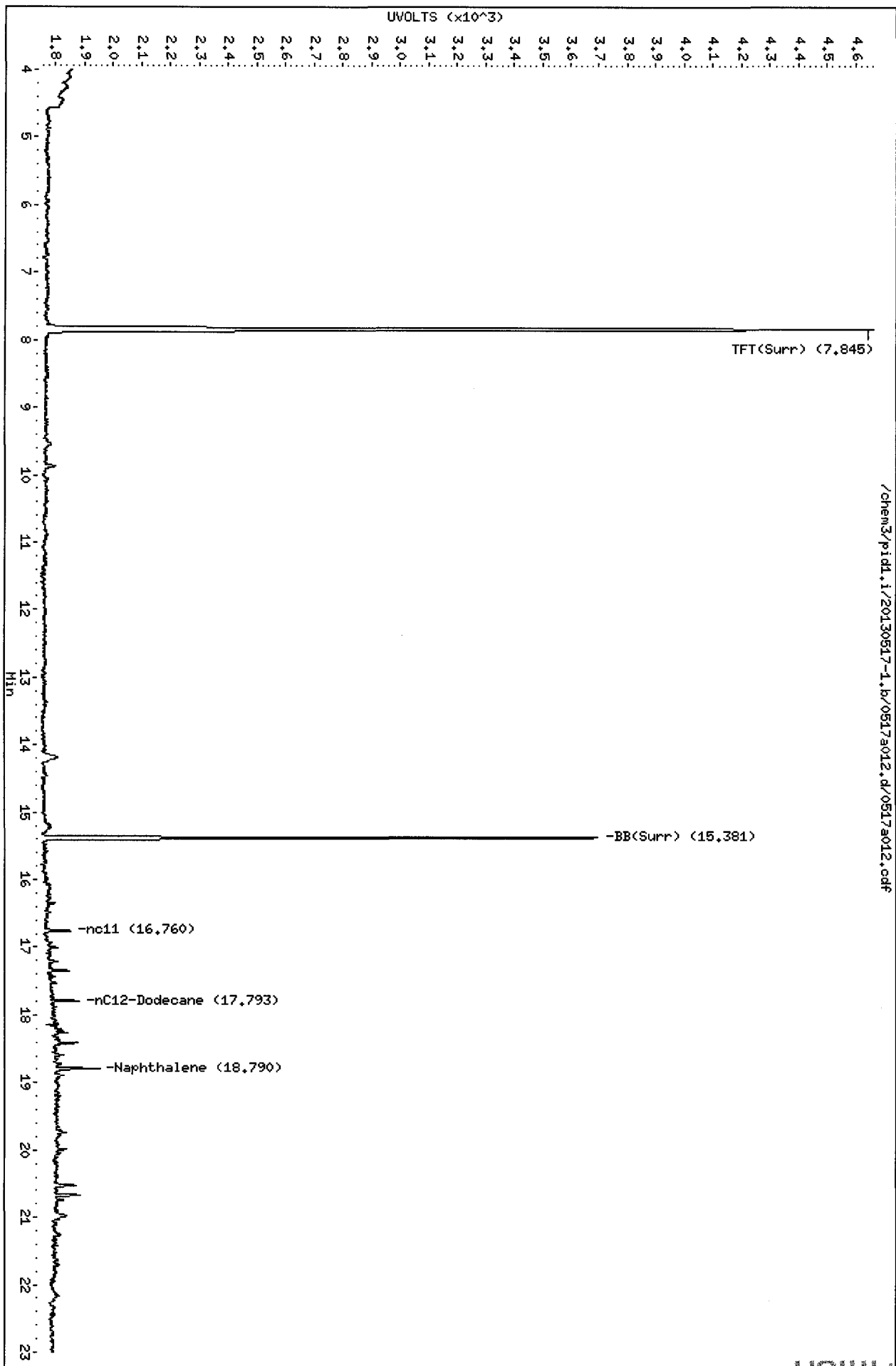
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a012.d
Date: 17-MAY-2013 19:50
Client ID: POST-SP-4
Sample Info: MQ44F
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

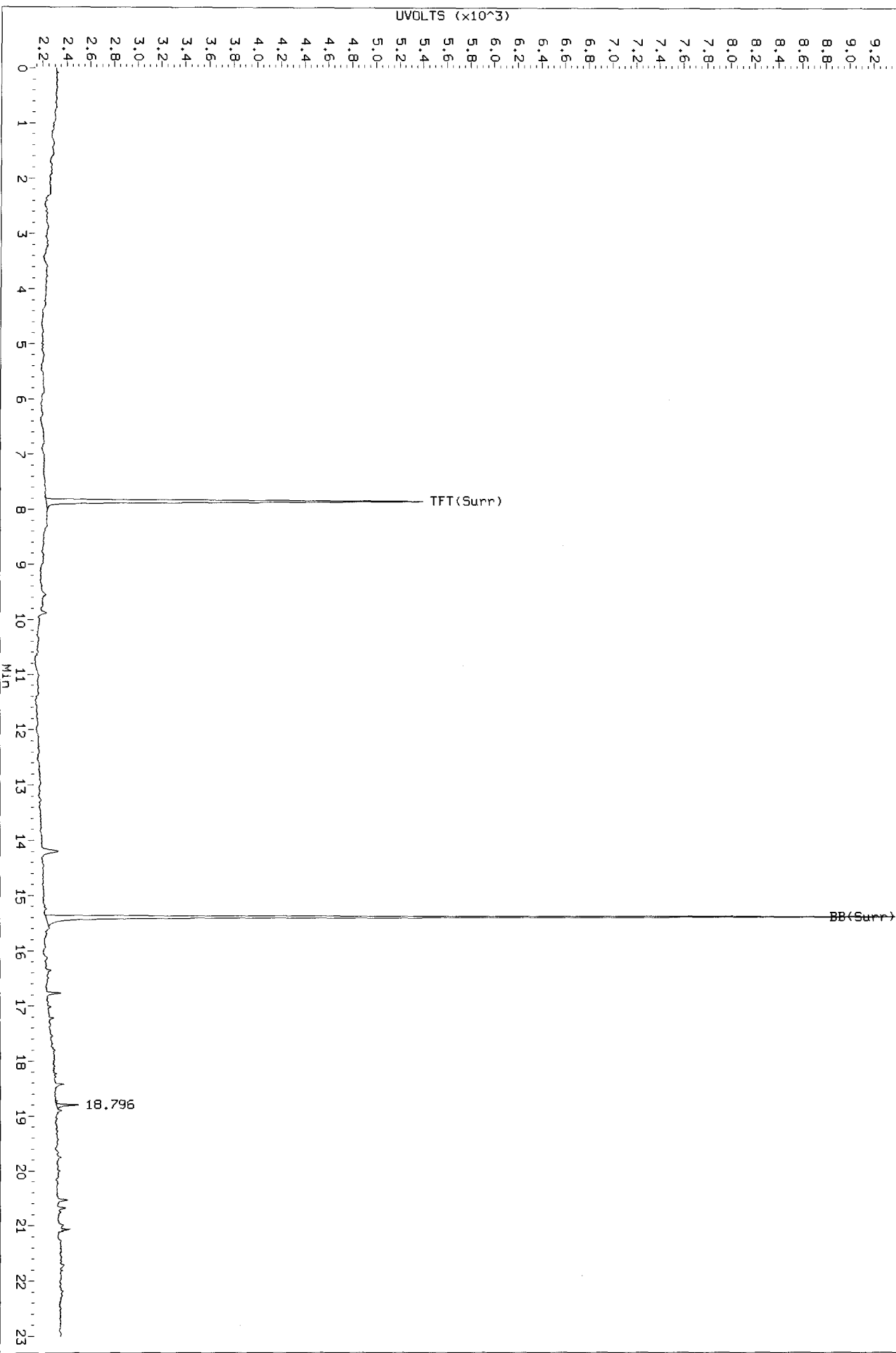
/chem3/pid1.i/20130517-1.b/0517a012.d/0517a012.cdf



PC
5/18/13

Data File: /chem3/pid1.i/20130517-2.b/0517a012.d/0517a012.cdf
Injection Date: 17-MAY-2013 19:50
Instrument: pid1.i
Client Sample ID: POST-SP-4

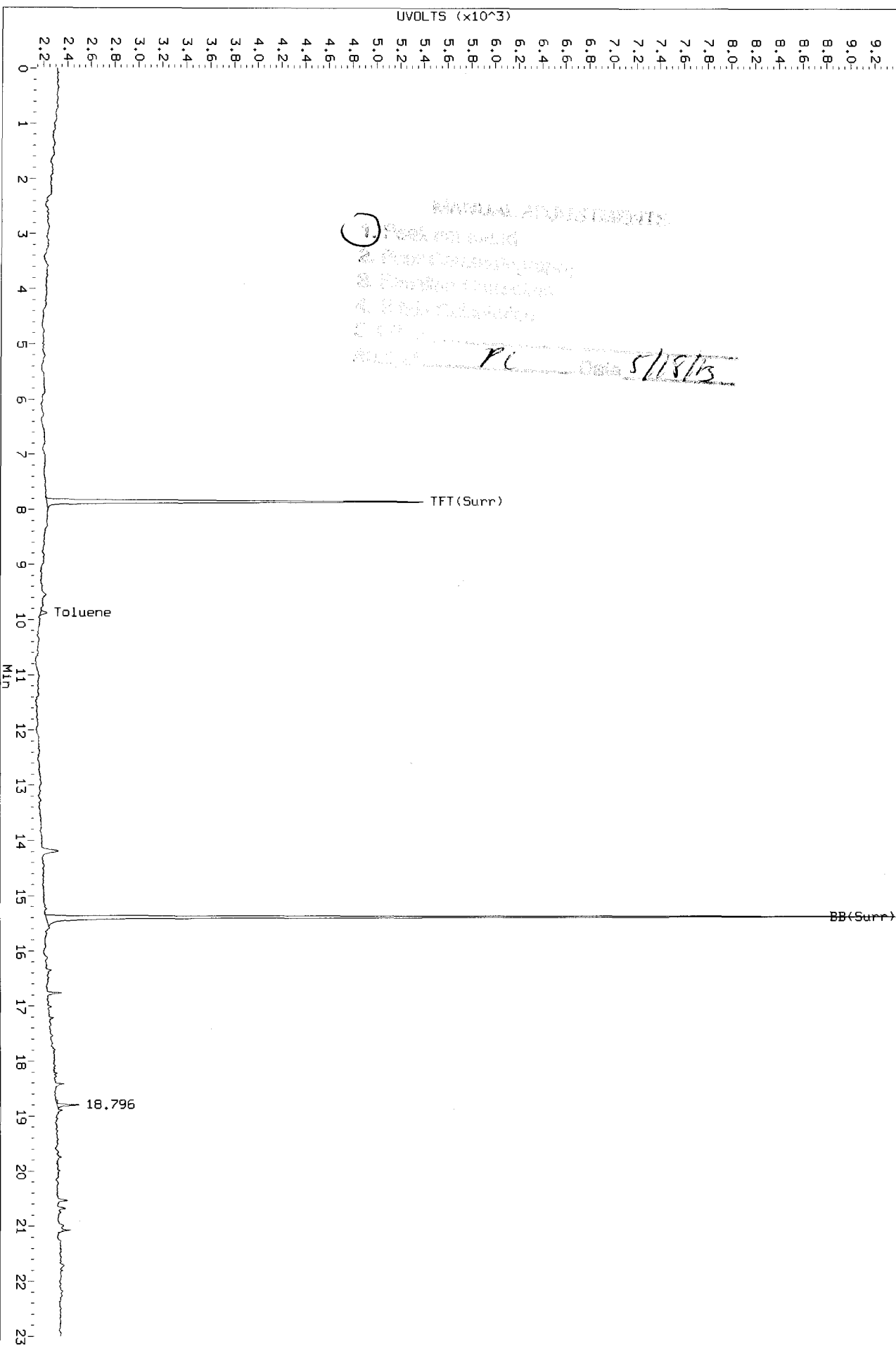
AIR 0517a012.cdf: 0.000 to 23.000 MIN



WQ44 : 00050

Data File: /chem3/pid1.1/20130517-2.b/0517a012.d/0517a012.cdf
Injection Date: 17-MAY-2013 19:50
Instrument: pid1.1
Client Sample ID: POST-SP-4

AIA 0517a012.cdf: 0.000 to 23.000 MIN



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ44
Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
POST-SP-1	NA	83.7%	83.3%	0	
POST-SP-2	NA	84.4%	84.5%	0	
POST-SP-3	NA	81.9%	82.5%	0	
POST-SP-4	NA	83.8%	85.5%	0	

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-10636 to 13-10639

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ44
Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
POST-SP-1	80.4%	80.0%	0
POST-SP-2	80.8%	81.8%	0
POST-SP-3	78.4%	79.4%	0
POST-SP-4	79.7%	82.0%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10636 to 13-10639

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-051713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/17/13 11:37

Purge Volume: 5.0 mL

LCSD: 05/17/13 12:07

Instrument/Analyst LCS: PID1/PKC

Sample Amount LCS: 100 mg-dry-wt

LCSD: PID1/PKC

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	50.1	50.0	100%	46.2	50.0	92.4%	8.1%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.3%	88.9%
Bromobenzene	88.3%	85.7%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1

Sample ID: LCS-051713
LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713
LIMS ID: 13-10634
Matrix: Soil
Data Release Authorized: *MW*
Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 05/17/13 11:37
LCSD: 05/17/13 12:07
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	172	185	93.0%	158	185	85.4%	8.5%
Toluene	1770	1980	89.4%	1620	1980	81.8%	8.8%
Ethylbenzene	516	580	89.0%	466	580	80.3%	10.2%
m,p-Xylene	1840	2120	86.8%	1680	2120	79.2%	9.1%
o-Xylene	832	960	86.7%	765	960	79.7%	8.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	88.2%	84.2%
Bromobenzene	85.5%	82.9%

VC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a004.d ARI ID: LCS0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a004.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 11:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.002	3166	44452	91.3	TFT(Surr)
15.383	0.002	2015	17511	88.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	356268	0.995 M
8015C 2MP-TMB (4.17 to 16.20)	723723	721029	0.996 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	580704	0.996 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	375758	1.002 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.003	3500	88.2	TFT(Surr)
15.390	0.002	7511	85.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	0.002	826	3.44	Benzene
9.882	0.003	8114	35.43	Toluene
12.774	0.003	1998	10.32	Ethylbenzene
12.937	0.006	7876	36.88	M/P-Xylene
13.883	0.004	2837	16.63	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

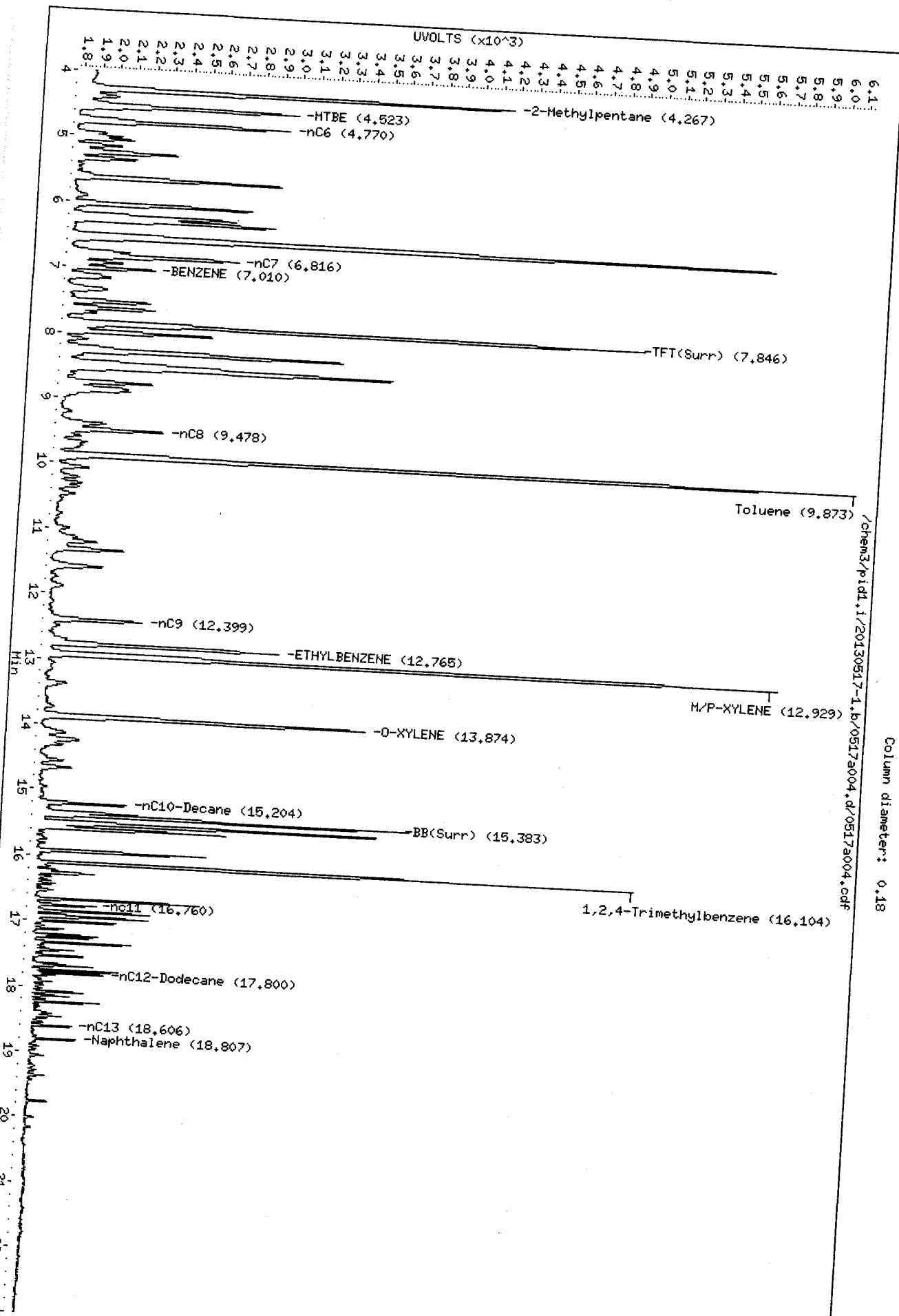
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Date: 17-MAY-2013 11:37
Client ID:
Sample Info: LCS0517

Column Phase: RTX 502-2 FID

Instrument: pid1.i

Page 1

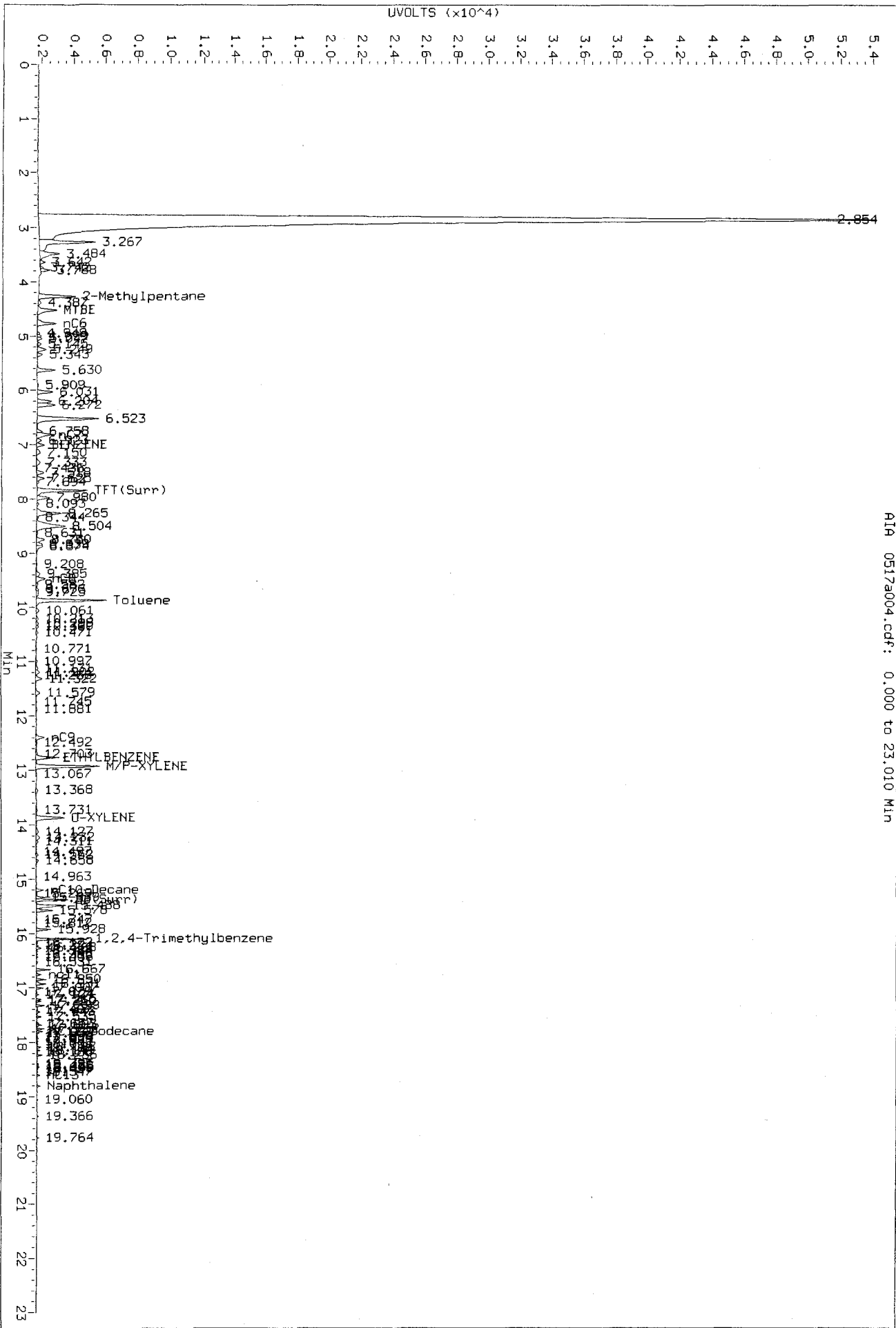
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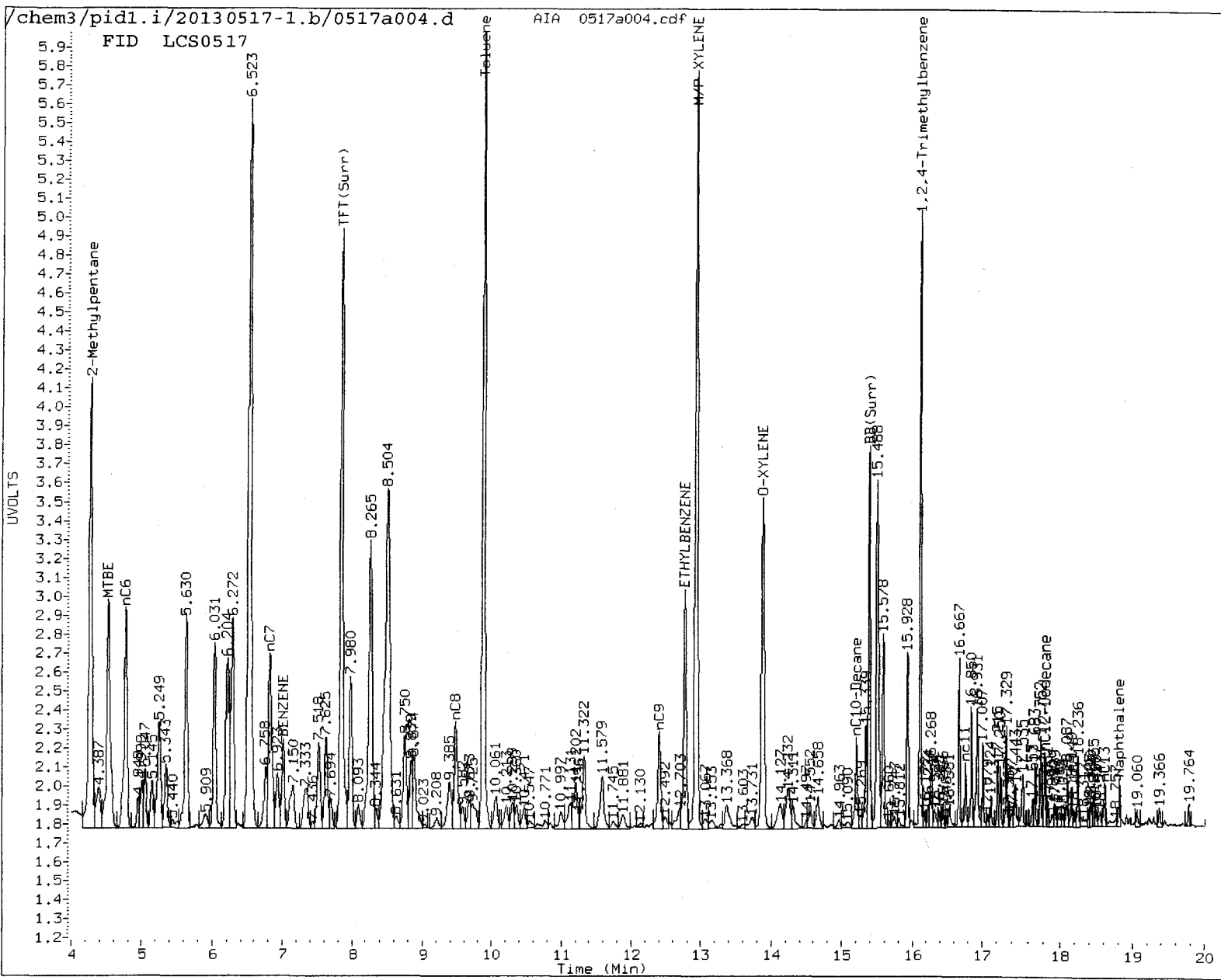
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100
5/20/15

Data File: /chem3/pid1.1/20130517-1.b/0517a004.d/0517a004.cdf
Injection Date: 17-MAY-2013 11:37
Instrument: pid1.1
Client Sample ID:



AIR 0517a004.cdf: 0.000 to 23.010 Min



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: RC Date: 5/20/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

*MC
Steps*

Data file 1: /chem3/pid1.i/20130517-1.b/0517a005.d ARI ID: LCSD0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a005.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:07
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	-0.001	3083	43246	88.9	TFT(Surr)
15.381	0.001	1955	17346	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	329384	0.920 M
8015C 2MP-TMB (4.17 to 16.20)	723723	672432	0.929 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	541268	0.929 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	347058	0.925 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.000	3342	84.2	TFT(Surr)
15.389	0.001	7285	82.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.015	-0.001	757	3.15	Benzene
9.879	0.000	7421	32.41	Toluene
12.771	0.000	1805	9.32	Ethylbenzene
12.934	0.003	7195	33.69	M/P-Xylene
13.880	0.001	2611	15.30	O-Xylene
ND	---	---	---	MTBE

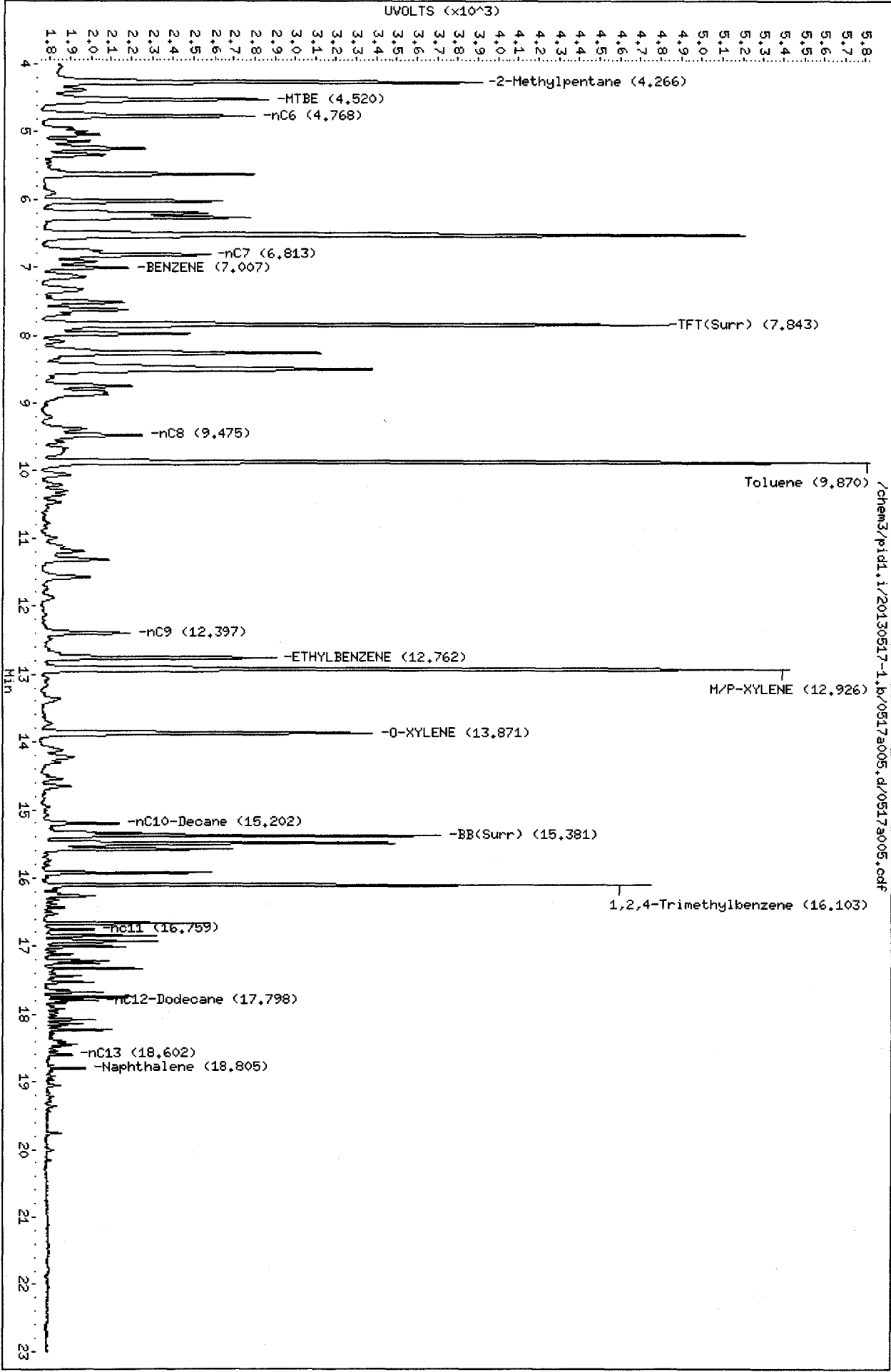
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a005.d
Date: 17-MAY-2013 12:07

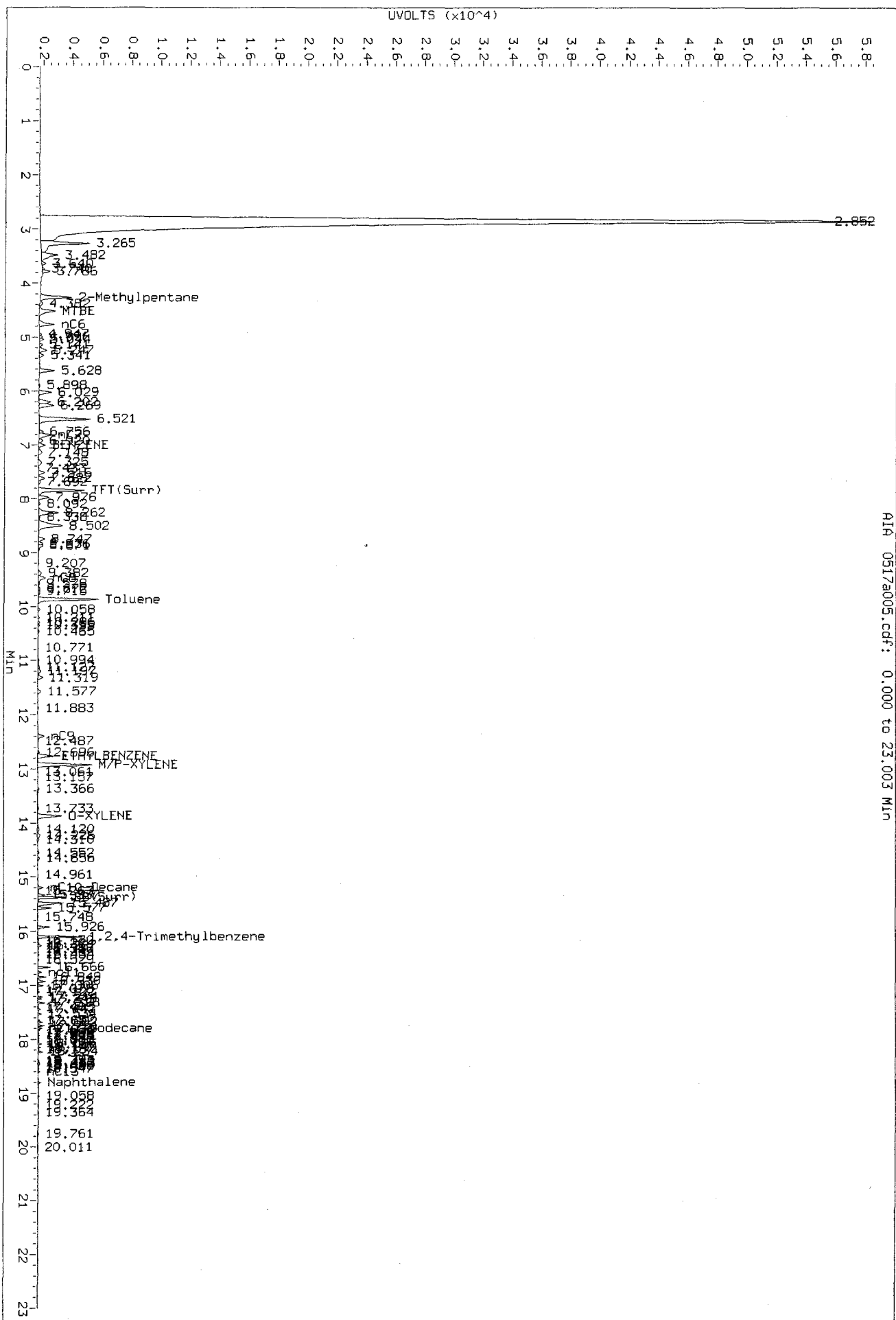
Client ID:
Sample Info: LCSD0517

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



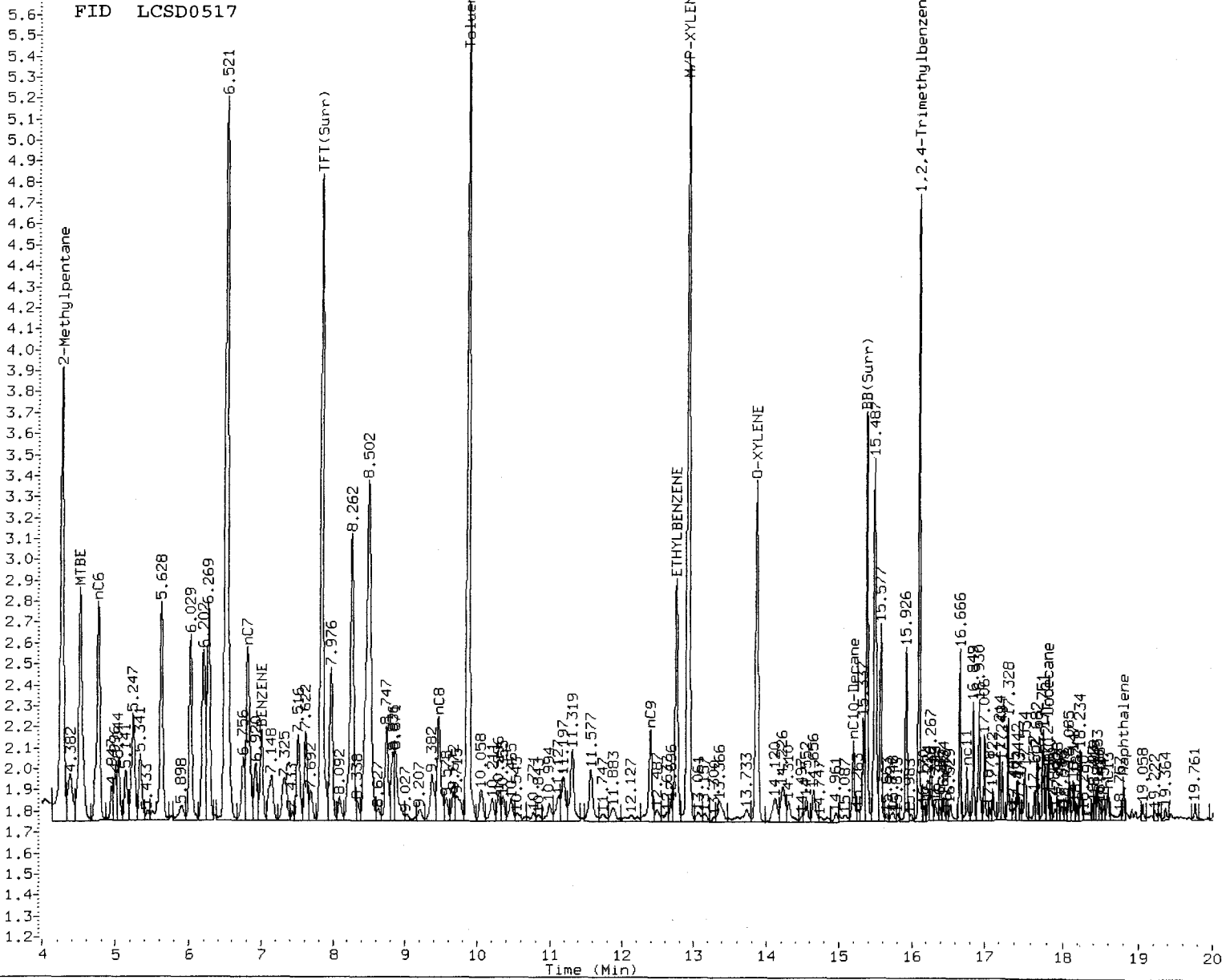
PC
5/20/13
Data File: /chem3/pid1.1/20130517-1.b/0517a005.d/0517a005.cdf
Injection Date: 17-May-2013 12:07
Instrument: pid1.1
Client Sample ID:



AIA 0517a005.cdf: 0.000 to 23.003 Min

FID LCSD0517

UVOLTS



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: KL

Date: 5/20/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-051713

METHOD BLANK

Lab Sample ID: MB-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/17/13 12:37

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	82.9%
Bromobenzene	83.2%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	85.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a006.d ARI ID: MB0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a006.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.000	2968	37734	85.6	TFT(Surr)
15.381	0.001	1947	16457	85.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3253	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	3996	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	3150	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3253	0.009

M Indicates manual integration within range
 * Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.001	3292	82.9	TFT(Surr)
15.390	0.001	7317	83.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

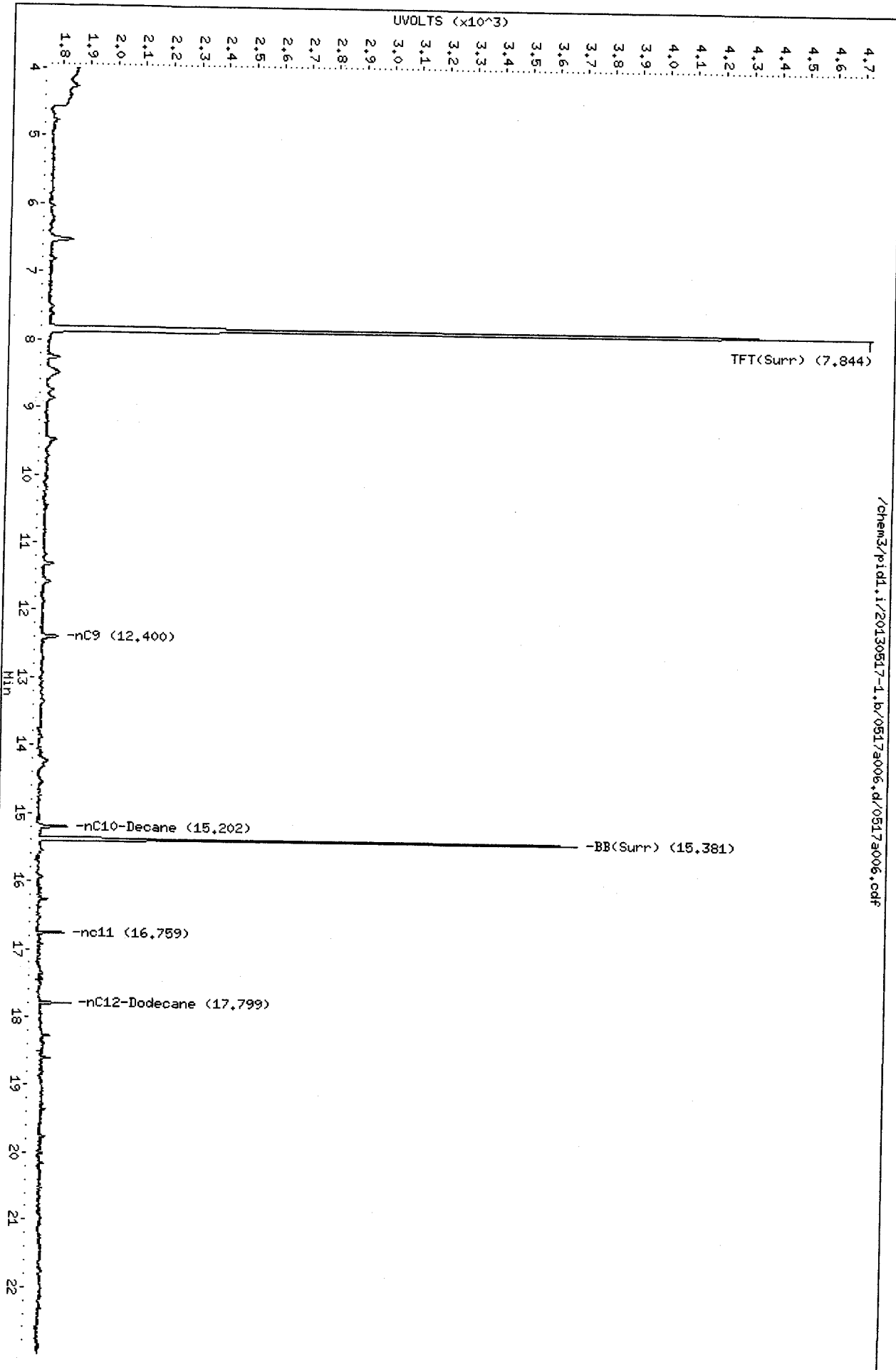
A Indicates Peak Area was used for quantitation instead of Height
 I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a006.d
Date : 17-MAY-2013 12:37
Client ID:
Sample Info: NB0517

Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: POST-SP-1
SAMPLE

Lab Sample ID: WQ44C

LIMS ID: 13-10636

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 84.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	6	6	
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.6	39.7	
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	24.6	
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	15	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: POST-SP-2
SAMPLE**

Lab Sample ID: WQ44D

LIMS ID: 13-10637

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 84.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	6	6	
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.6	35.5	
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	24.1	
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	13	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: POST-SP-3
SAMPLE**

Lab Sample ID: WQ44E

LIMS ID: 13-10638

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 84.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	6	7	
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.6	47.0	
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	27.2	
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	16	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: POST-SP-4
SAMPLE**

Lab Sample ID: WQ44F

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 85.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	6	6	U
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.6	36.9	
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	23.4	
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	11	

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WQ44LCS

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	211	200	106%	
Chromium	6010C	52.2	50.0	104%	
Copper	6010C	50.7	50.0	101%	
Lead	6010C	202	200	101%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WQ44MB
LIMS ID: 13-10639
Matrix: Soil
Data Release Authorized:
Reported: 05/21/13



QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	5	5	U
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 21, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WQ44 - III

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted four soil samples on May 17, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx, NWTPH-Gx/BTEX, and Lead, as requested on the COC.

The BETX LCSD percent recovery of o-Xylene fell outside the control limits low for **LCS-051713**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WQ44_III

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WQ44	Turn-around Requested: RUSH - 24 Hr	Page: 1 of 1
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TOMY SILVA	TSILVA@MAULFOSTER.COM	Ice Present? AY
Client Project Name: CASHMERE		No. of Coolers: 4
Client Project #: 0779-02.01-03	Samplers: TOMY SILVA	Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					Dx Silva Cler Clement	CIX	BTEX	LEAD	
AREA 2 - SP - 1	5/17/13	1020	S	6	X	X	X	X	
AREA 2 - SP - 2		1030							
AREA 2 - SP - 3		1040							
AREA 2 - SP - 4		1050							

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

20000-0000

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WQ44

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.7 0.6 4.1 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 5/17/13 Time: 1600

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: _____ NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/17/13 Time: 1400 (pre log)

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WQ44
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. AREA2-SP-1	WQ44G	13-10640	Soil	05/17/13 10:20	05/17/13 16:00
2. AREA2-SP-2	WQ44H	13-10641	Soil	05/17/13 10:30	05/17/13 16:00
3. AREA2-SP-3	WQ44I	13-10642	Soil	05/17/13 10:40	05/17/13 16:00
4. AREA2-SP-4	WQ44J	13-10643	Soil	05/17/13 10:50	05/17/13 16:00



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



Analytical Resources, Incorporated
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- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *AS*
Reported: 05/21/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ44G 13-10640	AREA2-SP-1 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	58 120	450 1900 64.0%
WQ44H 13-10641	AREA2-SP-2 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	58 120	430 1900 65.6%
WQ44I 13-10642	AREA2-SP-3 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	59 120	680 2000 54.4%
WQ44J 13-10643	AREA2-SP-4 HC ID: DIESEL/MOTOR OIL	05/19/13	05/19/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	57 120	990 1800 92.9%

¹Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a006.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44MBS1
 Client ID: WQ44MBS1
 Injection: 19-MAY-2013 16:35
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	105791	3
C8	1.082	-0.008	1818	1412	DIESEL (C12-C24)	288136	15.43
C10	2.865	0.006	496	555	M.OIL (C24-C38)	225475	14.06
C12	3.859	-0.006	101	34	AK-102 (C10-C25)	312903	14.41
C14	4.571	0.010	1400	1947	AK-103 (C25-C36)	188039	16.19
C16	5.155	0.000	1701	2352			
C18	5.720	0.000	2361	683			
C20	6.283	0.002	1772	1051			
C22	6.826	-0.005	1757	1066			
C24	7.356	0.003	1438	1012			
C25	7.592	-0.007	1097	658			
C26	7.862	0.007	1447	1385			
C28	8.299	0.001	1716	1569	IT.DIES (C10-C24)	302595	13.98
C32	9.087	0.012	3110	5389			
C34	9.416	-0.003	1332	659	BUNKERC (C10-C38)	528070	56.99
Filter Peak	11.488	0.000	1743	798			
C36	9.728	-0.011	1602	2569			
C38	10.032	-0.008	1535	1806			
C40	10.326	0.004	1839	1535			
o-terph	5.853	-0.001	1090590	958435			
Triacon Surr	8.712	-0.001	745993	745781	IT.MOIL (C24-C40)	999647	16.41

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

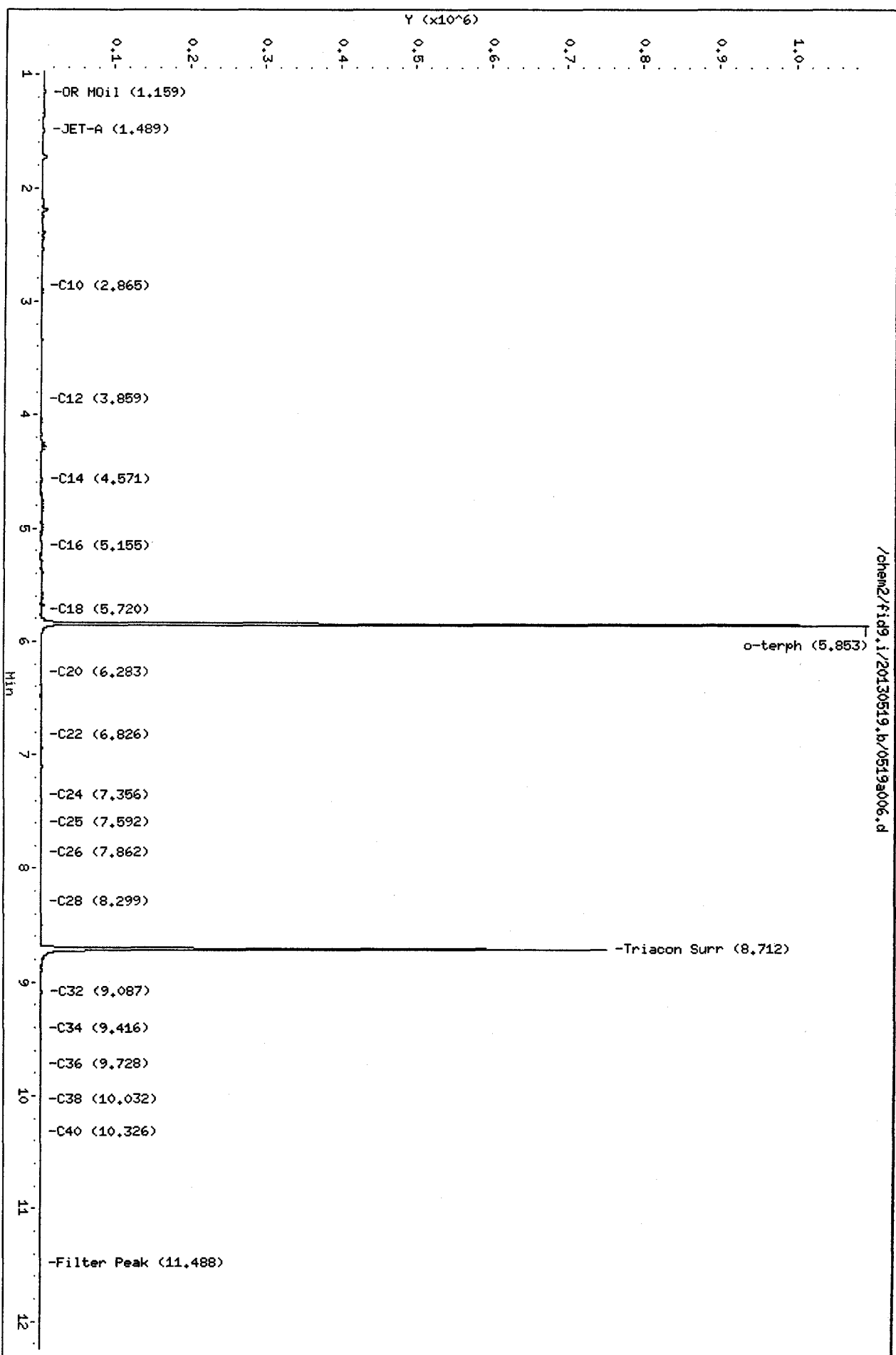
Surrogate	Area	Amount	%Rec
o-Terphenyl	958435	37.4	83.2
Triacontane	745781	39.5	87.7

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/20/13

Data File: /chem2/fid9.i/20130519.b/0519a006.d
Date: 19-MAY-2013 16:35
Client ID: MQ44HBS1
Sample Info: MQ44HBS1
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a017.d
Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 05/20/2013

ARI ID: WQ44G
Client ID: AREA2-SP-1
Injection: 19-MAY-2013 20:40
Dilution Factor: 10
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	73801	2
C8	1.084	-0.006	2399	4869	DIESEL (C12-C24)	7312759	391.48
C10	2.857	-0.001	273	261	M.OIL (C24-C38)	26506627	1653.03
C12	3.858	-0.007	869	1148	AK-102 (C10-C25)	8323844	383.46 M
C14	4.560	-0.001	3693	3284	AK-103 (C25-C36)	23806635	2049.14 M
C16	5.160	0.005	9664	3748			
C18	5.715	-0.005	23636	18709			
C20	6.281	0.001	47329	17362			
C22	6.829	-0.002	76966	32781			
C24	7.357	0.004	114854	75756			
C25	7.595	-0.004	132454	169110			
C26	7.856	0.001	148114	99807			
C28	8.296	-0.001	236644	185911	IT.DIES (C10-C24)	7340814	339.13 M
C32	9.084	0.009	190271	235188			
C34	9.420	0.001	190715	377871	BUNKERC (C10-C38)	33847441	3652.59 M
Filter Peak	11.483	-0.005	5749	1699			
C36	9.741	0.001	115425	112327			
C38	10.042	0.002	74583	22152			
C40	10.321	-0.001	46145	10841			
o-terph	5.841	-0.013	107930	73753			
Triacon Surr	8.711	-0.002	121198	88610	IT.MOIL (C24-C40)	27480213	1770.07 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

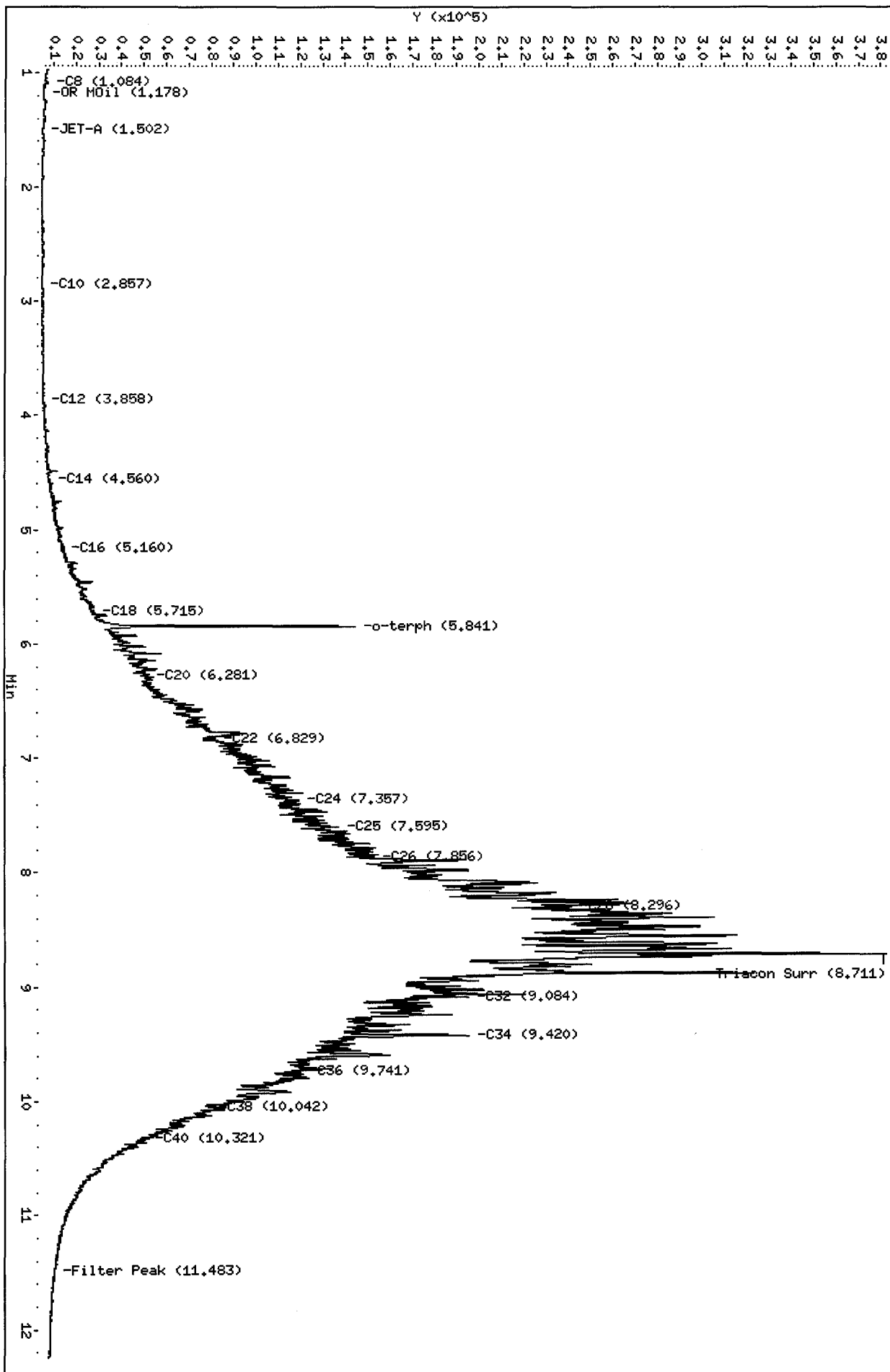
Surrogate	Area	Amount	%Rec
o-Terphenyl	73753	2.9	64.0
Triacontane	88610	4.7	104.2

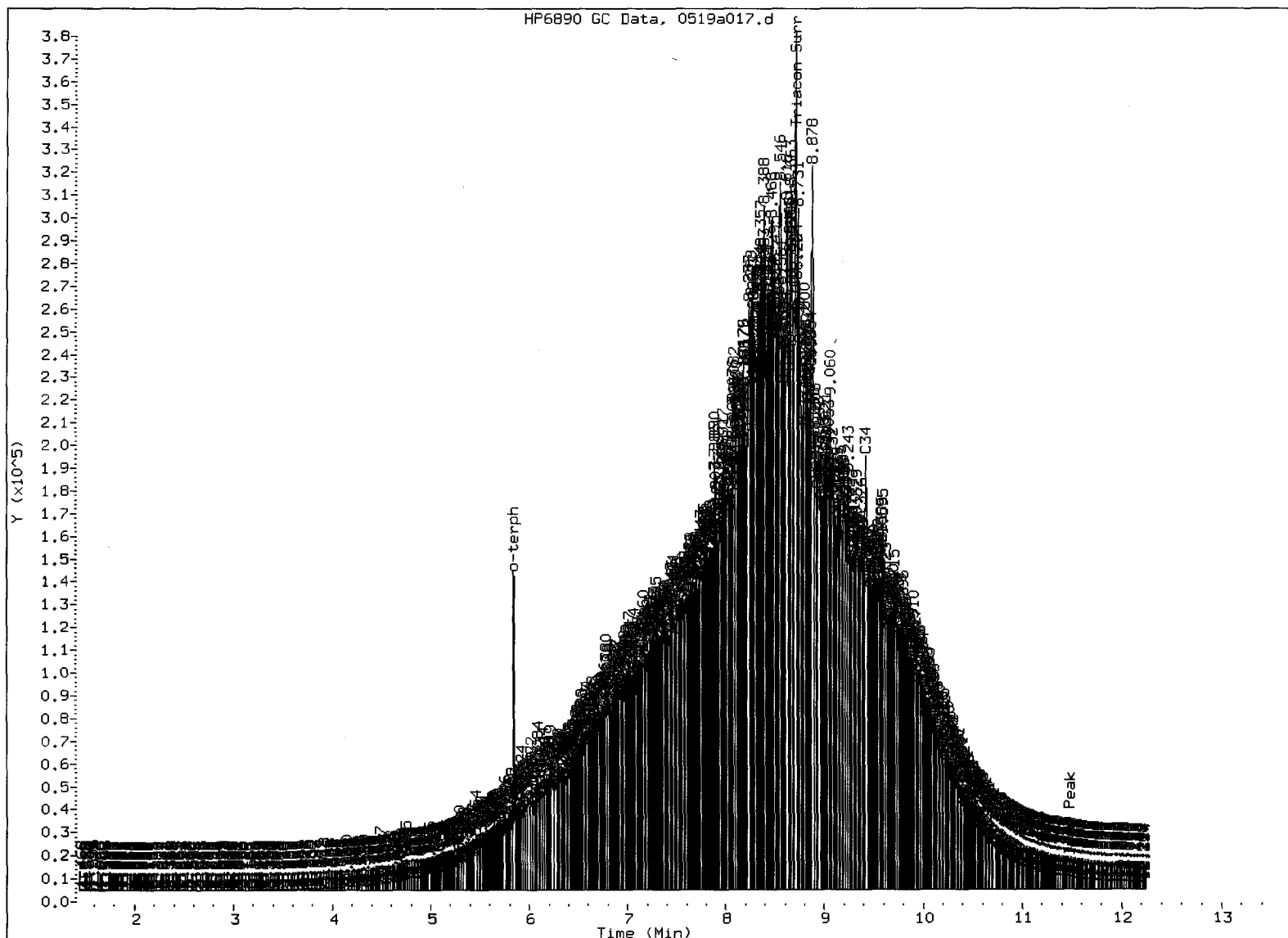
30 Spots

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/21/13

/chem2/fig9.i/20130519.b/0519a017.d





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst: JW

Date: 5/2/13

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a018.d
Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 05/20/2013

ARI ID: WQ44H
Client ID: AREA2-SP-2
Injection: 19-MAY-2013 21:02
Dilution Factor: 10
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	61008	2
C8	1.083	-0.007	2242	4611	DIESEL (C12-C24)	6846605	366.52
C10	2.859	0.000	267	261	M.OIL (C24-C38)	25981790	1620.30
C12	3.857	-0.007	661	880	AK-102 (C10-C25)	7796448	359.17 M
C14	4.557	-0.004	2596	1528	AK-103 (C25-C36)	23129562	1990.86 M
C16	5.154	-0.001	9064	3935			
C18	5.720	0.000	24444	8576			
C20	6.281	0.001	46817	40315			
C22	6.834	0.002	76360	51393			
C24	7.356	0.004	106508	109025			
C25	7.600	0.001	125157	150438			
C26	7.848	-0.008	142236	102431			
C28	8.295	-0.003	222073	115315	IT.DIES (C10-C24)	6868187	317.30 M
C32	9.075	-0.001	183915	61032			
C34	9.417	-0.003	191526	303860	BUNKERC (C10-C38)	32849978	3544.95 M
Filter Peak	11.486	-0.002	7630	4872			
C36	9.744	0.005	133959	128521			
C38	10.044	0.004	94729	50080			
C40	10.324	0.003	63416	36364			
o-terph	5.842	-0.012	111727	75442			
Triacon Surr	8.711	-0.002	112186	92225	IT.MOIL (C24-C40)	27270313	1756.28 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

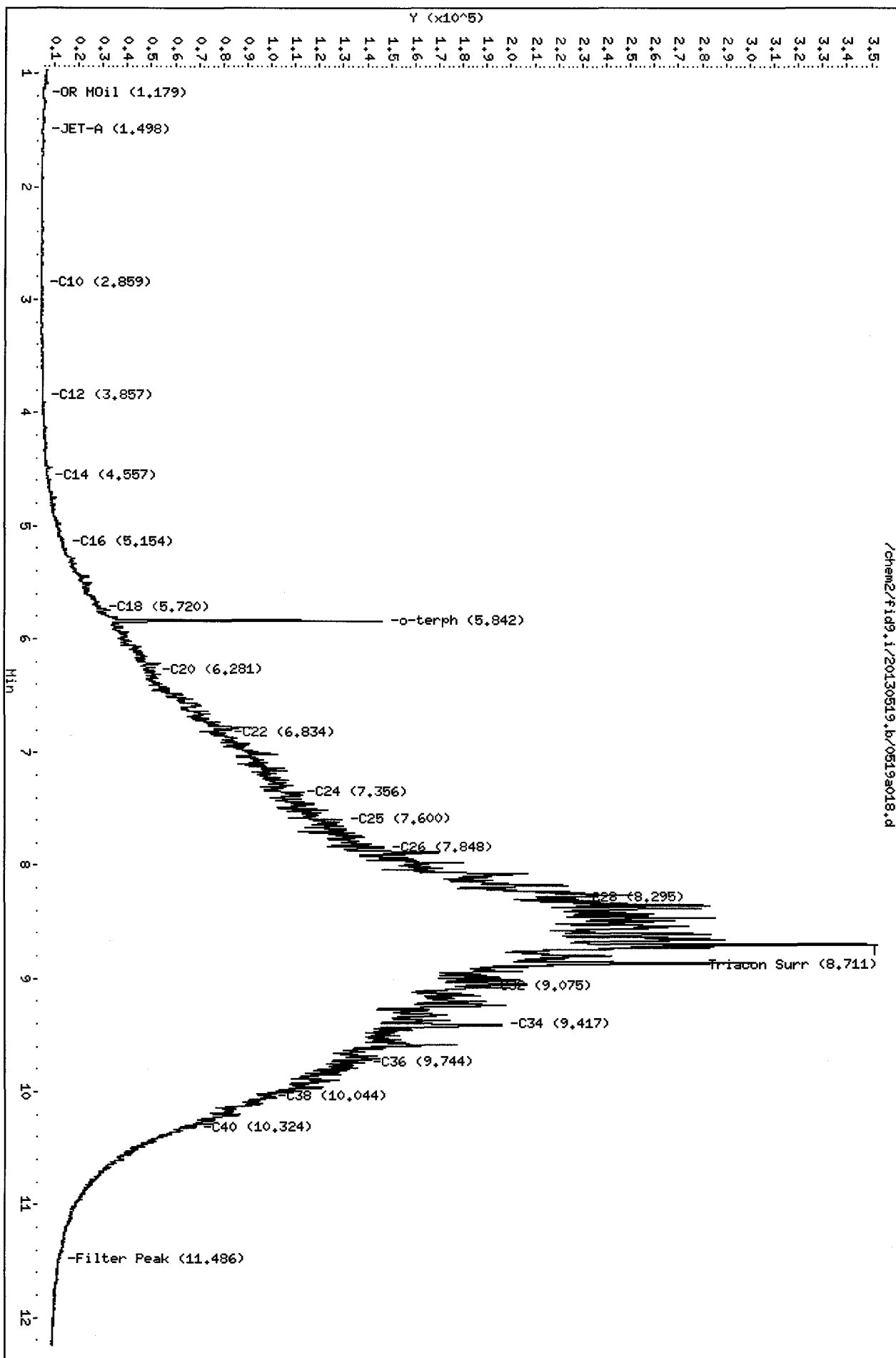
Surrogate	Area	Amount	%Rec
o-Terphenyl	75442	2.9	65.5
Triacontane	92225	4.9	108.4

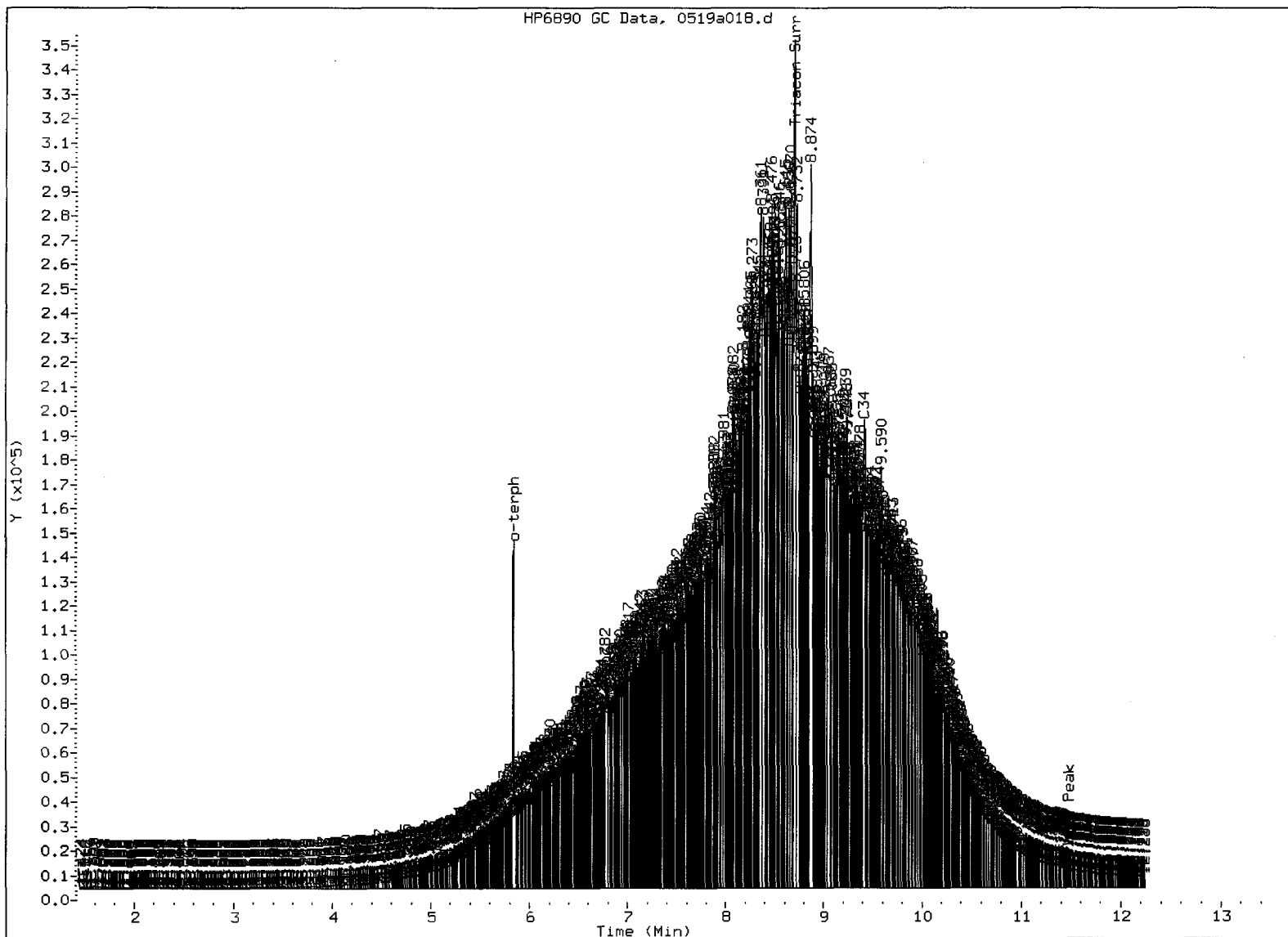
JCO
5/20/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

See spectra

/chem2/fid9.i/20130519.b/0519a018.d





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JW

Date: 5/20/03

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a019.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44I
 Client ID: AREA2-SP-3
 Injection: 19-MAY-2013 21:24
 Dilution Factor: 10
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	72240	2
C8	1.081	-0.009	2520	4287	DIESEL (C12-C24)	10731986	574.52
C10	2.861	0.002	284	352	M.OIL (C24-C38)	27116108	1691.04
C12	3.857	-0.008	1493	2177	AK-102 (C10-C25)	11995914	552.63 M
C14	4.559	-0.002	10469	2814	AK-103 (C25-C36)	23950547	2061.53 M
C16	5.158	0.003	28307	15858			
C18	5.716	-0.004	51993	30657			
C20	6.277	-0.003	72030	19593			
C22	6.828	-0.003	94323	22299			
C24	7.347	-0.005	123878	94416			
C25	7.595	-0.005	133622	47645			
C26	7.862	0.006	155765	186076			
C28	8.296	-0.001	219869	104025	IT.DIES (C10-C24)	10765860	497.36 M
C32	9.084	0.009	192643	198262			
C34	9.417	-0.002	194846	72938	BUNKERC (C10-C38)	37881967	4087.97 M
Filter Peak	11.492	0.005	6786	5198			
C36	9.743	0.003	126466	44709			
C38	10.036	-0.004	88594	33340			
C40	10.329	0.007	56196	51700			
o-terph	5.842	-0.012	97932	62873			
Triacon Surr	8.711	-0.002	112982	90108	IT.MOIL (C24-C40)	28255529	1820.08 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

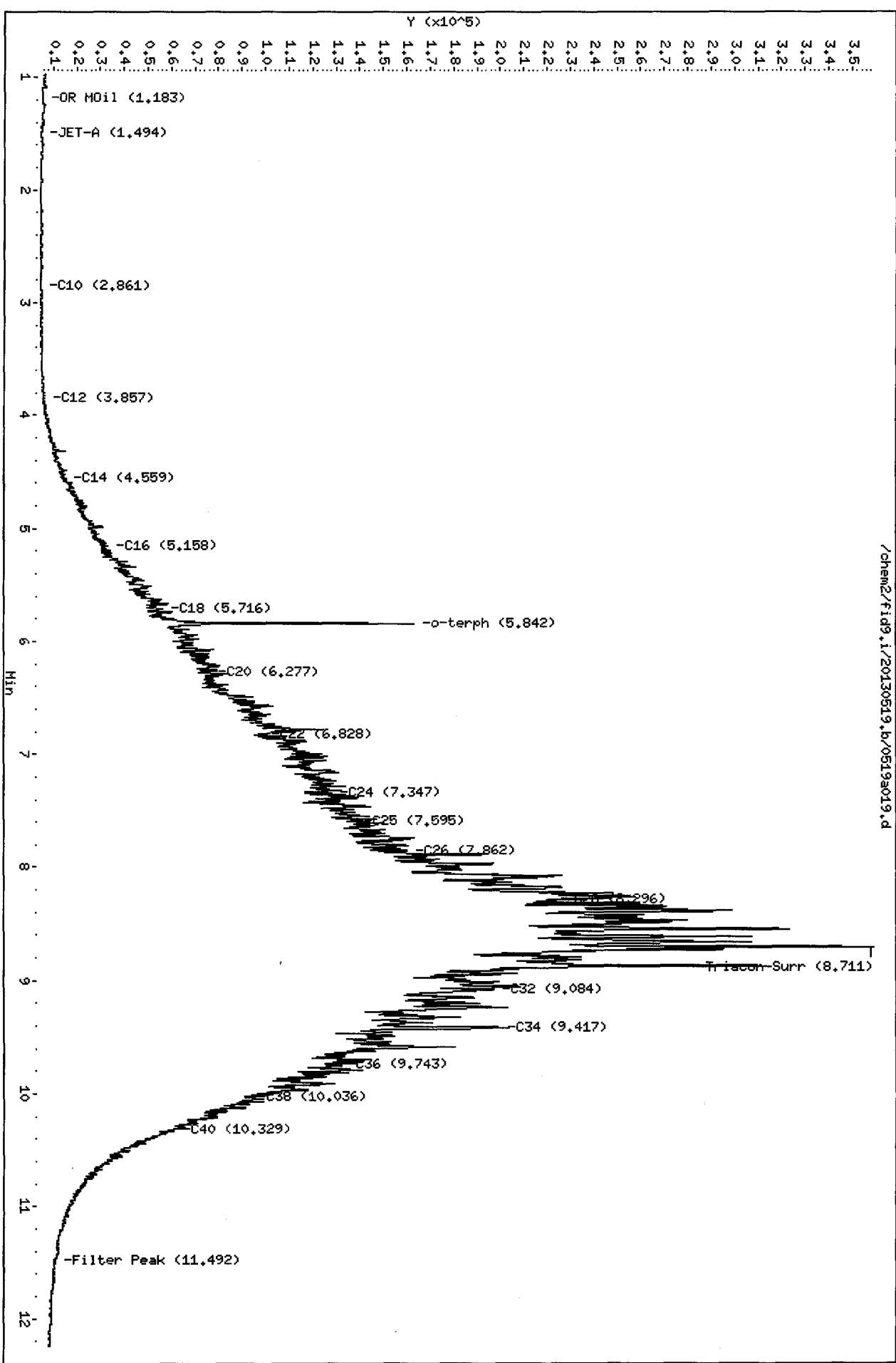
Surrogate	Area	Amount	%Rec
o-Terphenyl	62873	2.5	54.6
Triacontane	90108	4.8	105.9

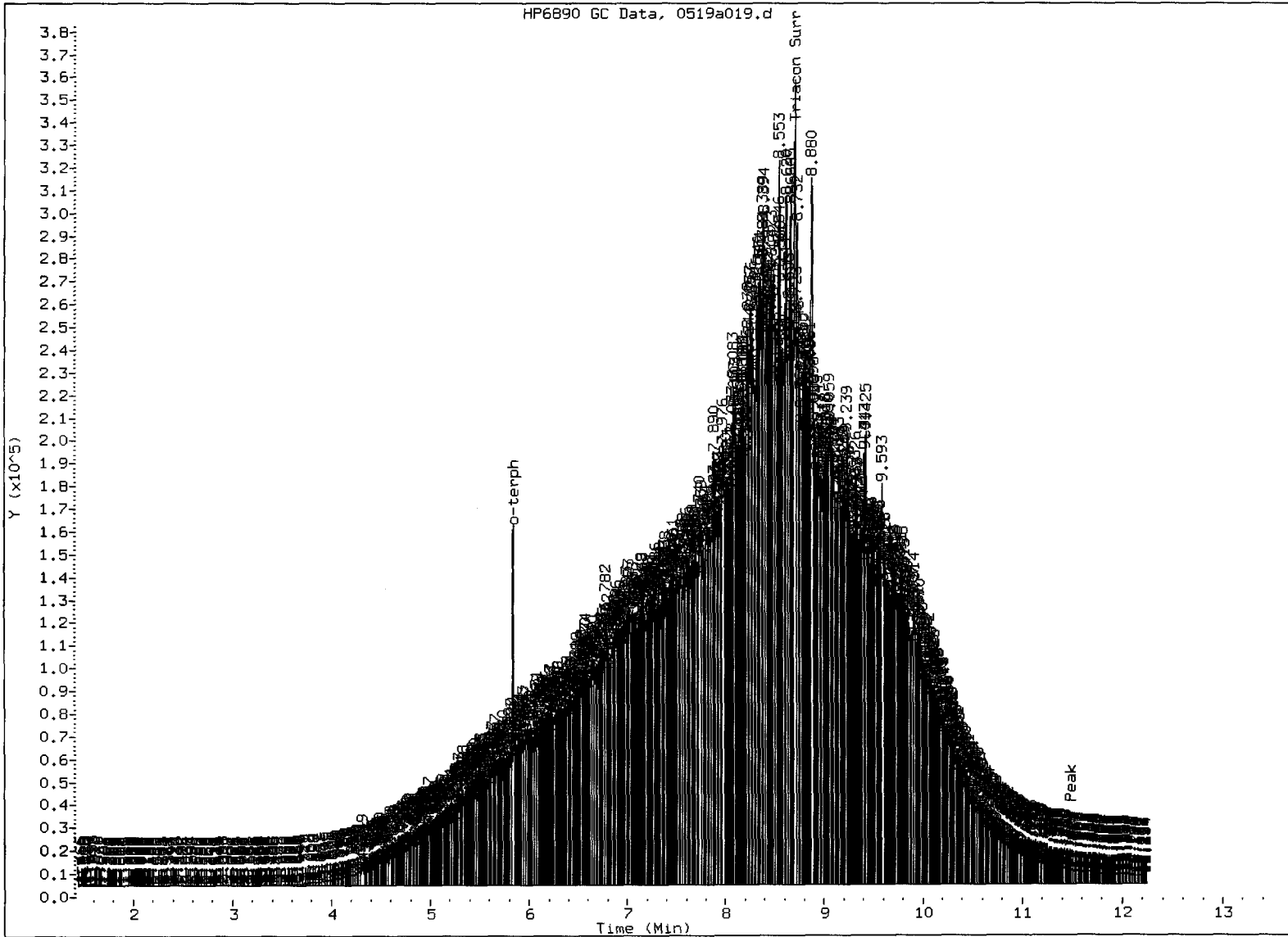
Handwritten note: 2.5/54.6

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/2/13

/chem2/fid9.i/20130519.b/0519a019.d





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst:

Date:

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a020.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44J
 Client ID: AREA2-SP-4
 Injection: 19-MAY-2013 21:46
 Dilution Factor: 10
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	84076	2
C8	1.082	-0.008	3109	5908	DIESEL (C12-C24)	16201219	867.31
C10	2.858	0.000	258	211	M.OIL (C24-C38)	25736961	1605.03
C12	3.862	-0.002	948	375	AK-102 (C10-C25)	18302984	843.18 M
C14	4.562	0.001	7148	5887	AK-103 (C25-C36)	22592242	1944.61 M
C16	5.147	-0.008	16806	19977			
C18	5.716	-0.004	32042	22464			
C20	6.278	-0.003	95272	88251			
C22	6.831	0.000	208651	37435			
C24	7.356	0.004	246951	90140			
C25	7.594	-0.006	243494	52706			
C26	7.853	-0.003	248909	367921			
C28	8.294	-0.004	211018	79400	IT.DIES (C10-C24)	16230511	749.82 M
C32	9.077	0.001	137646	186295			
C34	9.415	-0.004	133968	91403	BUNKERC (C10-C38)	41967472	4528.85 M
Filter Peak	11.485	-0.002	5473	1516			
C36	9.739	-0.001	81438	102159			
C38	10.050	0.010	57124	29520			
C40	10.317	-0.005	35855	36230			
o-terph	5.858	0.004	44608	106933			
Triacon Surr	8.705	-0.008	104529	94748	IT.MOIL (C24-C40)	26528671	1708.19 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	106933	4.2	92.8
Triacontane	94748	5.0	111.4

Handwritten note: 5/20/13

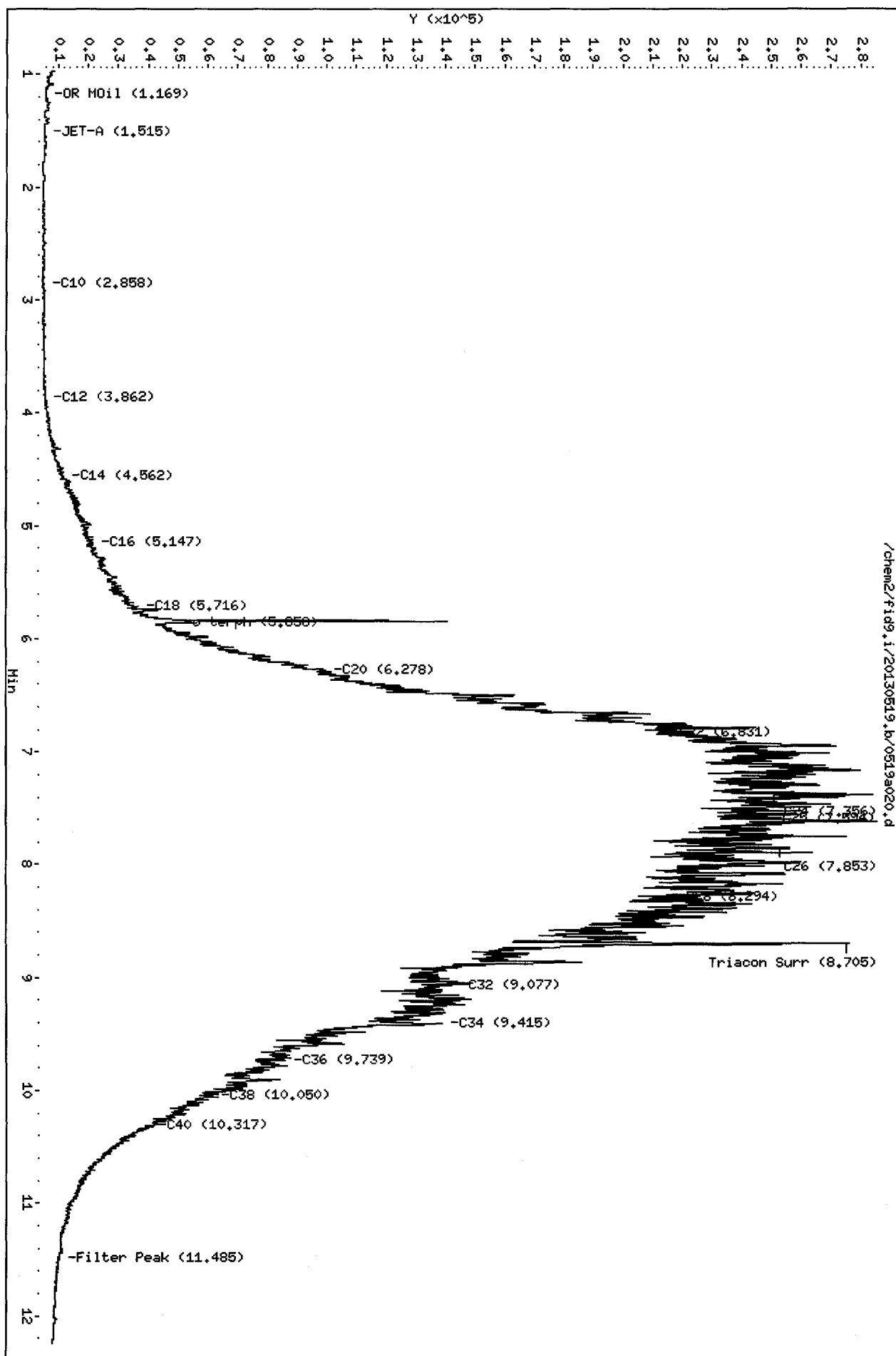
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

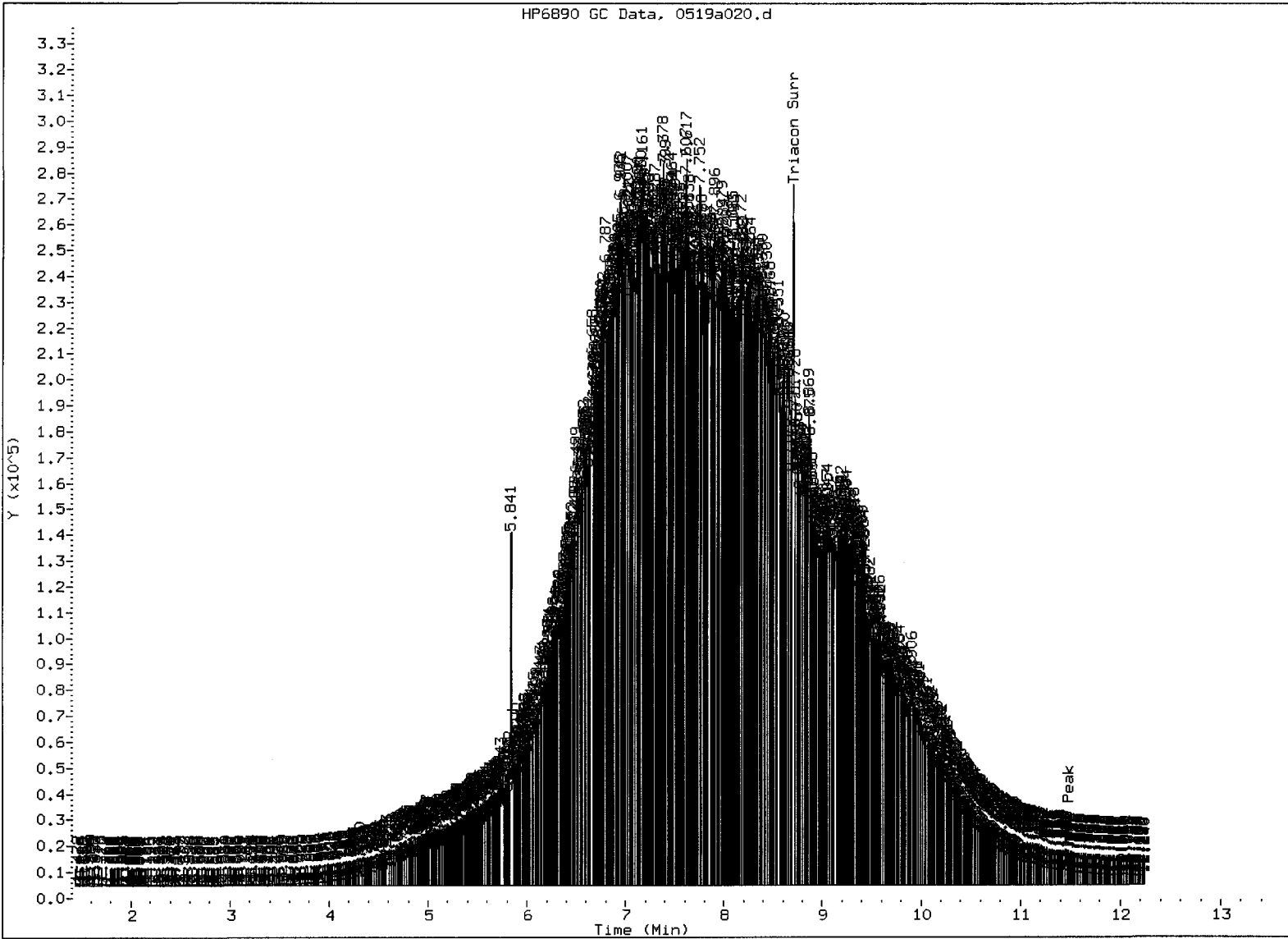
Data File: /chem2/fid9.i/20130519.k/0519a020.d
Date: 19-MAY-2013 21:46
Client ID: ARE2-SP-4
Sample Info: M044J.10

Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

*JW
Stadis*





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ⑤. Surrogate Skipped

Analyst: JW

Date: 5/2/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
AREA2-SP-1	64.0%	0
AREA2-SP-2	65.6%	0
AREA2-SP-3	54.4%	0
AREA2-SP-4	92.9%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-10640 to 13-10643

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-051913
LCS/LCSD

Lab Sample ID: LCS-051913
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/17/13
 Date Received: 05/17/13

Date Extracted LCS/LCSD: 05/19/13

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 05/19/13 16:58

Final Extract Volume LCS: 1.0 mL

LCSD: 05/19/13 17:20

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW

Dilution Factor LCS: 1.0

LCSD: FID/JLW

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	119	150	79.3%	119	150	79.3%	0.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	85.9%	81.3%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a007.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44LCSS1
 Client ID: WQ44LCSS1
 Injection: 19-MAY-2013 16:58
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4809123	140
C8	1.095	0.005	10940	19460	DIESEL (C12-C24)	22272836	1192.35 M
C10	2.860	0.002	85379	87508	M.OIL (C24-C38)	330741	20.63
C12	3.862	-0.003	206971	220992	AK-102 (C10-C25)	25818443	1189.40 M
C14	4.561	0.001	385261	358257	AK-103 (C25-C36)	239528	20.62
C16	5.156	0.001	525313	508272			
C18	5.721	0.002	514208	570241			
C20	6.277	-0.003	279182	412829			
C22	6.825	-0.006	130734	147950			
C24	7.346	-0.006	39066	65008			
C25	7.594	-0.005	20093	30120			
C26	7.872	0.017	4441	2228			
C28	8.293	-0.004	2846	3746	IT.DIES (C10-C24)	25731220	1188.73 M
C32	9.083	0.008	1371	1035			
C34	9.419	0.000	102	36	BUNKERC (C10-C38)	26061961	2812.43 M
Filter Peak	11.492	0.005	725	269			
C36	9.734	-0.005	306	416			
C38	10.040	0.000	284	72			
C40	10.334	0.013	667	455			
o-terph	5.857	0.004	1039500	989662			
Triacon Surr	8.713	0.000	716346	767154	IT.MOIL (C24-C40)	1106524	21.93

M Indicates manual integration within range.

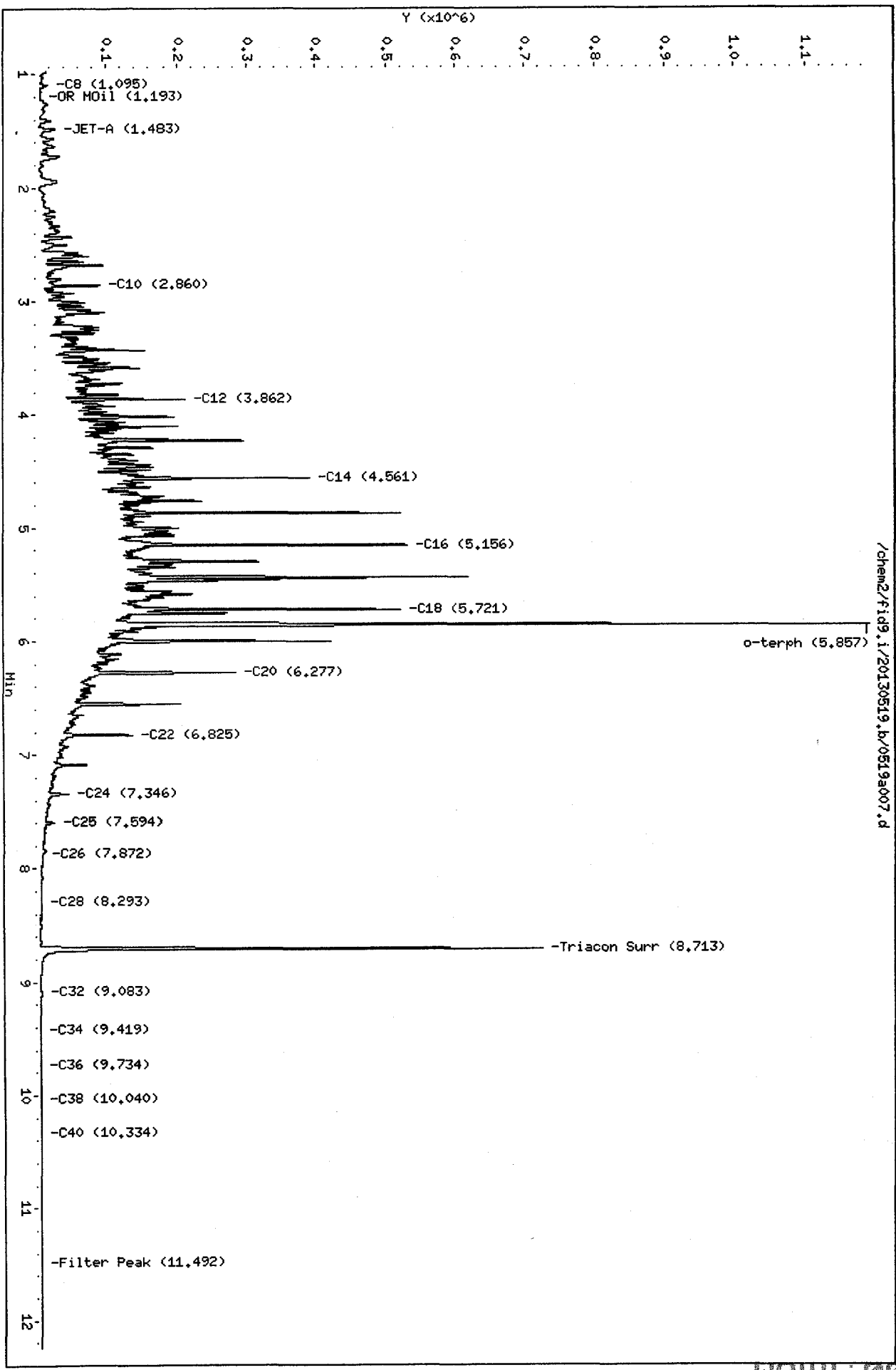
Range Times: NW Diesel (3.864 - 7.352) AK102 (2.86 - 7.60) Jet A (2.86 - 5.72)
 NW M.Oil (7.35 - 10.04) AK103 (7.60 - 9.74) OR Diesel (2.86 - 8.30)

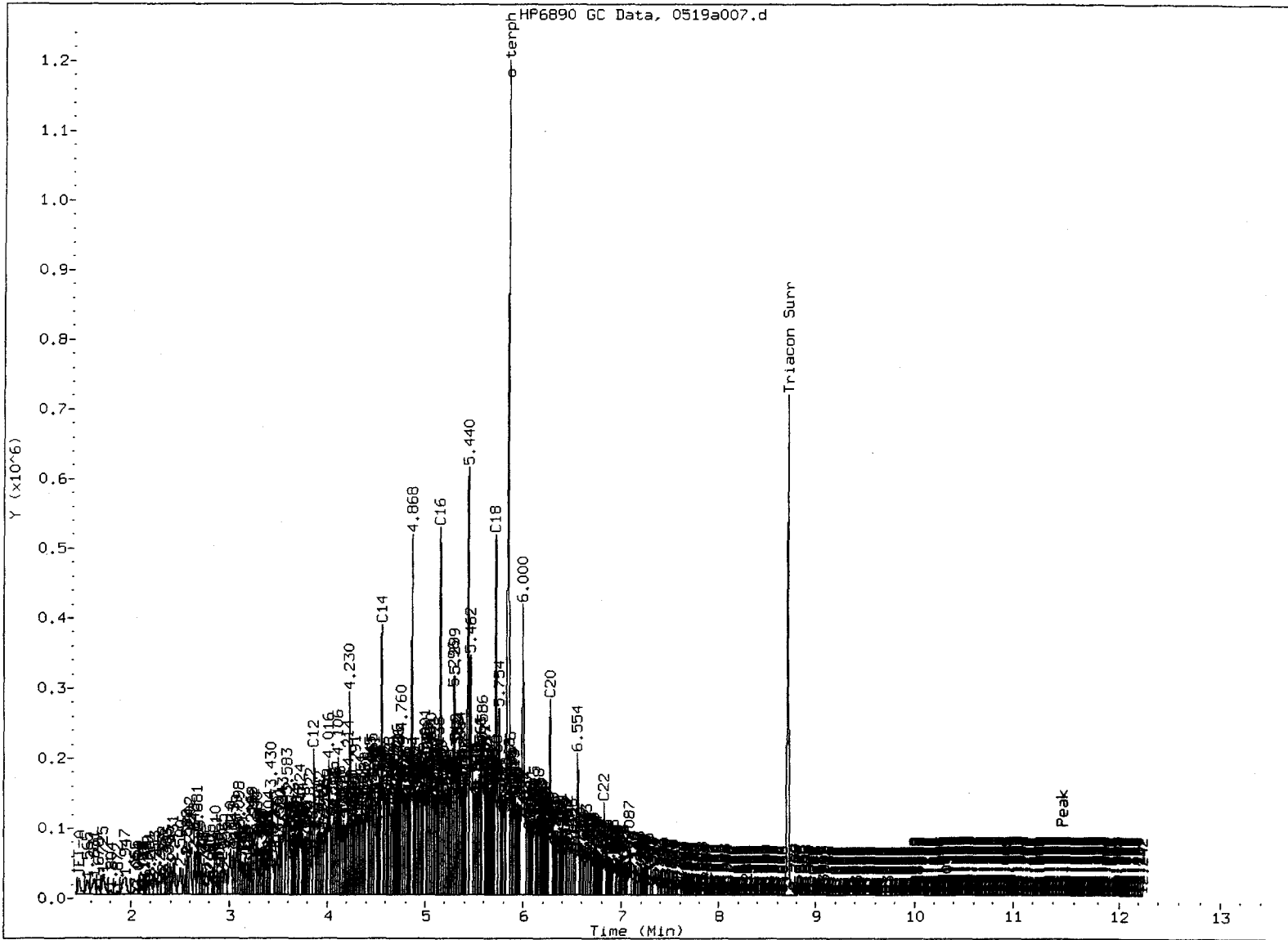
Surrogate	Area	Amount	%Rec
o-Terphenyl	989662	38.6	85.9
Triacontane	767154	40.6	90.2

Handwritten: 5/20/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/20/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JD

Date: 5/20/15

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130519.b/0519a008.d
 Method: /chem2/fid9.i/20130519.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/20/2013

ARI ID: WQ44LCSDS1
 Client ID: WQ44LCSDS1
 Injection: 19-MAY-2013 17:20
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4782153	139
C8	1.090	0.000	11868	17768	DIESEL (C12-C24)	22195274	1188.19
C10	2.857	-0.001	84529	89431	M.OIL (C24-C38)	319519	19.93
C12	3.862	-0.002	209368	224880	AK-102 (C10-C25)	25745711	1186.05 M
C14	4.563	0.002	385770	347491	AK-103 (C25-C36)	231590	19.93
C16	5.154	-0.001	520431	488341			
C18	5.722	0.002	508481	585275			
C20	6.281	0.001	292545	385413			
C22	6.824	-0.007	119332	161843			
C24	7.345	-0.007	36446	54860			
C25	7.593	-0.006	17886	34224			
C26	7.836	-0.019	8508	10889			
C28	8.293	-0.004	2665	2739	IT.DIES (C10-C24)	25660609	1185.47 M
C32	9.063	-0.012	837	1056			
C34	9.419	0.000	90	66	BUNKERC (C10-C38)	25980128	2803.60 M
Filter Peak	11.487	0.000	712	167			
C36	9.732	-0.007	359	344			
C38	10.045	0.005	219	139			
C40	10.324	0.003	742	291			
o-terph	5.858	0.004	975812	936606			
Triacon Surr	8.713	0.000	653762	744533	IT.MOIL (C24-C40)	1073252	21.24

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.352) AK102(2.86 - 7.60) Jet A(2.86 - 5.72)
 NW M.Oil(7.35 - 10.04) AK103(7.60 - 9.74) OR Diesel(2.86 - 8.30)

Surrogate	Area	Amount	%Rec
o-Terphenyl	936606	36.6	81.3
Triacontane	744533	39.4	87.5

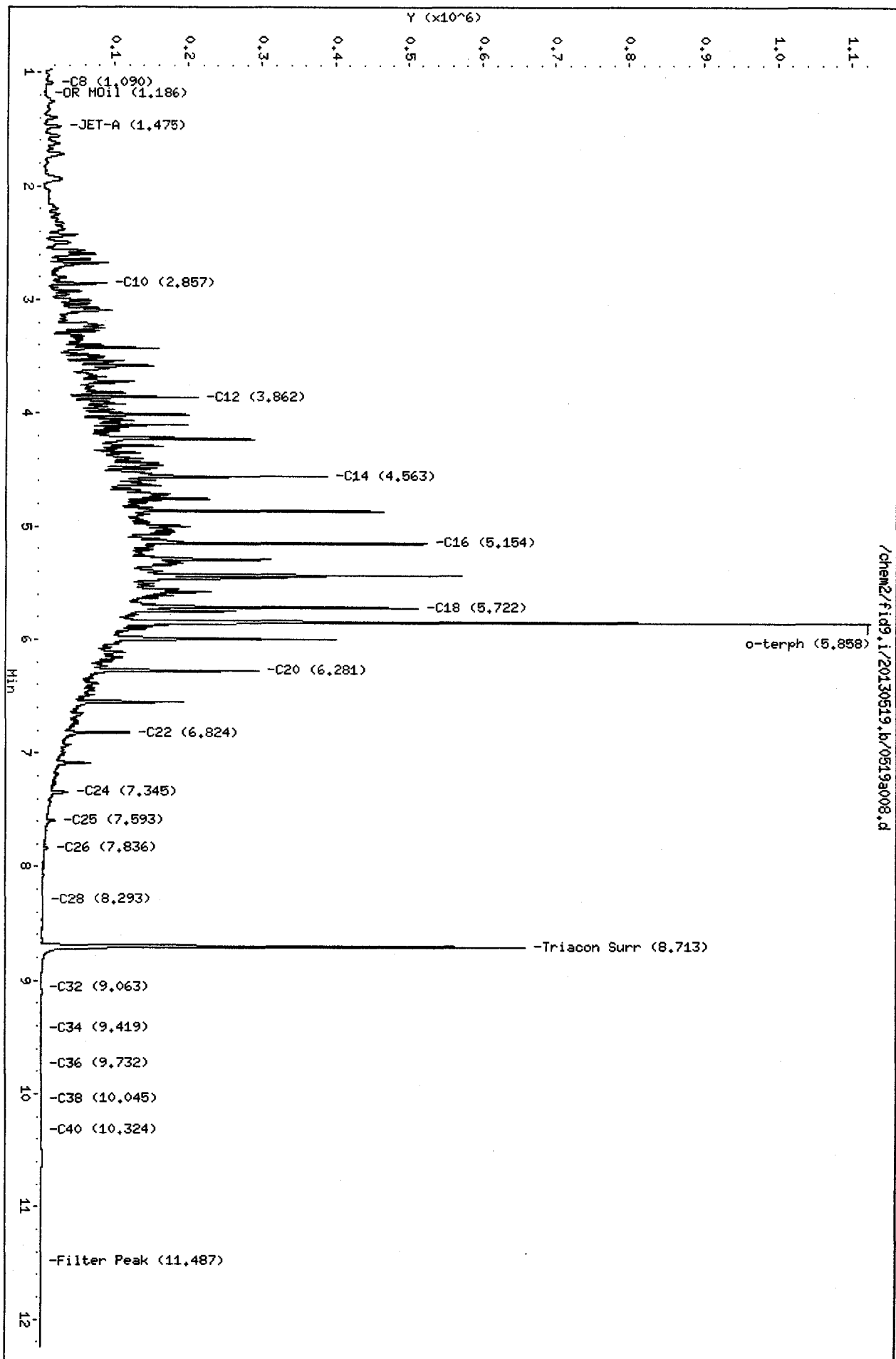
JW
5/20/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

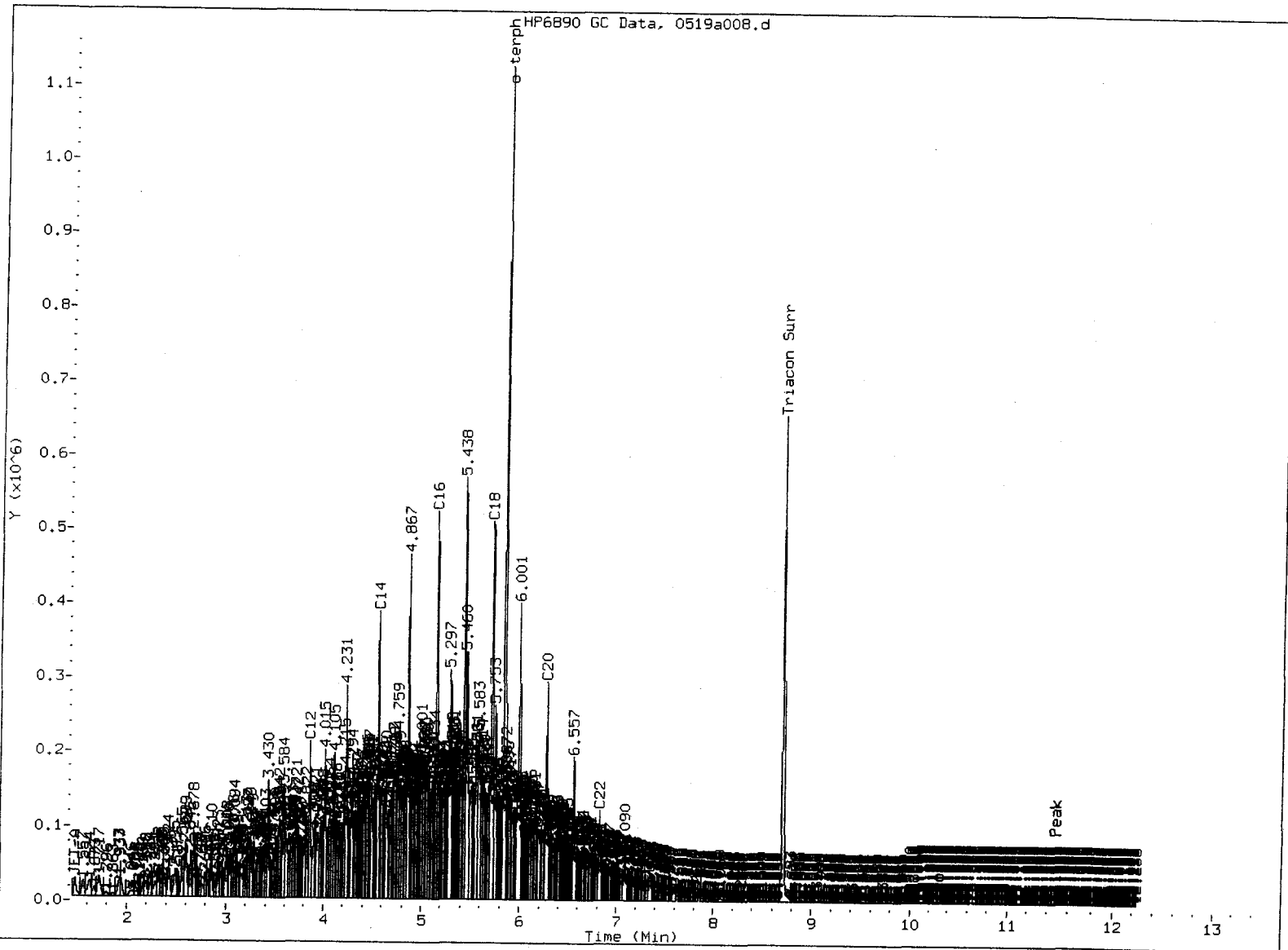
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Date: 19-MAY-2013 17:20
Client ID: M044LCSDS1
Sample Info: M044LCSDS1
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

500
5/20/13



/chem2/fid9.i/20130519.b/0519a008.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JW

Date: 5/20/10

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ44
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10640-WQ44G	AREA2-SP-1	8.66 g	1.00 mL	D	05/19/13
13-10641-WQ44H	AREA2-SP-2	8.55 g	1.00 mL	D	05/19/13
13-10642-WQ44I	AREA2-SP-3	8.48 g	1.00 mL	D	05/19/13
13-10643-WQ44J	AREA2-SP-4	8.73 g	1.00 mL	D	05/19/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-SP-1
SAMPLE

Lab Sample ID: WQ44G

LIMS ID: 13-10640

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 20:20

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 83 mg-dry-wt

Percent Moisture: 14.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	6.0	< 6.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	79.2%
Bromobenzene	81.6%

Gasoline Surrogate Recovery

Trifluorotoluene	82.6%
Bromobenzene	84.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a013.d ARI ID: WQ44G
Data file 2: /chem3/pid1.i/20130517-2.b/0517a013.d Client ID: AREA2-SP-1
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 20:20
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.001	2865	36204	82.6	TFT(Surr)
15.381	0.001	1933	16283	84.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1424	0.004
8015C 2MP-TMB (4.17 to 16.20)	723723	2	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2323	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.002	3143	79.2	TFT(Surr)
15.388	0.000	7172	81.6	BB(Surr)

SW8021 (PID)

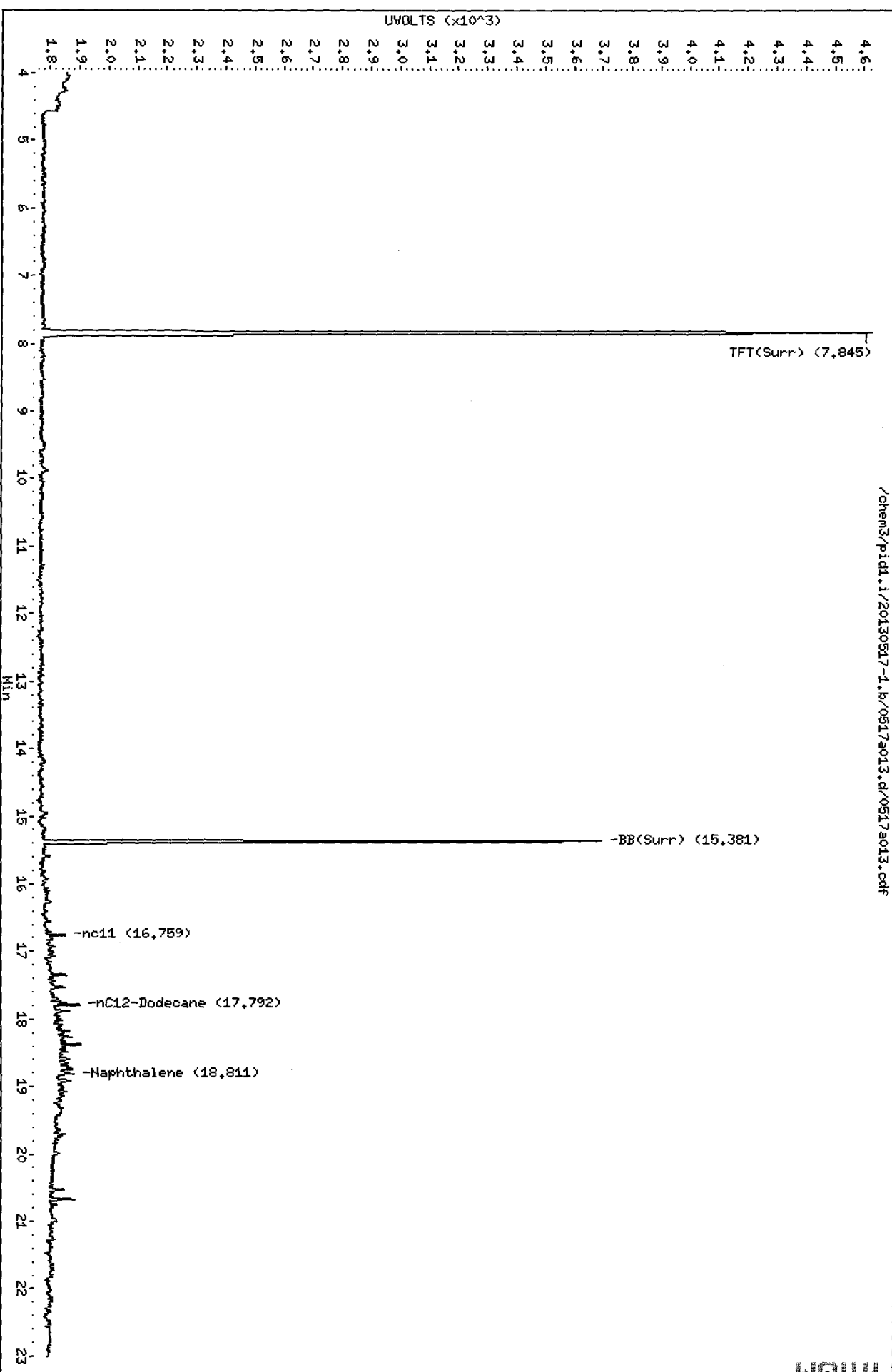
RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.880	0.002	50	0.22N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a013.d
Date: 17-MAY-2013 20:20
Client ID: AREG2-SP-1
Sample Info: MQ44G
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130517-1.b/0517a013.d/0517a013.cdf

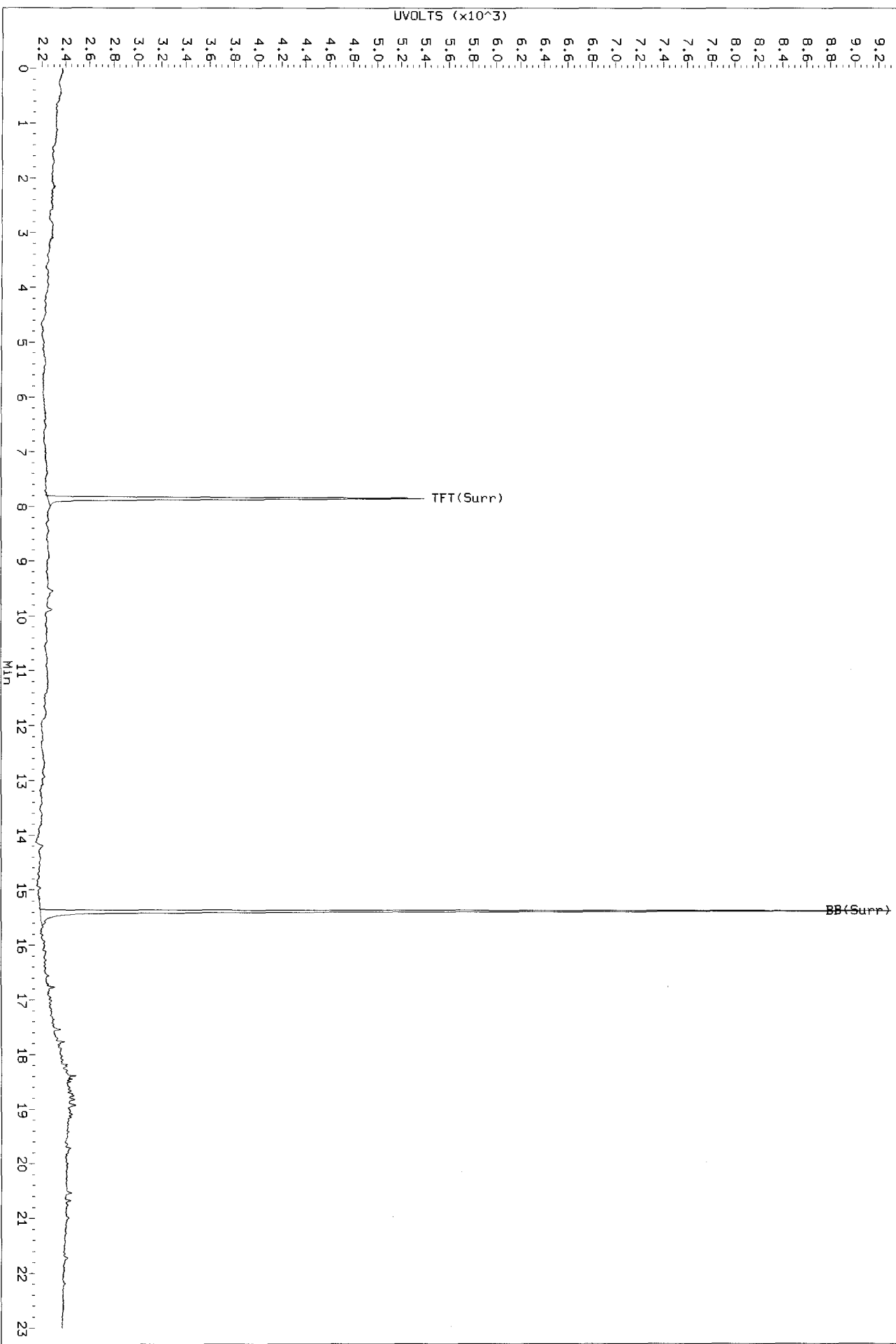


13000 11100

PL
5/18/15

Data File: /chem3/pid1.1/20130517-2.l/0517a013.d/0517a013.cdf
Injection Date: 17-MAY-2013 20:20
Instrument: pid1.1
Client Sample ID: AREA2-SP-1

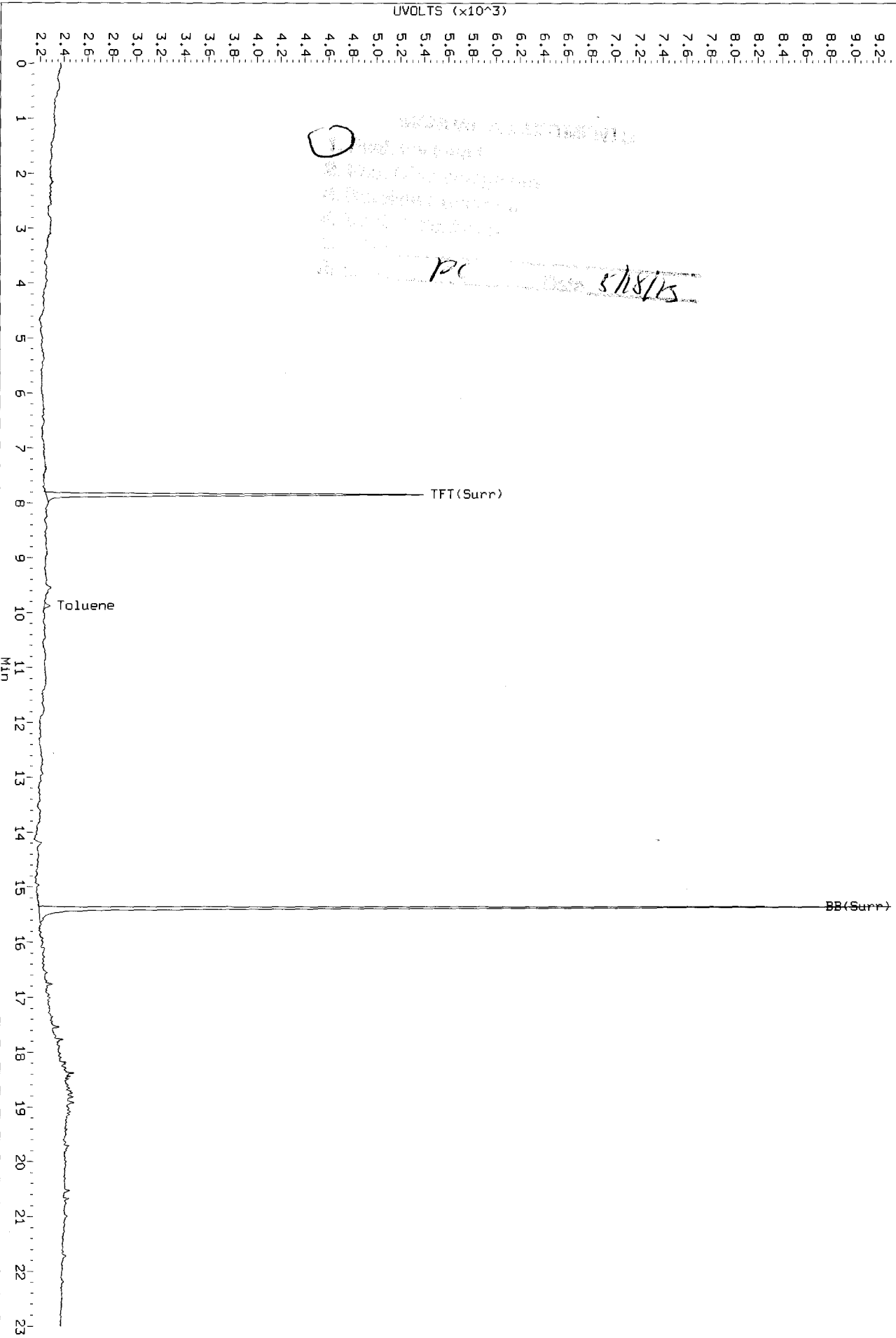
H1A 0517a013.cdf: 0.000 to 23.003 MIN



WQ44: 00035

Data File: /chem3/pid1.1/20130517-2.b/0517a013.d/0517a013.cdf
Injection Date: 17-MAY-2013 20:20
Instrument: pid1.1
Client Sample ID: AREA2-SP-1

AIR 0517a013.cdf: 0.000 to 23.003 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-SP-2
SAMPLE

Lab Sample ID: WQ44H

LIMS ID: 13-10641

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 21:51

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 14.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	16
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.2	< 6.2 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	77.3%
Bromobenzene	80.8%

Gasoline Surrogate Recovery

Trifluorotoluene	80.5%
Bromobenzene	84.1%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a016.d ARI ID: WQ44H
Data file 2: /chem3/pid1.i/20130517-2.b/0517a016.d Client ID: AREA2-SP-2
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 21:51
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.844	0.000	2794	35226	80.5	TFT(Surr)
15.381	0.000	1920	16093	84.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	8085	0.023
8015C 2MP-TMB (4.17 to 16.20)	723723	15627	0.022
AK101 nC6-nC10 (4.67 to 15.10)	582885	13267	0.023
NWTPHG Tol-Nap (9.77 to 18.90)	375093	8085	0.022

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.852	0.000	3070	77.3	TFT(Surr)
15.388	0.000	7104	80.8	BB(Surr)

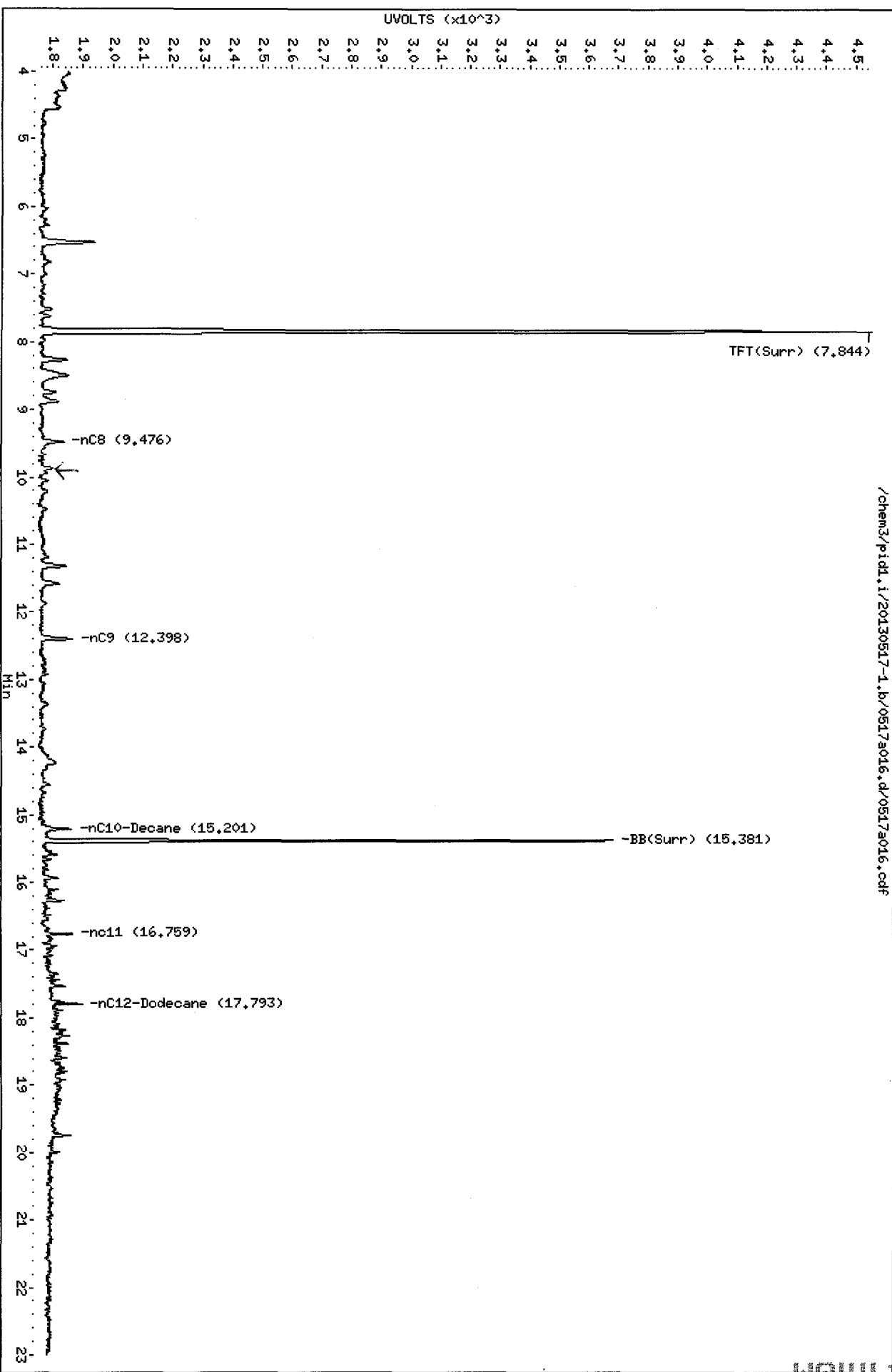
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.880	0.002	59	0.26N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a016.d
Date: 17-MAY-2013 21:51
Client ID: AREA2-SP-2
Sample Info: MQ44H
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



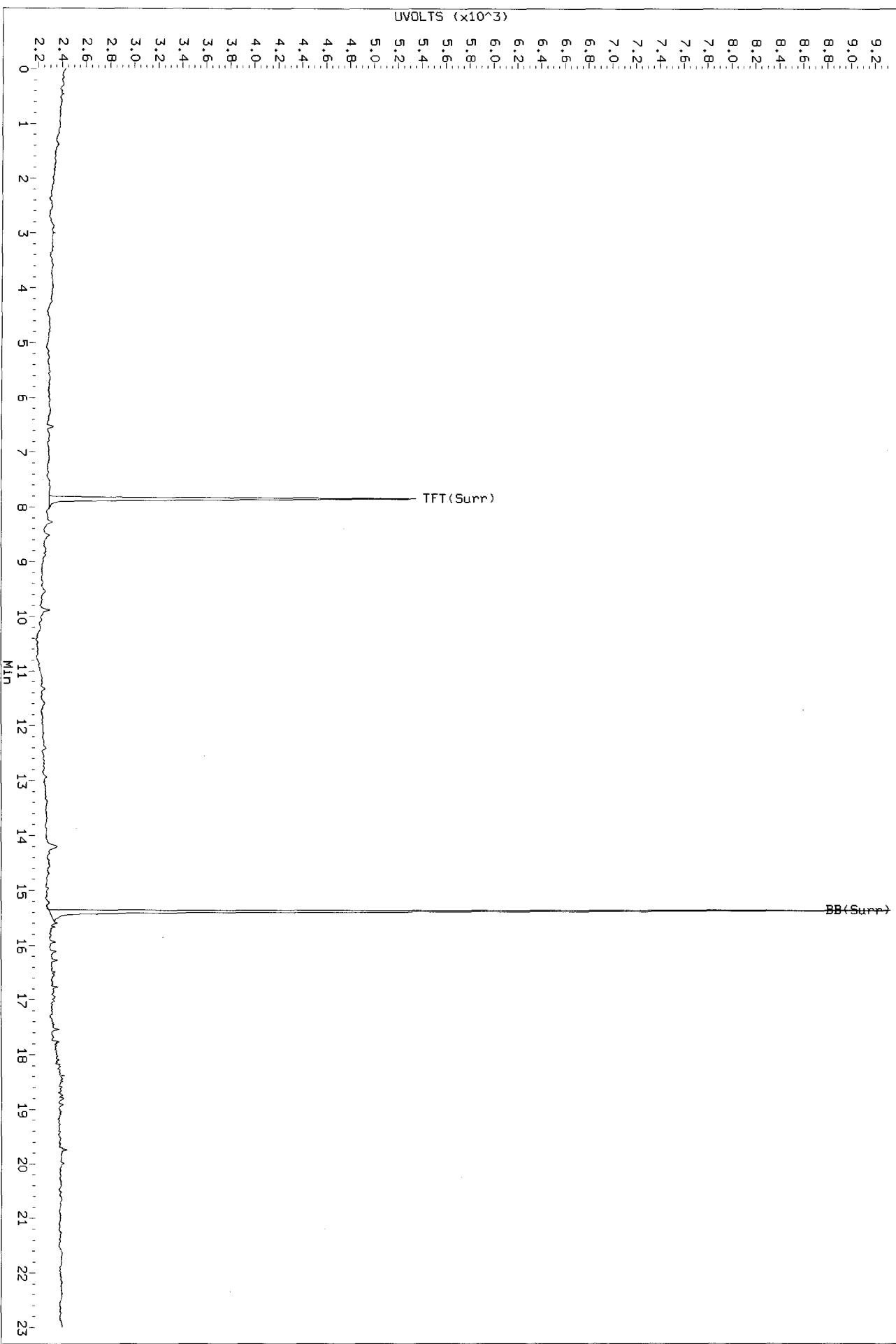
/chem3/pid1.i/20130517-1.b/0517a016.d/0517a016.cdf

000030

PL
5/18/15

Data File: /chem3/pid1.1/20130517-2.b/0517a016.d/0517a016.cdf
Injection Date: 17-MAY-2013 21:51
Instrument: pid1.1
Client Sample ID: AREa2-SP-2

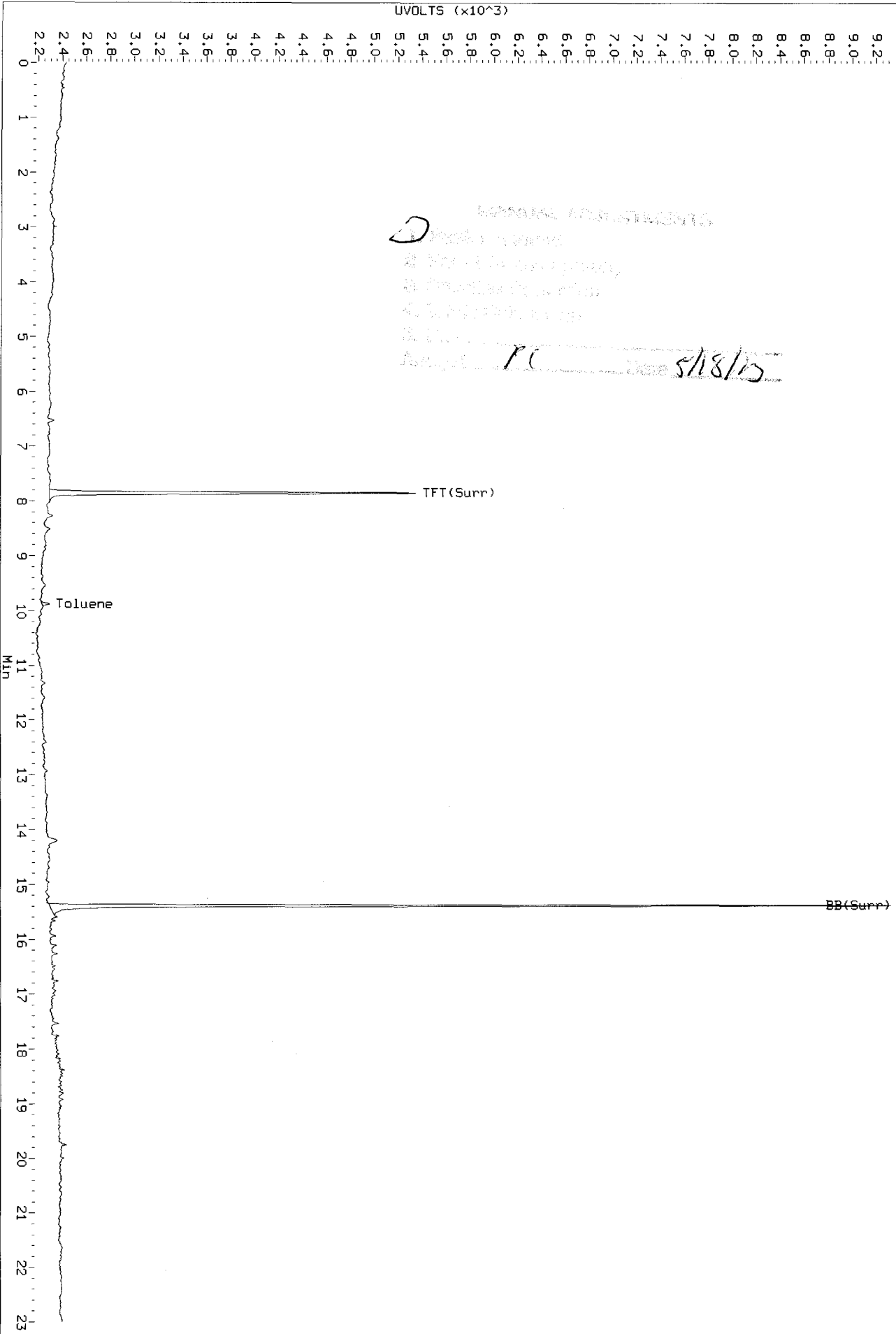
AIA 0517a016.cdf: 0.000 to 23.000 Min



0400 : 0004

Data File: /chem3/pid1.1/20130517-2.b/0517a016.d/0517a016.cdf
Injection Date: 17-MAY-2013 21:51
Instrument: pid1.1
Client Sample ID: AREA2-SP-2

AIA 0517a016.cdf: 0.000 to 23.000 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-SP-3
SAMPLE

Lab Sample ID: WQ44I

LIMS ID: 13-10642

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 22:21

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

	6.2	< 6.2 U	GAS ID ---
--	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	75.6%
Bromobenzene	80.1%

Gasoline Surrogate Recovery

Trifluorotoluene	78.4%
Bromobenzene	83.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PK
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a017.d ARI ID: WQ44I
Data file 2: /chem3/pid1.i/20130517-2.b/0517a017.d Client ID: AREA2-SP-3
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 22:21
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.845	0.002	2721	34544	78.4	TFT(Surr)
15.381	0.001	1895	15646	83.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	1595	0.004
8015C 2MP-TMB (4.17 to 16.20)	723723	472	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3781	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.853	0.002	2999	75.6	TFT(Surr)
15.389	0.001	7038	80.1	BB(Surr)

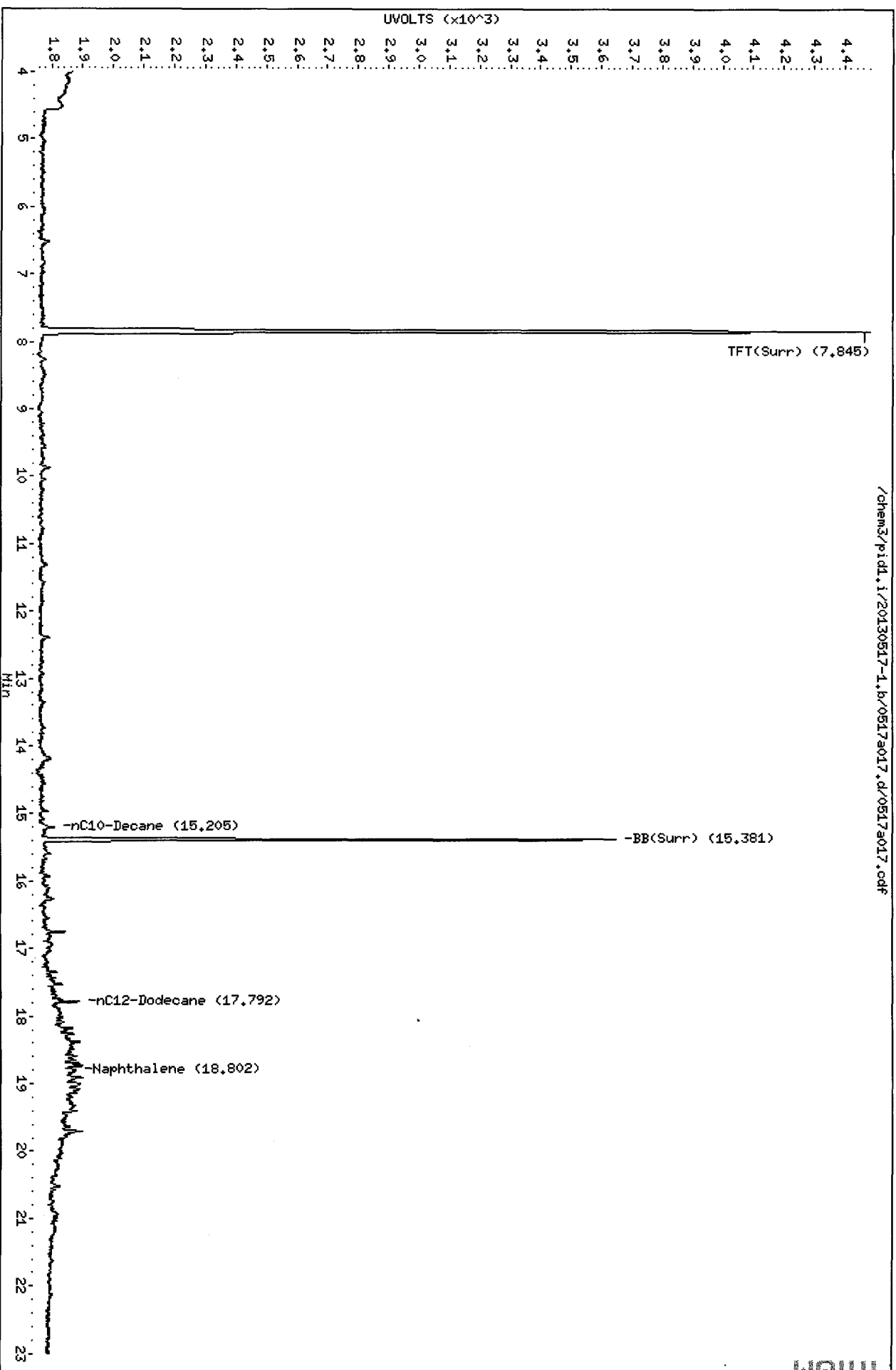
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
9.877	-0.002	45	0.20N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a017.d
Date: 17-MAY-2013 22:21
Client ID: AREA2-SP-3
Sample Info: MQ441
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



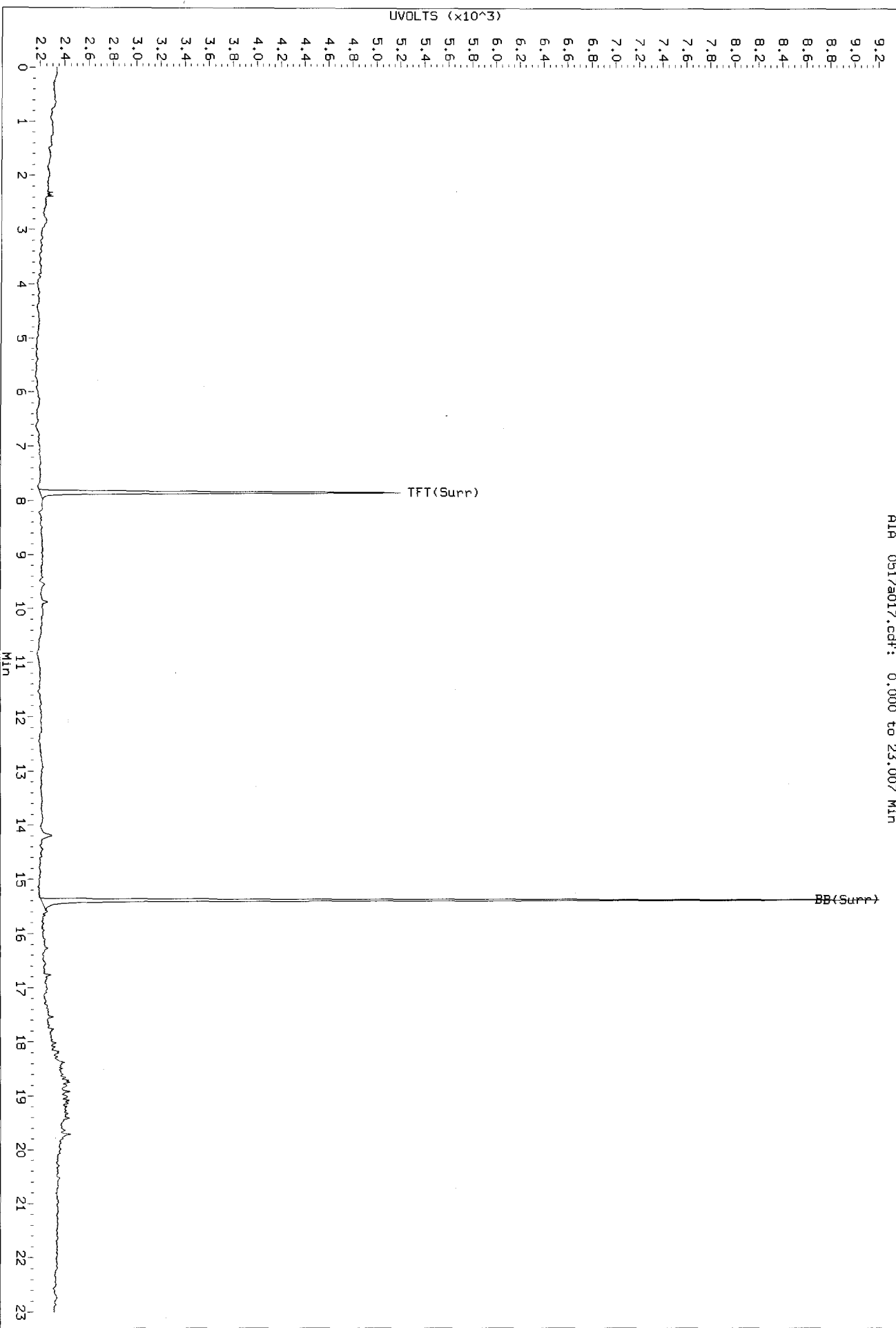
/chem3/pid1.i/20130517-1.b/0517a017.d/0517a017.cdf

11000 11000

Handwritten initials: VC 5/1/13

Data File: /chem3/pid1.1/20130517-2.b/0517a017.d/0517a017.cdf
Injection Date: 17-MAY-2013 22:21
Instrument: pid1.1
Client Sample ID: AREA2-SP-3

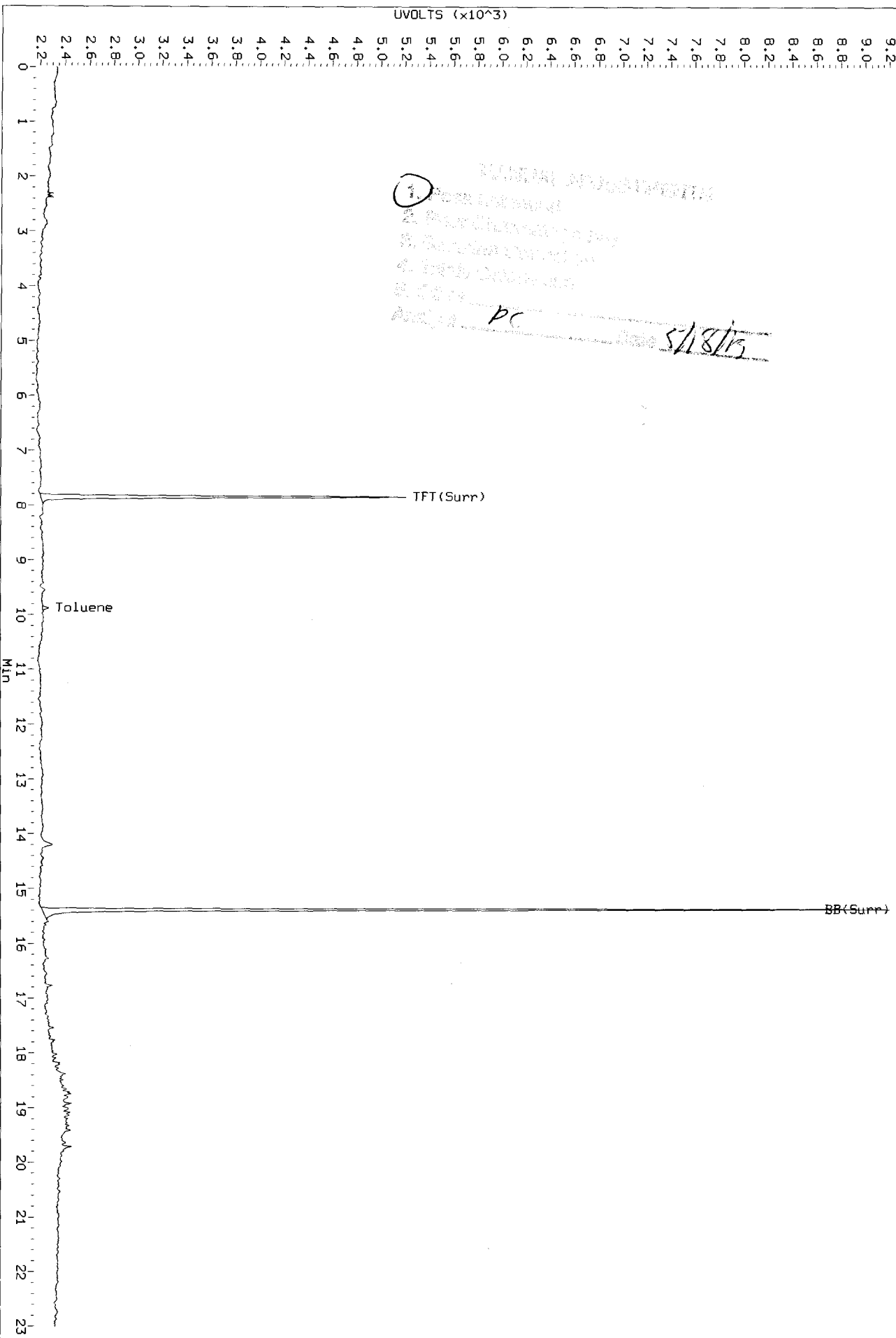
AIA 0517a017.cdf: 0.000 to 23.007 Min



0004 : 0004

Data File: /chem3/pid1.1/20130517-2.b/0517a017.d/0517a017.cdf
Injection Date: 17-MAY-2013 22:21
Instrument: pid1.1
Client Sample ID: ARE2-SF-3

AIR 0517a017.cdf: 0.000 to 23.007 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-SP-4
SAMPLE

Lab Sample ID: WQ44J

LIMS ID: 13-10643

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 22:51

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 83 mg-dry-wt

Percent Moisture: 13.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	6.0	< 6.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	77.3%
Bromobenzene	81.4%

Gasoline Surrogate Recovery

Trifluorotoluene	80.8%
Bromobenzene	84.1%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/2/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a018.d ARI ID: WQ44J
Data file 2: /chem3/pid1.i/20130517-2.b/0517a018.d Client ID: AREA2-SP-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 22:51
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.844	0.000	2801	35402	80.8	TFT(Surr)
15.380	0.000	1919	16120	84.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	1157	0.003
8015C 2MP-TMB (4.17 to 16.20)	723723	597	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	597	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1157	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.851	0.000	3070	77.3	TFT(Surr)
15.388	0.000	7156	81.4	BB(Surr)

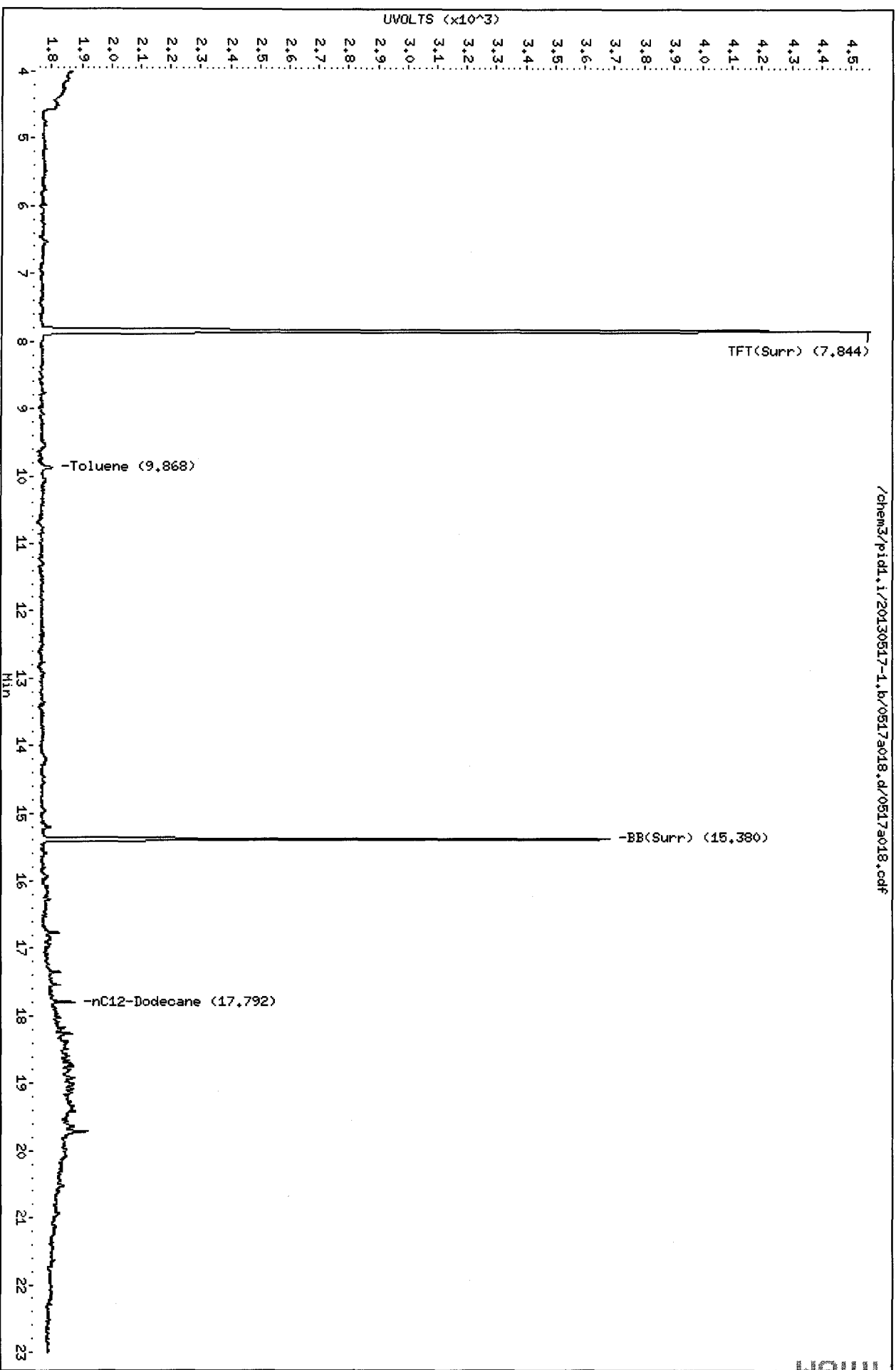
SW8021 (PID)

RT	Shift	Response	Amount	Compound
---	----	-----	----	-----
ND	---	---	---	Benzene
9.877	-0.002	47	0.21N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a018.d
Date: 17-MAY-2013 22:51
Client ID: AREA2-SP-4
Sample Info: MQ44J
Column Phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



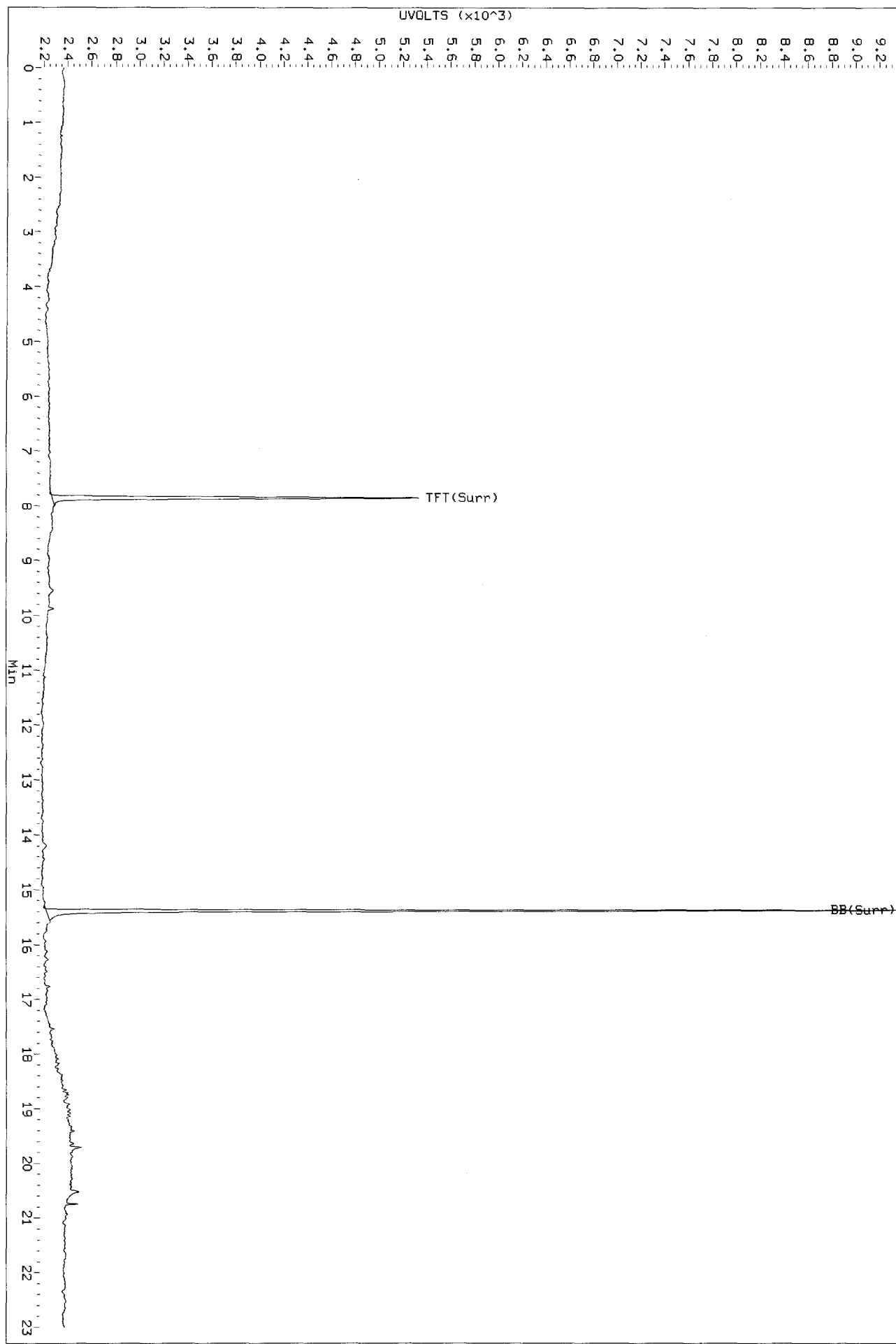
/chem3/pid1.i/20130517-1.b/0517a018.d/0517a018.cdf

0500 1100

5/18/13

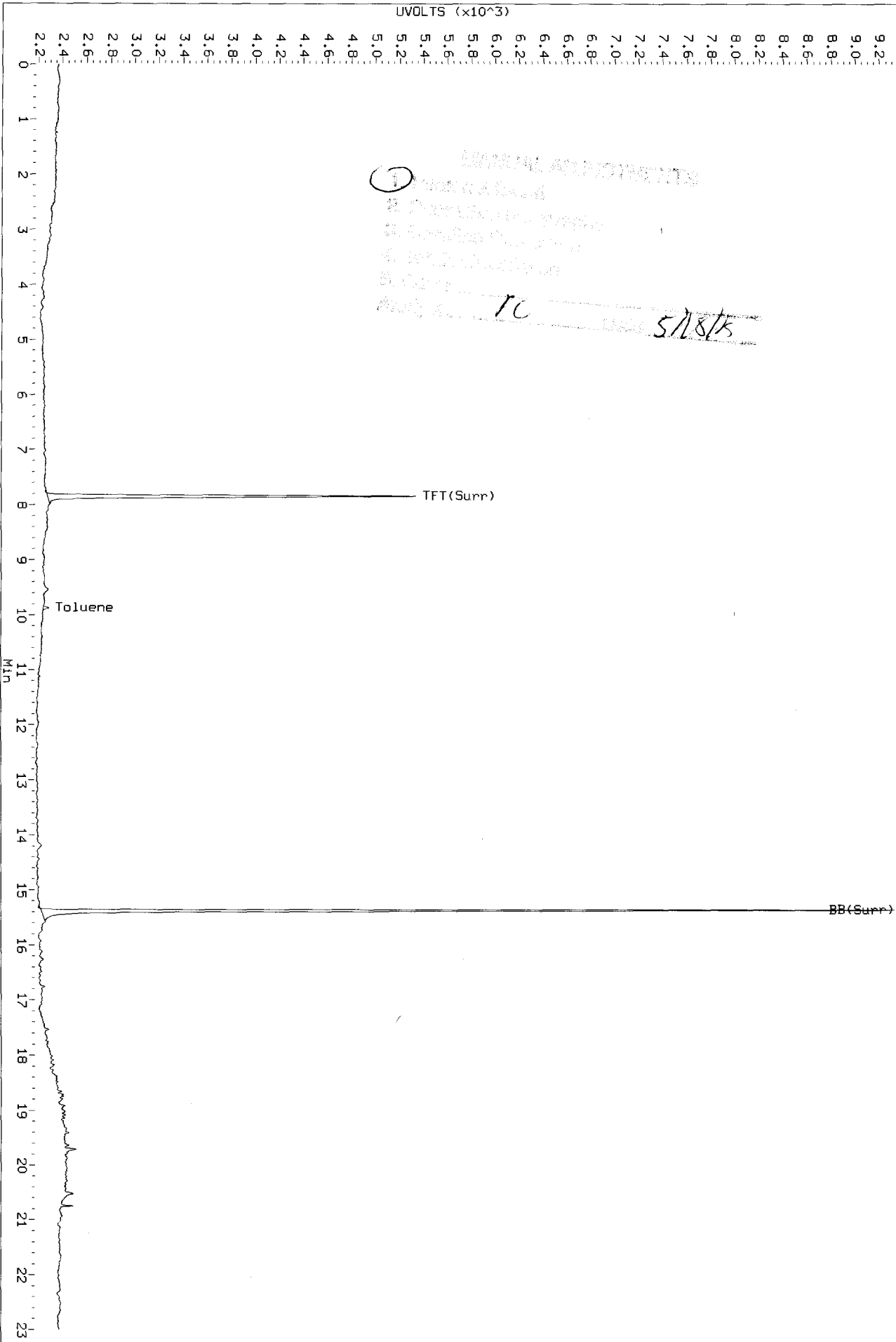
Data File: /chem3/pid1.i/20130517-2.b/0517a018.d/0517a018.cdf
Injection Date: 17-MAY-2013 22:51
Instrument: pid1.i
Client Sample ID: AREA2-SP-4

Area 0517a018.cdf: 0.000 to 23.000 MIN



Data File: /chem3/pid1.1/20130517-2.1.b/0517a018.d/0517a018.cdf
Injection Date: 17-MAY-2013 22:51
Instrument: pid1.1
Client Sample ID: AREA2-SP-4

AIR 0517a018.cdf: 0.000 to 23.000 Min



WQ44 : 00051

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ44
Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
AREA2-SP-1	NA	82.6%	84.7%	0
AREA2-SP-2	NA	80.5%	84.1%	0
AREA2-SP-3	NA	78.4%	83.0%	0
AREA2-SP-4	NA	80.8%	84.1%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-10640 to 13-10643

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ44
Matrix: Soil

QC Report No: WQ44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
AREA2-SP-1	79.2%	81.6%	0
AREA2-SP-2	77.3%	80.8%	0
AREA2-SP-3	75.6%	80.1%	0
AREA2-SP-4	77.3%	81.4%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10640 to 13-10643

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: LCS-051713
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713
 LIMS ID: 13-10634
 Matrix: Soil
 Data Release Authorized: *YWW*
 Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/17/13 11:37
 LCSD: 05/17/13 12:07
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS		LCS Recovery		LCSD		LCSD Recovery		RPD
	Value	Spike Added	Value	Recovery %	Value	Spike Added	Value	Recovery %	
Gasoline Range Hydrocarbons	50.1	50.0	100%		46.2	50.0	92.4%	8.1%	

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.3%	88.9%
Bromobenzene	88.3%	85.7%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-051713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/17/13 11:37

LCSD: 05/17/13 12:07

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike		LCS Recovery	LCSD	Spike		LCSD Recovery	RPD
		Added	LCS			Added	LCSD		
Benzene	172	185	93.0%	158	185	85.4%	8.5%		
Toluene	1770	1980	89.4%	1620	1980	81.8%	8.8%		
Ethylbenzene	516	580	89.0%	466	580	80.3%	10.2%		
m,p-Xylene	1840	2120	86.8%	1680	2120	79.2%	9.1%		
o-Xylene	832	960	86.7%	765	960	79.7%	8.4%		

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	88.2%	84.2%
Bromobenzene	85.5%	82.9%

PC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pidl.i/20130517-1.b/0517a004.d ARI ID: LCS0517
Data file 2: /chem3/pidl.i/20130517-2.b/0517a004.d Client ID:
Method: /chem3/pidl.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 11:37
Instrument: pidl.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.002	3166	44452	91.3	TFT(Surr)
15.383	0.002	2015	17511	88.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	356268	0.995 M
8015C 2MP-TMB (4.17 to 16.20)	723723	721029	0.996 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	580704	0.996 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	375758	1.002 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.003	3500	88.2	TFT(Surr)
15.390	0.002	7511	85.5	BB(Surr)

SW8021 (PID)

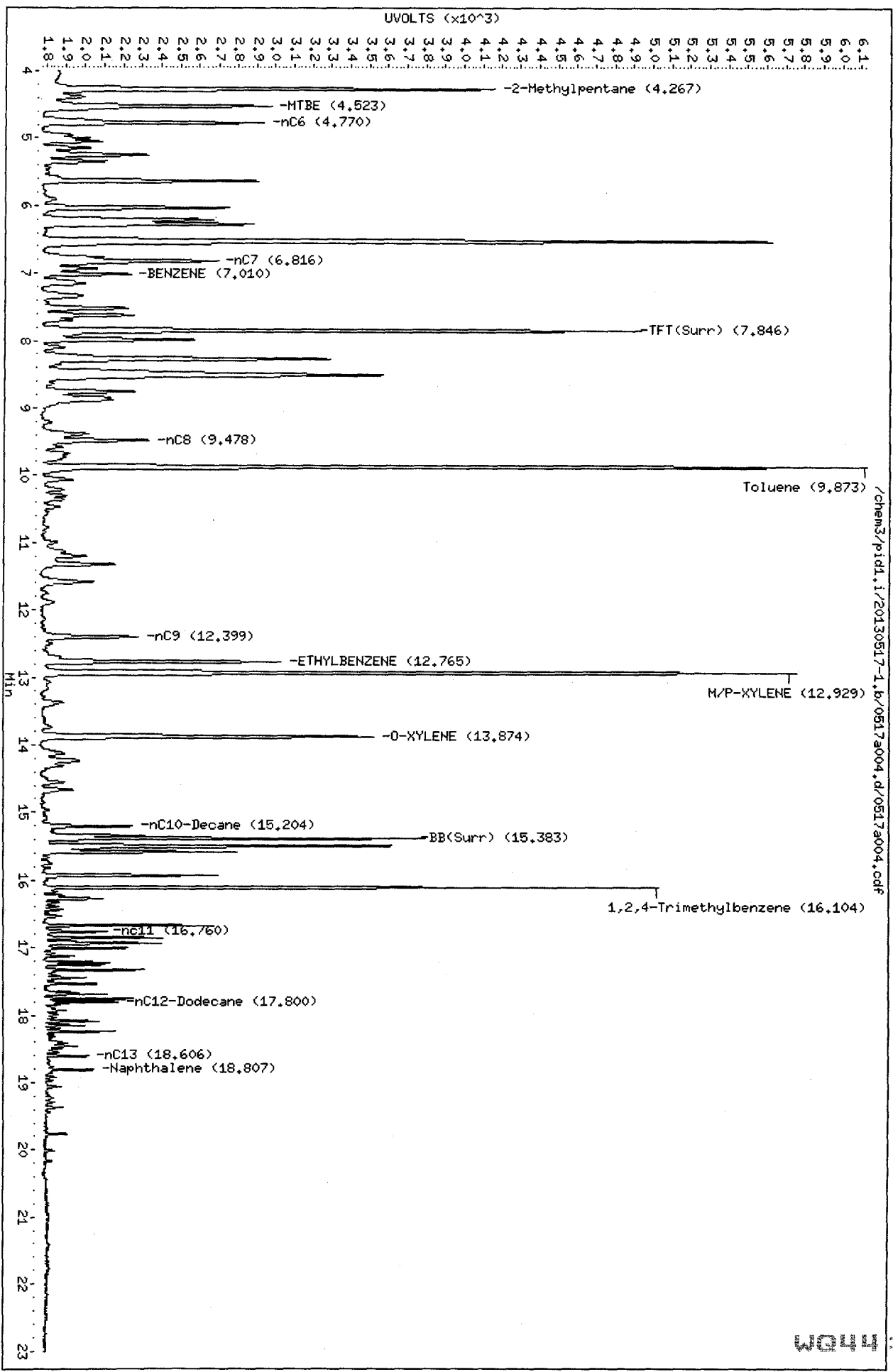
RT	Shift	Response	Amount	Compound
7.018	0.002	826	3.44	Benzene
9.882	0.003	8114	35.43	Toluene
12.774	0.003	1998	10.32	Ethylbenzene
12.937	0.006	7876	36.88	M/P-Xylene
13.883	0.004	2837	16.63	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a004.d
Date: 17-MAY-2013 11:37
Client ID:
Sample Info: LCS0517

Column Phase: RTX 502-2 FID

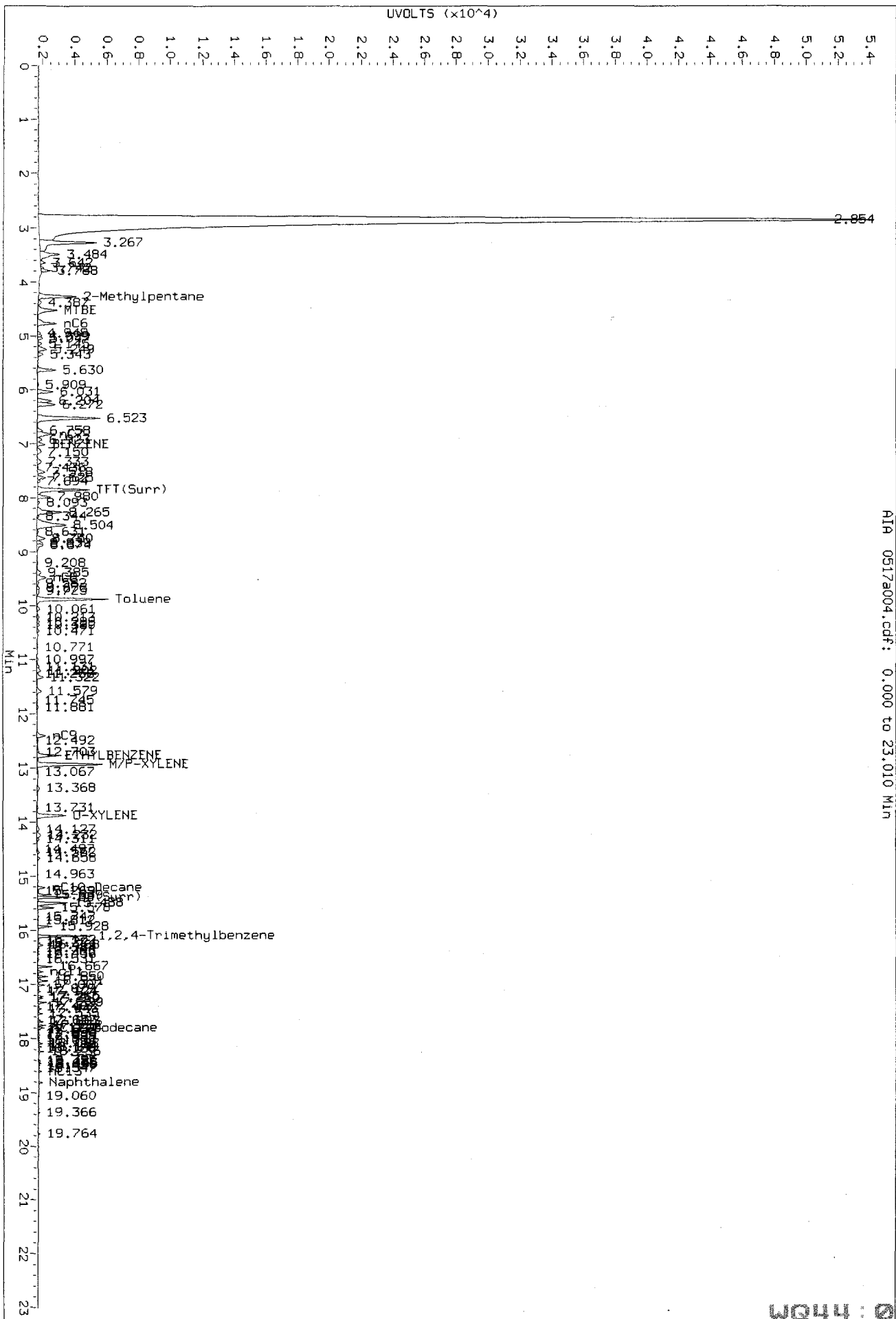
Instrument: pid1.1
Operator: PC
Column diameter: 0.18



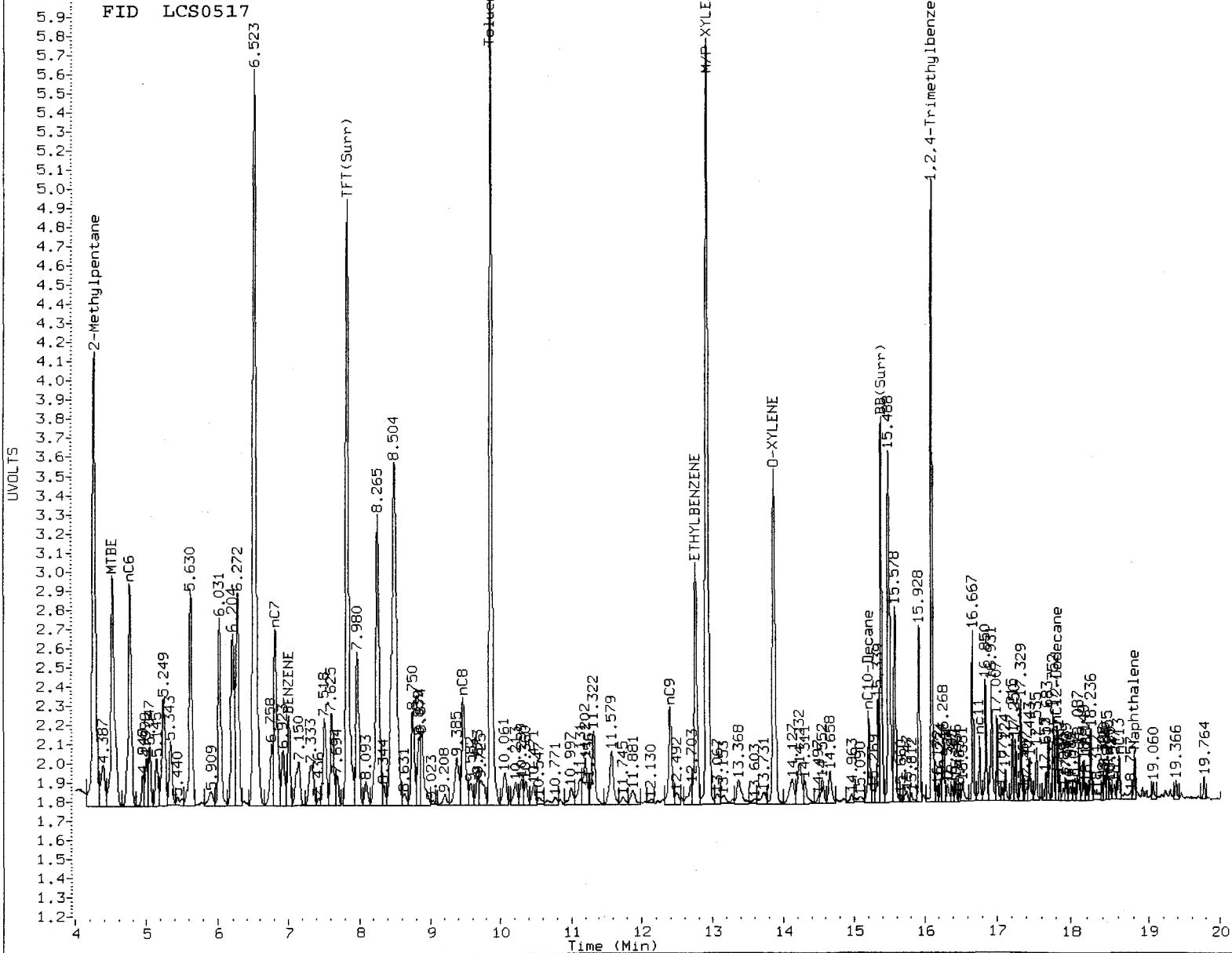
W044: 00057

MC
5/20/13

Data File: /chem3/pid1_1/20130517-1.b/0517a004.d/0517a004.cdf
Injection Date: 17-MAY-2013 11:37
Instrument: pid1.1
Client Sample ID:



A19 0517a004.cdf: 0.000 to 23.010 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: KL

Date: 5/20/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

pac
5/20/13

Data file 1: /chem3/pidl.i/20130517-1.b/0517a005.d ARI ID: LCSD0517
 Data file 2: /chem3/pidl.i/20130517-2.b/0517a005.d Client ID:
 Method: /chem3/pidl.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:07
 Instrument: pidl.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	-0.001	3083	43246	88.9	TFT(Surr)
15.381	0.001	1955	17346	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	329384	0.920 M
8015C 2MP-TMB (4.17 to 16.20)	723723	672432	0.929 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	541268	0.929 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	347058	0.925 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.000	3342	84.2	TFT(Surr)
15.389	0.001	7285	82.9	BB(Surr)

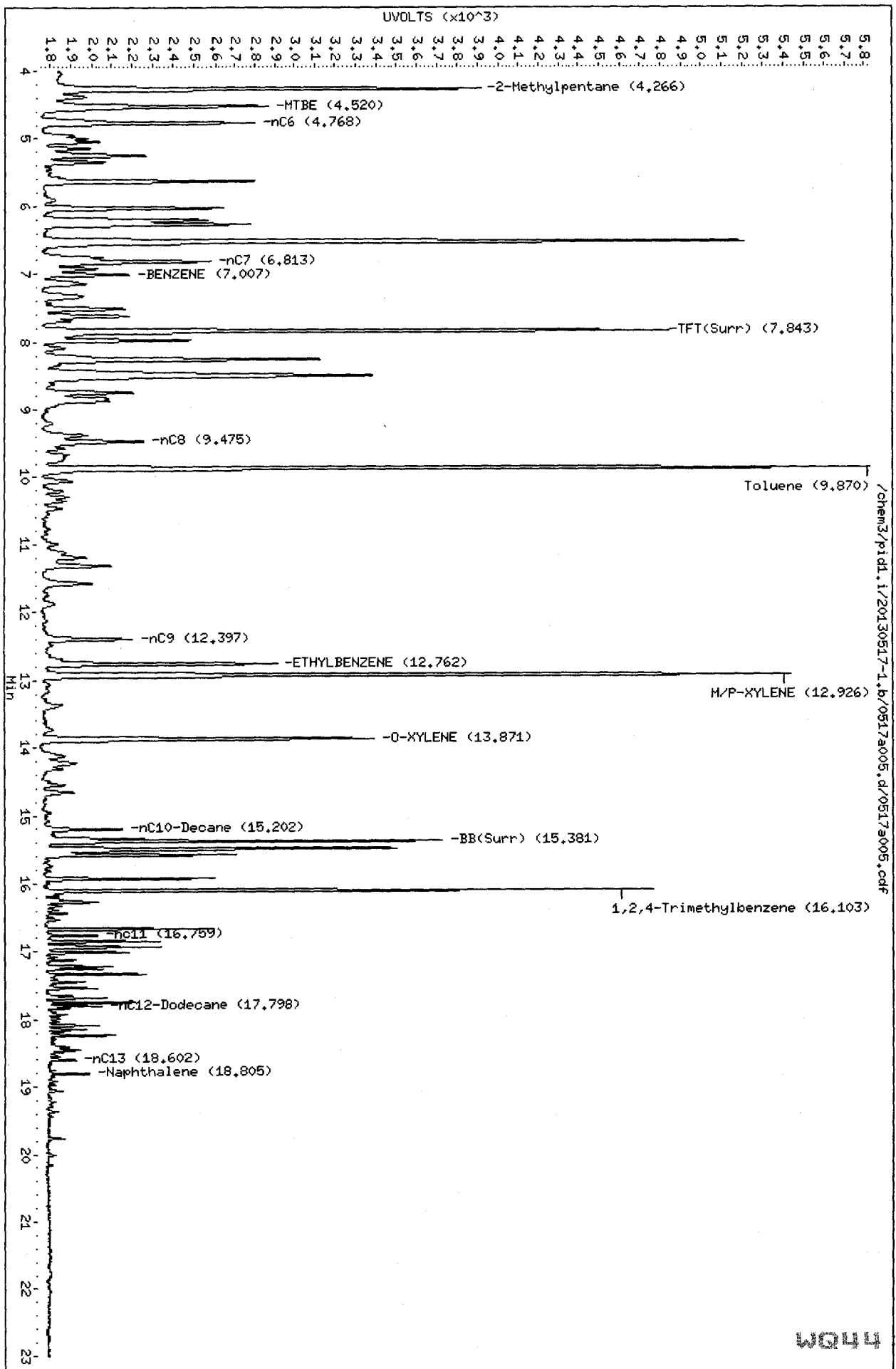
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.015	-0.001	757	3.15	Benzene
9.879	0.000	7421	32.41	Toluene
12.771	0.000	1805	9.32	Ethylbenzene
12.934	0.003	7195	33.69	M/P-Xylene
13.880	0.001	2611	15.30	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a005.d
Date: 17-MAY-2013 12:07
Client ID:
Sample Info: LCSD0517
Column phase: RTX 502-2 FID

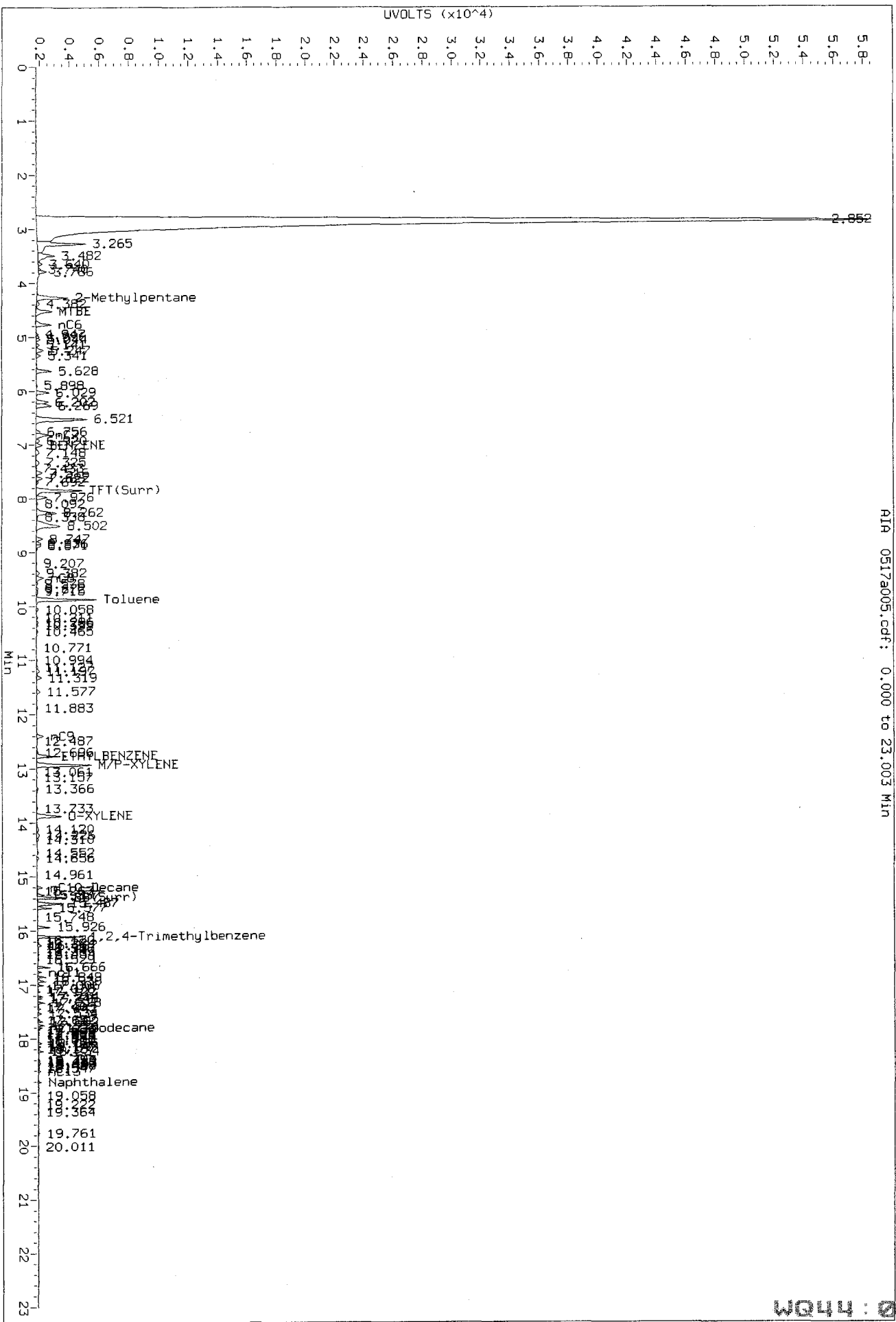
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



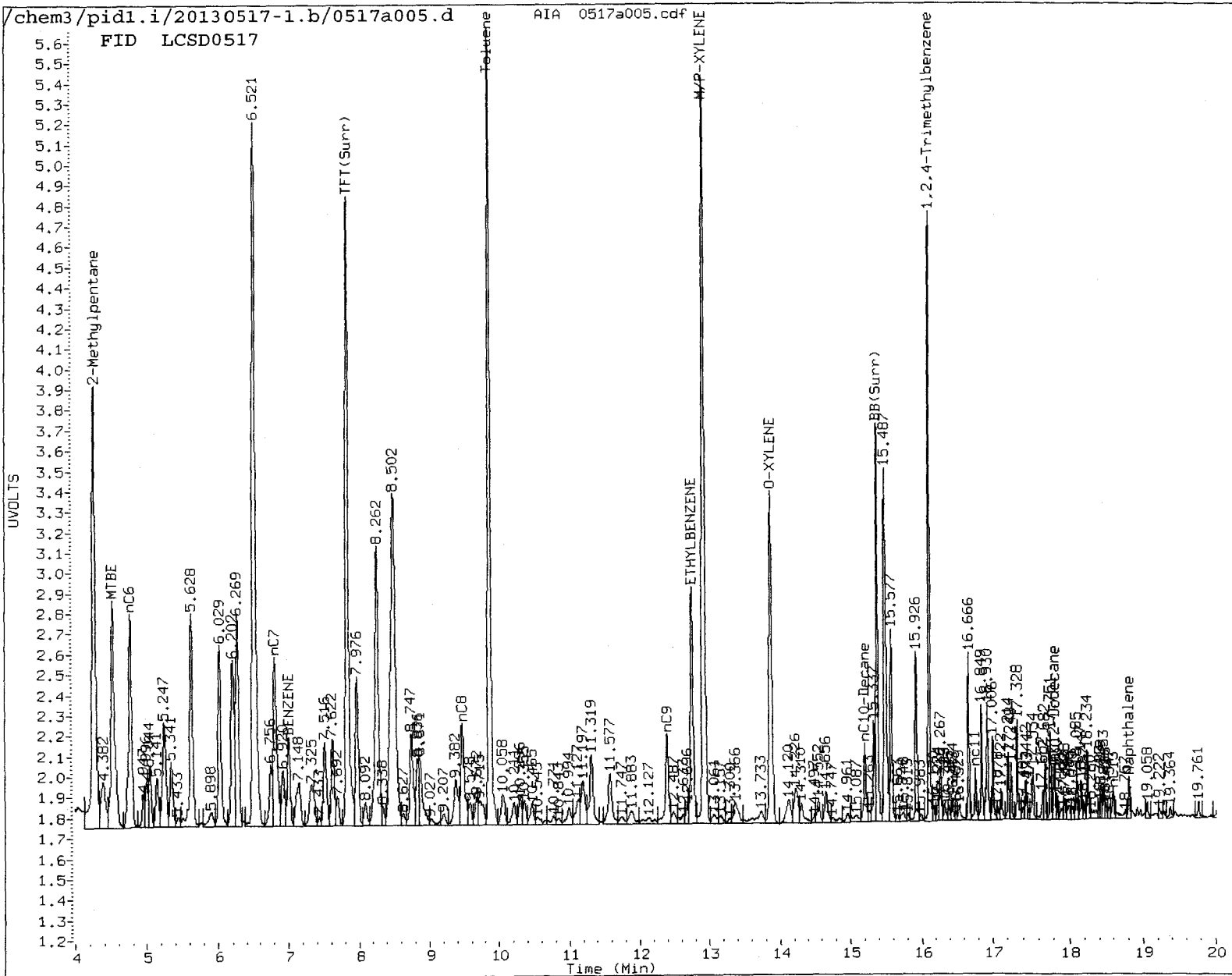
W044 00061

Data File: /chem3/pud1.1/20130517-1.b/0517a005.d/0517a005.cdf
 Injection Date: 17-MAY-2013 12:07
 Instrument: pud1.1
 Client Sample ID:

PC
 5/17/13



AIA 0517a005.cdf: 0.000 to 23.003 Min



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: KL

Date: 5/20/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-051713

METHOD BLANK

Lab Sample ID: MB-051713

LIMS ID: 13-10634

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/20/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/17/13 12:37

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	82.9%
Bromobenzene	83.2%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	85.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a006.d ARI ID: MB0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a006.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.000	2968	37734	85.6	TFT (Surr)
15.381	0.001	1947	16457	85.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3253	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	3996	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	3150	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3253	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.001	3292	82.9	TFT (Surr)
15.390	0.001	7317	83.2	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a006.d
Date: 17-MAY-2013 12:37

Client ID:
Sample Info: MB0517

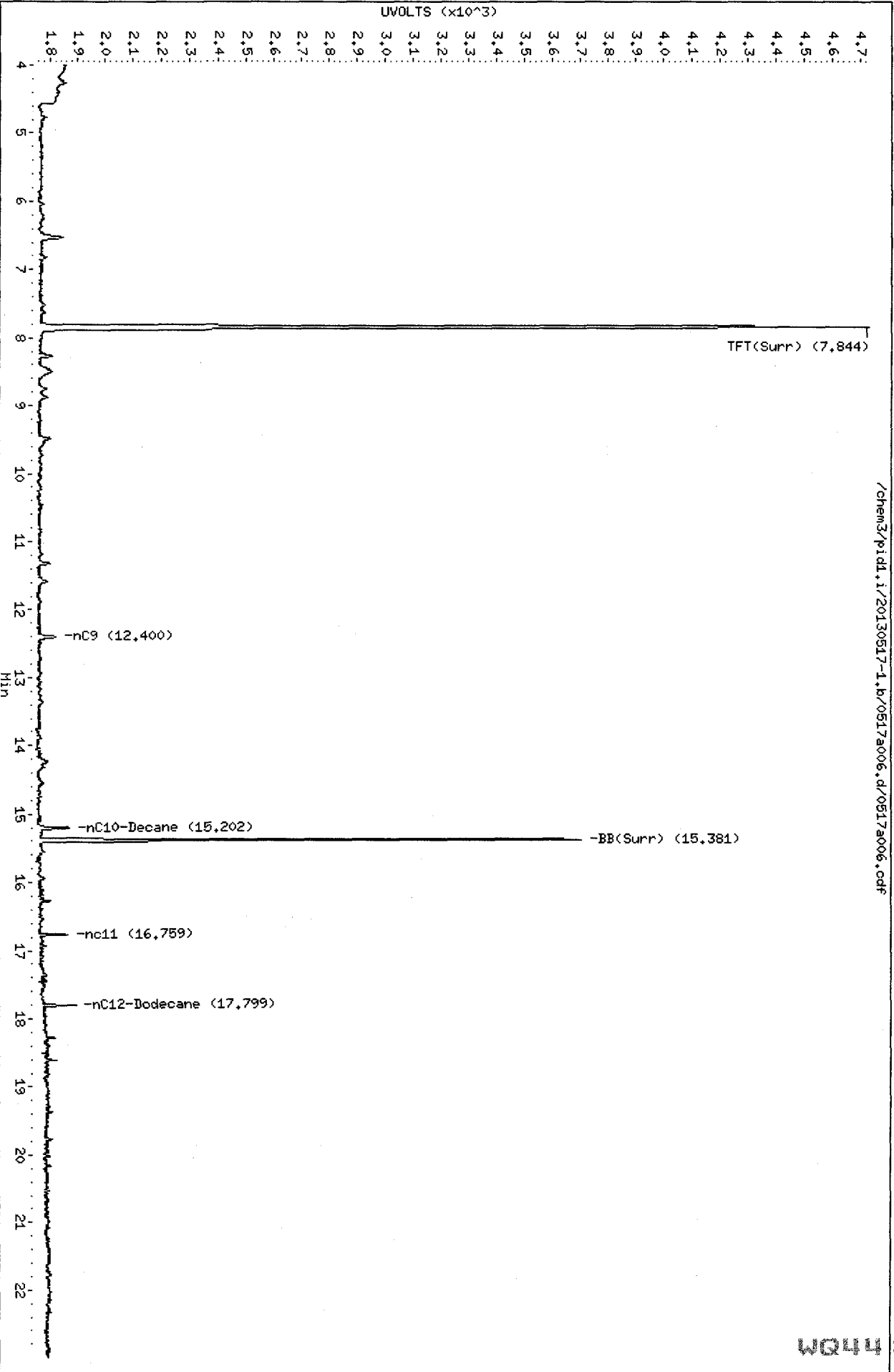
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

/chem3/pid1.i/20130517-1.b/0517a006.d/0517a006.cdf



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

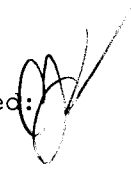
Page 1 of 1

Sample ID: AREA2-SP-1
SAMPLE

Lab Sample ID: WQ44G

LIMS ID: 13-10640

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 85.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	28	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: AREA2-SP-2
SAMPLE

Lab Sample ID: WQ44H

LIMS ID: 13-10641

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 85.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	29	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: AREA2-SP-3
SAMPLE**

Lab Sample ID: WQ44I

LIMS ID: 13-10642

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 84.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	25	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: AREA2-SP-4
SAMPLE

Lab Sample ID: WQ44J

LIMS ID: 13-10643

Matrix: Soil

Data Release Authorized 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/17/13

Date Received: 05/17/13

Percent Total Solids: 86.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	32	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WQ44LCS

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	211	200	106%	
Chromium	6010C	52.2	50.0	104%	
Copper	6010C	50.7	50.0	101%	
Lead	6010C	202	200	101%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WQ44MB

LIMS ID: 13-10639

Matrix: Soil

Data Release Authorized: 

Reported: 05/21/13

QC Report No: WQ44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	ng/kg-dry	Q
3050B	05/20/13	6010C	05/20/13	7440-38-2	Arsenic	5	5	U
3050B	05/20/13	6010C	05/20/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/20/13	6010C	05/20/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/20/13	6010C	05/20/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 22, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WQ45

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted forty-seven soil samples on May 17, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

Eighteen of forty-seven samples required an expedited turn-around-time and were logged under the ARI job number referenced above. Remaining samples were logged under separate covers.

The samples were analyzed for NWTPH-HCID, NWTPH-Dx, and NWTPH-Gx/BTEX, as requested on the COC.

The BETX LCSD percent recovery of o-Xylene fell outside the control limits low for **LCS-051713**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WQ45

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 5
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAULFESTEL.COM		Ice Present?
Client Project Name: CASHMERE		No. of Coolers:
		Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments
					DX SILICA GEL CLEAN-UP	BTEX 8081	CX	LEAD	HCID		
A2-W1-S-4	5-16	9:05 am	S	5			X	X			
A2-W2-S-4	5-16	9:10 am		5			X	X	X		
A2-F1-S-6	5-16	9:20 am		5	X	X					
A2-W3-S-4	5-16	10:00 am		5			X	X			
A2-F2-S-6	5-16	10:10 am		5	X	X					
A2-F3-S-6	5-16	10:15 am		5	X	X					
A2-F4-S-6	5-16	10:15 am		5	X	X					
A2-F5-S-6	5-16	10:30 am		5	X	X					
A2-F6-S-6	5-16	10:35 am		5	X	X					
A2-W4-S-4	5-16	11:00 am		5			X	X			

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

20000:5000

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 5
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MFAUSA.COM	No. of Coolers:	Cooler Temps:
Client Project Name: CASHMERE	Analysis Requested	
Client Project #: 0779.02.01-03	Notes/Comments	
Samplers: TONY SILVA		

Sample ID	Date	Time	Matrix	No. Containers	DX	SILICA GEL	BTGA	SOA1	GX	LEAD							
A2-F7-S-6	5-16	11:15am	S	5	X		X										
A2-F8-S-6	5-16	11:30am		5	X		X										
A2-WS-S-4	5-16	11:30am		5					X	X							
A2-F9-S-6	5-16	12:00		5	X		X										
A2-F10-S-6	5-16	12:10		5	X		X										
A2-W6-S-4	5-16	12:15		5					X	X							
A2-F11-S-6	5-16	12:20		4	X		X										
A2-F12-S-6	5-16	12:20		4	X		X										
A2-F13-S-6	5-16	12:25		4	X		X										
A2-F14-S-6	5-16	12:25		4	X		X										

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Jennifer Millsap</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name
	Company: MFA	Company: ARI	Company:	Company
	Date & Time: 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time.

2000-2013

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: <u>5</u> of <u>5</u>
ARI Client Company: <u>MFA, INC.</u>	Phone:	Date:
Client Contact: <u>TONY SILVA TSILVA@MAULFOSTER.COM</u>	No. of Coolers:	Ice Present?
Client Project Name: <u>CASHMERE</u>	Cooler Temps:	

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested						Notes/Comments
					DX	SILICA GEL CLEANUP	BTEX	SOAI	GM	LEAD	
A2-W15-S-4	5-16	1555	S	5					X	X	
A2-W16-S-4	5-16	1600		5					X	X	
A2-W17-S-4	5-16	1610		5					X	X	
A2-W18-S-4	5-16	1630		5					X	X	
A2-F27-S-6	5-16	1635		4	X	X					
A2-F28-S-6	5-16	1640		4	X	X					
A2-F29-S-6	5-16	1650		4	X	X					

Comments/Special Instructions	Relinquished by: (Signature) <u>[Signature]</u>	Received by (Signature) <u>[Signature]</u>	Relinquished by (Signature)	Received by (Signature)
	Printed Name: <u>LINDSEY CROSBY</u>	Printed Name: <u>Jennifer Millsap</u>	Printed Name	Printed Name:
	Company: <u>MFA</u>	Company: <u>ARI</u>	Company.	Company:
	Date & Time: <u>5/17/13 1600</u>	Date & Time: <u>5/17/13 1600</u>	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

10000-0000-0000

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 4 of 5
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MFAULFOSTER.COM		Ice Present?
		No. of Coolers:
		Cooler Temps:

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested							Notes/Comments
					Dx SILICA GEL CLEAN-UP	BTEX 8091	Gx	HCID	LEAD			
A2-F21-S-6	5-16	1430		4	X	X						
A2-F22-S-6	5-16	1440		4	X	X						
A2-F23-S-6	5-16	1445		4	X	X						
A2-F24-S-6	5-16	1450		4	X	X						
A2-F25-S-6	5-16	1510		4	X	X						
A2-F26-S-6	5-16	1515		4	X	X						
A2-W11-S-4	5-16	1530		5			X			X		
A2-W12-S-4	5-16	1535		5			X			X		
A2-W13-S-4	5-16	1540		5			X			X		
A2-W14-S-4	5-16	1550		5			X			X		

Comments/Special Instructions	Relinquished by (Signature) <i>[Signature]</i>	Received by (Signature) <i>[Signature]</i>	Relinquished by (Signature)	Received by (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company MFA	Company ARI	Company:	Company:
	Date & Time 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

5000-0000-0000

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Page: 3 of 5									
ARI Client Company: MFA, Inc.		Phone:		Date:									
Client Contact: TONY SILVA TSILVA@MAILPOSTER.COM		No. of Coolers:		Ice Present?									
Client Project Name: CASHMERE		Cooler Temps:		Analysis Requested									
Client Project #: 0779-02-01-03		Samplers: TONY SILVA		Notes/Comments									
Sample ID	Date	Time	Matrix	No Containers	DX SILVA GEL CLEANUP	BTEX SOB	COX	LEAD	HCID				
A2-W7-S-4	5-16	12:30	S	5			X	X					
A2-W8-S-4	5-16	12:35		5			X	X					
A2-W9-S-4	5-16	1330		5			X	X					
A2-W10-S-4	5-16	1330		5			X	X					
A2-F15-S-6	5-16	1345		4	X	X							
A2-F16-S-6	5-16	1400		4	X	X							
A2-F17-S-6	5-16	1405		4	X	X							
A2-F18-S-6	5-16	1410		4	X	X							
A2-F19-S-6	5-16	1415		4	X	X			X				
A2-F20-S-6	5-16	1425		4	X	X							
Comments/Special Instructions	Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)		Received by: (Signature)						
	Printed Name LINDSEY CROSBY		Printed Name Jennifer Millsap		Printed Name		Printed Name:						
	Company: MFA		Company: ARI		Company:		Company:						
	Date & Time 5/17/13 1600		Date & Time: 5/17/13 1600		Date & Time		Date & Time.						



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

020000-200005



Cooler Receipt Form

ARI Client MFA

Project Name: Cashmere

COC No(s) _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other _____

Assigned ARI Job No. WQ45

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? YES (YES) NO

Were custody papers properly filled out (ink, signed, etc.) YES (YES) NO

Temperature of Cooler(s) (°C) (recommended 2-6 °C for chemistry)..... 2.7 0.6 4.1 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90577952

Cooler Accepted by JM Date: 5/17/13 Time 1600

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES NO

Were all VOC vials free of air bubbles? (NA) (YES) NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI..... (NA)

Was Sample Split by ARI (NA) YES Date/Time _____ Equipment _____ Split by: _____

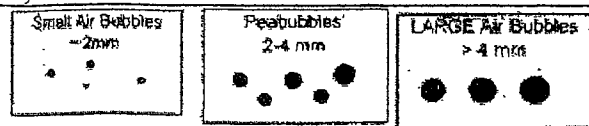
Samples Logged by: JM Date: 5/17/13 Time: 1400 (pre log)

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WQ45
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-W1-S-4	WQ45A	13-10644	Soil	05/16/13 09:05	05/17/13 16:00
2. A2-W2-S-4	WQ45B	13-10645	Soil	05/16/13 09:10	05/17/13 16:00
3. A2-W3-S-4	WQ45C	13-10646	Soil	05/16/13 10:00	05/17/13 16:00
4. A2-W4-S-4	WQ45D	13-10647	Soil	05/16/13 11:00	05/17/13 16:00
5. A2-W5-S-4	WQ45E	13-10648	Soil	05/16/13 11:30	05/17/13 16:00
6. A2-W6-S-4	WQ45F	13-10649	Soil	05/16/13 12:15	05/17/13 16:00
7. A2-W7-S-4	WQ45G	13-10650	Soil	05/16/13 12:30	05/17/13 16:00
8. A2-W8-S-4	WQ45H	13-10651	Soil	05/16/13 12:35	05/17/13 16:00
9. A2-W9-S-4	WQ45I	13-10652	Soil	05/16/13 13:30	05/17/13 16:00
10. A2-W10-S-4	WQ45J	13-10653	Soil	05/16/13 13:30	05/17/13 16:00
11. A2-W11-S-4	WQ45K	13-10654	Soil	05/16/13 15:30	05/17/13 16:00
12. A2-W12-S-4	WQ45L	13-10655	Soil	05/16/13 15:35	05/17/13 16:00
13. A2-W13-S-4	WQ45M	13-10656	Soil	05/16/13 15:40	05/17/13 16:00
14. A2-W14-S-4	WQ45N	13-10657	Soil	05/16/13 15:50	05/17/13 16:00
15. A2-W15-S-4	WQ45O	13-10658	Soil	05/16/13 15:55	05/17/13 16:00
16. A2-W16-S-4	WQ45P	13-10659	Soil	05/16/13 16:00	05/17/13 16:00
17. A2-W17-S-4	WQ45Q	13-10660	Soil	05/16/13 16:10	05/17/13 16:00
18. A2-W18-S-4	WQ45R	13-10661	Soil	05/16/13 16:30	05/17/13 16:00



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

NWTPH-HCID Method by GC/FID
Extraction Method: SW3580A
Page 1 of 1

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil

Data Release Authorized: *TNW*
Reported: 05/20/13

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-051713 13-10645	Method Blank	05/17/13	05/18/13	1.0	Gas	< 20 U
					Diesel	< 50 U
					Oil	< 100 U
					o-Terphenyl	111%
WQ45B 13-10645	A2-W2-S-4 HC ID: DIESEL/MOTOR OIL	05/17/13	05/18/13	1.0	Gas	< 20 U
					Diesel	> 50
					Oil	> 100
					o-Terphenyl	104%

Reported in mg/kg (ppm)

Gas value based on total peaks in the range from Toluene to C12.
Diesel value based on the total peaks in the range from C12 to C24.
Oil value based on the total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130518.b/0518a006.d
Method: /chem3/fid4a.i/20130518.b/hcidfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/20/2013
Macro: 21-MAR-2013
Calibration Dates: Gas:18-MAY-2013 Diesel:18-MAY-2013 M.Oil:18-MAY-2013

ARI ID: WQ45MBS1
Client ID:
Injection: 18-MAY-2013 11:26
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		15959	0.98 ✓
C8	----				WATPHD (C12-C24)		33058	1.95 ✓
C10	2.853	-0.001	300	357	WATPHM (C24-C38)		89951	7.05 ✓
C12	3.825	0.005	40	21	AK102 (C10-C25)		40138	2.03
C14	4.508	0.003	73	48	AK103 (C25-C36)		71521	7.77
C16	5.083	-0.003	73	50				
C18	5.624	-0.003	141	210				
C20	6.175	0.002	133	125				
C22	6.715	0.004	127	98	MIN.OIL (C24-C38)		89951	5.27
C24	7.225	0.000	232	401				
C25	7.475	0.002	234	104				
C26	7.730	0.006	291	219				
C28	8.160	-0.006	697	2032				
C32	8.961	-0.010	1815	3664				
C34	9.350	0.009	645	1262				
Filter Peak	11.525	-0.003	1479	2027				
C36	9.701	0.005	765	1464				
C38	10.045	0.002	841	565				
C40	10.379	-0.002	956	397				
o-terph	5.765	0.003	1228894	1015269				
Triacon Surr	8.590	-0.004	992581	978373				

Range Times: NW Diesel (3.821 - 7.225) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
NW M.Oil (7.23 - 10.04) AK103 (7.47 - 9.70) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1015269	50.1	111.3 ✓
Triacontane	978373	51.4	114.2

JW
5/24/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	19032.6	06-MAR-2013
Gas	16324.4	18-MAY-2013
Diesel	16926.1	18-MAY-2013
Motor Oil	12765.9	18-MAY-2013
AK102	19795.4	24-JAN-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013

Data File: /chem3/fid4a.i/20130518.b/0518a006.d

Date: 18-MAY-2013 11:26

Client ID:

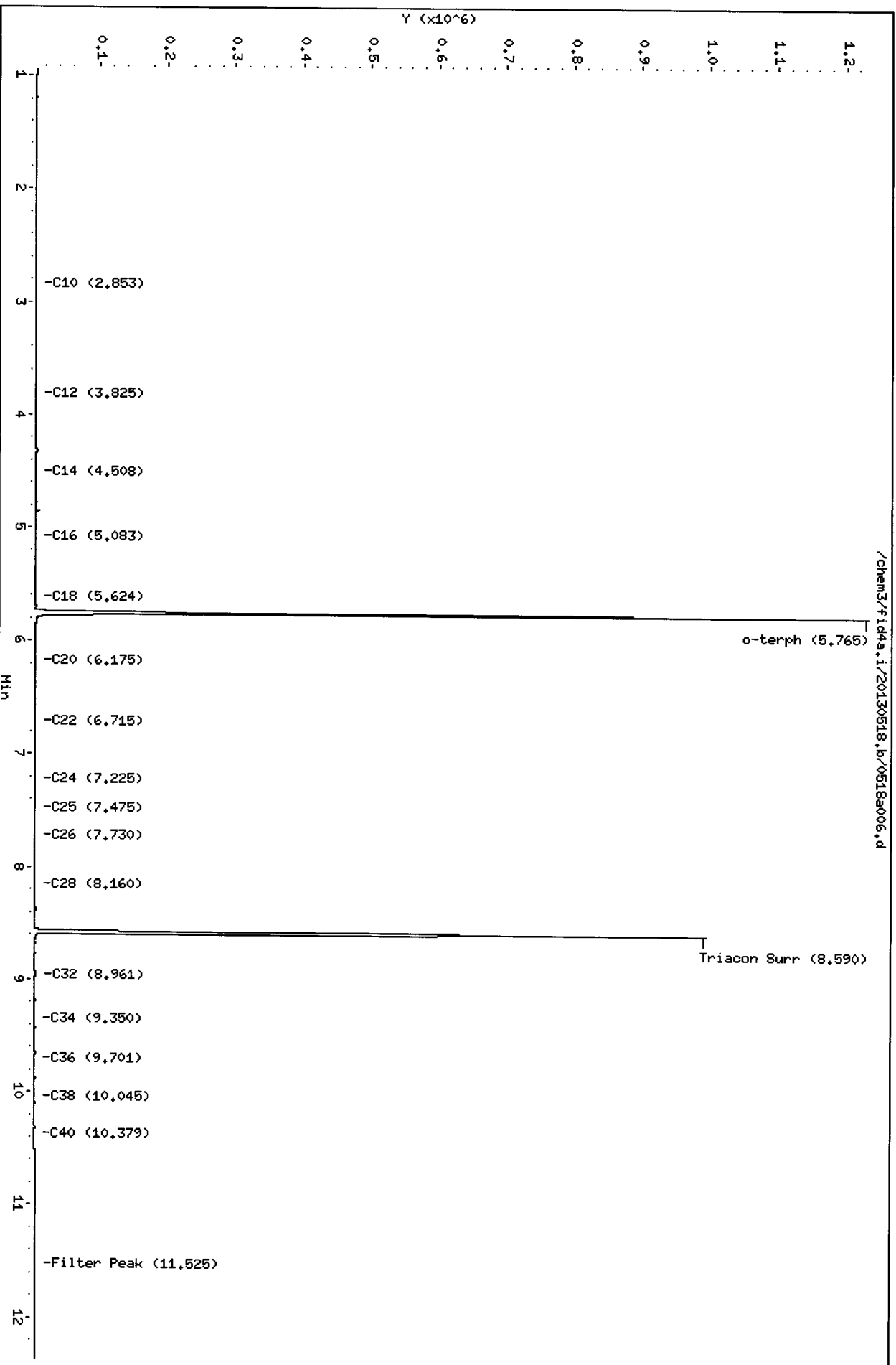
Sample Info: MQ45HBS1

Column phases: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130518.b/0518a007.d
Method: /chem3/fid4a.i/20130518.b/hcidfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/20/2013
Macro: 21-MAR-2013
Calibration Dates: Gas:18-MAY-2013 Diesel:18-MAY-2013 M.Oil:18-MAY-2013

ARI ID: WQ45B
Client ID:
Injection: 18-MAY-2013 11:47
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		69852	4.28
C8	----				WATPHD (C12-C24)		33496849	1979.01
C10	2.851	-0.003	755	1079	WATPHM (C24-C38)		55010131	4309.14
C12	3.819	-0.001	1013	693	AK102 (C10-C25)		38996705	1969.99
C14	4.481	-0.023	4278	11737	AK103 (C25-C36)		49242212	5351.21
C16	5.083	-0.003	8612	11396				
C18	5.630	0.002	46277	47626				
C20	6.186	0.014	220848	502937				
C22	6.714	0.003	465013	425997	MIN.OIL (C24-C38)		55010131	3224.71
C24	7.221	-0.005	628616	549000				
C25	7.472	-0.002	620517	365046				
C26	7.724	0.000	617020	731505				
C28	8.163	-0.004	561690	275484				
C32	8.964	-0.007	252469	287255				
C34	9.353	0.012	123766	187687				
Filter Peak	11.530	0.001	4344	5661				
C36	9.708	0.013	38022	37910				
C38	10.036	-0.007	12414	24878				
C40	10.389	0.008	5774	6519				
o-terph	5.767	0.005	1066930	951126				
Triacon Surr	8.610	0.016	907601	869329				

Range Times: NW Diesel (3.821 - 7.225) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
NW M.Oil (7.23 - 10.04) AK103 (7.47 - 9.70) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	951126	46.9	104.3 M
Triacotane	869329	45.7	101.5 M

Jw
5/21/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	19032.6	06-MAR-2013
Gas	16324.4	18-MAY-2013
Diesel	16926.1	18-MAY-2013
Motor Oil	12765.9	18-MAY-2013
AK102	19795.4	24-JAN-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013

Data File: /chem3/fid4a.1/20130518.b/0518a007.d
Date: 18-MAY-2013 11:47

Client ID:

Sample Info: M045B

Column phase: RTX-1

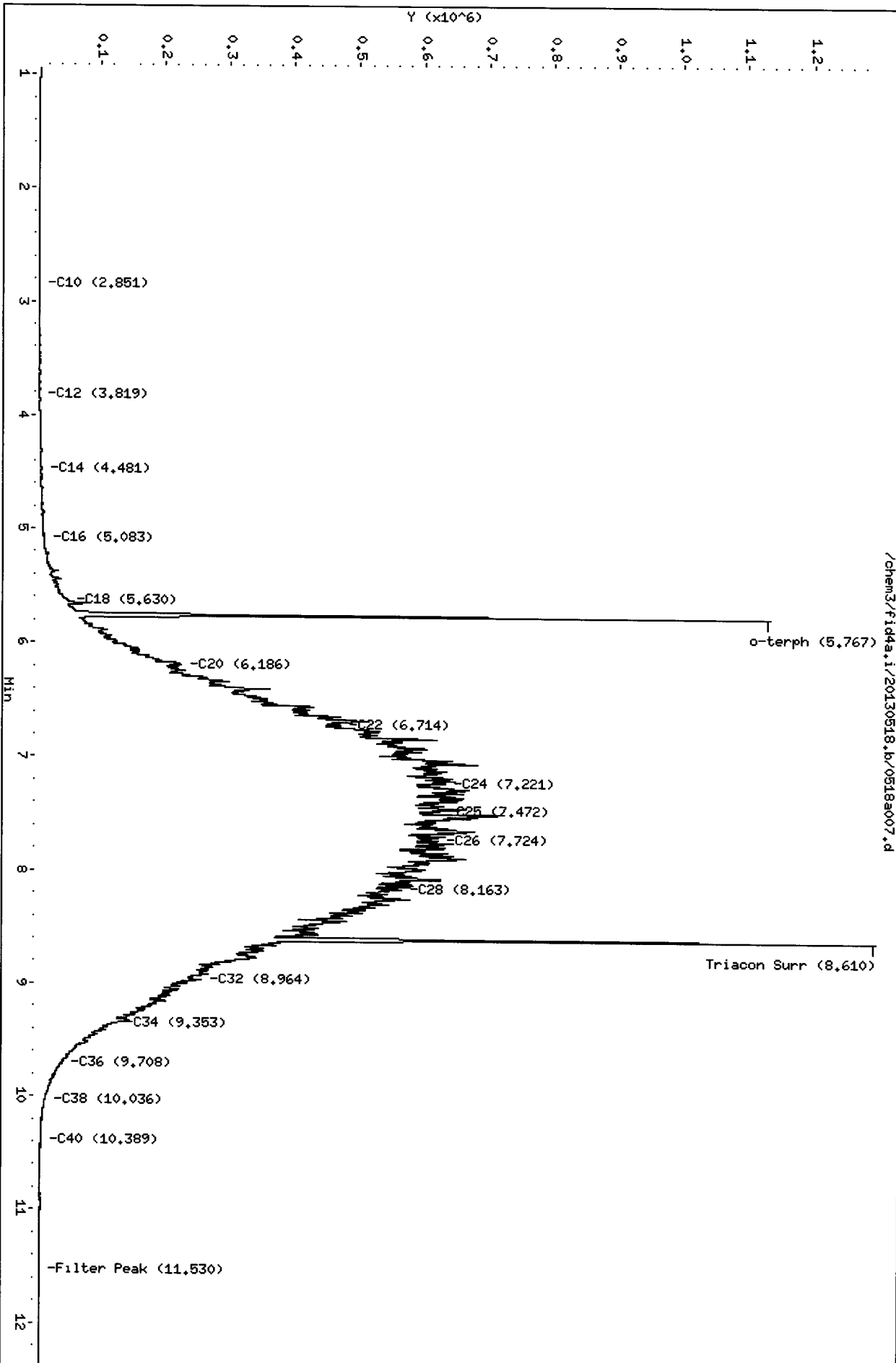
Instrument: fid4a.1

Operator: JR/VTS/JM

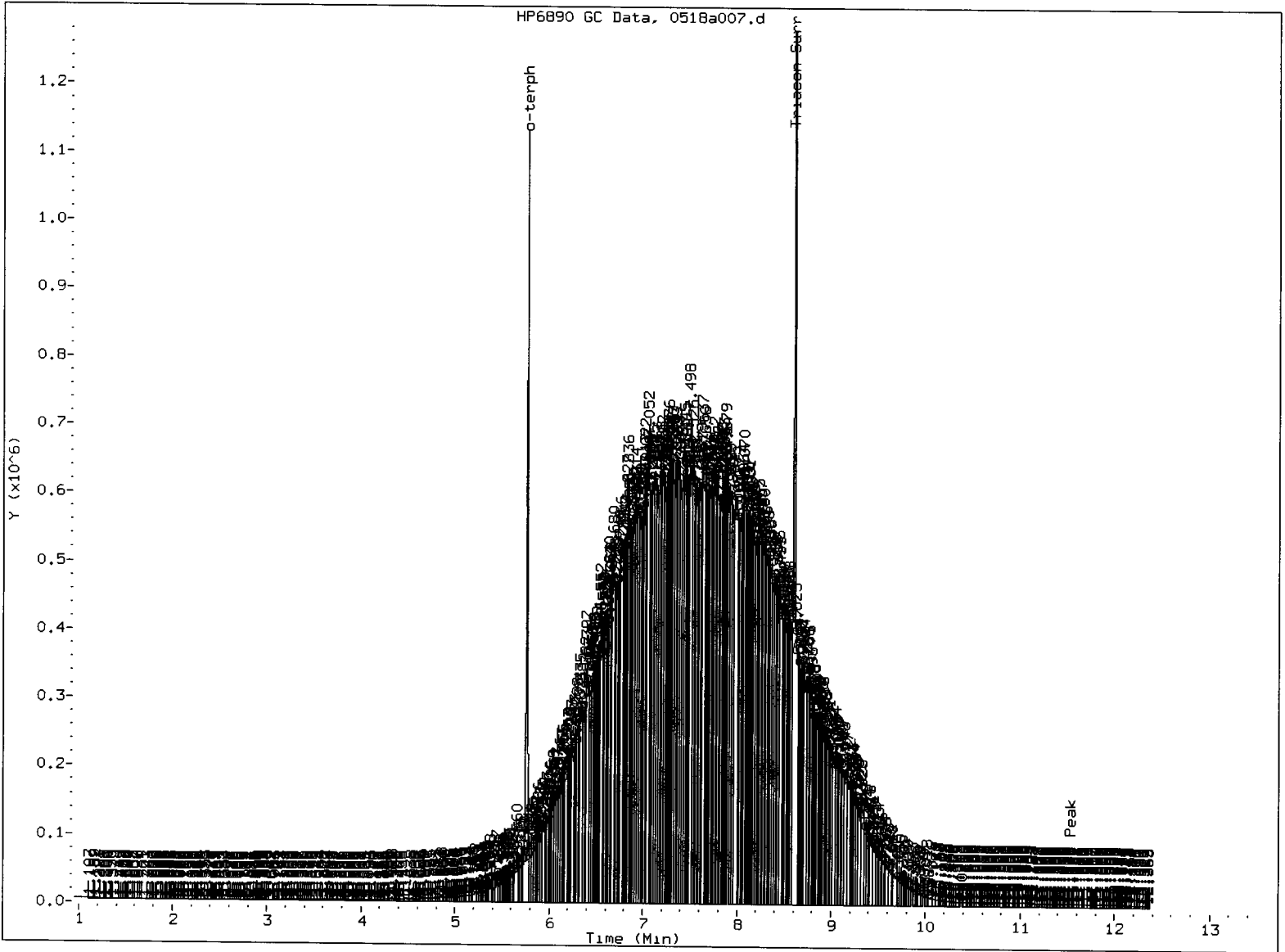
Column diameter: 0.25

JW
5/20/13

Page 1



0518A007.D



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: Ju

Date: 5/2/13

HCID SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>O-TER TOT OUT</u>
051713MB	111% 0
A2-W2-S-4	104% 0

LCS/MB LIMITS QC LIMITS

(O-TER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3580A
Log Number Range: 13-10645 to 13-10645

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ45
Project: Cashmere
0779.02.01-03


ARI ID	Client ID	Sample Amt	Final Vol	Basis	Prep Date
13-10645-051713MB	Method Blank	10.0 g	5.00 mL	-	05/17/13
13-10645-WQ45B	A2-W2-S-4	7.09 g	5.00 mL	D	05/17/13

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 3

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil

Data Release Authorized: 

Reported: 05/22/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-052013 13-10644	Method Blank HC ID: ---	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 86.7%
WQ45A 13-10644	A2-W1-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.8 14	310 710 E 50.9%
WQ45A DL 13-10644	A2-W1-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	68 140	310 720 68.9%
WQ45B 13-10645	A2-W2-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.4 15	1600 E 3200 E 59.8%
WQ45B DL 13-10645	A2-W2-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	74 150	1700 3000 56.9%
WQ45C 13-10646	A2-W3-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	6100 ES 16000 ES NR
WQ45C DL 13-10646	A2-W3-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	560 1100	8900 14000 D
WQ45D 13-10647	A2-W4-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.4 11	3200 ES 7000 ES 84.3%
WQ45D DL 13-10647	A2-W4-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	540 1100	4000 5600 D
WQ45E 13-10648	A2-W5-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.5 11	1100 E 3000 E 70.4%
WQ45E DL 13-10648	A2-W5-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	55 110	1200 2800 65.8%
WQ45F 13-10649	A2-W6-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.3 11	6.1 20 78.4%
WQ45G 13-10650	A2-W7-S-4 HC ID: ---	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	< 5.6 U < 11 U 84.9%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 3

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 05/22/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ45H 13-10651	A2-W8-S-4 HC ID: ---	05/20/13	05/21/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.5 11	< 5.5 U < 11 U 82.5%
WQ45I 13-10652	A2-W9-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID3B	10.0 1.0	Diesel Range Motor Oil Range o-Terphenyl	66 130	190 2300 73.3%
WQ45J 13-10653	A2-W10-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID3B	10.0 1.0	Diesel Range Motor Oil Range o-Terphenyl	68 140	220 2800 58.4%
WQ45K 13-10654	A2-W11-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	32 110 74.0%
WQ45L 13-10655	A2-W12-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.8 14	80 520 72.3%
WQ45M 13-10656	A2-W13-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.3 13	190 950 E 70.2%
WQ45M DL 13-10656	A2-W13-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	63 130	220 1000 74.7%
WQ45N 13-10657	A2-W14-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.5 13	55 660 E 66.1%
WQ45N DL 13-10657	A2-W14-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	32 65	56 760 66.4%
WQ45O 13-10658	A2-W15-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	540 E 2200 E 56.3%
WQ45O DL 13-10658	A2-W15-S-4 HC ID: DRO/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	56 110	620 2500 69.6%
WQ45P 13-10659	A2-W16-S-4 HC ID: DRO/RRO	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.5 13	8.0 27 76.8%
WQ45Q 13-10660	A2-W17-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.8 16	48 700 71.6%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 3 of 3

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *JB*
Reported: 05/22/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ45R 13-10661	A2-W18-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13	1.00	Diesel Range	7.4	70
			FID9	1.0	Motor Oil Range o-Terphenyl	15	850 E 69.6%
WQ45R DL 13-10661	A2-W18-S-4 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13	1.00	Diesel Range	37	71
			FID9	5.0	Motor Oil Range o-Terphenyl	74	1000 71.1%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/ftd3b.i/20130521.b/0521b006.d
Method: /chem3/ftd3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45MBS1
Client ID: WQ45MBS1
Injection: 21-MAY-2013 10:25
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	159538	12
C8	0.812	-0.002	6256	6126	WATPHD	(C12-C24)	120780	11.66 ✓
C10	2.245	0.005	1193	1158	WATPHM	(C24-C38)	75363	7.63 ✓
C12	3.042	0.000	531	120	AK102	(C10-C25)	152536	12.34
C14	3.623	0.000	1778	1944	AK103	(C25-C36)	60197	8.47
C16	4.117	-0.002	1022	511	OR.DIES	(C10-C28)	162554	10.57
C18	4.563	-0.003	1229	522				
C20	4.985	-0.001	772	166				
C22	5.379	0.000	824	218				
C24	5.748	0.002	590	188				
C25	5.924	0.003	273	105				
C26	6.104	0.006	361	101				
C28	6.410	-0.001	1034	869	IT.DIES	(C10-C24)	151573	10.99
C32	6.951	-0.002	3979	2011				
C34	7.186	0.000	678	206	CREOSOT	(C8-C22)	111111	34.36
Filter Peak	----							
C36	7.401	-0.003	930	523	BUNKERC	(C10-C38)	226936	46.27
o-terph	4.672	-0.002	785140	524843	JET-A	(C10-C18)	102934	9.51
Triacon Surr	6.697	-0.008	794096	546949				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	524843	39.0	86.7 ✓
Triacontane	546949	41.9	93.2

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b006.d

Date: 21-MAY-2013 10:25

Client ID: M045HBS1

Sample Info: M045HBS1

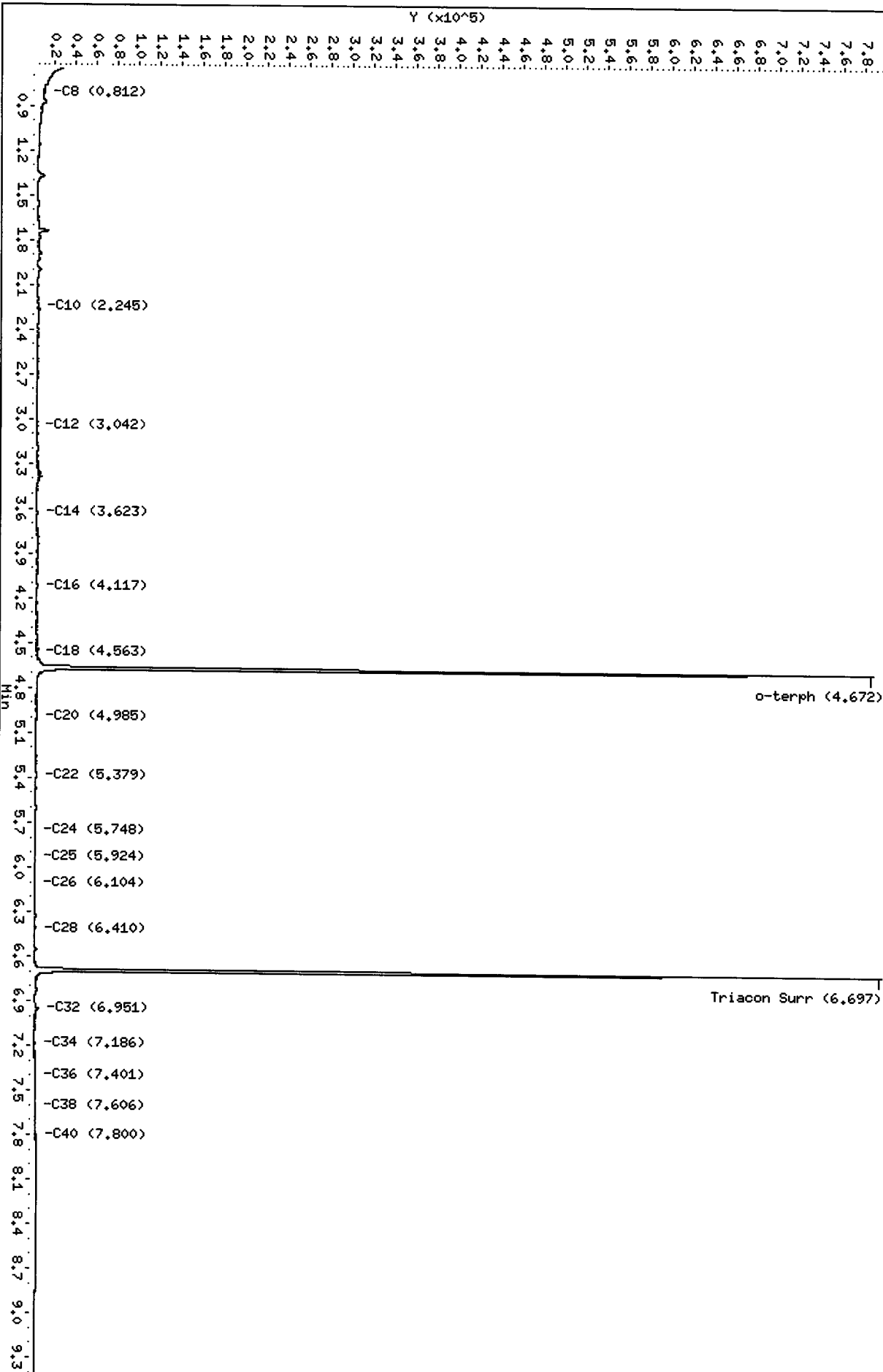
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b009.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45A
Client ID: A2-W1-S-4
Injection: 21-MAY-2013 11:23
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		220424	16
C8	0.823	0.009	7624	14907	WATPHD (C12-C24)		23356436	2255.04 ✓
C10	2.244	0.004	1871	1752	WATPHM (C24-C38)		51210568	5186.99 E ✓
C12	3.046	0.004	3679	4232	AK102 (C10-C25)		26177571	2118.49 M
C14	3.622	0.000	7966	8429	AK103 (C25-C36)		45670370	6424.77 M
C16	4.119	0.001	11390	10121	OR.DIES (C10-C28)		47034100	3057.74 M
C18	4.566	0.001	47861	22830				
C20	4.986	-0.001	181200	45496				
C22	5.379	-0.001	440090	104002				
C24	5.743	-0.003	596379	317586				
C25	5.912	-0.010	638965	480512				
C26	6.096	-0.003	614339	329171				
C28	6.412	0.001	626823	349034	IT.DIES (C10-C24)		23427998	1699.04
C32	6.954	0.001	412413	345411				
C34	7.190	0.004	351175	304588	CREOSOT (C8-C22)		11019210	3407.98
Filter Peak	----							
C36	7.406	0.002	288624	54824	BUNKERC (C10-C38)		74638566	15217.45
o-terph	4.677	0.002	670424	308162	JET-A (C10-C18)		920837	85.07
Triacon Surr	6.719	0.014	660106	420843				

Range Times: NW Diesel (3.092 - 5.796) NW Gas (0.608 - 3.092) NW M.Oil (5.796 - 7.656)
AK102 (2.190 - 5.872) AK103 (5.872 - 7.454) Jet A (2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	308162	22.9	50.9 ✓
Triacontane	420843	32.3	71.7

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b009.d

Date: 21-May-2013 11:23

Client ID: 62-M-S-4

Sample Info: M045A

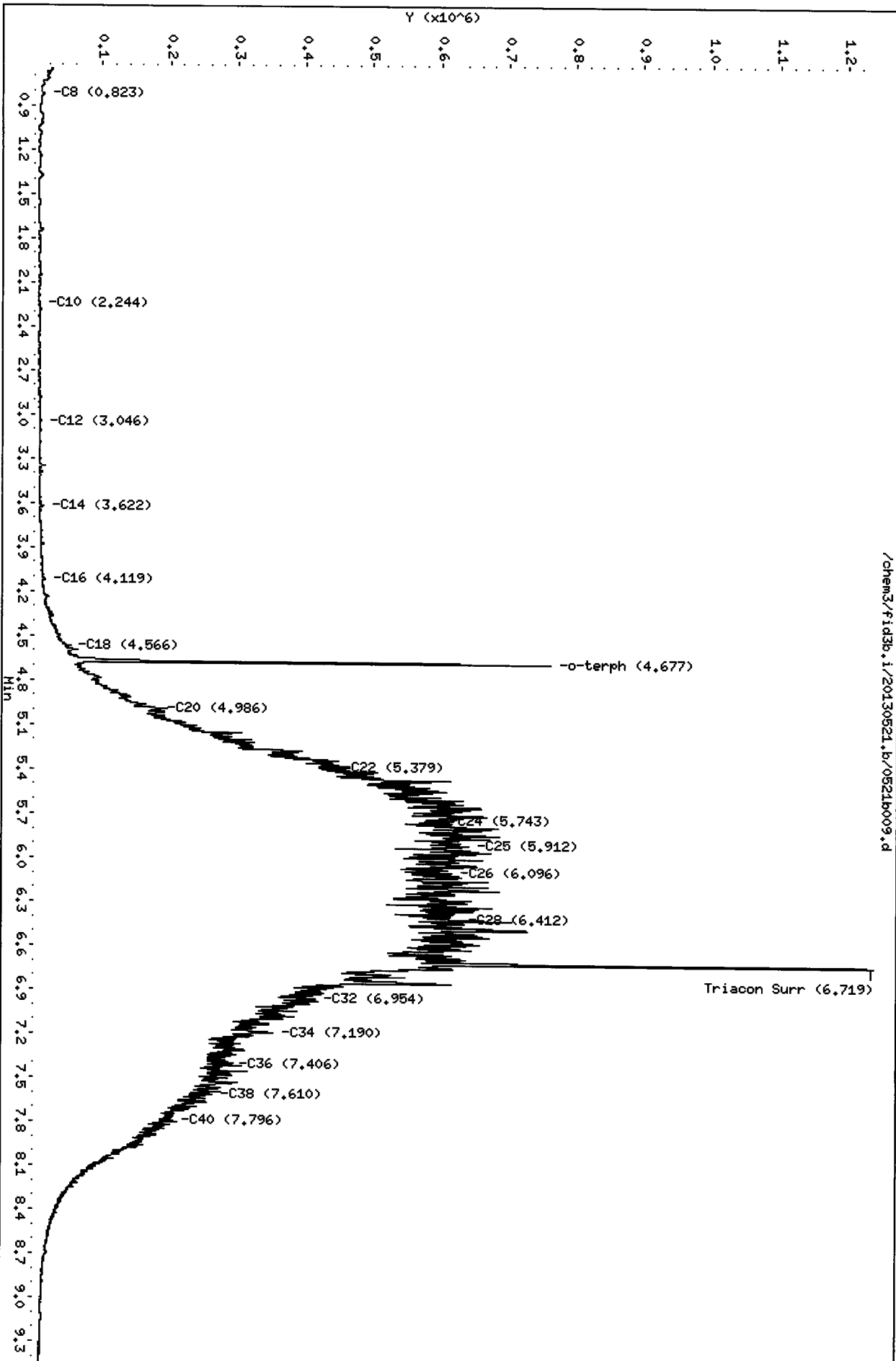
Column phase: RTX-1

Instrument: fid3b.i

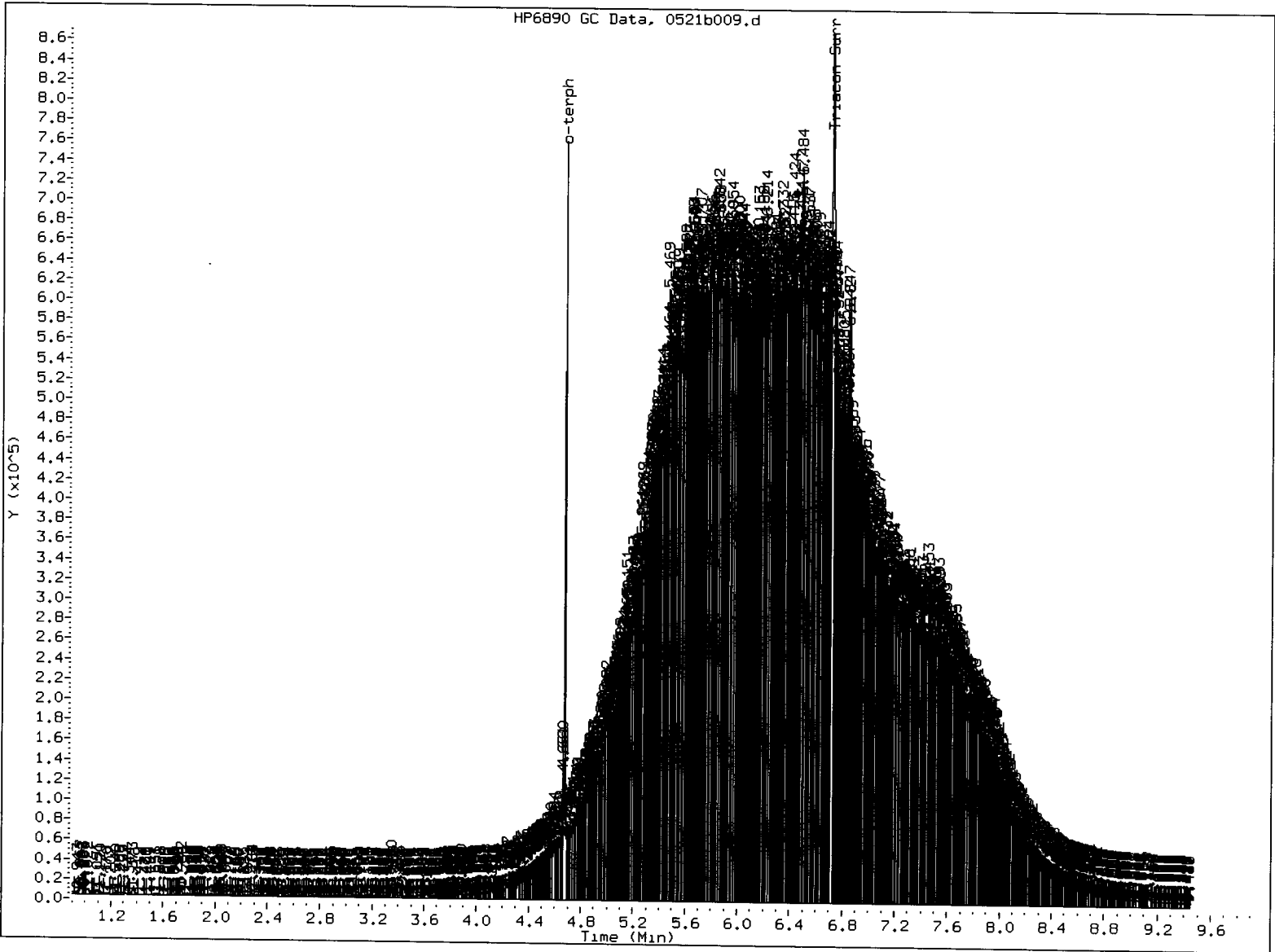
Operator: JM

Column diameter: 0.25

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JLW
5/21/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JU Date: 5/21/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b021.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/22/2013
Macro: FID:3B050913

ARI ID: WQ45A
Client ID: A2-W1-S-4
Injection: 21-MAY-2013 15:19
Dilution Factor: 10

FID:3B RESULTS								
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		61042	5
C8	0.821	0.007	3256	3018	WATPHD (C12-C24)		2347893	226.69 ✓
C10	2.242	0.001	307	64	WATPHM (C24-C38)		5222329	528.96 ✓
C12	3.041	-0.001	248	149	AK102 (C10-C25)		2619029	211.95 M
C14	3.617	-0.006	238	66	AK103 (C25-C36)		4641561	652.96 M
C16	4.120	0.002	626	685	OR.DIES (C10-C28)		4740551	308.19 M
C18	4.566	0.001	3685	3698				
C20	4.986	0.000	18593	12984				
C22	5.376	-0.003	47367	30162				
C24	5.748	0.002	61150	16497				
C25	5.925	0.003	68095	32612				
C26	6.096	-0.002	62715	32977				
C28	6.409	-0.001	63496	18321	IT.DIES (C10-C24)		2360144	171.16
C32	6.951	-0.001	44614	40659				
C34	7.184	-0.002	34304	20679	CREOSOT (C8-C22)		1105593	341.93
Filter Peak	----							
C36	7.406	0.002	30290	9725	BUNKERC (C10-C38)		7582473	1545.93
o-terph	4.669	-0.006	66095	41709	JET-A (C10-C18)		71142	6.57
Triacon Surr	6.696	-0.009	74830	40627				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	41709	3.1	68.9
Triacontane	40627	3.1	69.2

JW
5/22/13

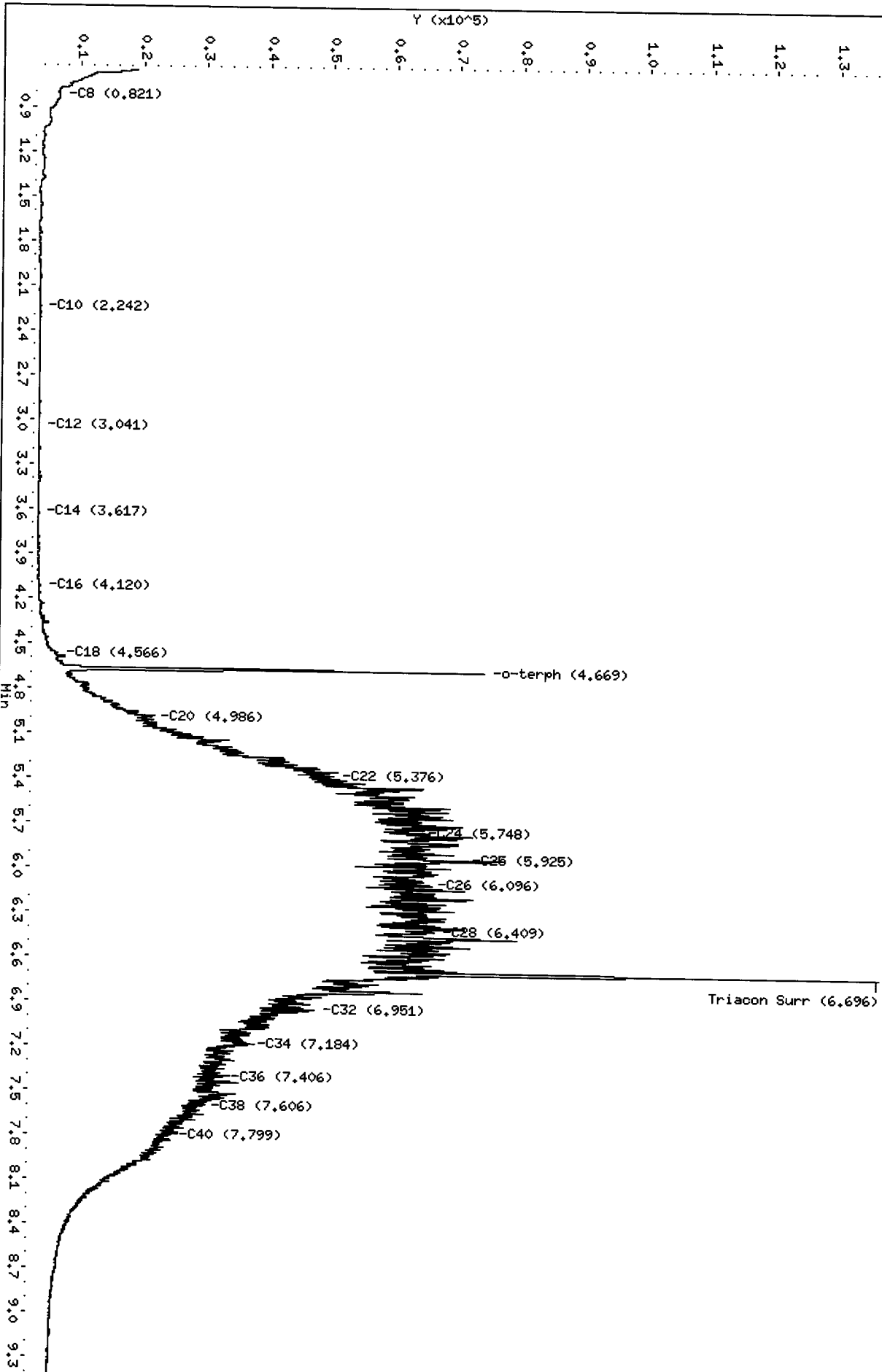
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b021.d
Date: 21-MAY-2013 15:19
Client ID: A2-M1-S-4
Sample Info: M0456.10
Column phase: RTX-1

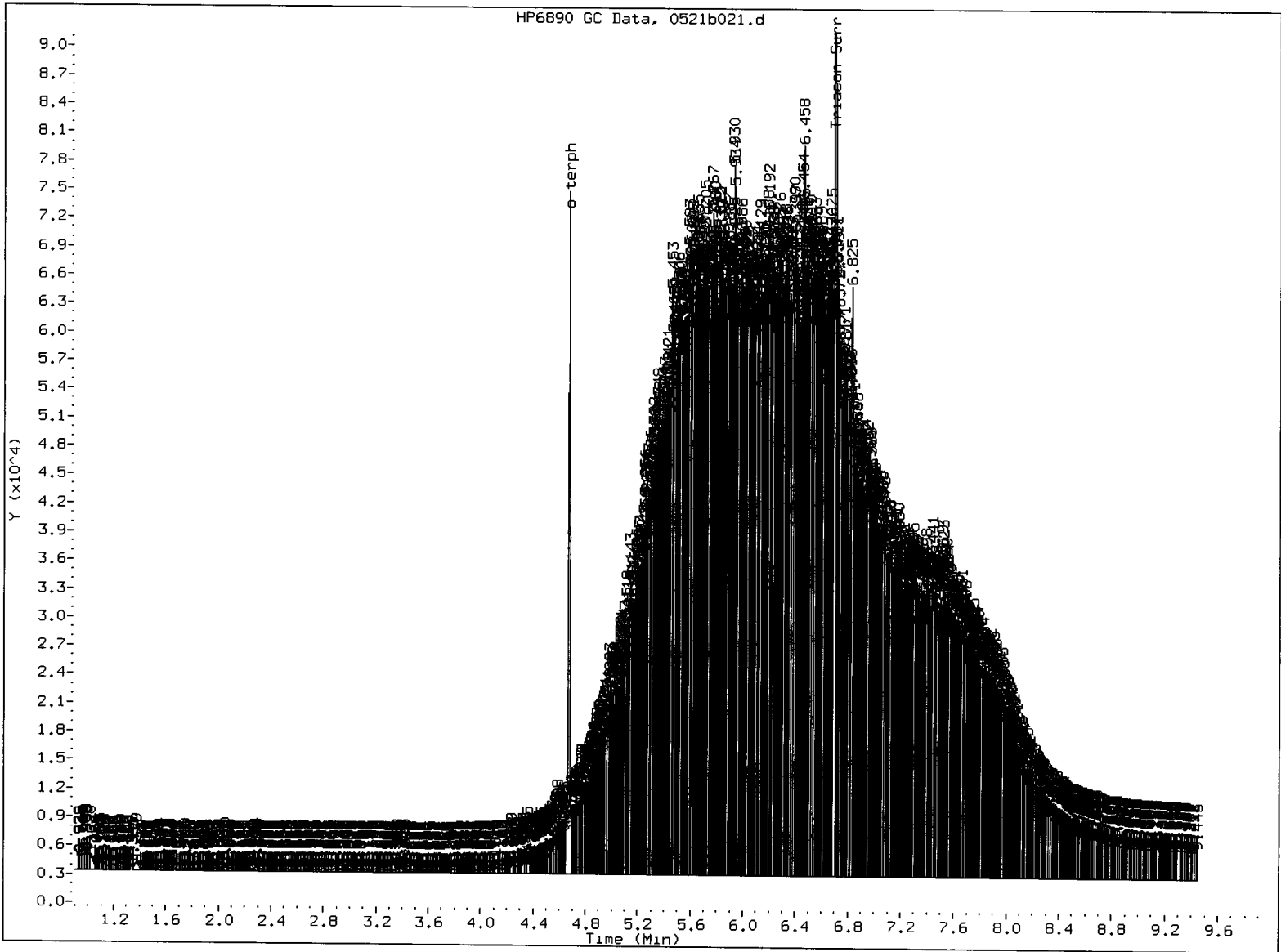
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

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Ju
5/22/13



1045 : 00029



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skipped surrogate

Analyst: JW

Date: 5/22/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b010.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45B
Client ID: A2-W2-S-4
Injection: 21-MAY-2013 11:42
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	491728	36
C8	0.822	0.007	12159	20765	WATPHD	(C12-C24)	111853523	10799.35 E
C10	2.238	-0.003	2746	2020	WATPHM	(C24-C38)	215127314	21789.72 E
C12	3.041	-0.002	4784	3347	AK102	(C10-C25)	126294059	10220.67 M
C14	3.624	0.001	10513	11714	AK103	(C25-C36)	196931538	27703.72
C16	4.120	0.001	31167	14831	OR.DIES	(C10-C28)	233151283	15157.41 M
C18	4.565	-0.001	167665	57342				
C20	4.986	0.000	836485	468878				
C22	5.378	-0.002	2218716	1194924				
C24	5.743	-0.003	3152426	1693495				
C25	5.923	0.001	3316810	754277				
C26	6.098	-0.001	3423843	650729				
C28	6.412	0.002	3204031	1830718	IT.DIES	(C10-C24)	112063922	8127.05
C32	6.953	0.000	1437768	580131				
C34	7.187	0.000	818763	273491	CREOSOT	(C8-C22)	53465582	16535.61
Filter Peak	----							
C36	7.404	0.000	460034	160436	BUNKERC	(C10-C38)	327191236	66708.36
o-terph	4.683	0.008	643100	362190	JET-A	(C10-C18)	3479350	321.44
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

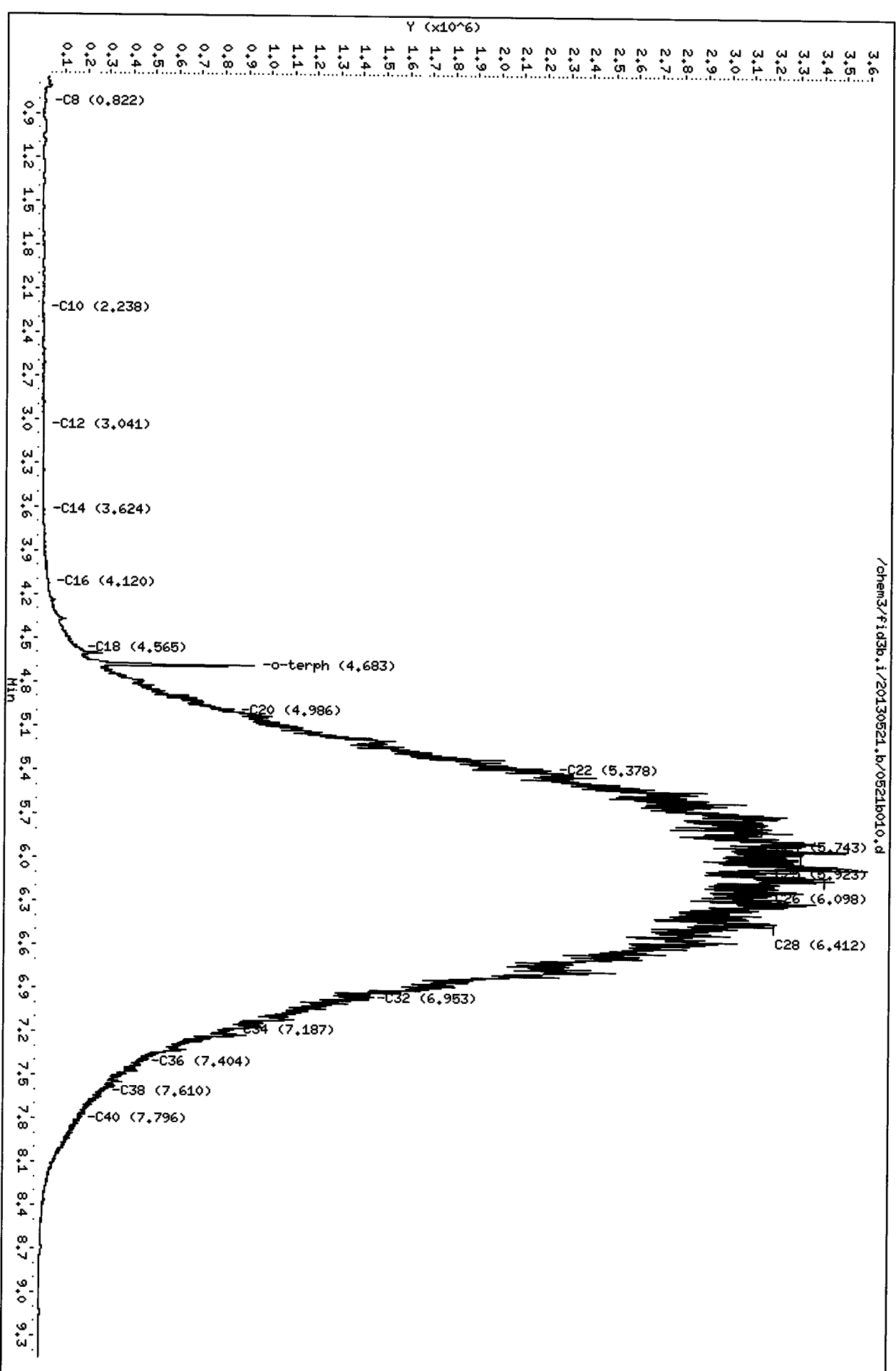
Surrogate	Area	Amount	%Rec
o-Terphenyl	362190	26.9	59.8 ✓
Triacontane	0	0.0	0.0 NR

JW
5/21/13

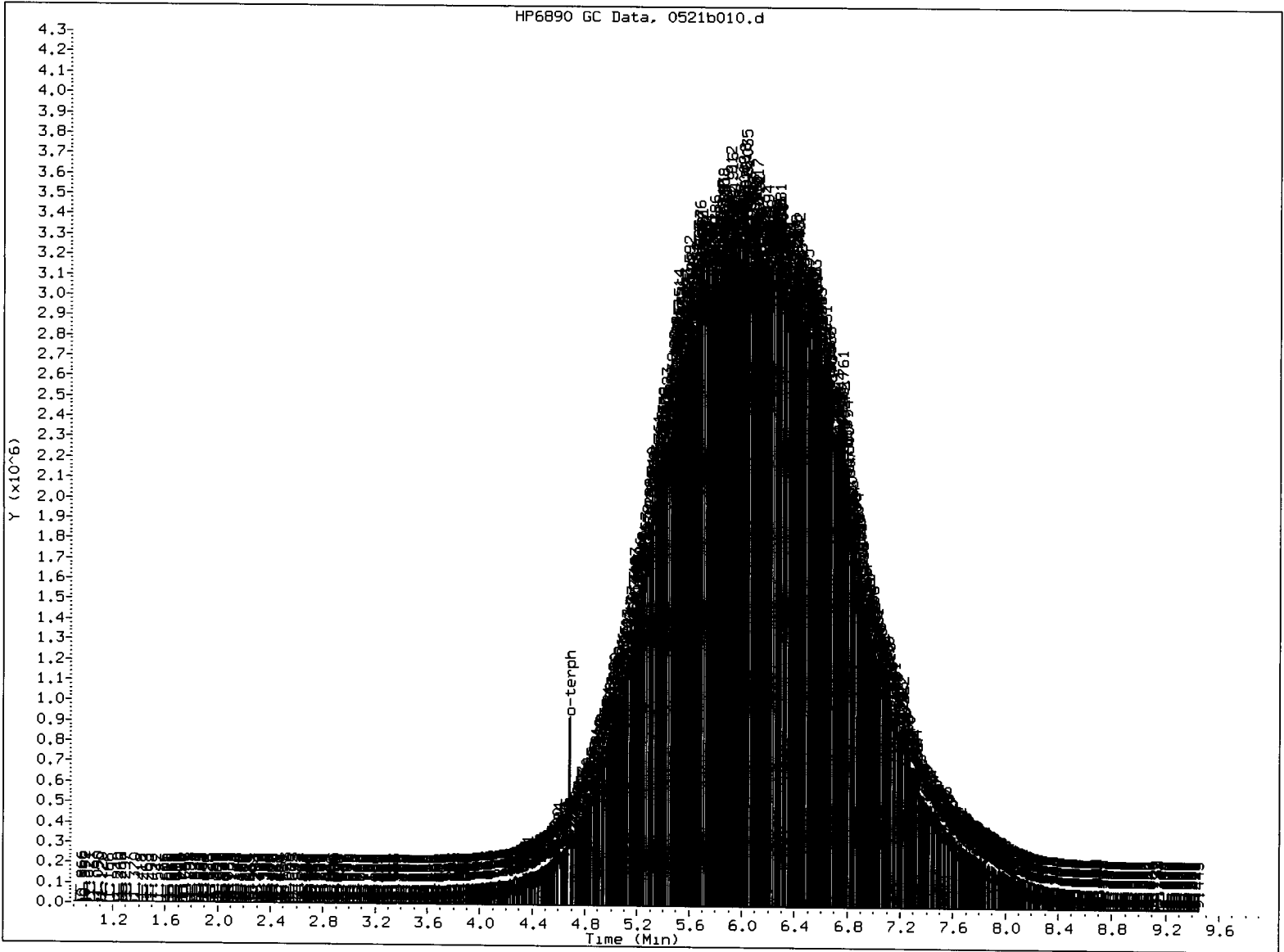
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b010.d
Date: 21-MAY-2013 11:42
Client ID: A2-M2-S-4
Sample Info: M045B
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b022.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/22/2013
Macro: FID:3B050913

ARI ID: WQ45B
Client ID: A2-W2-S-4
Injection: 21-MAY-2013 15:38
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		85301	6
C8	0.824	0.010	3936	7883	WATPHD (C12-C24)		11699584	1129.58
C10	2.240	0.000	567	449	WATPHM (C24-C38)		19678370	1993.17
C12	3.042	0.000	486	264	AK102 (C10-C25)		13241912	1071.64 M
C14	3.627	0.005	849	601	AK103 (C25-C36)		17775095	2500.55 M
C16	4.117	-0.001	2714	1852	OR.DIES (C10-C28)		23247064	1511.32 M
C18	4.566	0.001	19444	22459				
C20	4.983	-0.003	102556	47790				
C22	5.380	0.001	224498	122532				
C24	5.747	0.000	305919	129344				
C25	5.922	0.001	311130	164414				
C26	6.099	0.000	303780	70605				
C28	6.415	0.004	260642	97603	IT.DIES (C10-C24)		11724635	850.29
C32	6.954	0.001	124574	39068				
C34	7.183	-0.003	91992	43113	CREOSOT (C8-C22)		5700951	1763.17
Filter Peak	----							
C36	7.402	-0.001	45623	9805	BUNKERC (C10-C38)		31403005	6402.50
o-terph	4.671	-0.004	70701	34388	JET-A (C10-C18)		339816	31.39
Triacon Surr	6.700	-0.005	75476	37471				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	34388	2.6	56.8
Triacotane	37471	2.9	63.8

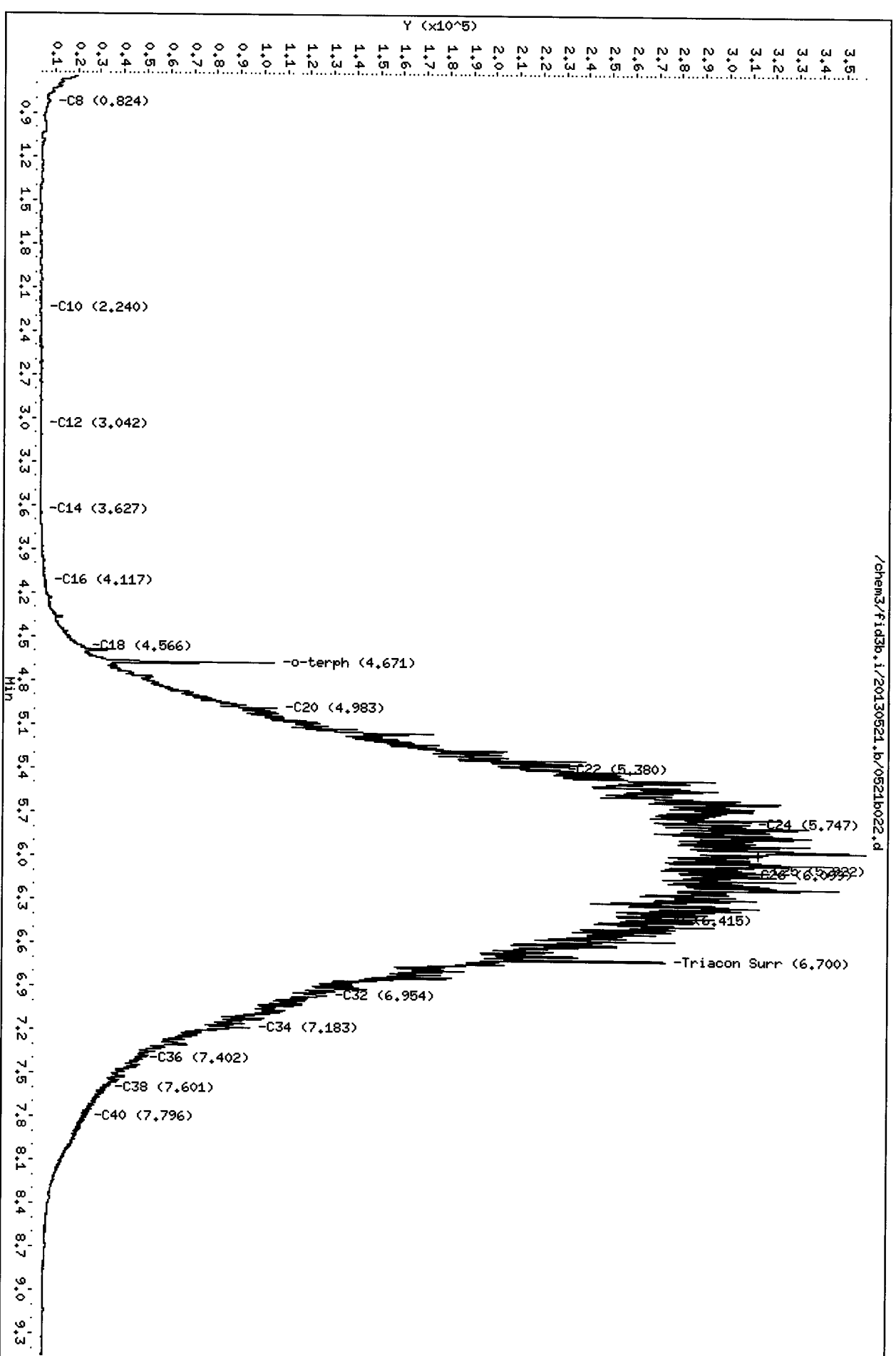
EW
5/22/13

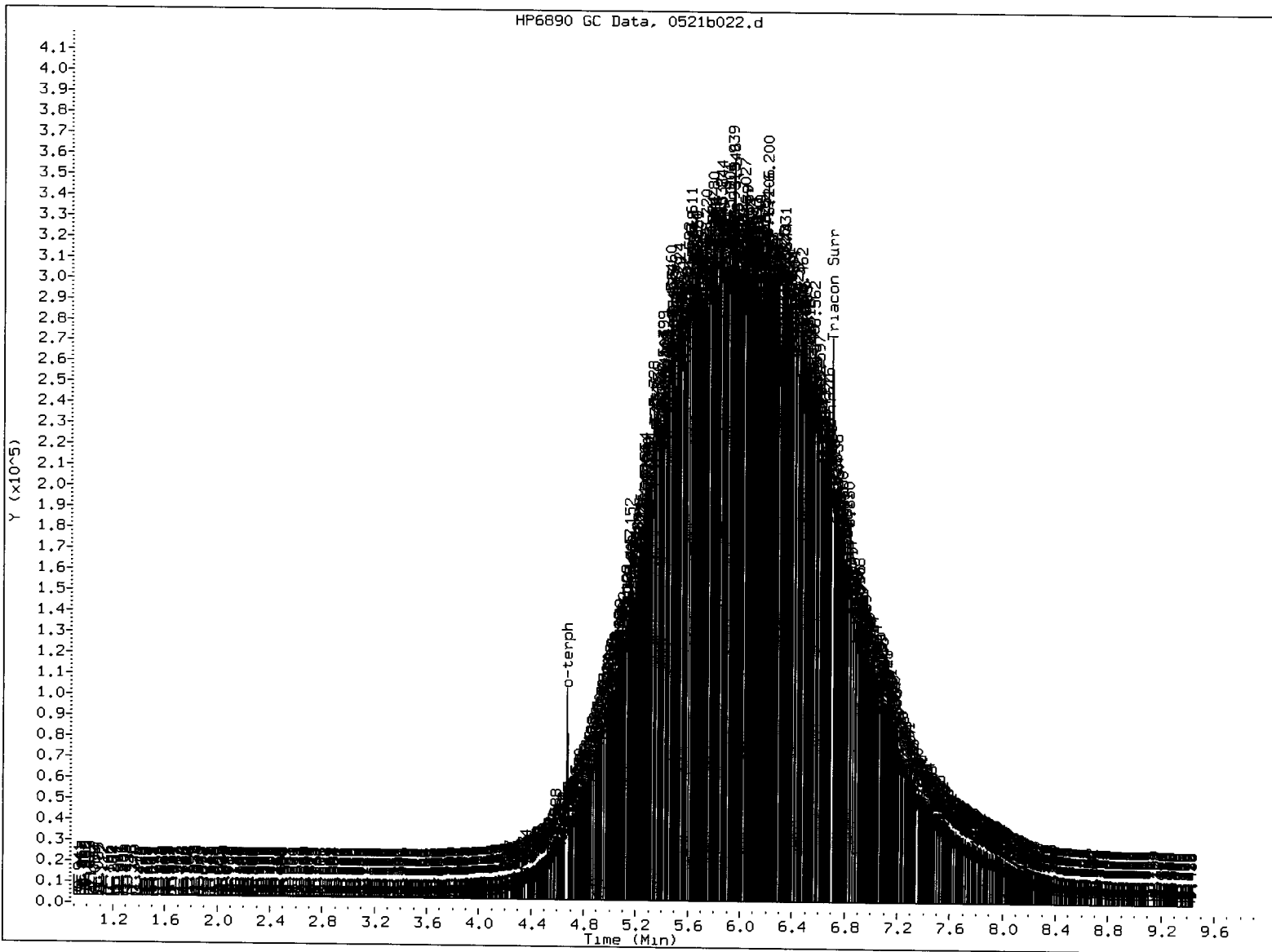
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b022.d
Date: 21-May-2013 15:38
Client ID: R2-M2-S-4
Sample Info: MQ45B.10
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

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5/22/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/22/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b011.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45C
Client ID: A2-W3-S-4
Injection: 21-MAY-2013 12:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		1388384	103
C8	0.857	0.043	5094	7669	WATPHD (C12-C24)		566455533	54690.74
C10	2.233	-0.007	7166	7613	WATPHM (C24-C38)		1374576271	139227.47
C12	3.038	-0.004	16539	8804	AK102 (C10-C25)		662273971	53596.22
C14	3.623	0.000	20639	7199	AK103 (C25-C36)		1279253602	179961.47
C16	4.119	0.001	102219	51569	OR.DIES (C10-C28)		1490873192	96923.23
C18	4.565	-0.001	431340	118034				
C20	4.989	0.003	2370027	891408				
C22	5.378	-0.001	9710259	3462851				
C24	5.747	0.001	21629491	7539280				
C25	5.921	0.000	23500816	12324581				
C26	6.103	0.005	24470812	9107889				
C28	6.413	0.003	24315045	4758428	IT.DIES (C10-C24)		567271538	41139.43
C32	6.951	-0.002	3736359	1973405				
C34	7.186	0.000	539811	278772	CREOSOT (C8-C22)		194242938	60074.64
Filter Peak	----							
C36	7.402	-0.002	69288	54492	BUNKERC (C10-C38)		1941847809	395907.56
o-terph	----				JET-A (C10-C18)		9970105	921.10
Triacon Surr	----							

E-
E-

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacotane	0	0.0	0.0

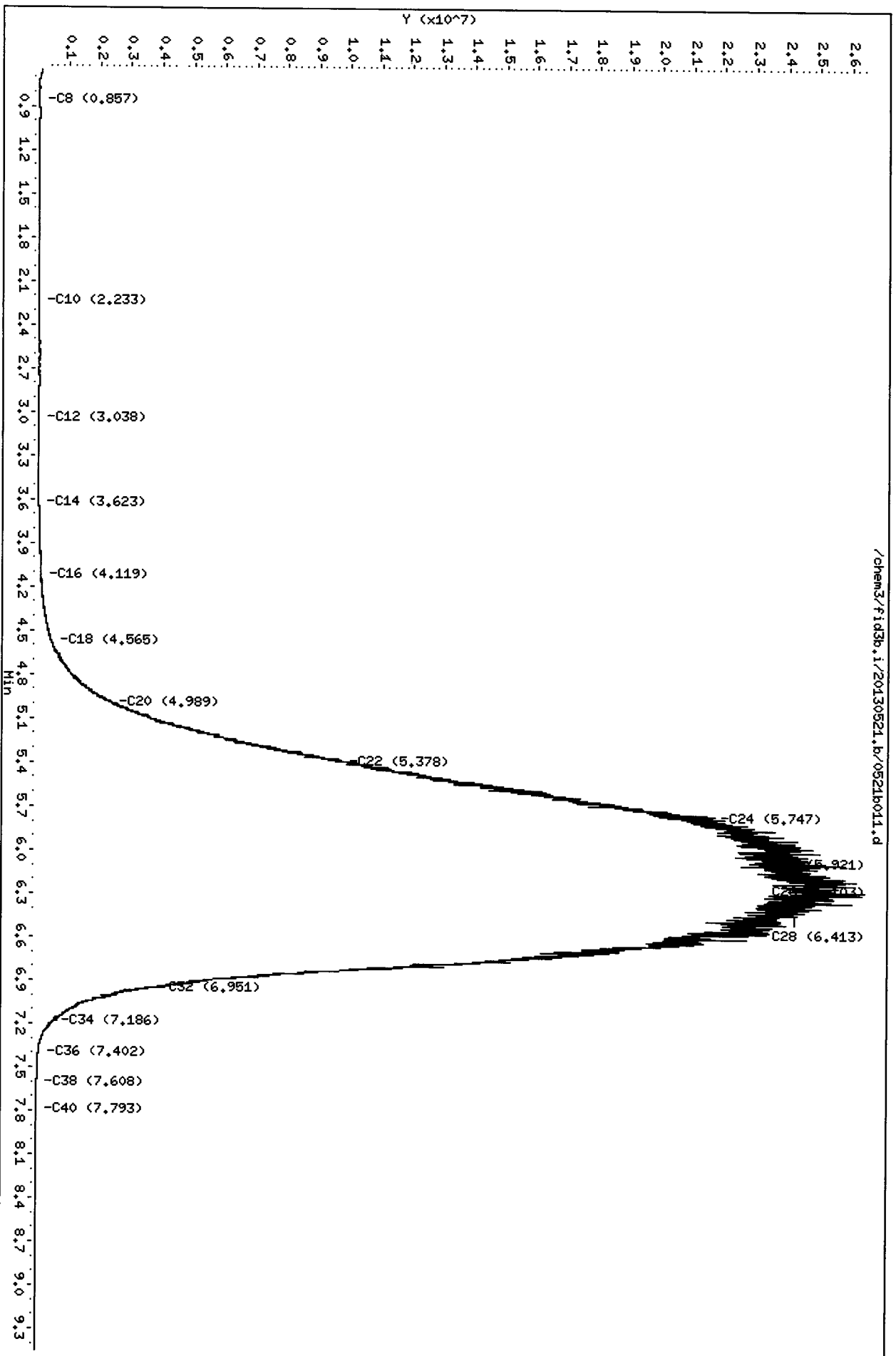
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NR

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW
5/21/13

Data File: /chem3/fid3b.i/20130521.b/0521b011.d
Date: 21-MAY-2013 12:02
Client ID: A2-W3-S-4
Sample Info: M045C
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



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Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b023.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/22/2013
Macro: FID:3B050913

ARI ID: WQ45C
Client ID: A2-W3-S-4
Injection: 21-MAY-2013 15:57
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	58126	4
C8	0.811	-0.003	3101	1654	WATPHD	(C12-C24)	8279816	799.41 ✓
C10	2.229	-0.011	470	571	WATPHM	(C24-C38)	12004667	1215.92 ✓
C12	3.038	-0.005	225	127	AK102	(C10-C25)	9351292	756.78 M
C14	3.625	0.002	245	59	AK103	(C25-C36)	10803583	1519.81
C16	4.119	0.001	1164	363	OR.DIES	(C10-C28)	16028615	1042.04 M
C18	4.566	0.001	7436	1313				
C20	4.984	-0.002	54412	37414				
C22	5.376	-0.003	172086	47262				
C24	5.745	-0.001	205488	52405				
C25	5.922	0.000	218476	57709				
C26	6.098	0.000	201941	47033				
C28	6.412	0.001	163548	93710	IT.DIES	(C10-C24)	8293202	601.44
C32	6.955	0.003	66793	50239				
C34	7.189	0.003	43562	23535	CREOSOT	(C8-C22)	3738577	1156.25
Filter Peak	----							
C36	7.401	-0.003	18768	6090	BUNKERC	(C10-C38)	20297869	4138.37
o-terph	----				JET-A	(C10-C18)	148601	13.73
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

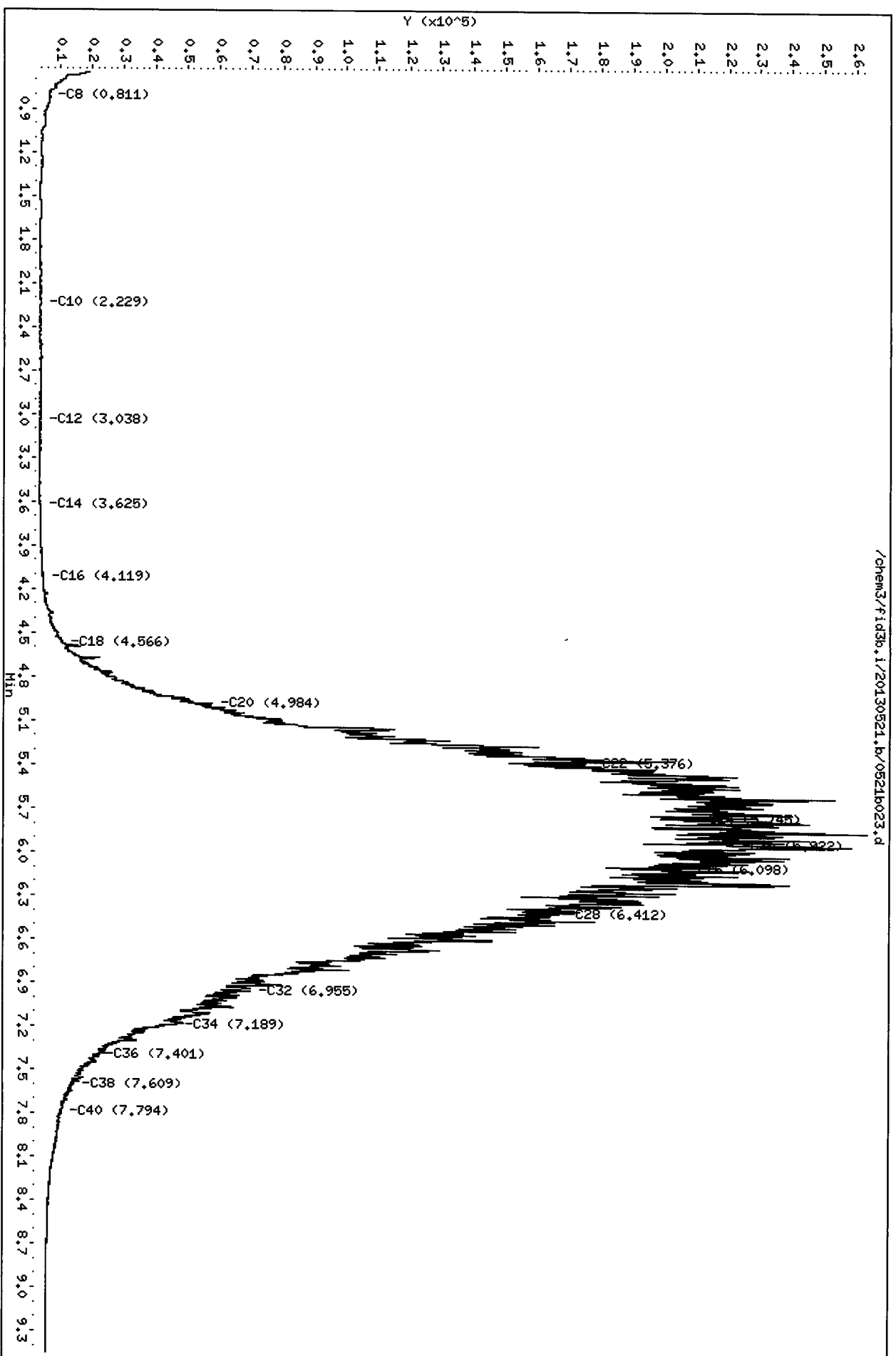
Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

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JW
5/22/13

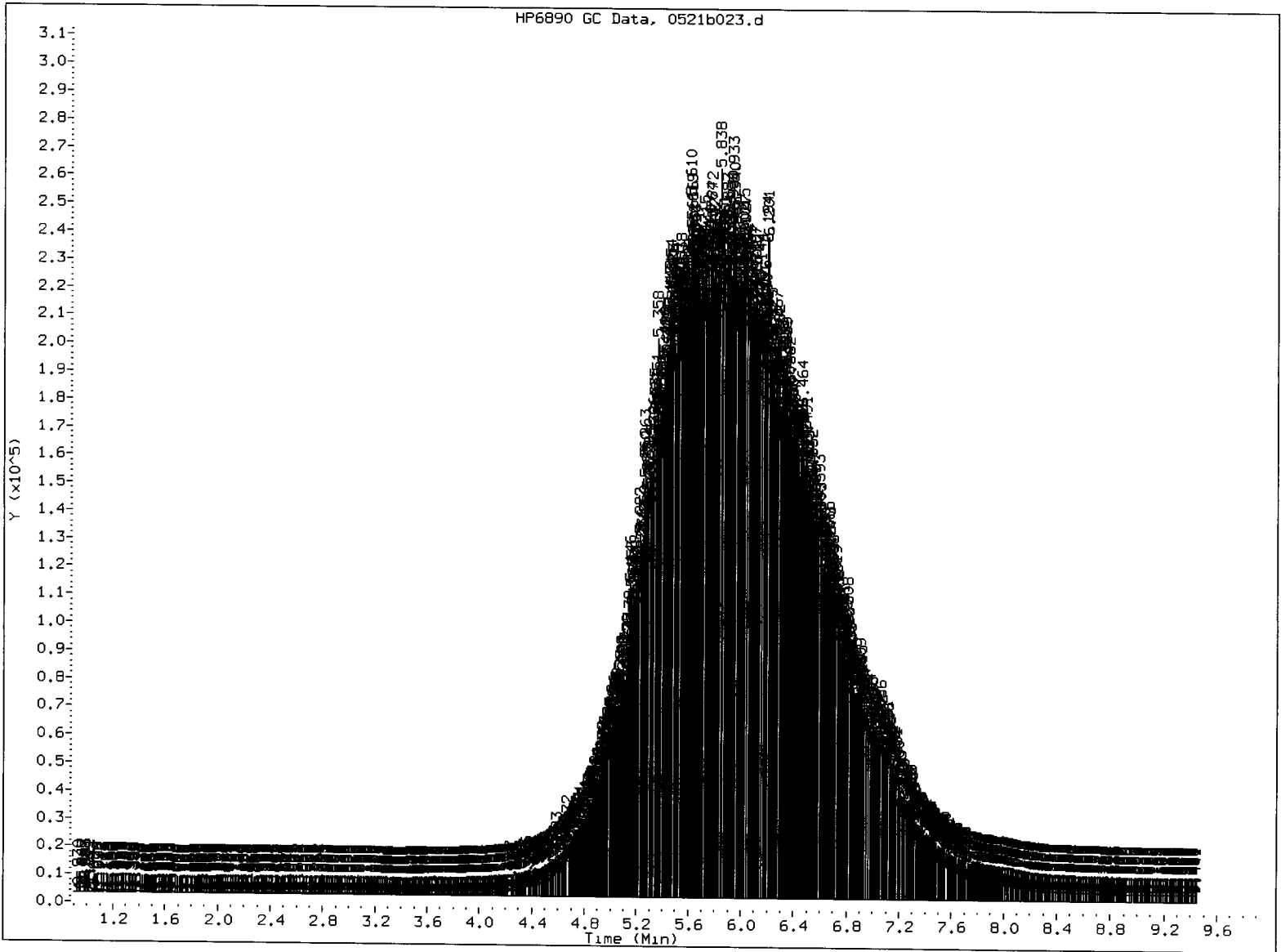
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b023.d
Date: 21-MAY-2013 15:57
Client ID: A2-M3-S-4
Sample Info: MQ45C,100
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



51000 51000



MANUAL INTEGRATION

1. Baseline correction

3. Peak not found

5. Skipped surrogate - removed after skimming due to dilution factor

Analyst: JW

Date: 5/21/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b012.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45D
Client ID: A2-W4-S-4
Injection: 21-MAY-2013 12:22
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	239058	18
C8	0.808	-0.006	12201	26224	WATPHD	(C12-C24)	306811025	29622.31 E-
C10	2.245	0.005	1324	1506	WATPHM	(C24-C38)	639605790	64784.11 E-
C12	3.042	0.000	3897	1215	AK102	(C10-C25)	350267150	28346.27 M
C14	3.621	-0.001	12137	6632	AK103	(C25-C36)	591853604	83260.15
C16	4.117	-0.002	55319	10879	OR.DIES	(C10-C28)	680341046	44229.69 M
C18	4.565	0.000	250022	58346				
C20	4.985	-0.001	1600435	492337				
C22	5.380	0.000	5880548	927548				
C24	5.743	-0.003	9786848	4696036				
C25	5.920	-0.001	10458850	3432764				
C26	6.097	-0.001	10073062	2574020				
C28	6.406	-0.004	9018673	4907125	IT.DIES	(C10-C24)	306930980	22259.12
C32	6.954	0.001	4070510	1485919				
C34	7.185	-0.001	3563295	2071459	CREOSOT	(C8-C22)	120322279	37212.77
Filter Peak	----							
C36	7.402	-0.002	888767	169948	BUNKERC	(C10-C38)	946536770	192981.69
o-terph	4.693	0.018	575933	509986	JET-A	(C10-C18)	5285181	488.28
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	509986	37.9	84.3 ✓
Triacotane	0	0.0	0.0

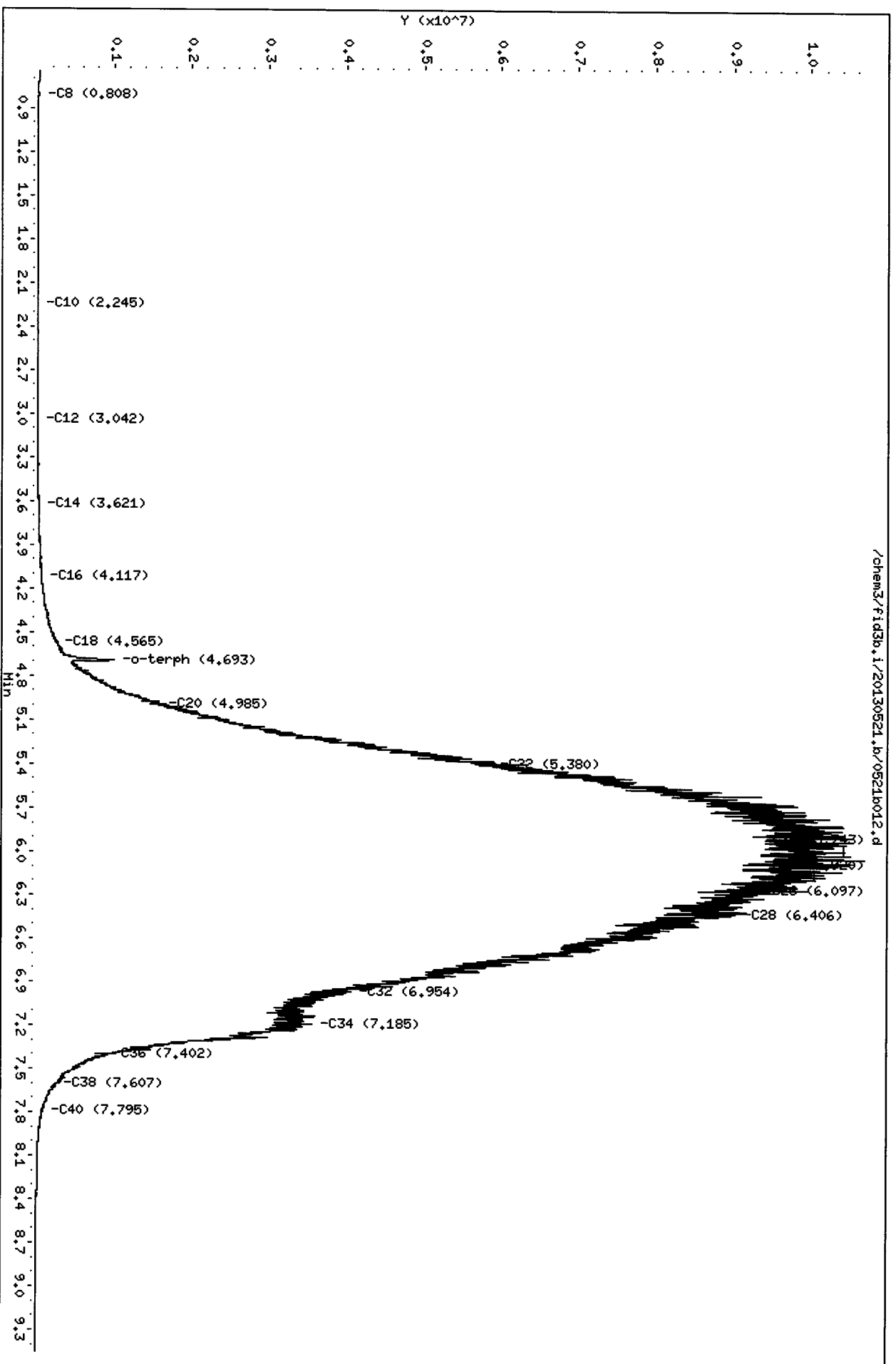
JW
5/21/13

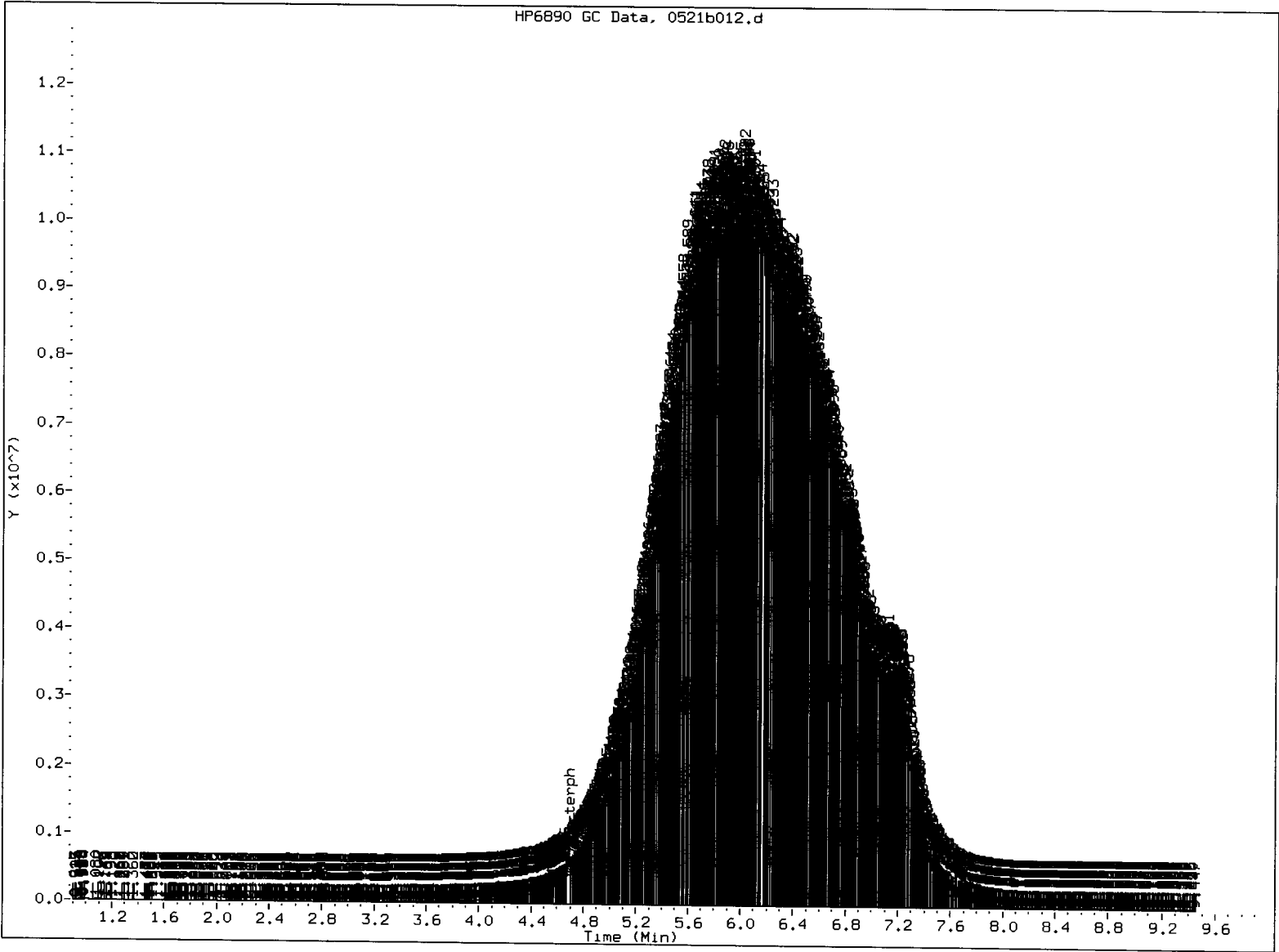
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b012.d
Date: 21-MAY-2013 12:22
Client ID: A2-M4-S-4
Sample Info: M045D
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
5/21/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b024.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/22/2013
Macro: FID:3B050913

ARI ID: WQ45D
Client ID: A2-W4-S-4
Injection: 21-MAY-2013 16:17
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	43650	3
C8	0.808	-0.006	3037	2167	WATPHD	(C12-C24)	3839031	370.65 ✓
C10	2.243	0.003	246	171	WATPHM	(C24-C38)	5179132	524.58 ✓
C12	3.041	-0.001	115	53	AK102	(C10-C25)	4221832	341.66 M
C14	3.621	-0.001	47	13	AK103	(C25-C36)	4722913	664.40
C16	4.113	-0.005	378	196	OR.DIES	(C10-C28)	6974739	453.44 M
C18	4.564	-0.001	2382	1292				
C20	4.984	-0.003	22048	6798				
C22	5.381	0.002	84832	32402				
C24	5.747	0.000	95678	29659				
C25	5.921	-0.001	91159	23278				
C26	6.099	0.001	91373	73409				
C28	6.411	0.000	62826	14695	IT.DIES	(C10-C24)	3845796	278.90
C32	6.949	-0.003	35000	14361				
C34	7.188	0.002	29506	18240	CREOSOT	(C8-C22)	1724556	533.36
Filter Peak	----							
C36	7.403	-0.001	10416	5878	BUNKERC	(C10-C38)	9024927	1840.02
o-terph	----				JET-A	(C10-C18)	47209	4.36
Triacon Surr	----							

Range Times: NW Diesel (3.092 - 5.796) NW Gas (0.608 - 3.092) NW M.Oil (5.796 - 7.656)
AK102 (2.190 - 5.872) AK103 (5.872 - 7.454) Jet A (2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

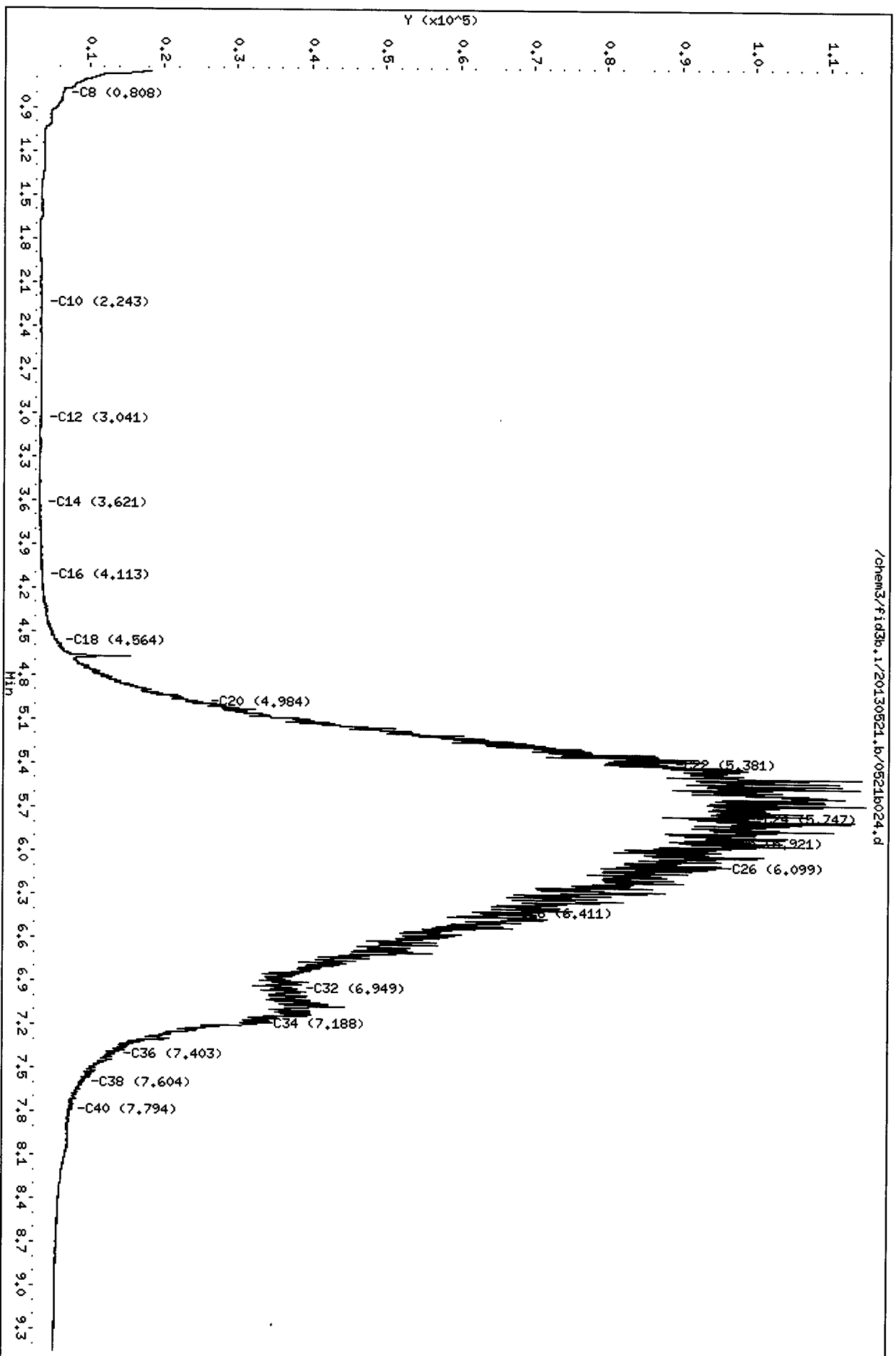
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW
5/22/13

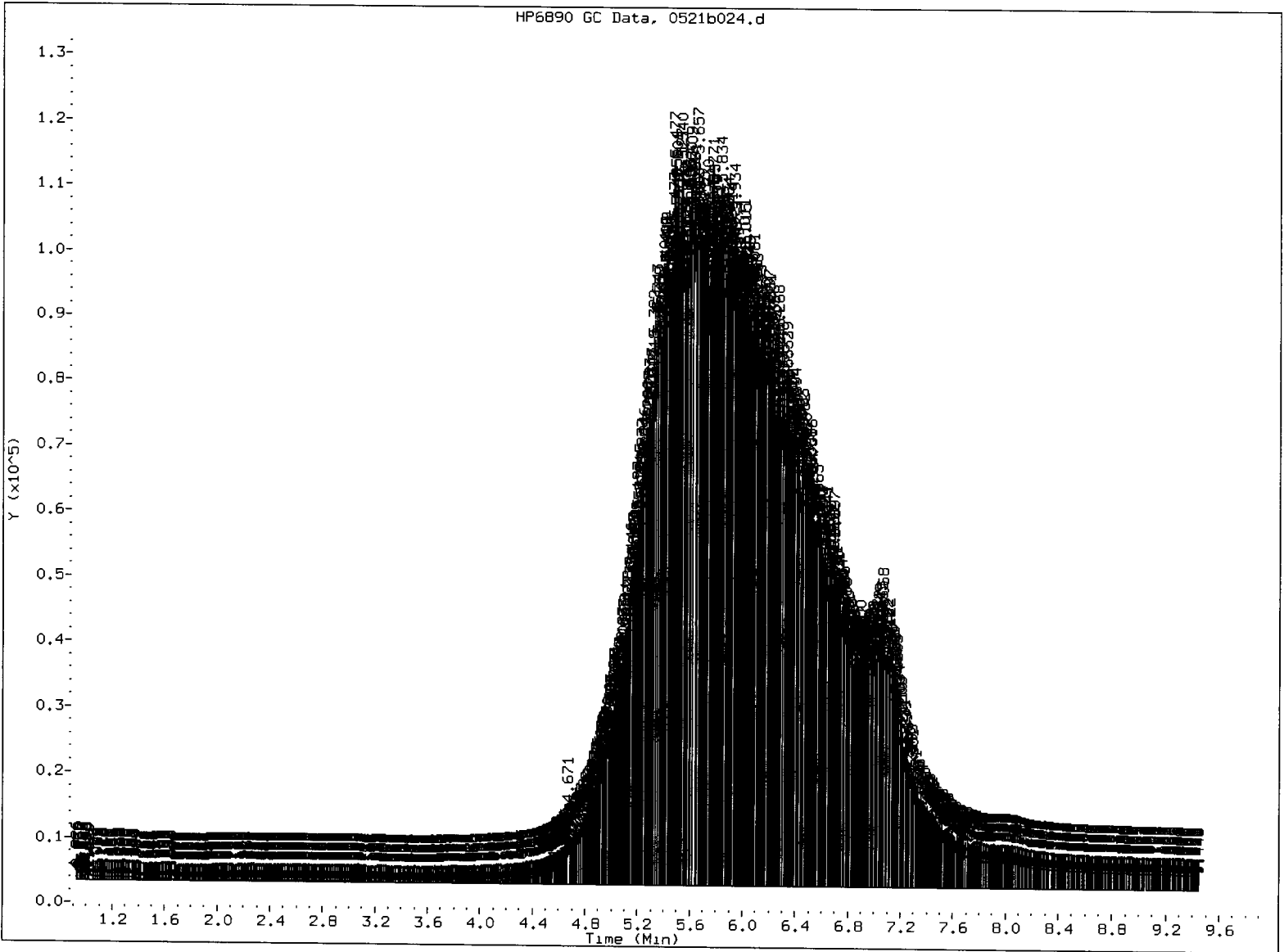
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Date: 21-MAY-2013 16:17
Client ID: A2-W4-S-4
Sample Info: MQ45D,100
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
5/22/13



0521b024.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate - removed after skimming due to dilution factor

Analyst: TW

Date: 5/22/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b013.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45E
Client ID: A2-W5-S-4
Injection: 21-MAY-2013 12:42
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	233353	17
C8	0.823	0.009	11084	20581	WATPHD	(C12-C24)	102725626	9918.06
C10	2.243	0.003	1219	1189	WATPHM	(C24-C38)	269181634	27264.75
C12	3.046	0.004	3849	4463	AK102	(C10-C25)	116236162	9406.71
C14	3.624	0.002	6114	9317	AK103	(C25-C36)	252015034	35452.70
C16	4.119	0.001	20587	6726	OR.DIES	(C10-C28)	238203558	15485.86
C18	4.563	-0.002	127180	44662				
C20	4.988	0.001	804083	321568				
C22	5.381	0.002	1997386	1079355				
C24	5.749	0.002	3006774	1311453				
C25	5.920	-0.002	3325247	1718024				
C26	6.100	0.001	3751187	1300096				
C28	6.408	-0.003	3740826	2552963	IT.DIES	(C10-C24)	102814616	7456.28
C32	6.952	0.000	1995332	770023				
C34	7.190	0.004	2216855	1198307	CREOSOT	(C8-C22)	47163038	14586.39
Filter Peak	----							
C36	7.401	-0.002	561258	131821	BUNKERC	(C10-C38)	371996250	75843.29
o-terph	4.681	0.006	696483	426175	JET-A	(C10-C18)	2348366	216.96
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	426175	31.7	70.4
Triacotane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW
5/24/13

Data File: /chem3/fid3b.i/20130521.b/0521b013.d

Date: 21-MAY-2013 12:42

Client ID: A2-M5-S-4

Sample Info: M045E

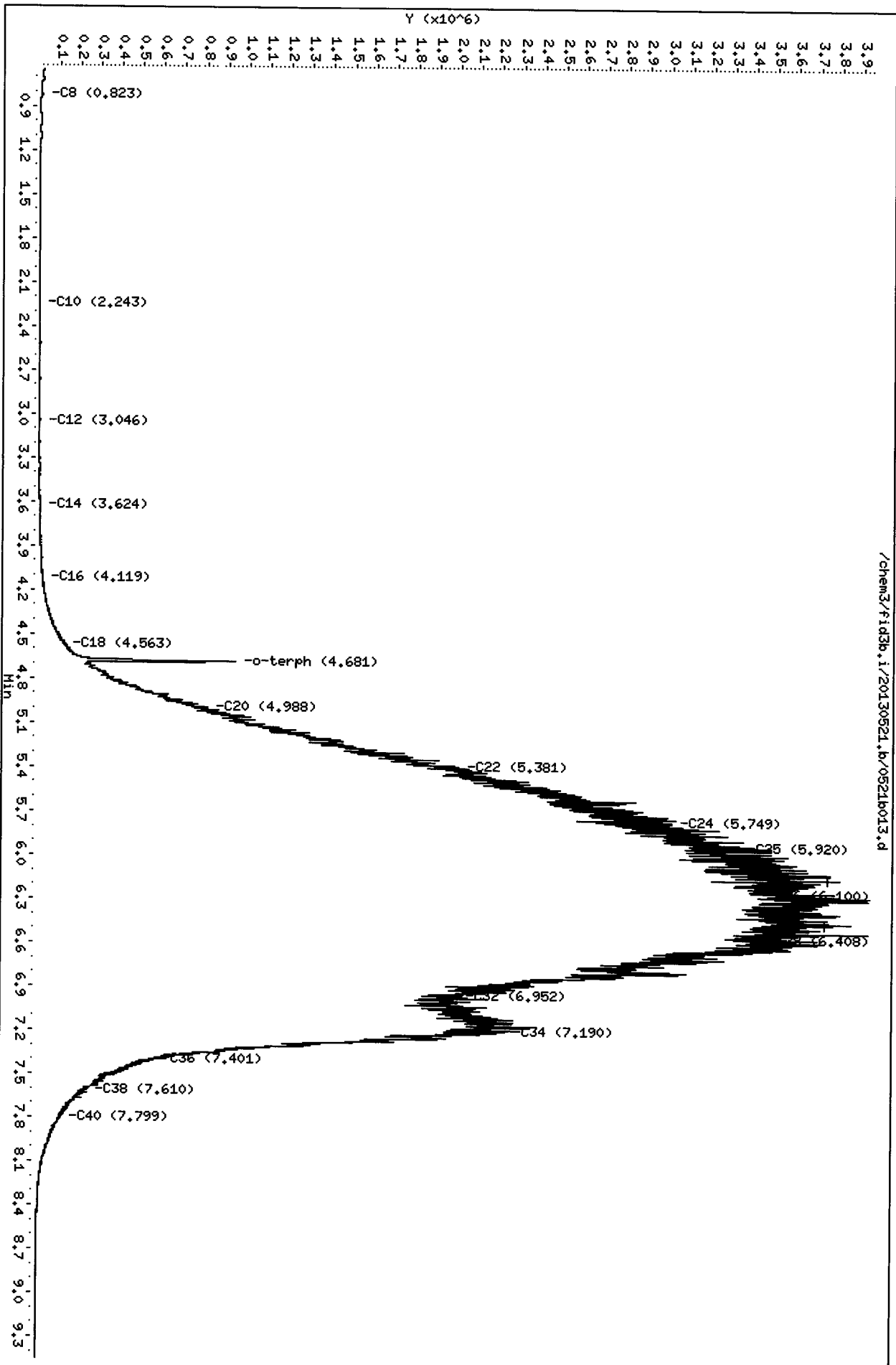
Column phase: RTX-1

Instrument: fid3b.i

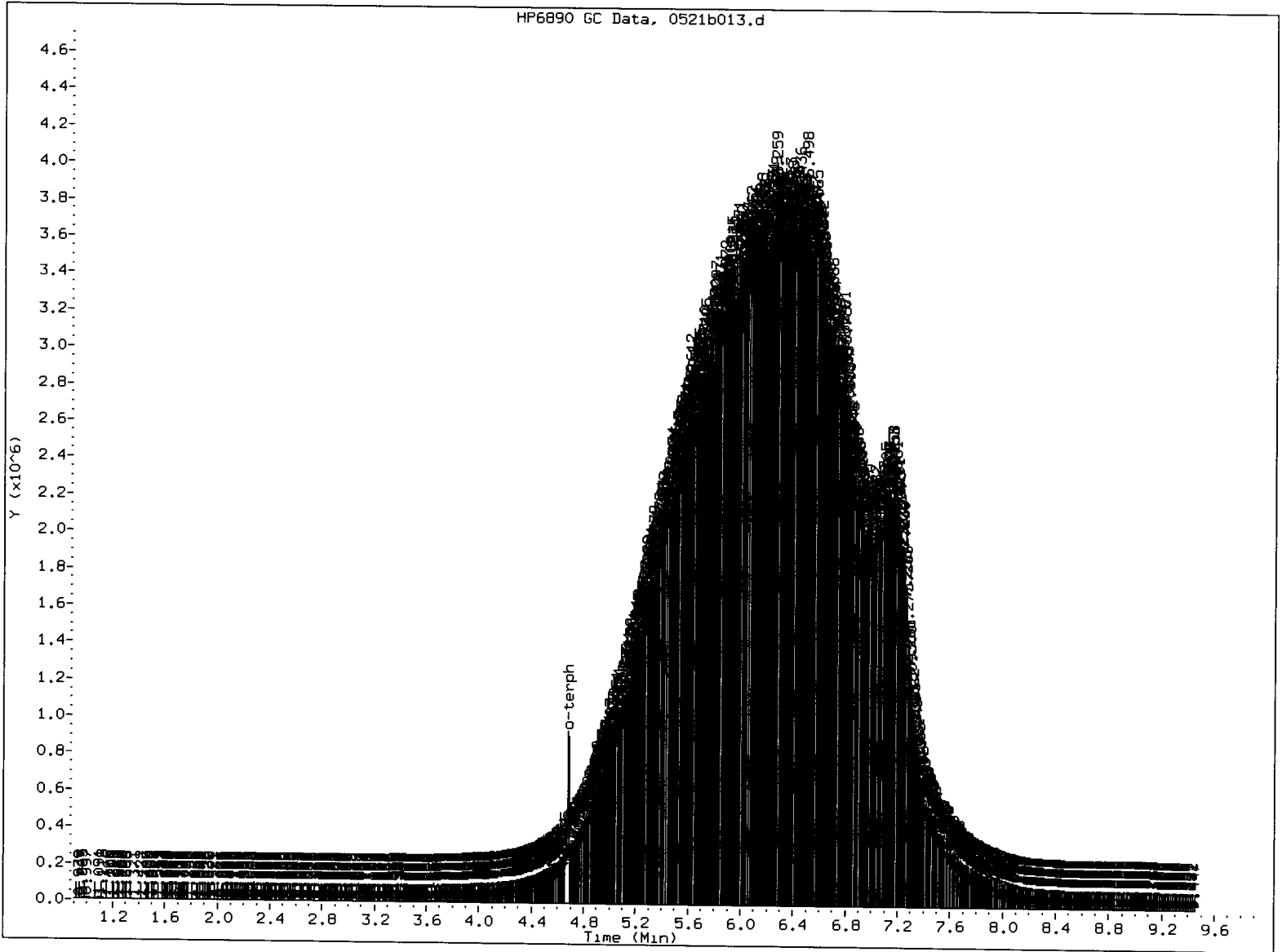
Operator: JM

Column diameter: 0.25

JW
5/21/13



01000 : 01000



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skimmed surrogate

Analyst: JW

Date: 5/21/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b025.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/22/2013
Macro: FID:3B050913

ARI ID: WQ45E
Client ID: A2-W5-S-4
Injection: 21-MAY-2013 16:36
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		71834	5
C8	0.809	-0.005	3295	525	WATPHD (C12-C24)		10729715	1035.94
C10	2.242	0.002	440	94	WATPHM (C24-C38)		25396651	2572.36
C12	3.044	0.002	314	164	AK102 (C10-C25)		12079767	977.59 M
C14	3.626	0.003	506	432	AK103 (C25-C36)		23718727	3336.68 M
C16	4.120	0.002	1797	492	OR.DIES (C10-C28)		24213099	1574.12 M
C18	4.568	0.002	14059	5256				
C20	4.988	0.002	87277	21748				
C22	5.374	-0.005	215126	148525				
C24	5.748	0.002	272487	69775				
C25	5.925	0.004	335579	83753				
C26	6.100	0.002	352942	235354				
C28	6.412	0.001	347907	88856	IT.DIES (C10-C24)		10745152	779.26
C32	6.954	0.001	191586	26373				
C34	7.184	-0.002	197154	94244	CREOSOT (C8-C22)		5042691	1559.58
Filter Peak	----							
C36	7.402	-0.002	49236	18027	BUNKERC (C10-C38)		36141802	7368.66
o-terph	4.670	-0.005	64531	39818	JET-A (C10-C18)		242214	22.38
Triacon Surr	6.702	-0.003	83598	53007				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	39818	3.0	65.8
Triacotane	53007	4.1	90.3

JW
5/22/13

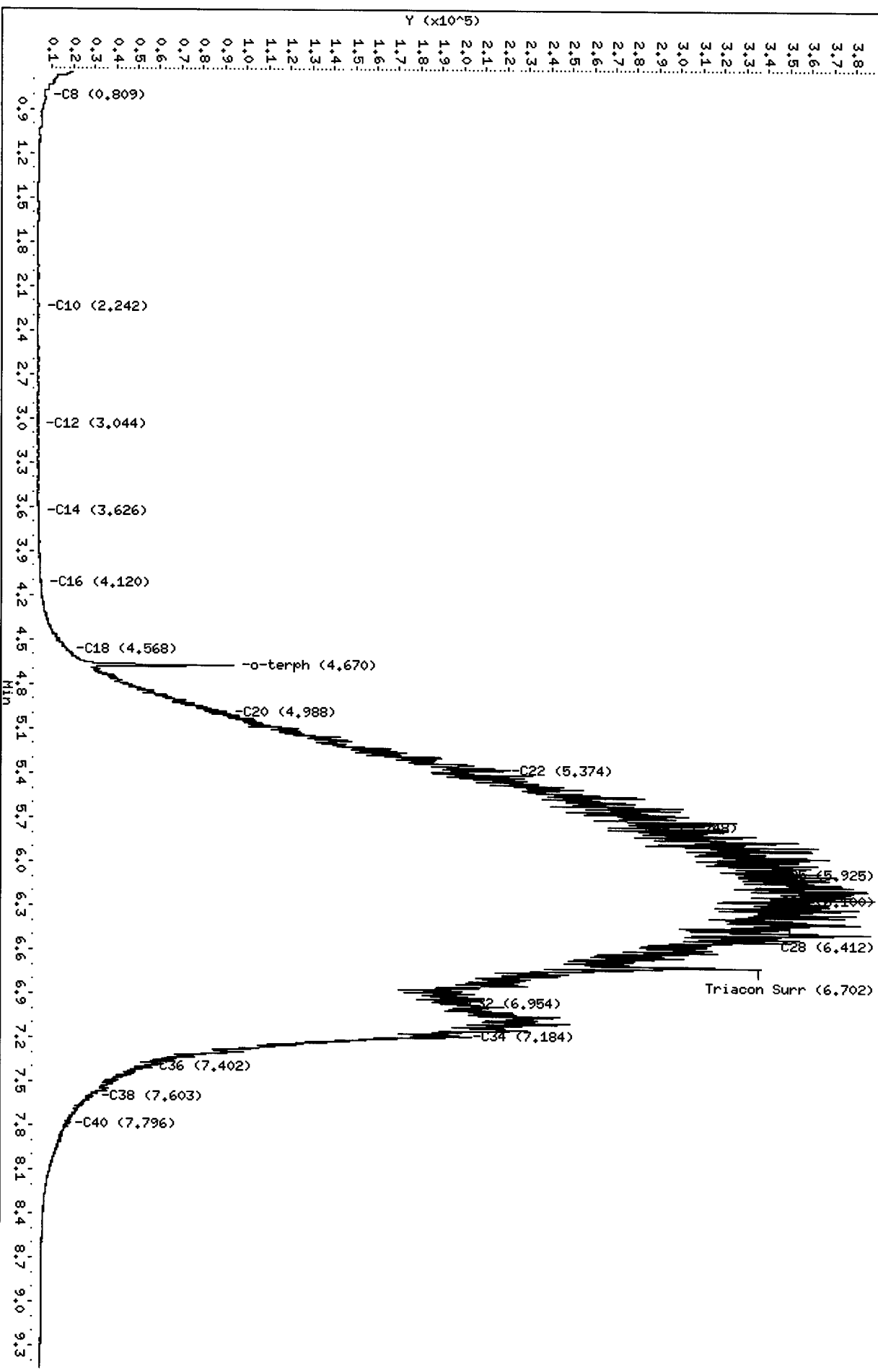
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b025.d
Date: 21-MAY-2013 16:36
Client ID: R2-M5-S-4
Sample Info: M045E,10

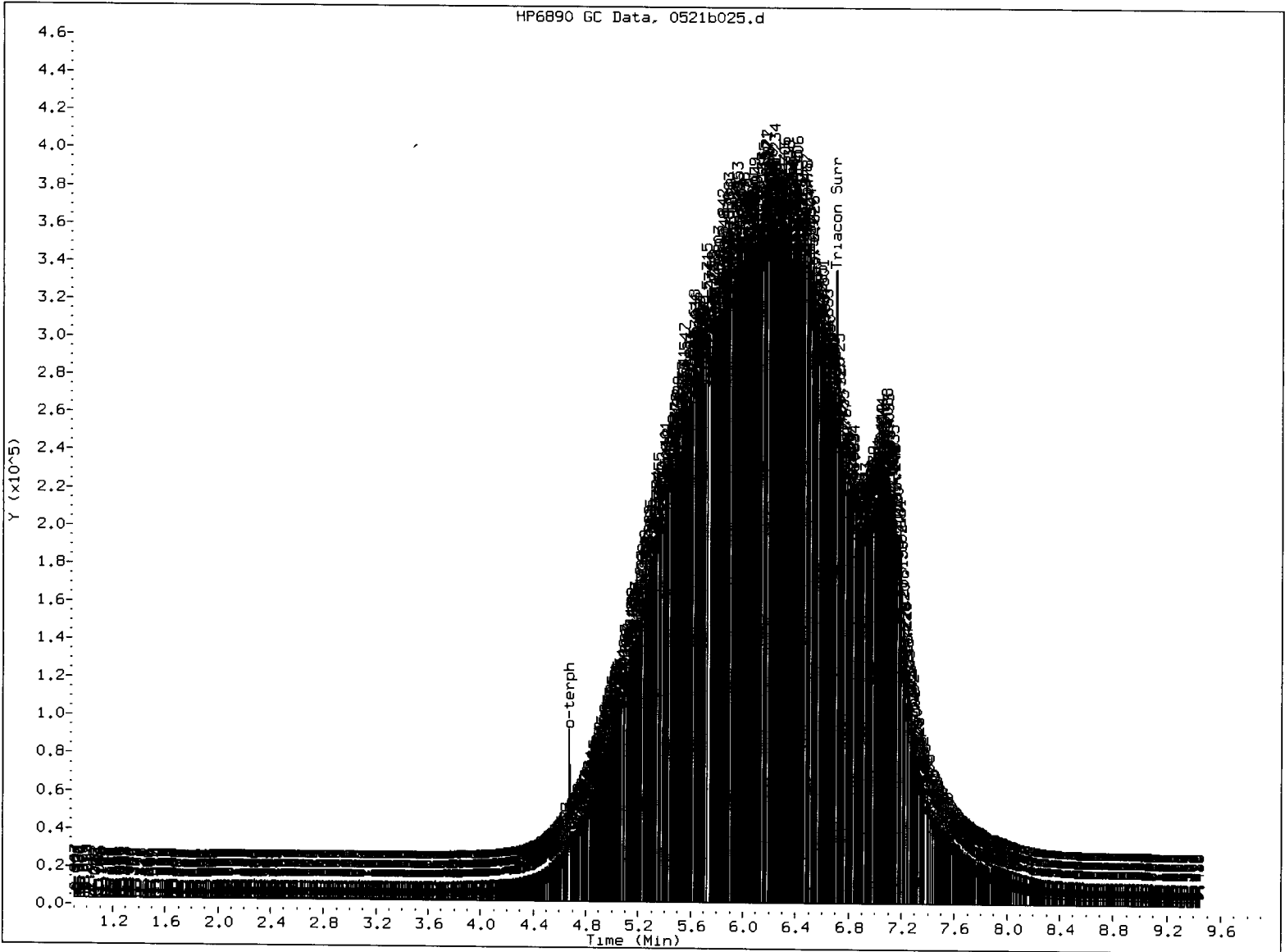
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Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

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JW
5/22/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/22/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b014.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45F
Client ID: A2-W6-S-4
Injection: 21-MAY-2013 13:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	103670	8
C8	0.813	-0.001	3255	1411	WATPHD	(C12-C24)	597719	57.71 ✓
C10	2.244	0.004	720	577	WATPHM	(C24-C38)	1827701	185.12 ✓
C12	3.048	0.006	1266	1167	AK102	(C10-C25)	652485	52.80 M
C14	3.624	0.001	1748	2042	AK103	(C25-C36)	1521734	214.07 M
C16	4.119	0.001	2135	1689	OR.DIES	(C10-C28)	1066441	69.33 M
C18	4.567	0.002	6050	3979				
C20	4.985	-0.001	4744	1208				
C22	5.383	0.004	6328	2289				
C24	5.748	0.001	8168	1128				
C25	5.919	-0.003	9170	5354				
C26	6.103	0.004	10217	2829				
C28	6.411	0.001	15967	5274	IT.DIES	(C10-C24)	616602	44.72
C32	6.952	-0.001	26428	17688				
C34	7.180	-0.006	21173	19169	CREOSOT	(C8-C22)	440401	136.21
Filter Peak	----							
C36	7.404	0.000	22281	8579	BUNKERC	(C10-C38)	2444303	498.35
o-terph	4.676	0.001	717491	474816	JET-A	(C10-C18)	194154	17.94
Triacon Surr	6.701	-0.004	891253	554856				

Range Times: NW Diesel (3.092 - 5.796) NW Gas (0.608 - 3.092) NW M.Oil (5.796 - 7.656)
AK102 (2.190 - 5.872) AK103 (5.872 - 7.454) Jet A (2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	474816	35.3	78.5 ✓
Triacontane	554856	42.5	94.5

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5/21/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b014.d

Date: 21-MAY-2013 13:01

Client ID: R2-M6-S-4

Sample Info: M045F

Column phase: RTX-1

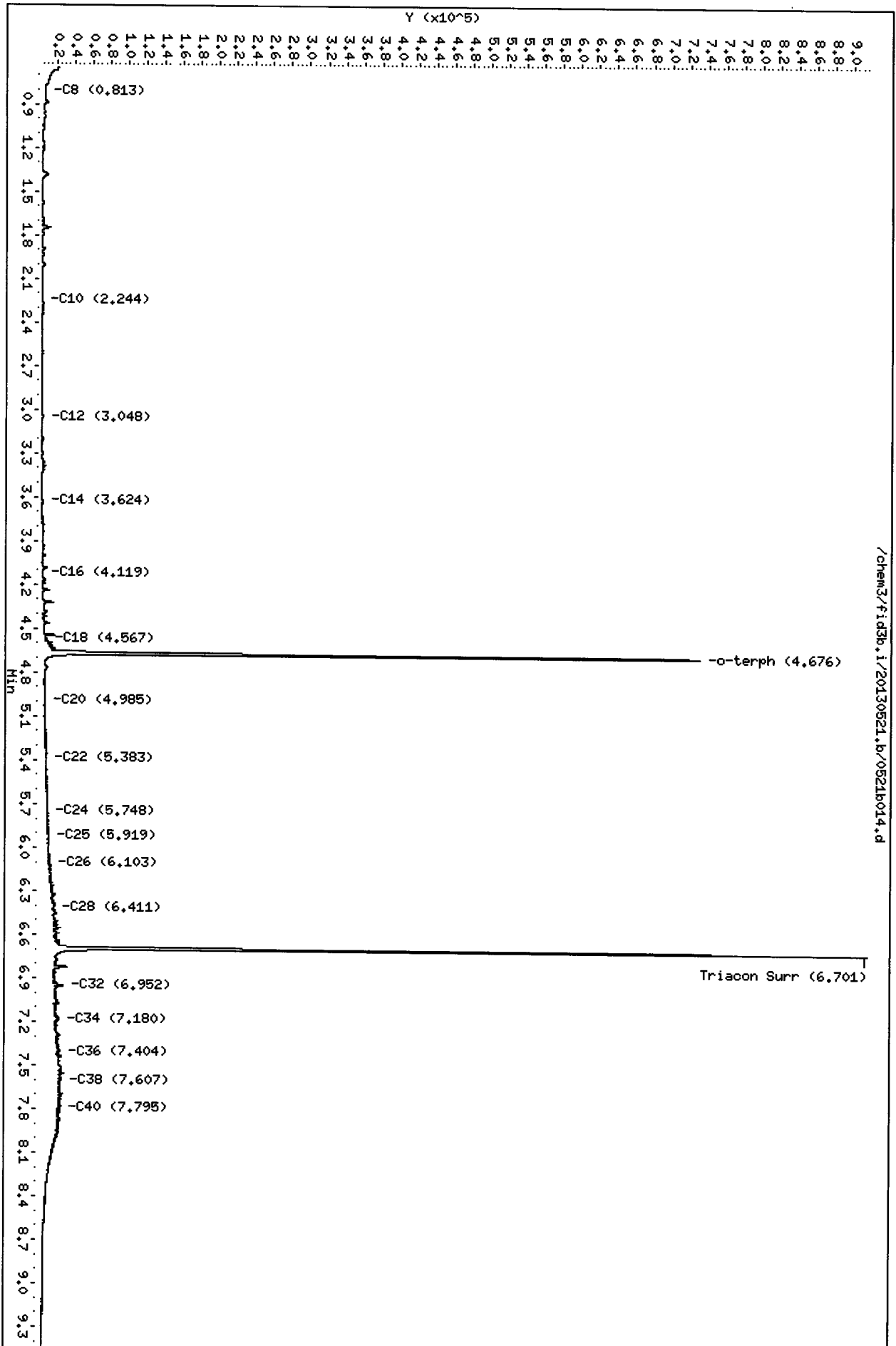
Instrument: fid3b.i

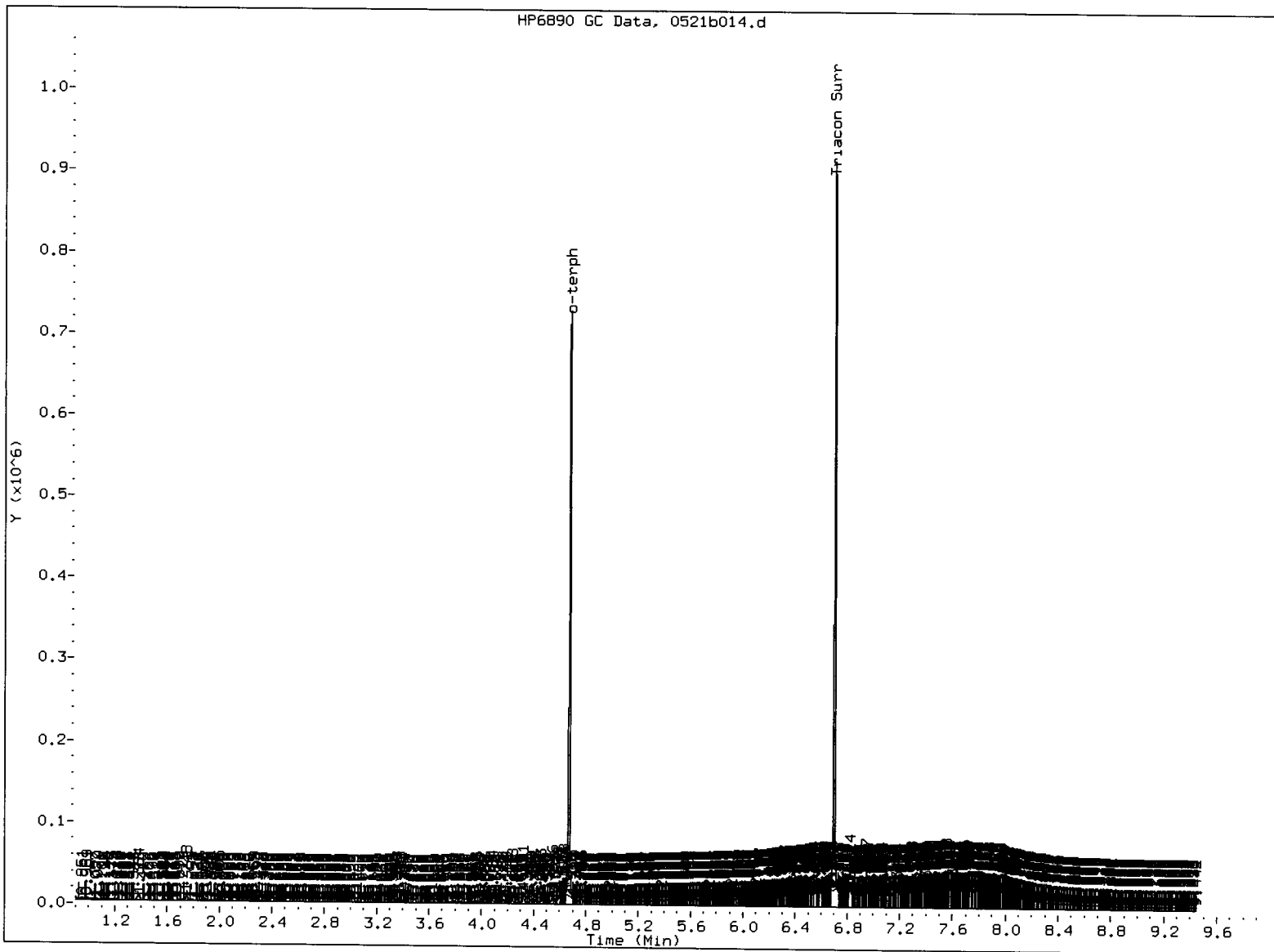
Operator: JM

Column diameter: 0.25

JW
5/2/13

/chem3/fid3b.i/20130521.b/0521b014.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: ju

Date: 5/21/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b015.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45G
Client ID: A2-W7-S-4
Injection: 21-MAY-2013 13:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		90386	7
C8	0.817	0.003	4338	3920	WATPHD (C12-C24)		164571	15.89
C10	2.245	0.005	523	482	WATPHM (C24-C38)		303069	30.70
C12	3.041	-0.001	184	55	AK102 (C10-C25)		183338	14.84
C14	3.626	0.004	821	404	AK103 (C25-C36)		248964	35.02
C16	4.118	0.000	787	209	OR.DIES (C10-C28)		251689	16.36
C18	4.565	0.000	1469	567				
C20	4.985	-0.001	1178	415				
C22	5.380	0.000	1517	758				
C24	5.745	-0.001	1465	799				
C25	5.923	0.001	1698	722				
C26	6.095	-0.004	1870	1180				
C28	6.410	0.000	3232	2652	IT.DIES (C10-C24)		177016	12.84
C32	6.951	-0.002	7501	9520				
C34	7.188	0.002	3056	1568	CREOSOT (C8-C22)		138071	42.70
Filter Peak	----							
C36	7.408	0.004	3298	715	BUNKERC (C10-C38)		480085	97.88
o-terph	4.674	0.000	816425	513979	JET-A (C10-C18)		84073	7.77
Triacon Surr	6.703	-0.002	665105	562160				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	513979	38.2	84.9
Triacontane	562160	43.1	95.7

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b015.d

Date: 21-MAY-2013 13:21

Client ID: R2-W7-S-4

Sample Info: MQ45G

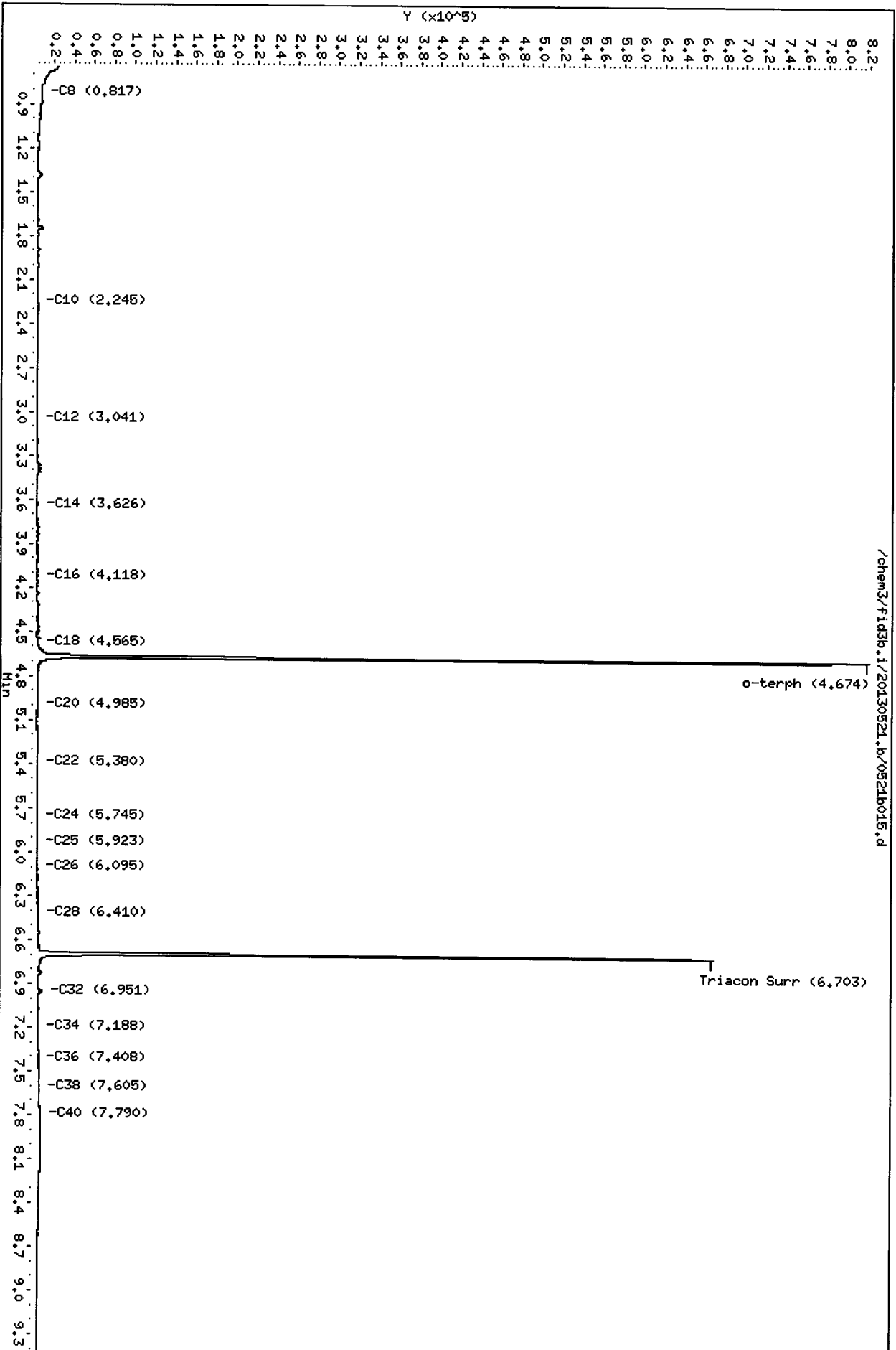
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

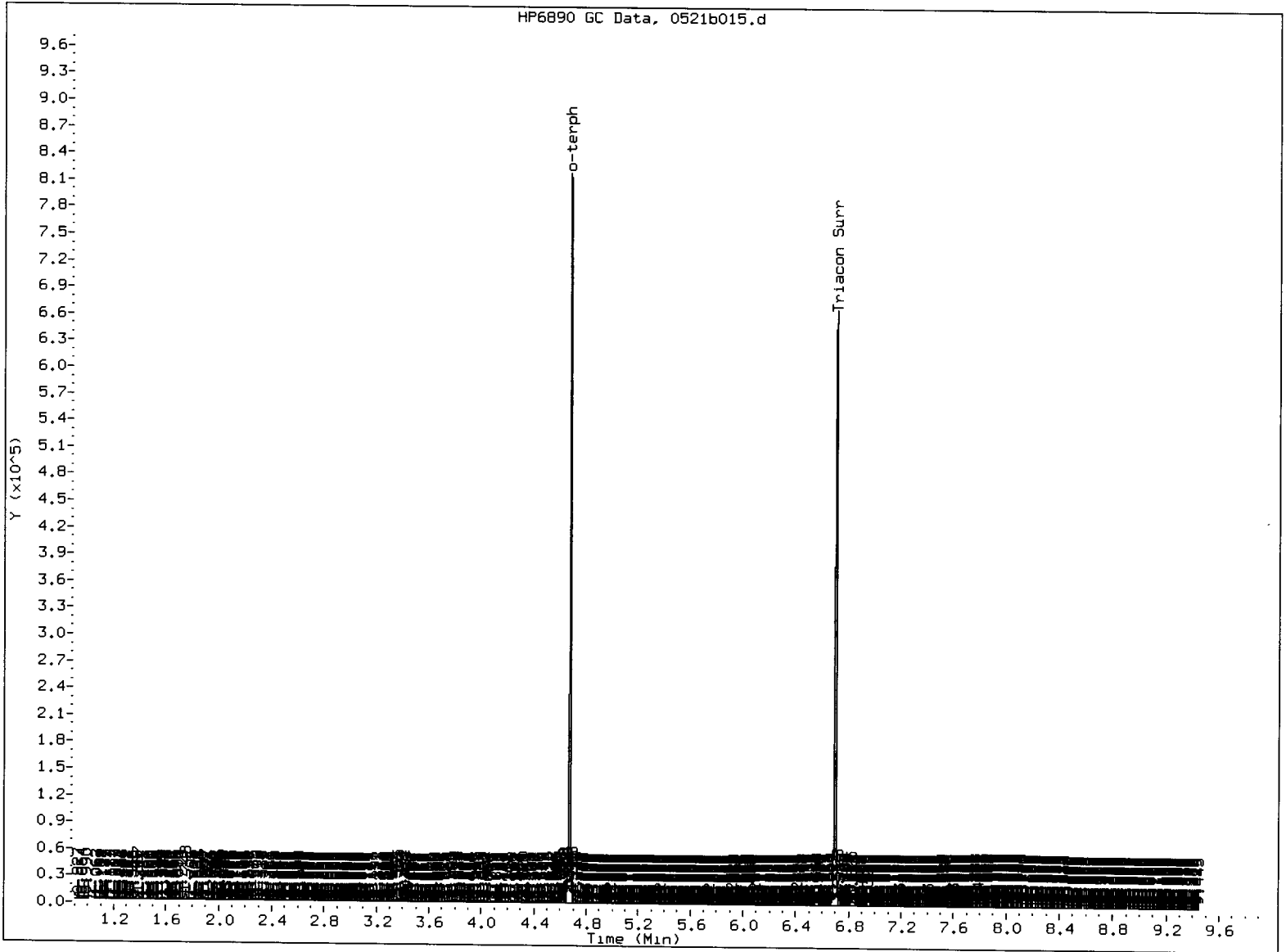
Column diameter: 0.25

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5/21/13



/chem3/fid3b.i/20130521.b/0521b015.d

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5) Skimmed surrogate

Analyst: SD

Date: 5/21/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b016.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45H
Client ID: A2-W8-S-4
Injection: 21-MAY-2013 13:41
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		81937	6
C8	0.816	0.002	4149	3166	WATPHD (C12-C24)		140786	13.59 ✓
C10	2.234	-0.007	371	107	WATPHM (C24-C38)		223906	22.68 ✓
C12	3.042	0.000	179	93	AK102 (C10-C25)		159472	12.91
C14	3.619	-0.003	280	71	AK103 (C25-C36)		186264	26.20
C16	4.123	0.005	700	698	OR.DIES (C10-C28)		214147	13.92
C18	4.574	0.009	1589	1755				
C20	4.990	0.003	1053	368				
C22	5.376	-0.003	1378	751				
C24	5.751	0.005	1523	615				
C25	5.920	-0.001	1209	238				
C26	6.093	-0.006	1594	1205				
C28	6.409	-0.001	2638	2647	IT.DIES (C10-C24)		154178	11.18
C32	6.952	-0.001	6807	5144				
C34	7.187	0.001	2246	949	CREOSOT (C8-C22)		118029	36.50
Filter Peak	----							
C36	7.404	0.001	2428	841	BUNKERC (C10-C38)		378084	77.08
o-terph	4.675	0.000	937068	499406	JET-A (C10-C18)		68882	6.36
Triacon Surr	6.700	-0.005	768309	558075				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	499406	37.1	82.5 ✓
Triacontane	558075	42.8	95.0

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b016.d

Date: 21-MAY-2013 13:41

Client ID: R2-M8-S-4

Sample Info: M045H

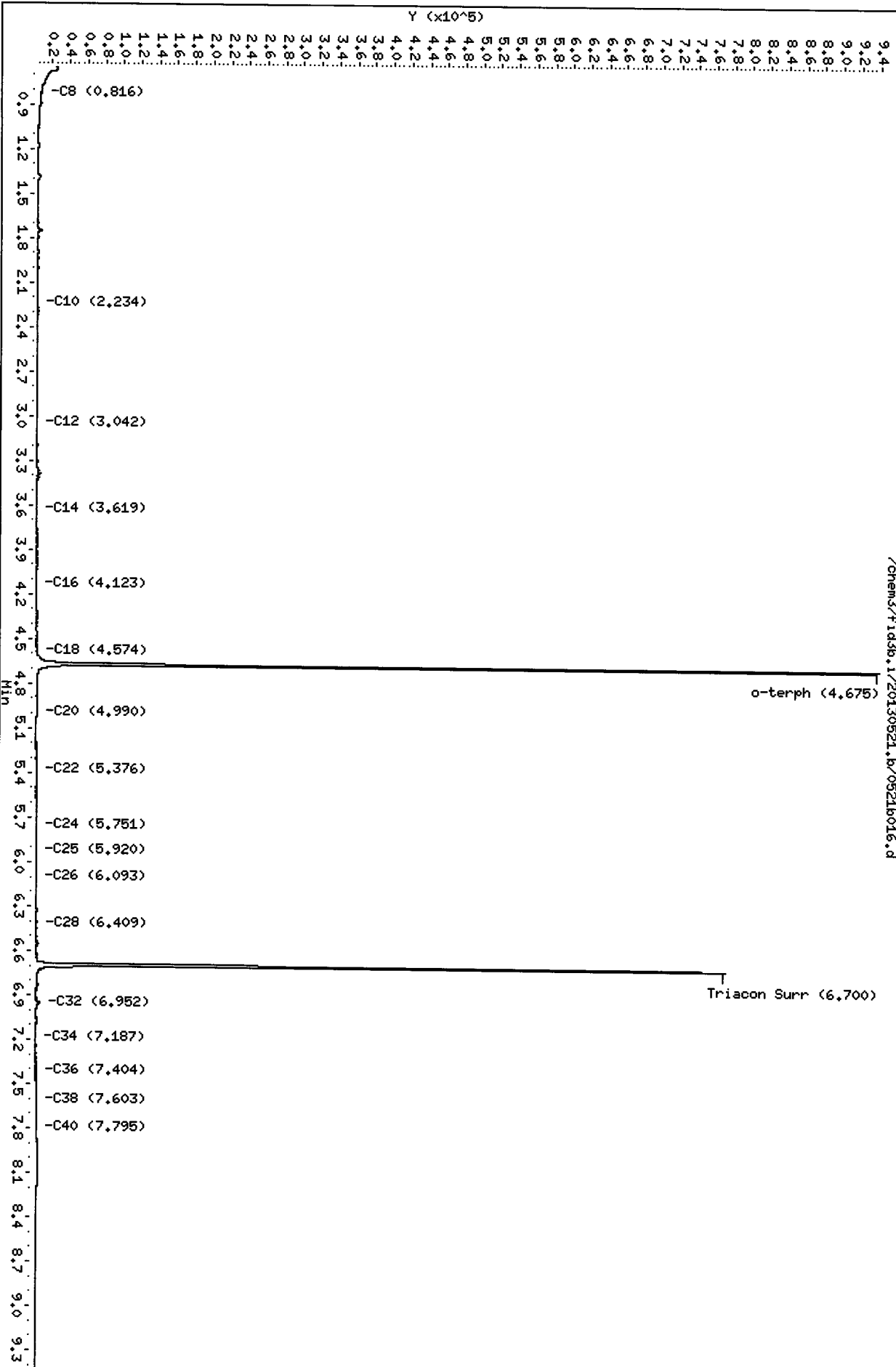
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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TW
5/21/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b017.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45I
Client ID: A2-W9-S-4
Injection: 21-MAY-2013 14:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		93340	7
C8	0.803	-0.011	3356	1325	WATPHD (C12-C24)		1518082	146.57 ✓
C10	2.245	0.004	667	628	WATPHM (C24-C38)		16932856	1715.09 ✓
C12	3.041	-0.001	793	363	AK102 (C10-C25)		1753544	141.91 M
C14	3.623	0.001	1640	1221	AK103 (C25-C36)		14531588	2044.26 M
C16	4.119	0.001	1973	1915	OR.DIES (C10-C28)		4811540	312.80 M
C18	4.567	0.002	5026	2462				
C20	4.988	0.001	10971	2577				
C22	5.383	0.003	21401	5490				
C24	5.745	-0.001	41699	14463				
C25	5.920	-0.001	56088	25154				
C26	6.101	0.002	70734	43062				
C28	6.408	-0.002	142180	30021	IT.DIES (C10-C24)		1544204	111.99
C32	6.953	0.000	192284	38024				
C34	7.186	0.000	229348	128496	CREOSOT (C8-C22)		790232	244.40
Filter Peak	----							
C36	7.401	-0.002	205596	86678	BUNKERC (C10-C38)		18477060	3767.14
o-terph	4.669	-0.006	75316	44381	JET-A (C10-C18)		178431	16.48
Triacon Surr	6.700	-0.005	69126	39920				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	44381	3.3	7.3
Triacontane	39920	3.1	6.8

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SW
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Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b017.d

Date: 21-MAY-2013 14:01

Client ID: A2-M9-S-4

Sample Info: M045I

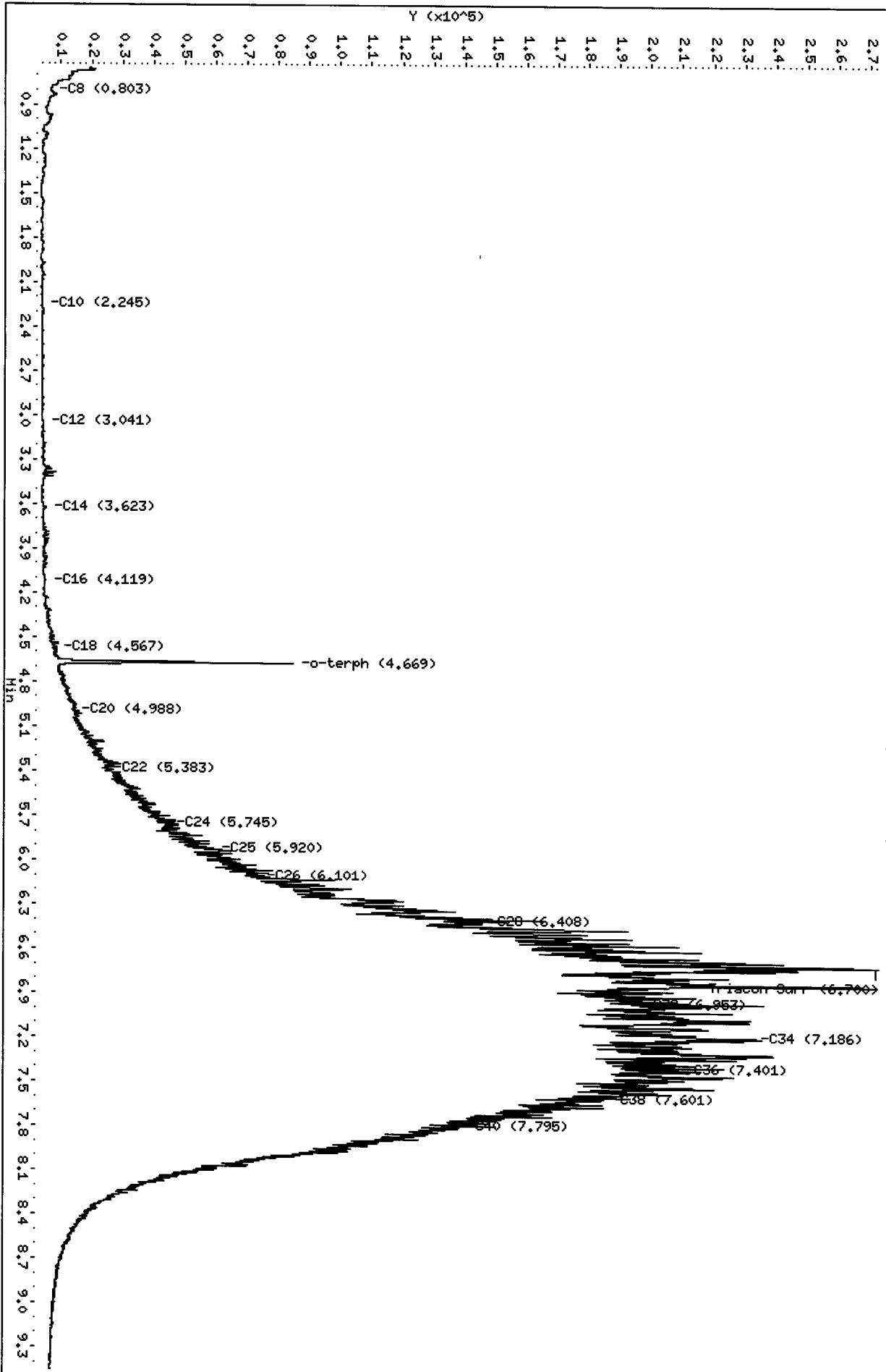
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Instrument: fid3b.i

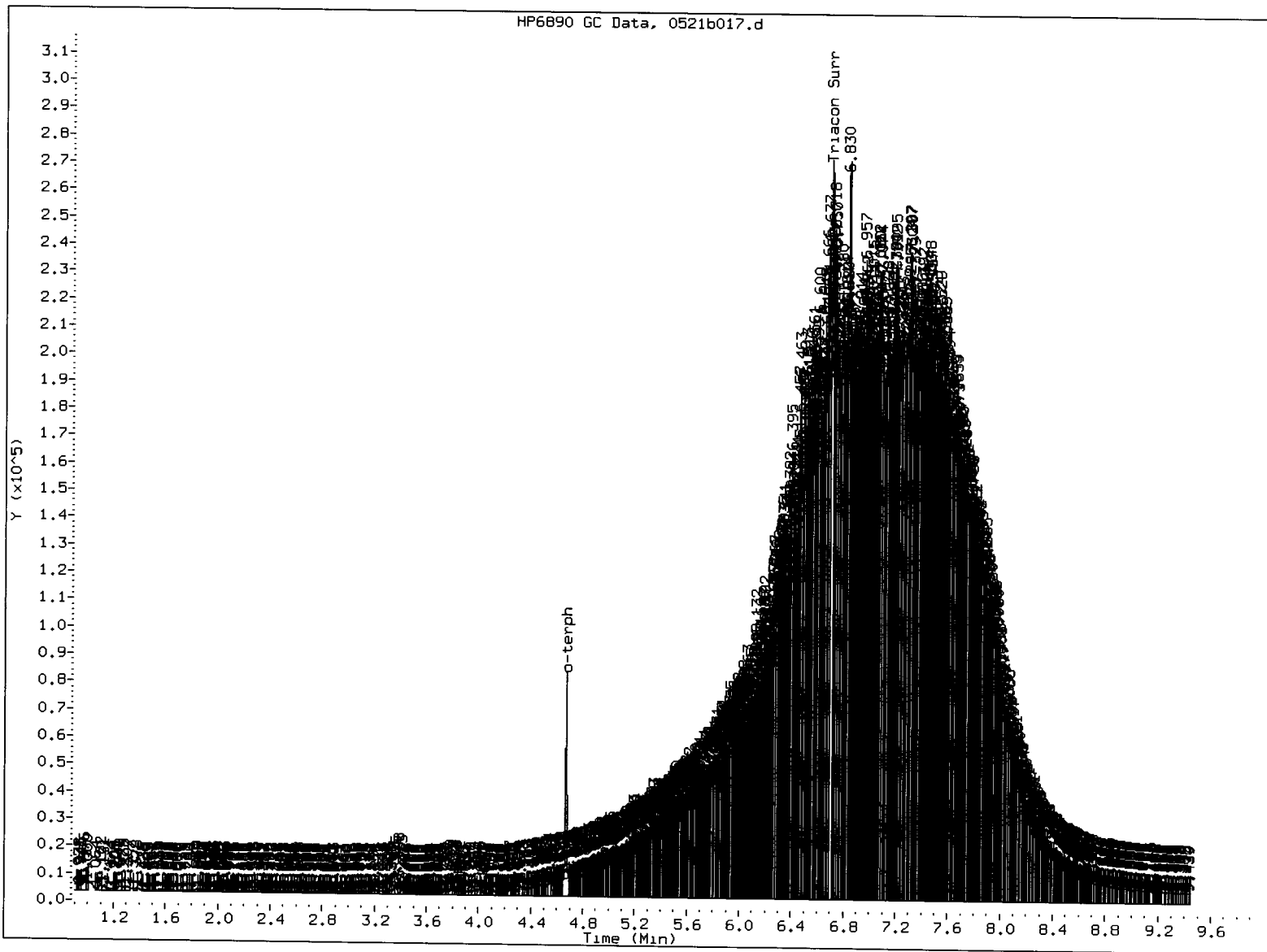
Operator: JM

Column diameter: 0.25

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JW
5/21/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: ju

Date: 5/21/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b018.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45J
Client ID: A2-W10-S-4
Injection: 21-MAY-2013 14:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	92675	7
C8	0.804	-0.010	3290	722	WATPHD	(C12-C24)	1647041	159.02 ✓
C10	2.238	-0.002	509	216	WATPHM	(C24-C38)	20332311	2059.41 ✓
C12	3.044	0.002	730	509	AK102	(C10-C25)	1898894	153.67 M
C14	3.627	0.004	1572	1454	AK103	(C25-C36)	17586814	2474.06
C16	4.120	0.002	1825	1775	OR.DIES	(C10-C28)	5679711	369.24 M
C18	4.567	0.001	5142	2415				
C20	4.986	-0.001	11643	5152				
C22	5.377	-0.002	26125	11544				
C24	5.748	0.002	48571	11465				
C25	5.923	0.001	66463	40246				
C26	6.098	-0.001	84214	27810				
C28	6.412	0.001	183703	100104	IT.DIES	(C10-C24)	1673233	121.35
C32	6.955	0.002	252803	68195				
C34	7.187	0.001	246939	39332	CREOSOT	(C8-C22)	803844	248.61
Filter Peak	----							
C36	7.405	0.001	242801	87368	BUNKERC	(C10-C38)	22005544	4486.53
o-terph	4.670	-0.004	65570	35314	JET-A	(C10-C18)	172987	15.98
Triacon Surr	----							

Range Times: NW Diesel (3.092 - 5.796) NW Gas (0.608 - 3.092) NW M.Oil (5.796 - 7.656)
AK102 (2.190 - 5.872) AK103 (5.872 - 7.454) Jet A (2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	35314	2.6	5.8 x 10
Triacotane	0	0.0	0.0 N2

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW
5/21/13

Data File: /chem3/fid3b.i/20130521.b/0521b018.d

Date: 21-MAY-2013 14:20

Client ID: A2-M10-S-4

Sample Info: M046J

Column phase: RTX-1

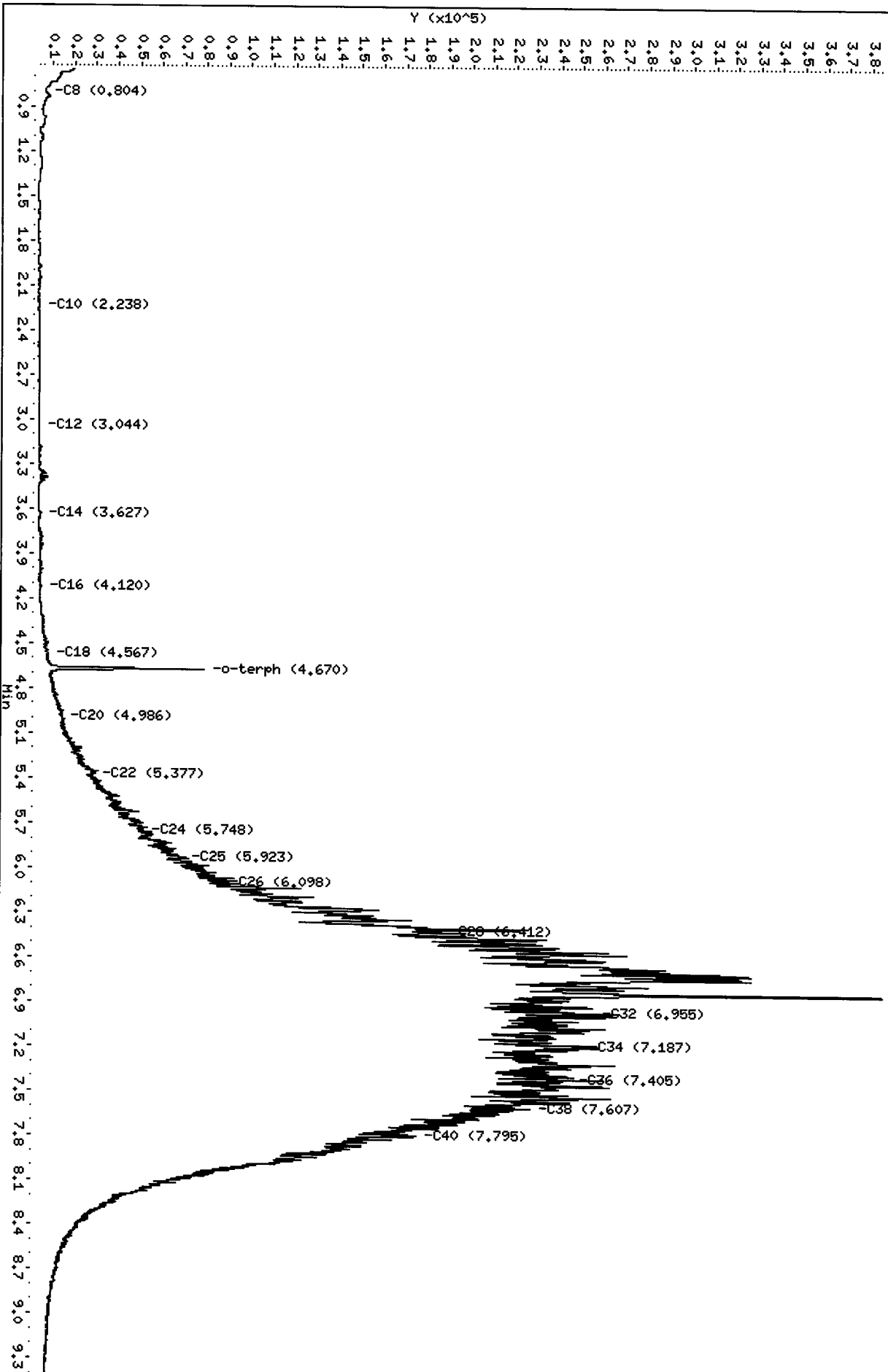
Instrument: fid3b.i

Operator: JM

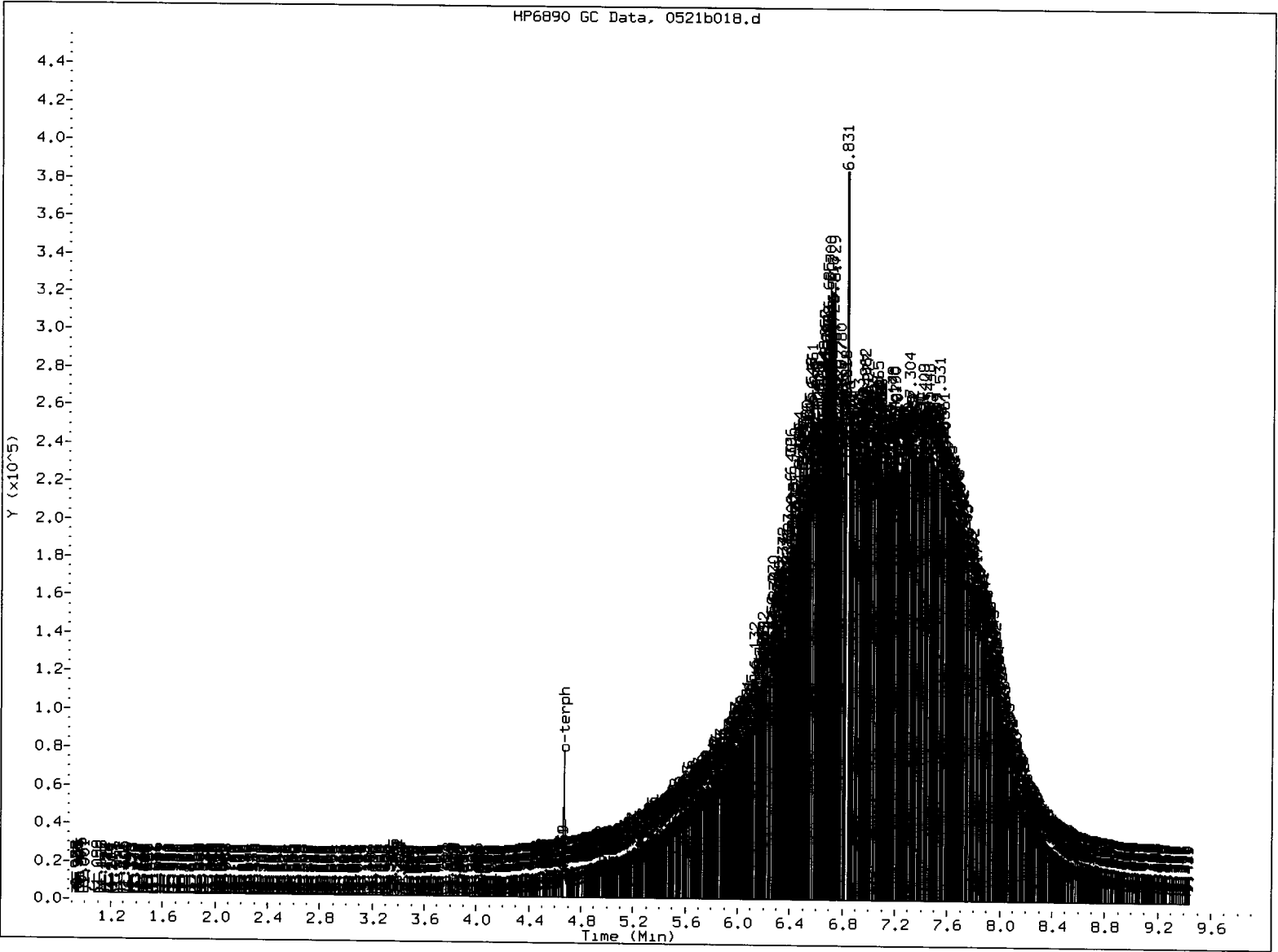
Column diameter: 0.25

Page 1

/chem3/fid3b.i/20130521.b/0521b018.d



10015 : 000055



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/2/13

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a006.d
Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 05/21/2013

ARI ID: WQ45K
Client ID:
Injection: 21-MAY-2013 10:39
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	64586	2
C8	1.087	-0.002	1631	3543	DIESEL (C12-C24)	5295767	283.50 ✓
C10	2.857	-0.001	258	243	M.OIL (C24-C38)	15123583	943.15 ✓
C12	3.867	0.003	1145	1698	AK-102 (C10-C25)	6162896	283.91 M
C14	4.560	-0.004	4638	6159	AK-103 (C25-C36)	13498189	1161.85 M
C16	5.160	0.002	8078	1892			
C18	5.730	0.005	19038	11931			
C20	6.291	0.003	26035	24016			
C22	6.837	-0.002	57387	34974			
C24	7.361	-0.003	87529	15570			
C25	7.617	0.003	110850	105296			
C26	7.874	0.006	120561	67746			
C28	8.310	-0.003	141001	133024	IT.DIES (C10-C24)	5314640	245.53 M
C32	9.091	-0.005	99268	107015			
C34	9.437	-0.004	83875	75051	BUNKERC (C10-C38)	20438224	2205.56 M
Filter Peak	11.485	-0.005	4015	1757			
C36	9.760	-0.001	58180	17078			
C38	10.062	0.002	38192	15555			
C40	10.338	-0.008	23195	27302			
o-terph	5.859	0.000	955012	852263			
Triacon Surr	8.737	0.002	675819	781989	IT.MOIL (C24-C40)	16340907	1005.43 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.864 - 7.364) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
NW M.Oil (7.36 - 10.06) AK103 (7.61 - 9.76) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	852263	33.3	73.9 ✓
Triacantane	781989	41.4	91.9

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

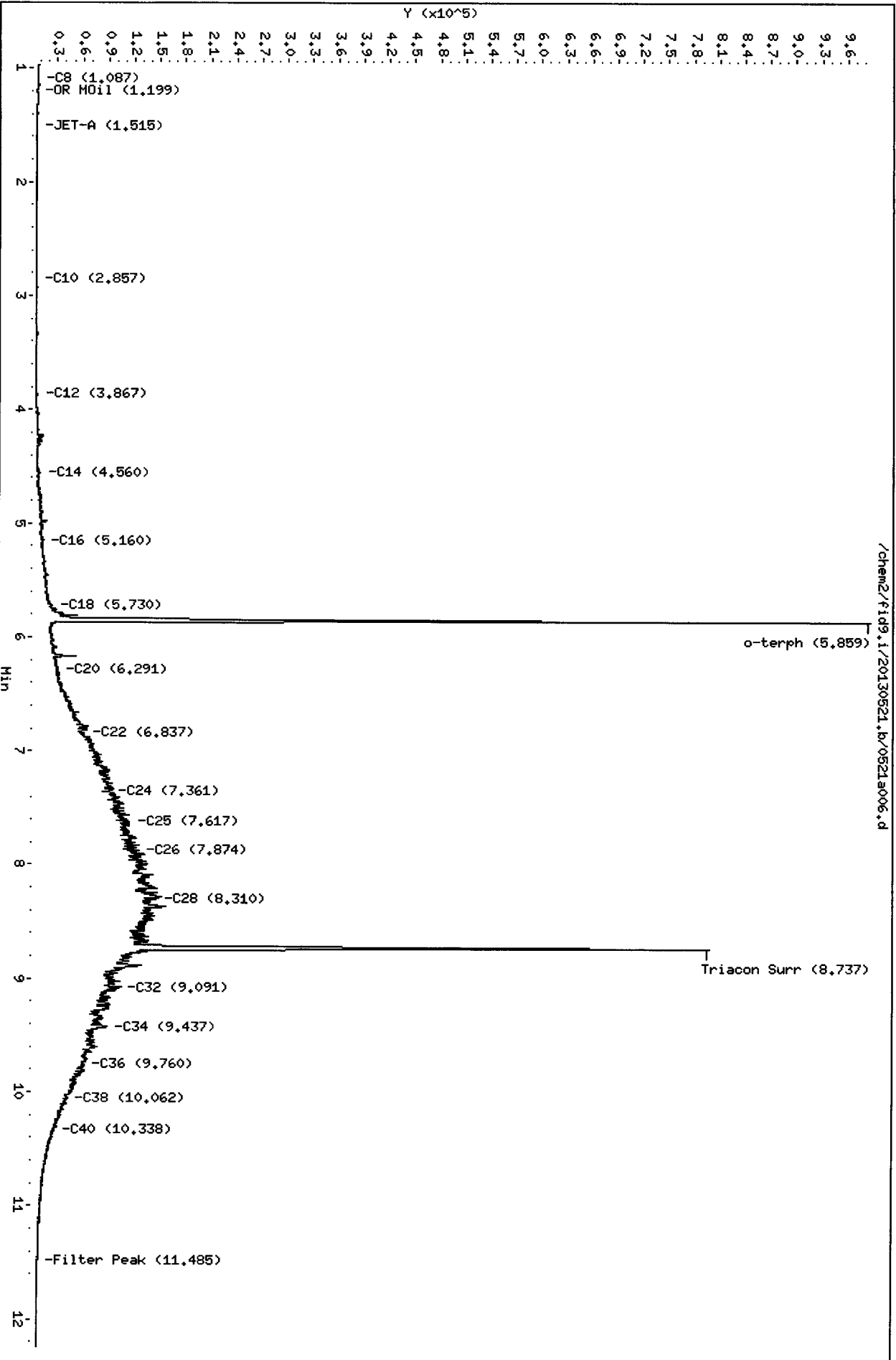
Data File: /chem2/fid9.i/20130521.b/0521a006.d
Date: 21-MAY-2013 10:39

Client ID:
Sample Info: MQ45K

Column phase: RTX-1

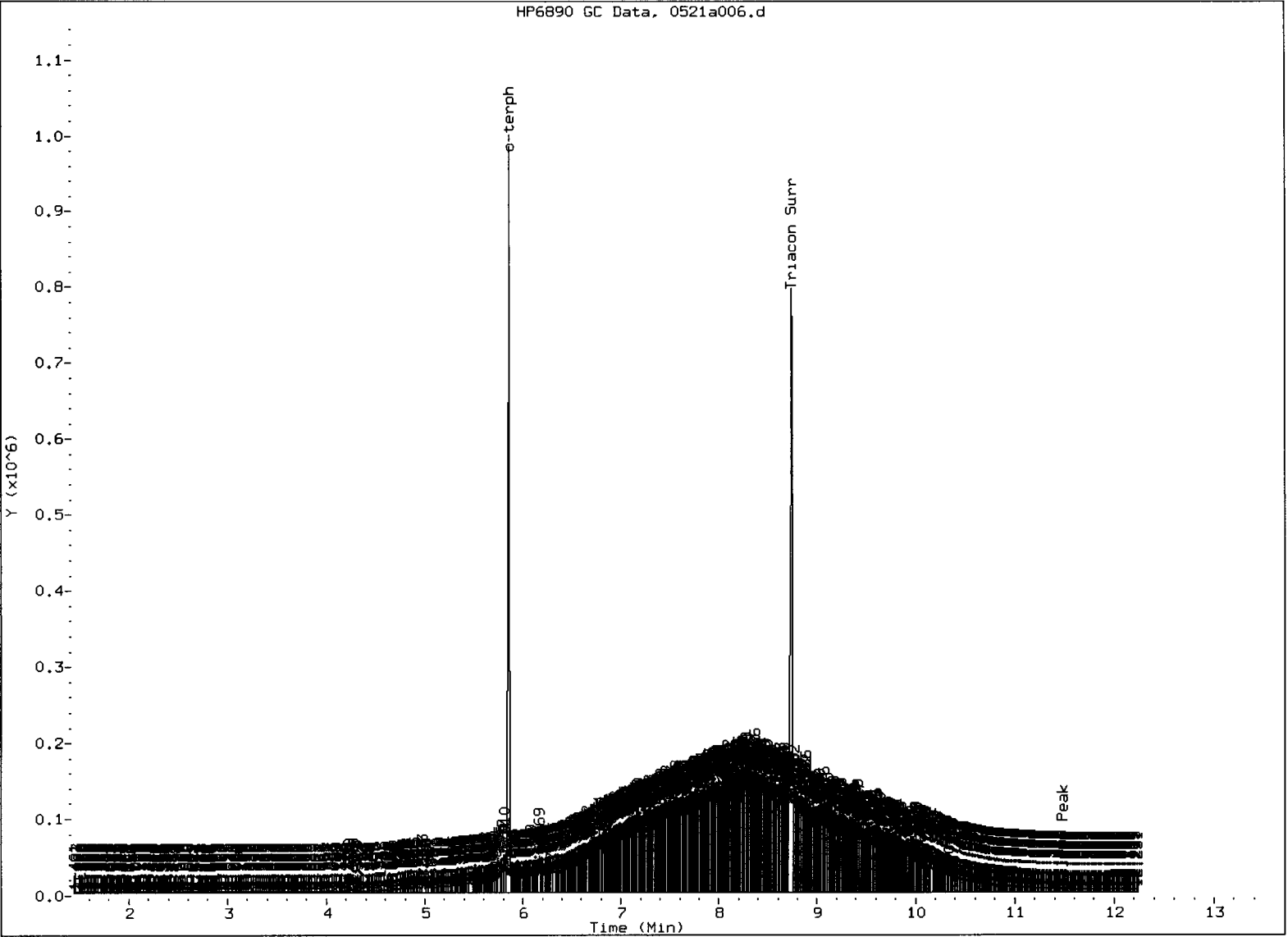
Instrument: fid9.i
Operator: JM
Column diameter: 0.25

JW
5/20/13



0521a006.d

HP6890 GC Data, 0521a006.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ⑤. Surrogate Skipped

Analyst: JU

Date: 5/21/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a007.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/21/2013

ARI ID: WQ45L
 Client ID:
 Injection: 21-MAY-2013 11:01
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	553991	16
C8	1.090	0.001	11806	20075	DIESEL (C12-C24)	10874561	582.16 ✓
C10	2.859	0.001	3297	3800	M.OIL (C24-C38)	60532338	3774.97 ✓
C12	3.863	-0.001	5749	8602	AK-102 (C10-C25)	12803304	589.82 M
C14	4.559	-0.004	11191	10568	AK-103 (C25-C36)	53618642	4615.19 M
C16	5.153	-0.006	15484	21779			
C18	5.722	-0.003	40341	46394			
C20	6.284	-0.005	65089	50365			
C22	6.839	-0.001	123303	45839			
C24	7.363	-0.001	172814	77881			
C25	7.616	0.002	209153	147045			
C26	7.868	0.001	262721	196793			
C28	8.314	0.001	505872	165645	IT.DIES (C10-C24)	11066072	511.23 M
C32	9.098	0.002	432635	119399			
C34	9.449	0.008	359092	207579	BUNKERC (C10-C38)	71598410	7726.42 M
Filter Peak	11.480	-0.010	15939	20824			
C36	9.761	0.001	350443	188554			
C38	10.061	0.001	275891	96801			
C40	10.352	0.006	148260	103755			
o-terph	5.857	-0.002	967184	832883			
Triacon Surr	8.781	0.046	332607	799410	IT.MOIL (C24-C40)	64292739	4103.00 M

M Indicates manual integration within range.

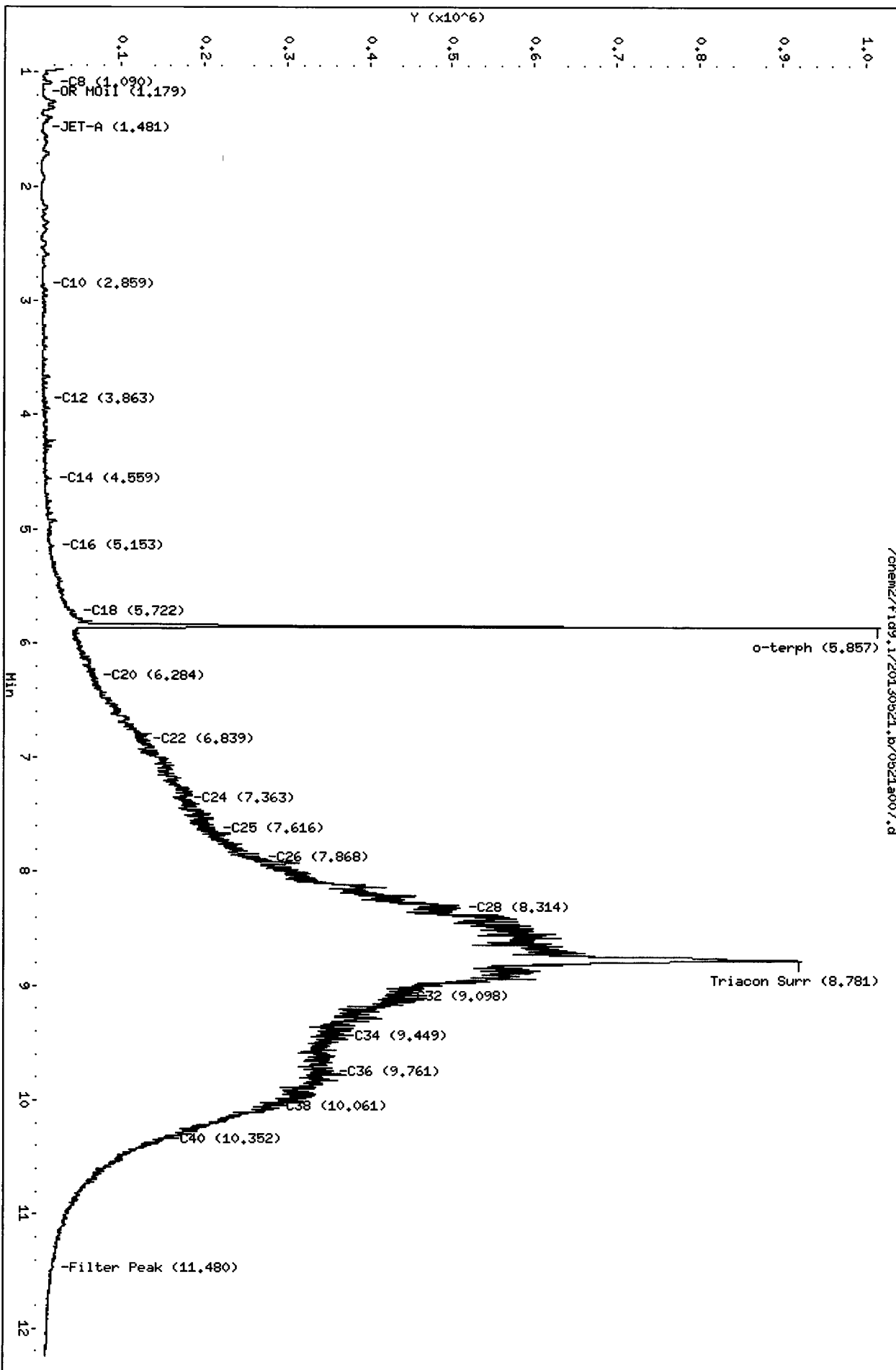
Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

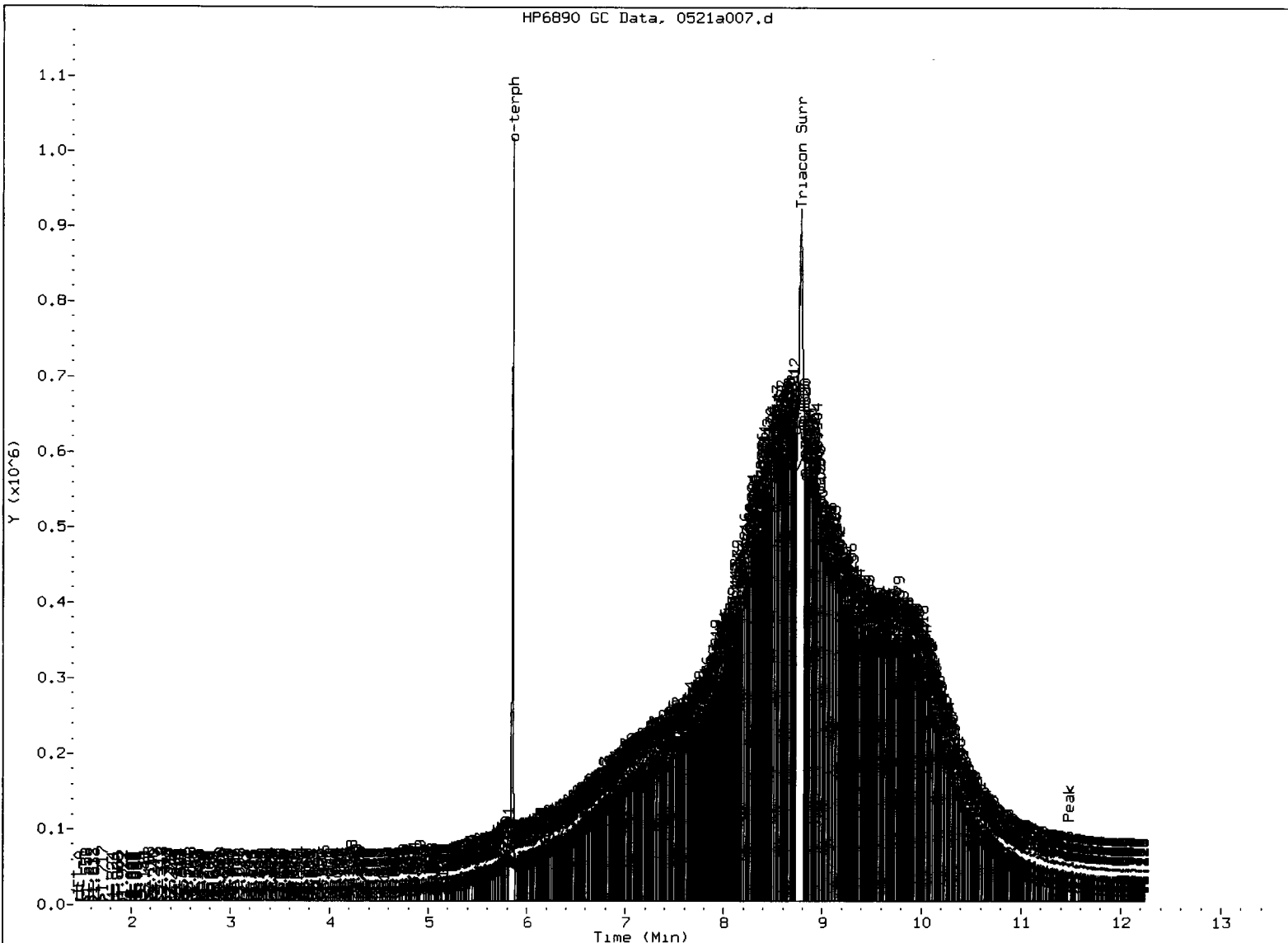
Surrogate	Area	Amount	%Rec
o-Terphenyl	832883	32.5	72.3 ✓
Triacontane	799410	42.3	94.0

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/21/13

JW
5/21/12





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst: TW

Date: 5/21/13

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a008.d
Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 05/21/2013

ARI ID: WQ45M
Client ID:
Injection: 21-MAY-2013 11:24
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	218087	6
C8	1.082	-0.007	5850	12179	DIESEL (C12-C24)	28025828	1500.33
C10	2.858	0.001	956	1035	M.OIL (C24-C38)	120425177	7510.06
C12	3.863	-0.001	3052	3925	AK-102 (C10-C25)	35145386	1619.07 M
C14	4.560	-0.003	9903	12633	AK-103 (C25-C36)	108589857	9346.81
C16	5.155	-0.003	14569	21657			
C18	5.721	-0.004	40545	64265			
C20	6.287	-0.002	91777	23530			
C22	6.837	-0.002	370522	188133			
C24	7.362	-0.002	677866	174716			
C25	7.617	0.003	877135	807409			
C26	7.862	-0.006	919863	799437			
C28	8.310	-0.002	1104168	197367	IT.DIES (C10-C24)	28088380	1297.62 M
C32	9.090	-0.006	684759	481154			
C34	9.444	0.003	504398	247807	BUNKERC (C10-C38)	148513558	16026.58 M
Filter Peak	11.477	-0.013	9402	15275			
C36	9.762	0.001	393592	308224			
C38	10.052	-0.009	231296	213790			
C40	10.342	-0.004	98764	25269			
o-terph	5.857	-0.003	807477	808887			
Triacon Surr	----				IT.MOIL (C24-C40)	122662362	7926.57

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

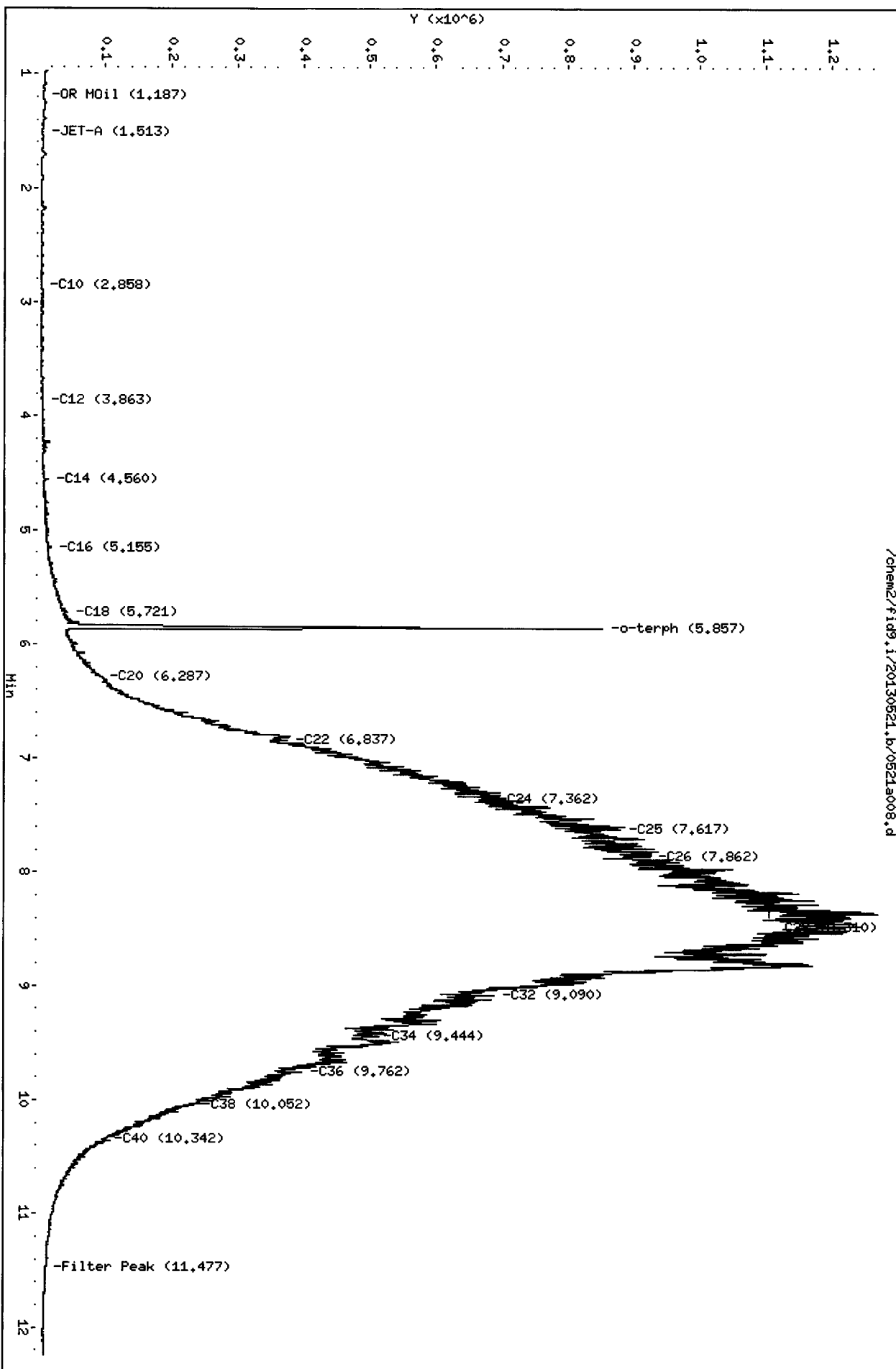
Surrogate	Area	Amount	%Rec
o-Terphenyl	808887	31.6	70.2
Triacontane	0	0.0	0.0

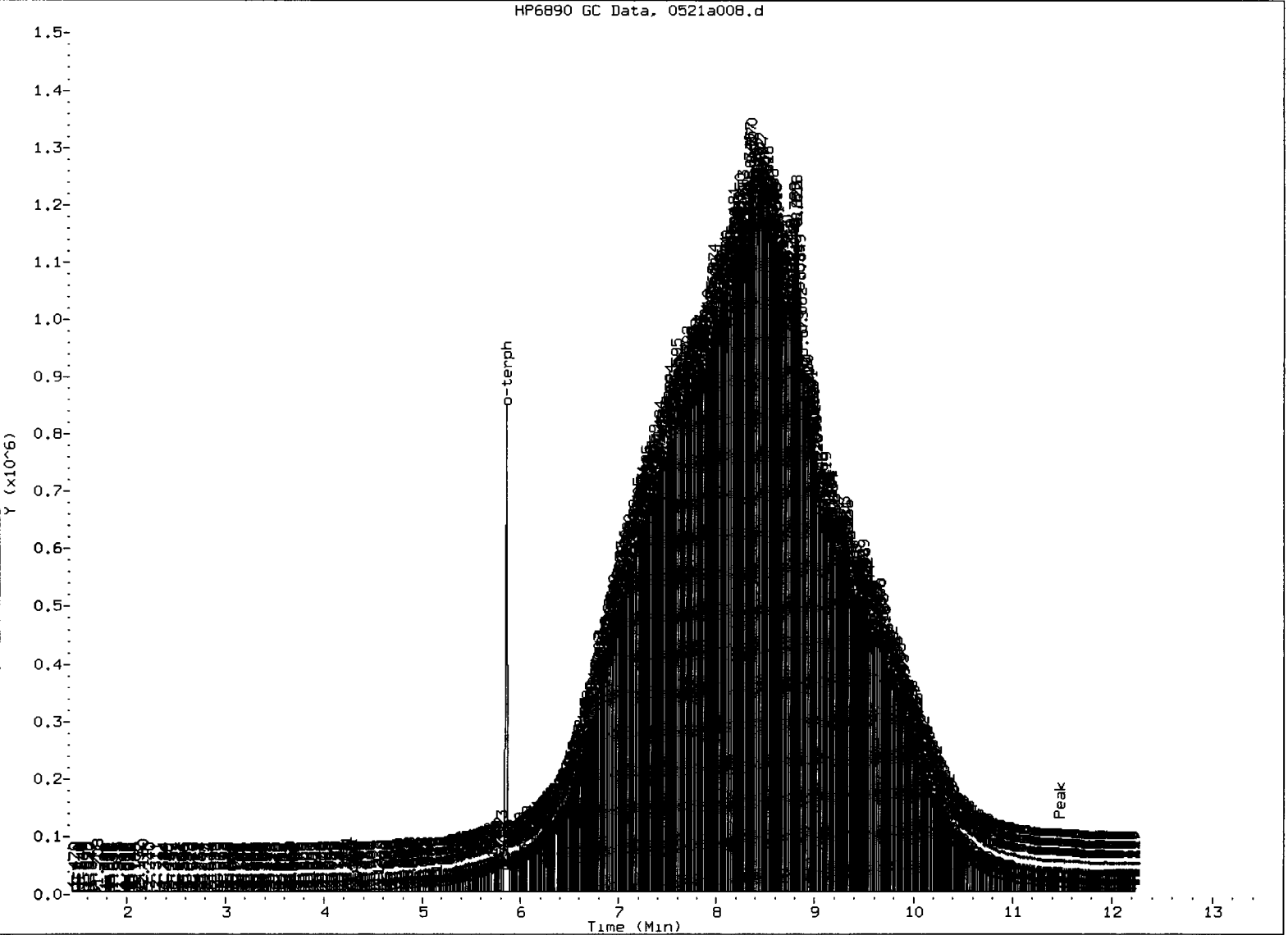
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fid9.i/20130521.b/0521a008.d
Date: 21-MAY-2013 11:24
Client ID:
Sample Info: MQ45H
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

JW
5/21/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JW

Date: 5/21/17

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a017.d
Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 05/22/2013

ARI ID: WQ45M
Client ID: A2-W13-S-4
Injection: 21-MAY-2013 14:48
Dilution Factor: 10
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	40078	1
C8	1.082	-0.007	1582	3808	DIESEL (C12-C24)	3297267	176.51 ✓
C10	2.857	-0.001	122	62	M.OIL (C24-C38)	13376150	834.17 ✓
C12	3.866	0.002	43	8	AK-102 (C10-C25)	4201668	193.56 M
C14	4.569	0.005	351	234	AK-103 (C25-C36)	11950130	1028.60 M
C16	5.155	-0.004	935	348			
C18	5.731	0.006	2647	775			
C20	6.294	0.006	8659	6477			
C22	6.840	0.000	45516	31598			
C24	7.365	0.001	86051	71299			
C25	7.619	0.005	101883	48948			
C26	7.864	-0.004	110582	60130			
C28	8.311	-0.001	118134	18757	IT.DIES (C10-C24)	3301771	152.53 M
C32	9.097	0.000	71974	24791			
C34	9.433	-0.009	68091	69177	BUNKERC (C10-C38)	16677920	1799.77 M
Filter Peak	11.491	0.001	4260	1441			
C36	9.764	0.003	41301	13018			
C38	10.055	-0.005	27464	25587			
C40	10.351	0.005	17660	12171			
o-terph	5.847	-0.013	112809	85932			
Triacon Surr	8.720	-0.015	95975	83597	IT.MOIL (C24-C40)	13794259	886.00 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.864 - 7.364) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
NW M.Oil (7.36 - 10.06) AK103 (7.61 - 9.76) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	85932	3.4	74.6
Triacontane	83597	4.4	98.3

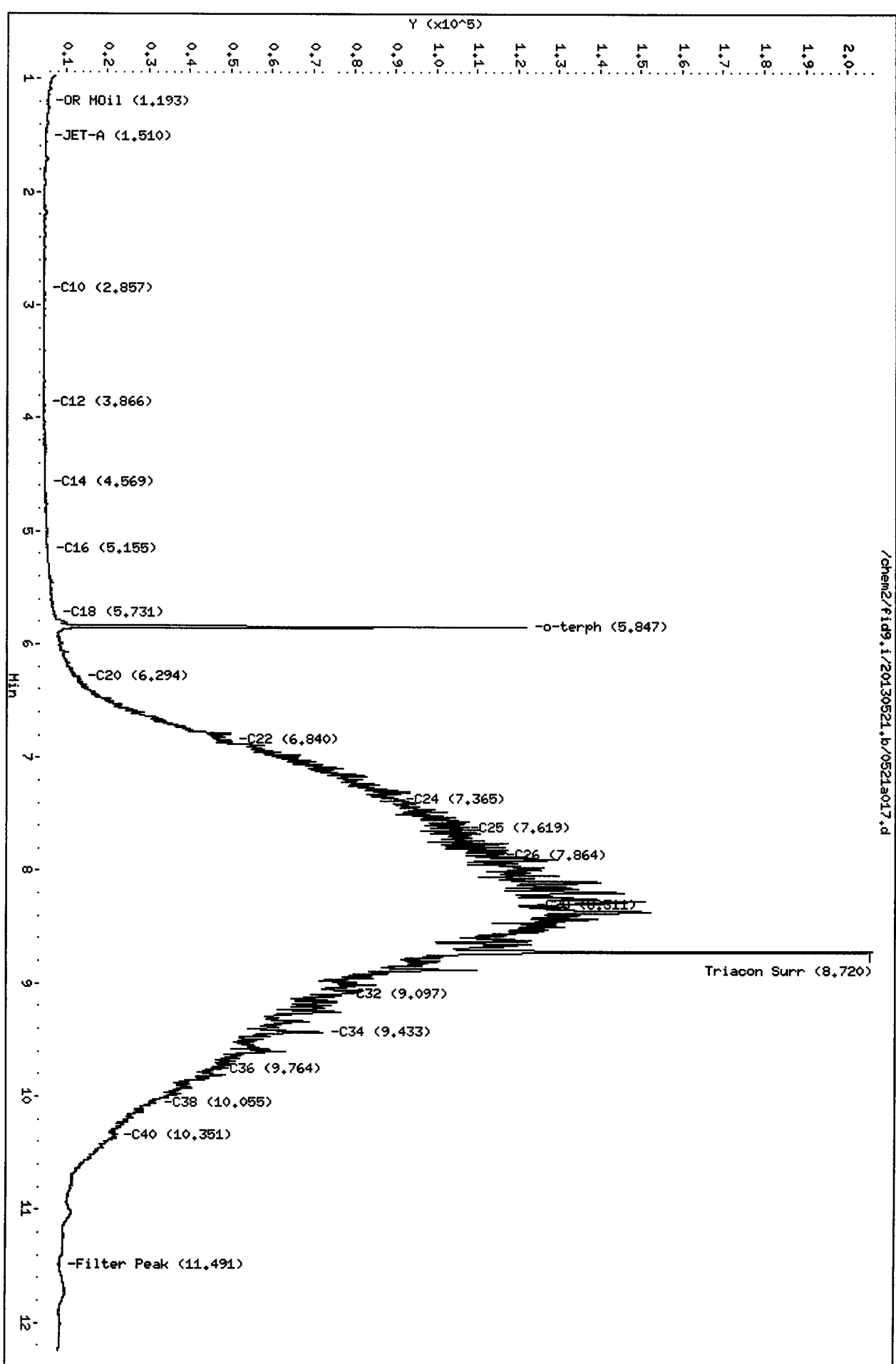
JW
5/22/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fid9.1/20130521.b/0521a017.d
Date: 21-MAY-2013 14:48
Client ID: A2-M13-S-4
Sample Info: MQ45M,10
Column phase: RTX-1

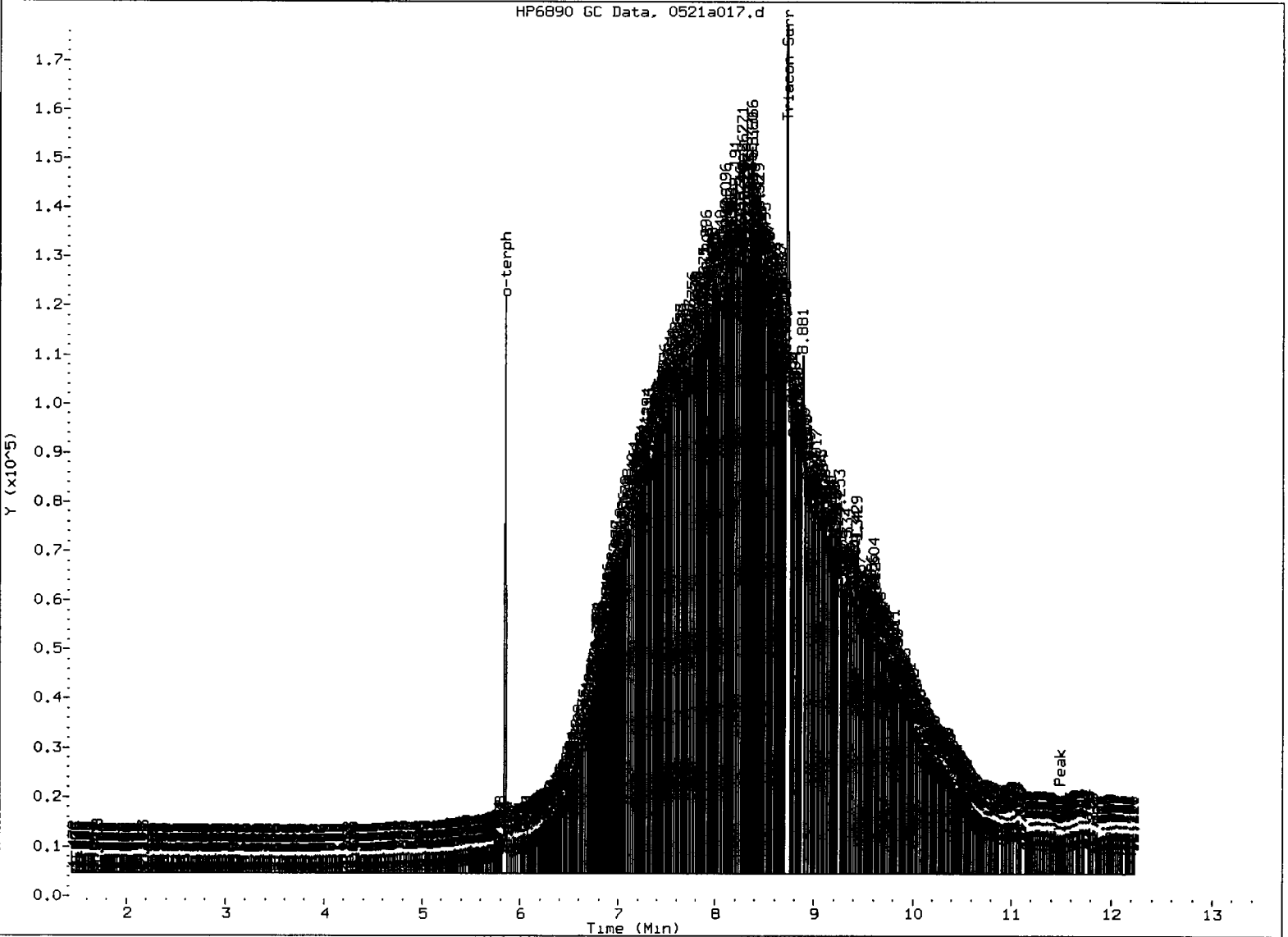
Instrument: fid9.1
Operator: JM
Column diameter: 0.25

JW
5/22/13



0045 00078

HP6890 GC Data, 0521a017.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst: JW

Date: 5/22/17

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a009.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/21/2013

ARI ID: WQ45N
 Client ID:
 Injection: 21-MAY-2013 11:46
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	582495	17
C8	1.090	0.001	15078	23006	DIESEL (C12-C24)	7936770	424.88 ✓
C10	2.861	0.003	1593	1849	M.OIL (C24-C38)	81989034	5113.07 E ✓
C12	3.861	-0.003	11921	14315	AK-102 (C10-C25)	9515781	438.37 M
C14	4.558	-0.005	11045	9765	AK-103 (C25-C36)	68762973	5918.73 M
C16	5.151	-0.007	11398	16898			
C18	5.724	-0.001	29523	27019			
C20	6.286	-0.003	44950	44598			
C22	6.838	-0.002	84309	58201			
C24	7.362	-0.002	137873	46090			
C25	7.615	0.000	183070	46282			
C26	7.871	0.004	238500	166246			
C28	8.319	0.006	498470	266694	IT.DIES (C10-C24)	8123141	375.27 M
C32	9.098	0.001	609368	334245			
C34	9.440	-0.001	609855	144840	BUNKERC (C10-C38)	90112175	9724.30 M
Filter Peak	11.491	0.001	28912	27427			
C36	9.757	-0.004	706221	792835			
C38	10.061	0.001	686897	303839			
C40	10.351	0.005	392596	390648			
o-terph	5.857	-0.002	840490	762307			
Triacon Surr	8.776	0.041	235475	556192	IT.MOIL (C24-C40)	90682411	5824.05 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	762307	29.8	66.1 ✓
Triacontane	556192	29.4	65.4

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

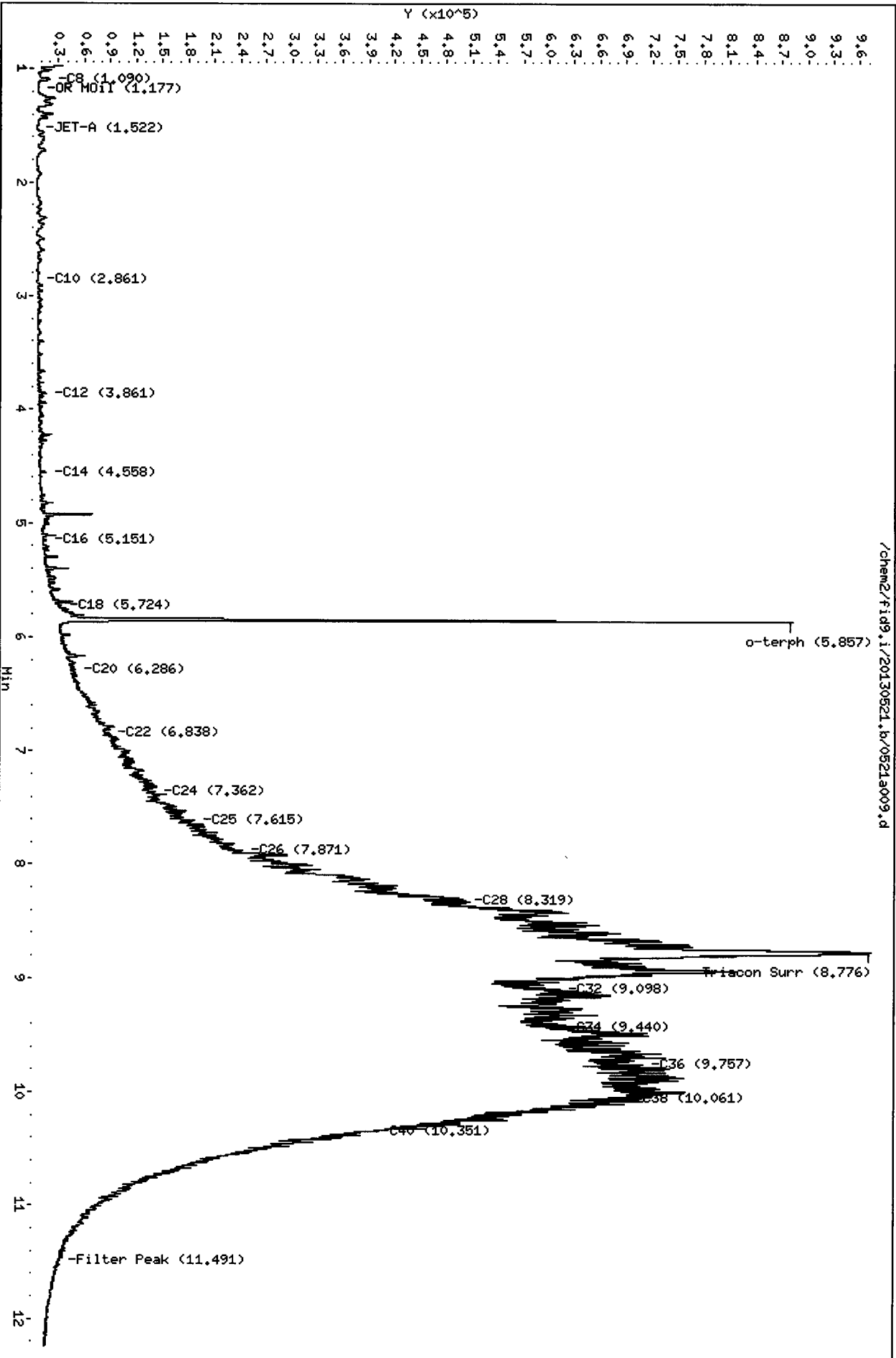
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Date: 21-MAY-2013 11:46

Client ID:
Sample Info: MQ45N

Column phase: RTX-1

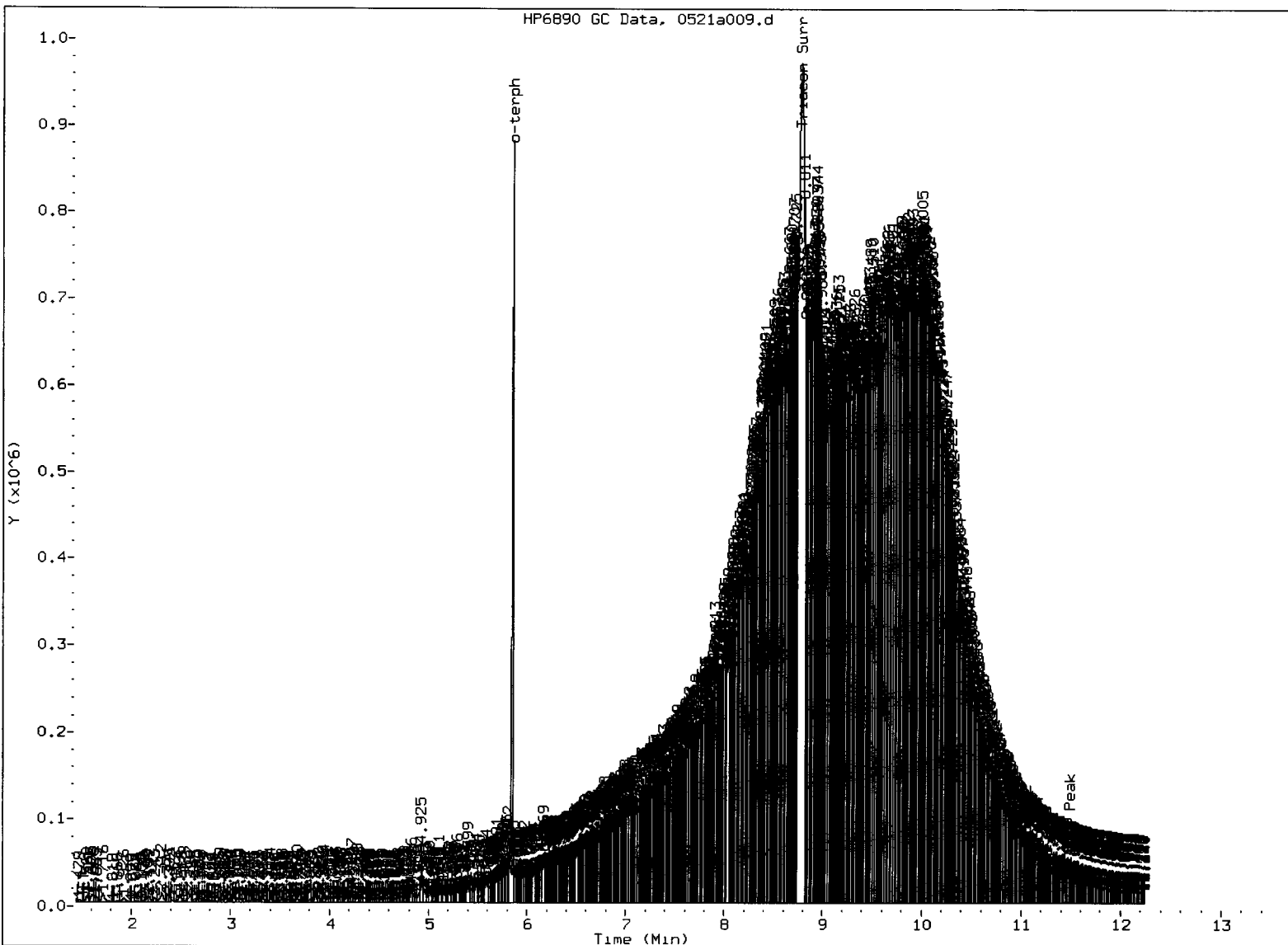
Instrument: fid9.i

Operator: JM
Column diameter: 0.25



0045:00081

HP6890 GC Data, 0521a009.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JW

Date: 5/21/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a018.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/22/2013

ARI ID: WQ45N
 Client ID: A2-W14-S-4
 Injection: 21-MAY-2013 15:10
 Dilution Factor: 5
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	119335	3
C8	1.078	-0.011	3506	6530	DIESEL (C12-C24)	1619364	86.69
C10	2.858	0.000	340	299	M.OIL (C24-C38)	18665371	1164.03
C12	3.853	-0.011	727	772	AK-102 (C10-C25)	1955412	90.08 M
C14	4.570	0.007	1228	861	AK-103 (C25-C36)	15170393	1305.78 M
C16	5.155	-0.004	2111	3031			
C18	5.726	0.001	4511	4081			
C20	6.290	0.001	8307	4868			
C22	6.836	-0.003	16967	12696			
C24	7.365	0.001	29243	9662			
C25	7.616	0.001	37975	26606			
C26	7.873	0.005	48326	15247			
C28	8.309	-0.004	105216	121478	IT.DIES (C10-C24)	1652932	76.36 M
C32	9.101	0.005	152019	90588			
C34	9.440	-0.001	183356	161592	BUNKERC (C10-C38)	20318303	2192.61 M
Filter Peak	11.497	0.007	9976	3538			
C36	9.764	0.003	177300	110105			
C38	10.062	0.002	165953	39420			
C40	10.346	0.000	111991	105750			
o-terph	5.848	-0.011	207869	153079			
Triacon Surr	8.726	-0.010	167762	196340	IT.MOIL (C24-C40)	21127849	1352.62 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	153079	6.0	66.4
Triacontane	196340	10.4	115.4

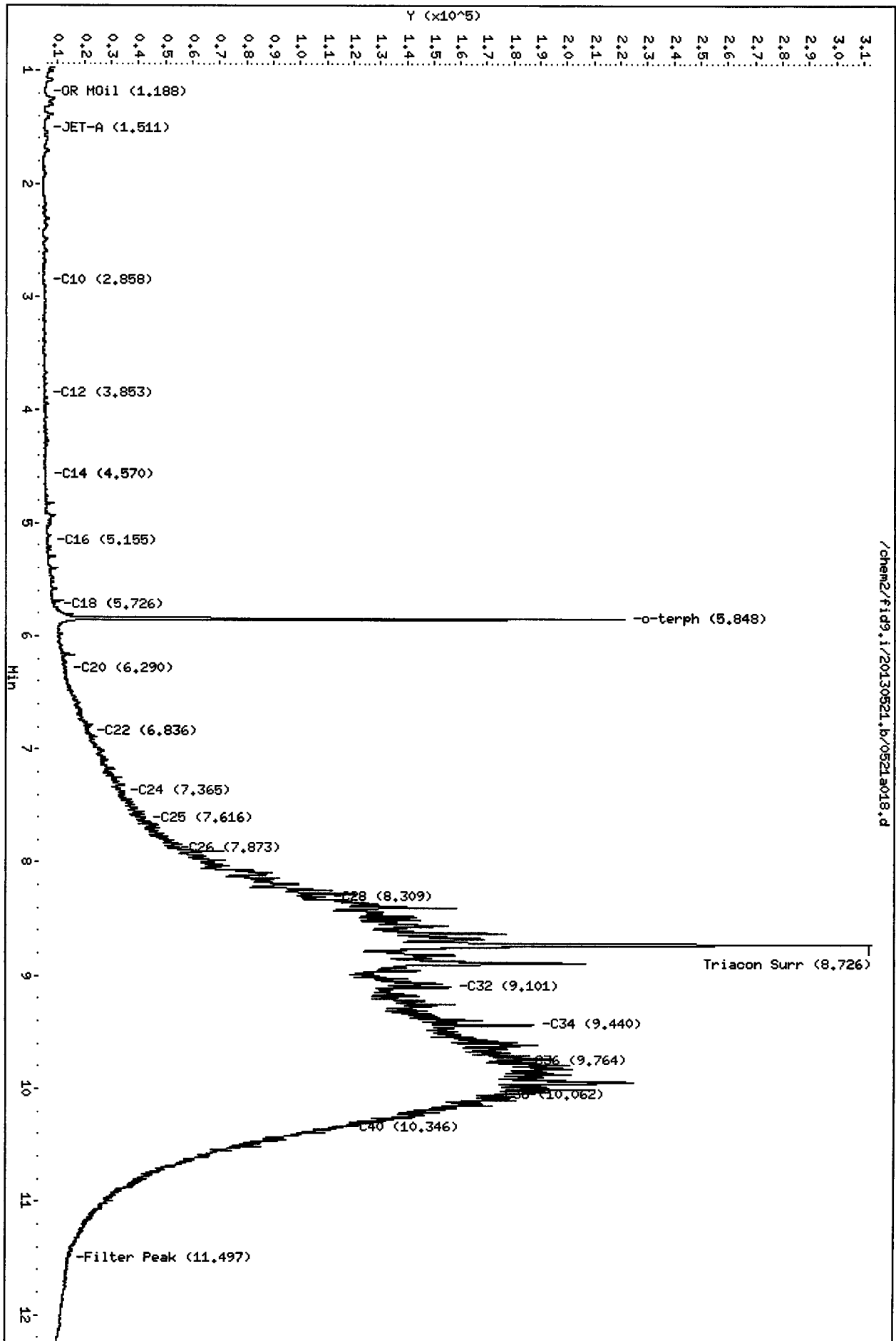
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/22/13

Data File: /chem2/fid9.i/20130521.b/0521a018.d
 Date: 21-MAY-2013 15:10
 Client ID: A2-M14-S-4
 Sample Info: MQ45N,5
 Column phase: RTX-1

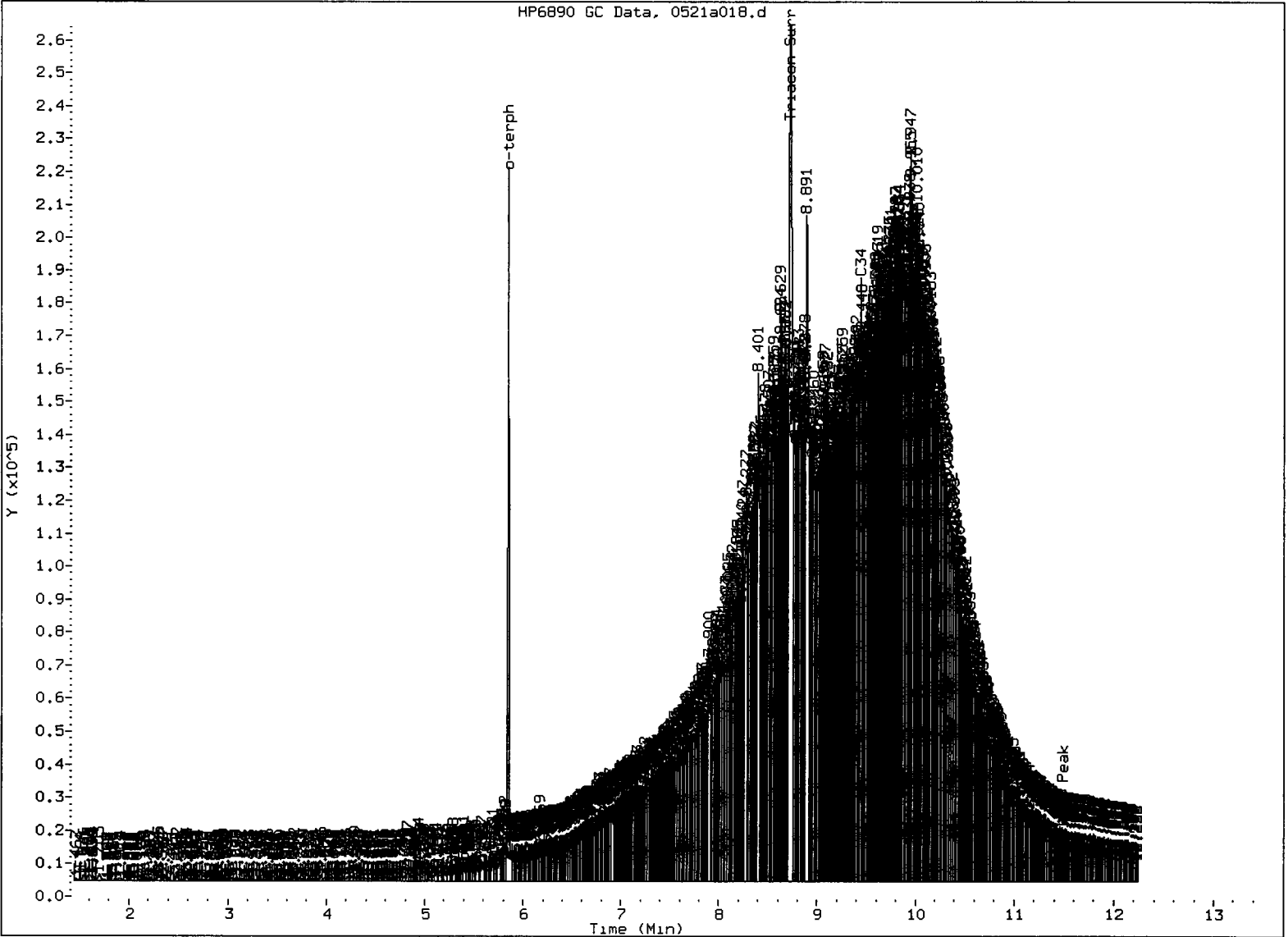
Instrument: fid9.i
 Operator: JM
 Column diameter: 0.25

JW
5/27/13



0521a018.d

HP6890 GC Data, 0521a018.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JW

Date: 5/22/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a010.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/21/2013

ARI ID: WQ450
 Client ID:
 Injection: 21-MAY-2013 12:09
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	477072	14
C8	1.075	-0.014	12534	22510	DIESEL (C12-C24)	90179494	4827.64 E
C10	2.861	0.003	1181	1406	M.OIL (C24-C38)	313502212	19550.89 E
C12	3.864	0.000	5636	9630	AK-102 (C10-C25)	102105476	4703.79 M
C14	4.564	0.000	25944	32442	AK-103 (C25-C36)	284682829	24503.92
C16	5.155	-0.003	128686	35555			
C18	5.728	0.003	410545	151619			
C20	6.281	-0.007	673570	800379			
C22	6.843	0.003	956065	639988			
C24	7.368	0.004	1282757	895147			
C25	7.621	0.007	1408681	1411901			
C26	7.865	-0.002	1686597	1014867			
C28	8.318	0.005	2371417	841962	IT.DIES (C10-C24)	90346294	4173.81 M
C32	9.100	0.003	2796850	5139148			
C34	9.442	0.000	1847658	544226	BUNKERC (C10-C38)	403848506	43580.61 M
Filter Peak	11.490	0.000	27393	9601			
C36	9.759	-0.002	1263853	397071			
C38	10.056	-0.004	777123	816248			
C40	10.350	0.004	304673	150564			
o-terph	5.876	0.017	609596	649371			
Triacon Surr	----				IT.MOIL (C24-C40)	320688712	20723.23

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	649371	25.4	56.3
Triacotane	0	0.0	0.0 NR

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fid9.i/20130521.b/0521a010.d
Date: 21-MAY-2013 12:09

Client ID:

Sample Info: MQ450

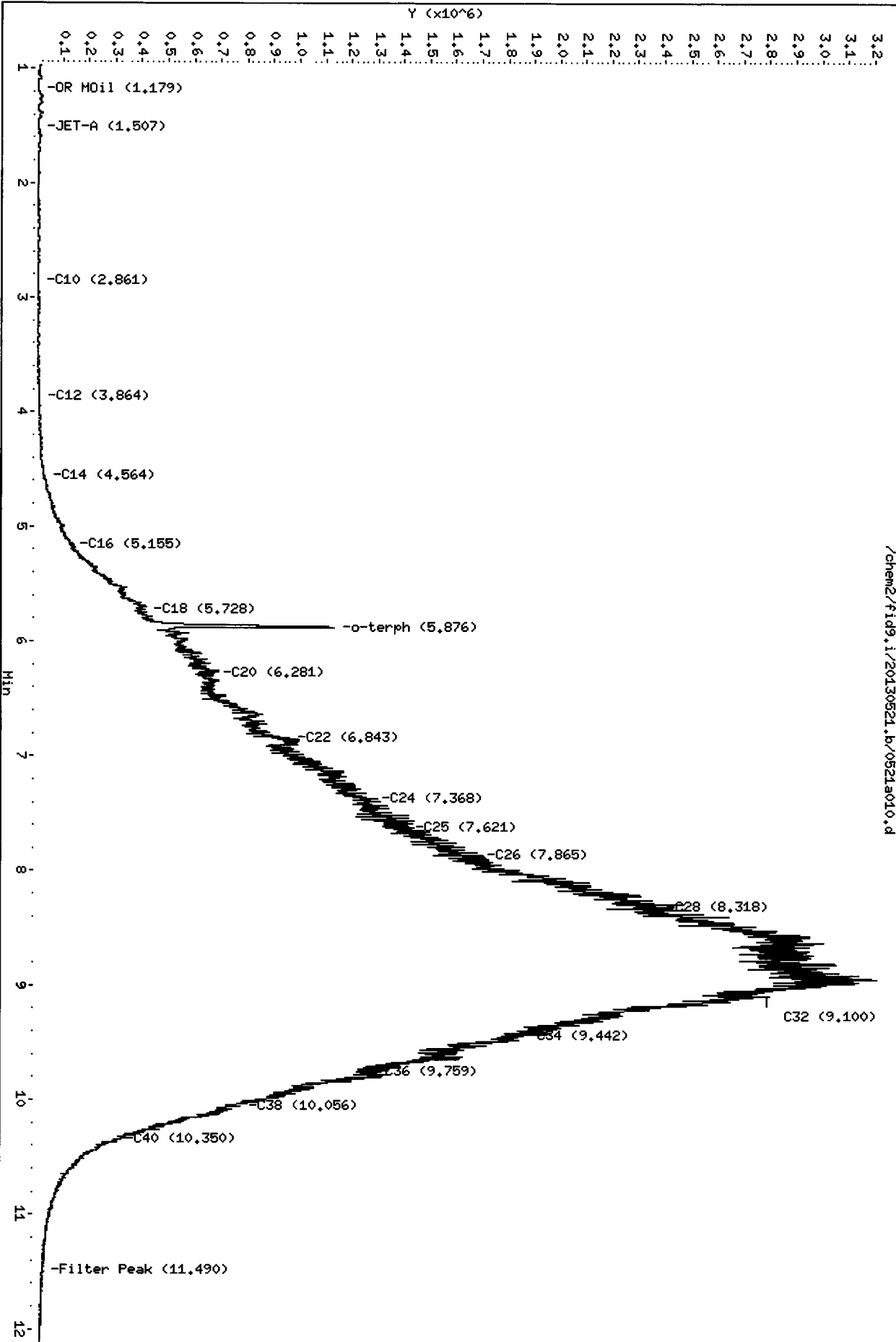
Column phase: RTX-1

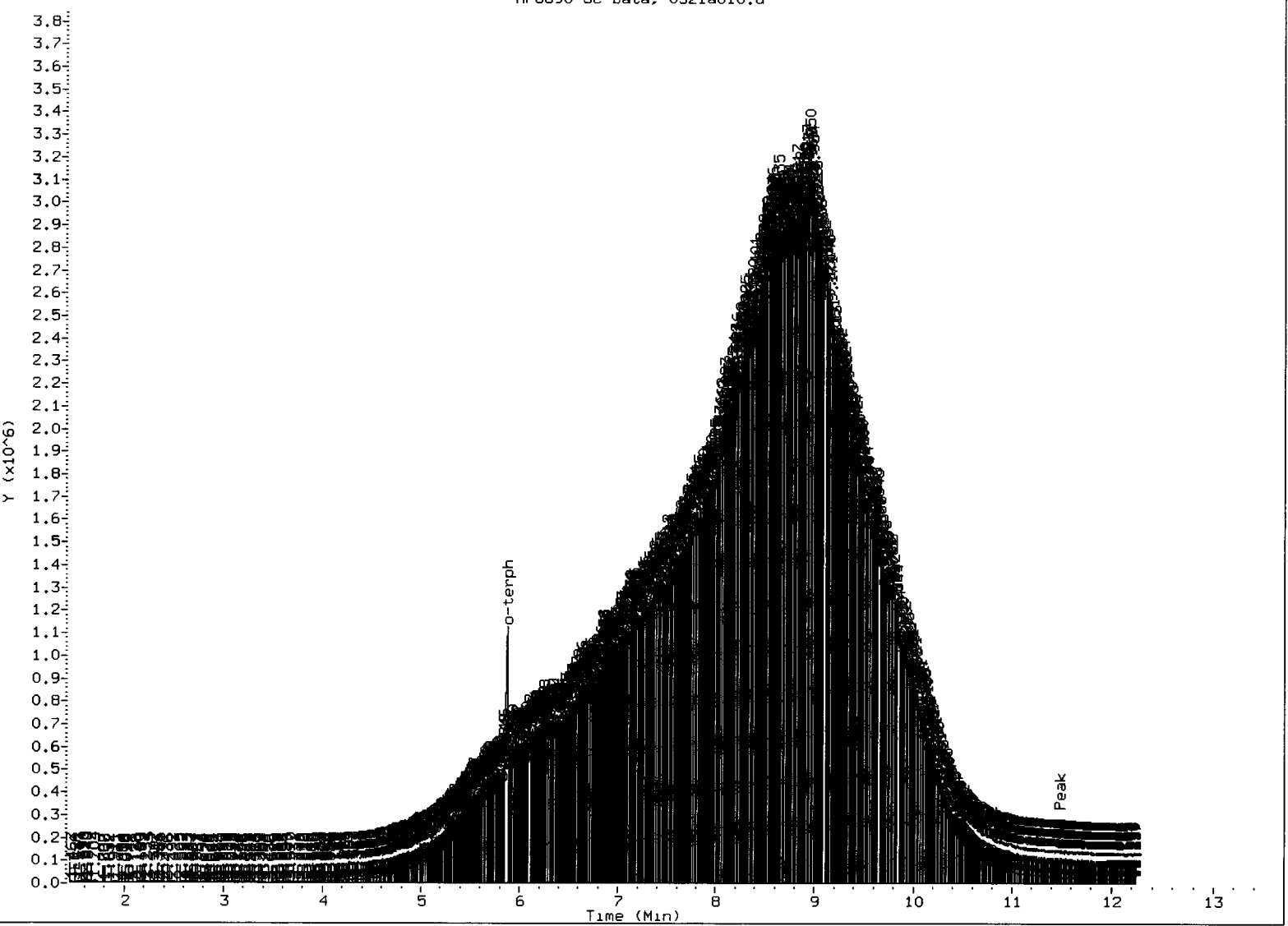
Instrument: fid9.i

Operator: JM

Column diameter: 0.25

JM
5/21/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a019.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/22/2013

ARI ID: WQ450
 Client ID: A2-W15-S-4
 Injection: 21-MAY-2013 15:32
 Dilution Factor: 10
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	59712	2
C8	1.079	-0.010	2281	5124	DIESEL (C12-C24)	10374994	555.41
C10	2.861	0.003	112	85	M.OIL (C24-C38)	35599885	2220.11
C12	3.855	-0.009	331	541	AK-102 (C10-C25)	11702252	539.10 M
C14	4.563	0.000	2164	1032	AK-103 (C25-C36)	32418121	2790.37
C16	5.160	0.002	11925	6117			
C18	5.724	-0.001	38422	14376			
C20	6.292	0.004	81396	72011			
C22	6.840	0.000	102600	56425			
C24	7.366	0.002	150942	156220			
C25	7.615	0.000	169579	86392			
C26	7.872	0.005	188816	74956			
C28	8.309	-0.004	334999	176270	IT.DIES (C10-C24)	10386877	479.85 M
C32	9.101	0.005	271825	153210			
C34	9.440	-0.002	227161	228107	BUNKERC (C10-C38)	45986763	4962.58 M
Filter Peak	11.496	0.006	7810	1709			
C36	9.755	-0.005	145735	60186			
C38	10.060	-0.001	92705	53137			
C40	10.350	0.004	55613	41680			
o-terph	5.848	-0.011	113536	80182			
Triacon Surr	----				IT.MOIL (C24-C40)	36799221	2378.00

M Indicates manual integration within range.

Range Times: NW Diesel (3.864 - 7.364) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.06) AK103 (7.61 - 9.76) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	80182	3.1	69.6
Triacontane	0	0.0	0.0

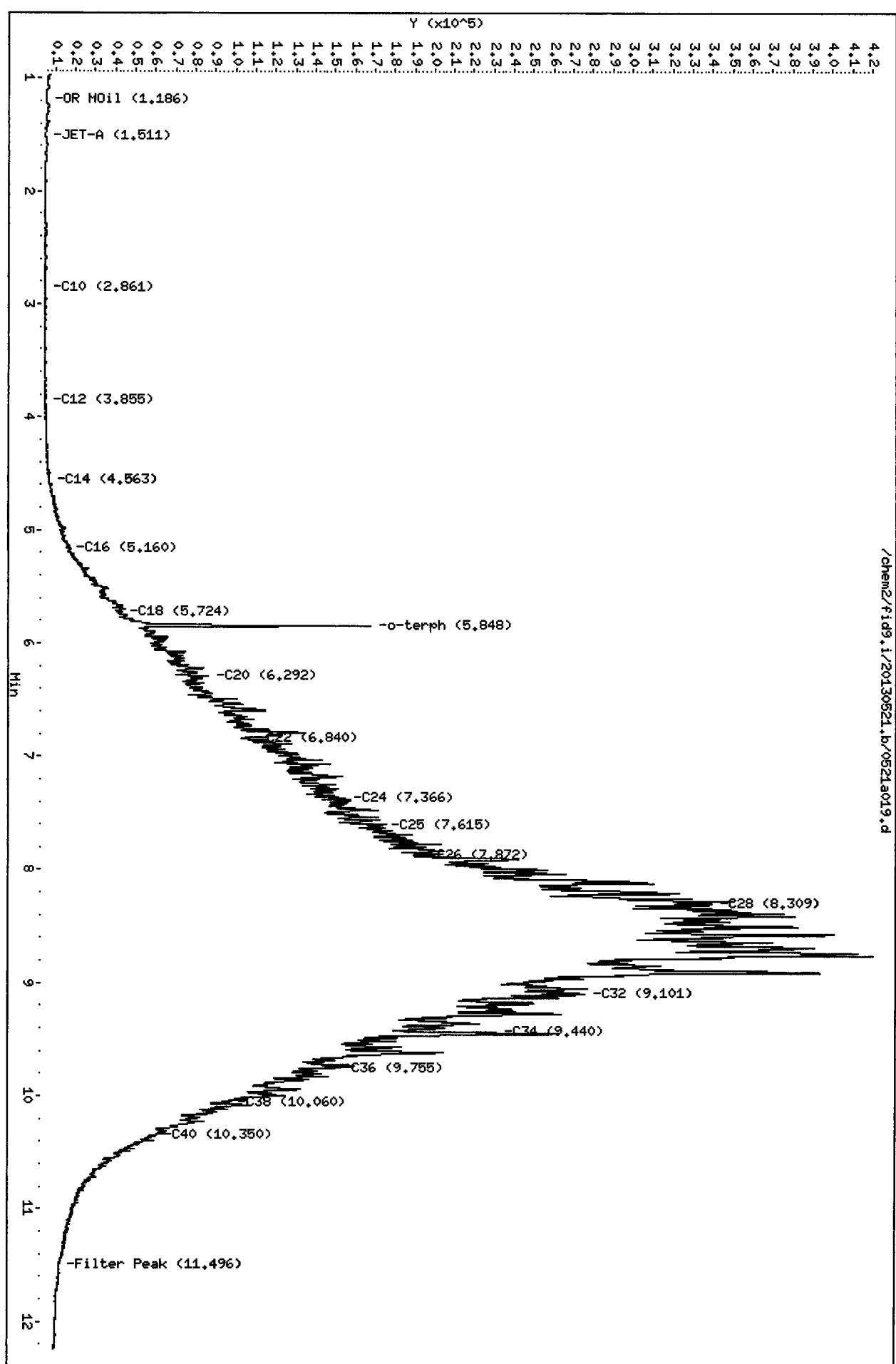
JW 5/22/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

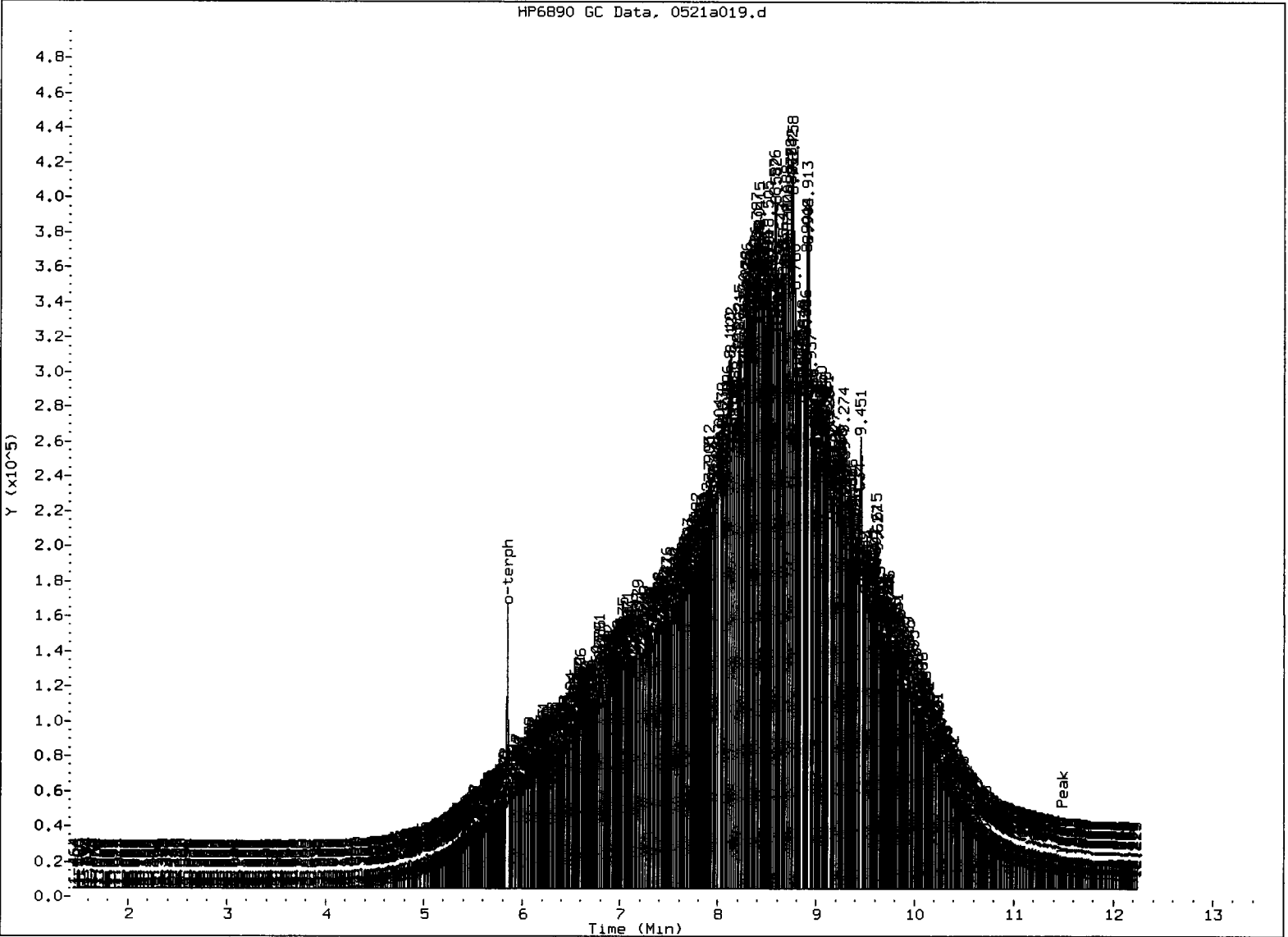
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Date: 21-MAY-2013 15:32
Client ID: A2-MIS-S-4
Sample Info: MQ450,10
Column phases: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

JW
5/22/13



050000 5407



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JW

Date: 5/22/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a011.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/21/2013

ARI ID: WQ45P
 Client ID:
 Injection: 21-MAY-2013 12:32
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	159356	5
C8	1.089	0.000	2641	5383	DIESEL (C12-C24)	1147787	61.45 ✓
C10	2.860	0.003	828	921	M.OIL (C24-C38)	3340615	208.33 ✓
C12	3.859	-0.005	187	88	AK-102 (C10-C25)	1271543	58.58 M
C14	4.566	0.003	2074	2898	AK-103 (C25-C36)	2909739	250.45 M
C16	5.157	-0.001	3353	4501			
C18	5.718	-0.007	5995	7445			
C20	6.290	0.002	8112	3700			
C22	6.839	0.000	11343	7188			
C24	7.360	-0.003	12070	4525			
C25	7.618	0.004	13042	6197			
C26	7.862	-0.006	14599	6308			
C28	8.318	0.005	24274	7649	IT.DIES (C10-C24)	1166947	53.91 M
C32	9.090	-0.006	30164	57475			
C34	9.435	-0.006	22770	30295	BUNKERC (C10-C38)	4507562	486.43 M
Filter Peak	11.491	0.001	6848	3794			
C36	9.758	-0.003	23201	18656			
C38	10.055	-0.005	15908	18458			
C40	10.348	0.002	14552	9192			
o-terph	5.862	0.003	1062618	884919			
Triacon Surr	8.732	-0.003	795523	833474	IT.MOIL (C24-C40)	4470634	235.04 M

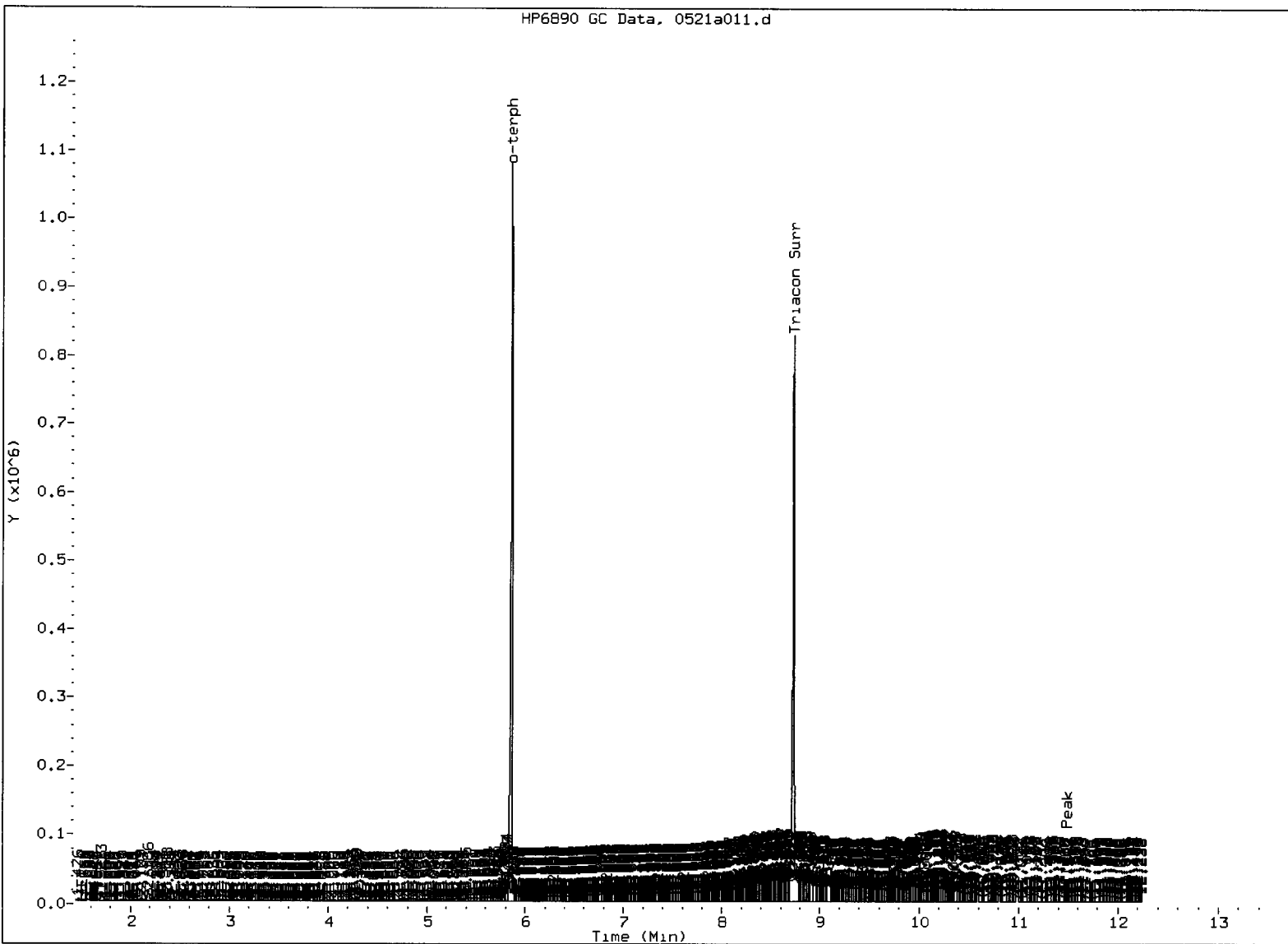
M Indicates manual integration within range.

Range Times: NW Diesel (3.864 - 7.364) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.06) AK103 (7.61 - 9.76) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	884919	34.6	76.8 ✓
Triacotane	833474	44.1	98.0

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: ju

Date: 5/21/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a012.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/21/2013

ARI ID: WQ45Q
 Client ID:
 Injection: 21-MAY-2013 12:54
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	674691	20
C8	1.089	0.000	11408	17848	DIESEL (C12-C24)	5726964	306.59 ✓
C10	2.860	0.003	3474	4071	M.OIL (C24-C38)	72479559	4520.03 ✓
C12	3.863	-0.001	12139	11074	AK-102 (C10-C25)	7085070	326.39 M
C14	4.561	-0.002	16913	13169	AK-103 (C25-C36)	61543198	5297.30 M
C16	5.157	-0.001	15897	21330			
C18	5.723	-0.002	23724	26371			
C20	6.289	0.000	28722	15811			
C22	6.838	-0.002	50920	33430			
C24	7.366	0.002	99665	31302			
C25	7.621	0.006	166853	383351			
C26	7.871	0.003	174908	138090			
C28	8.307	-0.005	383444	274805	IT.DIES (C10-C24)	6091614	281.42 M
C32	9.097	0.000	588954	484942			
C34	9.444	0.003	663965	716932	BUNKERC (C10-C38)	78571173	8478.87 M
Filter Peak	11.482	-0.008	36003	38858			
C36	9.761	0.000	625138	304973			
C38	10.055	-0.006	573601	476113			
C40	10.345	-0.001	307256	103111			
o-terph	5.862	0.003	900078	825724			
Triacon Surr	8.774	0.038	316379	797953	IT.MOIL (C24-C40)	80063089	5122.19 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	825724	32.2	71.6 ✓
Triacontane	797953	42.2	93.8

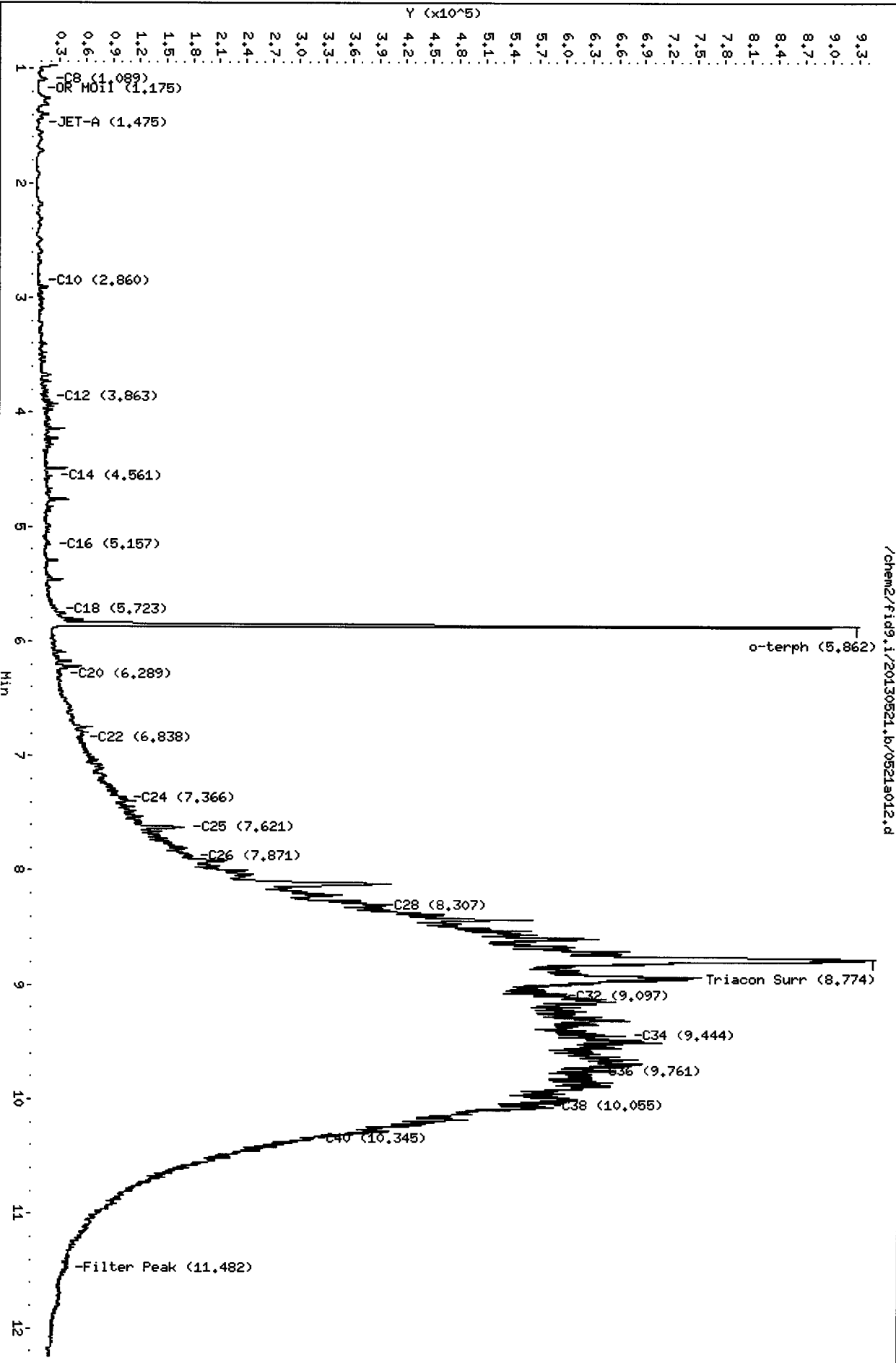
JW
5/21/13

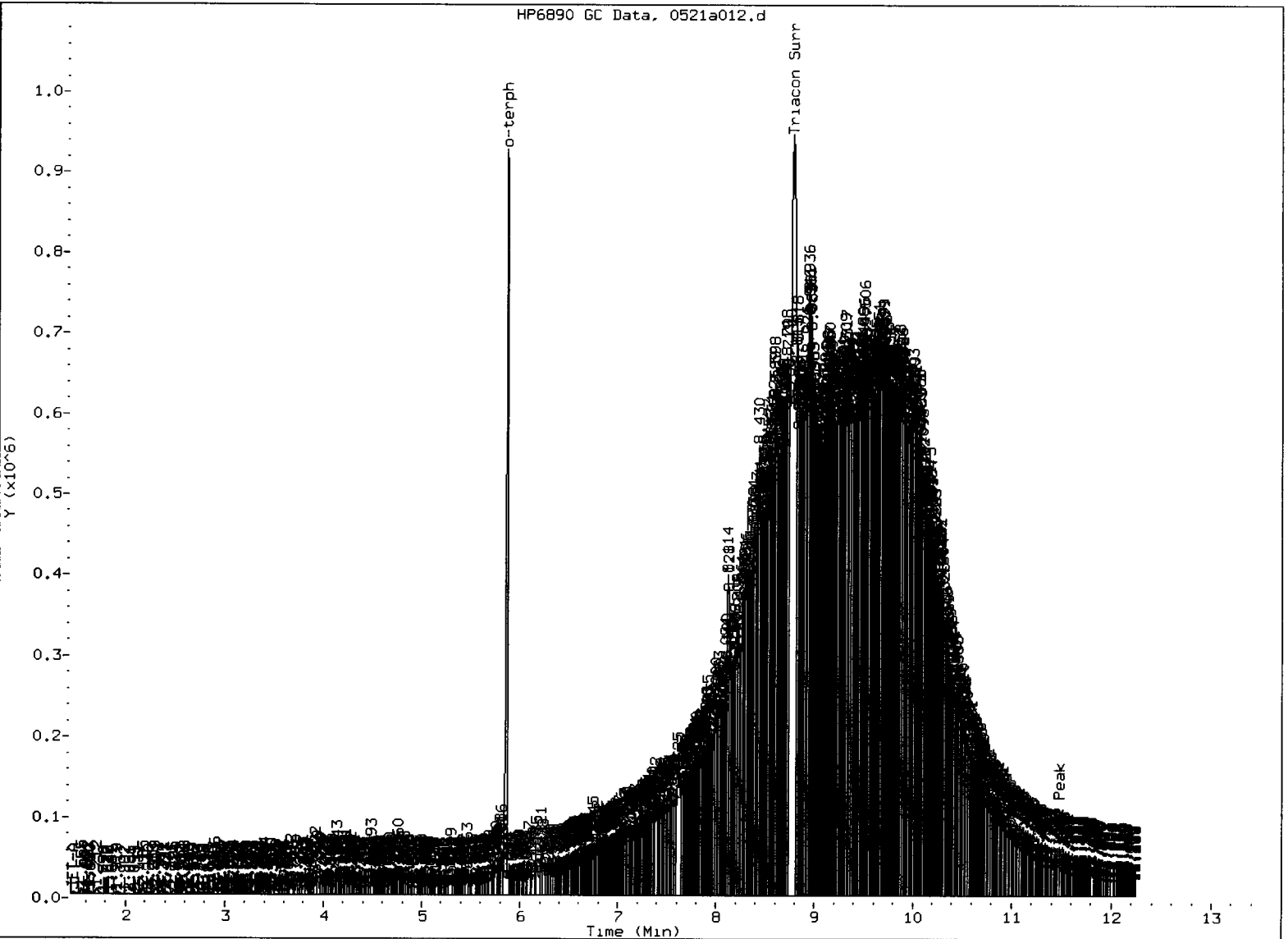
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Client ID:
Sample Info: MQ45Q
Column phase: RTX-1

Instrument: fid9.1
Operator: JM
Column diameter: 0.25

70
5/21/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
- ⑤. Surrogate Skipped

Analyst: JW

Date: 5/21/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a013.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/21/2013

ARI ID: WQ45R
 Client ID:
 Injection: 21-MAY-2013 13:17
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	534790	16
C8	1.088	-0.001	11441	18447	DIESEL (C12-C24)	8829753	472.69
C10	2.856	-0.002	3559	4071	M.OIL (C24-C38)	92506147	5768.95
C12	3.864	0.000	20611	21828	AK-102 (C10-C25)	10400791	479.14 M
C14	4.562	-0.002	39082	36404	AK-103 (C25-C36)	77905177	6705.64
C16	5.155	-0.004	23186	28599			
C18	5.725	0.000	34381	35205			
C20	6.291	0.003	47311	37384			
C22	6.834	-0.005	81472	51559			
C24	7.366	0.002	122221	64725			
C25	7.617	0.002	174349	203967			
C26	7.869	0.002	222389	252225			
C28	8.309	-0.003	570895	487562	IT.DIES (C10-C24)	9074601	419.23 M
C32	9.098	0.002	736955	486540			
C34	9.443	0.001	764553	418520	BUNKERC (C10-C38)	101580748	10961.91 M
Filter Peak	11.485	-0.005	38090	23409			
C36	9.761	0.000	752633	246671			
C38	10.060	0.000	761400	292547			
C40	10.348	0.002	386885	304260			
o-terph	5.861	0.002	987225	802176			
Triacon Surr	----				IT.MOIL (C24-C40)	101179513	6538.32

M Indicates manual integration within range.

Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	802176	31.3	69.6
Triacotane	0	0.0	0.0

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

Data File: /chem2/fig9.i/20130521.b/0521a013.d
Date: 21-MAY-2013 13:17

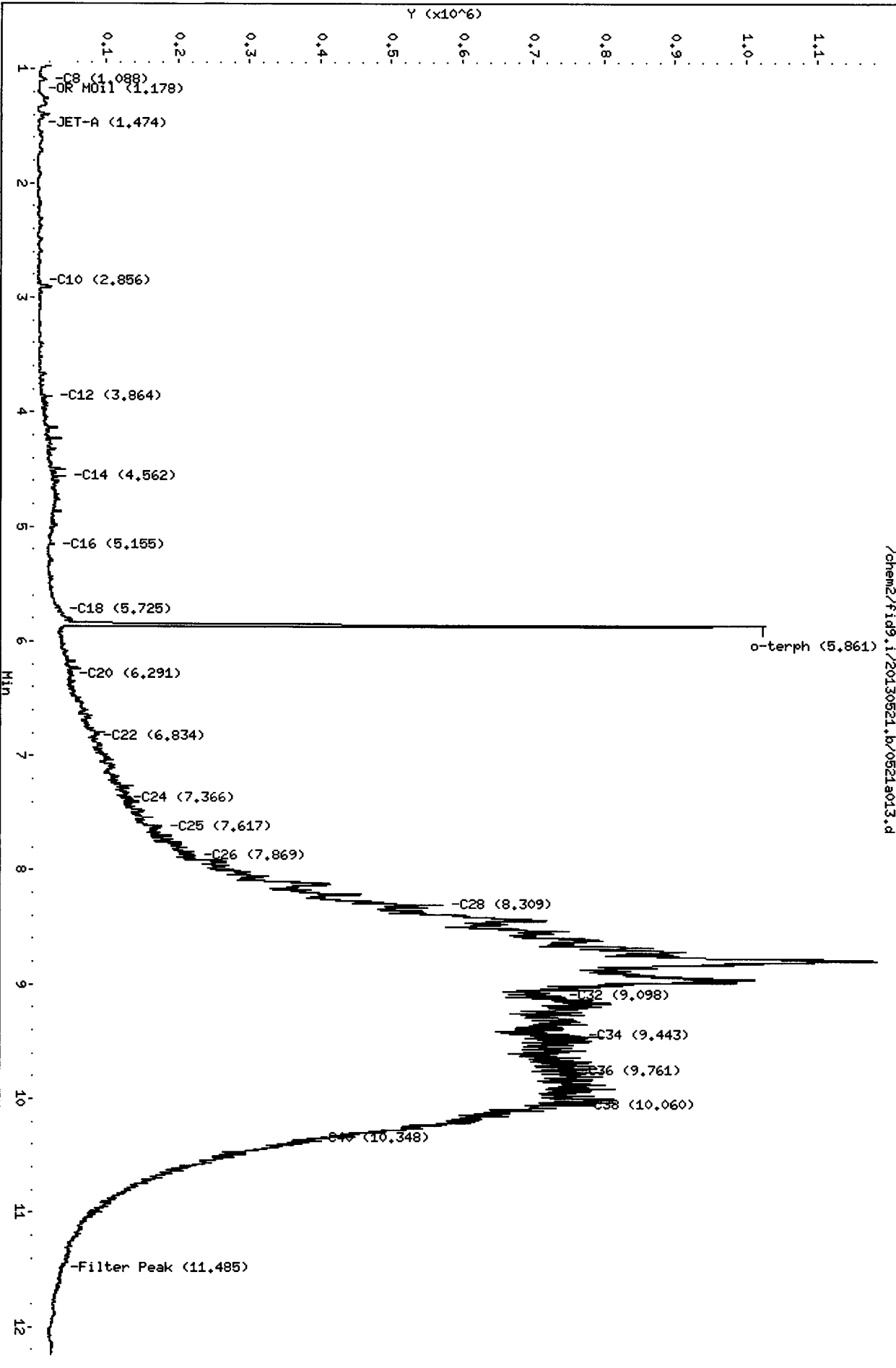
Client ID:
Sample Info: MQ4SR

Column phase: RTX-1

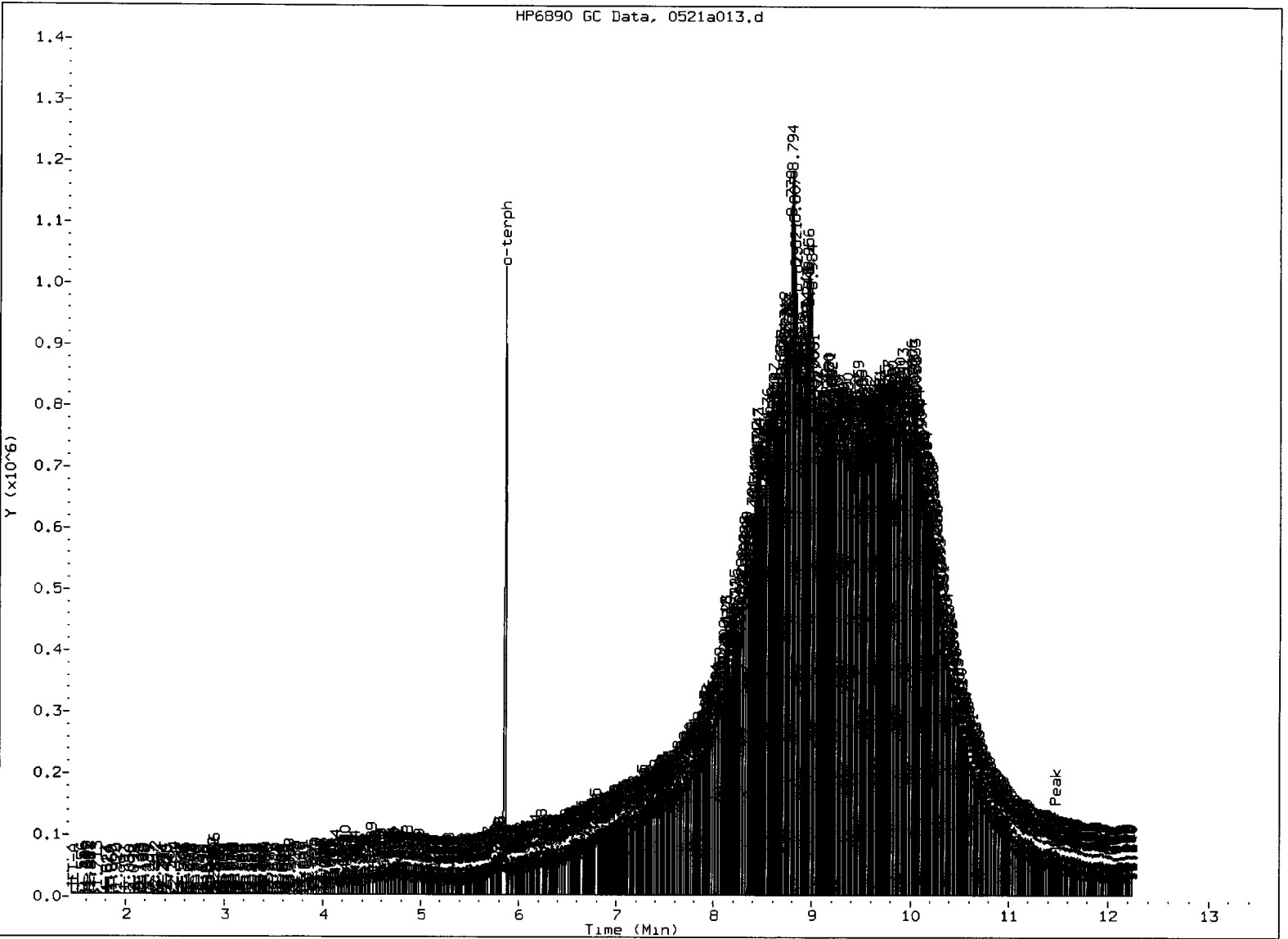
Instrument: fig9.i

Operator: JM
Column diameter: 0.25

JW
5/21/13



/chem2/fig9.i/20130521.b/0521a013.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JW

Date: 5/21/10

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130521.b/0521a020.d
 Method: /chem2/fid9.i/20130521.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 05/22/2013

ARI ID: WQ45R
 Client ID: A2-W18-S-4
 Injection: 21-MAY-2013 15:55
 Dilution Factor: 5
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	115473	3
C8	1.085	-0.004	3256	5550	DIESEL (C12-C24)	1786829	95.66
C10	2.856	-0.001	632	713	M.OIL (C24-C38)	21838601	1361.92
C12	3.869	0.005	1460	992	AK-102 (C10-C25)	2091186	96.34 M
C14	4.562	-0.001	5267	5384	AK-103 (C25-C36)	17886612	1539.58 M
C16	5.154	-0.004	4209	5671			
C18	5.725	0.000	5231	2384			
C20	6.287	-0.001	9637	4323			
C22	6.831	-0.008	16920	19779			
C24	7.361	-0.002	27733	14999			
C25	7.615	0.001	34986	12338			
C26	7.874	0.006	46361	17107			
C28	8.301	-0.012	112613	82858	IT.DIES (C10-C24)	1830755	84.58 M
C32	9.101	0.005	189218	149501			
C34	9.442	0.001	198068	201607	BUNKERC (C10-C38)	23669356	2554.24 M
Filter Peak	11.490	0.000	12291	10346			
C36	9.764	0.003	199233	93768			
C38	10.063	0.002	197236	145085			
C40	10.344	-0.002	120773	47216			
o-terph	5.851	-0.008	225832	163854			
Triacon Surr	8.728	-0.007	141004	158270	IT.MOIL (C24-C40)	24342113	1562.78 M

M Indicates manual integration within range.

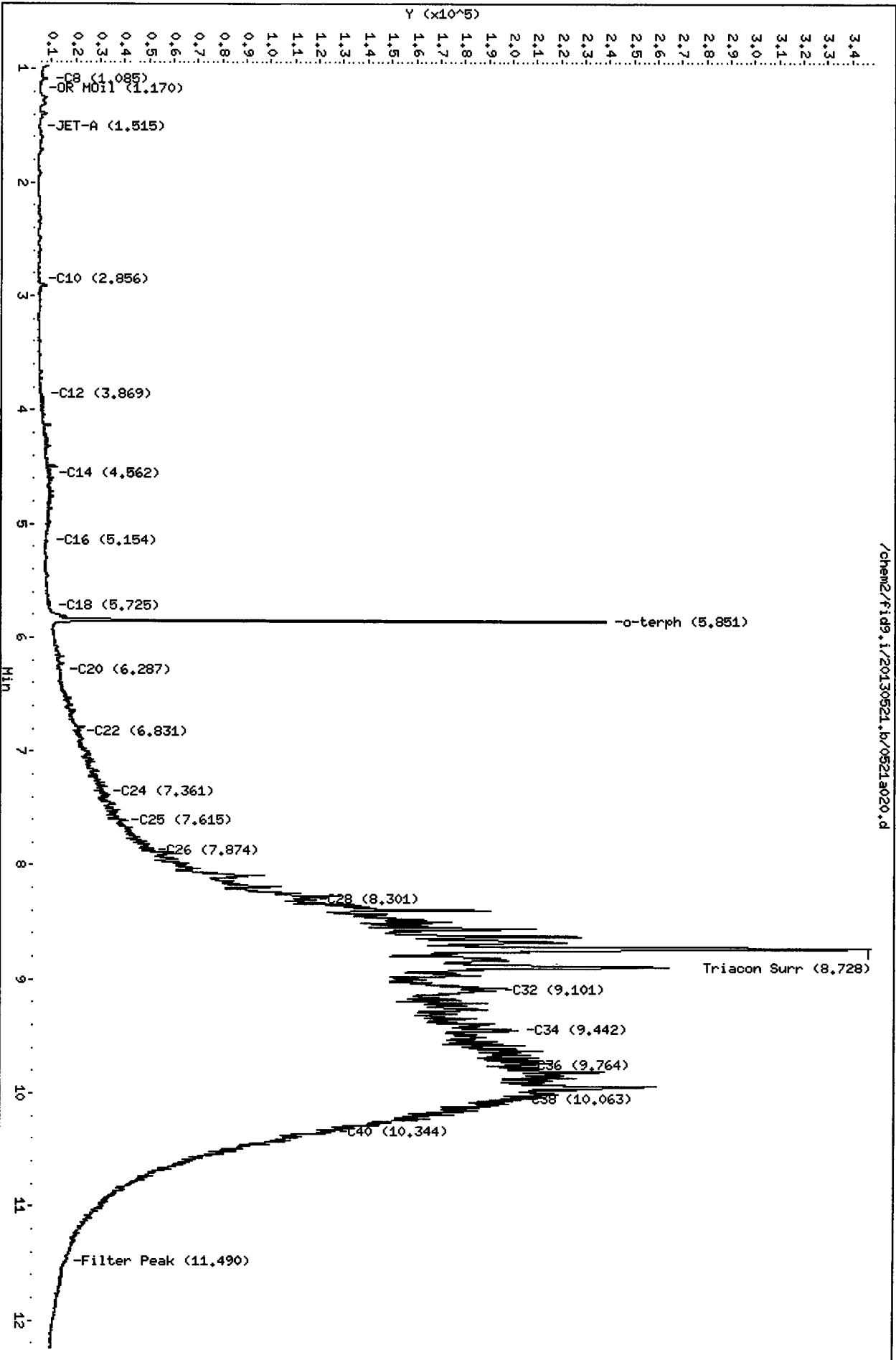
Range Times: NW Diesel(3.864 - 7.364) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.06) AK103(7.61 - 9.76) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	163854	6.4	71.1
Triacotane	158270	8.4	93.0

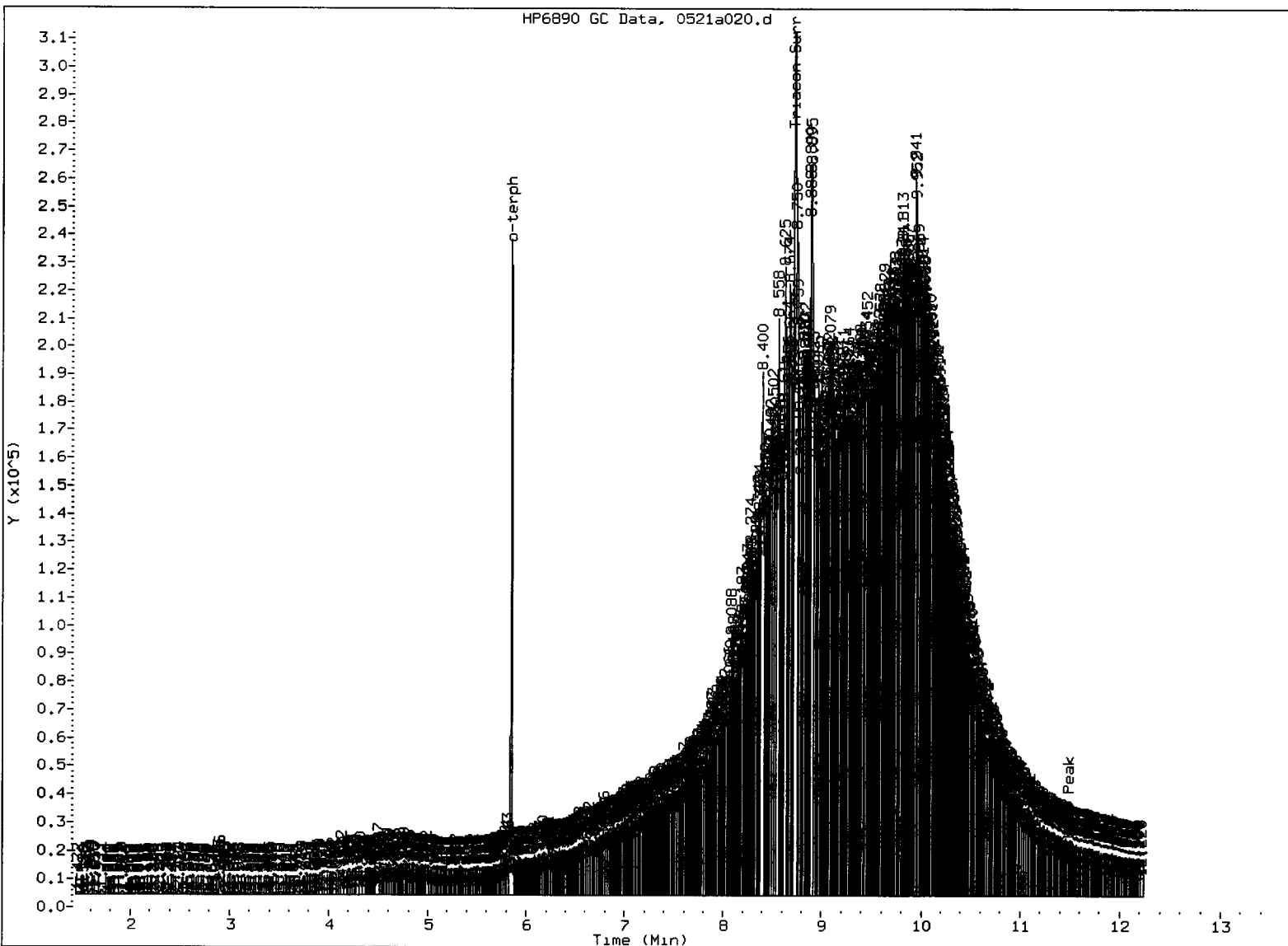
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013

JW
5/22/13

TU
5/22/12



HP6890 GC Data, 0521a020.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ⑤ Surrogate Skipped

Analyst: Jw

Date: 5/22/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-052013	86.7%	0
LCS-052013	79.3%	0
LCSD-052013	80.7%	0
A2-W1-S-4	50.9%	0
A2-W1-S-4 DL	68.9%	0
A2-W2-S-4	59.8%	0
A2-W2-S-4 DL	56.9%	0
A2-W3-S-4	NR	0
A2-W3-S-4 DL	D	0
A2-W4-S-4	84.3%	0
A2-W4-S-4 DL	D	0
A2-W5-S-4	70.4%	0
A2-W5-S-4 DL	65.8%	0
A2-W6-S-4	78.4%	0
A2-W7-S-4	84.9%	0
A2-W8-S-4	82.5%	0
A2-W9-S-4	73.3%	0
A2-W10-S-4	58.4%	0
A2-W11-S-4	74.0%	0
A2-W12-S-4	72.3%	0
A2-W13-S-4	70.2%	0
A2-W13-S-4 DL	74.7%	0
A2-W14-S-4	66.1%	0
A2-W14-S-4 DL	66.4%	0
A2-W15-S-4	56.3%	0
A2-W15-S-4 DL	69.6%	0
A2-W16-S-4	76.8%	0
A2-W17-S-4	71.6%	0
A2-W18-S-4	69.6%	0
A2-W18-S-4 DL	71.1%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-10644 to 13-10661

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b007.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45LCSS1
Client ID: WQ45LCSS1
Injection: 21-MAY-2013 10:44
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2914043	216
C8	0.827	0.013	8736	11038	WATPHD	(C12-C24)	11738669	1133.36 ✓
C10	2.242	0.002	66799	52930	WATPHM	(C24-C38)	184946	18.73 ✓
C12	3.047	0.005	140327	139534	AK102	(C10-C25)	13871179	1122.56 M
C14	3.626	0.003	209821	185748	AK103	(C25-C36)	144550	20.33
C16	4.121	0.002	372946	279746	OR.DIES	(C10-C28)	13988492	909.41 M
C18	4.569	0.004	335496	307117				
C20	4.986	-0.001	201334	174569				
C22	5.379	-0.001	88793	73504				
C24	5.746	0.000	32228	24062				
C25	5.922	0.000	14467	11311				
C26	6.089	-0.010	7403	8648				
C28	6.410	0.000	2134	1964	IT.DIES	(C10-C24)	13837599	1003.52
C32	6.955	0.002	4073	3612				
C34	7.189	0.003	125	38	CREOSOT	(C8-C22)	11384566	3520.97
Filter Peak	----							
C36	7.405	0.001	320	66	BUNKERC	(C10-C38)	14022545	2858.94
o-terph	4.678	0.003	771325	479898	JET-A	(C10-C18)	10637630	982.77
Triacon Surr	6.701	-0.004	803239	539358				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

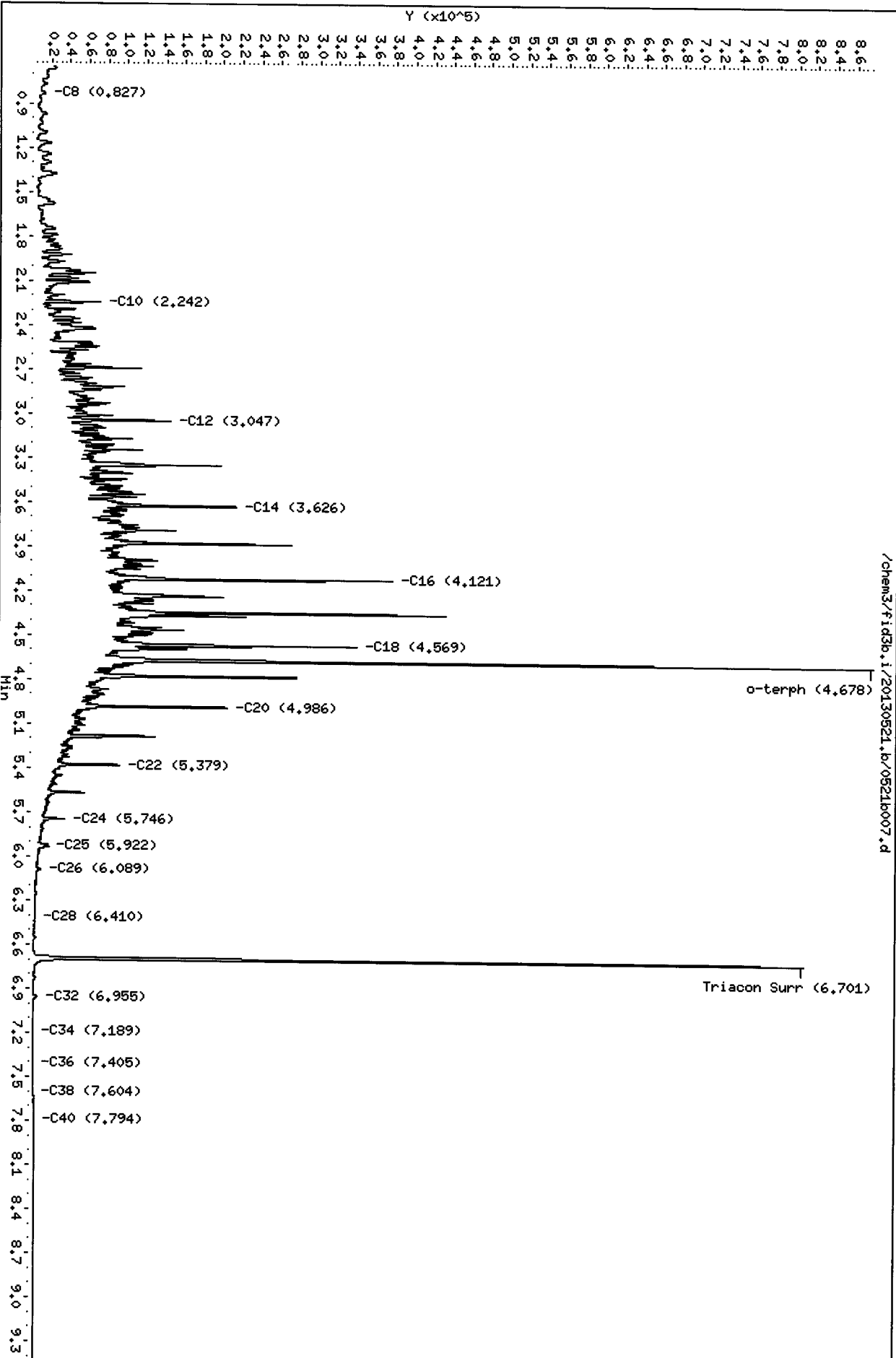
Surrogate	Area	Amount	%Rec
o-Terphenyl	479898	35.7	79.3 ✓
Triacontane	539358	41.3	91.9

*30
5/21/13*

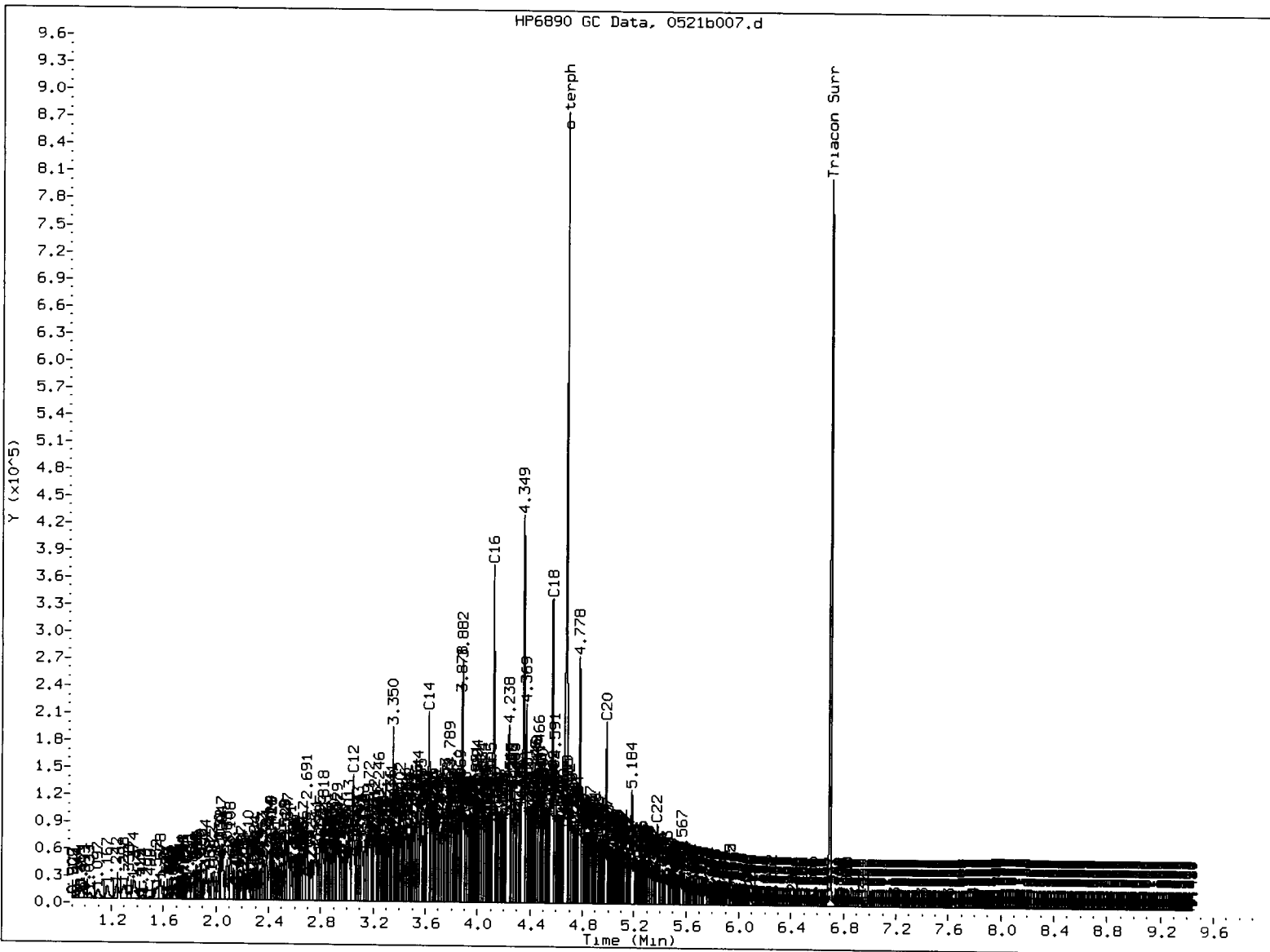
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chems3/fid3b.i/20130521.b/0521b007.d
Date: 21-MAY-2013 10:44
Client ID: MQ45LCS51
Sample Info: MQ45LCS51
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



11015 : 00107



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5) Skipped surrogate

Analyst: SLJ

Date: 5/21/3

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130521.b/0521b008.d
Method: /chem3/fid3b.i/20130521.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/21/2013
Macro: FID:3B050913

ARI ID: WQ45LCSDS1
Client ID: WQ45LCSDS1
Injection: 21-MAY-2013 11:04
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3041259	225
C8	0.801	-0.013	4087	2023	WATPHD (C12-C24)		11982488	1156.90
C10	2.243	0.002	73891	54498	WATPHM (C24-C38)		188784	19.12
C12	3.046	0.004	146161	144307	AK102 (C10-C25)		14206355	1149.69 M
C14	3.625	0.002	223756	233982	AK103 (C25-C36)		148661	20.91
C16	4.122	0.003	367069	257973	OR.DIES (C10-C28)		14319169	930.90 M
C18	4.570	0.005	339735	339135				
C20	4.987	0.001	197330	200314				
C22	5.379	0.000	94531	85701				
C24	5.744	-0.002	30647	24799				
C25	5.921	-0.001	15012	13239				
C26	6.108	0.009	3499	1327				
C28	6.408	-0.002	2309	2551	IT.DIES (C10-C24)		14171944	1027.77
C32	6.957	0.004	4720	4756				
C34	7.182	-0.004	145	63	CREOSOT (C8-C22)		11613468	3591.76
Filter Peak	----							
C36	7.406	0.003	304	107	BUNKERC (C10-C38)		14360728	2927.89
o-terph	4.679	0.005	842353	488601	JET-A (C10-C18)		10909191	1007.85
Triacon Surr	6.703	-0.002	868132	545866				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.608 - 3.092) NW M.Oil(5.796 - 7.656)
AK102(2.190 - 5.872) AK103(5.872 - 7.454) Jet A(2.190 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	488601	36.3	80.7
Triacontane	545866	41.8	93.0

TW
5/2/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130521.b/0521b008.d

Date: 21-May-2013 11:04

Client ID: M045LCSDS1

Sample Info: M045LCSDS1

Column phase: RTX-1

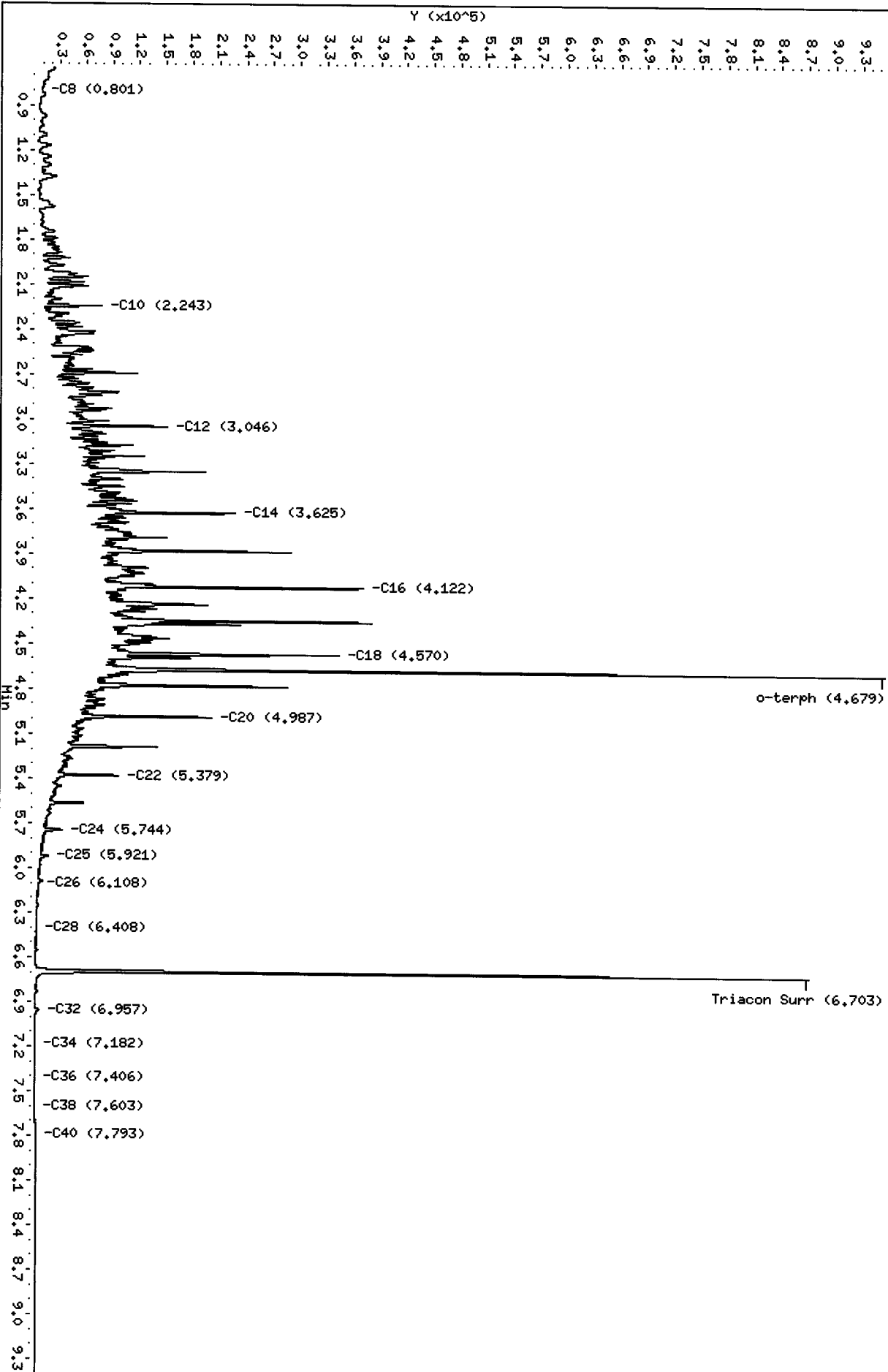
Instrument: fid3b.i

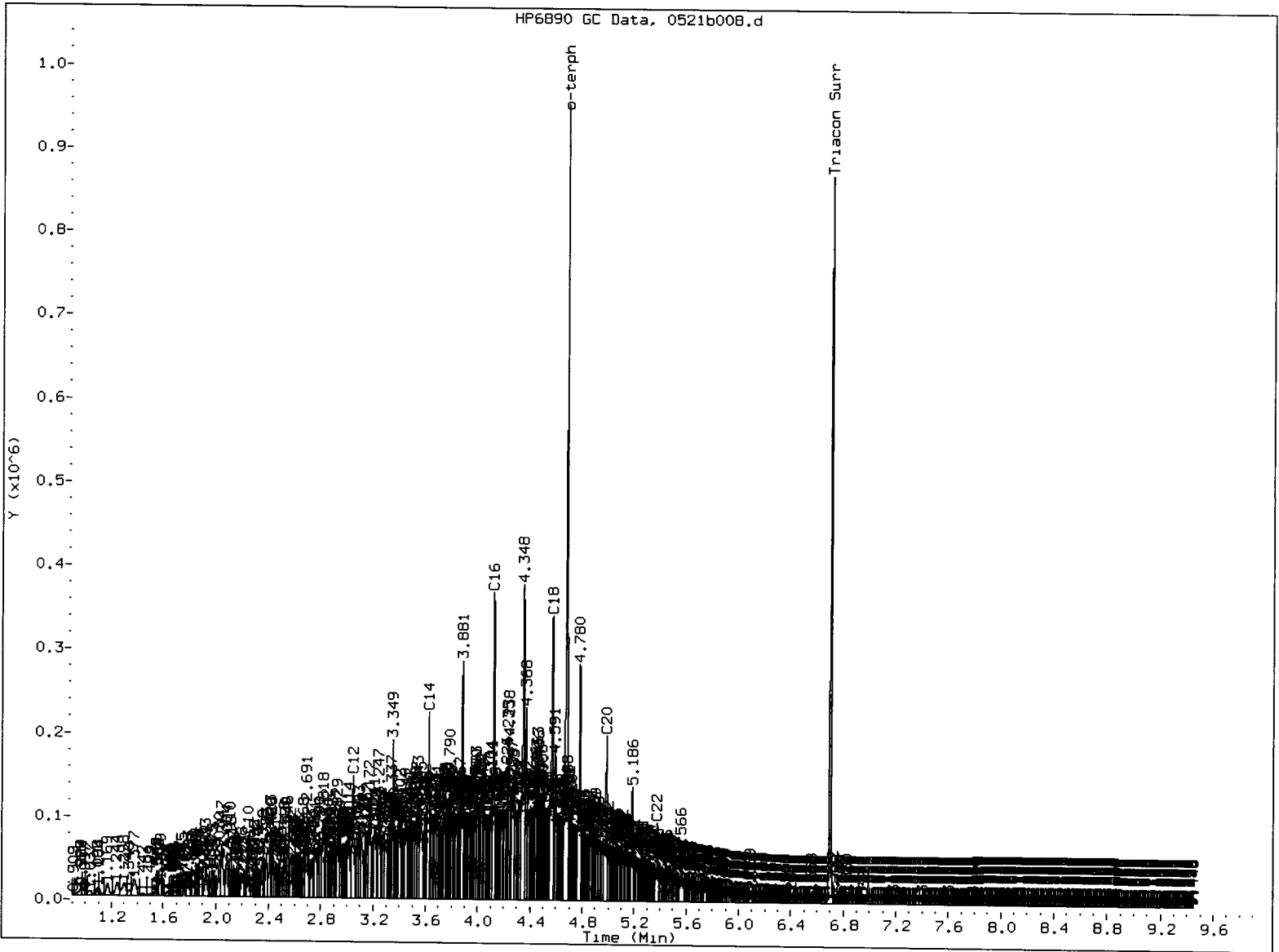
Operator: JM

Column diameter: 0.25

JLW
5/21/13

/chem3/fid3b.i/20130521.b/0521b008.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: Sw

Date: 5/21/03

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ45
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10644-052013MB1	Method Blank	10.0 g	1.00 mL	-	05/20/13
13-10644-052013LCS1	Lab Control	10.0 g	1.00 mL	-	05/20/13
13-10644-052013LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	05/20/13
13-10644-WQ45A	A2-W1-S-4	7.33 g	1.00 mL	D	05/20/13
13-10645-WQ45B	A2-W2-S-4	6.71 g	1.00 mL	D	05/20/13
13-10646-WQ45C	A2-W3-S-4	8.95 g	1.00 mL	D	05/20/13
13-10647-WQ45D	A2-W4-S-4	9.29 g	1.00 mL	D	05/20/13
13-10648-WQ45E	A2-W5-S-4	9.04 g	1.00 mL	D	05/20/13
13-10649-WQ45F	A2-W6-S-4	9.43 g	1.00 mL	D	05/20/13
13-10650-WQ45G	A2-W7-S-4	8.93 g	1.00 mL	D	05/20/13
13-10651-WQ45H	A2-W8-S-4	9.06 g	1.00 mL	D	05/20/13
13-10652-WQ45I	A2-W9-S-4	7.55 g	10.0 mL	D	05/20/13
13-10653-WQ45J	A2-W10-S-4	7.40 g	10.0 mL	D	05/20/13
13-10654-WQ45K	A2-W11-S-4	8.77 g	1.00 mL	D	05/20/13
13-10655-WQ45L	A2-W12-S-4	7.32 g	1.00 mL	D	05/20/13
13-10656-WQ45M	A2-W13-S-4	7.91 g	1.00 mL	D	05/20/13
13-10657-WQ45N	A2-W14-S-4	7.70 g	1.00 mL	D	05/20/13
13-10658-WQ45O	A2-W15-S-4	8.92 g	1.00 mL	D	05/20/13
13-10659-WQ45P	A2-W16-S-4	7.73 g	1.00 mL	D	05/20/13
13-10660-WQ45Q	A2-W17-S-4	6.41 g	1.00 mL	D	05/20/13
13-10661-WQ45R	A2-W18-S-4	6.77 g	1.00 mL	D	05/20/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W1-S-4

SAMPLE

Lab Sample ID: WQ45A

LIMS ID: 13-10644

Matrix: Soil

Data Release Authorized: *YWW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 23:21

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 57 mg-dry-wt

Percent Moisture: 27.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	22	< 22 U
108-88-3	Toluene	22	< 22 U
100-41-4	Ethylbenzene	22	< 22 U
179601-23-1	m,p-Xylene	44	< 44 U
95-47-6	o-Xylene	22	< 22 U

Gasoline Range Hydrocarbons	8.8	< 8.8 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	76.5%
Bromobenzene	80.4%

Gasoline Surrogate Recovery

Trifluorotoluene	79.0%
Bromobenzene	82.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a019.d ARI ID: WQ45A
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a019.d Client ID: A2-W1-S-4
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 23:21
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.001	2739	34971	79.0	TFT(Surr)
15.381	0.001	1876	15869	82.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	5853	0.016
8015C 2MP-TMB (4.17 to 16.20)	723723	4557	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	3897	0.007
NWTPHG Tol-Nap (9.77 to 18.90)	375093	5853	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.001	3038	76.5	TFT(Surr)
15.388	0.000	7068	80.4	BB(Surr)

SW8021 (PID)

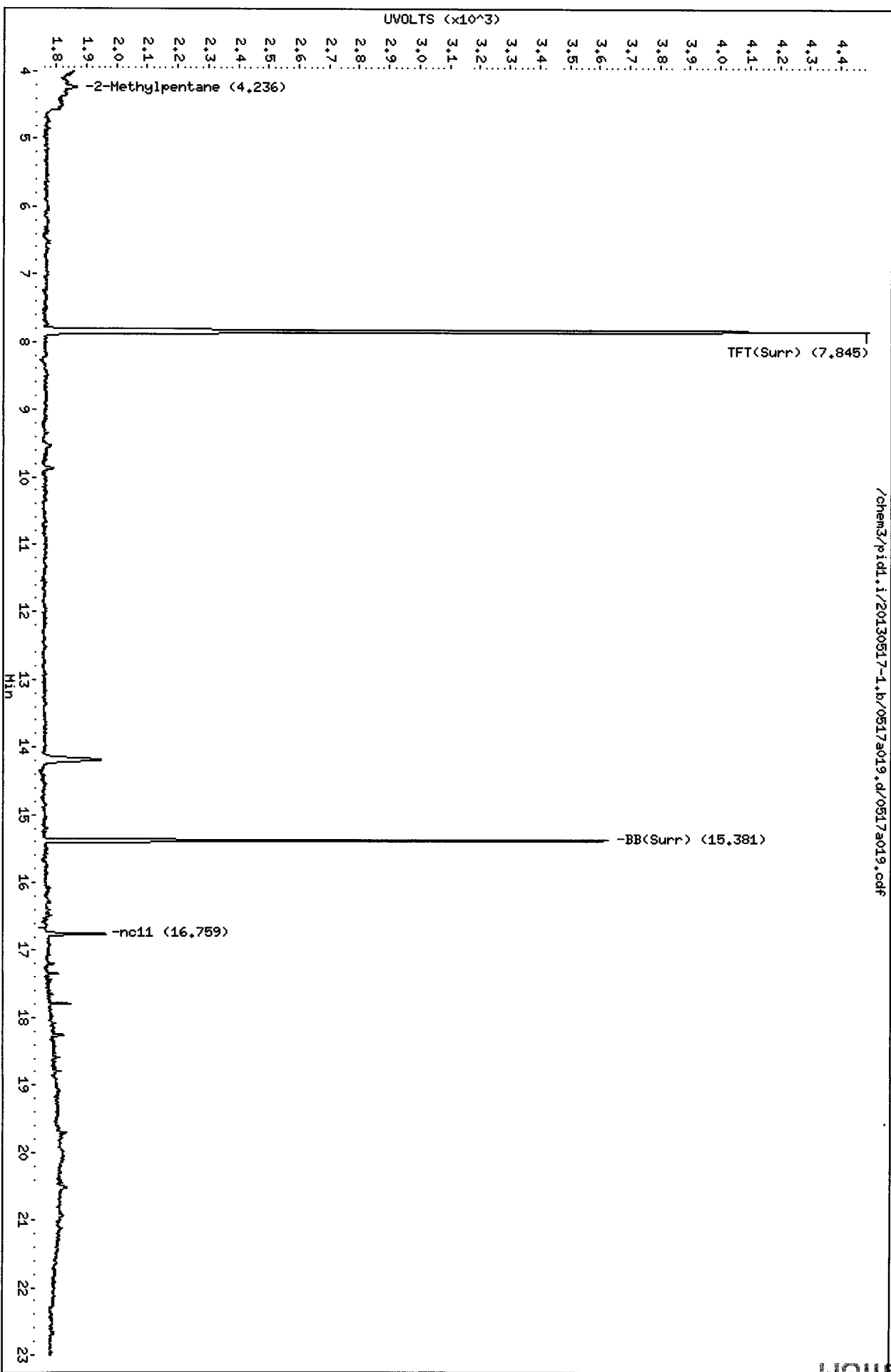
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.877	-0.002	49	0.21N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/p/iddl.i/20130517-1.b/0517a019.d
Date: 17-MAY-2013 23:21
Client ID: A2-M1-S-4
Sample Info: M045A

Column phase: RTX 502-2 FID

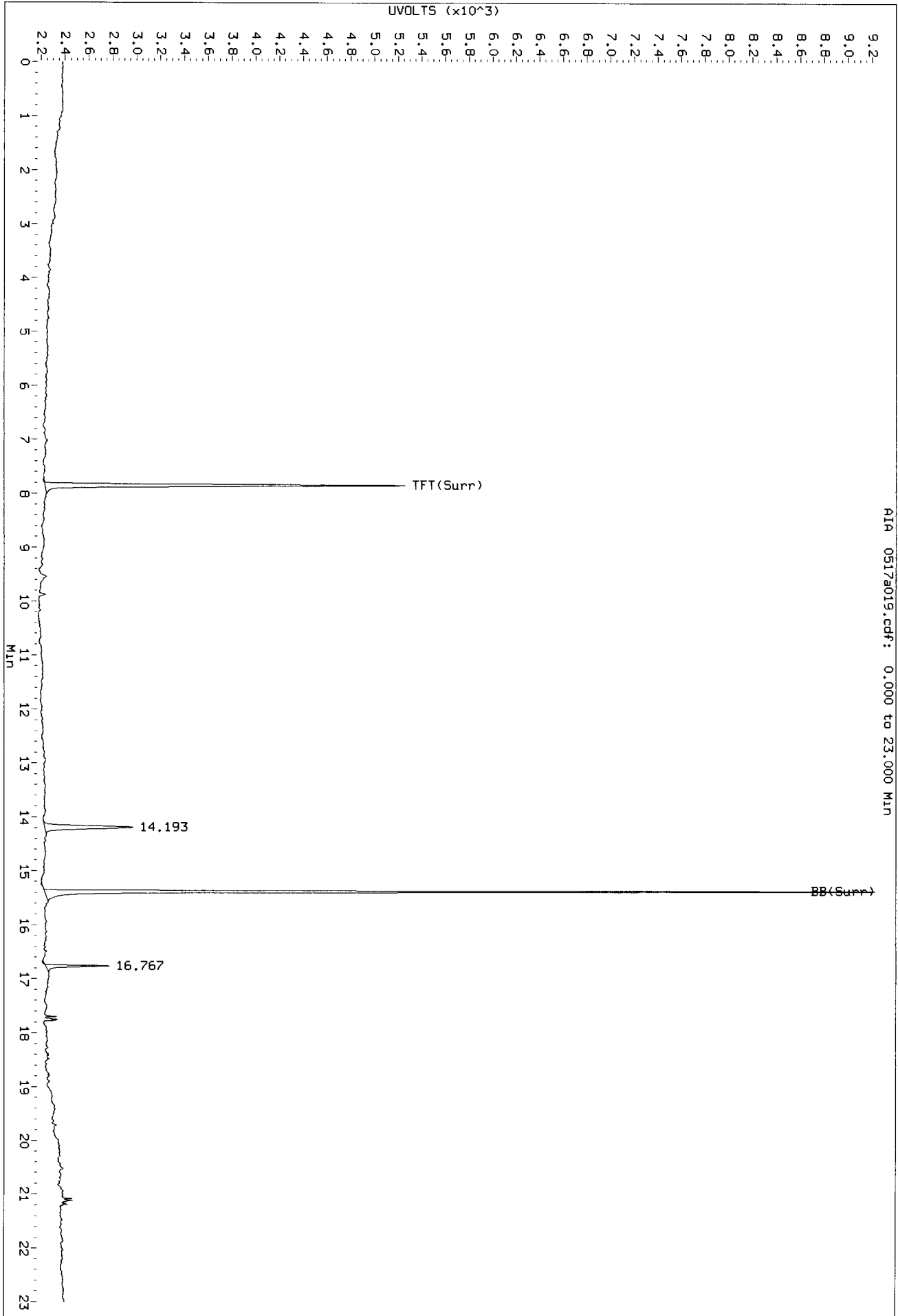
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



17 1801 17

MS/2013

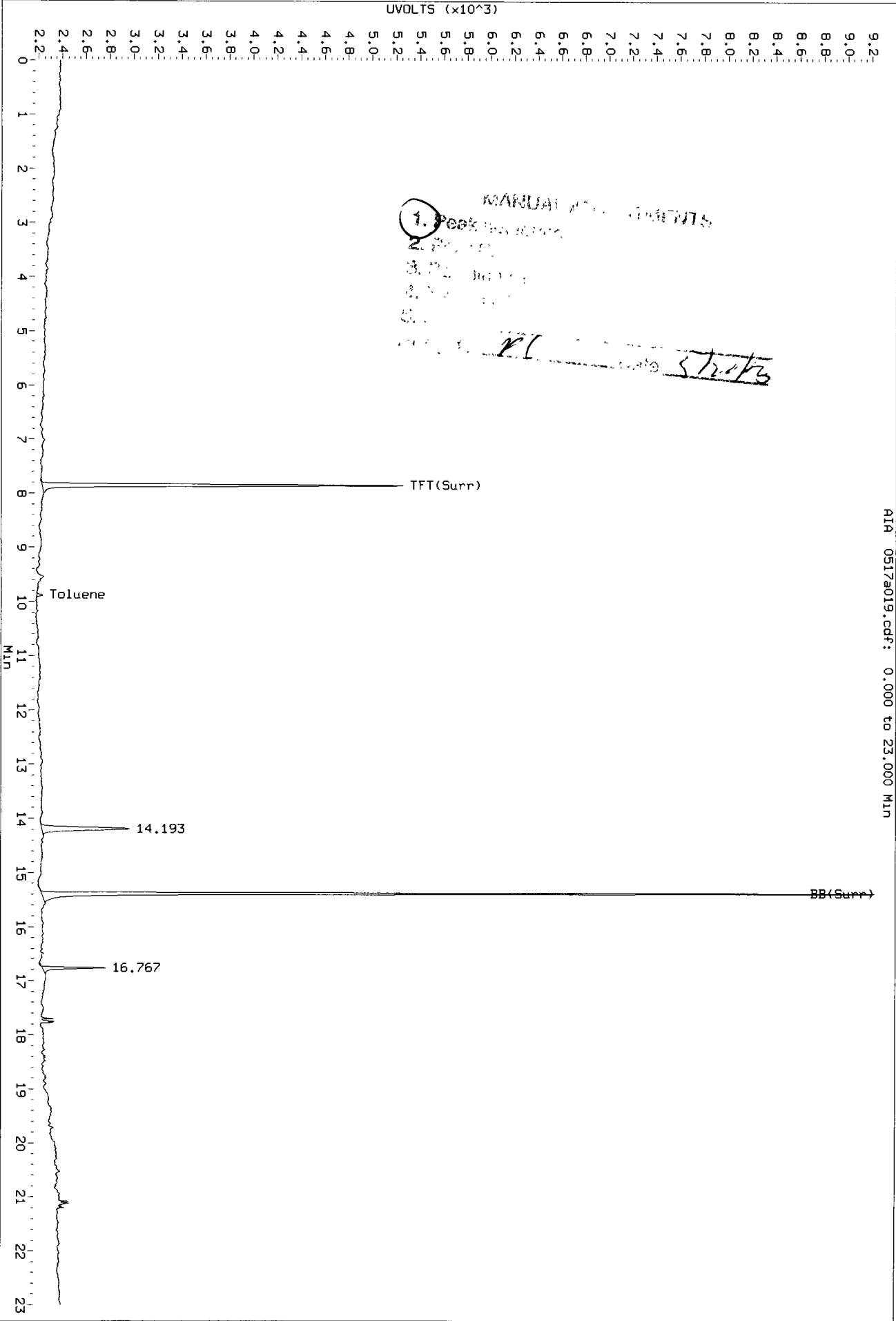
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Injection Date: 17-MAY-2013 23:21
Instrument: p1d1.1
Client Sample ID: A2-U1-5-4



AIA 0517a019.cdf: 0.000 to 23.000 Min

Data File: /chem3/pid1.1/20130517-2.b/0517a019.d/0517a019.cdf
Injection Date: 17-May-2013 23:21
Instrument: pid1.1
Client Sample ID: A2-W1-S-4

AIA 0517a019.cdf: 0.000 to 23.000 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1



Sample ID: A2-W2-S-4

SAMPLE

Lab Sample ID: WQ45B

LIMS ID: 13-10645

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/17/13 23:52

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 63 mg-dry-wt

Percent Moisture: 32.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	210
100-41-4	Ethylbenzene	20	< 20 U
179601-23-1	m,p-Xylene	40	< 40 U
95-47-6	o-Xylene	20	< 20 U

Gasoline Range Hydrocarbons	8.0	< 8.0 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	76.8%
Bromobenzene	80.9%

Gasoline Surrogate Recovery

Trifluorotoluene	79.7%
Bromobenzene	83.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/7/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a020.d ARI ID: WQ45B
Data file 2: /chem3/pid1.i/20130517-2.b/0517a020.d Client ID: A2-W2-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 23:52
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.844	0.000	2763	34811	79.7	TFT(Surr)
15.380	0.000	1898	15957	83.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	14993	0.042 M
8015C 2MP-TMB (4.17 to 16.20)	723723	9120	0.013 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	6231	0.011
NWTPHG Tol-Nap (9.77 to 18.90)	375093	36719	0.098 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.852	0.000	3050	76.8	TFT(Surr)
15.388	0.000	7111	80.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.879	0.001	600	2.62	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

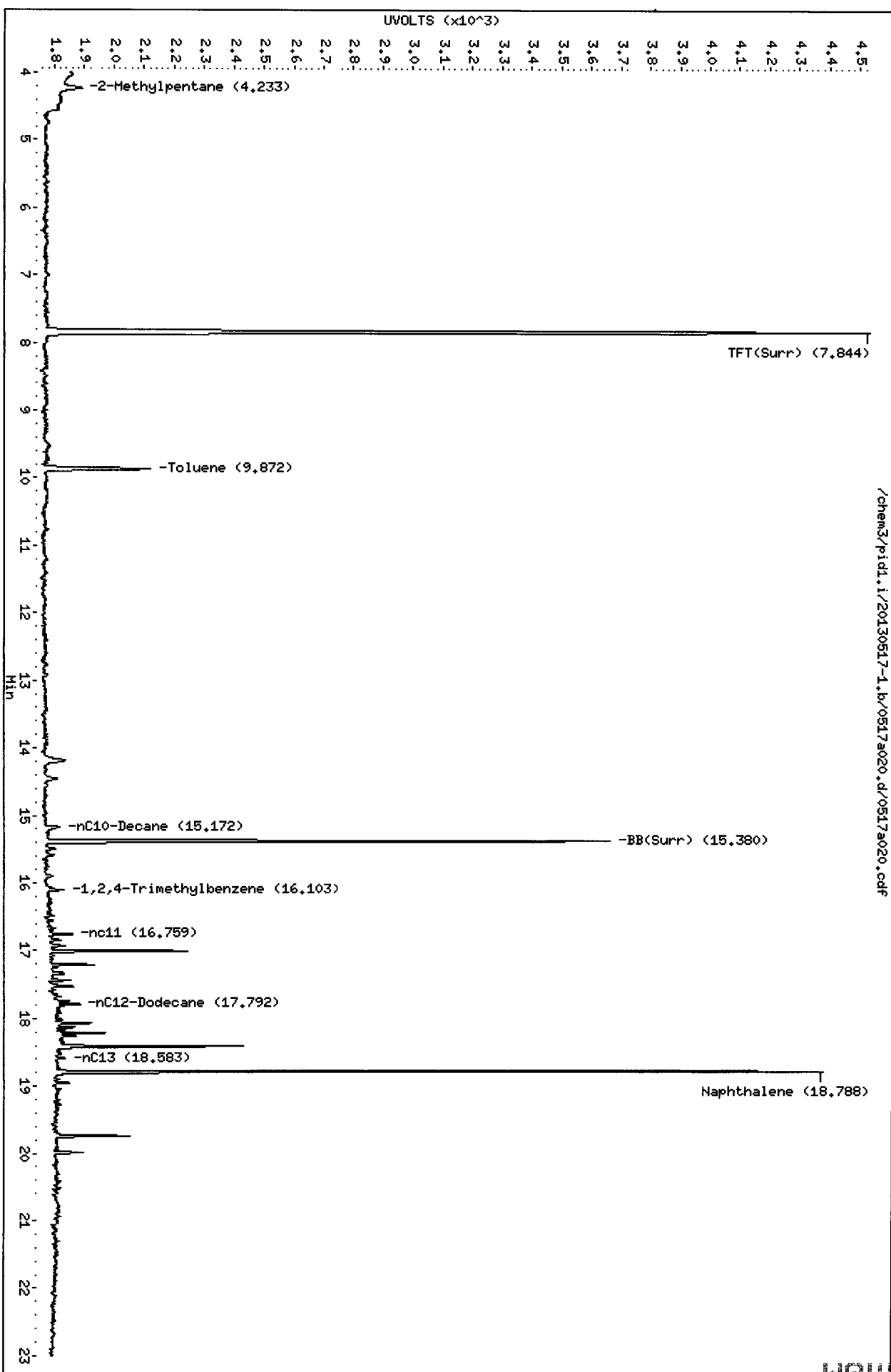
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a020.d
Date: 17-MAY-2013 23:52
Client ID: A2-M2-S-4
Sample Info: MQ45B

Column phase: RTX 502-2 FID

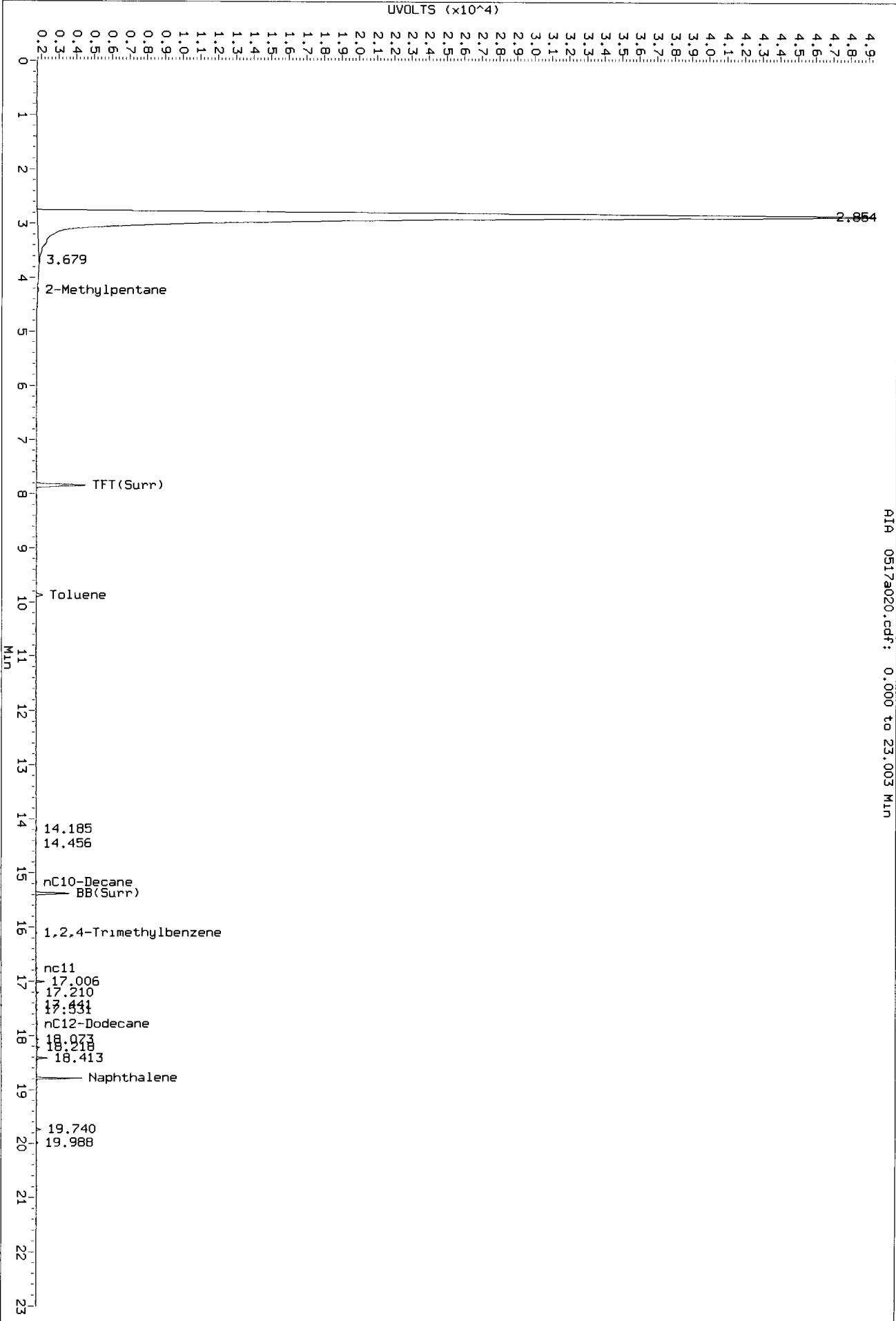
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

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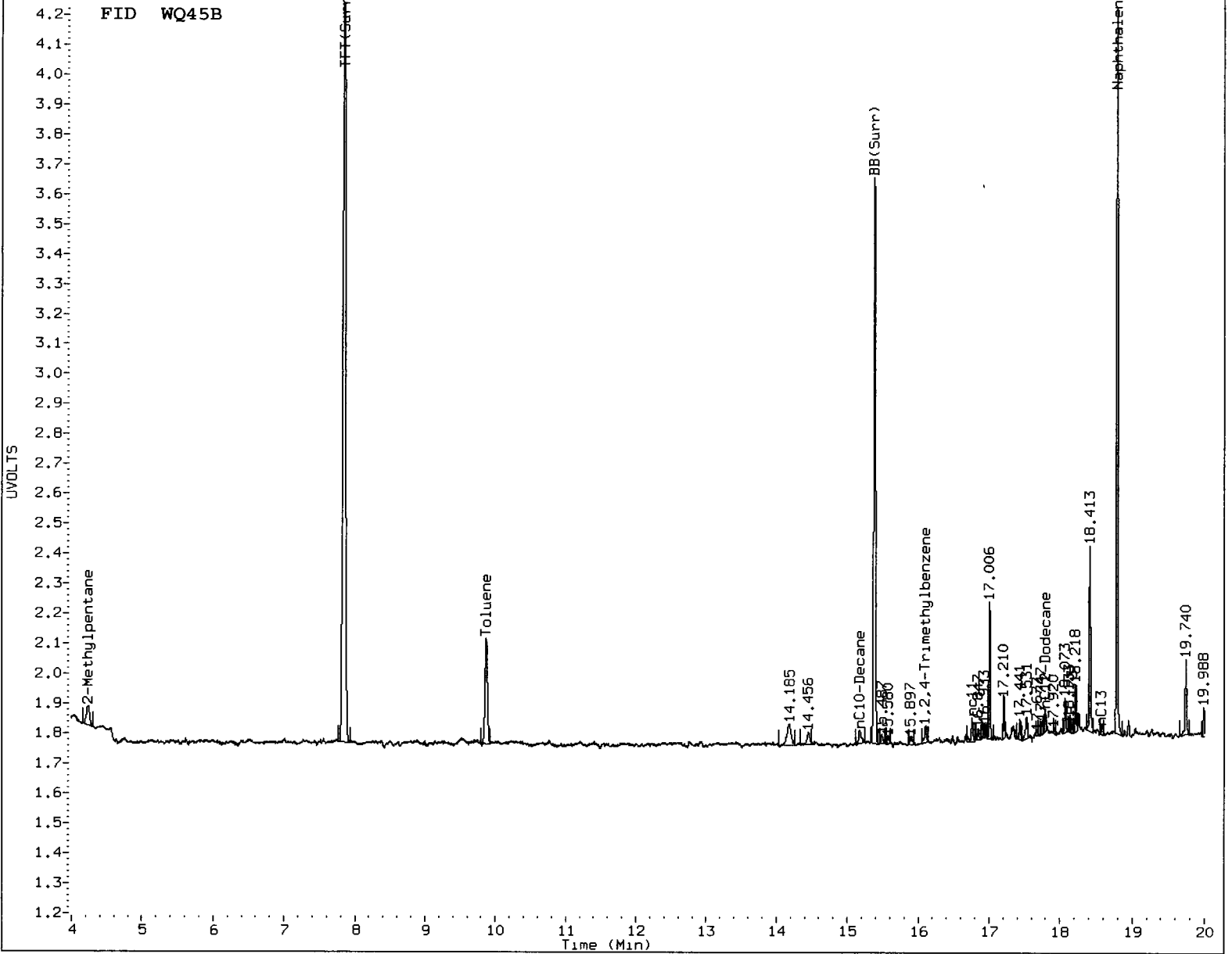


PK
STP/13

Data File: /chem3/pid1.1/20130517-1.b/0517a020.d/0517a020.cdf
Injection Date: 17-May-2013 23:52
Instrument: pid1.1
Client Sample ID: A2-W2-S-4



AIA 0517a020.cdf: 0.000 to 23.003 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: KC Date: 5/16/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W3-S-4

SAMPLE

Lab Sample ID: WQ45C

LIMS ID: 13-10646

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 00:22

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 92 mg-dry-wt

Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	27	< 27 U
95-47-6	o-Xylene	14	< 14 U

Gasoline Range Hydrocarbons	5.4	< 5.4 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	81.3%
Bromobenzene	85.4%

Gasoline Surrogate Recovery

Trifluorotoluene	84.4%
Bromobenzene	88.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

VS
Stark

Data file 1: /chem3/pid1.i/20130517-1.b/0517a021.d ARI ID: WQ45C
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a021.d Client ID: A2-W3-S-4
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 00:22
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.001	2929	37133	84.4	TFT(Surr)
15.381	0.001	2008	16836	88.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3501	0.010
8015C 2MP-TMB (4.17 to 16.20)	723723	1722	0.002
AK101 nC6-nC10 (4.67 to 15.10)	582885	1722	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	5547	0.015

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.001	3229	81.3	TFT(Surr)
15.388	0.000	7508	85.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.877	-0.002	32	0.14N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a021.d

Date: 18-May-2013 00:22

Client ID: A2-M3-S-4

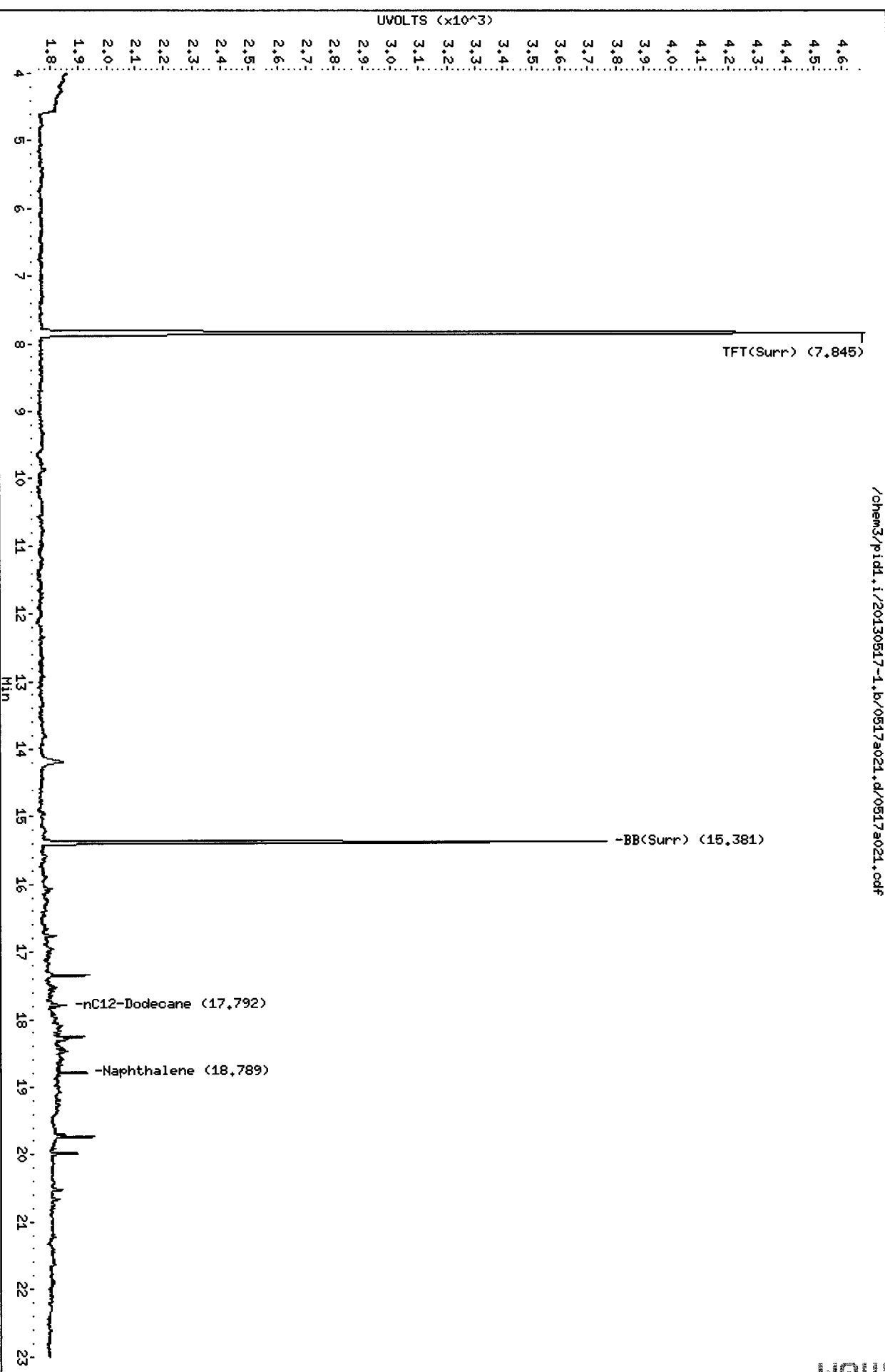
Sample Info: MQ45C

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

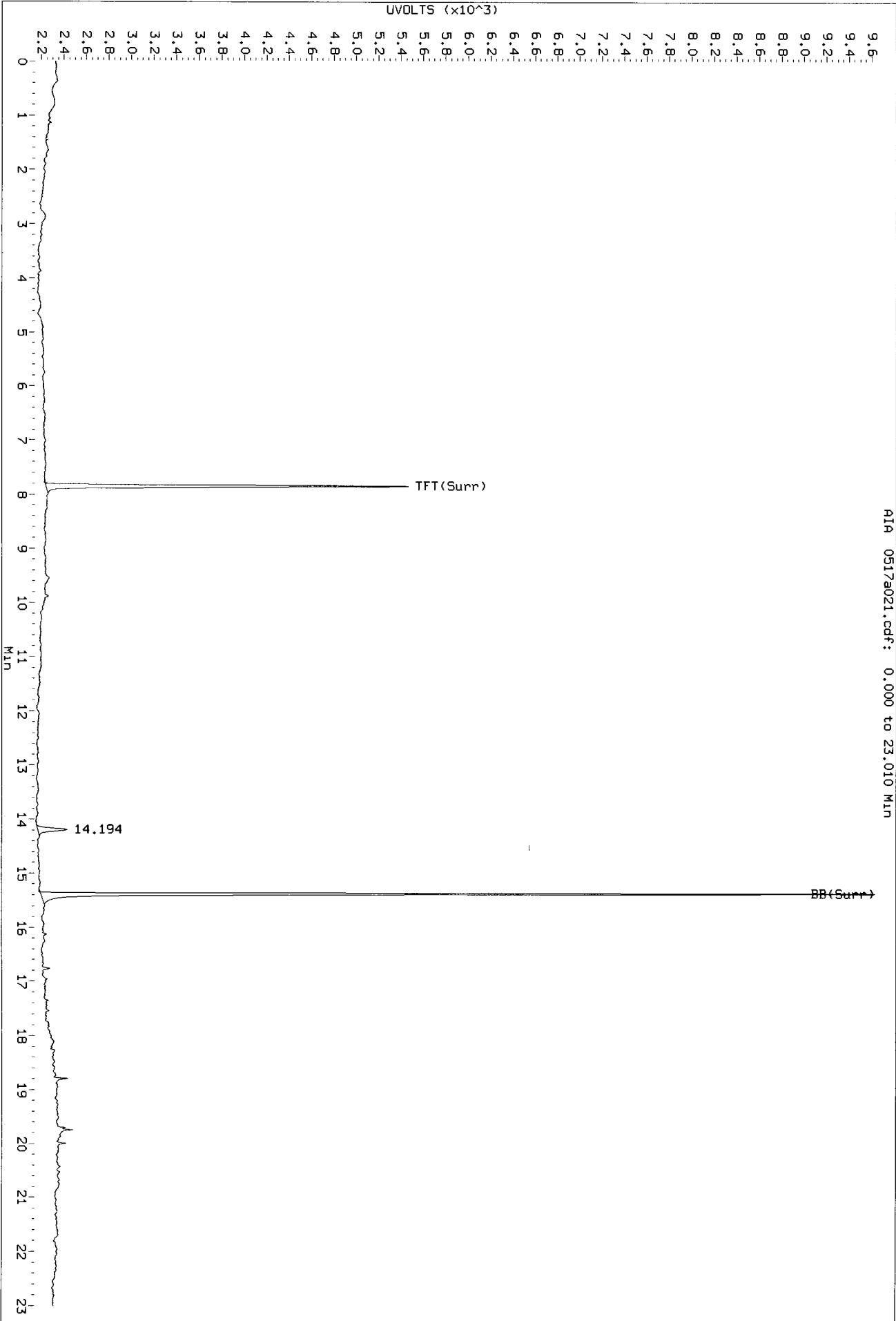


/chem3/pid1.i/20130517-1.b/0517a021.d/0517a021.cdf

PK
5/20/13

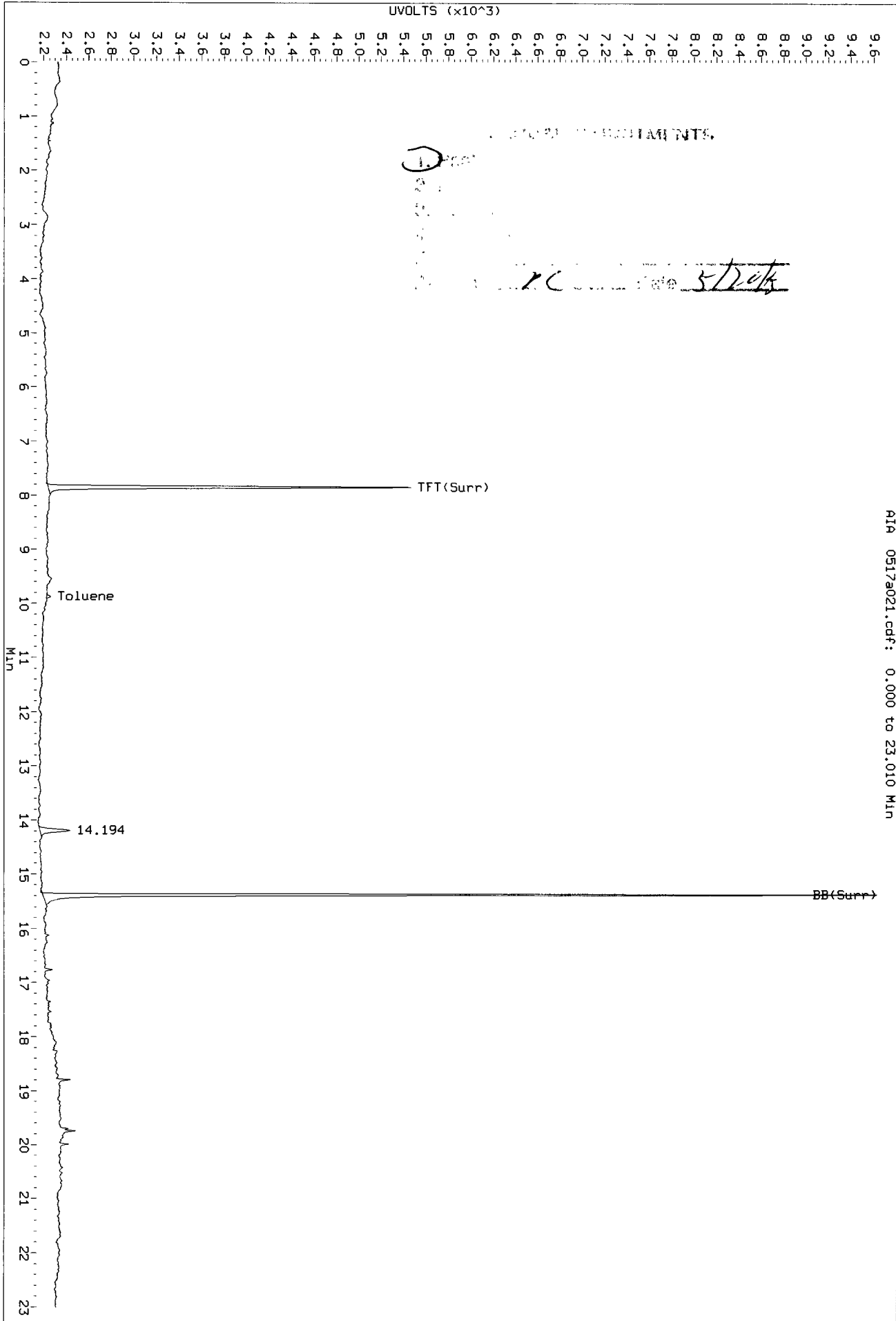
Data File: /chem3/pid1.1/20130517-2.b/0517a021.d/0517a021.cdf
Injection Date: 18-May-2013 00:22
Instrument: pid1.1
Client Sample ID: A2-W3-5-4

AIA 0517a021.cdf: 0.000 to 23.010 Min



Data File: /chem3/pid1.1/20130517-2.b/0517a021.d/0517a021.cdf
Injection Date: 18-MAY-2013 00:22
Instrument: pid1.1
Client Sample ID: A2-W3-5-4

AIA 0517a021.cdf: 0.000 to 23.010 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W4-S-4

SAMPLE

Lab Sample ID: WQ45D

LIMS ID: 13-10647

Matrix: Soil

Data Release Authorized: *WJW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 00:52

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 83 mg-dry-wt

Percent Moisture: 8.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	6.0	< 6.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	77.6%
Bromobenzene	83.1%

Gasoline Surrogate Recovery

Trifluorotoluene	81.1%
Bromobenzene	86.1%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/2/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a022.d ARI ID: WQ45D
Data file 2: /chem3/pid1.i/20130517-2.b/0517a022.d Client ID: A2-W4-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 00:52
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.001	2812	35638	81.1	TFT(Surr)
15.381	0.001	1965	16384	86.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	1451	0.004
8015C 2MP-TMB (4.17 to 16.20)	723723	1451	0.002
AK101 nC6-nC10 (4.67 to 15.10)	582885	1450	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1902	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.001	3080	77.6	TFT(Surr)
15.388	0.000	7304	83.1	BB(Surr)

SW8021 (PID)

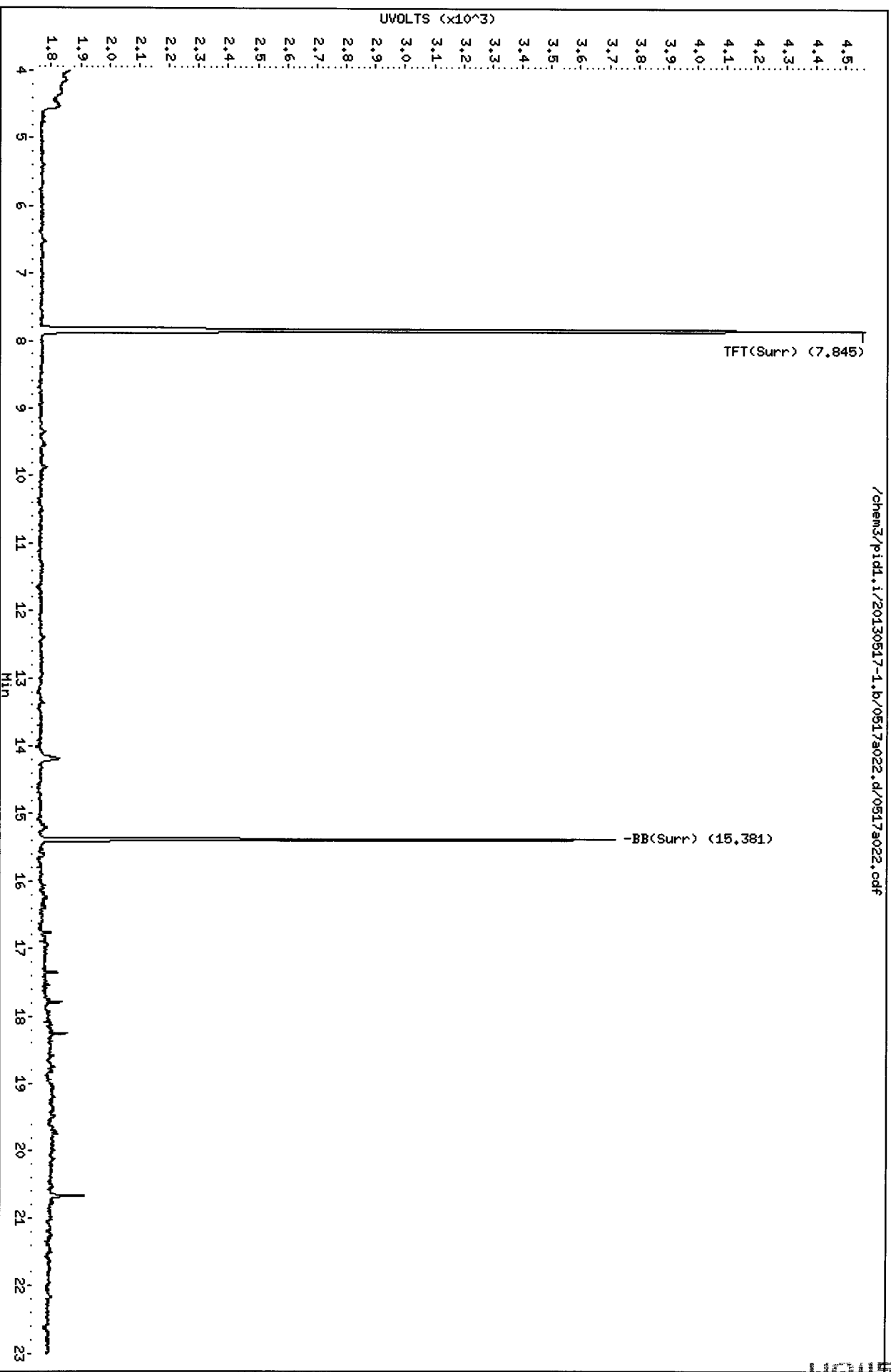
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/piddl.i/20130517-1.b/0517a022.d
Date : 18-MAY-2013 00:52
Client ID: A2-M4-S-4
Sample Info: M045D

Column phase: RTX 502-2 FID

Instrument: piddl.i
Operator: PC
Column diameter: 0.18



/chem3/piddl.i/20130517-1.b/0517a022.d/0517a022.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W5-S-4

SAMPLE

Lab Sample ID: WQ45E

LIMS ID: 13-10648

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 01:22

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 86 mg-dry-wt

Percent Moisture: 10.0%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	15	< 15 U	
108-88-3	Toluene	15	< 15 U	
100-41-4	Ethylbenzene	15	< 15 U	
179601-23-1	m,p-Xylene	29	< 29 U	
95-47-6	o-Xylene	15	< 15 U	
	Gasoline Range Hydrocarbons	5.8	< 5.8 U	---

BETX Surrogate Recovery

Trifluorotoluene	79.8%
Bromobenzene	83.8%

Gasoline Surrogate Recovery

Trifluorotoluene	82.5%
Bromobenzene	86.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a023.d ARI ID: WQ45E
Data file 2: /chem3/pid1.i/20130517-2.b/0517a023.d Client ID: A2-W5-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 01:22
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.844	0.001	2860	35988	82.5	TFT(Surr)
15.381	0.001	1974	16680	86.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	3613	0.010
8015C 2MP-TMB (4.17 to 16.20)	723723	2643	0.004
AK101 nC6-nC10 (4.67 to 15.10)	582885	2643	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3613	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.852	0.001	3167	79.8	TFT(Surr)
15.389	0.000	7365	83.8	BB(Surr)

SW8021 (PID)

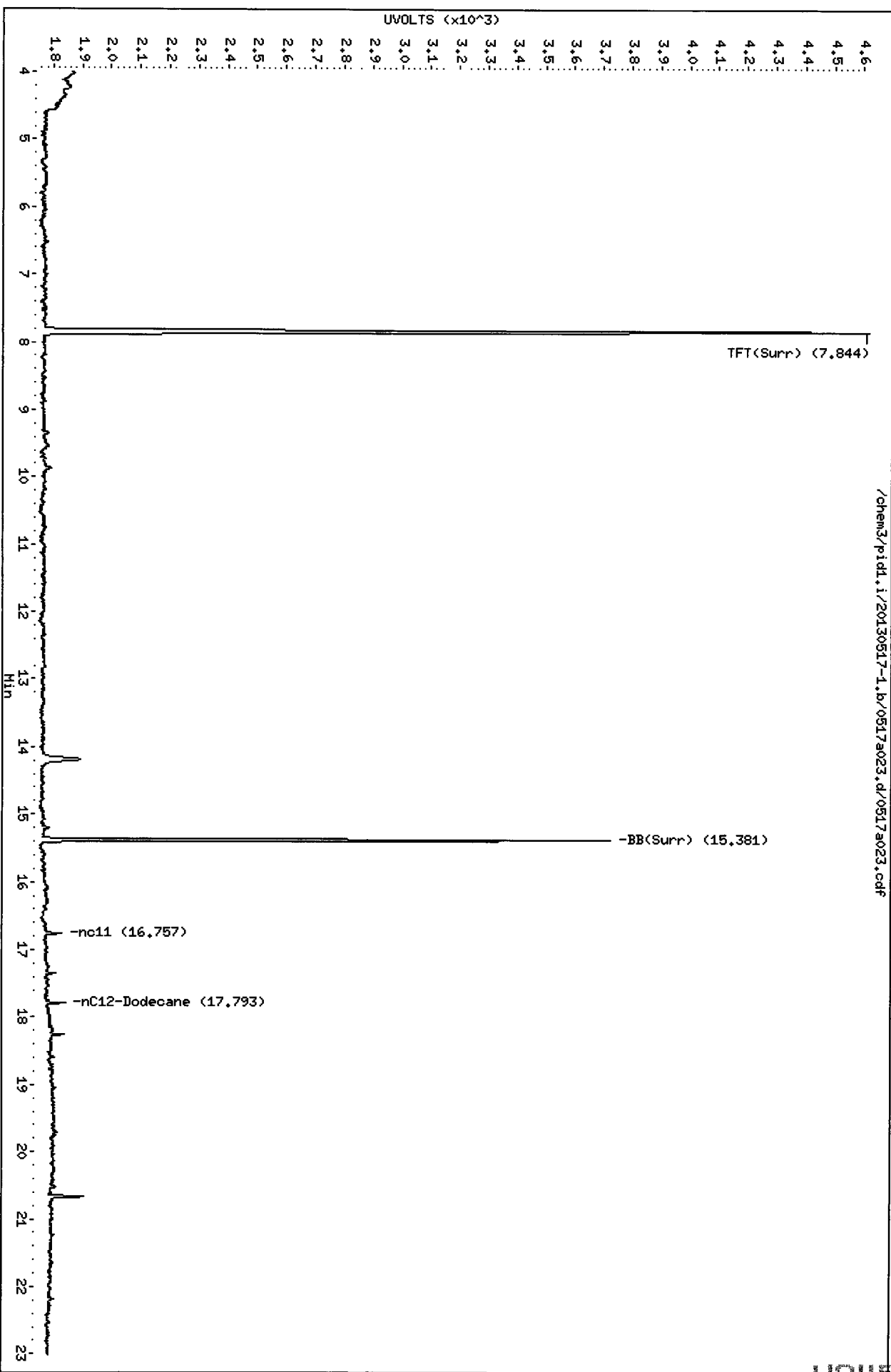
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a023.d
Date: 18-MAY-2013 01:22
Client ID: A2-M5-S-4
Sample Info: MQ45E

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



0517a023.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W6-S-4

SAMPLE

Lab Sample ID: WQ45F

LIMS ID: 13-10649

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 01:52

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

Percent Moisture: 6.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	13	< 13 U
108-88-3	Toluene	13	< 13 U
100-41-4	Ethylbenzene	13	< 13 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	13	< 13 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	78.1%
Bromobenzene	82.8%

Gasoline Surrogate Recovery

Trifluorotoluene	81.0%
Bromobenzene	85.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

WQ
 5/20/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a024.d ARI ID: WQ45F
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a024.d Client ID: A2-W6-S-4
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 01:52
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.843	-0.001	2810	35256	81.0	TFT(Surr)
15.381	0.000	1955	16379	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	1939	0.005
8015C 2MP-TMB (4.17 to 16.20)	723723	1202	0.002
AK101 nC6-nC10 (4.67 to 15.10)	582885	1202	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1939	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.851	-0.001	3099	78.1	TFT(Surr)
15.388	0.000	7279	82.8	BB(Surr)

SW8021 (PID)

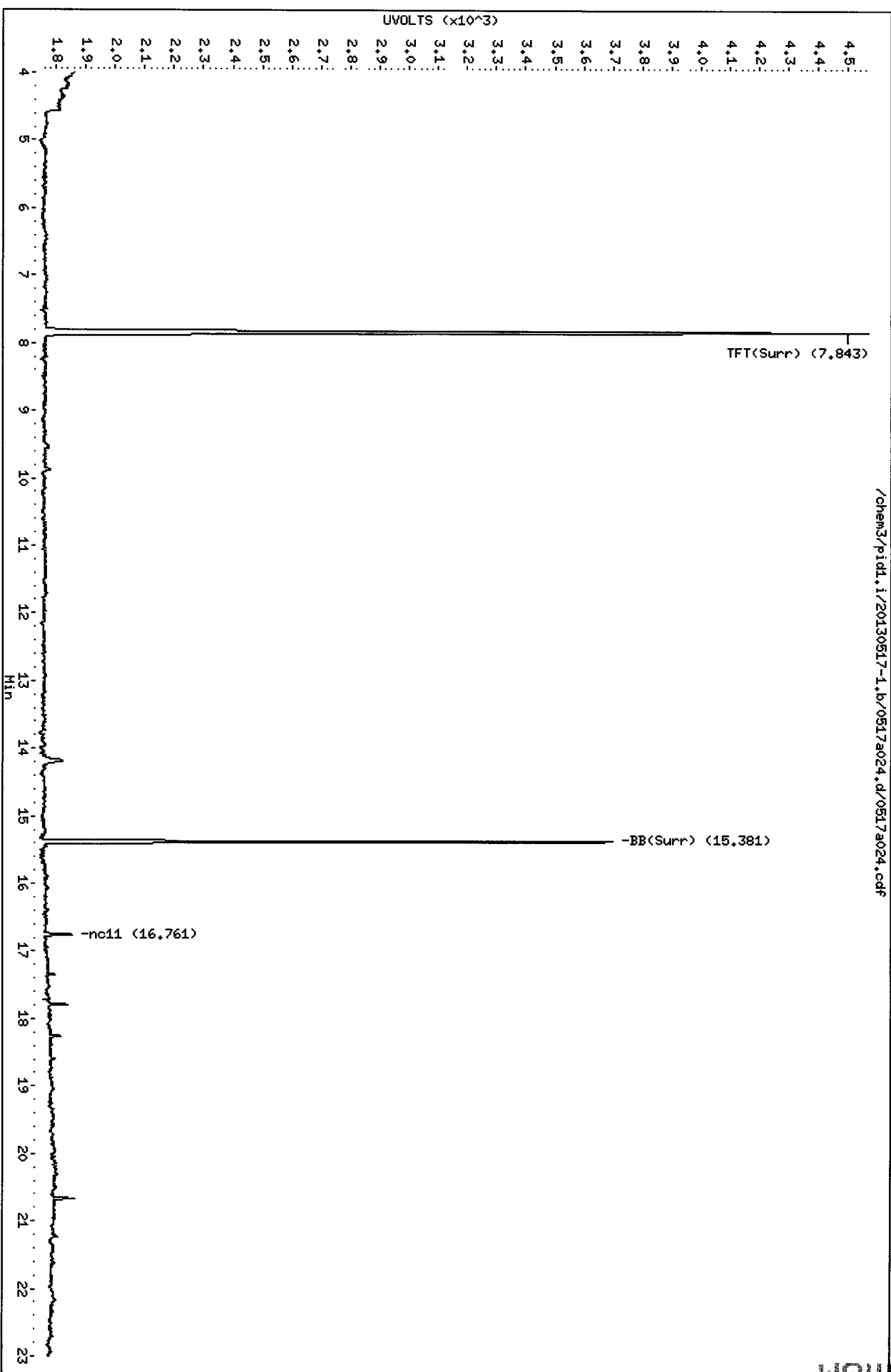
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a024.d
Date: 18-MAY-2013 01:52
Client ID: A2-M6-S-4
Sample Info: MQ45F

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130517-1.b/0517a024.d/0517a024.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W7-S-4

SAMPLE

Lab Sample ID: WQ45G

LIMS ID: 13-10650

Matrix: Soil

Data Release Authorized: *YMW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 02:23

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 98 mg-dry-wt

Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	13	< 13 U
108-88-3	Toluene	13	< 13 U
100-41-4	Ethylbenzene	13	< 13 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	13	< 13 U

Gasoline Range Hydrocarbons	5.1	< 5.1 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	70.5%
Bromobenzene	75.5%

Gasoline Surrogate Recovery

Trifluorotoluene	72.9%
Bromobenzene	78.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
Strofs

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a025.d ARI ID: WQ45G
Data file 2: /chem3/pid1.i/20130517-2.b/0517a025.d Client ID: A2-W7-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 02:23
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.846	0.002	2529	32233	72.9	TFT(Surr)
15.381	0.000	1795	15052	78.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	3331	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	4013	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	2574	0.004
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3331	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.854	0.002	2798	70.5	TFT(Surr)
15.388	0.000	6638	75.5	BB(Surr)

SW8021 (PID)

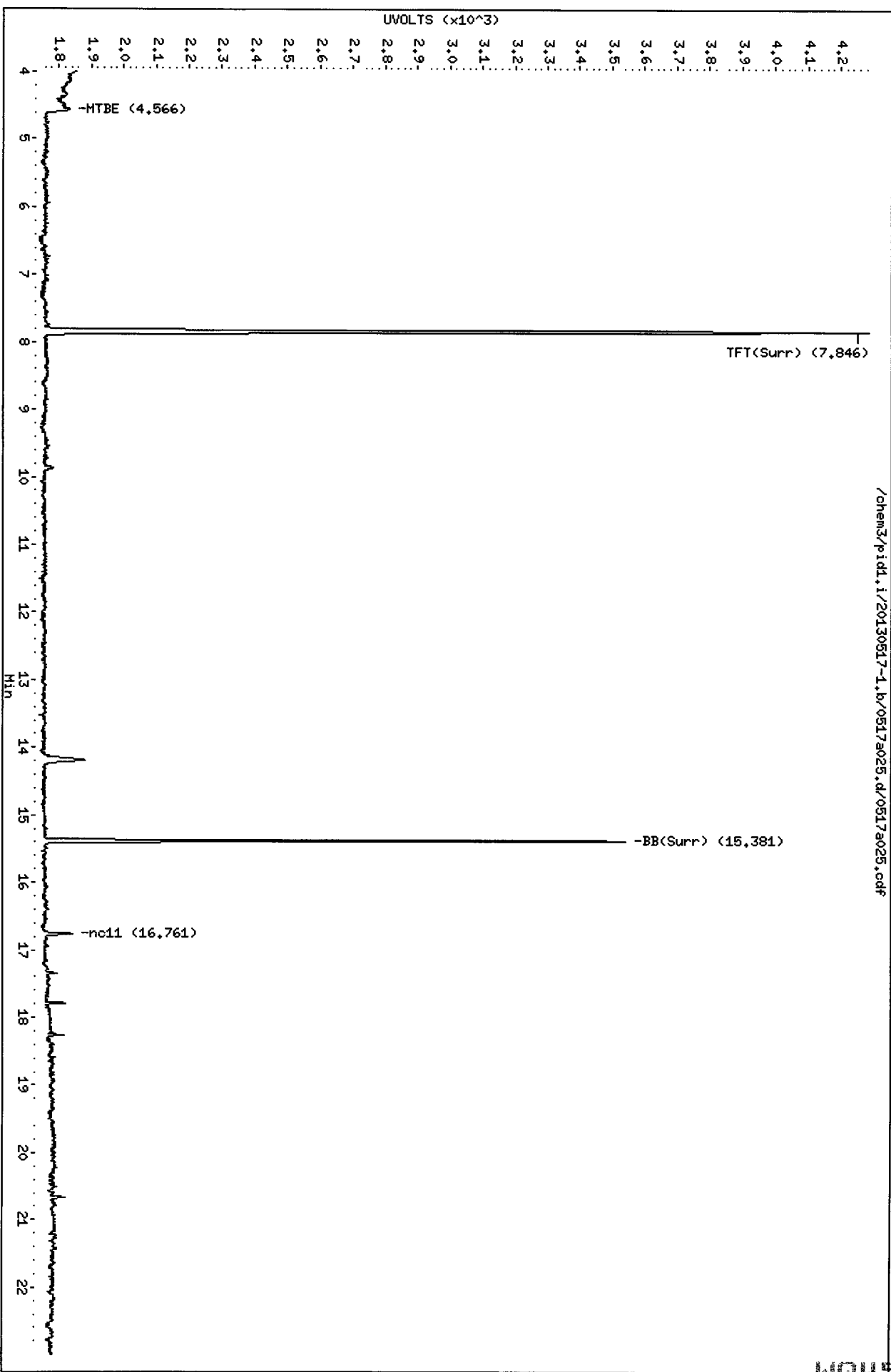
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a025.d
Date: 18-MAY-2013 02:23
Client ID: A2-M7-S-4
Sample Info: MQ45G

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



00100 : 0015

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W8-S-4

SAMPLE

Lab Sample ID: WQ45H

LIMS ID: 13-10651

Matrix: Soil

Data Release Authorized: *MWJ*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 03:53

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 92 mg-dry-wt

Percent Moisture: 10.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	27	< 27 U
95-47-6	o-Xylene	14	< 14 U

Gasoline Range Hydrocarbons	5.4	< 5.4 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	74.8%
Bromobenzene	80.3%

Gasoline Surrogate Recovery

Trifluorotoluene	77.8%
Bromobenzene	82.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a028.d ARI ID: WQ45H
Data file 2: /chem3/pid1.i/20130517-2.b/0517a028.d Client ID: A2-W8-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 03:53
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.000	2698	33833	77.8	TFT(Surr)
15.380	0.000	1886	15724	82.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	4921	0.014
8015C 2MP-TMB (4.17 to 16.20)	723723	10815	0.015
AK101 nC6-nC10 (4.67 to 15.10)	582885	10279	0.018
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4921	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.000	2970	74.8	TFT(Surr)
15.389	0.000	7056	80.3	BB(Surr)

SW8021 (PID)

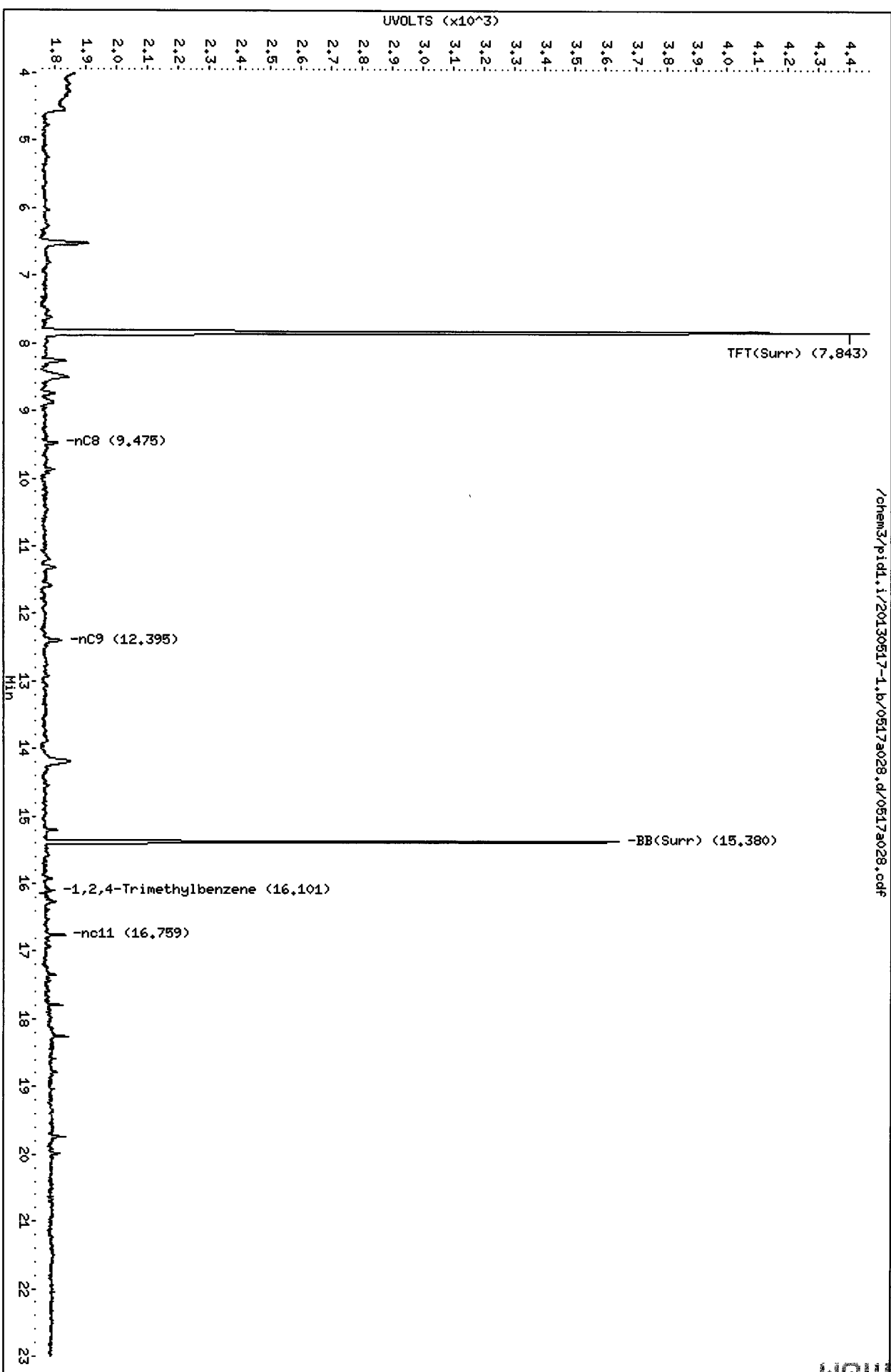
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a028.d
Date: 18-MAY-2013 03:53
Client ID: A2-M8-S-4
Sample Info: MQ45H

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130517-1.b/0517a028.d/0517a028.cdf

20130517 03:53

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W9-S-4

SAMPLE

Lab Sample ID: WQ45I

LIMS ID: 13-10652

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 04:23

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 57 mg-dry-wt

Percent Moisture: 24.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	22	< 22 U
108-88-3	Toluene	22	33
100-41-4	Ethylbenzene	22	< 22 U
179601-23-1	m,p-Xylene	44	< 44 U
95-47-6	o-Xylene	22	< 22 U

Gasoline Range Hydrocarbons	8.8	< 8.8 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	73.4%
Bromobenzene	79.3%

Gasoline Surrogate Recovery

Trifluorotoluene	77.0%
Bromobenzene	82.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a029.d ARI ID: WQ45I
Data file 2: /chem3/pid1.i/20130517-2.b/0517a029.d Client ID: A2-W9-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 04:23
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.844	0.000	2670	33412	77.0	TFT(Surr)
15.381	0.001	1882	15589	82.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	4595	0.013
8015C 2MP-TMB (4.17 to 16.20)	723723	3391	0.005
AK101 nC6-nC10 (4.67 to 15.10)	582885	1744	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4595	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.852	0.000	2912	73.4	TFT(Surr)
15.388	0.000	6974	79.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
9.877	-0.002	86	0.38N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a029.d

Date: 18-MAY-2013 04:23

Client ID: A2-M9-S-4

Sample Info: MQ451

Column phase: RTX 502-2 FID

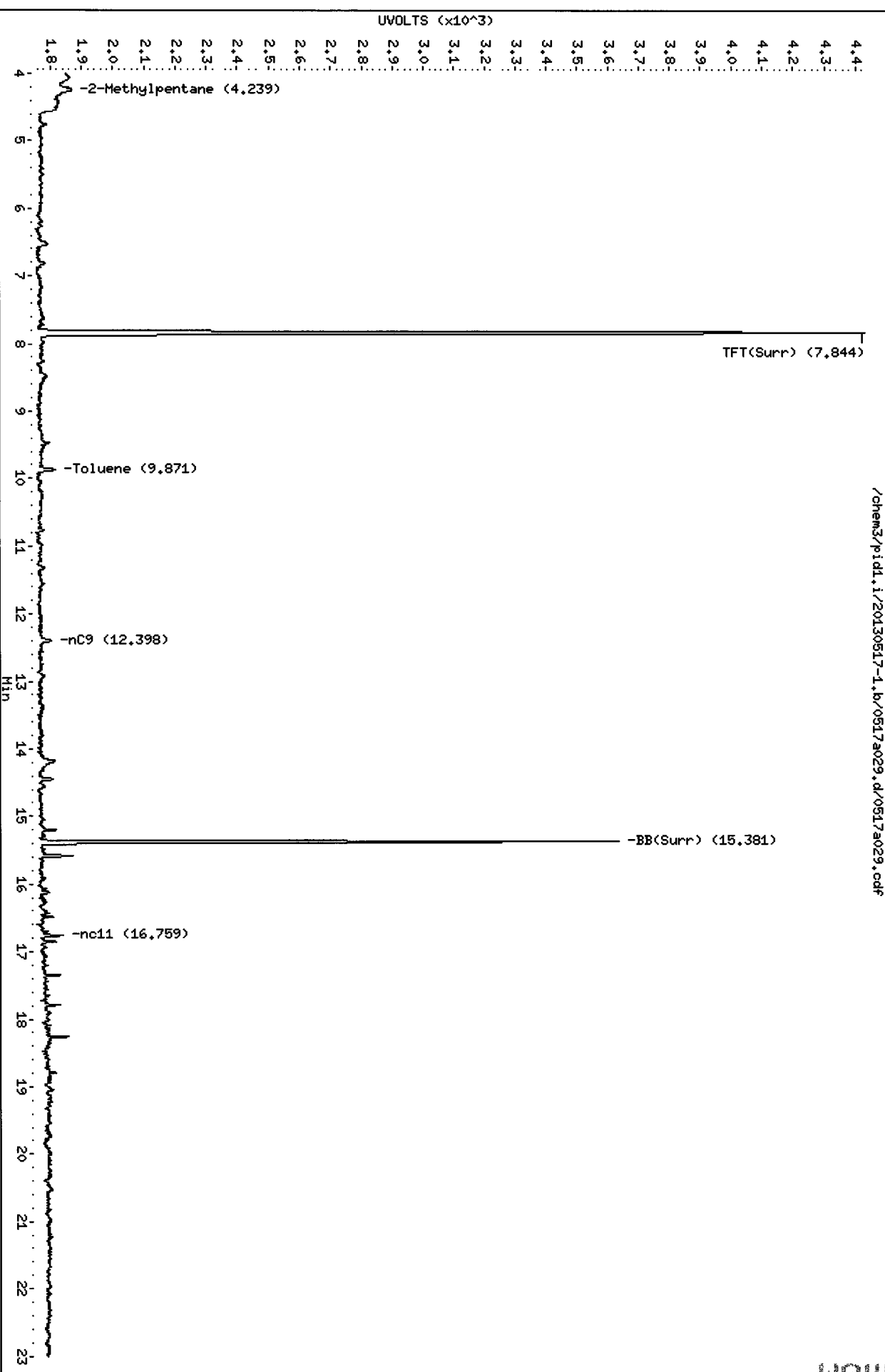
Page 1

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

/chem3/pid1.i/20130517-1.b/0517a029.d/0517a029.cdf

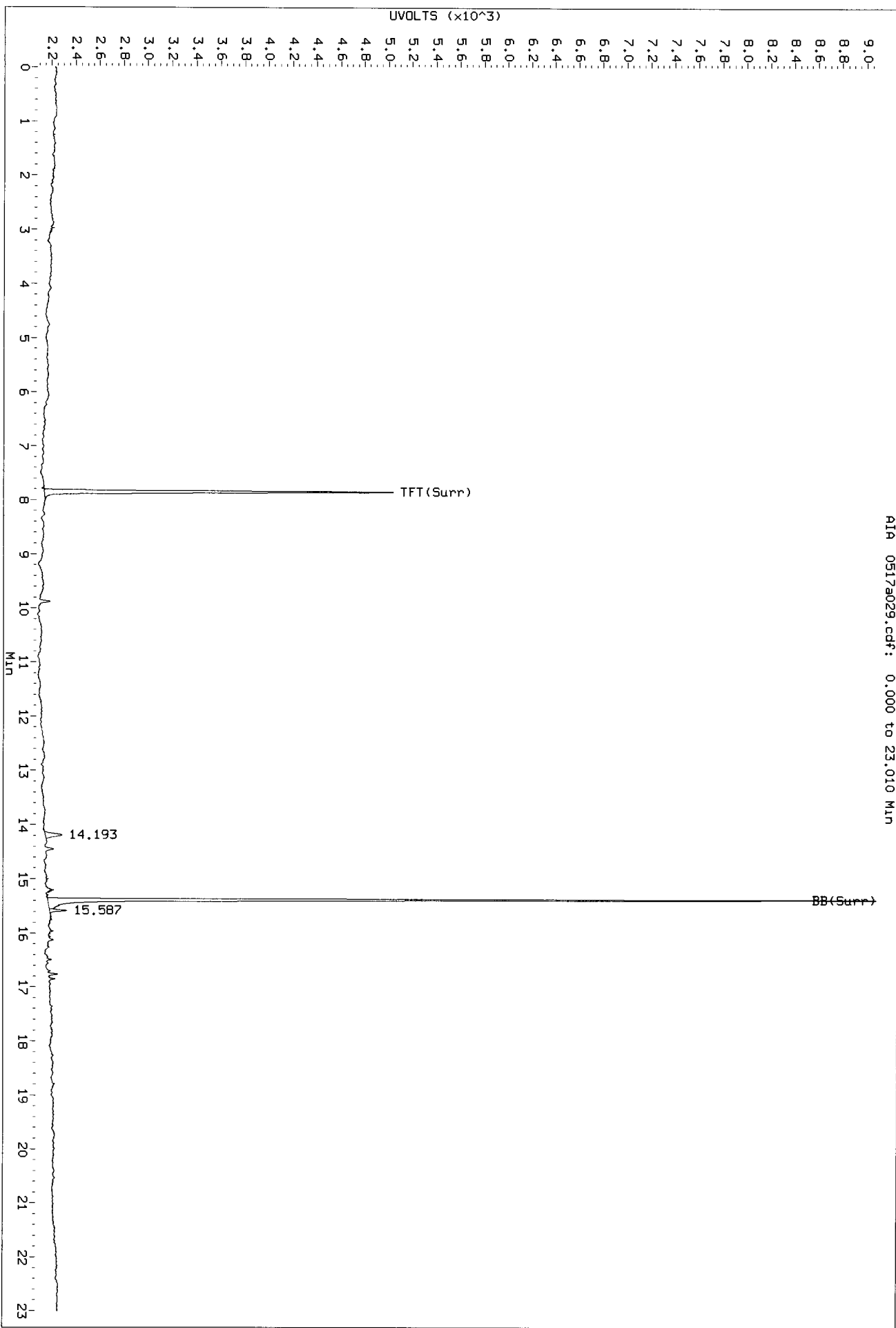


00145 : 00145

PK
5/15/13

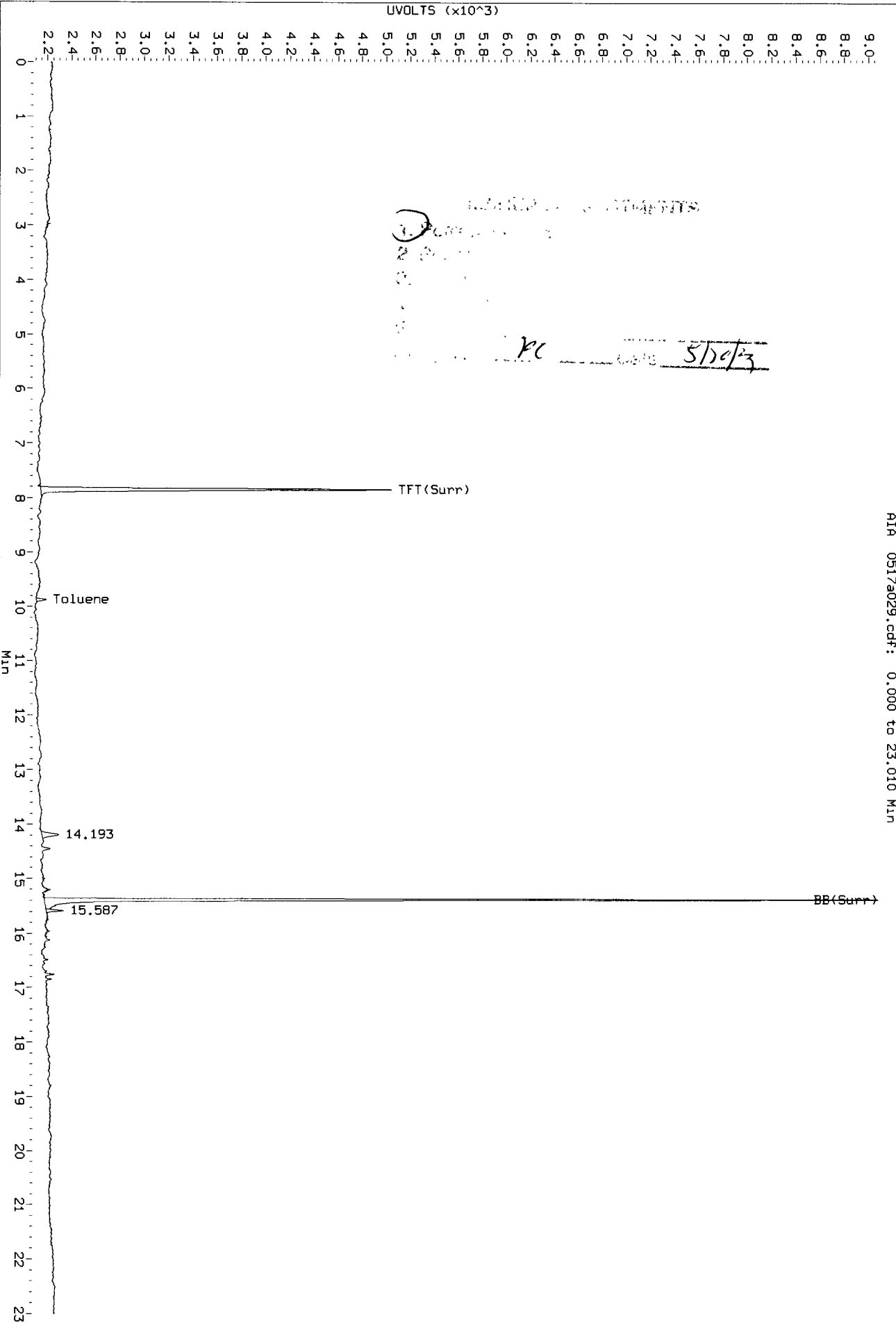
Data File: /chem3/pd1.1/20130517-2.b/0517a029.d/0517a029.cdf
Injection Date: 18-May-2013 04:23
Instrument: pd1.1
Client Sample ID: A2-W9-S-4

AIA 0517a029.cdf: 0.000 to 23.010 Min



Data File: /chem3/p1d1.1/20130517-2.b/0517a029.d/0517a029.cdf
Injection Date: 18-MAY-2013 04:23
Instrument: p1d1.1
Client Sample ID: A2-W9-S-4

AIA 0517a029.cdf: 0.000 to 23.010 Min





ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W10-S-4

SAMPLE

Lab Sample ID: WQ45J

LIMS ID: 13-10653

Matrix: Soil

Data Release Authorized: *WJW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/18/13 04:54

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 48 mg-dry-wt

Percent Moisture: 26.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	26	< 26 U
108-88-3	Toluene	26	32
100-41-4	Ethylbenzene	26	< 26 U
179601-23-1	m,p-Xylene	52	< 52 U
95-47-6	o-Xylene	26	< 26 U

	RL	Result	GAS ID
Gasoline Range Hydrocarbons	10	< 10 U	---

BETX Surrogate Recovery

Trifluorotoluene	75.6%
Bromobenzene	81.1%

Gasoline Surrogate Recovery

Trifluorotoluene	78.8%
Bromobenzene	83.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a030.d ARI ID: WQ45J
Data file 2: /chem3/pid1.i/20130517-2.b/0517a030.d Client ID: A2-W10-S-4
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 18-MAY-2013 04:54
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.844	0.000	2732	34557	78.8	TFT(Surr)
15.381	0.001	1908	16000	83.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	4706	0.013
8015C 2MP-TMB (4.17 to 16.20)	723723	3648	0.005
AK101 nC6-nC10 (4.67 to 15.10)	582885	2800	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4706	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.852	0.001	3001	75.6	TFT(Surr)
15.389	0.000	7128	81.1	BB(Surr)

SW8021 (PID)

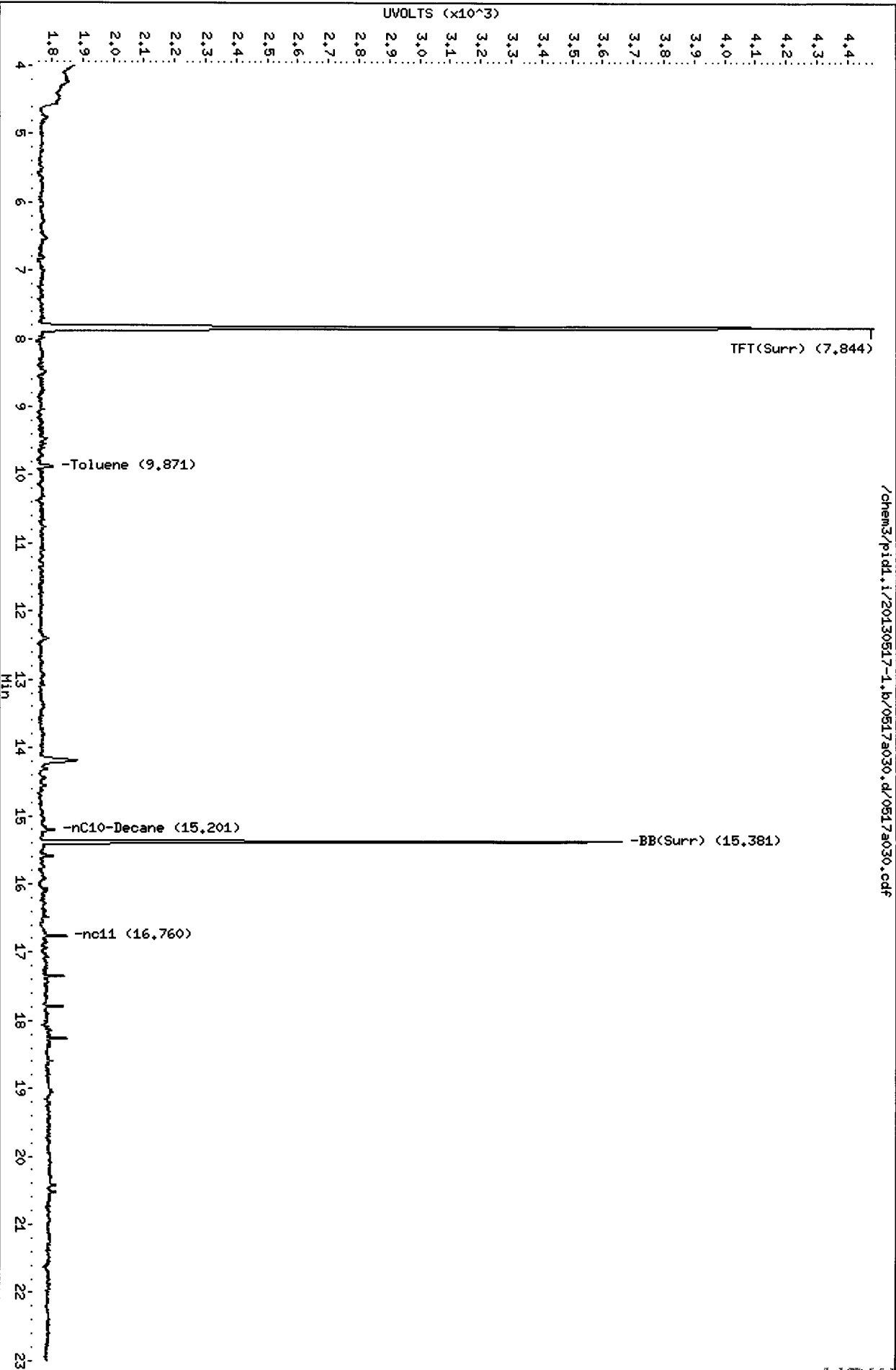
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
9.880	0.002	72	0.31N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a030.d
Date: 18-MAY-2013 04:54
Client ID: A2-M10-S-4
Sample Info: MQ45J

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

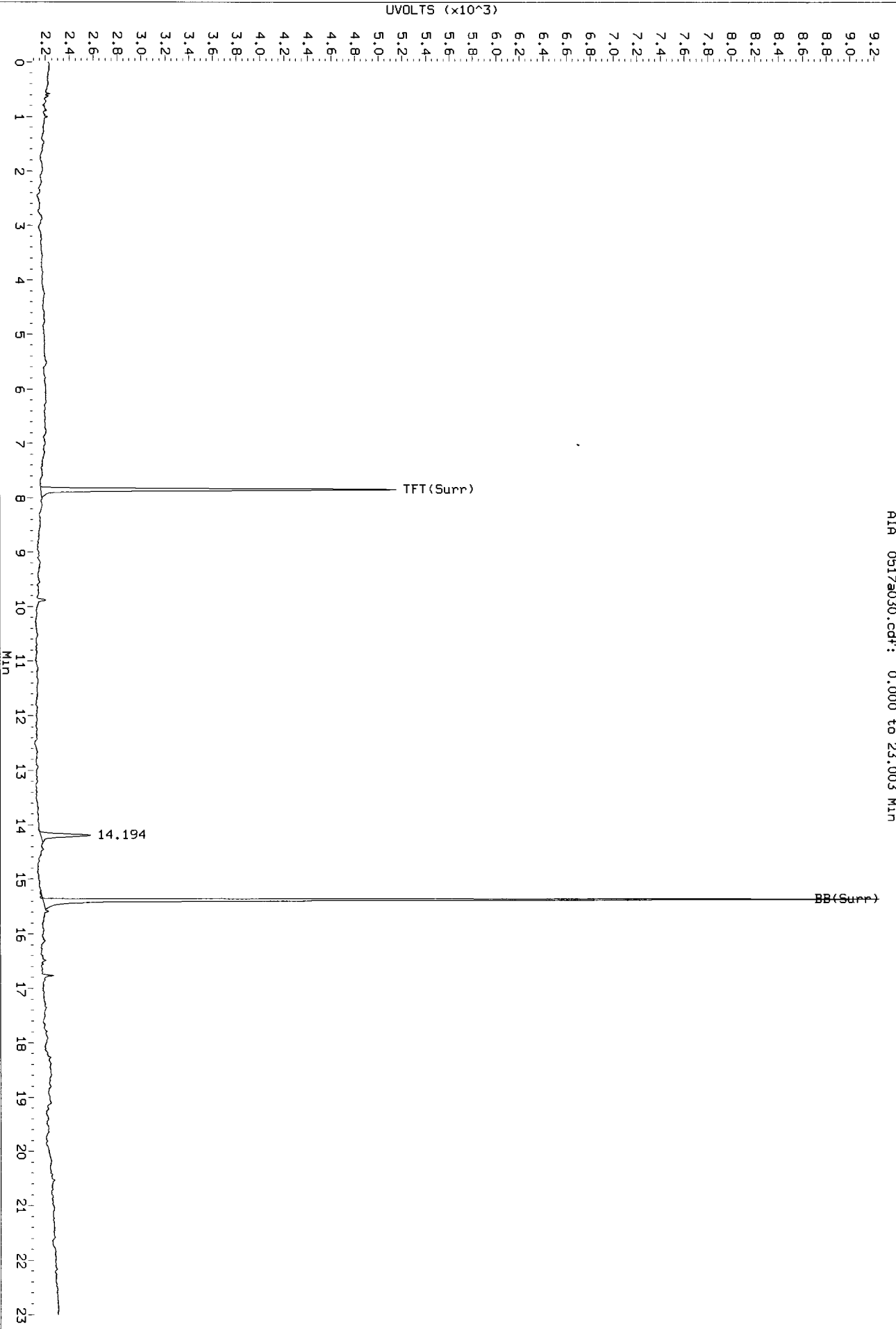


051701: 00150

ML
5/20/13

Data File: /chem3/pid1.1/20130517-2.b/0517a030.d/0517a030.cdf
Injection Date: 18-MAY-2013 04:34
Instrument: pid1.1
Client Sample ID: A2-W10-S-4

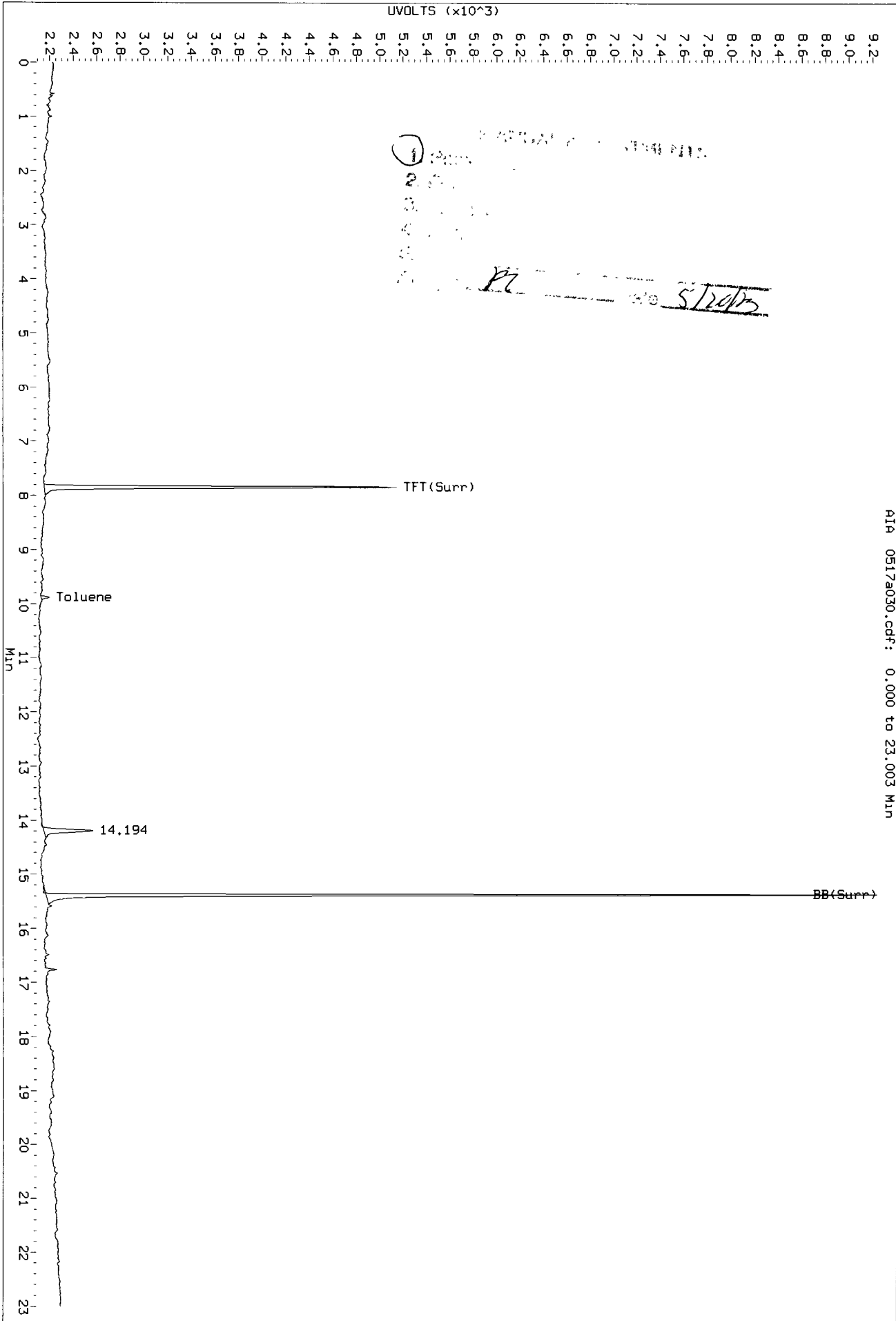
AIR 0517a030.cdf: 0.000 to 23.003 Min



051705 : 00151

Data File: /chem3/pid1.1/20130517-2.b/0517a030.d/0517a030.cdf
Injection Date: 18-May-2013 04:54
Instrument: pid1.1
Client Sample ID: A2-W10-S-4

AIA 0517a030.cdf: 0.000 to 23.003 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W11-S-4

SAMPLE

Lab Sample ID: WQ45K

LIMS ID: 13-10654

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 11:57

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 13.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	6.1	< 6.1 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	72.0%
Bromobenzene	85.4%

Gasoline Surrogate Recovery

Trifluorotoluene	73.5%
Bromobenzene	88.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a007.d ARI ID: WQ45K
Data file 2: /chem3/pid1.i/20130520-2.b/0520a007.d Client ID: A2-W11-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 11:57
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.844	0.003	2551	32343	73.5	TFT(Surr)
15.380	0.002	2016	16676	88.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	489	0.001
8015C 2MP-TMB (4.17 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.89)	375093	489	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.004	2859	72.0	TFT(Surr)
15.388	0.003	7505	85.4	BB(Surr)

SW8021 (PID)

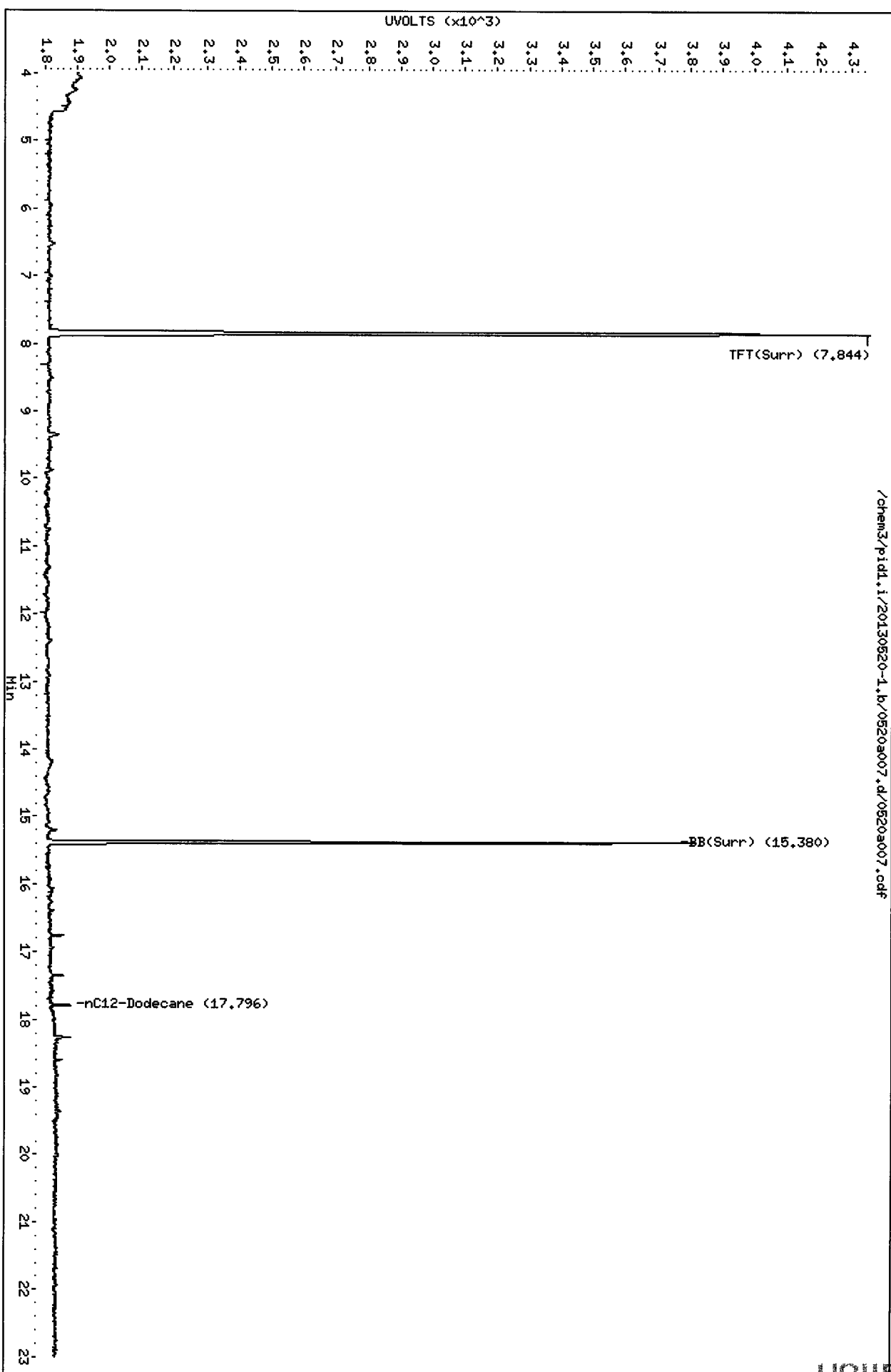
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a007.d
Date: 20-MAY-2013 11:57
Client ID: A2-M11-S-4
Sample Info: MQ45K

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

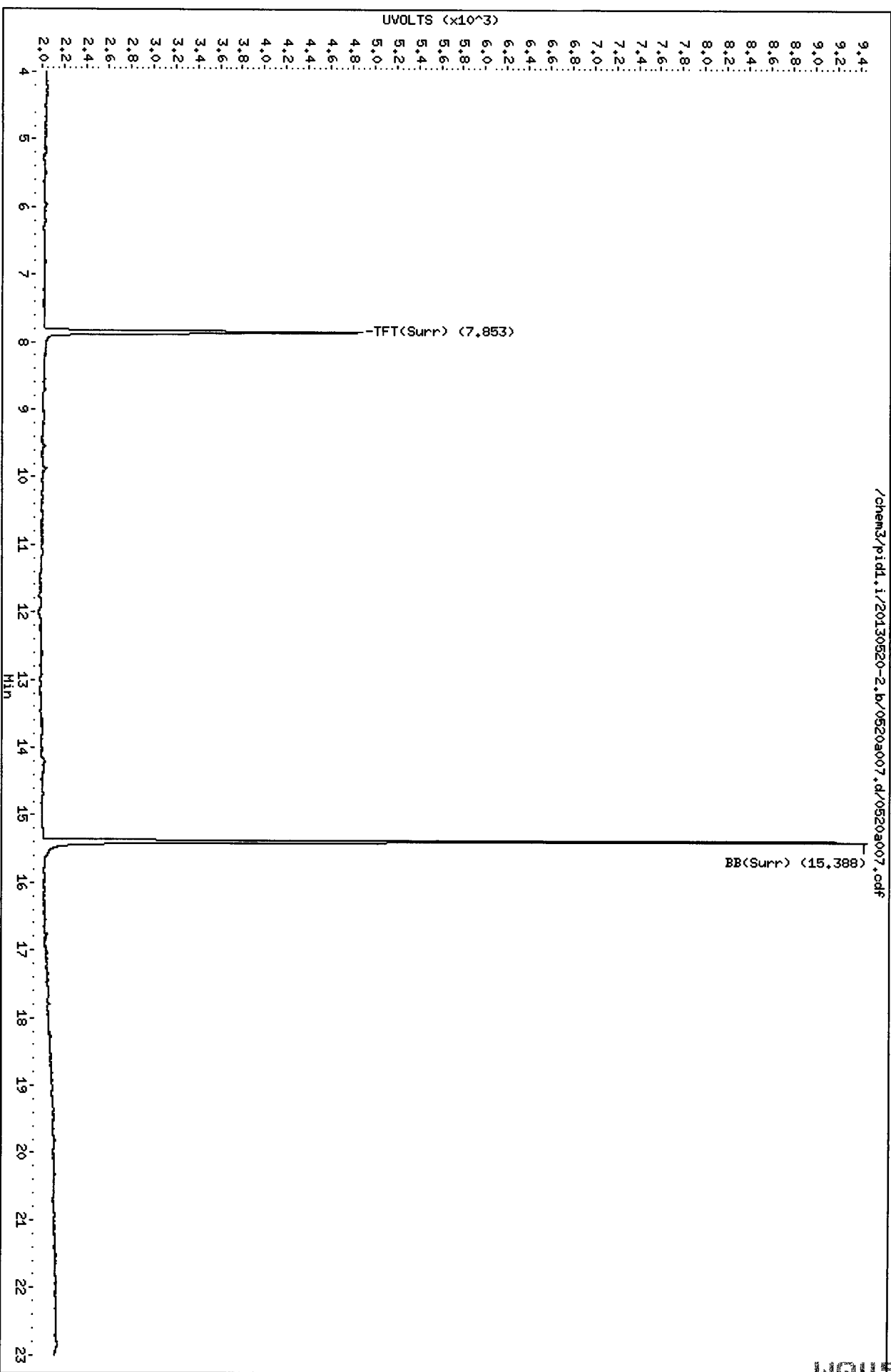


17 15 12 9 6 3 0

Data File: /chem3/pid1.i/20130520-2.b/0520a007.d
Date: 20-MAY-2013 11:57
Client ID: A2-M11-S-4
Sample Info: MQ45K

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W12-S-4

SAMPLE

Lab Sample ID: WQ45L

LIMS ID: 13-10655

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 12:26

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 67 mg-dry-wt

Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	< 19 U
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	19	< 19 U

	RL	Result	GAS ID
Gasoline Range Hydrocarbons	7.4	< 7.4 U	---

BETX Surrogate Recovery

Trifluorotoluene	70.6%
Bromobenzene	83.8%

Gasoline Surrogate Recovery

Trifluorotoluene	72.2%
Bromobenzene	86.9%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

FC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a008.d ARI ID: WQ45L
Data file 2: /chem3/pid1.i/20130520-2.b/0520a008.d Client ID: A2-W12-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 12:26
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.001	2504	31676	72.2	TFT(Surr)
15.379	0.002	1983	16380	86.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	1207	0.003
8015C 2MP-TMB (4.17 to 16.20)	723723	626	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	626	0.001
NWTPHG Tol-Nap (9.77 to 18.89)	375093	1207	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.001	2801	70.6	TFT(Surr)
15.386	0.002	7368	83.8	BB(Surr)

SW8021 (PID)

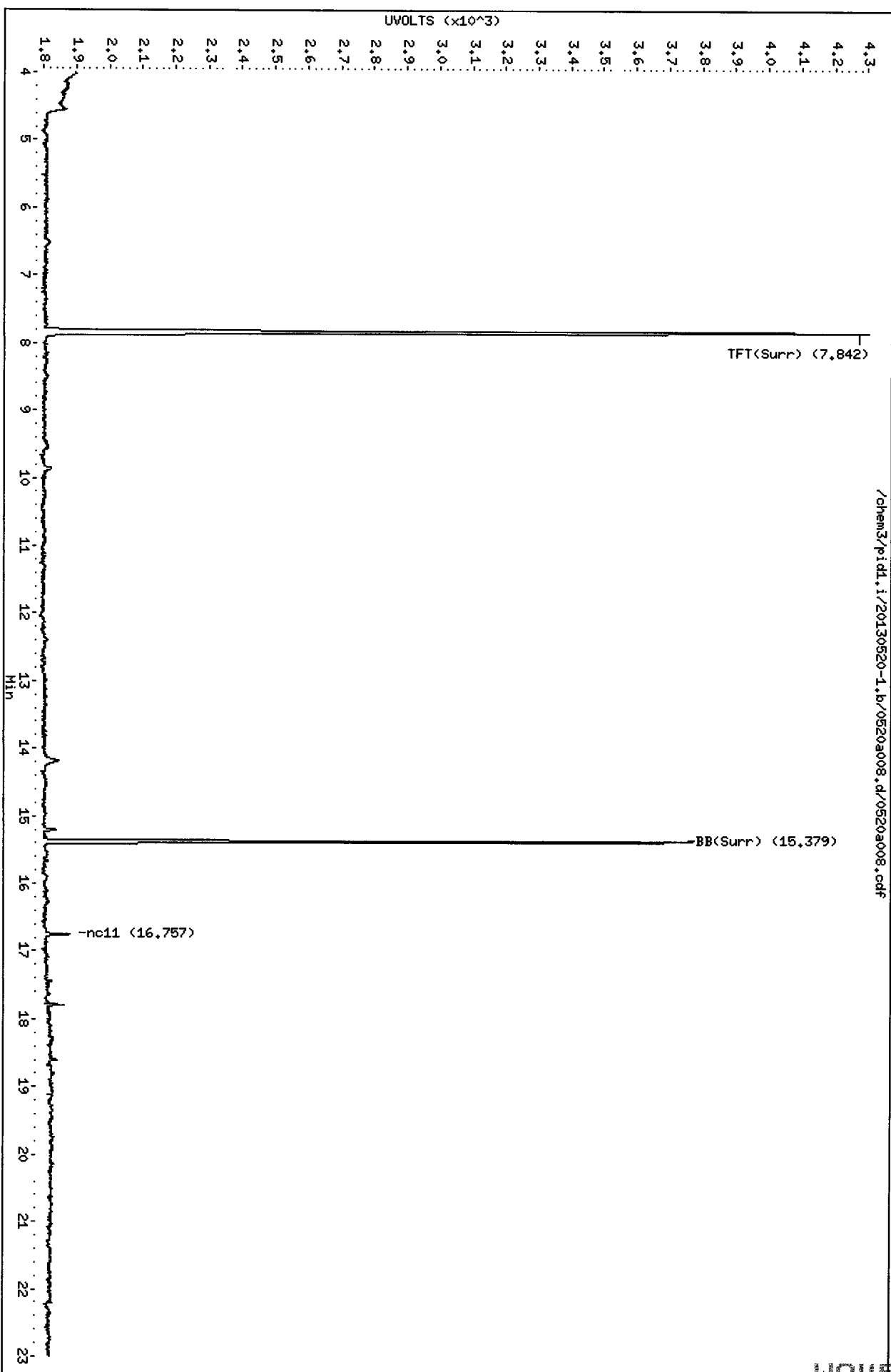
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a008.d
Date: 20-MAY-2013 12:26
Client ID: A2-M42-S-4
Sample Info: MQ45L

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130520-1.b/0520a008.d/0520a008.cdf

00150 : 5101

Data File: /chem3/pid1.i/20130520-2.b/0520a008.d

Date: 20-MAY-2013 12:26

Client ID: A2-M42-S-4

Sample Info: MQ45L

Page 1

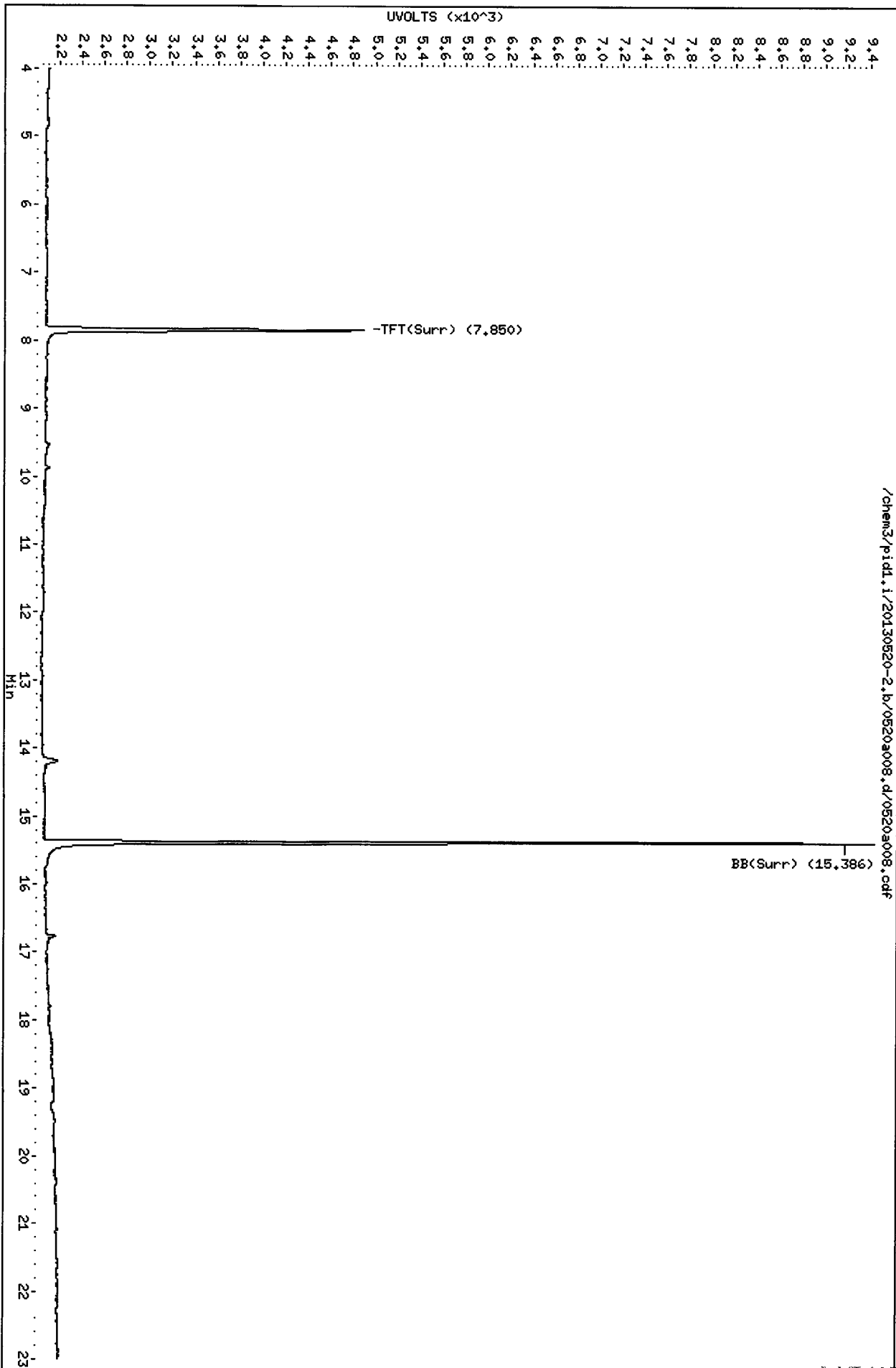
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130520-2.b/0520a008.d/0520a008.cdf



1045 : 00150

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W13-S-4

SAMPLE

Lab Sample ID: WQ45M

LIMS ID: 13-10656

Matrix: Soil

Data Release Authorized: *YWW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 12:56

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 21.6%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.6	< 6.6 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	72.8%
Bromobenzene	80.3%

Gasoline Surrogate Recovery

Trifluorotoluene	74.8%
Bromobenzene	83.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
5/2/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a009.d ARI ID: WQ45M
Data file 2: /chem3/pid1.i/20130520-2.b/0520a009.d Client ID: A2-W13-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 12:56
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.843	0.002	2595	32816	74.8	TFT(Surr)
15.379	0.002	1901	16023	83.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	0	0.000
8015C 2MP-TMB (4.17 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.89)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.851	0.002	2890	72.8	TFT(Surr)
15.387	0.002	7057	80.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/05203009.d
Date: 20-MAY-2013 12:56
Client ID: A2-M43-S-4
Sample Info: MQ45H

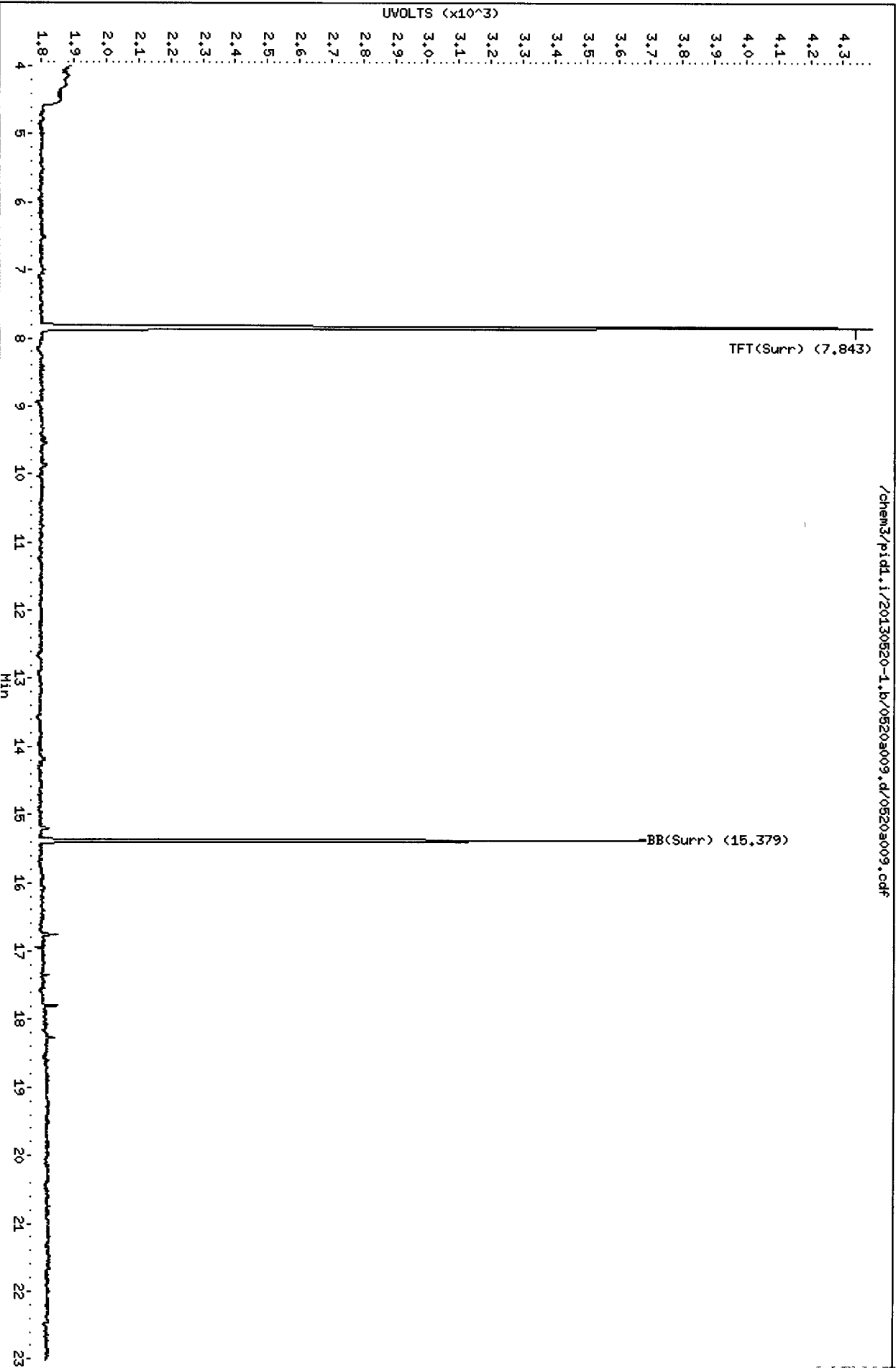
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 F1D

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-1.b/05203009.d/05203009.cdf



00150 : 00150

Data File: /chem3/pid1.i/20130520-2.b/05203009.d

Date: 20-MAY-2013 12:56

Client ID: A2-M43-S-4

Sample Info: MQ45H

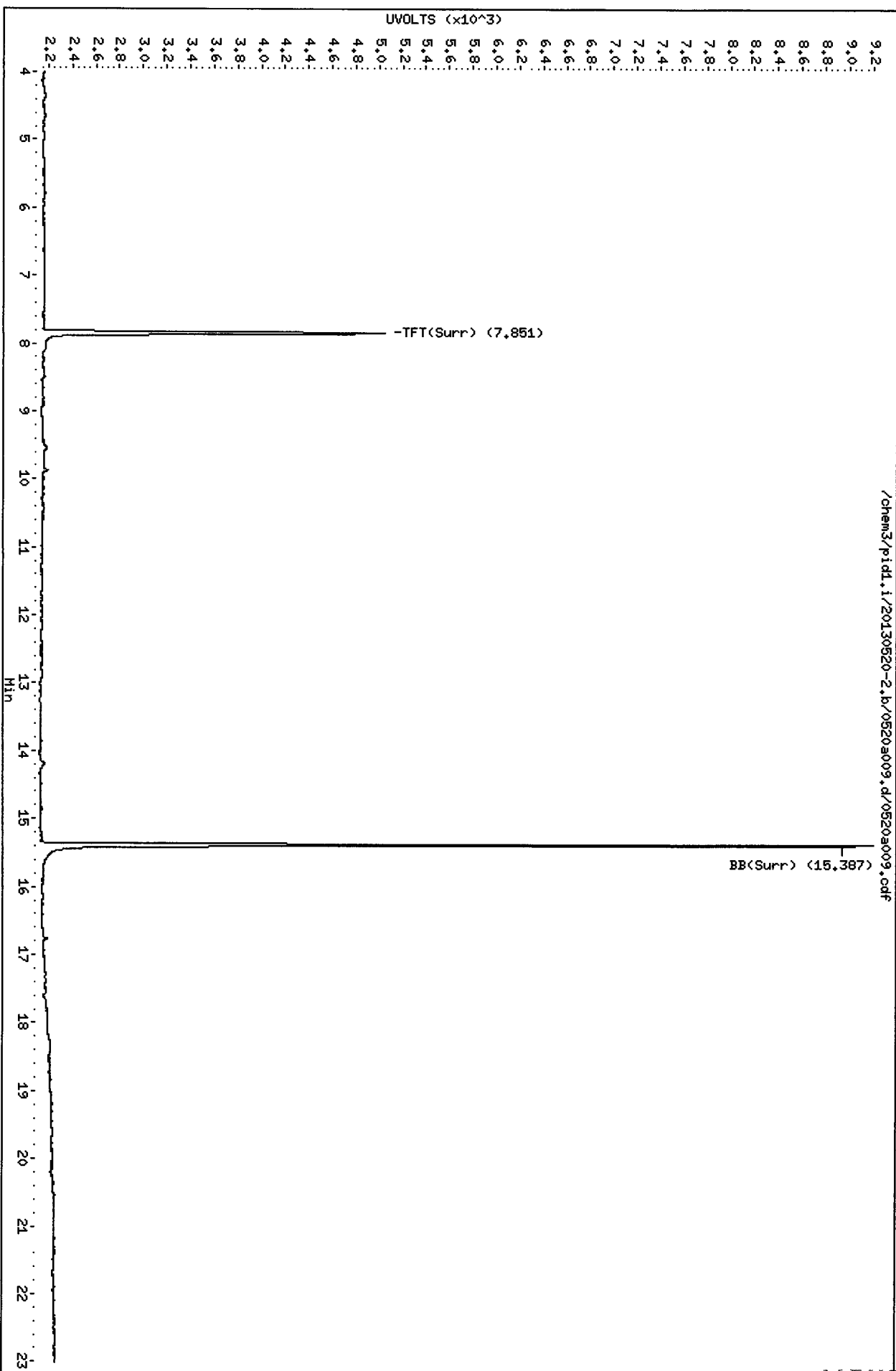
Page 1

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID



UVOLTS : 00107

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W14-S-4

SAMPLE

Lab Sample ID: WQ45N

LIMS ID: 13-10657

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 13:25

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 67 mg-dry-wt

Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	< 19 U
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	19	< 19 U

Gasoline Range Hydrocarbons	7.4	< 7.4 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	78.6%
Bromobenzene	86.1%

Gasoline Surrogate Recovery

Trifluorotoluene	80.8%
Bromobenzene	88.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

100
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a010.d ARI ID: WQ45N
Data file 2: /chem3/pid1.i/20130520-2.b/0520a010.d Client ID: A2-W14-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 13:25
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.844	0.002	2804	35322	80.8	TFT(Surr)
15.379	0.002	2016	16755	88.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	473	0.001
8015C 2MP-TMB (4.17 to 16.20)	723723	473	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	472	0.001
NWTPHG Tol-Nap (9.77 to 18.89)	375093	473	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.851	0.002	3120	78.6	TFT(Surr)
15.387	0.003	7565	86.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a010.d

Date: 20-MAY-2013 13:25

Client ID: A2-M44-S-4

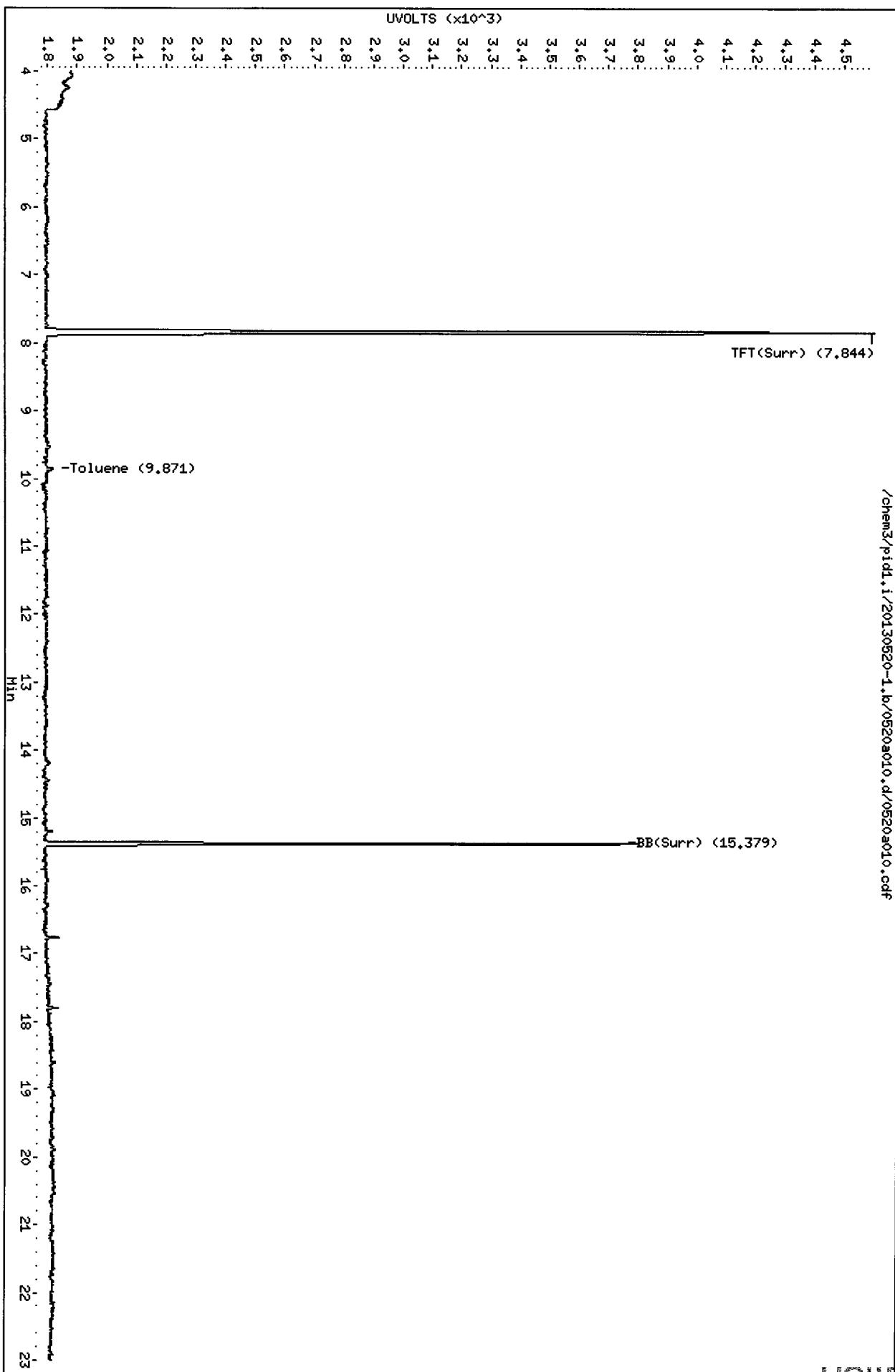
Sample Info: MQ45N

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



/chem3/pid1.i/20130520-1.b/0520a010.d/0520a010.cdf

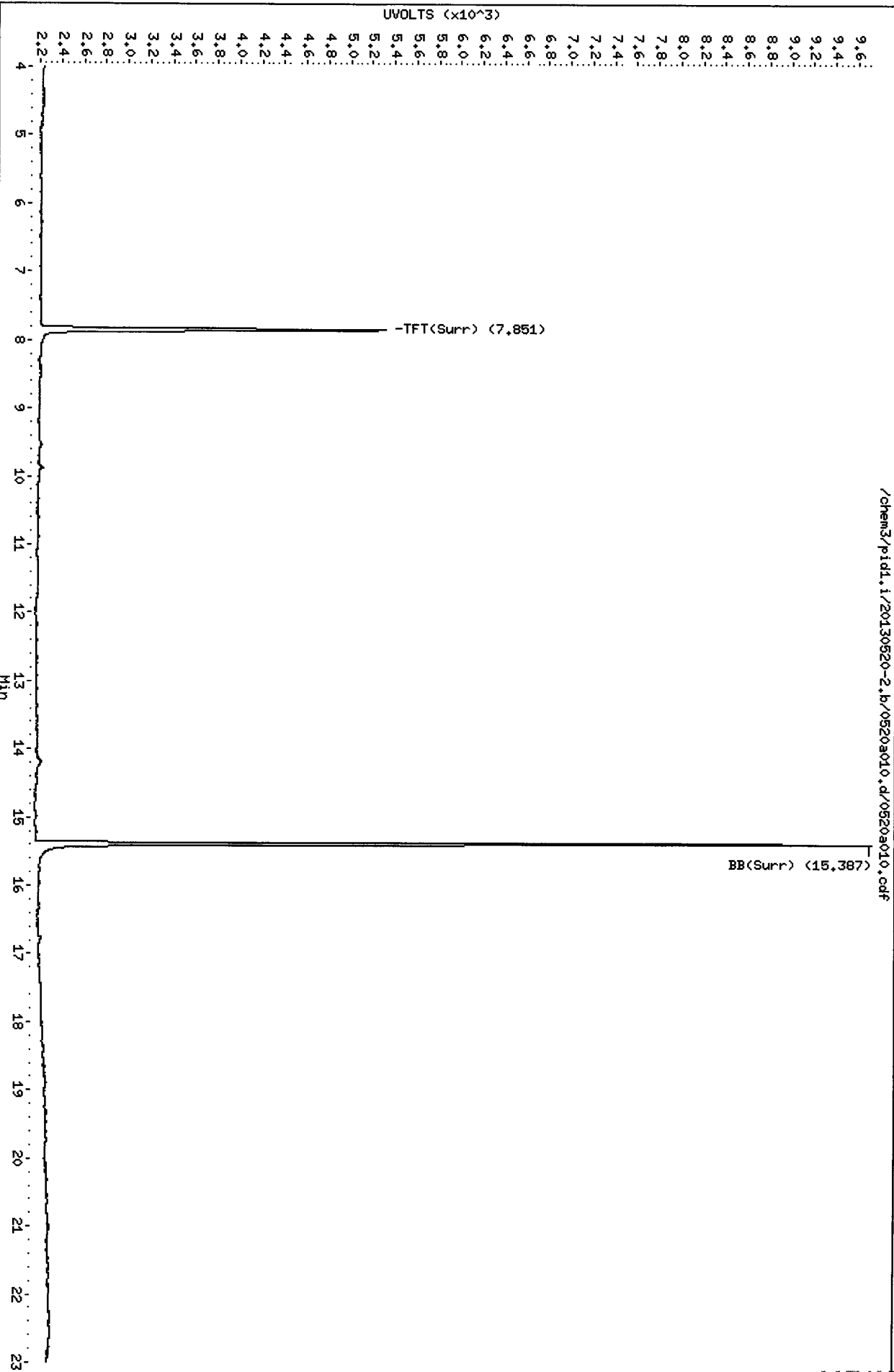
20130520 13:25

Data File: /chem3/pid1.i/20130520-2.b/0520a010.d
Date: 20-MAY-2013 13:25
Client ID: A2-M44-S-4
Sample Info: MQ45N

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130520-2.b/0520a010.d/0520a010.cdf

051001 : 1200

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W15-S-4

SAMPLE

Lab Sample ID: WQ450

LIMS ID: 13-10658

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 13:54

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 83 mg-dry-wt

Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	6.0	< 6.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	78.7%
Bromobenzene	86.4%

Gasoline Surrogate Recovery

Trifluorotoluene	81.0%
Bromobenzene	88.8%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a011.d ARI ID: WQ450
Data file 2: /chem3/pid1.i/20130520-2.b/0520a011.d Client ID: A2-W15-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 13:54
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.843	0.002	2808	35593	81.0	TFT(Surr)
15.379	0.002	2026	17232	88.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	7522	0.021
8015C 2MP-TMB (4.17 to 16.20)	723723	6769	0.009
AK101 nC6-nC10 (4.67 to 15.10)	582885	6768	0.012
NWTPHG Tol-Nap (9.77 to 18.89)	375093	7522	0.020

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.851	0.002	3124	78.7	TFT(Surr)
15.387	0.002	7593	86.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

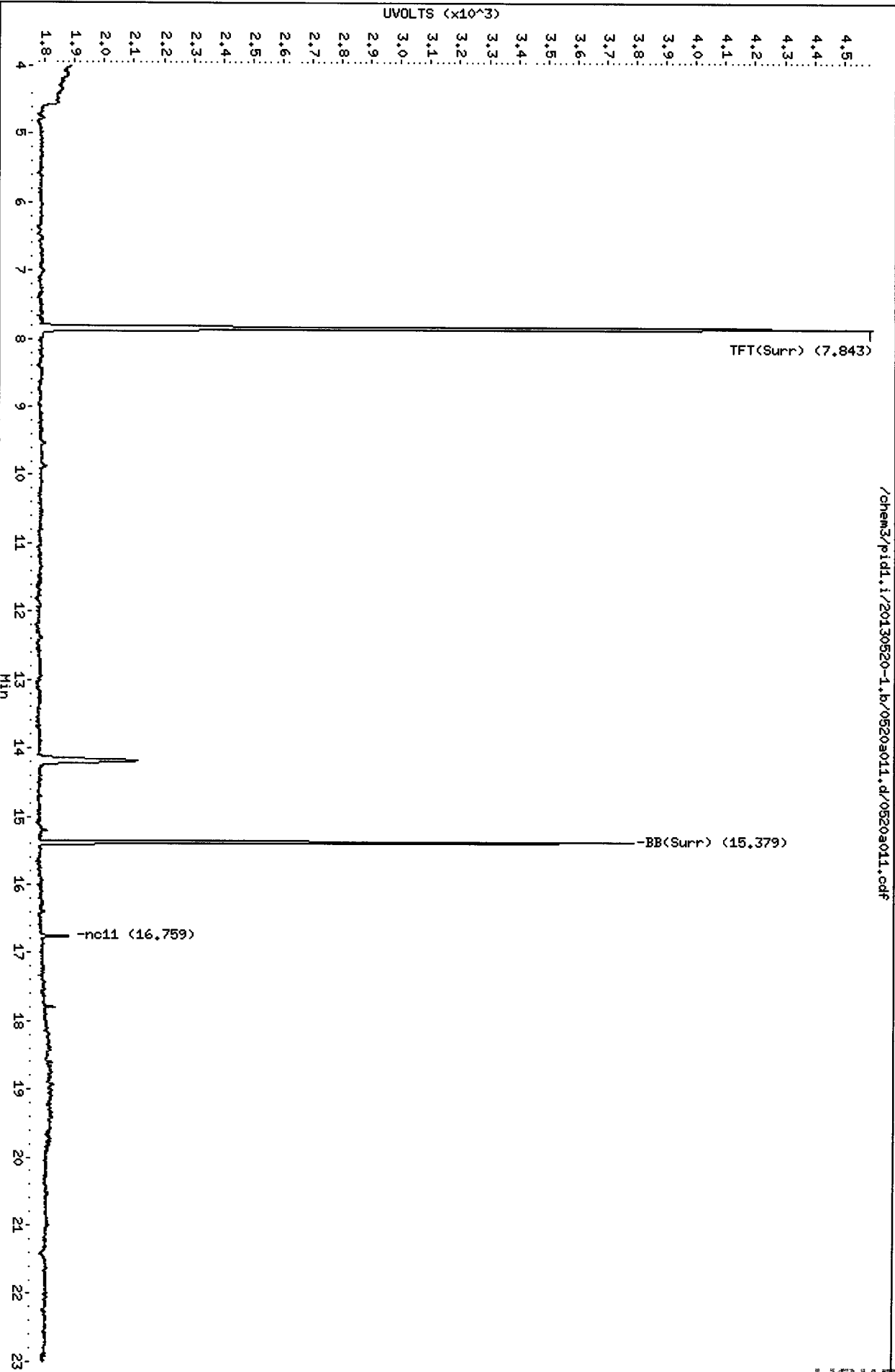
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a011.d
Date: 20-May-2013 13:54
Client ID: R2-M15-S-4
Sample Info: MQ450

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130520-1.b/0520a011.d/0520a011.cdf

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

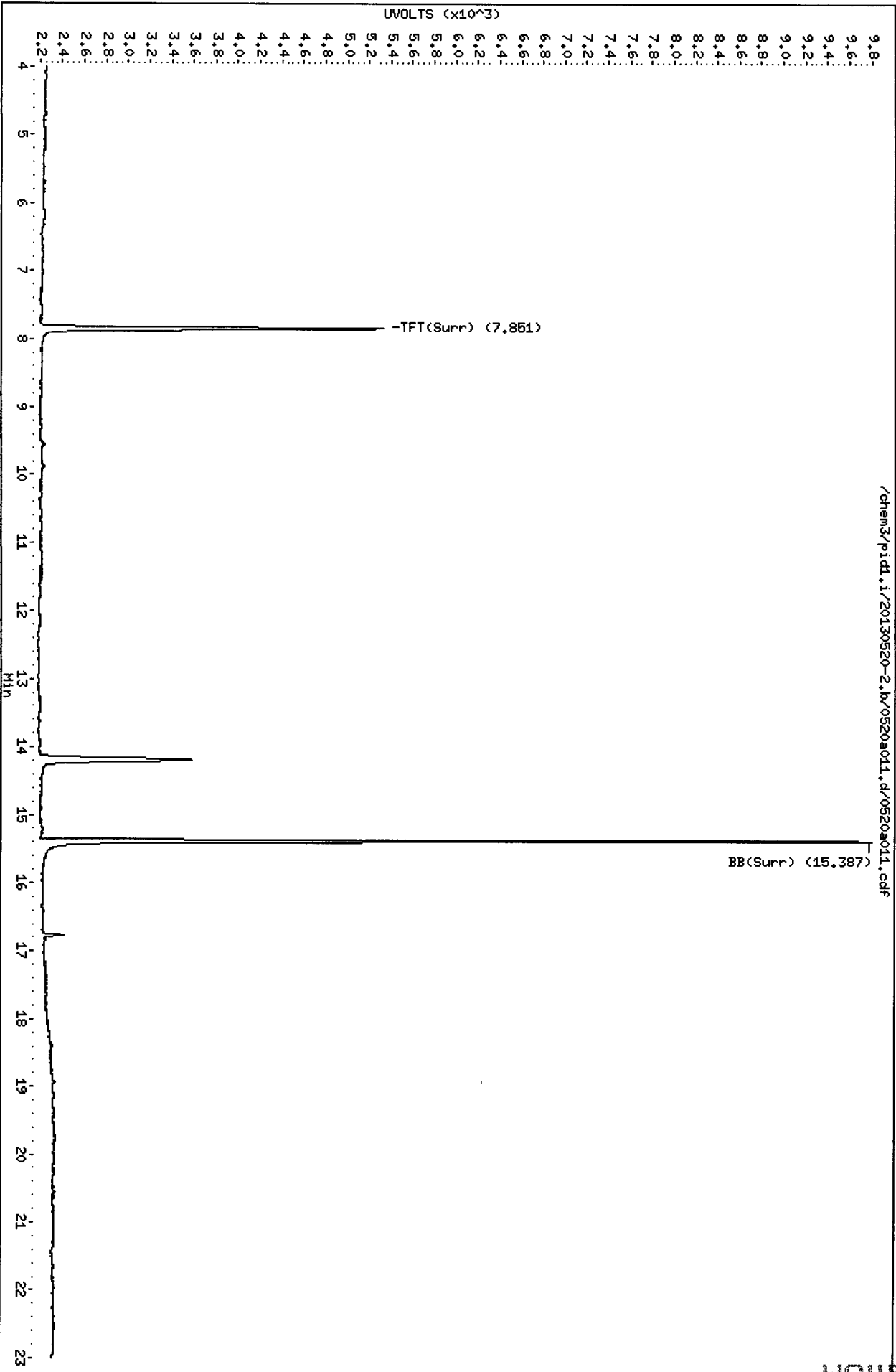


WQ15 : 00171

Data File: /chem3/pid1.i/20130520-2.k/0520a011.d
Date: 20-May-2013 13:54
Client ID: A2-M15-S-4
Sample Info: M0450

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130520-2.k/0520a011.d/0520a011.cdf

100172 : 0015

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W16-S-4

SAMPLE

Lab Sample ID: WQ45P

LIMS ID: 13-10659

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 14:23

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 23.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	18	< 18 U

Gasoline Range Hydrocarbons	7.4	< 7.4 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	78.2%
Bromobenzene	86.5%

Gasoline Surrogate Recovery

Trifluorotoluene	80.8%
Bromobenzene	88.8%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
3/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a012.d ARI ID: WQ45P
Data file 2: /chem3/pid1.i/20130520-2.b/0520a012.d Client ID: A2-W16-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 14:23
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.003	2801	35413	80.8	TFT(Surr)
15.380	0.003	2027	16867	88.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	411	0.001
8015C 2MP-TMB (4.17 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.89)	375093	411	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3105	78.2	TFT(Surr)
15.388	0.003	7601	86.5	BB(Surr)

SW8021 (PID)

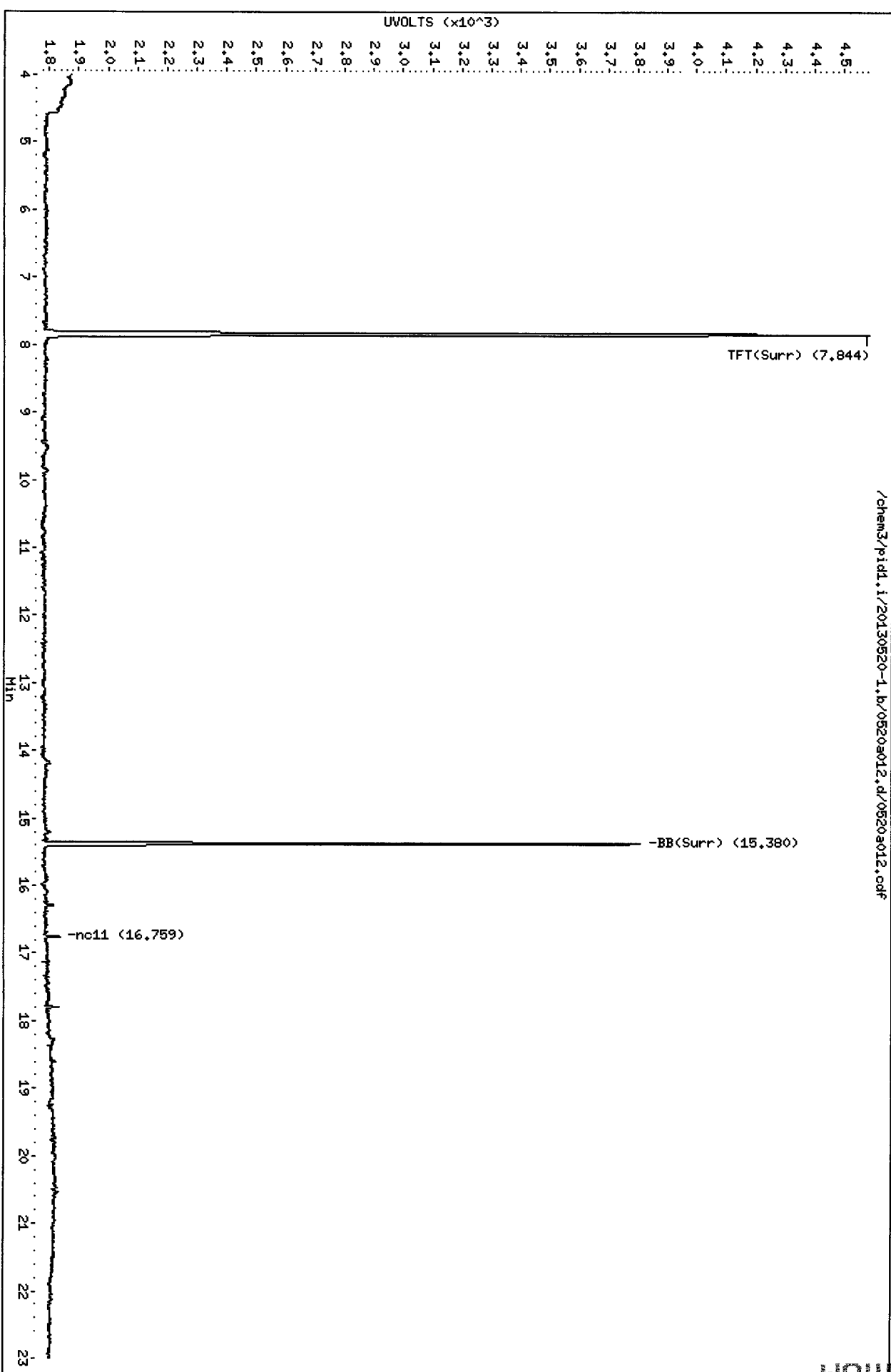
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520s012.d
Date: 20-May-2013 14:23
Client ID: A2-M16-S-4
Sample Info: MQ45P

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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Data File: /chem3/pid1.i/20130520-2.b/0520a012.d

Date: 20-MAY-2013 14:23

Client ID: A2-M16-S-4

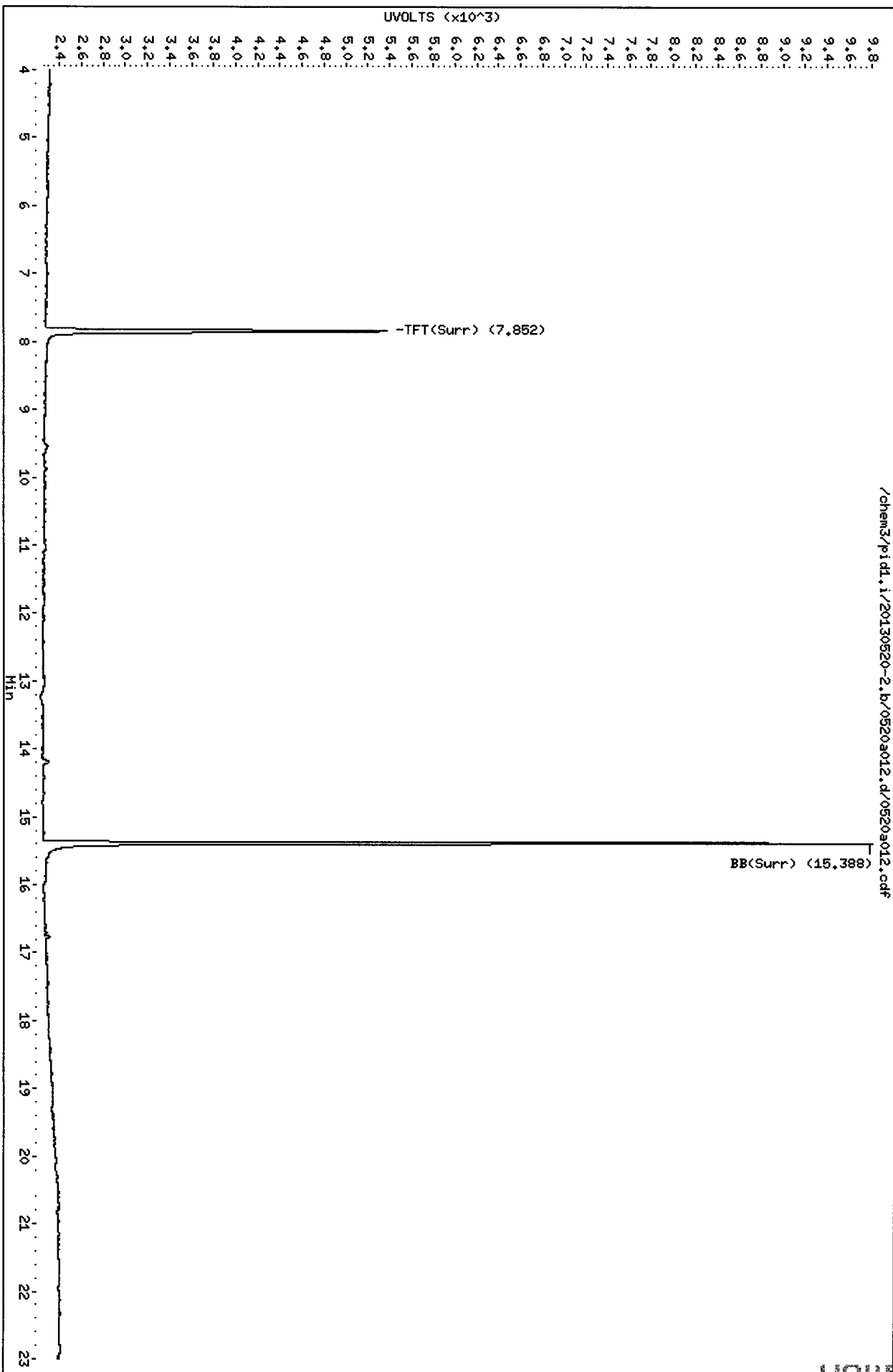
Sample Info: MQ4SP

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021EMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W17-S-4
SAMPLE

Lab Sample ID: WQ45Q
 LIMS ID: 13-10660
 Matrix: Soil
 Data Release Authorized: *MMW*
 Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Analyzed: 05/20/13 14:52
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 49 mg-dry-wt
 Percent Moisture: 36.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	26	< 26 U
108-88-3	Toluene	26	< 26 U
100-41-4	Ethylbenzene	26	< 26 U
179601-23-1	m,p-Xylene	51	< 51 U
95-47-6	o-Xylene	26	< 26 U

Gasoline Range Hydrocarbons 10 < 10 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	77.2%
Bromobenzene	85.6%

Gasoline Surrogate Recovery

Trifluorotoluene	79.5%
Bromobenzene	88.2%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a013.d ARI ID: WQ45Q
Data file 2: /chem3/pid1.i/20130520-2.b/0520a013.d Client ID: A2-W17-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 14:52
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.846	0.004	2758	34868	79.5	TFT(Surr)
15.381	0.004	2013	16887	88.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	971	0.003
8015C 2MP-TMB (4.17 to 16.20)	723723	2	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.89)	375093	971	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.854	0.005	3066	77.2	TFT(Surr)
15.388	0.004	7525	85.6	BB(Surr)

SW8021 (PID)

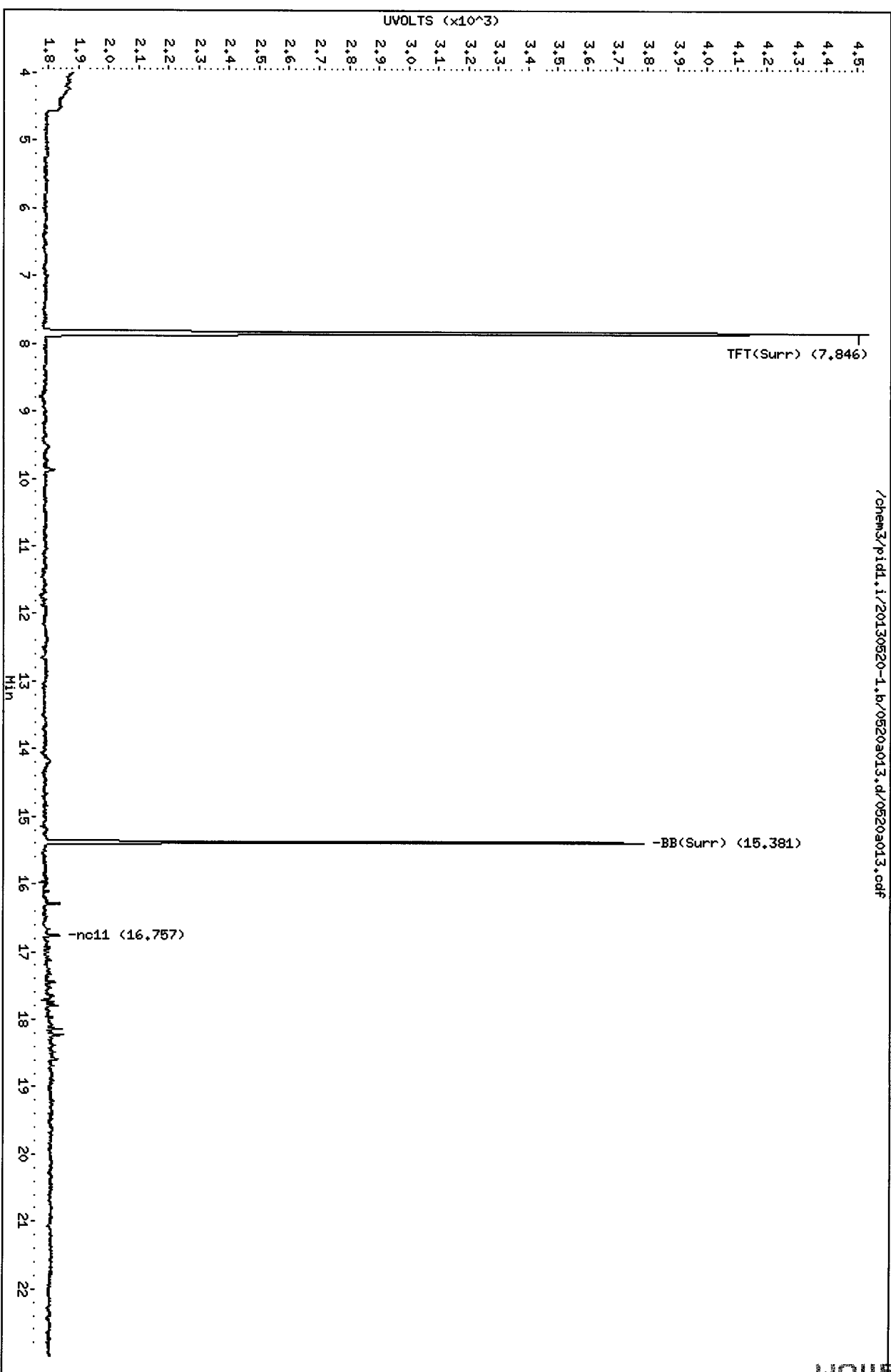
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.877	0.002	55	0.24N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a013.d
Date: 20-MAY-2013 14:52
Client ID: A2-M17-S-4
Sample Info: M045Q

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130520-1.b/0520a013.d/0520a013.caf

00170 0015

Data File: /chem3/pid1.i/20130520-2.b/0520a013.d

Date: 20-MAY-2013 14:52

Client ID: A2-M47-S-4

Sample Info: MQ45Q

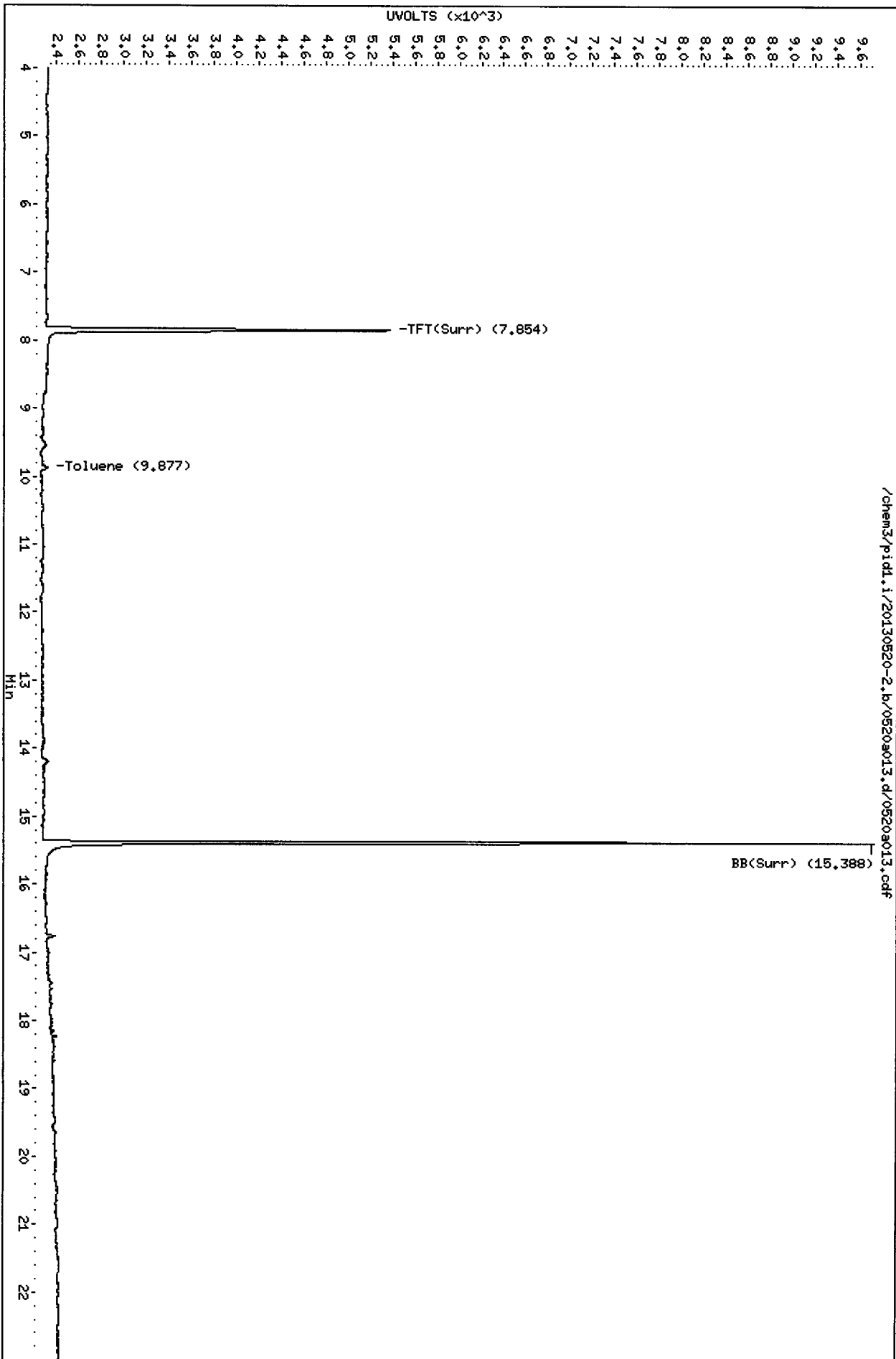
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1



WQ15 : 00180

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W18-S-4

SAMPLE

Lab Sample ID: WQ45R

LIMS ID: 13-10661

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 15:22

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 52 mg-dry-wt

Percent Moisture: 32.6%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	24	< 24 U
108-88-3	Toluene	24	< 24 U
100-41-4	Ethylbenzene	24	< 24 U
179601-23-1	m,p-Xylene	48	< 48 U
95-47-6	o-Xylene	24	< 24 U

Gasoline Range Hydrocarbons	9.7	< 9.7 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	76.1%
Bromobenzene	84.6%

Gasoline Surrogate Recovery

Trifluorotoluene	78.7%
Bromobenzene	87.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a014.d ARI ID: WQ45R
Data file 2: /chem3/pid1.i/20130520-2.b/0520a014.d Client ID: A2-W18-S-4
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 15:22
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.004	2731	34814	78.7	TFT(Surr)
15.380	0.003	1990	16571	87.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.17 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.89)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.004	3022	76.1	TFT(Surr)
15.388	0.003	7439	84.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

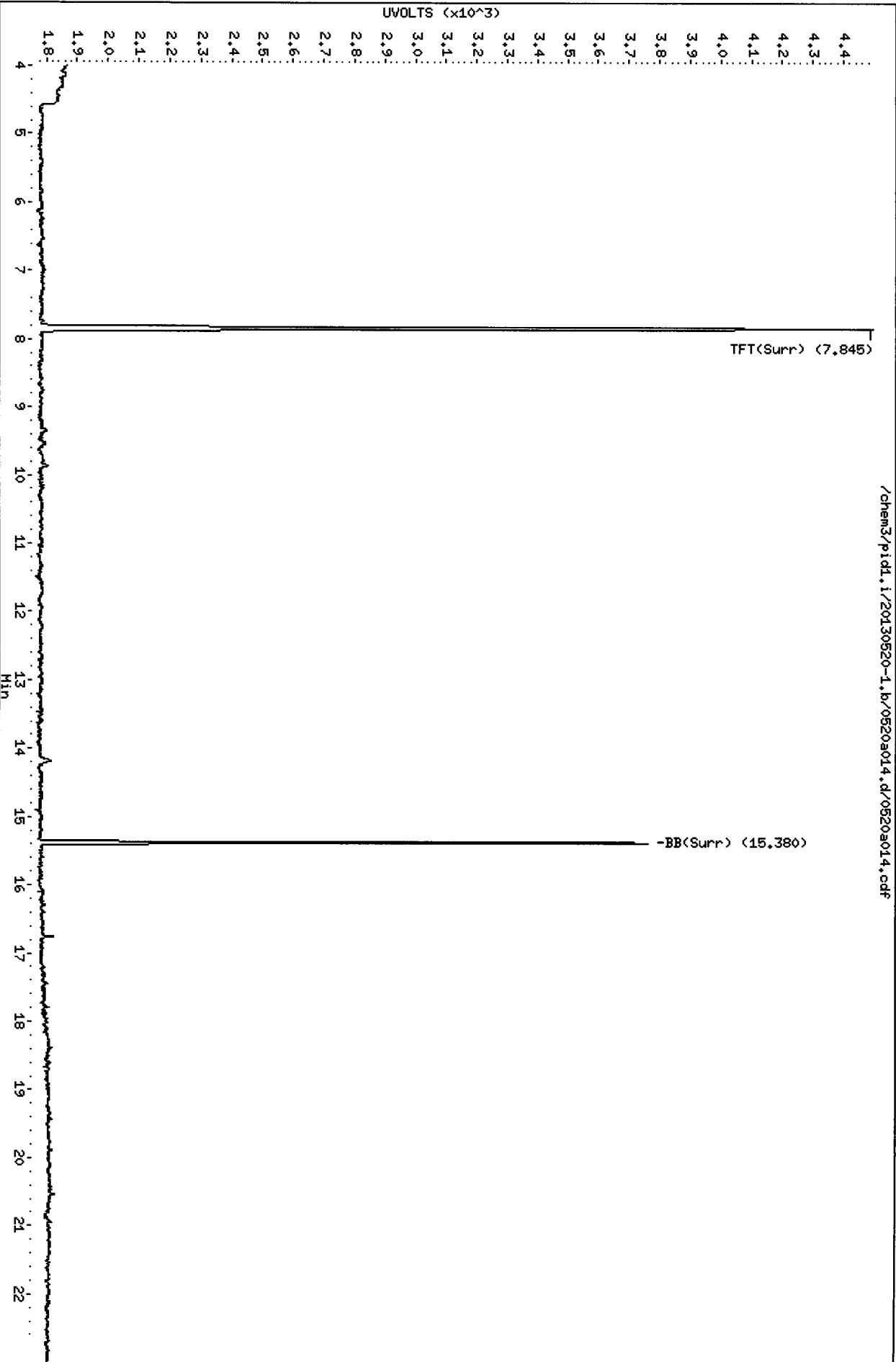
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520s014.d
Date: 20-MAY-2013 15:22
Client ID: A2-M18-S-4
Sample Info: MQ4SR

Column phase: RTX 502-2 F1D

/chem3/pid1.i/20130520-1.b/0520s014.d/0520s014.cdf

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



4015 : 00180

Data File: /chem3/pid1.i/20130520-2.b/0520a014.d

Date: 20-May-2013 15:22

Client ID: A2-M48-S-4

Sample Info: MQ45R

Page 1

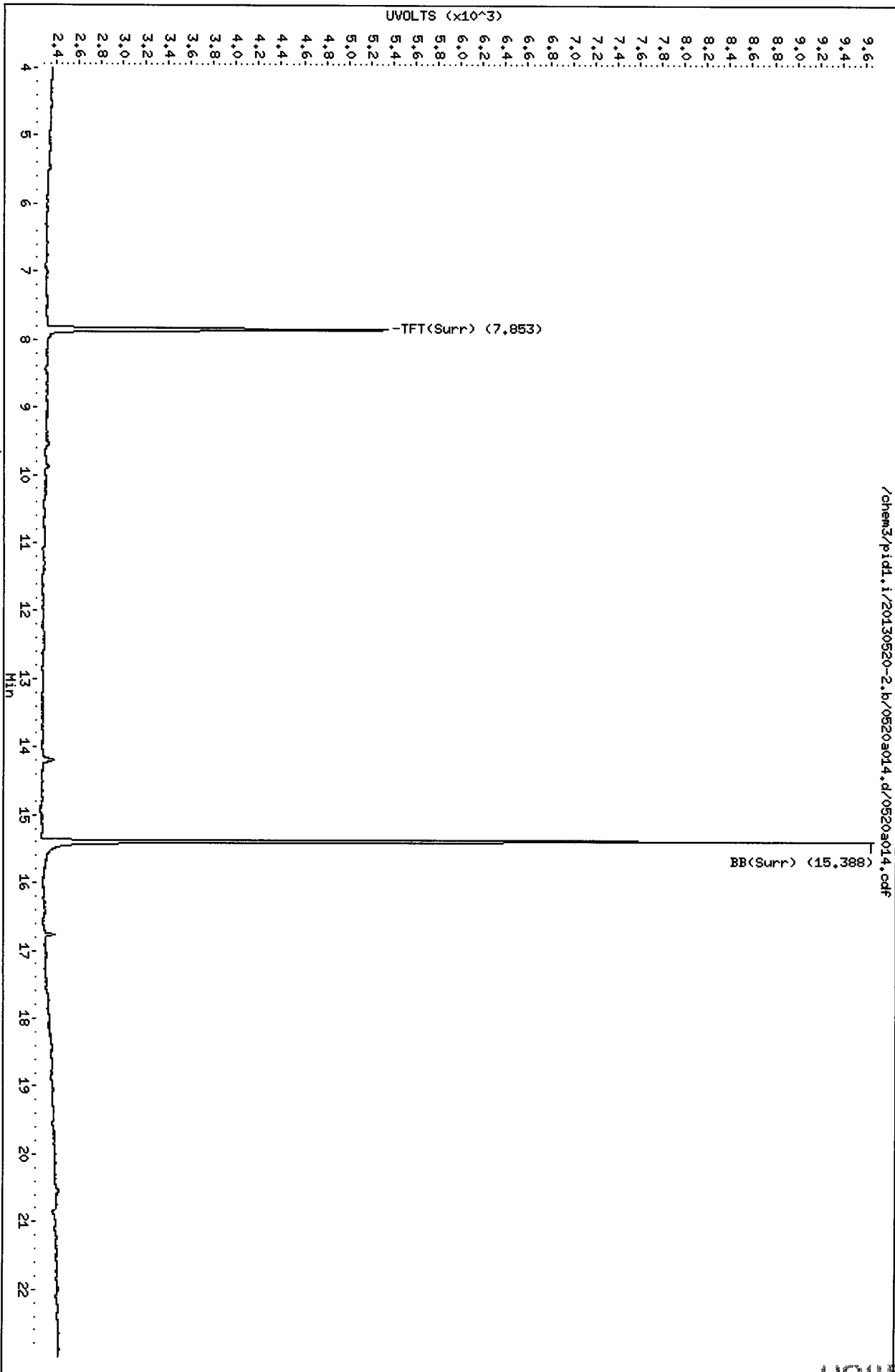
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130520-2.b/0520a014.d/0520a014.cdf



15:22:00

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ45
Matrix: Soil

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-051713	NA	85.6%	85.3%	0
LCS-051713	NA	91.3%	88.3%	0
LCSD-051713	NA	88.9%	85.7%	0
A2-W1-S-4	NA	79.0%	82.2%	0
A2-W2-S-4	NA	79.7%	83.2%	0
A2-W3-S-4	NA	84.4%	88.0%	0
A2-W4-S-4	NA	81.1%	86.1%	0
A2-W5-S-4	NA	82.5%	86.5%	0
A2-W6-S-4	NA	81.0%	85.7%	0
A2-W7-S-4	NA	72.9%	78.6%	0
A2-W8-S-4	NA	77.8%	82.6%	0
A2-W9-S-4	NA	77.0%	82.5%	0
A2-W10-S-4	NA	78.8%	83.6%	0
MB-052013	NA	88.0%	85.8%	0
LCS-052013	NA	95.5%	91.0%	0
LCSD-052013	NA	93.9%	89.5%	0
A2-W11-S-4	NA	73.5%	88.3%	0
A2-W12-S-4	NA	72.2%	86.9%	0
A2-W13-S-4	NA	74.8%	83.3%	0
A2-W14-S-4	NA	80.8%	88.3%	0
A2-W15-S-4	NA	81.0%	88.8%	0
A2-W16-S-4	NA	80.8%	88.8%	0
A2-W17-S-4	NA	79.5%	88.2%	0
A2-W18-S-4	NA	78.7%	87.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-10644 to 13-10661

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ45
Matrix: Soil

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
MB-051713	82.9%	83.2%	0
LCS-051713	88.2%	85.5%	0
LCSD-051713	84.2%	82.9%	0
A2-W1-S-4	76.5%	80.4%	0
A2-W2-S-4	76.8%	80.9%	0
A2-W3-S-4	81.3%	85.4%	0
A2-W4-S-4	77.6%	83.1%	0
A2-W5-S-4	79.8%	83.8%	0
A2-W6-S-4	78.1%	82.8%	0
A2-W7-S-4	70.5%	75.5%	0
A2-W8-S-4	74.8%	80.3%	0
A2-W9-S-4	73.4%	79.3%	0
A2-W10-S-4	75.6%	81.1%	0
MB-052013	86.2%	84.5%	0
LCS-052013	93.8%	90.0%	0
LCSD-052013	91.2%	88.2%	0
A2-W11-S-4	72.0%	85.4%	0
A2-W12-S-4	70.6%	83.8%	0
A2-W13-S-4	72.8%	80.3%	0
A2-W14-S-4	78.6%	86.1%	0
A2-W15-S-4	78.7%	86.4%	0
A2-W16-S-4	78.2%	86.5%	0
A2-W17-S-4	77.2%	85.6%	0
A2-W18-S-4	76.1%	84.6%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10644 to 13-10661

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-051713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713
LIMS ID: 13-10644
Matrix: Soil
Data Release Authorized: *MMW*
Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 05/17/13 11:37
LCSD: 05/17/13 12:07
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	50.1	50.0	100%	46.2	50.0	92.4%	8.1%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.3%	88.9%
Bromobenzene	88.3%	85.7%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-051713

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051713

LIMS ID: 13-10644

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/17/13 11:37

LCSD: 05/17/13 12:07

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	172	185	93.0%	158	185	85.4%	8.5%
Toluene	1770	1980	89.4%	1620	1980	81.8%	8.8%
Ethylbenzene	516	580	89.0%	466	580	80.3%	10.2%
m,p-Xylene	1840	2120	86.8%	1680	2120	79.2%	9.1%
o-Xylene	832	960	86.7%	765	960	79.7%	8.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	88.2%	84.2%
Bromobenzene	85.5%	82.9%

PC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130517-1.b/0517a004.d ARI ID: LCS0517
Data file 2: /chem3/pid1.i/20130517-2.b/0517a004.d Client ID:
Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 11:37
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.002	3166	44452	91.3	TFT(Surr)
15.383	0.002	2015	17511	88.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	356268	0.995 M
8015C 2MP-TMB (4.17 to 16.20)	723723	721029	0.996 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	580704	0.996 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	375758	1.002 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.003	3500	88.2	TFT(Surr)
15.390	0.002	7511	85.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	0.002	826	3.44	Benzene
9.882	0.003	8114	35.43	Toluene
12.774	0.003	1998	10.32	Ethylbenzene
12.937	0.006	7876	36.88	M/P-Xylene
13.883	0.004	2837	16.63	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a004.d

Date: 17-MAY-2013 11:37

Client ID:

Sample Info: LCS0517

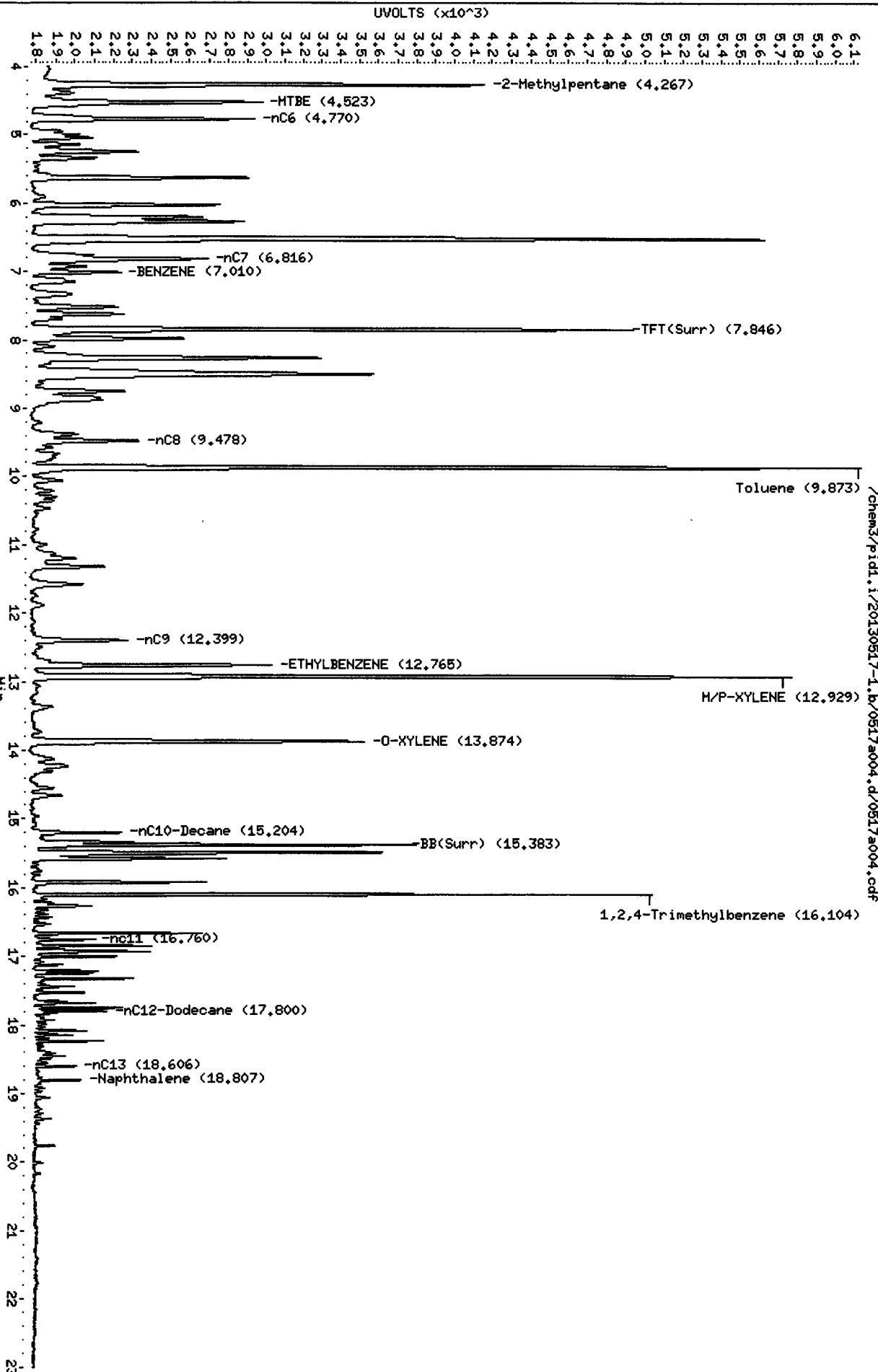
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

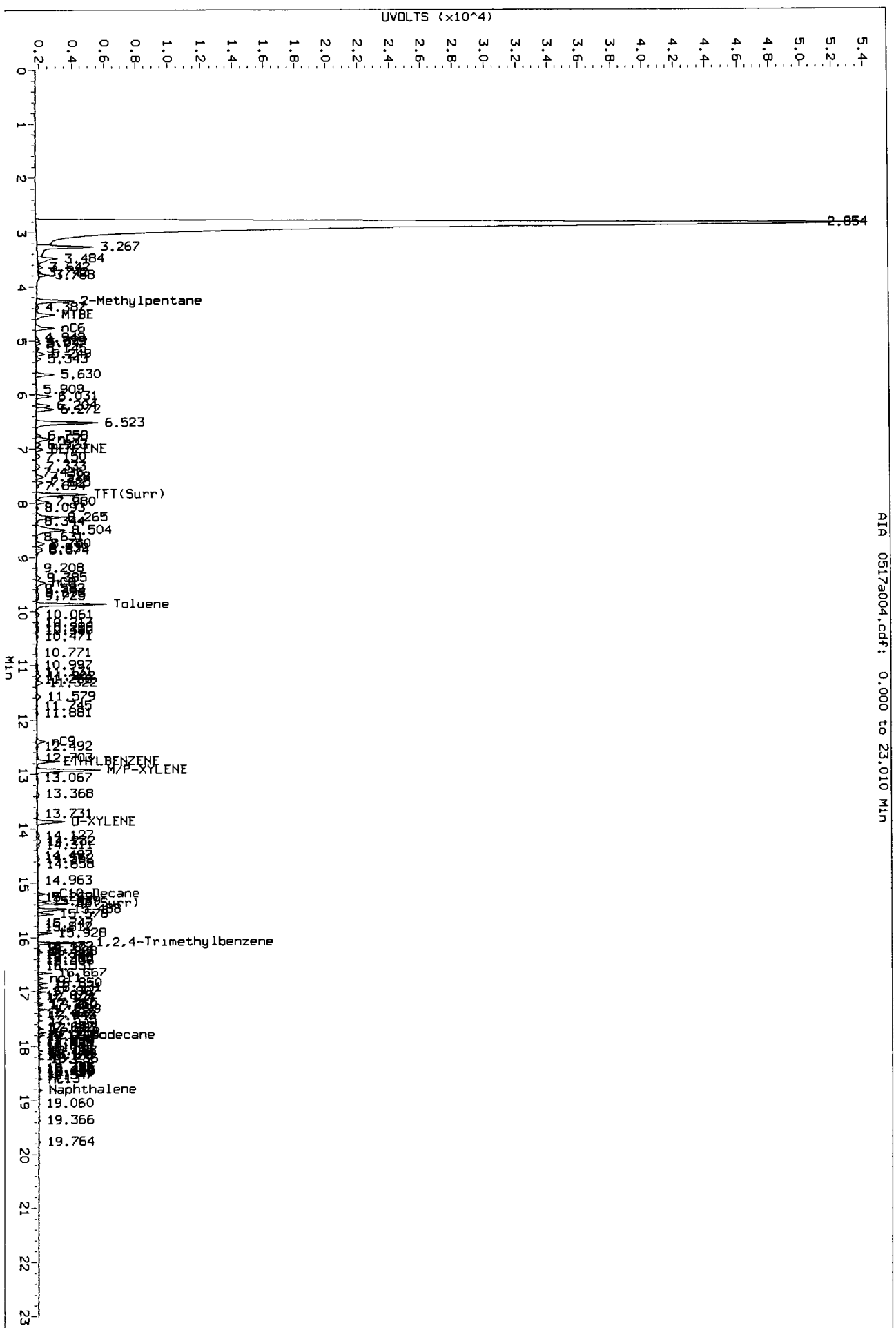
Page 1



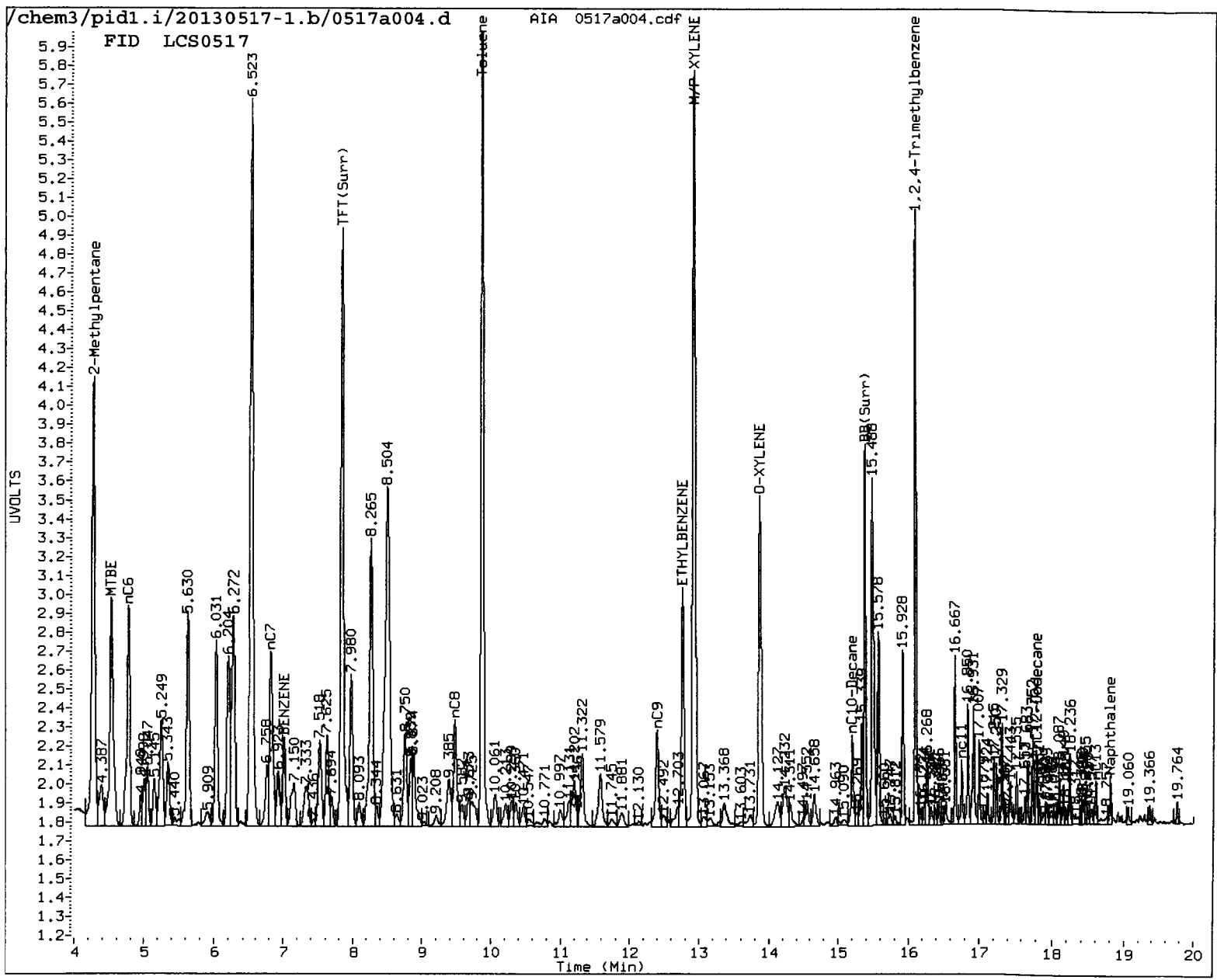
2015:00100

MC
5/20/15

Data File: /chem3/pid1.1/20130517-1.b/0517a004.d/0517a004.cdf
Injection Date: 17-MAY-2013 11:37
Instrument: pid1.1
Client Sample ID:



AIR 0517a004.cdf: 0.000 to 23.010 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: PC

Date: 5/20/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

*MC
5/20/13*

Data file 1: /chem3/pid1.i/20130517-1.b/0517a005.d ARI ID: LCSD0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a005.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:07
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	-0.001	3083	43246	88.9	TFT(Surr)
15.381	0.001	1955	17346	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	329384	0.920 M
8015C 2MP-TMB (4.17 to 16.20)	723723	672432	0.929 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	541268	0.929 M
NWTFPHG Tol-Nap (9.77 to 18.90)	375093	347058	0.925 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.000	3342	84.2	TFT(Surr)
15.389	0.001	7285	82.9	BB(Surr)

SW8021 (PID)

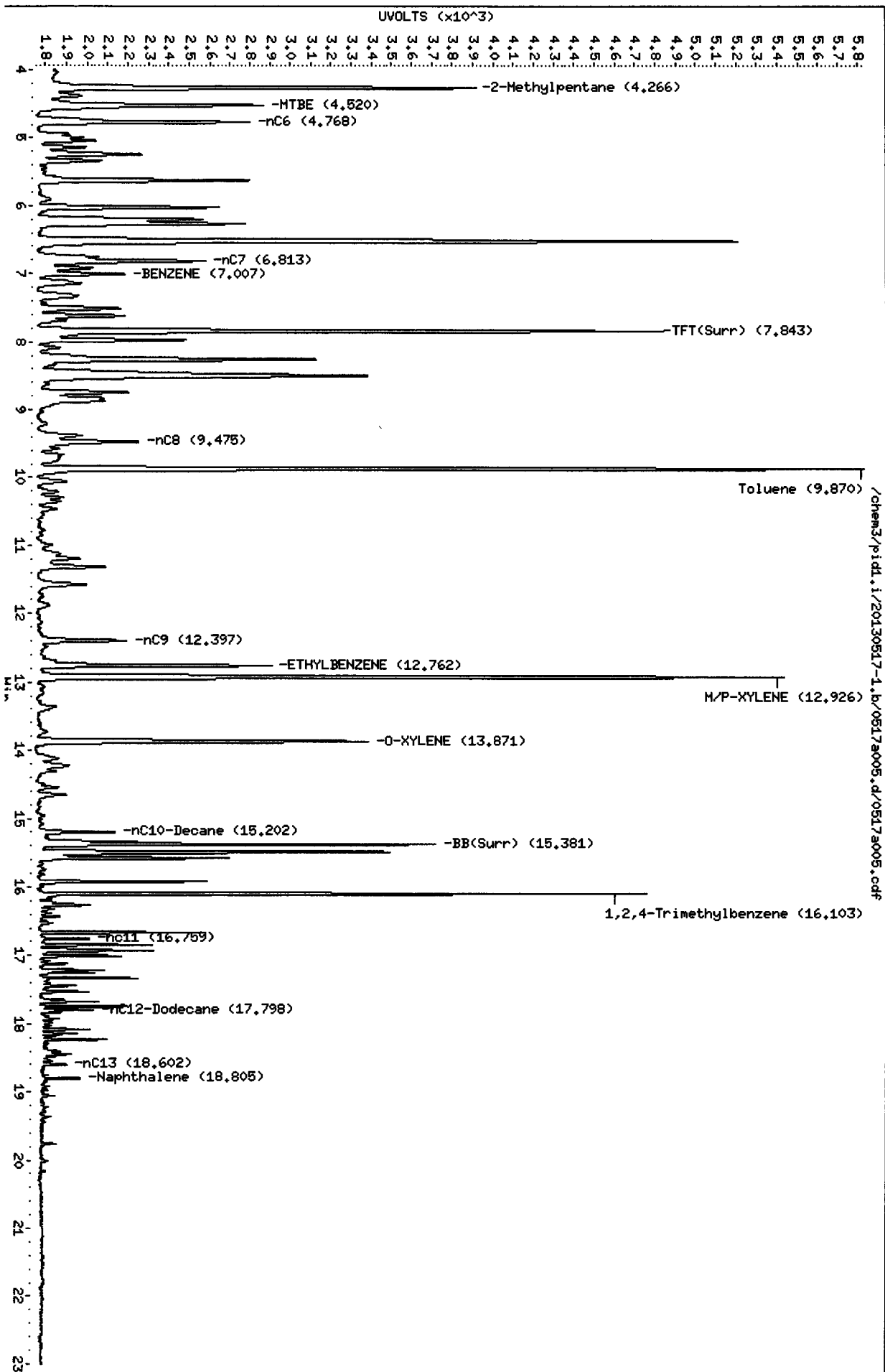
RT	Shift	Response	Amount	Compound
7.015	-0.001	757	3.15	Benzene
9.879	0.000	7421	32.41	Toluene
12.771	0.000	1805	9.32	Ethylbenzene
12.934	0.003	7195	33.69	M/P-Xylene
13.880	0.001	2611	15.30	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a005.d
Date: 17-MAY-2013 12:07
Client ID:
Sample Info: LCS0517

Column phase: RTX 502-2 FID

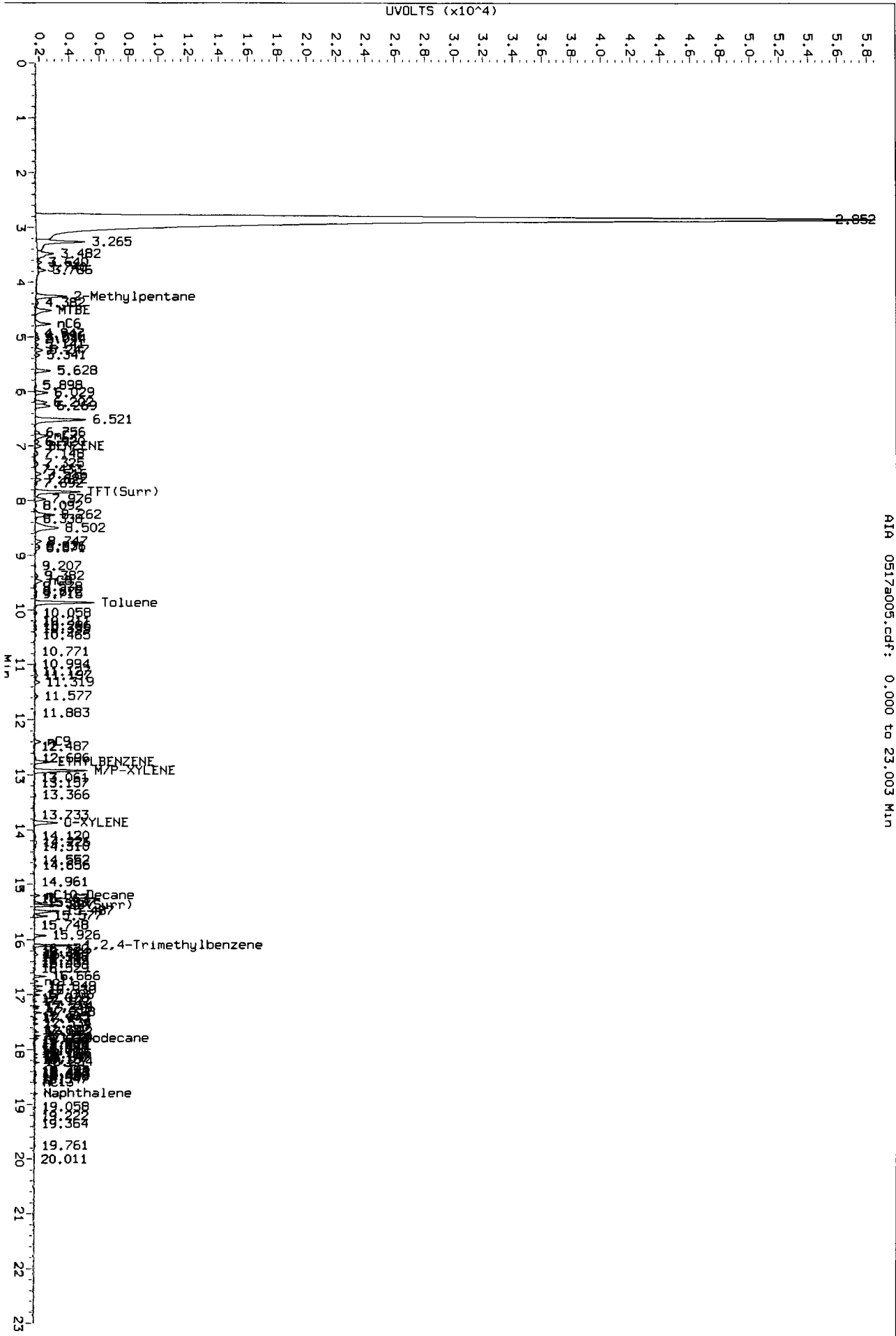
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

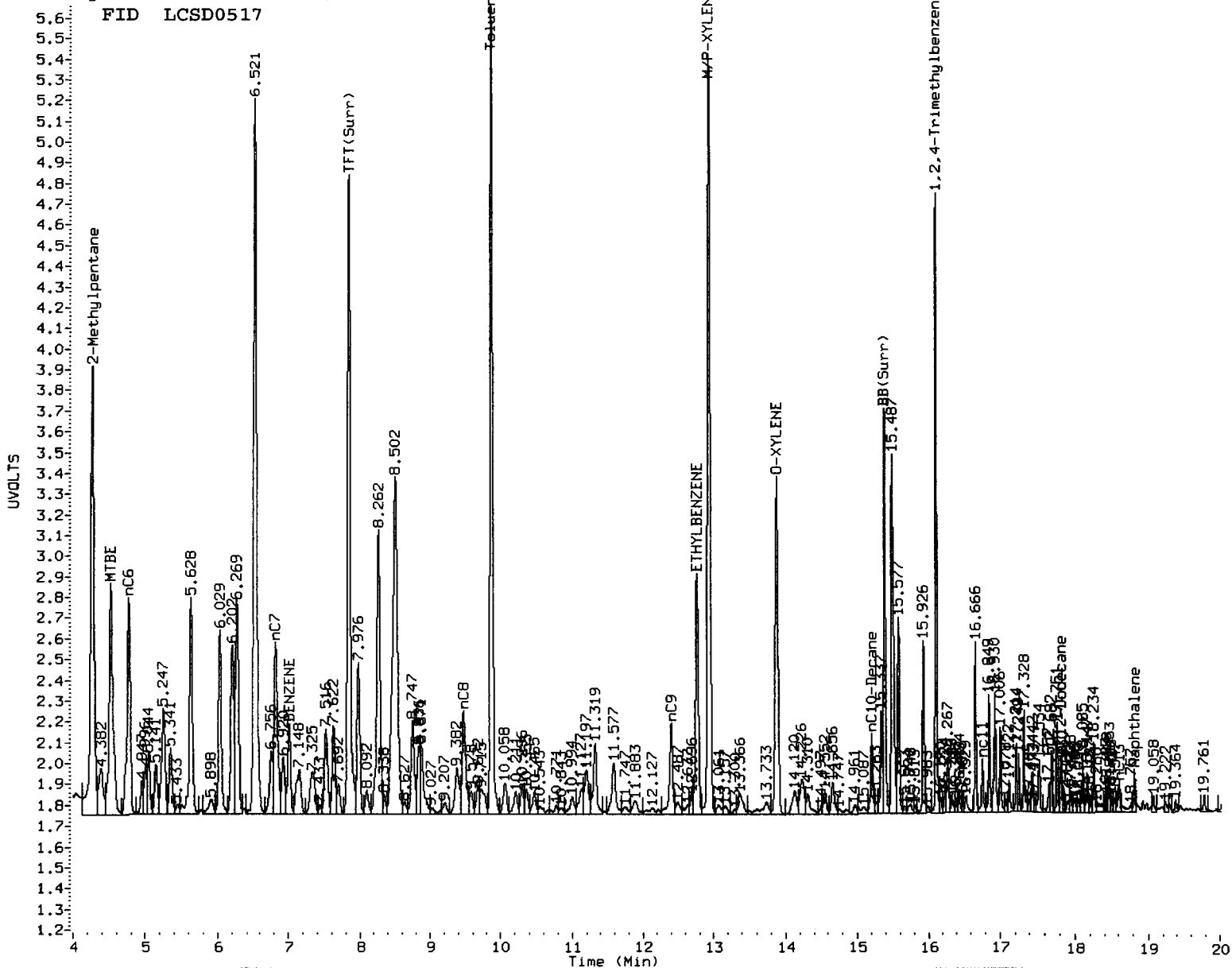


17051005

pc
5/20/13
Data File: /chem3/pid1.1/20130517-1.b/0517a005.d/0517a005.cdf
Injection Date: 17-MAY-2013 12:07
Instrument: pid1.1
Client Sample ID:

A1A 0517a005.cdf: 0.000 to 23.003 Min





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: MC Date: 5/20/13

ORGANICS ANALYSIS DATA SHEET
 TPHG by Method NWTPHG
 Page 1 of 1



Sample ID: LCS-052013
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-052013
 LIMS ID: 13-10654
 Matrix: Soil
 Data Release Authorized: *MMW*
 Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/20/13 10:19
 LCSD: 05/20/13 10:49
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	51.6	50.0	103%	49.6	50.0	99.2%	4.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.5%	93.9%
Bromobenzene	91.0%	89.5%



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-052013

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052013
LIMS ID: 13-10654
Matrix: Soil
Data Release Authorized: *MW*
Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 05/20/13 10:19
LCSD: 05/20/13 10:49
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	LCS		LCSD	LCSD		RPD
		Spike Added	Recovery		Spike Added	Recovery	
Benzene	186	185	101%	182	185	98.4%	2.2%
Toluene	1900	1980	96.0%	1840	1980	92.9%	3.2%
Ethylbenzene	546	580	94.1%	530	580	91.4%	3.0%
m,p-Xylene	1980	2120	93.4%	1920	2120	90.6%	3.1%
o-Xylene	884	960	92.1%	871	960	90.7%	1.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	93.8%	91.2%
Bromobenzene	90.0%	88.2%

PC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a004.d ARI ID: LCS0520
Data file 2: /chem3/pid1.i/20130520-2.b/0520a004.d Client ID:
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 10:19
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.841	0.000	3312	46603	95.5	TFT(Surr)
15.379	0.002	2077	18648	91.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	368788	1.030 M
8015C 2MP-TMB (4.17 to 16.20)	723723	750686	1.037 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	604299	1.037 M
NWTPHG Tol-Nap (9.77 to 18.89)	375093	387478	1.033 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.849	0.000	3722	93.8	TFT(Surr)
15.387	0.002	7911	90.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.013	-0.001	893	3.72	Benzene
9.876	0.002	8709	38.03	Toluene
12.768	0.003	2114	10.92	Ethylbenzene
12.932	0.005	8435	39.50	M/P-Xylene
13.877	0.003	3016	17.68	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a004.d

Date: 20-MAY-2013 10:19

Client ID:

Sample Info: LCS0520

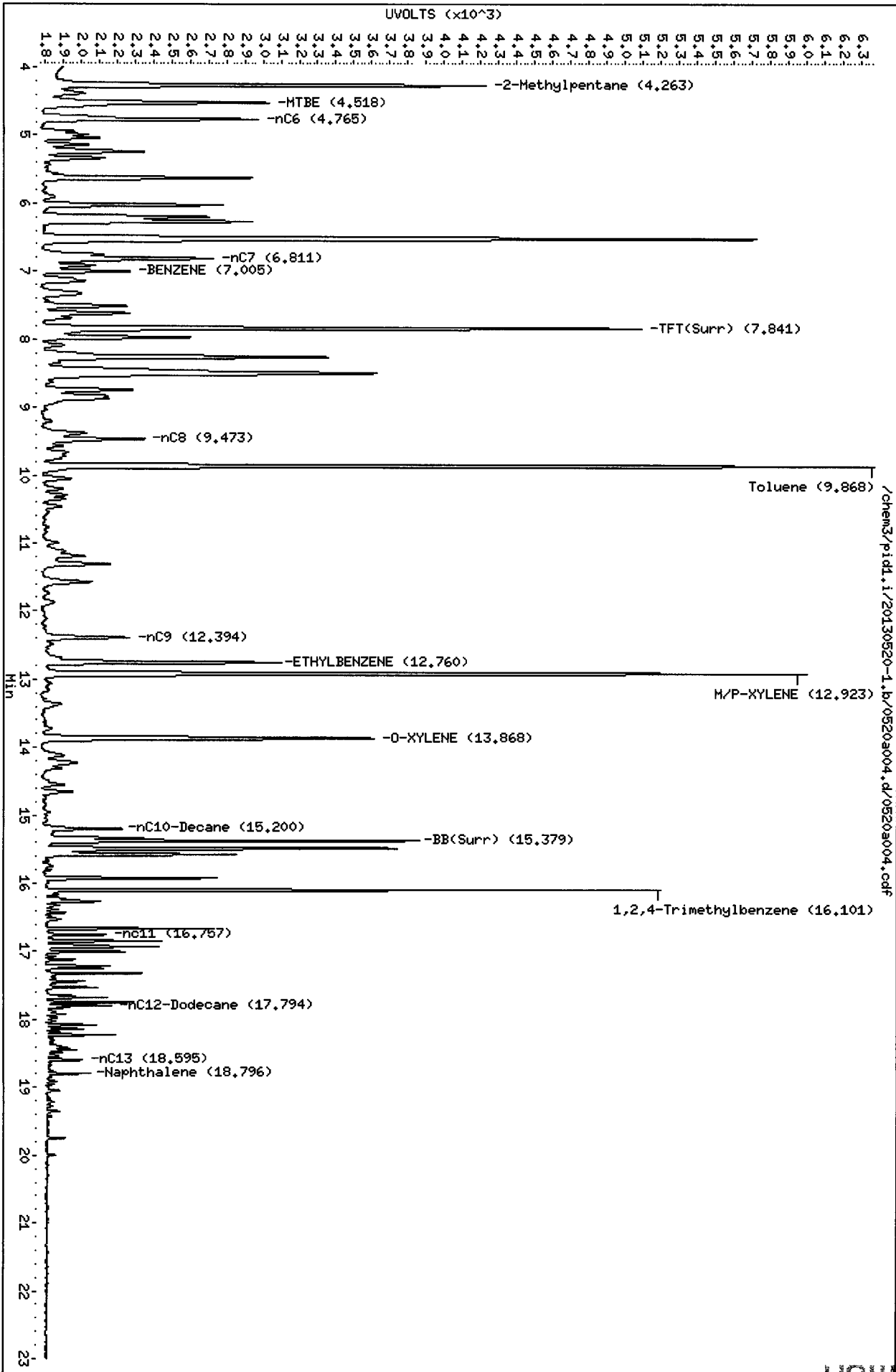
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1

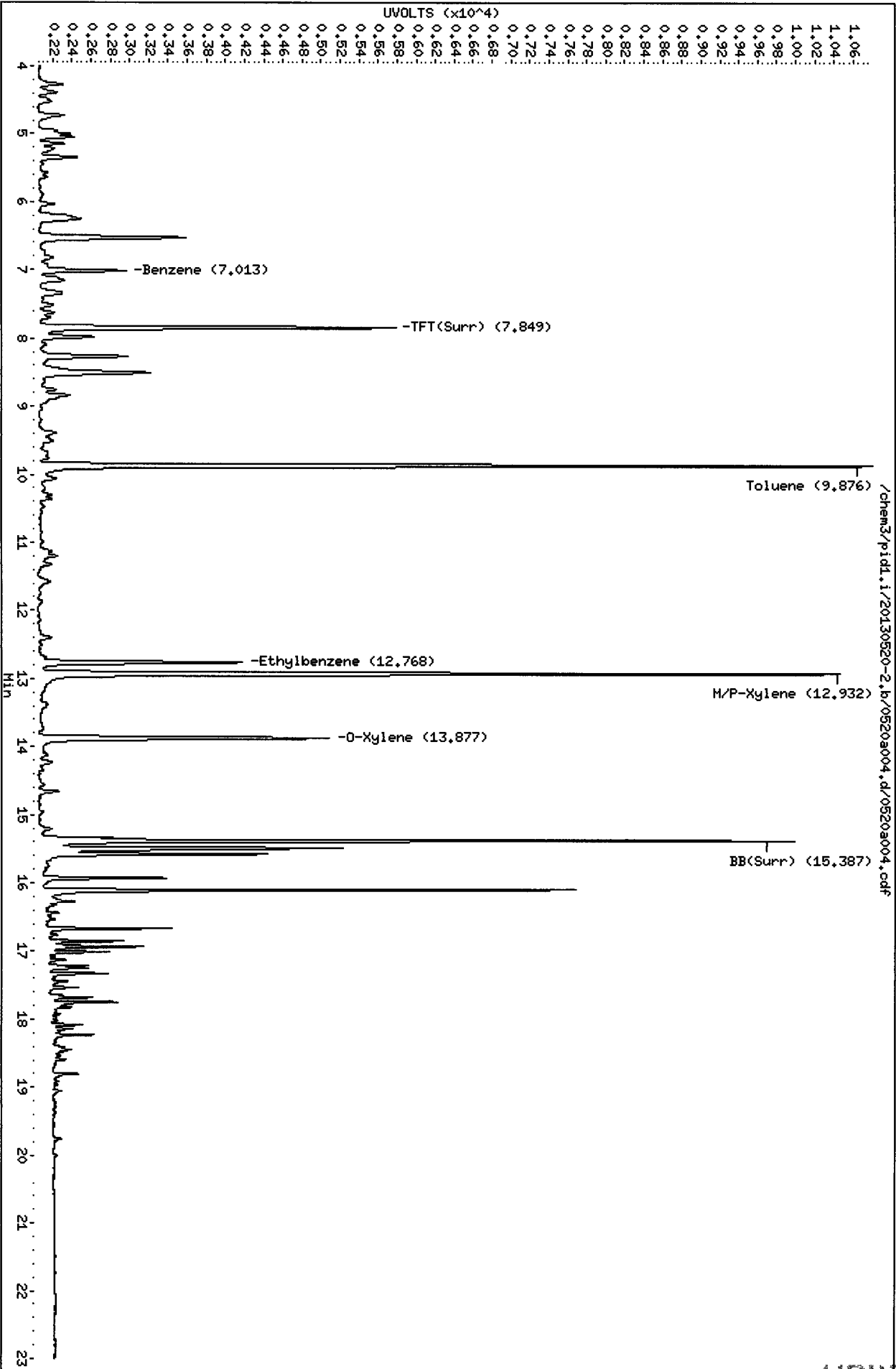


0045 : 00200

Data File: /chem3/pid1.i/20130520-2.b/0520a004.d
Date : 20-MAY-2013 10:19
Client ID:
Sample Info: LCS0520

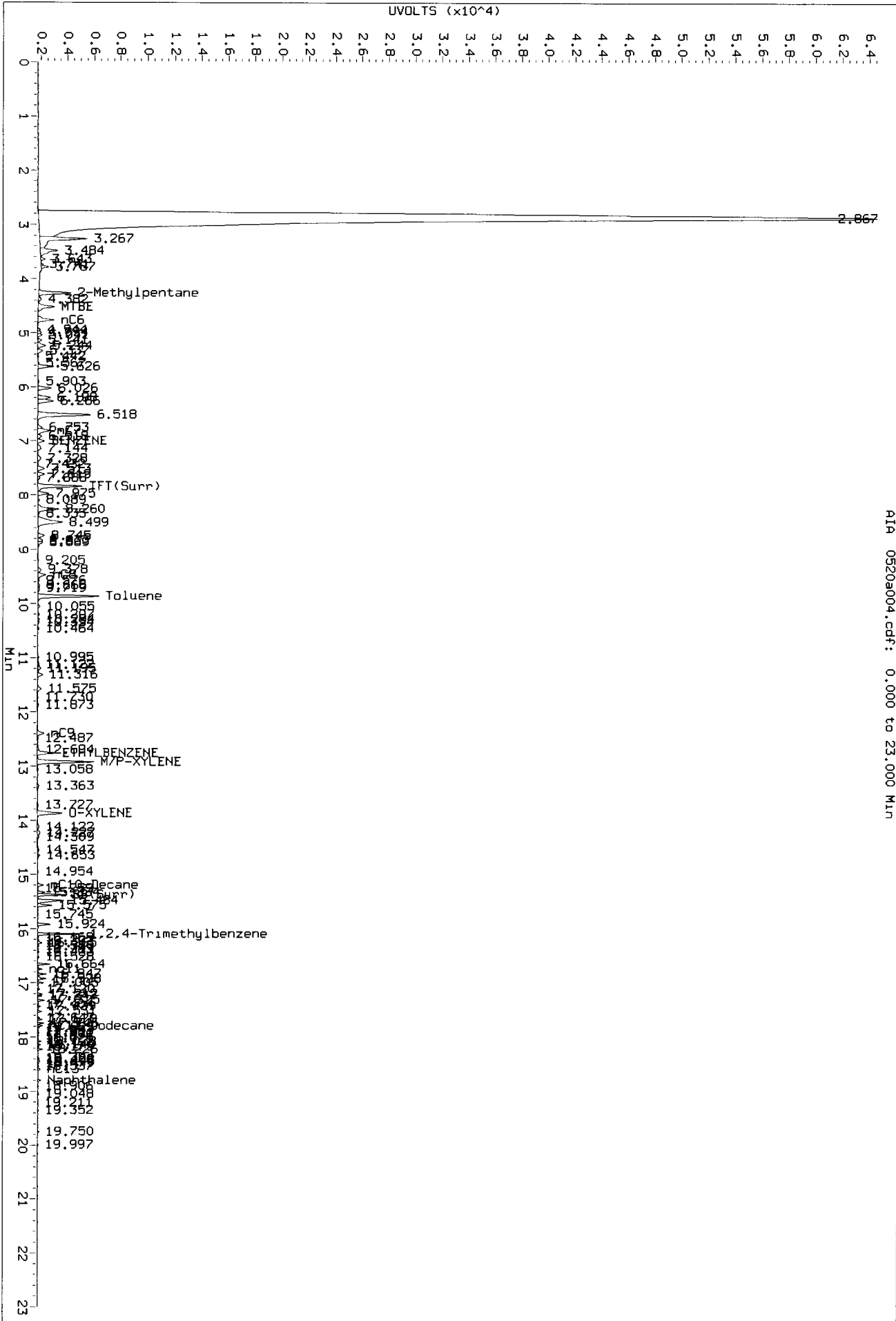
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



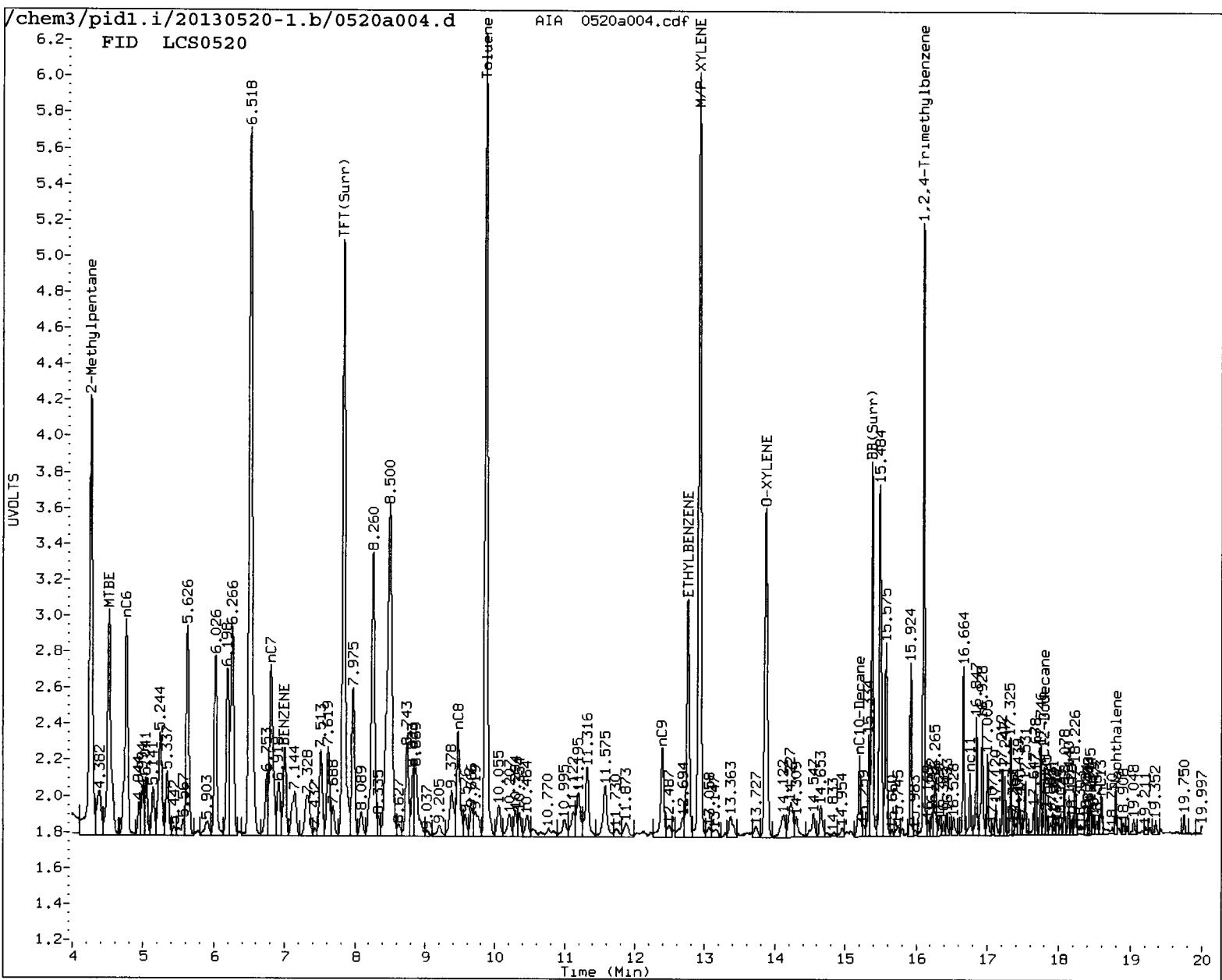
PC
5/21/13

Data File: /chem3/pid1.1/20130520-1.b/0520a004.d/0520a004.cdf
Injection Date: 20-MAY-2013 10:19
Instrument: pid1.1
Client Sample ID:



AIA 0520a004.cdf: 0.000 to 23.000 Min

W045: 00202



MANUAL INTEGRATION

- 1) Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: AL Date: 5/21/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/21/13

Data file 1: /chem3/pid1.i/20130520-1.b/0520a005.d ARI ID: LCSD0520
 Data file 2: /chem3/pid1.i/20130520-2.b/0520a005.d Client ID:
 Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 10:49
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.001	3257	45499	93.9	TFT(Surr)
15.377	0.000	2043	17762	89.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	353158	0.986 M
8015C 2MP-TMB (4.17 to 16.20)	723723	722878	0.999 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	580622	0.996 M
NWTPHG Tol-Nap (9.77 to 18.89)	375093	371772	0.991 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	-0.001	3621	91.2	TFT(Surr)
15.385	0.001	7755	88.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.000	877	3.65	Benzene
9.875	0.000	8444	36.87	Toluene
12.766	0.000	2053	10.61	Ethylbenzene
12.930	0.003	8185	38.33	M/P-Xylene
13.875	0.001	2972	17.42	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a005.d

Date: 20-MAY-2013 10:49

Client ID:

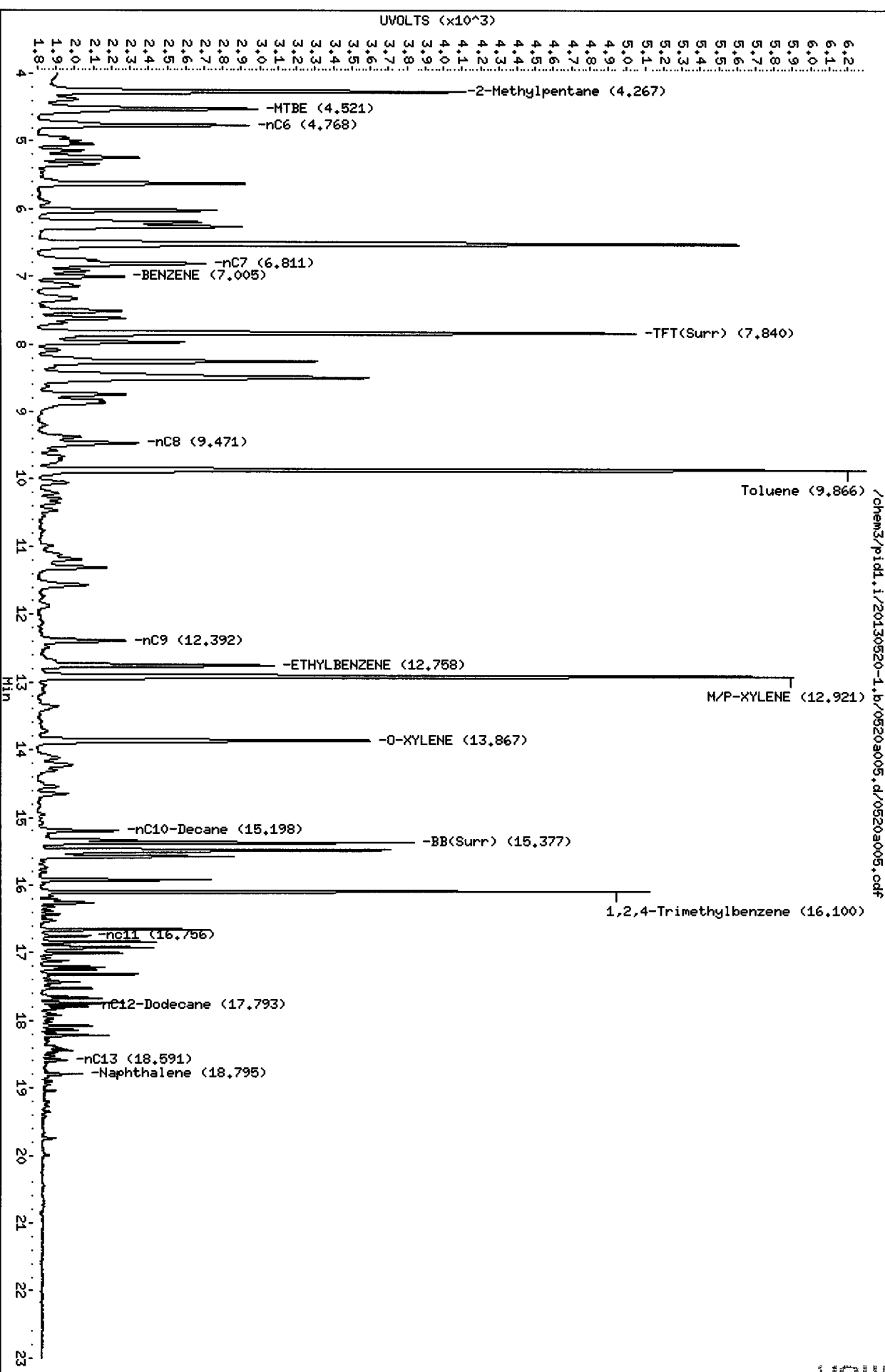
Sample Info: LCSD0520

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



002015 . 0045

Data File: /chem3/pid1.i/20130520-2.b/0520a005.d

Date: 20-May-2013 10:49

Client ID:

Sample Info: LCS0520

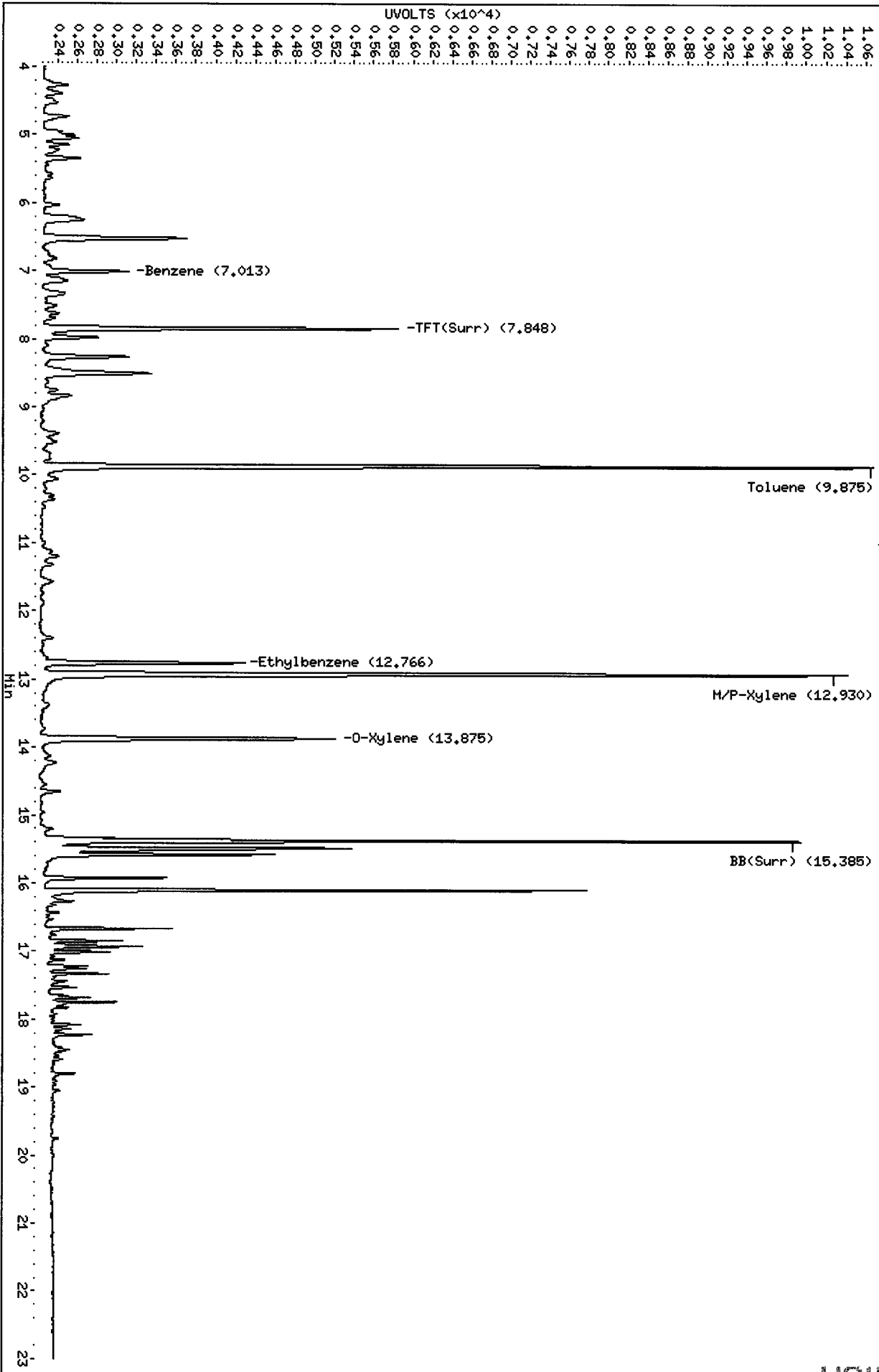
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

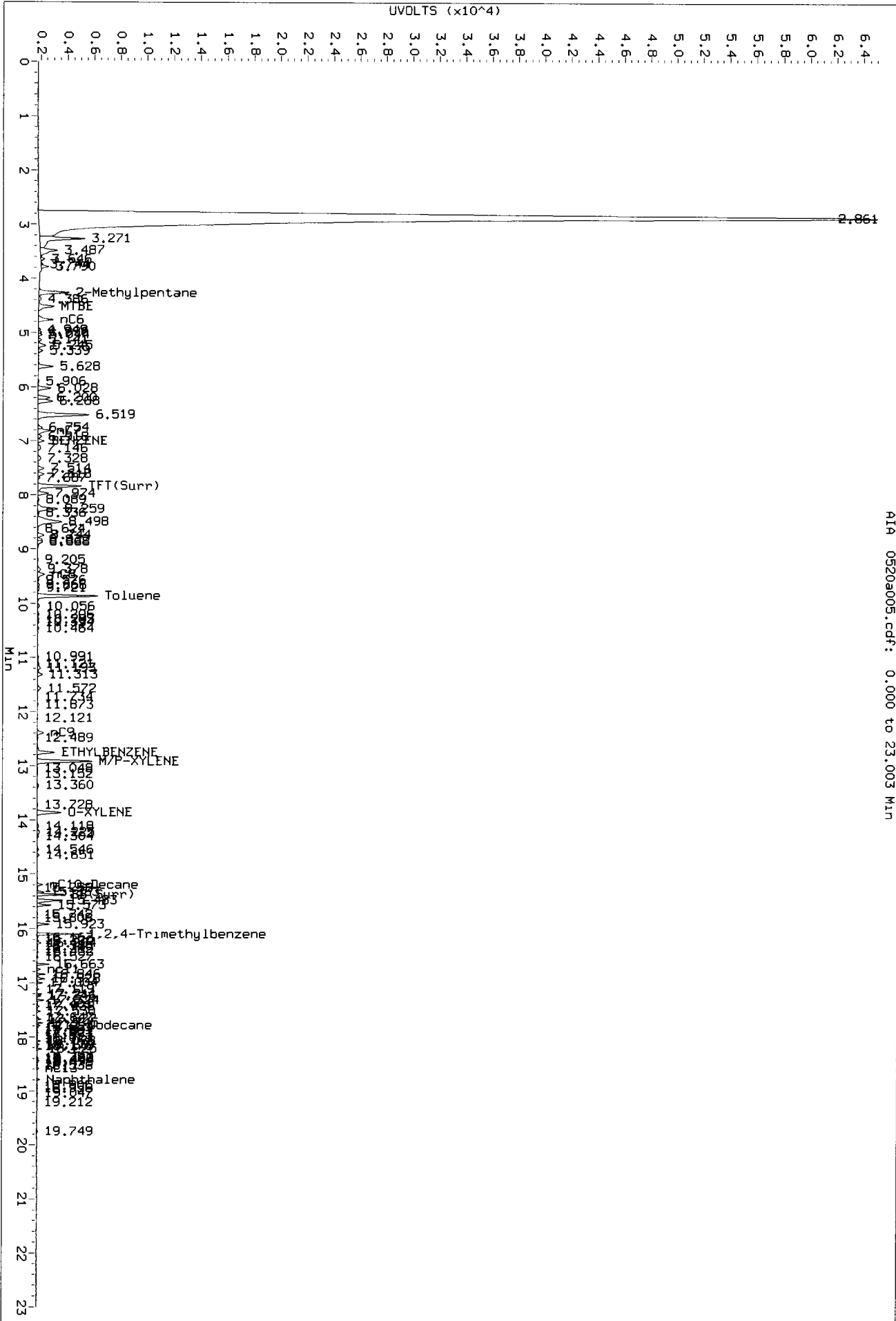
Column phase: RTX 502-2 PID

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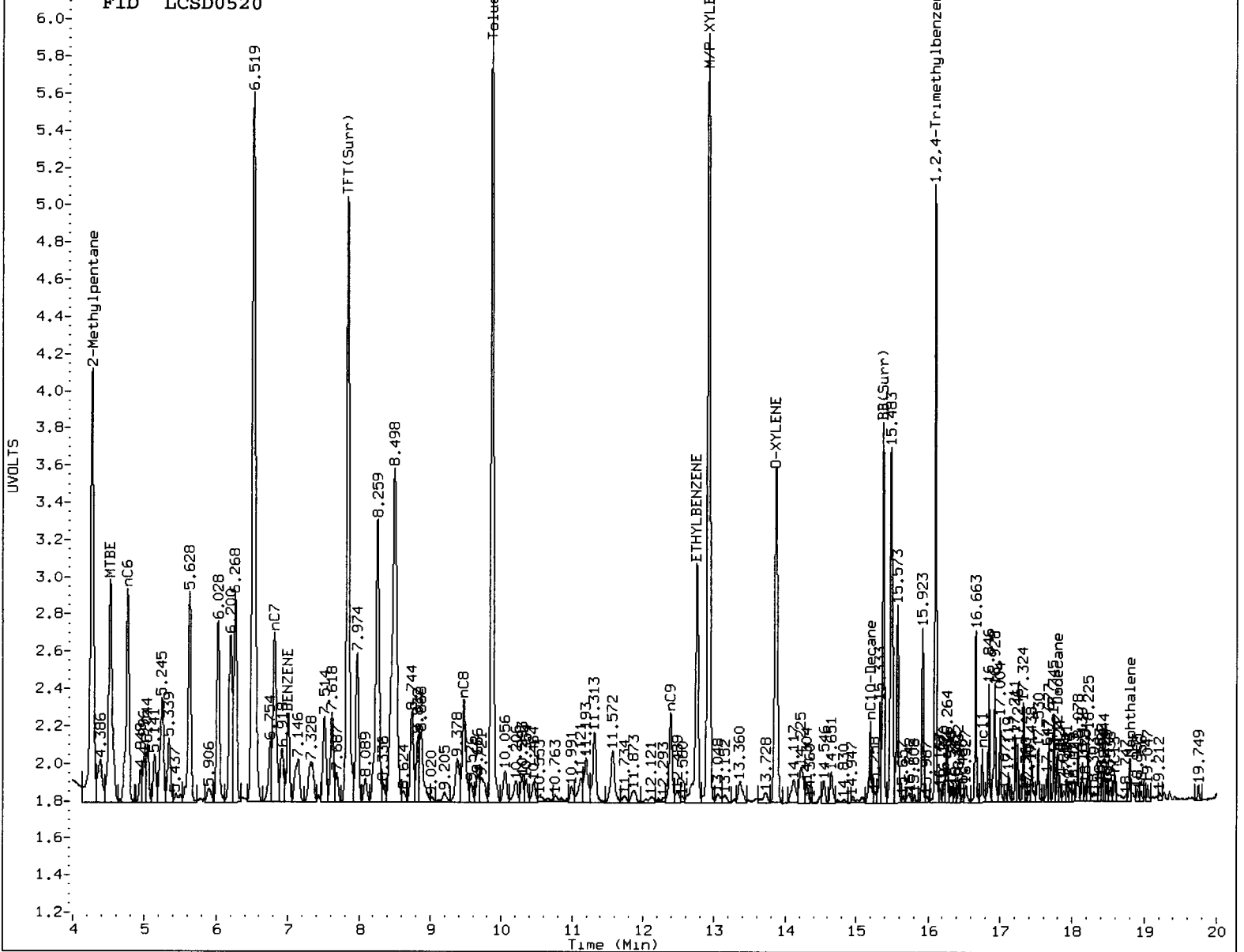


PL
5/11/13

Data File: /chem3/p1d1.1/20130520-1.b/0520a005.d/0520a005.cdf
Injection Date: 20-MAY-2013 10:49
Instrument: p1d1.1
Client Sample ID:



AIA 0520a005.cdf: 0.000 to 23.003 Min



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

- 5. Other _____

Analyst: JK

Date: 5/21/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-051713

METHOD BLANK

Lab Sample ID: MB-051713

LIMS ID: 13-10644

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/17/13 12:37

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	82.9%
Bromobenzene	83.2%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	85.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 5/26/13

Data file 1: /chem3/pid1.i/20130517-1.b/0517a006.d ARI ID: MB0517
 Data file 2: /chem3/pid1.i/20130517-2.b/0517a006.d Client ID:
 Method: /chem3/pid1.i/20130517-2.b/PIDB.m Injection Date: 17-MAY-2013 12:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.000	2968	37734	85.6	TFT (Surr)
15.381	0.001	1947	16457	85.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3253	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	3996	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	3150	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3253	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.001	3292	82.9	TFT (Surr)
15.390	0.001	7317	83.2	BB (Surr)

SW8021 (PID)

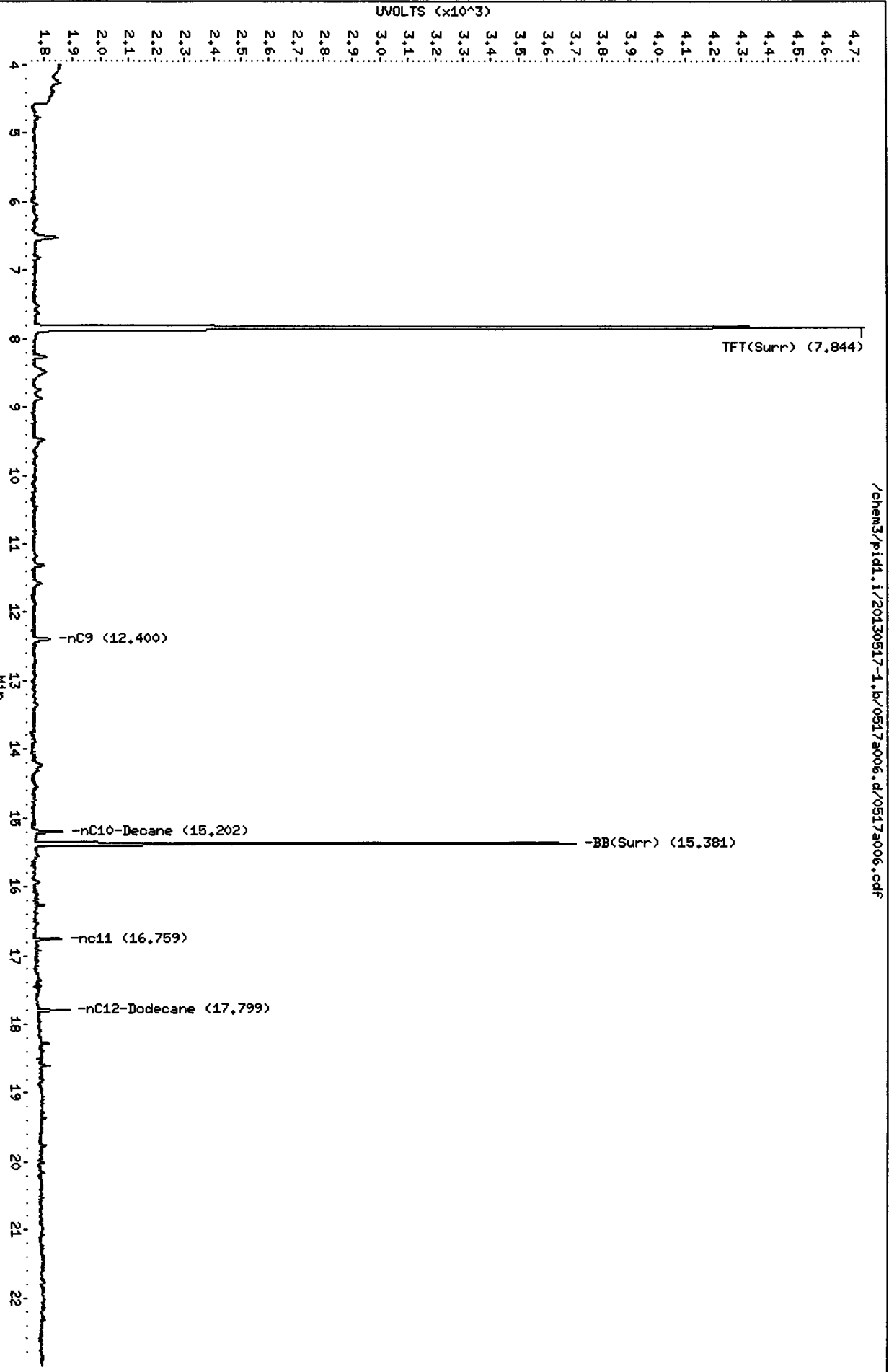
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130517-1.b/0517a006.d
Date: 17-MAY-2013 12:37
Client ID:
Sample Info: MB0517

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130517-1.b/0517a006.d/0517a006.cdf

17 05 12 00:00

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: MB-052013
 METHOD BLANK

Lab Sample ID: MB-052013
 LIMS ID: 13-10654
 Matrix: Soil
 Data Release Authorized: *mmw*
 Reported: 05/21/13

QC Report No: WQ45-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed: 05/20/13 11:18
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	86.2%
Bromobenzene	84.5%

Gasoline Surrogate Recovery

Trifluorotoluene	88.0%
Bromobenzene	85.8%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

KC
 5/21/13

Data file 1: /chem3/pid1.i/20130520-1.b/0520a006.d ARI ID: MB0520
 Data file 2: /chem3/pid1.i/20130520-2.b/0520a006.d Client ID:
 Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 11:18
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.840	-0.001	3053	38513	88.0	TFT(Surr)
15.378	0.001	1958	16506	85.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3061	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	5396	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	4623	0.008
NWTPHG Tol-Nap (9.77 to 18.89)	375093	3061	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.848	-0.001	3421	86.2	TFT(Surr)
15.386	0.001	7427	84.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

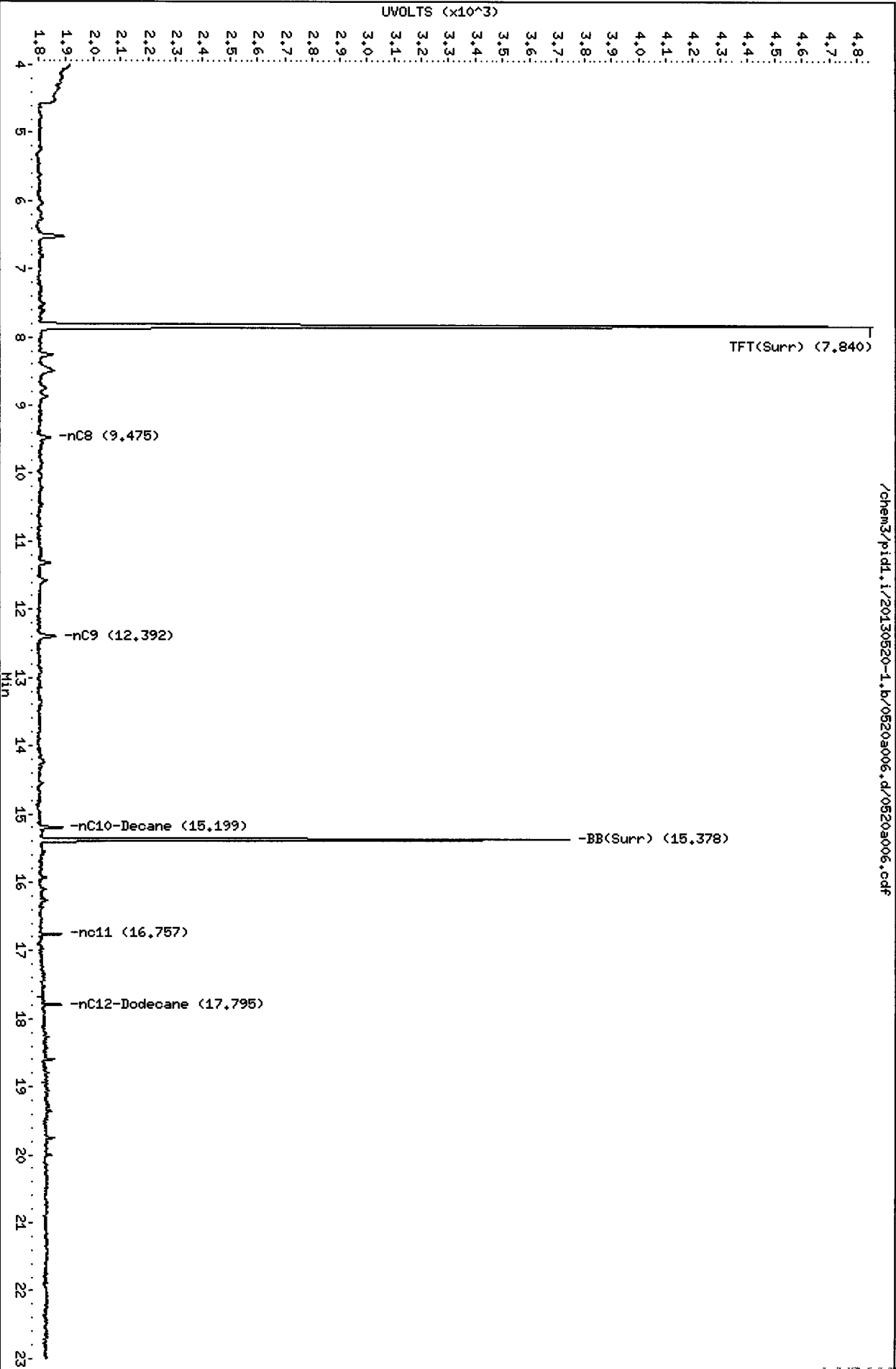
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520s006.d
Date: 20-MAY-2013 11:18
Client ID:
Sample Info: MB0520

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-1.b/0520s006.d/0520s006.cdf



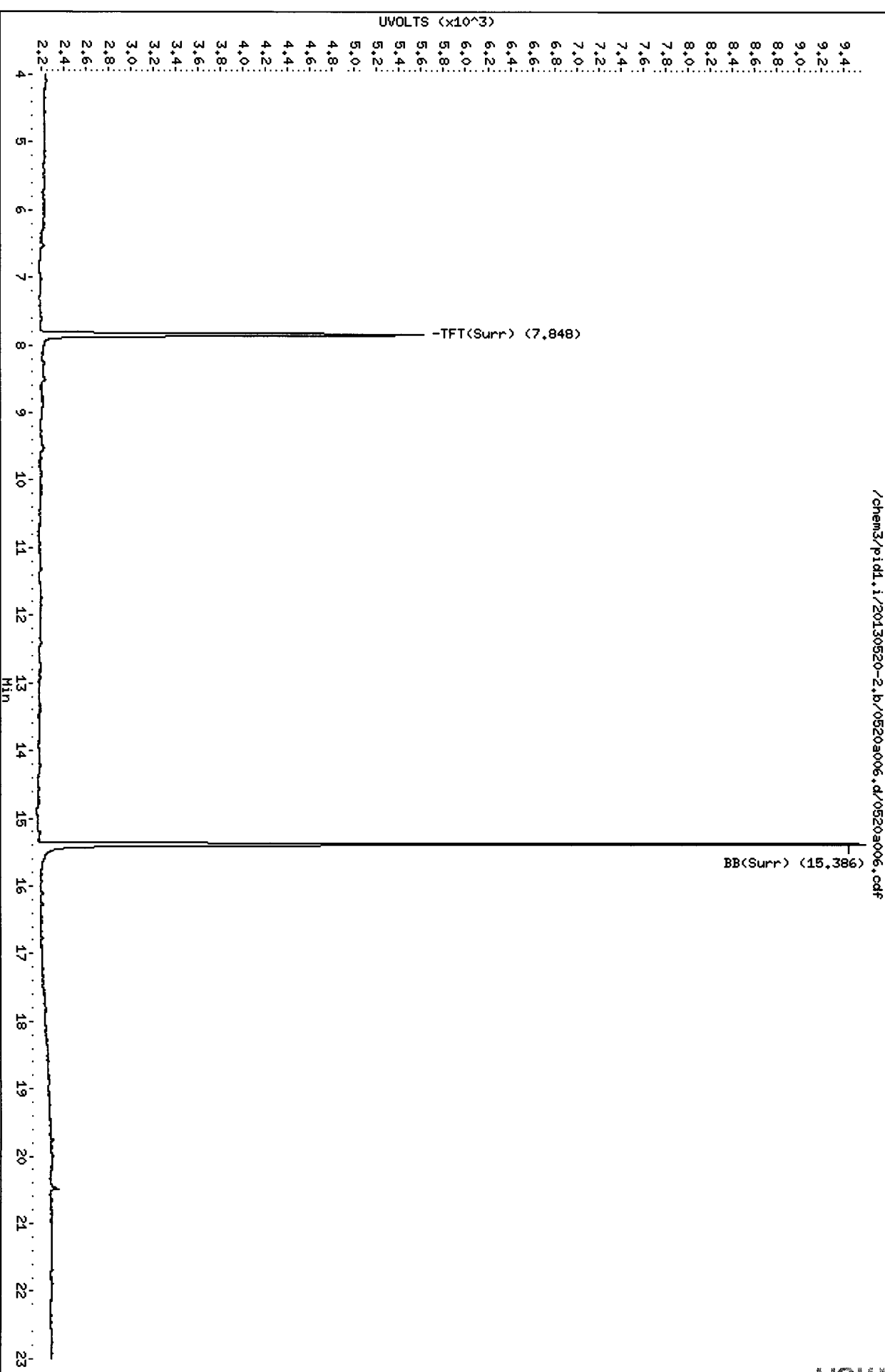
Data File: /chem3/pid1.i/20130520-2.b/05203006.d
Date: 20-MAY-2013 11:18

Client ID:
Sample Info: HB0520

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130520-2.b/05203006.d/05203006.cdf



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 29, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WR26

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted three soil samples on May 24, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx, NWTPH-Gx/BTEX, and Lead, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WR26

Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WR26	Turn-around Requested: RUSH - 24 HR.	Page: 1 of 1
ARI Client Company: MFA, INC.	Phone:	Date: 05/24/13 Ice Present? <input checked="" type="checkbox"/>
Client Contact: TONY SILVA TSILVA@MFAULFOSTER.COM	No. of Coolers: 3 of 3	Cooler Temps: 3



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested			Notes/Comments
					Dr. Silva GC Cleanup	Gx/BTEX	LEADS (only IF GC Detected)	
AREA 2 - 052213-SP-1	5/23	1800	S	5	X	X	X	
AREA 2 - 052213-SP-1	5/23	1400	S	5	X	X	X	
STORMPIPE - SP-1	5/23	0830	S	5	X	X	X	
Comments/Special Instructions	Relinquished by (Signature): <i>Lindsey Crosby</i>	Received by (Signature): <i>John Rain</i>	Relinquished by (Signature):	Received by (Signature):				
	Printed Name: LINDSEY CROSBY	Printed Name: John Rain	Printed Name:	Printed Name:				
	Company: MFA	Company: Analytical Resources, Inc.	Company:	Company:				
	Date & Time: 5/24 0700	Date & Time: 05/24/13 06:54	Date & Time:	Date & Time:				

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client MFA

Project Name: Cashmere

COC No(s) _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No WR26

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? ... YES NO

Were custody papers properly filled out (ink, signed, etc.) ... YES NO

Temperature of Cooler(s) (°C) (recommended 2 0-6.0 °C for chemistry). ... 3.0 4.9 5.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by JR (AV) Date: 5/24/13 Time: 651

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? ... YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? ... NA YES NO

Were all bottles sealed in individual plastic bags? ... YES NO

Did all bottles arrive in good condition (unbroken)? ... YES NO

Were all bottle labels complete and legible? ... YES NO

Did the number of containers listed on COC match with the number of containers received? ... YES NO

Did all bottle labels and tags agree with custody papers? ... YES NO

Were all bottles used correct for the requested analyses? ... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs). NA YES NO

Were all VOC vials free of air bubbles? ... NA YES NO

Was sufficient amount of sample sent in each bottle? ... YES NO

Date VOC Trip Blank was made at ARI. NA

Was Sample Split by ARI: YES Date/Time _____ Equipment: _____ Split by: _____

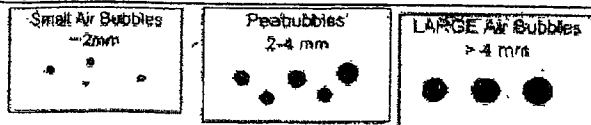
Samples Logged by: JM Date: 5/24/13 Time: 921

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WR26
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. AREA2-052313-SP-1	WR26A	13-11199	Soil	05/23/13 12:00	05/24/13 06:54
2. AREA2-052213-SP-1	WR26B	13-11200	Soil	05/23/13 14:00	05/24/13 06:54
3. STORMPIPE-SP-1	WR26C	13-11201	Soil	05/23/13 08:30	05/24/13 06:54

Subject: FW: WR25 and WR26 Sample Receipts and COCs

From: "Tony Silva" <tsilva@maulfoster.com>

Date: 5/24/2013 11:09 AM

To: "Cheronne Oreiro" <cheronneo@arilabs.com>

CC: "Justin Clary" <jclary@maulfoster.com>, "Lindsey Crosby" <lcrosby@maulfoster.com>, "Erik Naylor" <enaylor@maulfoster.com>

Cheronne,

As discussed:

EPH/VPH:

- There are 4 soil samples submitted with analysis that include VPH/EPH (three are floor, one is a wall).
- We want to do a 24-hour rush on all four of these soil samples (floor and wall samples).
- We want the rush to include all of the analysis requested for these 4 samples (not just the EPH/VPH).
- For all 4 samples in addition to what is already on the chain of custodies, please also add the analysis of:
 - Gx
 - VOCs (EDB, EDC, and MTBE)
 - PAHs via 8270 SIM.

Stockpiles:

- Please run these soil 3 samples on work order WR26 for lead, no need to wait to see if Gx is detected.

TONY SILVA RG, LG | MAUL FOSTER & ALONGI, INC.

d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 |

www.maulfoster.com

2001 NW 19th Avenue, Suite 200, Portland, OR 97209

-----Original Message-----

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]

Sent: Friday, May 24, 2013 9:51 AM

To: Tony Silva

Cc: Lindsey Crosby; Erik Naylor

Subject: WR25 and WR26 Sample Receipts and COCs

Hi Tony,

Please see attached.

Thanks,

-Cheronne

--

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

This correspondence contains confidential information from Analytical Resources, Inc. (ARI) The information contained herein is intended solely for the use of the individual(s) named above. If you are not the intended recipient, any copying, distribution, disclosure, or use of the text and/or attached document(s) is strictly prohibited.

If you have received this correspondence in error, please notify sender immediately. Thank you.

Attachments

WR25_COCs.pdf	169 KB
WR25_receipt.pdf	18.7 KB
WR26_COC.pdf	103 KB
WR26_receipt.pdf	14.4 KB



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WR26-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *B*
Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-052413 13-11199	Method Blank HC ID: ---	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 69.2%
WR26A 13-11199	AREA2-052313-SP-1 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	32 64	180 1300 74.8%
WR26B 13-11200	AREA2-052213-SP-1 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	60 120	800 1600 73.6%
WR26C 13-11201	STORMPIPE-SP-1 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	59 120	760 2300 68.9%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b012.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/25/2013
Macro: FID:3B052113

ARI ID: WR25MBS1
Client ID: WR25MBS1
Injection: 25-MAY-2013 11:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----							
C8	0.825	-0.002	2880	4906	WATPHG	(Tol-C12)	148666	11
C10	2.245	0.003	1379	1135	WATPHD	(C12-C24)	159458	15.40
C12	3.043	-0.002	670	329	WATPHM	(C24-C38)	379649	38.45
C14	3.628	0.006	1154	556	AK102	(C10-C25)	196393	15.89
C16	4.118	-0.001	1030	418	AK103	(C25-C36)	267296	37.60
C18	4.570	0.002	1308	1334				
C20	4.985	-0.004	991	447				
C22	5.378	-0.004	708	352	MSPIRIT	(Tol-C12)	148666	10.82
C24	5.757	0.005	642	100				
C25	5.929	0.003	695	308				
C26	6.099	0.000	847	385				
C28	6.411	-0.002	1694	530				
C32	6.956	0.002	6236	6746				
C34	7.197	0.009	5497	7592				
Filter Peak	----							
C36	7.400	-0.007	7919	9190				
o-terph	4.674	-0.002	722844	419009	JET-A	(C10-C18)	119734	11.06
Triacon Surr	6.703	-0.002	835702	503420				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	419009	31.2	69.2
Triacontane	503420	38.6	85.7

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b012.d

Date: 25-MAY-2013 11:29

Client ID: MR25HBS1

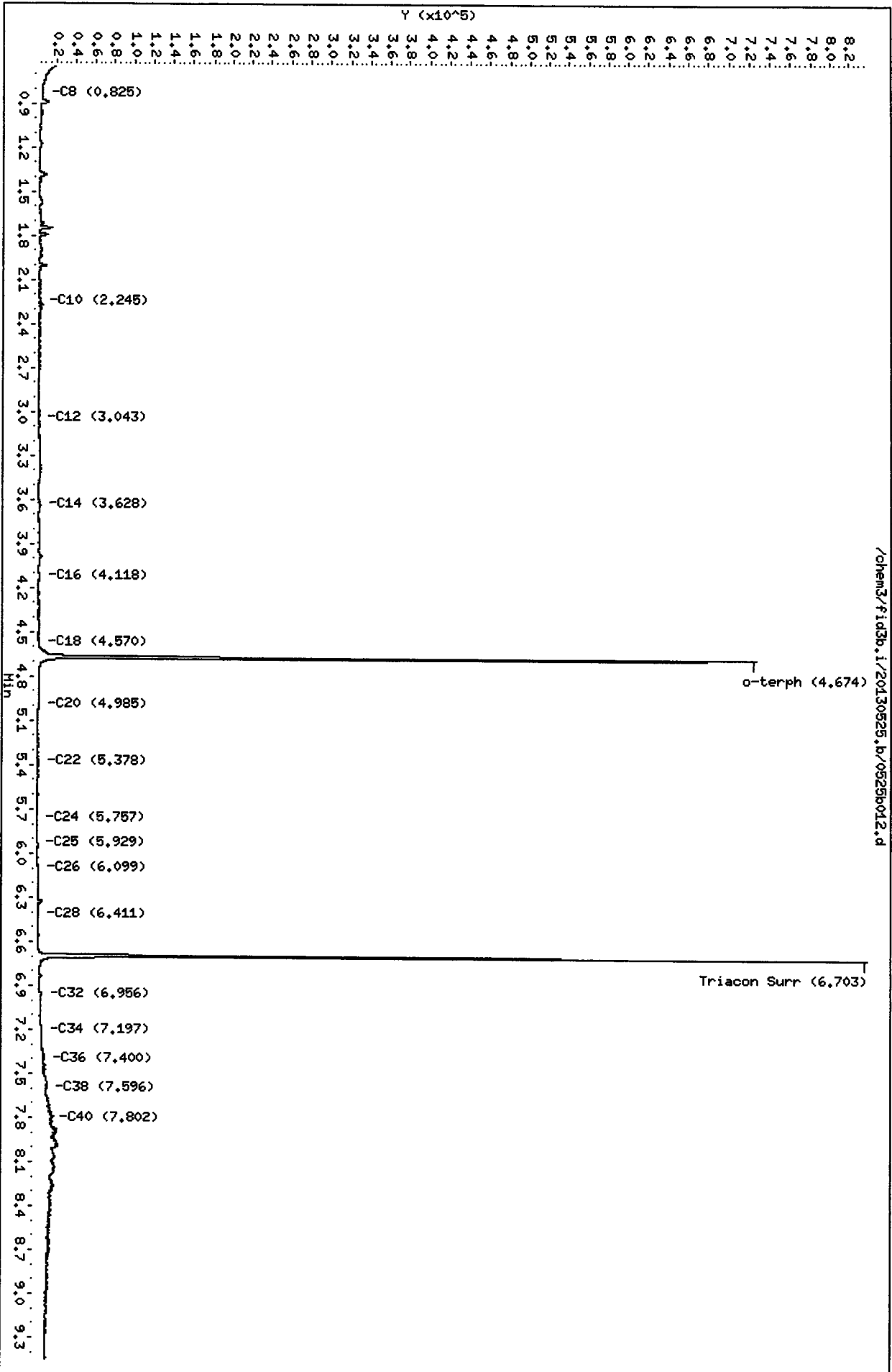
Sample Info: MR25HBS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130528.b/0528b010.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR26A
Client ID: AREA2-052313-SP-1
Injection: 28-MAY-2013 11:36
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		50346	4
C8	0.808	-0.015	3109	4802	WATPHD (C12-C24)		2900503	280.04
C10	2.242	0.002	340	323	WATPHM (C24-C38)		19791285	2004.61
C12	3.035	-0.007	496	396	AK102 (C10-C25)		3299330	267.01 M
C14	3.618	-0.001	974	223	AK103 (C25-C36)		17407813	2448.88 M
C16	4.114	-0.002	2380	969				
C18	4.562	0.000	10567	2849				
C20	4.979	-0.002	21112	6540				
C22	5.380	0.001	43339	30091	MSPiRIT (Tol-C12)		50346	3.66
C24	5.747	0.001	84882	32174				
C25	5.919	-0.001	105369	16664				
C26	6.103	0.006	140079	78668				
C28	6.406	-0.003	227982	100046				
C32	6.947	-0.005	211592	101523				
C34	7.185	0.001	247848	112349				
Filter Peak	----							
C36	7.405	0.001	187179	40545				
o-terph	4.669	-0.003	141294	90529	JET-A (C10-C18)		247855	22.90
Triacon Surr	6.702	-0.003	208844	118184				

*DRO
mo*

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

Surrogate	Area	Amount	%Rec
o-Terphenyl	90529	6.7	74.8
Triacontane	118184	9.1	100.6

R 05/28/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130528.b/0528b010.d

Date: 28-MAY-2013 11:36

Client ID: AREA2-052313-SP-1

Sample Info: MR26A,5

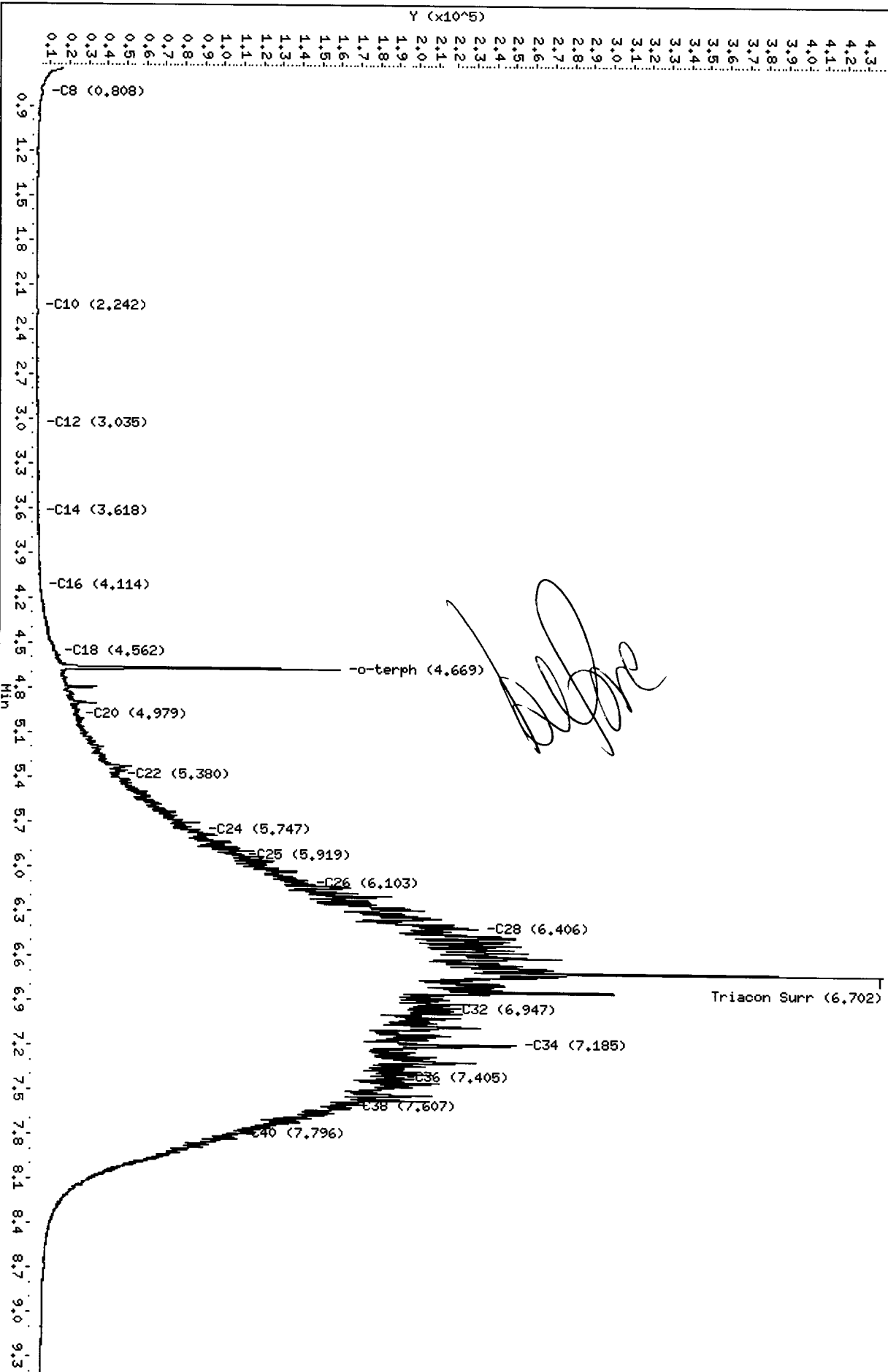
Instrument: fid3b.i

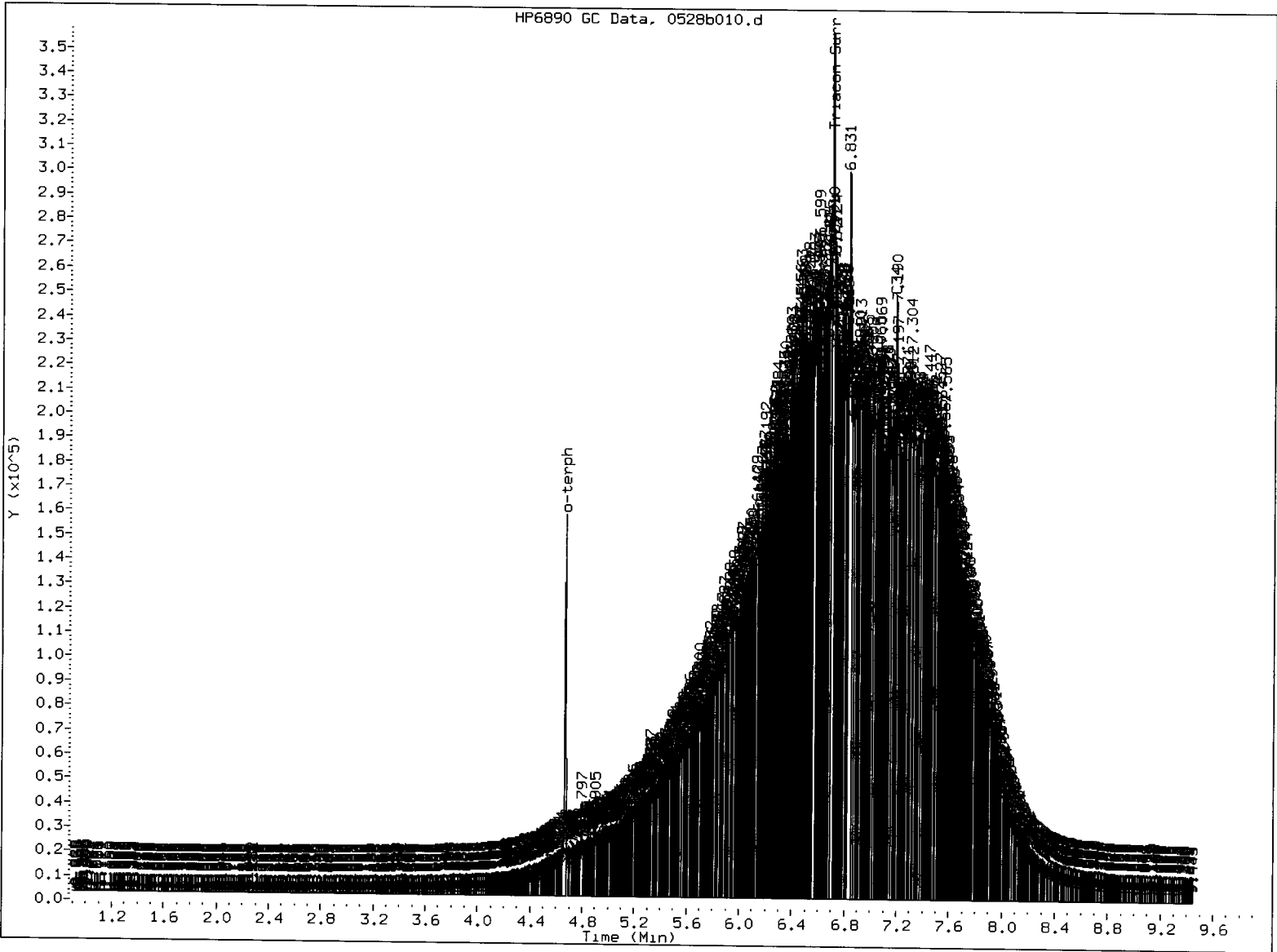
Operator: JM

Column diameter: 0.25

Column phase: RTX-1

/chem3/fid3b.i/20130528.b/0528b010.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: *A*

Date: 05/20/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130528.b/0528b011.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR26B
Client ID: AREA2-052213-SP-1
Injection: 28-MAY-2013 11:56
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	45239	3
C8	0.809	-0.013	2563	5404	WATPHD	(C12-C24)	6921426	668.26 <i>Dro</i>
C10	2.241	0.001	262	180	WATPHM	(C24-C38)	13366444	1353.85 <i>m.o</i>
C12	3.037	-0.005	313	193	AK102	(C10-C25)	7729193	625.50 M
C14	3.624	0.004	657	376	AK103	(C25-C36)	12209026	1717.53 M
C16	4.113	-0.002	1768	311				
C18	4.559	-0.002	11542	8796				
C20	4.977	-0.003	58495	38139				
C22	5.379	0.000	124978	33760	MSPIRIT	(Tol-C12)	45239	3.29
C24	5.745	0.000	168616	29582				
C25	5.921	0.000	195324	87600				
C26	6.094	-0.002	191038	114753				
C28	6.411	0.003	186598	89702				
C32	6.951	-0.001	98387	26724				
C34	7.184	0.000	84409	40737				
Filter Peak	----							
C36	7.405	0.000	44808	16565				
o-terph	4.667	-0.004	80199	44559	JET-A	(C10-C18)	214594	19.83
Triacon Surr	6.699	-0.006	94035	57018				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

Surrogate	Area	Amount	%Rec
o-Terphenyl	44559	3.3	73.6
Triacontane	57018	4.4	97.1

7c 05/20/13

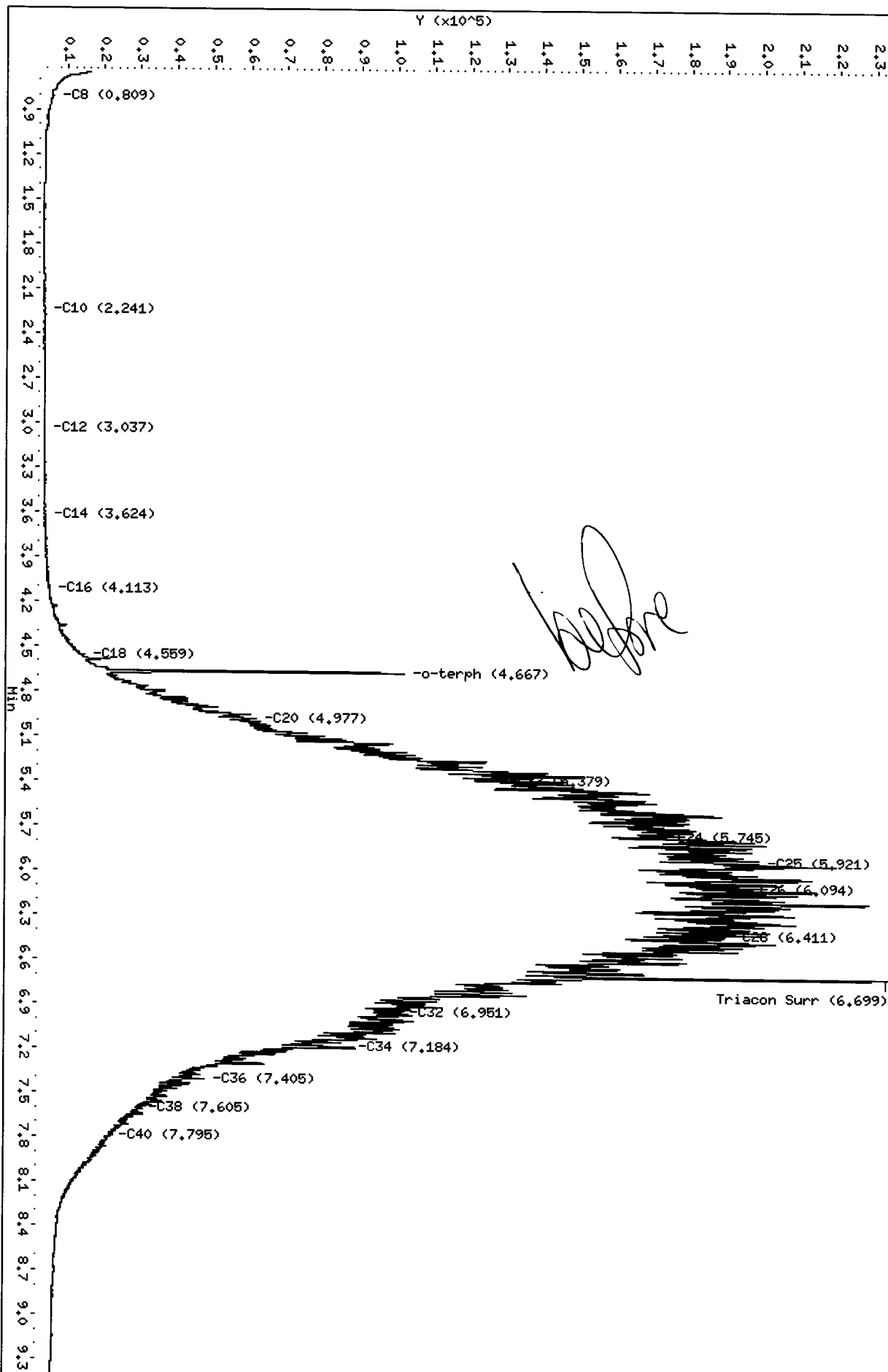
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

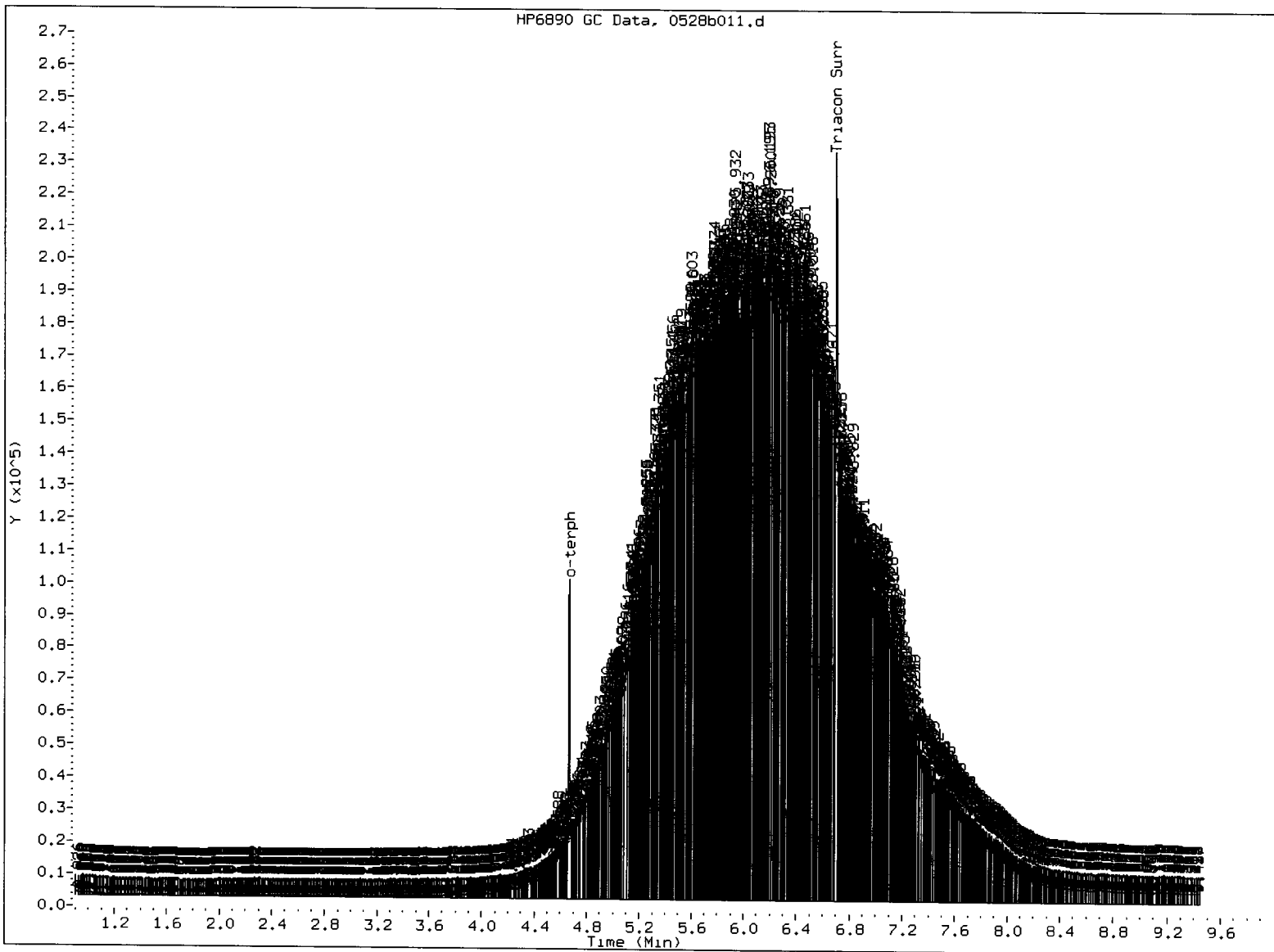
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Date: 28-MAY-2013 11:56
Client ID: AREA2-052213-SP-1
Sample Info: MR26B,10

Column phase: RTX-1

Instrument: fid3b.1
Operator: JM
Column diameter: 0.25

/chem3/fid3b.1/20130528.b/0528b011.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: *rn*

Date: *05/23/13*

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130528.b/0528b012.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR26C
Client ID: STORMPIPE-SP-1
Injection: 28-MAY-2013 12:15
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		83910	6
C8	0.827	0.004	2234	1295	WATPHD (C12-C24)		6599557	637.18
C10	2.243	0.003	513	525	WATPHM (C24-C38)		18873912	1911.69
C12	3.039	-0.003	1673	1410	AK102 (C10-C25)		7398900	598.77 M
C14	3.621	0.002	3295	1398	AK103 (C25-C36)		17329785	2437.90 M
C16	4.115	-0.001	7666	1861				
C18	4.560	-0.001	23980	9043				
C20	4.982	0.002	54632	35459				
C22	5.379	0.000	99344	27083	MSPiRIT (Tol-C12)		83910	6.11
C24	5.747	0.001	159826	60687				
C25	5.926	0.006	214287	133850				
C26	6.097	0.001	228156	78512				
C28	6.409	0.001	270963	57918				
C32	6.953	0.000	149658	58108				
C34	7.184	-0.001	138752	62518				
Filter Peak	----							
C36	7.406	0.002	96049	52082				
o-terph	4.667	-0.005	83227	41708	JET-A (C10-C18)		738216	68.20
Triacon Surr	6.703	-0.002	99004	47257				

Handwritten notes:
637.18
1911.69
598.77 M
2437.90 M

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

Surrogate	Area	Amount	%Rec
o-Terphenyl	41708	3.1	68.9
Triacontane	47257	3.6	80.5

Handwritten signature: JW
Handwritten date: 05/28/13

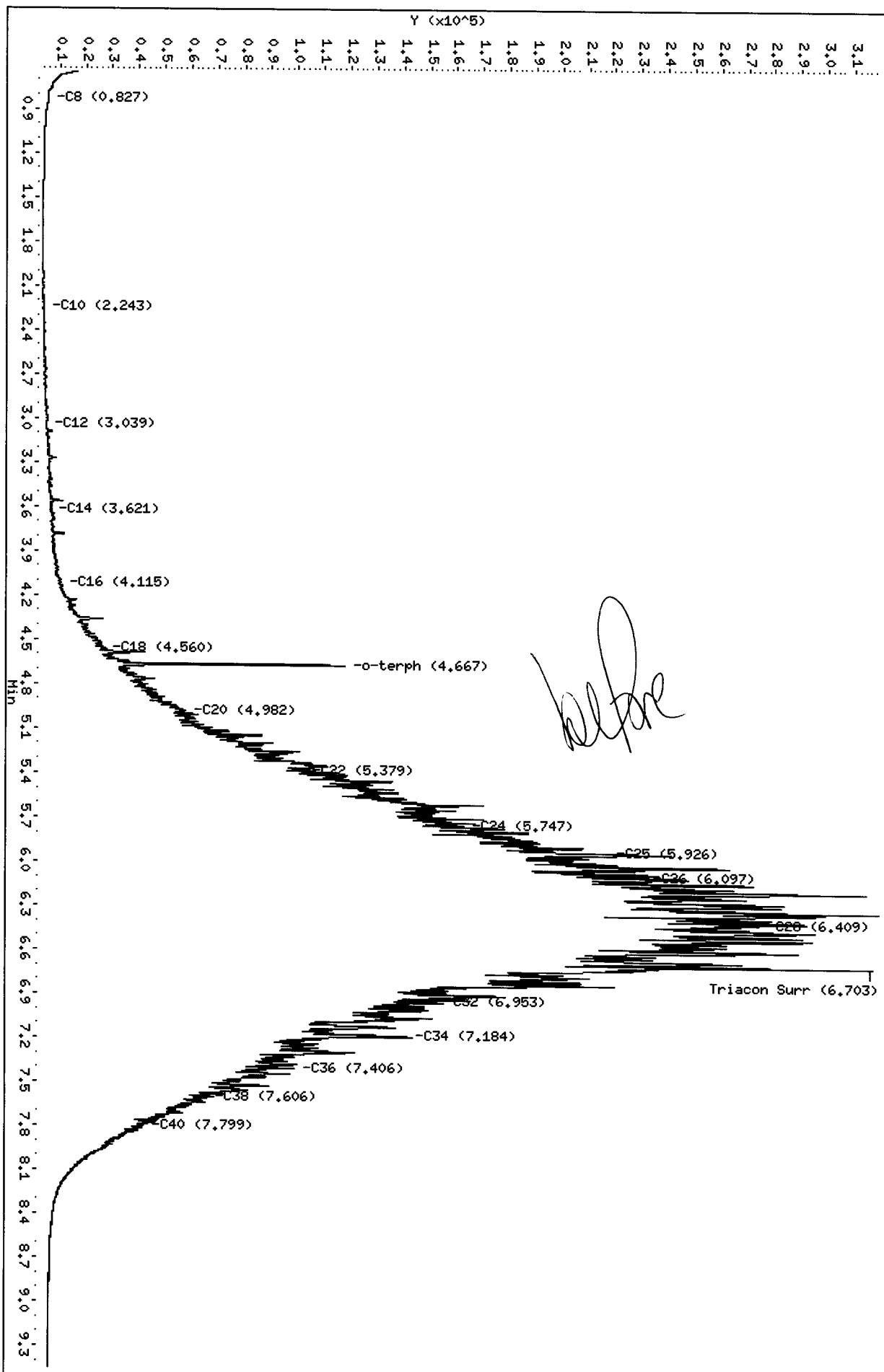
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

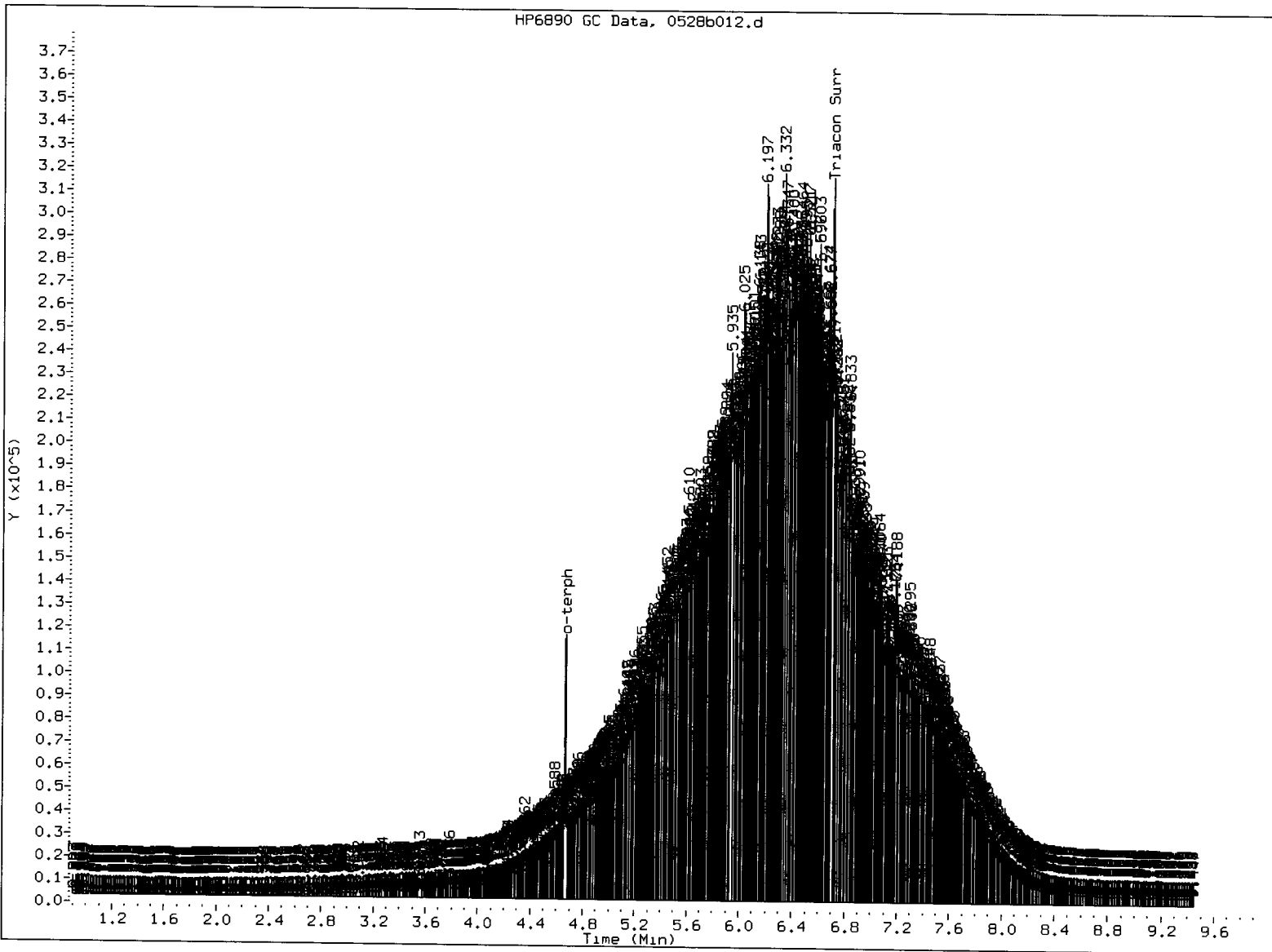
Data File: /chem3/fid3b.i/20130528.b/0528b012.d
Date: 28-MAY-2013 12:15
Client ID: STORHPPE-SP-1
Sample Info: WR26C,10

Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130528.b/0528b012.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JA

Date: 05/10/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR26-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-052413	69.2%	0
LCS-052413	66.9%	0
AREA2-052313-SP-1	74.8%	0
AREA2-052213-SP-1	73.6%	0
STORMPIPE-SP-1	68.9%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11199 to 13-11201

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-052413
LAB CONTROL

Lab Sample ID: LCS-052413
 LIMS ID: 13-11199
 Matrix: Soil
 Data Release Authorized: *CP*
 Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/23/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 11:48
 Instrument/Analyst: FID/VTS

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	112	150	74.7%

TPHD Surrogate Recovery

o-Terphenyl	66.9%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b013.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/25/2013
Macro: FID:3B052113

ARI ID: WR25LCSS1
Client ID: WR25LCSS1
Injection: 25-MAY-2013 11:48
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----							
C8	0.836	0.009	10228	14086	WATPHG	(Tol-C12)	3023397	224
C10	2.244	0.003	74029	52903	WATPHD	(C12-C24)	11645017	1124.32
C12	3.046	0.001	125949	138819	WATPHM	(C24-C38)	281512	28.51
C14	3.626	0.003	208796	273577	AK102	(C10-C25)	13882013	1123.44 M
C16	4.122	0.003	316887	251706	AK103	(C25-C36)	201499	28.35
C18	4.569	0.001	346663	261545				
C20	4.984	-0.005	179512	183989				
C22	5.381	0.000	82026	76220	MSPIRIT	(Tol-C12)	3023397	220.07
C24	5.748	-0.004	27459	18686				
C25	5.922	-0.004	13958	18479				
C26	6.096	-0.002	6449	4955				
C28	6.414	0.001	2588	3197				
C32	6.960	0.007	4318	5818				
C34	7.188	0.000	1335	370				
Filter Peak	----							
C36	7.405	-0.002	2452	1600				
o-terph	4.677	0.001	746774	404644	JET-A	(C10-C18)	10642947	983.26
Triacon Surr	6.702	-0.002	684916	535798				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	404644	30.1	66.9
Triacontane	535798	41.1	91.3

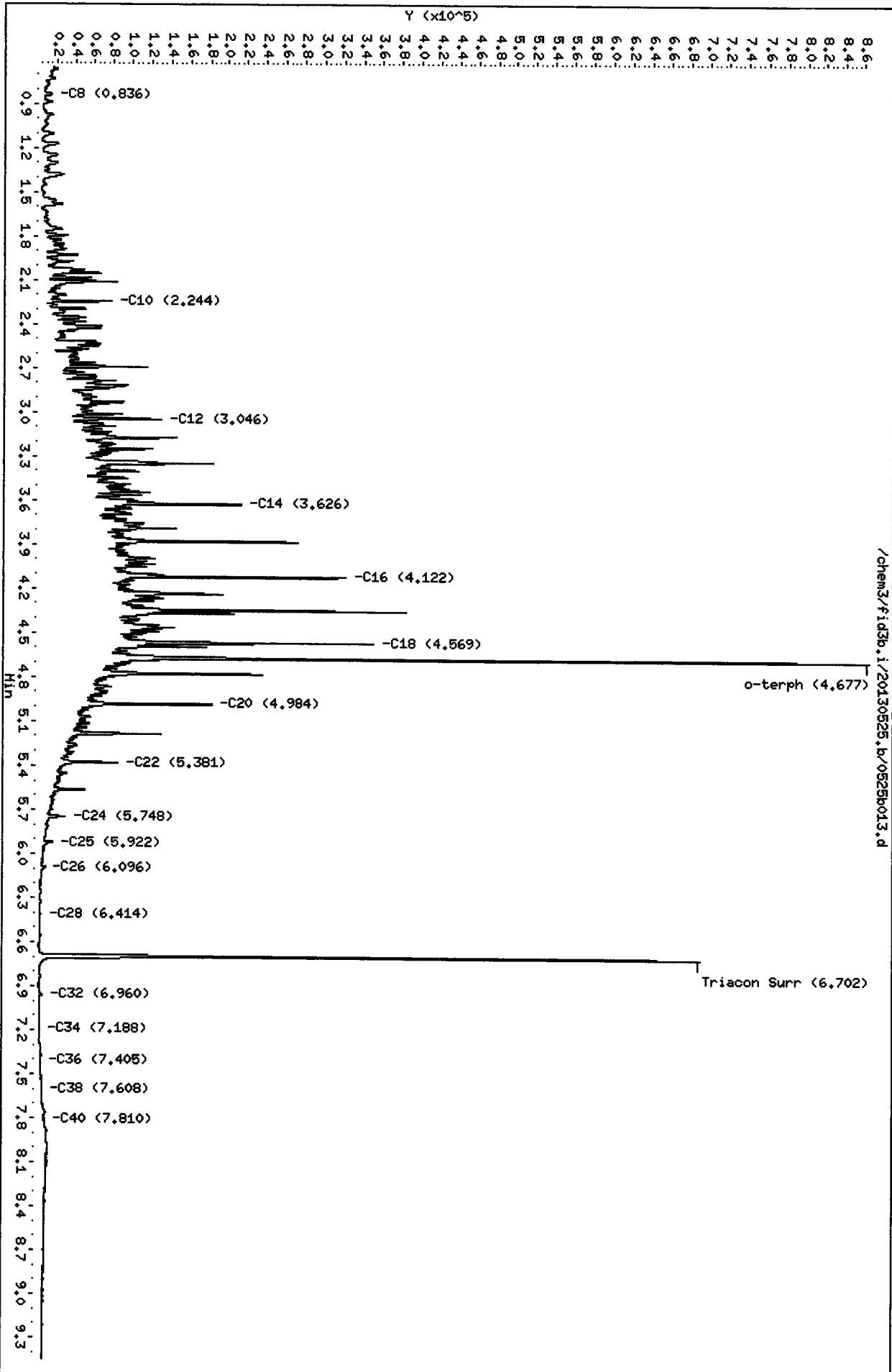
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b013.d
Date : 25-MAY-2013 11:48
Client ID: MR25LCSS1
Sample Info: MR25LCSS1

MTS
5.25.13

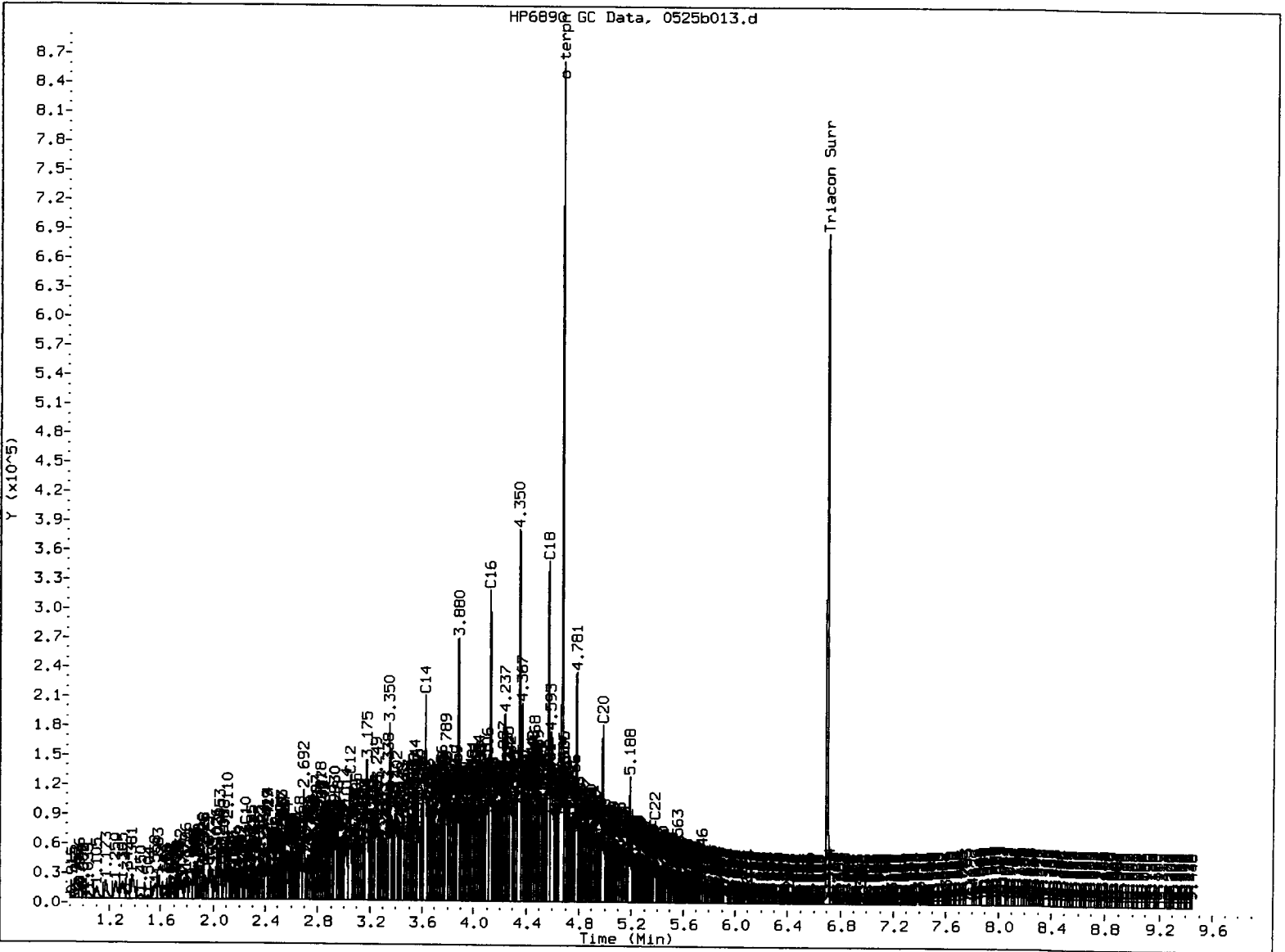
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



11:48:00 AM 5/25/2013

HP6890 GC Data, 0525b013.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: UD

Date: 5.25.13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/24/13

ARI Job: WR26
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11199-052413MB1	Method Blank	10.0 g	1.00 mL	-	05/24/13
13-11199-052413LCS1	Lab Control	10.0 g	1.00 mL	-	05/24/13
13-11199-WR26A	AREA2-052313-SP-1	7.79 g	1.00 mL	D	05/24/13
13-11200-WR26B	AREA2-052213-SP-1	8.34 g	1.00 mL	D	05/24/13
13-11201-WR26C	STORMPIPE-SP-1	8.42 g	1.00 mL	D	05/24/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: AREA2-052313-SP-1
SAMPLE**

Lab Sample ID: WR26A

LIMS ID: 13-11199

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 23:38

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 66 mg-dry-wt

Percent Moisture: 22.6%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	24
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	38	< 38 U
95-47-6	o-Xylene	19	< 19 U

Gasoline Range Hydrocarbons 7.5 < 7.5 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	85.1%
Bromobenzene	90.2%

Gasoline Surrogate Recovery

Trifluorotoluene	84.8%
Bromobenzene	88.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a030.d ARI ID: WR26A
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a030.d Client ID: AREA2-052313-SP-1
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 23:38
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.001	2509	32351	84.8	TFT(Surr)
15.380	0.000	1761	14644	88.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	734	0.002
8015C 2MP-TMB (4.18 to 16.20)	723723	735	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	734	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	734	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	-0.001	2744	85.1	TFT(Surr)
15.388	0.000	6523	90.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.001	63	0.32N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a030.d
Date: 24-May-2013 23:38
Client ID: AREA-052313-SP-1
Sample Info: MR26A

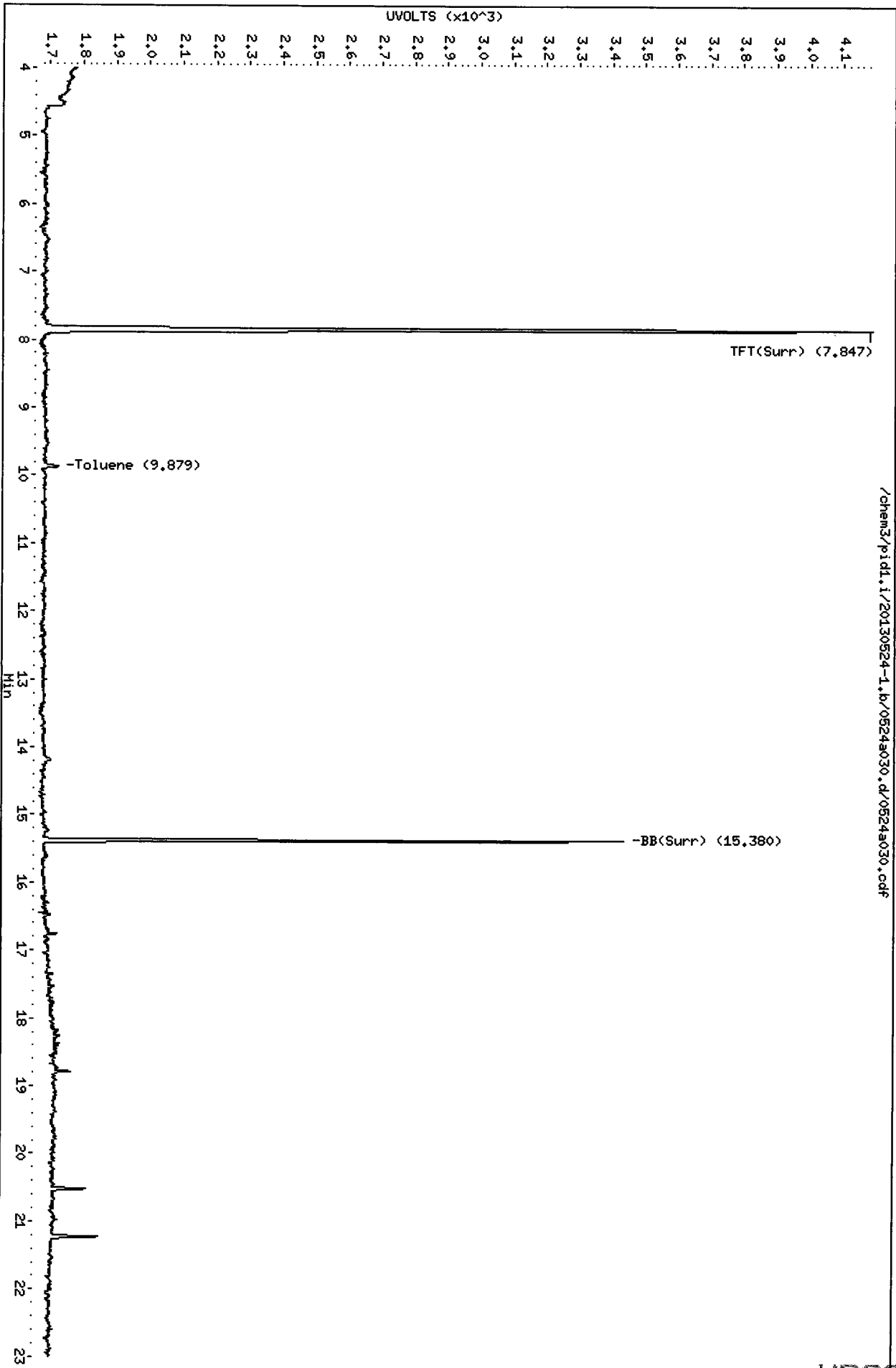
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Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130524-2.b/0524a030.d

Date: 24-MAY-2013 23:38

Client ID: AREA2-052313-SP-1

Sample Info: MR26A

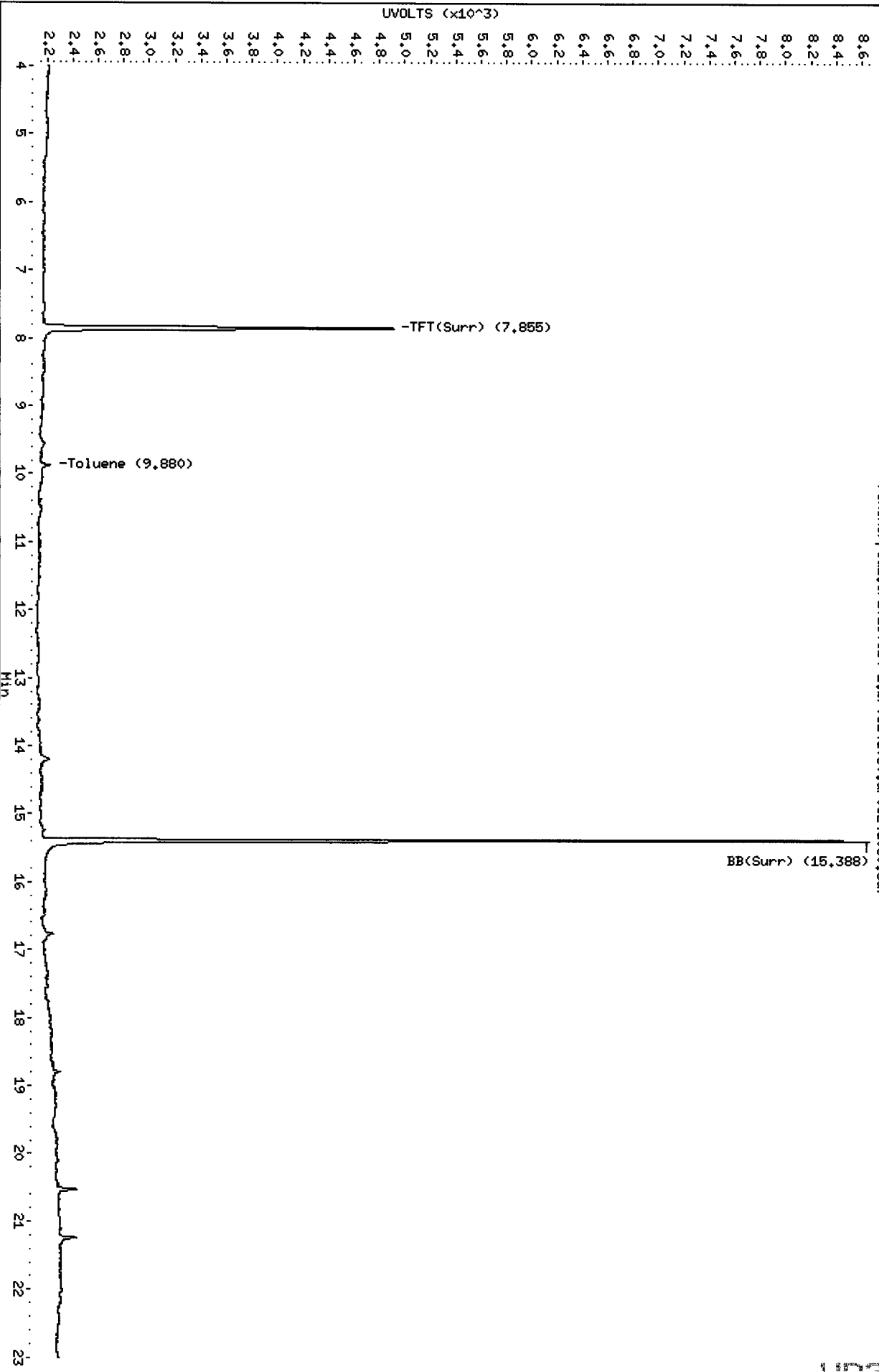
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

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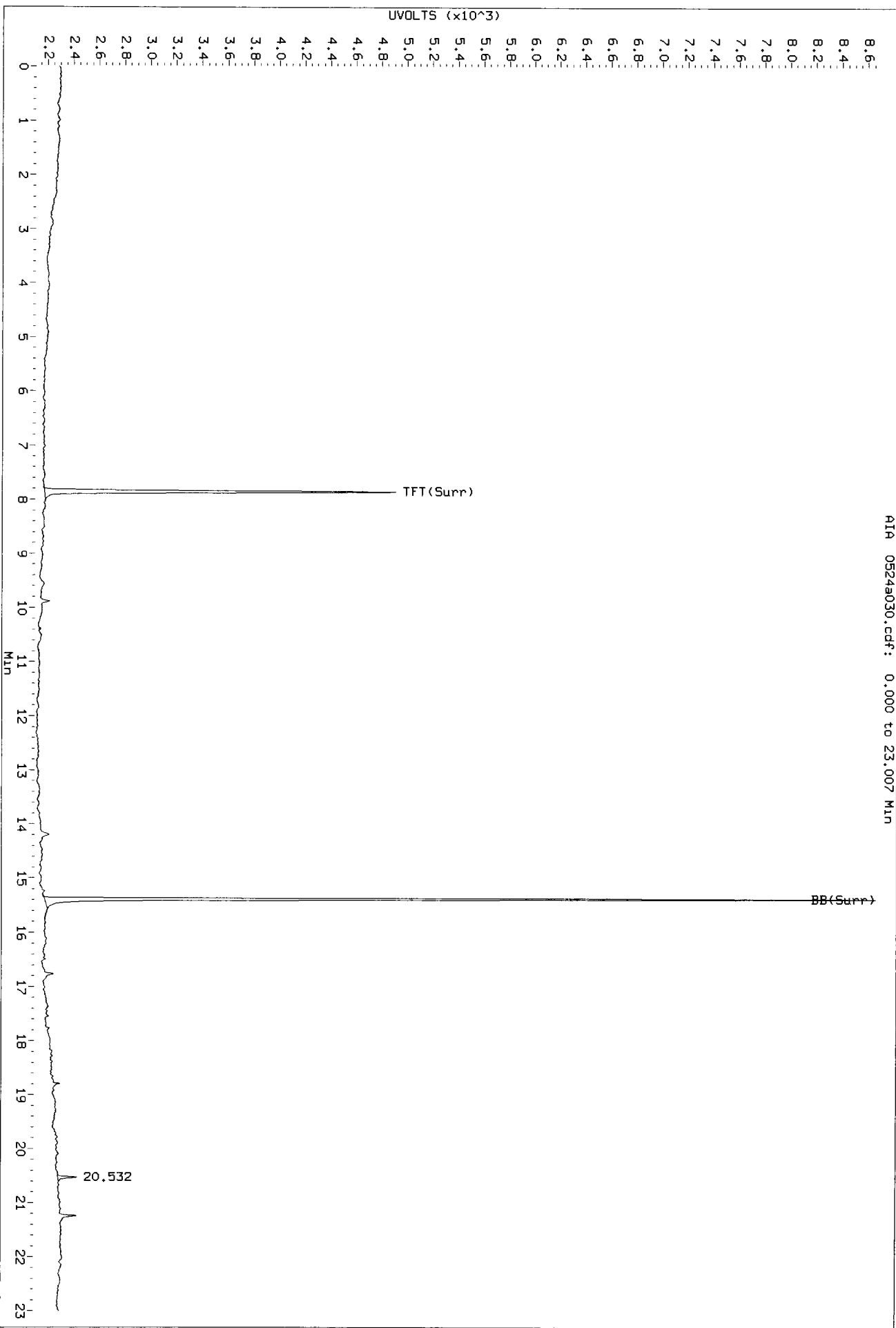


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PL
5/28/13

Data File: /chem3/p1d1.1/20130524-2.b/0524a030.d/0524a030.cdf
Injection Date: 24-MAY-2013 23:38
Instrument: p1d1.1
Client Sample ID: AREA2-052313-SP-1

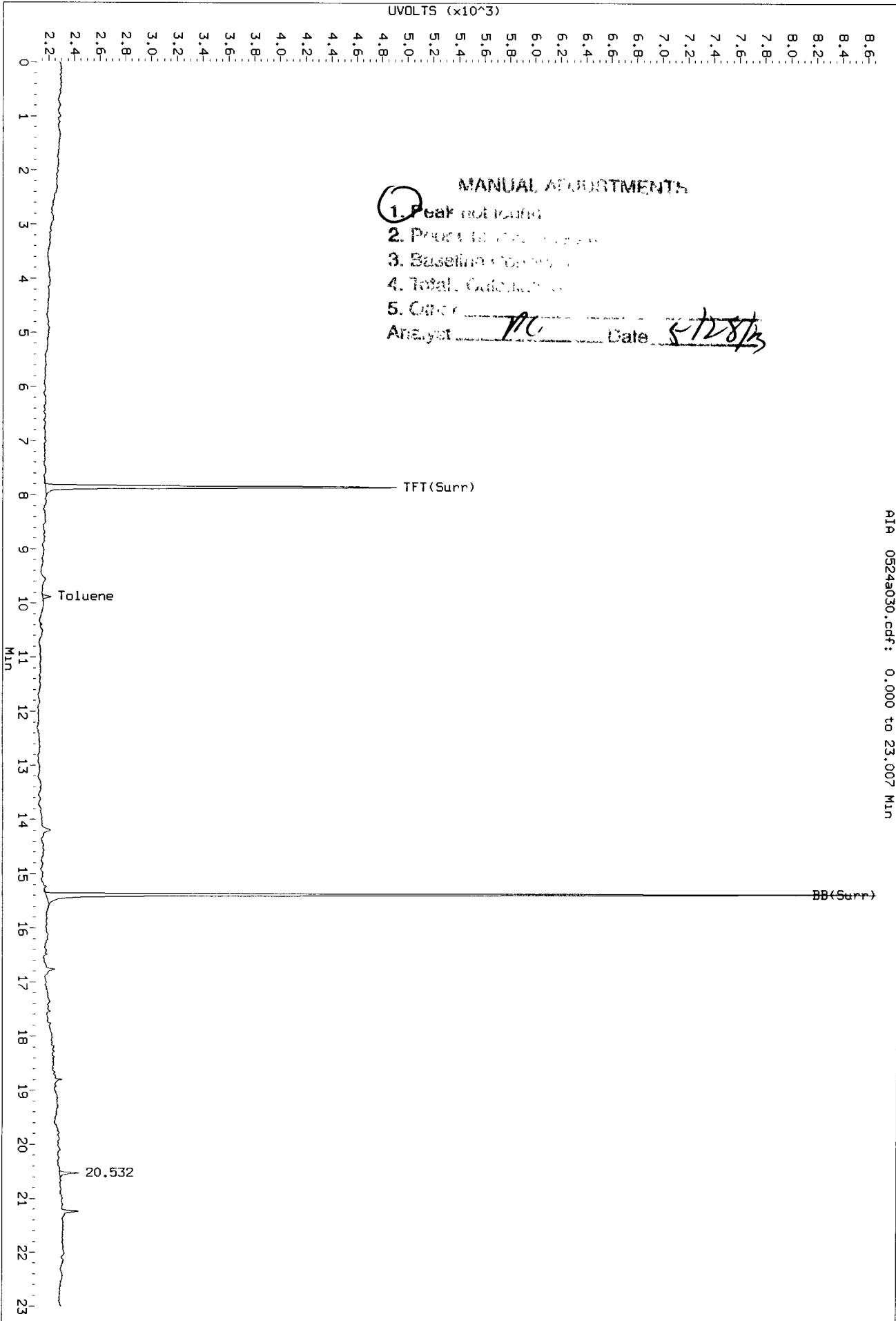
AIA 0524a030.cdf: 0.000 to 23.007 Min



20130524-2.b

Data File: /chem3/pid1.1/20130524-2.b/0524a030.d/0524a030.cdf
Injection Date: 24-MAY-2013 23:38
Instrument: pid1.1
Client Sample ID: ARA2-052313-SP-1

AIA 0524a030.cdf: 0.000 to 23.007 Min



0524a030.cdf



ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: AREA2-052213-SP-1
 SAMPLE

Lab Sample ID: WR26B
 LIMS ID: 13-11200
 Matrix: Soil
 Data Release Authorized: *MMW*
 Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/23/13
 Date Received: 05/24/13

Date Analyzed: 05/25/13 00:07
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 74 mg-dry-wt
 Percent Moisture: 16.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	17
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons 6.8 < 6.8 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	86.6%
Bromobenzene	93.6%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	91.8%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

RC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a031.d ARI ID: WR26B
Data file 2: /chem3/pid1.i/20130524-2.b/0524a031.d Client ID: AREA2-052213-SP-1
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 25-MAY-2013 00:07
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	0.000	2532	32336	85.6	TFT(Surr)
15.380	0.000	1825	15489	91.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	1452	0.004
8015C 2MP-TMB (4.18 to 16.20)	723723	1453	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1452	0.004

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.000	2791	86.6	TFT(Surr)
15.388	0.000	6765	93.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.880	-0.001	49	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a031.d

Date: 25-MAY-2013 00:07

Client ID: AREA2-052213-SP-1

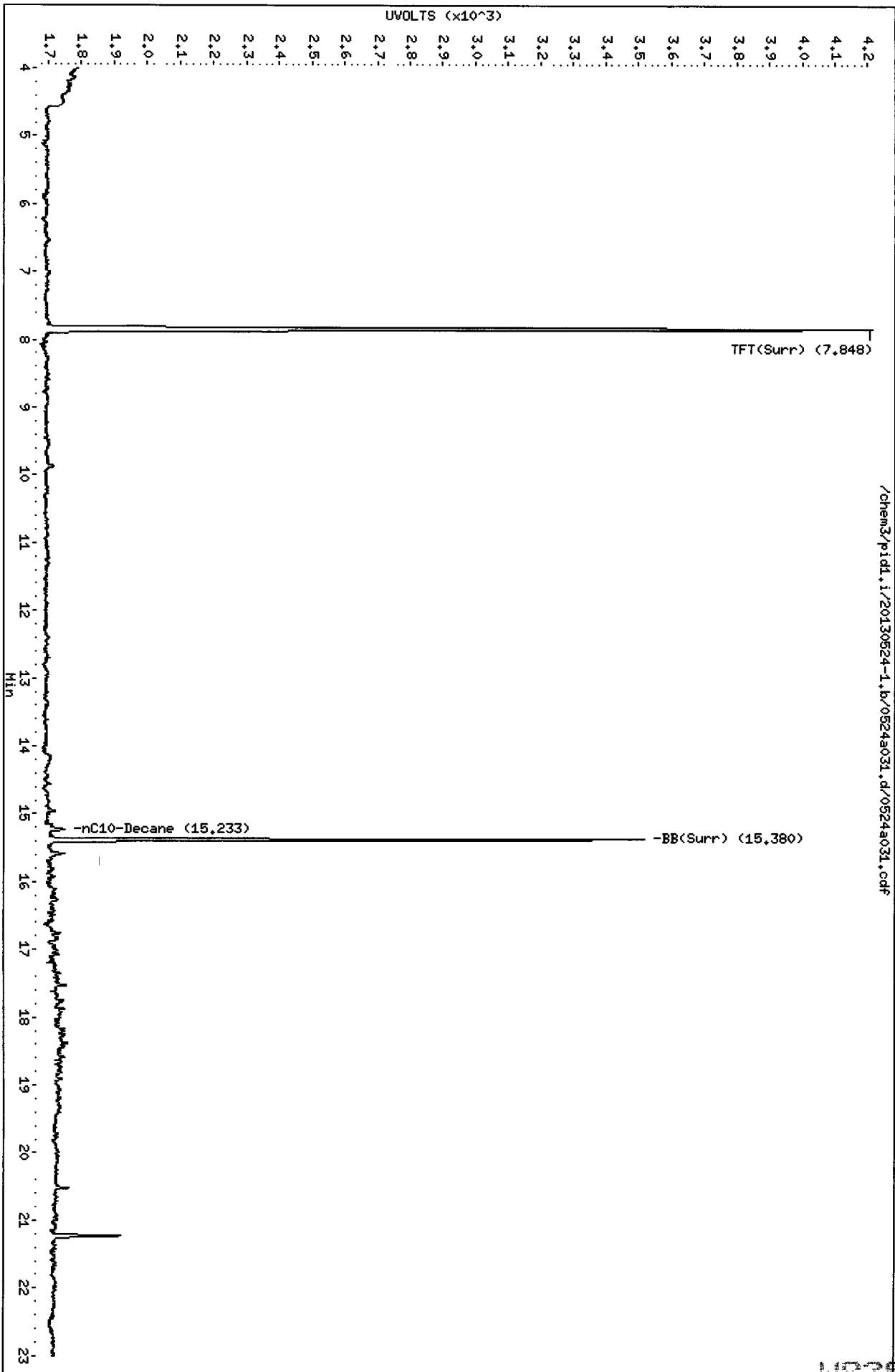
Sample Info: MR26B

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



/chem3/pid1.i/20130524-1.b/0524a031.d/0524a031.cdf

Data File: /chem3/pid1.i/20130524-2.b/0524a031.d

Date: 25-MAY-2013 00:07

Client ID: AREA2-052213-SP-1

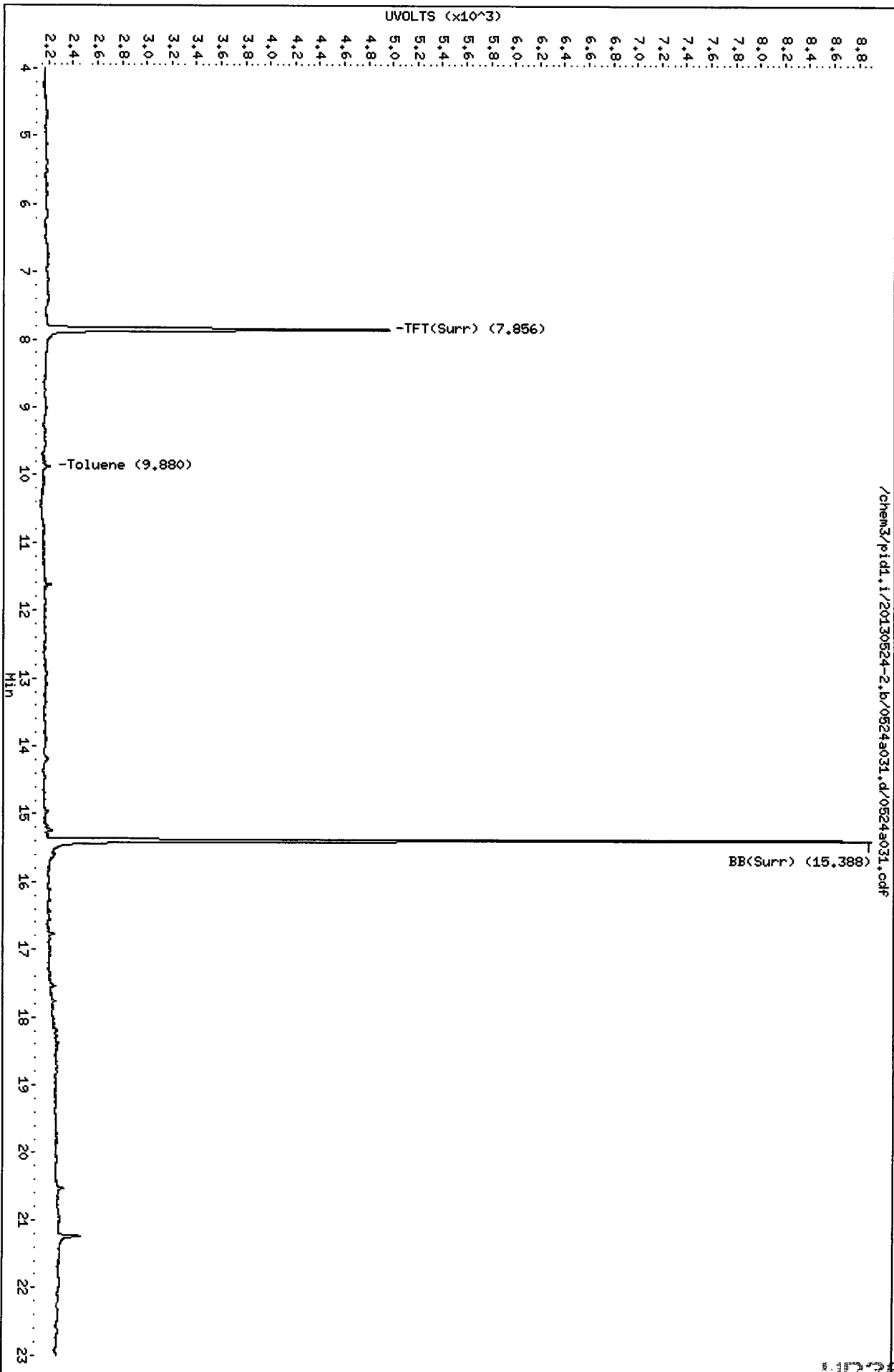
Sample Info: MR26B

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



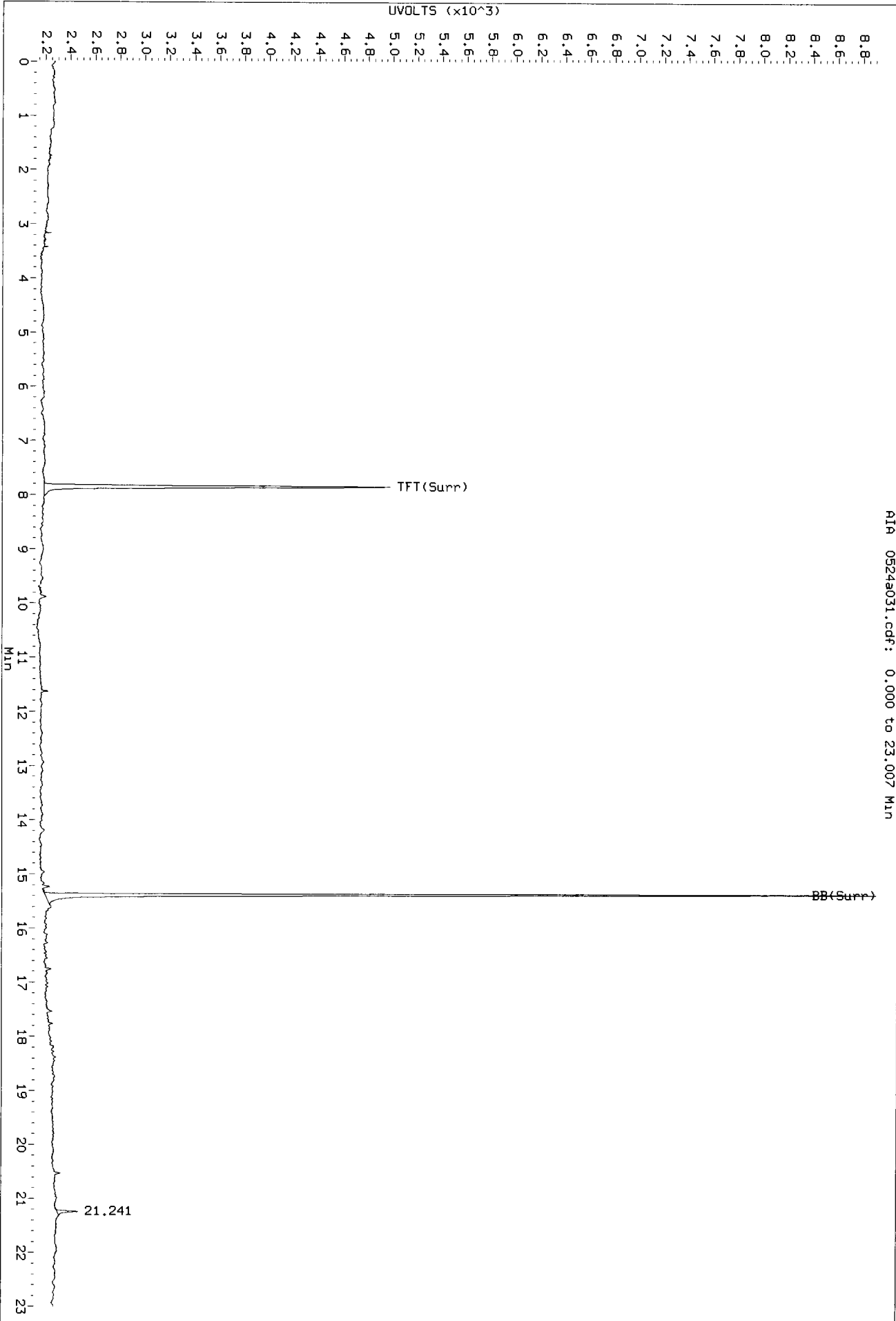
/chem3/pid1.i/20130524-2.b/0524a031.d/0524a031.cdf

MR26B

MC
5/28/13

Data File: /chem3/p1d1.1/20130524-2.b/0524a031.d/0524a031.cdf
Injection Date: 25-MAY-2013 00:07
Instrument: p1d1.1
Client Sample ID: AREA2-052213-SP-1

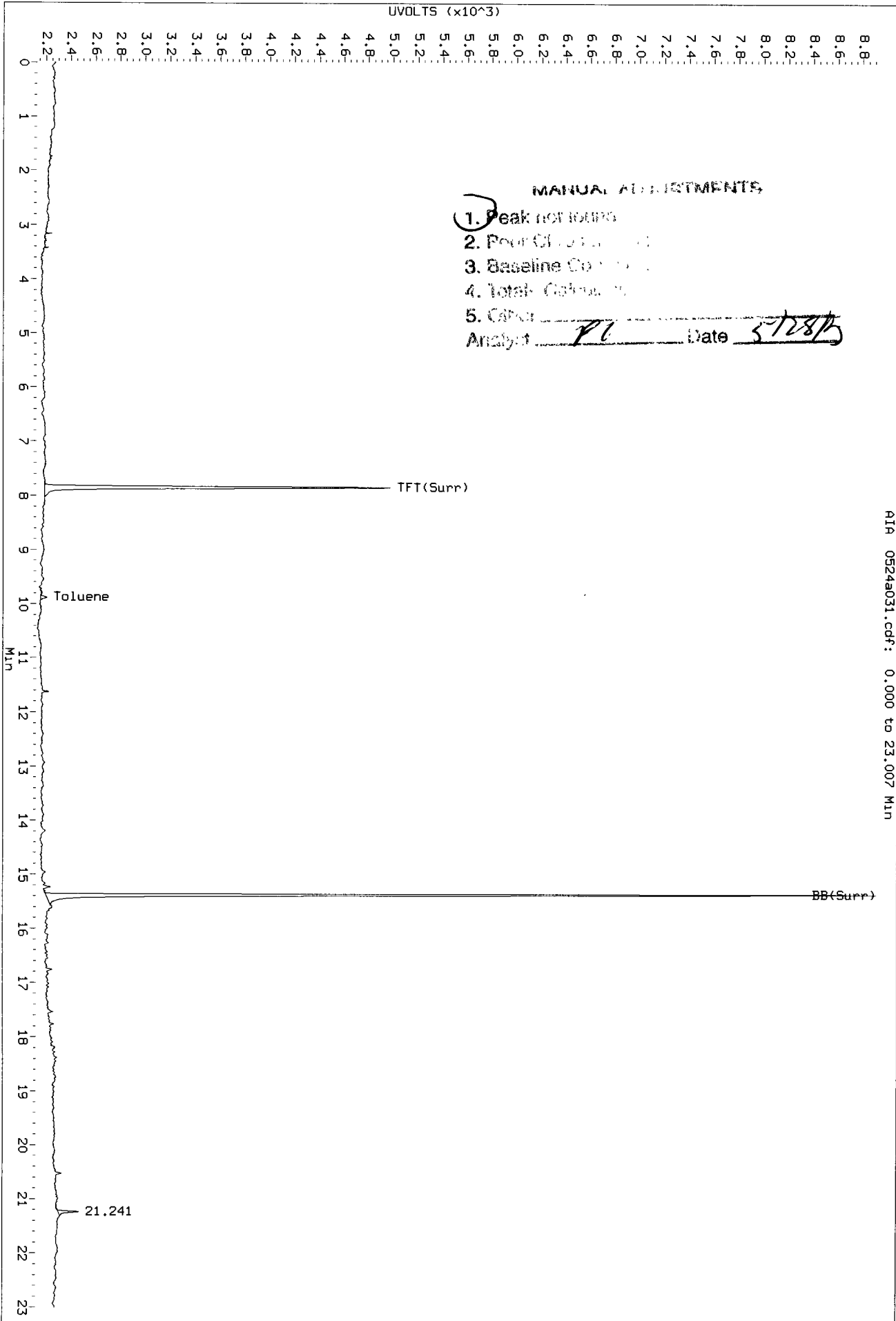
AIA 0524a031.cdf: 0.000 to 23.007 Min



0524a031.cdf

Data File: /chem3/p1d1.1/20130524-2.b/0524a031.d/0524a031.cdf
Injection Date: 25-MAY-2013 00:07
Instrument: p1d1.1
Client Sample ID: AREA2-052213-SP-1

AIA 0524a031.cdf: 0.000 to 23.007 Min



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor Cl...
- 3. Baseline Cor...
- 4. Total Calcu...
- 5. C...

Analyt PL Date 5/28/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: STORMPIPE-SP-1

SAMPLE

Lab Sample ID: WR26C

LIMS ID: 13-11201

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 00:35

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 62 mg-dry-wt

Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	< 20 U
100-41-4	Ethylbenzene	20	< 20 U
179601-23-1	m,p-Xylene	40	< 40 U
95-47-6	o-Xylene	20	< 20 U

Gasoline Range Hydrocarbons **8.1** **19** **GAS ID
GRO**

BETX Surrogate Recovery

Trifluorotoluene	86.9%
Bromobenzene	93.7%

Gasoline Surrogate Recovery

Trifluorotoluene	86.5%
Bromobenzene	91.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a032.d ARI ID: WR26C
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a032.d Client ID: STORMPIPE-SP-1
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 25-MAY-2013 00:35
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

=====
 FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	0.000	2560	33046	86.5	TFT(Surr)
15.381	0.000	1812	15529	91.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	59003	0.165 M
8015C 2MP-TMB (4.18 to 16.20)	723723	22084	0.031 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	16428	0.028 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	88017	0.235 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====
 PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.000	2800	86.9	TFT(Surr)
15.388	0.000	6775	93.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130524-1.b/0524a032.d

Page 1

Date: 25-MAY-2013 00:35

Client ID: STORPIPE-SP-1

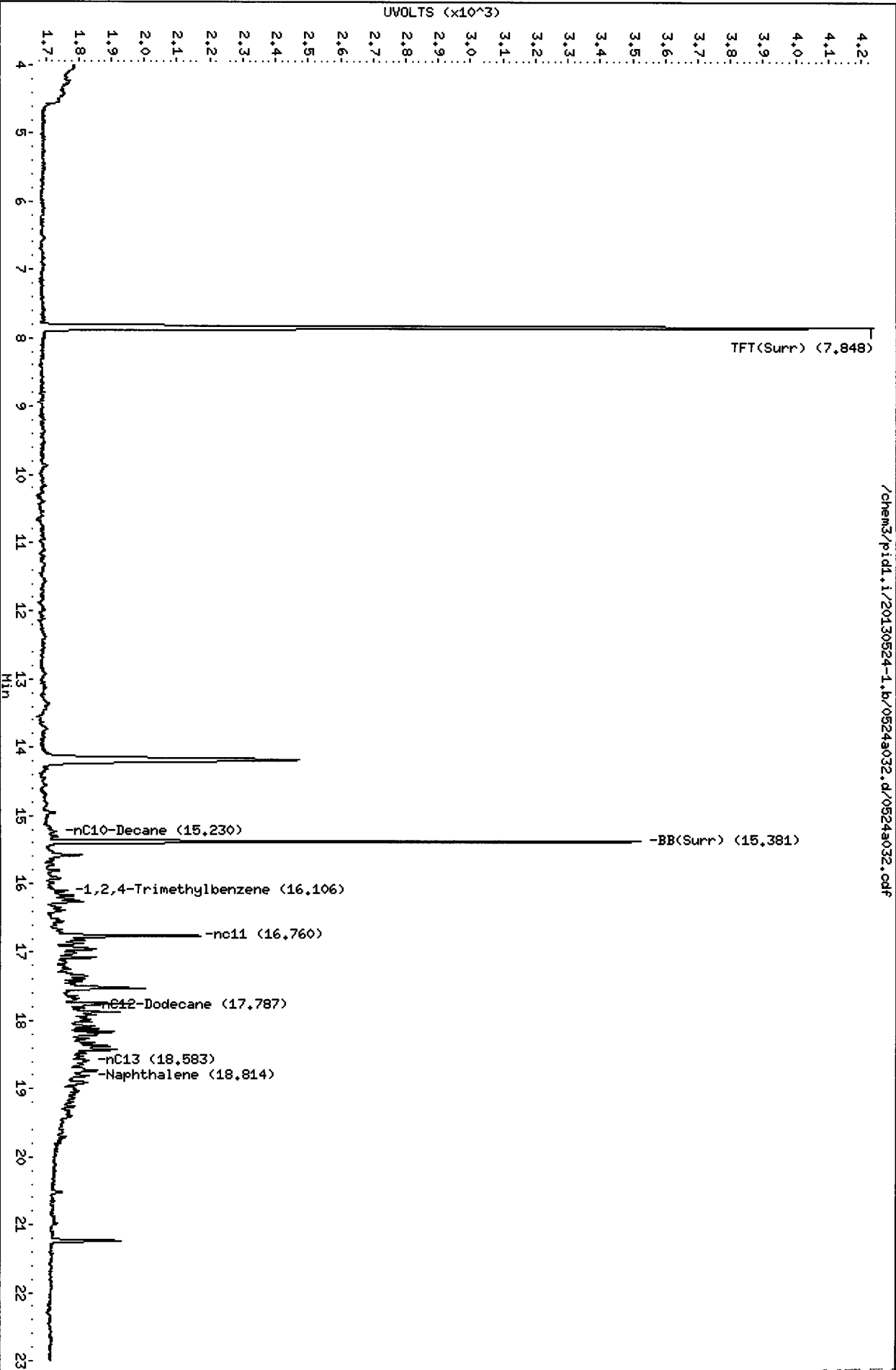
Sample Info: MR26C

Instrument: pidd.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 FID



/chem3/pidd.i/20130524-1.b/0524a032.d/0524a032.cdf

Data File: /chem3/pid1.i/20130524-2.b/0524a032.d
Date: 25-May-2013 00:35
Client ID: STORPIPE-SP-1
Sample Info: MR26C

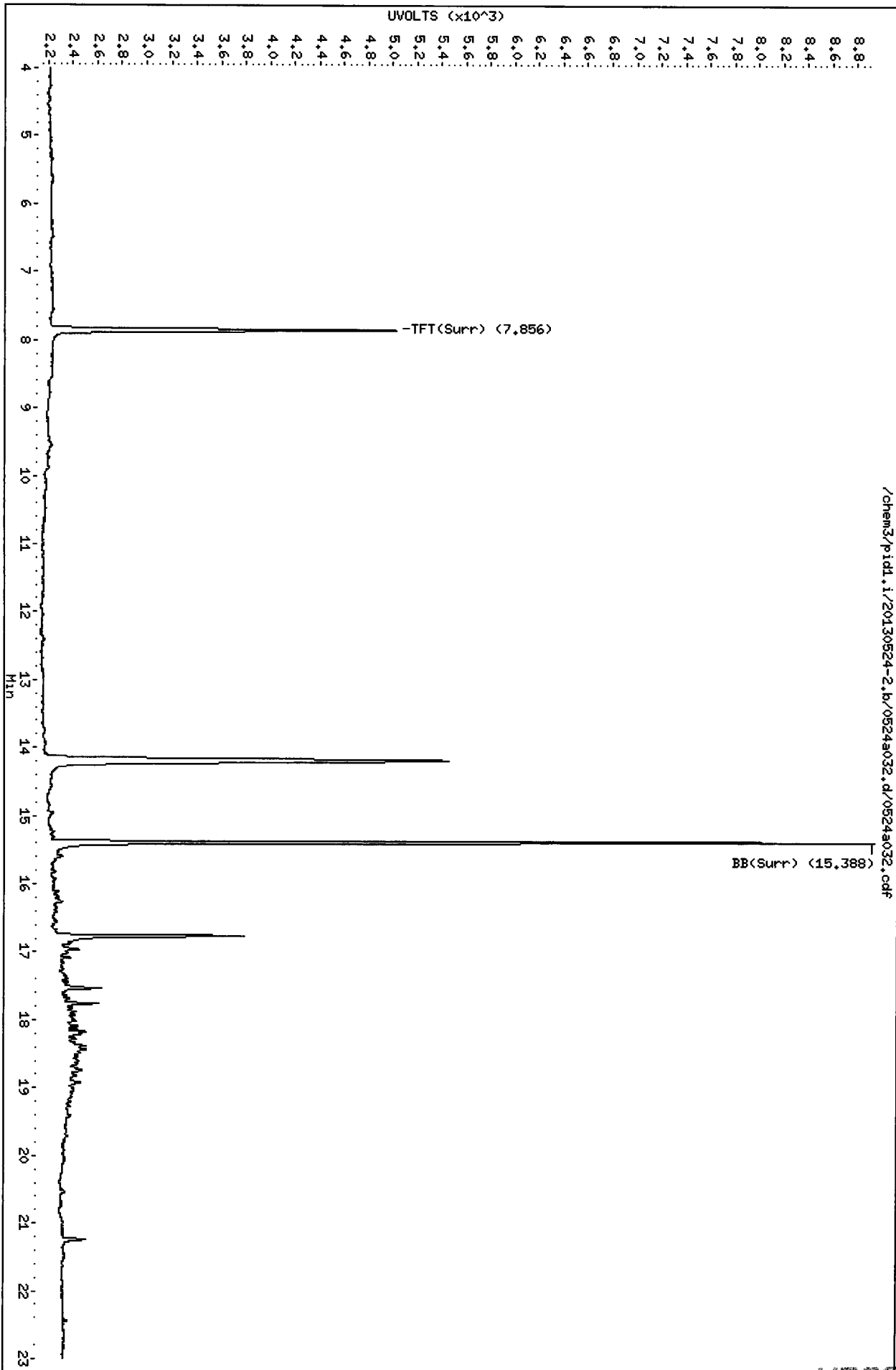
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

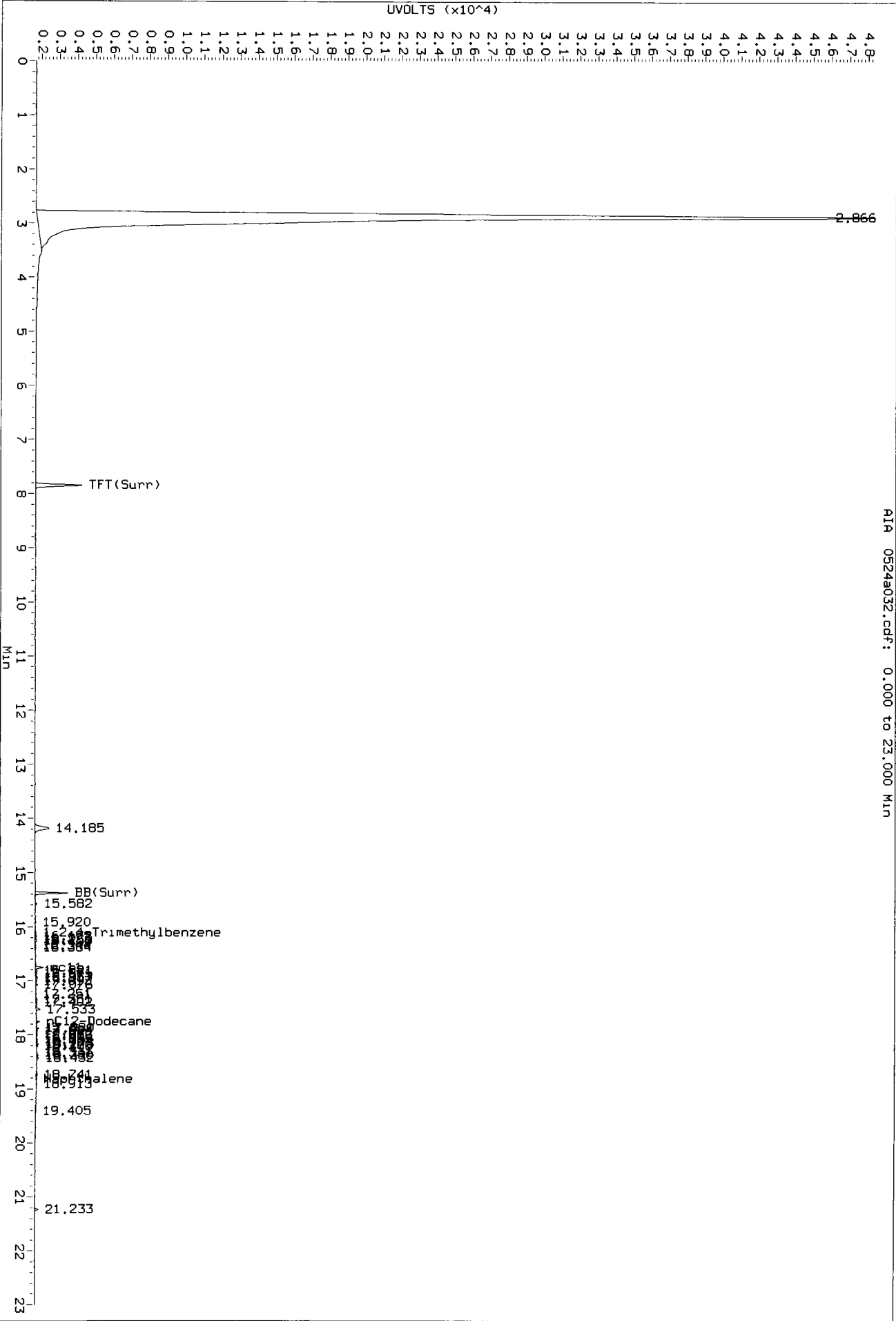
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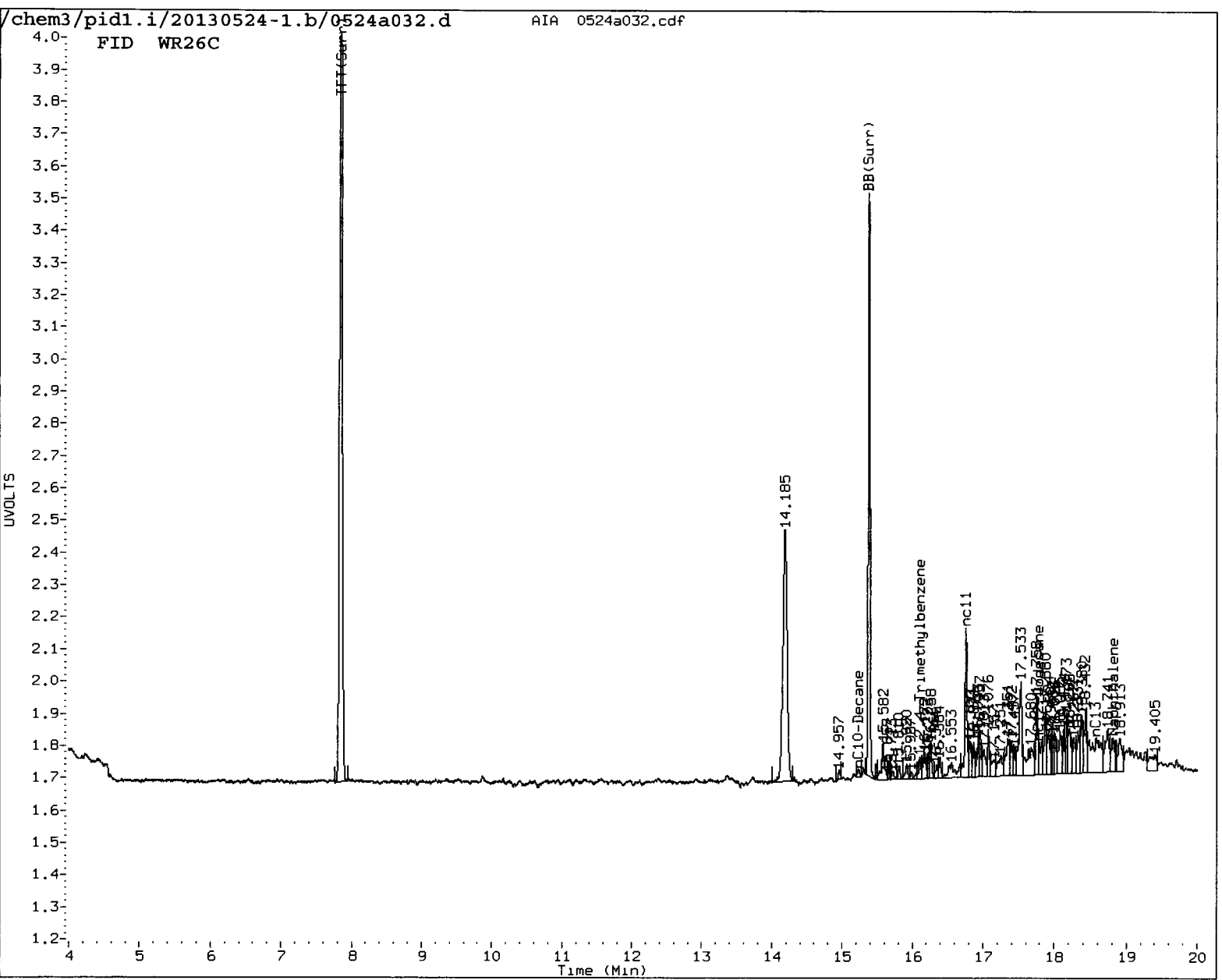
PK
5/28/13

Data File: /chem3/pid1.1/20130524-1.b/0524s032.d/0524s032.cdf
Injection Date: 25-MAY-2013 00:35
Instrument: pid1.1
Client Sample ID: STORMPIPE-SP-1

AIA 0524s032.cdf: 0.000 to 23.000 Min



17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: PL Date: 5/28/13

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR26
Matrix: Soil

QC Report No: WR26-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-052413	NA	92.1%	92.0%	0
LCS-052413	NA	95.9%	91.8%	0
LCSD-052413	NA	98.4%	94.1%	0
AREA2-052313-SP-1	NA	84.8%	88.6%	0
AREA2-052213-SP-1	NA	85.6%	91.8%	0
STORMPIPE-SP-1	NA	86.5%	91.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11199 to 13-11201

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR26
Matrix: Soil

QC Report No: WR26-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
MB-052413	93.8%	94.7%	0
LCS-052413	96.6%	94.2%	0
LCSD-052413	99.4%	96.9%	0
AREA2-052313-SP-1	85.1%	90.2%	0
AREA2-052213-SP-1	86.6%	93.6%	0
STORMPIPE-SP-1	86.9%	93.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11199 to 13-11201



ORGANICS ANALYSIS DATA SHEET
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: LCS-052413
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413
 LIMS ID: 13-11199
 Matrix: Soil
 Data Release Authorized: *WVW*
 Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/24/13 10:44
 LCSD: 05/24/13 11:13
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	49.0	50.0	98.0%	48.9	50.0	97.8%	0.2%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.9%	98.4%
Bromobenzene	91.8%	94.1%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413

LIMS ID: 13-11199

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/24/13 10:44

LCSD: 05/24/13 11:13

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	190	185	103%	186	185	101%	2.1%
Toluene	2030	1980	103%	2020	1980	102%	0.5%
Ethylbenzene	602	580	104%	602	580	104%	0.0%
m,p-Xylene	2150	2120	101%	2160	2120	102%	0.5%
o-Xylene	995	960	104%	988	960	103%	0.7%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	96.6%	99.4%
Bromobenzene	94.2%	96.9%

126
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a004.d ARI ID: LCS0524
Data file 2: /chem3/pid1.i/20130524-2.b/0524a004.d Client ID:
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 10:44
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2837	40729	95.9	TFT (Surr)
15.383	0.002	1824	16098	91.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	349354	0.976 M
8015C 2MP-TMB (4.18 to 16.20)	723723	721396	0.997 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	580990	0.997 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	367872	0.981 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3115	96.6	TFT (Surr)
15.390	0.002	6807	94.2	BB (Surr)

SW8021 (PID)

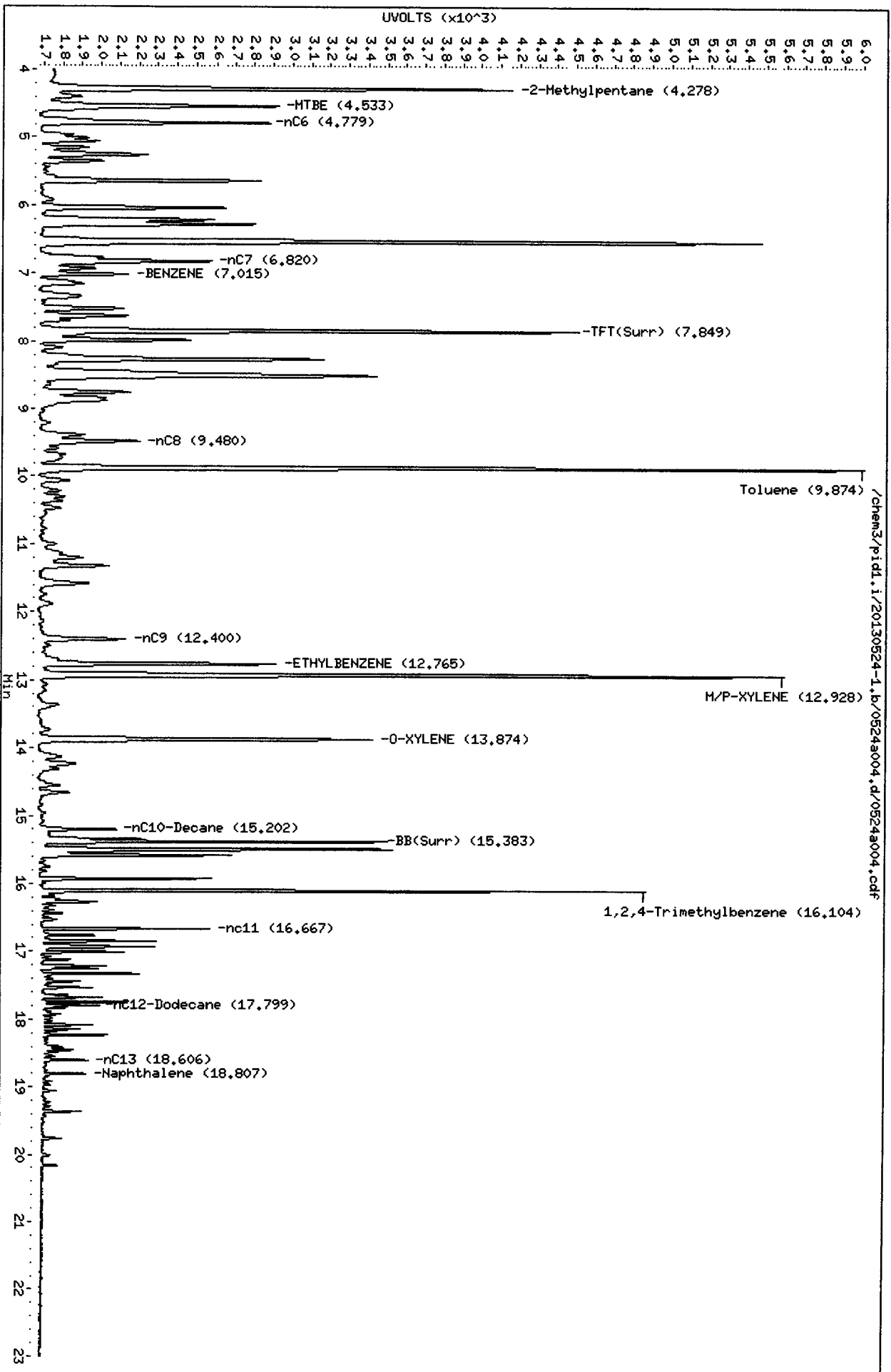
RT	Shift	Response	Amount	Compound
7.023	0.002	851	3.79	Benzene
9.883	0.002	8036	40.56	Toluene
12.774	0.002	1968	12.05	Ethylbenzene
12.938	0.005	7753	43.09	M/P-Xylene
13.883	0.003	2826	19.90	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a004.d
Date: 24-May-2013 10:44
Client ID:
Sample Info: LCS0524

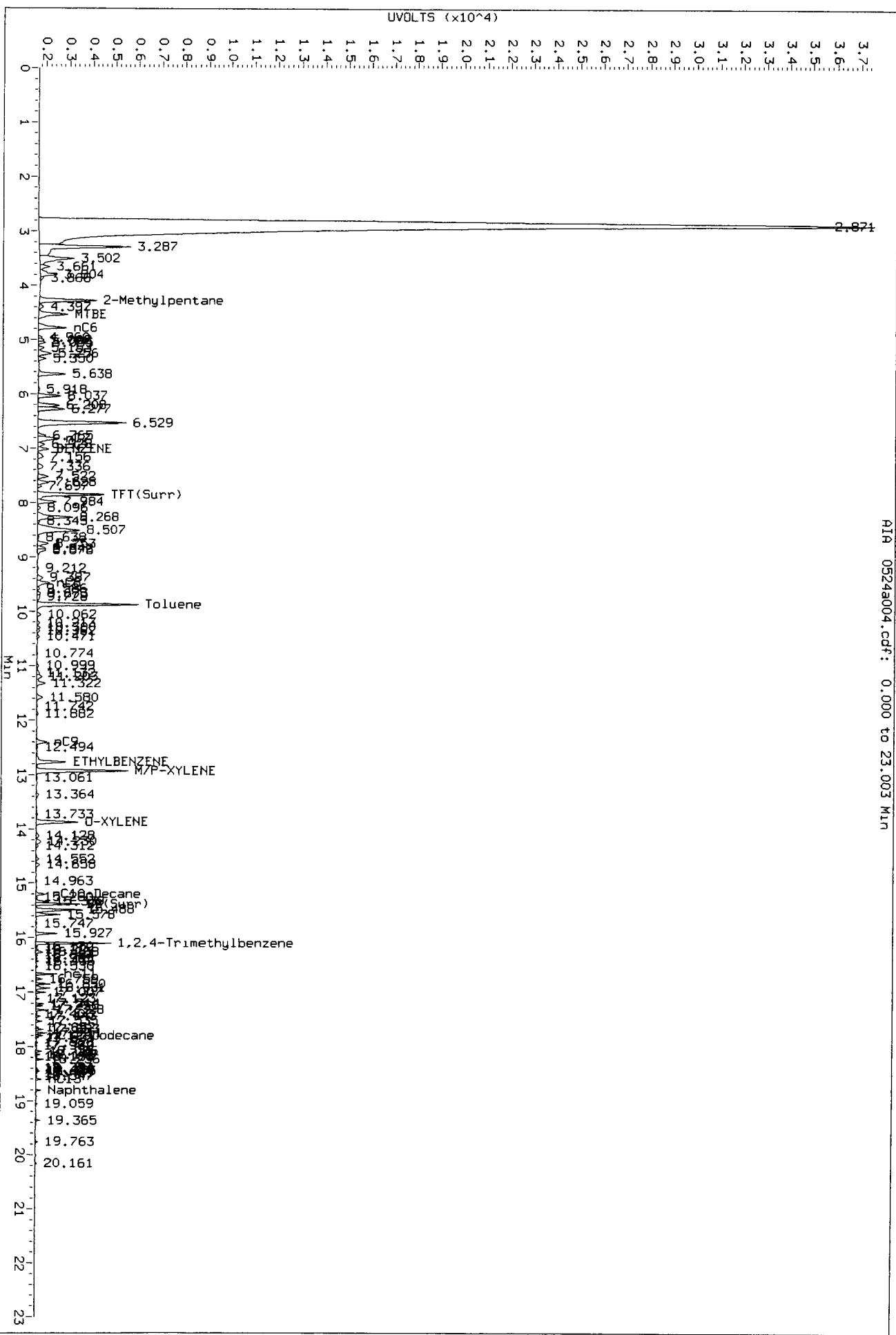
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



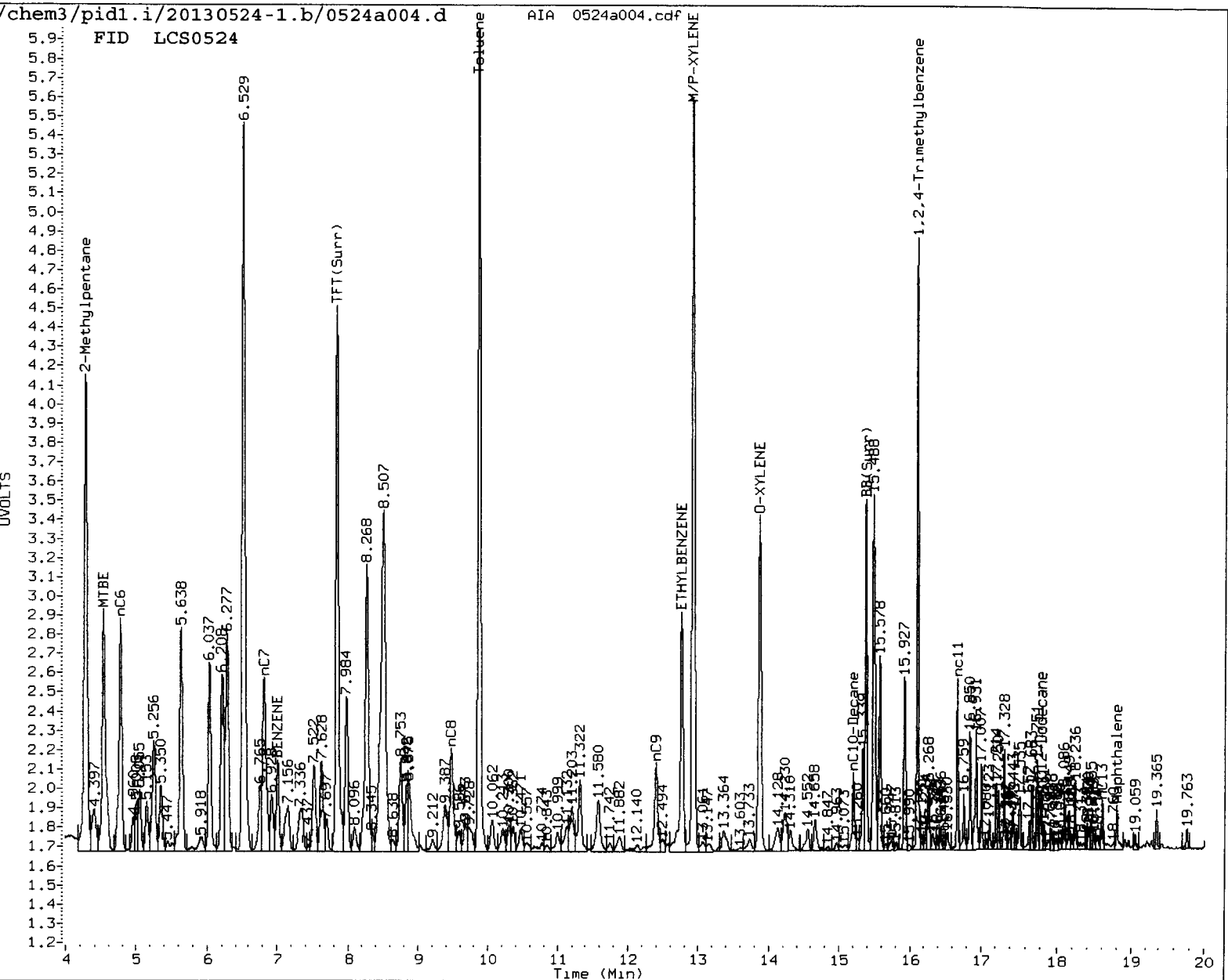
PC
5/28/13

Data File: /chem3/pud1.i/20130524-1.b/05243004.d/05243004.cdf
Injection Date: 24-May-2013 10:44
Instrument: pud1.1
Client Sample ID:



AIA 05243004.cdf: 0.000 to 23.003 MIN

05243004



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

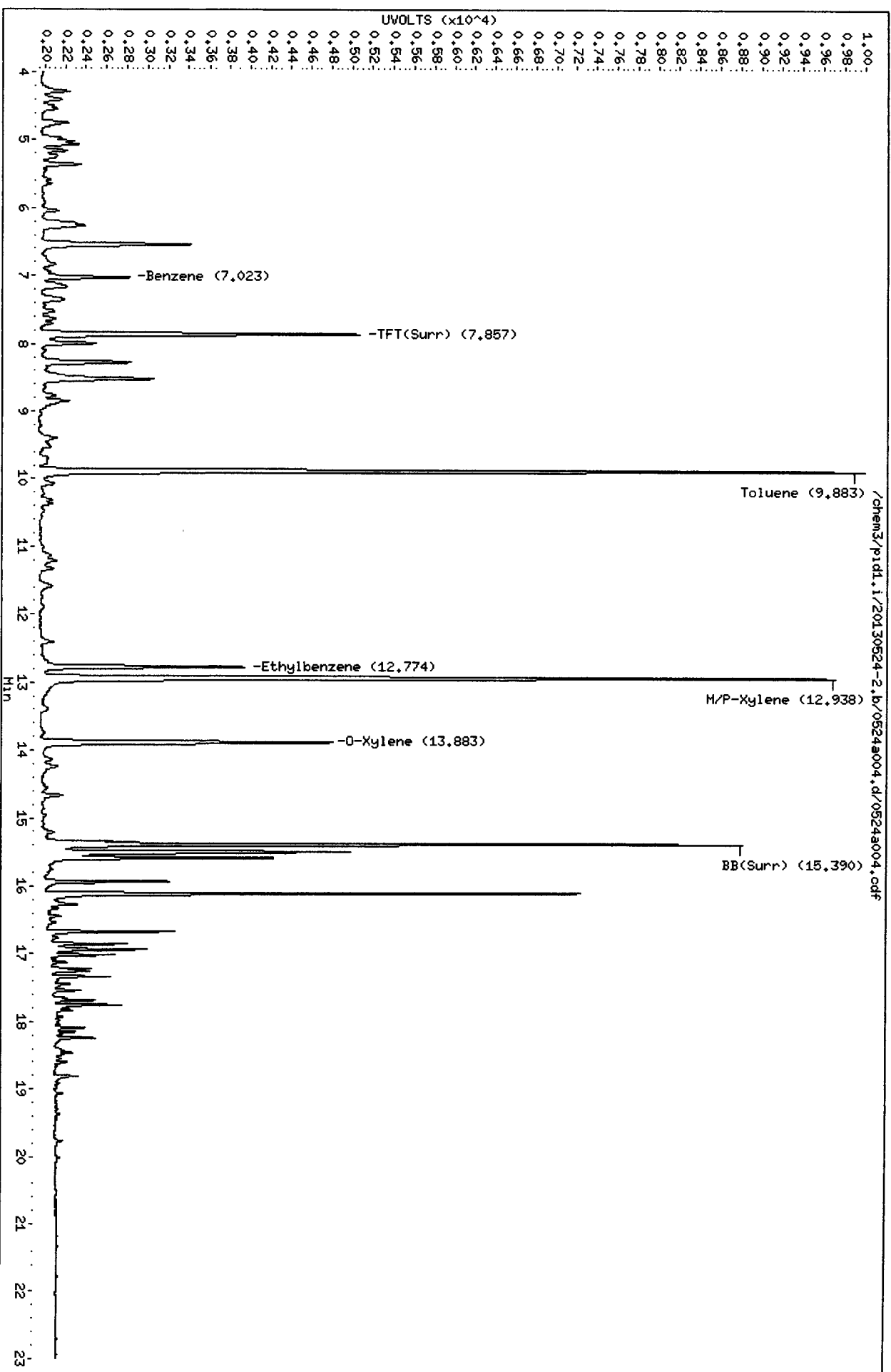
Analyst: PC

Date: 5/28/13

Data File: /chem3/pid1.i/20130524-2.b/0524a004.d
Date : 24-MAY-2013 10:44
Client ID:
Sample Info: LCS0524

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



11226 : 00051

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PL
 5/28/13

Data file 1: /chem3/pidl.i/20130524-1.b/0524a005.d ARI ID: LCSD0524
 Data file 2: /chem3/pidl.i/20130524-2.b/0524a005.d Client ID:
 Method: /chem3/pidl.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 11:13
 Instrument: pidl.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	-0.002	2912	41805	98.4	TFT(Surr)
15.380	0.000	1870	16778	94.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	349312	0.975 M
8015C 2MP-TMB (4.18 to 16.20)	723723	716463	0.990 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	575437	0.987 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	366864	0.978 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	-0.001	3205	99.4	TFT(Surr)
15.389	0.001	7003	96.9	BB(Surr)

SW8021 (PID)

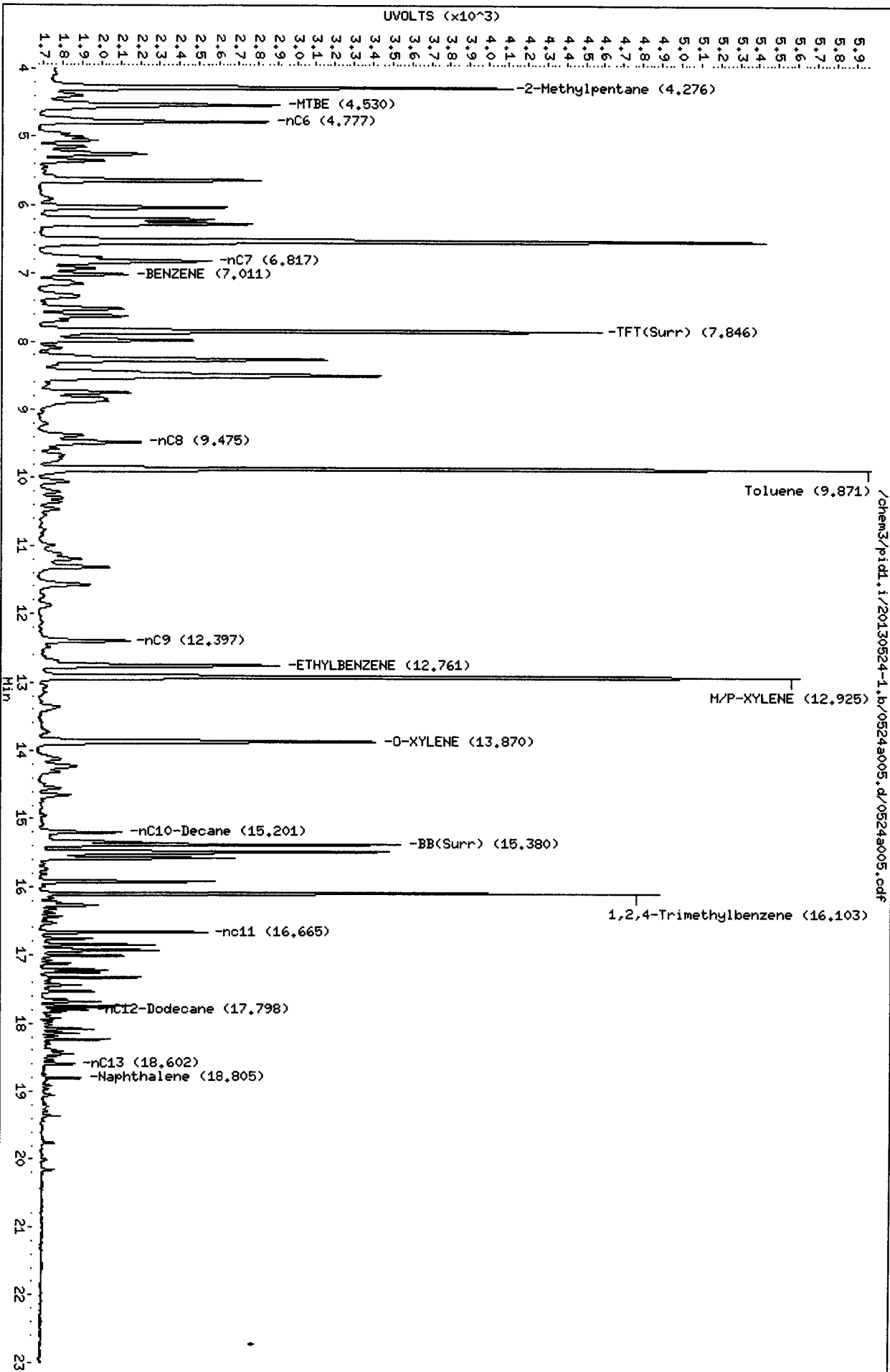
RT	Shift	Response	Amount	Compound
7.020	0.000	839	3.73	Benzene
9.880	-0.001	7999	40.37	Toluene
12.771	-0.001	1964	12.03	Ethylbenzene
12.935	0.002	7784	43.26	M/P-Xylene
13.880	0.000	2808	19.77	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a005.d
Date: 24-MAY-2013 11:13
Client ID:
Sample Info: LCSD0524

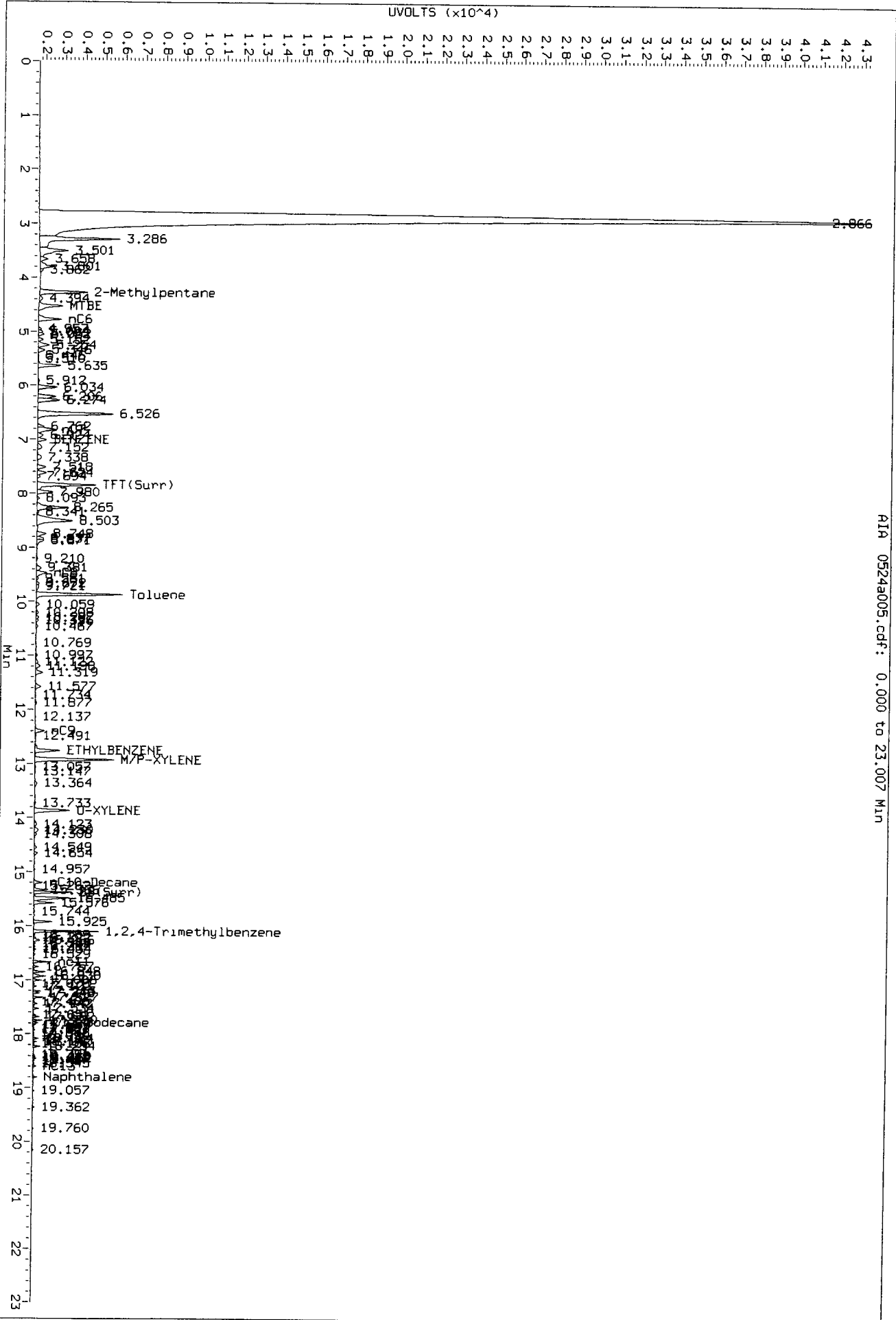
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

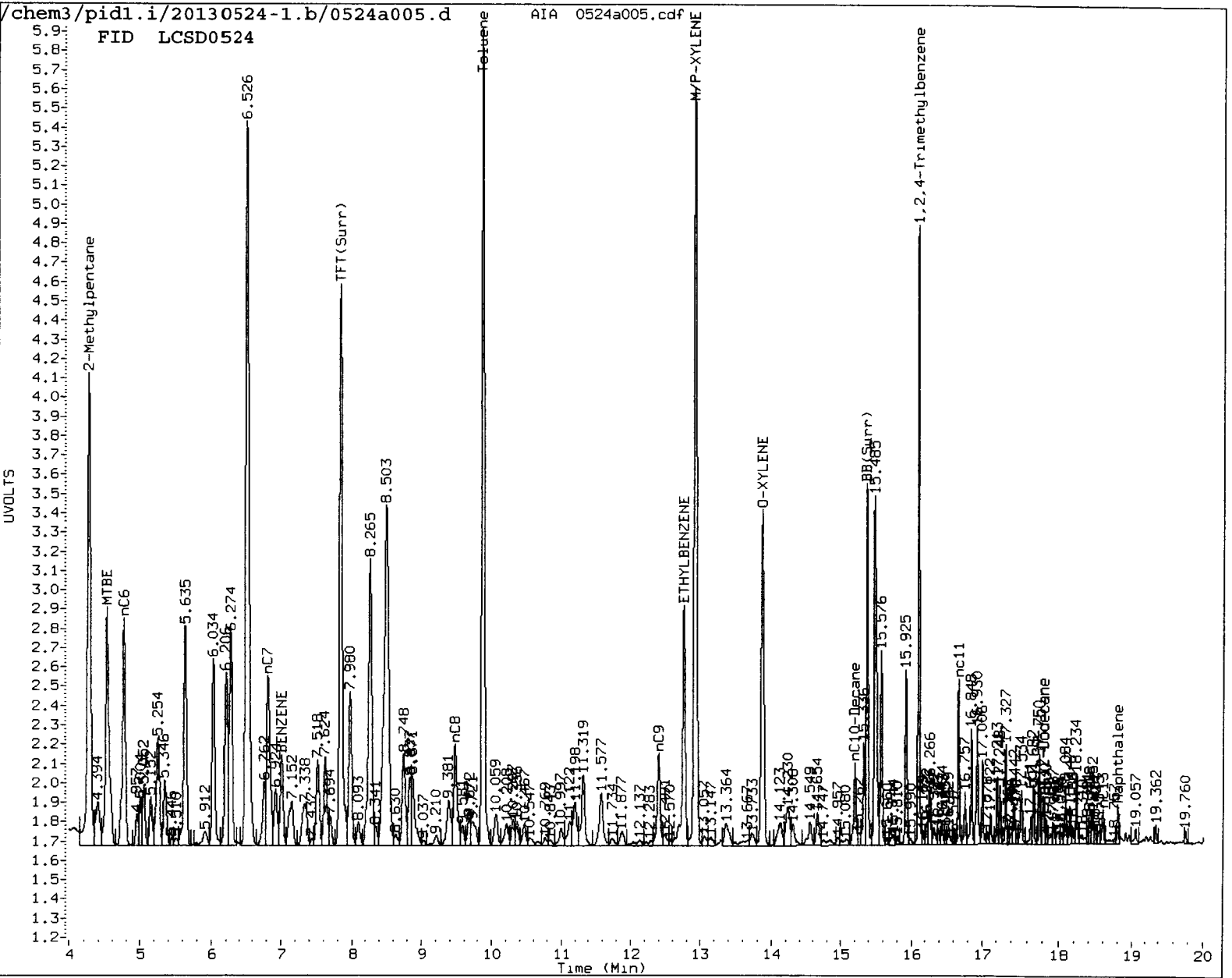


RE
sh8k

Data File: /chem3/pid1.y/20130524-1.b/0524a005.d/0524a005.cdf
Injection Date: 24-MAY-2013 11:13
Instrument: pid1.1
Client Sample ID:



AIA 0524a005.cdf: 0.000 to 23.007 Min



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: PC

Date: 5/28/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-052413

METHOD BLANK

Lab Sample ID: MB-052413

LIMS ID: 13-11199

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/24/13 11:43

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	94.7%

Gasoline Surrogate Recovery

Trifluorotoluene	92.1%
Bromobenzene	92.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PL
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a006.d ARI ID: MB0524
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a006.d Client ID:
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 11:43
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	-0.002	2726	35062	92.1	TFT (Surr)
15.381	0.001	1828	15440	92.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2025	0.006
8015C 2MP-TMB (4.18 to 16.20)	723723	3345	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	2631	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2025	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	-0.002	3025	93.8	TFT (Surr)
15.388	0.001	6843	94.7	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

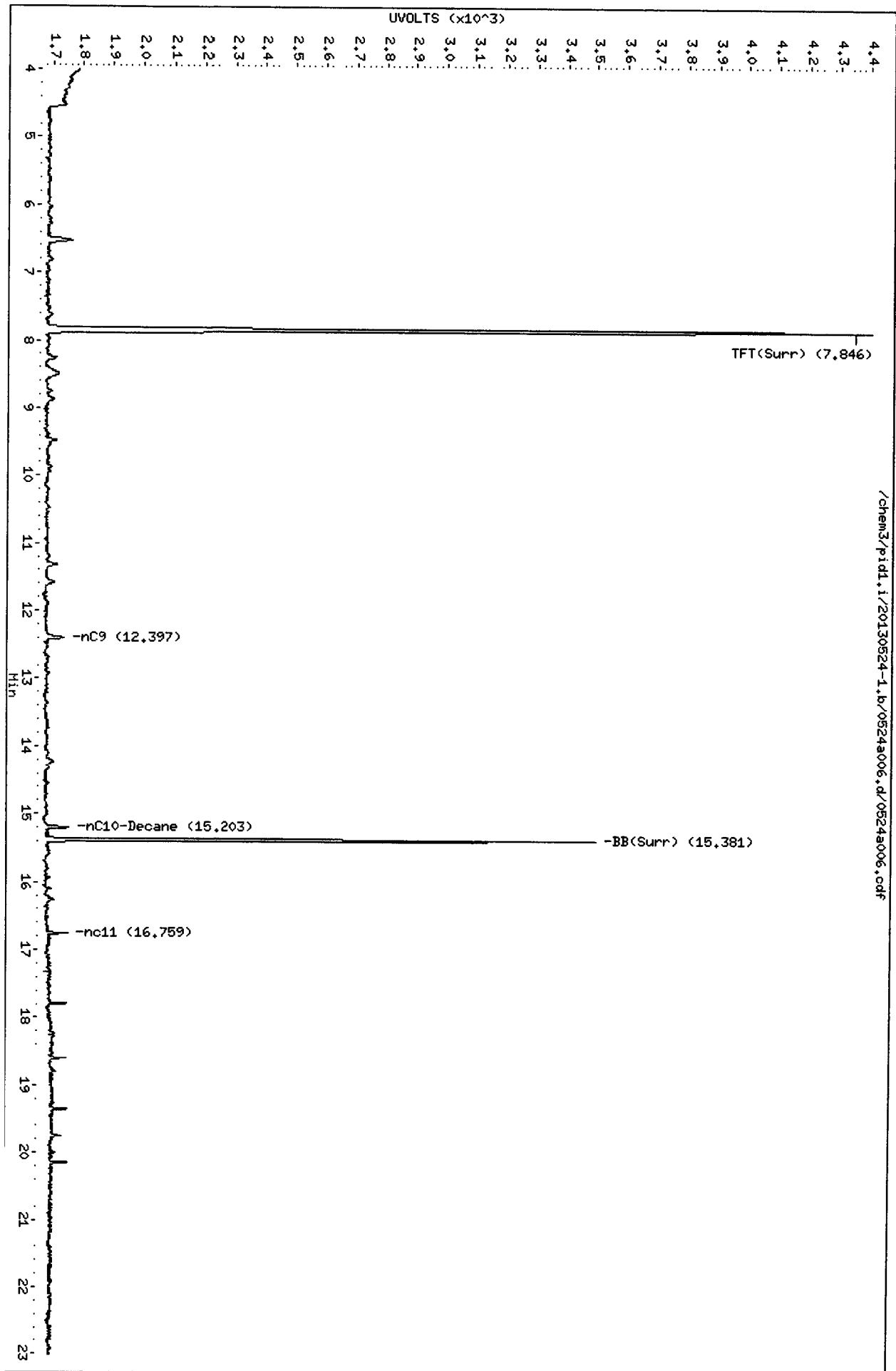
Data File: /chem3/pid1.i/20130524-1.b/0524a006.d
Date: 24-MAY-2013 11:43
Client ID:
Sample Info: HB0524

Instrument: pid1.i

Column phase: RTX 502-2 FID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130524-1.b/0524a006.d/0524a006.cdf



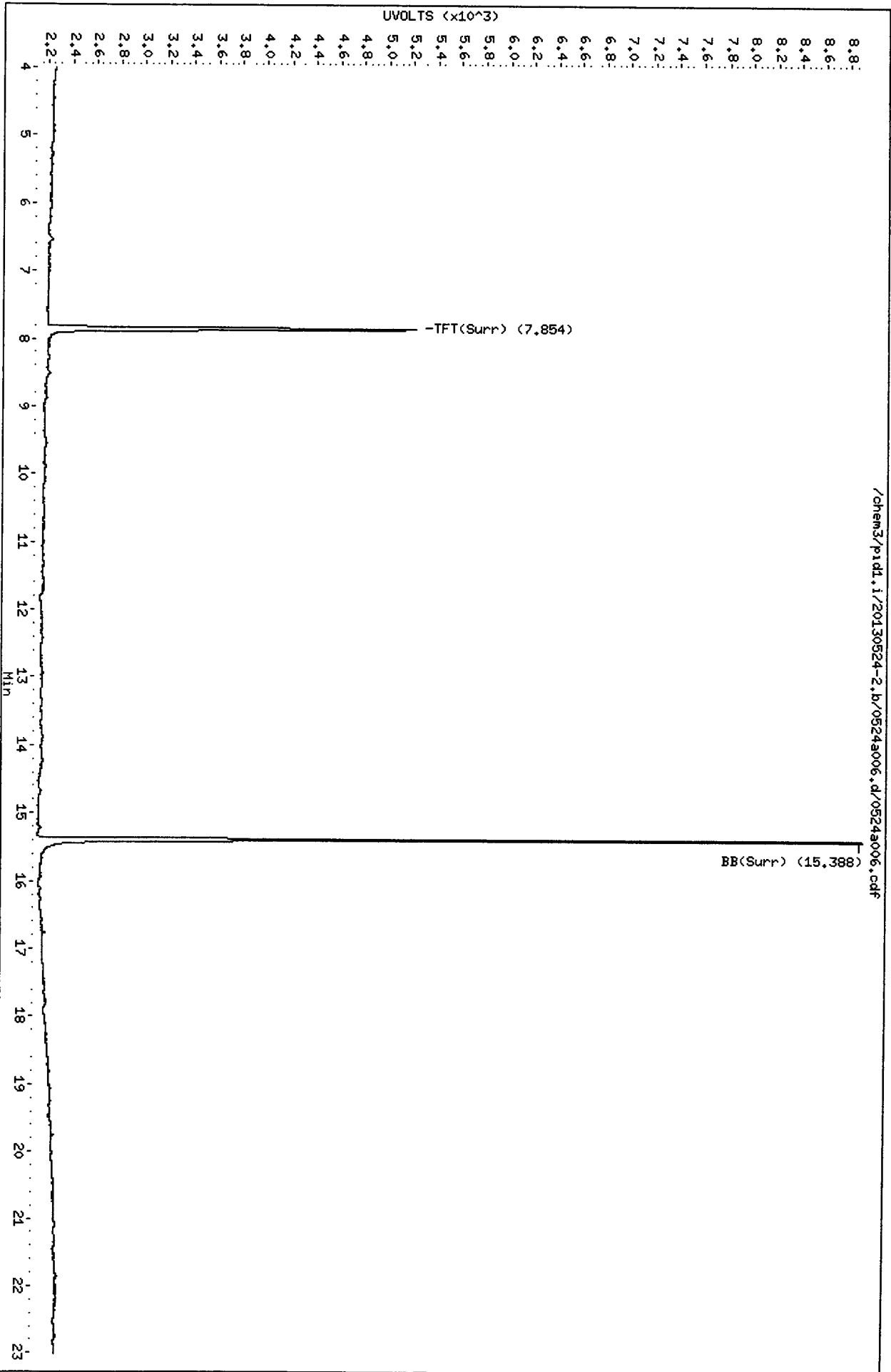
Data File: /chem3/pid1.i/20130524-2.b/0524a006.d
Date : 24-MAY-2013 11:43
Client ID:
Sample Info: MB0524

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130524-2.b/0524a006.d/0524a006.cdf



0524a006.cdf

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: **AREA2-052313-SP-1**
SAMPLE

Lab Sample ID: WR26A

LIMS ID: 13-11199

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Percent Total Solids: 77.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/28/13	6010C	05/28/13	7439-92-1	Lead	2	43	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

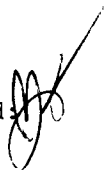
Page 1 of 1

Sample ID: AREA2-052213-SP-1
SAMPLE

Lab Sample ID: WR26B

LIMS ID: 13-11200

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Percent Total Solids: 83.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/28/13	6010C	05/28/13	7439-92-1	Lead	2	23	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: STORMPIPE-SP-1
SAMPLE**

Lab Sample ID: WR26C

LIMS ID: 13-11201

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Percent Total Solids: 84.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/28/13	6010C	05/28/13	7439-92-1	Lead	2	11	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WR26LCS

LIMS ID: 13-11199

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Lead	6010C	197	200	98.5%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WR26MB

LIMS ID: 13-11199

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR26-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/28/13	6010C	05/28/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 29, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WR33

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted thirteen soil samples on May 24, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

Three of the thirteen samples required an expedited turn-around-time and were logged under the ARI job number referenced above. The remaining ten samples were logged under a separate cover (ARI job WR39).

The samples were analyzed for VOCs, SIM PAHs, NWTPH-Dx, NWTPH-Gx/BTEX, EPH, and VPH, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over the typed name.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WR33

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WR33	Turn-around Requested:	Page: 2 of 3
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAWFOSTER.COM		Ice Present?
Client Project Name: CASHMERE		No. of Coolers:
Client Project #: 0779.02.01-08	Samplers: LINDSEY CROSBY	Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					DX SILICA GEL CLEANUP	BTEX	VPH	EPH	
A2-F30-S-6	5/22	1540	S	4	X	X			
A2-F31-S-6		1545		4					
A2-F32-S-6		1550		7			X	X	
A2-F33-S-6		1600		4					
A2-F34-S-6		1610		4					
A2-F35-S-6		1620		4					
A2-F36-S-6		1620		4					
A2-F37-S-6		1650		7			X	X	
A2-F38-S-6		1700		4					
A2-F39-S-6		1715		4					

Comments/Special Instructions PLEASE RUSH VPH/EPH. ALL OTHERS ARE STANDARD TAT	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Joshua Kain	Printed Name:	Printed Name:
	Company: MFA	Company: Analytical Resources	Company:	Company:
	Date & Time: 5/24 0700	Date & Time: 05/24/13 06:52	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 3 of 3
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAMFOSTER.COM		Ice Present?
		No. of Coolers:
		Cooler Temps:

Client Project Name: CASHMERE					Analysis Requested										Notes/Comments			
Client Project #: 0779.02.01-03		Samplers: LINDSEY CRISBY			DX SILVA	CASHMERE-SUP	BTCX	VPH	EPH									
Sample ID	Date	Time	Matrix	No. Containers														
A2-F40-S-6	5/22	1715	S	4	X	X												
A2-F41-S-6	5/23	1030	S	4	X	X												
A2-F48-S-6	5/23	1130	S	7	X	X	X	X										
Comments/Special Instructions PLEASE RUSH EPH / VPH SAMPLES. ALL OTHERS STANDARD TAT					Relinquished by: (Signature)	Received by: (Signature)					Relinquished by: (Signature)	Received by: (Signature)						
					Printed Name: LINDSEY CRISBY	Printed Name: Joshua Raines					Printed Name:	Printed Name:						
					Company: MFA	Company: Analytical Resources					Company:	Company:						
					Date & Time: 5/24 0700	Date & Time: 05/24/12 16:52					Date & Time:	Date & Time:						

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WR33

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.0 4.9 5.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JR (AV) Date: 5/24/13 Time: 651

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: _____ NA

Was Sample Split by ARI: YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/24/13 Time: 1140

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WR33
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-F32-S-6	WR33A	13-11207	Soil	05/22/13 15:50	05/24/13 06:52
2. A2-F37-S-6	WR33B	13-11208	Soil	05/22/13 16:50	05/24/13 06:52
3. A2-F42-S-6	WR33C	13-11209	Soil	05/23/13 11:30	05/24/13 06:52
4. A2-F32-S-6	WR33D	13-11210	Soil	05/22/13 15:50	05/24/13 06:52
5. A2-F37-S-6	WR33E	13-11211	Soil	05/22/13 16:50	05/24/13 06:52
6. A2-F42-S-6	WR33F	13-11212	Soil	05/23/13 11:30	05/24/13 06:52

Subject: FW: WR25 and WR26 Sample Receipts and COCs
From: "Tony Silva" <tsilva@maulfoster.com>
Date: 5/24/2013 11:09 AM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Justin Clary" <jclary@maulfoster.com>, "Lindsey Crosby" <lcrosby@maulfoster.com>, "Erik Naylor" <enaylor@maulfoster.com>

Cheronne,

As discussed:

EPH/VPH:

- There are 4 soil samples submitted with analysis that include VPH/EPH (three are floor, one is a wall).
- We want to do a 24-hour rush on all four of these soil samples (floor and wall samples).
- We want the rush to include all of the analysis requested for these 4 samples (not just the EPH/VPH).
- For all 4 samples in addition to what is already on the chain of custodies, please also add the analysis of:
 - Gx
 - VOCs (EDB, EDC, and MTBE)
 - PAHs via 8270 SIM.

Stockpiles:

- Please run these soil 3 samples on work order WR26 for lead, no need to wait to see if Gx is detected.

TONY SILVA RG, LG | MAUL FOSTER & ALONGI, INC.
d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 |
www.maulfoster.com
2001 NW 19th Avenue, Suite 200, Portland, OR 97209

-----Original Message-----

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Friday, May 24, 2013 9:51 AM
To: Tony Silva
Cc: Lindsey Crosby; Erik Naylor
Subject: WR25 and WR26 Sample Receipts and COCs

Hi Tony,

Please see attached.

Thanks,

-Cheronne

--

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

This correspondence contains confidential information from Analytical Resources, Inc. (ARI) The information contained herein is intended solely for the use of the individual(s) named above. If you are not the intended recipient, any copying, distribution, disclosure, or use of the text and/or attached document(s) is strictly prohibited.

If you have received this correspondence in error, please notify sender immediately. Thank you.

Attachments:

WR25_COCs.pdf	169 KB
WR25_receipt.pdf	18.7 KB
WR26_COC.pdf	103 KB
WR26_receipt.pdf	14.4 KB



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-F32-S-6

Page 1 of 1

SAMPLE

Lab Sample ID: WR33A

QC Report No: WR33-Maul Foster & Alongi, Inc

LIMS ID: 13-11207

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AB*

Date Sampled: 05/22/13

Reported: 05/28/13

Date Received: 05/24/13

Instrument/Analyst: NT5/PAB

Sample Amount: 4.20 g-dry-wt

Date Analyzed: 05/24/13 17:35

Purge Volume: 5.0 mL

Moisture: 17.1%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.2	< 1.2	U
106-93-4	1,2-Dibromoethane	1.2	< 1.2	U
1634-04-4	Methyl tert-Butyl Ether	1.2	< 1.2	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	100%
Bromofluorobenzene	98.6%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-F37-S-6

Page 1 of 1

SAMPLE

Lab Sample ID: WR33B

QC Report No: WR33-Maul Foster & Alongi, Inc

LIMS ID: 13-11208

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AS*

Date Sampled: 05/22/13

Reported: 05/28/13

Date Received: 05/24/13

Instrument/Analyst: NT5/PAB

Sample Amount: 4.46 g-dry-wt

Date Analyzed: 05/24/13 17:59

Purge Volume: 5.0 mL

Moisture: 14.1%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.1	< 1.1	U
106-93-4	1,2-Dibromoethane	1.1	< 1.1	U
1634-04-4	Methyl tert-Butyl Ether	1.1	< 1.1	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	102%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-F42-S-6

Page 1 of 1

SAMPLE

Lab Sample ID: WR33C

QC Report No: WR33-Maul Foster & Alongi, Inc

LIMS ID: 13-11209

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *MS*

Date Sampled: 05/23/13

Reported: 05/28/13

Date Received: 05/24/13

Instrument/Analyst: NT5/PAB

Sample Amount: 3.45 g-dry-wt

Date Analyzed: 05/24/13 18:23

Purge Volume: 5.0 mL

Moisture: 31.8%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.4	< 1.4	U
106-93-4	1,2-Dibromoethane	1.4	< 1.4	U
1634-04-4	Methyl tert-Butyl Ether	1.4	< 1.4	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	99.9%
Bromofluorobenzene	94.7%
d4-1,2-Dichlorobenzene	99.7%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-052413A	Method Blank	Low	103%	101%	100%	102%	0
LCS-052413A	Lab Control	Low	99.5%	100%	101%	100%	0
LCSD-052413A	Lab Control Dup	Low	100%	101%	101%	100%	0
WR33A	A2-F32-S-6	Low	106%	100%	98.6%	100%	0
WR33B	A2-F37-S-6	Low	106%	102%	100%	100%	0
WR33C	A2-F42-S-6	Low	107%	99.9%	94.7%	99.7%	0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-11207 to 13-11209

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-052413A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413A

QC Report No: WR33-Maul Foster & Alongi, Inc

LIMS ID: 13-11207

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 05/28/13

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCS D: NT5/PAB

LCS D: 5.00 g-dry-wt

Date Analyzed LCS: 05/24/13 12:58

Purge Volume LCS: 5.0 mL

LCS D: 05/24/13 13:22

LCS D: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
1,2-Dichloroethane	48.9	50.0	97.8%	49.8	50.0	99.6%	1.8%
1,2-Dibromoethane	50.5	50.0	101%	50.7	50.0	101%	0.4%
Methyl tert-Butyl Ether	52.8	50.0	106%	54.2	50.0	108%	2.6%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCS D
d4-1,2-Dichloroethane	99.5%	100%
d8-Toluene	100%	101%
Bromofluorobenzene	101%	101%
d4-1,2-Dichlorobenzene	100%	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-052413A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-052413A


QC Report No: WR33-Maul Foster & Alongi, Inc

LIMS ID: 13-11207

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: 

Date Sampled: NA

Reported: 05/28/13

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 05/24/13 13:46

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
106-93-4	1,2-Dibromoethane	1.0	< 1.0	U
1634-04-4	Methyl tert-Butyl Ether	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	101%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: A2-F32-S-6
SAMPLE

Lab Sample ID: WR33A
 LIMS ID: 13-11207
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 15:47
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 4.16 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: 17.1%

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	12	< 12 U
91-57-6	2-Methylnaphthalene	12	< 12 U
90-12-0	1-Methylnaphthalene	12	< 12 U
208-96-8	Acenaphthylene	12	< 12 U
83-32-9	Acenaphthene	12	< 12 U
86-73-7	Fluorene	12	< 12 U
85-01-8	Phenanthrene	12	< 12 U
120-12-7	Anthracene	12	< 12 U
206-44-0	Fluoranthene	12	39
129-00-0	Pyrene	12	43
56-55-3	Benzo (a) anthracene	12	21
218-01-9	Chrysene	12	28
205-99-2	Benzo (b) fluoranthene	12	23
207-08-9	Benzo (k) fluoranthene	12	14
50-32-8	Benzo (a) pyrene	12	23
193-39-5	Indeno (1,2,3-cd)pyrene	12	< 12 U
53-70-3	Dibenz (a,h) anthracene	12	< 12 U
191-24-2	Benzo (g,h,i) perylene	12	15
132-64-9	Dibenzofuran	12	< 12 U
TOTBFA	Total Benzofluoranthenes	12	50

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	86.3%
d10-2-Methylnaphthalene	68.7%
d14-Dibenzo (a,h) anthracen	76.3%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: A2-F37-S-6
SAMPLE

Lab Sample ID: WR33B
 LIMS ID: 13-11208
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 16:15
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 4.30 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: 14.1%

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	12	< 12 U
91-57-6	2-Methylnaphthalene	12	< 12 U
90-12-0	1-Methylnaphthalene	12	< 12 U
208-96-8	Acenaphthylene	12	< 12 U
83-32-9	Acenaphthene	12	< 12 U
86-73-7	Fluorene	12	< 12 U
85-01-8	Phenanthrene	12	< 12 U
120-12-7	Anthracene	12	< 12 U
206-44-0	Fluoranthene	12	16
129-00-0	Pyrene	12	16
56-55-3	Benzo(a)anthracene	12	< 12 U
218-01-9	Chrysene	12	< 12 U
205-99-2	Benzo(b)fluoranthene	12	< 12 U
207-08-9	Benzo(k)fluoranthene	12	< 12 U
50-32-8	Benzo(a)pyrene	12	< 12 U
193-39-5	Indeno(1,2,3-cd)pyrene	12	< 12 U
53-70-3	Dibenz(a,h)anthracene	12	< 12 U
191-24-2	Benzo(g,h,i)perylene	12	< 12 U
132-64-9	Dibenzofuran	12	< 12 U
TOTBFA	Total Benzofluoranthenes	12	< 12 U


Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	87.3%
d10-2-Methylnaphthalene	67.0%
d14-Dibenzo(a,h)anthracen	81.7%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: A2-F42-S-6
SAMPLE

Lab Sample ID: WR33C
 LIMS ID: 13-11209
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/23/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 16:42
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 10.23 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: 31.8%

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	4.9	53
91-57-6	2-Methylnaphthalene	4.9	11
90-12-0	1-Methylnaphthalene	4.9	8.6
208-96-8	Acenaphthylene	4.9	11
83-32-9	Acenaphthene	4.9	7.2
86-73-7	Fluorene	4.9	17
85-01-8	Phenanthrene	4.9	45
120-12-7	Anthracene	4.9	13
206-44-0	Fluoranthene	4.9	30
129-00-0	Pyrene	4.9	29
56-55-3	Benzo (a) anthracene	4.9	8.8
218-01-9	Chrysene	4.9	13
205-99-2	Benzo (b) fluoranthene	4.9	10
207-08-9	Benzo (k) fluoranthene	4.9	< 4.9 U
50-32-8	Benzo (a) pyrene	4.9	8.2
193-39-5	Indeno (1,2,3-cd) pyrene	4.9	5.8
53-70-3	Dibenz (a,h) anthracene	4.9	< 4.9 U
191-24-2	Benzo (g,h,i) perylene	4.9	8.8
132-64-9	Dibenzofuran	4.9	13
TOTBFA	Total Benzofluoranthenes	4.9	20

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene 76.3%
 d10-2-Methylnaphthalene 60.3%
 d14-Dibenzo (a,h) anthracen 66.0%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>FLN</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-052413	88.7%	68.7%	90.3%	0
LCS-052413	84.3%	62.3%	83.3%	0
A2-F32-S-6	86.3%	68.7%	76.3%	0
A2-F37-S-6	87.3%	67.0%	81.7%	0
A2-F42-S-6	76.3%	60.3%	66.0%	0

LCS/MB LIMITS QC LIMITS

(FLN) = d10-Fluoranthene (30-160) (30-160)
(MNP) = d10-2-Methylnaphthalene (35-100) (34-100)
(DBA) = d14-Dibenzo(a,h)anthracene (37-120) (10-117)

Prep Method: SW3546
Log Number Range: 13-11207 to 13-11209

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413

LIMS ID: 13-11207

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 05/24/13

Date Analyzed LCS: 05/25/13 14:52

Instrument/Analyst LCS: NT4/JZ

Sample Amount LCS: 10.00 g-dry-wt

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	88.2	150	58.8%
2-Methylnaphthalene	96.2	150	64.1%
1-Methylnaphthalene	86.9	150	57.9%
Acenaphthylene	102	150	68.0%
Acenaphthene	96.4	150	64.3%
Fluorene	102	150	68.0%
Phenanthrene	101	150	67.3%
Anthracene	107	150	71.3%
Fluoranthene	107	150	71.3%
Pyrene	127	150	84.7%
Benzo(a)anthracene	136	150	90.7%
Chrysene	126	150	84.0%
Benzo(b)fluoranthene	121	150	80.7%
Benzo(k)fluoranthene	119	150	79.3%
Benzo(a)pyrene	135	150	90.0%
Indeno(1,2,3-cd)pyrene	115	150	76.7%
Dibenz(a,h)anthracene	116	150	77.3%
Benzo(g,h,i)perylene	111	150	74.0%
Dibenzofuran	93.6	150	62.4%
Total Benzofluoranthenes	330	450	73.3%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	84.3%
d10-2-Methylnaphthalene	62.3%
d14-Dibenzo(a,h)anthracen	83.3%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: MB-052413
METHOD BLANK

Lab Sample ID: MB-052413
 LIMS ID: 13-11207
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 14:24
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	5.0	< 5.0 U
90-12-0	1-Methylnaphthalene	5.0	< 5.0 U
208-96-8	Acenaphthylene	5.0	< 5.0 U
83-32-9	Acenaphthene	5.0	< 5.0 U
86-73-7	Fluorene	5.0	< 5.0 U
85-01-8	Phenanthrene	5.0	< 5.0 U
120-12-7	Anthracene	5.0	< 5.0 U
206-44-0	Fluoranthene	5.0	< 5.0 U
129-00-0	Pyrene	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	5.0	< 5.0 U
218-01-9	Chrysene	5.0	< 5.0 U
205-99-2	Benzo(b)fluoranthene	5.0	< 5.0 U
207-08-9	Benzo(k)fluoranthene	5.0	< 5.0 U
50-32-8	Benzo(a)pyrene	5.0	< 5.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	< 5.0 U
53-70-3	Dibenz(a,h)anthracene	5.0	< 5.0 U
191-24-2	Benzo(g,h,i)perylene	5.0	< 5.0 U
132-64-9	Dibenzofuran	5.0	< 5.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	88.7%
d10-2-Methylnaphthalene	68.7%
d14-Dibenzo(a,h)anthracen	90.3%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTFPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-052413 13-11207	Method Blank HC ID: ---	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 76.2%
WR33A 13-11207	A2-F32-S-6 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	180 330 63.6%
WR33B 13-11208	A2-F37-S-6 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	30 200 68.0%
WR33C 13-11209	A2-F42-S-6 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.3 15	12 110 70.4%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b042.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR33MBS1
Client ID:
Injection: 25-MAY-2013 21:10
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		128014	9
C8	0.827	0.001	2520	2619	WATPHD (C12-C24)		160037	15.45
C10	2.243	0.001	1045	894	WATPHM (C24-C38)		476751	48.29
C12	3.039	-0.007	603	381	AK102 (C10-C25)		188404	15.25
C14	3.615	-0.008	699	213	AK103 (C25-C36)		446884	62.87
C16	4.121	0.002	1265	1105				
C18	4.573	0.004	1586	1602				
C20	4.987	-0.002	828	128				
C22	5.382	0.001	697	184	MSPIRIT (Tol-C12)		128014	9.32
C24	5.757	0.005	667	178				
C25	5.924	-0.002	562	155				
C26	6.099	0.000	798	361				
C28	6.412	-0.001	1610	943				
C32	6.955	0.001	5468	8112				
C34	7.192	0.004	1942	1483				
Filter Peak	----							
C36	7.412	0.005	1985	1020				
o-terph	4.675	-0.002	883377	460978	JET-A (C10-C18)		112911	10.43
Triacon Surr	6.704	0.000	777242	241250				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	460978	34.3	76.2
Triacontane	241250	18.5	41.1

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

JA 05/28/13

Data File: /chem3/fid3b.i/20130525.b/0525b042.d
Date: 25-MAY-2013 21:10

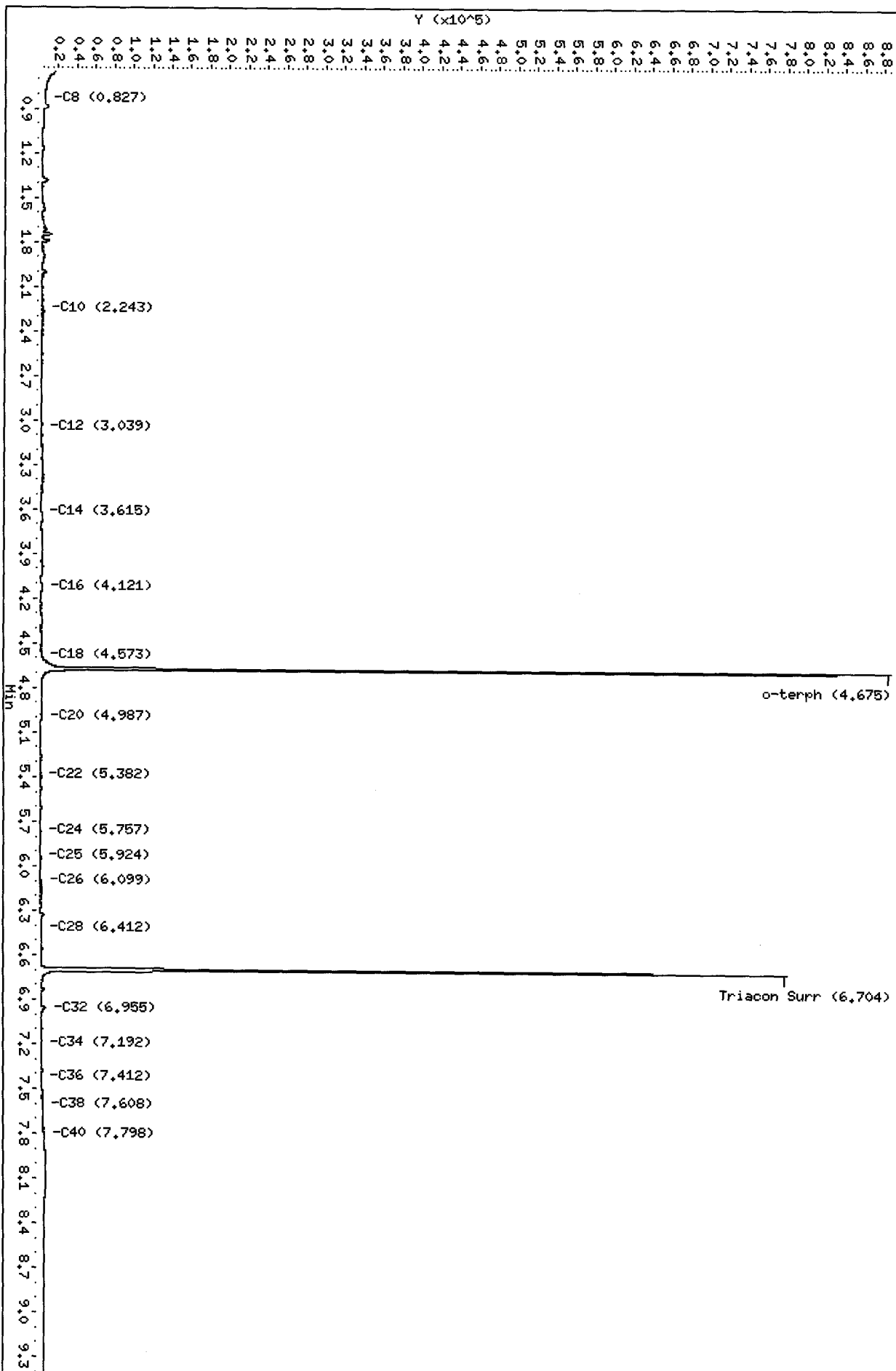
Client ID:
Sample Info: MR33MBS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b042.d



MR33 : 00025

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b044.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR33A
Client ID:
Injection: 25-MAY-2013 21:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		94174	7
C8	0.821	-0.005	3238	4226	WATPHD (C12-C24)		15962659	1541.18
C10	2.243	0.001	879	822	WATPHM (C24-C38)		27348240	2770.04
C12	3.048	0.002	1388	1162	AK102 (C10-C25)		17729351	1434.79 M
C14	3.624	0.002	3016	3155	AK103 (C25-C36)		25135856	3536.04 M
C16	4.123	0.004	5331	4723				
C18	4.565	-0.004	29860	32596				
C20	4.985	-0.004	111314	67214				
C22	5.384	0.003	312538	168920	MSPIRIT (Tol-C12)		94174	6.85
C24	5.754	0.002	410093	173382				
C25	5.925	-0.001	412222	97593				
C26	6.102	0.004	407660	95145				
C28	6.412	-0.001	377477	59395				
C32	6.951	-0.003	182368	49227				
C34	7.189	0.001	150826	117287				
Filter Peak	----							
C36	7.407	0.000	61678	42717				
o-terph	4.676	-0.001	644183	384651	JET-A (C10-C18)		557525	51.51
Triacon Surr	6.714	0.009	832592	552071				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	384651	28.6	63.6
Triacontane	552071	42.3	94.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

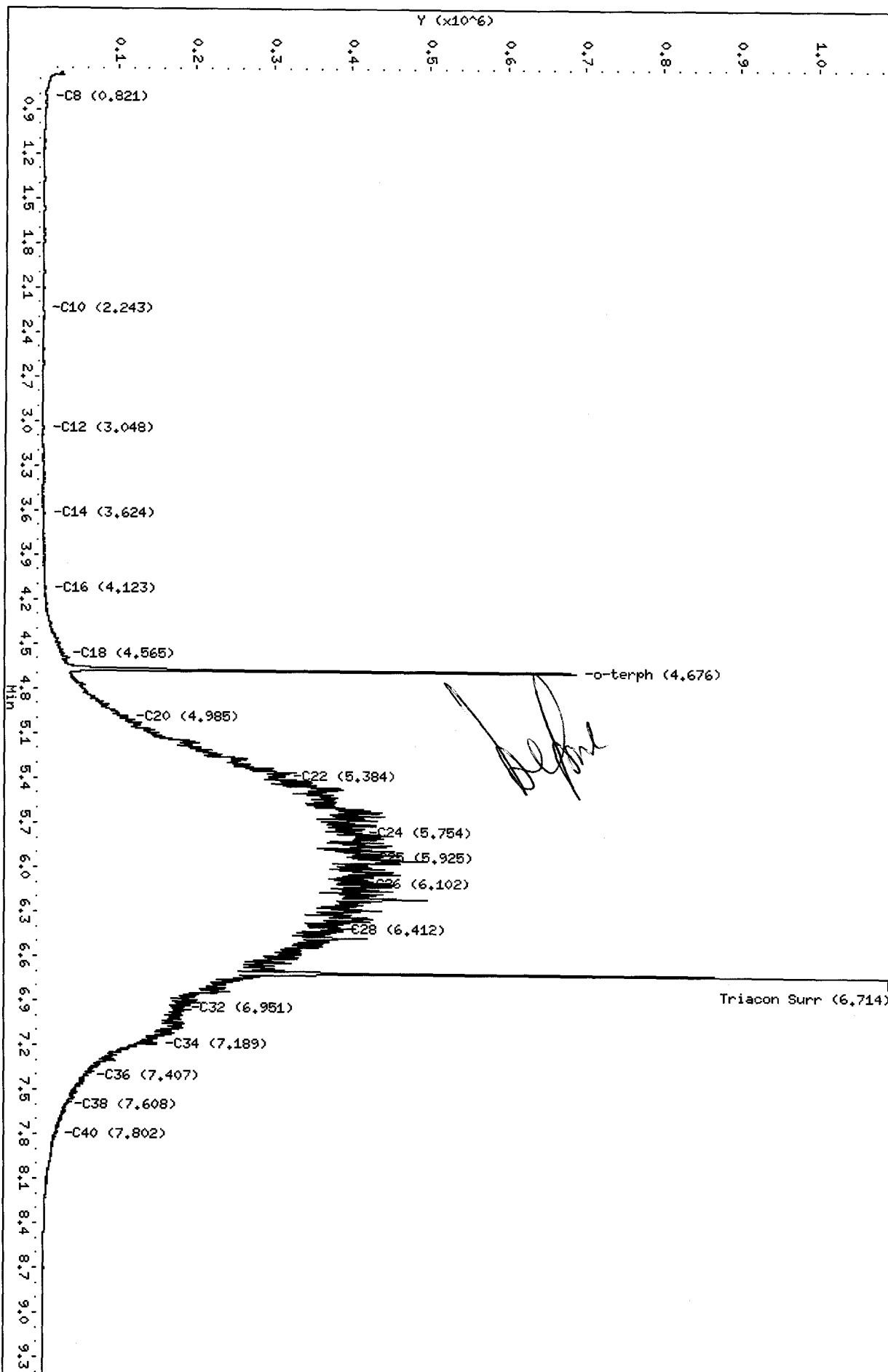
J 05/28/13

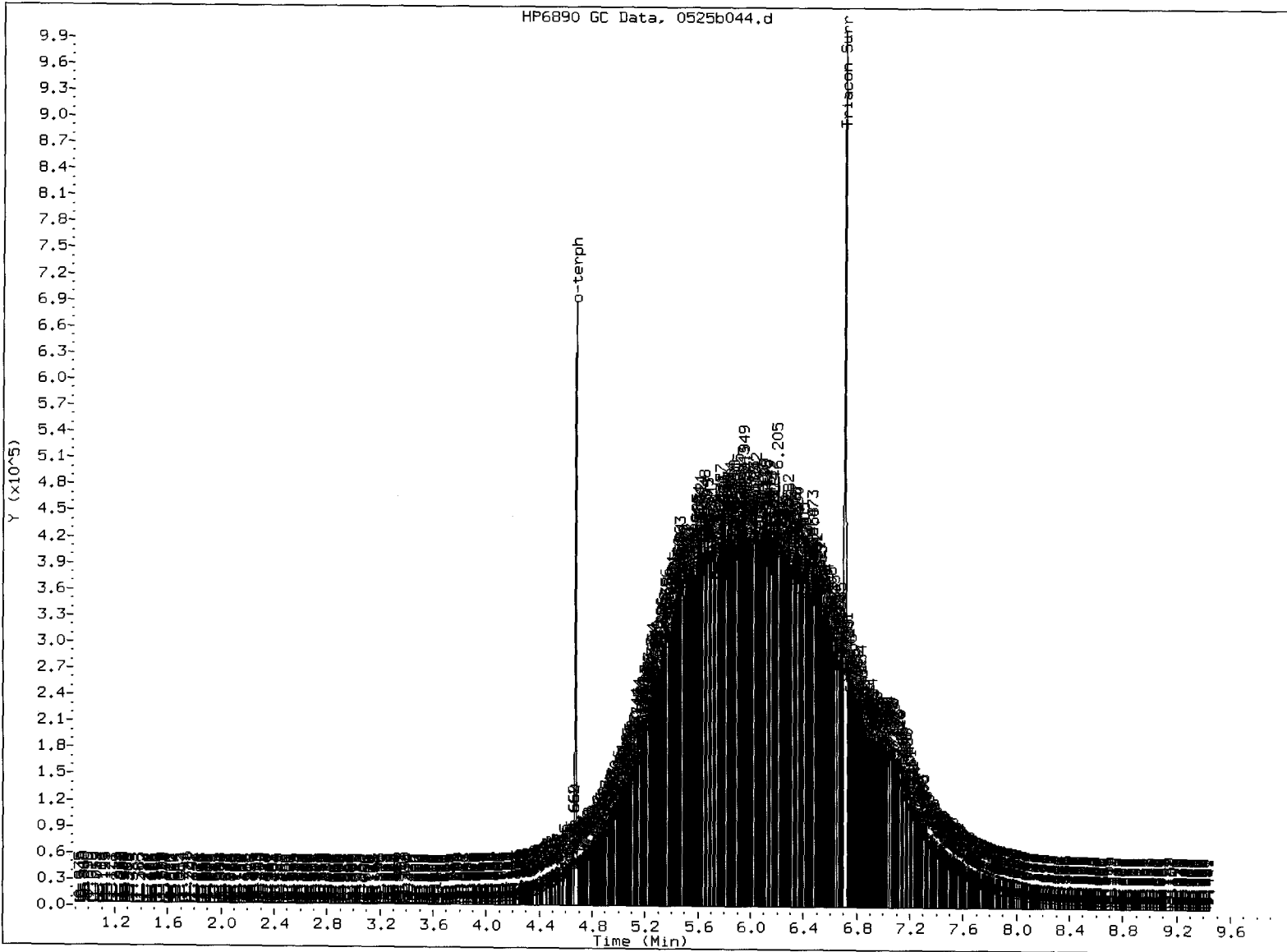
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Date: 25-MAY-2013 21:49

Client ID:
Sample Info: MR33A
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b044.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst:

Date:

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b045.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR33B
Client ID:
Injection: 25-MAY-2013 22:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		84025	6
C8	0.827	0.001	2945	2830	WATPHD (C12-C24)		2692040	259.91
C10	2.245	0.004	801	830	WATPHM (C24-C38)		16872929	1709.02
C12	3.051	0.006	720	168	AK102 (C10-C25)		3122299	252.68 M
C14	3.628	0.006	1747	2252	AK103 (C25-C36)		15348464	2159.17 M
C16	4.122	0.004	2291	2554				
C18	4.566	-0.002	13169	8435				
C20	4.991	0.002	18035	7003				
C22	5.382	0.001	40320	10304	MSPIRIT (Tol-C12)		84025	6.12
C24	5.753	0.001	76901	20958				
C25	5.924	-0.002	100537	23550				
C26	6.098	0.000	128052	56227				
C28	6.414	0.001	245562	129340				
C32	6.952	-0.002	164996	31894				
C34	7.190	0.002	186973	133266				
Filter Peak	----							
C36	7.406	-0.001	125694	102244				
o-terph	4.676	0.000	603438	411254	JET-A (C10-C18)		247805	22.89
Triacon Surr	6.711	0.007	783813	561190				

*JPS
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Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	411254	30.6	67.9
Triacontane	561190	43.0	95.6

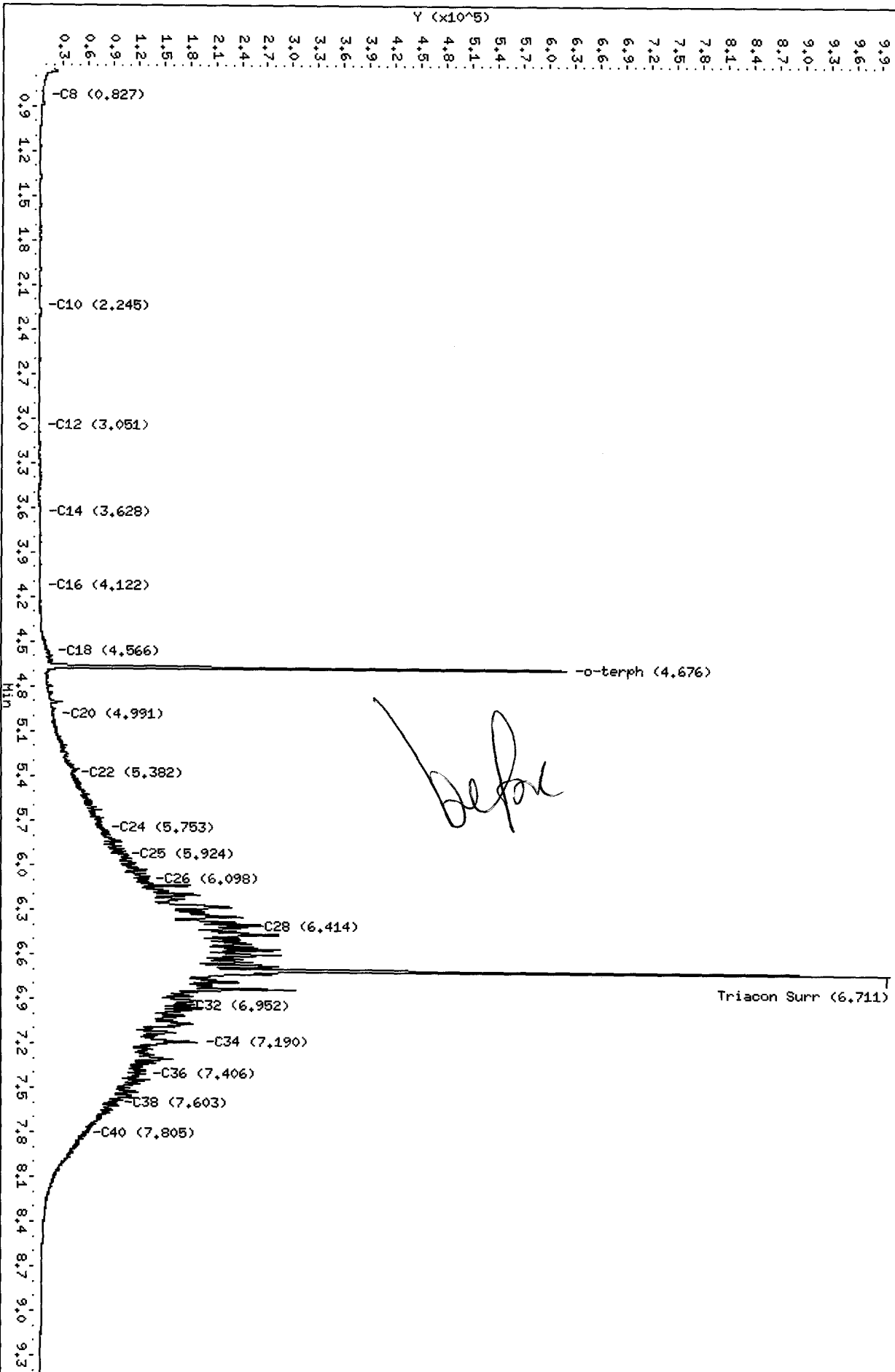
7 05/28/13

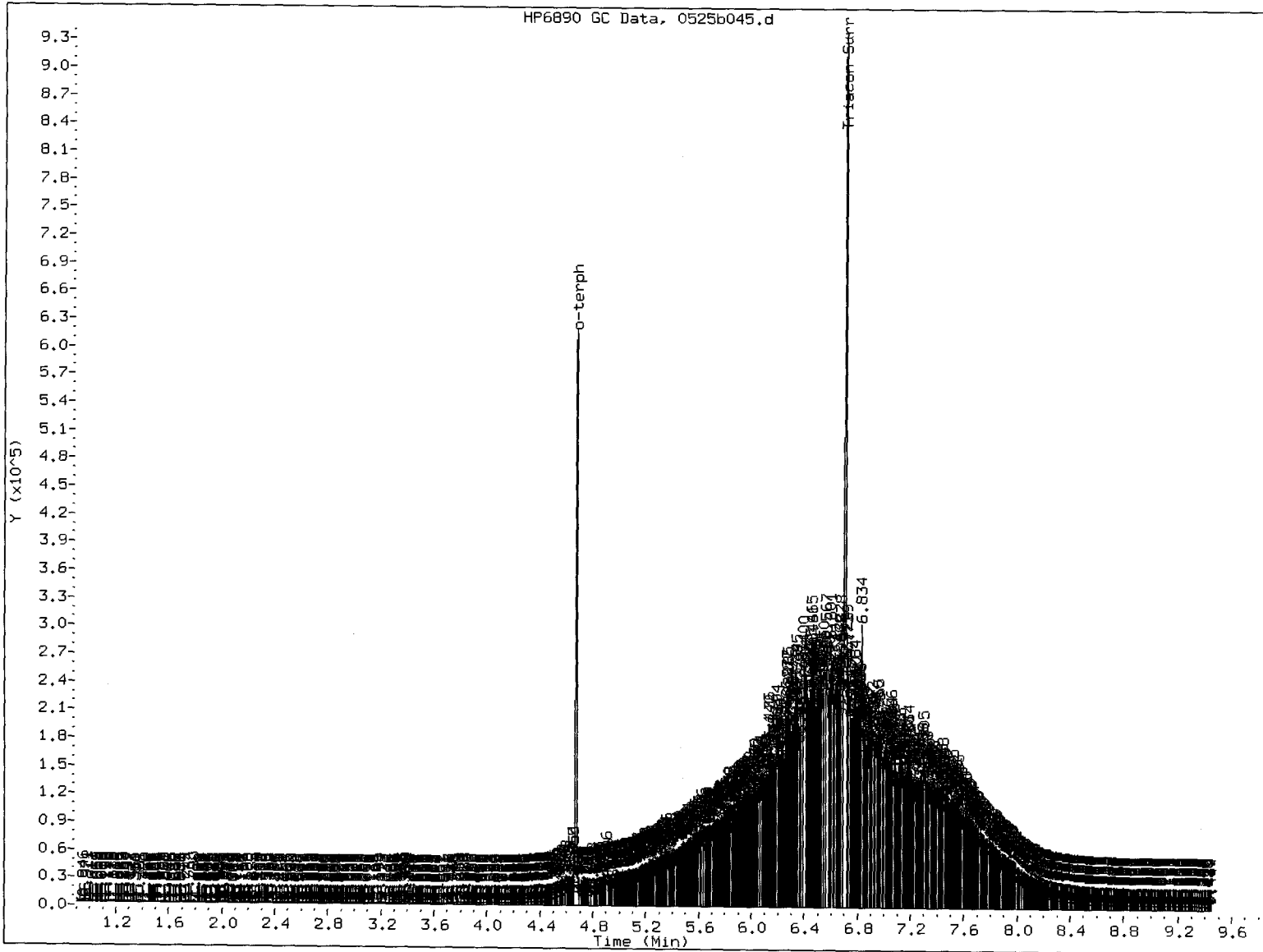
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b045.d
Date: 25-MAY-2013 22:08
Client ID:
Sample Info: MR33B
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b045.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: *MR*

Date: *12/10/13*

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b046.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR33C
Client ID:
Injection: 25-MAY-2013 22:27
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG (Tol-C12)		109505	8
C8	0.830	0.004	3175	6276	WATPHD (C12-C24)		884337	85.38
C10	2.242	0.000	1055	919	WATPHM (C24-C38)		7408896	750.43
C12	3.046	0.000	1422	1588	AK102 (C10-C25)		1013165	81.99
C14	3.625	0.003	3424	4266	AK103 (C25-C36)		6307389	887.30 M
C16	4.119	0.000	2674	2809				
C18	4.567	-0.001	8853	7275				
C20	4.987	-0.001	6741	4327				
C22	5.378	-0.003	11873	4840	MSPiRIT (Tol-C12)		109505	7.97
C24	5.752	0.000	21147	12822				
C25	5.921	-0.005	29967	37751				
C26	6.102	0.004	27622	16187				
C28	6.410	-0.003	64350	63711				
C32	6.958	0.005	112797	89079				
C34	7.189	0.001	99385	61654				
Filter Peak	-----							
C36	7.408	0.002	101742	42351				
o-terph	4.676	0.000	765702	425844	JET-A (C10-C18)		252393	23.32
Triacon Surr	6.705	0.001	699051	497340				

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Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	425844	31.7	70.4
Triacontane	497340	38.1	84.7

J 05/28/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b046.d

Date: 25-MAY-2013 22:27

Client ID:

Sample Info: MR33C

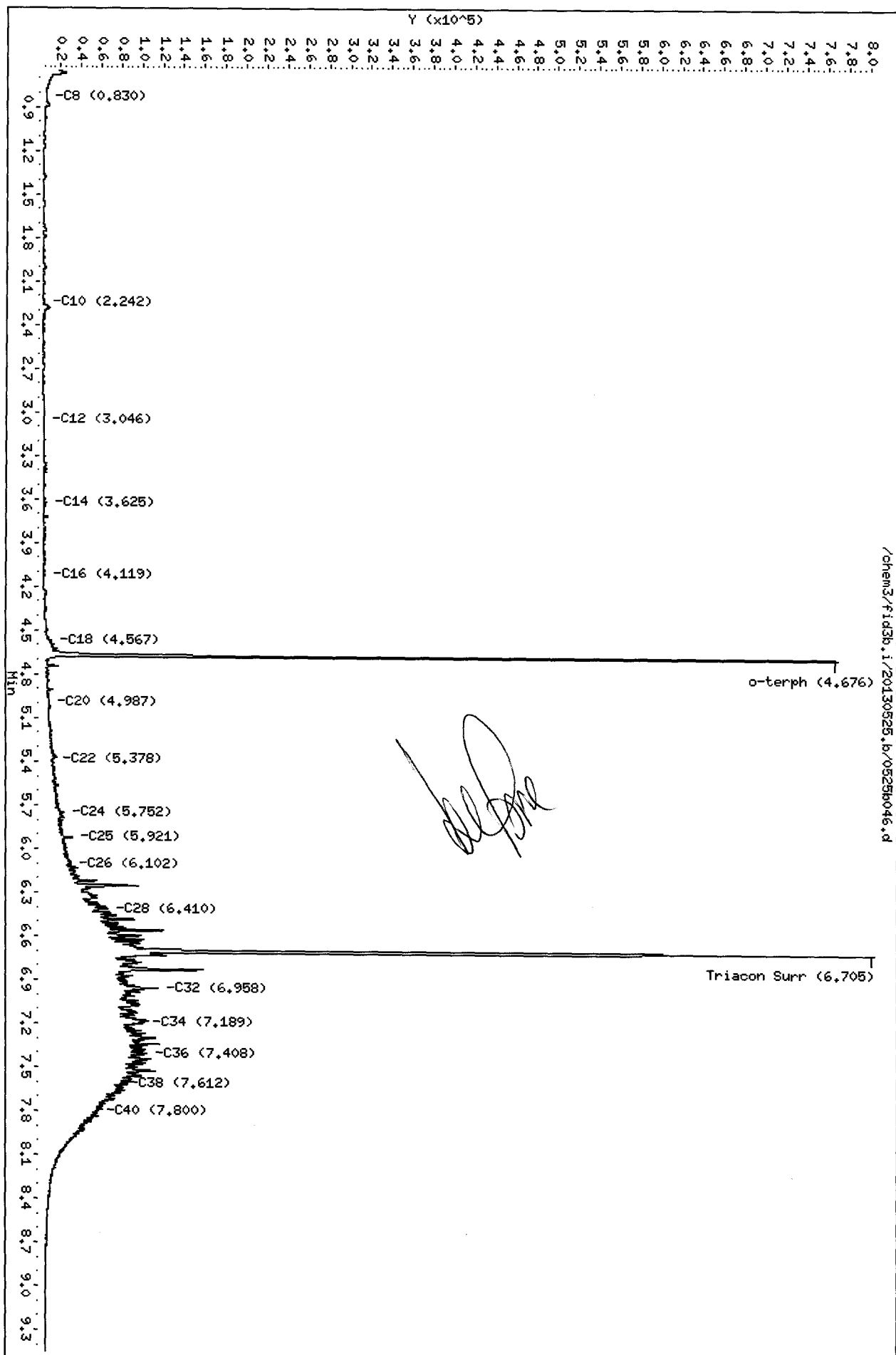
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b046.d



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-052413	76.2%	0
LCS-052413	63.6%	0
A2-F32-S-6	63.6%	0
A2-F37-S-6	68.0%	0
A2-F42-S-6	70.4%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-11207 to 13-11209

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-052413

Page 1 of 1

LAB CONTROL

Lab Sample ID: LCS-052413


QC Report No: WR33-Maul Foster & Alongi, Inc

LIMS ID: 13-11207

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: 

Date Sampled: 05/22/13

Reported: 05/28/13

Date Received: 05/24/13

Date Extracted: 05/24/13

Sample Amount: 10.0 g

Date Analyzed: 05/25/13 21:29

Final Extract Volume: 1.0 mL

Instrument/Analyst: FID/JGR

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	118	150	78.7%

TPHD Surrogate Recovery

o-Terphenyl 63.6%

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b043.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR33LCSS1
Client ID:
Injection: 25-MAY-2013 21:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3045057	225
C8	0.829	0.002	7721	13787	WATPHD (C12-C24)		12182077	1176.17
C10	2.243	0.002	68140	52774	WATPHM (C24-C38)		194427	19.69
C12	3.046	0.001	134536	138154	AK102 (C10-C25)		14448449	1169.28 M
C14	3.625	0.002	229186	182182	AK103 (C25-C36)		144866	20.38
C16	4.122	0.003	342298	285048				
C18	4.570	0.002	317161	275512				
C20	4.987	-0.002	181059	149139				
C22	5.378	-0.003	87076	85336	MSPIRIT (Tol-C12)		3045057	221.64
C24	5.747	-0.005	29132	31216				
C25	5.925	-0.002	14518	17635				
C26	6.100	0.002	6140	2759				
C28	6.410	-0.003	2207	1710				
C32	6.958	0.004	3204	1286				
C34	7.188	0.000	237	41				
Filter Peak	----							
C36	7.407	0.000	628	350				
o-terph	4.679	0.003	755045	385035	JET-A (C10-C18)		11100480	1025.53
Triacon Surr	6.706	0.002	864892	565594				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	385035	28.6	63.6
Triacontane	565594	43.3	96.3

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Jk 05/28/13

Data File: /chem3/fid3b.i/20130525.b/0525b043.d

Date: 25-MAY-2013 21:29

Client ID:

Sample Info: MR33LCSS1

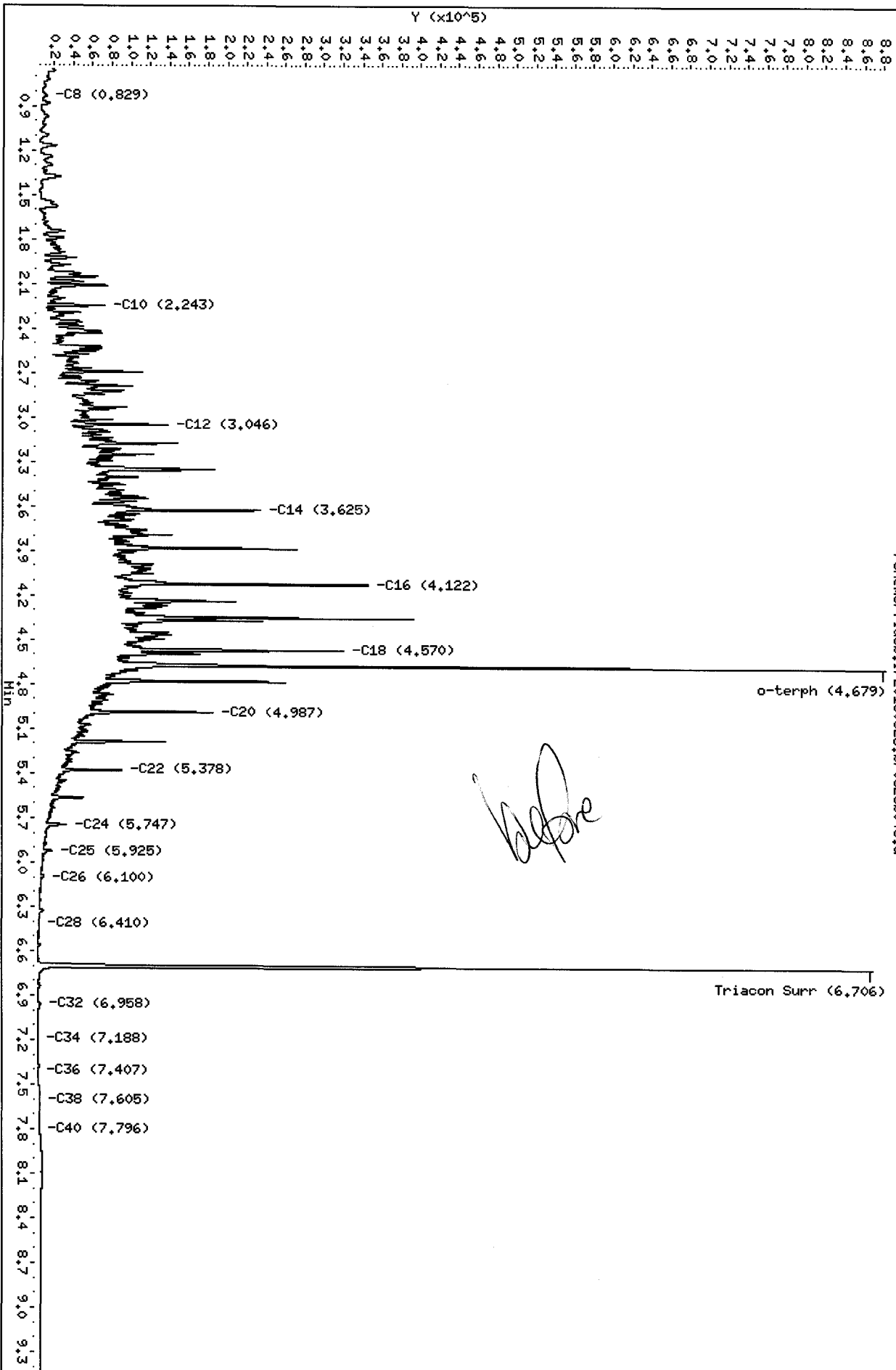
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b043.d



TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/24/13

ARI Job: WR33
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11207-052413MB1	Method Blank	10.0 g	1.00 mL	-	05/24/13
13-11207-052413LCS1	Lab Control	10.0 g	1.00 mL	-	05/24/13
13-11207-WR33A	A2-F32-S-6	8.34 g	1.00 mL	D	05/24/13
13-11208-WR33B	A2-F37-S-6	8.61 g	1.00 mL	D	05/24/13
13-11209-WR33C	A2-F42-S-6	6.83 g	1.00 mL	D	05/24/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-F32-S-6
SAMPLE

Lab Sample ID: WR33A

LIMS ID: 13-11207

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 01:03

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 17.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

	6.5	< 6.5 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	86.9%
Bromobenzene	95.2%

Gasoline Surrogate Recovery

Trifluorotoluene	86.5%
Bromobenzene	92.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ML
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a033.d ARI ID: WR33A
Data file 2: /chem3/pid1.i/20130524-2.b/0524a033.d Client ID: A2-F32-S-6
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 25-MAY-2013 01:03
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.001	2560	32952	86.5	TFT(Surr)
15.380	0.000	1835	15647	92.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	884	0.002
8015C 2MP-TMB (4.18 to 16.20)	723723	884	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	884	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	884	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	-0.001	2802	86.9	TFT(Surr)
15.388	0.000	6885	95.2	BB(Surr)

SW8021 (PID)

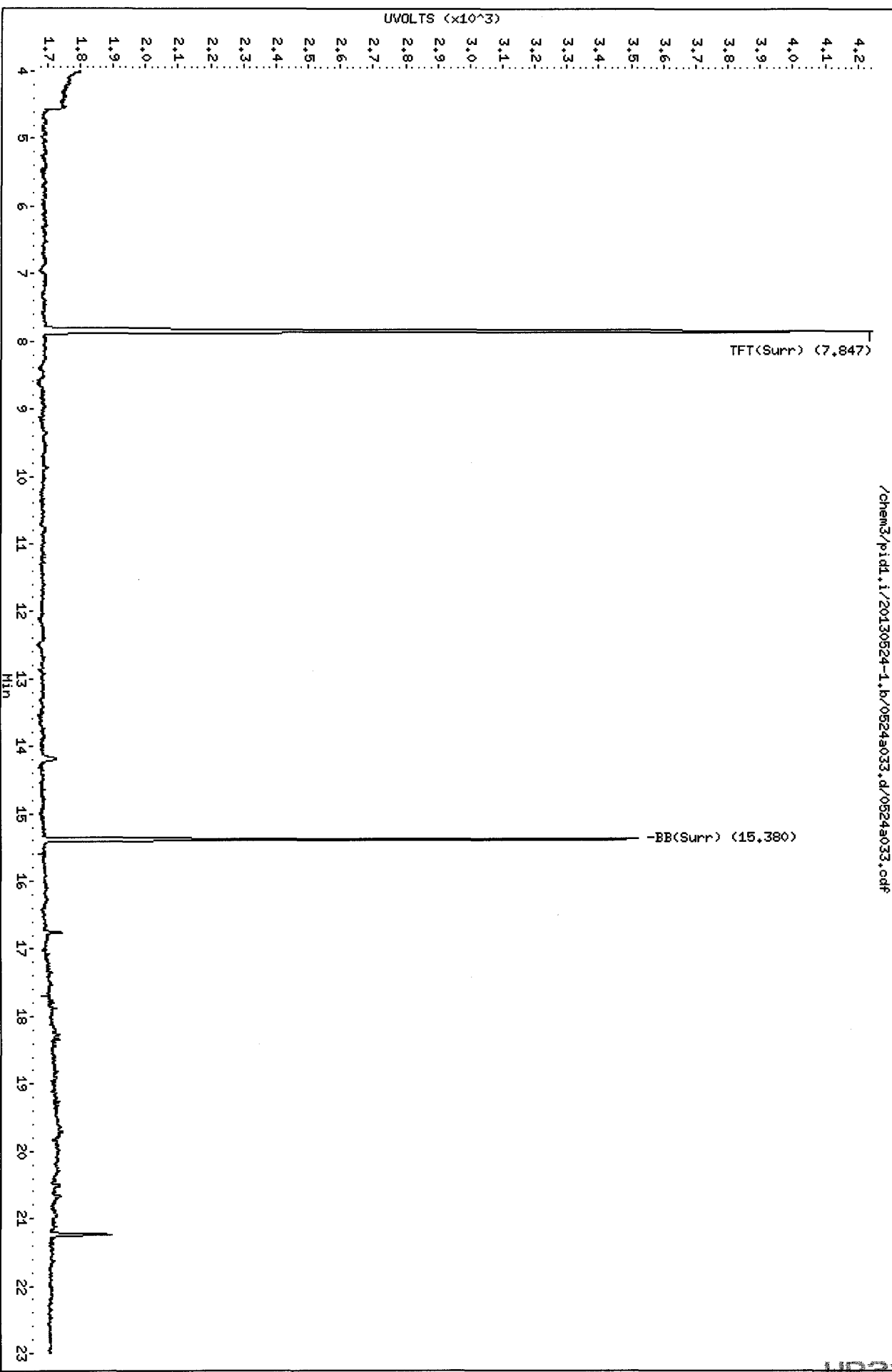
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524s033.d
Date : 25-MAY-2013 01:03
Client ID: A2-F32-S-6
Sample Info: MR33A
Column phase: RTX 502-2 FID

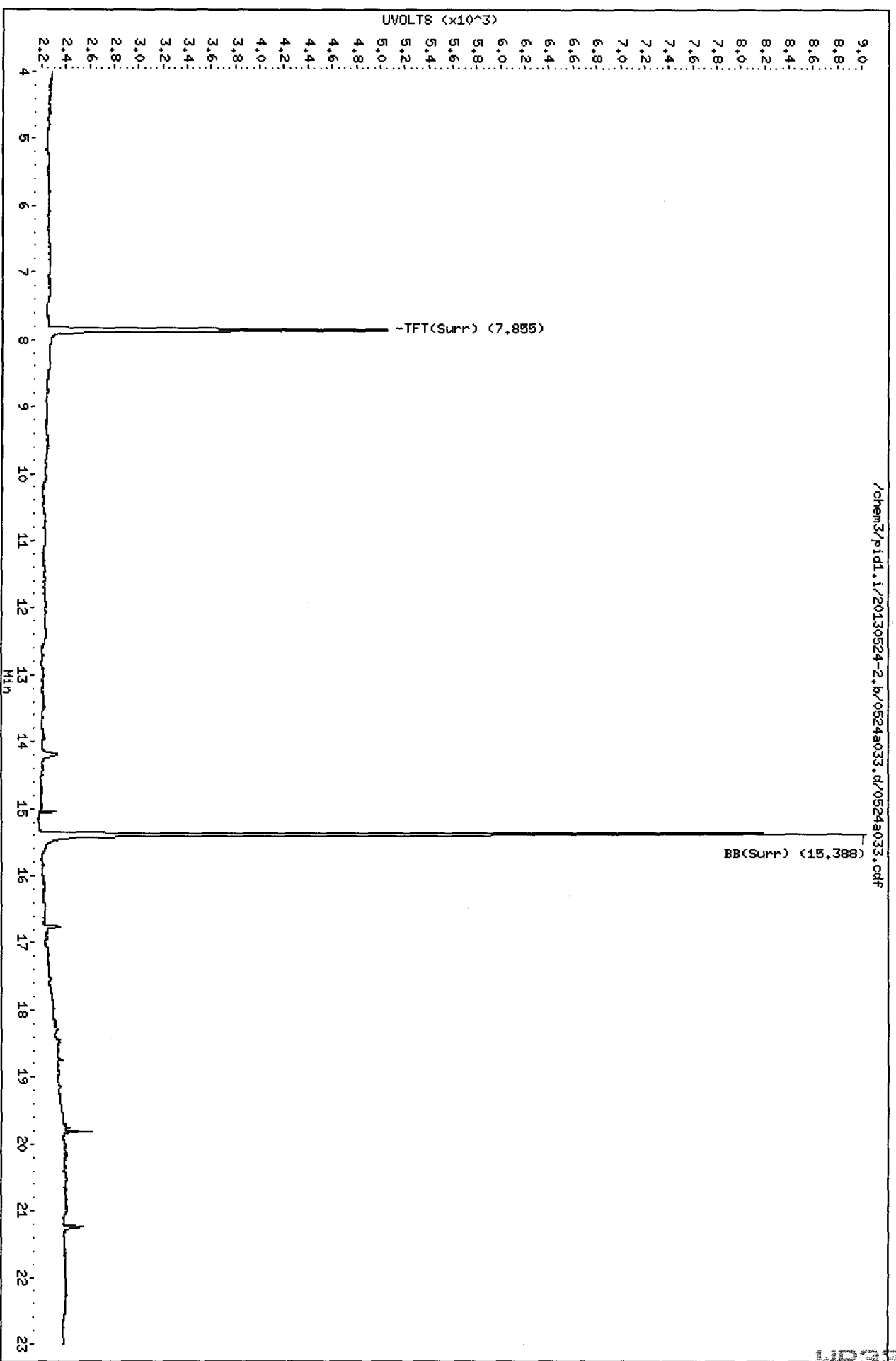
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



010005 : 0000

Data File: /chem3/pid1.1/20130524-2.b/0524a033.d
Date: 25-MAY-2013 01:03
Client ID: A2-F32-S-6
Sample Info: MR33A
Column phase: RTX 502-2 PID

Instrument: pid1.1
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-F37-S-6
SAMPLE

Lab Sample ID: WR33B

LIMS ID: 13-11208

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 01:31

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 85 mg-dry-wt

Percent Moisture: 14.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	5.9	< 5.9 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	82.0%
Bromobenzene	91.2%

Gasoline Surrogate Recovery

Trifluorotoluene	82.2%
Bromobenzene	89.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a034.d ARI ID: WR33B
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a034.d Client ID: A2-F37-S-6
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 25-MAY-2013 01:31
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2431	31008	82.2	TFT(Surr)
15.381	0.001	1778	14891	89.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	4545	0.013
8015C 2MP-TMB (4.18 to 16.20)	723723	3119	0.004
AK101 nC6-nC10 (4.68 to 15.10)	582885	3119	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4545	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	2643	82.0	TFT(Surr)
15.388	0.001	6596	91.2	BB(Surr)

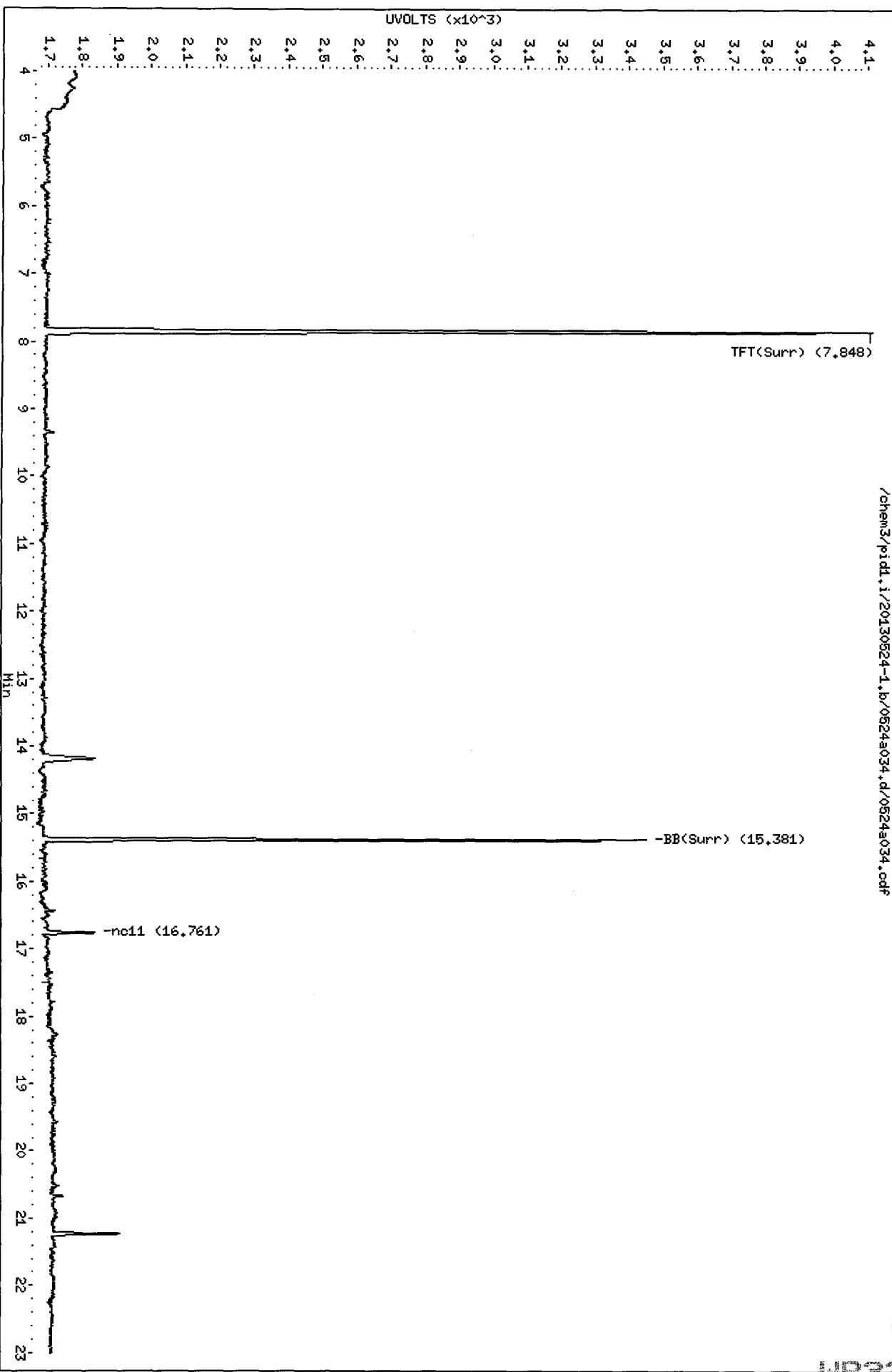
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a034.d
Date: 25-MAY-2013 01:31
Client ID: A2-F37-S-6
Sample Info: MR338
Column phase: RTX 502-2 FID

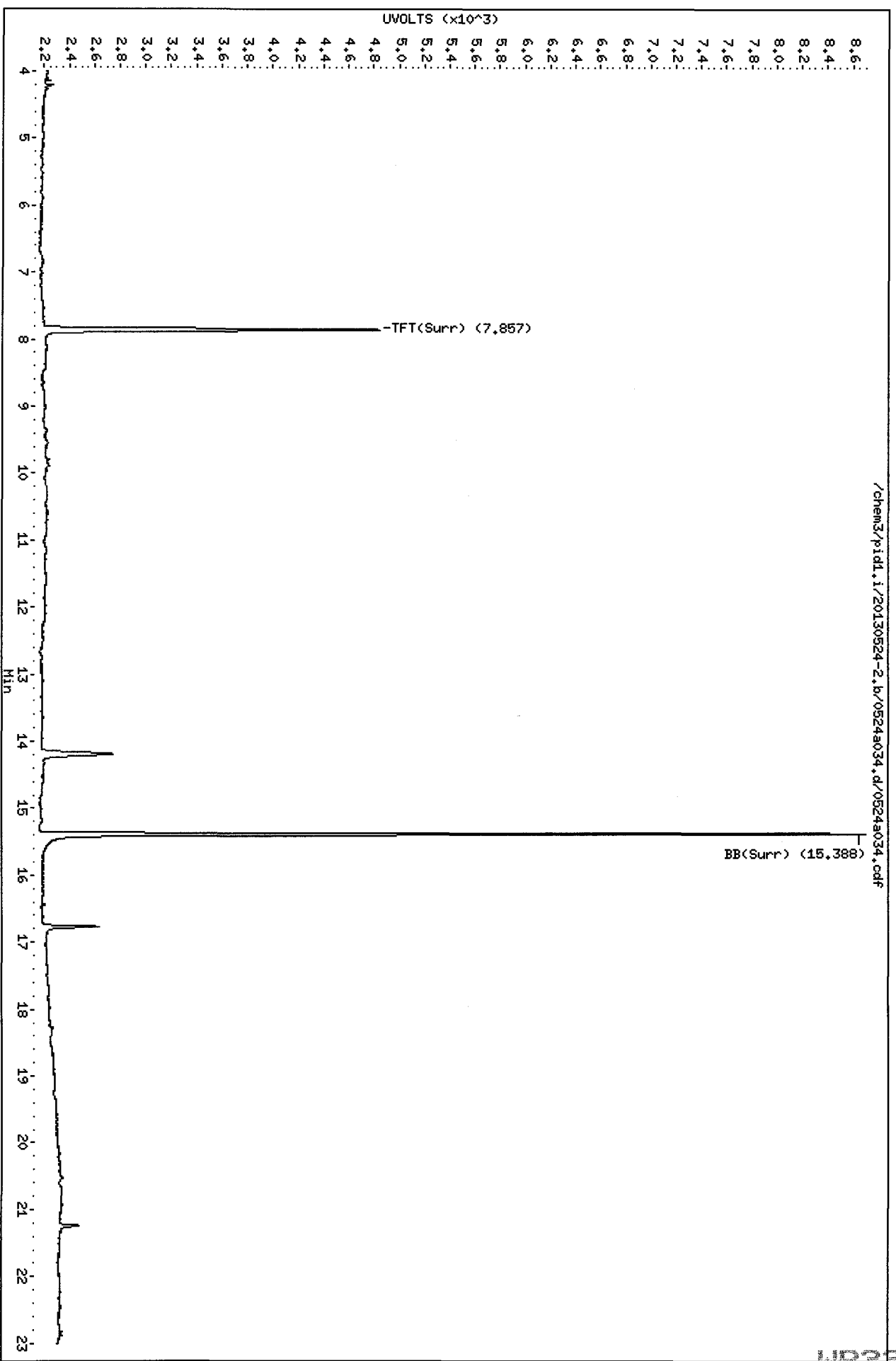
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



MR338 : 00017

Data File: /chem3/pid1.i/20130524-2.b/0524a034.d
Date : 25-MAY-2013 01:31
Client ID: A2-F37-S-6
Sample Info: MR33B
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



01000000 : 00000000

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: A2-F42-S-6
SAMPLE**

Lab Sample ID: WR33C

LIMS ID: 13-11209

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 02:00

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 50 mg-dry-wt

Percent Moisture: 31.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	25	< 25 U
108-88-3	Toluene	25	48
100-41-4	Ethylbenzene	25	< 25 U
179601-23-1	m,p-Xylene	50	< 50 U
95-47-6	o-Xylene	25	< 25 U

Gasoline Range Hydrocarbons 10 < 10 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	87.1%
Bromobenzene	95.5%

Gasoline Surrogate Recovery

Trifluorotoluene	87.0%
Bromobenzene	93.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a035.d ARI ID: WR33C
Data file 2: /chem3/pid1.i/20130524-2.b/0524a035.d Client ID: A2-F42-S-6
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 25-MAY-2013 02:00
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2575	32892	87.0	TFT(Surr)
15.380	0.000	1860	15594	93.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2195	0.006
8015C 2MP-TMB (4.18 to 16.20)	723723	1773	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	1773	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2195	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	2807	87.1	TFT(Surr)
15.388	0.000	6905	95.5	BB(Surr)

SW8021 (PID)

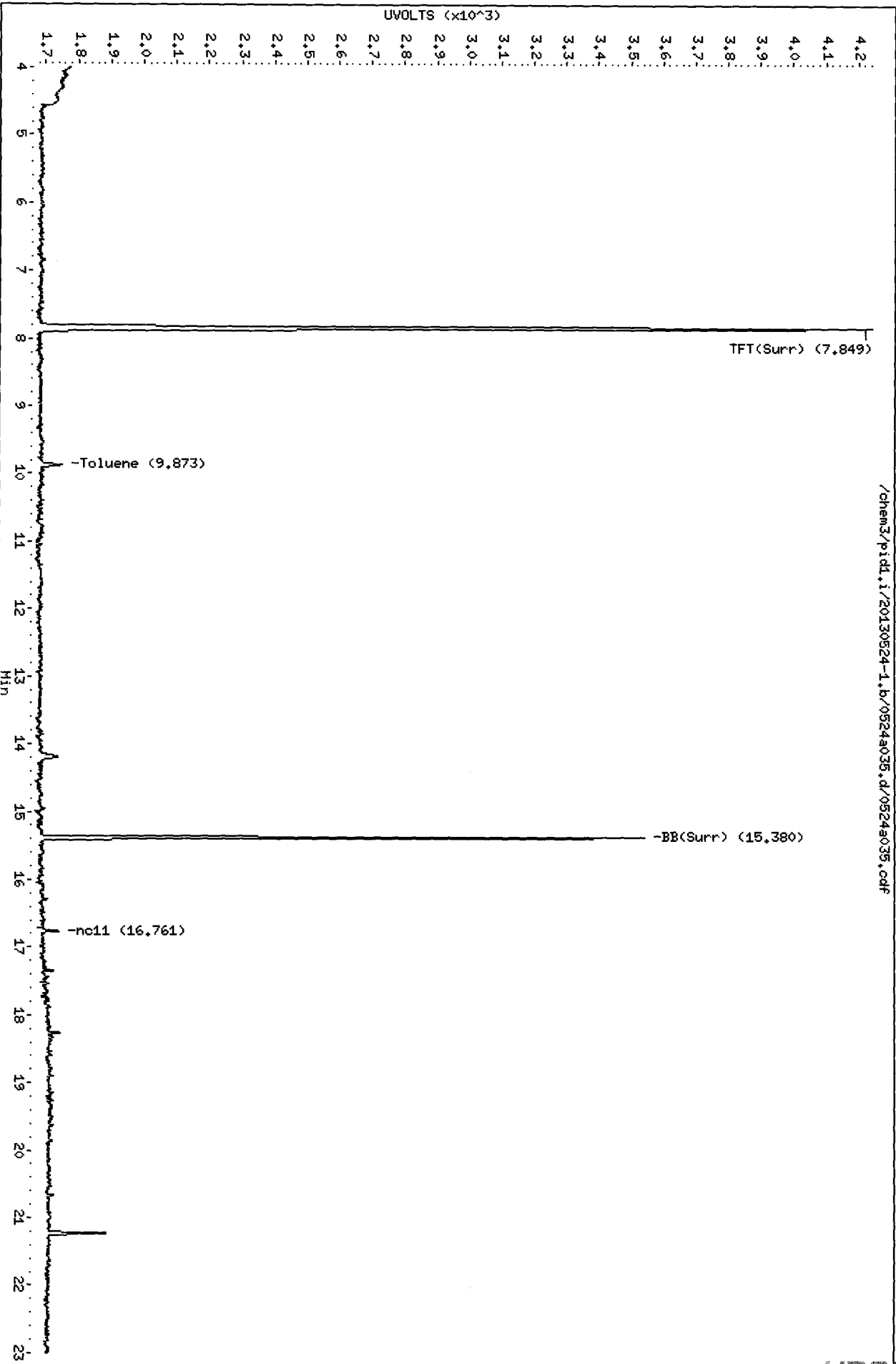
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.002	96	0.48N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a035.d
Date: 25-MAY-2013 02:00
Client ID: A2-F42-S-6
Sample Info: MR33C
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

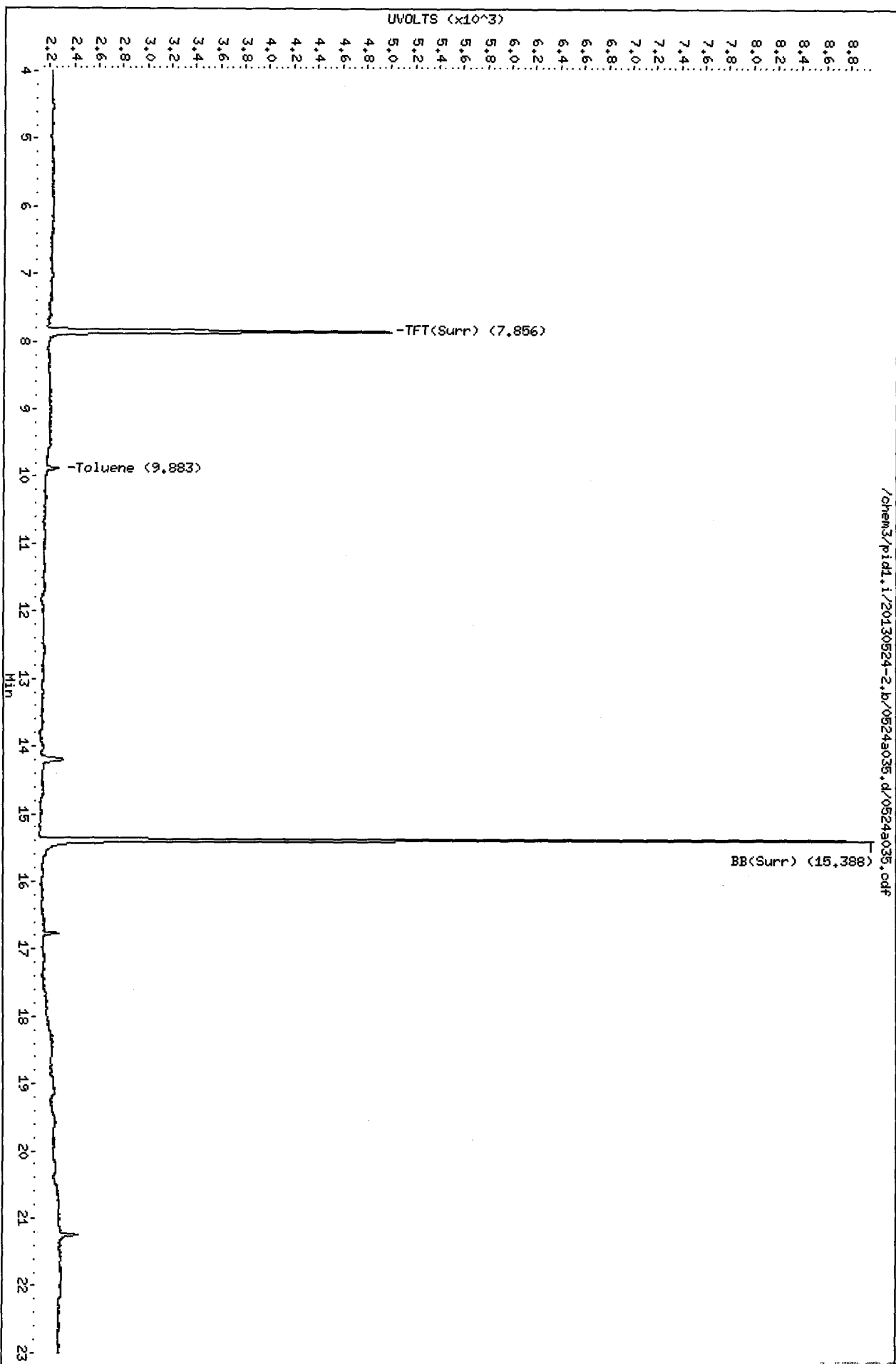


12005 : 0005

Data File: /chem3/pid1.i/20130524-2.1b/0524a035.d
Date: 25-MAY-2013 02:00
Client ID: A2-F42-S-6
Sample Info: MR33C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130524-2.1b/0524a035.d/0524a035.cdf

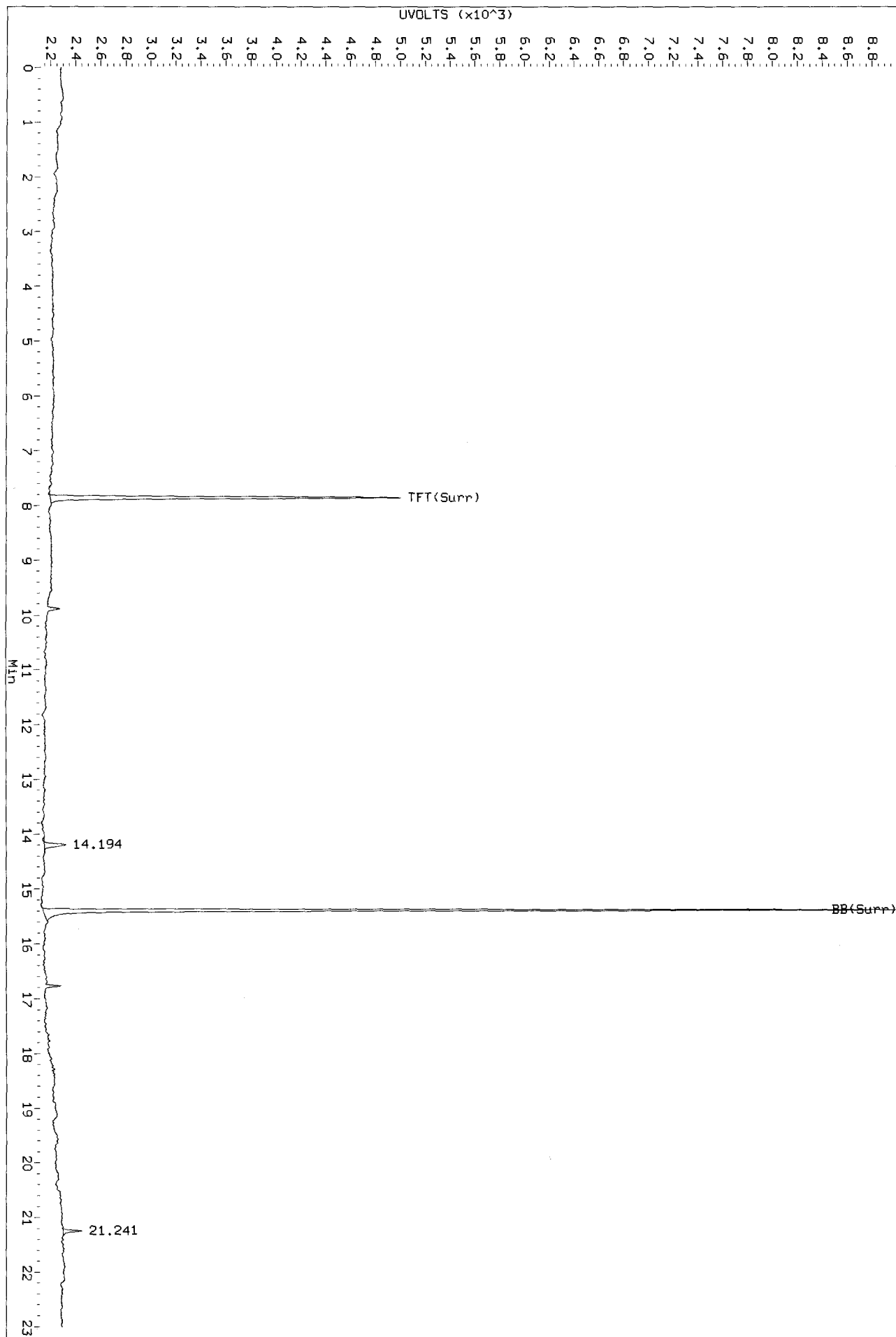


4022 : 00052

PK
5/28/13

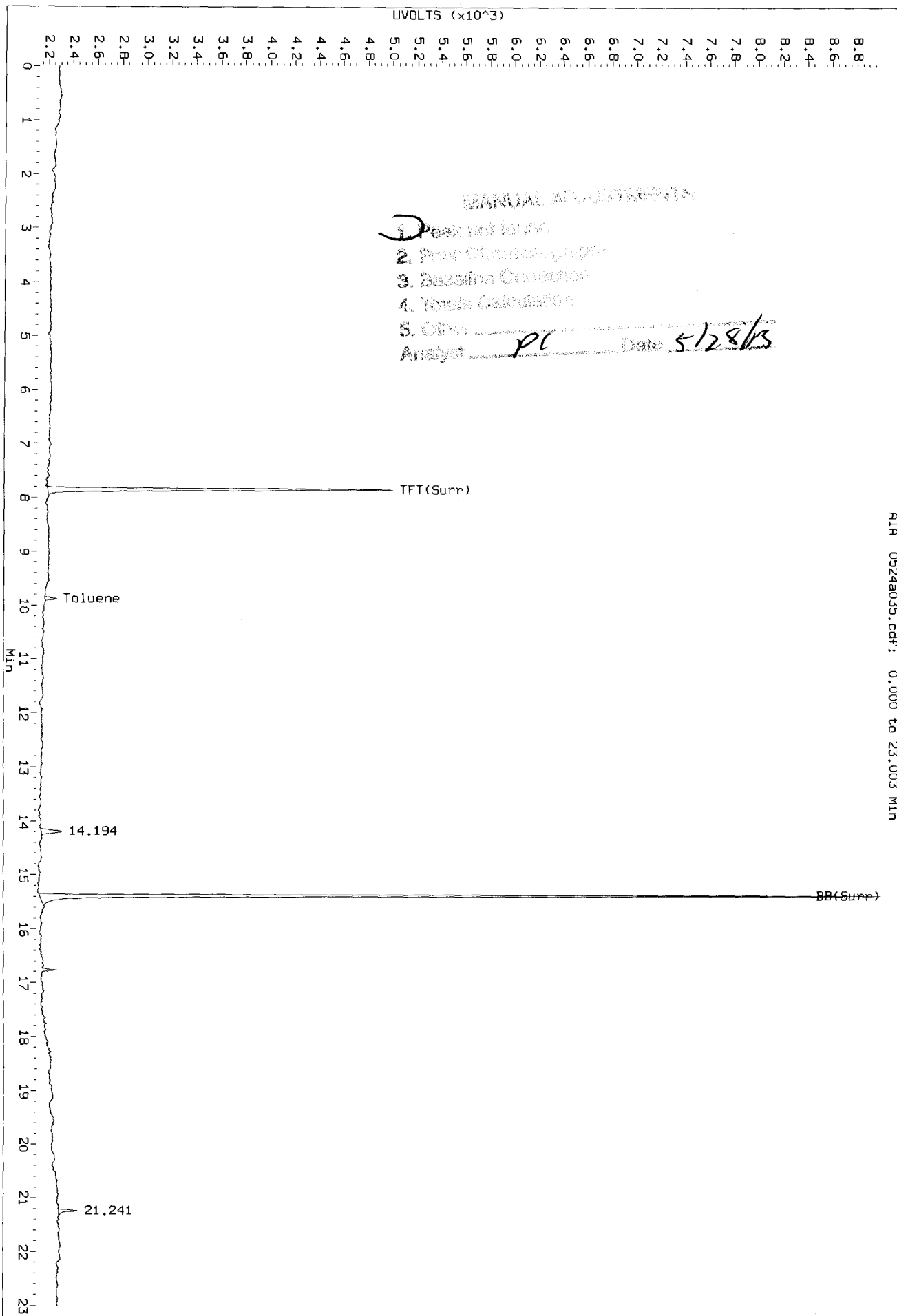
Data File: /chem3/pid1_1/20130524-2.b/0524a035.d/0524a035.cdf
Injection Date: 25-MAY-2013 02:00
Instrument: pid1.1
Client Sample ID: A2-F42-S-6

AIA 0524a035.cdf: 0.000 to 23.003 MIN



Data File: /chem3/pid1.1/20130524-2.1/0524a035.d/0524a035.cdf
Injection Date: 25-May-2013 02:00
Instrument: pid1.1
Client Sample ID: A2-F42-S-6

AIA 0524a035.cdf: 0.000 to 23.003 Min



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR33
Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-052413	NA	100%	99.5%	0	
LCS-052413	NA	107%	99.2%	0	
LCSD-052413	NA	102%	95.0%	0	
A2-F32-S-6	NA	86.5%	92.3%	0	
A2-F37-S-6	NA	82.2%	89.5%	0	
A2-F42-S-6	NA	87.0%	93.6%	0	

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11207 to 13-11209

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR33
Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-052413	103%	102%	0
LCS-052413	107%	103%	0
LCSD-052413	102%	97.7%	0
A2-F32-S-6	86.9%	95.2%	0
A2-F37-S-6	82.0%	91.2%	0
A2-F42-S-6	87.1%	95.5%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11207 to 13-11209

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413

LIMS ID: 13-11207

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/24/13 16:34

LCSD: 05/24/13 17:02

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	45.7	50.0	91.4%	50.0	50.0	100%	9.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	107%	102%
Bromobenzene	99.2%	95.0%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413
 LIMS ID: 13-11207
 Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/24/13 16:34
 LCSD: 05/24/13 17:02
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCS	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	179	185	96.8%	192	185	104%	7.0%
Toluene	1930	1980	97.5%	2070	1980	105%	7.0%
Ethylbenzene	562	580	96.9%	608	580	105%	7.9%
m,p-Xylene	2020	2120	95.3%	2200	2120	104%	8.5%
o-Xylene	938	960	97.7%	1010	960	105%	7.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	107%	102%
Bromobenzene	103%	97.7%

10C
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a015.d ARI ID: LCS0524A
Data file 2: /chem3/pid1.i/20130524-2.b/0524a015.d Client ID:
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 16:34
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.847	-0.001	3161	44356	106.8	TFT(Surr)
15.382	0.001	1971	17600	99.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	325754	0.910 M
8015C 2MP-TMB (4.18 to 16.20)	723723	673766	0.931 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	541240	0.929 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	342674	0.914 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.855	-0.001	3461	107.4	TFT(Surr)
15.389	0.001	7439	102.9	BB(Surr)

SW8021 (PID)

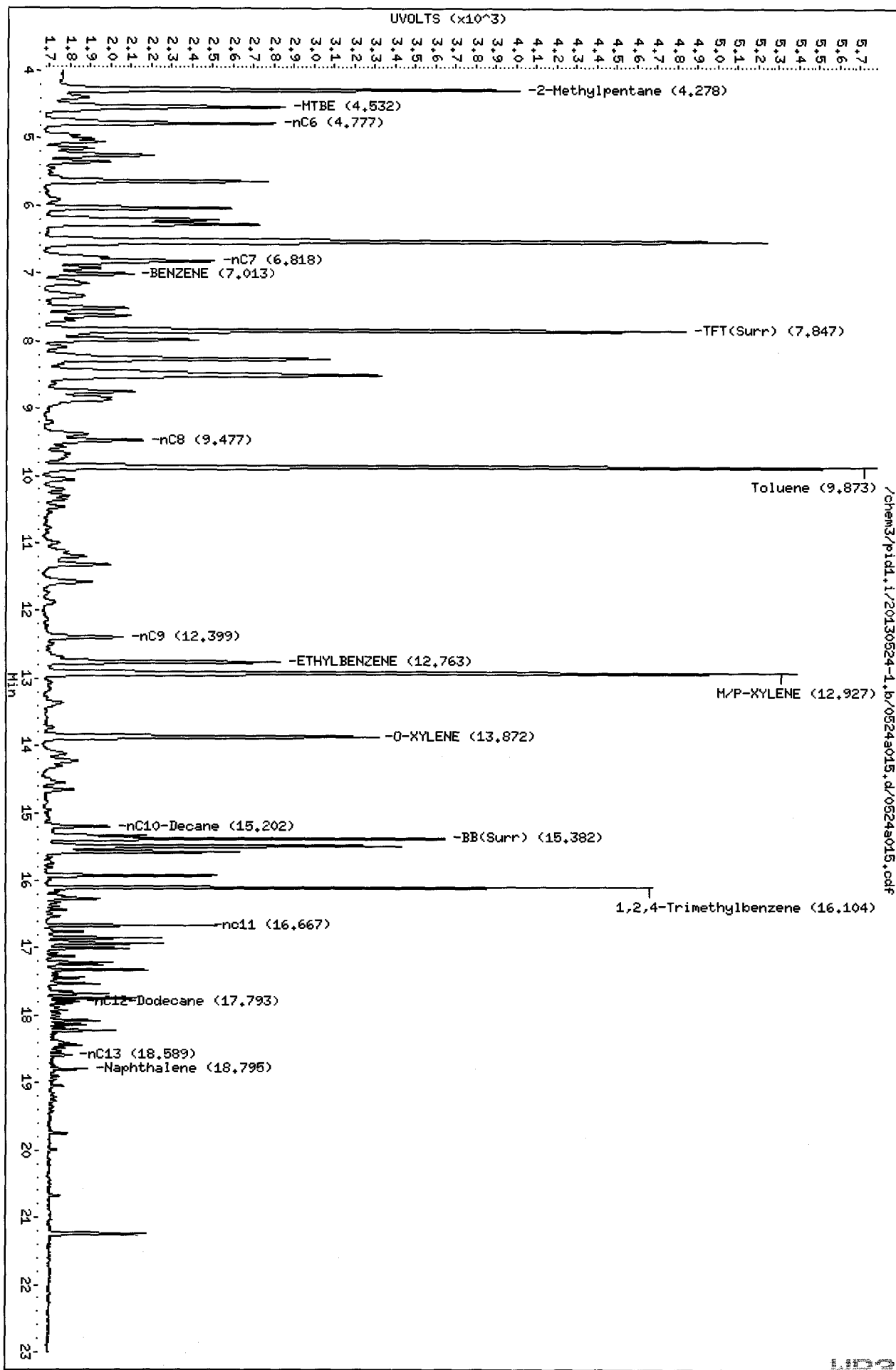
RT	Shift	Response	Amount	Compound
--	-----	-----	----	-----
7.021	0.000	806	3.58	Benzene
9.881	0.000	7635	38.53	Toluene
12.772	0.000	1834	11.23	Ethylbenzene
12.936	0.003	7263	40.36	M/P-Xylene
13.881	0.001	2665	18.77	O-Xylene
ND	----	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a015.d
Date: 24-MAY-2013 16:34
Client ID:
Sample Info: LCS0524A
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130524-1.b/0524a015.d/0524a015.cdf

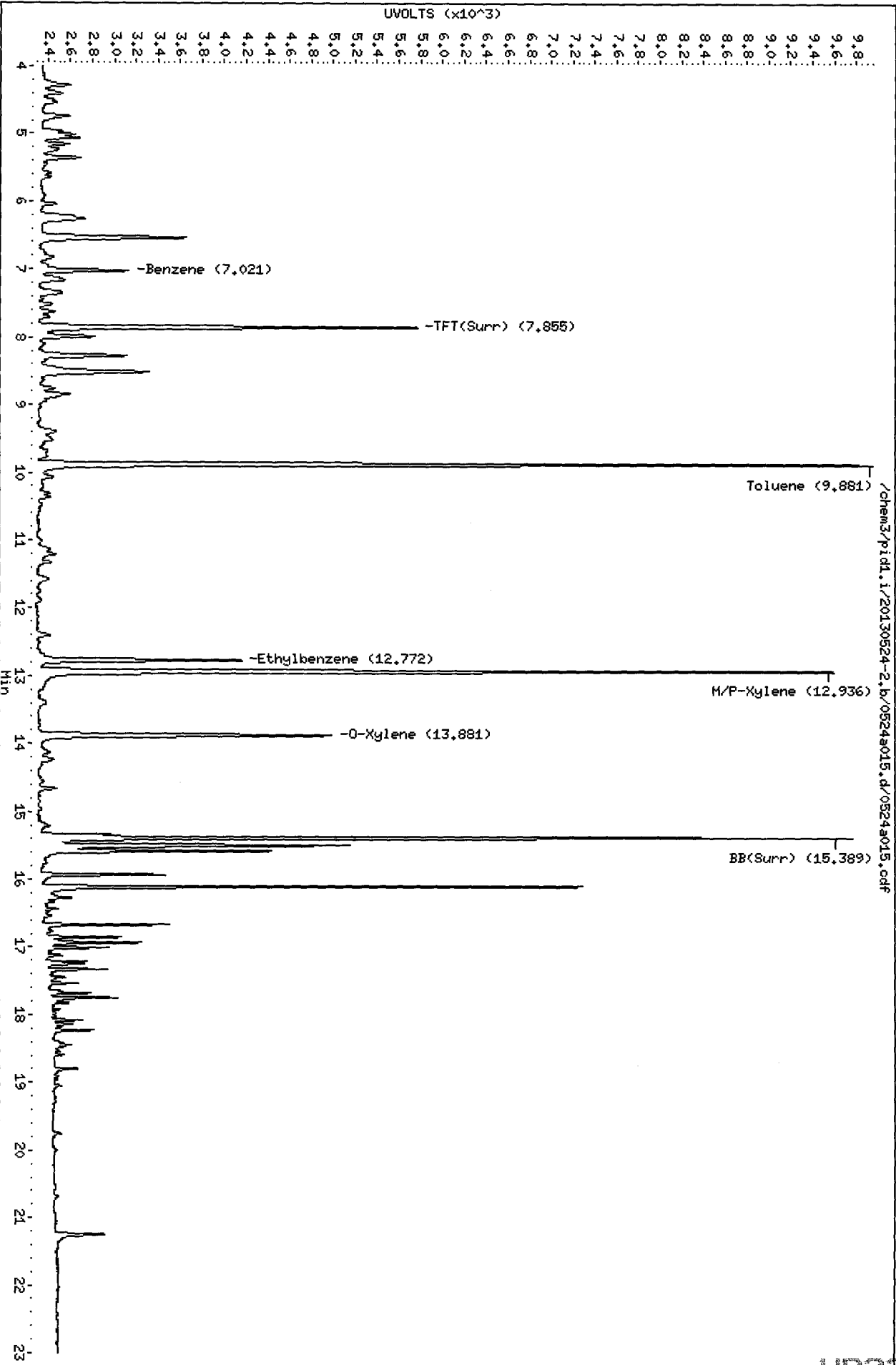
Data File: /chem3/pid1.i/20130524-2.b/0524s015.d
Date : 24-MAY-2013 16:34

Client ID:
Sample Info: LCS0524A

Column phase: RTX 502-2 PID

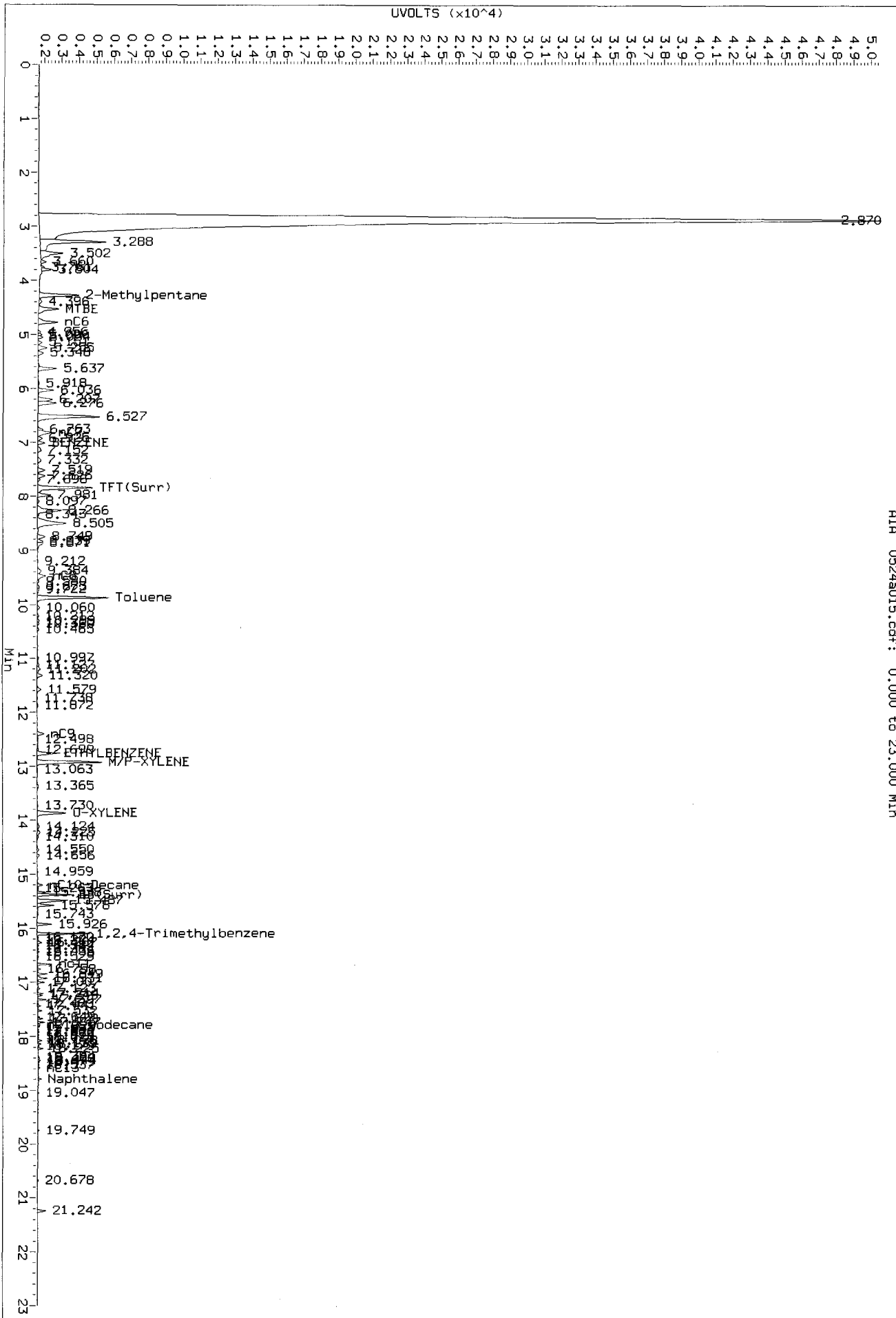
Instrument: pid1.i

Operator: PC
Column diameter: 0.18

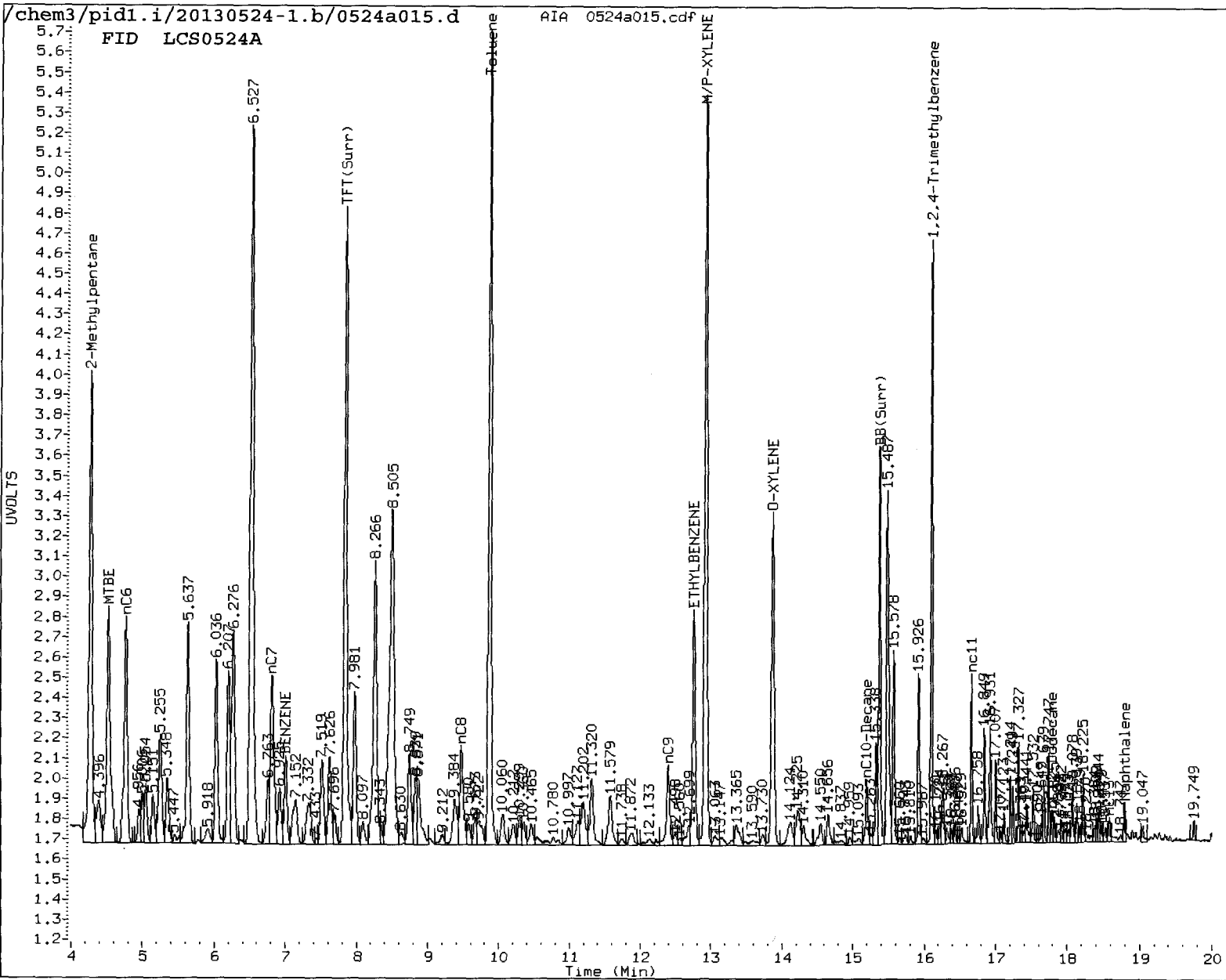


PL
5/28/13

Data File: /chem3/pid1.1/20130524-1.b/05244015.d/05244015.cdf
Injection Date: 24-MAY-2013 16:34
Instrument: pid1.1
Client Sample ID:



AIR 05244015.cdf: 0.000 to 23.000 Min



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: VC

Date: 5/28/13

KC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a016.d ARI ID: LCSD0524A
Data file 2: /chem3/pid1.i/20130524-2.b/0524a016.d Client ID:
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 17:02
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	-0.002	3022	43087	102.1	TFT(Surr)
15.380	0.000	1888	16886	95.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	355572	0.993 M
8015C 2MP-TMB (4.18 to 16.20)	723723	726459	1.004 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	583512	1.001 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	375552	1.001 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	-0.002	3305	102.5	TFT(Surr)
15.388	0.000	7063	97.7	BB(Surr)

SW8021 (PID)

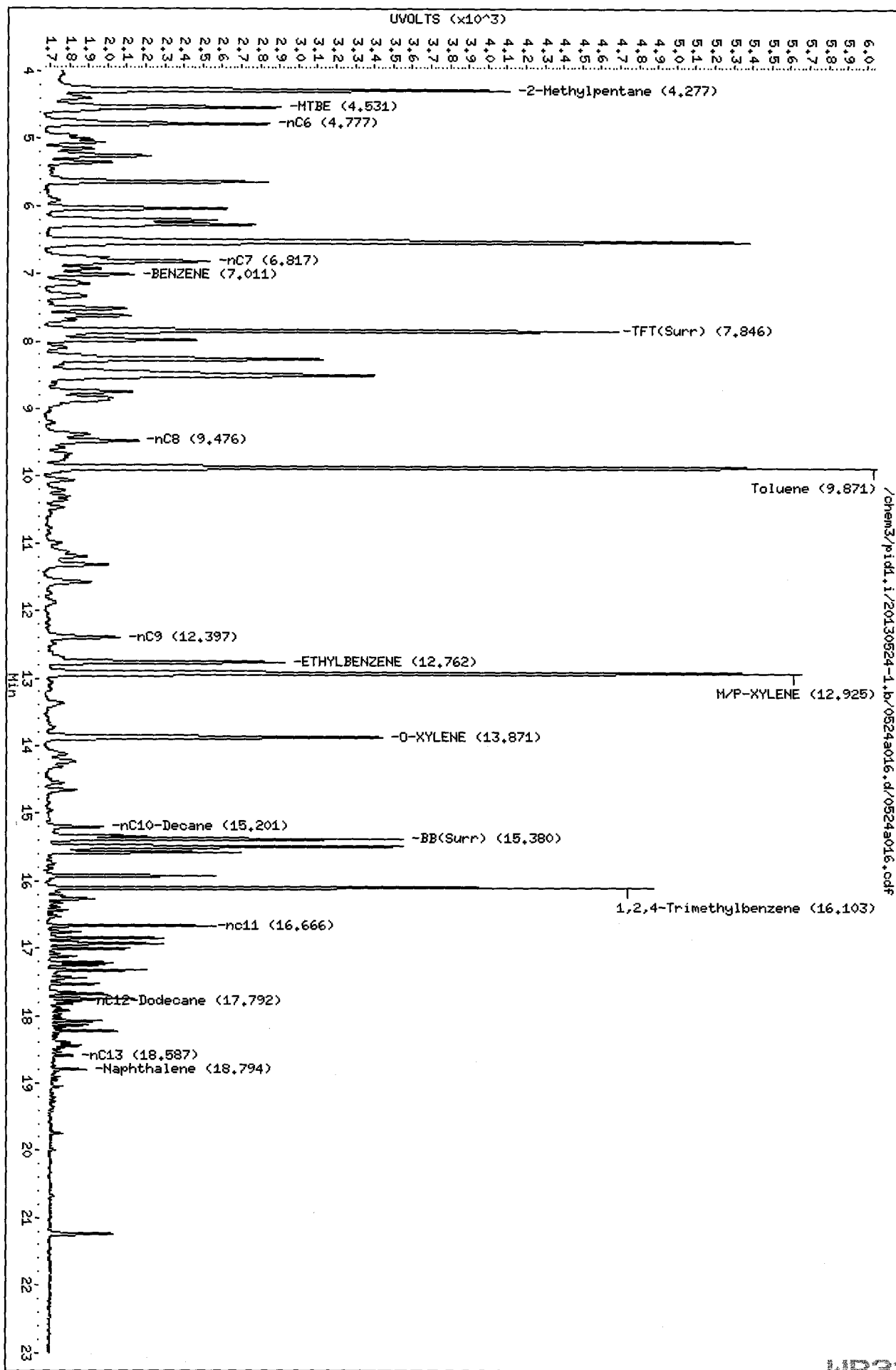
RT	Shift	Response	Amount	Compound
7.019	-0.001	860	3.83	Benzene
9.879	-0.002	8194	41.36	Toluene
12.771	-0.001	1984	12.15	Ethylbenzene
12.934	0.001	7915	43.99	M/P-Xylene
13.880	0.000	2874	20.24	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a016.d
Date: 24-MAY-2013 17:02
Client ID:
Sample Info: LCS0524A
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



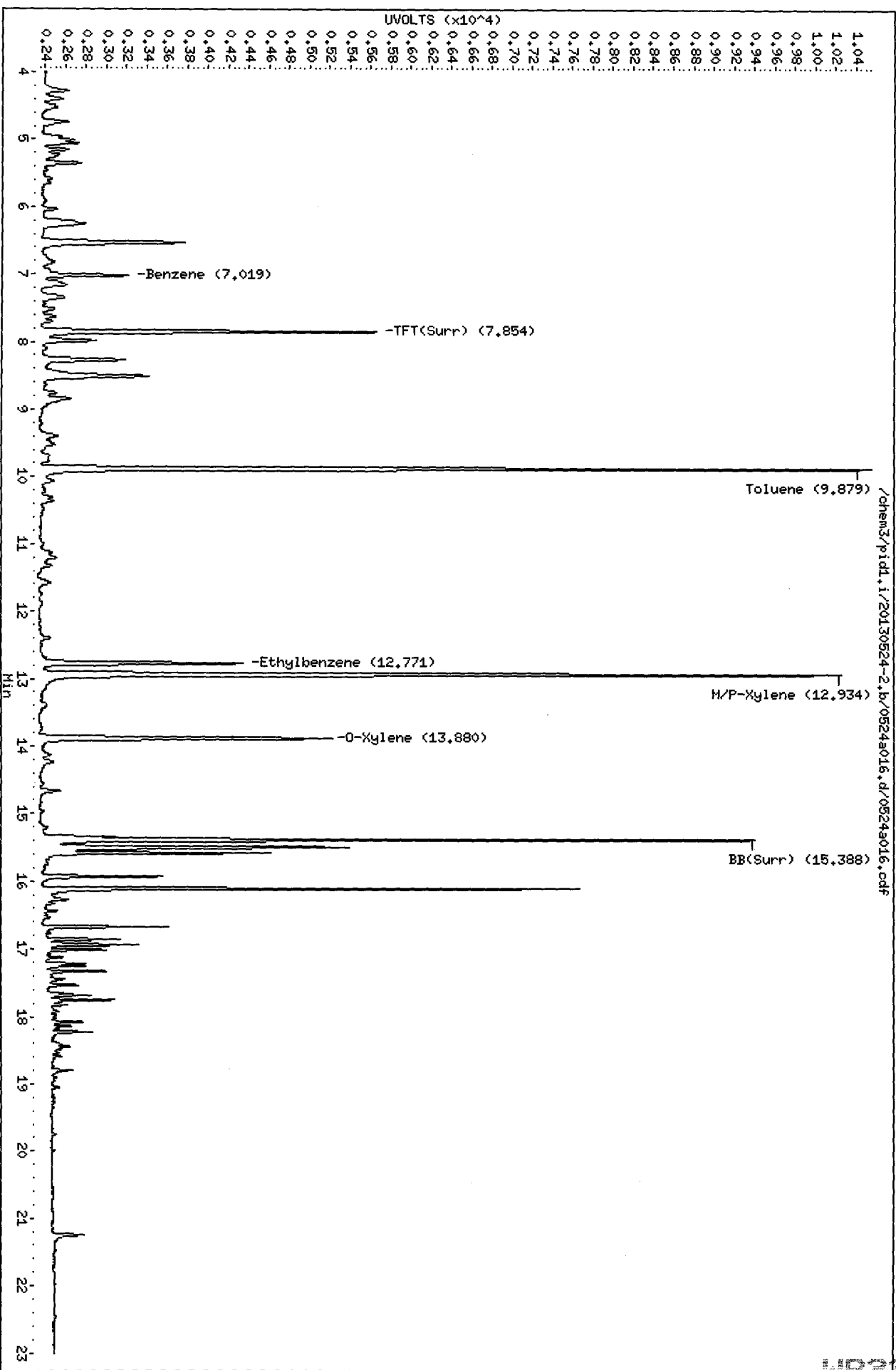
/chem3/pid1.i/20130524-1.b/0524a016.d/0524a016.cdf

130524

Data File: /chem3/pid1.i/20130524-2.b/0524a016.d
Date: 24-MAY-2013 17:02
Client ID:
Sample Info: LCS0524a

Column phase: RTX 502-2 PID

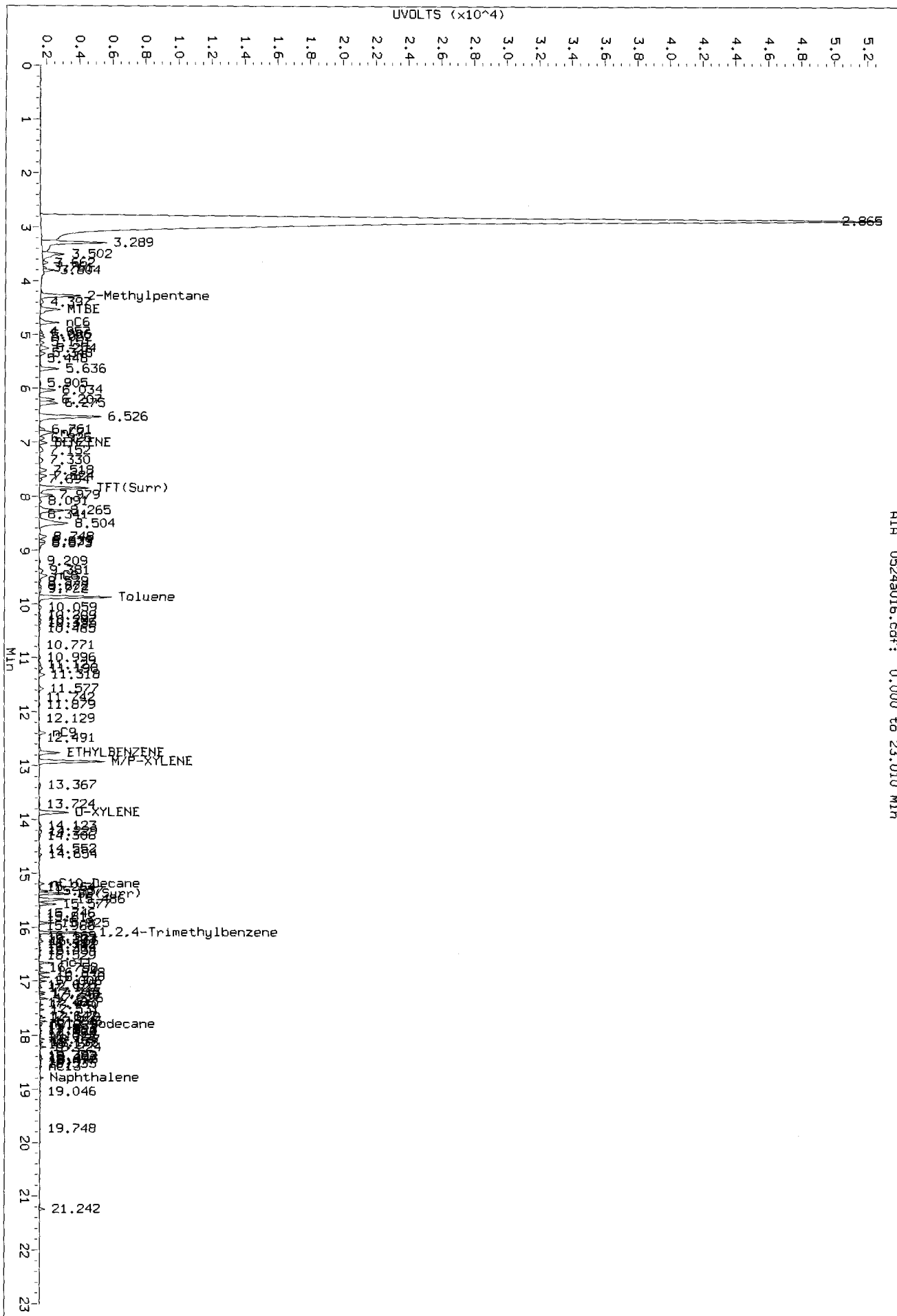
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

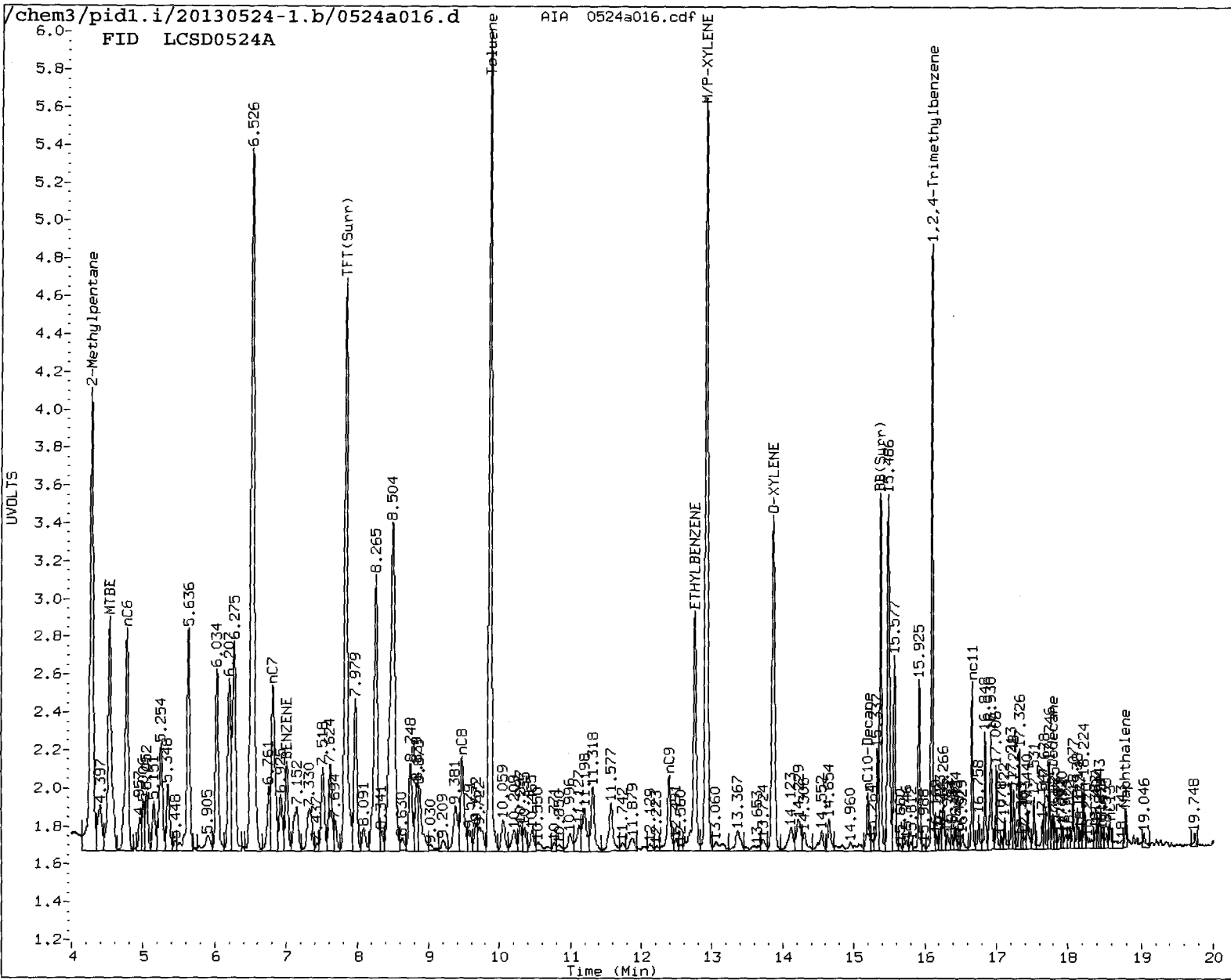


PK
5/28/13

Data File: /chem3/pid1.1/20130524-1.b/0524s016.d/0524s016.cdf
Injection Date: 24-May-2013 17:02
Instrument: pid1.1
Client Sample ID:

AIR 0524s016.cdf: 0.000 to 23.010 Min





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other

Analyst: YL

Date: 5/28/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-052413

METHOD BLANK

Lab Sample ID: MB-052413

LIMS ID: 13-11207

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/24/13 17:30

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons 5.0 < 5.0 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	103%
Bromobenzene	102%

Gasoline Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	99.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a017.d ARI ID: MB0524A
Data file 2: /chem3/pid1.i/20130524-2.b/0524a017.d Client ID:
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 17:30
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.001	2970	38373	100.4	TFT(Surr)
15.380	0.000	1977	16541	99.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	930	0.003
8015C 2MP-TMB (4.18 to 16.20)	723723	3478	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	3478	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	930	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.855	-0.001	3312	102.7	TFT(Surr)
15.388	0.000	7354	101.7	BB(Surr)

SW8021 (PID)

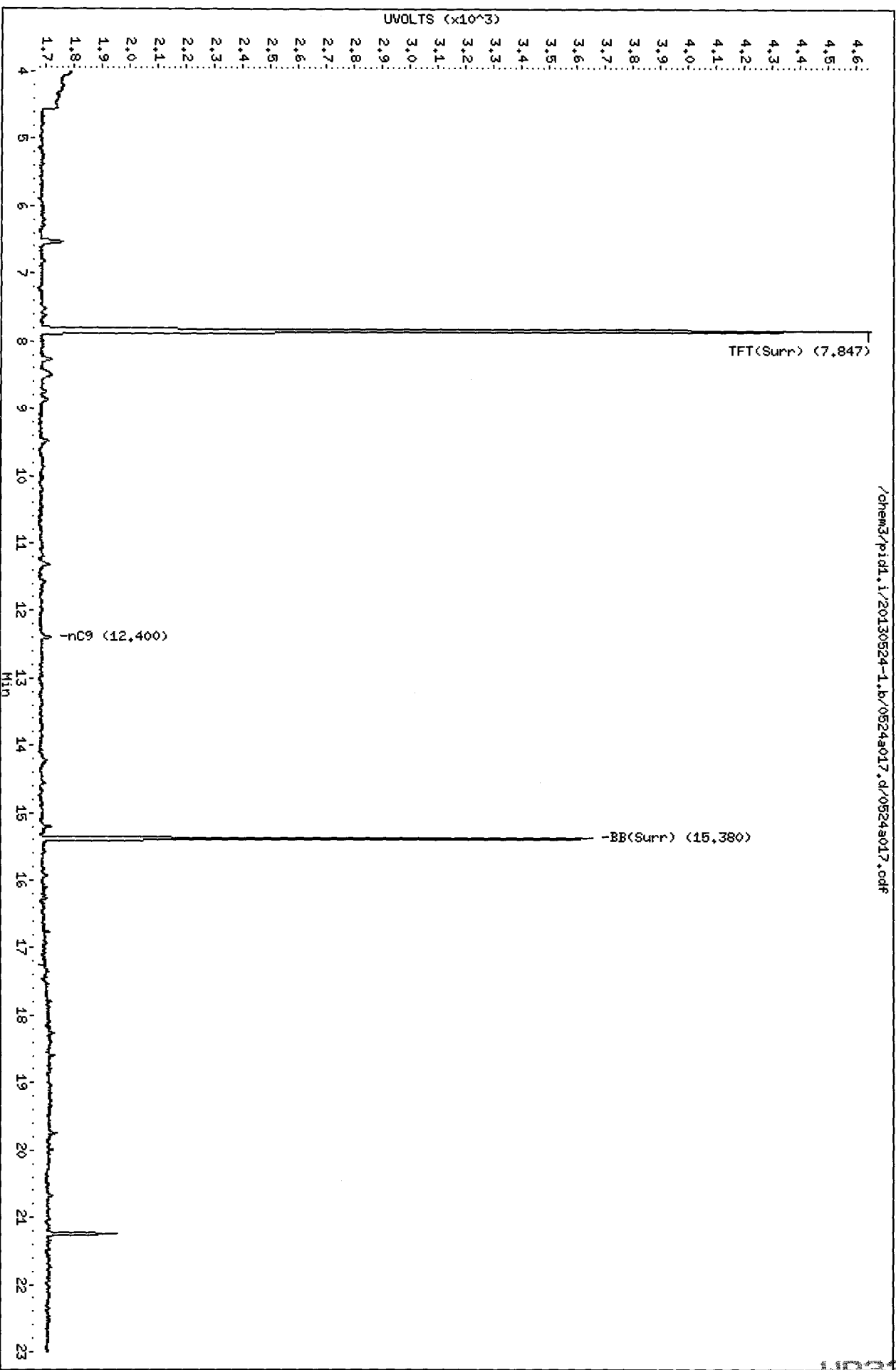
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a017.d
Date : 24-MAY-2013 17:30
Client ID:
Sample Info: HB0524A
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

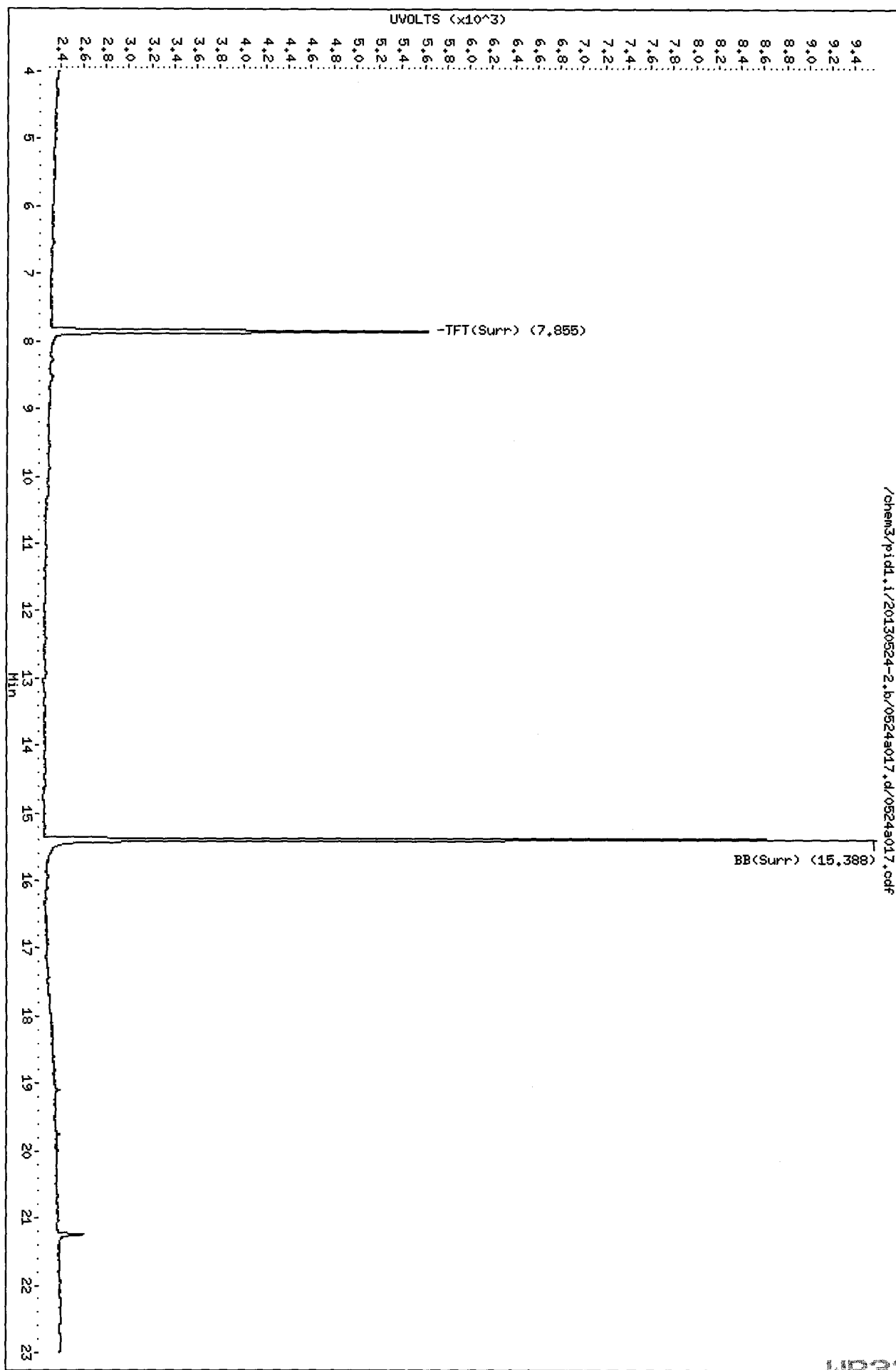


/chem3/pid1.i/20130524-1.b/0524a017.d/0524a017.cdf

17 2007 : 0000


Data File: /chem3/pidl.1/20130524-2.b/0524a017.d
Date : 24-MAY-2013 17:30
Client ID:
Sample Info: HB0524A
Column phase: RTX 502-2 PID

Instrument: pidl.1
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH
Extraction Method: SW3550C
 Page 1 of 1

Sample ID: A2-F32-S-6
SAMPLE

Lab Sample ID: WR33D
 LIMS ID: 13-11210
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/29/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Percent Moisture: 18.5%

Sample Amount: 8.83 g-dry-wt
 Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 16:17
 Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 12:55
 Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,300	< 2,300 U
C10-C12 Aliphatics	2,300	< 2,300 U
C12-C16 Aliphatics	2,300	< 2,300 U
C16-C21 Aliphatics	2,300	19,000
C21-C34 Aliphatics	2,300	230,000
C8-C10 Aromatics	2,300	< 2,300 U
C10-C12 Aromatics	2,300	< 2,300 U
C12-C16 Aromatics	2,300	< 2,300 U
C16-C21 Aromatics	2,300	5,300
C21-C34 Aromatics	2,300	46,000

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	99.2%
Aromatic	o-Terphenyl	101%

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH

Extraction Method: SW3550C

Page 1 of 1

Sample ID: A2-F37-S-6

SAMPLE

Lab Sample ID: WR33E

LIMS ID: 13-11211

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/29/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Extracted: 05/24/13

Percent Moisture: 15.3%

Sample Amount: 9.02 g-dry-wt

Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 16:42

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 13:20

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,200	< 2,200 U
C10-C12 Aliphatics	2,200	< 2,200 U
C12-C16 Aliphatics	2,200	< 2,200 U
C16-C21 Aliphatics	2,200	4,800
C21-C34 Aliphatics	2,200	120,000
C8-C10 Aromatics	2,200	< 2,200 U
C10-C12 Aromatics	2,200	< 2,200 U
C12-C16 Aromatics	2,200	< 2,200 U
C16-C21 Aromatics	2,200	2,600
C21-C34 Aromatics	2,200	22,000


Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	104%
Aromatic	o-Terphenyl	101%

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH
Extraction Method: SW3550C
 Page 1 of 1

Sample ID: A2-F42-S-6
SAMPLE

Lab Sample ID: WR33F
 LIMS ID: 13-11212
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/29/13

QC Report No: WR33-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/23/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Percent Moisture: 31.1%

Sample Amount: 7.39 g-dry-wt
 Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 17:07
 Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 13:46
 Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,700	< 2,700 U
C10-C12 Aliphatics	2,700	< 2,700 U
C12-C16 Aliphatics	2,700	< 2,700 U
C16-C21 Aliphatics	2,700	4,100
C21-C34 Aliphatics	2,700	140,000
C8-C10 Aromatics	2,700	< 2,700 U
C10-C12 Aromatics	2,700	< 2,700 U
C12-C16 Aromatics	2,700	< 2,700 U
C16-C21 Aromatics	2,700	< 2,700 U
C21-C34 Aromatics	2,700	41,000

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	104%
Aromatic	o-Terphenyl	102%

ALEPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>COD</u>	<u>TOT OUT</u>
MB-052413	103% 0	
LCS-052413	103% 0	
A2-F32-S-6	99.2% 0	
A2-F37-S-6	104% 0	
A2-F42-S-6	104% 0	

	LCS/MB LIMITS	QC LIMITS
(COD) = 1-Chlorooctadecane	(27-128)	(39-131)

Prep Method: SW3550C
Log Number Range: 13-11210 to 13-11212

AREPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-052413	92.5%	0
LCS-052413	84.0%	0
A2-F32-S-6	101%	0
A2-F37-S-6	101%	0
A2-F42-S-6	102%	0

(OTER) = o-Terphenyl

LCS/MB LIMITS

QC LIMITS

(34-133)

(10-143)

Prep Method: SW3550C
Log Number Range: 13-11210 to 13-11212

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH

Page 1 of 1


Sample ID: LCS-052413

LAB CONTROL

Lab Sample ID: LCS-052413

LIMS ID: 13-11210

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 05/24/13

Sample Amount: 10.0 g-as-rec

Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 15:26

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 12:04

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
C8-C10 Aliphatics	5000	7500	66.7%
C10-C12 Aliphatics	4700	7500	62.7%
C12-C16 Aliphatics	6200	7500	82.7%
C16-C21 Aliphatics	6900	7500	92.0%
C10-C12 Aromatics	3900	7500	52.0%
C12-C16 Aromatics	5500	7500	73.3%
C16-C21 Aromatics	14000	15000	93.3%
C21-C34 Aromatics	11100	15000	74.0%

Results reported in µg/kg

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	103%
Aromatic	o-Terphenyl	84.0%

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH

Extraction Method: SW3550C

Page 1 of 1

Sample ID: MB-052413

METHOD BLANK

Lab Sample ID: MB-052413

LIMS ID: 13-11210

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/29/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 05/24/13

Percent Moisture: NA

Sample Amount: 10.0 g-as-rec

Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 15:01

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 11:39

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,000	< 2,000 U
C10-C12 Aliphatics	2,000	< 2,000 U
C12-C16 Aliphatics	2,000	< 2,000 U
C16-C21 Aliphatics	2,000	< 2,000 U
C21-C34 Aliphatics	2,000	< 2,000 U
C8-C10 Aromatics	2,000	< 2,000 U
C10-C12 Aromatics	2,000	< 2,000 U
C12-C16 Aromatics	2,000	< 2,000 U
C16-C21 Aromatics	2,000	< 2,000 U
C21-C34 Aromatics	2,000	< 2,000 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	103%
Aromatic	o-Terphenyl	92.5%

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: A2-F32-S-6

SAMPLE

Lab Sample ID: WR33D

LIMS ID: 13-11210

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 11:53

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 41.0 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1200	< 1,200 U
108-88-3	Toluene	1200	< 1,200 U
100-41-4	Ethylbenzene	1200	< 1,200 U
179601-23-1	m,p-Xylene	2400	< 2,400 U
95-47-6	o-Xylene	1200	< 1,200 U
1634-04-4	Methyl tert-Butyl Ether	1200	< 1,200 U
109-66-0	n-Pentane	1200	< 1,200 U
110-54-3	n-Hexane	1200	< 1,200 U
111-65-9	n-Octane	1200	< 1,200 U
124-18-5	n-Decane	1200	< 1,200 U
112-40-3	n-Dodecane	1200	< 1,200 U

Range	RL	Result
C8-C10 Aromatics	12,000	< 12,000 U
C10-C12 Aromatics	12,000	< 12,000 U
C12-C13 Aromatics	12,000	< 12,000 U
C5-C6 Aliphatics	12,000	< 12,000 U
C6-C8 Aliphatics	12,000	< 12,000 U
C8-C10 Aliphatics	12,000	< 12,000 U
C10-C12 Aliphatics	12,000	< 12,000 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	89.5%
FID: 2,5-Dibromotoluene	89.0%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: A2-F37-S-6

SAMPLE

Lab Sample ID: WR33E

LIMS ID: 13-11211

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 12:26

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 45.3 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1100	< 1,100 U
108-88-3	Toluene	1100	< 1,100 U
100-41-4	Ethylbenzene	1100	< 1,100 U
179601-23-1	m,p-Xylene	2200	< 2,200 U
95-47-6	o-Xylene	1100	< 1,100 U
1634-04-4	Methyl tert-Butyl Ether	1100	< 1,100 U
109-66-0	n-Pentane	1100	< 1,100 U
110-54-3	n-Hexane	1100	< 1,100 U
111-65-9	n-Octane	1100	< 1,100 U
124-18-5	n-Decane	1100	< 1,100 U
112-40-3	n-Dodecane	1100	< 1,100 U

Range	RL	Result
C8-C10 Aromatics	11,000	< 11,000 U
C10-C12 Aromatics	11,000	< 11,000 U
C12-C13 Aromatics	11,000	< 11,000 U
C5-C6 Aliphatics	11,000	< 11,000 U
C6-C8 Aliphatics	11,000	< 11,000 U
C8-C10 Aliphatics	11,000	< 11,000 U
C10-C12 Aliphatics	11,000	< 11,000 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	89.5%
FID: 2,5-Dibromotoluene	83.5%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: A2-F42-S-6

SAMPLE

Lab Sample ID: WR33F

LIMS ID: 13-11212

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 12:58

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 30.1 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1700	< 1,700 U
108-88-3	Toluene	1700	< 1,700 U
100-41-4	Ethylbenzene	1700	< 1,700 U
179601-23-1	m,p-Xylene	3300	< 3,300 U
95-47-6	o-Xylene	1700	< 1,700 U
1634-04-4	Methyl tert-Butyl Ether	1700	< 1,700 U
109-66-0	n-Pentane	1700	< 1,700 U
110-54-3	n-Hexane	1700	< 1,700 U
111-65-9	n-Octane	1700	< 1,700 U
124-18-5	n-Decane	1700	< 1,700 U
112-40-3	n-Dodecane	1700	< 1,700 U

Range	RL	Result
C8-C10 Aromatics	17,000	< 17,000 U
C10-C12 Aromatics	17,000	< 17,000 U
C12-C13 Aromatics	17,000	< 17,000 U
C5-C6 Aliphatics	17,000	< 17,000 U
C6-C8 Aliphatics	17,000	< 17,000 U
C8-C10 Aliphatics	17,000	< 17,000 U
C10-C12 Aliphatics	17,000	< 17,000 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	91.5%
FID: 2,5-Dibromotoluene	96.0%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR33-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>PDBT</u>	<u>FDBT</u>	<u>TOT</u>	<u>OUT</u>
MB-052513	82.0%	91.0%	0	
LCS-052513	82.0%	91.0%	0	
LCSD-052513	83.0%	92.0%	0	
A2-F32-S-6	89.5%	89.0%	0	
A2-F37-S-6	89.5%	83.5%	0	
A2-F42-S-6	91.5%	96.0%	0	

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(PDBT) = 2,5-Dibromotoluene	(60-140)	(60-140)
(FDBT) = 2,5-Dibromotoluene	(60-140)	(60-140)

Prep Method: METHOD
Log Number Range: 13-11210 to 13-11212

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: LCS-052513

LCS/LCSD

Lab Sample ID: LCS-052513

LIMS ID: 13-11210

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/25/13 09:44

Purge Volume: 10 mL

Date Analyzed LCSD: 05/25/13 10:16

Sample Amount: 111 mg-dry-wt

Instrument/Analyst: PID1/PKC

Analyte/Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1800	1800	100%	1840	1800	102%	2.2%
Toluene	1850	1800	103%	1810	1800	101%	2.2%
Ethylbenzene	1790	1800	99.4%	1830	1800	102%	2.2%
m,p-Xylene	3600	3600	100%	3630	3600	101%	0.8%
o-Xylene	1790	1800	99.4%	1790	1800	99.4%	0.0%
Methyl tert-Butyl Ether	1730	1800	96.1%	1750	1800	97.2%	1.1%
Naphthalene	1670	1800	92.8%	1830	1800	102%	9.1%
1,2,3-Trimethylbenzene	1940	1800	108%	1960	1800	109%	1.0%
1-Methylnaphthalene	1550	1800	86.1%	1440	1800	80.0%	7.4%
n-Pentane	1420	1800	78.9%	1880	1800	104%	27.9%
n-Hexane	1600	1800	88.9%	1870	1800	104%	15.6%
n-Octane	1550	1800	86.1%	1760	1800	97.8%	12.7%
n-Decane	1400	1800	77.8%	1740	1800	96.7%	21.7%
n-Dodecane	1620	1800	90.0%	2070	1800	115%	24.4%

Values reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

VPH Surrogate Recovery

	LCS	LCSD
PID: 2,5-Dibromotoluene	82.0%	83.0%
FID: 2,5-Dibromotoluene	91.0%	92.0%

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1


Sample ID: MB-052513

METHOD BLANK

Lab Sample ID: MB-052513

LIMS ID: 13-11210

Matrix: Soil

Data Release Authorized: 

Reported: 05/28/13

QC Report No: WR33-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/25/13 10:48

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 111 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	450	< 450 U
108-88-3	Toluene	450	< 450 U
100-41-4	Ethylbenzene	450	< 450 U
179601-23-1	m,p-Xylene	900	< 900 U
95-47-6	o-Xylene	450	< 450 U
1634-04-4	Methyl tert-Butyl Ether	450	< 450 U
109-66-0	n-Pentane	450	< 450 U
110-54-3	n-Hexane	450	< 450 U
111-65-9	n-Octane	450	< 450 U
124-18-5	n-Decane	450	< 450 U
112-40-3	n-Dodecane	450	< 450 U

Range	RL	Result
C8-C10 Aromatics	4,500	< 4,500 U
C10-C12 Aromatics	4,500	< 4,500 U
C12-C13 Aromatics	4,500	< 4,500 U
C5-C6 Aliphatics	4,500	< 4,500 U
C6-C8 Aliphatics	4,500	< 4,500 U
C8-C10 Aliphatics	4,500	< 4,500 U
C10-C12 Aliphatics	4,500	< 4,500 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	82.0%
FID: 2,5-Dibromotoluene	91.0%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 29, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WR25

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted fifteen soil samples on May 24, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for VOCs, SIM PAHs, NWTPH-Dx, NWTPH-Gx/BTEX, EPH, and VPH, as requested.

Matrix spike and matrix spike percent recoveries were not reported for Diesel for sample **SL-W2-S-4**. No corrective action is required for matrix QC.

The EPH closing continuing calibration percent recovery for the Aromatic C16-C21 range was outside the control limits high. All other calibration recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over the typed name.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WR25

Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: <i>WR25</i>	Turn-around Requested: <i>RUSH - 24 HR.</i>	Page: <i>1</i> of <i>2</i>
ARI Client Company: <i>MFA, INC.</i>	Phone:	Date: <i>05/24/13</i>
Client Contact: <i>TONY SILVA TSILVA@MANUFACTURER.COM</i>	No. of Coolers: <i>1 of 3</i>	Ice Present? <i>yes</i> Cooler Temps: <i>3</i>



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Client Project Name: <i>CASHMERE</i>					Analysis Requested						Notes/Comments	
Client Project #: <i>0779.02.01-03</i>		Samplers: <i>LINDSEY CRUSBY</i>			PX SUCRA GEL CLEAN UP	GX/BTEX	LEAD (OMY IF GX DETECTED)	VOCs (EDS, EDC, MIBE)	SO ONLY IF GX DETECTED			
Sample ID	Date	Time	Matrix	No. Containers								
<i>SL-W1-S-4</i>	<i>5/22</i>	<i>1215</i>	<i>S</i>	<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>SL-W2-S-4</i>	<i>5/22</i>	<i>1230</i>	<i>S</i>	<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>SL-W3-S-4</i>	<i>5/22</i>	<i>1245</i>	<i>S</i>	<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>SL-W4-S-4</i>	<i>5/22</i>	<i>1340</i>	<i>S</i>	<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>SL-W5-S-4</i>	<i>5/22</i>	<i>1350</i>	<i>S</i>	<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>SL-W6-S-4</i>	<i>5/22</i>	<i>1400</i>	<i>S</i>	<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
Comments/Special Instructions					Relinquished by: (Signature) <i>Lindsay Crusby</i>	Received by: (Signature) <i>Joshua Rains</i>		Relinquished by: (Signature)		Received by: (Signature)		
					Printed Name: <i>LINDSEY CRUSBY</i>	Printed Name: <i>Joshua Rains</i>		Printed Name:		Printed Name:		
					Company: <i>MFA</i>	Company: <i>Analytical Resources Inc</i>		Company:		Company:		
					Date & Time: <i>5/24 0700</i>	Date & Time: <i>05/24/13 6:51</i>		Date & Time:		Date & Time:		

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

11225-000002

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: RUSH - 24 Hr.	Page: 2 of 2
ARI Client Company: MFA, INC.	Phone:	Date: 05/24/13
Client Contact: TONY SILVA TSILVA@MAULFOSTER.COM	No. of Coolers: 1 of 3	Ice Present? yes Cooler Temps: 3



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Client Project Name: CASHMERE					Analysis Requested							Notes/Comments
Client Project #: 0779-02-01-03		Samplers: LINDSEY CROSBY			Dx SILICA Gel CLEANUP	Gx/BTEX	LEAD (ONLY IF Gx DETECTED)	VOCs (EAS) EDC (MTBE) ONLY IF Gx DETECTED	MPH	EPH		
Sample ID	Date	Time	Matrix	No. Containers								
A2-W19-S-4	5/22	1530	S	5	X	X	X	X				
A2-W20-S-4	5/22	1535		5	X	X	X	X				
A2-W21-S-4	5/22	1740		5	X	X	X	X				
A2-W22-S-4	5/22	1745		8	X	X	X	X	X	X		
A2-W23-S-4	5/23	1000		5	X	X	X	X				
A2-W24-S-4	5/23	1010		5	X	X	X	X				
A2-W25-S-4	5/23	1020		5	X	X	X	X				
A2-W26-S-4	5/23	1100		5	X	X	X	X				
A2-W27-S-4	5/23	1130		5	X	X	X	X				
Comments/Special Instructions RUN VOCs ONLY IF Gx DETECTED					Relinquished by: (Signature) <i>[Signature]</i> Printed Name: LINDSEY CROSBY Company: MFA Date & Time: 5/24 0700	Received by: (Signature) <i>[Signature]</i> Printed Name: Joshua Pains Company: Analytical Resources Inc Date & Time: 05/24/13 06:51	Relinquished by: (Signature)	Received by: (Signature)				

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MEA

Project Name: Cashmere

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WR25

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.0 4.9 5.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877982

Cooler Accepted by: JR (AV) Date: 5/24/13 Time: 6:51

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 5/24/13 Time: 8:02

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WR25
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SL-W1-S-4	WR25A	13-11183	Soil	05/22/13 12:15	05/24/13 06:51
2. SL-W2-S-4	WR25B	13-11184	Soil	05/22/13 12:30	05/24/13 06:51
3. SL-W3-S-4	WR25C	13-11185	Soil	05/22/13 12:45	05/24/13 06:51
4. SL-W4-S-4	WR25D	13-11186	Soil	05/22/13 13:40	05/24/13 06:51
5. SL-W5-S-4	WR25E	13-11187	Soil	05/22/13 13:50	05/24/13 06:51
6. SL-W6-S-4	WR25F	13-11188	Soil	05/22/13 14:00	05/24/13 06:51
7. A2-W19-S-4	WR25G	13-11189	Soil	05/22/13 15:30	05/24/13 06:51
8. A2-W20-S-4	WR25H	13-11190	Soil	05/22/13 15:35	05/24/13 06:51
9. A2-W21-S-4	WR25I	13-11191	Soil	05/22/13 17:40	05/24/13 06:51
10. A2-W23-S-4	WR25J	13-11192	Soil	05/23/13 10:00	05/24/13 06:51
11. A2-W24-S-4	WR25K	13-11193	Soil	05/23/13 10:10	05/24/13 06:51
12. A2-W25-S-4	WR25L	13-11194	Soil	05/23/13 10:20	05/24/13 06:51
13. A2-W26-S-4	WR25M	13-11195	Soil	05/23/13 11:00	05/24/13 06:51
14. A2-W27-S-4	WR25N	13-11196	Soil	05/23/13 11:30	05/24/13 06:51
15. A2-W22-S-4	WR25O	13-11197	Soil	05/22/13 17:45	05/24/13 06:51
16. A2-W22-S-4	WR25P	13-11198	Soil	05/22/13 17:45	05/24/13 06:51

Subject: FW: WR25 and WR26 Sample Receipts and COCs
From: "Tony Silva" <tsilva@maulfoster.com>
Date: 5/24/2013 11:09 AM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Justin Clary" <jclary@maulfoster.com>, "Lindsey Crosby" <lcrosby@maulfoster.com>, "Erik Naylor" <enaylor@maulfoster.com>

Cheronne,

As discussed:

EPH/VPH:

- There are 4 soil samples submitted with analysis that include VPH/EPH (three are floor, one is a wall).
- We want to do a 24-hour rush on all four of these soil samples (floor and wall samples).
- We want the rush to include all of the analysis requested for these 4 samples (not just the EPH/VPH).
- For all 4 samples in addition to what is already on the chain of custodies, please also add the analysis of:
 - Gx
 - VOCs (EDB, EDC, and MTBE)
 - PAHs via 8270 SIM.

Stockpiles:

- Please run these soil 3 samples on work order WR26 for lead, no need to wait to see if Gx is detected.

TONY SILVA RG, LG | MAUL FOSTER & ALONGI, INC.
d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 |
www.maulfoster.com
2001 NW 19th Avenue, Suite 200, Portland, OR 97209

-----Original Message-----

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Friday, May 24, 2013 9:51 AM
To: Tony Silva
Cc: Lindsey Crosby; Erik Naylor
Subject: WR25 and WR26 Sample Receipts and COCs

Hi Tony,

Please see attached.

Thanks,

-Cheronne

--

Cheronne Oreiro

Project Manager

Analytical Resources, Inc.

4611 S. 134th Place, Suite 100

Tukwila, WA 98168-3240

cheronneo@arilabs.com

(206)-695-6214

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If you have received this correspondence in error, please notify sender immediately. Thank you.

Attachments:

WR25_COCs.pdf	169 KB
WR25_receipt.pdf	18.7 KB
WR26_COC.pdf	103 KB
WR26_receipt.pdf	14.4 KB



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-W22-S-4

Page 1 of 1

SAMPLE

Lab Sample ID: WR25P


QC Report No: WR25-Maul Foster & Alongi, Inc

LIMS ID: 13-11198

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: 

Date Sampled: 05/22/13

Reported: 05/28/13

Date Received: 05/24/13

Instrument/Analyst: NT5/PAB

Sample Amount: 3.36 g-dry-wt

Date Analyzed: 05/24/13 17:11

Purge Volume: 5.0 mL

Moisture: 23.7%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.5	< 1.5	U
106-93-4	1,2-Dibromoethane	1.5	< 1.5	U
1634-04-4	Methyl tert-Butyl Ether	1.5	< 1.5	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	99.3%
Bromofluorobenzene	99.7%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-052413A	Method Blank	Low	103%	101%	100%	NA	0
LCS-052413A	Lab Control	Low	99.5%	100%	101%	NA	0
LCSD-052413A	Lab Control Dup	Low	100%	101%	101%	NA	0
WR25P	A2-W22-S-4	Low	107%	99.3%	99.7%	NA	0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-11198 to 13-11198

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-052413A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413A


QC Report No: WR25-Maul Foster & Alongi, Inc

LIMS ID: 13-11198

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: 

Date Sampled: NA

Reported: 05/28/13

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCS: NT5/PAB

LCS: 5.00 g-dry-wt

Date Analyzed LCS: 05/24/13 12:58

Purge Volume LCS: 5.0 mL

LCS: 05/24/13 13:22

LCS: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	48.9	50.0	97.8%	49.8	50.0	99.6%	1.8%
1,2-Dibromoethane	50.5	50.0	101%	50.7	50.0	101%	0.4%
Methyl tert-Butyl Ether	52.8	50.0	106%	54.2	50.0	108%	2.6%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	99.5%	100%
d8-Toluene	100%	101%
Bromofluorobenzene	101%	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-052413A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-052413A

QC Report No: WR25-Maul Foster & Alongi, Inc

LIMS ID: 13-11198

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AS*

Date Sampled: NA

Reported: 05/28/13

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 05/24/13 13:46

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
106-93-4	1,2-Dibromoethane	1.0	< 1.0	U
1634-04-4	Methyl tert-Butyl Ether	1.0	< 1.0	U


Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	101%
Bromofluorobenzene	100%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: A2-W22-S-4
SAMPLE

Lab Sample ID: WR25P
 LIMS ID: 13-11198
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 15:19
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 2.29 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: 23.7%

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	22	13 J
91-57-6	2-Methylnaphthalene	22	13 J
90-12-0	1-Methylnaphthalene	22	< 22 U
208-96-8	Acenaphthylene	22	< 22 U
83-32-9	Acenaphthene	22	< 22 U
86-73-7	Fluorene	22	< 22 U
85-01-8	Phenanthrene	22	< 22 U
120-12-7	Anthracene	22	< 22 U
206-44-0	Fluoranthene	22	< 22 U
129-00-0	Pyrene	22	< 22 U
56-55-3	Benzo(a)anthracene	22	< 22 U
218-01-9	Chrysene	22	11 J
205-99-2	Benzo(b)fluoranthene	22	< 22 U
207-08-9	Benzo(k)fluoranthene	22	< 22 U
50-32-8	Benzo(a)pyrene	22	< 22 U
193-39-5	Indeno(1,2,3-cd)pyrene	22	< 22 U
53-70-3	Dibenz(a,h)anthracene	22	< 22 U
191-24-2	Benzo(g,h,i)perylene	22	< 22 U
132-64-9	Dibenzofuran	22	< 22 U
TOTBFA	Total Benzofluoranthenes	22	< 22 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	80.7%
d10-2-Methylnaphthalene	62.3%
d14-Dibenzo(a,h)anthracen	68.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>FLN</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-052413	88.7%	68.7%	90.3%	0
LCS-052413	84.3%	62.3%	83.3%	0
A2-W22-S-4	80.7%	62.3%	68.7%	0

LCS/MB LIMITS QC LIMITS

(FLN) = d10-Fluoranthene	(30-160)	(30-160)
(MNP) = d10-2-Methylnaphthalene	(35-100)	(34-100)
(DBA) = d14-Dibenzo(a,h)anthracene	(37-120)	(10-117)

Prep Method: SW3546
Log Number Range: 13-11198 to 13-11198

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413

LIMS ID: 13-11198

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 05/24/13

Date Analyzed LCS: 05/25/13 14:52

Instrument/Analyst LCS: NT4/JZ

Sample Amount LCS: 10.00 g-dry-wt

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	88.2	150	58.8%
2-Methylnaphthalene	96.2	150	64.1%
1-Methylnaphthalene	86.9	150	57.9%
Acenaphthylene	102	150	68.0%
Acenaphthene	96.4	150	64.3%
Fluorene	102	150	68.0%
Phenanthrene	101	150	67.3%
Anthracene	107	150	71.3%
Fluoranthene	107	150	71.3%
Pyrene	127	150	84.7%
Benzo(a)anthracene	136	150	90.7%
Chrysene	126	150	84.0%
Benzo(b)fluoranthene	121	150	80.7%
Benzo(k)fluoranthene	119	150	79.3%
Benzo(a)pyrene	135	150	90.0%
Indeno(1,2,3-cd)pyrene	115	150	76.7%
Dibenz(a,h)anthracene	116	150	77.3%
Benzo(g,h,i)perylene	111	150	74.0%
Dibenzofuran	93.6	150	62.4%
Total Benzofluoranthenes	330	450	73.3%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	84.3%
d10-2-Methylnaphthalene	62.3%
d14-Dibenzo(a,h)anthracen	83.3%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: MB-052413
METHOD BLANK

Lab Sample ID: MB-052413
 LIMS ID: 13-11198
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/24/13
 Date Analyzed: 05/25/13 14:24
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	5.0	< 5.0 U
90-12-0	1-Methylnaphthalene	5.0	< 5.0 U
208-96-8	Acenaphthylene	5.0	< 5.0 U
83-32-9	Acenaphthene	5.0	< 5.0 U
86-73-7	Fluorene	5.0	< 5.0 U
85-01-8	Phenanthrene	5.0	< 5.0 U
120-12-7	Anthracene	5.0	< 5.0 U
206-44-0	Fluoranthene	5.0	< 5.0 U
129-00-0	Pyrene	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	5.0	< 5.0 U
218-01-9	Chrysene	5.0	< 5.0 U
205-99-2	Benzo(b)fluoranthene	5.0	< 5.0 U
207-08-9	Benzo(k)fluoranthene	5.0	< 5.0 U
50-32-8	Benzo(a)pyrene	5.0	< 5.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	< 5.0 U
53-70-3	Dibenz(a,h)anthracene	5.0	< 5.0 U
191-24-2	Benzo(g,h,i)perylene	5.0	< 5.0 U
132-64-9	Dibenzofuran	5.0	< 5.0 U
TOTBEA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/kg (ppb)


SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	88.7%
d10-2-Methylnaphthalene	68.7%
d14-Dibenzo(a,h)anthracen	90.3%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: 
Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WR25A 13-11183	SL-W1-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	9.6 19	70 190 61.6%
MB-052413 13-11184	Method Blank HC ID: ---	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 69.2%
WR25B 13-11184	SL-W2-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	2200 ES 6500 ES NR
WR25B DL 13-11184	SL-W2-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	560 1100	2200 6500 D
WR25C 13-11185	SL-W3-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	10 20	23 58 62.1%
WR25D 13-11186	SL-W4-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.4 11	4900 ES 12000 ES NR
WR25D DL 13-11186	SL-W4-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	540 1100	5300 15000 D
WR25E 13-11187	SL-W5-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	10 31 65.4%
WR25F 13-11188	SL-W6-S-4 HC ID: ---	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	< 5.8 U < 12 U 78.6%
WR25G 13-11189	A2-W19-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	70 170 57.0%
WR25H 13-11190	A2-W20-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.7 13	7.3 28 76.1%
WR25I 13-11191	A2-W21-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.5 11	33 150 66.8%
WR25J 13-11192	A2-W23-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.5 13	15 100 69.1%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 2

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WR25K 13-11193	A2-W24-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.6 13	33 150 64.9%
WR25L 13-11194	A2-W25-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	1500 ES 6800 ES 84.0%
WR25L DL 13-11194	A2-W25-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 25	Diesel Range Motor Oil Range o-Terphenyl	150 290	1900 14000 D
WR25M 13-11195	A2-W26-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.2 12	4200 ES 13000 ES NR
WR25M DL 13-11195	A2-W26-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 200	Diesel Range Motor Oil Range o-Terphenyl	1200 2500	5100 29000 D
WR25N 13-11196	A2-W27-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.6 15	1800 ES 9100 ES 79.2%
WR25N DL 13-11196	A2-W27-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	760 1500	1900 20000 D
WR25O 13-11197	A2-W22-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/25/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.0 14	360 E 1800 E 59.8%
WR25O DL 13-11197	A2-W22-S-4 HC ID: DRO/MOTOR OIL	05/24/13	05/28/13 FID3B	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	35 70	420 2200 65.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b012.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/25/2013
Macro: FID:3B052113

ARI ID: WR25MBS1
Client ID: WR25MBS1
Injection: 25-MAY-2013 11:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		148666	11
C8	0.825	-0.002	2880	4906	WATPHD (C12-C24)		159458	15.40
C10	2.245	0.003	1379	1135	WATPHM (C24-C38)		379649	38.45
C12	3.043	-0.002	670	329	AK102 (C10-C25)		196393	15.89
C14	3.628	0.006	1154	556	AK103 (C25-C36)		267296	37.60
C16	4.118	-0.001	1030	418				
C18	4.570	0.002	1308	1334				
C20	4.985	-0.004	991	447				
C22	5.378	-0.004	708	352	MSPiRIT (Tol-C12)		148666	10.82
C24	5.757	0.005	642	100				
C25	5.929	0.003	695	308				
C26	6.099	0.000	847	385				
C28	6.411	-0.002	1694	530				
C32	6.956	0.002	6236	6746				
C34	7.197	0.009	5497	7592				
Filter Peak	----							
C36	7.400	-0.007	7919	9190				
o-terph	4.674	-0.002	722844	419009	JET-A (C10-C18)		119734	11.06
Triacon Surr	6.703	-0.002	835702	503420				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	419009	31.2	69.2
Triacontane	503420	38.6	85.7

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b012.d

Date: 25-MAY-2013 11:29

Client ID: MR25HBS1

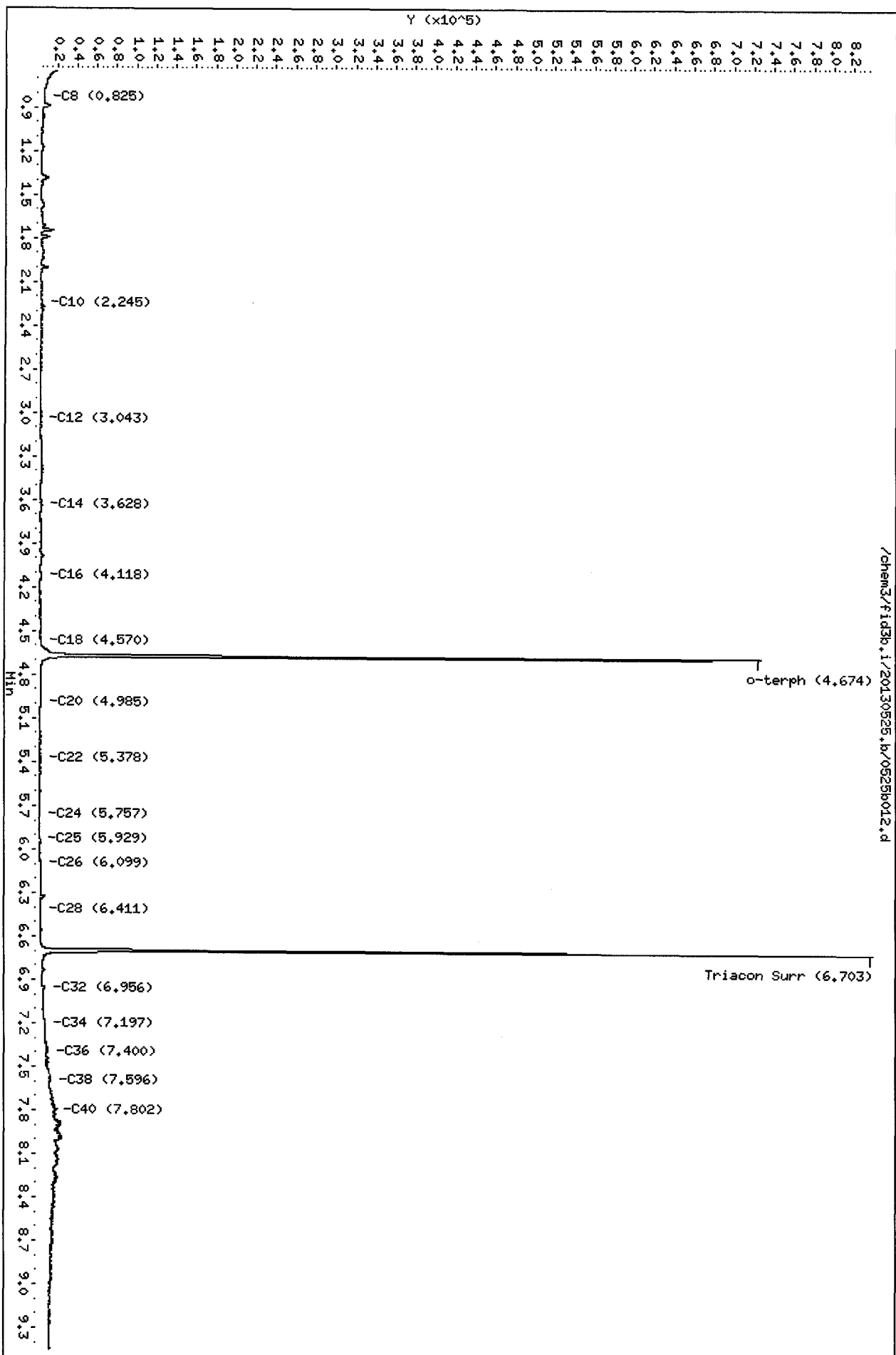
Sample Info: MR25HBS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Handwritten: 5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b014.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25A
Client ID: SL-W1-S-4
Injection: 25-MAY-2013 12:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		205647	15
C8	0.832	0.005	3953	11261	WATPHD (C12-C24)		3801397	367.02 <i>DRU</i>
C10	2.246	0.004	2658	2207	WATPHM (C24-C38)		9721105	984.63 <i>MO</i>
C12	3.046	0.000	3974	4509	AK102 (C10-C25)		4124476	333.78 M
C14	3.625	0.003	9785	9906	AK103 (C25-C36)		8737567	1229.17 M
C16	4.120	0.001	12373	12092				
C18	4.566	-0.002	29177	28971				
C20	4.988	-0.001	38160	28588				
C22	5.379	-0.003	48295	16660	MSPIRIT (Tol-C12)		205647	14.97
C24	5.752	0.000	60394	21325				
C25	5.923	-0.003	100388	97286				
C26	6.096	-0.003	71157	53909				
C28	6.412	-0.001	121416	88196				
C32	6.960	0.006	204103	102887				
C34	7.186	-0.002	101072	55841				
Filter Peak	----							
C36	7.409	0.002	80992	35610				
o-terph	4.677	0.001	618261	372673	JET-A (C10-C18)		710140	65.61
Triacon Surr	6.707	0.002	709591	458933				

Range Times: NW Diesel (3.096 - 5.802) NW Gas (0.603 - 3.096) NW M.Oil (5.802 - 7.657)
AK102 (2.192 - 5.876) AK103 (5.876 - 7.457) Jet A (2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	372673	27.7	61.6
Triacontane	458933	35.2	78.2

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b,1/20130525,b/0525b014.d

Date: 25-MAY-2013 12:08

Client ID: SL-M1-S-4

Sample Info: MR25A

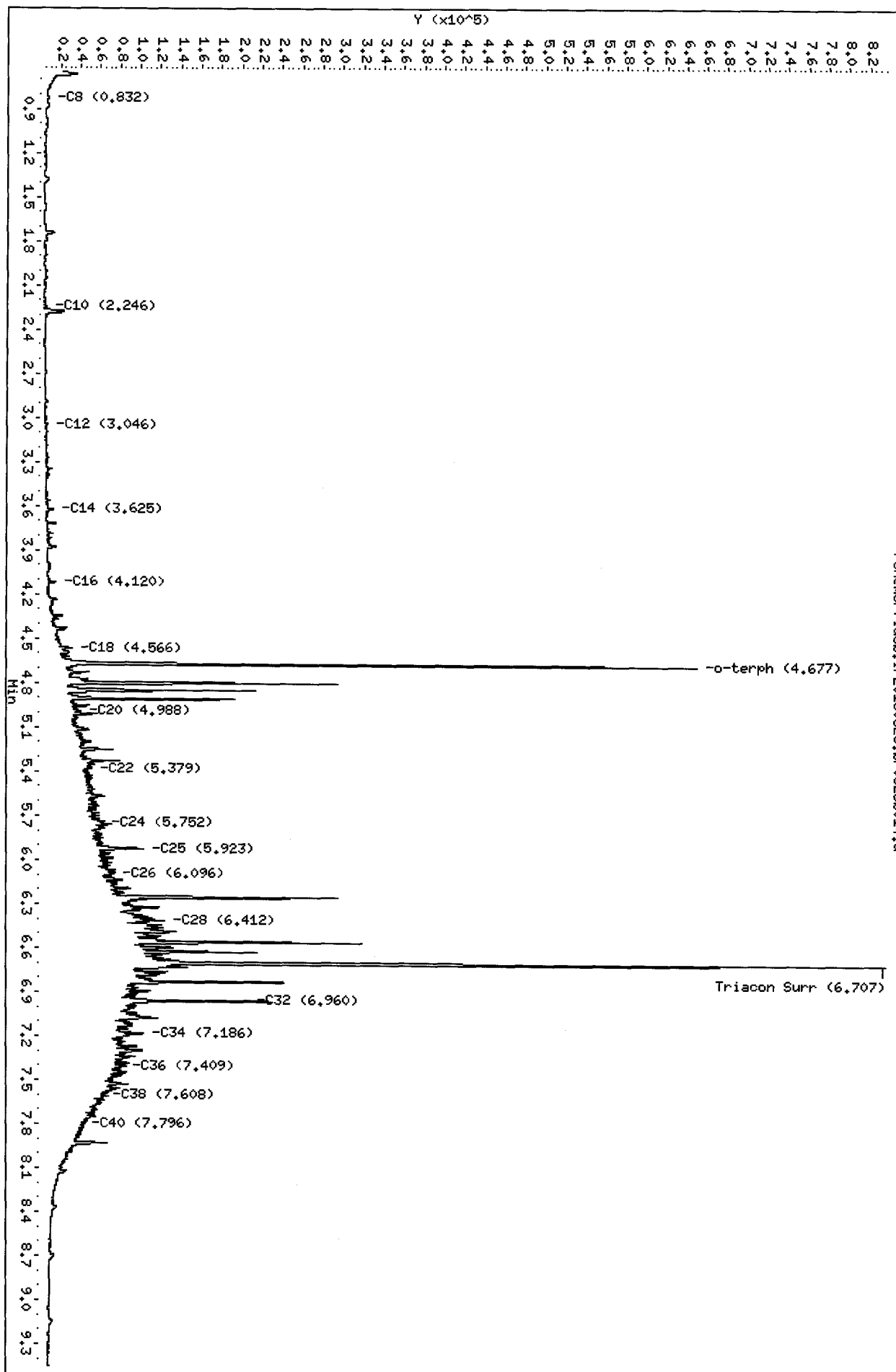
Column phase: RTX-1

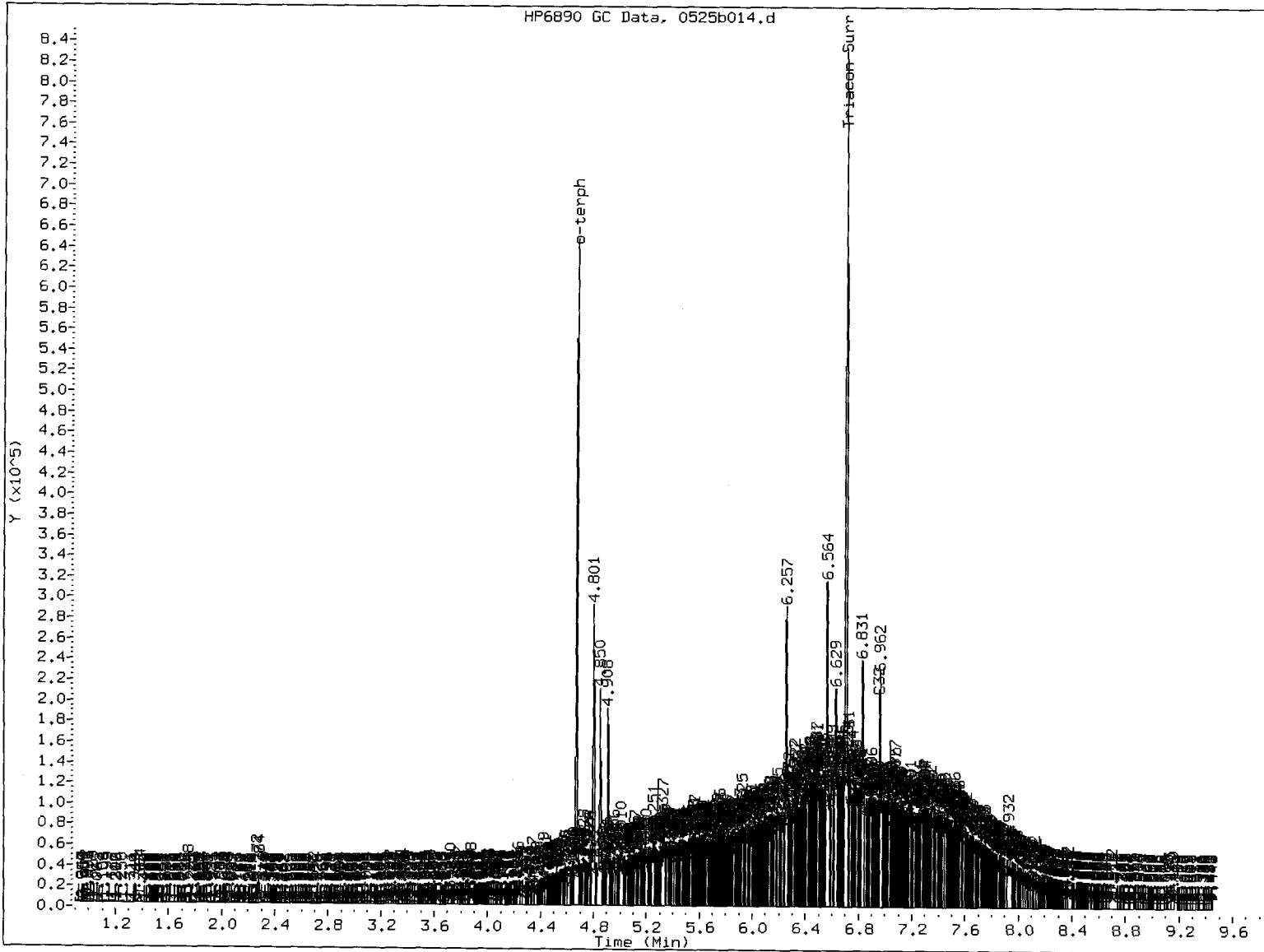
Instrument: fid3b,1

Operator: JM

Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: PL

Date: 5/28/83

Analytical Resources Inc.
TPH Quantitation Report

PI
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b015.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25B
Client ID: SL-W2-S-4
Injection: 25-MAY-2013 12:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		1393279	103
C8	0.809	-0.017	3488	4314	WATPHD (C12-C24)		201065402	19412.67 <i>DR</i>
C10	2.246	0.004	7169	7981	WATPHM (C24-C38)		567291112	57459.53 <i>NO ES</i>
C12	3.046	0.001	42648	26630	AK102 (C10-C25)		223974979	18125.75
C14	3.624	0.001	91362	12724	AK103 (C25-C36)		540339228	76013.26
C16	4.120	0.001	250883	153645				
C18	4.568	-0.001	718063	334411				
C20	4.987	-0.002	1634470	482479				
C22	5.373	-0.008	3050065	1922490	MSPIRIT (Tol-C12)		1393279	101.41
C24	5.749	-0.003	5165412	2840431				
C25	5.925	-0.001	5778522	3752364				
C26	6.101	0.003	6821934	4450864				
C28	6.411	-0.002	8024447	1715554				
C32	6.955	0.001	6025309	4265246				
C34	7.184	-0.004	3212587	1358954				
Filter Peak	----							
C36	7.405	-0.002	1136092	500701				
o-terph	----				JET-A (C10-C18)		22894276	2115.11
Triacon Surr	----							

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b015.d

Date: 25-MAY-2013 12:28

Client ID: SL-W2-S-4

Sample Info: MR25B

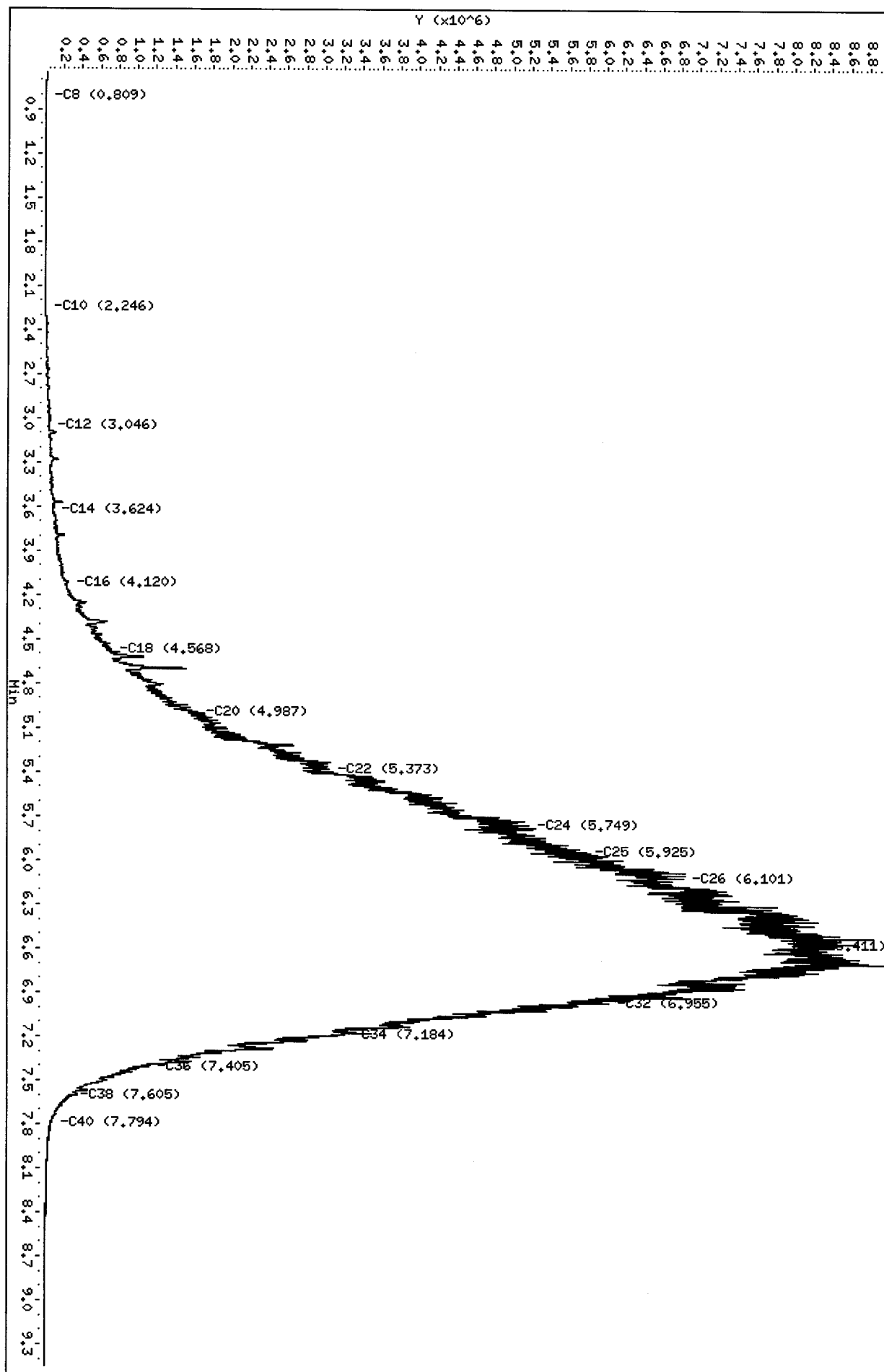
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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Analytical Resources Inc.
TPH Quantitation Report

PC
5/28/13
DL

Data file: /chem3/fid3b.i/20130525.b/0525b040.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25B
Client ID: SL-W2-S-4
Injection: 25-MAY-2013 20:31
Dilution Factor: 100

FID:3B RESULTS

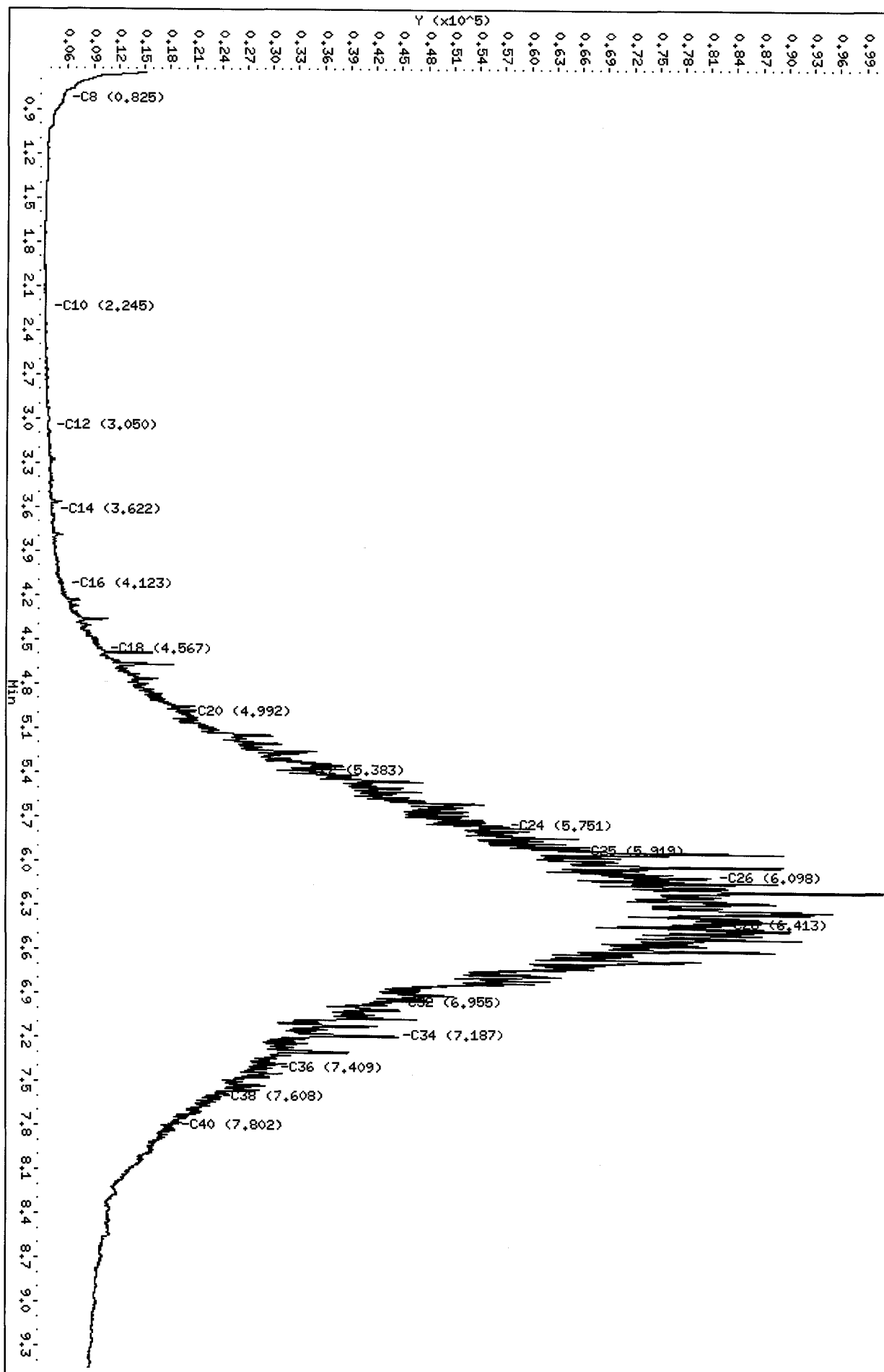
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		38973	3
C8	0.825	-0.001	2164	1808	WATPHD (C12-C24)		2074898	200.33
C10	2.245	0.003	208	201	WATPHM (C24-C38)		5742193	581.61
C12	3.050	0.004	477	112	AK102 (C10-C25)		2331971	188.72
C14	3.622	0.000	992	288	AK103 (C25-C36)		5250316	738.60
C16	4.123	0.004	2324	2006				
C18	4.567	-0.002	6973	1860				
C20	4.992	0.003	16156	4441				
C22	5.383	0.001	29333	5158	MSPIRIT (Tol-C12)		38973	2.84
C24	5.751	-0.001	53525	12318				
C25	5.919	-0.007	61867	14645				
C26	6.098	0.000	77770	36075				
C28	6.413	0.000	78538	38633				
C32	6.955	0.001	40612	27498				
C34	7.187	-0.001	40946	48627				
Filter Peak	----							
C36	7.409	0.002	26860	8729				
o-terph	----				JET-A (C10-C18)		216925	20.04
Triacon Surr	----							

mixed oils

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



Analytical Resources Inc.
TPH Quantitation Report

VC
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b020.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25C
Client ID: SL-W3-S-4
Injection: 25-MAY-2013 14:06
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG (Tol-C12)		153442	11
C8	0.835	0.008	4309	9072	WATPHD (C12-C24)		1217226	117.52 <i>DR</i>
C10	2.247	0.006	2262	2008	WATPHM (C24-C38)		2855587	289.24 <i>MC</i>
C12	3.046	0.001	2369	2674	AK102 (C10-C25)		1366000	110.55 M
C14	3.622	0.000	4582	5031	AK103 (C25-C36)		2615481	367.94 M
C16	4.117	-0.002	4934	4755				
C18	4.567	-0.002	13621	13805				
C20	4.986	-0.003	12771	11370				
C22	5.377	-0.004	16704	11100	MSPIRIT (Tol-C12)		153442	11.17
C24	5.754	0.002	36708	40031				
C25	5.922	-0.004	63501	50343				
C26	6.092	-0.007	28809	19440				
C28	6.412	-0.001	40246	51690				
C32	6.955	0.001	33736	42377				
C34	7.186	-0.002	20016	13999				
Filter Peak	-----							
C36	7.408	0.001	15440	3632				
o-terph	4.676	0.000	704958	376085	JET-A (C10-C18)		366969	33.90
Triacon Surr	6.704	0.000	666748	451121				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	376085	28.0	62.1
Triacontane	451121	34.6	76.8

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b020.d

Date: 25-MAY-2013 14:06

Client ID: SL-M3-S-4

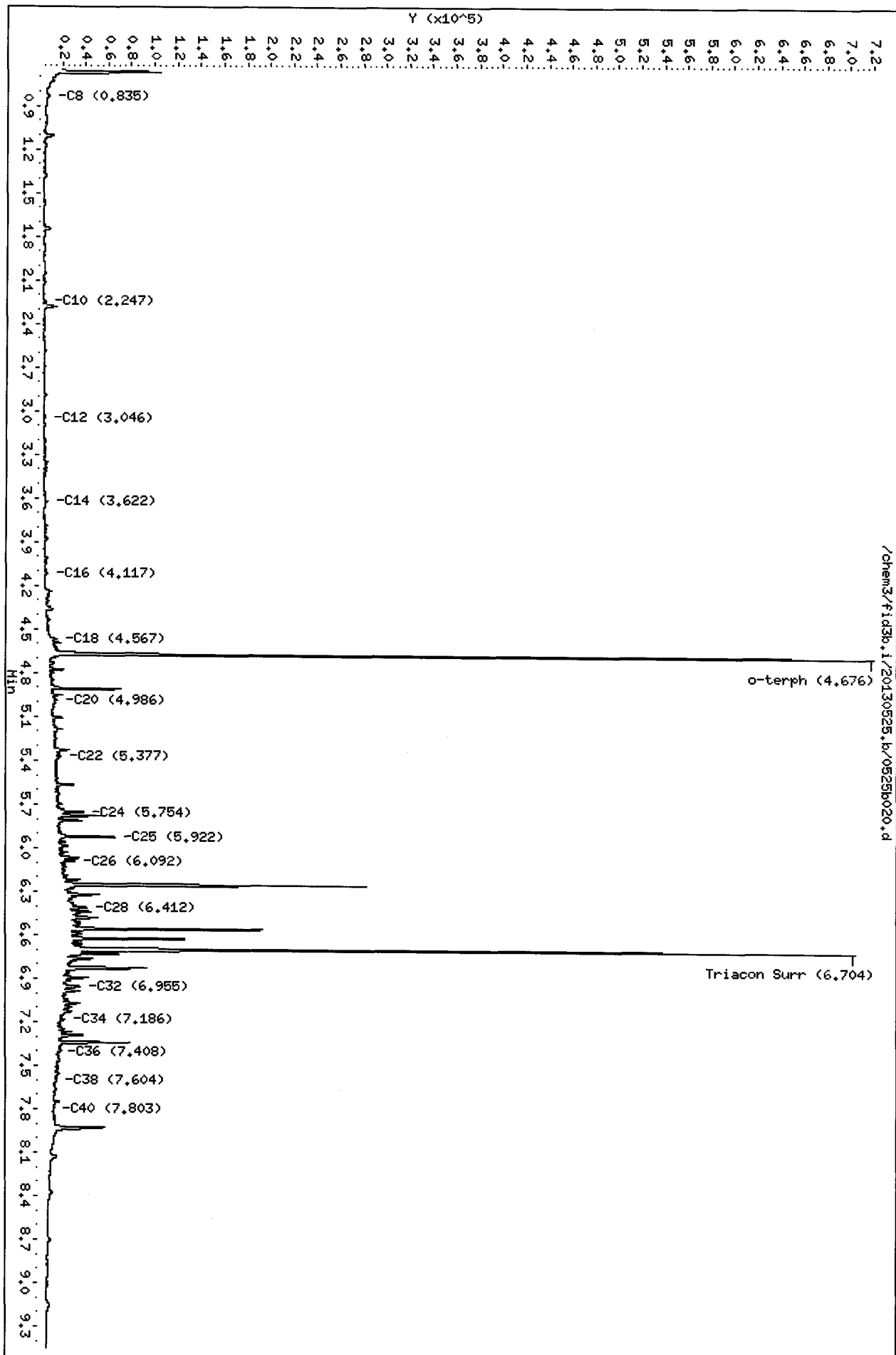
Sample Info: MR25C

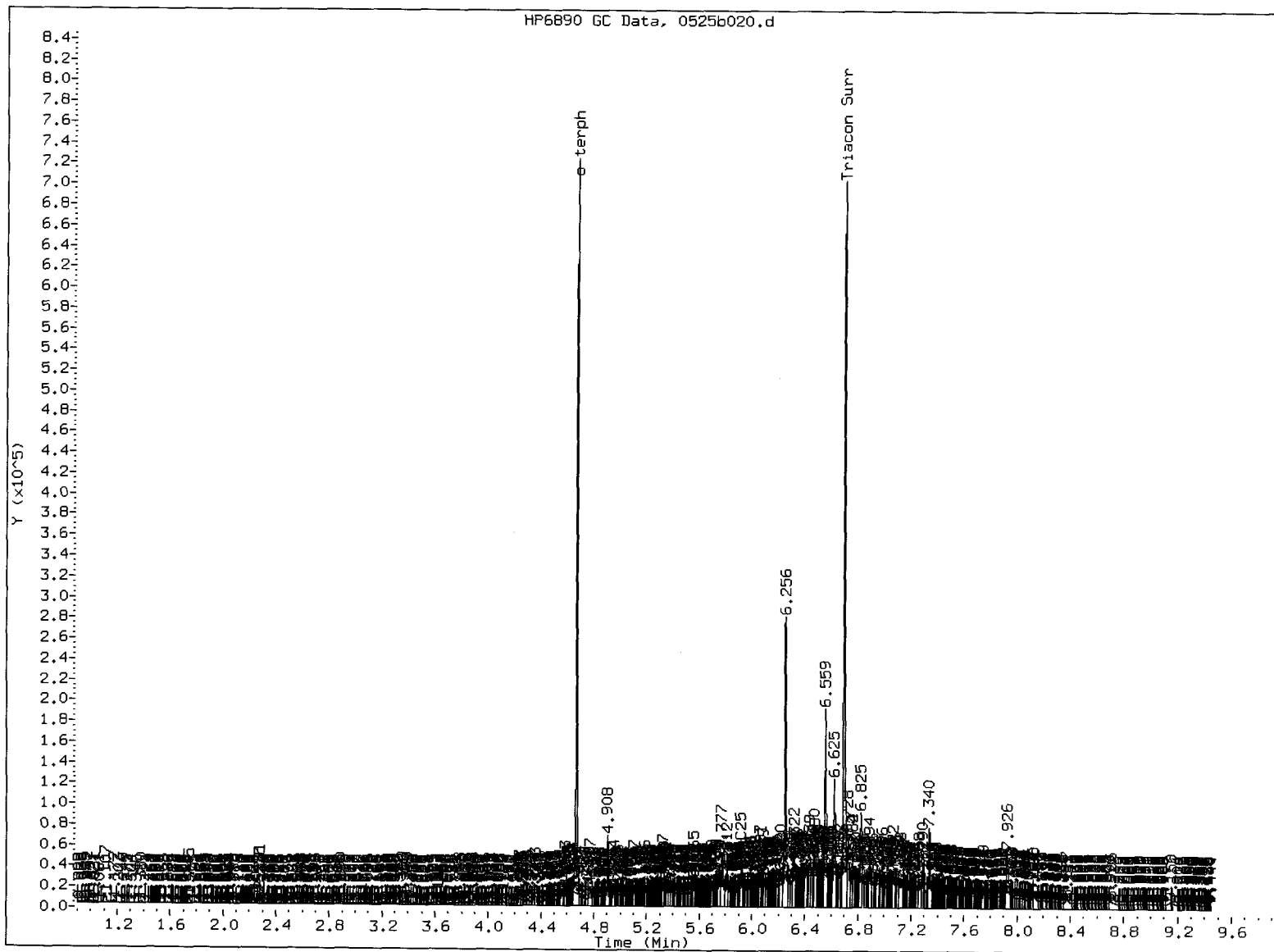
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: PL

Date: 5/28/13

PL
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b021.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25D
Client ID: SL-W4-S-4
Injection: 25-MAY-2013 14:25
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		5090175	377
C8	0.838	0.012	1759	800	WATPHD (C12-C24)		466018470	44993.64
C10	2.243	0.002	25649	36834	WATPHM (C24-C38)		1088356336	110236.95
C12	3.044	-0.002	151713	35222	AK102 (C10-C25)		523215164	42342.53
C14	3.625	0.003	317347	115990	AK103 (C25-C36)		1033116565	145335.67
C16	4.118	0.000	622999	124056				
C18	4.566	-0.002	1825446	1133733				
C20	4.990	0.001	3618728	1274647				
C22	5.381	0.000	6858568	1086703	MSPIRIT (Tol-C12)		5090175	370.50
C24	5.750	-0.001	11180580	4616232				
C25	5.926	0.000	13384164	4469707				
C26	6.100	0.002	15540358	3990431				
C28	6.410	-0.003	19424421	5946018				
C32	6.951	-0.003	5741204	3638947				
C34	7.190	0.003	768045	163357				
Filter Peak	----							
C36	7.405	-0.001	269960	93524				
o-terph	----				JET-A (C10-C18)		61616423	5692.48
Triacon Surr	----							

ES

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b021.d

Date: 25-MAY-2013 14:25

Client ID: SL-W4-S-4

Sample Info: MR25D

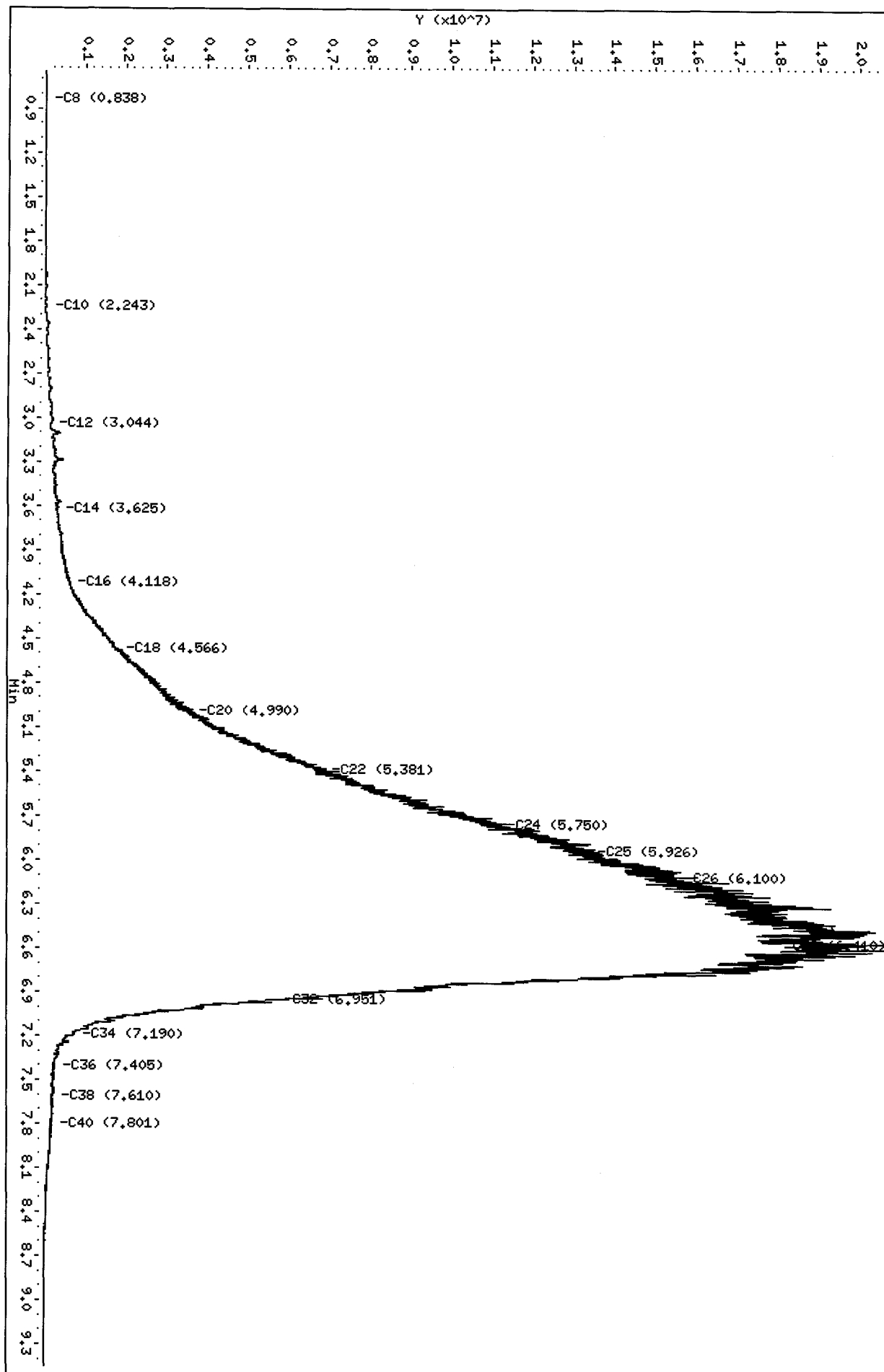
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b021.d



Analytical Resources Inc.
TPH Quantitation Report

PL
5/28/13
DL

Data file: /chem3/fid3b.i/20130525.b/0525b041.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25D
Client ID: SL-W4-S-4
Injection: 25-MAY-2013 20:51
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		79268	6
C8	0.821	-0.006	2219	1495	WATPHD (C12-C24)		5012127	483.92
C10	2.245	0.003	452	451	WATPHM (C24-C38)		13208400	1337.85
C12	3.041	-0.005	1706	1743	AK102 (C10-C25)		5668063	458.70
C14	3.628	0.006	3249	1842	AK103 (C25-C36)		11958173	1682.24
C16	4.120	0.001	7012	2552				
C18	4.569	0.001	21472	13022				
C20	4.992	0.003	40605	8893				
C22	5.375	-0.006	77437	52116	MSPIRIT (Tol-C12)		79268	5.77
C24	5.753	0.001	118137	59946				
C25	5.931	0.005	178858	161786				
C26	6.099	0.001	164656	44874				
C28	6.412	-0.001	190423	87904				
C32	6.955	0.001	91430	16132				
C34	7.183	-0.005	97998	58760				
Filter Peak	----							
C36	7.405	-0.002	64908	24958				
o-terph	----				JET-A (C10-C18)		704374	65.07
Triacon Surr	----							

min spirit
etc

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b041.d

Date: 25-MAY-2013 20:51

Client ID: SL-M4-S-4

Sample Info: MR25D.100

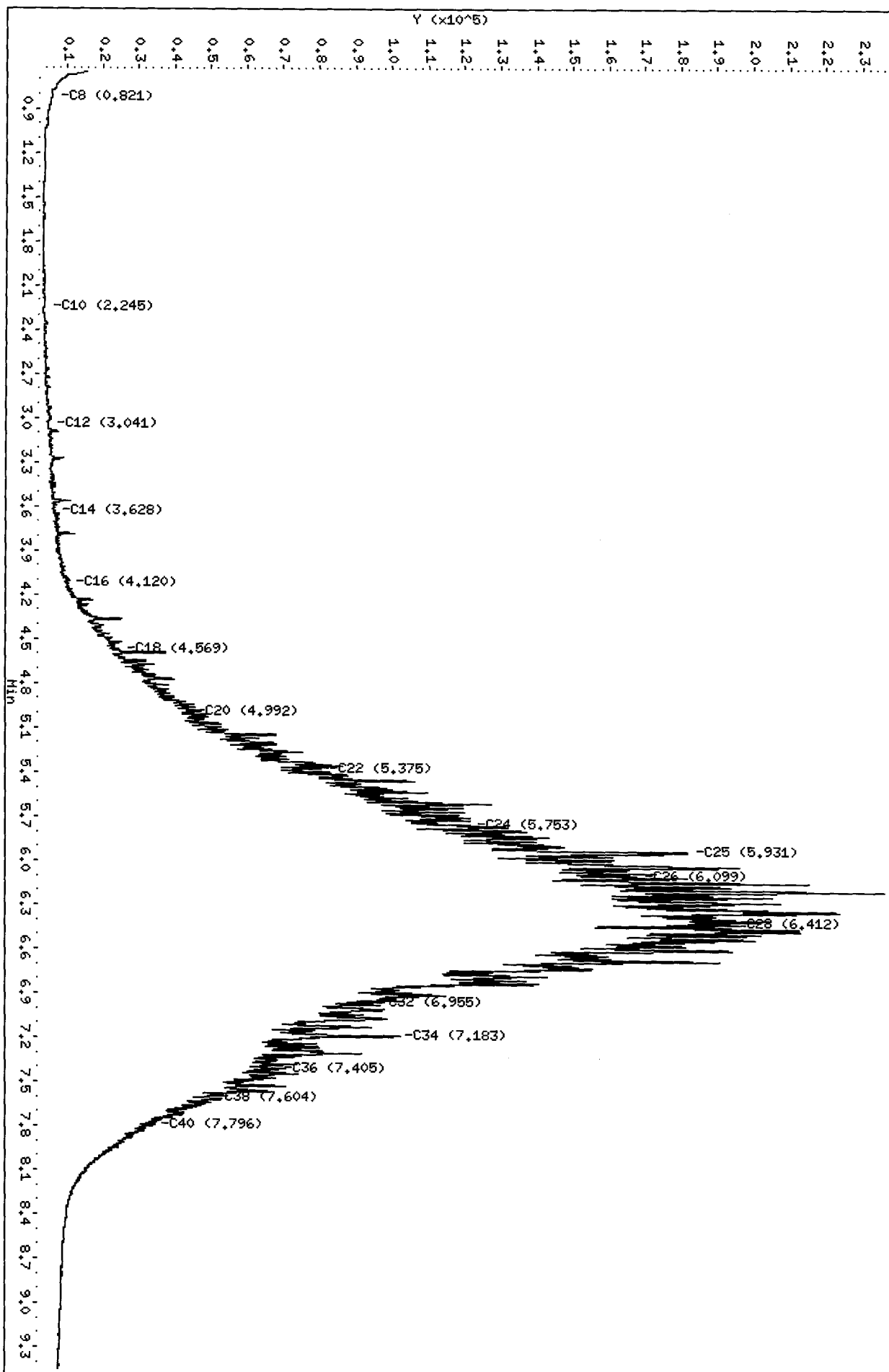
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b041.d



Analytical Resources Inc.
TPH Quantitation Report

KC
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b022.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25E
Client ID: SL-W5-S-4
Injection: 25-MAY-2013 14:45
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		51531	4
C8	0.825	-0.001	2304	1467	WATPHD (C12-C24)		885430	85.49 DR
C10	2.237	-0.004	295	51	WATPHM (C24-C38)		2595299	262.87 MC
C12	3.047	0.002	1249	1424	AK102 (C10-C25)		987789	79.94 M
C14	3.624	0.002	2228	2507	AK103 (C25-C36)		2314687	325.62 M
C16	4.121	0.002	2201	1040				
C18	4.566	-0.002	6647	6138				
C20	4.985	-0.004	5778	2917				
C22	5.382	0.001	11249	5856	MSPIRIT (Tol-C12)		51531	3.75
C24	5.752	0.000	17180	7142				
C25	5.929	0.003	24822	11215				
C26	6.102	0.003	24792	9272				
C28	6.411	-0.002	31882	12433				
C32	6.950	-0.003	32514	27533				
C34	7.189	0.001	23294	20132				
Filter Peak	----							
C36	7.406	-0.001	18465	4712				
o-terph	4.675	-0.001	777101	396089	JET-A (C10-C18)		189583	17.51
Triacon Surr	6.705	0.000	813484	524064				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	396089	29.4	65.4
Triacontane	524064	40.2	89.3

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b022.d

Date: 25-MAY-2013 14:45

Client ID: SL-M5-S-4

Sample Info: MR25E

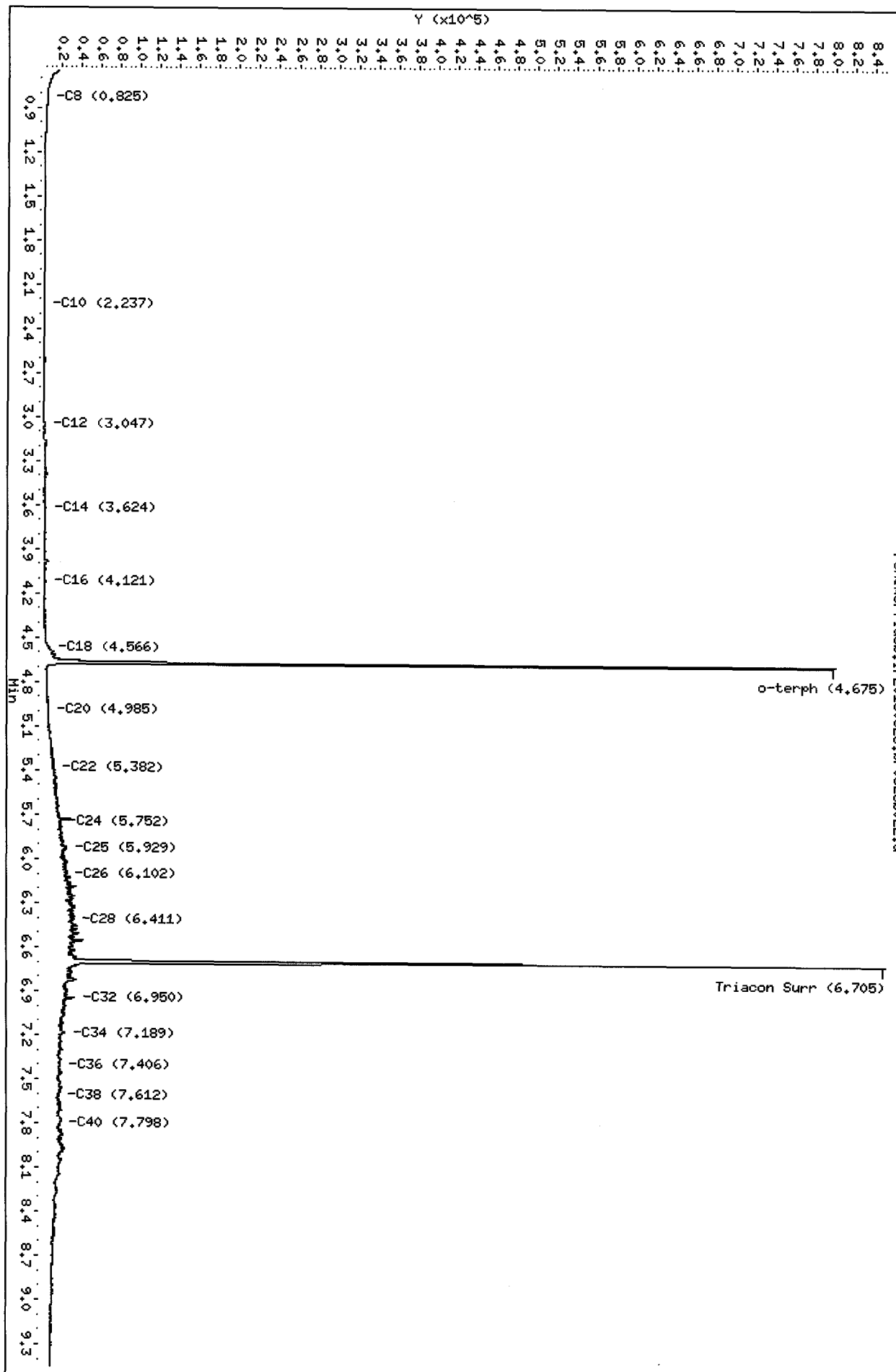
Column phase: RTX-1

Instrument: fid3b.i

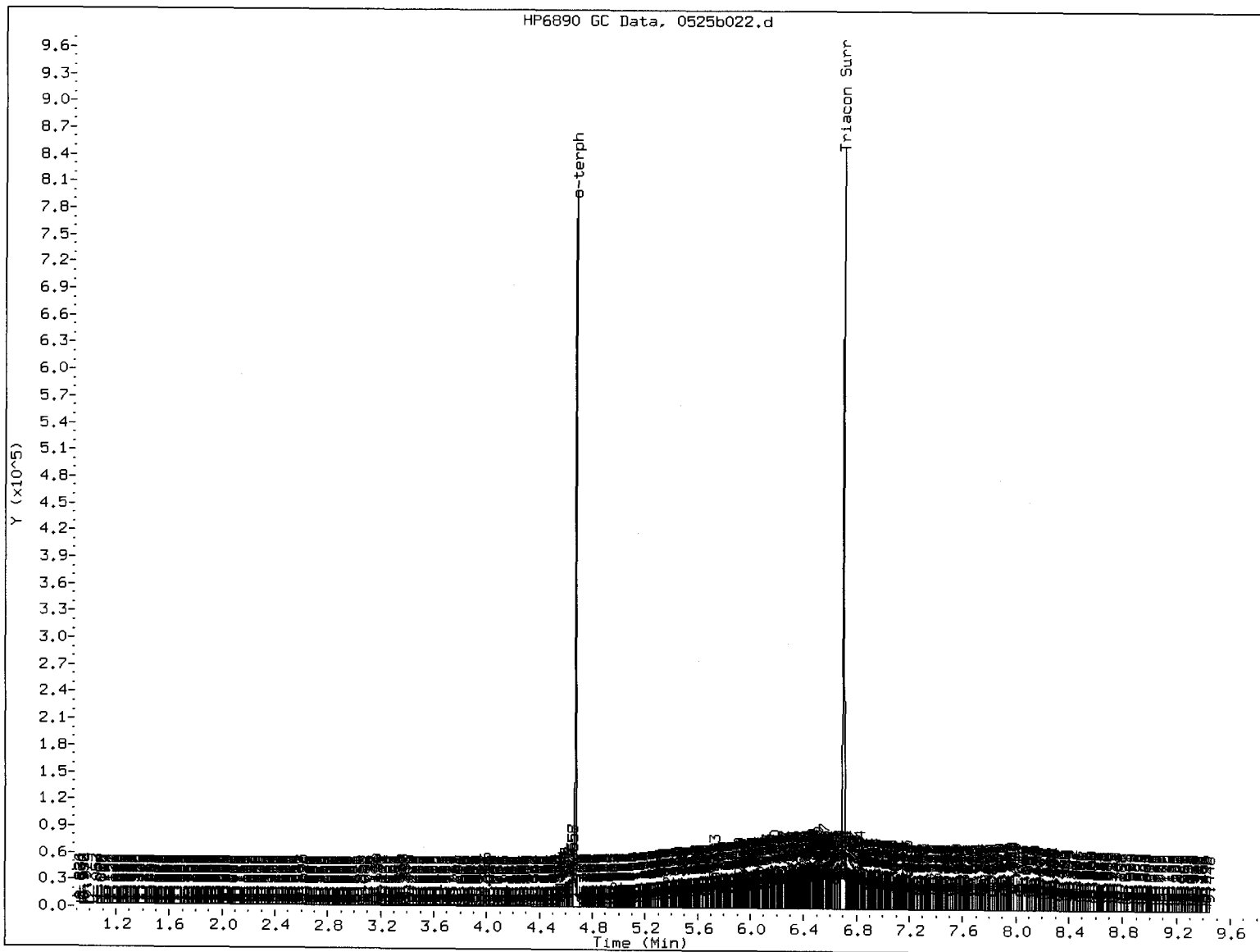
Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b022.d



MR25E : 00038



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: RC

Date: 5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Handwritten: 5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b025.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25F
Client ID: SL-W6-S-4
Injection: 25-MAY-2013 15:42
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94975	7
C8	0.823	-0.003	2639	2446	WATPHD	(C12-C24)	328078	31.68
C10	2.243	0.001	714	700	WATPHM	(C24-C38)	865750	87.69
C12	3.046	0.000	891	175	AK102	(C10-C25)	386107	31.25
C14	3.627	0.005	1742	2047	AK103	(C25-C36)	770440	108.38
C16	4.120	0.001	1415	1064				
C18	4.564	-0.004	3365	1627				
C20	4.991	0.002	2183	679				
C22	5.379	-0.003	3150	1668	MSPIRIT	(Tol-C12)	94975	6.91
C24	5.752	0.000	4963	1126				
C25	5.924	-0.003	5563	5563				
C26	6.103	0.005	6353	3147				
C28	6.410	-0.003	11601	6759				
C32	6.954	0.000	13674	18495				
C34	7.188	0.000	8004	2840				
Filter Peak	----							
C36	7.406	-0.001	7164	2793				
o-terph	4.677	0.001	750474	476049	JET-A	(C10-C18)	173189	16.00
Triacon Surr	6.706	0.001	694874	570805				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

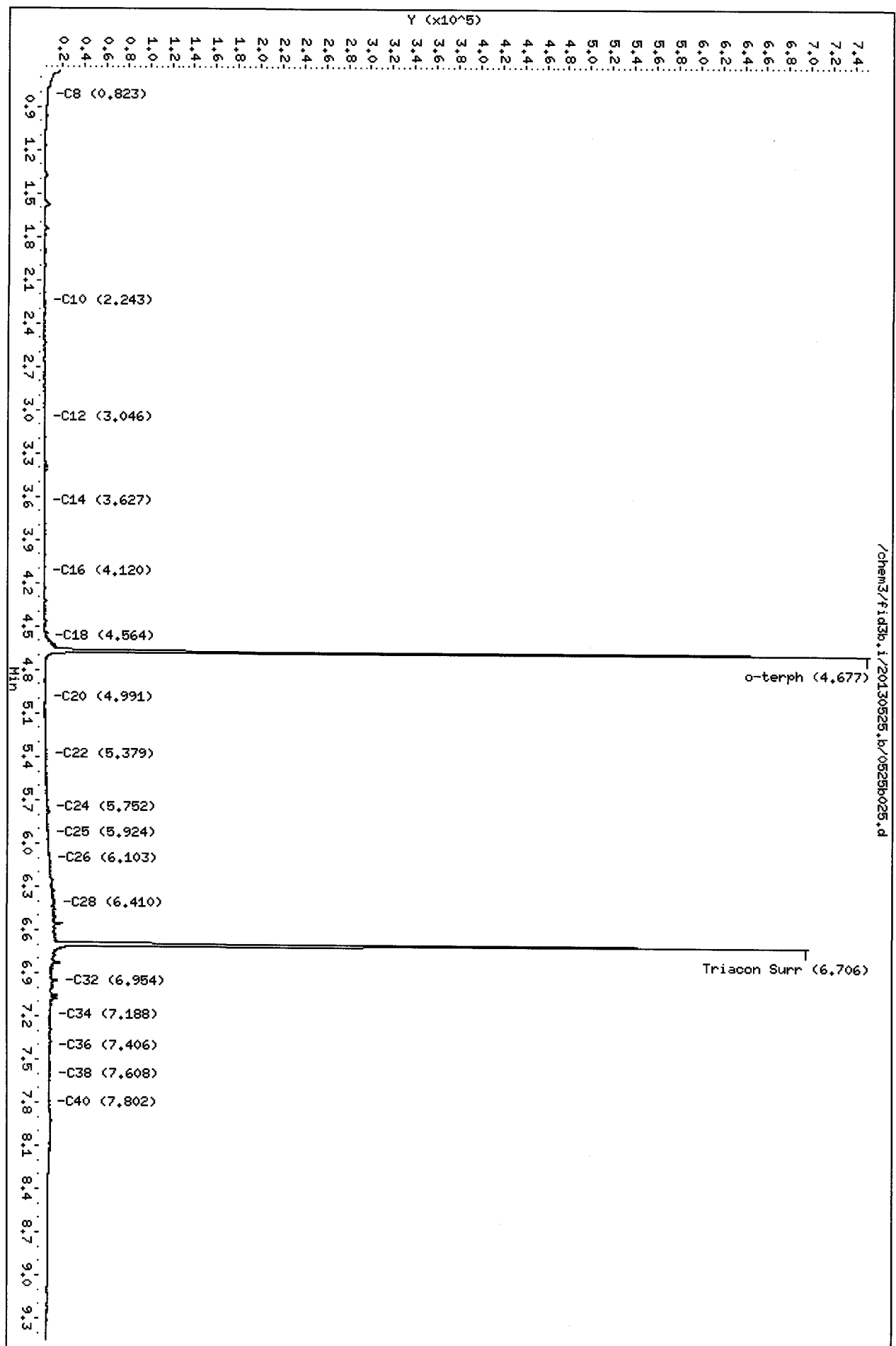
Surrogate	Area	Amount	%Rec
o-Terphenyl	476049	35.4	78.7
Triacontane	570805	43.7	97.2

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.1/20130525.b/0525b025.d
Date: 25-MAY-2013 15:42
Client ID: SL-M6-S-4
Sample Info: MR25F
Column phase: RTX-1

Instrument: fid3b.1
Operator: JM
Column diameter: 0.25

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MR25 : 00011

AL
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b026.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25G
Client ID: A2-W19-S-4
Injection: 25-MAY-2013 16:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	90069	7
C8	0.816	-0.010	3976	7008	WATPHD	(C12-C24)	6015829	580.82 mixed oils
C10	2.247	0.006	1147	1090	WATPHM	(C24-C38)	13518908	1369.30
C12	3.046	0.000	1161	357	AK102	(C10-C25)	6750672	546.32 M
C14	3.626	0.004	2937	2460	AK103	(C25-C36)	12099776	1702.16 M
C16	4.122	0.003	4239	4647				
C18	4.567	-0.002	19786	26627				
C20	4.992	0.003	47038	26687				
C22	5.383	0.002	109314	38561	MSPIRIT	(Tol-C12)	90069	6.56
C24	5.750	-0.002	162378	37622				
C25	5.924	-0.002	165366	41351				
C26	6.097	-0.002	162688	53094				
C28	6.415	0.002	175362	54790				
C32	6.954	0.001	116096	20483				
C34	7.188	0.001	94061	20433				
Filter Peak	----							
C36	7.411	0.004	77430	36907				
o-terph	4.674	-0.002	648887	345304	JET-A	(C10-C18)	409564	37.84
Triacon Surr	6.707	0.003	711012	407821				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	345304	25.7	57.1
Triacontane	407821	31.3	69.5

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b026.d

Date: 25-MAY-2013 16:01

Client ID: A2-M49-S-4

Sample Info: MR25G

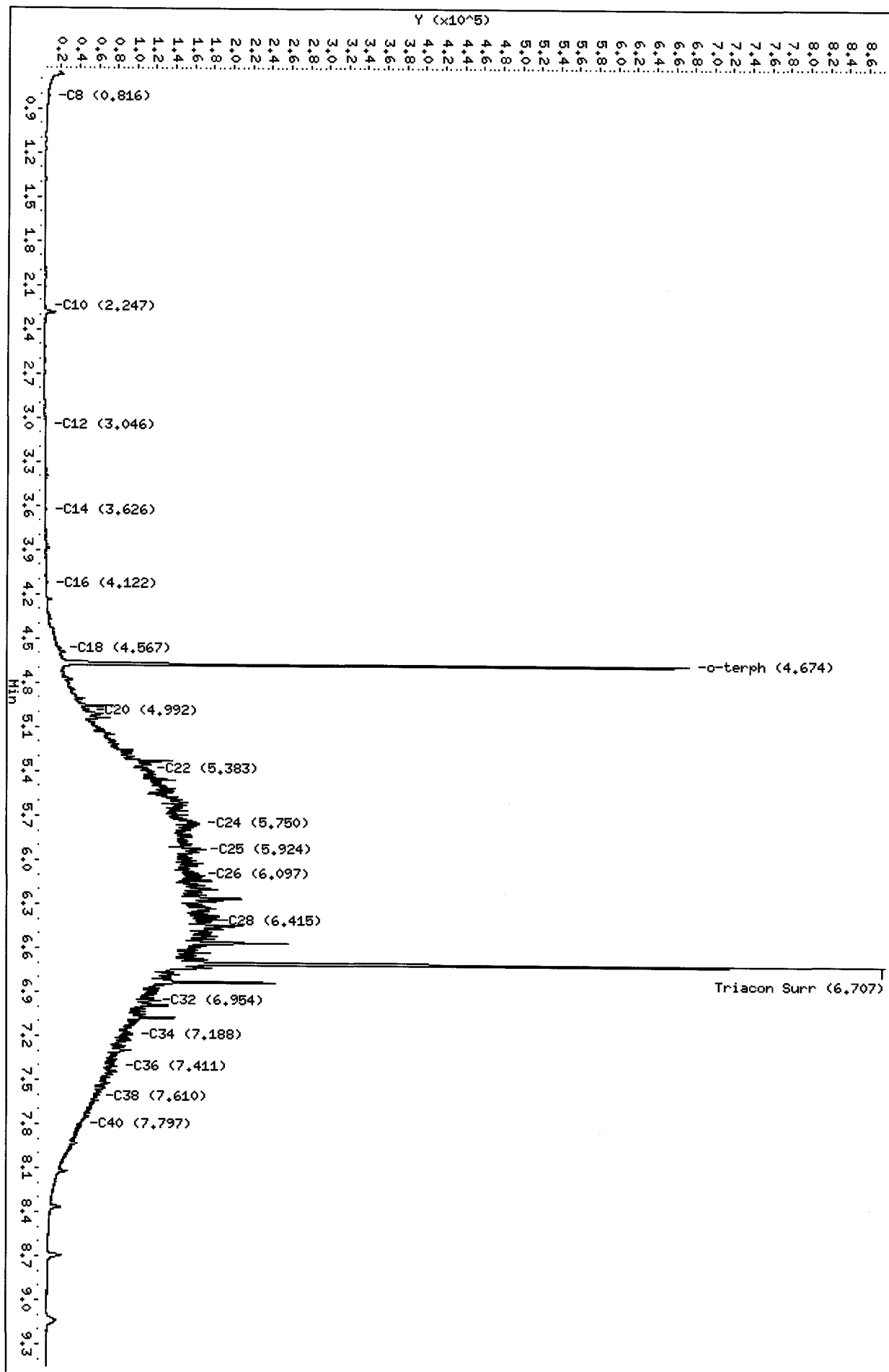
Column phase: RTX-1

Instrument: fid3b.i

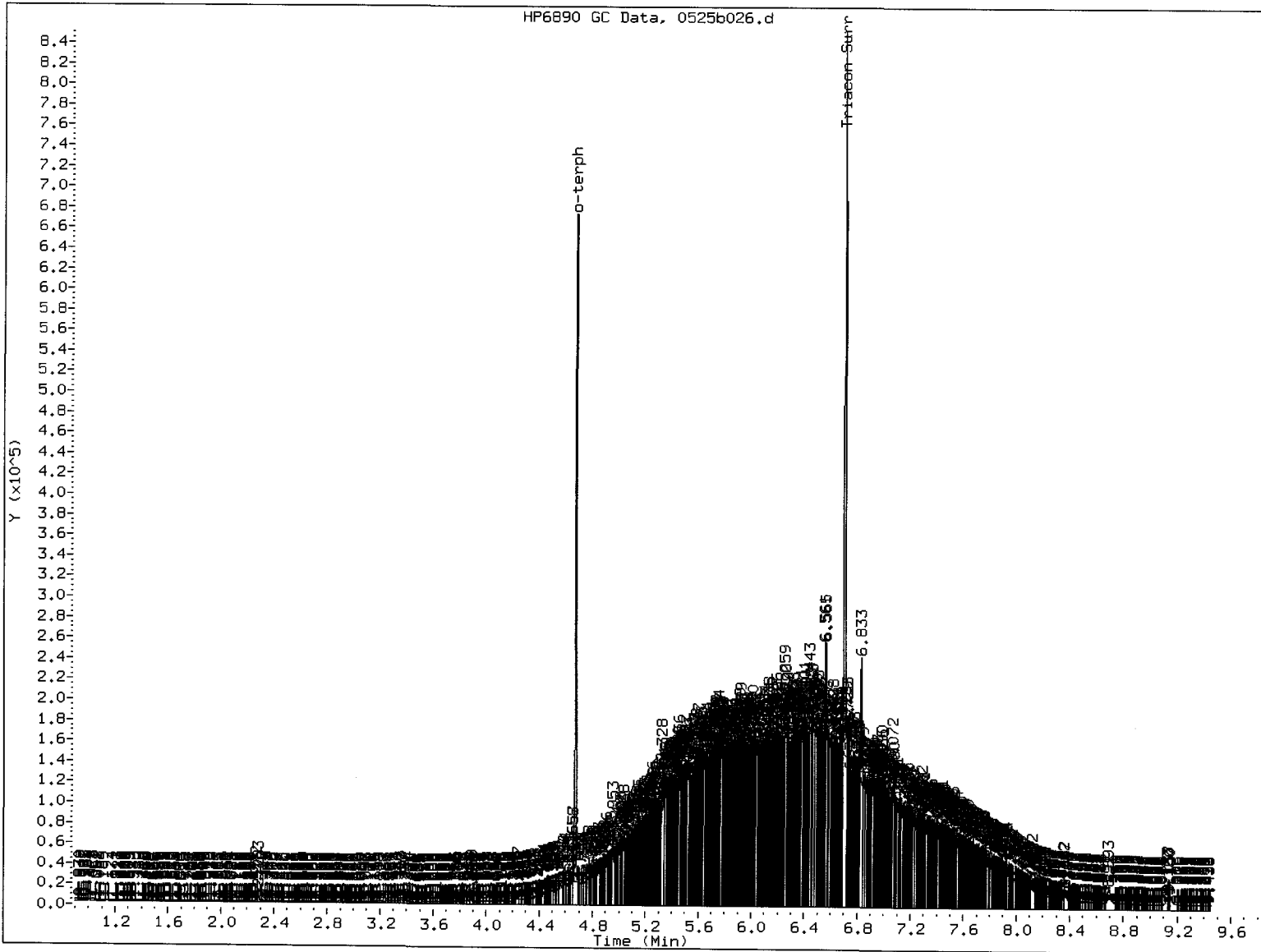
Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b026.d



MR25G : 000043



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: *JK*

Date: *5/28/03*

Analytical Resources Inc.
TPH Quantitation Report

AL
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b027.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25H
Client ID: A2-W20-S-4
Injection: 25-MAY-2013 16:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73244	5
C8	0.826	0.000	2700	2504	WATPHD (C12-C24)		562624	54.32
C10	2.245	0.003	968	917	WATPHM (C24-C38)		2065248	209.18
C12	3.045	-0.001	797	141	AK102 (C10-C25)		641840	51.94
C14	3.624	0.002	2612	3602	AK103 (C25-C36)		1828870	257.28 M
C16	4.117	-0.002	1968	1608				
C18	4.564	-0.005	7344	5142				
C20	4.989	0.000	4225	1194				
C22	5.381	-0.001	7684	6366	MSPIRIT (Tol-C12)		73244	5.33
C24	5.755	0.003	11860	2876				
C25	5.924	-0.002	14090	7062				
C26	6.096	-0.003	14798	5681				
C28	6.416	0.003	24003	17536				
C32	6.953	-0.001	25547	13289				
C34	7.184	-0.004	19538	10961				
Filter Peak	----							
C36	7.411	0.004	16843	7241				
o-terph	4.676	-0.001	776612	460818	JET-A (C10-C18)		171806	15.87
Triacon Surr	6.702	-0.002	731825	513883				

mixed
oil

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	460818	34.3	76.1
Triacontane	513883	39.4	87.5

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b027.d

Date: 25-MAY-2013 16:20

Client ID: A2-M20-S-4

Sample Info: MR25H

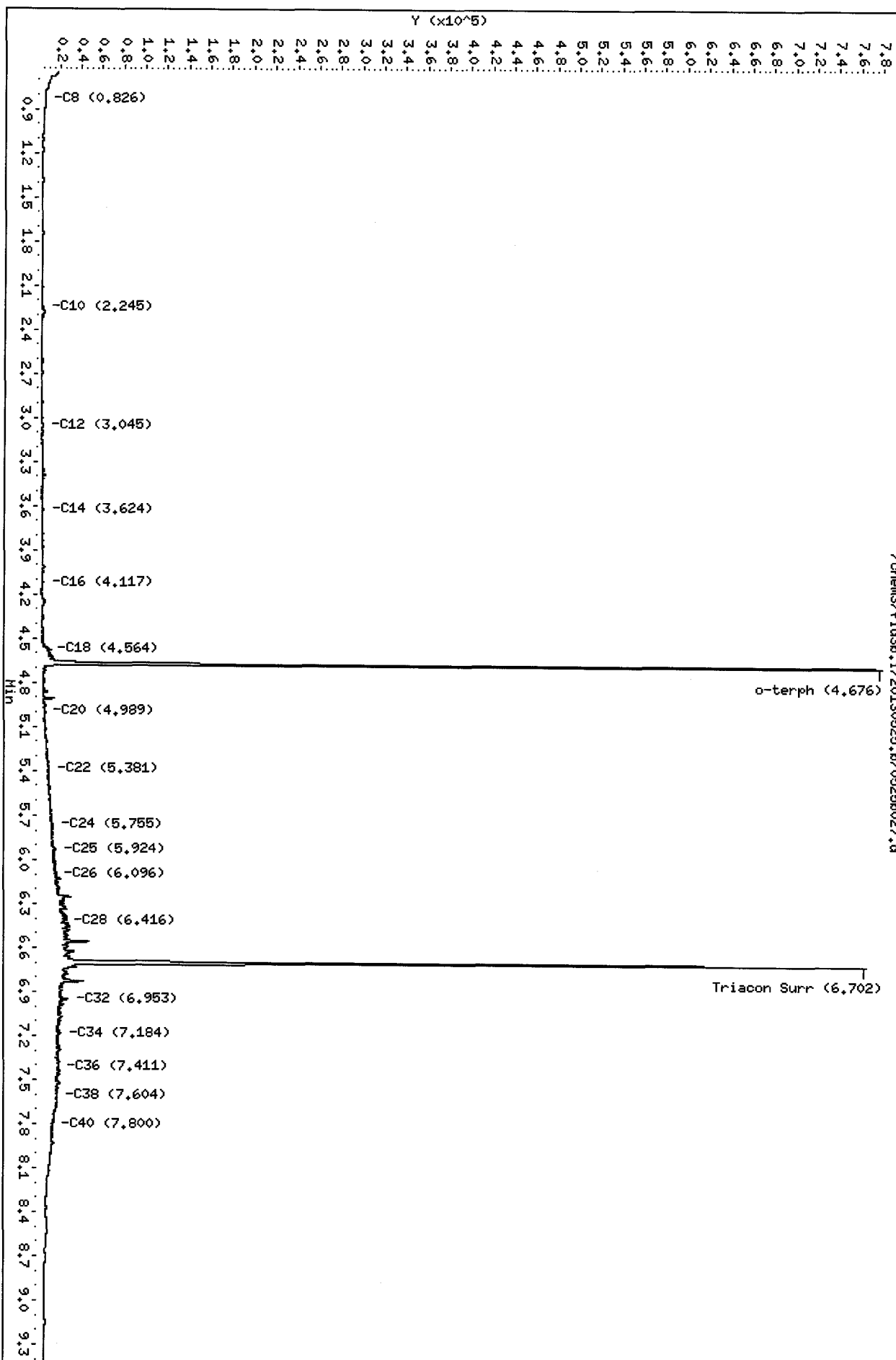
Column phase: RTX-1

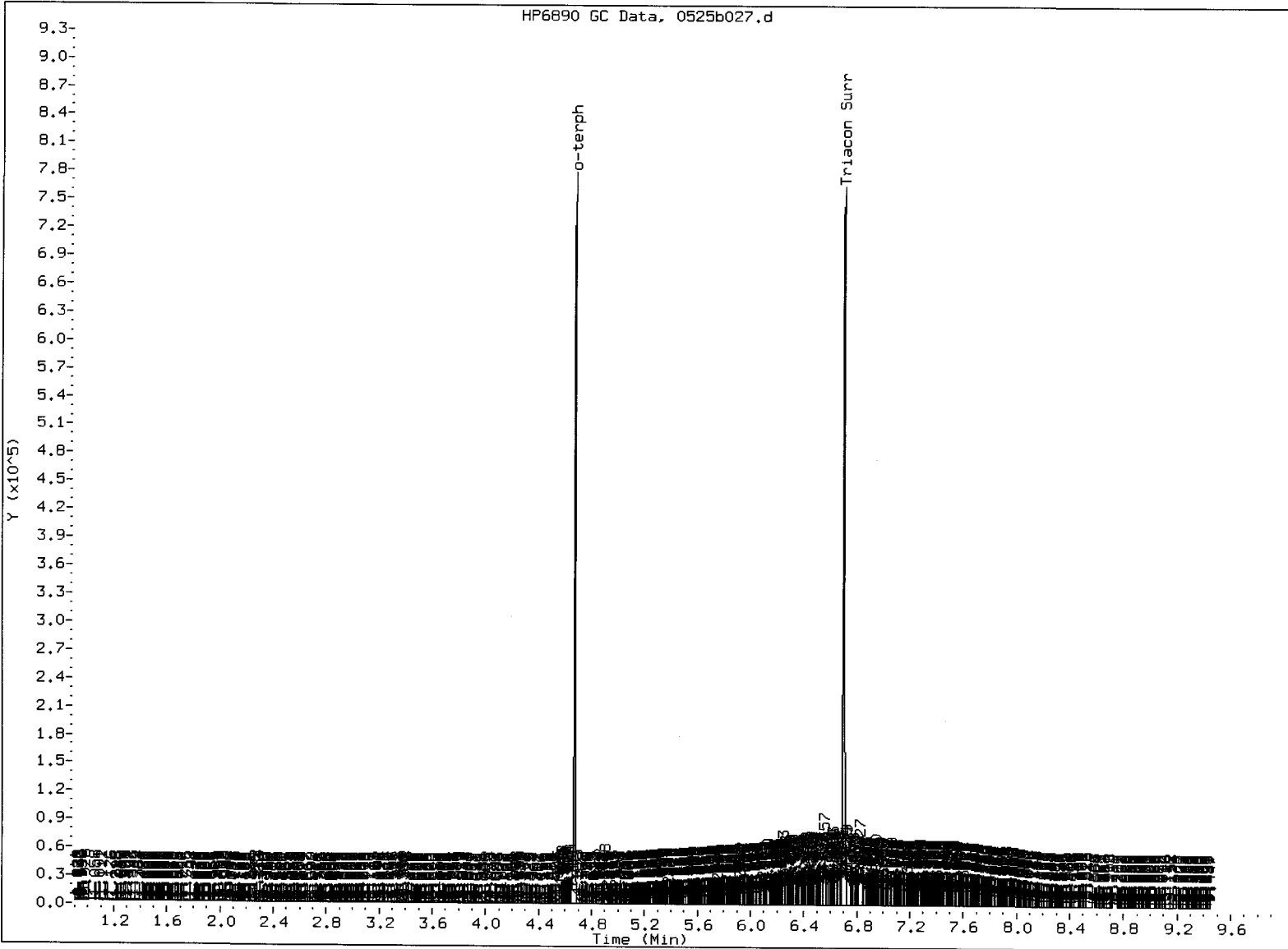
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: PL

Date: 5/28/83

Analytical Resources Inc.
TPH Quantitation Report

PC
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b028.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25I
Client ID: A2-W21-S-4
Injection: 25-MAY-2013 16:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		84495	6
C8	0.832	0.006	3002	3712	WATPHD (C12-C24)		3083149	297.68
C10	2.244	0.002	685	490	WATPHM (C24-C38)		13211271	1338.14
C12	3.044	-0.001	1115	338	AK102 (C10-C25)		3377705	273.35 M
C14	3.624	0.002	3429	3100	AK103 (C25-C36)		11510006	1619.19 M
C16	4.118	0.000	6898	1929				
C18	4.568	0.000	23316	4077				
C20	4.990	0.001	26541	13597				
C22	5.383	0.002	38396	5317	MSPIRIT (Tol-C12)		84495	6.15
C24	5.753	0.002	55798	18358				
C25	5.927	0.001	69779	24066				
C26	6.100	0.001	83191	34827				
C28	6.414	0.001	143279	44310				
C32	6.950	-0.003	139415	26693				
C34	7.187	0.000	150304	126404				
Filter Peak	----							
C36	7.408	0.001	142348	88988				
o-terph	4.676	0.000	731705	404455	JET-A (C10-C18)		574917	53.11
Triacon Surr	6.710	0.005	806823	555046				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	404455	30.1	66.8
Triacontane	555046	42.5	94.5

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b028.d

Date: 25-MAY-2013 16:40

Client ID: A2-M21-S-4

Sample Info: MR251

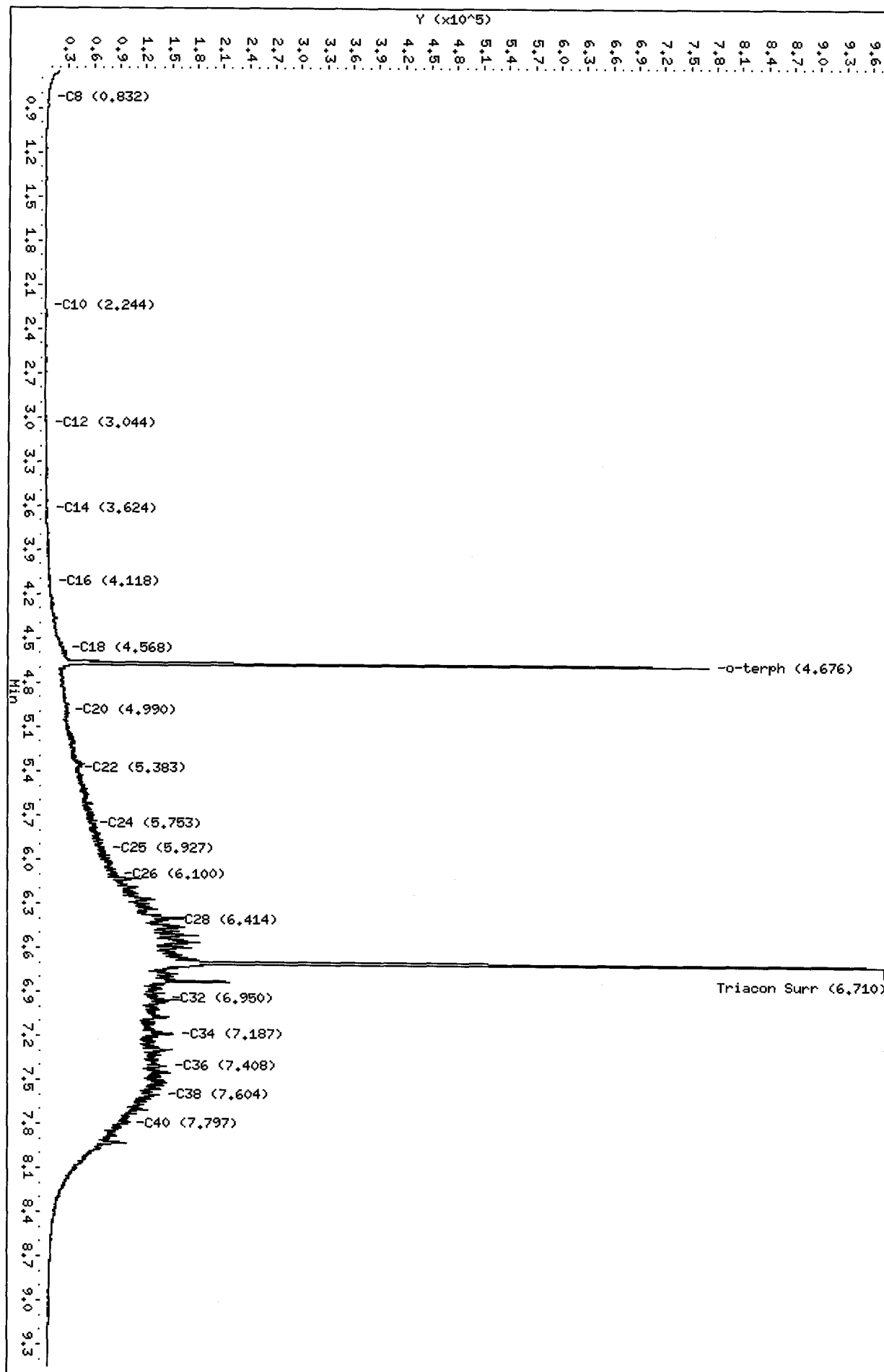
Column phase: RTX-1

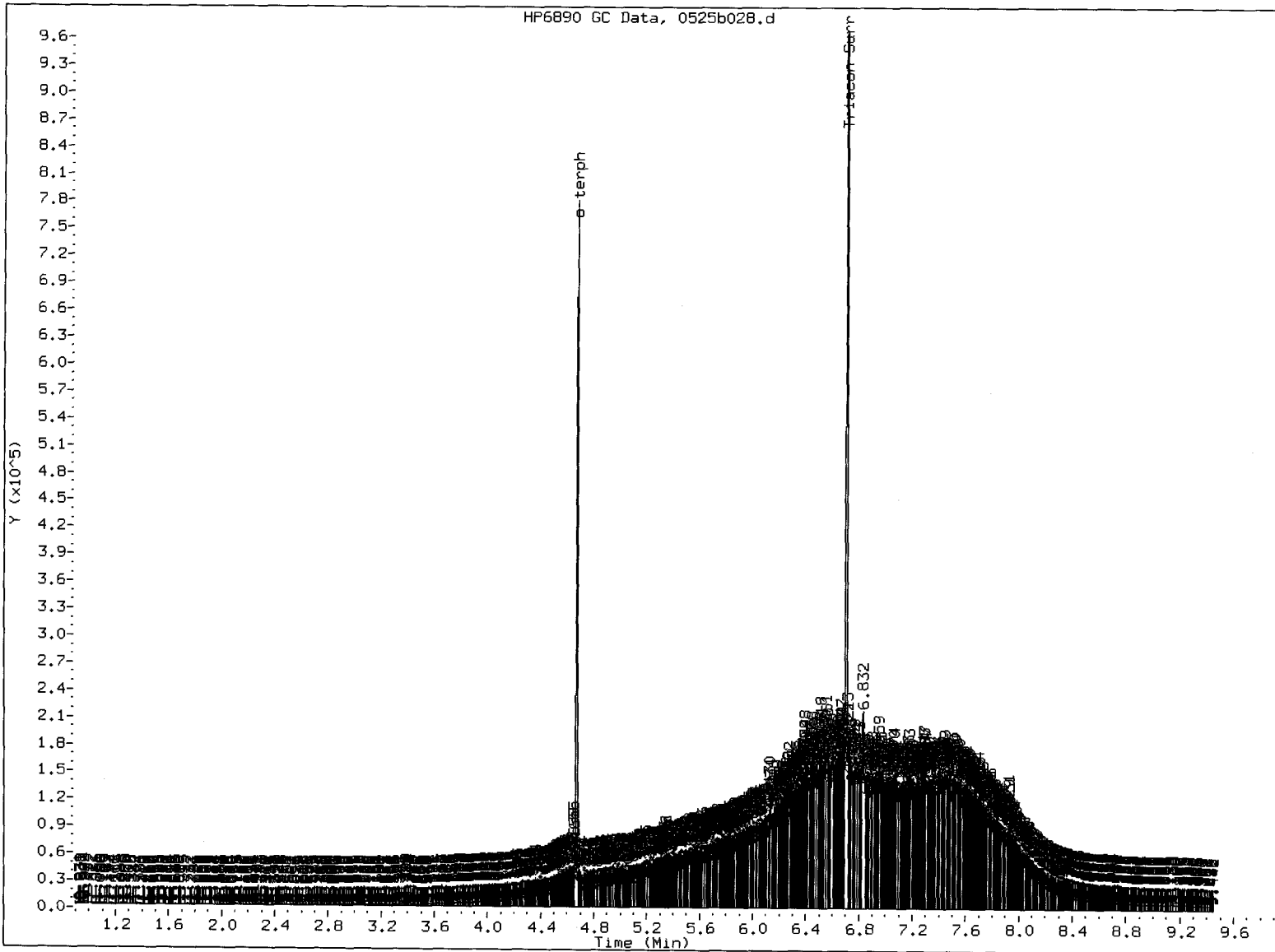
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5 Skimmed surrogate

Analyst: PL

Date: 5/28/13

MC
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b029.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25J
Client ID: A2-W23-S-4
Injection: 25-MAY-2013 16:59
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		72496	5
C8	0.832	0.006	4009	7434	WATPHD (C12-C24)		1166608	112.63
C10	2.247	0.005	688	693	WATPHM (C24-C38)		7986018	808.88
C12	3.041	-0.005	757	392	AK102 (C10-C25)		1322188	107.00 M
C14	3.625	0.003	2221	2636	AK103 (C25-C36)		6936414	975.79 M
C16	4.120	0.002	2352	989				
C18	4.568	0.000	9163	5529				
C20	4.992	0.004	8245	3730				
C22	5.381	0.000	15731	4954	MSPIRIT (Tol-C12)		72496	5.28
C24	5.752	0.000	26580	10172				
C25	5.930	0.004	31621	6202				
C26	6.097	-0.001	41108	13601				
C28	6.415	0.002	82917	68489				
C32	6.954	0.000	95540	47913				
C34	7.189	0.001	91131	35387				
Filter Peak	----							
C36	7.406	-0.001	85945	53096				
o-terph	4.675	-0.001	800759	418338	JET-A (C10-C18)		211828	19.57
Triacon Surr	6.708	0.004	825830	516162				

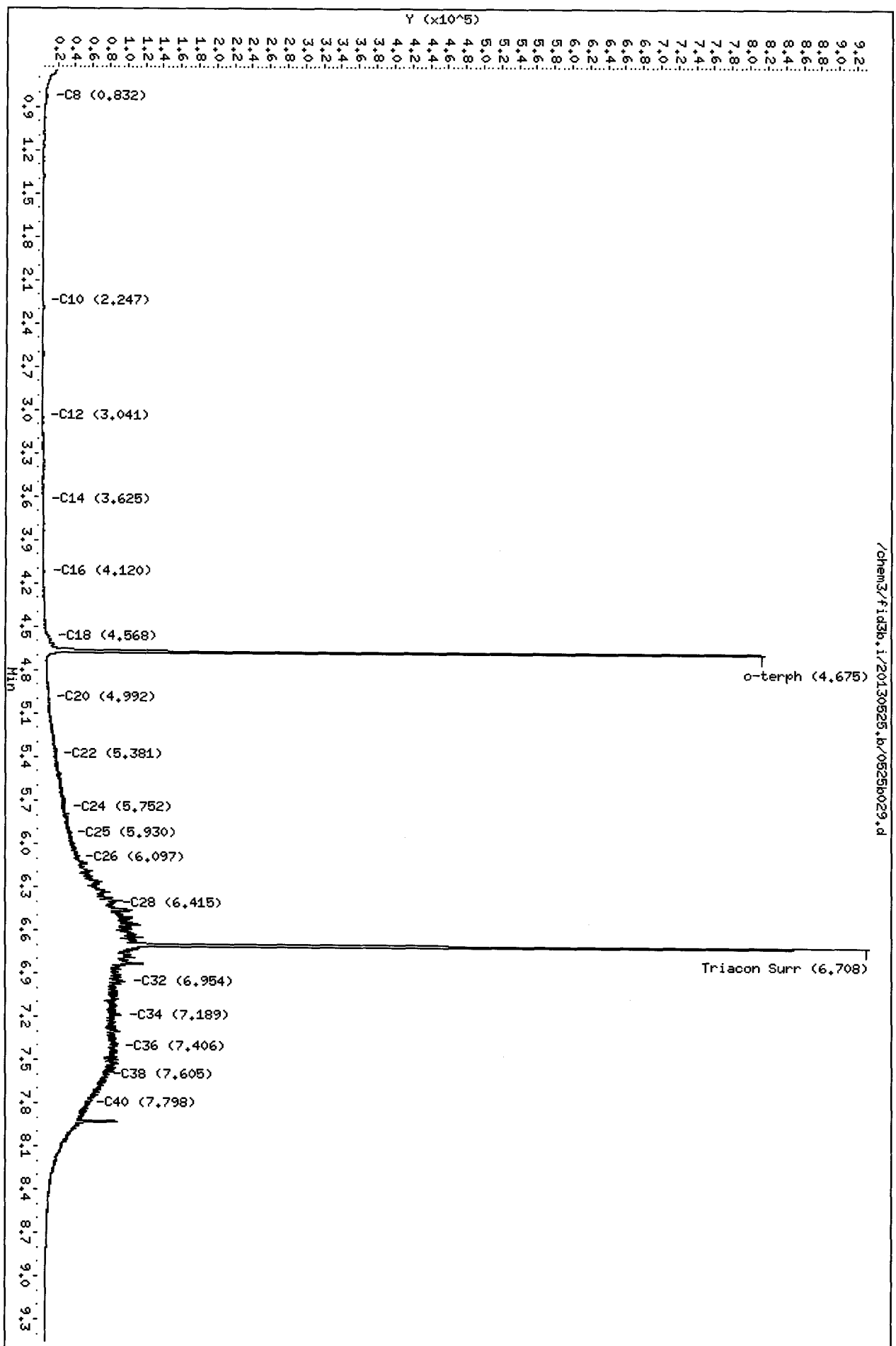
Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

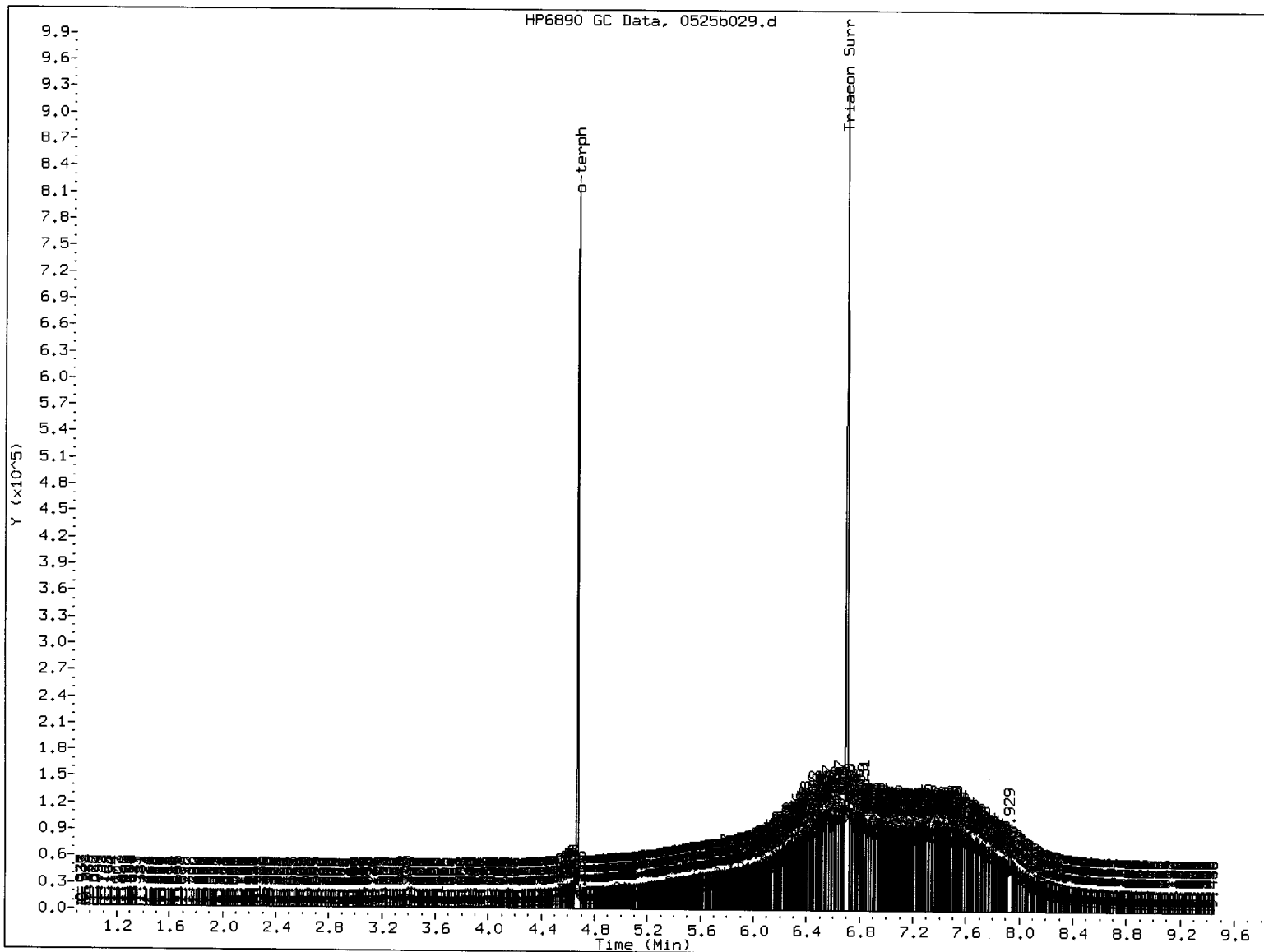
Surrogate	Area	Amount	%Rec
o-Terphenyl	418338	31.1	69.1
Triacontane	516162	39.6	87.9

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b029.d
 Date: 25-MAY-2013 16:59
 Client ID: A2-M23-S-4
 Sample Info: MR25J
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: PL

Date: 5/28/83

VC
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b030.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25K
Client ID: A2-W24-S-4
Injection: 25-MAY-2013 17:18
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73207	5
C8	0.831	0.005	2701	2696	WATPHD (C12-C24)		2568841	248.02
C10	2.245	0.004	550	569	WATPHM (C24-C38)		10962070	1110.32
C12	3.043	-0.002	873	286	AK102 (C10-C25)		2924044	236.64 M
C14	3.624	0.002	3064	2626	AK103 (C25-C36)		10129077	1424.93 M
C16	4.117	-0.001	4844	3912				
C18	4.566	-0.002	16342	7971				
C20	4.992	0.004	16482	4862				
C22	5.382	0.001	36519	7826	MSPIRIT (Tol-C12)		73207	5.33
C24	5.751	0.000	65319	35719				
C25	5.928	0.002	81222	21537				
C26	6.097	-0.002	93472	36603				
C28	6.420	0.008	161126	86776				
C32	6.951	-0.002	119205	42800				
C34	7.183	-0.005	78532	71644				
Filter Peak	----							
C36	7.405	-0.002	61821	28253				
o-terph	4.674	-0.002	627229	392695	JET-A (C10-C18)		400927	37.04
Triacon Surr	6.706	0.001	762034	498783				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	392695	29.2	64.9
Triacontane	498783	38.2	85.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b030.d

Date: 25-MAY-2013 17:18

Client ID: A2-M24-S-4

Sample Info: MR25K

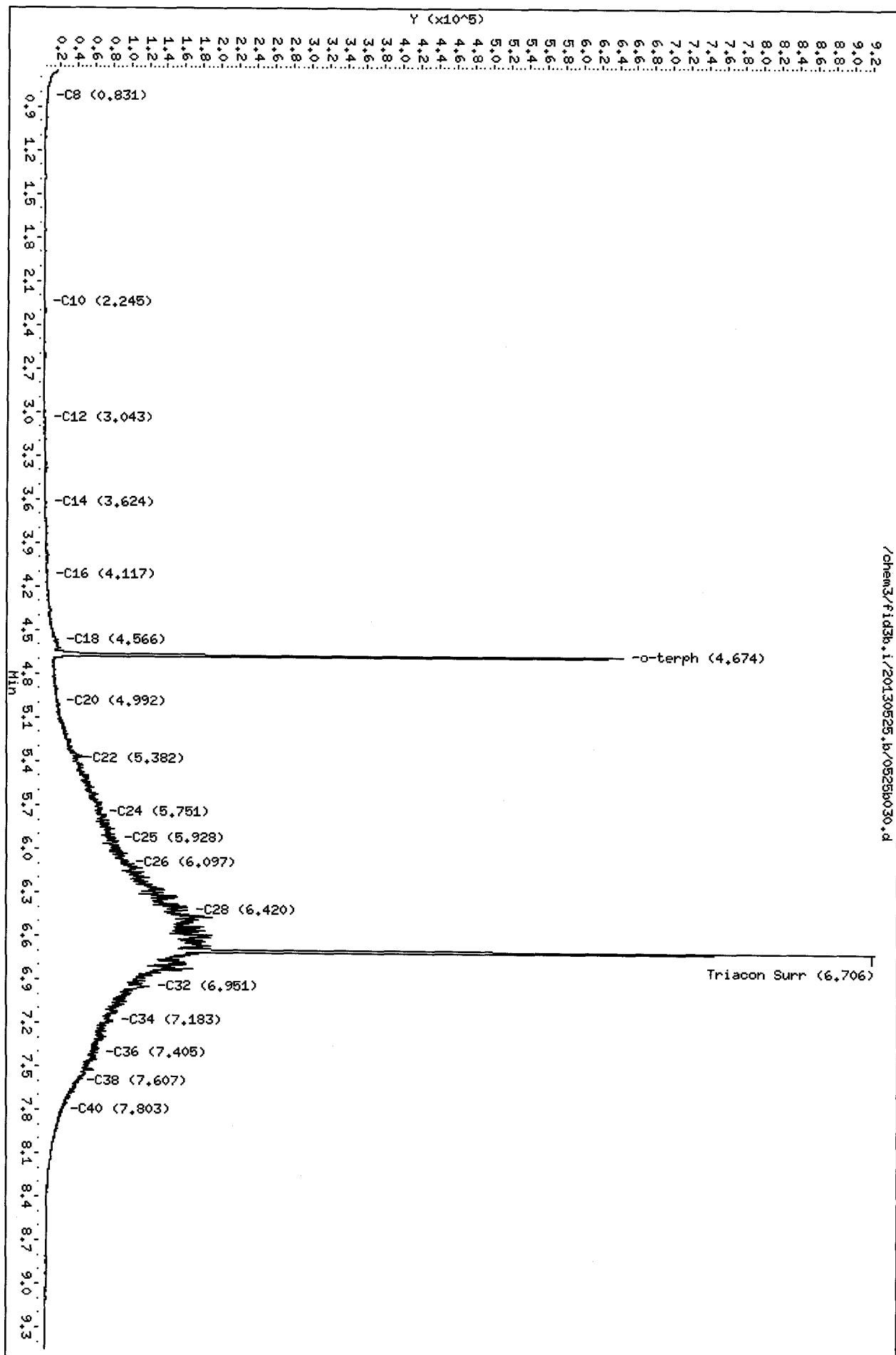
Column phase: RTX-1

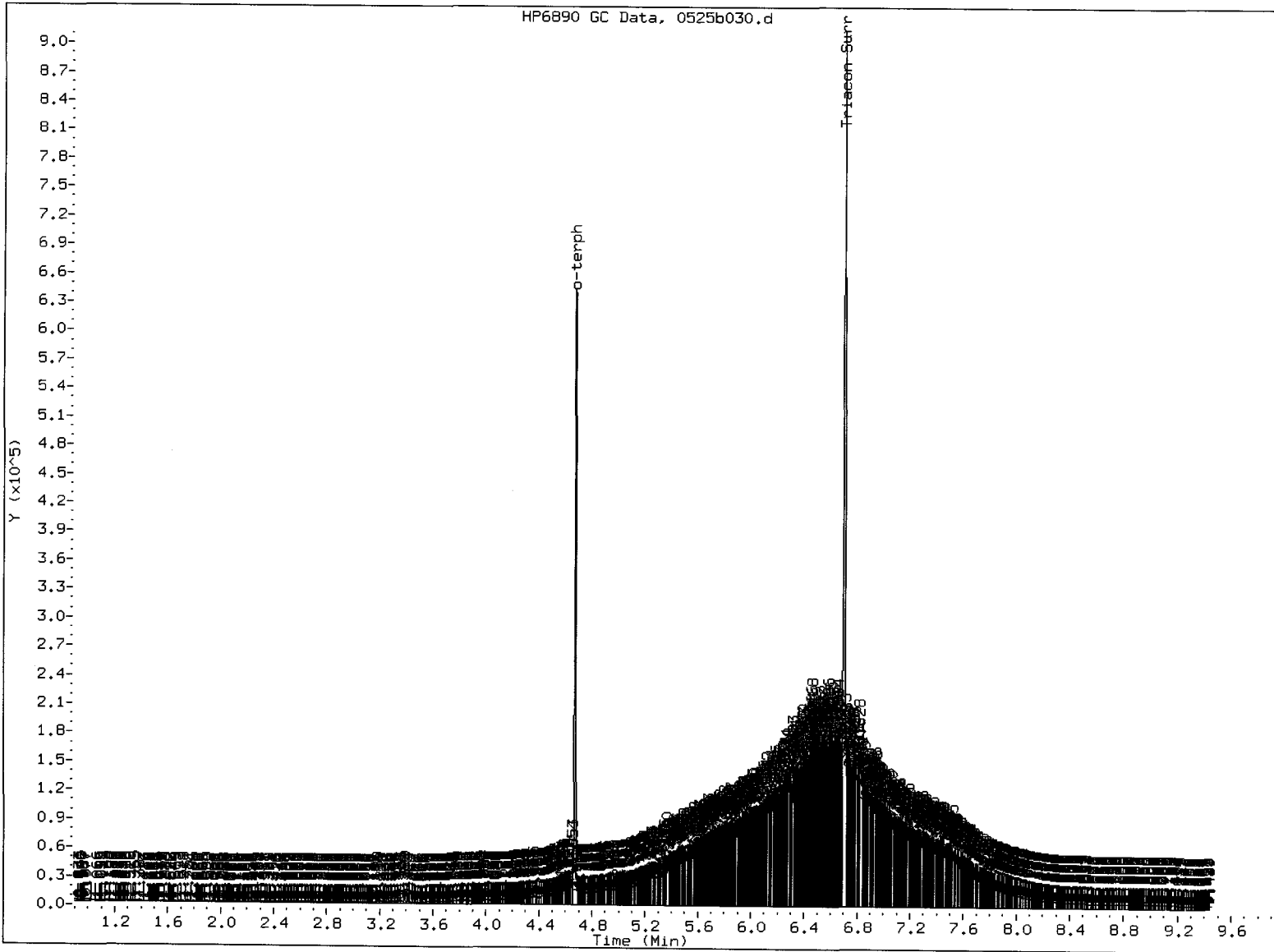
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b030.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: PC

Date: 5/28/83

Analytical Resources Inc.
TPH Quantitation Report

PL
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b031.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25L
Client ID: A2-W25-S-4
Injection: 25-MAY-2013 17:37
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		170492	13
C8	0.838	0.011	2607	674	WATPHD (C12-C24)		132759335	12817.79
C10	2.241	0.000	1308	364	WATPHM (C24-C38)		568854461	57617.88
C12	3.047	0.001	4963	5798	AK102 (C10-C25)		148241027	11996.78 M
C14	3.625	0.002	15320	12570	AK103 (C25-C36)		549668920	77325.74
C16	4.120	0.001	56375	21364				
C18	4.566	-0.002	240864	89331				
C20	4.989	0.000	1196113	849661				
C22	5.385	0.004	2176615	344755	MSPIRIT (Tol-C12)		170492	12.41
C24	5.753	0.001	3503051	1207442				
C25	5.924	-0.002	4195354	2177874				
C26	6.100	0.001	4898905	1599773				
C28	6.413	0.000	6546478	1400438				
C32	6.956	0.002	8824774	2547921				
C34	7.190	0.002	4318927	1220736				
Filter Peak	----							
C36	7.406	-0.001	817843	251502				
o-terph	4.684	0.008	688990	508200	JET-A (C10-C18)		5292513	488.95
Triacon Surr	----							

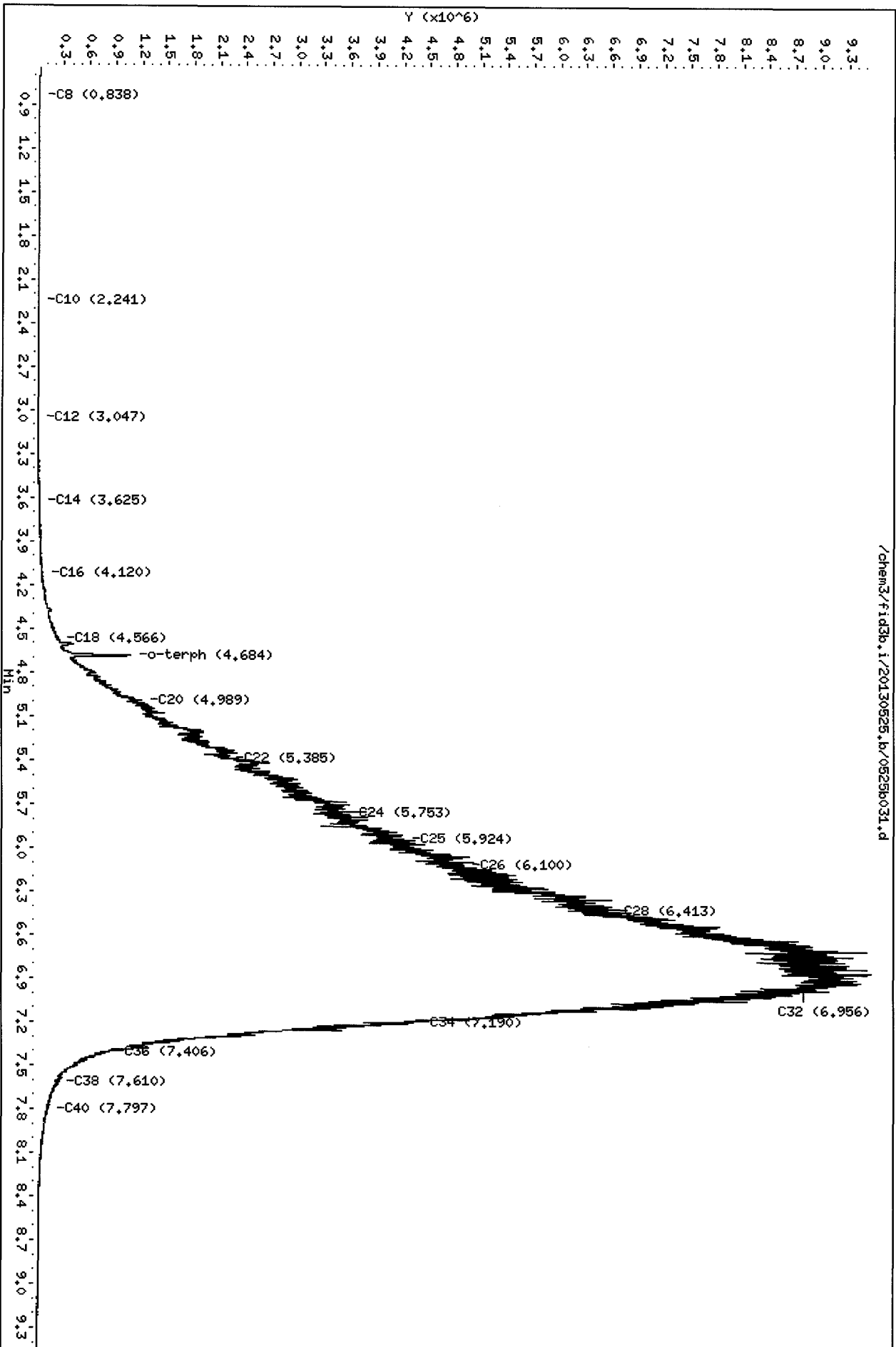
Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	508200	37.8	84.0
Triacontane	0	0.0	0.0 <i>NR</i>

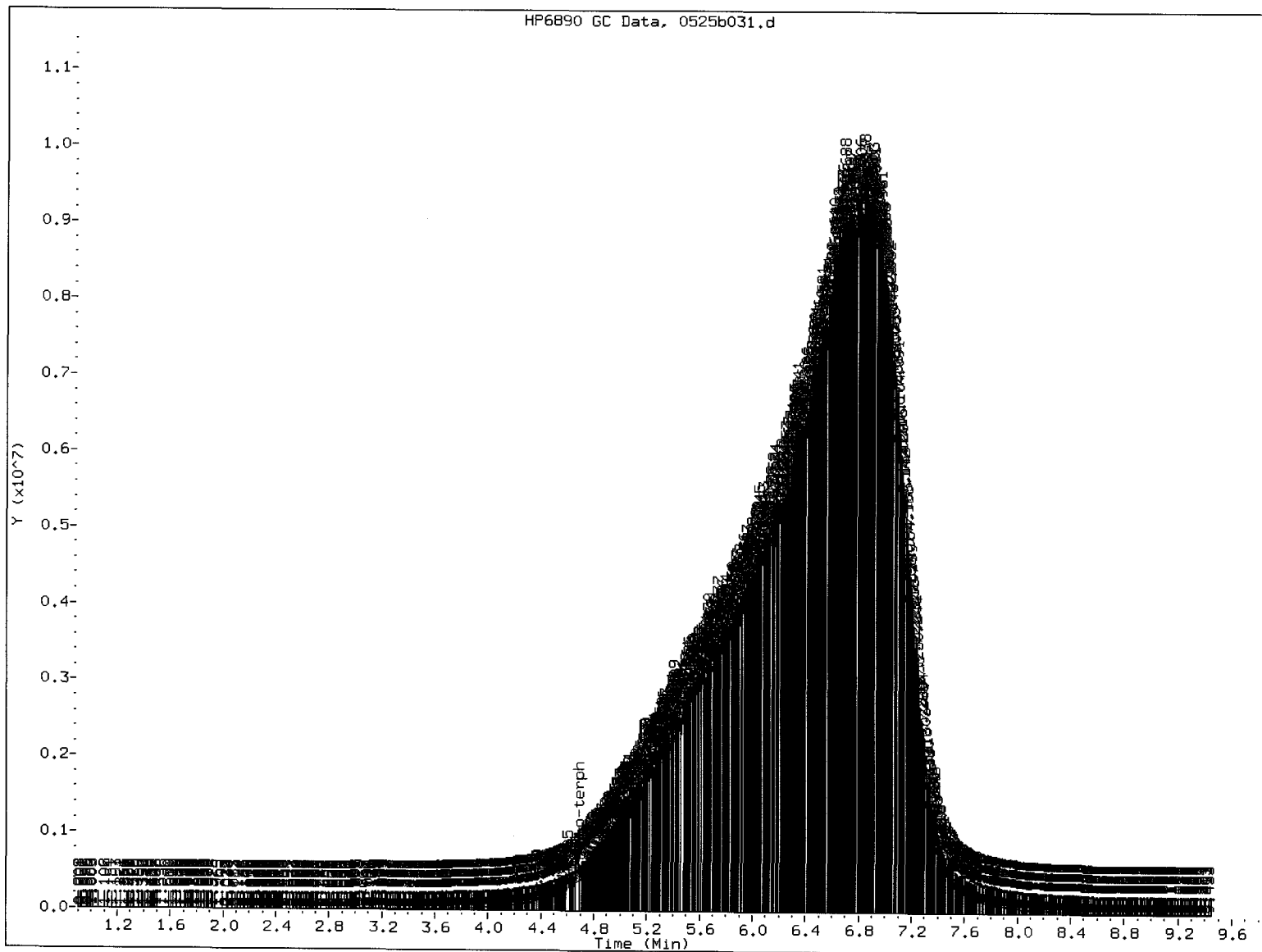
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b031.d
Date: 25-MAY-2013 17:37
Client ID: A2-M25-S-4
Sample Info: MR25L
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



/chem3/fid3b.i/20130525.b/0525b031.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: rc

Date: 5/28/10

Analytical Resources Inc.
TPH Quantitation Report

PC
5/28/13

Data file: /chem3/fid3b.i/20130528.b/0528b006.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25L
Client ID: A2-W25-S-4
Injection: 28-MAY-2013 10:18
Dilution Factor: 25

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		34124	3
C8	0.816	-0.007	2190	2616	WATPHD (C12-C24)		6583382	635.62
C10	2.242	0.002	172	40	WATPHM (C24-C38)		45890665	4648.15
C12	3.037	-0.006	226	157	AK102 (C10-C25)		7461899	603.87 M
C14	3.619	-0.001	635	183	AK103 (C25-C36)		42230924	5940.92
C16	4.118	0.002	2411	1543				
C18	4.566	0.004	14208	5916				
C20	4.979	-0.001	64570	35202				
C22	5.374	-0.005	113484	58010	MSPIRIT (Tol-C12)		34124	2.48
C24	5.743	-0.002	178198	89684				
C25	5.925	0.004	237075	92449				
C26	6.096	-0.001	285125	149609				
C28	6.405	-0.003	459311	388715				
C32	6.952	-0.001	611106	132158				
C34	7.187	0.003	580724	180675				
Filter Peak	----							
C36	7.408	0.003	372570	100049				
o-terph	----				JET-A (C10-C18)		260561	24.07
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130528.b/0528b006.d

Date: 28-MAY-2013 10:18

Client ID: A2-M25-S-4

Sample Info: MR25L/25

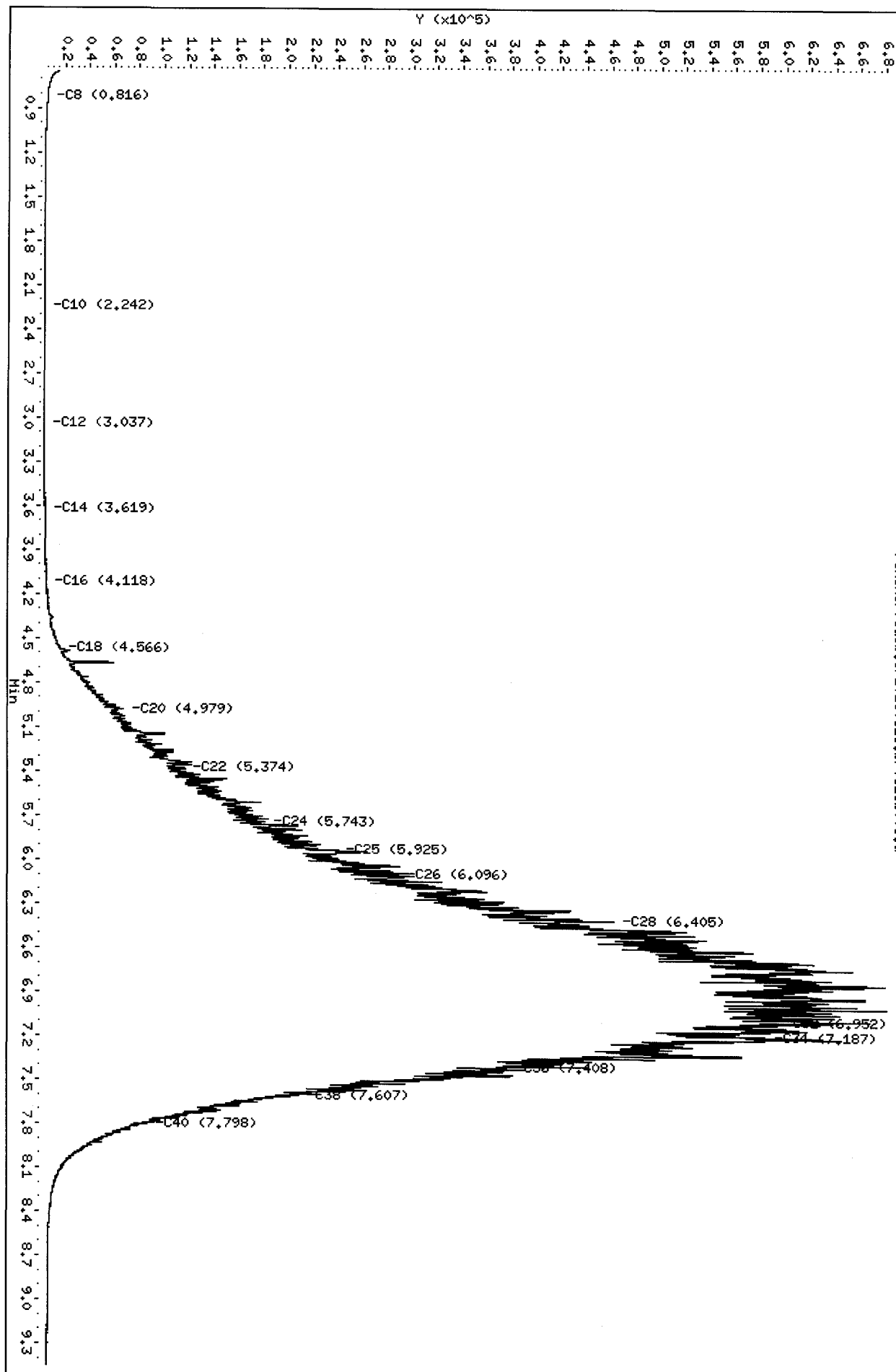
Column phase: RTX-1

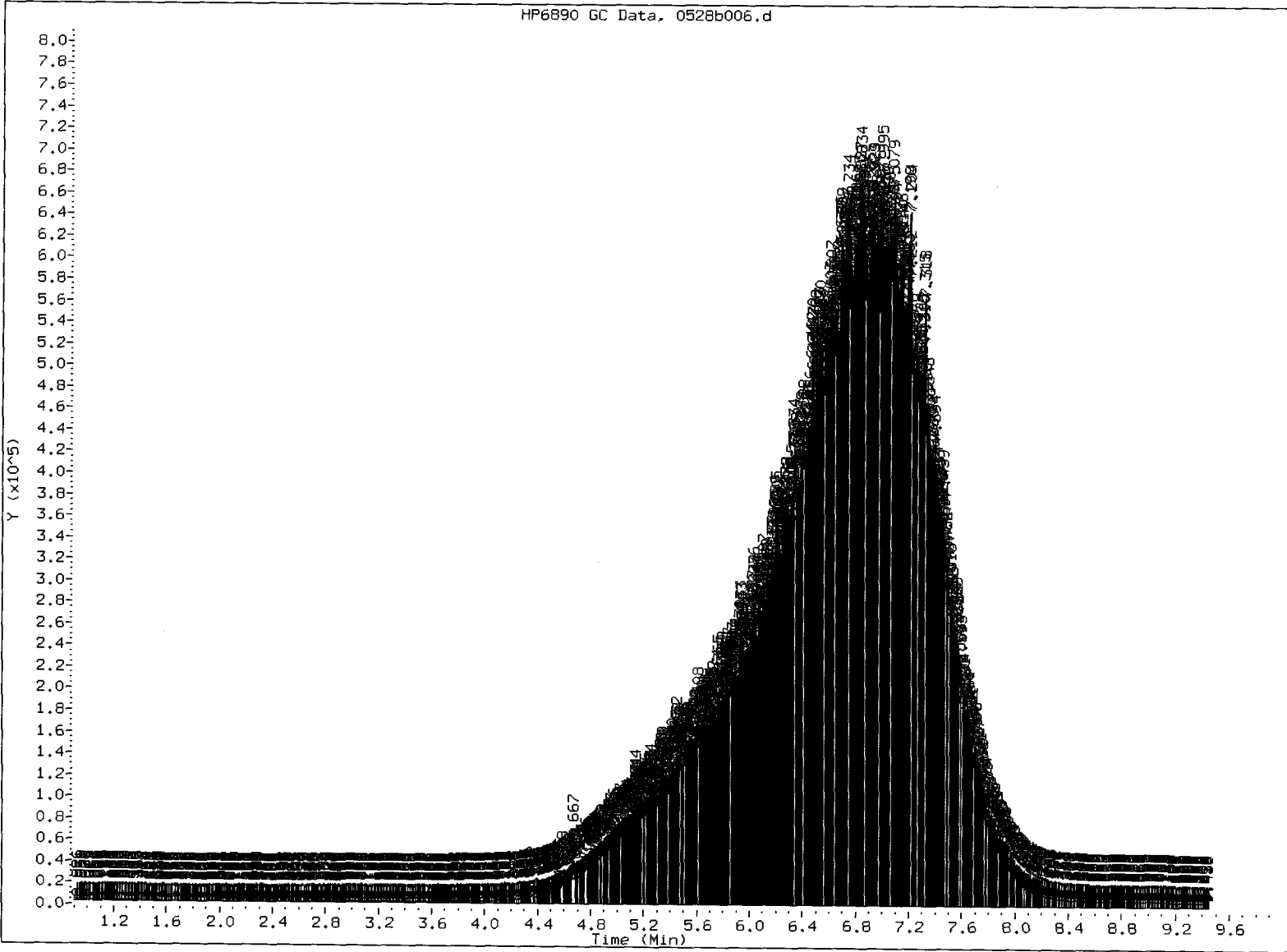
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130528.b/0528b006.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: PC

Date: 5/28/13

PC
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b032.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25M
Client ID: A2-W26-S-4
Injection: 25-MAY-2013 17:57
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		919124	68
C8	0.834	0.007	2200	1183	WATPHD (C12-C24)		352949368	34076.93
C10	2.237	-0.004	7542	8259	WATPHM (C24-C38)		1065665276	107938.63
C12	3.043	-0.003	28260	5571	AK102 (C10-C25)		398336309	32236.39
C14	3.620	-0.002	96062	41650	AK103 (C25-C36)		1007222829	141693.02
C16	4.120	0.001	332298	59408				
C18	4.570	0.001	1367364	319733				
C20	4.991	0.002	3145243	1119148				
C22	5.385	0.004	5346284	1553200	MSPiRIT (Tol-C12)		919124	66.90
C24	5.757	0.005	8615996	5277114				
C25	5.926	0.000	11069799	3961057				
C26	6.097	-0.001	14037797	3596906				
C28	6.416	0.003	18228833	4586924				
C32	6.960	0.006	6643142	3965327				
C34	7.185	-0.003	2077208	481617				
Filter Peak	----							
C36	7.408	0.001	1264985	551608				
o-terph	----				JET-A (C10-C18)		32456684	2998.54
Triacon Surr	----							

Range Times: NW Diesel (3.096 - 5.802) NW Gas (0.603 - 3.096) NW M.Oil (5.802 - 7.657)
AK102 (2.192 - 5.876) AK103 (5.876 - 7.457) Jet A (2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

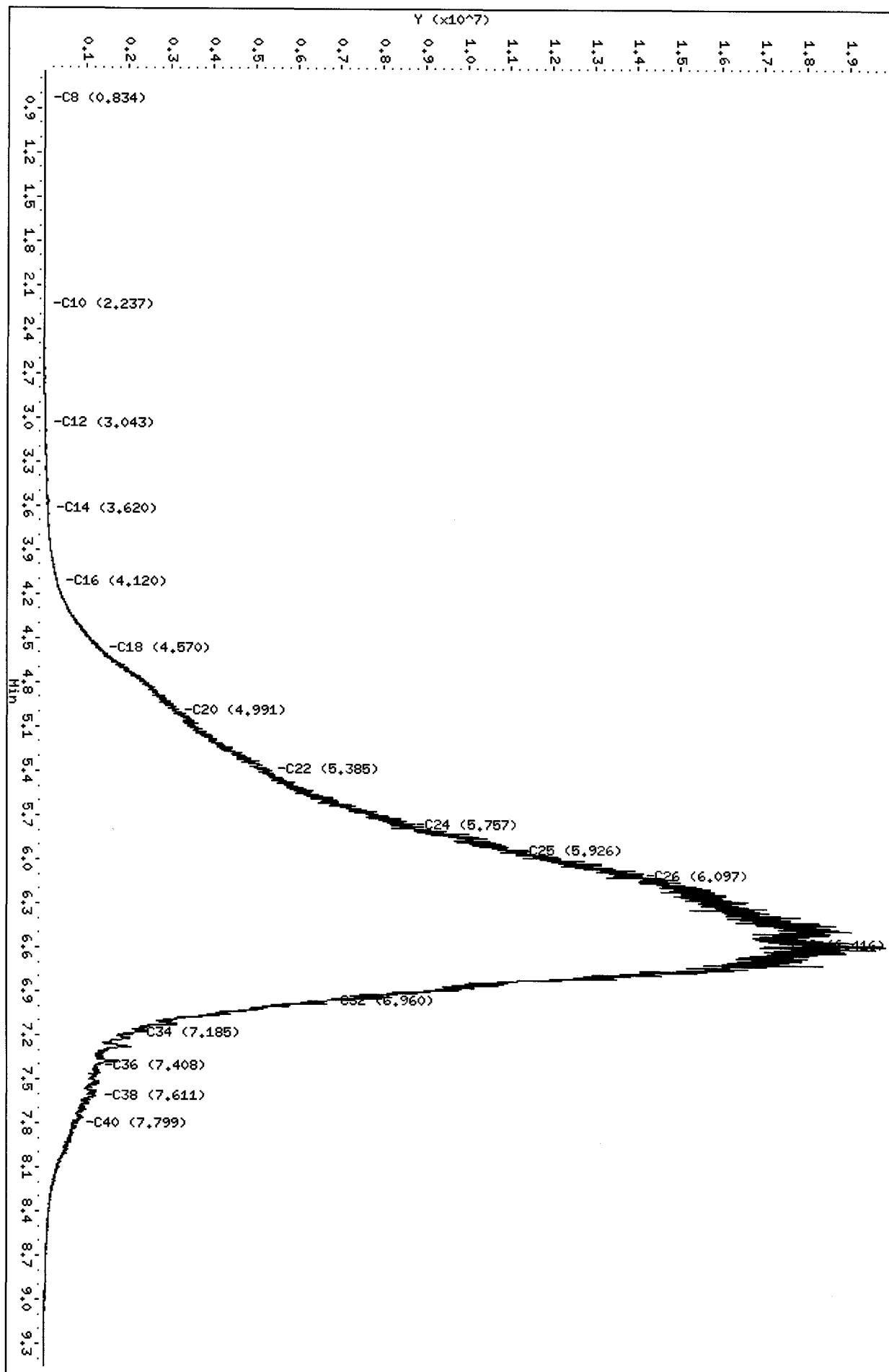
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Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b032.d
Date: 25-MAY-2013 17:57
Client ID: A2-M26-S-4
Sample Info: MR25H
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b032.d



Analytical Resources Inc.
TPH Quantitation Report

PC
5/28/13

Data file: /chem3/fid3b.i/20130528.b/0528b015.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/PC
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25M
Client ID: A2-W26-S-4
Injection: 28-MAY-2013 13:26
Dilution Factor: 200

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	48712	4
C8	0.836	0.013	2036	1902	WATPHD	(C12-C24)	2127606	205.42
C10	2.235	-0.005	380	350	WATPHM	(C24-C38)	11407837	1155.47
C12	3.034	-0.008	823	1046	AK102	(C10-C25)	2396041	193.91
C14	3.617	-0.003	964	552	AK103	(C25-C36)	10315570	1451.16
C16	4.115	-0.001	2176	590				
C18	4.562	0.000	8637	2623				
C20	4.983	0.002	17692	3800				
C22	5.379	0.000	28586	9833	MSPiRIT	(Tol-C12)	48712	3.55
C24	5.748	0.002	58117	18798				
C25	5.919	-0.002	81411	60320				
C26	6.095	-0.002	95867	27880				
C28	6.406	-0.002	139041	60101				
C32	6.951	-0.002	119569	59143				
C34	7.184	-0.001	158229	127353				
Filter Peak	----							
C36	7.406	0.002	89580	19213				
o-terph	----				JET-A	(C10-C18)	237744	21.96
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

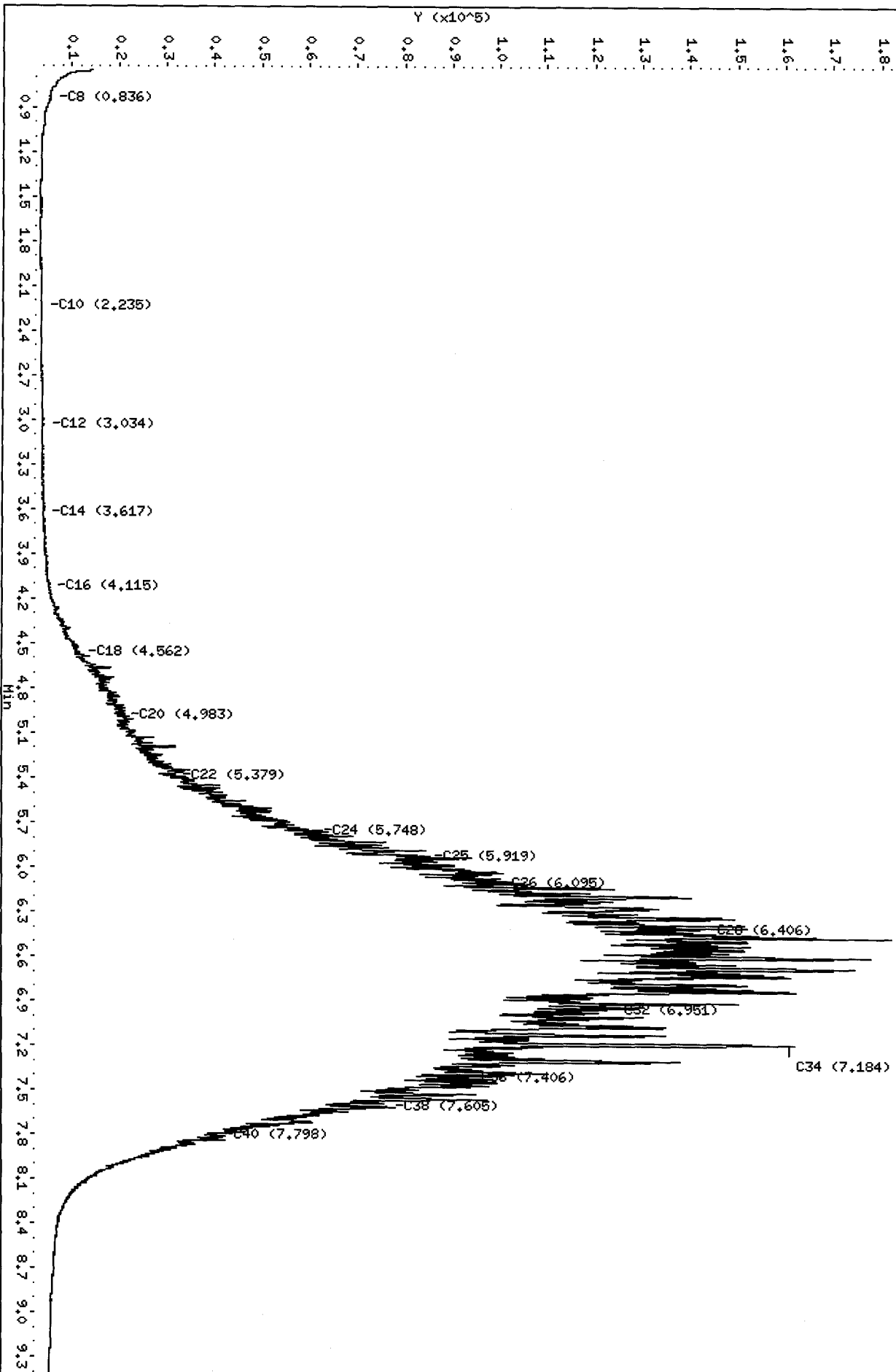
Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0 <i>D</i>
Triacontane	0	0.0	0.0 <i>D</i>

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130528.b/0528b015.d
Date: 28-MAY-2013 13:26
Client ID: A2-M26-S-4
Sample Info: MR25H,200
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM/PC
Column diameter: 0.25

/chem3/fid3b.i/20130528.b/0528b015.d



5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b033.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25N
Client ID: A2-W27-S-4
Injection: 25-MAY-2013 18:16
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		239251	18
C8	0.826	0.000	2768	5108	WATPHD (C12-C24)		120452078	11629.53
C10	2.243	0.001	2356	2479	WATPHM (C24-C38)		596144394	60382.01
C12	3.046	0.001	8176	11608	AK102 (C10-C25)		137944011	11163.47 M
C14	3.624	0.002	35518	21599	AK103 (C25-C36)		567573277	79844.47
C16	4.120	0.001	148643	43493				
C18	4.568	0.000	350174	130999				
C20	4.987	-0.001	829635	819246				
C22	5.382	0.001	1866758	624911	MSPIRIT (Tol-C12)		239251	17.41
C24	5.749	-0.003	3599785	1038742				
C25	5.927	0.001	4520560	1247686				
C26	6.095	-0.004	5531220	2897351				
C28	6.413	0.000	7703753	1635644				
C32	6.957	0.003	8540221	6357401				
C34	7.190	0.002	3874188	3268475				
Filter Peak	----							
C36	7.403	-0.003	1439406	328547				
o-terph	4.689	0.013	787792	479104	JET-A (C10-C18)		10146720	937.41
Triacon Surr	----							

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	479104	35.6	79.2
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b033.d

Date: 25-MAY-2013 18:16

Client ID: A2-M27-S-4

Sample Info: MR25N

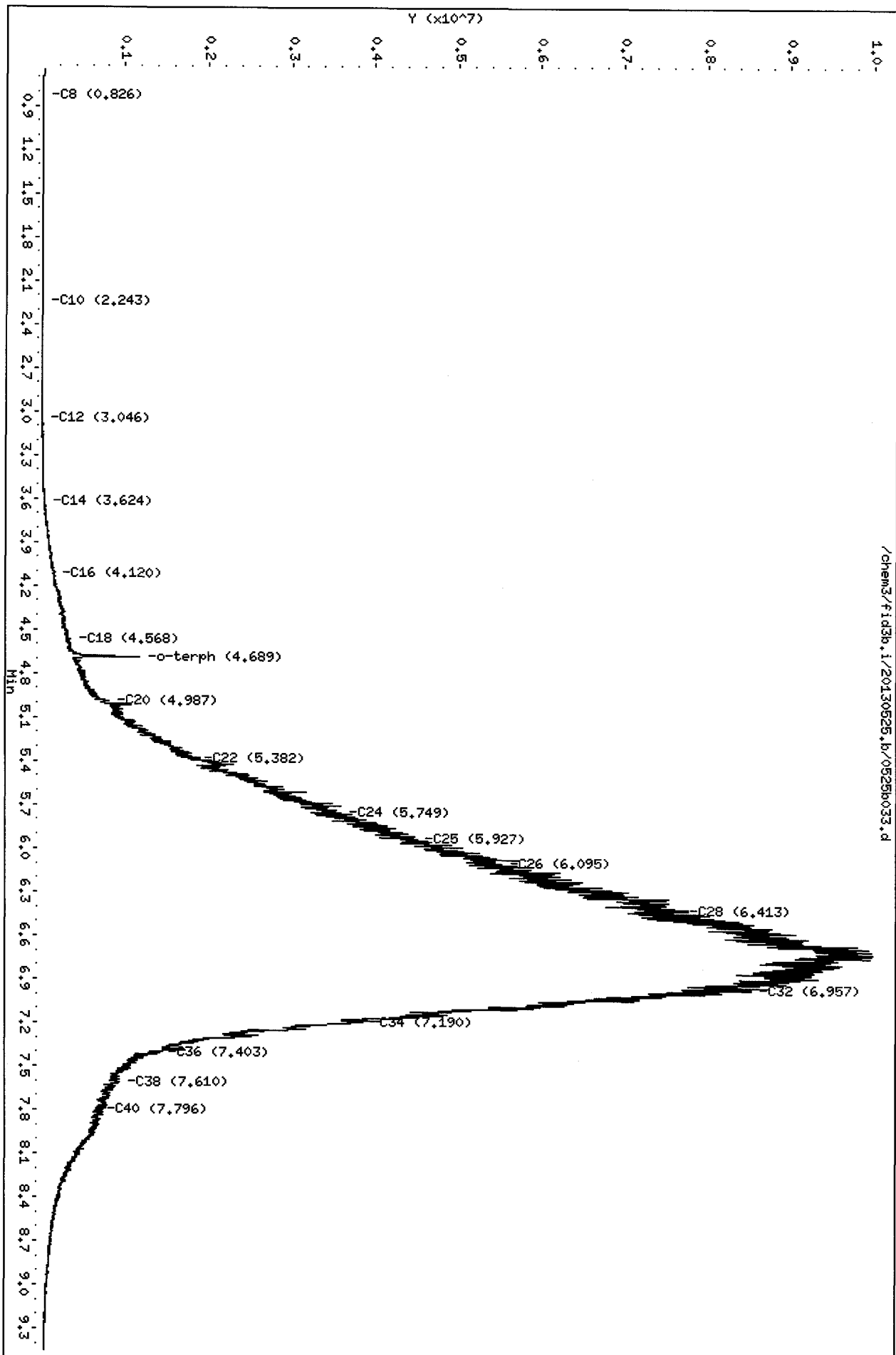
Column phase: RTX-1

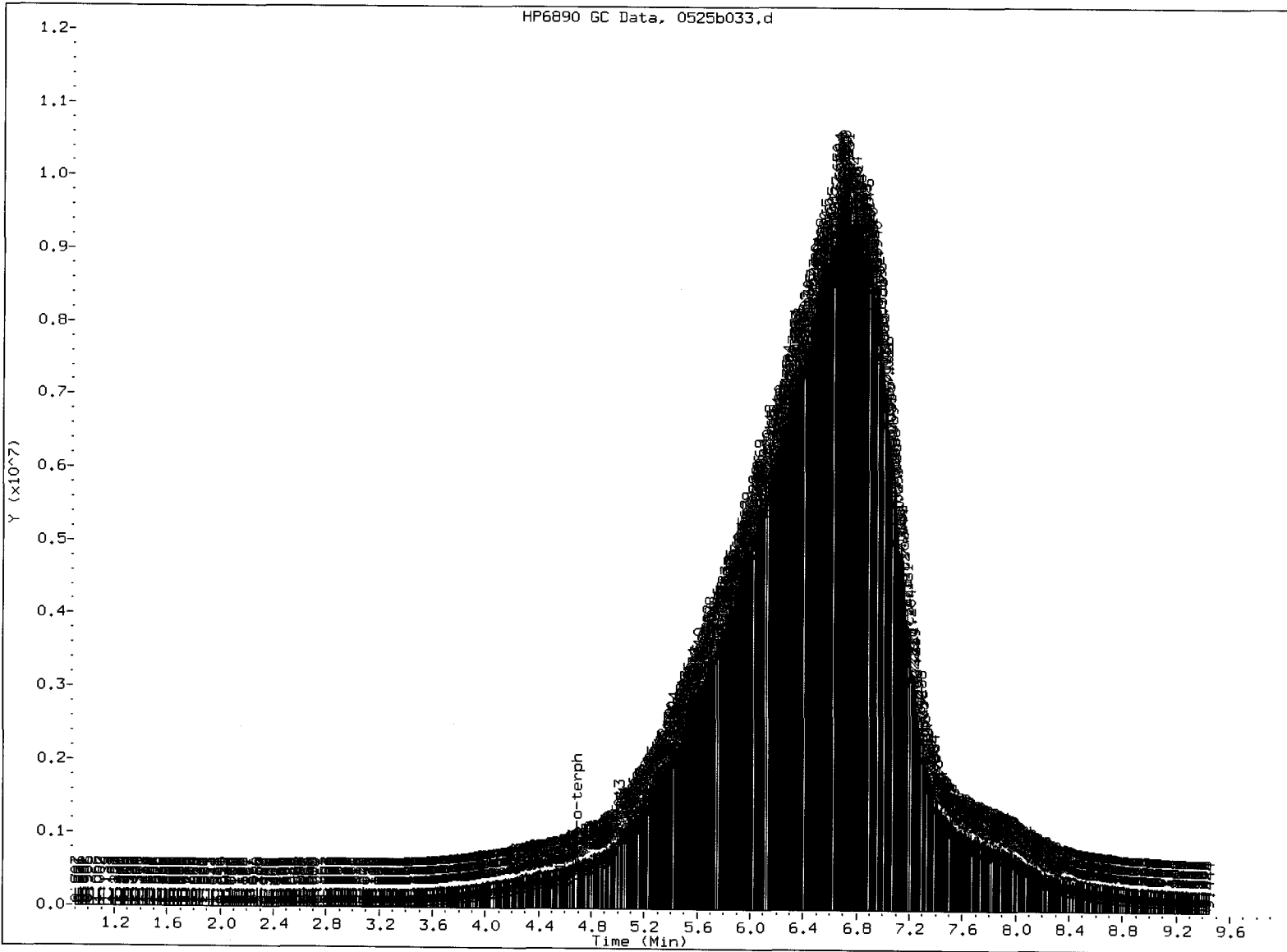
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b033.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: pl

Date: 5/28/83

MAC
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130528.b/0528b016.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/PC
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25N
Client ID: A2-W27-S-4
Injection: 28-MAY-2013 13:46
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	37811	3
C8	0.822	0.000	2316	1521	WATPHD	(C12-C24)	1318715	127.32
C10	2.238	-0.002	157	170	WATPHM	(C24-C38)	12977921	1314.50
C12	3.049	0.007	165	46	AK102	(C10-C25)	1536146	124.32
C14	3.620	0.000	352	148	AK103	(C25-C36)	11279331	1586.74
C16	4.112	-0.003	1337	482				
C18	4.560	-0.001	3078	603				
C20	4.980	0.000	8439	4439				
C22	5.378	-0.001	19769	3119	MSPiRIT	(Tol-C12)	37811	2.75
C24	5.748	0.003	42330	19296				
C25	5.919	-0.001	58644	13631				
C26	6.098	0.002	76168	30418				
C28	6.409	0.001	109133	27760				
C32	6.953	0.001	154916	57620				
C34	7.187	0.003	181735	107730				
Filter Peak	----							
C36	7.404	-0.001	145133	95458				
o-terph	----				JET-A	(C10-C18)	102332	9.45
Triacon Surr	----							

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

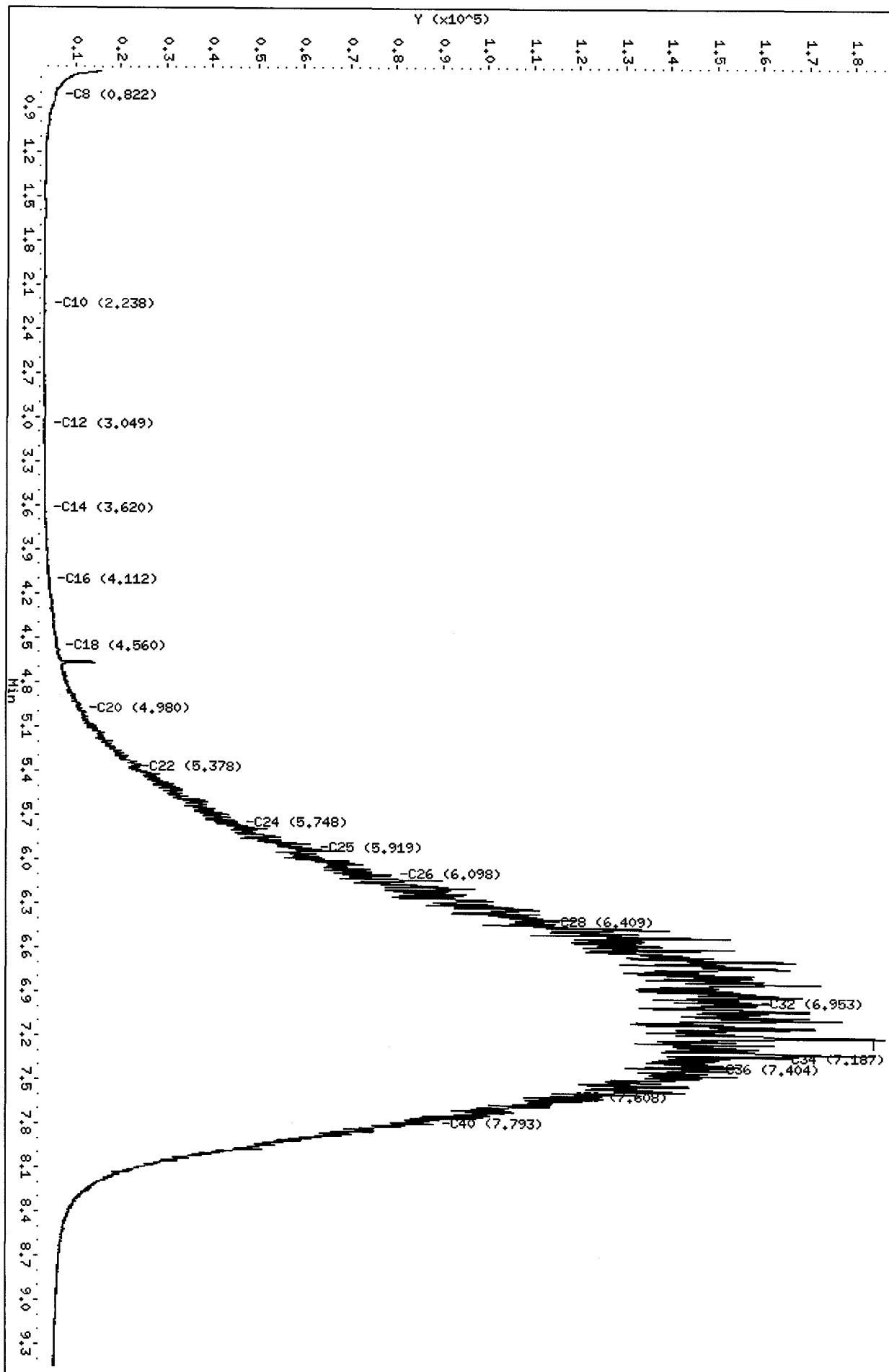
Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130528.b/0528b016.d
Date: 28-MAY-2013 13:46
Client ID: R2-M27-S-4
Sample Info: MR25N.100
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM/PC
Column diameter: 0.25

/chem3/fid3b.i/20130528.b/0528b016.d



Analytical Resources Inc.
TPH Quantitation Report

RC
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b034.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR250
Client ID: A2-W22-S-4
Injection: 25-MAY-2013 18:35
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		171328	13
C8	0.835	0.008	4177	9235	WATPHD (C12-C24)		27060558	2612.67
C10	2.248	0.006	1823	1540	WATPHM (C24-C38)		128015287	12966.36
C12	3.047	0.001	4062	4572	AK102 (C10-C25)		30795273	2492.19 M
C14	3.626	0.004	8804	8588	AK103 (C25-C36)		115119954	16194.72
C16	4.121	0.002	35113	9586				
C18	4.574	0.005	111951	104771				
C20	4.985	-0.004	191597	162927				
C22	5.380	-0.002	420051	205046	MSPIRIT (Tol-C12)		171328	12.47
C24	5.751	-0.001	669349	274176				
C25	5.928	0.002	862134	351496				
C26	6.101	0.002	1085200	359884				
C28	6.413	0.000	1439077	468977				
C32	6.956	0.002	1277600	387140				
C34	7.186	-0.002	1074785	315421				
Filter Peak	----							
C36	7.408	0.001	967030	267972				
o-terph	4.678	0.002	575542	361758	JET-A (C10-C18)		2851938	263.48
Triacon Surr	----							

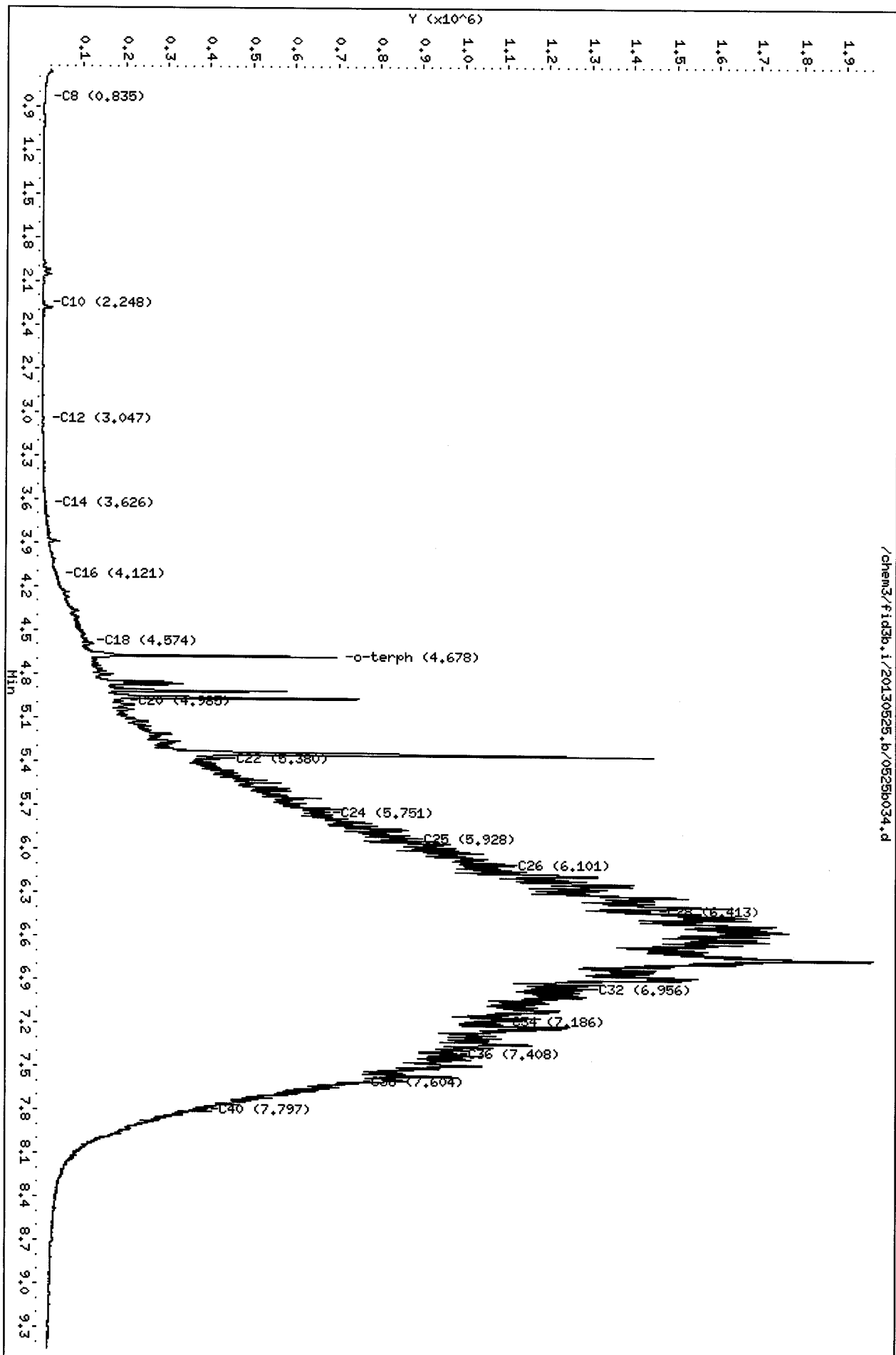
Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	361758	26.9	59.8
Triacontane	0	0.0	0.0

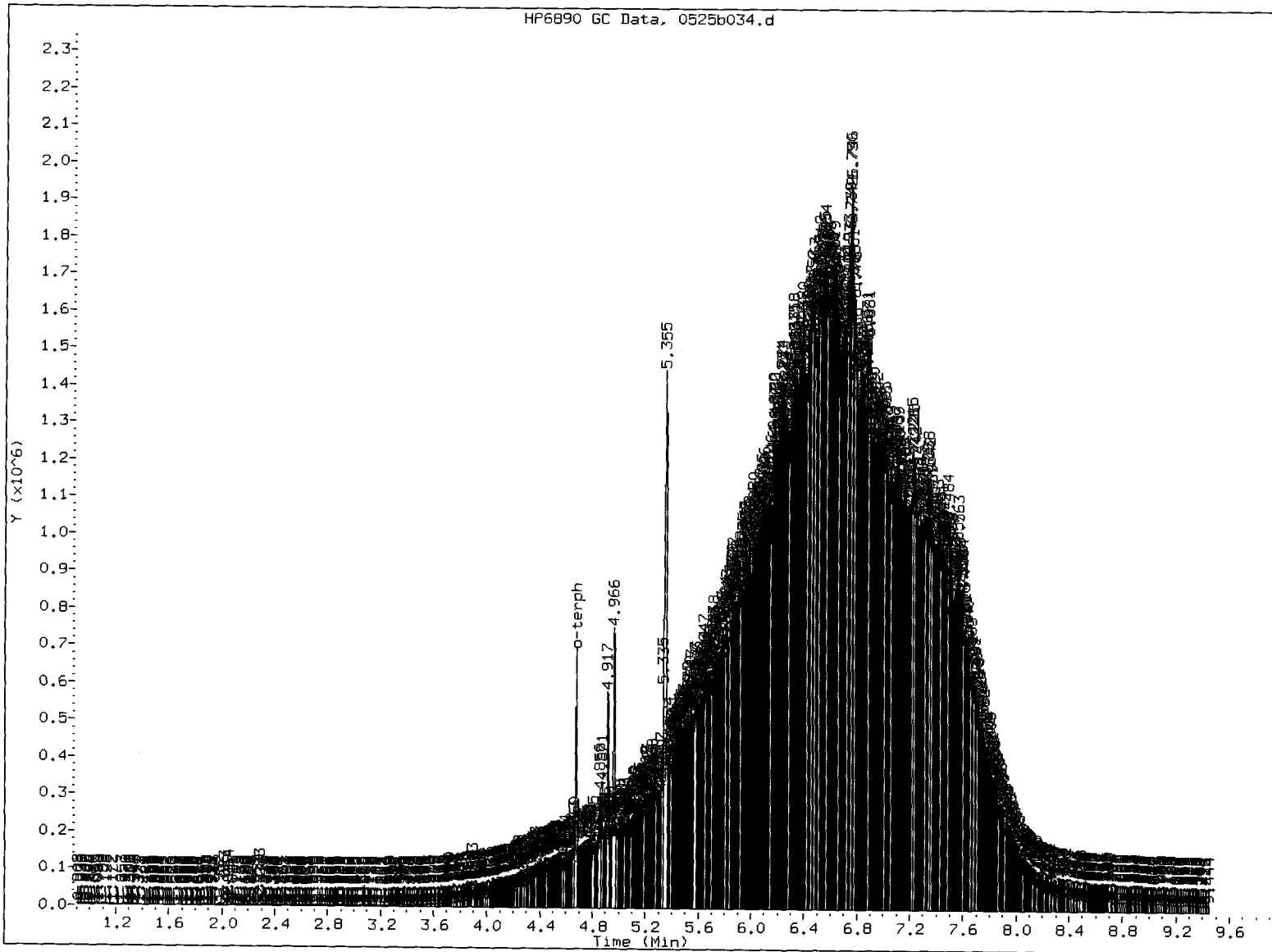
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b034.d
Date : 25-MAY-2013 18:35
Client ID: A2-M22-S-4
Sample Info: MR250
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



/chem3/fid3b.i/20130525.b/0525b034.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: PC

Date: 5-12-83

AC
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130528.b/0528b009.d
Method: /chem3/fid3b.i/20130528.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR250
Client ID: A2-W22-S-4
Injection: 28-MAY-2013 11:16
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	66890	5
C8	0.825	0.002	2622	6437	WATPHD	(C12-C24)	6284457	606.76
C10	2.241	0.001	481	486	WATPHM	(C24-C38)	30699273	3109.45
C12	3.040	-0.002	477	366	AK102	(C10-C25)	7065248	571.77 M
C14	3.621	0.002	1851	943	AK103	(C25-C36)	27524083	3872.00 M
C16	4.116	0.000	8150	3206				
C18	4.559	-0.003	25708	13796				
C20	4.976	-0.004	45507	21669				
C22	5.384	0.005	82296	17610	MSPIRIT	(Tol-C12)	66890	4.87
C24	5.744	-0.001	144375	45161				
C25	5.919	-0.002	192732	94484				
C26	6.098	0.001	256758	109150				
C28	6.404	-0.004	402622	374241				
C32	6.951	-0.001	308205	75922				
C34	7.180	-0.005	274549	162331				
Filter Peak	----							
C36	7.401	-0.004	234889	50363				
o-terph	4.670	-0.002	159050	79024	JET-A	(C10-C18)	660769	61.05
Triacon Surr	6.708	0.003	167629	72673				

Range Times: NW Diesel(3.092 - 5.796) NW Gas(0.601 - 3.092) NW M.Oil(5.796 - 7.657)
AK102(2.190 - 5.871) AK103(5.871 - 7.455) Jet A(2.190 - 4.612)

Surrogate	Area	Amount	%Rec
o-Terphenyl	79024	5.9	65.3
Triacontane	72673	5.6	61.9

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130528.b/0528b009.d

Date: 28-MAY-2013 11:16

Client ID: A2-M22-S-4

Sample Info: MR250.5

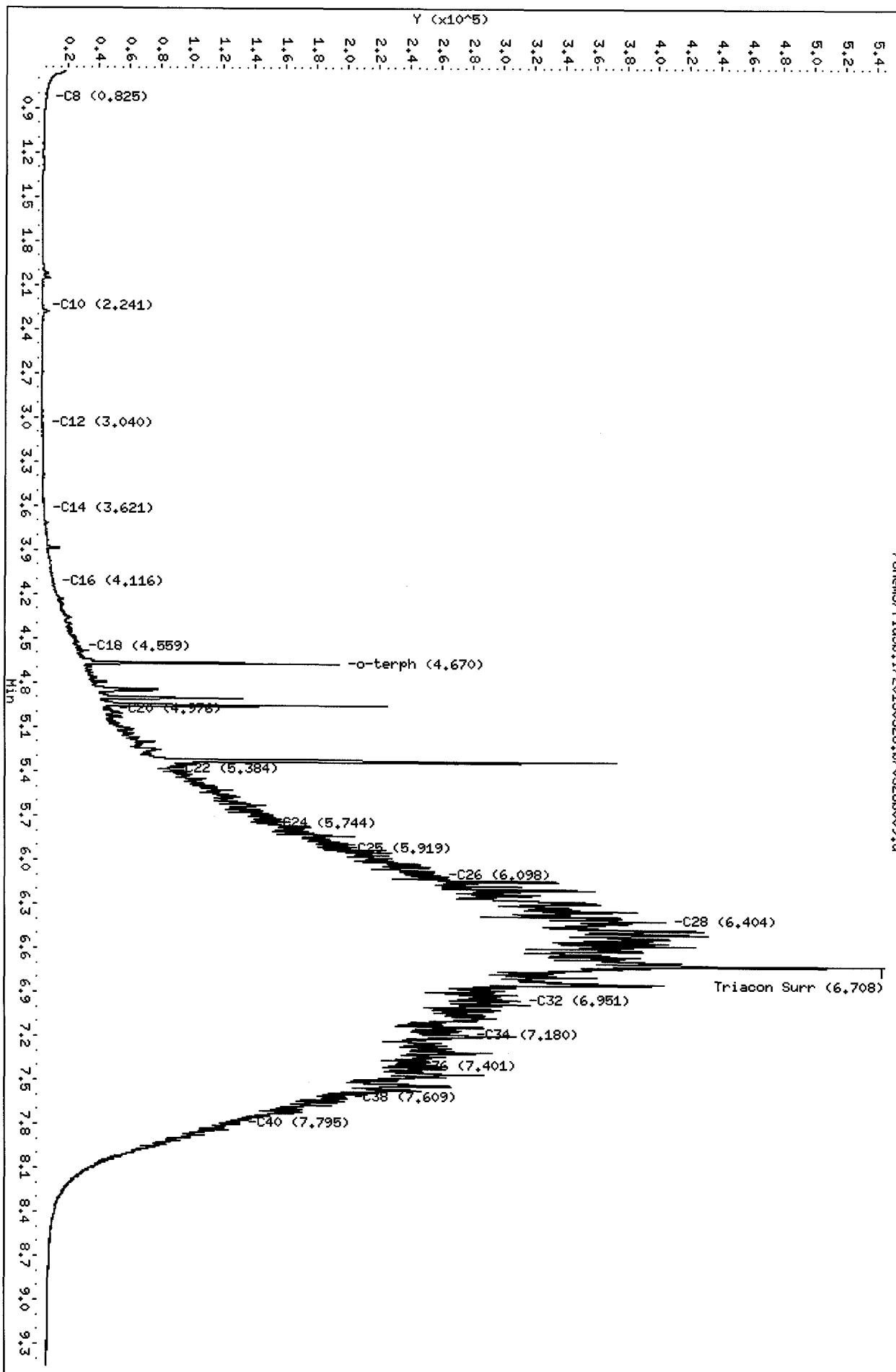
Column phase: RTX-1

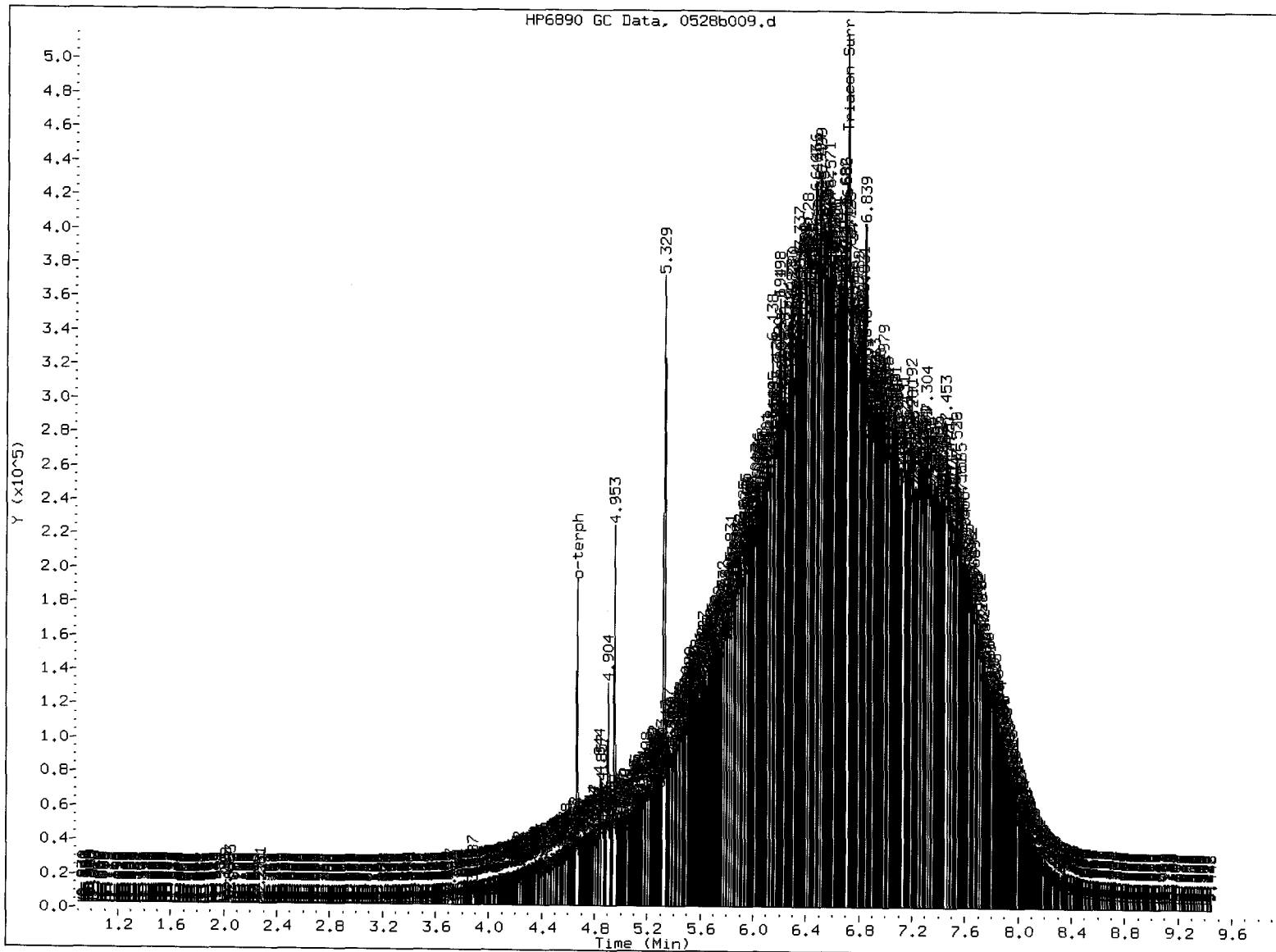
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130528.b/0528b009.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5) Skipped surrogate

Analyst: PC

Date: 5/28/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
SL-W1-S-4	61.6%	0
MB-052413	69.2%	0
LCS-052413	66.9%	0
SL-W2-S-4	NR	0
SL-W2-S-4 DL	D	0
SL-W2-S-4 MS	NR	0
SL-W2-S-4 MSD	NR	0
SL-W3-S-4	62.1%	0
SL-W4-S-4	NR	0
SL-W4-S-4 DL	D	0
SL-W5-S-4	65.4%	0
SL-W6-S-4	78.6%	0
A2-W19-S-4	57.0%	0
A2-W20-S-4	76.1%	0
A2-W21-S-4	66.8%	0
A2-W23-S-4	69.1%	0
A2-W24-S-4	64.9%	0
A2-W25-S-4	84.0%	0
A2-W25-S-4 DL	D	0
A2-W26-S-4	NR	0
A2-W26-S-4 DL	D	0
A2-W27-S-4	79.2%	0
A2-W27-S-4 DL	D	0
A2-W22-S-4	59.8%	0
A2-W22-S-4 DL	65.3%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11183 to 13-11197

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: SL-W2-S-4

Page 1 of 1

MS/MSD

Lab Sample ID: WR25B


QC Report No: WR25-Maul Foster & Alongi, Inc

LIMS ID: 13-11184

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: 

Date Sampled: 05/22/13

Reported: 05/28/13

Date Received: 05/24/13

Date Extracted MS/MSD: 05/24/13

Sample Amount MS: 8.85 g-dry-wt

MSD: 8.86 g-dry-wt

Date Analyzed MS: 05/25/13 12:47

Final Extract Volume MS: 1.0 mL

MSD: 05/25/13 13:07

MSD: 1.0 mL

Instrument/Analyst MS: FID/PKC

Dilution Factor MS: 1.0

MSD: FID/PKC

MSD: 1.0

Percent Moisture: 11.7%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	2200	2170	169	NA	2230	169	NA	2.7%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	NR	NR

Results reported in mg/kg

NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.

RPD calculated using sample concentrations per SW846.

PC
5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b016.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25BMS
Client ID: SL-W2-S-4 MS
Injection: 25-MAY-2013 12:47
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3941083	292
C8	0.814	-0.012	7027	7498	WATPHD (C12-C24)		198693258	19183.64
C10	2.244	0.003	50974	61701	WATPHM (C24-C38)		535346357	54223.92
C12	3.051	0.005	141487	161619	AK102 (C10-C25)		223264813	18068.28
C14	3.619	-0.003	208020	118727	AK103 (C25-C36)		507894961	71449.10
C16	4.115	-0.004	377948	184837				
C18	4.567	-0.002	751129	207857				
C20	4.987	-0.002	1573230	427590				
C22	5.383	0.002	2931924	1129633	MSPIRIT (Tol-C12)		3941083	286.86
C24	5.753	0.001	4580635	1505821				
C25	5.925	-0.001	5182452	1120432				
C26	6.102	0.003	5951676	940441				
C28	6.409	-0.003	7429058	2013918				
C32	6.953	0.000	5479672	746631				
C34	7.189	0.001	3072022	1518460				
Filter Peak	----							
C36	7.405	-0.002	1218210	324942				
o-terph	----				JET-A (C10-C18)		30591554	2826.23
Triacon Surr	----							

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b016.d

Date: 25-MAY-2013 12:47

Client ID: SL-M2-S-4 MS

Sample Info: MR25BMS

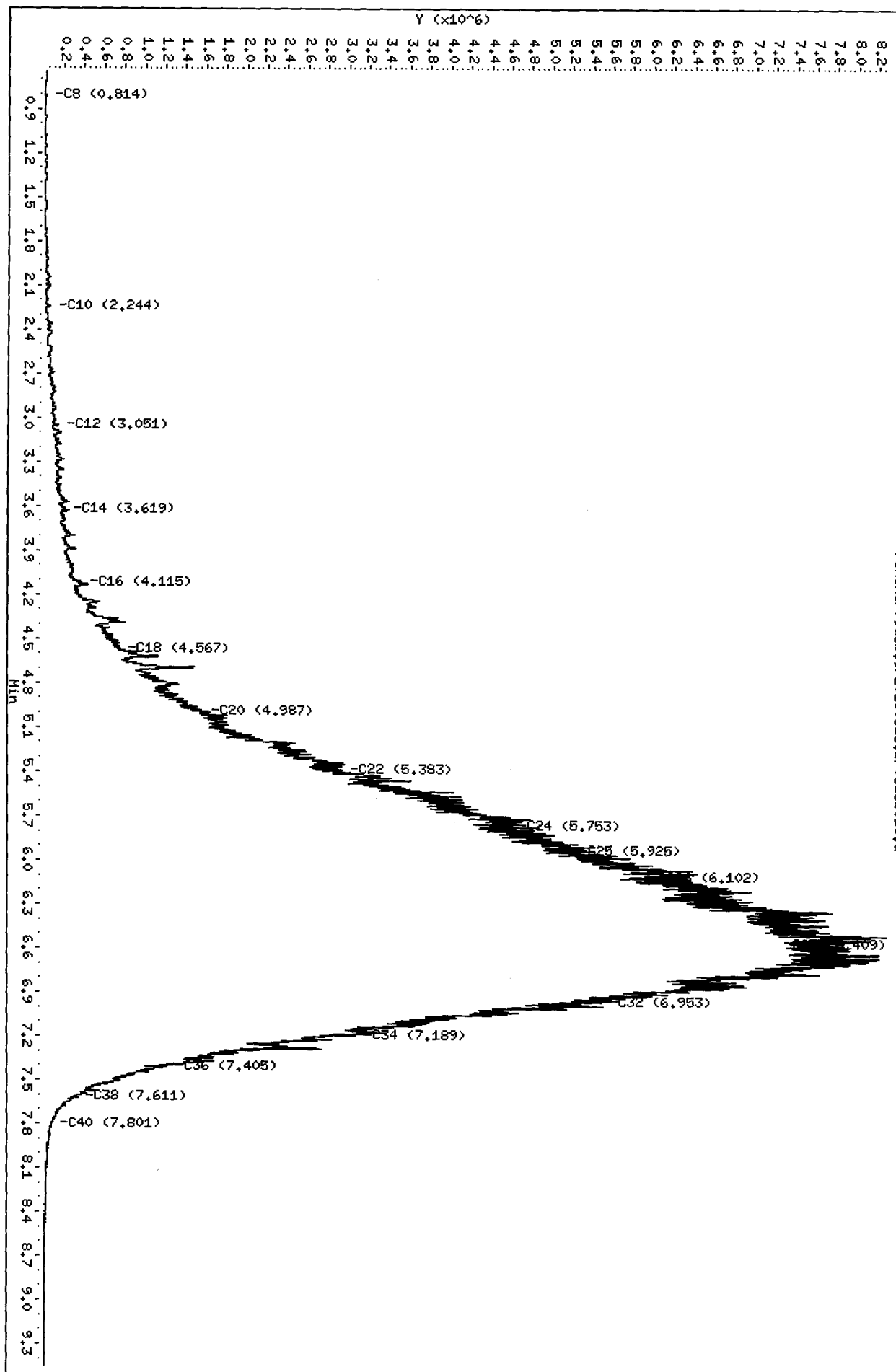
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b016.d



Analytical Resources Inc.
TPH Quantitation Report

AC
5/28/13

Data file: /chem3/fid3b.i/20130525.b/0525b017.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/28/2013
Macro: FID:3B052113

ARI ID: WR25BMSD
Client ID: SL-W2-S-4 MSD
Injection: 25-MAY-2013 13:07
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3670406	272
C8	0.814	-0.012	7444	12746	WATPHD (C12-C24)		205034639	19795.90
C10	2.244	0.003	55511	39575	WATPHM (C24-C38)		544550687	55156.21
C12	3.045	-0.001	113729	60798	AK102 (C10-C25)		231088562	18701.43
C14	3.618	-0.004	211293	110447	AK103 (C25-C36)		515907118	72576.23
C16	4.116	-0.003	361547	195450				
C18	4.571	0.003	822533	218362				
C20	4.986	-0.003	1599180	375038				
C22	5.379	-0.002	2889355	1009958	MSPIRIT (Tol-C12)		3670406	267.16
C24	5.754	0.003	4934809	2242918				
C25	5.927	0.001	5304196	737557				
C26	6.100	0.002	6522286	3146518				
C28	6.412	0.000	7526982	4087602				
C32	6.950	-0.004	5587832	1527606				
C34	7.186	-0.002	3116627	1058152				
Filter Peak	----							
C36	7.409	0.003	1062602	415527				
o-terph	----				JET-A (C10-C18)		31361537	2897.36
Triacon Surr	----							

75

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b017.d

Date: 25-MAY-2013 13:07

Client ID: SL-W2-S-4 MSD

Sample Info: MR25BMSD

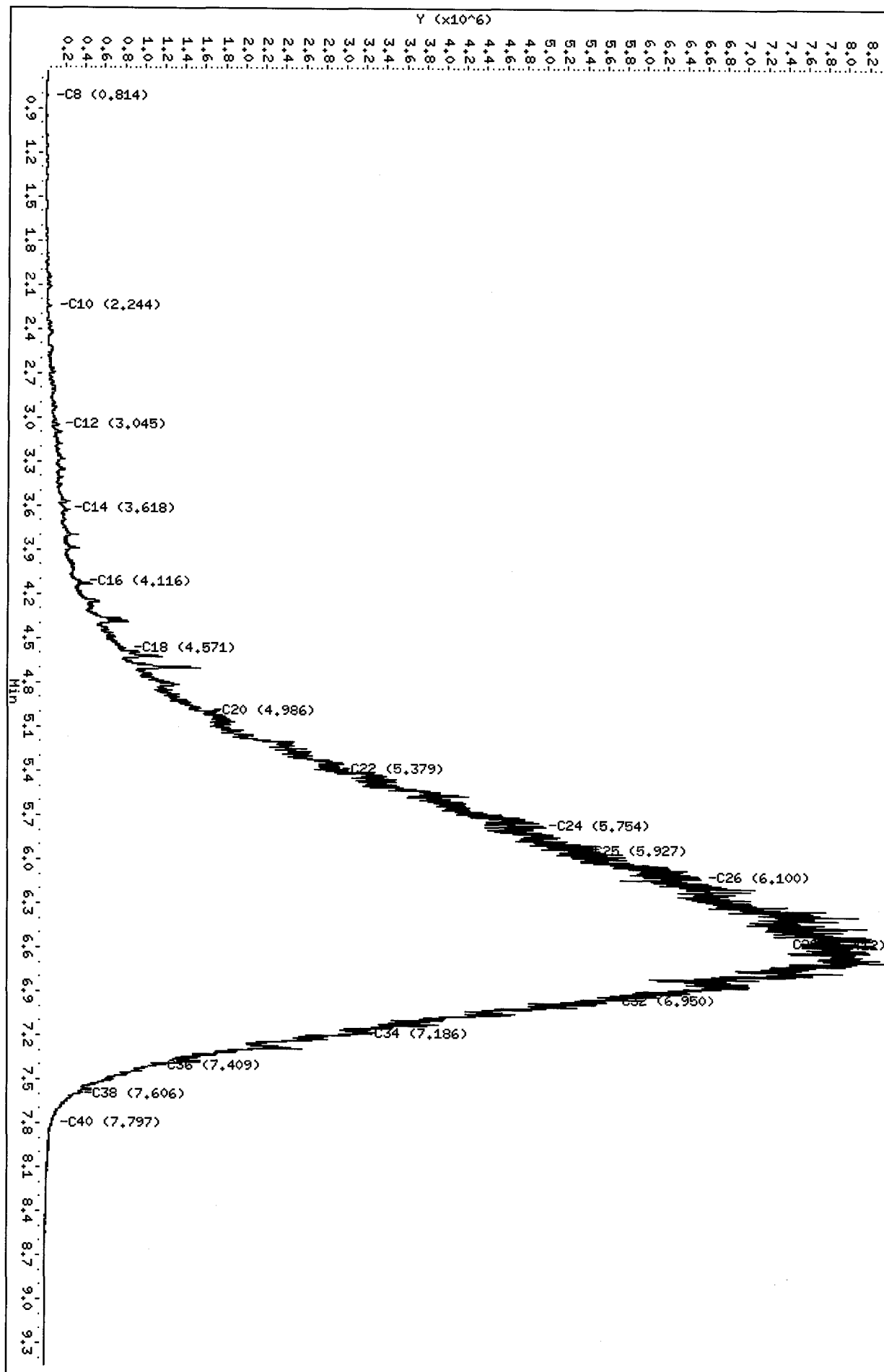
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130525.b/0525b017.d



0525 : 0000

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-052413

Page 1 of 1

LAB CONTROL

Lab Sample ID: LCS-052413

QC Report No: WR25-Maul Foster & Alongi, Inc

LIMS ID: 13-11184

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AS*

Date Sampled: 05/22/13

Reported: 05/28/13

Date Received: 05/24/13

Date Extracted: 05/24/13

Sample Amount: 10.0 g

Date Analyzed: 05/25/13 11:48

Final Extract Volume: 1.0 mL

Instrument/Analyst: FID/VTS

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	112	150	74.7%

TPHD Surrogate Recovery

o-Terphenyl	66.9%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130525.b/0525b013.d
Method: /chem3/fid3b.i/20130525.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/25/2013
Macro: FID:3B052113

ARI ID: WR25LCSS1
Client ID: WR25LCSS1
Injection: 25-MAY-2013 11:48
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	3023397	224
C8	0.836	0.009	10228	14086	WATPHD	(C12-C24)	11645017	1124.32
C10	2.244	0.003	74029	52903	WATPHM	(C24-C38)	281512	28.51
C12	3.046	0.001	125949	138819	AK102	(C10-C25)	13882013	1123.44 M
C14	3.626	0.003	208796	273577	AK103	(C25-C36)	201499	28.35
C16	4.122	0.003	316887	251706				
C18	4.569	0.001	346663	261545				
C20	4.984	-0.005	179512	183989				
C22	5.381	0.000	82026	76220	MSPIRIT	(Tol-C12)	3023397	220.07
C24	5.748	-0.004	27459	18686				
C25	5.922	-0.004	13958	18479				
C26	6.096	-0.002	6449	4955				
C28	6.414	0.001	2588	3197				
C32	6.960	0.007	4318	5818				
C34	7.188	0.000	1335	370				
Filter Peak	----							
C36	7.405	-0.002	2452	1600				
o-terph	4.677	0.001	746774	404644	JET-A	(C10-C18)	10642947	983.26
Triacon Surr	6.702	-0.002	684916	535798				

Range Times: NW Diesel(3.096 - 5.802) NW Gas(0.603 - 3.096) NW M.Oil(5.802 - 7.657)
AK102(2.192 - 5.876) AK103(5.876 - 7.457) Jet A(2.192 - 4.619)

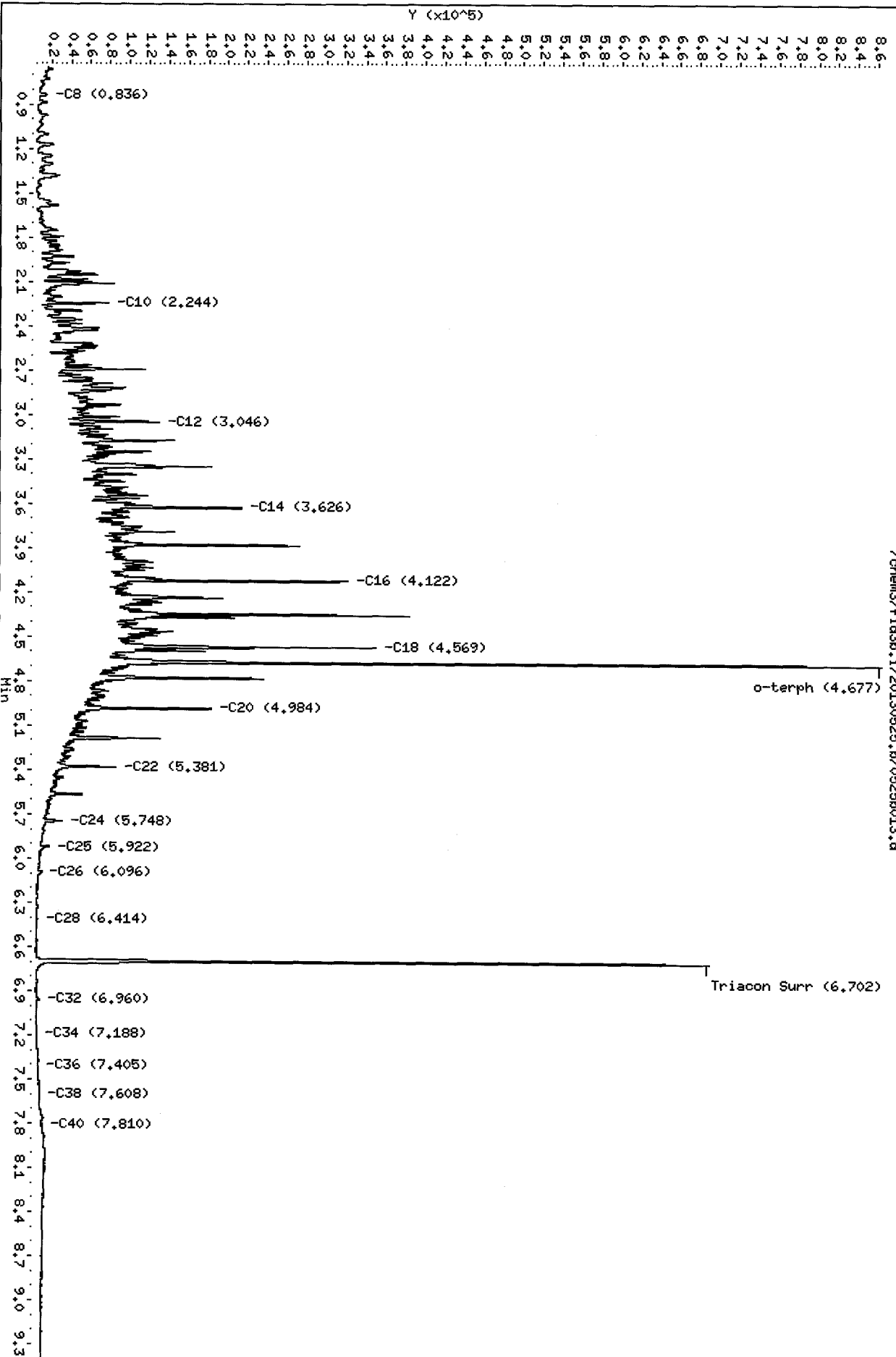
Surrogate	Area	Amount	%Rec
o-Terphenyl	404644	30.1	66.9
Triacontane	535798	41.1	91.3

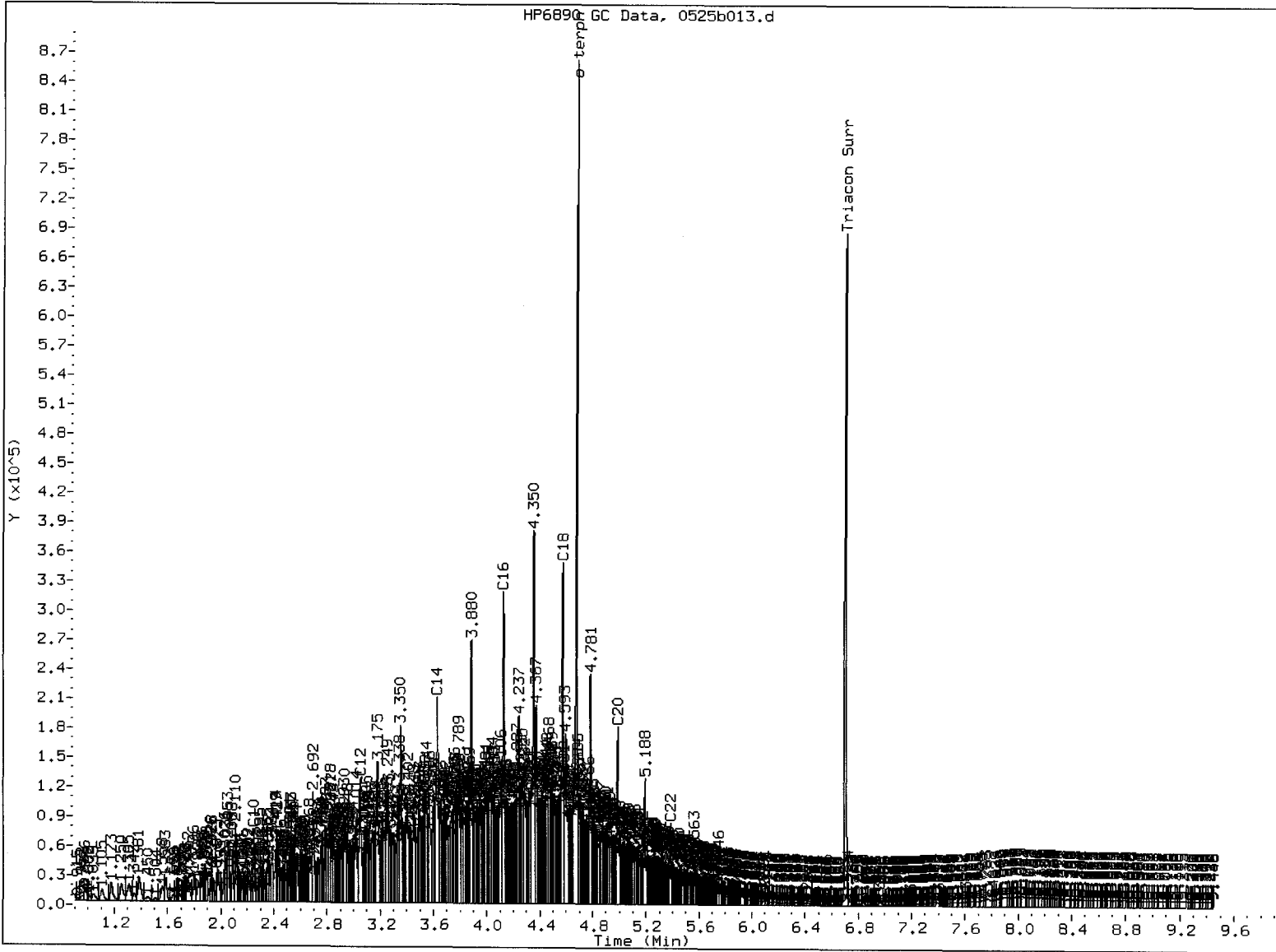
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130525.b/0525b013.d
Date: 25-MAY-2013 11:48
Client ID: MR25LCSS1
Sample Info: MR25LCSS1
Column phase: RTX-1

MR
5.25.13

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: UD

Date: 5.25.13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/24/13

ARI Job: WR25
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11183-WR25A	SL-W1-S-4	5.21 g	1.00 mL	D	05/24/13
13-11184-052413MB1	Method Blank	10.0 g	1.00 mL	-	05/24/13
13-11184-052413LCS1	Lab Control	10.0 g	1.00 mL	-	05/24/13
13-11184-WR25B	SL-W2-S-4	8.89 g	1.00 mL	D	05/24/13
13-11184-WR25BMS	SL-W2-S-4	8.85 g	1.00 mL	D	05/24/13
13-11184-WR25BMSD	SL-W2-S-4	8.86 g	1.00 mL	D	05/24/13
13-11185-WR25C	SL-W3-S-4	5.02 g	1.00 mL	D	05/24/13
13-11186-WR25D	SL-W4-S-4	9.18 g	1.00 mL	D	05/24/13
13-11187-WR25E	SL-W5-S-4	8.54 g	1.00 mL	D	05/24/13
13-11188-WR25F	SL-W6-S-4	8.65 g	1.00 mL	D	05/24/13
13-11189-WR25G	A2-W19-S-4	8.26 g	1.00 mL	D	05/24/13
13-11190-WR25H	A2-W20-S-4	7.46 g	1.00 mL	D	05/24/13
13-11191-WR25I	A2-W21-S-4	9.04 g	1.00 mL	D	05/24/13
13-11192-WR25J	A2-W23-S-4	7.73 g	1.00 mL	D	05/24/13
13-11193-WR25K	A2-W24-S-4	7.60 g	1.00 mL	D	05/24/13
13-11194-WR25L	A2-W25-S-4	8.49 g	1.00 mL	D	05/24/13
13-11195-WR25M	A2-W26-S-4	8.08 g	1.00 mL	D	05/24/13
13-11196-WR25N	A2-W27-S-4	6.61 g	1.00 mL	D	05/24/13
13-11197-WR25O	A2-W22-S-4	7.17 g	1.00 mL	D	05/24/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: SL-W1-S-4
SAMPLE

Lab Sample ID: WR25A

LIMS ID: 13-11183

Matrix: Soil

Data Release Authorized: *mw*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 12:45

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 31 mg-dry-wt

Percent Moisture: 48.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	41	< 41 U
108-88-3	Toluene	41	62
100-41-4	Ethylbenzene	41	< 41 U
179601-23-1	m,p-Xylene	81	< 81 U
95-47-6	o-Xylene	41	< 41 U

Gasoline Range Hydrocarbons 16 < 16 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	97.7%
Bromobenzene	96.3%

Gasoline Surrogate Recovery

Trifluorotoluene	95.0%
Bromobenzene	94.9%

BETX values reported in ug/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

RC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a007.d ARI ID: WR25A
Data file 2: /chem3/pid1.i/20130524-2.b/0524a007.d Client ID: SL-W1-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 12:45
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2812	35886	95.0	TFT(Surr)
15.383	0.002	1885	15700	94.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2822	0.008
8015C 2MP-TMB (4.18 to 16.20)	723723	1532	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	1532	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2822	0.008

M Indicates manual integration within range
* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3150	97.7	TFT(Surr)
15.390	0.003	6959	96.3	BB(Surr)

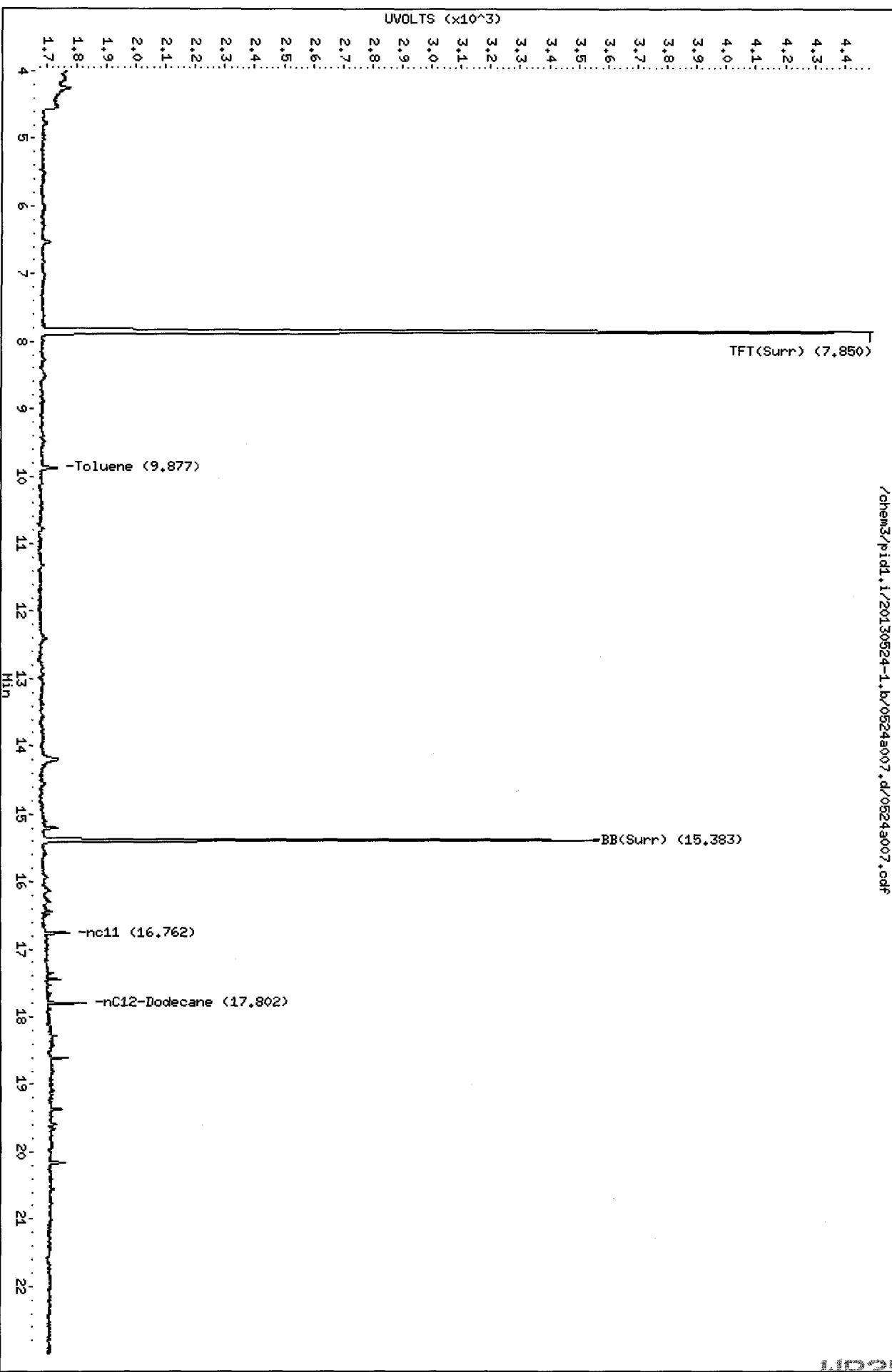
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.002	75	0.38N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd,1/20130524-1.b/05249007.d
Date : 24-May-2013 12:45
Client ID: SL-N1-S-4
Sample Info: MR25A
Column phase: RTX 502-2 FID

Instrument: pidd,1
Operator: PC
Column diameter: 0.18

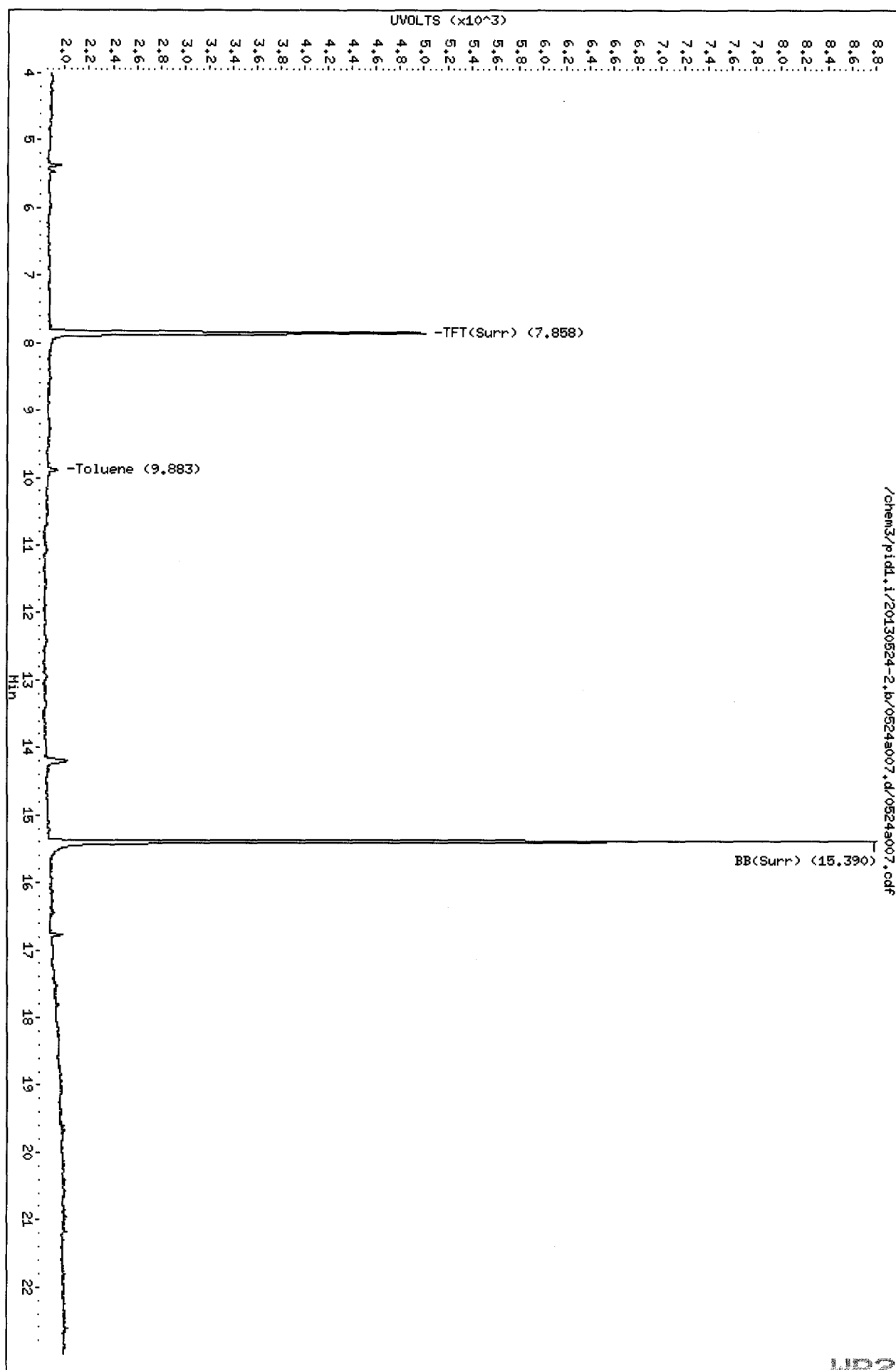


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Data File: /chem3/pid1.i/20130524-2.1b/0524a007.d
Date: 24-MAY-2013 12:45
Client ID: SL-M1-S-4
Sample Info: MR25A
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

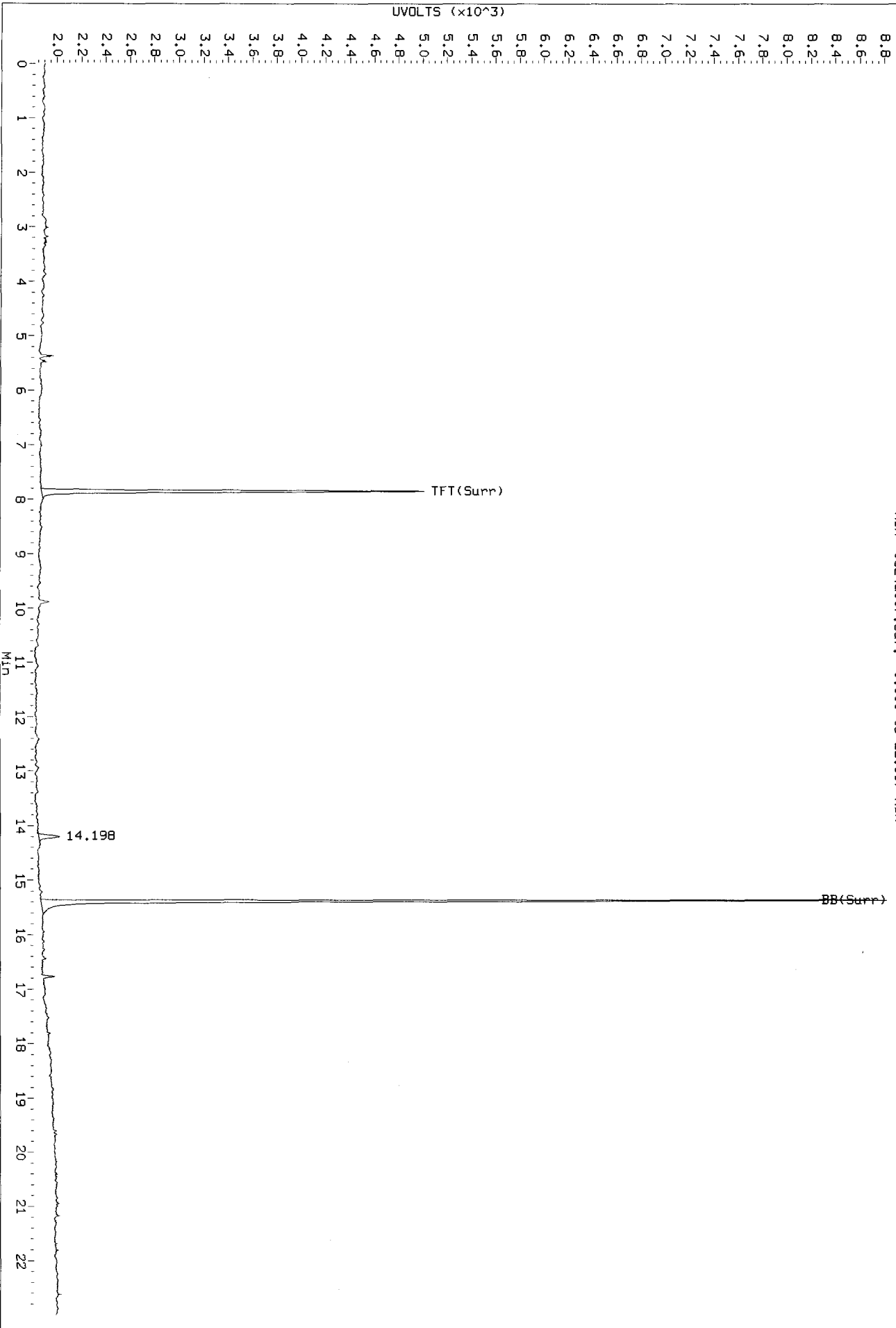
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PL
5/28/15

Data File: /chem3/pid1.1/20130524-2.b/0524a007.d/0524a007.cdf
Injection Date: 24-MAY-2013 12:45
Instrument: pid1.1
Client Sample ID: SL-W1-S-4

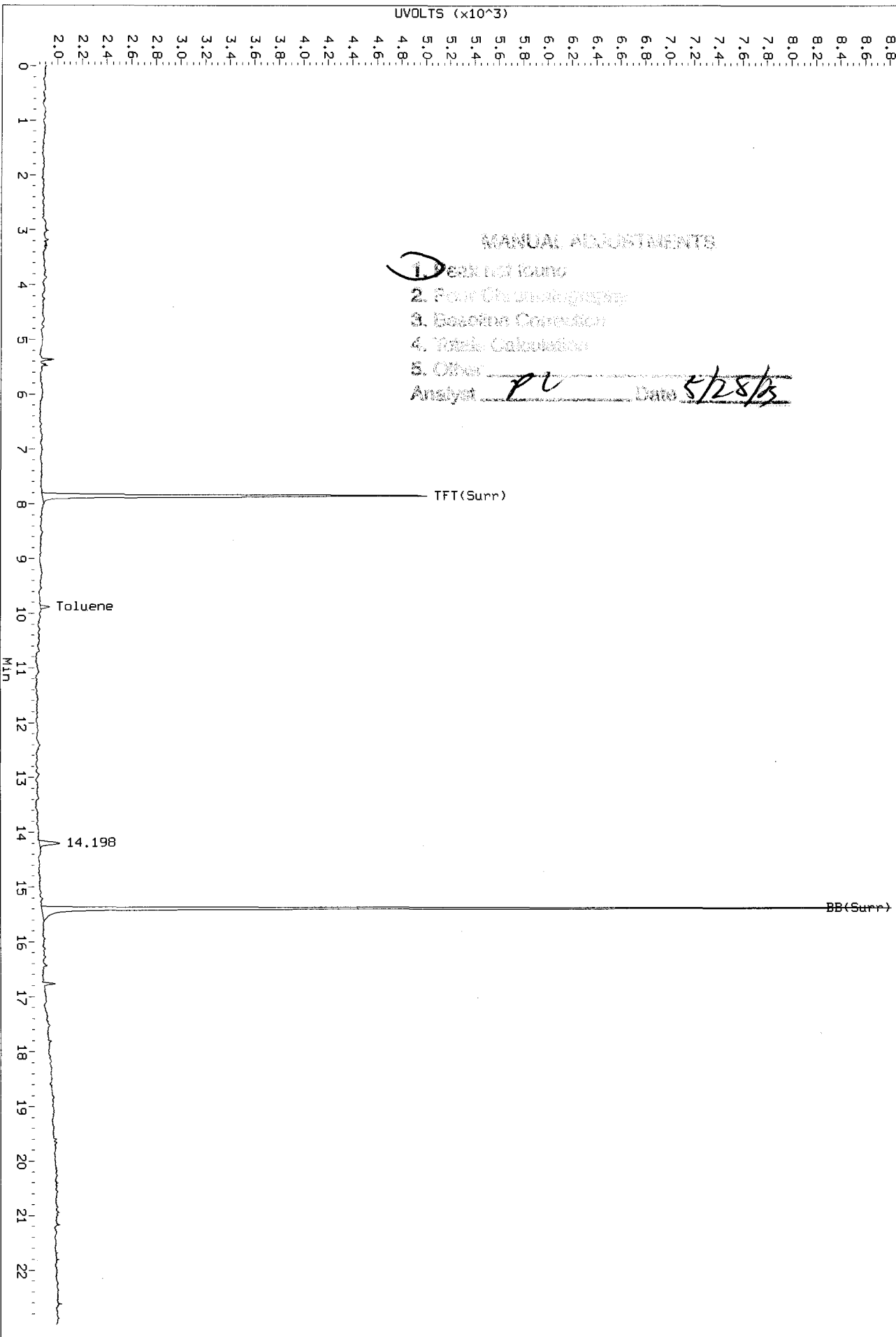
RIH 0524a007.cdf: 0.000 to 22.997 MIN



4025: 00000

Data File: /chem3/pid1.1/20130524-2.b/0524a007.d/0524a007.cdf
Injection Date: 24-MAY-2013 12:45
Instrument: pid1.1
Client Sample ID: SL-W1-S-4

RII 0524a007.cdf: 0.000 to 22.997 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: **SI-W2-S-4**
SAMPLE

Lab Sample ID: WR25B

LIMS ID: 13-11184

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 13:14

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 73 mg-dry-wt

Percent Moisture: 11.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	17
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons **6.8** **67** **GAS ID**
GRO

BETX Surrogate Recovery

Trifluorotoluene	98.4%
Bromobenzene	100%

Gasoline Surrogate Recovery

Trifluorotoluene	96.5%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a008.d ARI ID: WR25B
Data file 2: /chem3/pid1.i/20130524-2.b/0524a008.d Client ID: SL-W2-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 13:14
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.847	-0.001	2855	36534	96.5	TFT(Surr)
15.380	0.000	2015	19485	101.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	233072	0.651 M
8015C 2MP-TMB (4.18 to 16.20)	723723	64588	0.089 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	26485	0.045 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	366741	0.978 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
--	----	-----	----	-----
7.854	-0.001	3171	98.4	TFT(Surr)
15.388	0.000	7265	100.5	BB(Surr)

SW8021 (PID)

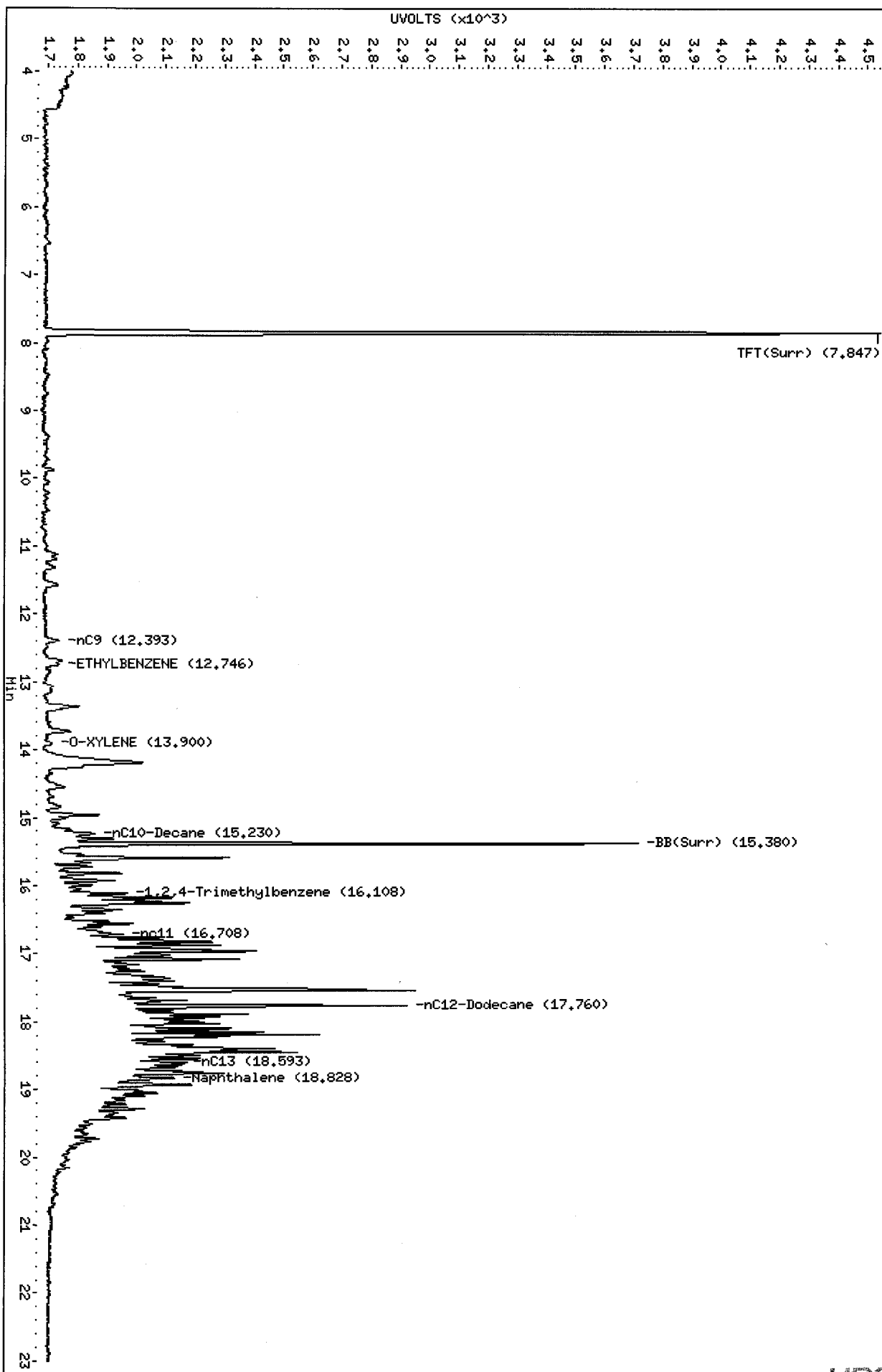
RT	Shift	Response	Amount	Compound
ND	----	----	----	-----
9.880	-0.001	49	0.25N	Benzene
ND	----	----	----	Toluene
ND	----	----	----	Ethylbenzene
ND	----	----	----	M/P-Xylene
ND	----	----	----	O-Xylene
ND	----	----	----	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a008.d
Date: 24-MAY-2013 13:14
Client ID: SL-M2-S-4
Sample Info: MR25B
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130524-1.b/0524a008.d/0524a008.cdf

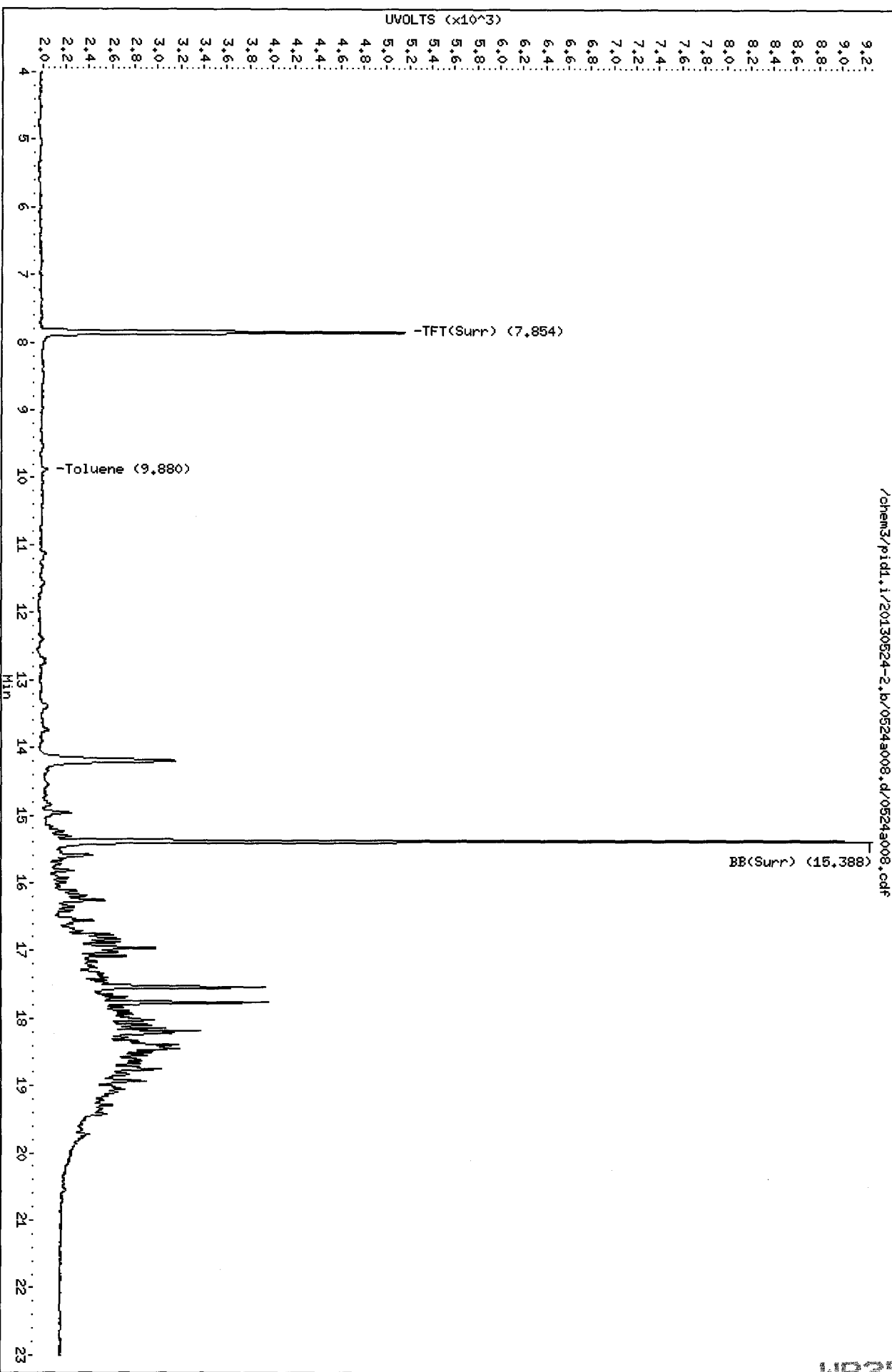


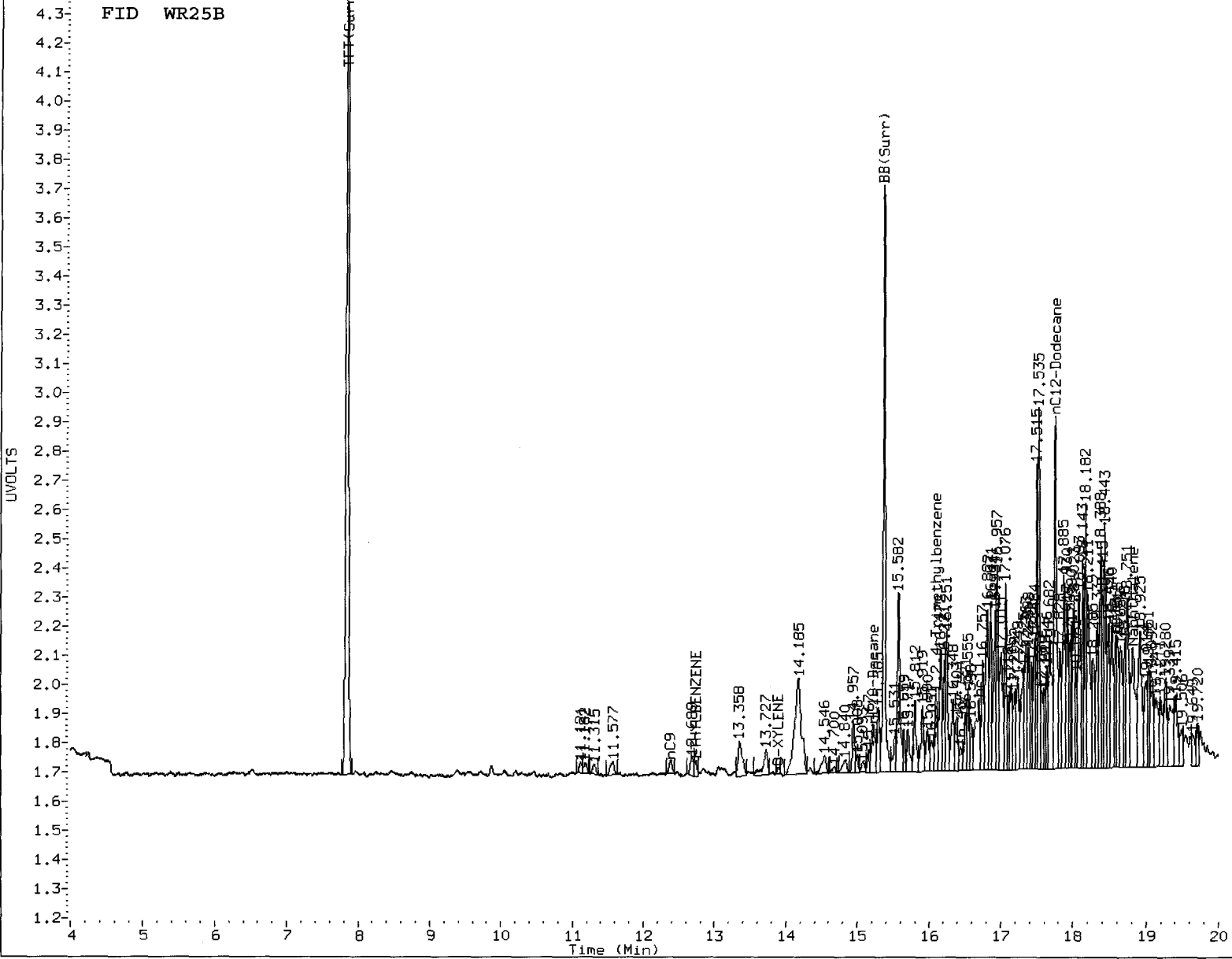
MC
5/28/04

Data File: /chem3/pidl,1/20130524-2.l/0524a008.d
Date: 24-MAY-2013 13:14
Client ID: SL-M2-S-4
Sample Info: MR25B
Column phase: RTX 502-2 PID

Instrument: pidl.i
Operator: PC
Column diameter: 0.18

/chem3/pidl,1/20130524-2.l/0524a008.d/0524a008.cdf





MANUAL INTEGRATION

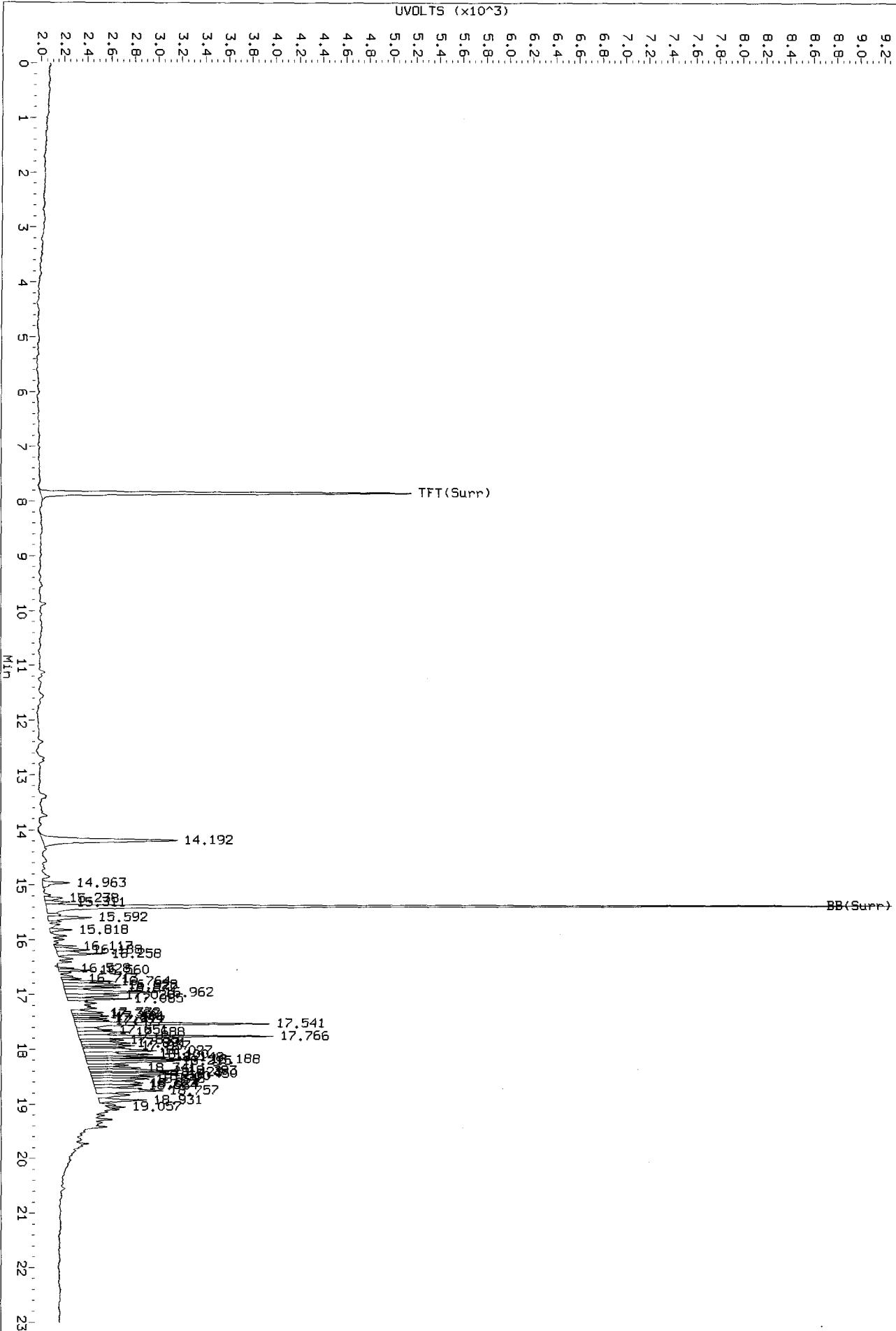
- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: VC

Date: 5/28/13

5/15
Data File: /chem3/pid1.1/20130524-2.1b/05244008.d/05244008.cdf
Injection Date: 24-May-2013 13:14
Instrument: pid1.1
Client Sample ID: SL-W2-S-4

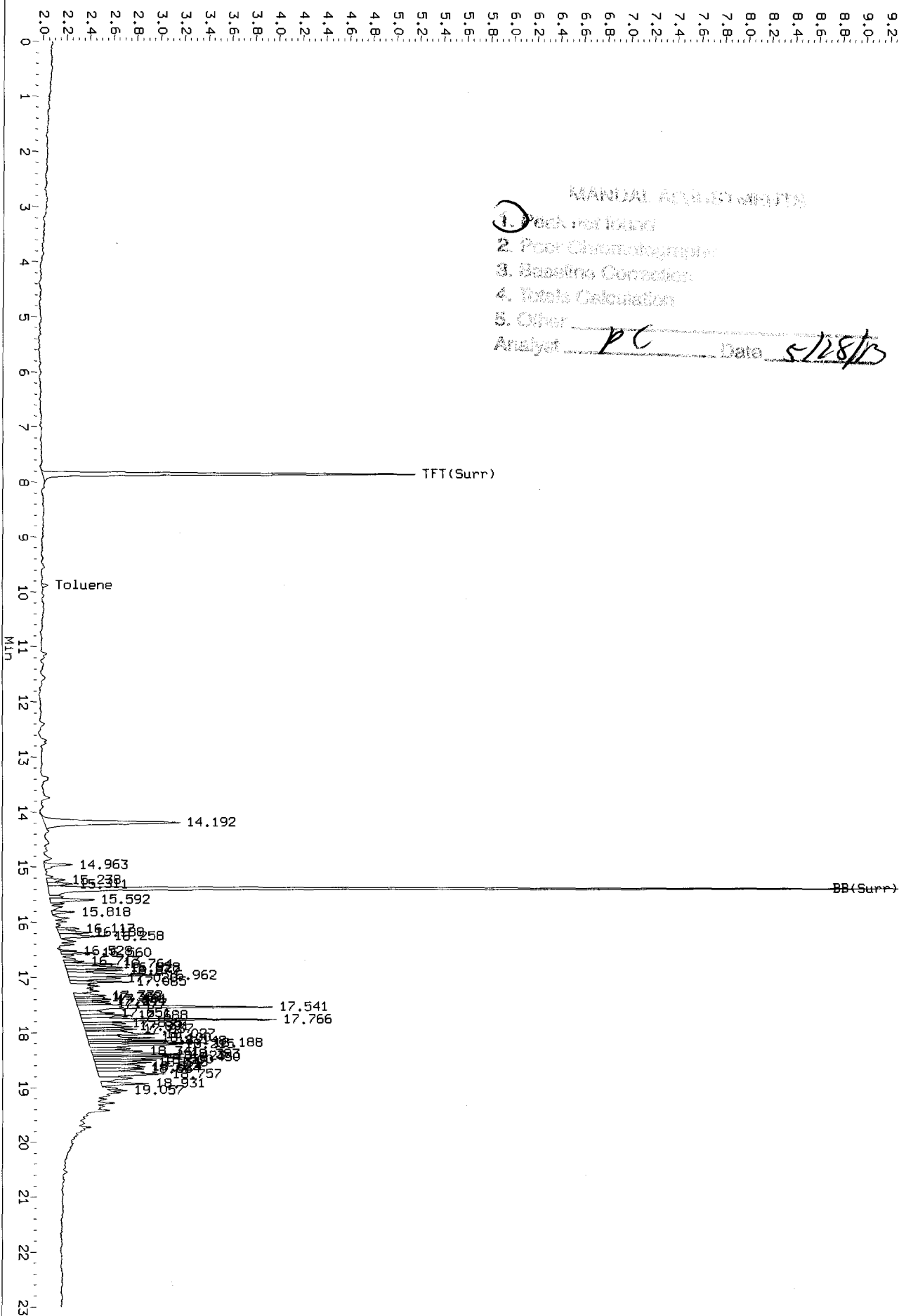
RII 05244008.cdf: 0.000 to 23.003 Min



Data File: /chem3/pid1.1/20130524-2.l/05244008.d/05244008.cdf
Injection Date: 24-May-2013 13:14
Instrument: pid1.1
Client Sample ID: SL-W2-S-4

AIR 05244008.cdf: 0.000 to 23.003 MIN

UVOLTS (x10³)



MANUAL ACQUISITION

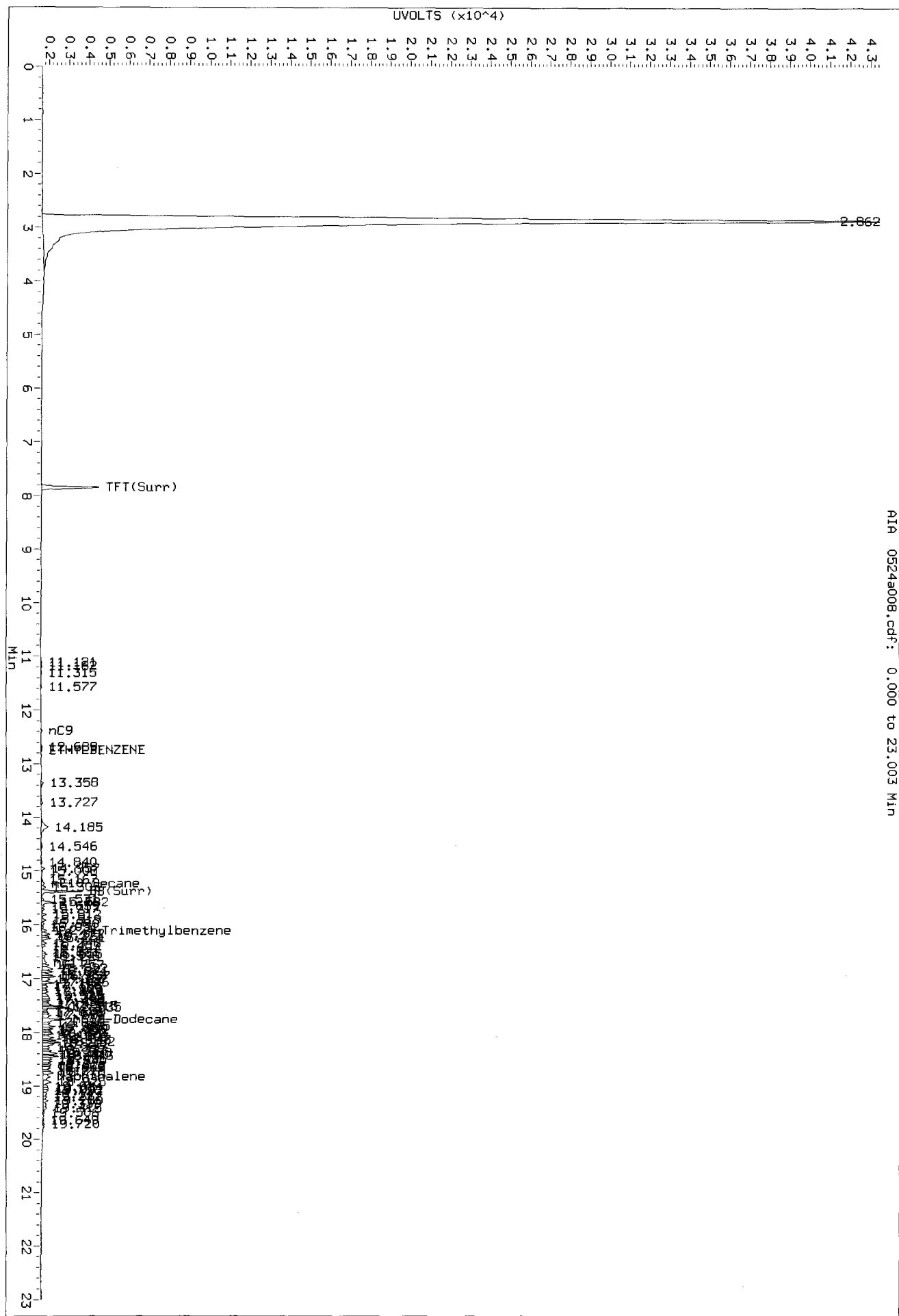
1. Peak not found
2. Poor Chromatogram
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst PC Date 5/28/13

PC
5/28/13

Data File: /chem3/pid1.1/20130524-1.b/0524a008.d/0524a008.cdf
Injection Date: 24-May-2013 13:14
Instrument: pid1.1
Client Sample ID: SL-W2-S-4

AIR 0524a008.cdf: 0.000 to 23.003 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: SL-W3-S-4

SAMPLE

Lab Sample ID: WR25C

LIMS ID: 13-11185

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 13:42

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 32 mg-dry-wt

Percent Moisture: 50.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	40	< 40 U
108-88-3	Toluene	40	98
100-41-4	Ethylbenzene	40	< 40 U
179601-23-1	m,p-Xylene	79	< 79 U
95-47-6	o-Xylene	40	< 40 U

Gasoline Range Hydrocarbons 16 < 16 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	95.7%
Bromobenzene	95.6%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	93.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a009.d ARI ID: WR25C
Data file 2: /chem3/pid1.i/20130524-2.b/0524a009.d Client ID: SL-W3-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 13:42
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.847	-0.001	2774	35647	93.7	TFT(Surr)
15.381	0.000	1848	15773	93.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	1504	0.004
8015C 2MP-TMB (4.18 to 16.20)	723723	1056	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	1056	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2043	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.854	-0.002	3086	95.7	TFT(Surr)
15.388	0.000	6911	95.6	BB(Surr)

SW8021 (PID)

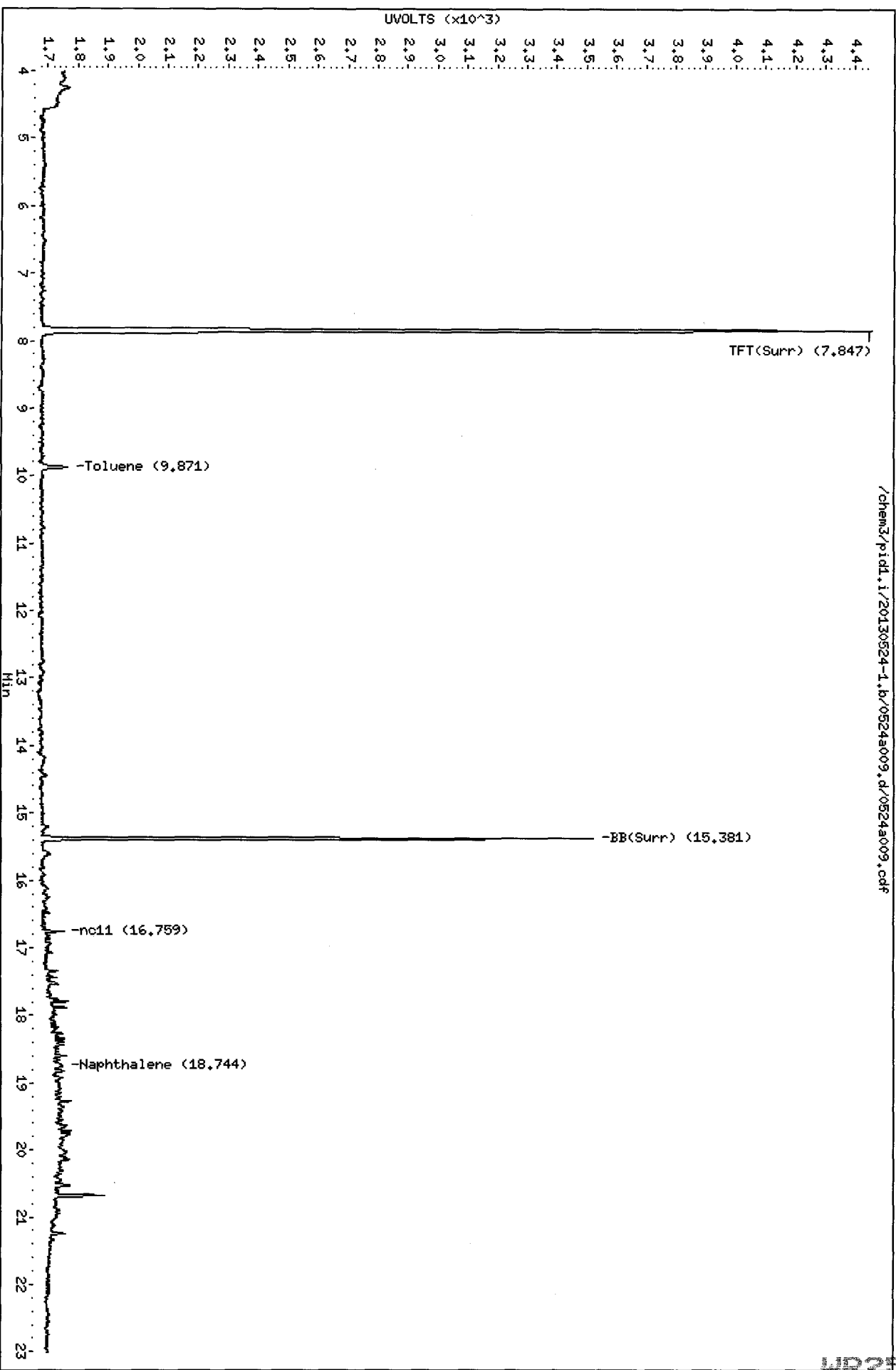
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
9.880	-0.001	123	0.62N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a009.d
Date : 24-MAY-2013 13:42
Client ID: SL-M3-S-4
Sample Info: MR25C
Column phase: RTX 502-2 FID

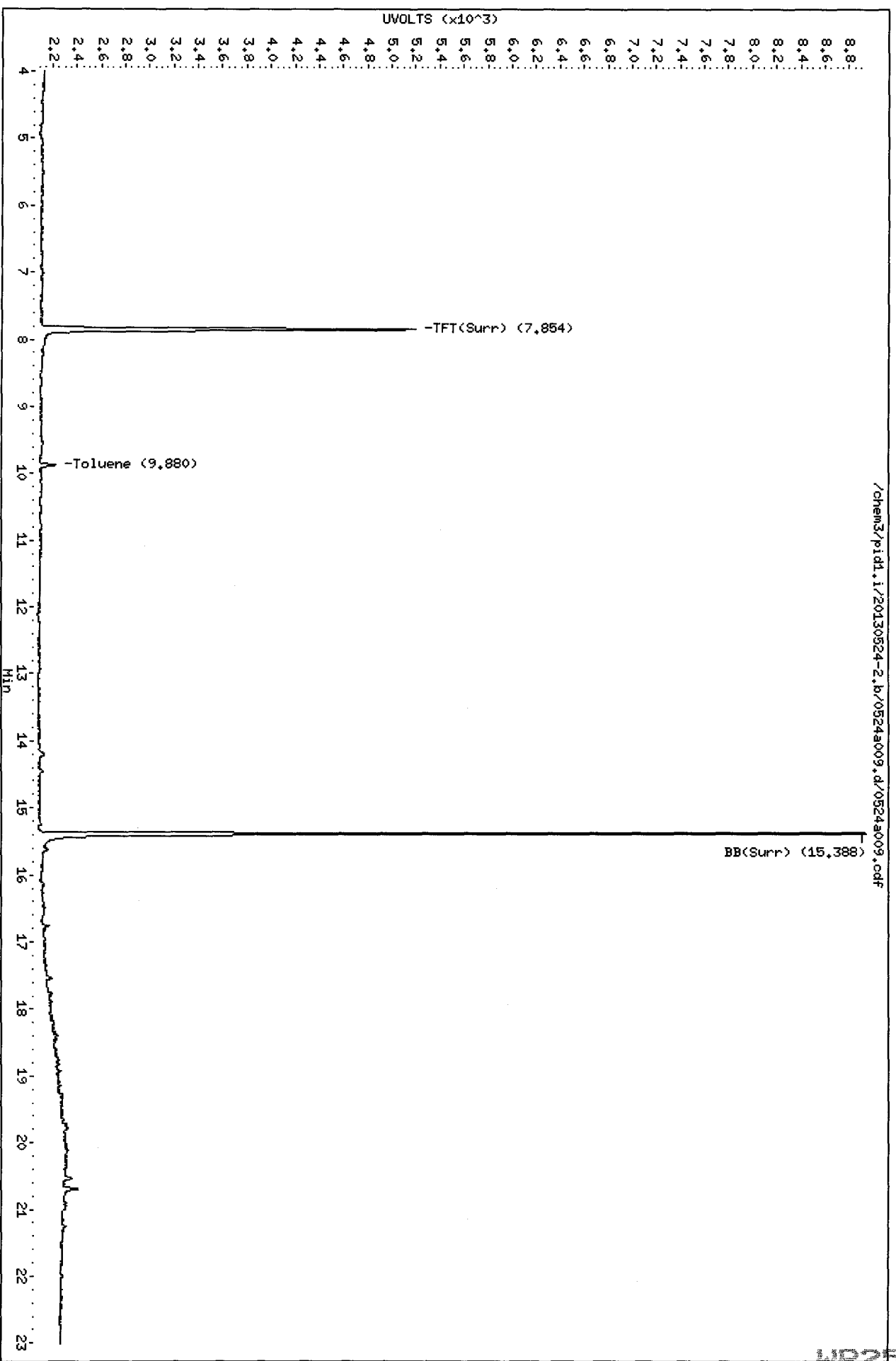
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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Data File: /chem3/pid1.i/20130524-2.b/0524a009.d
Date : 24-MAY-2013 13:42
Client ID: SL-M3-S-4
Sample Info: MR25C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

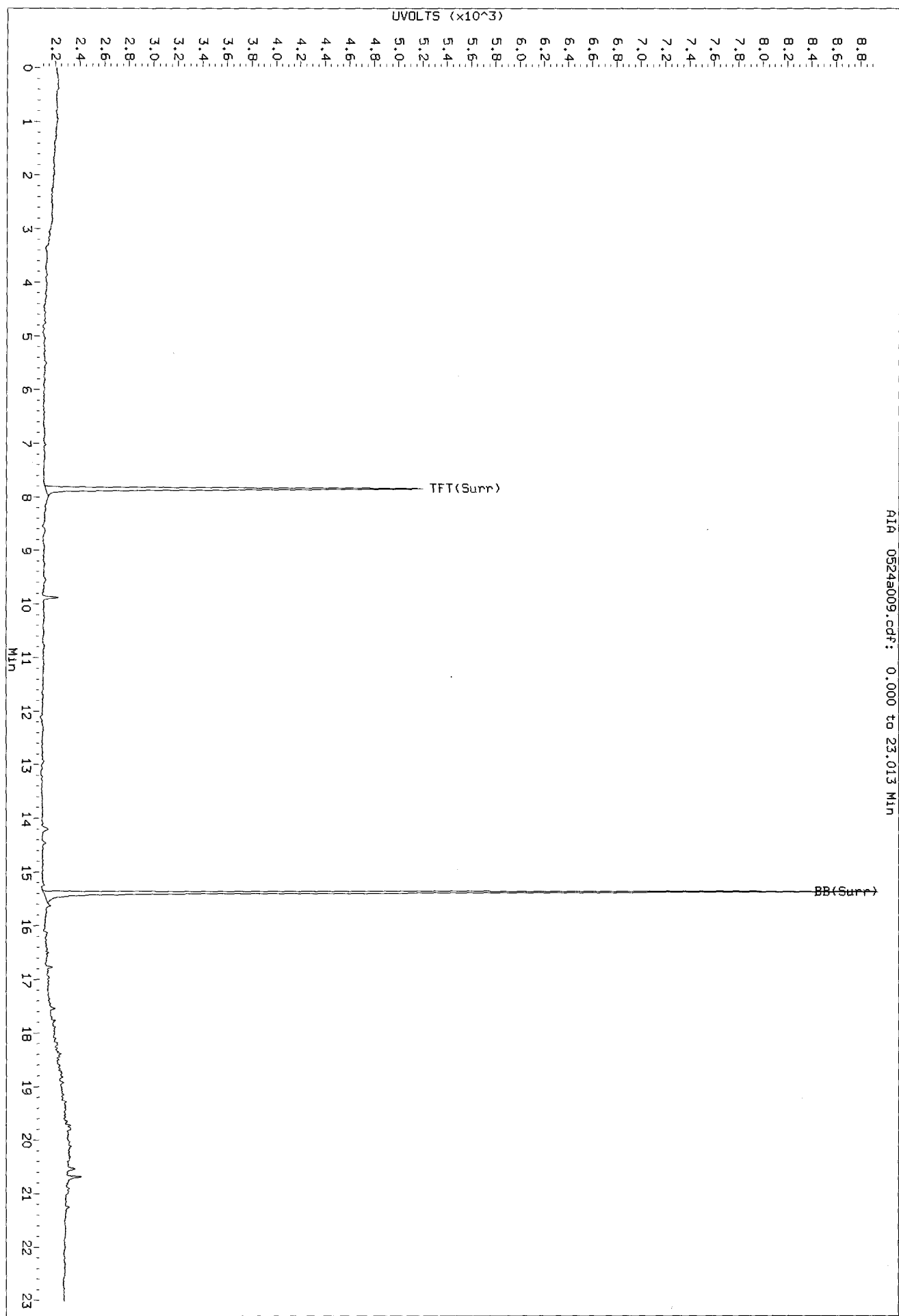


001000
152000

PK
5/28/13

Data File: /chem3/pid1.1/20130524-2.b/0524a009.d/0524a009.cdf
Injection Date: 24-May-2013 13:42
Instrument: pid1.1
Client Sample ID: SL-W3-S-4

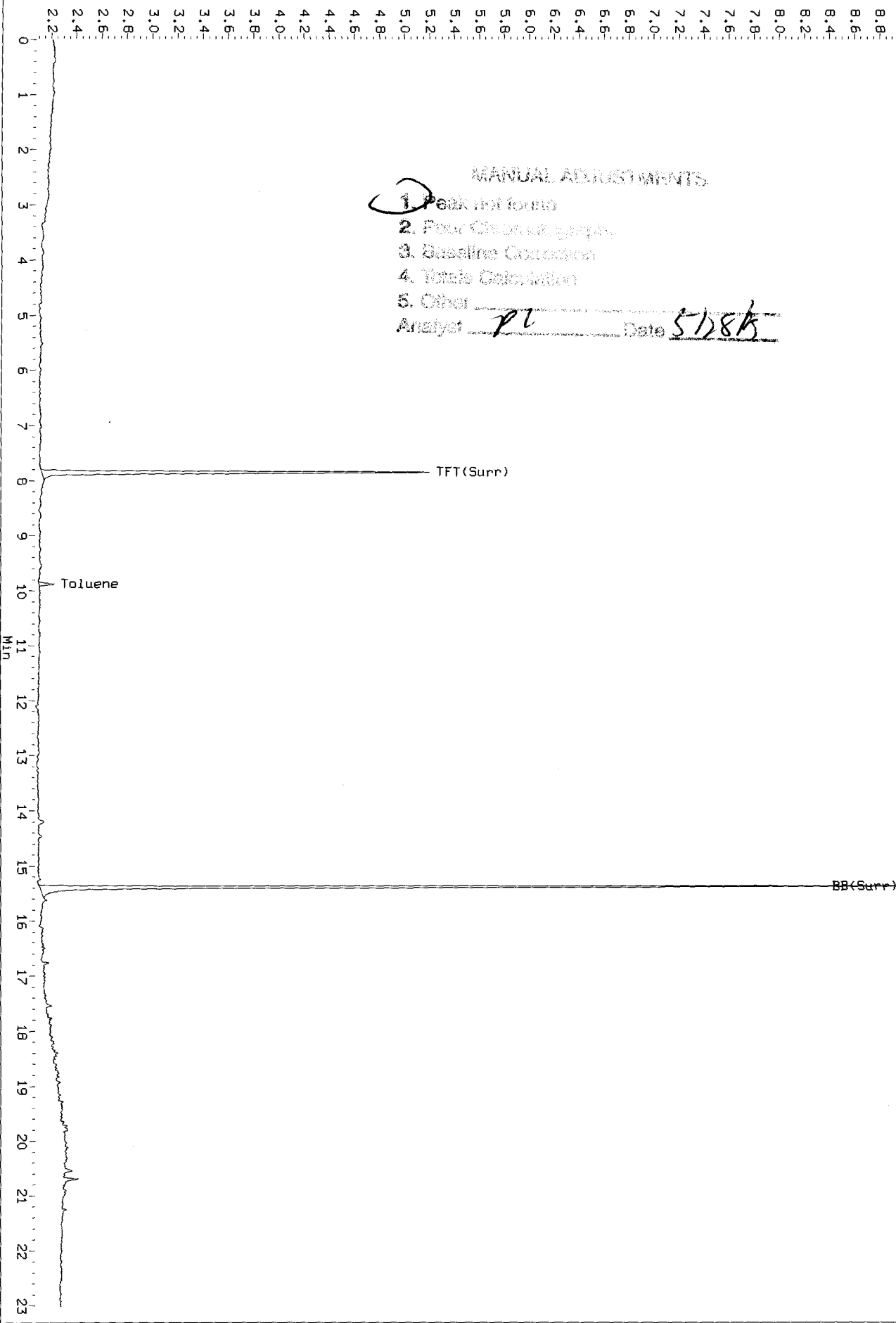
AIR 0524a009.cdf: 0.000 to 23.013 Min



Data File: /chem3/pid1.1/20130524-2.b/0524a009.d/0524a009.cdf
Injection Date: 24-MAY-2013 13:42
Instrument: pid1.1
Client Sample ID: SL-W3-S-4

RI1A 0524a009.cdf: 0.000 to 23.013 MIN

UVOLTS (x10³)



MANUAL ADJUSTMENTS

- 1. Peak list found
- 2. Plot Chromatogram
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst PL Date 5/28/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: SL-W4-S-4
SAMPLE**

Lab Sample ID: WR25D

LIMS ID: 13-11186

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 14:11

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 8.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons **6.1** **170** **GAS ID
GRO**

BETX Surrogate Recovery

Trifluorotoluene	96.3%
Bromobenzene	104%

Gasoline Surrogate Recovery

Trifluorotoluene	94.7%
Bromobenzene	116%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

RC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a010.d ARI ID: WR25D
Data file 2: /chem3/pid1.i/20130524-2.b/0524a010.d Client ID: SL-W4-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 14:11
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.001	2802	36169	94.7	TFT(Surr)
15.380	0.000	2315	24894	116.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	726566	2.029 M
8015C 2MP-TMB (4.18 to 16.20)	723723	246318	0.340 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	114702	0.197 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1064880	2.839 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	-0.001	3103	96.3	TFT(Surr)
15.388	0.000	7485	103.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

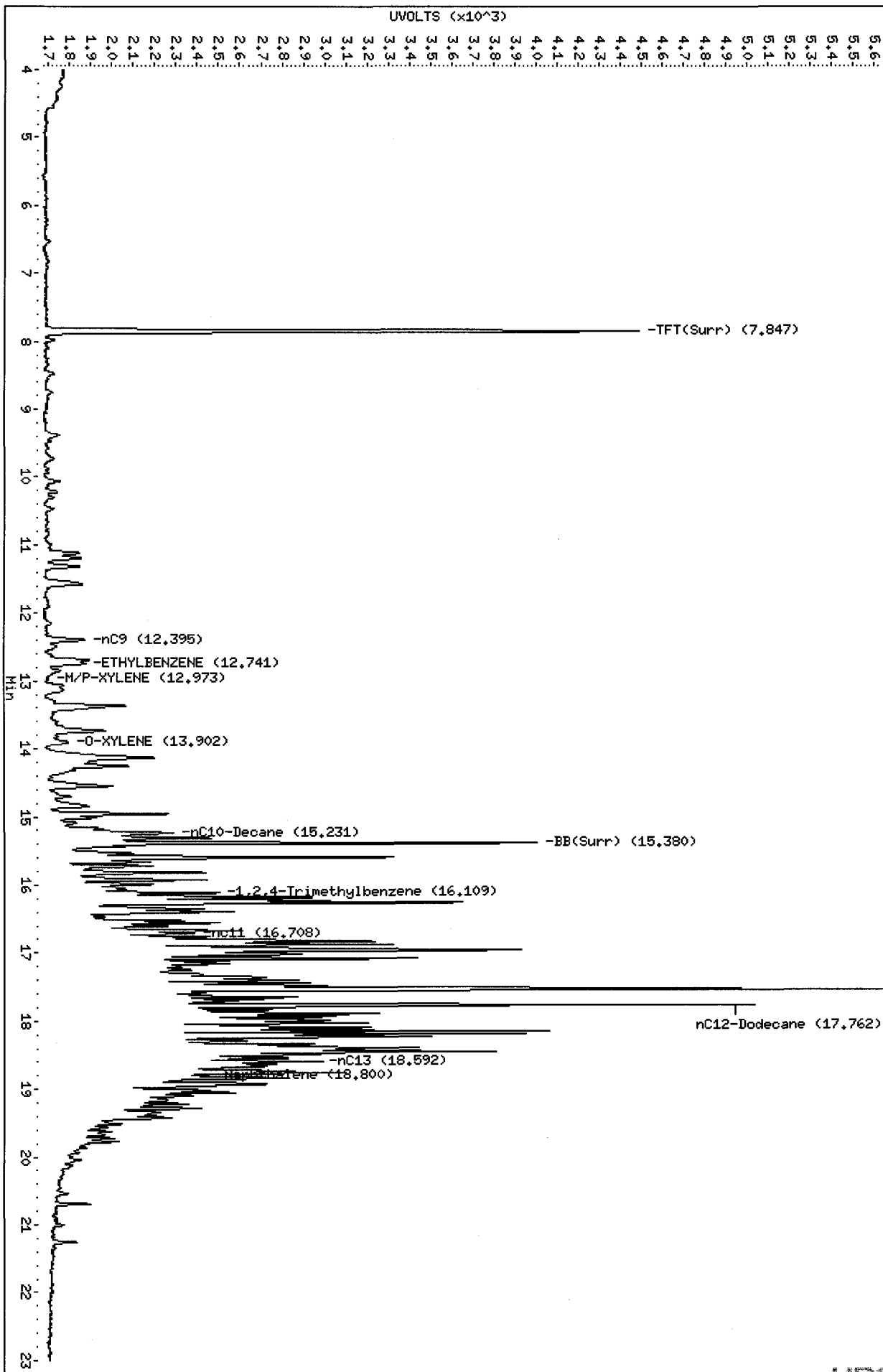
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524s010.d
Date: 24-MAY-2013 14:11
Client ID: SL-M4-S-4
Sample Info: MR25D
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

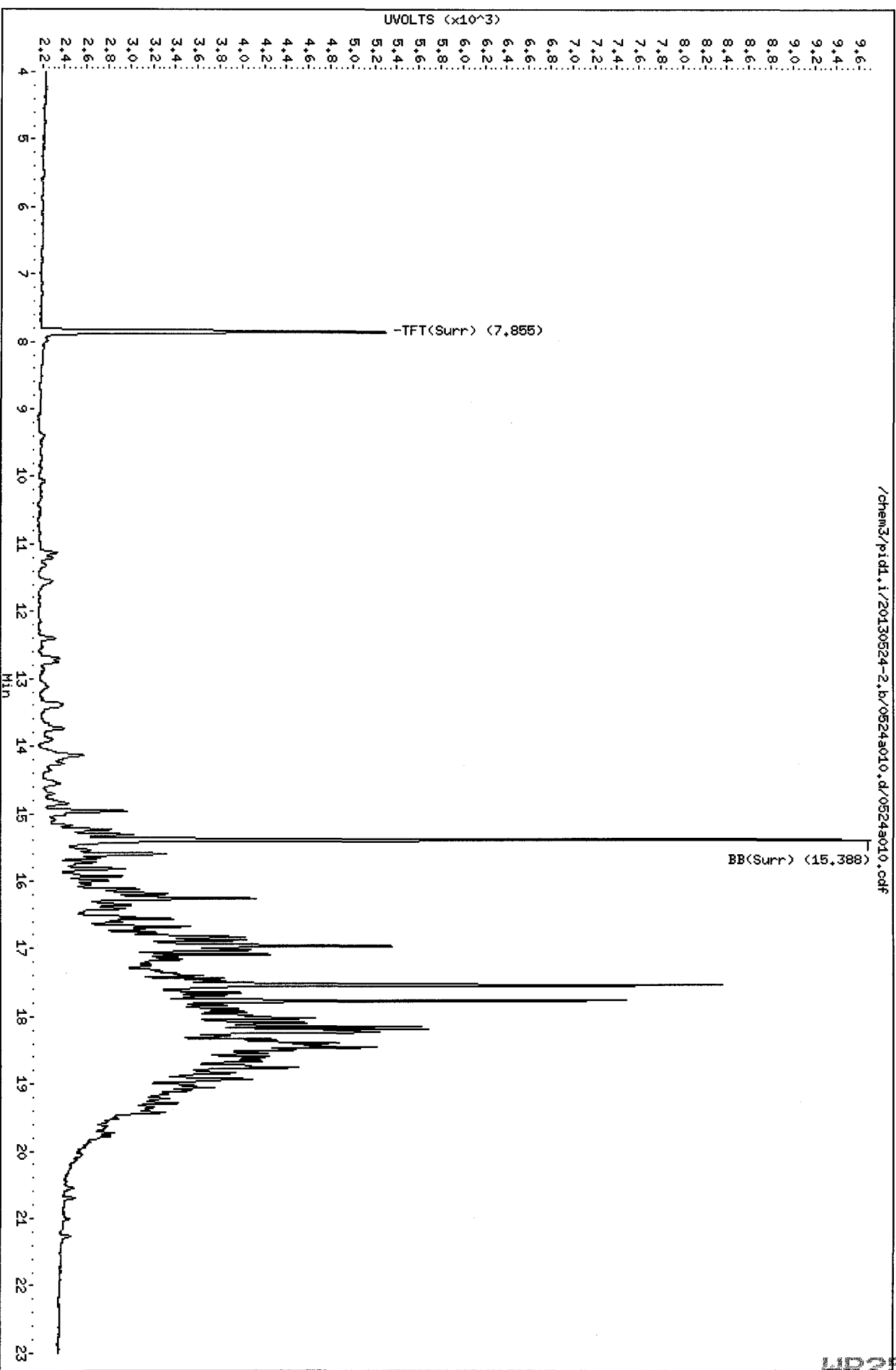
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MR25 : 0524 14:11

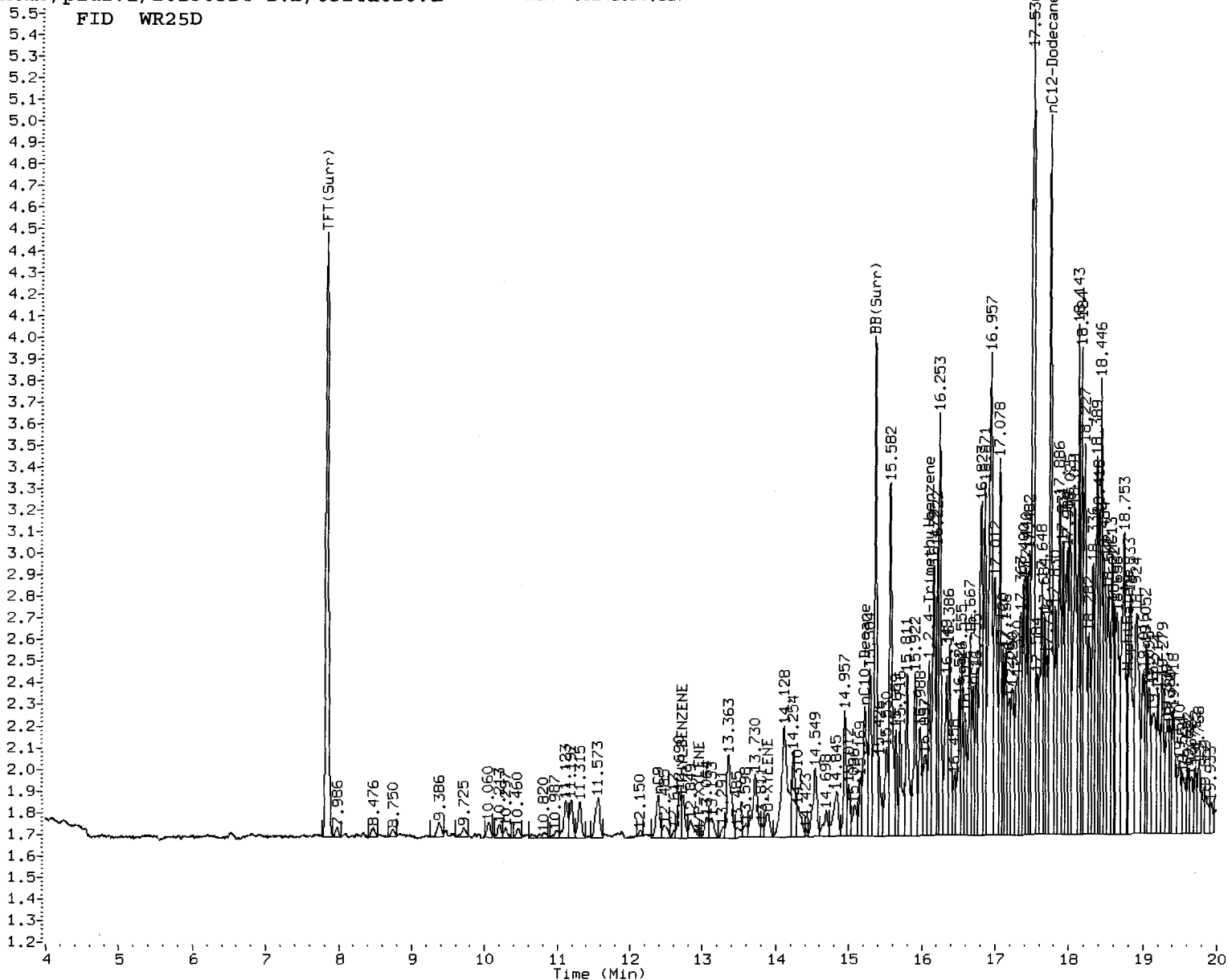
Data File: /chem3/pid1.i/20130524-2.b/0524a010.d
Date: 24-MAY-2013 14:11
Client ID: SL-M4-S-4
Sample Info: MR25D
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



FID WR25D

UVOLTS



MANUAL INTEGRATION

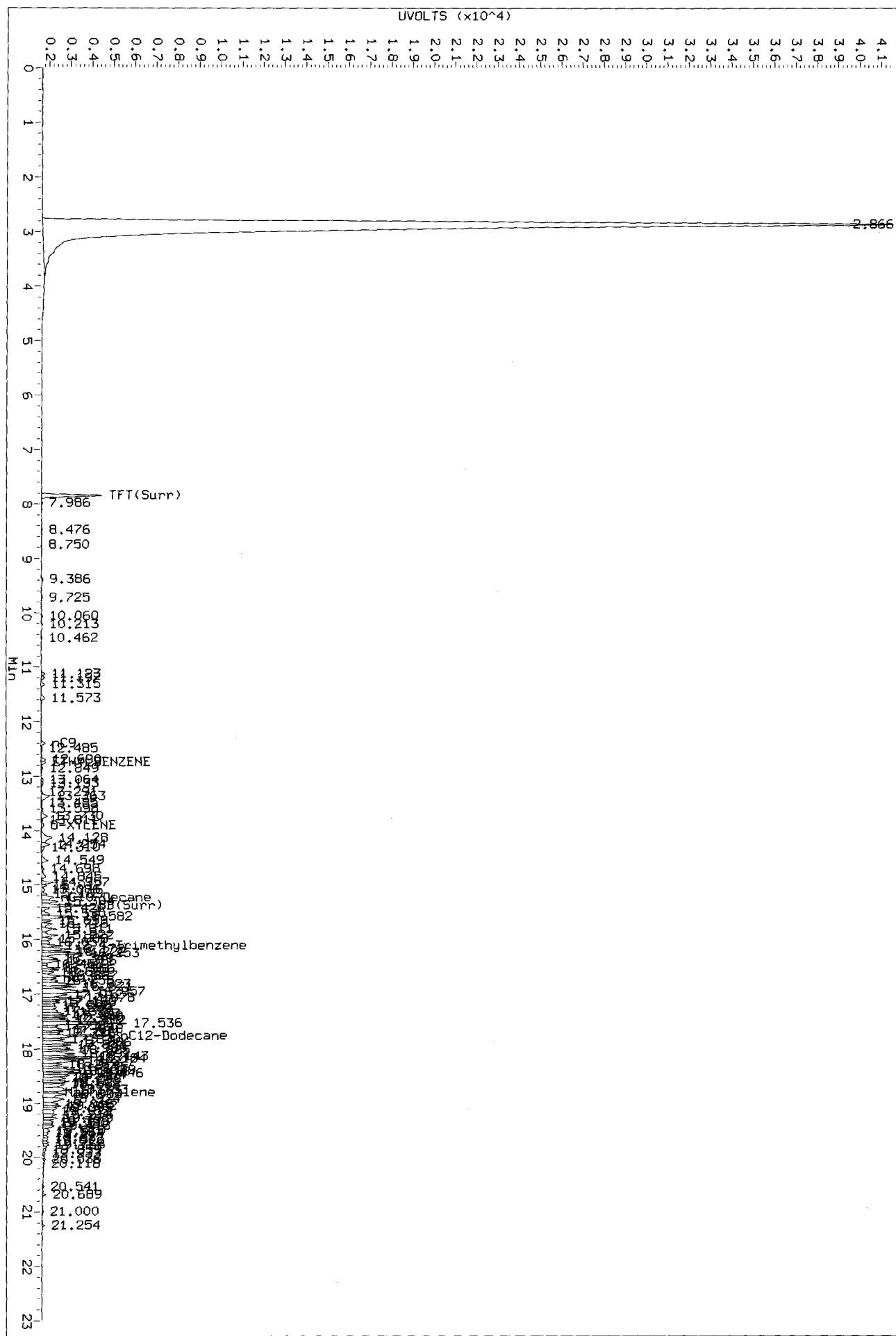
- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: KL Date: 5/28/13

PK
5/28/13

Data File: /chem3/pid1.1/20130524-1.b/0524a010.d/0524a010.cdf
Injection Date: 24-MAY-2013 14:11
Instrument: pid1.1
Client Sample ID: SL-W4-S-4

R19 0524a010.cdf: 0.000 to 23.003 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: SI-W5-S-4
SAMPLE

Lab Sample ID: WR25E

LIMS ID: 13-11187

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 14:39

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 15.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.5	< 6.5 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	91.0%
Bromobenzene	93.8%

Gasoline Surrogate Recovery

Trifluorotoluene	89.4%
Bromobenzene	91.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a011.d ARI ID: WR25E
Data file 2: /chem3/pid1.i/20130524-2.b/0524a011.d Client ID: SL-W5-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 14:39
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	0.000	2645	34055	89.4	TFT(Surr)
15.381	0.001	1820	15553	91.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	2858	0.008
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	6218	0.017

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.000	2932	91.0	TFT(Surr)
15.389	0.001	6783	93.8	BB(Surr)

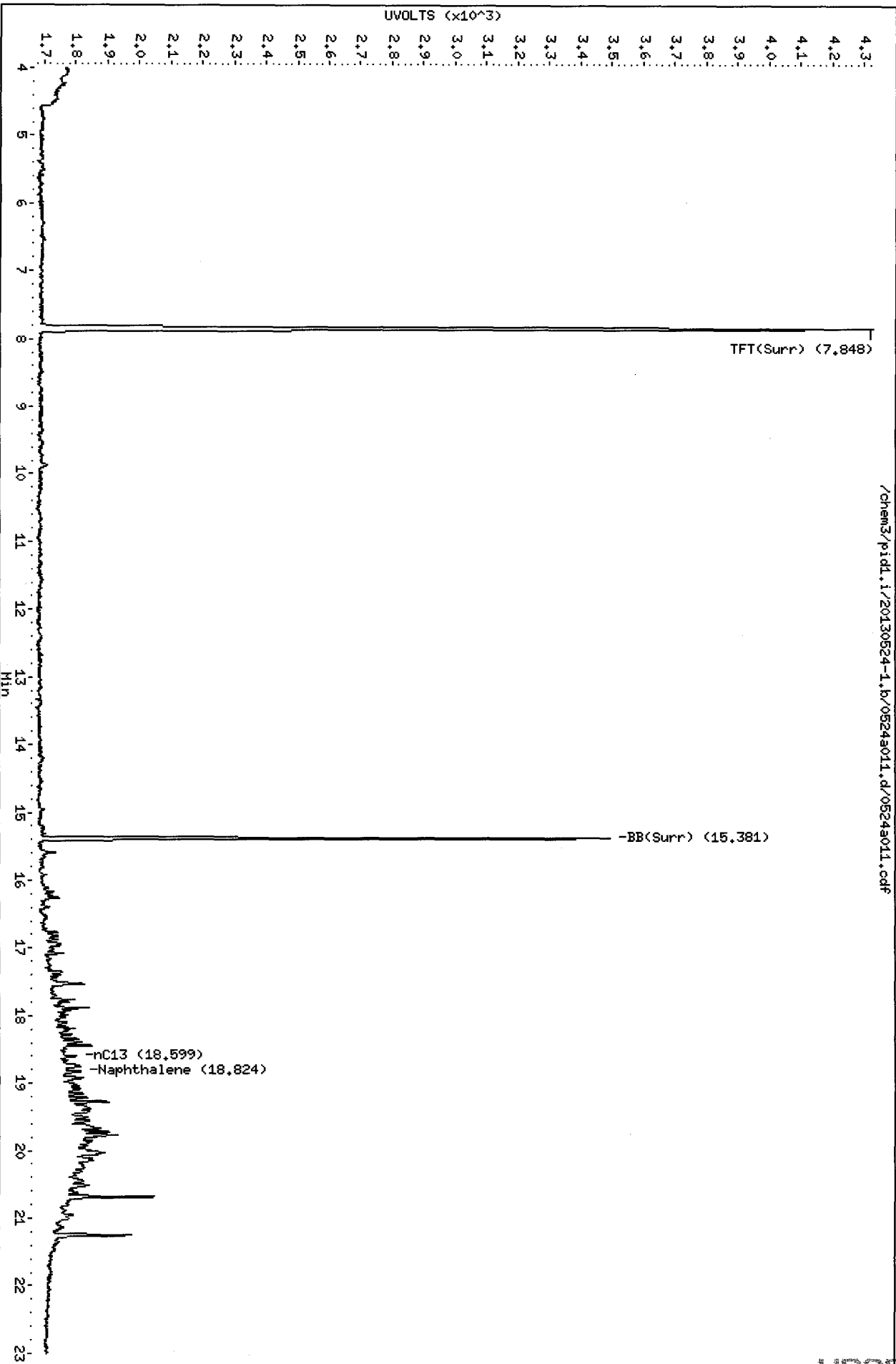
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

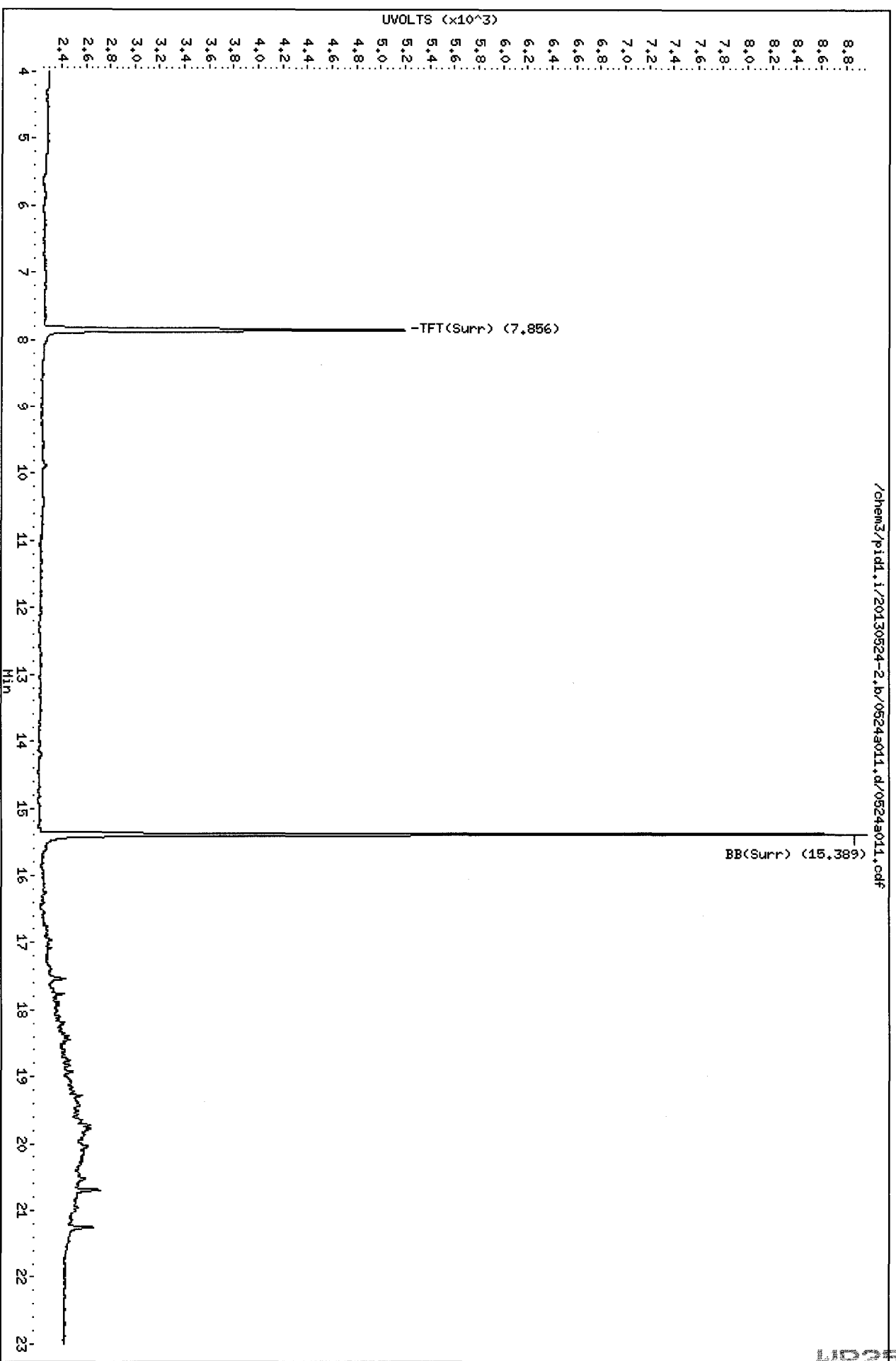
Data File: /chem3/pid1.i/20130524-1.b/0524a011.d
Date: 24-MAY-2013 14:39
Client ID: SL-M5-S-4
Sample Info: MR25E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130524-2.b/0524a011.d
Date: 24-MAY-2013 14:39
Client ID: SL-M5-S-4
Sample Info: MR25E
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: SL-W6-S-4
SAMPLE**

Lab Sample ID: WR25F

LIMS ID: 13-11188

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 15:07

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 14.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.5	< 6.5 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	91.6%
Bromobenzene	94.8%

Gasoline Surrogate Recovery

Trifluorotoluene	90.0%
Bromobenzene	92.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a012.d ARI ID: WR25F
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a012.d Client ID: SL-W6-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 15:07
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	-0.001	2663	34353	90.0	TFT(Surr)
15.380	0.000	1828	15514	92.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	858	0.002
8015C 2MP-TMB (4.18 to 16.20)	723723	409	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	408	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	858	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.000	2952	91.6	TFT(Surr)
15.389	0.001	6852	94.8	BB(Surr)

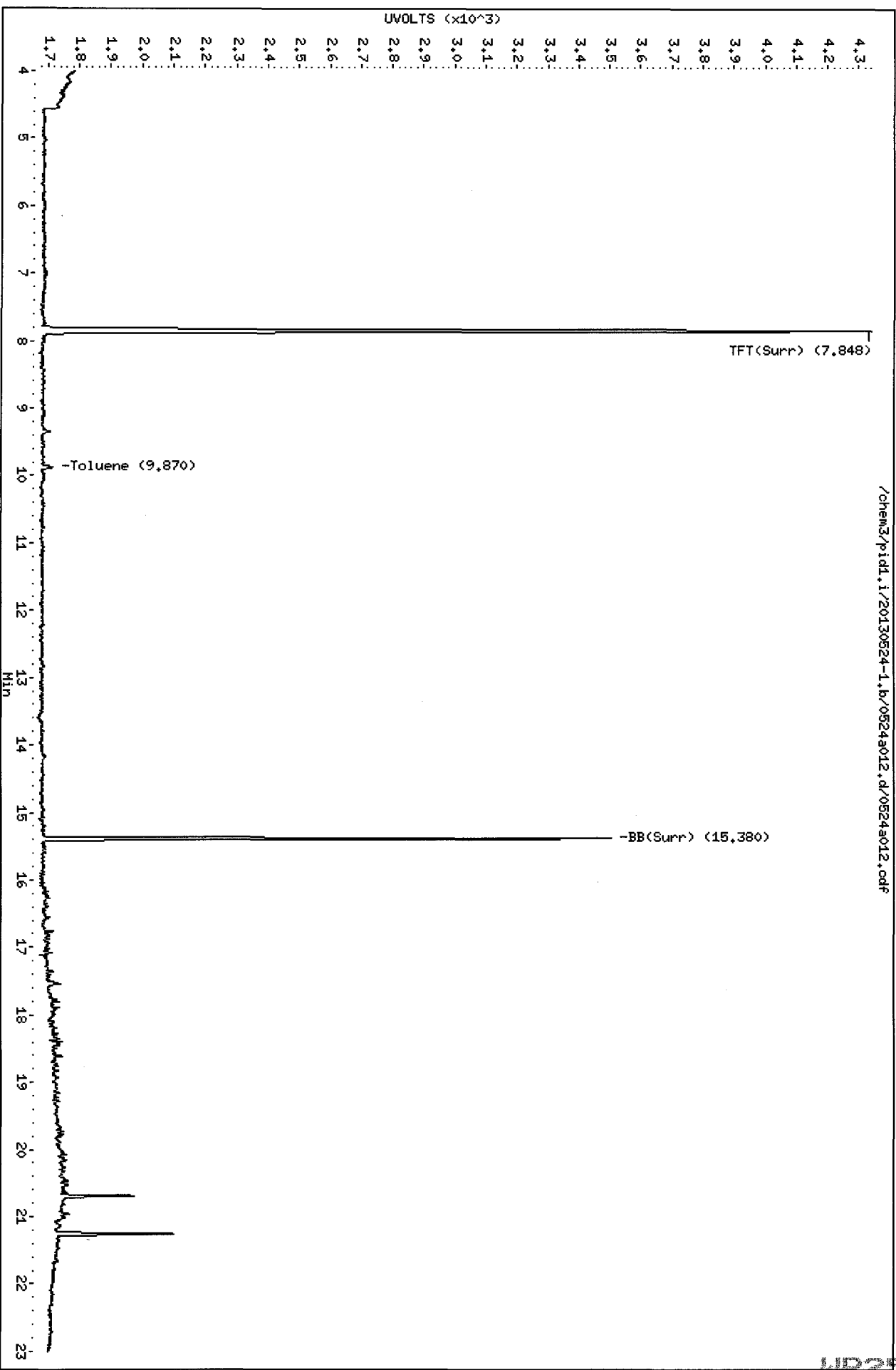
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a012.d
Date : 24-MAY-2013 15:07
Client ID: SL-M6-S-4
Sample Info: MR25F
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130524-1.b/0524a012.d/0524a012.cdf

Data File: /chem3/pid1.i/20130524-2.b/0524a012.d

Date: 24-MAY-2013 15:07

Client ID: SL-M6-S-4

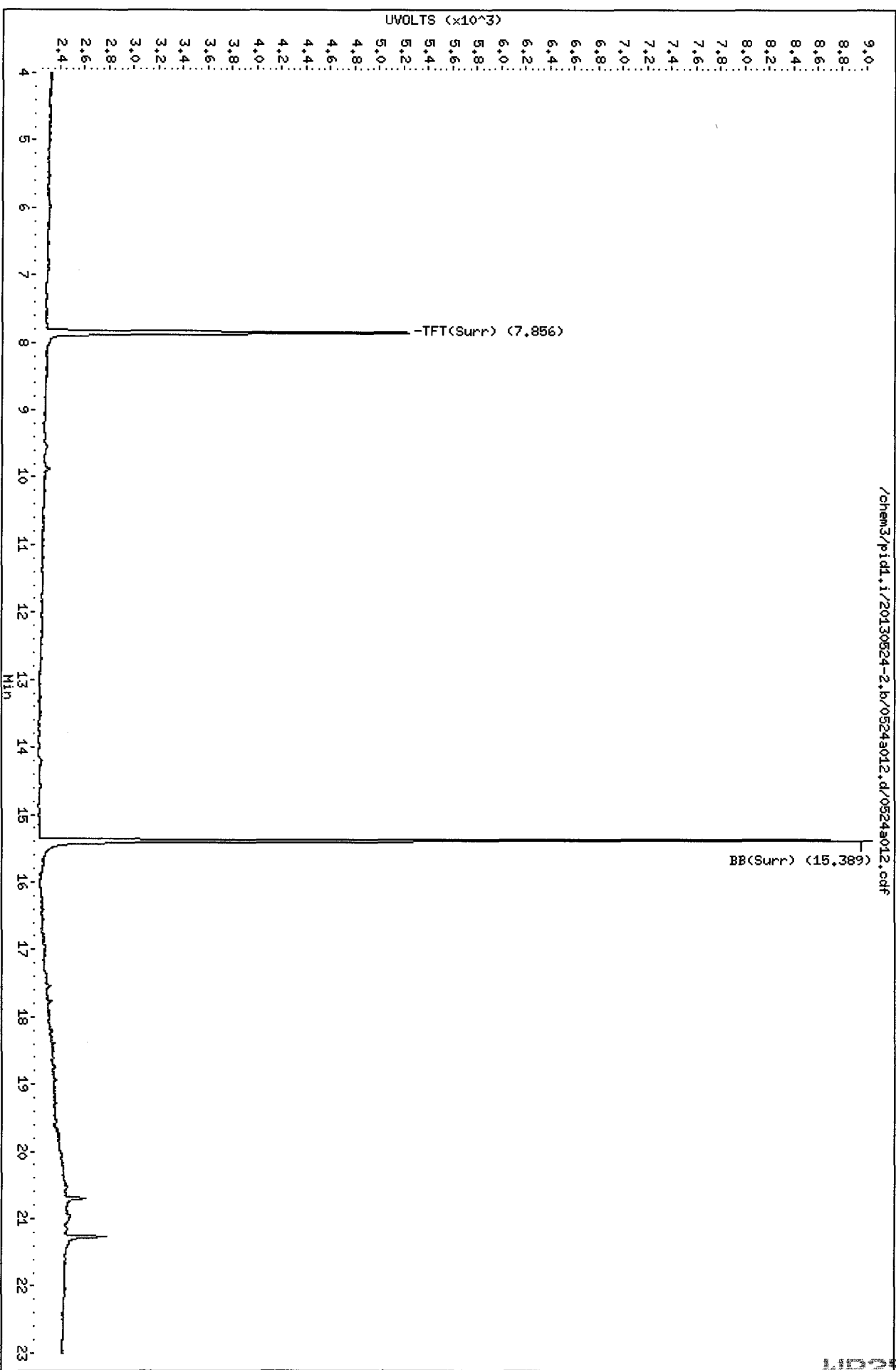
Sample Info: MR25F

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



MR25F : 0524 20

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W19-S-4
SAMPLE

Lab Sample ID: WR25G

LIMS ID: 13-11189

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 18:27

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 58 mg-dry-wt

Percent Moisture: 18.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	21	< 21 U
108-88-3	Toluene	21	29
100-41-4	Ethylbenzene	21	< 21 U
179601-23-1	m,p-Xylene	43	< 43 U
95-47-6	o-Xylene	21	< 21 U

Gasoline Range Hydrocarbons 8.6 < 8.6 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	90.1%
Bromobenzene	92.9%

Gasoline Surrogate Recovery

Trifluorotoluene	88.7%
Bromobenzene	90.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a019.d ARI ID: WR25G
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a019.d Client ID: A2-W19-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 18:27
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.847	-0.001	2626	33605	88.7	TFT(Surr)
15.381	0.000	1802	15469	90.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3496	0.010
8015C 2MP-TMB (4.18 to 16.20)	723723	3062	0.004
AK101 nC6-nC10 (4.68 to 15.10)	582885	2474	0.004
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3496	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.854	-0.001	2904	90.1	TFT(Surr)
15.388	0.000	6715	92.9	BB(Surr)

SW8021 (PID)

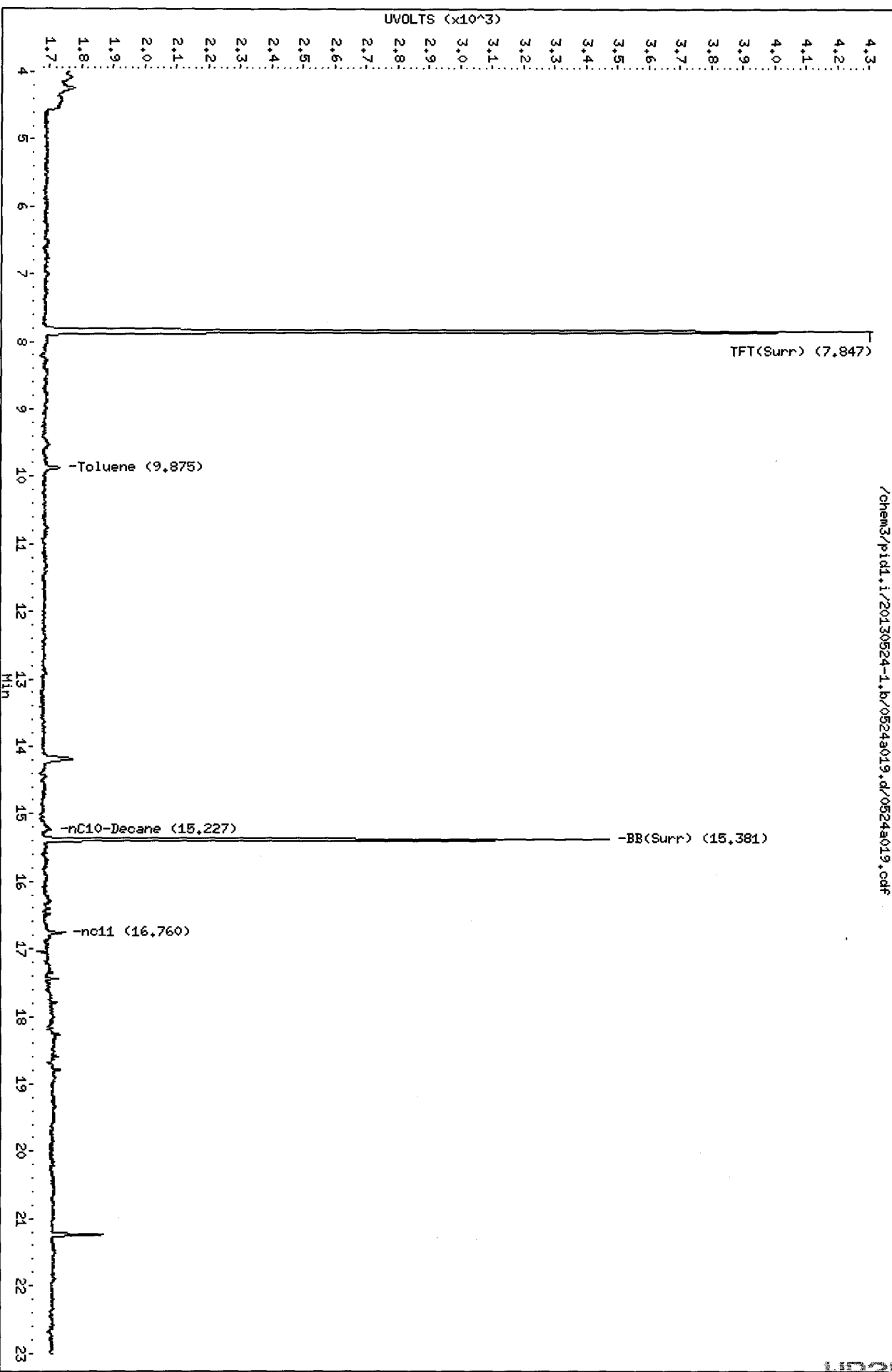
RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.880	-0.001	67	0.34N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a019.d
Date : 24-MAY-2013 18:27
Client ID: A2-M19-S-4
Sample Info: MR25G
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

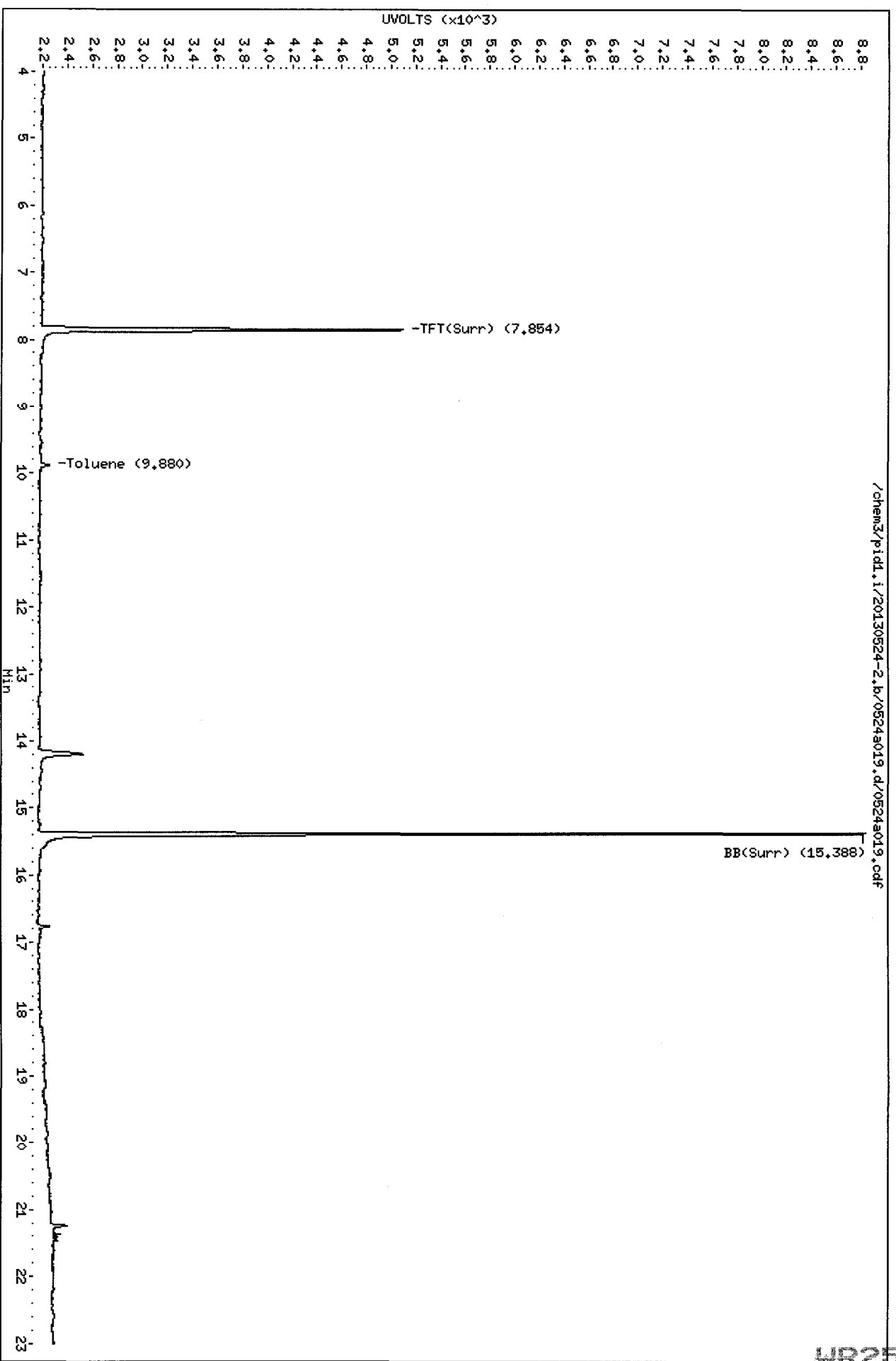
/chem3/pid1.i/20130524-1.b/0524a019.d/0524a019.cdf



MR25 : 001 25

Data File: /chem3/pid1.i/20130524-2.b/0524a019.d
Date : 24-MAY-2013 18:27
Client ID: A2-M19-S-4
Sample Info: MR25G
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

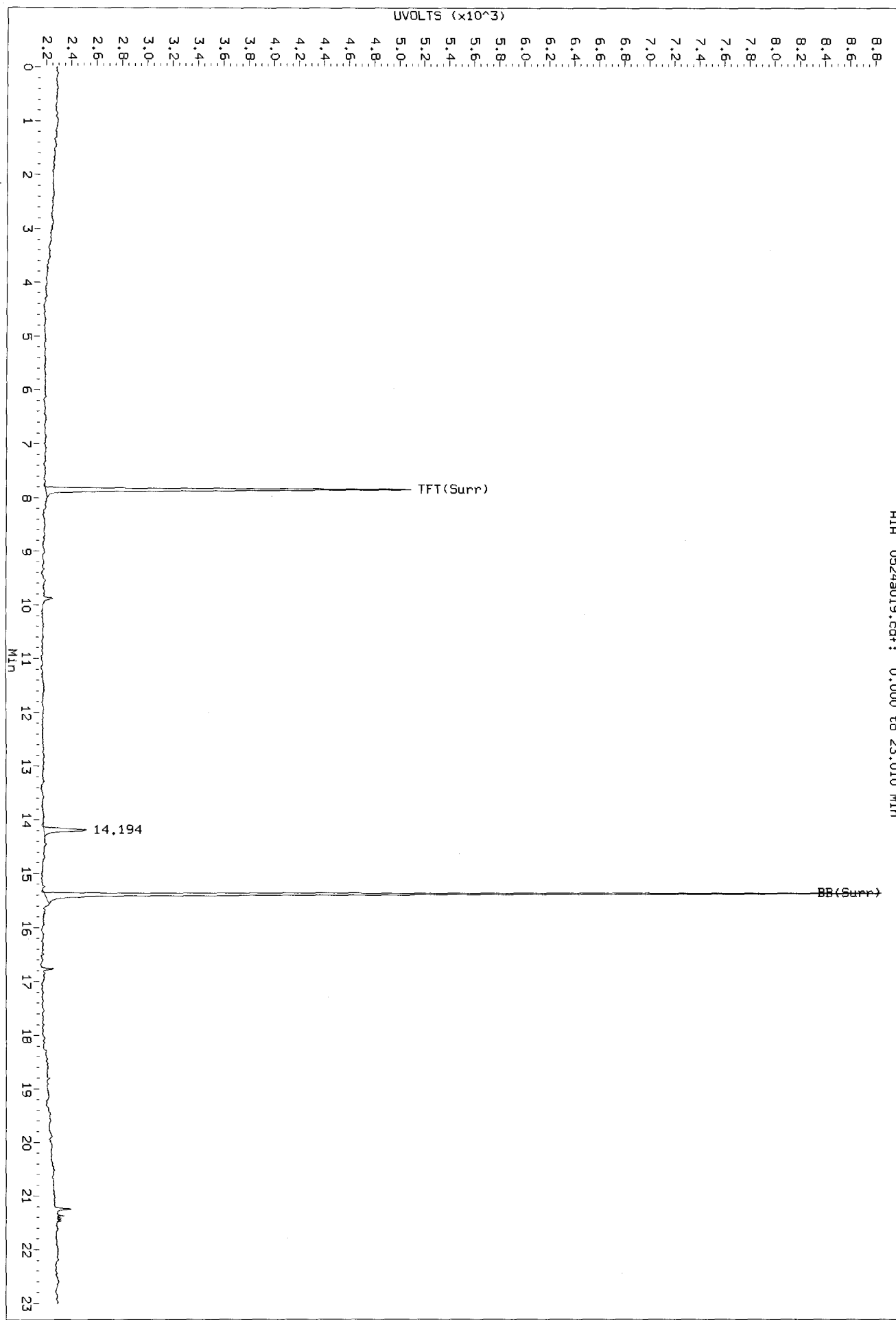


/chem3/pid1.i/20130524-2.b/0524a019.d/0524a019.cdf

PC
5/28/13

Data File: /chem3/pid1.1/20130524-2.b/0524a019.d/0524a019.cdf
Injection Date: 24-MAY-2013 18:27
Instrument: pid1.1
Client Sample ID: A2-W19-S-4

AIR 0524a019.cdf: 0.000 to 23.010 MIN

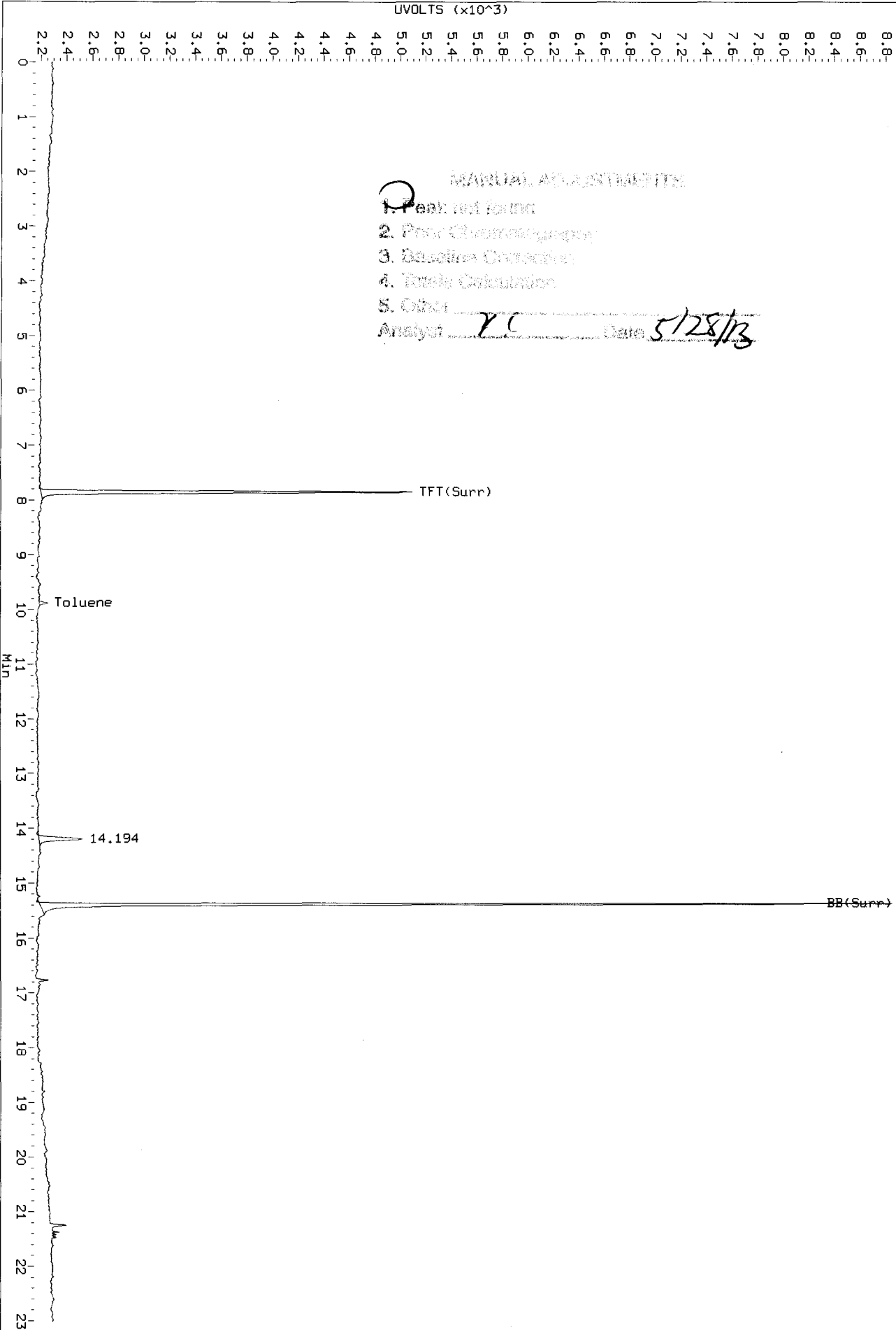


RC

Data File: /chem3/pid1.1/20130524-2.1/0524a019.d/0524a019.cdf
Injection Date: 24-May-2013 18:27
Instrument: pid1.1
Client Sample ID: A2-W19-S-4

RIR 0524a019.cdf: 0.000 to 23.010 Min

UVOLTS (x10³)



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: A2-W20-S-4
SAMPLE**

Lab Sample ID: WR25H

LIMS ID: 13-11190

Matrix: Soil

Data Release Authorized: *mw*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 18:55

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 67 mg-dry-wt

Percent Moisture: 26.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	< 19 U
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	19	< 19 U

Gasoline Range Hydrocarbons 7.5 < 7.5 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	90.2%
Bromobenzene	93.9%

Gasoline Surrogate Recovery

Trifluorotoluene	88.9%
Bromobenzene	91.8%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a020.d ARI ID: WR25H
Data file 2: /chem3/pid1.i/20130524-2.b/0524a020.d Client ID: A2-W20-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 18:55
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	0.000	2631	33487	88.9	TFT(Surr)
15.380	0.000	1825	15340	91.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	630	0.002
8015C 2MP-TMB (4.18 to 16.20)	723723	630	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	629	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	630	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.855	-0.001	2908	90.2	TFT(Surr)
15.388	0.000	6788	93.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a020.d

Date: 24-MAY-2013 18:55

Client ID: A2-M20-S-4

Sample Info: MR25H

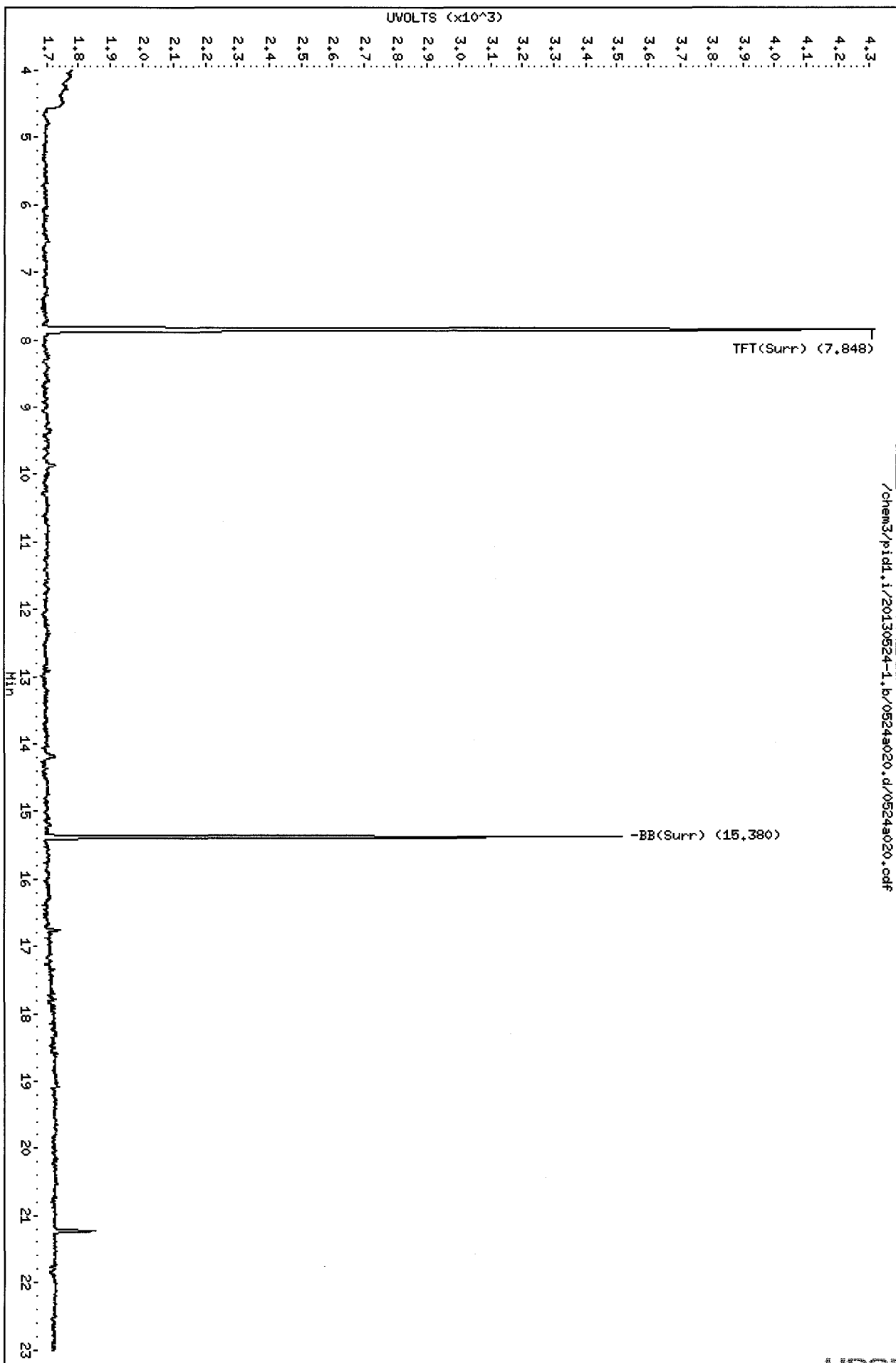
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1



/chem3/pid1.i/20130524-1.b/0524a020.d/0524a020.cdf

MR25: 00131

Date : 24-MAY-2013 18:55

Client ID: A2-M20-S-4

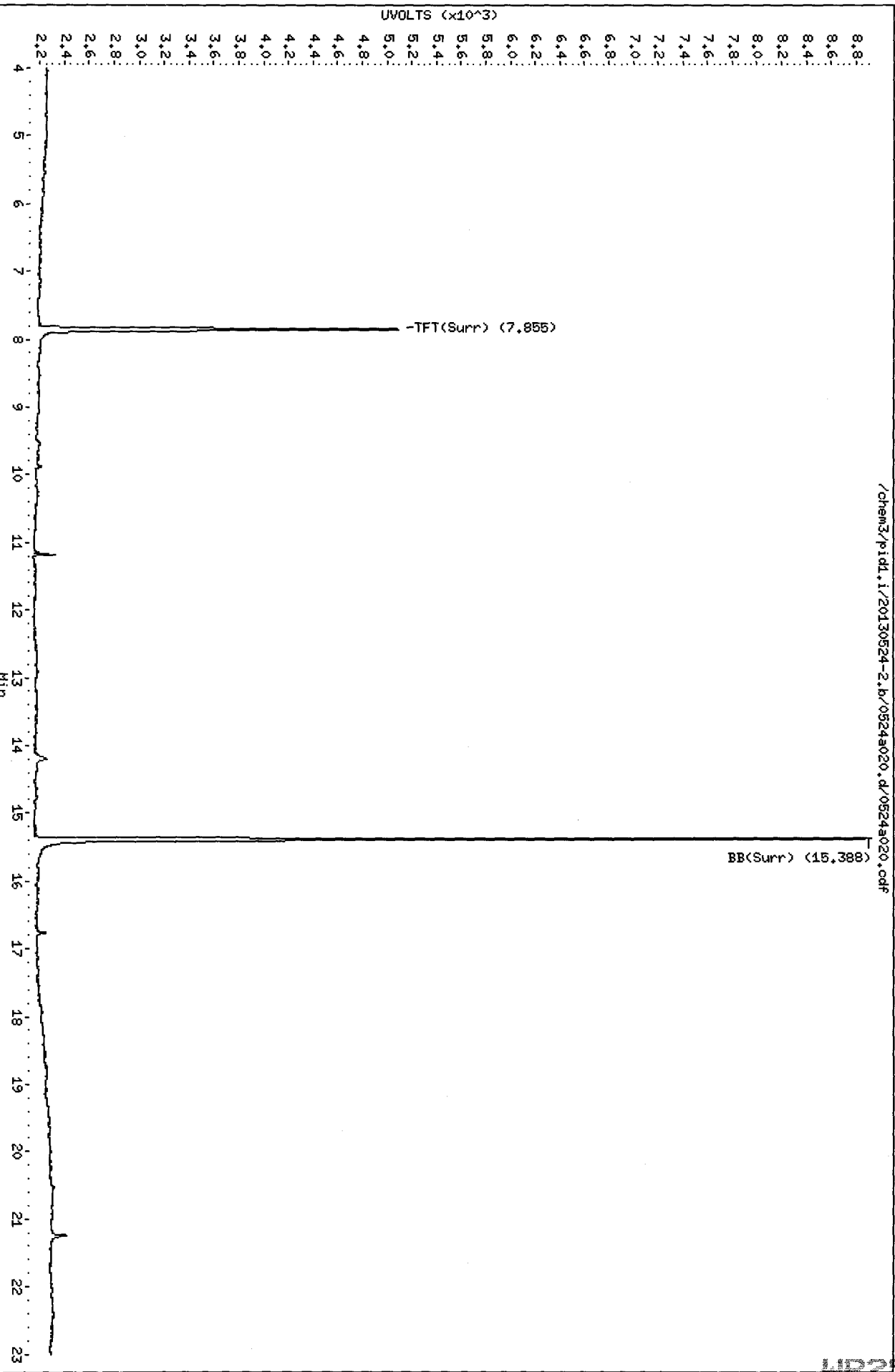
Sample Info: MR25H

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID



/chem3/pid1.i/20130524-2.b/0524a020.d/0524a020.cdf

20130524-2.b/0524a020.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W21-S-4
SAMPLE

Lab Sample ID: WR25I

LIMS ID: 13-11191

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 19:23

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 9.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	15
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

Gasoline Range Hydrocarbons 5.7 < 5.7 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	87.6%
Bromobenzene	91.4%

Gasoline Surrogate Recovery

Trifluorotoluene	87.5%
Bromobenzene	90.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a021.d ARI ID: WR25I
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a021.d Client ID: A2-W21-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 19:23
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	-0.001	2588	33274	87.5	TFT(Surr)
15.380	0.000	1802	15032	90.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.89)	358114	401	0.001
8015C 2MP-TMB (4.18 to 16.20)	723723	401	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	401	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	401	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.000	2825	87.6	TFT(Surr)
15.389	0.001	6609	91.4	BB(Surr)

SW8021 (PID)

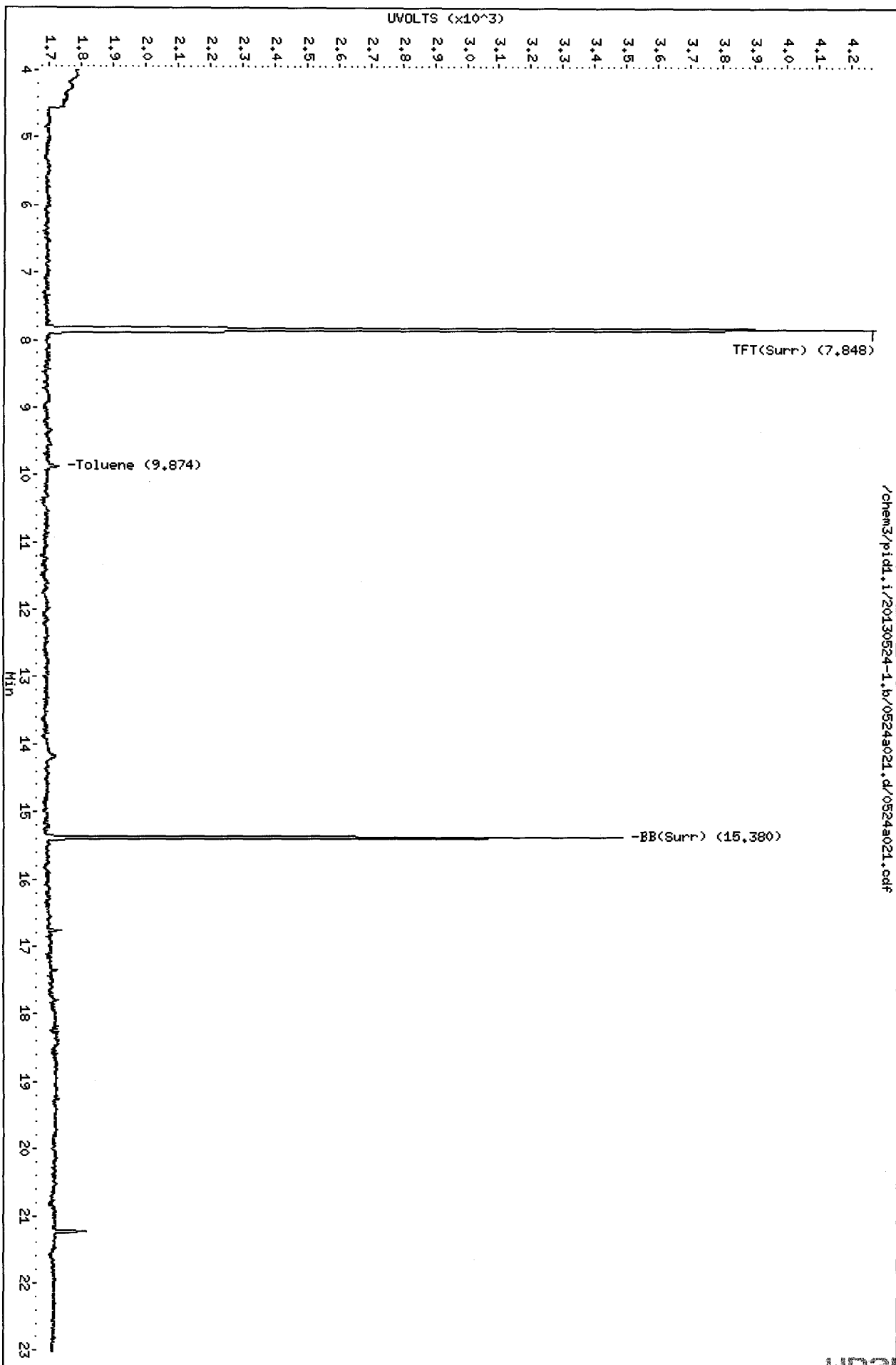
RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.880	-0.001	51	0.26N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a021.d
Date: 24-MAY-2013 19:23
Client ID: A2-M21-S-4
Sample Info: MR251
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

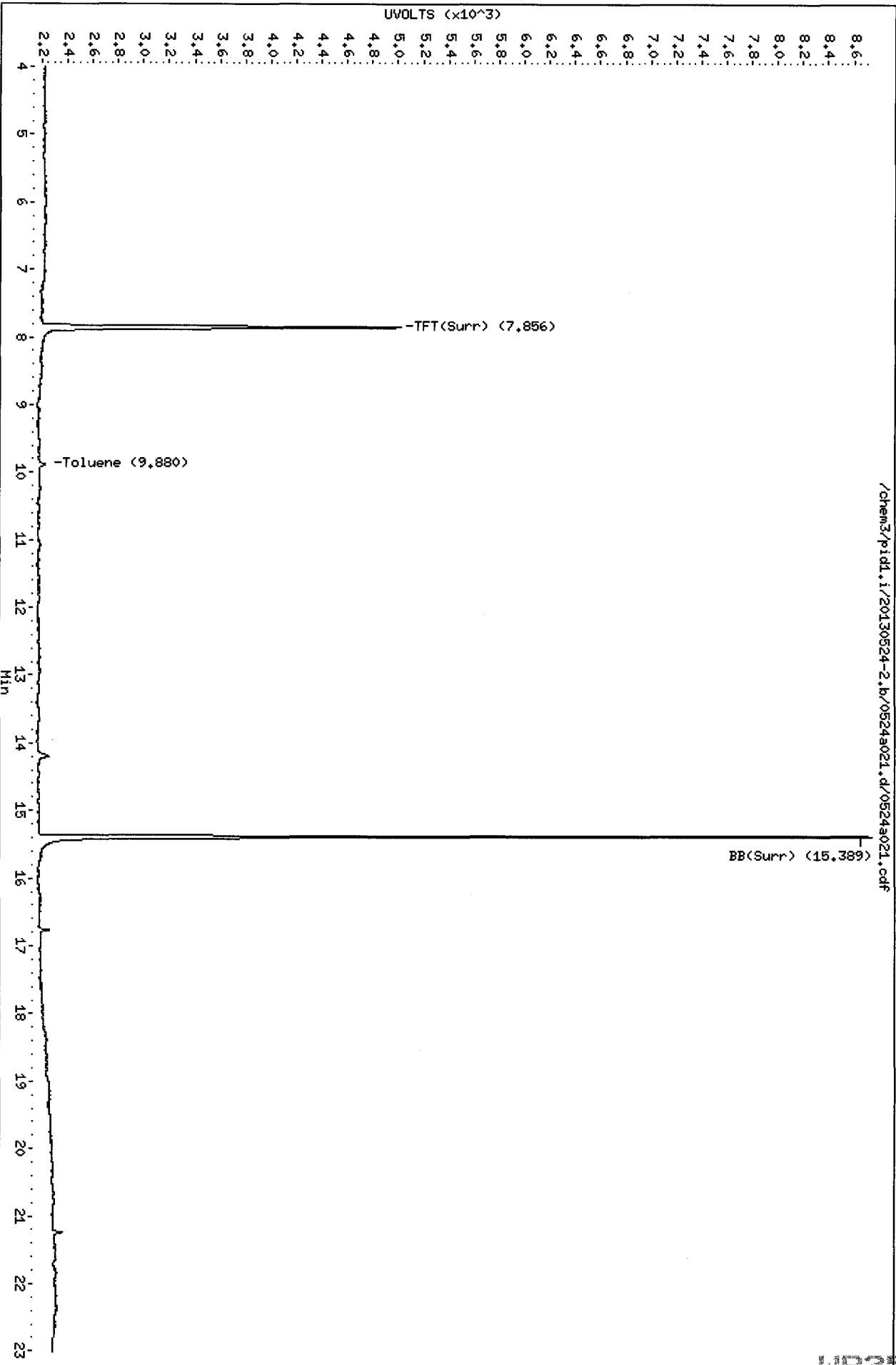
/chem3/pid1.i/20130524-1.b/0524a021.d/0524a021.cdf



MR251 : 001 05

Data File: /chem3/pid1.i/20130524-2.b/0524a021.d
Date: 24-MAY-2013 19:23
Client ID: A2-M21-S-4
Sample Info: MR251
Column phase: RTX 502-2 PID

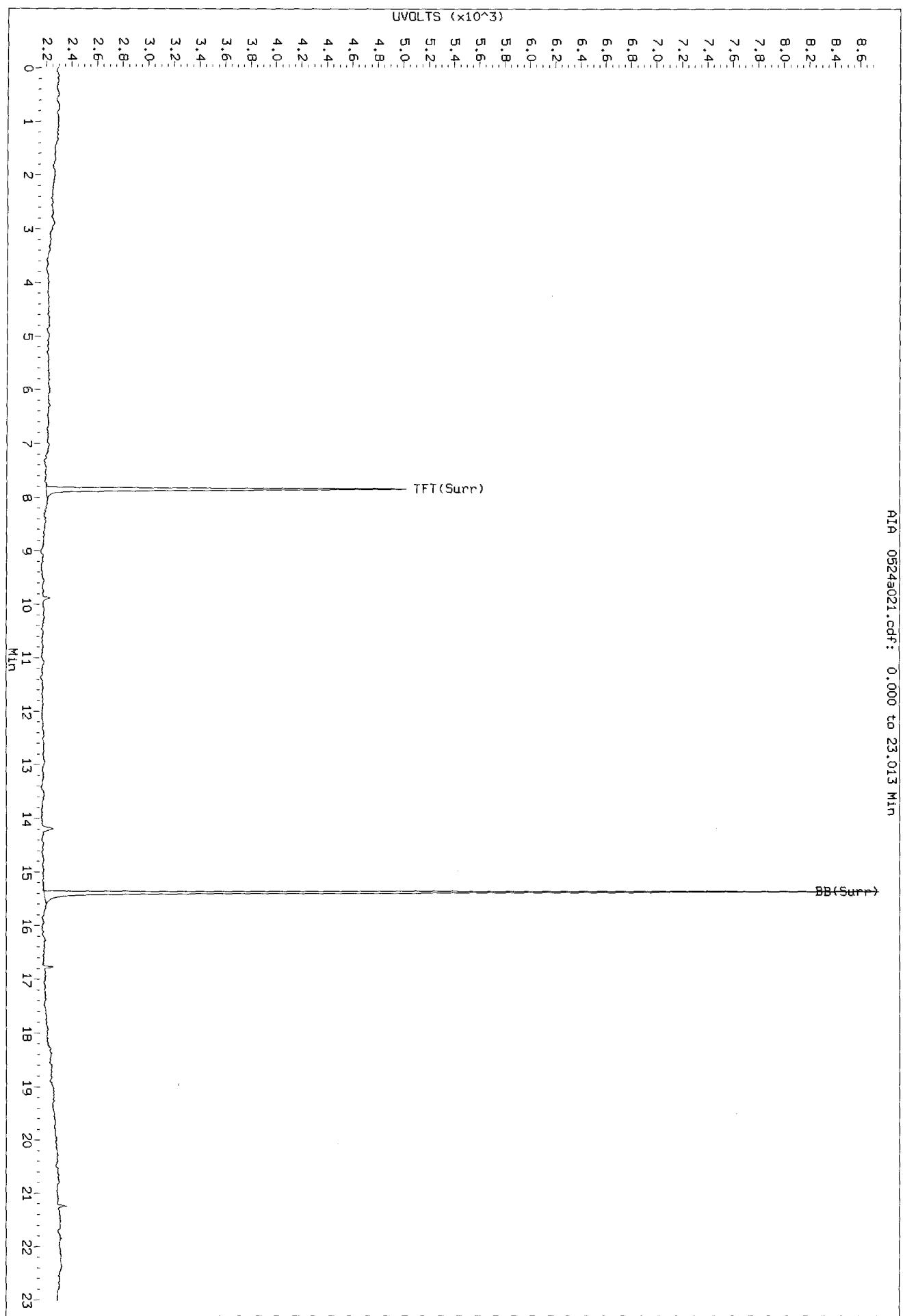
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



PC
5/18/13

Data File: /chem3/pid1.1/20130524-2.b/0524a021.d/0524a021.cdf
Injection Date: 24-May-2013 19:23
Instrument: pid1.1
Client Sample ID: A2-W21-S-4

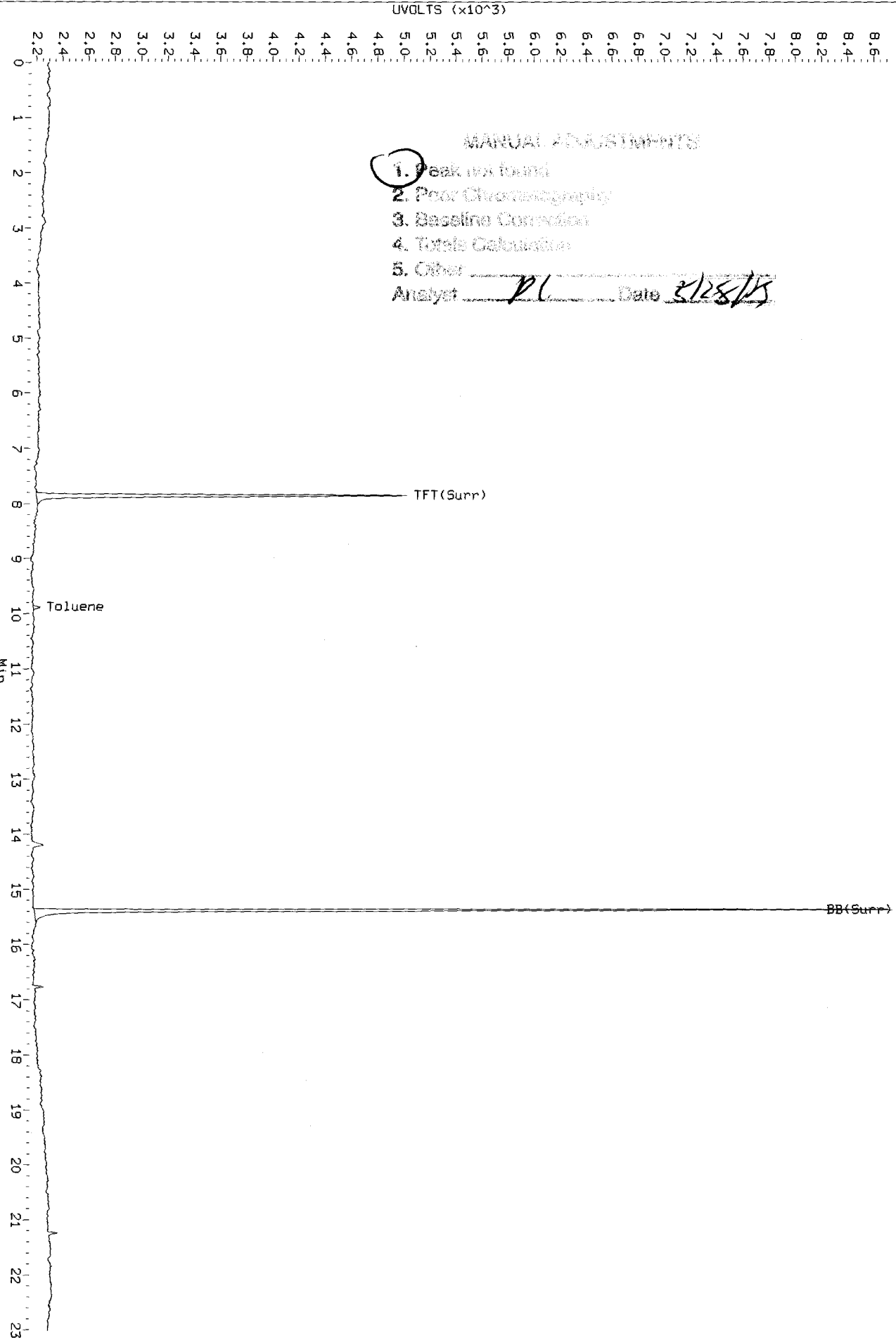
ALR 0524a021.cdf: 0.000 to 23.013 Min



Data File: /chem3/pid1.1/20130524-2.b/0524a021.d/0524a021.cdf
Injection Date: 24-May-2013 19:23
Instrument: pid1.1
Client Sample ID: A2-W21-S-4

RI 0524a021.cdf: 0.000 to 23.013 Min

UVOLTS (x10³)



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Total Calculation
- 5. Other

Analyst PL Date 5/28/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: A2-W23-S-4
SAMPLE**

Lab Sample ID: WR25J
LIMS ID: 13-11192
Matrix: Soil
Data Release Authorized: *MW*
Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03
Date Sampled: 05/23/13
Date Received: 05/24/13

Date Analyzed: 05/24/13 19:52
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Sample Amount: 68 mg-dry-wt
Percent Moisture: 23.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	18	< 18 U

	7.4	< 7.4 U	GAS ID ---
--	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	92.4%
Bromobenzene	95.5%

Gasoline Surrogate Recovery

Trifluorotoluene	90.9%
Bromobenzene	94.4%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a022.d ARI ID: WR25J
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a022.d Client ID: A2-W23-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 19:52
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.846	-0.002	2691	34659	90.9	TFT(Surr)
15.380	0.000	1876	15867	94.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.855	-0.001	2979	92.4	TFT(Surr)
15.389	0.001	6901	95.5	BB(Surr)

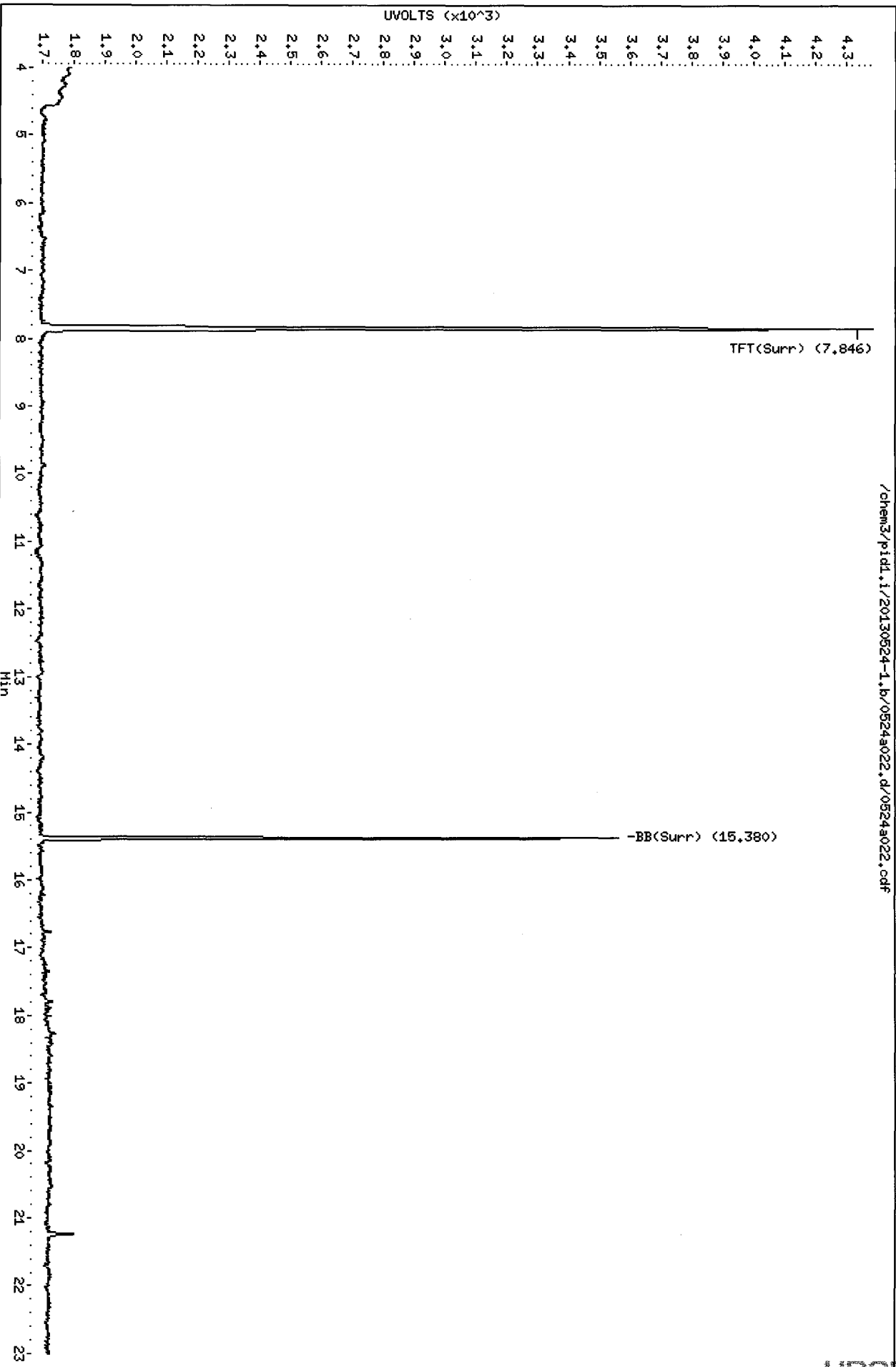
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a022.d
Date : 24-MAY-2013 19:52
Client ID: A2-M23-S-4
Sample Info: MR25J
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



MR25 : 001112

Data File: /chem3/pid1.i/20130524-2.b/0524a022.d

Date: 24-MAY-2013 19:52

Client ID: A2-M23-S-4

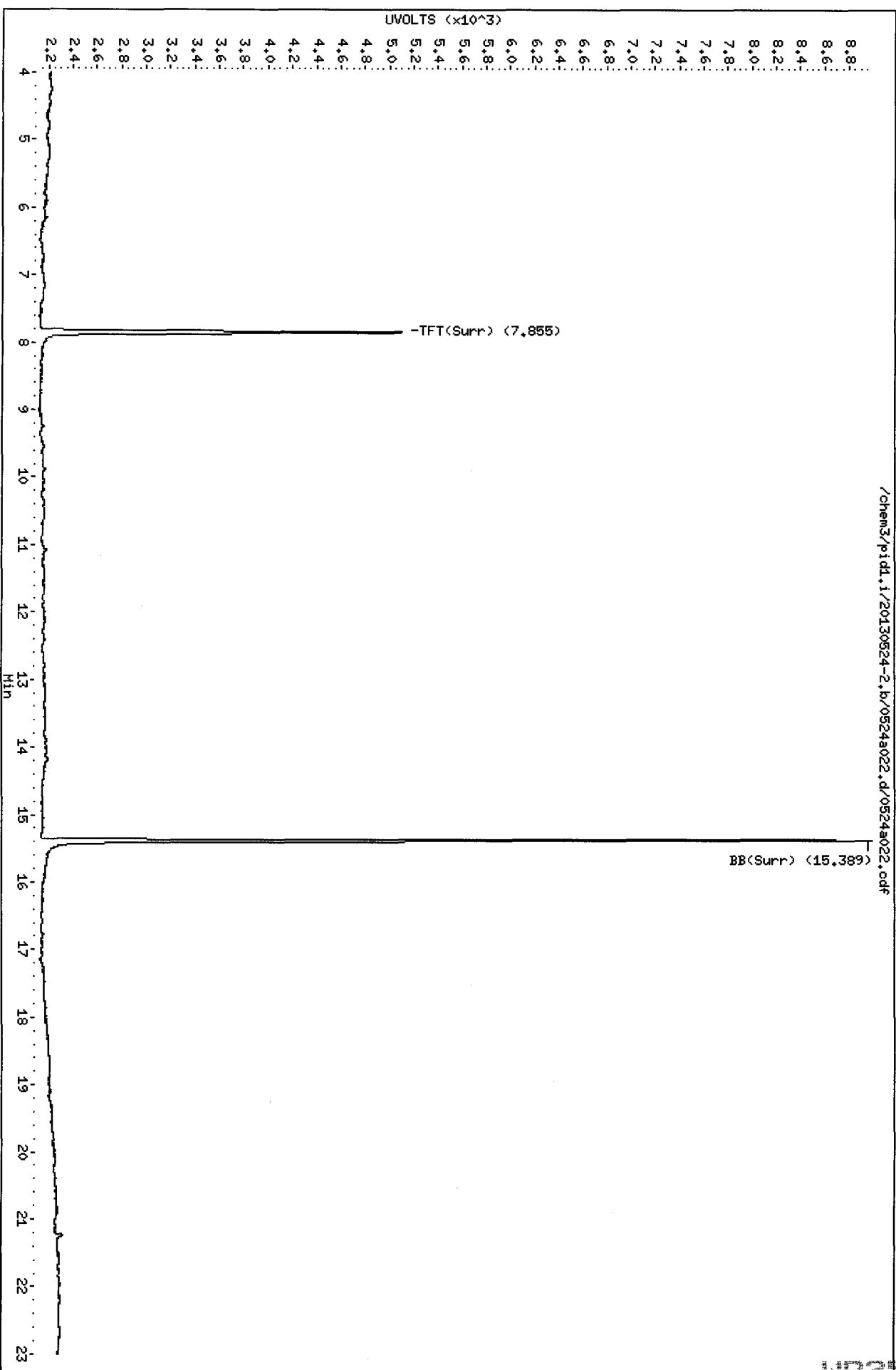
Sample Info: MR25J

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



/chem3/pid1.i/20130524-2.b/0524a022.d/0524a022.cdf

MR25J : 00145

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: A2-W24-S-4
SAMPLE**

Lab Sample ID: WR25K

LIMS ID: 13-11193

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 20:20

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 58 mg-dry-wt

Percent Moisture: 24.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	22	< 22 U
108-88-3	Toluene	22	< 22 U
100-41-4	Ethylbenzene	22	< 22 U
179601-23-1	m,p-Xylene	43	< 43 U
95-47-6	o-Xylene	22	< 22 U

Gasoline Range Hydrocarbons	8.7	< 8.7 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.4%
Bromobenzene	94.5%

Gasoline Surrogate Recovery

Trifluorotoluene	88.8%
Bromobenzene	92.8%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a023.d ARI ID: WR25K
Data file 2: /chem3/pid1.i/20130524-2.b/0524a023.d Client ID: A2-W24-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 20:20
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2629	33686	88.8	TFT(Surr)
15.382	0.001	1843	15334	92.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	6023	0.017
8015C 2MP-TMB (4.18 to 16.20)	723723	3663	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	3662	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	6023	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	2883	89.4	TFT(Surr)
15.389	0.001	6834	94.5	BB(Surr)

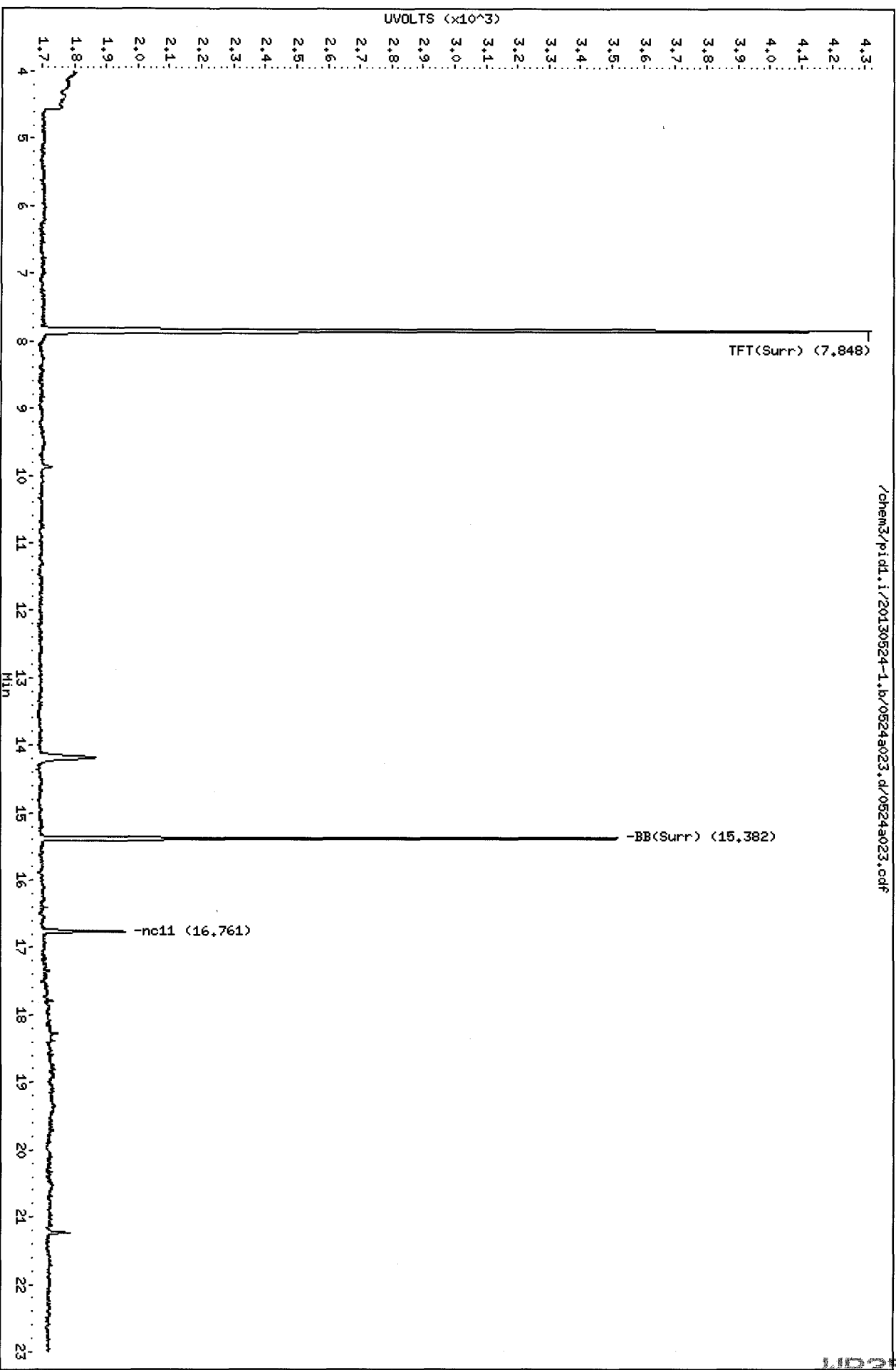
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.001	48	0.24N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a023.d
Date : 24-May-2013 20:20
Client ID: A2-M24-S-4
Sample Info: MR25K
Column phase: RTX 502-2 FID

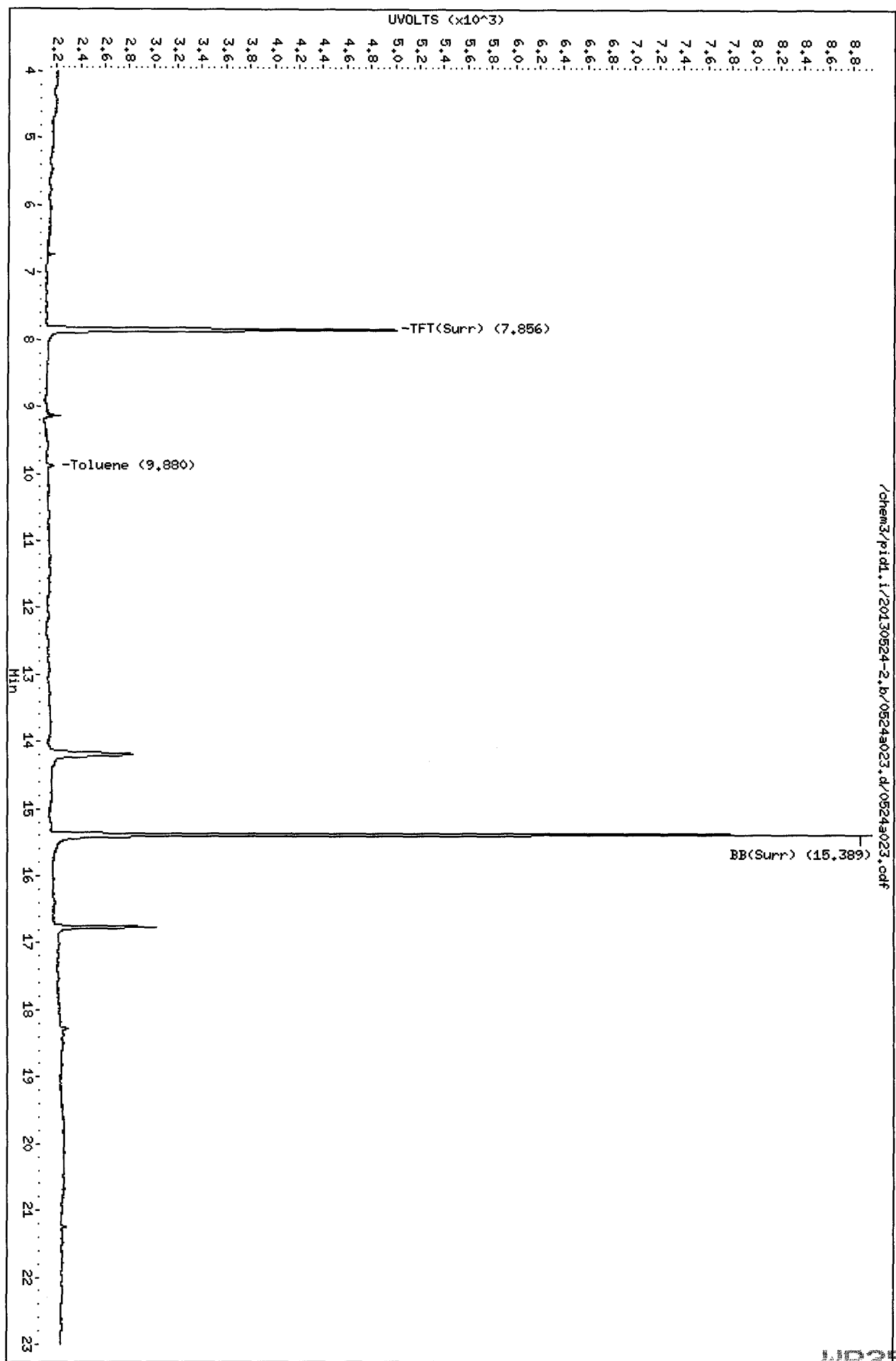
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



MR25K : 0524 15

Data File: /chem3/pid1.i/20130524-2.b/0524s023.d
Date: 24-MAY-2013 20:20
Client ID: A2-M24-S-4
Sample Info: MR25K
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

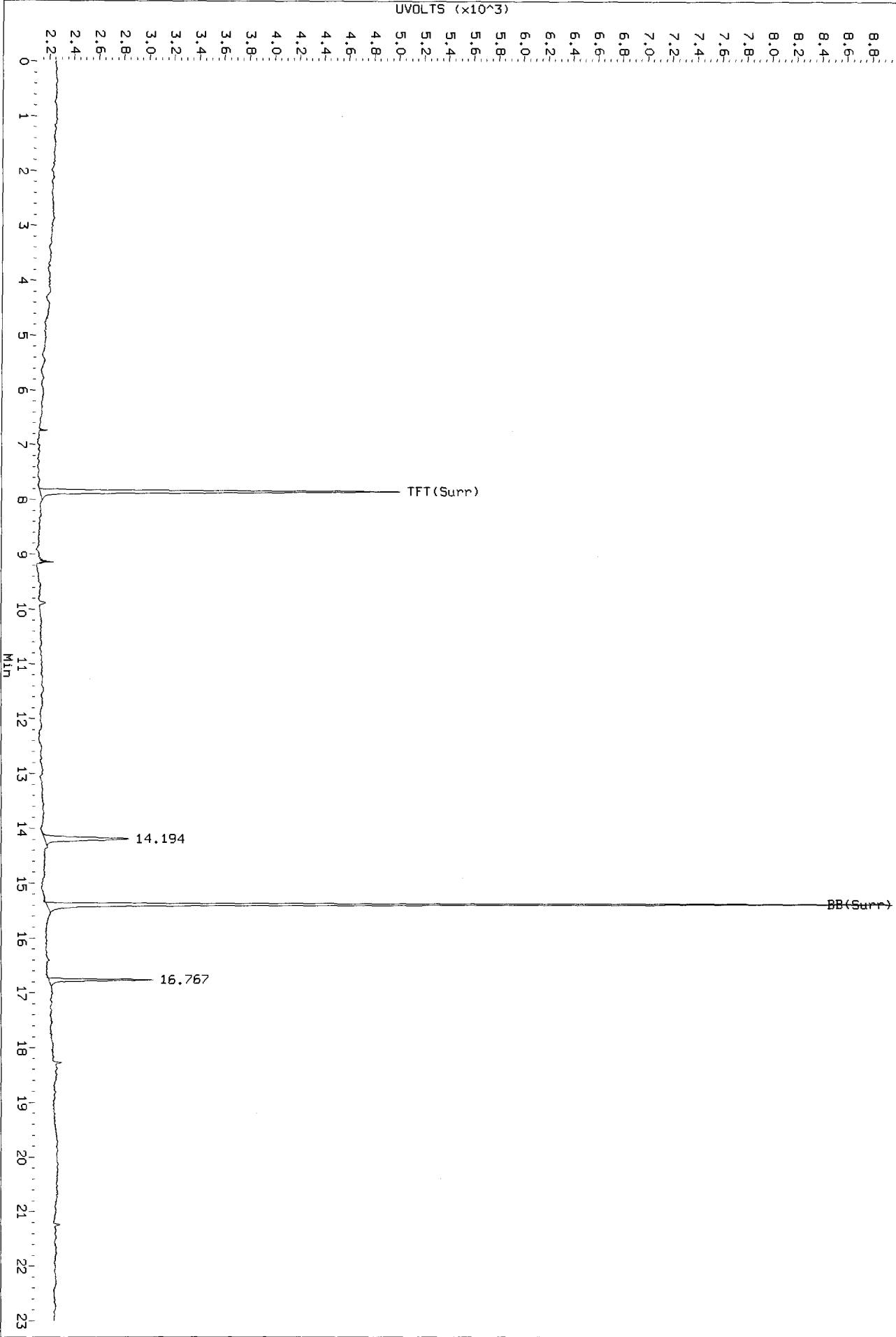


MR25K : 0524S023

PL
5/28/13

Data File: /chem3/pid1.1/20130524-2.1/0524a023.d/0524a023.cdf
Injection Date: 24-May-2013 20:20
Instrument: pid1.1
Client Sample ID: A2-W24-S-4

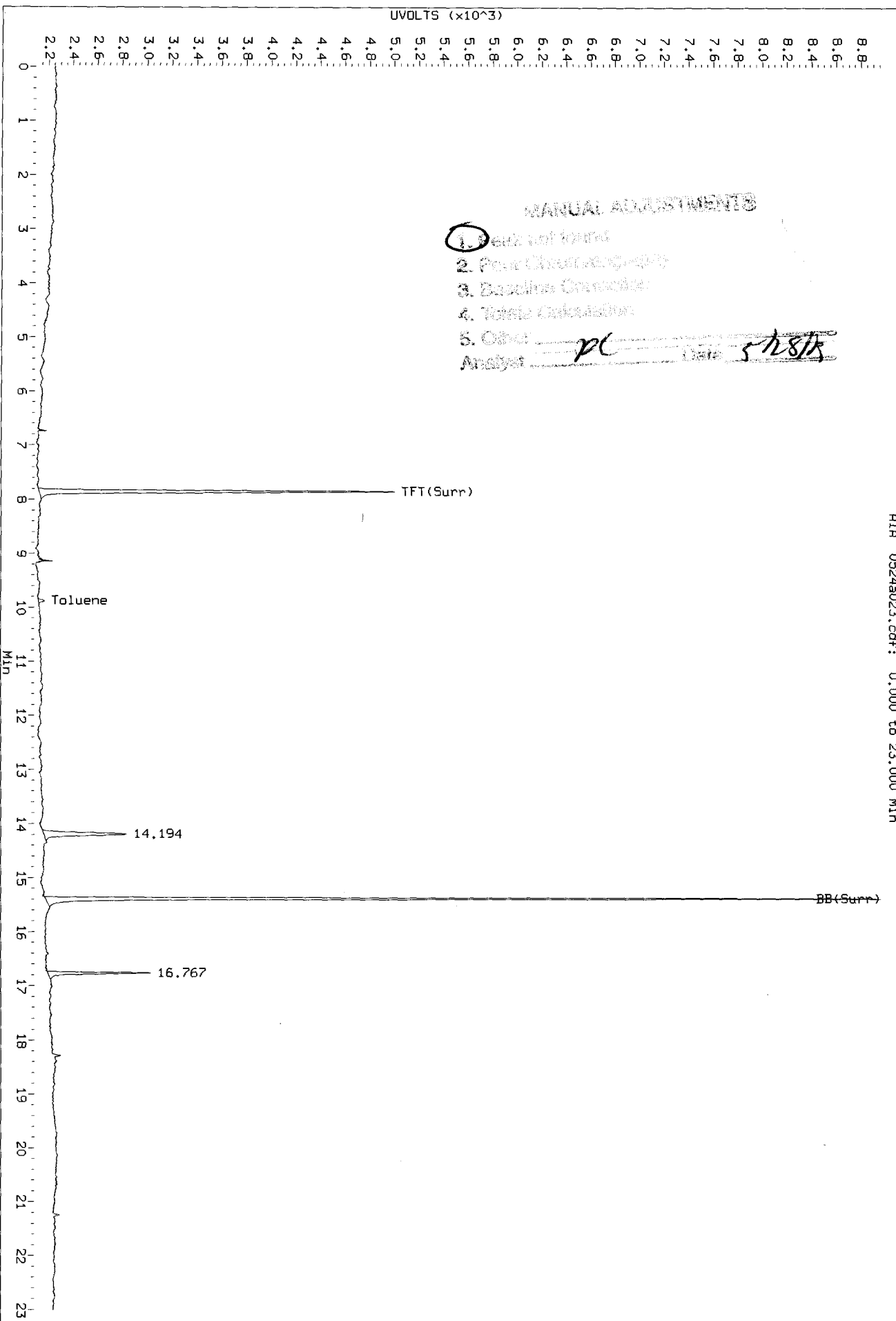
ALN 0524a023.cdf: 0.000 to 23.000 Min



4925 : 001 117

Data File: /chem3/pid1.1/20130524-2.b/0524a023.d/0524a023.cdf
Injection Date: 24-May-2013 20:20
Instrument: pid1.1
Client Sample ID: A2-W24-S-4

RI# 0524a023.cdf: 0.000 to 23.000 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: A2-W25-S-4
SAMPLE**

Lab Sample ID: WR25L

LIMS ID: 13-11194

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 20:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 88 mg-dry-wt

Percent Moisture: 15.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	14	< 14 U	
108-88-3	Toluene	14	< 14 U	
100-41-4	Ethylbenzene	14	< 14 U	
179601-23-1	m,p-Xylene	28	< 28 U	
95-47-6	o-Xylene	14	< 14 U	
	Gasoline Range Hydrocarbons	5.7	< 5.7 U	---

BETX Surrogate Recovery

Trifluorotoluene	90.6%
Bromobenzene	93.5%

Gasoline Surrogate Recovery

Trifluorotoluene	90.0%
Bromobenzene	91.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a024.d ARI ID: WR25L
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a024.d Client ID: A2-W25-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 20:48
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.847	-0.001	2663	34117	90.0	TFT(Surr)
15.381	0.000	1822	15482	91.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	12427	0.035
8015C 2MP-TMB (4.18 to 16.20)	723723	10948	0.015
AK101 nC6-nC10 (4.68 to 15.10)	582885	10948	0.019
NWTPHG Tol-Nap (9.77 to 18.90)	375093	12427	0.033

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.855	-0.001	2920	90.6	TFT(Surr)
15.389	0.001	6757	93.5	BB(Surr)

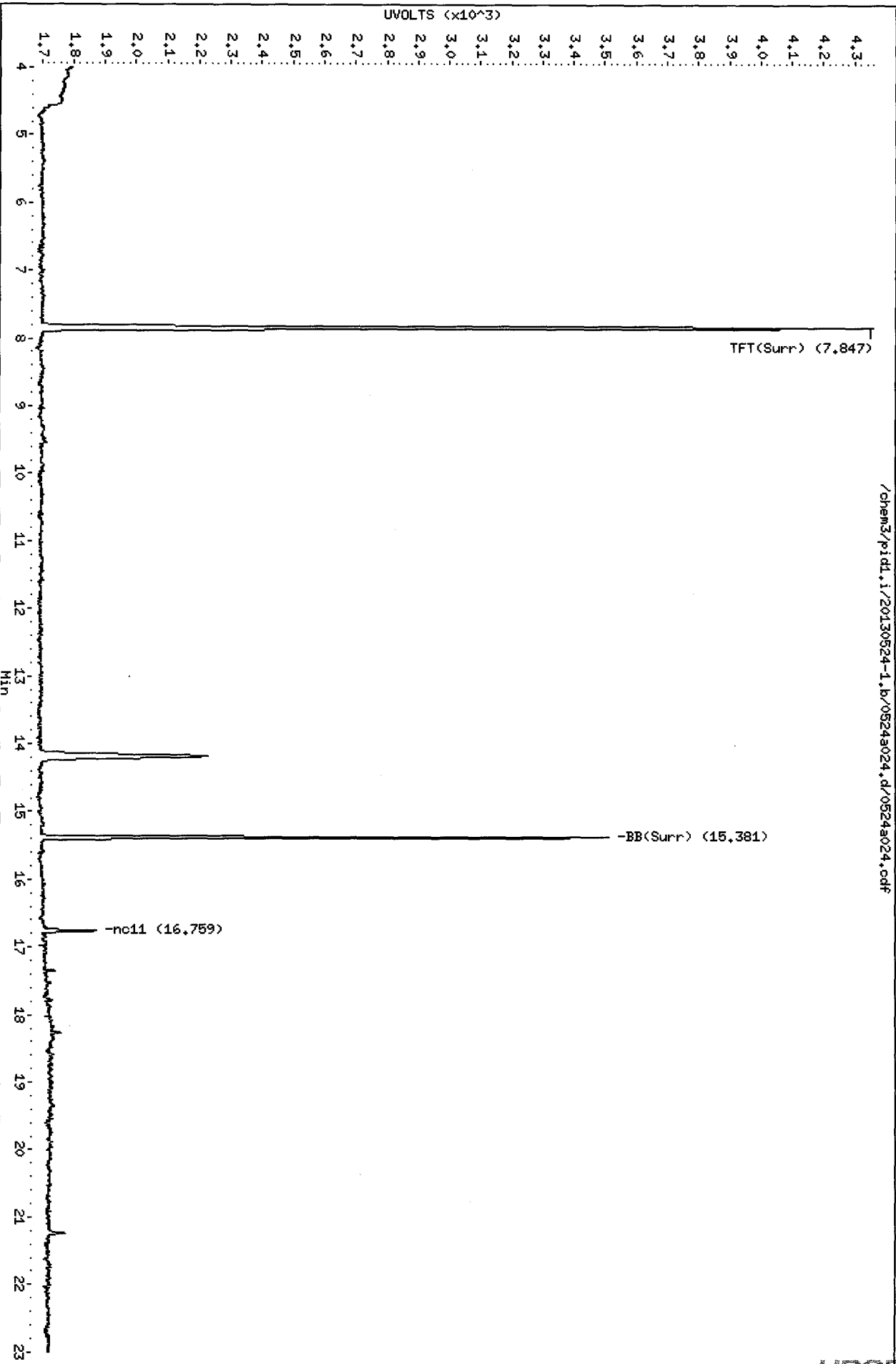
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidl.1/20130524-1.b/0524a024.d
Date: 24-MAY-2013 20:48
Client ID: A2-N25-S-4
Sample Info: MR25L
Column phase: RTX 502-2 FID

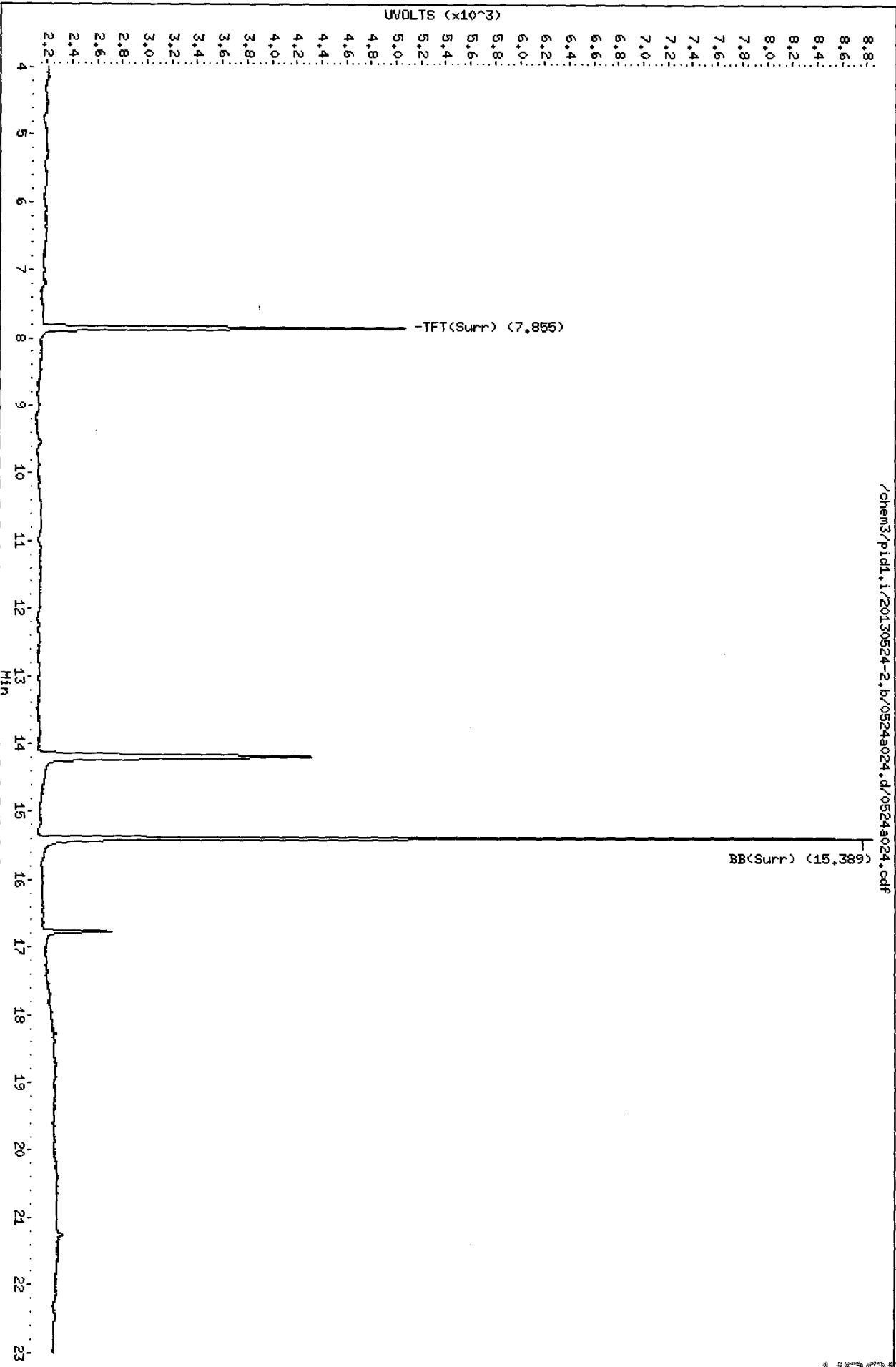
Instrument: pidl.1
Operator: PC
Column diameter: 0.18



MR25 : 00151

Data File: /chem3/pid1.i/20130524-2.b/0524a024.d
Date: 24-MAY-2013 20:48
Client ID: A2-M25-S-4
Sample Info: MR25L
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



05 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W26-S-4
SAMPLE

Lab Sample ID: WR25M

LIMS ID: 13-11195

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 22:13

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 70 mg-dry-wt

Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	36	< 36 U
95-47-6	o-Xylene	18	< 18 U

Gasoline Range Hydrocarbons	7.2	< 7.2 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	91.7%

Gasoline Surrogate Recovery

Trifluorotoluene	85.2%
Bromobenzene	89.9%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a027.d ARI ID: WR25M
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a027.d Client ID: A2-W26-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 22:13
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2522	32294	85.2	TFT(Surr)
15.381	0.001	1786	15272	89.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	4665	0.013
8015C 2MP-TMB (4.18 to 16.20)	723723	9866	0.014
AK101 nC6-nC10 (4.68 to 15.10)	582885	9380	0.016
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4665	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

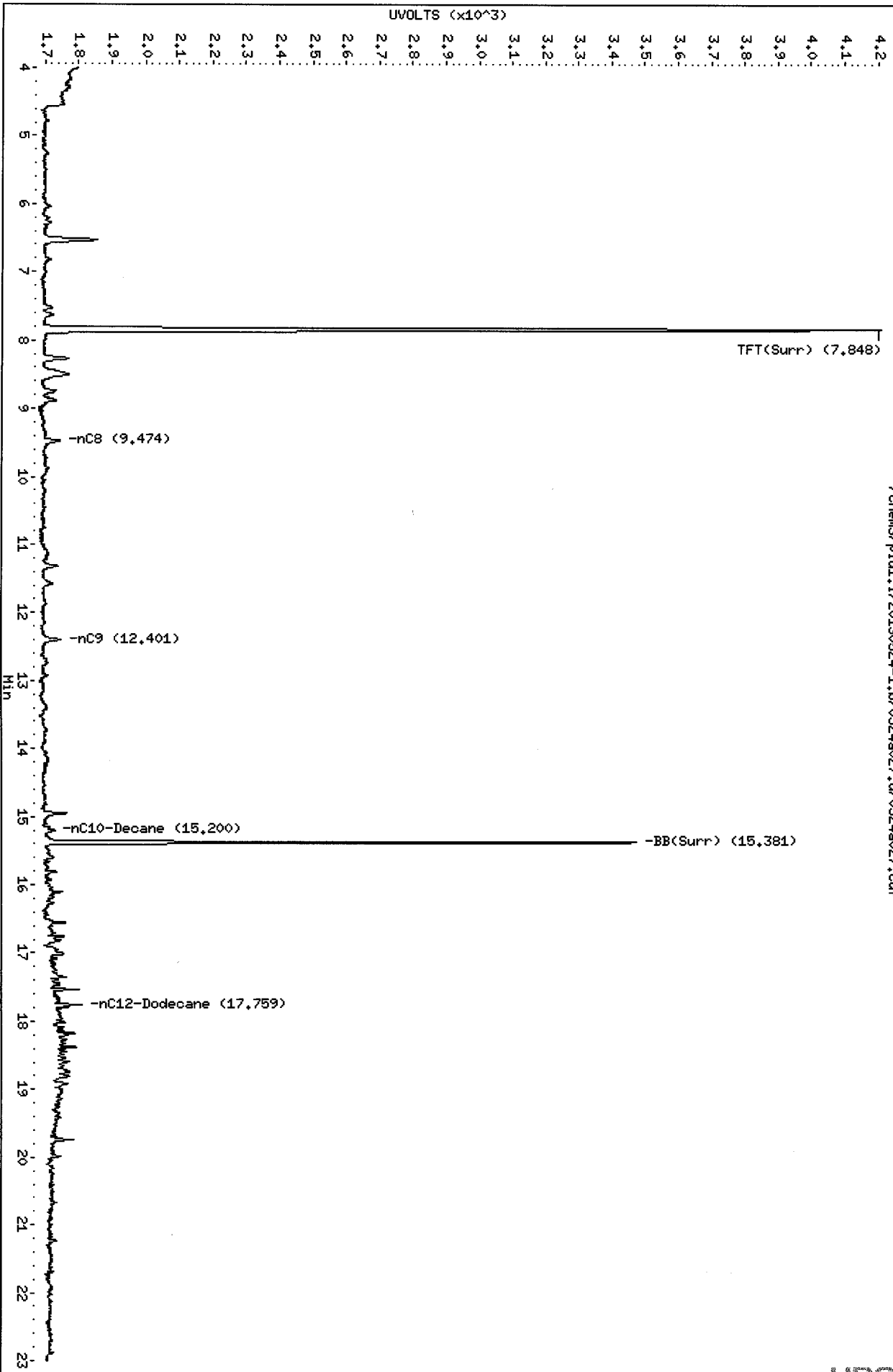
PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	2769	85.9	TFT(Surr)
15.389	0.001	6628	91.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated



/chem3/pid1.i/20130524-1.b/0524a027.d/0524a027.cdf

MR25 : 00155

Data File: /chem3/pid1.i/20130524-2.1b/0524a027.d

Page 1

Date: 24-MAY-2013 22:13

Client ID: A2-M26-S-4

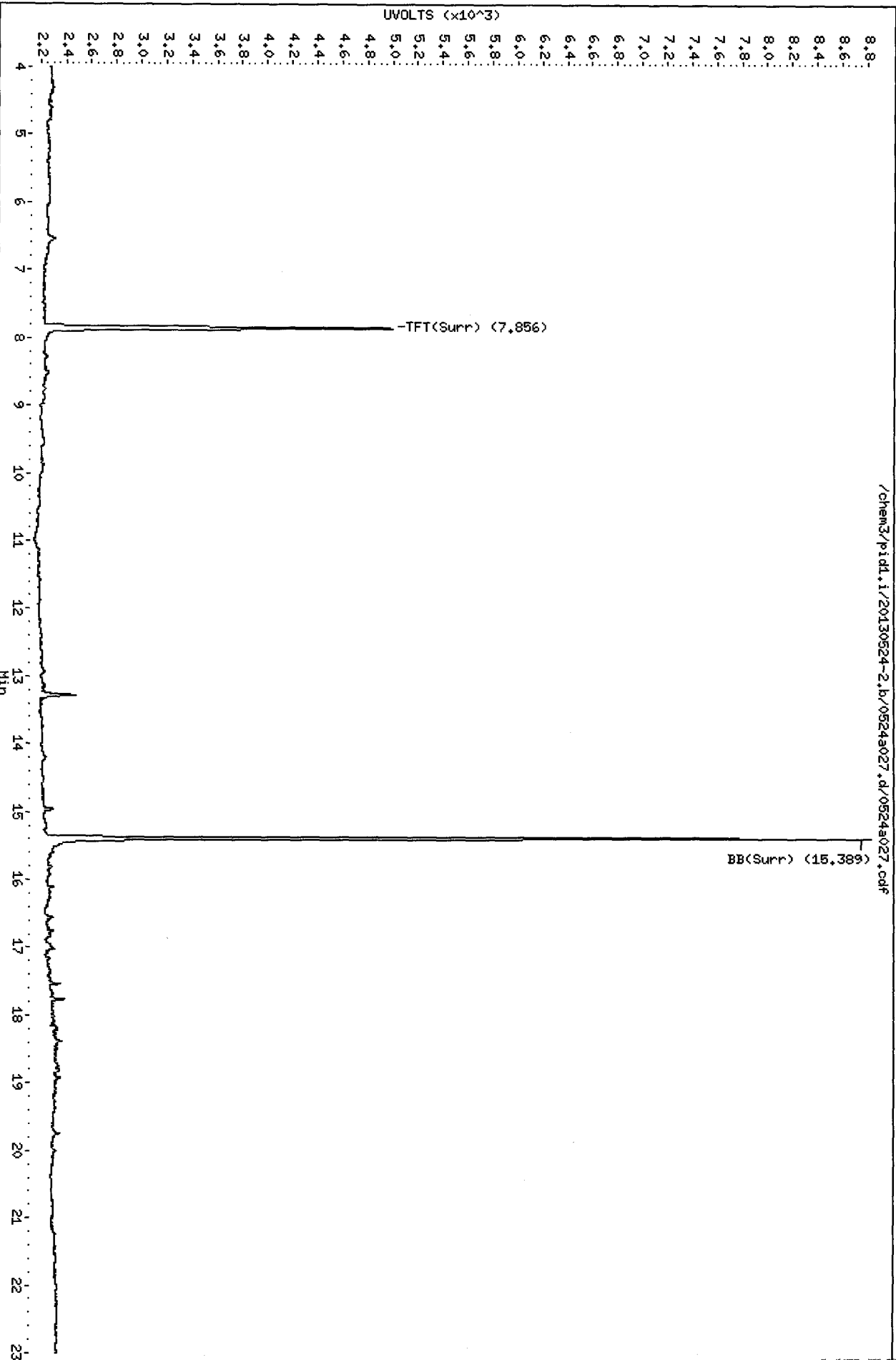
Sample Info: MR25H

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID



MR25H : 20130524

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W27-S-4
SAMPLE

Lab Sample ID: WR25N

LIMS ID: 13-11196

Matrix: Soil

Data Release Authorized: *WWW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 22:42

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 49 mg-dry-wt

Percent Moisture: 34.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	26	< 26 U
108-88-3	Toluene	26	< 26 U
100-41-4	Ethylbenzene	26	< 26 U
179601-23-1	m,p-Xylene	51	< 51 U
95-47-6	o-Xylene	26	< 26 U

Gasoline Range Hydrocarbons	10	< 10 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	85.4%
Bromobenzene	92.0%

Gasoline Surrogate Recovery

Trifluorotoluene	84.5%
Bromobenzene	90.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a028.d ARI ID: WR25N
Data file 2: /chem3/pid1.i/20130524-2.b/0524a028.d Client ID: A2-W27-S-4
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 22:42
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2500	32384	84.5	TFT(Surr)
15.380	0.000	1800	15071	90.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	2754	85.4	TFT(Surr)
15.389	0.001	6653	92.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

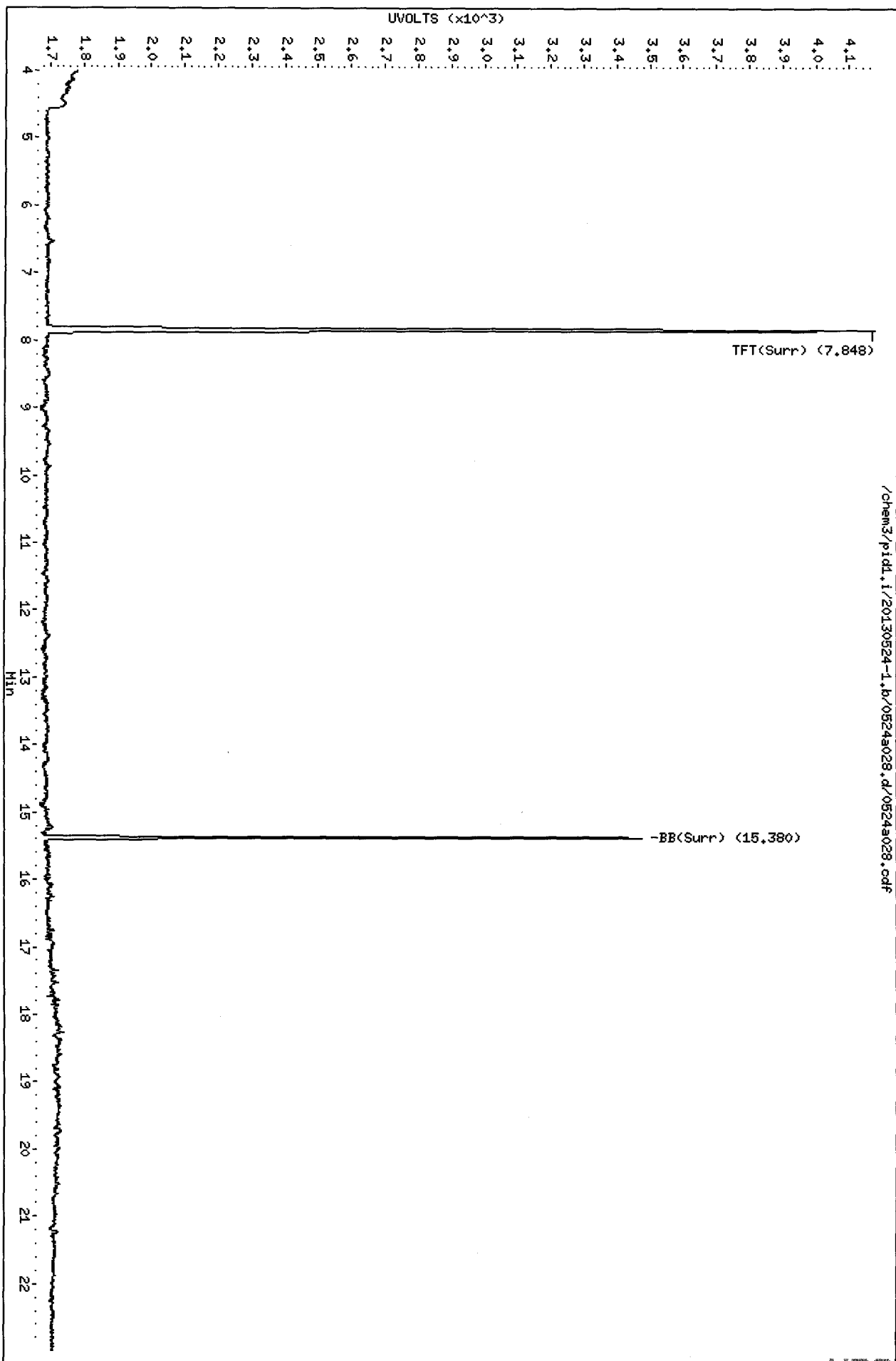
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a028.d
Date : 24-MAY-2013 22:42
Client ID: A2-M27-S-4
Sample Info: MR25N
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130524-1.b/0524a028.d/0524a028.cdf



Data File: /chem3/pid1.i/20130524-2.1b/0524a028.d

Page 1

Date : 24-MAY-2013 22:42

Client ID: A2-M27-S-4

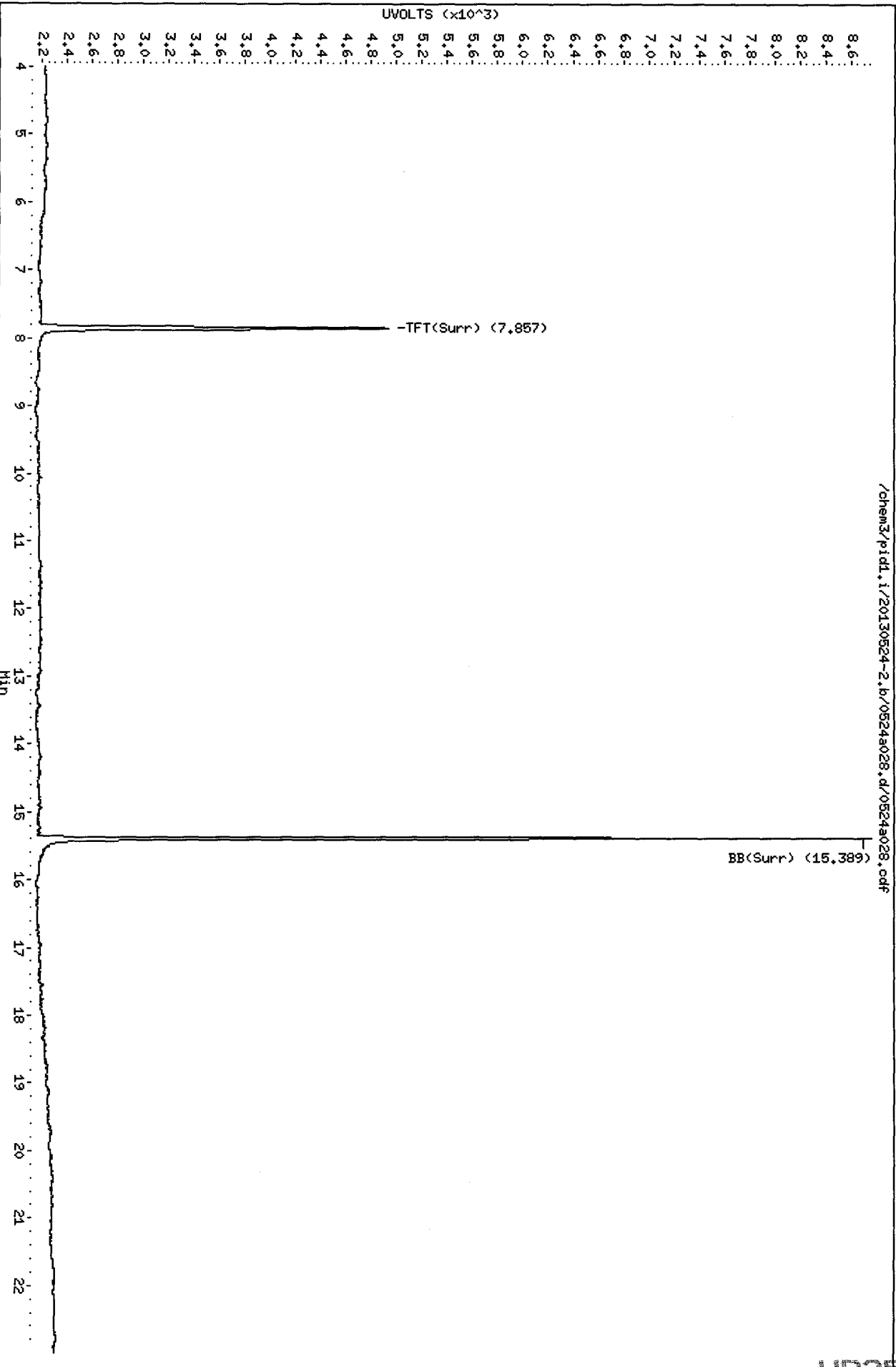
Sample Info: MR25N

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID



MR25 : 201305

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W22-S-4
SAMPLE

Lab Sample ID: WR250

LIMS ID: 13-11197

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/24/13 23:10

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 40 mg-dry-wt

Percent Moisture: 28.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	31	< 31 U
108-88-3	Toluene	31	< 31 U
100-41-4	Ethylbenzene	31	< 31 U
179601-23-1	m,p-Xylene	62	< 62 U
95-47-6	o-Xylene	31	< 31 U

Gasoline Range Hydrocarbons 12 < 12 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	86.8%
Bromobenzene	94.0%

Gasoline Surrogate Recovery

Trifluorotoluene	86.3%
Bromobenzene	93.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a029.d ARI ID: WR250
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a029.d Client ID: A2-W22-S-4
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 23:10
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2554	32896	86.3	TFT(Surr)
15.380	0.000	1847	15607	93.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	11429	0.032
8015C 2MP-TMB (4.18 to 16.20)	723723	9422	0.013
AK101 nC6-nC10 (4.68 to 15.10)	582885	3900	0.007
NWTPHG Tol-Nap (9.77 to 18.90)	375093	12020	0.032

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	2797	86.8	TFT(Surr)
15.388	0.000	6797	94.0	BB(Surr)

SW8021 (PID)

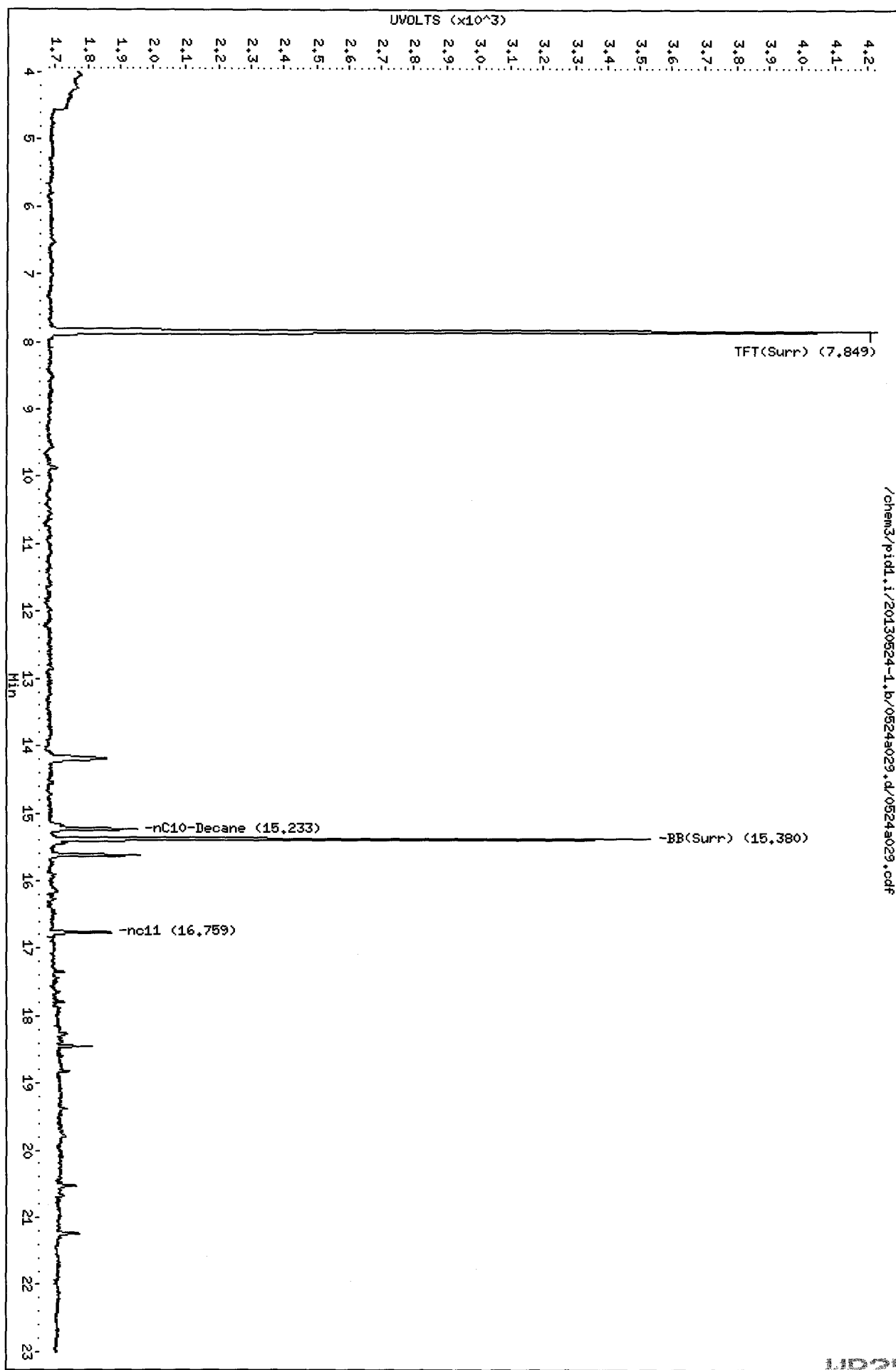
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.006	36	0.18N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a029.d
Date : 24-MAY-2013 23:10
Client ID: A2-M22-S-4
Sample Info: MR250
Column phase: RTX 502-2 FID

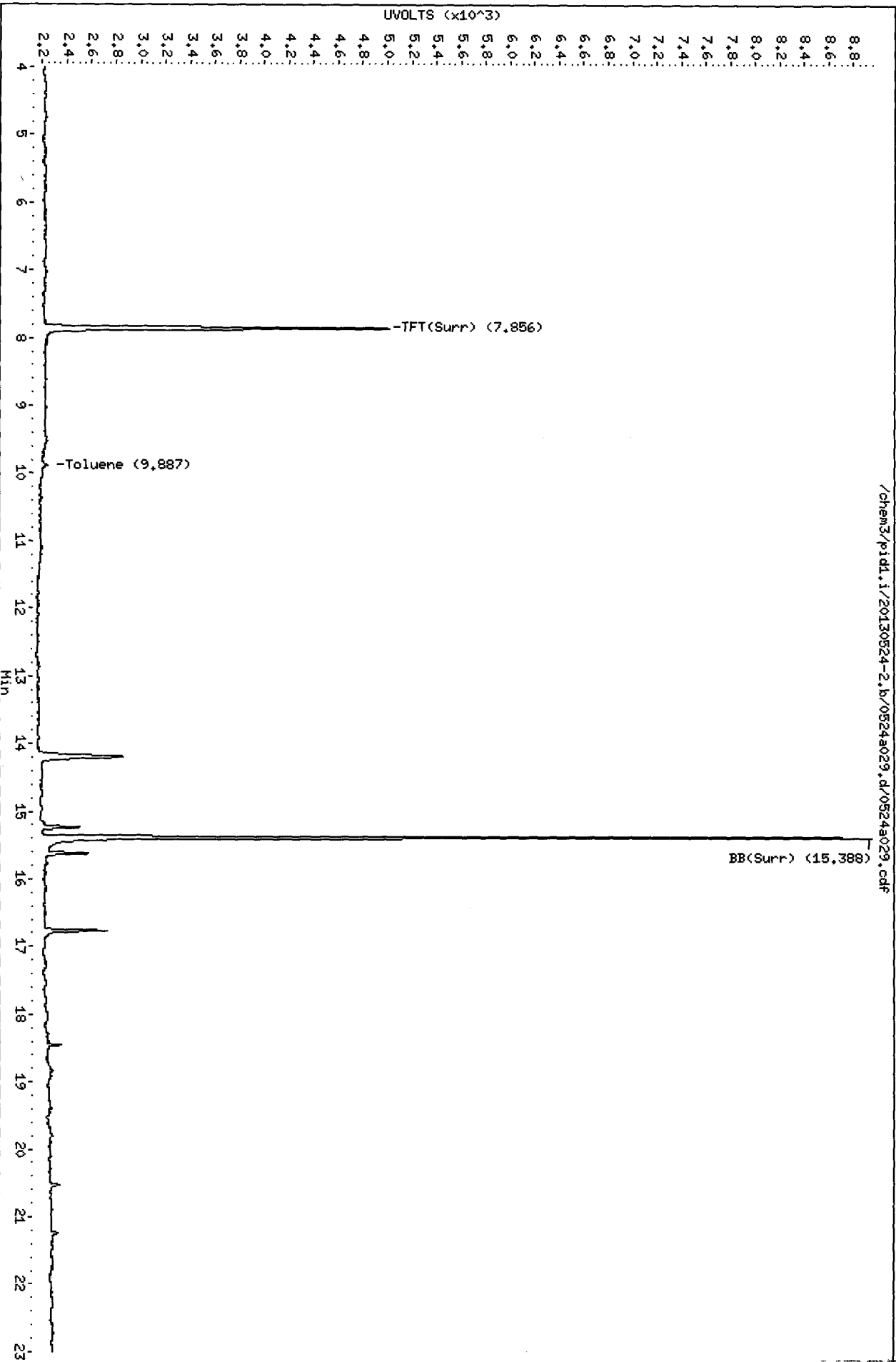
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130524-1.b/0524a029.d/0524a029.cdf



Data File: /chem3/pid1.i/20130524-2.b/0524a029.d
Date: 24-MAY-2013 23:10
Client ID: A2-M22-S-4
Sample Info: MR250
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



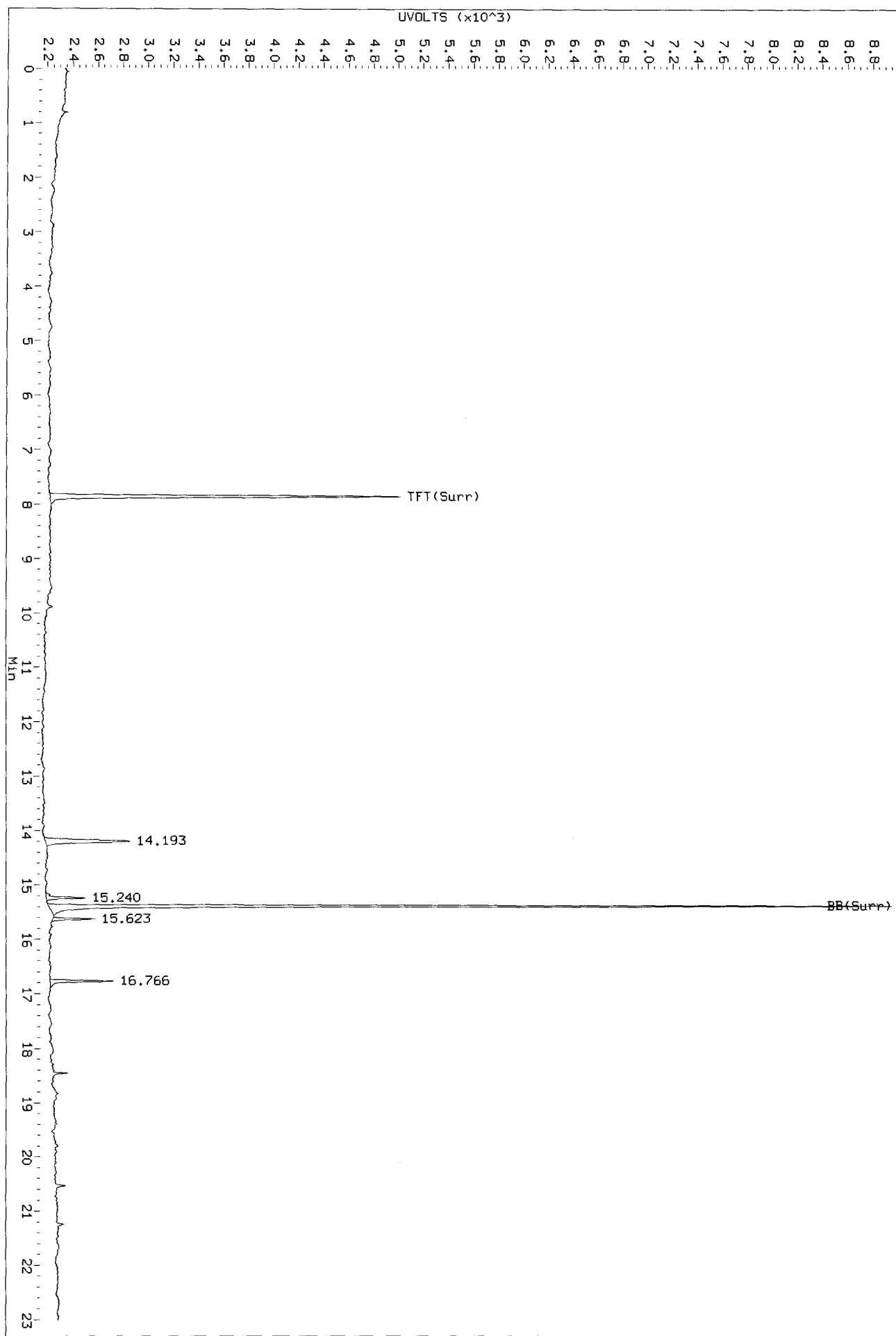
/chem3/pid1.i/20130524-2.b/0524a029.d/0524a029.cdf

MR250 : 0524 05

PK
5/28/13

Data File: /chem3/pid1.1/20130524-2.b/0524a029.d/0524a029.cdf
Injection Date: 24-May-2013 23:10
Instrument: pid1.1
Client Sample ID: A2-W22-S-4

AIR 0524a029.cdf: 0.000 to 23.003 Min



Data File: /chem3/pid1.1/20130524-2.b/0524a029.d/0524a029.cdf
Injection Date: 24-MAY-2013 23:10
Instrument: pid1.1
Client Sample ID: A2-W22-S-4

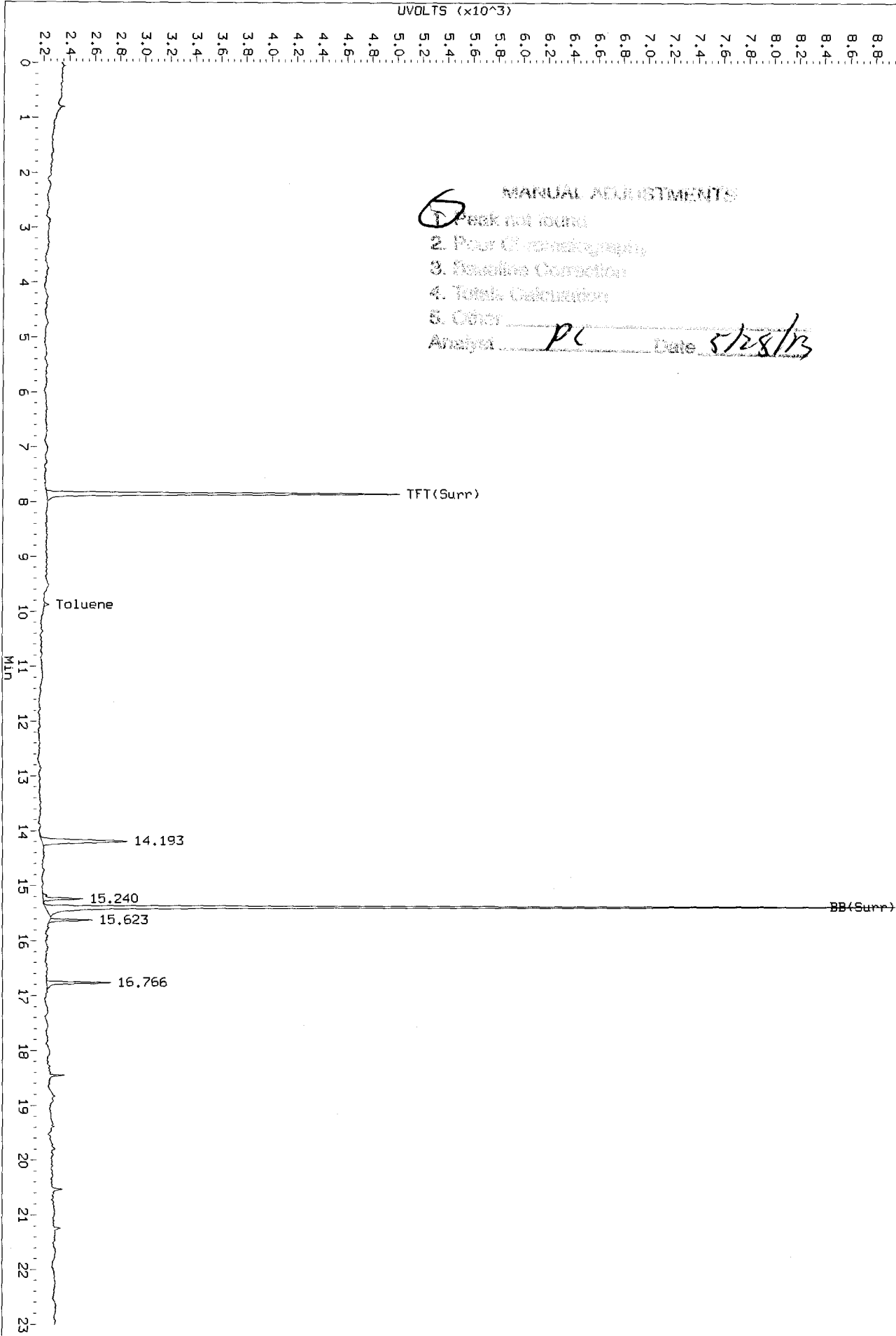
AIR 0524a029.cdf: 0.000 to 23.003 Min

UVOLTS (x10³)

MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor C₁₈ chromatography
- 3. Baseline Correction
- 4. Total Calculation
- 5. Other

Analyst PC Date 5/28/13



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR25
Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	BFB	TFT	BBZ	TOT	OUT
MB-052413	NA	92.1%	92.0%	0	
LCS-052413	NA	95.9%	91.8%	0	
LCSD-052413	NA	98.4%	94.1%	0	
SL-W1-S-4	NA	95.0%	94.9%	0	
SL-W2-S-4	NA	96.5%	101%	0	
SL-W3-S-4	NA	93.7%	93.0%	0	
SL-W4-S-4	NA	94.7%	116%	0	
SL-W5-S-4	NA	89.4%	91.6%	0	
SL-W6-S-4	NA	90.0%	92.0%	0	
A2-W19-S-4	NA	88.7%	90.7%	0	
A2-W20-S-4	NA	88.9%	91.8%	0	
A2-W21-S-4	NA	87.5%	90.7%	0	
A2-W23-S-4	NA	90.9%	94.4%	0	
A2-W24-S-4	NA	88.8%	92.8%	0	
A2-W25-S-4	NA	90.0%	91.7%	0	
A2-W26-S-4	NA	85.2%	89.9%	0	
A2-W27-S-4	NA	84.5%	90.6%	0	
A2-W22-S-4	NA	86.3%	93.0%	0	

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11183 to 13-11197

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR25
Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-052413	93.8%	94.7%	0
LCS-052413	96.6%	94.2%	0
LCSD-052413	99.4%	96.9%	0
SL-W1-S-4	97.7%	96.3%	0
SL-W2-S-4	98.4%	100%	0
SL-W3-S-4	95.7%	95.6%	0
SL-W4-S-4	96.3%	104%	0
SL-W5-S-4	91.0%	93.8%	0
SL-W6-S-4	91.6%	94.8%	0
A2-W19-S-4	90.1%	92.9%	0
A2-W20-S-4	90.2%	93.9%	0
A2-W21-S-4	87.6%	91.4%	0
A2-W23-S-4	92.4%	95.5%	0
A2-W24-S-4	89.4%	94.5%	0
A2-W25-S-4	90.6%	93.5%	0
A2-W26-S-4	85.9%	91.7%	0
A2-W27-S-4	85.4%	92.0%	0
A2-W22-S-4	86.8%	94.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11183 to 13-11197

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413

LIMS ID: 13-11183

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/24/13 10:44

LCSD: 05/24/13 11:13

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	49.0	50.0	98.0%	48.9	50.0	97.8%	0.2%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.9%	98.4%
Bromobenzene	91.8%	94.1%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-052413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052413

LIMS ID: 13-11183

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/24/13 10:44

LCSD: 05/24/13 11:13

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	190	185	103%	186	185	101%	2.1%
Toluene	2030	1980	103%	2020	1980	102%	0.5%
Ethylbenzene	602	580	104%	602	580	104%	0.0%
m,p-Xylene	2150	2120	101%	2160	2120	102%	0.5%
o-Xylene	995	960	104%	988	960	103%	0.7%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	96.6%	99.4%
Bromobenzene	94.2%	96.9%

106
5/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130524-1.b/0524a004.d ARI ID: LCS0524
Data file 2: /chem3/pid1.i/20130524-2.b/0524a004.d Client ID:
Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 10:44
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2837	40729	95.9	TFT(Surr)
15.383	0.002	1824	16098	91.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	349354	0.976 M
8015C 2MP-TMB (4.18 to 16.20)	723723	721396	0.997 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	580990	0.997 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	367872	0.981 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3115	96.6	TFT(Surr)
15.390	0.002	6807	94.2	BB(Surr)

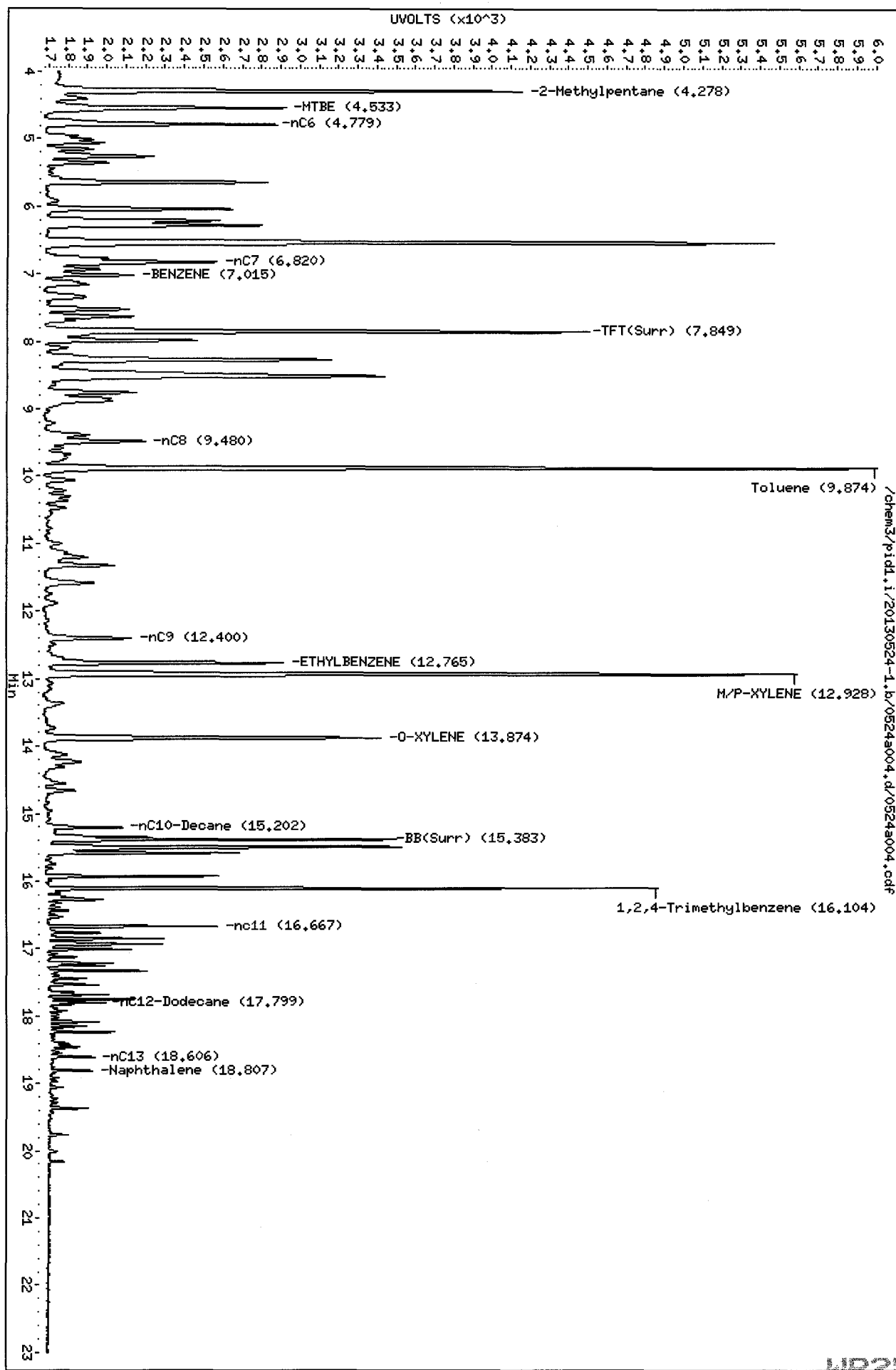
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.023	0.002	851	3.79	Benzene
9.883	0.002	8036	40.56	Toluene
12.774	0.002	1968	12.05	Ethylbenzene
12.938	0.005	7753	43.09	M/P-Xylene
13.883	0.003	2826	19.90	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

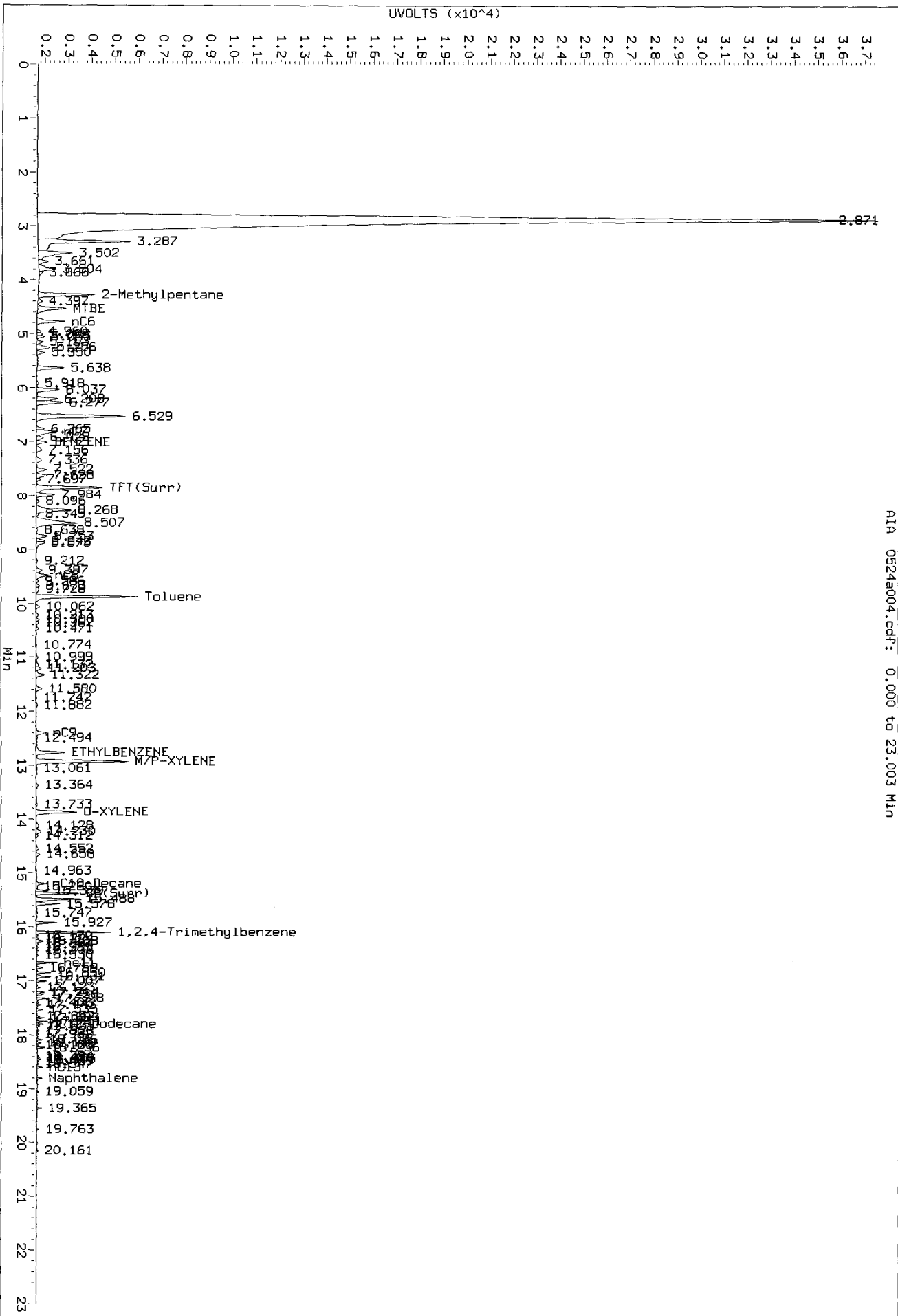
Data File: /chem3/pid1.i/20130524-1.b/0524a004.d
Date: 24-MAY-2013 10:44
Client ID:
Sample Info: LCS0524
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



PC
5/28/13

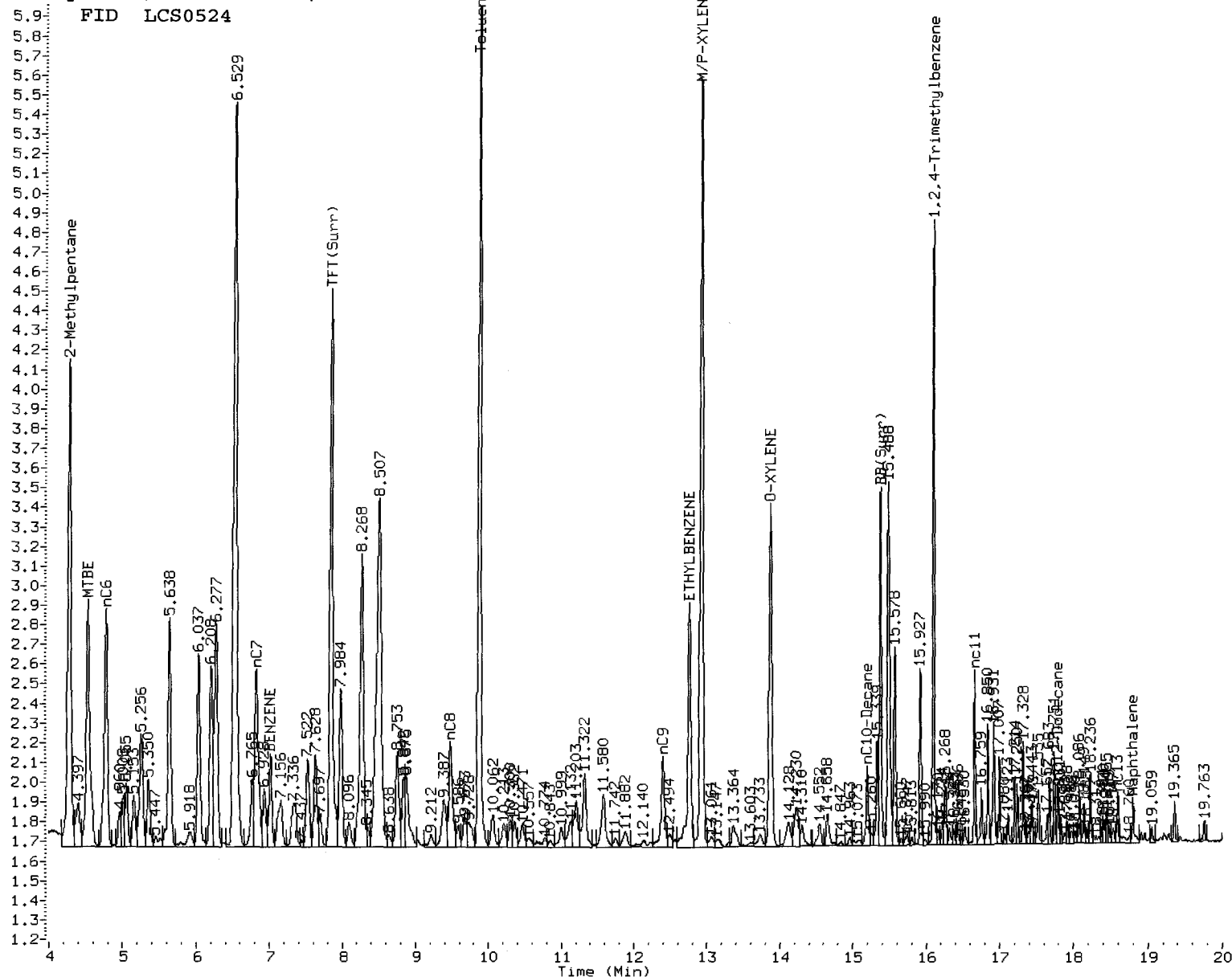
Data File: /chem3/pid1.1/20130524-1.b/0524a004.d/0524a004.cdf
Injection Date: 24-MAY-2013 10:44
Instrument: pid1.1
Client Sample ID:



AIR 0524a004.cdf: 0.000 to 23.003 Min

FID LCS0524

UVOLTS



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

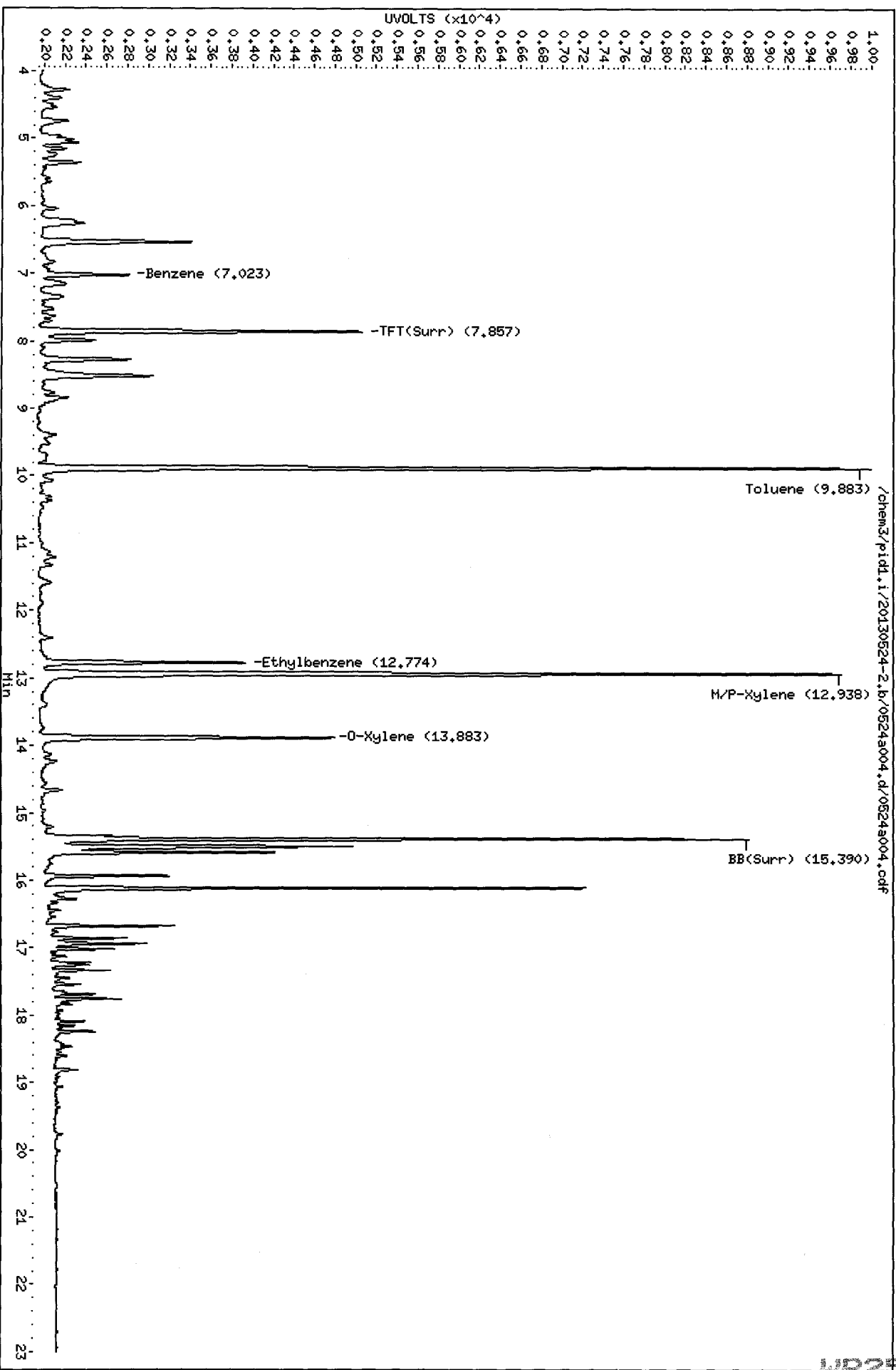
5. Other _____

Analyst: PC

Date: 5/28/13

Data File: /chem3/pid1.i/20130524-2.b/0524a004.d
Date : 24-MAY-2013 10:44
Client ID:
Sample Info: LCS0524
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130524-2.b/0524a004.d/0524a004.cdf

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a005.d ARI ID: LCSD0524
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a005.d Client ID:
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 11:13
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	-0.002	2912	41805	98.4	TFT(Surr)
15.380	0.000	1870	16778	94.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	349312	0.975 M
8015C 2MP-TMB (4.18 to 16.20)	723723	716463	0.990 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	575437	0.987 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	366864	0.978 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	-0.001	3205	99.4	TFT(Surr)
15.389	0.001	7003	96.9	BB(Surr)

SW8021 (PID)

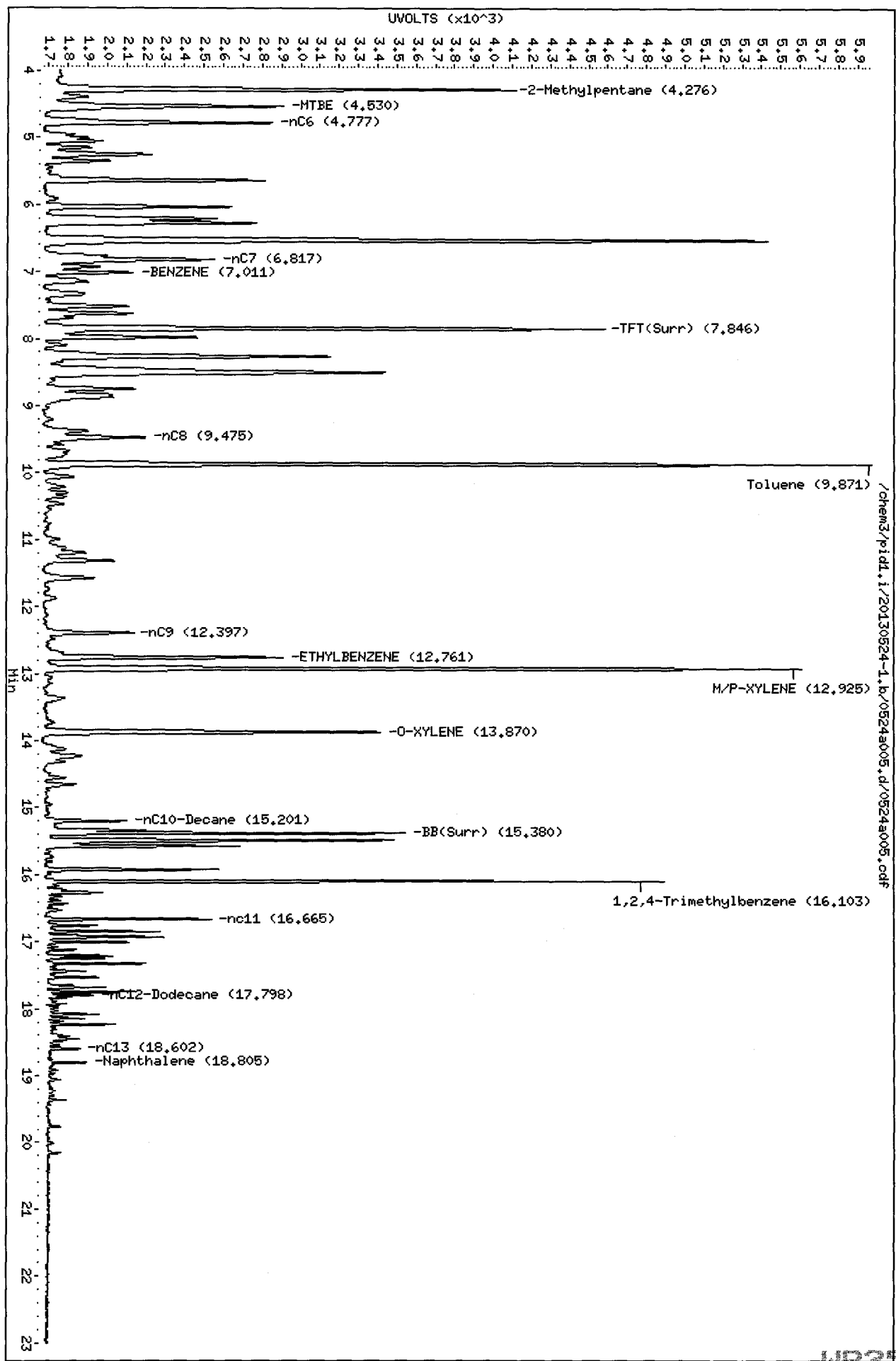
RT	Shift	Response	Amount	Compound
7.020	0.000	839	3.73	Benzene
9.880	-0.001	7999	40.37	Toluene
12.771	-0.001	1964	12.03	Ethylbenzene
12.935	0.002	7784	43.26	M/P-Xylene
13.880	0.000	2808	19.77	O-Xylene
ND	---	---	---	MTBE

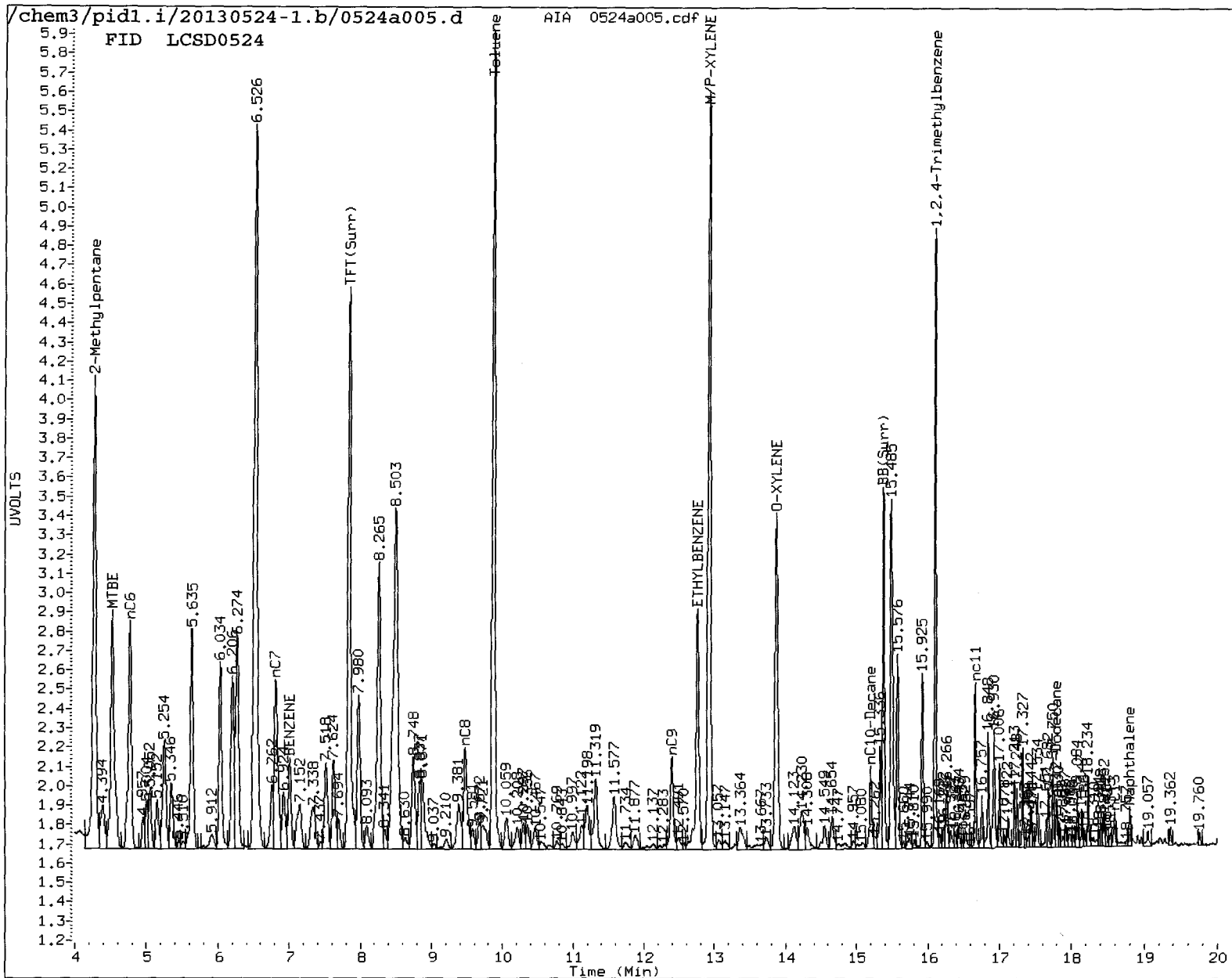
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a005.d
Date: 24-MAY-2013 11:13
Client ID:
Sample Info: LCS0524
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18





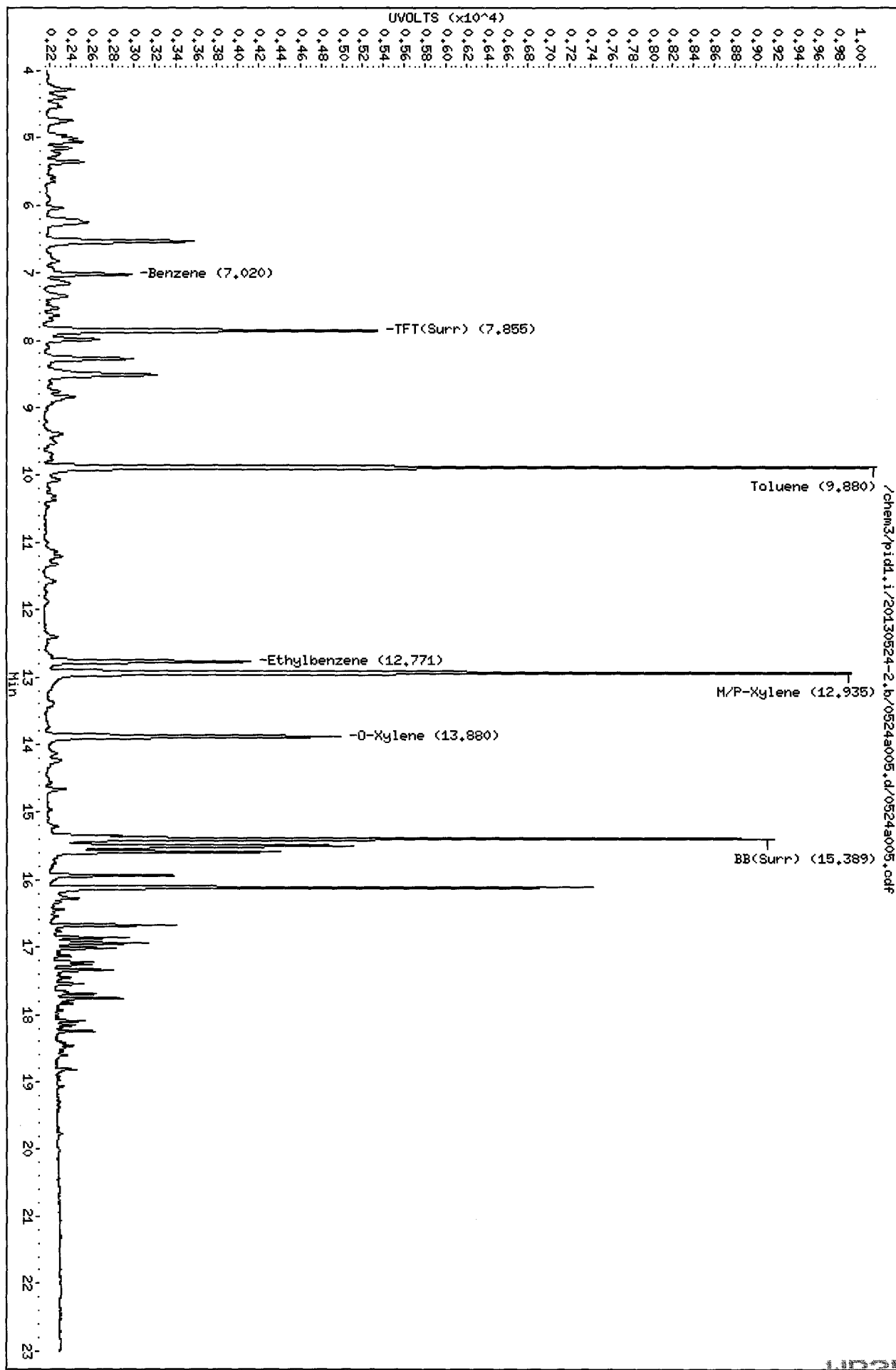
MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: PC Date: 5/28/13

Data File: /chem3/pid1.i/20130524-2.b/0524a005.d
Date: 24-MAY-2013 11:13
Client ID:
Sample Info: LCS00524
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-052413

METHOD BLANK

Lab Sample ID: MB-052413

LIMS ID: 13-11183

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/24/13 11:43

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	94.7%

Gasoline Surrogate Recovery

Trifluorotoluene	92.1%
Bromobenzene	92.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PL
5/28/13

Data file 1: /chem3/pid1.i/20130524-1.b/0524a006.d ARI ID: MB0524
 Data file 2: /chem3/pid1.i/20130524-2.b/0524a006.d Client ID:
 Method: /chem3/pid1.i/20130524-2.b/PIDB.m Injection Date: 24-MAY-2013 11:43
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	-0.002	2726	35062	92.1	TFT(Surr)
15.381	0.001	1828	15440	92.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2025	0.006
8015C 2MP-TMB (4.18 to 16.20)	723723	3345	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	2631	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2025	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	-0.002	3025	93.8	TFT(Surr)
15.388	0.001	6843	94.7	BB(Surr)

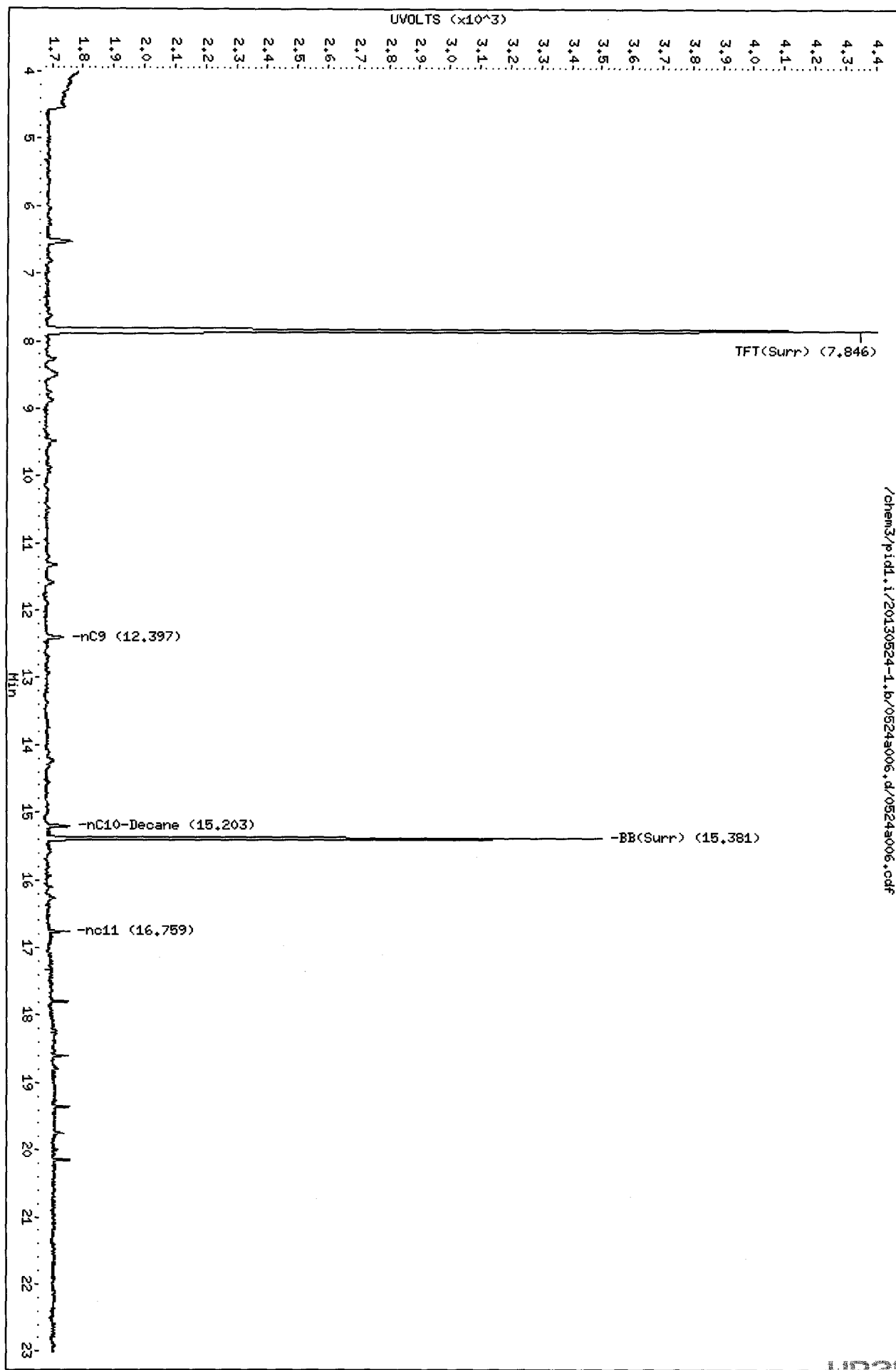
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130524-1.b/0524a006.d
Date: 24-MAY-2013 11:43
Client ID:
Sample Info: MB0524
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18




/chem3/pid1.i/20130524-1.b/0524a006.d/0524a006.cdf

44225 : 001010

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH
Extraction Method: SW3550C
 Page 1 of 1

Sample ID: A2-W22-S-4
SAMPLE

Lab Sample ID: WR25P
 LIMS ID: 13-11198
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/29/13

QC Report No: WR25-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Extracted: 05/24/13
 Percent Moisture: 23.7%

Sample Amount: 8.06 g-dry-wt
 Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 15:51
 Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 12:29
 Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,500	< 2,500 U
C10-C12 Aliphatics	2,500	< 2,500 U
C12-C16 Aliphatics	2,500	4,500
C16-C21 Aliphatics	2,500	64,000
C21-C34 Aliphatics	2,500	1,000,000
C8-C10 Aromatics	2,500	< 2,500 U
C10-C12 Aromatics	2,500	< 2,500 U
C12-C16 Aromatics	2,500	< 2,500 U
C16-C21 Aromatics	2,500	18,000
C21-C34 Aromatics	2,500	120,000

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	101%
Aromatic	o-Terphenyl	91.2%

AREPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-052413	92.5%	0
LCS-052413	84.0%	0
A2-W22-S-4	91.2%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(OTER) = o-Terphenyl	(34-133)	(10-143)

Prep Method: SW3550C
Log Number Range: 13-11198 to 13-11198

ALEPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>COD</u>	<u>TOT OUT</u>
MB-052413	103% 0	
LCS-052413	103% 0	
A2-W22-S-4	101% 0	

	LCS/MB LIMITS	QC LIMITS
(COD) = 1-Chlorooctadecane	(27-128)	(39-131)

Prep Method: SW3550C
Log Number Range: 13-11198 to 13-11198

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH

Page 1 of 1


Sample ID: LCS-052413

LAB CONTROL

Lab Sample ID: LCS-052413

LIMS ID: 13-11198

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 05/24/13

Sample Amount: 10.0 g-as-rec

Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 15:26

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 12:04

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
C8-C10 Aliphatics	5000	7500	66.7%
C10-C12 Aliphatics	4700	7500	62.7%
C12-C16 Aliphatics	6200	7500	82.7%
C16-C21 Aliphatics	6900	7500	92.0%
C10-C12 Aromatics	3900	7500	52.0%
C12-C16 Aromatics	5500	7500	73.3%
C16-C21 Aromatics	14000	15000	93.3%
C21-C34 Aromatics	11100	15000	74.0%

Results reported in µg/kg

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	103%
Aromatic	o-Terphenyl	84.0%

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH

Extraction Method: SW3550C

Page 1 of 1

Sample ID: MB-052413

METHOD BLANK

Lab Sample ID: MB-052413

LIMS ID: 13-11198

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/29/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 05/24/13

Percent Moisture: NA

Sample Amount: 10.0 g-as-rec

Final Extract Volume: 1.0 mL

Aliphatic

Date Analyzed: 05/28/13 15:01

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 05/28/13 11:39

Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,000	< 2,000 U
C10-C12 Aliphatics	2,000	< 2,000 U
C12-C16 Aliphatics	2,000	< 2,000 U
C16-C21 Aliphatics	2,000	< 2,000 U
C21-C34 Aliphatics	2,000	< 2,000 U
C8-C10 Aromatics	2,000	< 2,000 U
C10-C12 Aromatics	2,000	< 2,000 U
C12-C16 Aromatics	2,000	< 2,000 U
C16-C21 Aromatics	2,000	< 2,000 U
C21-C34 Aromatics	2,000	< 2,000 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	103%
Aromatic	o-Terphenyl	92.5%

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: A2-W22-S-4
SAMPLE

Lab Sample ID: WR25P

LIMS ID: 13-11198

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/25/13 11:21

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 36.3 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1400	< 1,400 U
108-88-3	Toluene	1400	< 1,400 U
100-41-4	Ethylbenzene	1400	< 1,400 U
179601-23-1	m,p-Xylene	2800	< 2,800 U
95-47-6	o-Xylene	1400	< 1,400 U
1634-04-4	Methyl tert-Butyl Ether	1400	< 1,400 U
109-66-0	n-Pentane	1400	< 1,400 U
110-54-3	n-Hexane	1400	< 1,400 U
111-65-9	n-Octane	1400	< 1,400 U
124-18-5	n-Decane	1400	< 1,400 U
112-40-3	n-Dodecane	1400	< 1,400 U

Range	RL	Result
C8-C10 Aromatics	14,000	< 14,000 U
C10-C12 Aromatics	14,000	< 14,000 U
C12-C13 Aromatics	14,000	< 14,000 U
C5-C6 Aliphatics	14,000	< 14,000 U
C6-C8 Aliphatics	14,000	< 14,000 U
C8-C10 Aliphatics	14,000	< 14,000 U
C10-C12 Aliphatics	14,000	< 14,000 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	82.5%
FID: 2,5-Dibromotoluene	91.0%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR25-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>PDBT</u>	<u>FDBT</u>	<u>TOT</u>	<u>OUT</u>
MB-052513	82.0%	91.0%	0	
LCS-052513	82.0%	91.0%	0	
LCSD-052513	83.0%	92.0%	0	
A2-W22-S-4	82.5%	91.0%	0	

	LCS/MB LIMITS	QC LIMITS
(PDBT) = 2,5-Dibromotoluene	(60-140)	(60-140)
(FDBT) = 2,5-Dibromotoluene	(60-140)	(60-140)

Prep Method: METHOD
Log Number Range: 13-11198 to 13-11198

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: LCS-052513

LCS/LCSD

Lab Sample ID: LCS-052513

LIMS ID: 13-11198

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/25/13 09:44

Date Analyzed LCSD: 05/25/13 10:16

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 111 mg-dry-wt

Analyte/Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1800	1800	100%	1840	1800	102%	2.2%
Toluene	1850	1800	103%	1810	1800	101%	2.2%
Ethylbenzene	1790	1800	99.4%	1830	1800	102%	2.2%
m,p-Xylene	3600	3600	100%	3630	3600	101%	0.8%
o-Xylene	1790	1800	99.4%	1790	1800	99.4%	0.0%
Methyl tert-Butyl Ether	1730	1800	96.1%	1750	1800	97.2%	1.1%
Naphthalene	1670	1800	92.8%	1830	1800	102%	9.1%
1,2,3-Trimethylbenzene	1940	1800	108%	1960	1800	109%	1.0%
1-Methylnaphthalene	1550	1800	86.1%	1440	1800	80.0%	7.4%
n-Pentane	1420	1800	78.9%	1880	1800	104%	27.9%
n-Hexane	1600	1800	88.9%	1870	1800	104%	15.6%
n-Octane	1550	1800	86.1%	1760	1800	97.8%	12.7%
n-Decane	1400	1800	77.8%	1740	1800	96.7%	21.7%
n-Dodecane	1620	1800	90.0%	2070	1800	115%	24.4%

Values reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

VPH Surrogate Recovery

	LCS	LCSD
PID: 2,5-Dibromotoluene	82.0%	83.0%
FID: 2,5-Dibromotoluene	91.0%	92.0%

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: MB-052513

METHOD BLANK

Lab Sample ID: MB-052513

LIMS ID: 13-11198

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/28/13

QC Report No: WR25-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/25/13 10:48

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 111 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	450	< 450 U
108-88-3	Toluene	450	< 450 U
100-41-4	Ethylbenzene	450	< 450 U
179601-23-1	m,p-Xylene	900	< 900 U
95-47-6	o-Xylene	450	< 450 U
1634-04-4	Methyl tert-Butyl Ether	450	< 450 U
109-66-0	n-Pentane	450	< 450 U
110-54-3	n-Hexane	450	< 450 U
111-65-9	n-Octane	450	< 450 U
124-18-5	n-Decane	450	< 450 U
112-40-3	n-Dodecane	450	< 450 U

Range	RL	Result
C8-C10 Aromatics	4,500	< 4,500 U
C10-C12 Aromatics	4,500	< 4,500 U
C12-C13 Aromatics	4,500	< 4,500 U
C5-C6 Aliphatics	4,500	< 4,500 U
C6-C8 Aliphatics	4,500	< 4,500 U
C8-C10 Aliphatics	4,500	< 4,500 U
C10-C12 Aliphatics	4,500	< 4,500 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	82.0%
FID: 2,5-Dibromotoluene	91.0%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 3, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS07

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted fourteen soil samples on May 31, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a horizontal line.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS07

Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **W507** Turn-around Requested: **RUSH - 24 hr.**

ARI Client Company: **MFA, Inc** Phone:

Client Contact: **Tony Silva** **TSILVA@MAVLFOSTER.COM**

Client Project Name: **CASHMERE**

Client Project #: **0779.02.01-03** Samplers: **Lindsey Crosby**

Page: **1** of **2**

Date: Ice Present? **4**

No. of Coolers: Cooler Temps: **3.9**



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments	
					Dx Silica Gel Cleanup	Gx/BTEX	LEAD (only if Gx detected)	VOCs (EDS, MTBE, EDC)	only if Gx detected			
SL-W7-S-4	5/30	0830	S	5	X	X	X	X	X			
SL-W8-S-4		0840			X	X	X	X	X			
SL-W9-S-4		0850			X	X	X	X	X			
SL-W10-S-4		0930			X	X	X	X	X			
SL-W11-S-4		0940			X	X	X	X	X			
SL-W12-S-4		1050			X	X	X	X	X			
SL-W13-S-4		1140			X	X	X	X	X			
SL-W14-S-4		1150			X	X	X	X	X			
A2-W28-S-4		1230			X	X	X	X	X			
A2-W29-S-4		1240			X	X	X	X	X			

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Jennifer Millsep</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: <i>Jennifer Millsep</i>	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/30/13 1800	Date & Time: 5/31/13 1005	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: <u>W307</u>	Turn-around Requested: <u>TUSH-24 HR.</u>	Page: <u>2</u> of <u>2</u>
ARI Client Company: <u>MFA INC.</u>	Phone:	Date:
Client Contact: <u>TONY SILVA</u>	<u>TSILVA@MAULFOSTER.COM</u>	Ice Present? <u>✓</u>
Client Project Name: <u>CASHMERE</u>	Client Project #: <u>0779.02.01-03</u>	No. of Coolers: <u>1</u>
Client Project #: <u>0779.02.01-03</u>	Samplers: <u>Lindsey Crosby</u>	Cooler Temps: <u>3.9</u>

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
					Dx Silver Gel Clean up	Gx/ROTEO	LEADS (ONLY IF Gx DETECTED)	VOCs (EDS, MRBE, EDC)	ONLY IF Gx DETECTED	
A2-W30-S-4	5/30	1250	S	5	X	X	X	X	X	
A2-W31-S-4		1610		1						
A2-W33-S-4		1615		1						
A2-W32-S-4		1620		1						

Comments/Special Instructions	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Relinquished by: _____	Received by: _____
	Printed Name: <u>LINDSEY CROSBY</u>	Printed Name: <u>Jennifer Millsop</u>	Printed Name: _____	Printed Name: _____
	Company: <u>MFA</u>	Company: <u>ARI</u>	Company: _____	Company: _____
	Date & Time: <u>5/30/13 1800</u>	Date & Time: <u>5/31/13 1005</u>	Date & Time: _____	Date & Time: _____

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WS07

Tracking No: K046 684 6753 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 5/31/13 Time: 1005

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/31/13 Time: 1031

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WS07
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SL-W7-S-4	WS07A	13-11581	Soil	05/30/13 08:30	05/31/13 10:05
2. SL-W8-S-4	WS07B	13-11582	Soil	05/30/13 08:40	05/31/13 10:05
3. SL-W9-S-4	WS07C	13-11583	Soil	05/30/13 08:50	05/31/13 10:05
4. SL-W10-S-4	WS07D	13-11584	Soil	05/30/13 09:30	05/31/13 10:05
5. SL-W11-S-4	WS07E	13-11585	Soil	05/30/13 09:40	05/31/13 10:05
6. SL-W12-S-4	WS07F	13-11586	Soil	05/30/13 10:50	05/31/13 10:05
7. SL-W13-S-4	WS07G	13-11587	Soil	05/30/13 11:40	05/31/13 10:05
8. SL-W14-S-4	WS07H	13-11588	Soil	05/30/13 11:50	05/31/13 10:05
9. A2-W28-S-4	WS07I	13-11589	Soil	05/30/13 12:30	05/31/13 10:05
10. A2-W29-S-4	WS07J	13-11590	Soil	05/30/13 12:40	05/31/13 10:05
11. A2-W30-S-4	WS07K	13-11591	Soil	05/30/13 12:50	05/31/13 10:05
12. A2-W31-S-4	WS07L	13-11592	Soil	05/30/13 16:10	05/31/13 10:05
13. A2-W33-S-4	WS07M	13-11593	Soil	05/30/13 16:15	05/31/13 10:05
14. A2-W32-S-4	WS07N	13-11594	Soil	05/30/13 16:20	05/31/13 10:05



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



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- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WS07-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 06/03/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-053113 13-11581	Method Blank HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 76.0%
WS07A 13-11581	SL-W7-S-4 HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.6 13	< 6.6 U < 13 U 76.7%
WS07B 13-11582	SL-W8-S-4 HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	< 6.0 U < 12 U 68.2%
WS07C 13-11583	SL-W9-S-4 HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 12	< 5.7 U < 12 U 74.4%
WS07D 13-11584	SL-W10-S-4 HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.4 13	< 6.4 U < 13 U 80.3%
WS07E 13-11585	SL-W11-S-4 HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.4 15	< 7.4 U < 15 U 70.6%
WS07F 13-11586	SL-W12-S-4 HC ID: ---	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.6 13	< 6.6 U < 13 U 75.6%
MB-060113 13-11587	Method Blank HC ID: ---	06/01/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 80.2%
WS07G 13-11587	SL-W13-S-4 HC ID: ---	06/01/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	< 6.0 U < 12 U 81.2%
WS07H 13-11588	SL-W14-S-4 HC ID: DIESEL/MOTOR OIL	06/01/13	06/03/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	55 110	130 310 69.1%
WS07I 13-11589	A2-W28-S-4 HC ID: ---	06/01/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.4 11	< 5.4 U < 11 U 84.8%
WS07J 13-11590	A2-W29-S-4 HC ID: DRO/MOTOR OIL	05/31/13	06/01/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	62 120	200 380 58.7%
WS07K 13-11591	A2-W30-S-4 HC ID: DIESEL/MOTOR OIL	05/31/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	42 76 52.5%

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Extraction Method: SW3546

Page 2 of 2

QC Report No: WS07-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/03/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WS07L 13-11592	A2-W31-S-4	05/31/13	06/03/13	1.00	Diesel Range	5.8	51
	HC ID: DRO/MOTOR OIL		FID3B	1.0	Motor Oil Range o-Terphenyl	12	350 56.9%
WS07M 13-11593	A2-W33-S-4	05/31/13	06/03/13	1.00	Diesel Range	31	97
	HC ID: DRO/MOTOR OIL		FID3B	5.0	Motor Oil Range o-Terphenyl	61	1100 52.8%
WS07N 13-11594	A2-W32-S-4	05/31/13	06/01/13	1.00	Diesel Range	6.2	6.4
	HC ID: DRO/MOTOR OIL		FID3B	1.0	Motor Oil Range o-Terphenyl	12	38 66.1%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.

Motor Oil range quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b008.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07MBS1
Client ID: WS07MBS1
Injection: 01-JUN-2013 13:33
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		122162	9
C8	0.836	0.000	4165	4138	WATPHD (C12-C24)		141785	13.69
C10	2.241	0.001	757	801	WATPHM (C24-C38)		84586	8.57
C12	3.048	0.005	471	190	AK102 (C10-C25)		173630	14.05 M
C14	3.624	0.003	1058	896	AK103 (C25-C36)		70531	9.92
C16	4.115	-0.003	850	295				
C18	4.569	0.005	1728	1626				
C20	4.983	0.000	598	402				
C22	5.379	0.001	279	87	MSPIRIT (Tol-C12)		122162	8.89
C24	5.741	-0.001	148	34				
C25	5.917	-0.002	281	99				
C26	6.096	0.002	138	28				
C28	6.414	0.005	642	401				
C32	6.966	0.015	1613	1089				
C34	7.192	0.005	652	192				
Filter Peak	----							
C36	7.410	0.006	961	450				
o-terph	4.668	-0.004	668111	459722	JET-A (C10-C18)		130113	12.02
Triacon Surr	6.699	-0.002	559228	374625				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	459722	34.2	76.0
Triacontane	374625	28.7	63.8

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b008.d

Date: 01-JUN-2013 13:33

Client ID: MS07MBS1

Sample Info: MS07MBS1

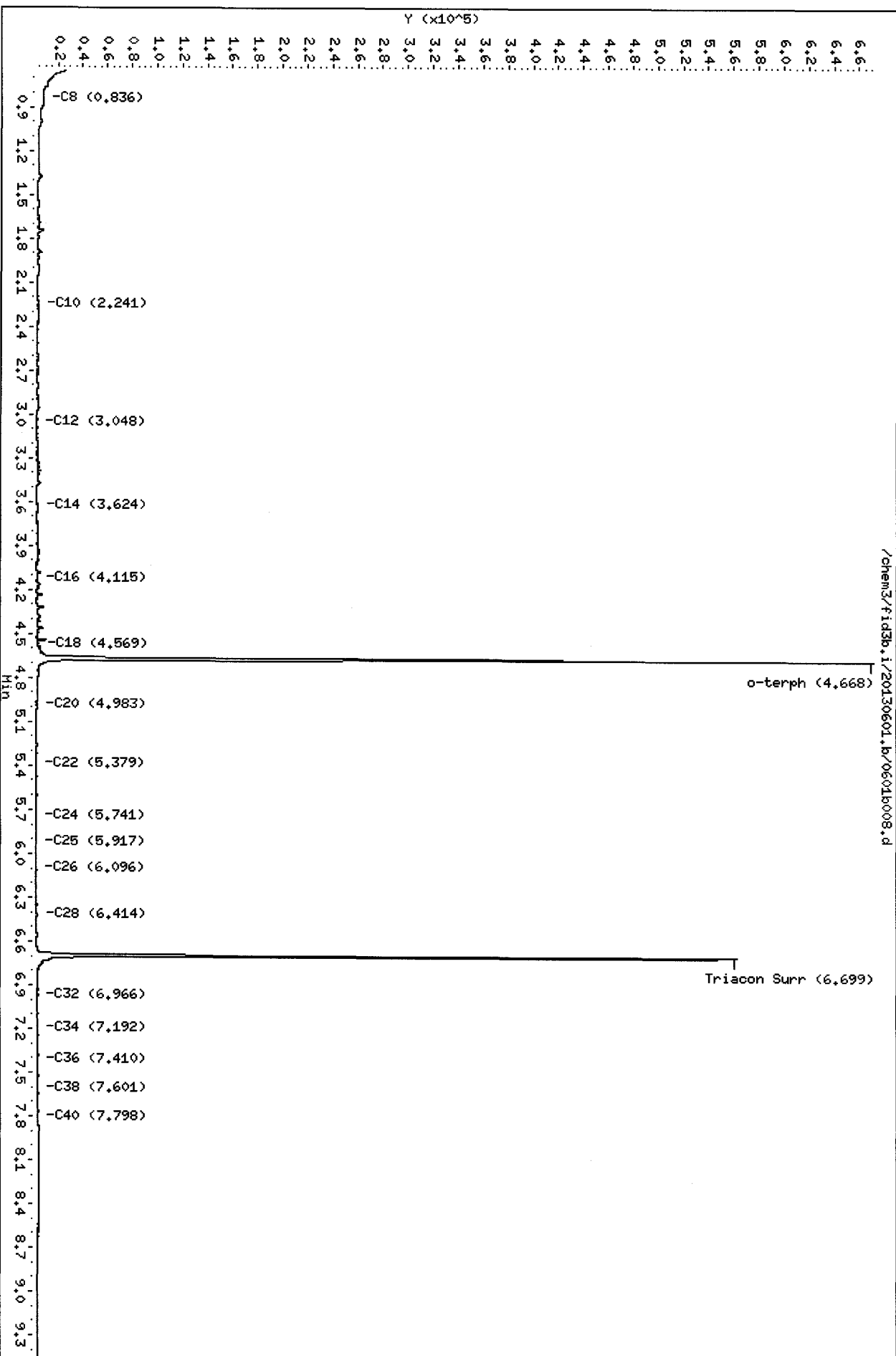
Column phase: RTX-1

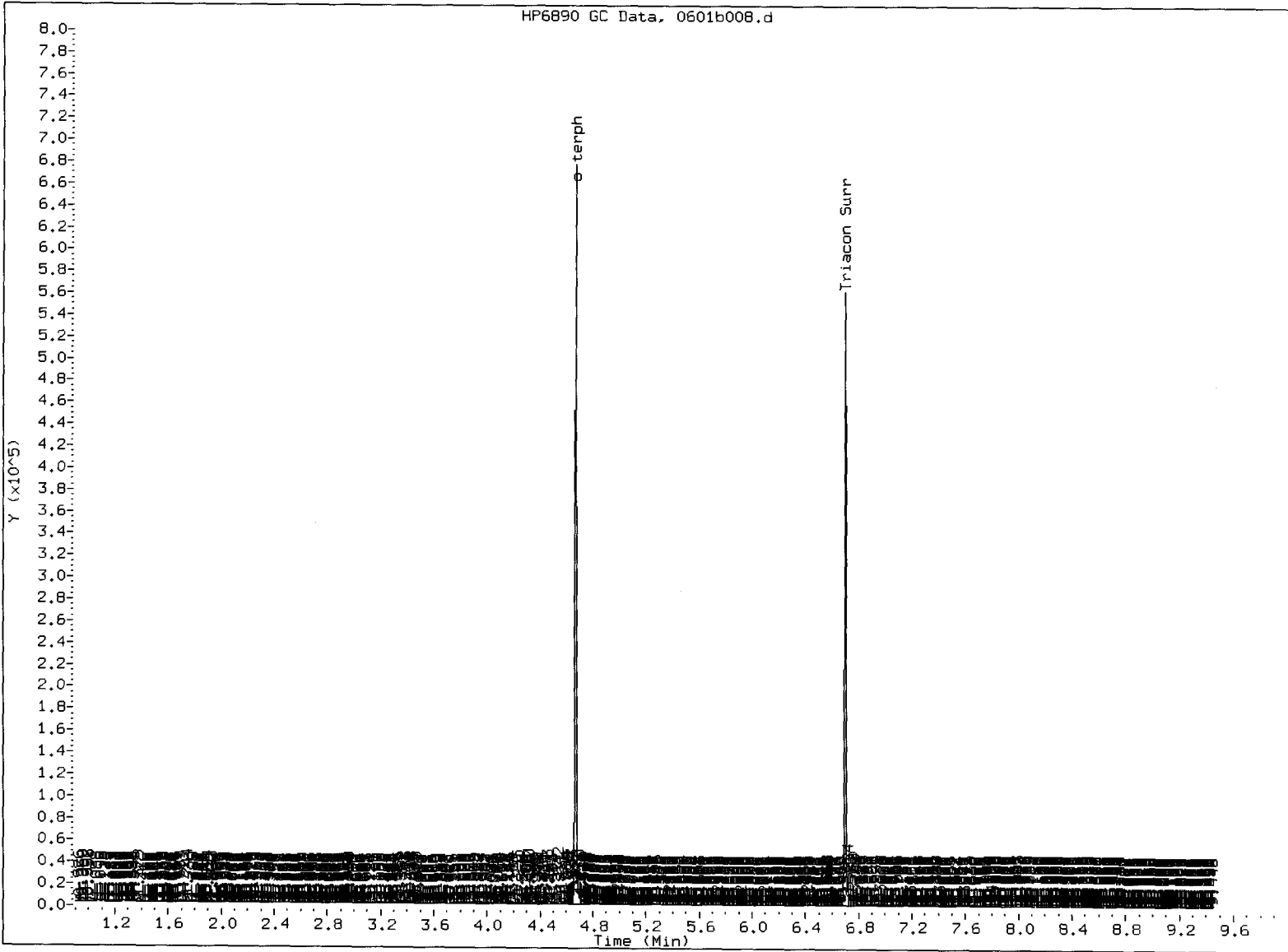
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

50
49/0





MANUAL INTEGRATION

- 1. Baseline correction *- some noise split*
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: *SW* Date: *4/3/0*

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b009.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07MBS2
Client ID: WS07MBS2
Injection: 03-JUN-2013 12:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		68458	5
C8	0.819	-0.011	3207	3109	WATPHD (C12-C24)		162922	15.73
C10	2.242	0.004	443	446	WATPHM (C24-C38)		160051	16.21
C12	3.034	-0.005	425	358	AK102 (C10-C25)		186045	15.06
C14	3.624	0.006	1384	1540	AK103 (C25-C36)		121166	17.05 M
C16	4.117	0.005	1230	677				
C18	4.565	0.006	1887	1923				
C20	4.977	-0.001	857	284				
C22	5.372	0.000	692	251	MSPIRIT (Tol-C12)		68458	4.98
C24	5.741	0.000	547	413				
C25	5.920	0.003	335	123				
C26	6.090	-0.003	500	106				
C28	6.398	-0.005	1038	535				
C32	6.954	0.005	3578	3398				
C34	7.182	-0.003	1305	585				
Filter Peak	----							
C36	7.412	0.010	1915	1012				
o-terph	4.666	0.000	780900	485587	JET-A (C10-C18)		113120	10.45
Triacon Surr	6.699	0.004	807242	587170				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	485587	36.1	80.2
Triacontane	587170	45.0	100.0

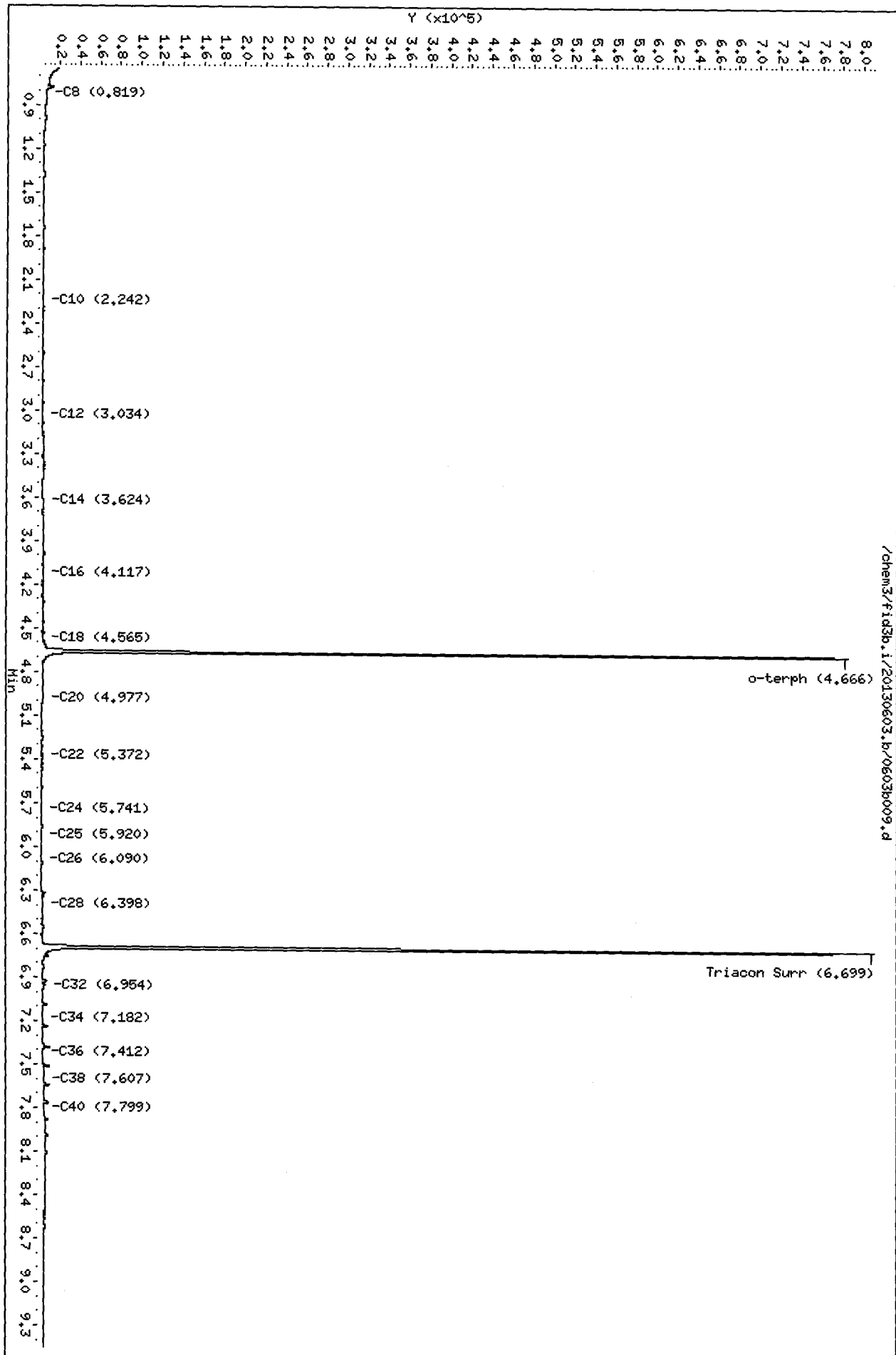
JW
6/3/13

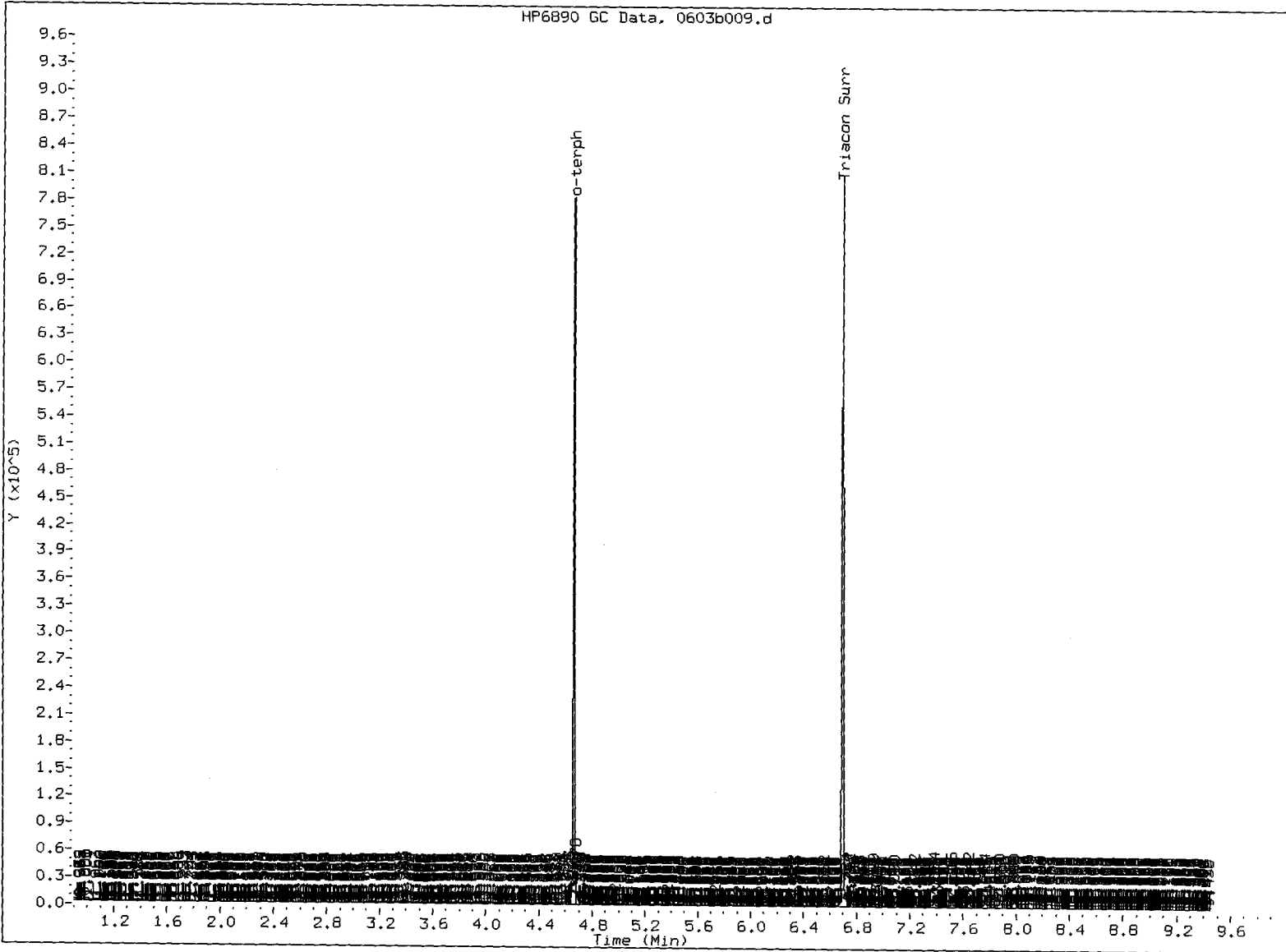
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/06030009.d
 Date: 03-JUN-2013 12:00
 Client ID: MS07HBS2
 Sample Info: MS07HBS2
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25

30
6/6/10





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

surrogate split

Analyst: JW

Date: 6/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b011.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07A
Client ID: SL-W7-S-4
Injection: 01-JUN-2013 14:31
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		129752	10
C8	0.839	0.003	5562	11689	WATPHD (C12-C24)		210602	20.33
C10	2.246	0.005	1055	976	WATPHM (C24-C38)		426535	43.20
C12	3.051	0.008	884	366	AK102 (C10-C25)		258199	20.90
C14	3.621	0.000	2125	2002	AK103 (C25-C36)		390154	54.89
C16	4.118	0.001	1876	1925				
C18	4.561	-0.003	2906	2326				
C20	4.985	0.002	1792	1010				
C22	5.376	-0.002	2046	346	MSPIRIT (Tol-C12)		129752	9.44
C24	5.751	0.008	4279	4026				
C25	5.923	0.004	8258	4353				
C26	6.093	-0.002	3961	4037				
C28	6.409	0.000	7198	8330				
C32	6.956	0.004	7404	8881				
C34	7.186	-0.001	3074	1142				
Filter Peak	----							
C36	7.406	0.002	2699	1992				
o-terph	4.672	-0.001	745840	464390	JET-A (C10-C18)		151083	13.96
Triacon Surr	6.702	0.001	502253	387357				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

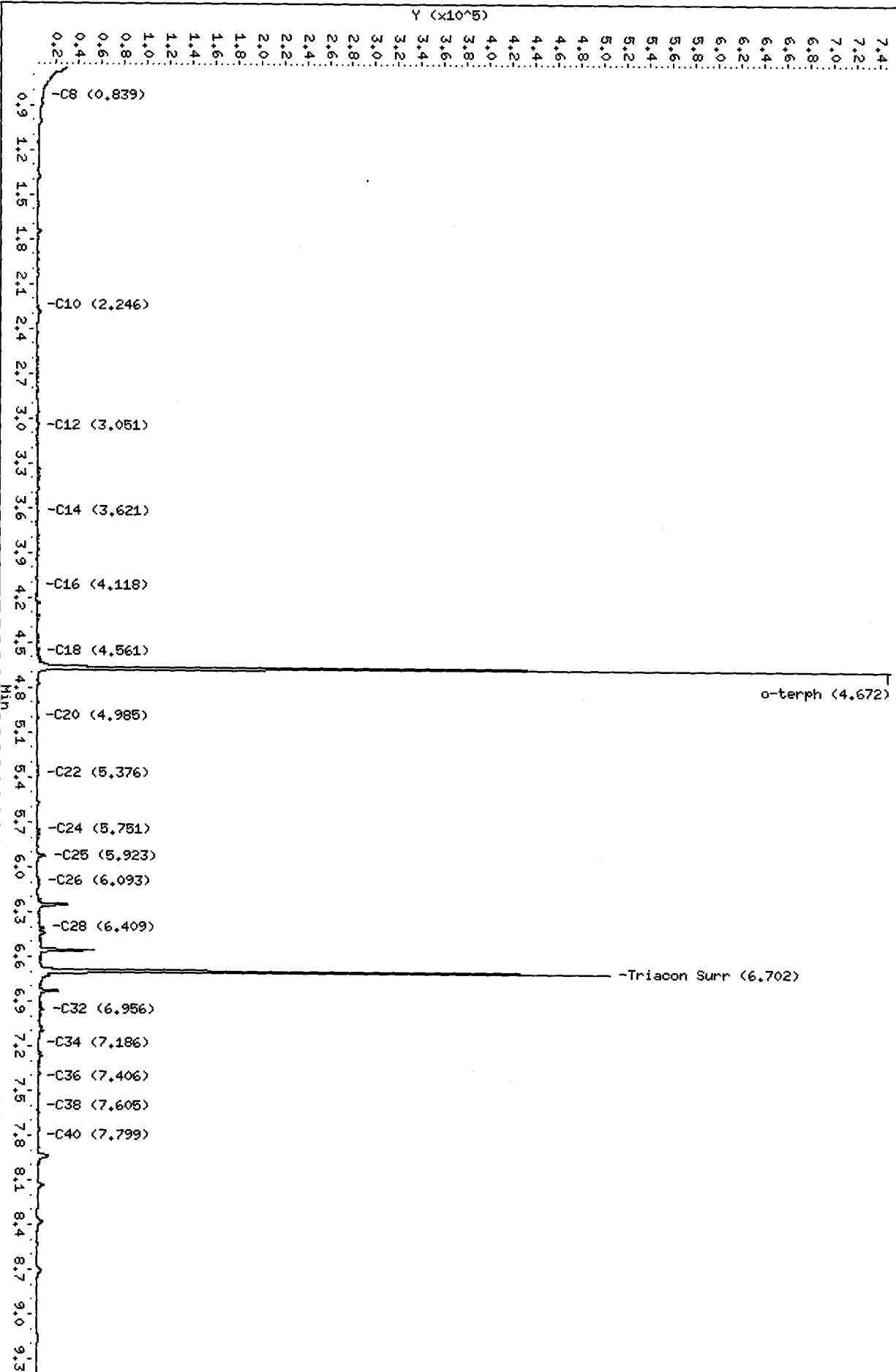
Surrogate	Area	Amount	%Rec
o-Terphenyl	464390	34.5	76.7
Triacontane	387357	29.7	66.0

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b011.d
Date: 01-JUN-2013 14:31
Client ID: SL-M7-S-4
Sample Info: MS07H
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



/chem3/fid3b.i/20130601.b/0601b011.d

MS07 00018

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b012.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07B
Client ID: SL-W8-S-4
Injection: 01-JUN-2013 14:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		74046	5
C8	0.838	0.003	4100	2522	WATPHD (C12-C24)		98838	9.54
C10	2.241	0.001	538	356	WATPHM (C24-C38)		97231	9.85
C12	3.052	0.009	357	134	AK102 (C10-C25)		123408	9.99
C14	3.624	0.003	701	276	AK103 (C25-C36)		83103	11.69
C16	4.115	-0.003	459	139				
C18	4.570	0.006	1116	983				
C20	4.983	0.000	461	159				
C22	5.381	0.003	296	92	MSPIRIT (Tol-C12)		74046	5.39
C24	5.747	0.004	331	178				
C25	5.926	0.007	300	136				
C26	6.097	0.003	287	139				
C28	6.404	-0.005	689	244				
C32	6.960	0.008	1622	705				
C34	7.187	0.000	752	258				
Filter Peak	----							
C36	7.412	0.008	777	244				
o-terph	4.672	-0.001	675121	412597	JET-A (C10-C18)		81666	7.54
Triacon Surr	6.697	-0.004	512518	355232				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

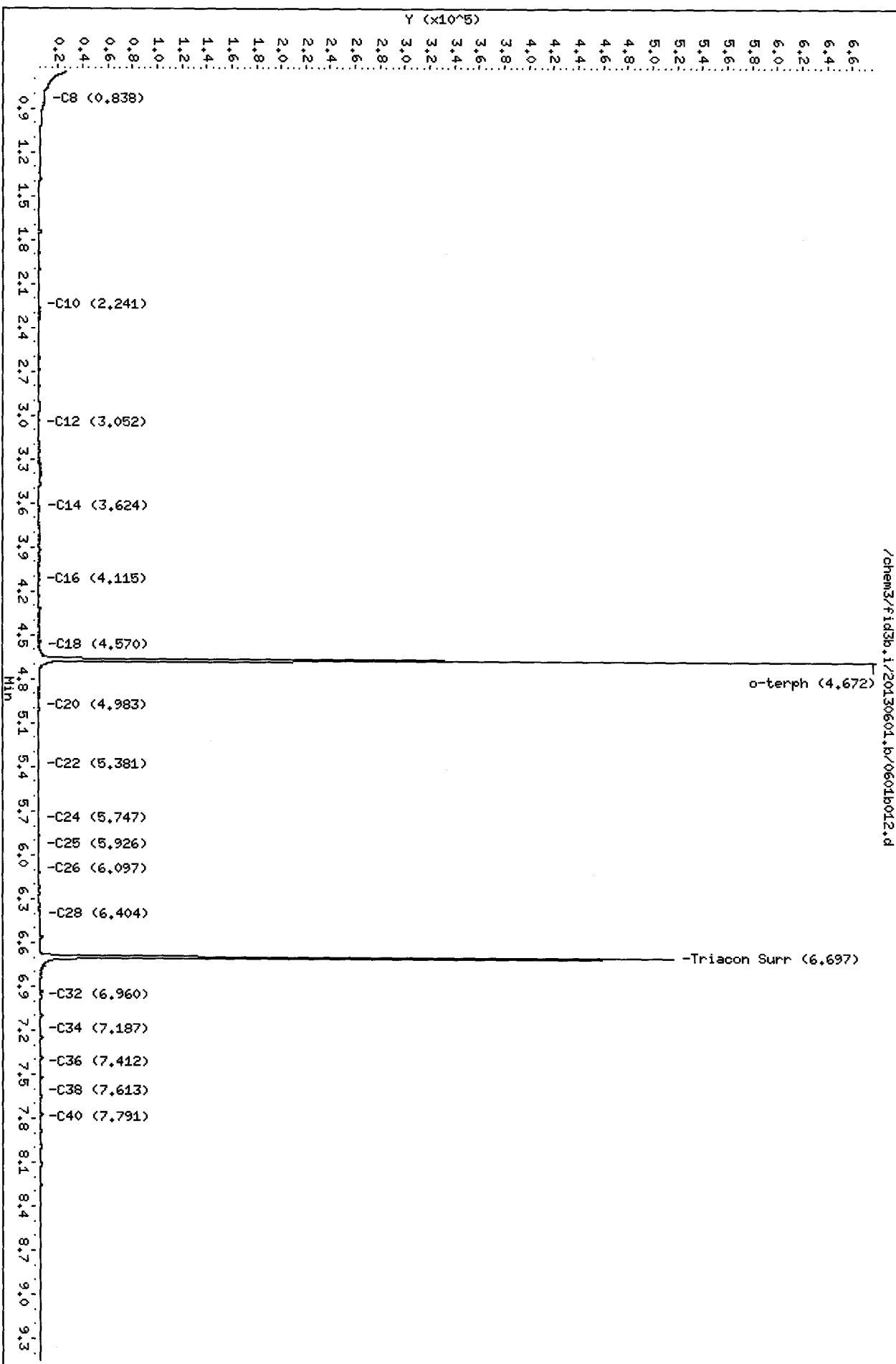
Surrogate	Area	Amount	%Rec
o-Terphenyl	412597	30.7	68.2
Triacontane	355232	27.2	60.5

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetaA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b,1/20130601,b/0601b012.d
Date: 01-JUN-2013 14:50
Client ID: SL-M8-S-4
Sample Info: MS07B
Column phase: RTX-1

Instrument: fid3b,1
Operator: JM
Column diameter: 0.25



/chem3/fid3b,1/20130601,b/0601b012.d

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b013.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07C
Client ID: SL-W9-S-4
Injection: 01-JUN-2013 15:10
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		76795	6
C8	0.852	0.016	4542	3428	WATPHD (C12-C24)		170832	16.49
C10	2.239	-0.001	452	146	WATPHM (C24-C38)		95862	9.71
C12	3.036	-0.007	1299	922	AK102 (C10-C25)		194775	15.76
C14	3.621	0.000	961	436	AK103 (C25-C36)		82683	11.63
C16	4.115	-0.003	1342	1152				
C18	4.566	0.001	2089	476				
C20	4.987	0.003	655	216				
C22	5.383	0.004	702	219	MSPIRIT (Tol-C12)		76795	5.59
C24	5.746	0.003	236	82				
C25	5.922	0.003	238	68				
C26	6.097	0.002	374	170				
C28	6.405	-0.004	518	204				
C32	6.962	0.010	1891	1031				
C34	7.181	-0.007	633	158				
Filter Peak	----							
C36	7.418	0.013	739	384				
o-terph	4.671	-0.002	730356	450100	JET-A (C10-C18)		146651	13.55
Triacon Surr	6.699	-0.003	513899	368150				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

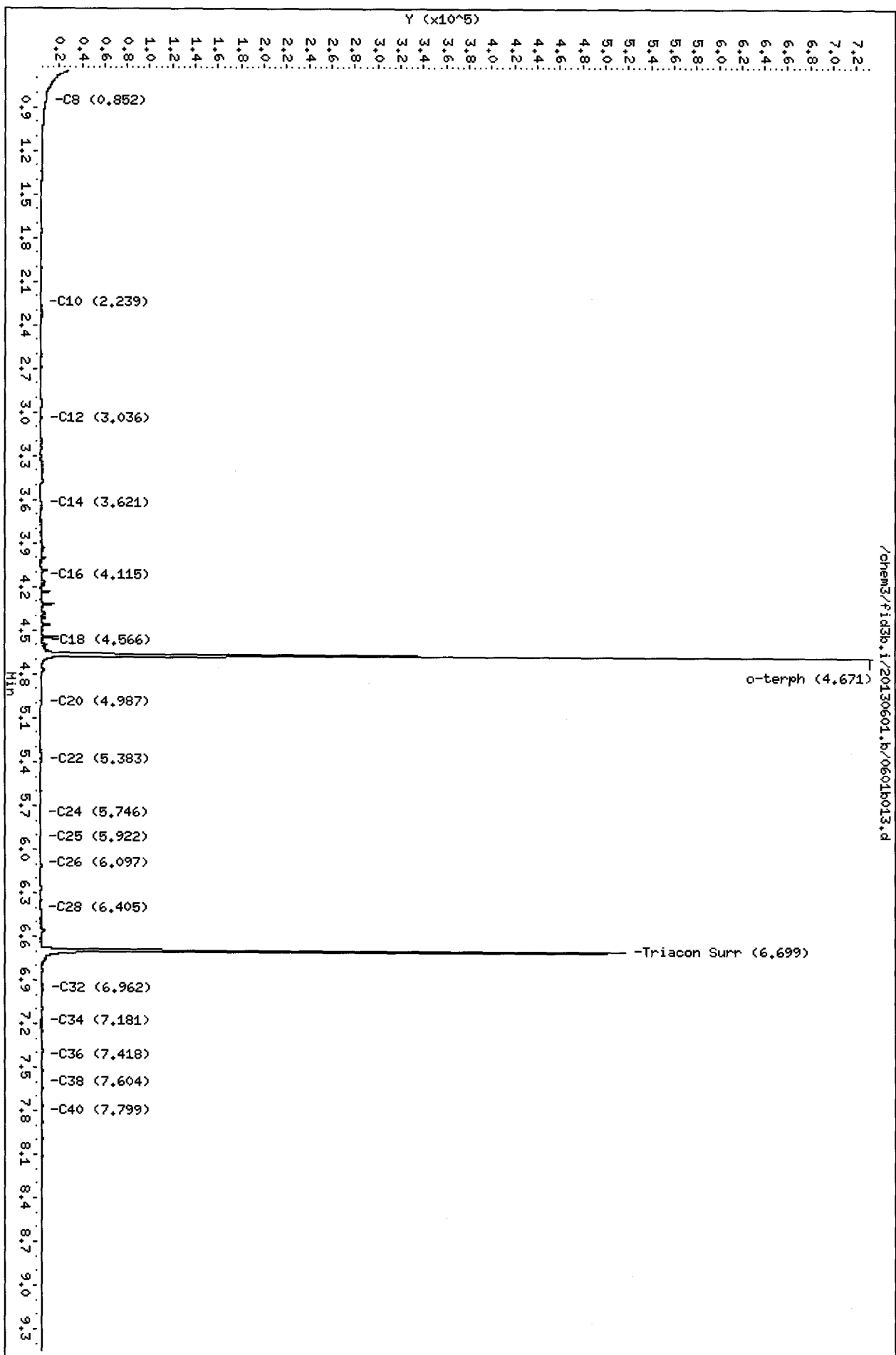
Surrogate	Area	Amount	%Rec
o-Terphenyl	450100	33.5	74.4
Triacontane	368150	28.2	62.7

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Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b013.d
Date: 01-JUN-2013 15:10
Client ID: SL-M9-S-4
Sample Info: MS07C
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b014.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07D
Client ID: SL-W10-S-4
Injection: 01-JUN-2013 15:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		85412	6
C8	0.816	-0.020	5795	3214	WATPHD (C12-C24)		123875	11.96
C10	2.236	-0.005	380	51	WATPHM (C24-C38)		168528	17.07
C12	3.036	-0.007	1383	840	AK102 (C10-C25)		149131	12.07
C14	3.621	0.000	1138	784	AK103 (C25-C36)		151193	21.27
C16	4.118	0.000	917	834				
C18	4.563	-0.001	1615	861				
C20	4.989	0.005	826	293				
C22	5.384	0.006	926	792	MSPIRIT (Tol-C12)		85412	6.22
C24	5.743	0.000	759	175				
C25	5.917	-0.002	1087	247				
C26	6.095	0.000	1291	459				
C28	6.406	-0.004	1848	510				
C32	6.958	0.007	3114	1893				
C34	7.188	0.001	1081	289				
Filter Peak	----							
C36	7.390	-0.014	2714	3949				
o-terph	4.672	-0.001	830922	486190	JET-A (C10-C18)		89259	8.25
Triacon Surr	6.701	0.000	605414	426874				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

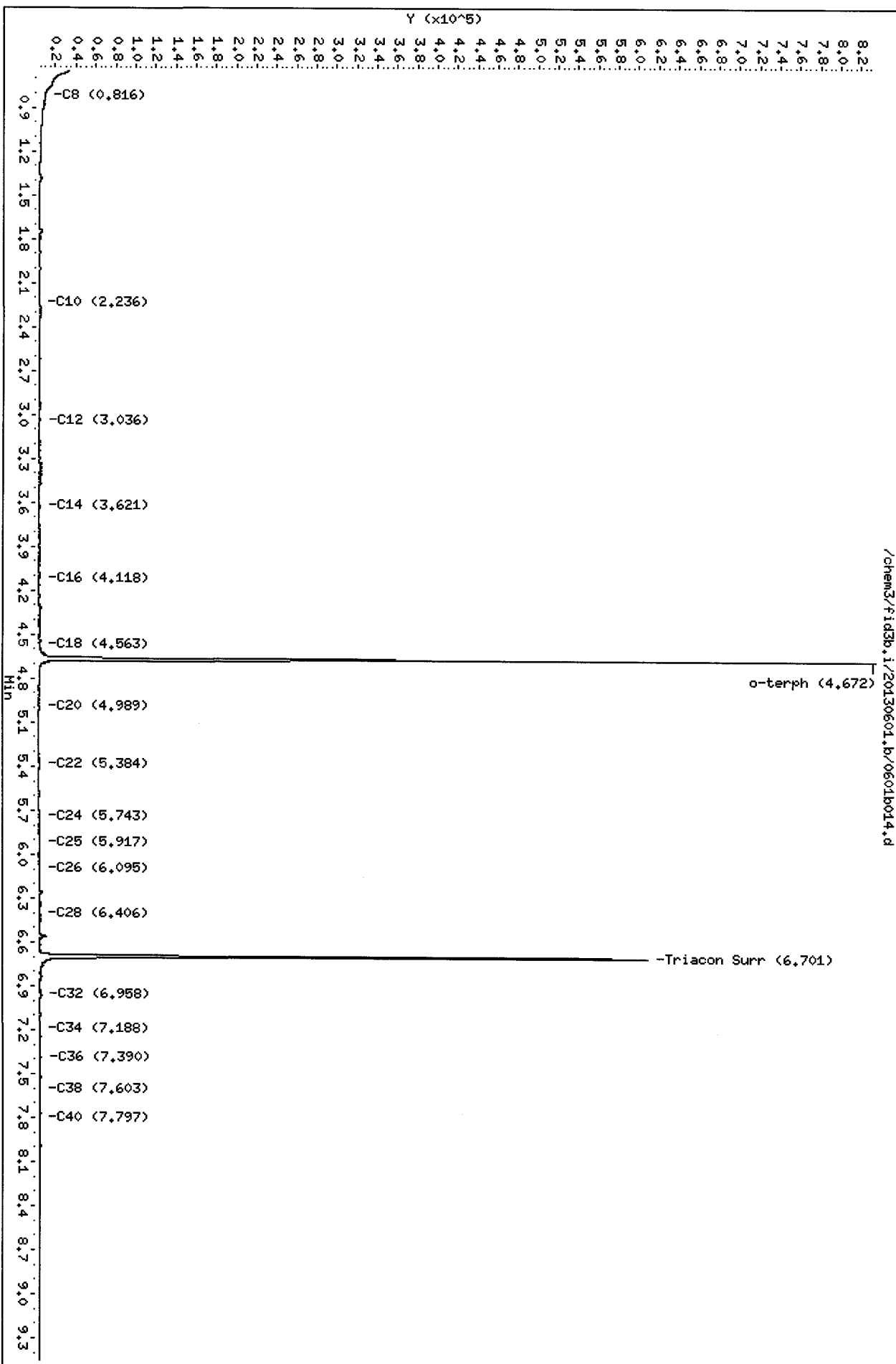
Surrogate	Area	Amount	%Rec
o-Terphenyl	486190	36.1	80.3
Triacantane	426874	32.7	72.7

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b014.d
Date: 01-JUN-2013 15:29
Client ID: SL-M40-S-4
Sample Info: MS07D
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



MS07:000011

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b015.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07E
Client ID: SL-W11-S-4
Injection: 01-JUN-2013 15:48
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		91952	7
C8	0.829	-0.007	5298	6451	WATPHD (C12-C24)		236223	22.81
C10	2.243	0.002	587	459	WATPHM (C24-C38)		412396	41.77
C12	3.035	-0.007	1597	1275	AK102 (C10-C25)		273401	22.13
C14	3.622	0.001	1162	572	AK103 (C25-C36)		375417	52.81
C16	4.119	0.001	1309	976				
C18	4.564	0.000	2532	1256				
C20	4.984	0.001	2036	439				
C22	5.381	0.003	2683	1438	MSPIRIT (Tol-C12)		91952	6.69
C24	5.739	-0.003	1953	519				
C25	5.922	0.003	4376	2150				
C26	6.092	-0.002	3237	3469				
C28	6.410	0.001	6050	6954				
C32	6.954	0.003	7066	4205				
C34	7.185	-0.002	3124	2309				
Filter Peak	----							
C36	7.403	-0.001	2741	1504				
o-terph	4.671	-0.002	644372	427522	JET-A (C10-C18)		124425	11.50
Triacon Surr	6.701	0.000	554566	381858				

Range Times: NW Diesel (3.093 - 5.793) NW Gas (0.613 - 3.093) NW M.Oil (5.793 - 7.656)
AK102 (2.190 - 5.869) AK103 (5.869 - 7.454) Jet A (2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	427522	31.8	70.6
Triacontane	381858	29.3	65.0

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b015.d

Date: 01-JUN-2013 15:48

Client ID: SL-M11-S-4

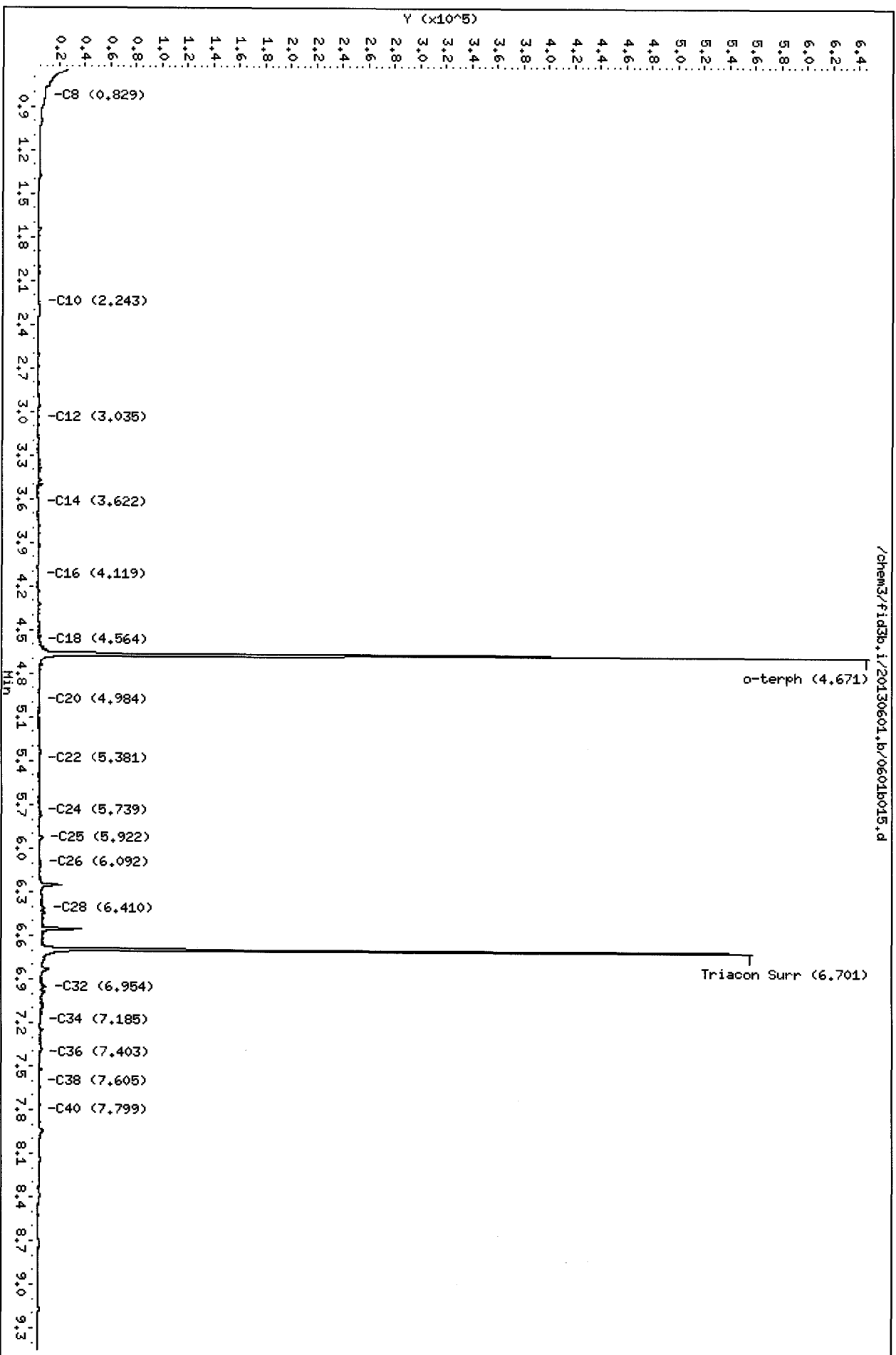
Sample Info: MS07E

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25



/chem3/fid3b.i/20130601.b/0601b015.d

MS07-00026

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b016.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07F
Client ID: SL-W12-S-4
Injection: 01-JUN-2013 16:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		86503	6
C8	0.832	-0.004	5371	6200	WATPHD (C12-C24)		153480	14.82
C10	2.243	0.003	598	499	WATPHM (C24-C38)		405170	41.04
C12	3.035	-0.008	1340	1027	AK102 (C10-C25)		177595	14.37
C14	3.623	0.003	1288	823	AK103 (C25-C36)		368065	51.78 M
C16	4.116	-0.002	999	785				
C18	4.564	0.000	1944	888				
C20	4.988	0.004	1293	545				
C22	5.380	0.002	1294	396	MSPIRIT (Tol-C12)		86503	6.30
C24	5.734	-0.009	1018	291				
C25	5.924	0.005	10396	13025				
C26	6.089	-0.005	3872	3479				
C28	6.408	-0.001	6255	2597				
C32	6.952	0.000	7319	9376				
C34	7.188	0.001	3003	2362				
Filter Peak	----							
C36	7.404	0.000	2985	1268				
o-terph	4.672	-0.001	682238	457804	JET-A (C10-C18)		95401	8.81
Triacon Surr	6.701	0.000	521253	399571				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	457804	34.0	75.6
Triacontane	399571	30.6	68.1

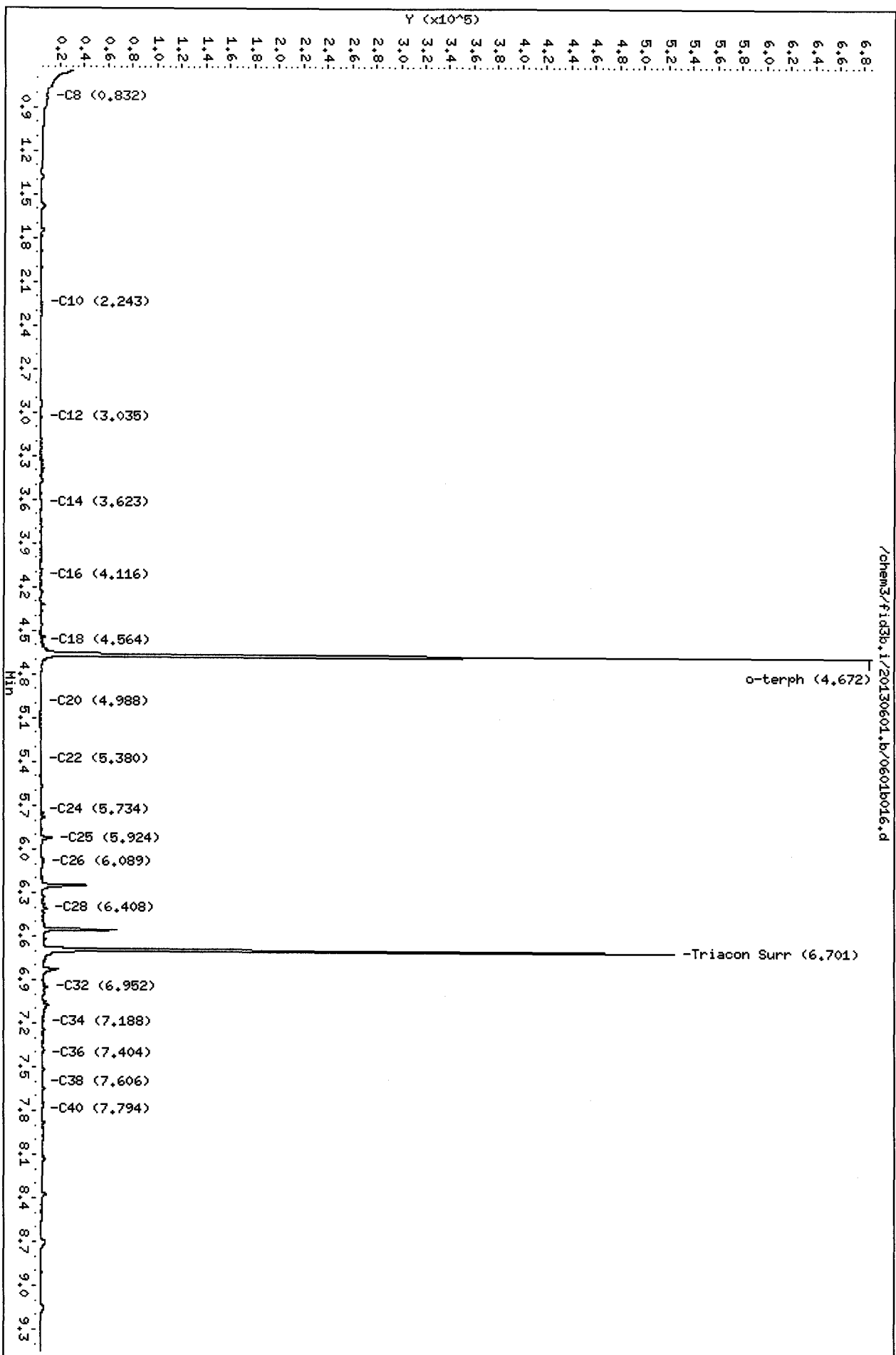
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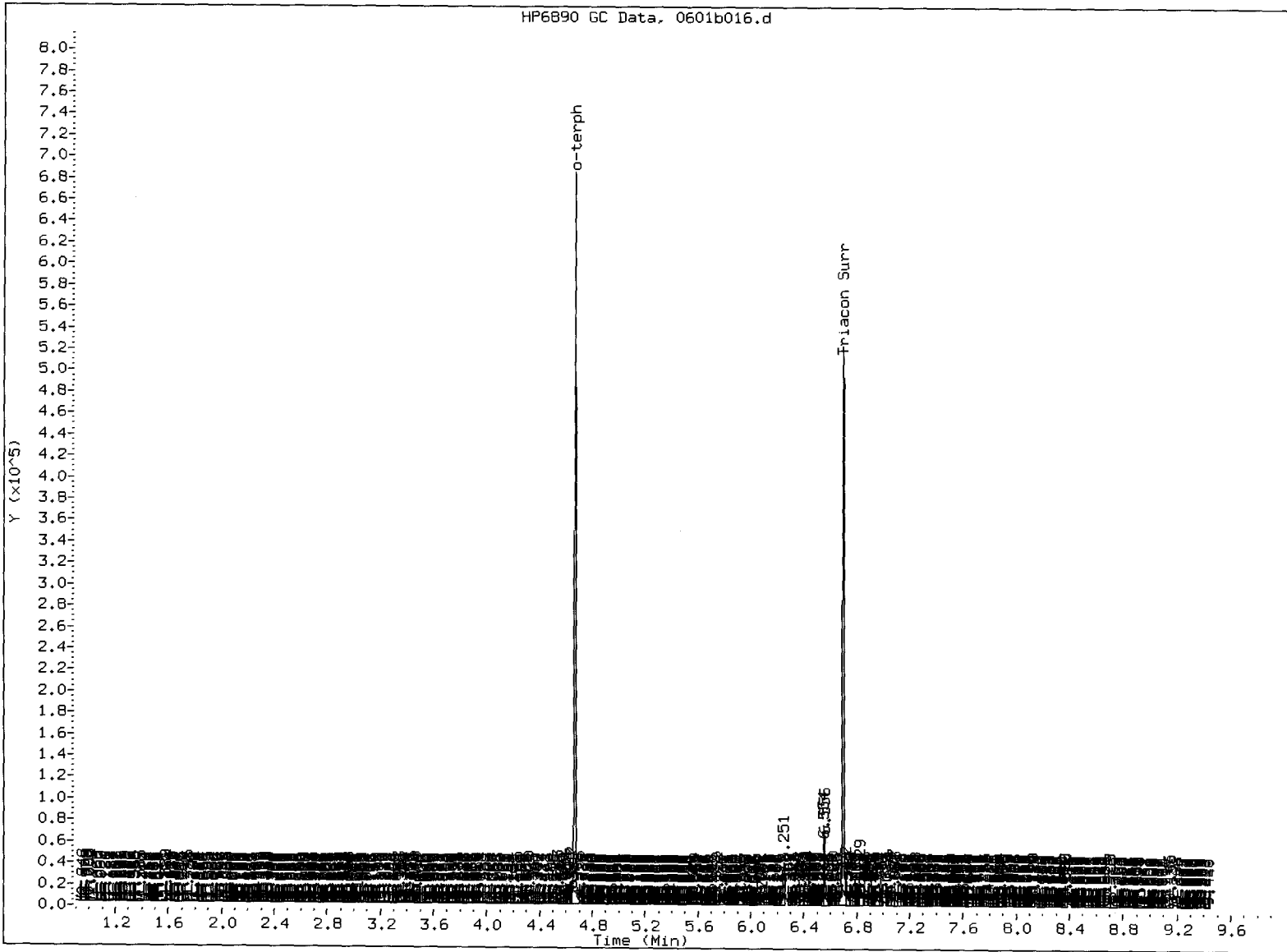
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b016.d
Date: 01-JUN-2013 16:08
Client ID: SL-MI2-S-4
Sample Info: MS07F
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/3/13





MANUAL INTEGRATION

- 1. Baseline correction - *50% was split*
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: *BW*

Date: *4/3/13*

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b012.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07G
Client ID: SL-W13-S-4
Injection: 03-JUN-2013 12:58
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	104334	8
C8	0.833	0.003	3289	7552	WATPHD	(C12-C24)	184304	17.79
C10	2.243	0.005	856	815	WATPHM	(C24-C38)	399111	40.43
C12	3.035	-0.004	585	335	AK102	(C10-C25)	220631	17.86
C14	3.619	0.001	1875	1876	AK103	(C25-C36)	352609	49.60
C16	4.113	0.002	1511	1570				
C18	4.558	-0.001	2482	2079				
C20	4.979	0.000	1365	263				
C22	5.372	0.000	1535	502	MSPIRIT	(Tol-C12)	104334	7.59
C24	5.736	-0.005	1278	222				
C25	5.921	0.005	4007	5308				
C26	6.095	0.002	2595	1578				
C28	6.405	0.002	7235	9048				
C32	6.950	0.000	8857	10602				
C34	7.183	-0.002	3181	3106				
Filter Peak	----							
C36	7.414	0.013	4453	5360				
o-terph	4.669	0.002	848610	491643	JET-A	(C10-C18)	126452	11.68
Triacon Surr	6.698	0.003	891631	575449				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

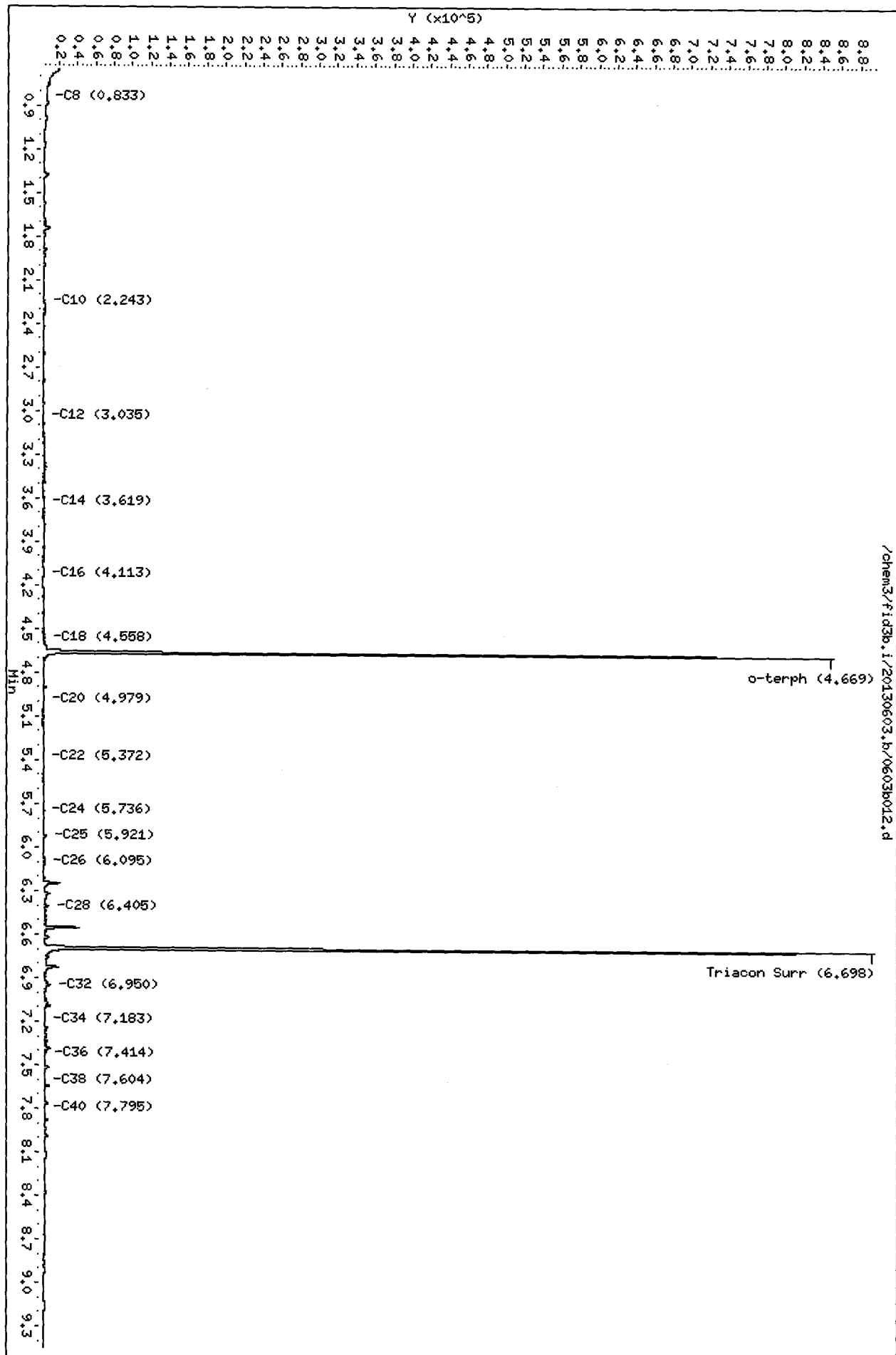
Surrogate	Area	Amount	%Rec
o-Terphenyl	491643	36.6	81.2
Triacontane	575449	44.1	98.0

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b012.d
Date: 03-JUN-2013 12:58
Client ID: SL-M13-S-4
Sample Info: MS07G
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



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Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b013.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07H
Client ID: SL-W14-S-4
Injection: 03-JUN-2013 13:18
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		71231	5
C8	0.803	-0.027	6131	13921	WATPHD (C12-C24)		1203232	116.17
C10	2.243	0.004	637	652	WATPHM (C24-C38)		2774033	280.98
C12	3.034	-0.004	626	434	AK102 (C10-C25)		1300404	105.24 M
C14	3.617	-0.001	1727	1166	AK103 (C25-C36)		2430209	341.87 M
C16	4.115	0.003	4632	3108				
C18	4.555	-0.004	10548	7306				
C20	4.976	-0.002	11993	6904				
C22	5.374	0.002	13982	6770	MSPIRIT (Tol-C12)		71231	5.18
C24	5.738	-0.003	17279	7438				
C25	5.918	0.002	20843	13313				
C26	6.095	0.002	22407	4416				
C28	6.401	-0.002	33610	23438				
C32	6.949	0.000	28536	23221				
C34	7.182	-0.002	27078	20747				
Filter Peak	----							
C36	7.397	-0.005	26672	17011				
o-terph	4.663	-0.004	65843	41894	JET-A (C10-C18)		341538	31.55
Triacon Surr	6.692	-0.002	69001	44142				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	41894	3.1	69.2
Triacontane	44142	3.4	75.2

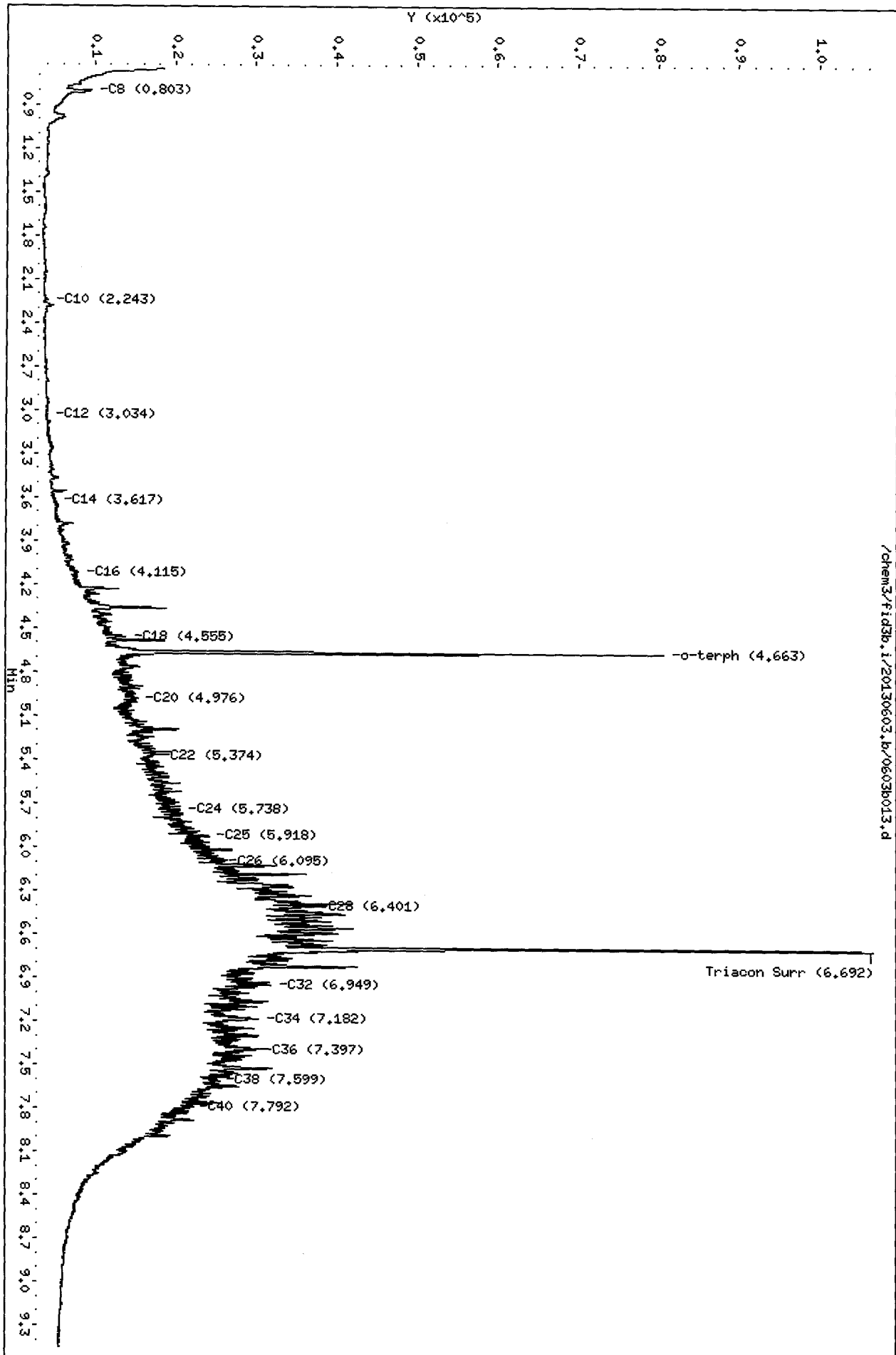
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4/10

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b013.d
Date: 03-JUN-2013 13:18
Client ID: SL-M44-S-4
Sample Info: MS07H.10
Column phase: RTX-1

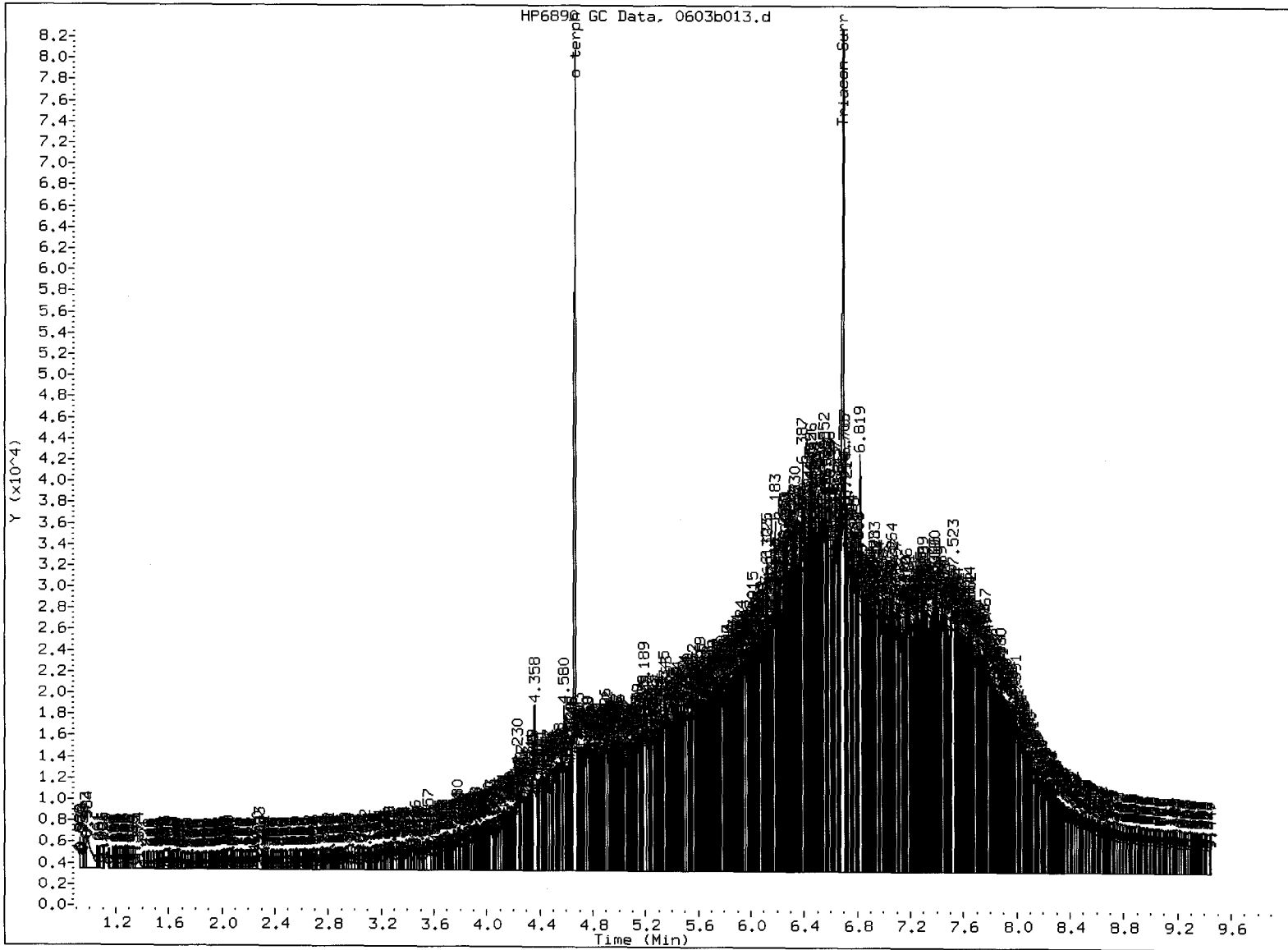
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/3/13



/chem3/fid3b.i/20130603.b/0603b013.d

000000 0007



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/3/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b014.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07I
Client ID: A2-W28-S-4
Injection: 03-JUN-2013 13:37
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		91684	7
C8	0.836	0.006	3003	598	WATPHD (C12-C24)		159522	15.40
C10	2.242	0.004	662	607	WATPHM (C24-C38)		301694	30.56
C12	3.033	-0.006	307	224	AK102 (C10-C25)		185167	14.99
C14	3.624	0.006	968	1131	AK103 (C25-C36)		250383	35.22
C16	4.115	0.003	895	327				
C18	4.553	-0.006	1142	235				
C20	4.981	0.002	1044	335				
C22	5.371	-0.002	1088	255	MSPIRIT (Tol-C12)		91684	6.67
C24	5.742	0.000	1308	524				
C25	5.914	-0.003	1256	443				
C26	6.095	0.001	1694	326				
C28	6.401	-0.002	2738	846				
C32	6.952	0.002	6443	3564				
C34	7.187	0.002	2680	982				
Filter Peak	----							
C36	7.405	0.003	3052	839				
o-terph	4.668	0.001	875469	513014	JET-A (C10-C18)		96339	8.90
Triacon Surr	6.699	0.004	824194	598987				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

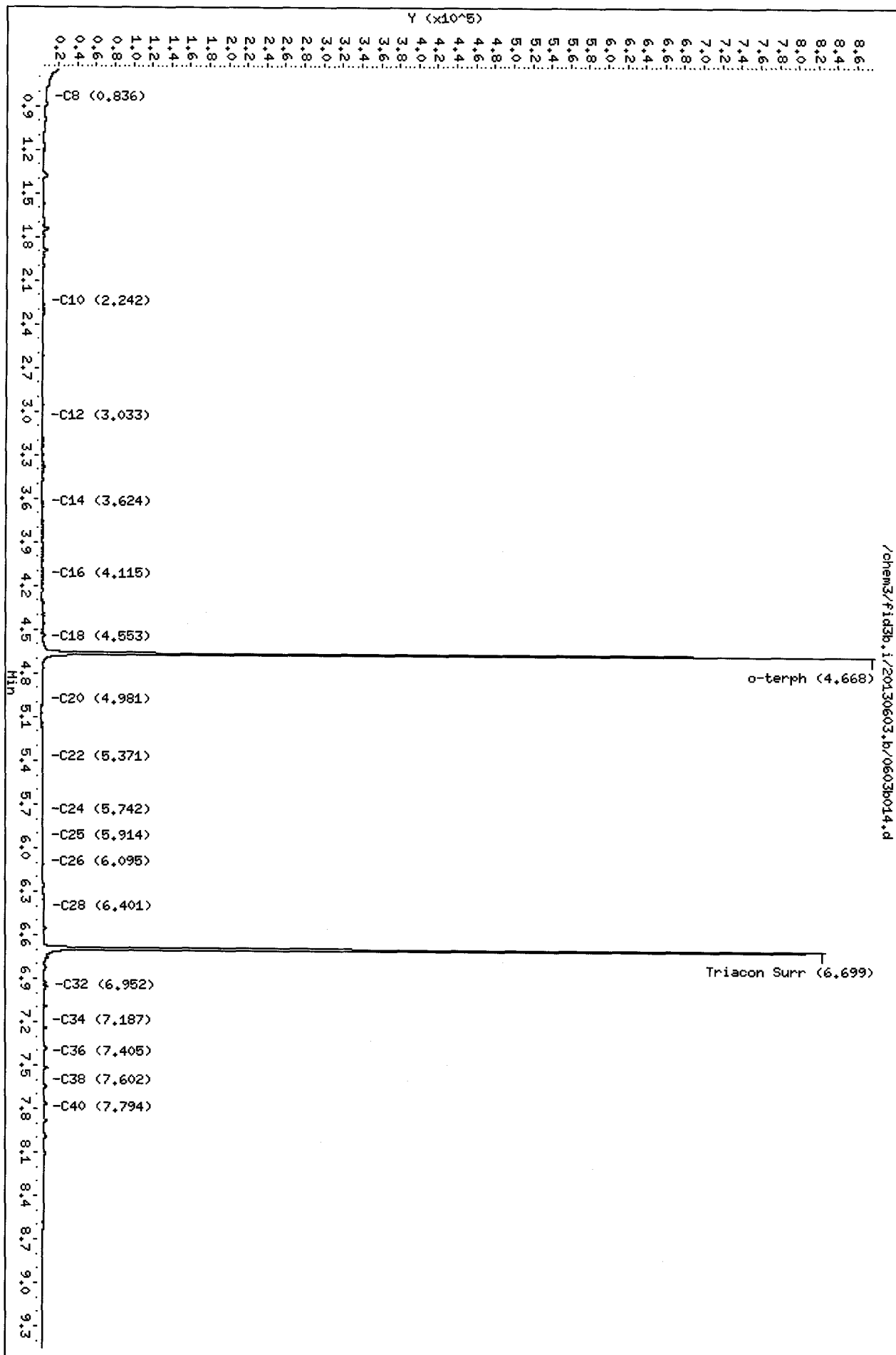
Surrogate	Area	Amount	%Rec
o-Terphenyl	513014	38.1	84.8
Triacontane	598987	45.9	102.0

JW
6/7/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b014.d
 Date : 03-JUN-2013 13:37
 Client ID: A2-M28-S-4
 Sample Info: MS071
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25



MS07 00036

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b017.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07J
Client ID: A2-W29-S-4
Injection: 01-JUN-2013 16:27
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73411	5
C8	0.834	-0.001	4222	9734	WATPHD (C12-C24)		1658666	160.14
C10	2.242	0.002	416	342	WATPHM (C24-C38)		3070565	311.01
C12	3.036	-0.007	1191	847	AK102 (C10-C25)		1808762	146.38 M
C14	3.624	0.003	921	650	AK103 (C25-C36)		2710712	381.33 M
C16	4.120	0.002	4356	1688				
C18	4.563	-0.001	13059	4877				
C20	4.983	0.000	15491	2758				
C22	5.380	0.002	20711	6004	MSPIRIT (Tol-C12)		73411	5.34
C24	5.744	0.001	26593	11077				
C25	5.919	0.000	29162	12523				
C26	6.098	0.004	31998	7390				
C28	6.412	0.003	36662	5741				
C32	6.953	0.001	27919	18088				
C34	7.191	0.004	21685	7579				
Filter Peak	----							
C36	7.405	0.001	20168	7041				
o-terph	4.667	-0.006	73898	35457	JET-A (C10-C18)		346170	31.98
Triacon Surr	6.694	-0.007	54159	28296				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	35457	2.6	58.6
Triacontane	28296	2.2	48.2

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

JW
6/3/13

Data File: /chem3/fid3b.i/20130601.b/0601b017.d

Date : 01-JUN-2013 16:27

Client ID: A2-M29-S-4

Sample Info: MS07J,10

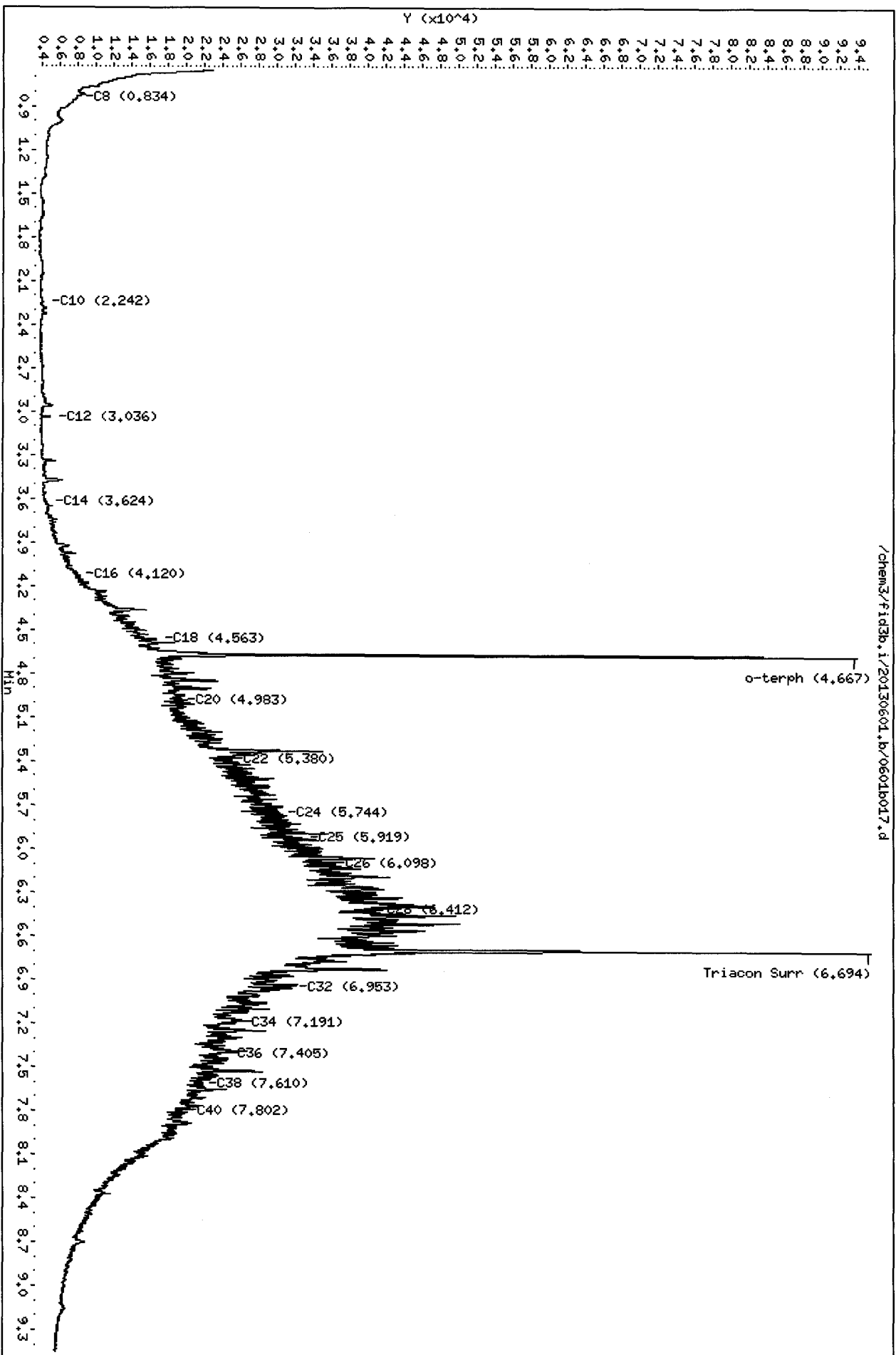
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

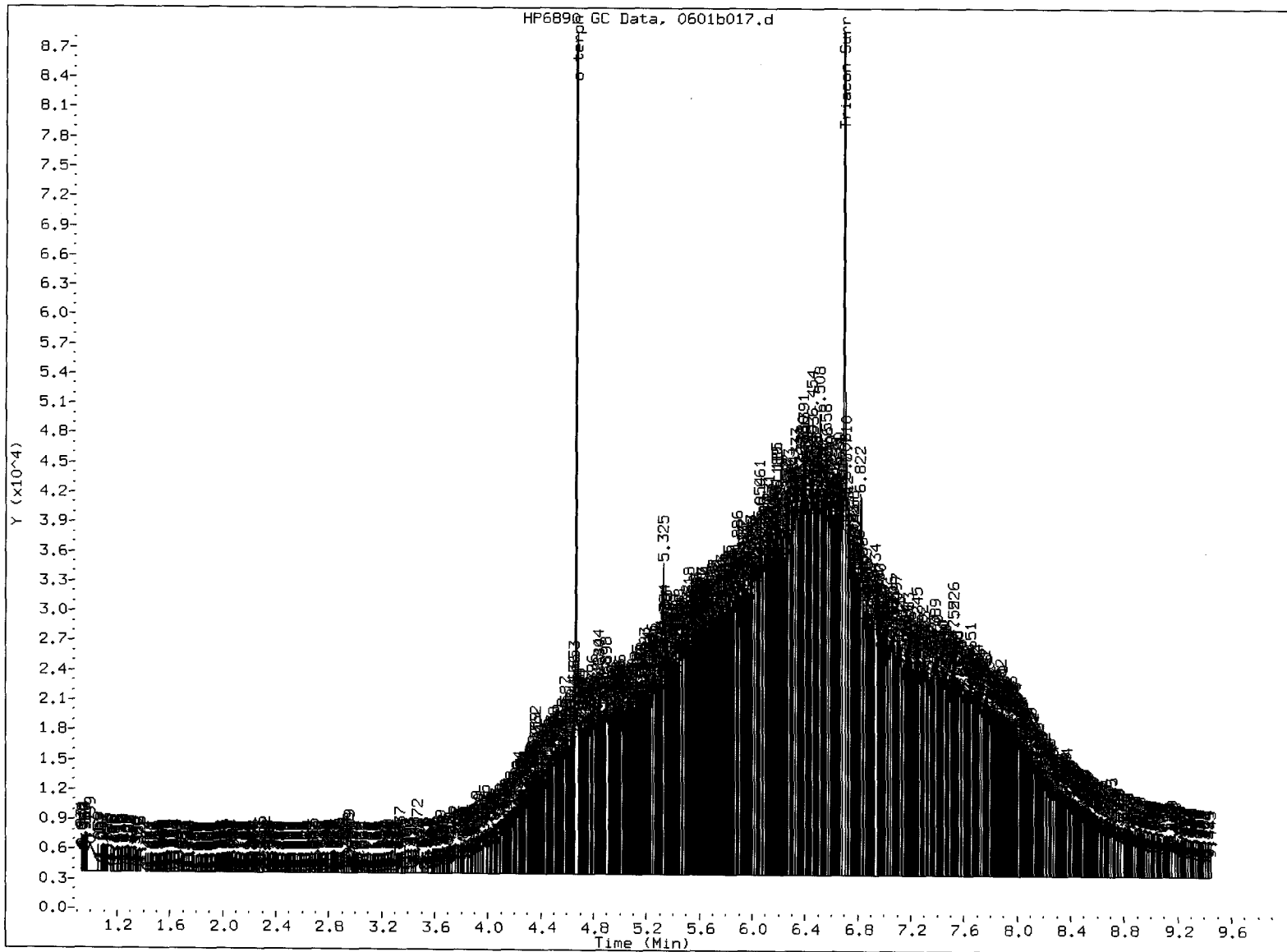
Column diameter: 0.25

Jio
6/7/10



/chem3/fid3b.i/20130601.b/0601b017.d

MS07: 000000



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JD

Date: 6/3/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b018.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07K
Client ID: A2-W30-S-4
Injection: 01-JUN-2013 16:46
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	131656	10
C8	0.839	0.003	4707	6682	WATPHD	(C12-C24)	3819753	368.79
C10	2.242	0.002	914	656	WATPHM	(C24-C38)	6554041	663.84
C12	3.042	-0.001	1362	1032	AK102	(C10-C25)	4108015	332.45 M
C14	3.618	-0.002	4218	3250	AK103	(C25-C36)	5911343	831.59 M
C16	4.114	-0.004	8150	8118				
C18	4.561	-0.003	23893	24705				
C20	4.981	-0.002	31760	28644				
C22	5.376	-0.002	41648	24920	MSPIRIT	(Tol-C12)	131656	9.58
C24	5.743	0.001	50925	15975				
C25	5.924	0.005	70270	48535				
C26	6.096	0.001	69496	18516				
C28	6.411	0.002	79706	53147				
C32	6.952	0.001	65289	56916				
C34	7.189	0.002	54970	21641				
Filter Peak	----							
C36	7.404	0.000	42458	35412				
o-terph	4.672	0.000	732804	317923	JET-A	(C10-C18)	574781	53.10
Triacon Surr	6.701	0.000	631973	379982				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	317923	23.6	52.5
Triacontane	379982	29.1	64.7

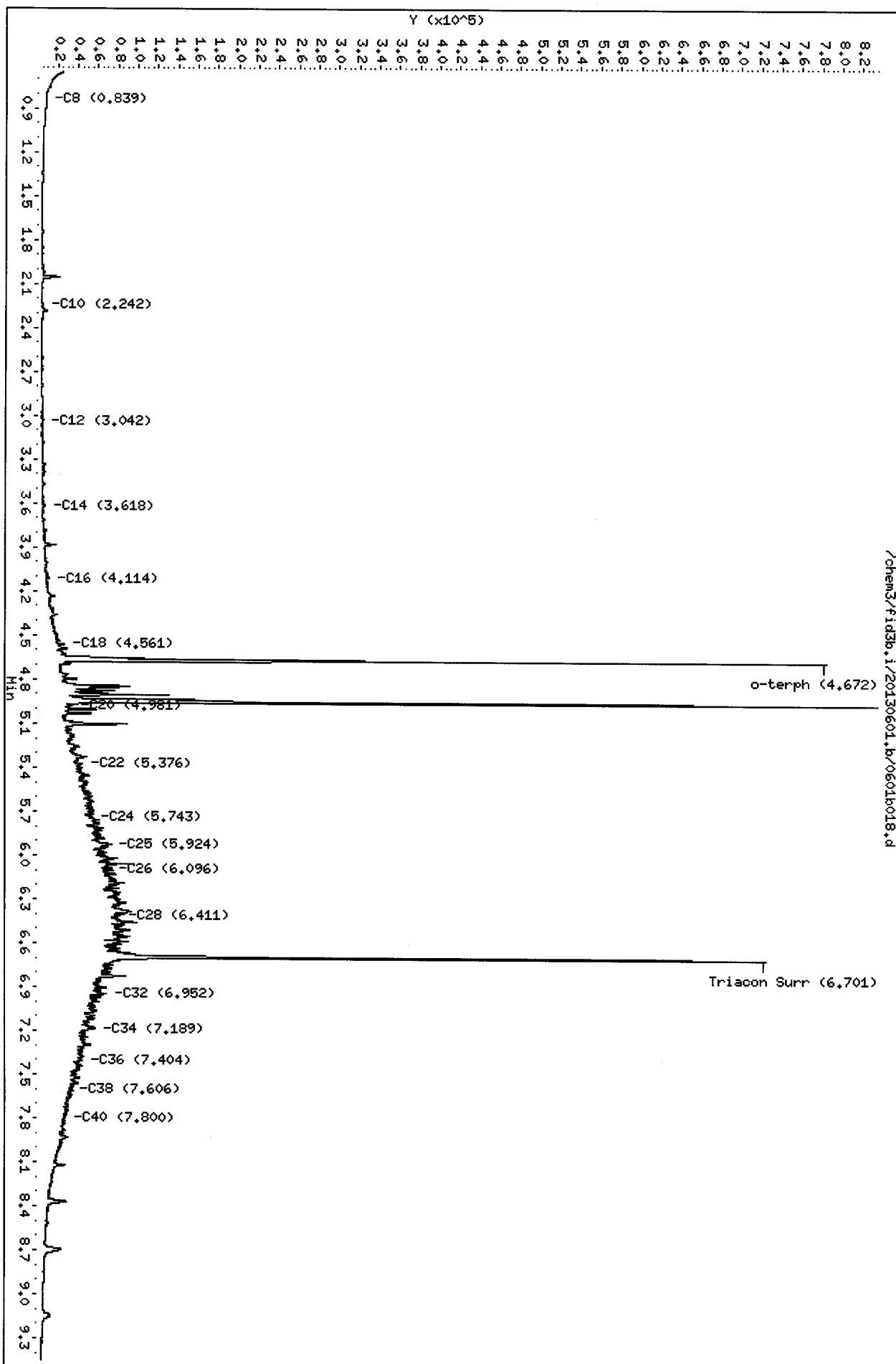
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6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

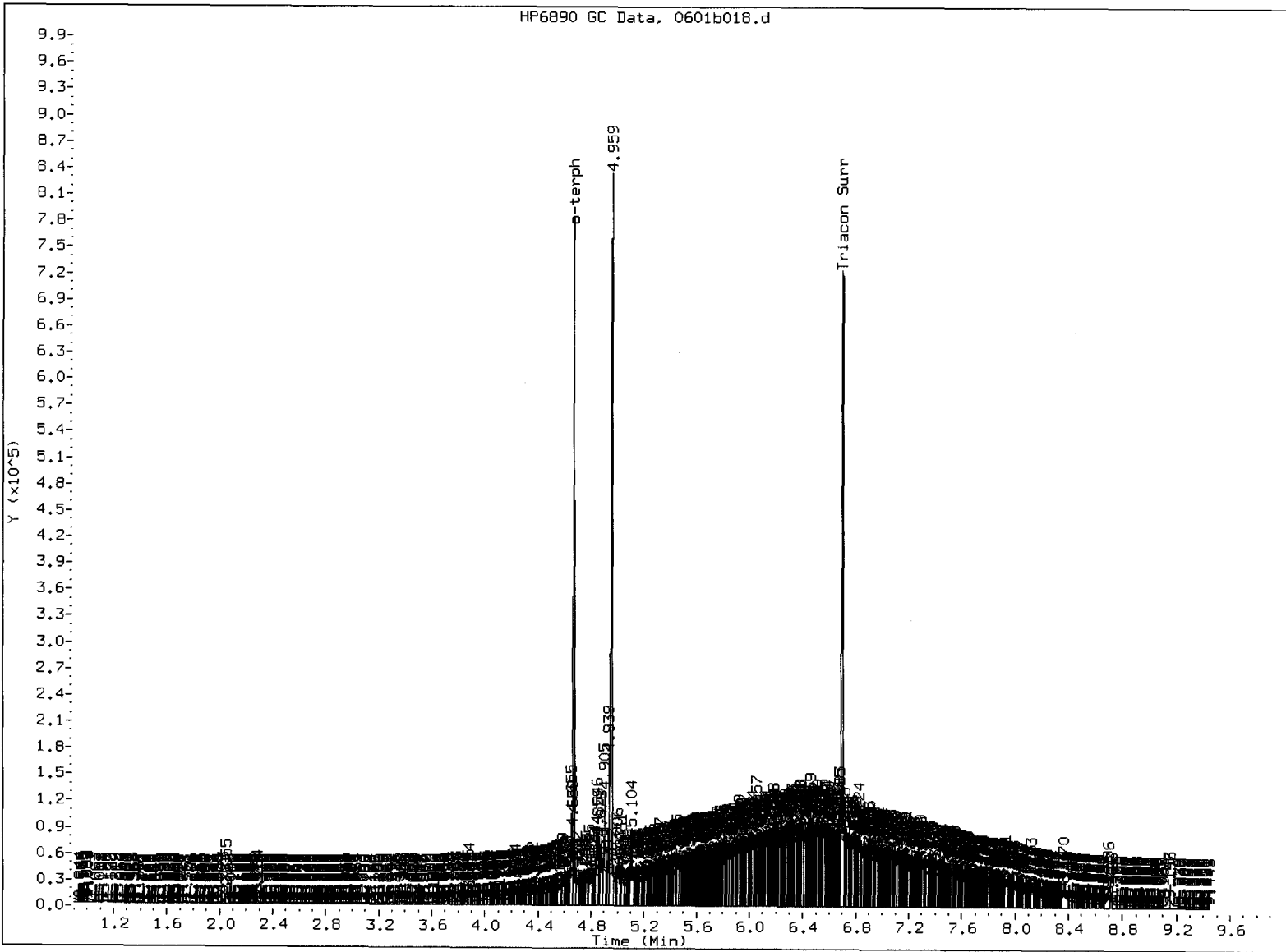
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Date: 01-JUN-2013 16:46
Client ID: A2-M30-S-4
Sample Info: MS07K
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/3/13



/chem3/fid3b.i/20130601.b/0601b018.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW Date: 6/3/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b007.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07L
Client ID: A2-W31-S-4
Injection: 03-JUN-2013 11:22
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	220575	16
C8	0.831	0.001	6844	16975	WATPHD	(C12-C24)	4571225	441.35
C10	2.244	0.006	1423	1463	WATPHM	(C24-C38)	30074087	3046.13
C12	3.030	-0.009	2453	3822	AK102	(C10-C25)	5263608	425.97 M
C14	3.617	-0.001	4285	3218	AK103	(C25-C36)	26049882	3664.62 M
C16	4.107	-0.005	6040	4603				
C18	4.561	0.003	17028	9903				
C20	4.978	-0.001	30437	13779				
C22	5.375	0.002	65916	31699	MSPIRIT	(Tol-C12)	220575	16.06
C24	5.743	0.002	126785	78053				
C25	5.916	-0.001	155792	38847				
C26	6.091	-0.002	190751	97254				
C28	6.407	0.003	341329	122117				
C32	6.948	-0.002	288771	106428				
C34	7.184	0.000	291317	51413				
Filter Peak	----							
C36	7.405	0.003	314500	168148				
o-terph	4.665	-0.002	613412	344572	JET-A	(C10-C18)	574364	53.06
Triacon Surr	6.706	0.012	710549	446256				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	344572	25.6	56.9
Triacontane	446256	34.2	76.0

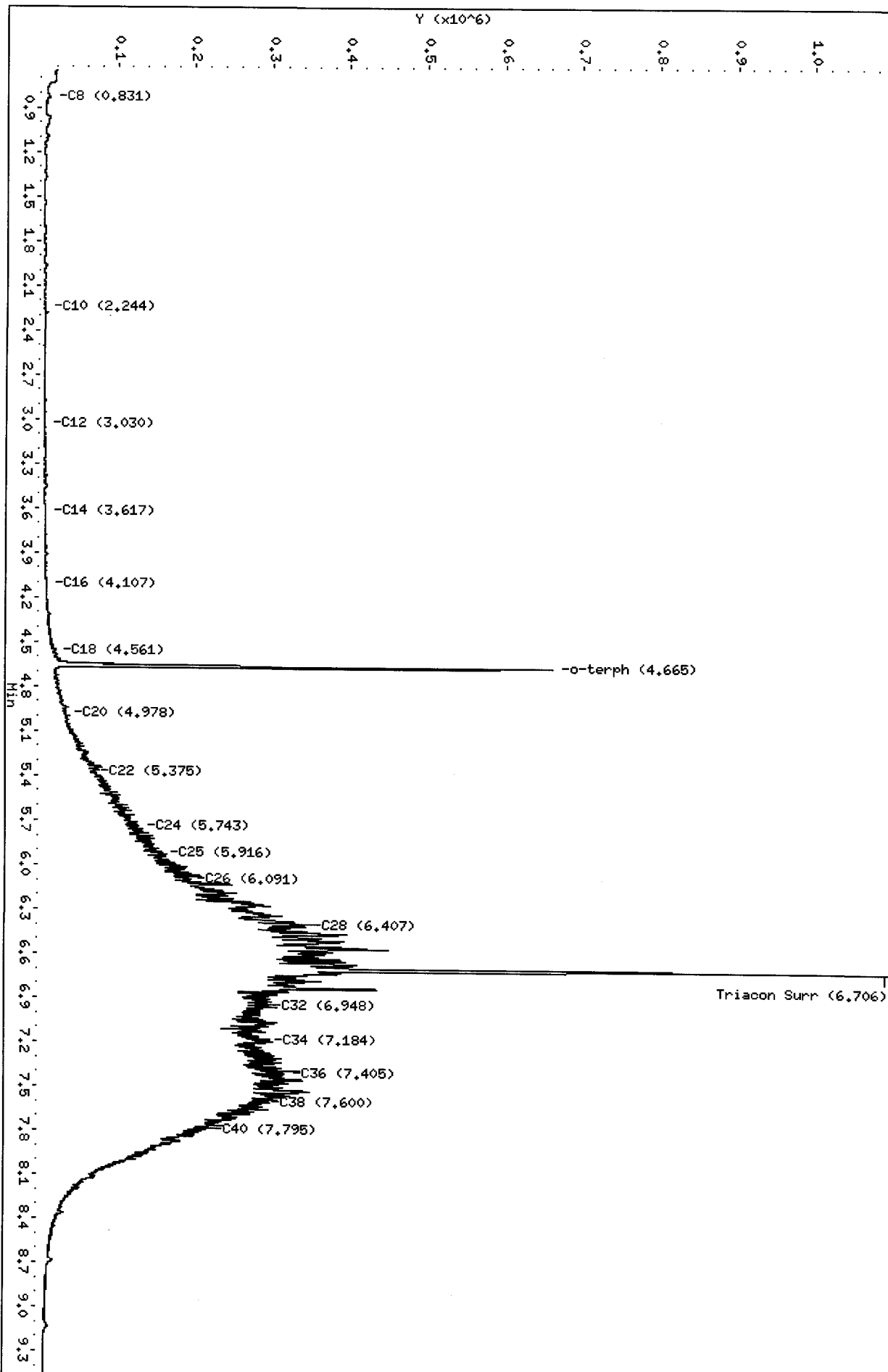
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43/10

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

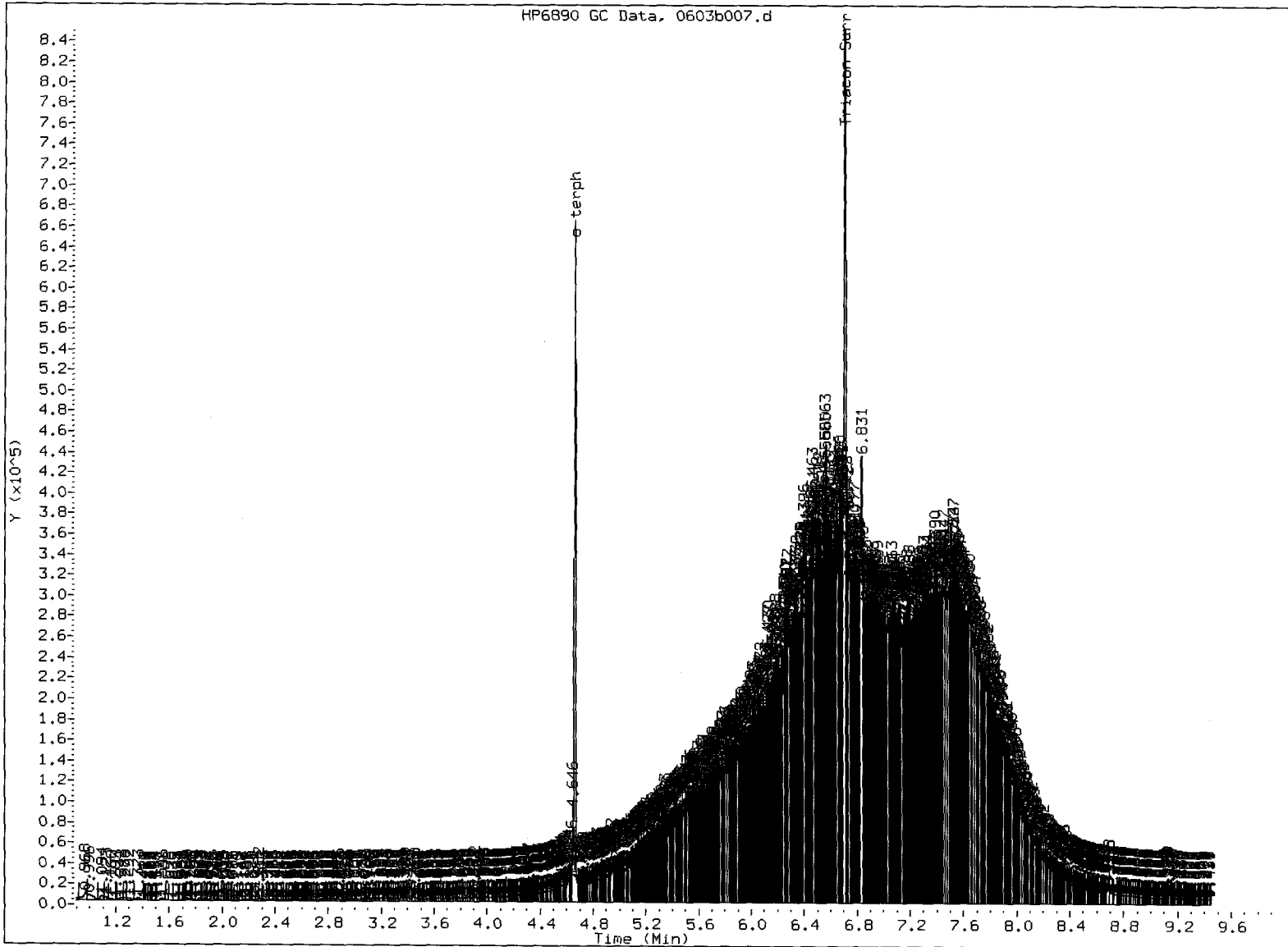
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Date : 03-JUN-2013 11:22
Client ID: A2-M31-S-4
Sample Info: MS07L
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

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MS07:00044



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SC Date: 6/2/83

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b008.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07M
Client ID: A2-W33-S-4
Injection: 03-JUN-2013 11:41
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		70796	5
C8	0.821	-0.009	4289	8560	WATPHD (C12-C24)		1639281	158.27 ✓
C10	2.237	-0.002	358	278	WATPHM (C24-C38)		17246103	1746.82 ✓
C12	3.048	0.009	424	74	AK102 (C10-C25)		1890366	152.98 M
C14	3.614	-0.004	563	141	AK103 (C25-C36)		15283564	2150.04 M
C16	4.113	0.001	1787	752				
C18	4.560	0.001	4900	666				
C20	4.974	-0.004	10781	1666				
C22	5.368	-0.004	27136	17281	MSPIRIT (Tol-C12)		70796	5.15
C24	5.740	-0.001	45233	10582				
C25	5.915	-0.001	59165	17257				
C26	6.092	-0.001	91453	59072				
C28	6.400	-0.003	183535	38724				
C32	6.945	-0.004	190418	37231				
C34	7.183	-0.001	195434	69654				
Filter Peak	----							
C36	7.404	0.002	171956	56625				
o-terph	4.662	-0.004	136493	63872	JET-A (C10-C18)		170448	15.75
Triacon Surr	6.699	0.005	133179	74447				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	63872	4.7	52.8 ✓
Triacontane	74447	5.7	63.4

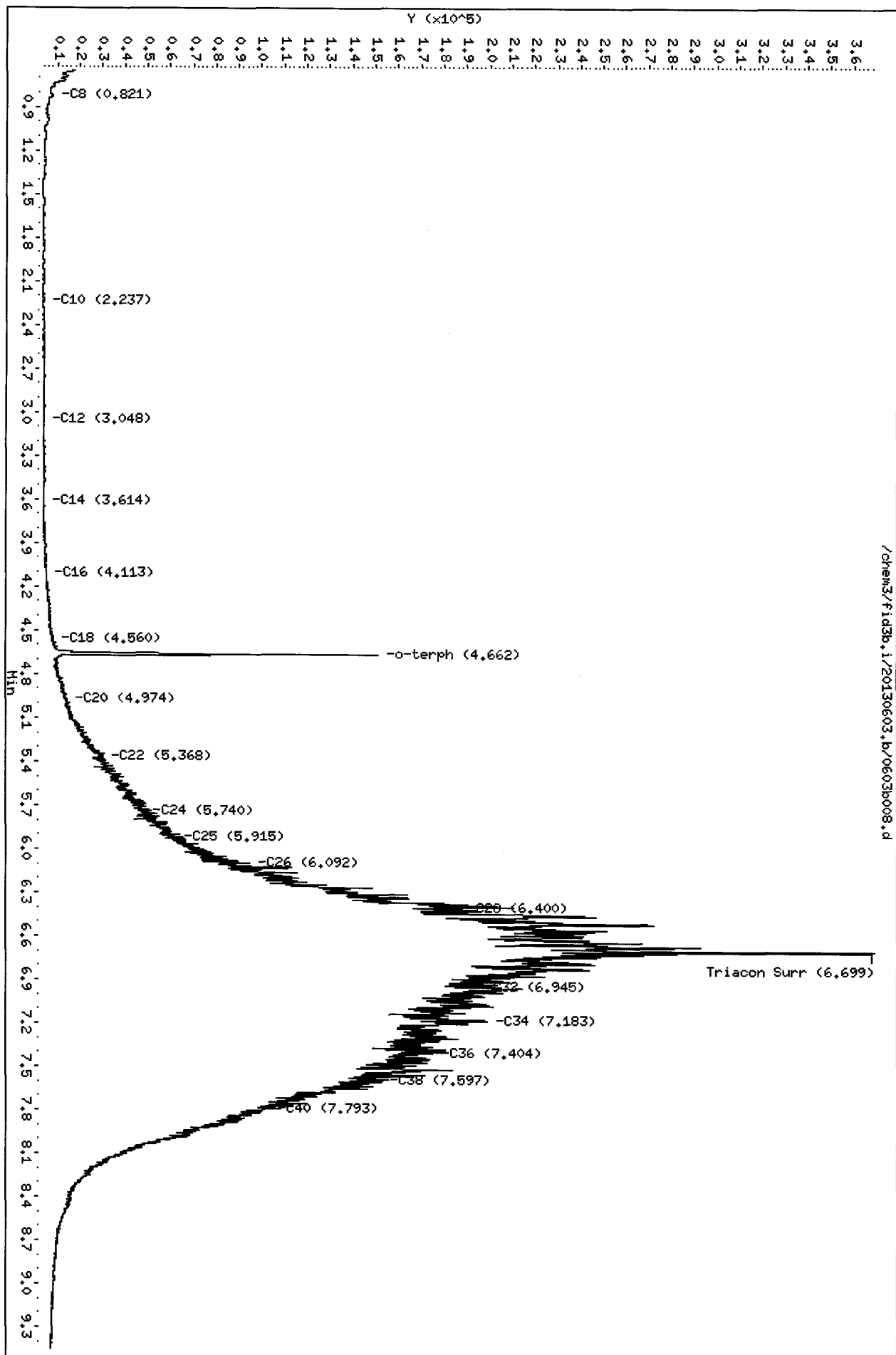
JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603p008.d
 Date: 03-JUN-2013 11:41
 Client ID: A2-M33-S-4
 Sample Info: MS07M.5
 Column Phase: RTX-1

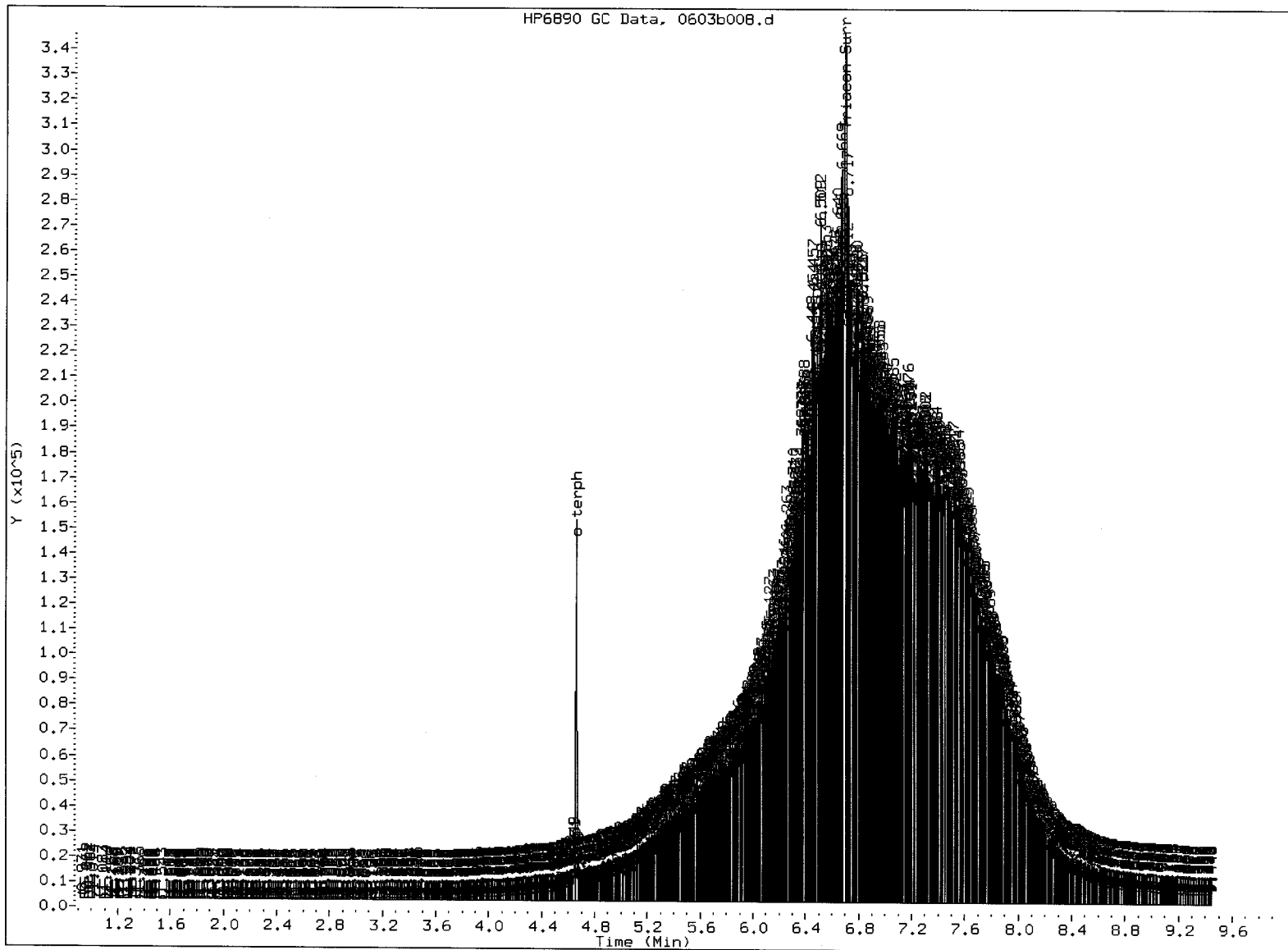
Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25

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JM
6/3/13

11007 00047



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤. Skipped surrogate

Analyst: JW

Date: 6/3/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b023.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07N
Client ID: A2-W32-S-4
Injection: 01-JUN-2013 18:23
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		116294	9
C8	0.820	-0.016	5427	9188	WATPHD (C12-C24)		538128	51.96
C10	2.240	0.000	922	941	WATPHM (C24-C38)		3080547	312.02
C12	3.034	-0.009	1483	1914	AK102 (C10-C25)		623682	50.47 M
C14	3.620	-0.001	2224	1939	AK103 (C25-C36)		2619945	368.57 M
C16	4.113	-0.005	2106	2010				
C18	4.565	0.001	5424	6169				
C20	4.981	-0.002	3727	1786				
C22	5.376	-0.002	7127	2544	MSPIRIT (Tol-C12)		116294	8.46
C24	5.739	-0.003	10951	5352				
C25	5.920	0.001	17437	23001				
C26	6.093	-0.002	15898	2816				
C28	6.408	-0.001	29287	5176				
C32	6.951	0.000	38471	33992				
C34	7.189	0.002	31052	8520				
Filter Peak	----							
C36	7.402	-0.002	35958	19099				
o-terph	4.669	-0.003	626090	400160	JET-A (C10-C18)		171935	15.88
Triacon Surr	6.700	-0.001	614679	419252				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	400160	29.8	66.1
Triacotane	419252	32.1	71.4

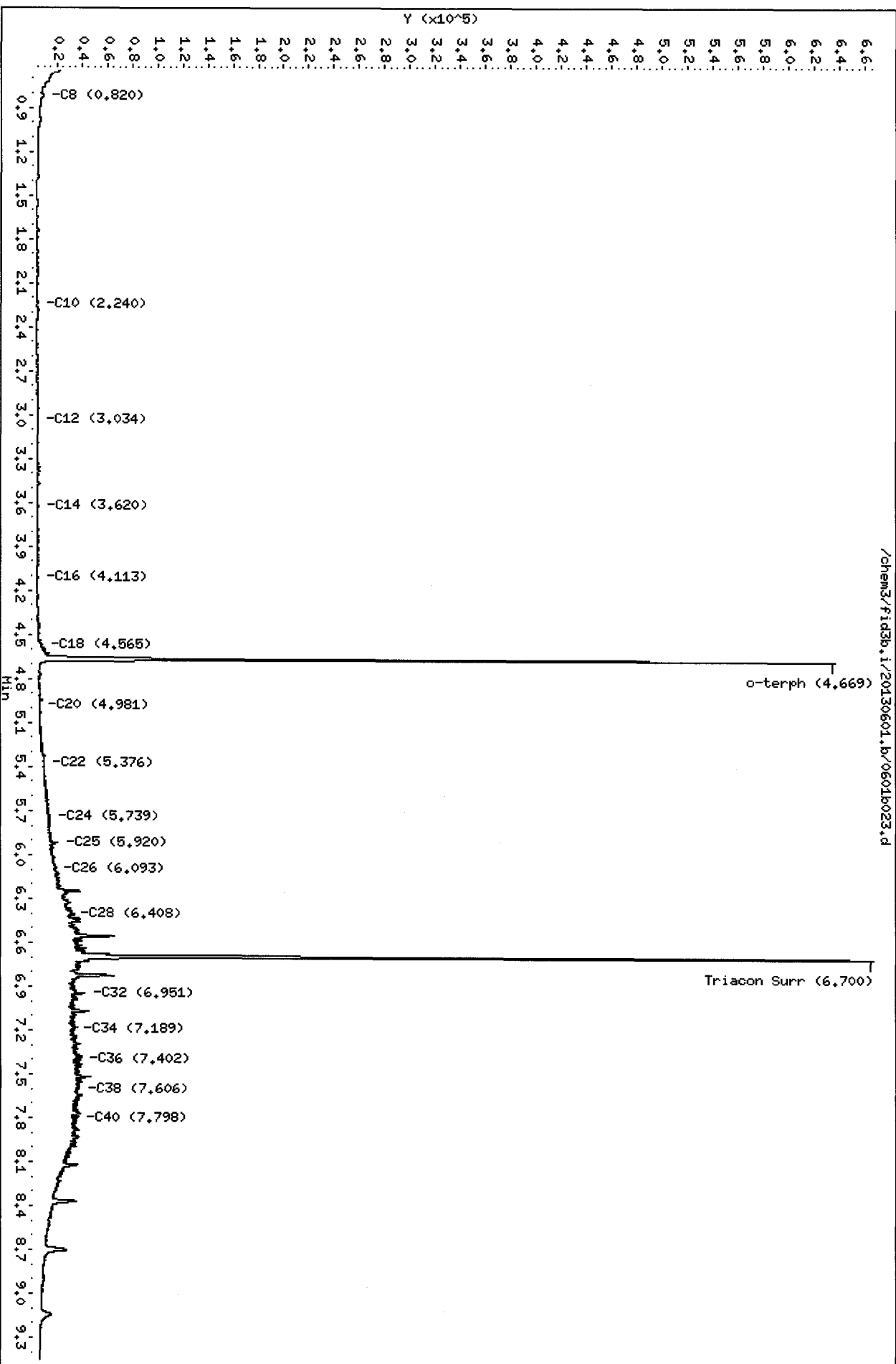
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6/1/13*

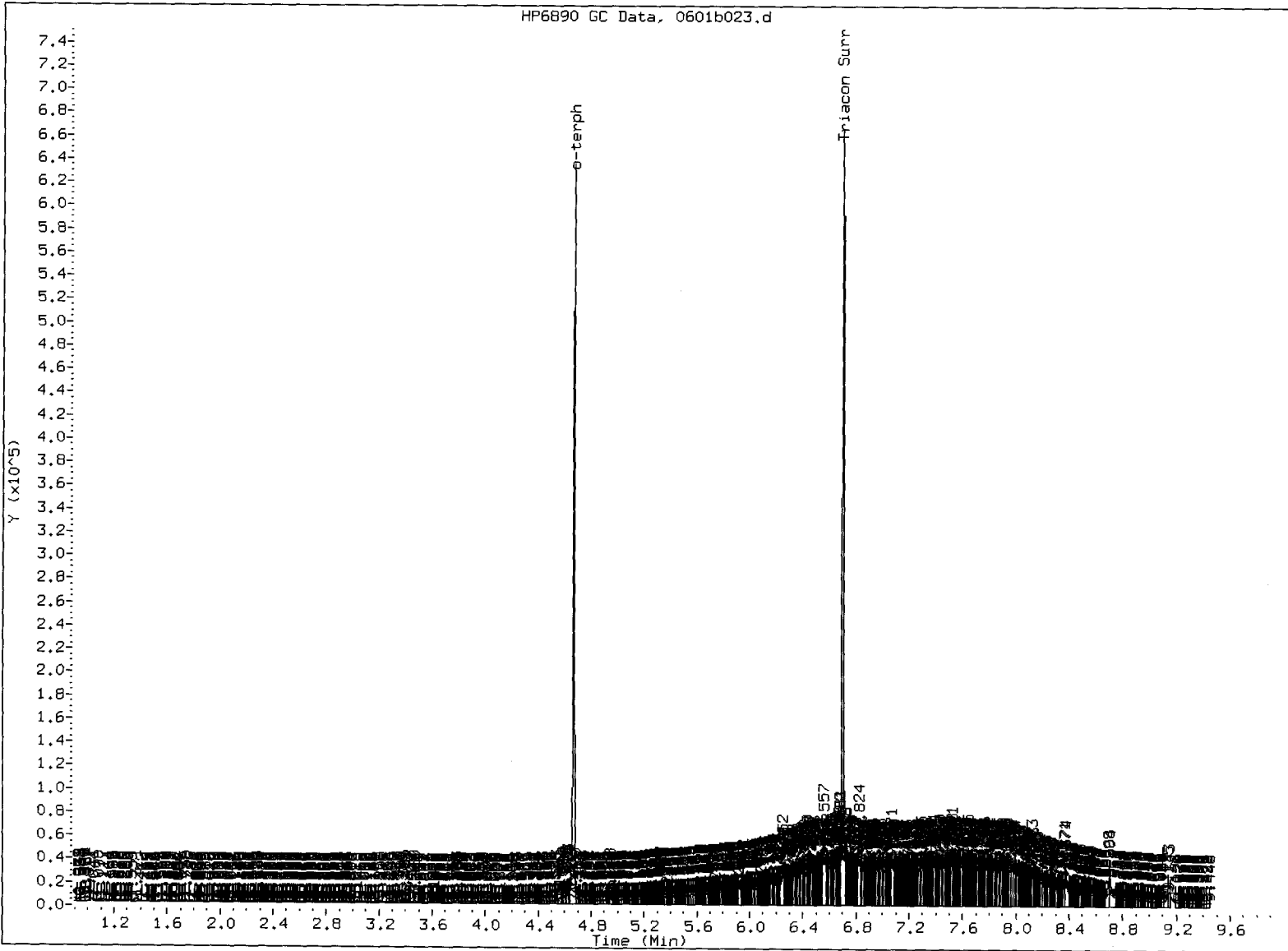
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130601.b/0601b023.d
 Date: 01-JUN-2013 18:23
 Client ID: A2-M32-S-4
 Sample Info: MS07N
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25

500
6/2/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: TW

Date: 4/30

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS07-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-053113	76.0%	0
LCS-053113	53.4%	0
LCSD-053113	71.8%	0
SL-W7-S-4	76.7%	0
SL-W8-S-4	68.2%	0
SL-W9-S-4	74.4%	0
SL-W10-S-4	80.3%	0
SL-W11-S-4	70.6%	0
SL-W12-S-4	75.6%	0
MB-060113	80.2%	0
LCS-060113	90.6%	0
LCSD-060113	85.2%	0
SL-W13-S-4	81.2%	0
SL-W14-S-4	69.1%	0
A2-W28-S-4	84.8%	0
A2-W29-S-4	58.7%	0
A2-W30-S-4	52.5%	0
A2-W31-S-4	56.9%	0
A2-W33-S-4	52.8%	0
A2-W32-S-4	66.1%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-11581 to 13-11594

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-053113
LCS/LCSD

Lab Sample ID: LCS-053113
 LIMS ID: 13-11581
 Matrix: Soil
 Data Release Authorized: *B*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Extracted LCS/LCSD: 05/31/13

Sample Amount LCS: 10.0 g
 LCSD: 10.0 g

Date Analyzed LCS: 06/01/13 13:52
 LCSD: 06/01/13 14:11

Final Extract Volume LCS: 1.0 mL
 LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW
 LCSD: FID/JLW

Dilution Factor LCS: 1.0
 LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	102	150	68.0%	110	150	73.3%	7.5%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	53.4%	71.8%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b009.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07LCSS1
Client ID: WS07LCSS1
Injection: 01-JUN-2013 13:52
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2839482	210
C8	0.836	0.001	10758	19585	WATPHD (C12-C24)		10596891	1023.12
C10	2.243	0.003	68929	49429	WATPHM (C24-C38)		168795	17.10
C12	3.041	-0.002	135991	131427	AK102 (C10-C25)		12670822	1025.42 M
C14	3.621	0.000	233008	157973	AK103 (C25-C36)		134859	18.97
C16	4.118	0.001	301253	247168				
C18	4.565	0.001	326093	233769				
C20	4.984	0.000	156754	155224				
C22	5.377	-0.001	72476	66919	MSPIRIT (Tol-C12)		2839482	206.68
C24	5.737	-0.006	9851	2710				
C25	5.924	0.006	10264	12255				
C26	6.094	0.000	4584	2732				
C28	6.412	0.003	1618	842				
C32	6.951	0.000	451	109				
C34	7.183	-0.004	56	16				
Filter Peak	----							
C36	7.404	0.000	232	100				
o-terph	4.674	0.001	617634	323207	JET-A (C10-C18)		9697196	895.88
Triacon Surr	6.700	-0.001	576729	354597				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	323207	24.0	53.4
Triacontane	354597	27.2	60.4

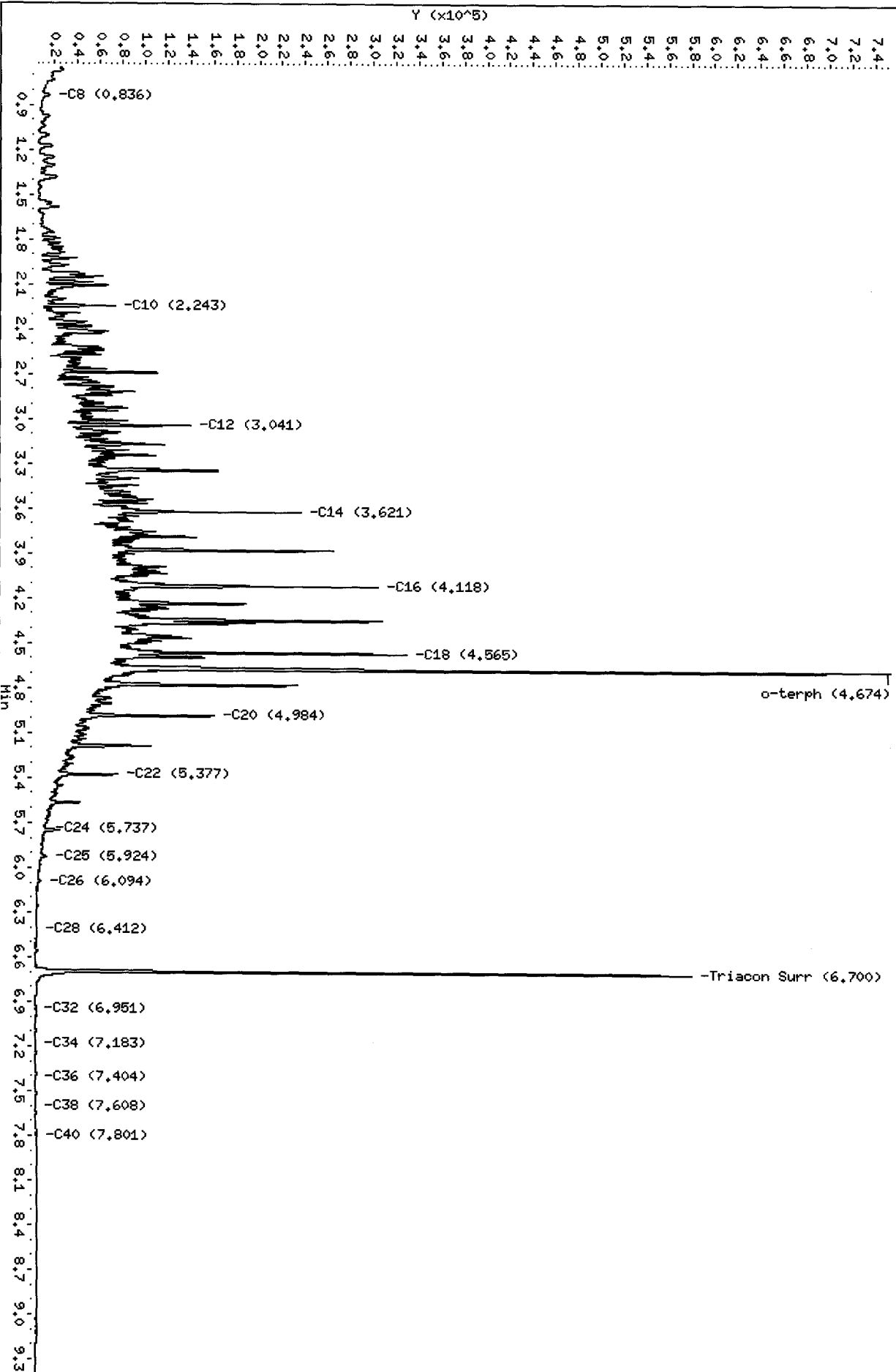
JW
WJH

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

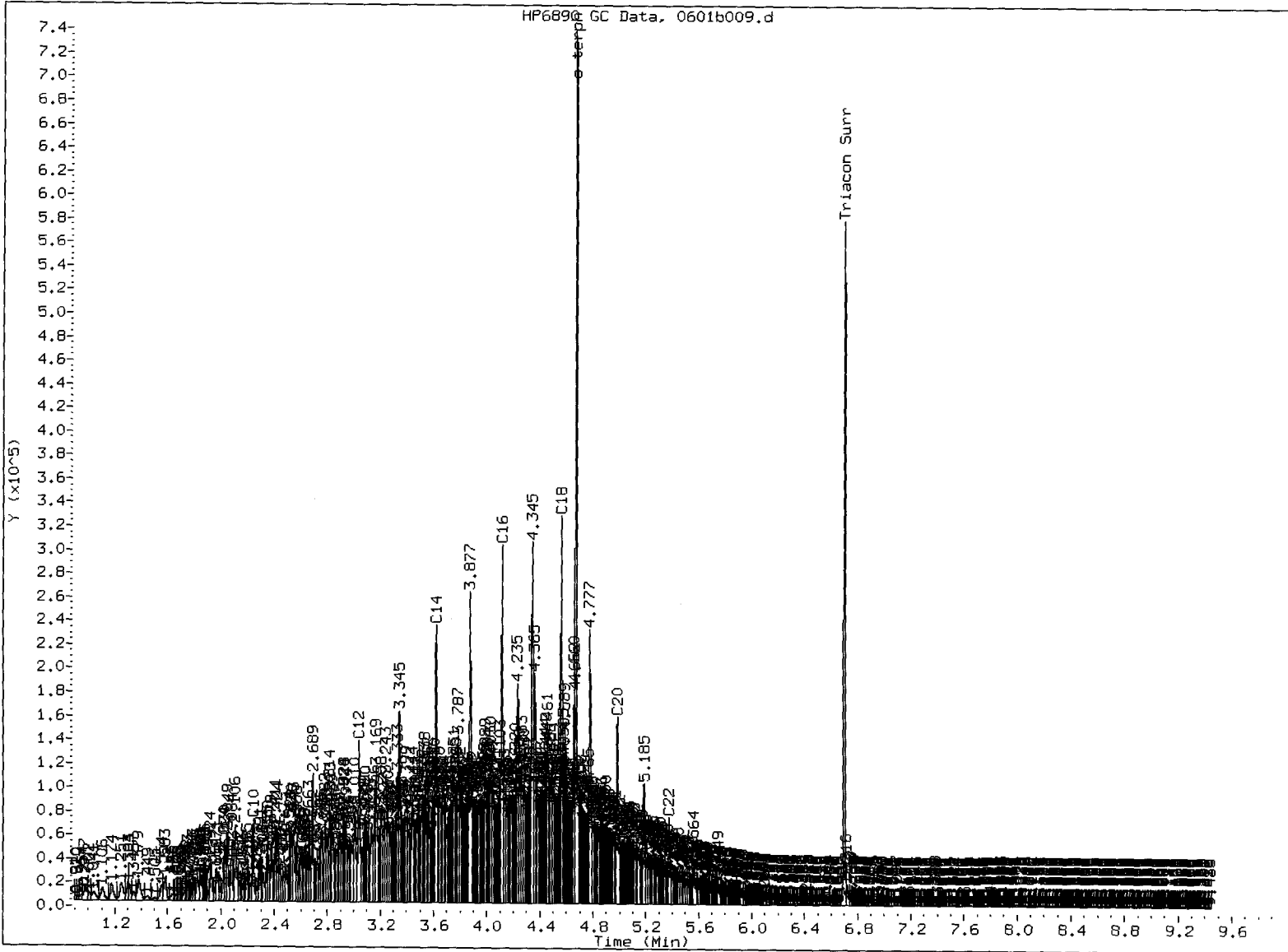
Data File: /chem3/fid3b.i/20130601.b/0601b009.d
Date: 01-JUN-2013 13:52
Client ID: MS07LCSS1
Sample Info: MS07LCSS1
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JM
6/3/13



/chem3/fid3b.i/20130601.b/0601b009.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JCS

Date: 6/3/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130601.b/0601b010.d
Method: /chem3/fid3b.i/20130601.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07LCSDS1
Client ID: WS07LCSDS1
Injection: 01-JUN-2013 14:11
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3018972	224
C8	0.838	0.002	11680	19402	WATPHD (C12-C24)		11441626	1104.68
C10	2.241	0.001	70086	51540	WATPHM (C24-C38)		156658	15.87
C12	3.044	0.002	137962	140320	AK102 (C10-C25)		13613053	1101.67 M
C14	3.621	0.001	235678	156003	AK103 (C25-C36)		123952	17.44
C16	4.120	0.002	323397	269533				
C18	4.566	0.002	322303	280724				
C20	4.985	0.002	197206	183491				
C22	5.378	0.000	74784	80133	MSPIRIT (Tol-C12)		3018972	219.74
C24	5.746	0.003	21097	15680				
C25	5.921	0.003	11146	9485				
C26	6.096	0.001	4404	940				
C28	6.409	0.000	1080	249				
C32	6.957	0.005	402	112				
C34	7.191	0.004	20	10				
Filter Peak	----							
C36	7.413	0.009	167	61				
o-terph	4.674	0.001	684017	434621	JET-A (C10-C18)		10539833	973.73
Triacon Surr	6.704	0.003	513289	394960				

Range Times: NW Diesel(3.093 - 5.793) NW Gas(0.613 - 3.093) NW M.Oil(5.793 - 7.656)
AK102(2.190 - 5.869) AK103(5.869 - 7.454) Jet A(2.190 - 4.614)

Surrogate	Area	Amount	%Rec
o-Terphenyl	434621	32.3	71.8
Triacontane	394960	30.3	67.3

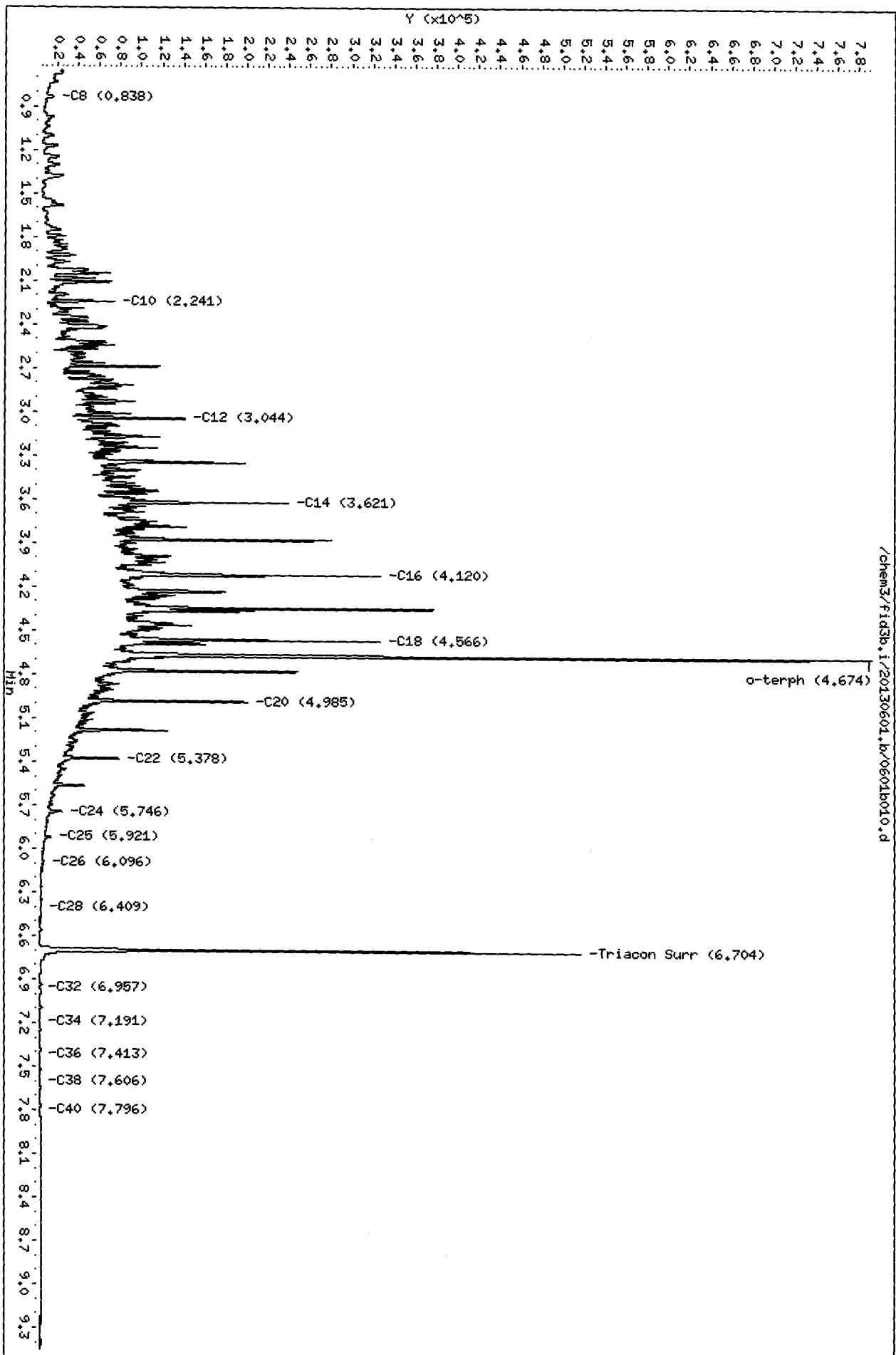
JCO
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/ftd3b.i/20130601.b/0601b010.d
Date: 01-JUN-2013 14:11
Client ID: MS07LCS051
Sample Info: MS07LCS051

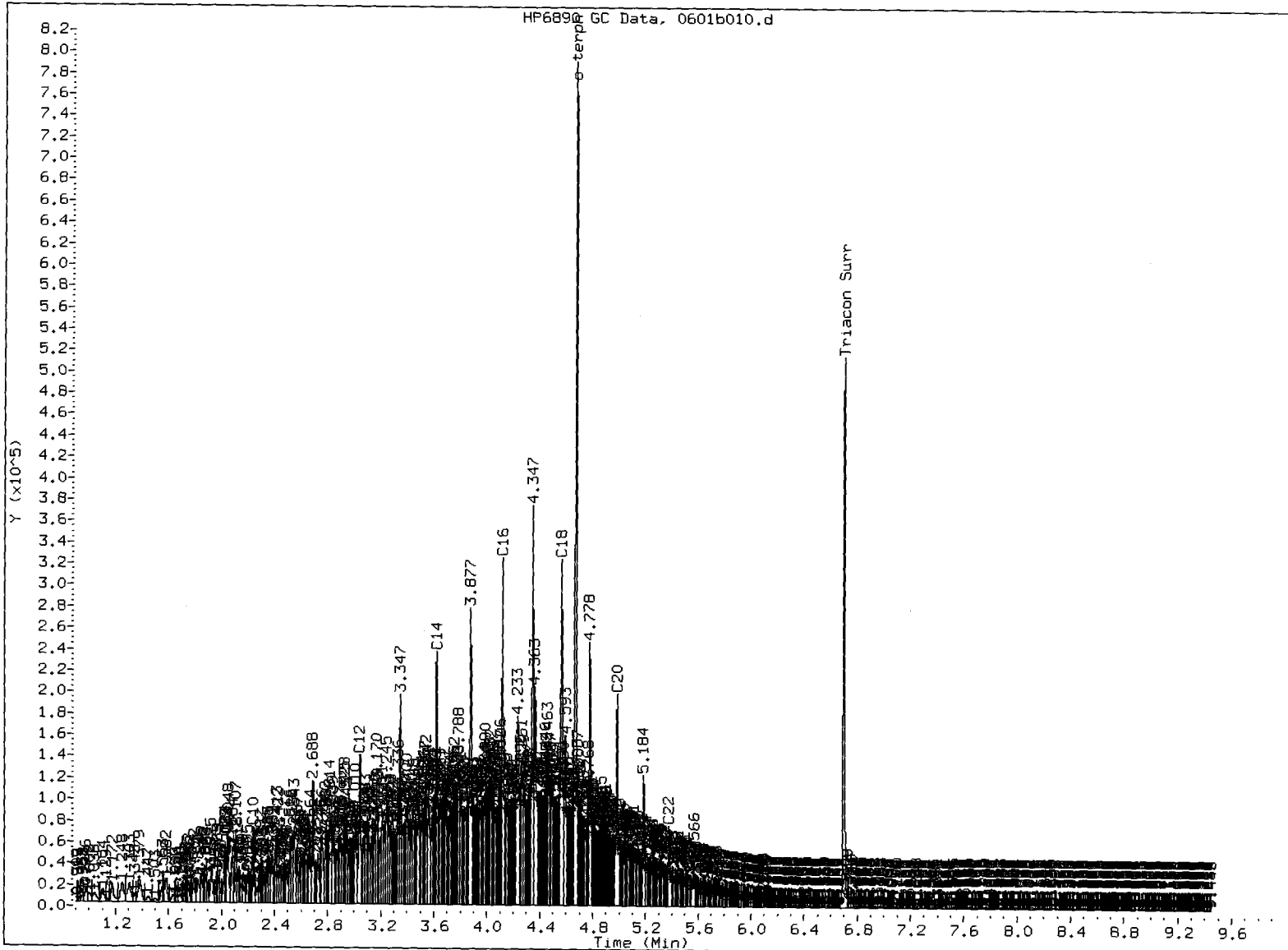
Column phase: RTX-1

Instrument: ftd3b.i
Operator: JM
Column diameter: 0.25



MS07 00058

JM
6/2/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JD

Date: 6/3/10

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-060113

Page 1 of 1

LCS/LCSD

Lab Sample ID: LCS-060113

QC Report No: WS07-Maul Foster & Alongi, Inc

LIMS ID: 13-11587

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *B*

Date Sampled: 05/30/13

Reported: 06/03/13

Date Received: 05/31/13

Date Extracted LCS/LCSD: 06/01/13

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 06/03/13 12:20

Final Extract Volume LCS: 1.0 mL

LCSD: 06/03/13 12:39

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW

Dilution Factor LCS: 1.0

LCSD: FID/JLW

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	117	150	78.0%	118	150	78.7%	0.9%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	90.6%	85.2%

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b010.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07LCSS2
Client ID: WS07LCSS2
Injection: 03-JUN-2013 12:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3116386	231
C8	0.832	0.001	7914	18821	WATPHD (C12-C24)		12149572	1173.03
C10	2.242	0.003	79041	53746	WATPHM (C24-C38)		242550	24.57
C12	3.041	0.002	136595	144623	AK102 (C10-C25)		14489959	1172.64 M
C14	3.618	0.000	206412	164796	AK103 (C25-C36)		187029	26.31 M
C16	4.116	0.004	343021	263377				
C18	4.562	0.003	395388	287693				
C20	4.978	0.000	192355	170830				
C22	5.374	0.001	100669	81395	MSPIRIT (Tol-C12)		3116386	226.83
C24	5.741	-0.001	28540	29190				
C25	5.915	-0.002	14819	11593				
C26	6.088	-0.005	7194	7272				
C28	6.406	0.002	2009	1789				
C32	6.958	0.008	3469	3981				
C34	7.186	0.001	219	44				
Filter Peak	----							
C36	7.412	0.010	521	287				
o-terph	4.671	0.005	694180	548014	JET-A (C10-C18)		11236283	1038.07
Triacon Surr	6.700	0.005	862868	610206				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	548014	40.7	90.5
Triacontane	610206	46.8	103.9

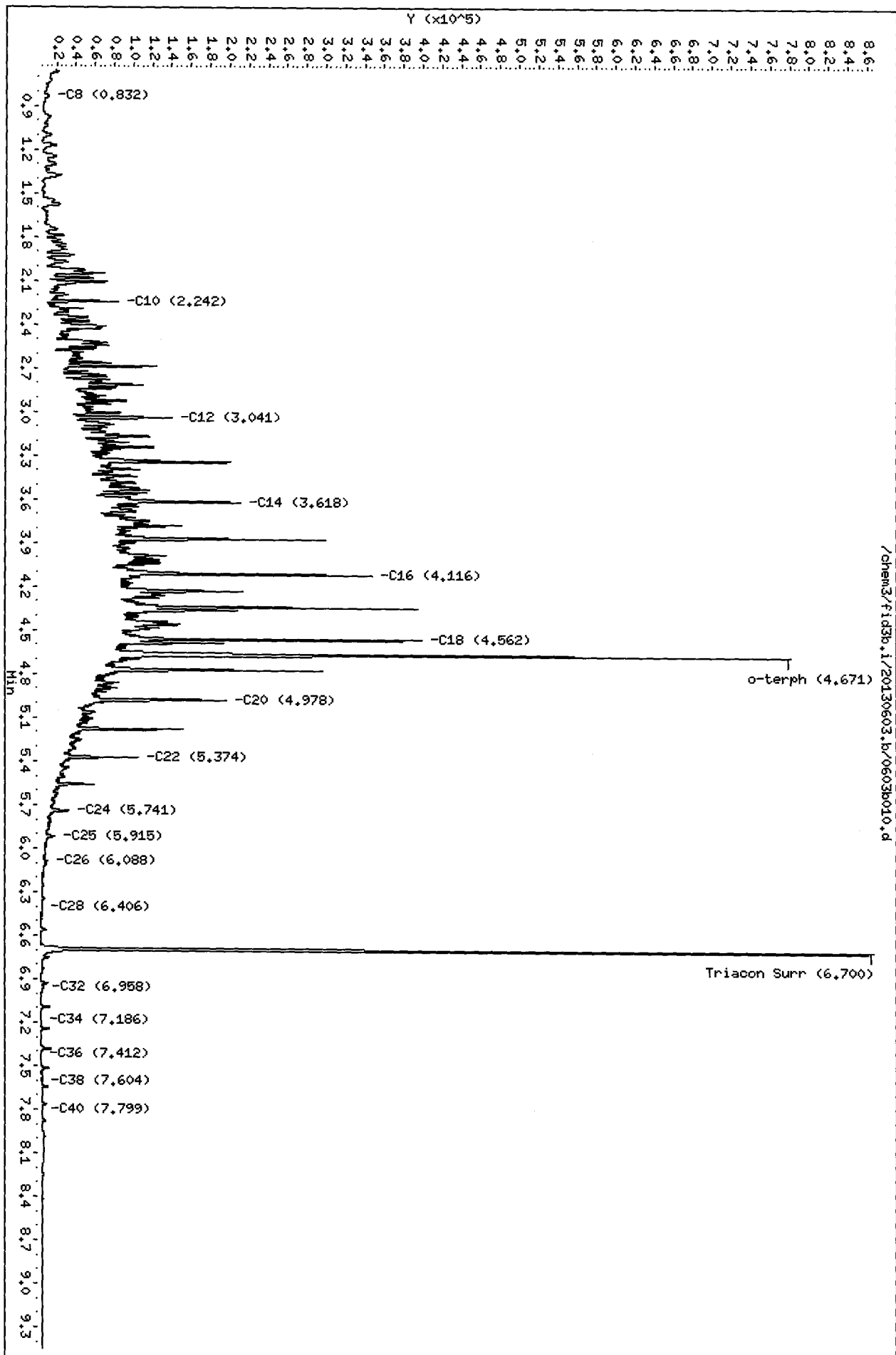
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6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b010.d
Date: 03-JUN-2013 12:20
Client ID: MS07LCSS2
Sample Info: MS07LCSS2
Column phase: RTX-1

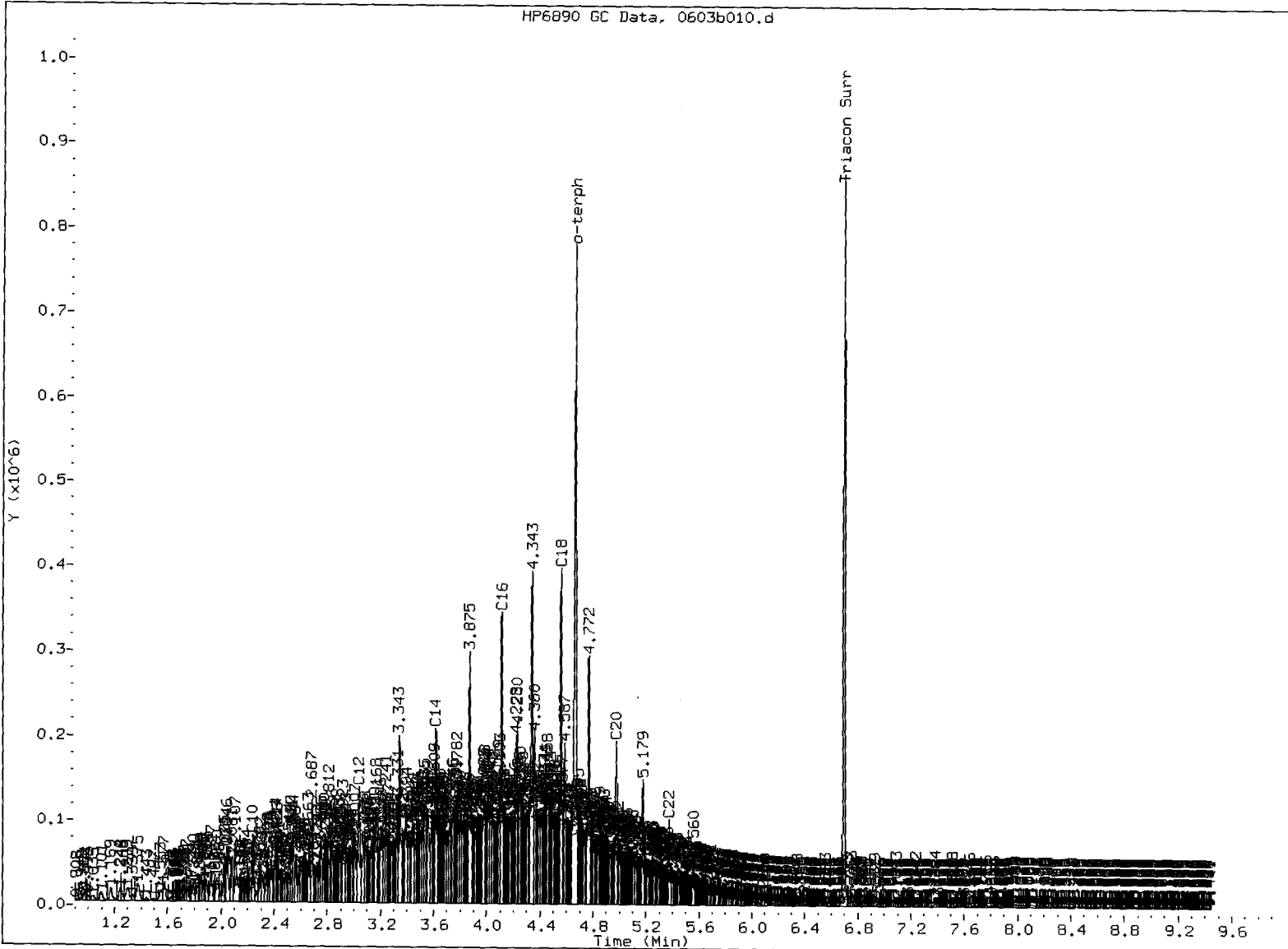
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

30
43/0



/chem3/fid3b.i/20130603.b/0603b010.d

MS07 00052



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: TU

Date: 6/3/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b011.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WS07LCSDS2
Client ID: WS07LCSDS2
Injection: 03-JUN-2013 12:39
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2888015	214
C8	0.831	0.001	7168	9689	WATPHD (C12-C24)		12242131	1181.97
C10	2.241	0.003	70487	51284	WATPHM (C24-C38)		220694	22.35
C12	3.037	-0.001	138503	109822	AK102 (C10-C25)		14412100	1166.34 M
C14	3.617	-0.001	213163	214416	AK103 (C25-C36)		170461	23.98
C16	4.115	0.003	368034	294406				
C18	4.562	0.004	373864	319380				
C20	4.979	0.001	215459	176373				
C22	5.371	-0.001	90014	74886	MSPIRIT (Tol-C12)		2888015	210.21
C24	5.741	0.000	30684	23405				
C25	5.915	-0.001	17460	16212				
C26	6.087	-0.007	7132	6737				
C28	6.408	0.005	2017	874				
C32	6.961	0.012	3639	3875				
C34	7.183	-0.002	83	27				
Filter Peak	----							
C36	7.408	0.007	364	273				
o-terph	4.670	0.004	914480	515361	JET-A (C10-C18)		11053242	1021.16
Triacon Surr	6.700	0.006	861975	619955				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

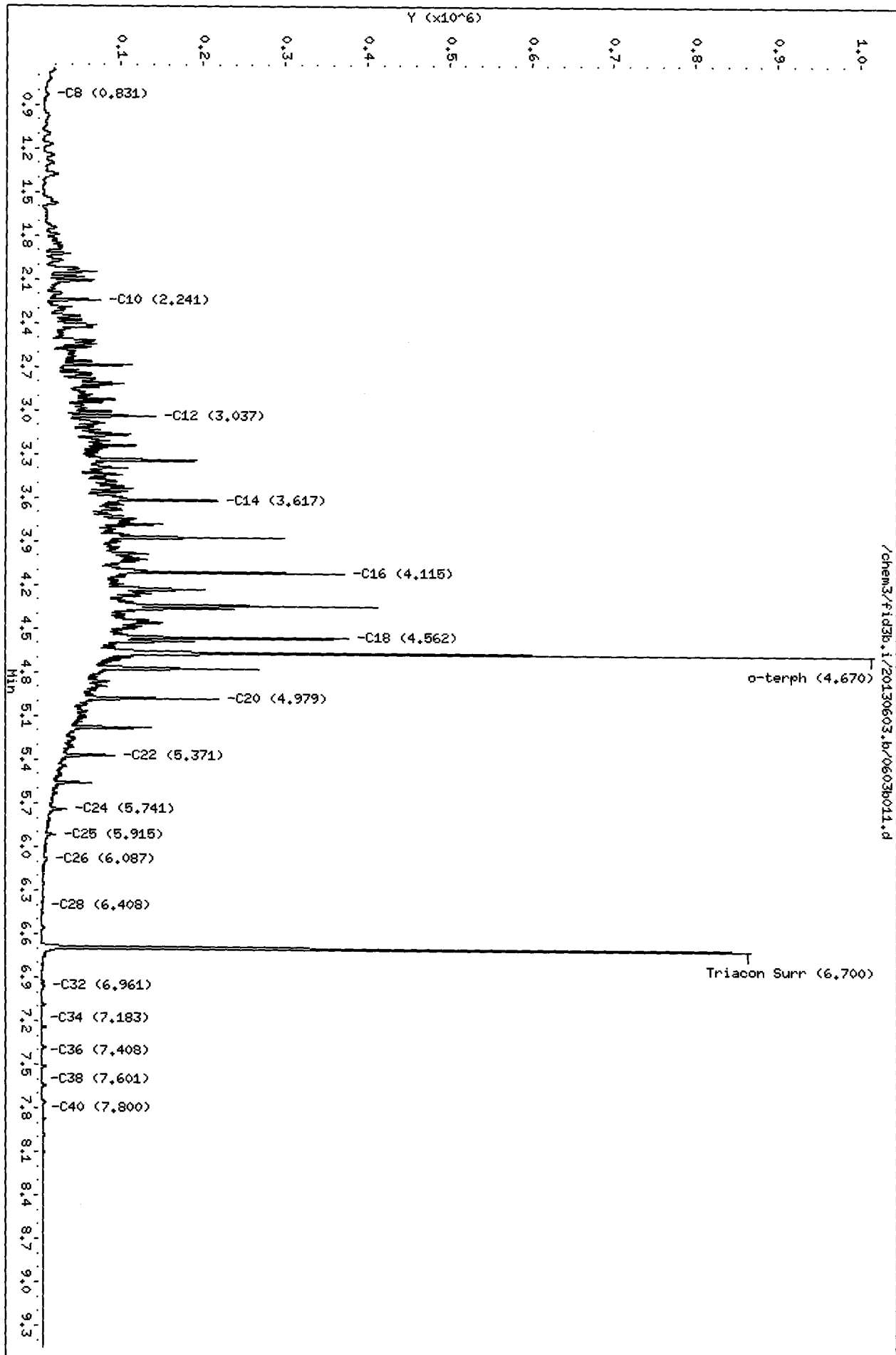
Surrogate	Area	Amount	%Rec
o-Terphenyl	515361	38.3	85.2
Triacontane	619955	47.5	105.6

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b011.d
Date: 03-JUN-2013 12:39
Client ID: MS07LCSDS2
Sample Info: MS07LCSDS2
Column phase: RTX-1

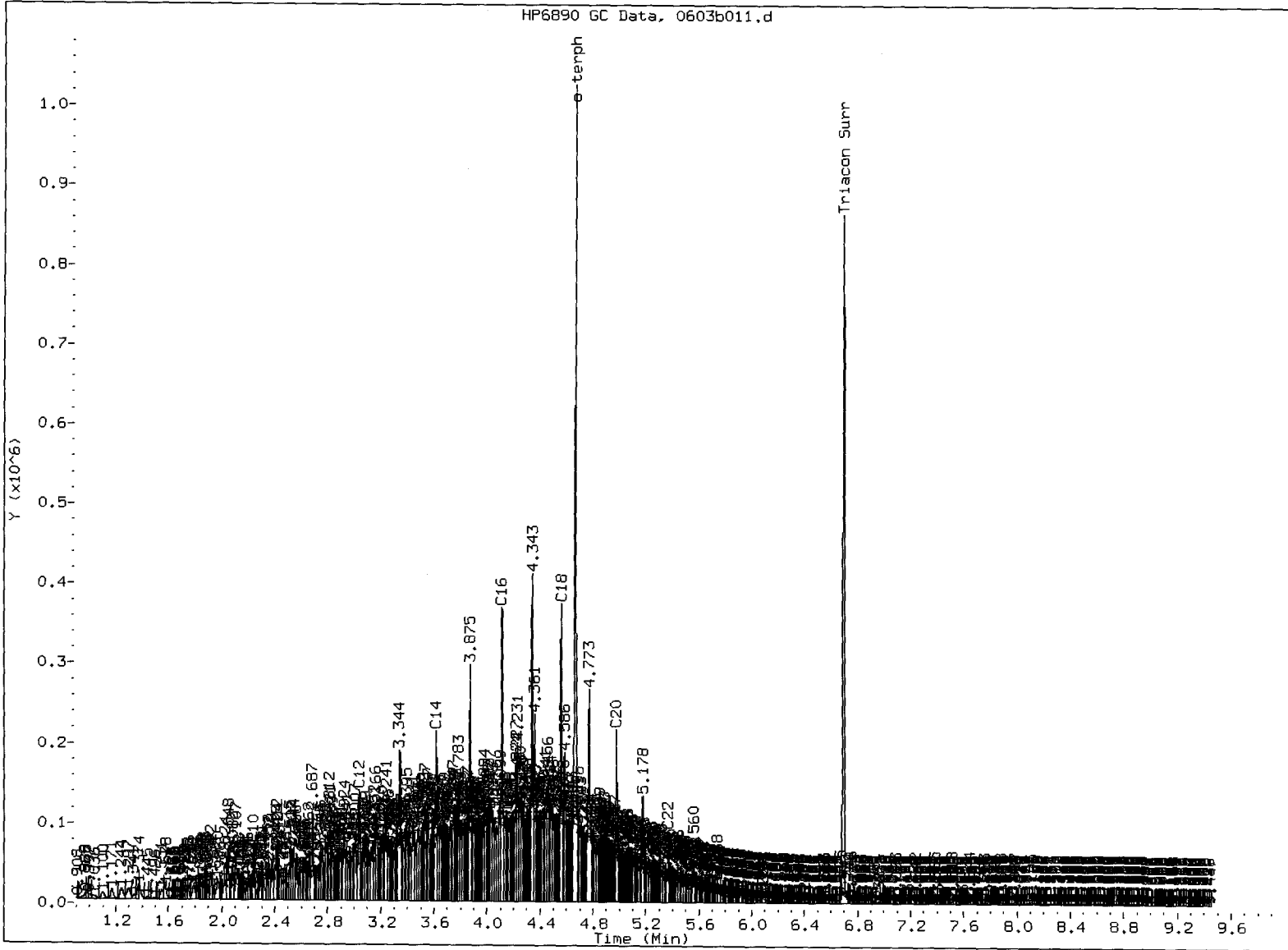
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



56
2/3/0

1007 0000

HP6890 GC Data, 0603b011.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JU Date: 6/3/0

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/31/13

ARI Job: WS07
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11581-053113MB1	Method Blank	10.0 g	1.00 mL	-	05/31/13
13-11581-053113LCS1	Lab Control	10.0 g	1.00 mL	-	05/31/13
13-11581-053113LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	05/31/13
13-11581-WS07A	SL-W7-S-4	7.63 g	1.00 mL	D	05/31/13
13-11582-WS07B	SL-W8-S-4	8.28 g	1.00 mL	D	05/31/13
13-11583-WS07C	SL-W9-S-4	8.72 g	1.00 mL	D	05/31/13
13-11584-WS07D	SL-W10-S-4	7.84 g	1.00 mL	D	05/31/13
13-11585-WS07E	SL-W11-S-4	6.77 g	1.00 mL	D	05/31/13
13-11586-WS07F	SL-W12-S-4	7.56 g	1.00 mL	D	05/31/13
13-11587-060113MB1	Method Blank	10.0 g	1.00 mL	-	06/01/13
13-11587-060113LCS1	Lab Control	10.0 g	1.00 mL	-	06/01/13
13-11587-060113LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	06/01/13
13-11587-WS07G	SL-W13-S-4	8.39 g	1.00 mL	D	06/01/13
13-11588-WS07H	SL-W14-S-4	9.02 g	1.00 mL	D	06/01/13
13-11589-WS07I	A2-W28-S-4	9.32 g	1.00 mL	D	06/01/13
13-11590-WS07J	A2-W29-S-4	8.12 g	1.00 mL	D	05/31/13
13-11591-WS07K	A2-W30-S-4	8.76 g	1.00 mL	D	05/31/13
13-11592-WS07L	A2-W31-S-4	8.67 g	1.00 mL	D	05/31/13
13-11593-WS07M	A2-W33-S-4	8.17 g	1.00 mL	D	05/31/13
13-11594-WS07N	A2-W32-S-4	8.11 g	1.00 mL	D	05/31/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W7-S-4
SAMPLE

Lab Sample ID: WS07A
 LIMS ID: 13-11581
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 13:59
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 64 mg-dry-wt
 Percent Moisture: 24.3%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	19	< 19 U	
108-88-3	Toluene	19	< 19 U	
100-41-4	Ethylbenzene	19	< 19 U	
179601-23-1	m,p-Xylene	39	< 39 U	
95-47-6	o-Xylene	19	< 19 U	
	Gasoline Range Hydrocarbons	7.8	< 7.8 U	---

BETX Surrogate Recovery

Trifluorotoluene	94.1%
Bromobenzene	89.0%

Gasoline Surrogate Recovery

Trifluorotoluene	93.3%
Bromobenzene	90.7%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

10
 6/3/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a009.d ARI ID: WS07A
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a009.d Client ID: SL-W7-S-4
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 13:59
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.232	0.003	16140	238367	93.3	TFT(Surr)
14.959	0.004	10158	98666	90.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	57559	0.027
8015B 2MP-TMB (4.56 to 15.68)	4363035	51585	0.012
AK101 nC6-nC10 (5.09 to 14.57)	3480628	34331	0.010
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	57559	0.026
CalGas nC6-nC12 (5.09 to 17.32)	4309570	57559	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.232	0.003	13572	94.1	TFT(Surr)
14.958	0.004	29203	89.0	BB(Surr)

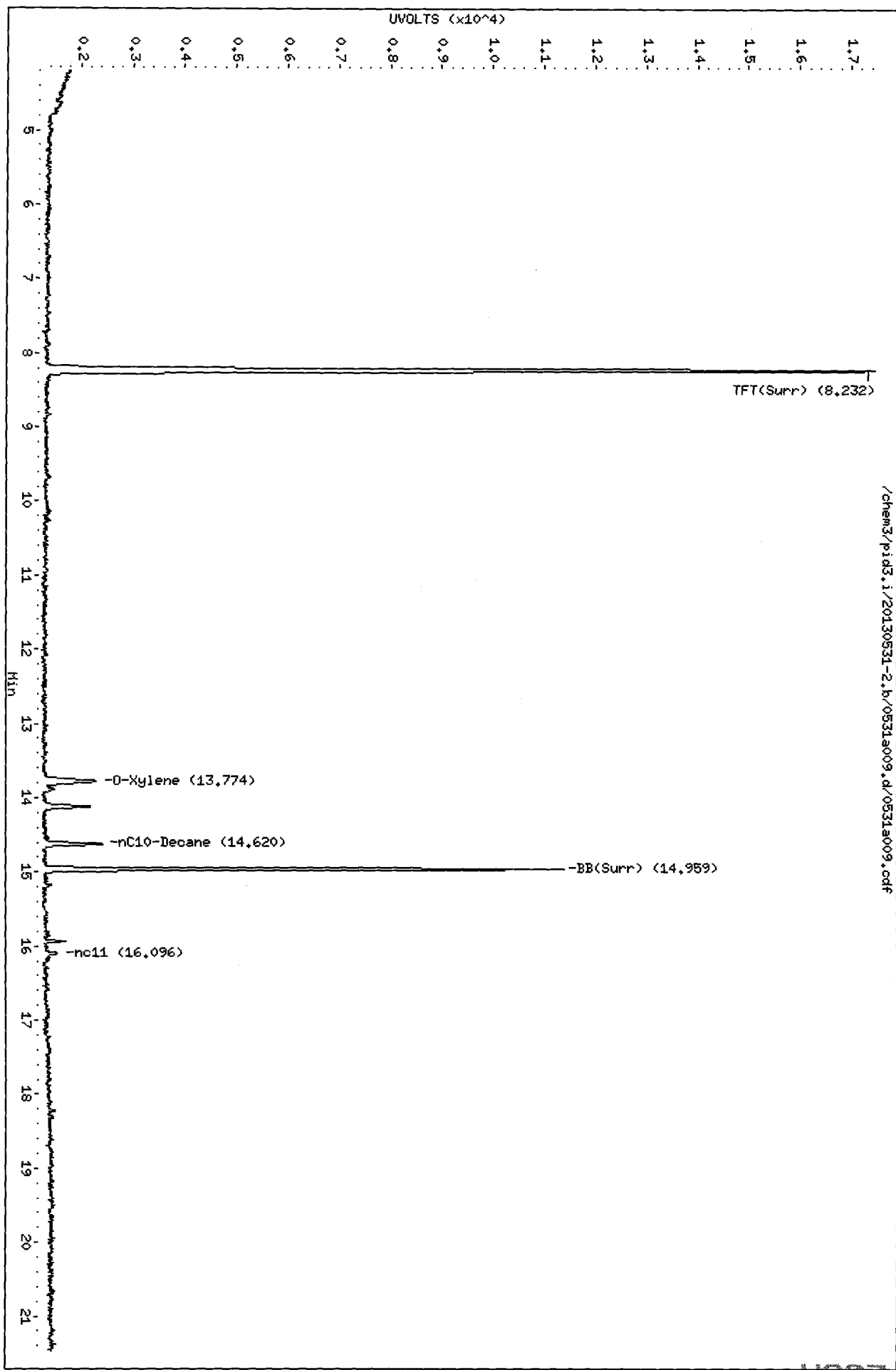
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a009.d
Date: 31-MAY-2013 13:59
Client ID: SL-M7-S-4
Sample Info: MS07A
Column Phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



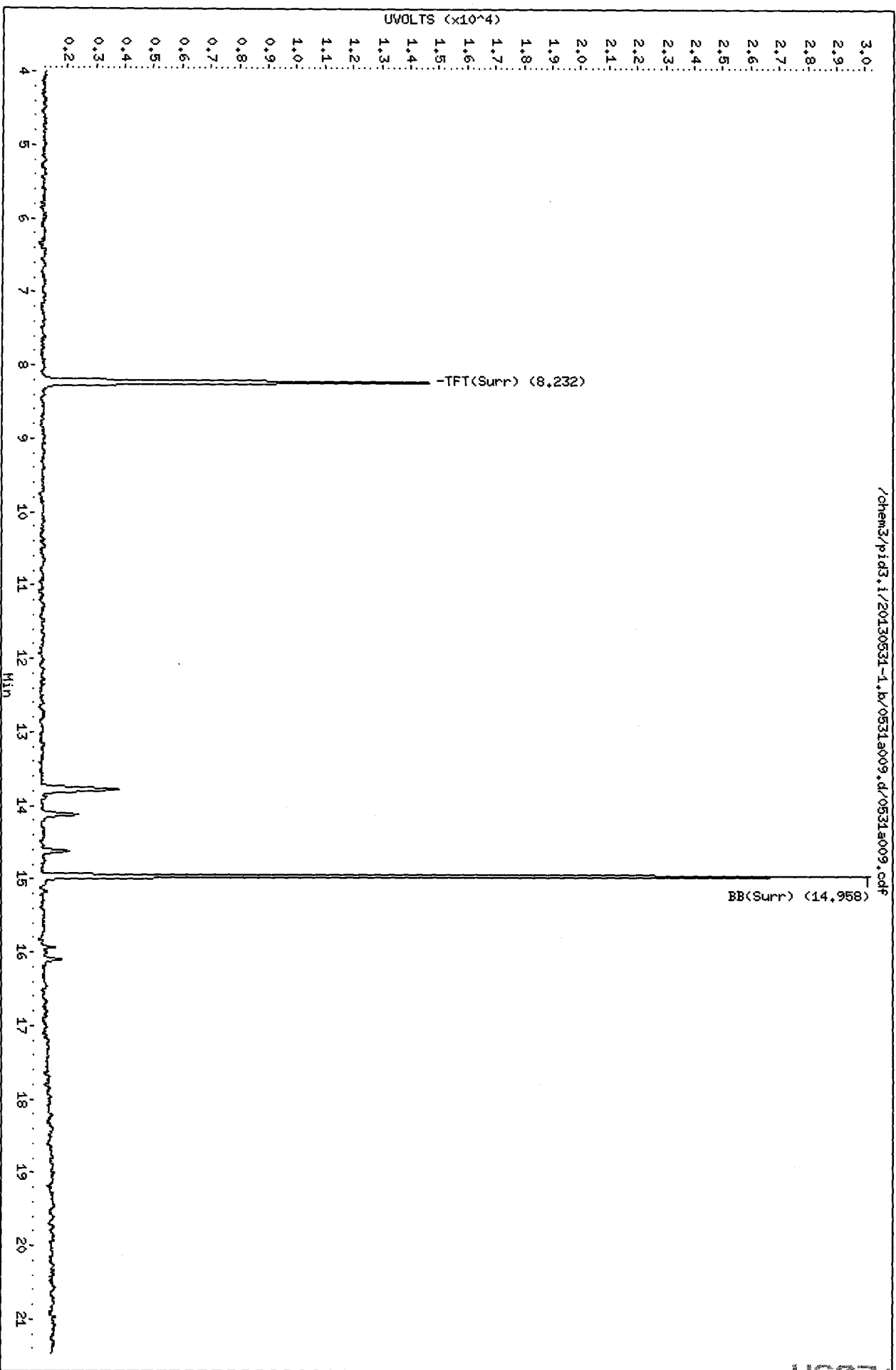
/chem3/pid3.i/20130531-2.b/0531a009.d/0531a009.cdf

MS07 00070

Data File: /chem3/pid3.i/20130531-1.b/0531a009.d
Date : 31-MAY-2013 13:59
Client ID: SL-M7-S-4
Sample Info: MS07A

Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



17000 1.000

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W8-S-4
SAMPLE

Lab Sample ID: WS07B
 LIMS ID: 13-11582
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 14:28
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 72 mg-dry-wt
 Percent Moisture: 17.4%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	17	< 17 U	
108-88-3	Toluene	17	< 17 U	
100-41-4	Ethylbenzene	17	< 17 U	
179601-23-1	m,p-Xylene	34	< 34 U	
95-47-6	o-Xylene	17	< 17 U	
	Gasoline Range Hydrocarbons	6.9	< 6.9 U	---

BETX Surrogate Recovery

Trifluorotoluene	94.2%
Bromobenzene	91.9%

Gasoline Surrogate Recovery

Trifluorotoluene	93.3%
Bromobenzene	92.2%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Handwritten initials/signature

Data file 1: /chem3/pid3.i/20130531-2.b/0531a010.d ARI ID: WS07B
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a010.d Client ID: SL-W8-S-4
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 14:28
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.237	0.008	16147	239486	93.3	TFT(Surr)
14.959	0.003	10321	99845	92.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	17873	0.009
8015B 2MP-TMB (4.56 to 15.68)	4363035	16641	0.004
AK101 nC6-nC10 (5.09 to 14.57)	3480628	16641	0.005
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	17873	0.008
CalGas nC6-nC12 (5.09 to 17.32)	4309570	17874	0.004

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.008	13587	94.2	TFT(Surr)
14.958	0.003	30139	91.9	BB(Surr)

SW8021 (PID)

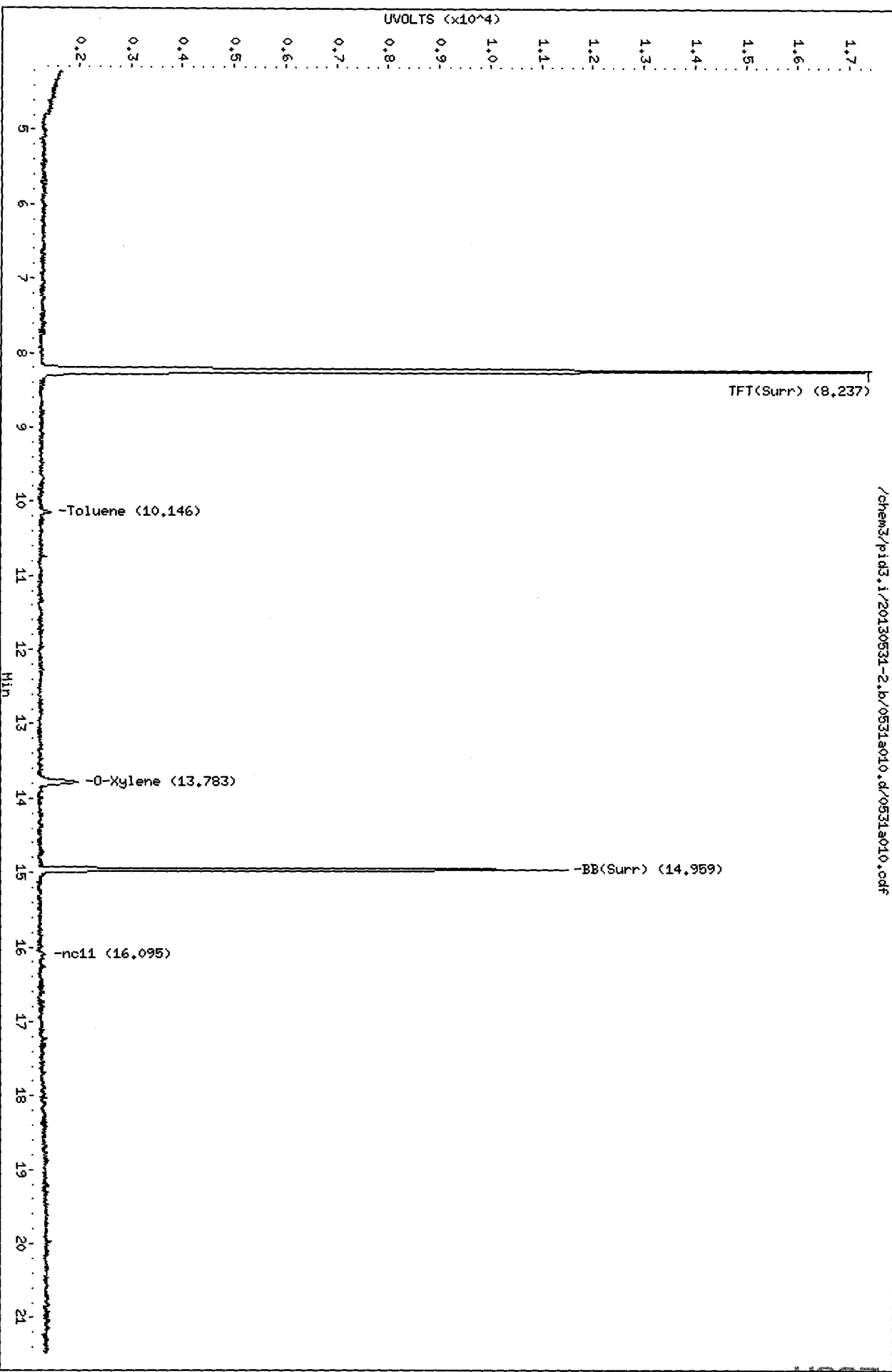
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.147	0.013	200	0.23N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a010.d
Date: 31-MAY-2013 14:28
Client ID: SL-M8-S-4
Sample Info: MS07B
Column phase: RTX 502-2 FID

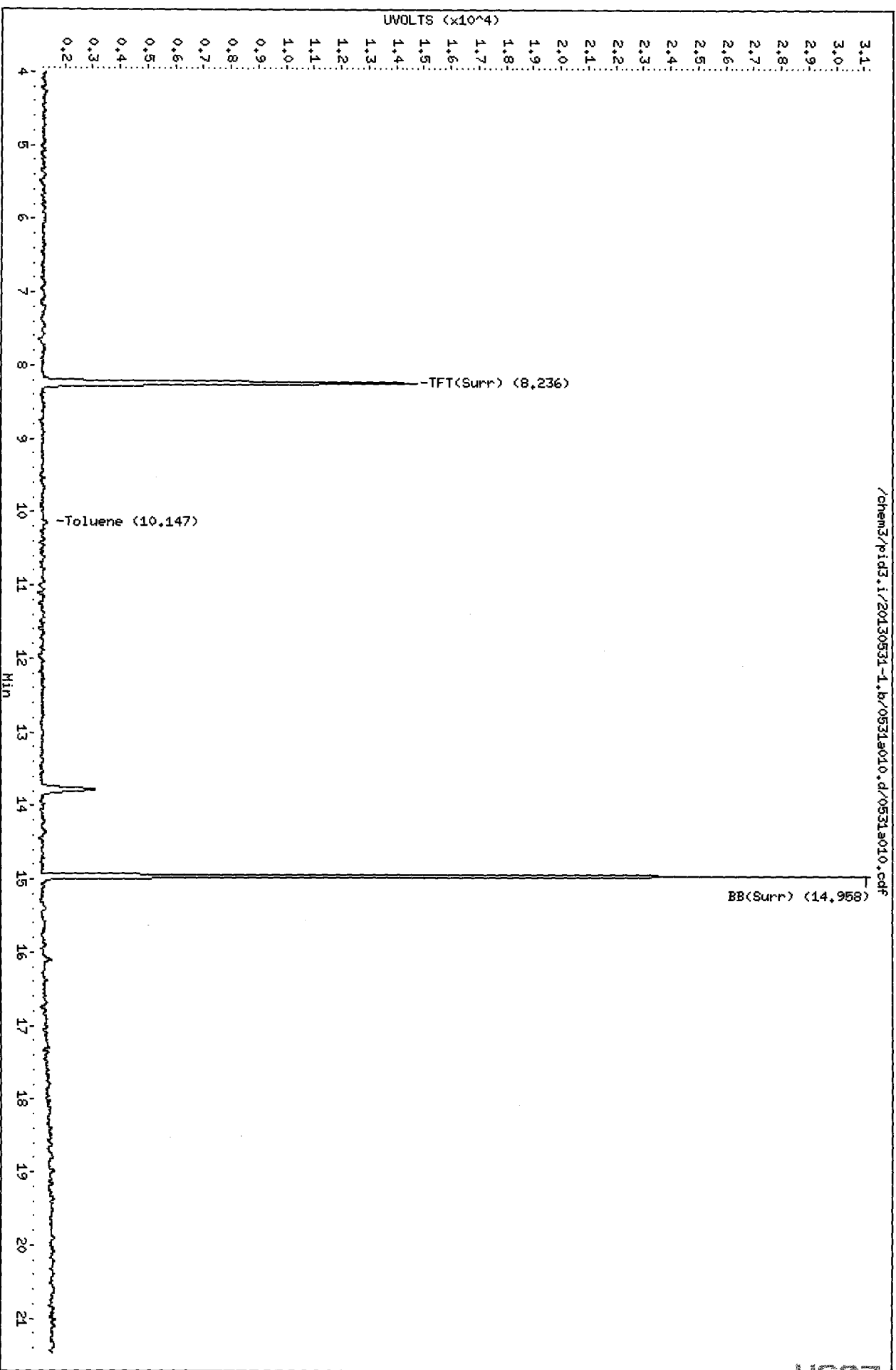
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



1000 1000

Data File: /chem3/pid3.i/20130531-1.b/0531a010.d
Date: 31-MAY-2013 14:28
Client ID: SL-M8-S-4
Sample Info: MS07B
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



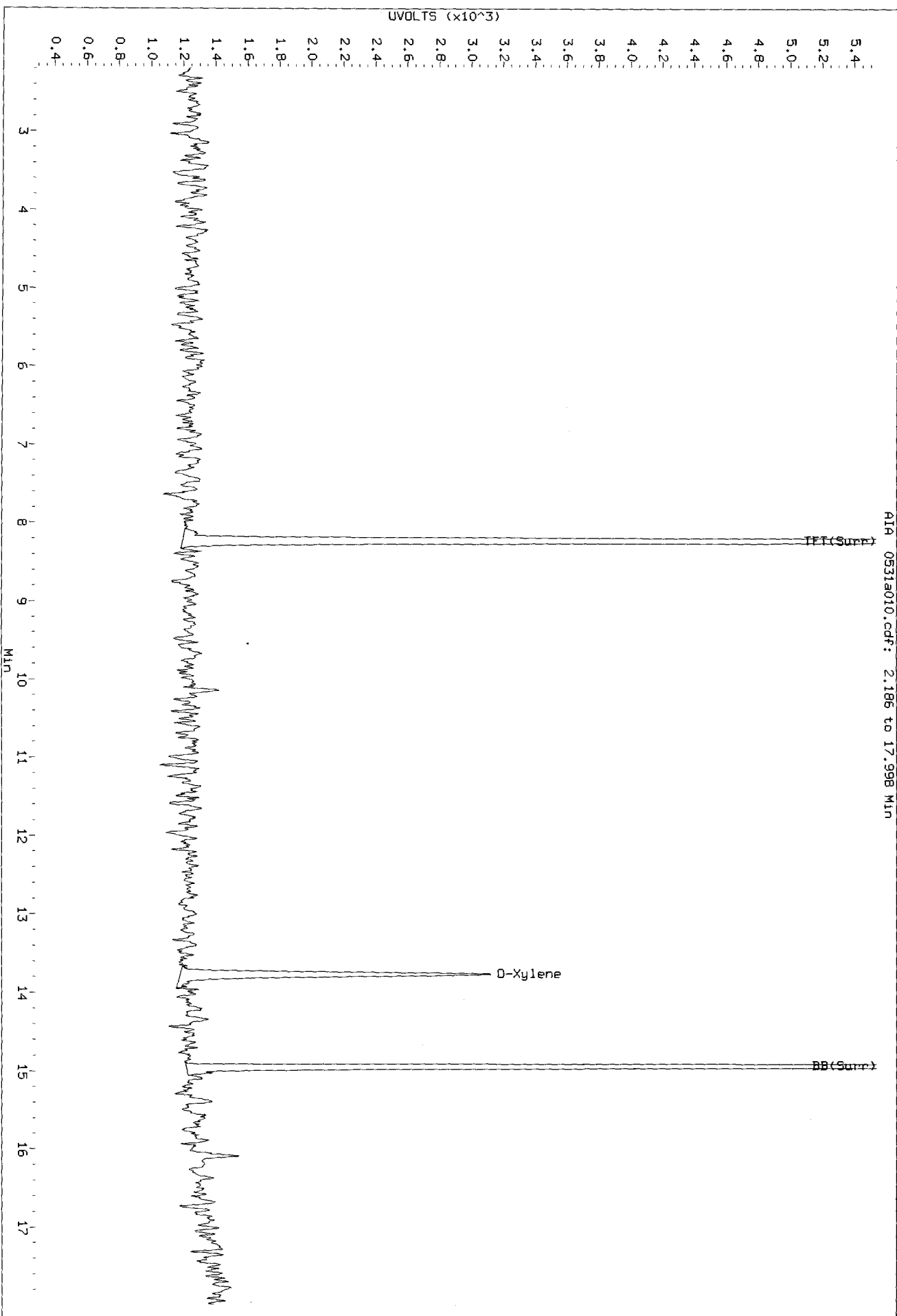
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MS07 00075

SAFE
2A

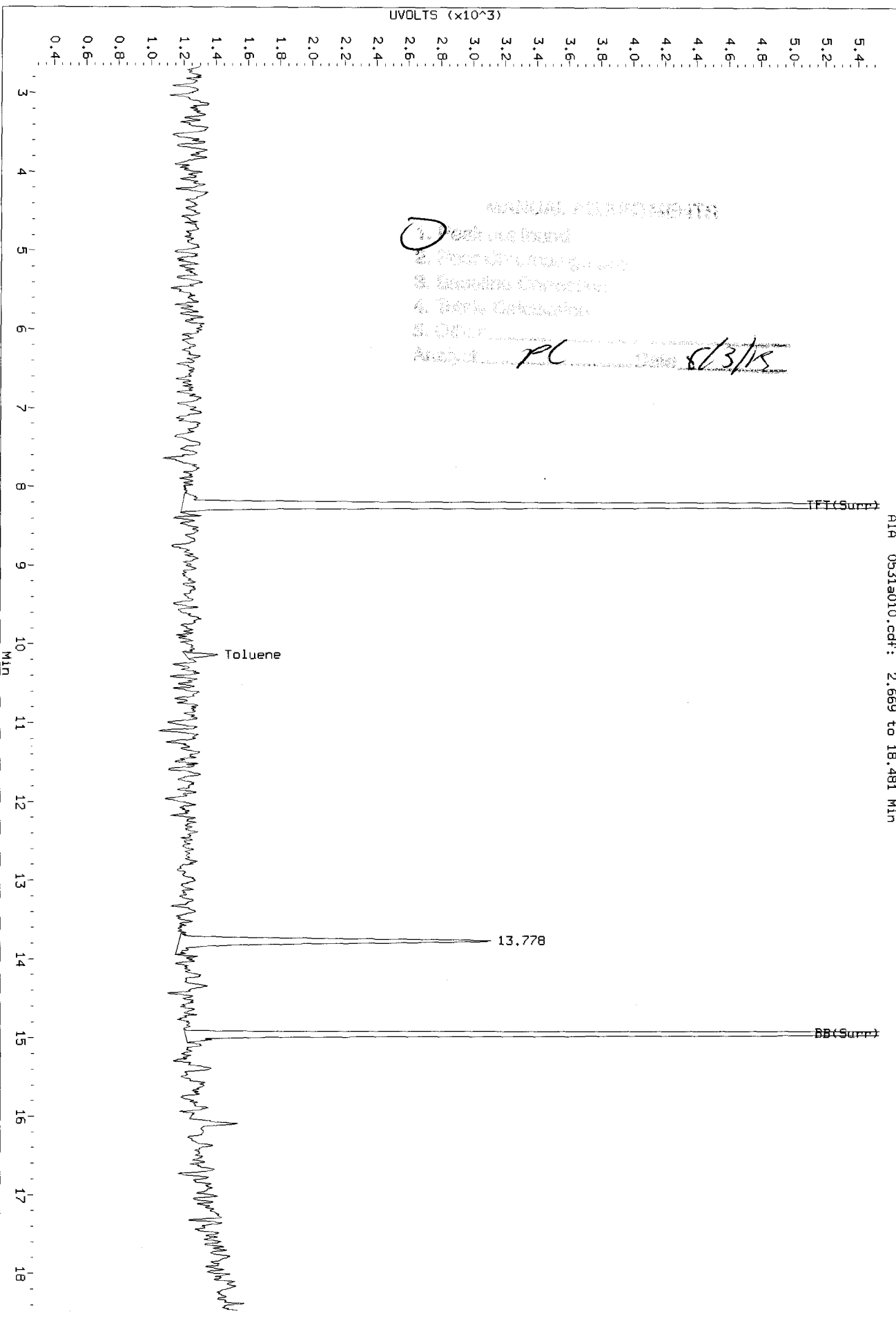
Data File: /chem3/pid3.1/20130531-1.b/0531a010.d/0531a010.cdf
Injection Date: 31-MAY-2013 14:28
Instrument: pid3.1
Client Sample ID: SL-W8-S-4

AIA_0531a010.cdf: 2.186 to 17.998 MIN



Data File: /chem3/pid3.1/20130531-1.b/0531a010.d/0531a010.cdf
Injection Date: 31-MAY-2013 14:28
Instrument: pid3.1
Client Sample ID: SL-W8-S-4

R1A 0531a010.cdf: 2.669 to 18.481 Min



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W9-S-4
SAMPLE

Lab Sample ID: WS07C
 LIMS ID: 13-11583
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 14:56
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 91 mg-dry-wt
 Percent Moisture: 12.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	14	< 14 U	
108-88-3	Toluene	14	21	
100-41-4	Ethylbenzene	14	< 14 U	
179601-23-1	m,p-Xylene	28	< 28 U	
95-47-6	o-Xylene	14	< 14 U	
	Gasoline Range Hydrocarbons	5.5	< 5.5 U	---

BETX Surrogate Recovery

Trifluorotoluene	89.2%
Bromobenzene	87.9%

Gasoline Surrogate Recovery

Trifluorotoluene	89.3%
Bromobenzene	88.1%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
6/18/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a011.d ARI ID: WS07C
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a011.d Client ID: SL-W9-S-4
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 14:56
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.234	0.005	15451	227000	89.3	TFT(Surr)
14.960	0.005	9868	96391	88.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	29754	0.014
8015B 2MP-TMB (4.56 to 15.68)	4363035	25894	0.006
AK101 nC6-nC10 (5.09 to 14.57)	3480628	25893	0.007
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	29754	0.014
CalGas nC6-nC12 (5.09 to 17.32)	4309570	29755	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
8.234	0.005	12859	89.2	TFT(Surr)
14.959	0.005	28842	87.9	BB(Surr)

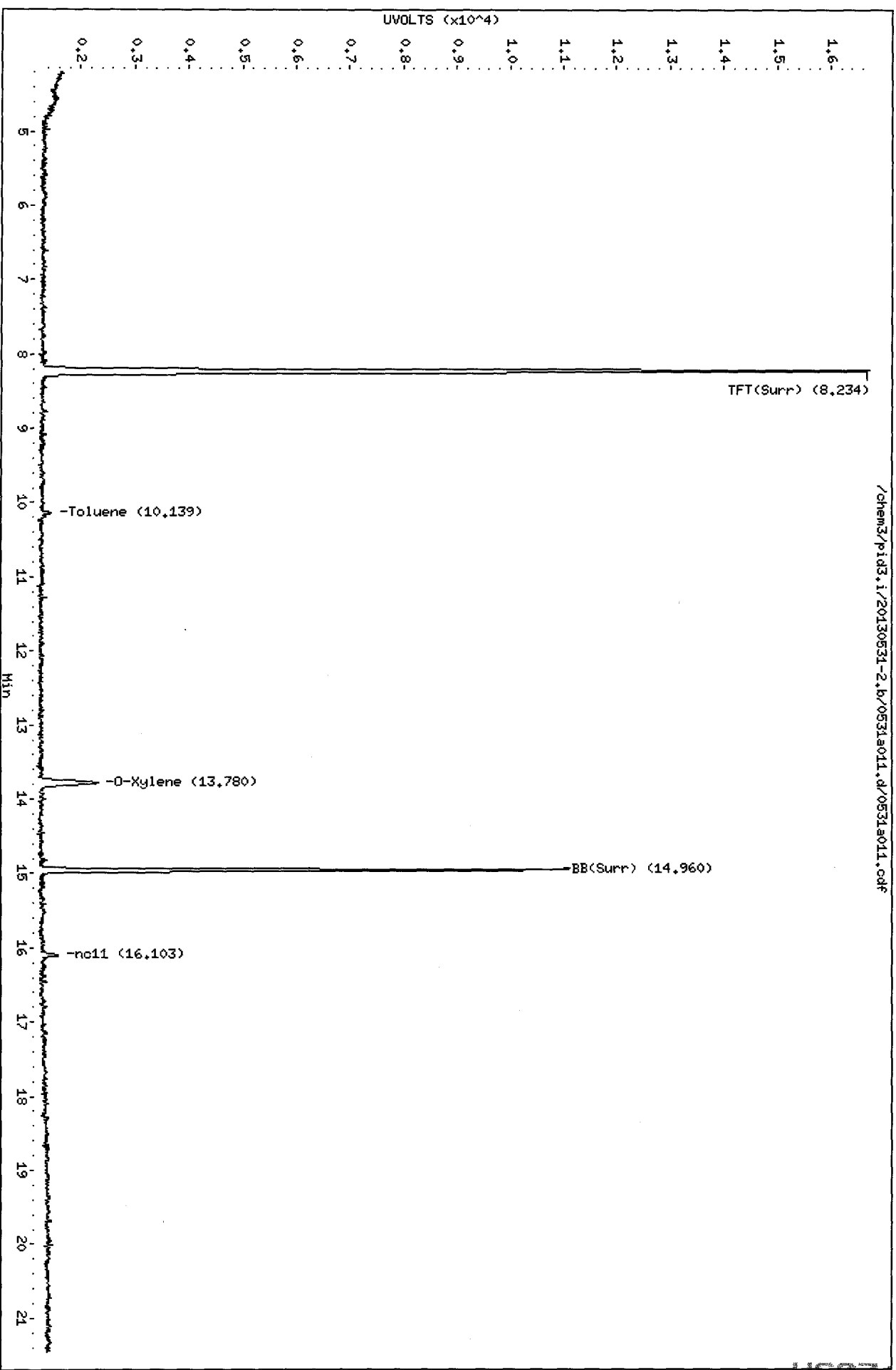
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.150	0.016	324	0.38N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a011.d
Date: 31-MAY-2013 14:56
Client ID: SL-M9-S-4
Sample Info: MS07C
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

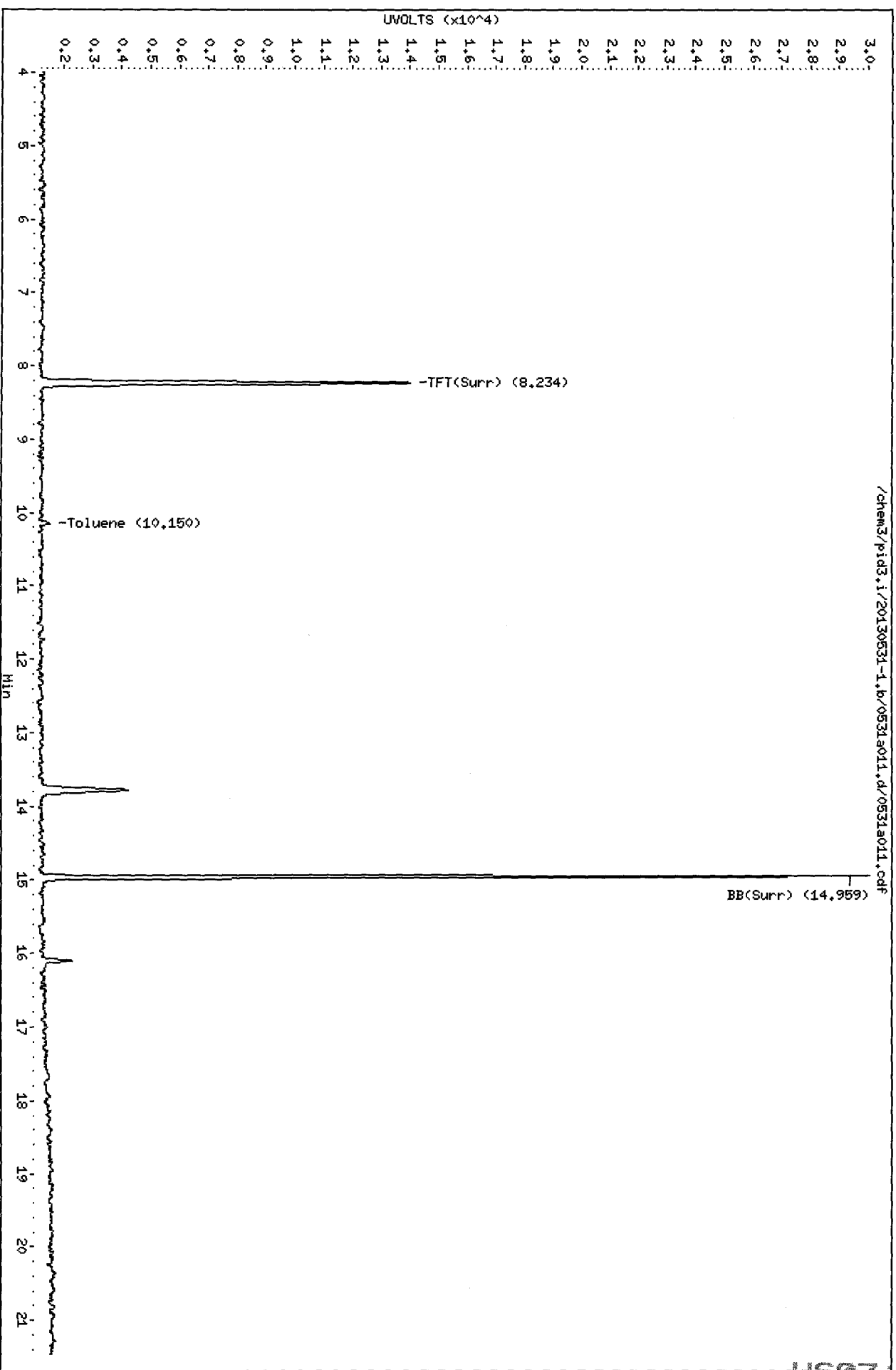


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00000 1507

Data File: /chem3/pid3.i/20130531-1.b/0531a011.d
Date : 31-MAY-2013 14:56
Client ID: SL-M9-S-4
Sample Info: MS07C
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



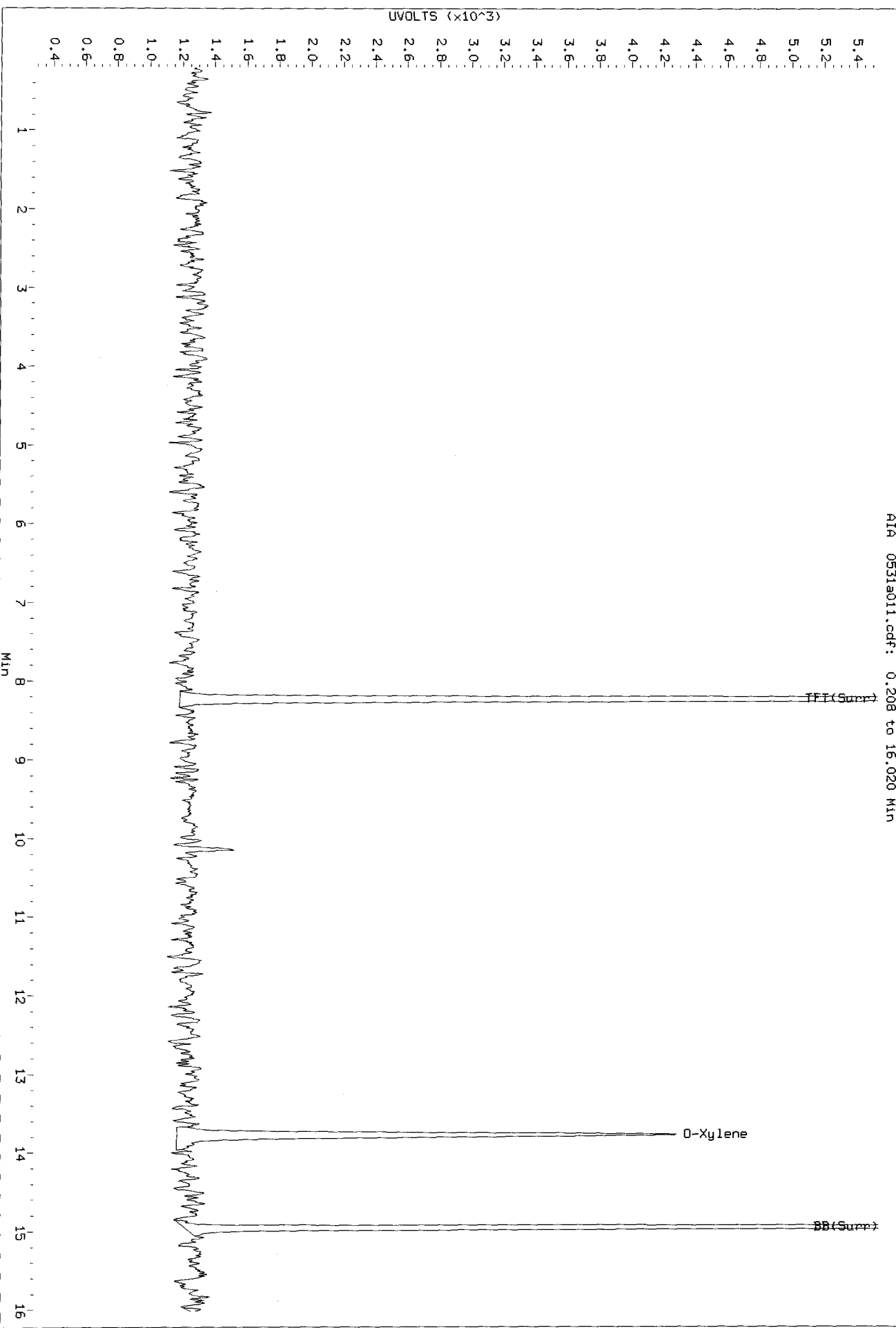
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10001 10007

W
B/S

Data File: /chem3/pid3.1/20130531-1.b/0531a011.d/0531a011.cdf
Injection Date: 31-MAY-2013 14:36
Instrument: pid3.1
Client Sample ID: SL-W9-S-4

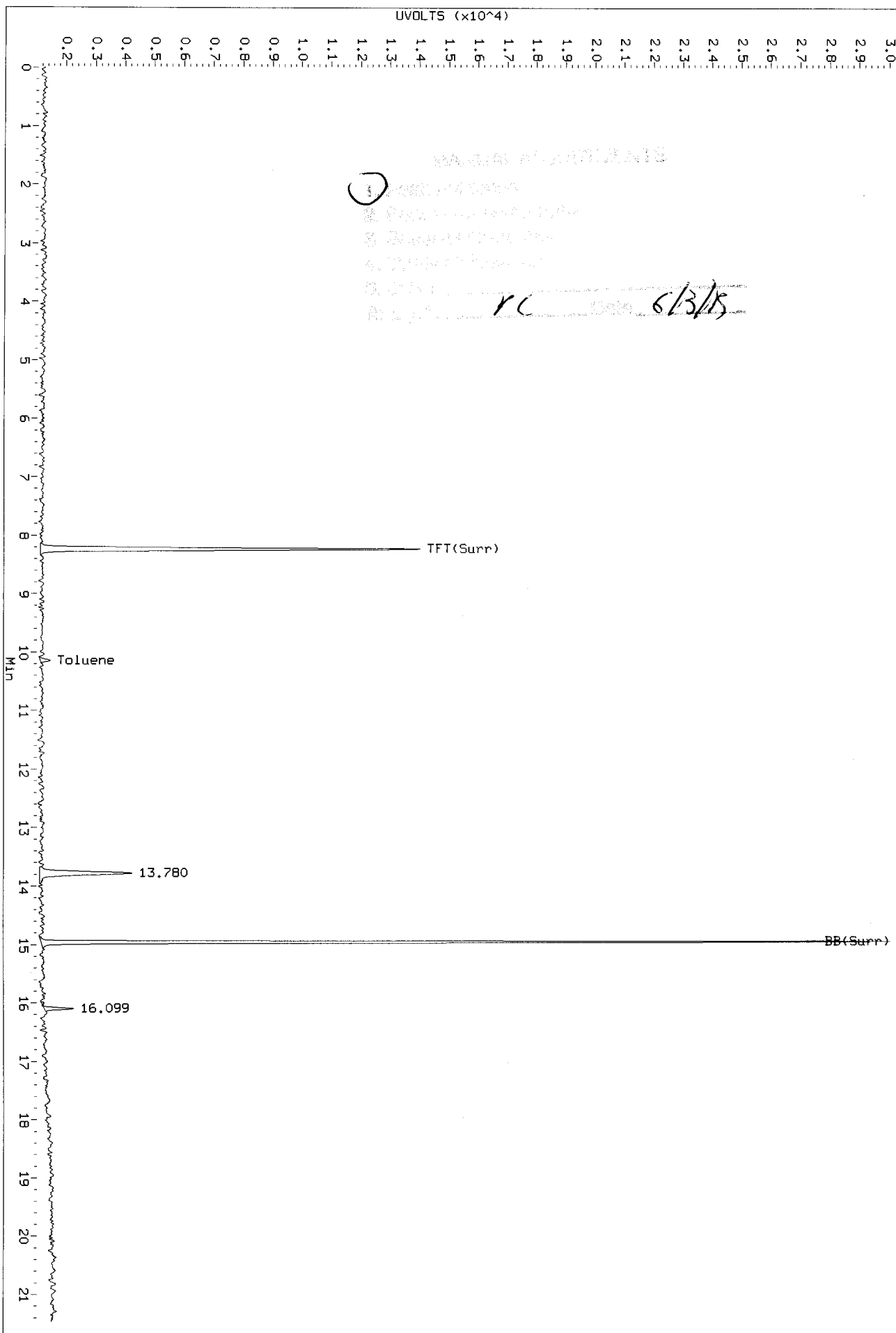
AIA 0531a011.cdf: 0.208 to 16.020 Min



WS07: 00002

Data File: /chem3/pid3.1/20130531-1.b/0531a011.d/0531a011.cdf
Injection Date: 31-May-2013 14:56
Instrument: pid3.1
Client Sample ID: SL-W9-S-4

AIR 0531a011.cdf: 0.000 to 21.463 Min



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: **SL-W10-S-4**
SAMPLE

Lab Sample ID: WS07D
 LIMS ID: 13-11584
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 15:24
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 63 mg-dry-wt
 Percent Moisture: 21.9%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	20	< 20 U	
108-88-3	Toluene	20	20	
100-41-4	Ethylbenzene	20	< 20 U	
179601-23-1	m,p-Xylene	40	< 40 U	
95-47-6	o-Xylene	20	< 20 U	
	Gasoline Range Hydrocarbons	7.9	< 7.9 U	---

BETX Surrogate Recovery

Trifluorotoluene	95.5%
Bromobenzene	91.8%

Gasoline Surrogate Recovery

Trifluorotoluene	93.6%
Bromobenzene	92.7%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a012.d ARI ID: WS07D
Data file 2: /chem3/pid3.i/20130531-1.b/0531a012.d Client ID: SL-W10-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 15:24
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.237	0.008	16191	241705	93.6	TFT(Surr)
14.959	0.004	10378	100685	92.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	11954	0.006
8015B 2MP-TMB (4.56 to 15.68)	4363035	8150	0.002
AK101 nC6-nC10 (5.09 to 14.57)	3480628	8149	0.002
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	11954	0.005
CalGas nC6-nC12 (5.09 to 17.32)	4309570	11954	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.008	13769	95.5	TFT(Surr)
14.959	0.004	30118	91.8	BB(Surr)

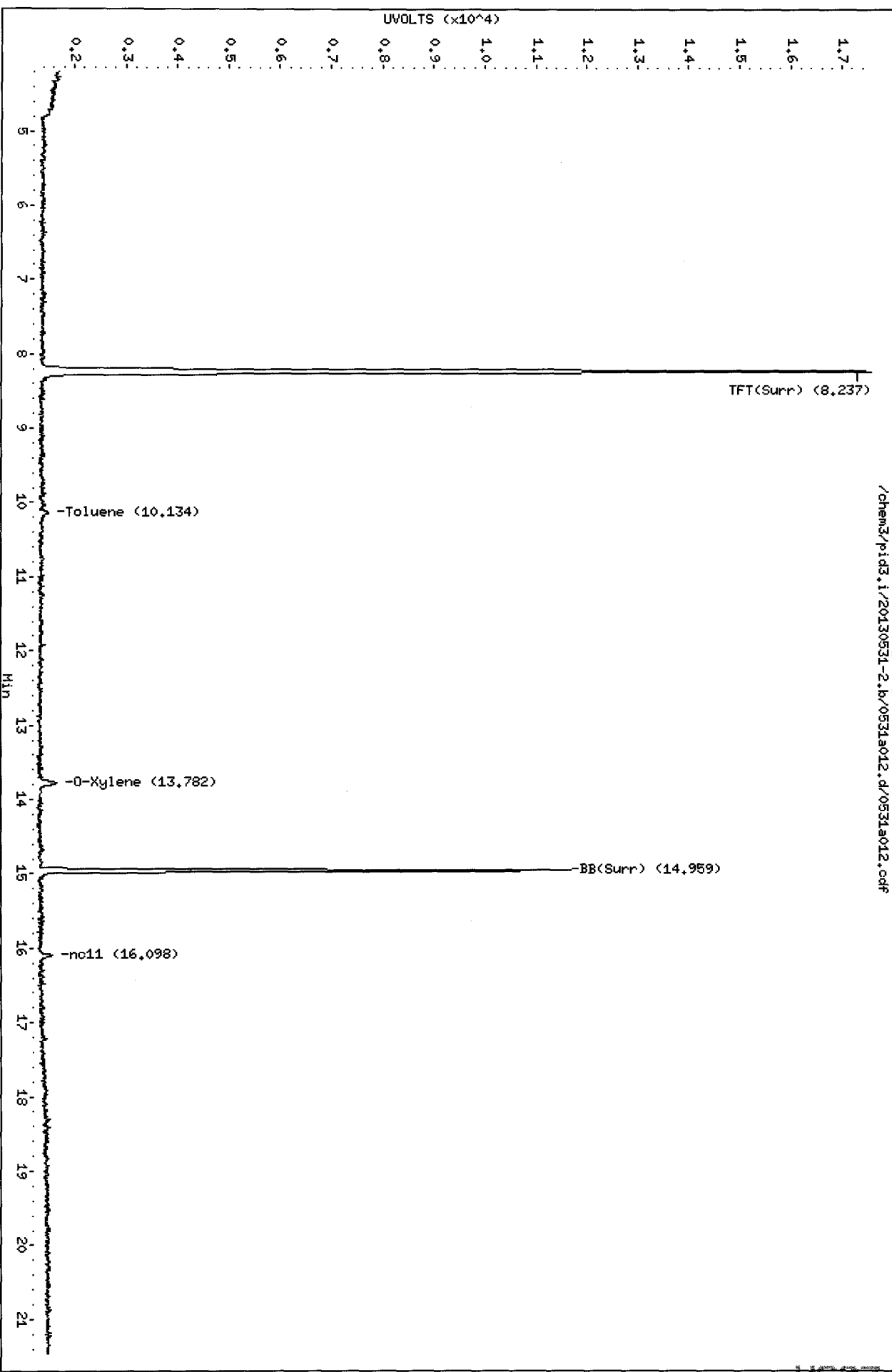
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.147	0.013	209	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a012.d
Date : 31-MAY-2013 15:24
Client ID: SL-M10-S-4
Sample Info: MS07D
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

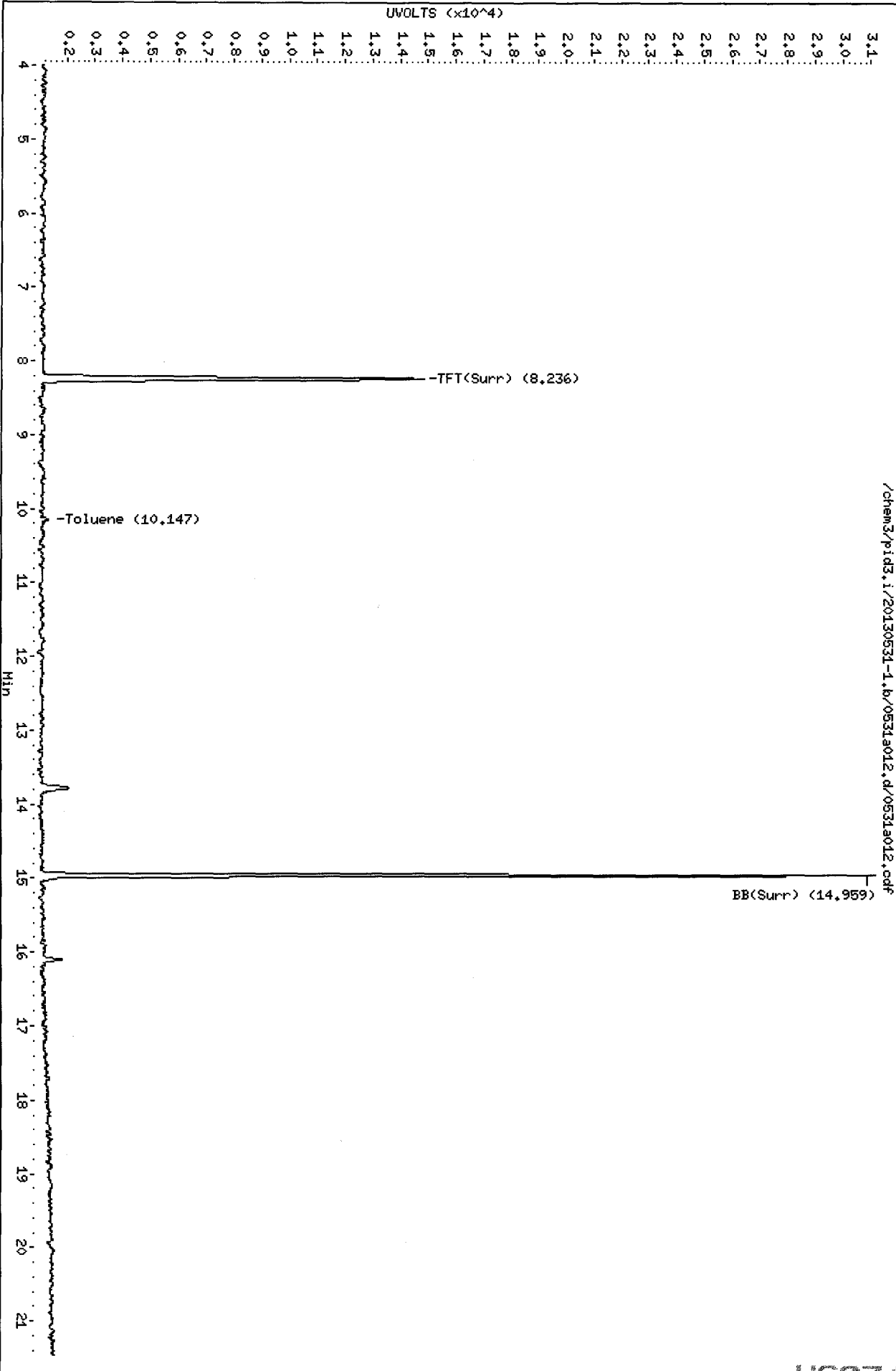


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MS07 00006

Data File: /chem3/pid3.i/20130531-1.b/0531a012.d
Date : 31-MAY-2013 15:24
Client ID: SL-M10-S-4
Sample Info: MS07D
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

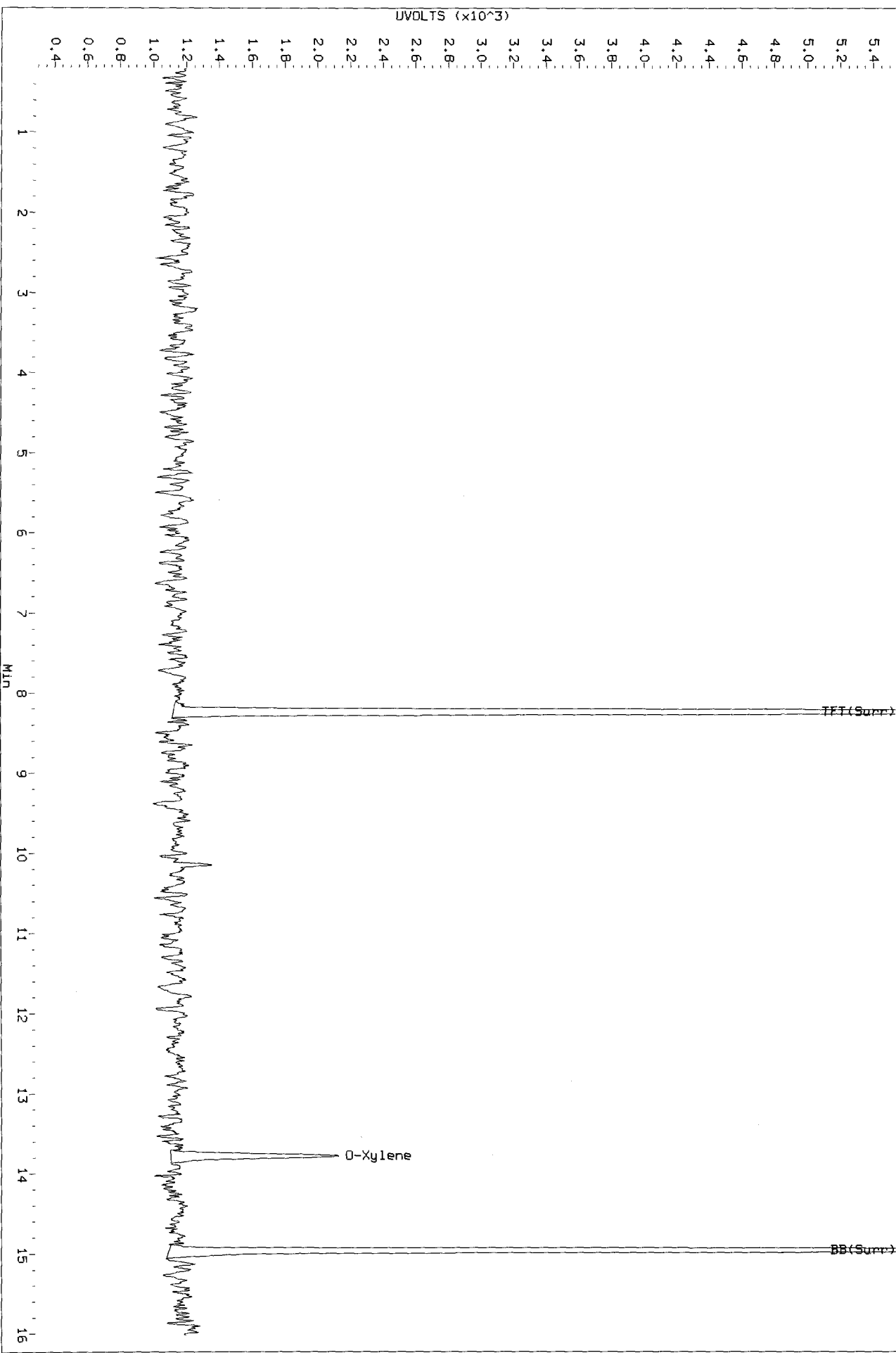


MS07 00007

PK
C/3/13

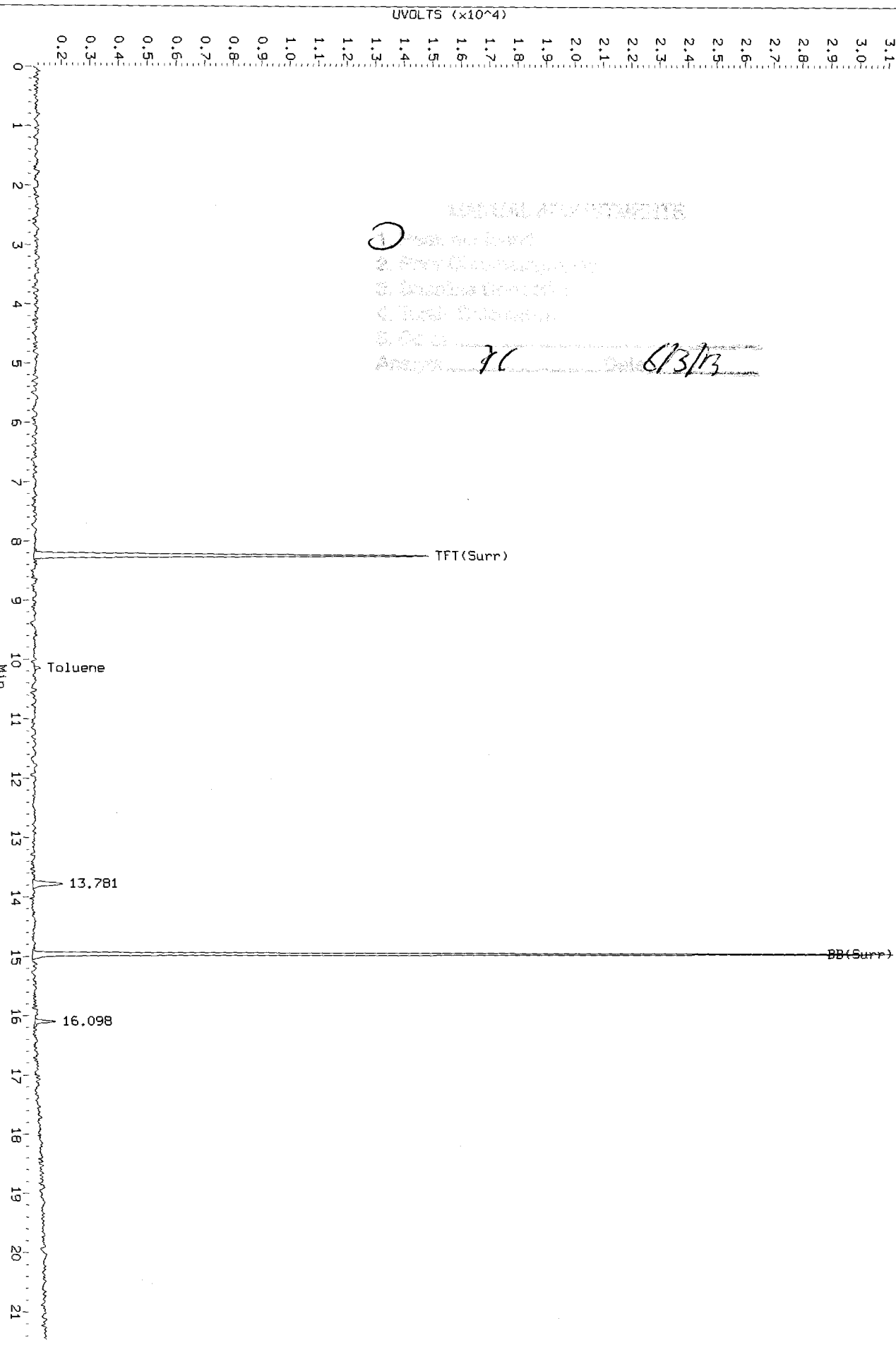
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Injection Date: 31-MAY-2013 15:24
Instrument: pid3.1
Client Sample ID: SL-W10-S-4

AIA 0531a012.cdf: 0.208 to 16.020 MIN



Data File: /chem3/pid3.1/20130531-1.b/0531a012.d/0531a012.cdf
Injection Date: 31-MAY-2013 15:24
Instrument: pid3.1
Client Sample ID: SL-M10-S-4


AIA 0531a012.cdf: 0.000 to 21.463 Min



ANALYST ADJUSTMENTS
① Peak No. 10
A. Peak Classification:
B. Inactive Compound:
C. Peak Structure:
D. Date:
Analysis: 7C Date: 6/3/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W11-S-4
SAMPLE

Lab Sample ID: WS07E
 LIMS ID: 13-11585
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 16:49
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 55 mg-dry-wt
 Percent Moisture: 32.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	23	< 23 U
108-88-3	Toluene	23	46
100-41-4	Ethylbenzene	23	< 23 U
179601-23-1	m,p-Xylene	45	< 45 U
95-47-6	o-Xylene	23	< 23 U

Gasoline Range Hydrocarbons 9.1 < 9.1 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	90.5%
Bromobenzene	91.0%

Gasoline Surrogate Recovery

Trifluorotoluene	89.9%
Bromobenzene	90.1%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 6/3/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a015.d ARI ID: WS07E
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a015.d Client ID: SL-W11-S-4
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 16:49
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.240	0.011	15552	230811	89.9	TFT(Surr)
14.960	0.005	10094	98137	90.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	47690	0.023
8015B 2MP-TMB (4.56 to 15.68)	4363035	49202	0.011
AK101 nC6-nC10 (5.09 to 14.57)	3480628	44674	0.013
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	47690	0.022
CalGas nC6-nC12 (5.09 to 17.32)	4309570	51676	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.010	13046	90.5	TFT(Surr)
14.959	0.004	29861	91.0	BB(Surr)

SW8021 (PID)

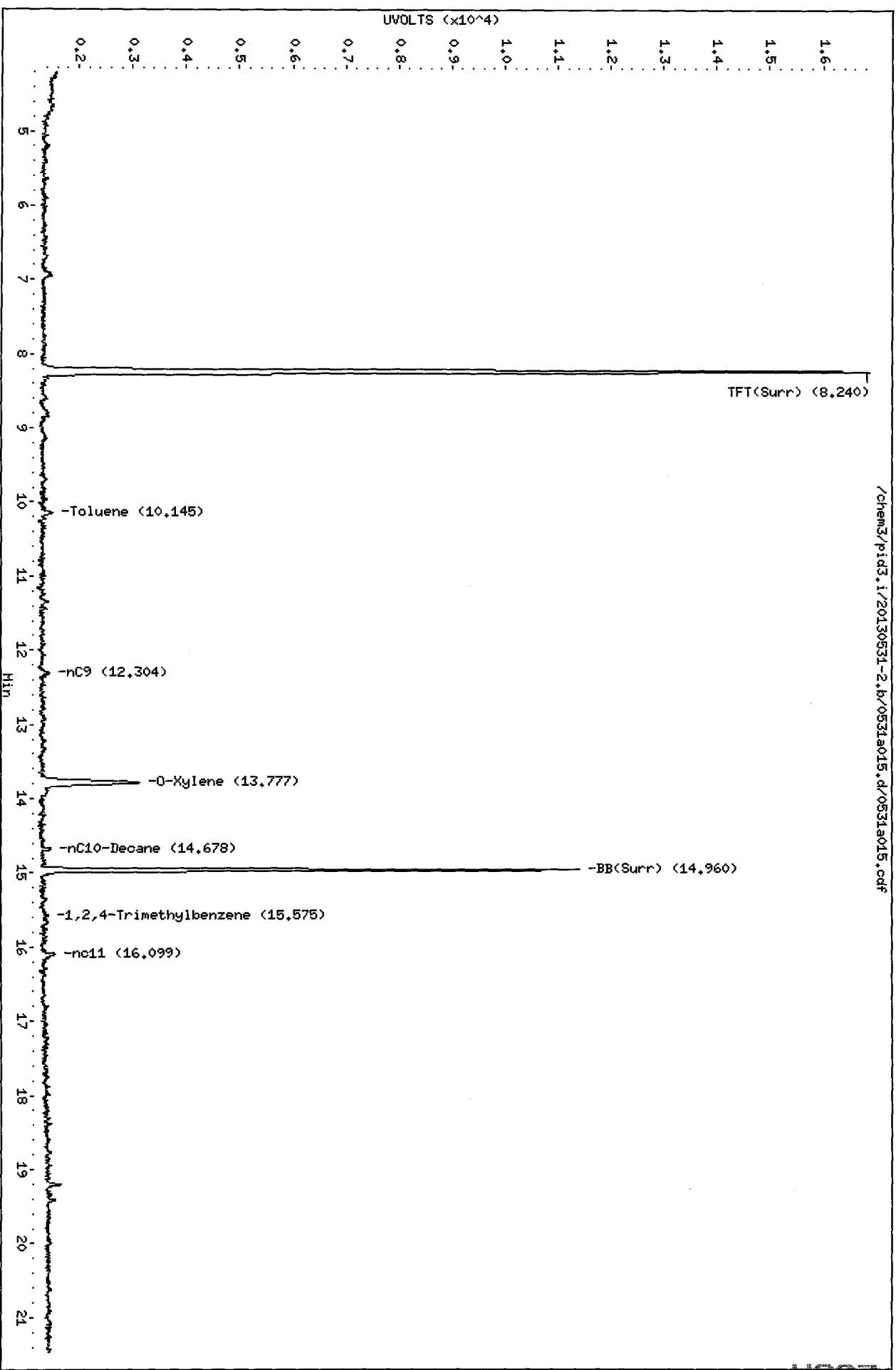
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.143	0.009	436	0.51	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a015.d
Date: 31-MAY-2013 16:49
Client ID: SL-M11-S-4
Sample Info: MS07E
Column Phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

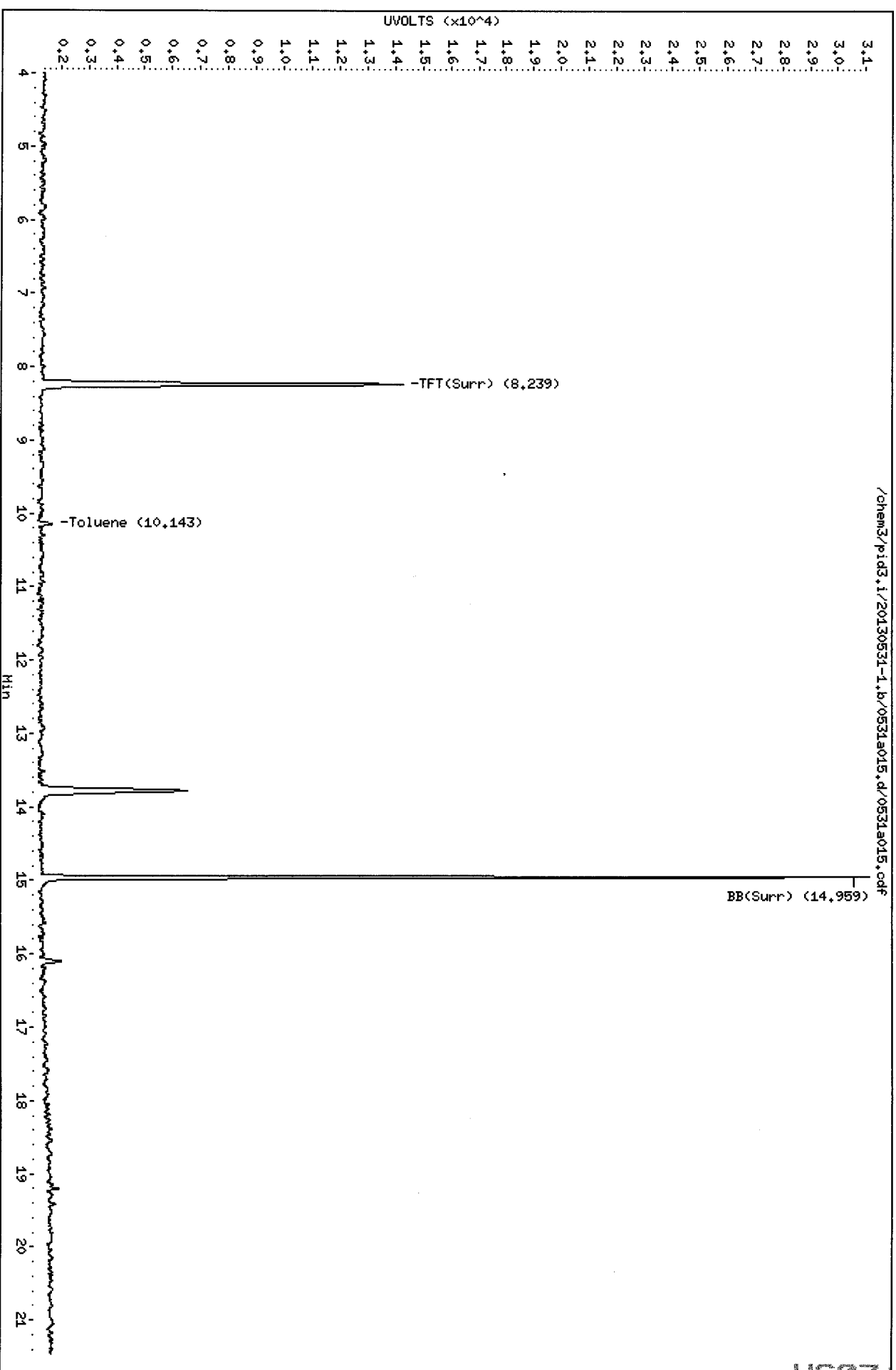


/chem3/pid3.i/20130531-2.b/0531a015.d/0531a015.cdf

MS07.00002

Data File: /chem3/pid3.i/20130531-1.b/0531a015.d
Date: 31-MAY-2013 16:49
Client ID: SL-M11-S-4
Sample Info: MS07E
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



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0007

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W12-S-4
SAMPLE

Lab Sample ID: WS07F
 LIMS ID: 13-11586
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 17:17
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 65 mg-dry-wt
 Percent Moisture: 24.4%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	19	< 19 U	
108-88-3	Toluene	19	< 19 U	
100-41-4	Ethylbenzene	19	< 19 U	
179601-23-1	m,p-Xylene	38	< 38 U	
95-47-6	o-Xylene	19	< 19 U	
	Gasoline Range Hydrocarbons	7.7	< 7.7 U	---

BETX Surrogate Recovery

Trifluorotoluene	89.7%
Bromobenzene	90.3%

Gasoline Surrogate Recovery

Trifluorotoluene	88.1%
Bromobenzene	89.5%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a016.d ARI ID: WS07F
Data file 2: /chem3/pid3.i/20130531-1.b/0531a016.d Client ID: SL-W12-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 17:17
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.240	0.011	15247	226882	88.1	TFT(Surr)
14.960	0.005	10019	96416	89.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.03 to 17.32)	2099137	7022	0.003
8015B 2MP-TMB (4.56 to 15.68)	4363035	7712	0.002
AK101 nC6-nC10 (5.09 to 14.57)	3480628	7022	0.002
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	7022	0.003
CalGas nC6-nC12 (5.09 to 17.32)	4309570	7022	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.239	0.010	12929	89.7	TFT(Surr)
14.959	0.004	29613	90.3	BB(Surr)

SW8021 (PID)

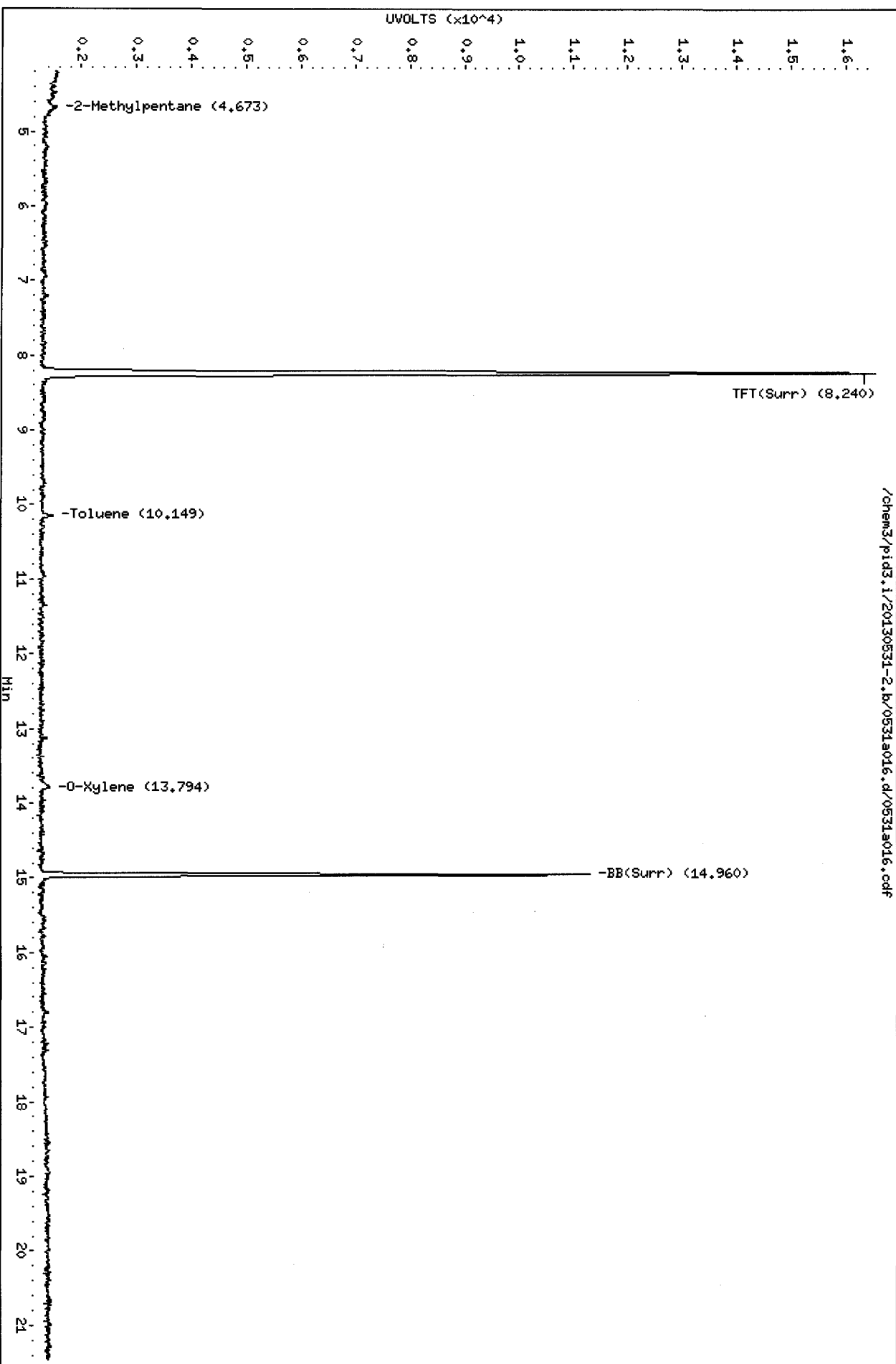
RT	Shift	Response	Amount	Compound
---	----	-----	-----	-----
ND	---	---	---	Benzene
10.137	0.003	175	0.21N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a016.d
Date : 31-MAY-2013 17:17
Client ID: SL-N12-S-4
Sample Info: MS07F
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

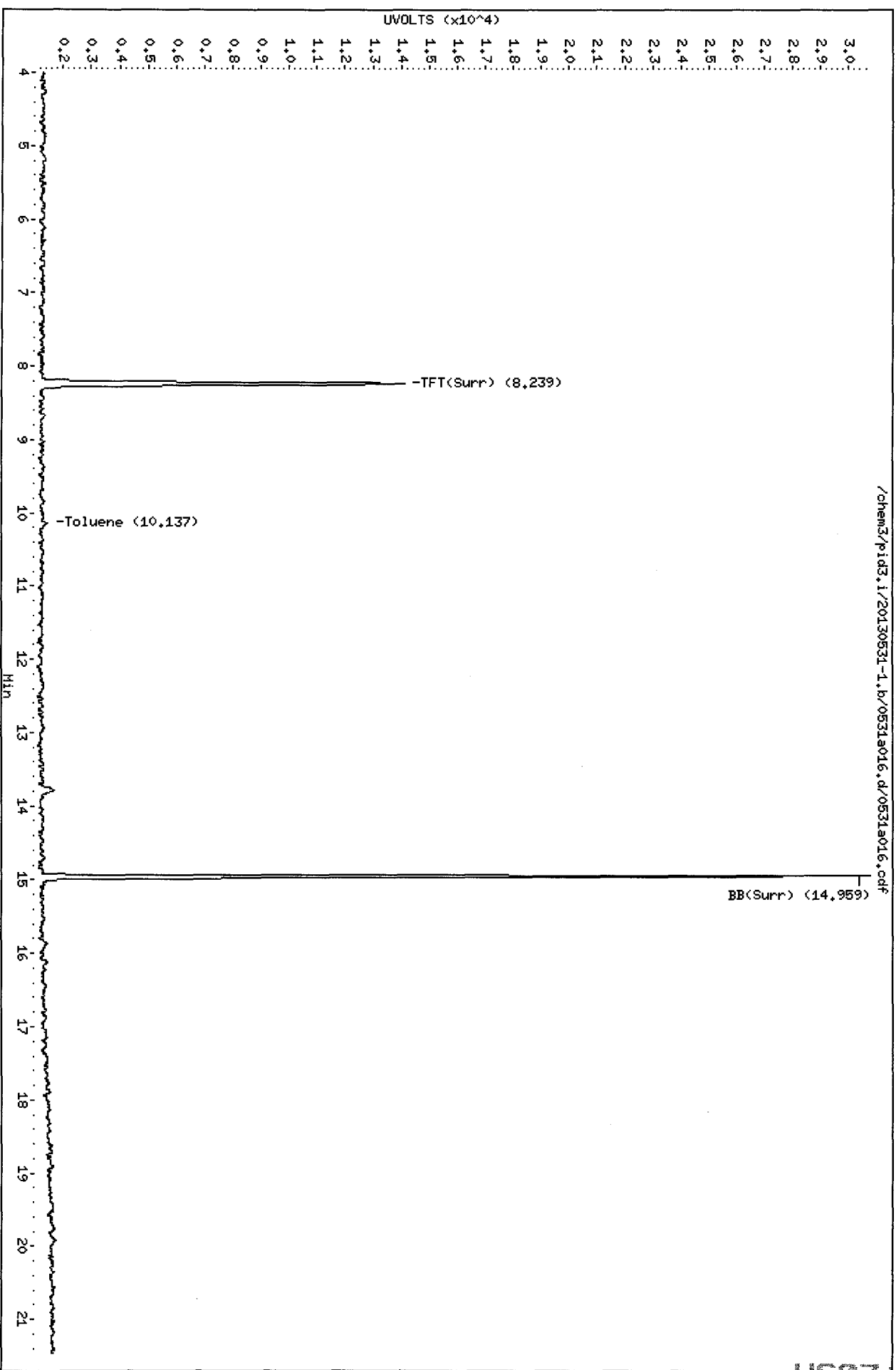
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MS07 00006

Data File: /chem3/pid3.i/20130531-1.b/0531a016.d
Date : 31-May-2013 17:17
Client ID: SL-N12-S-4
Sample Info: MS07F
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



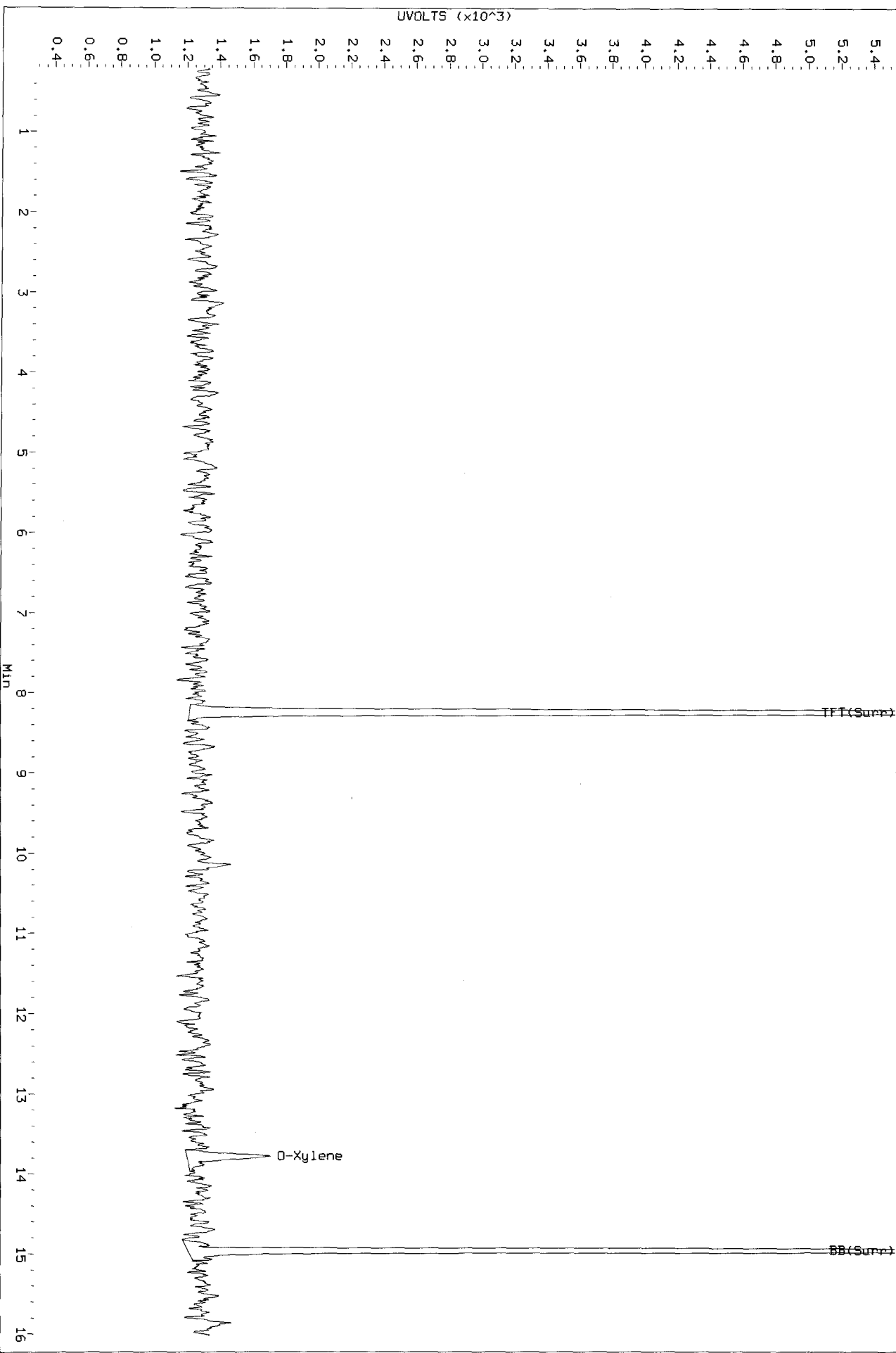
/chem3/pid3.i/20130531-1.b/0531a016.d/0531a016.cdf

10007 10007

PC
6/3/13

Data File: /chem3/pid3.1/20130531-1.1/0531a016.d/0531a016.cdf
Injection Date: 31-MAY-2013 17:17
Instrument: pid3.1
Client Sample ID: SL-W12-S-4

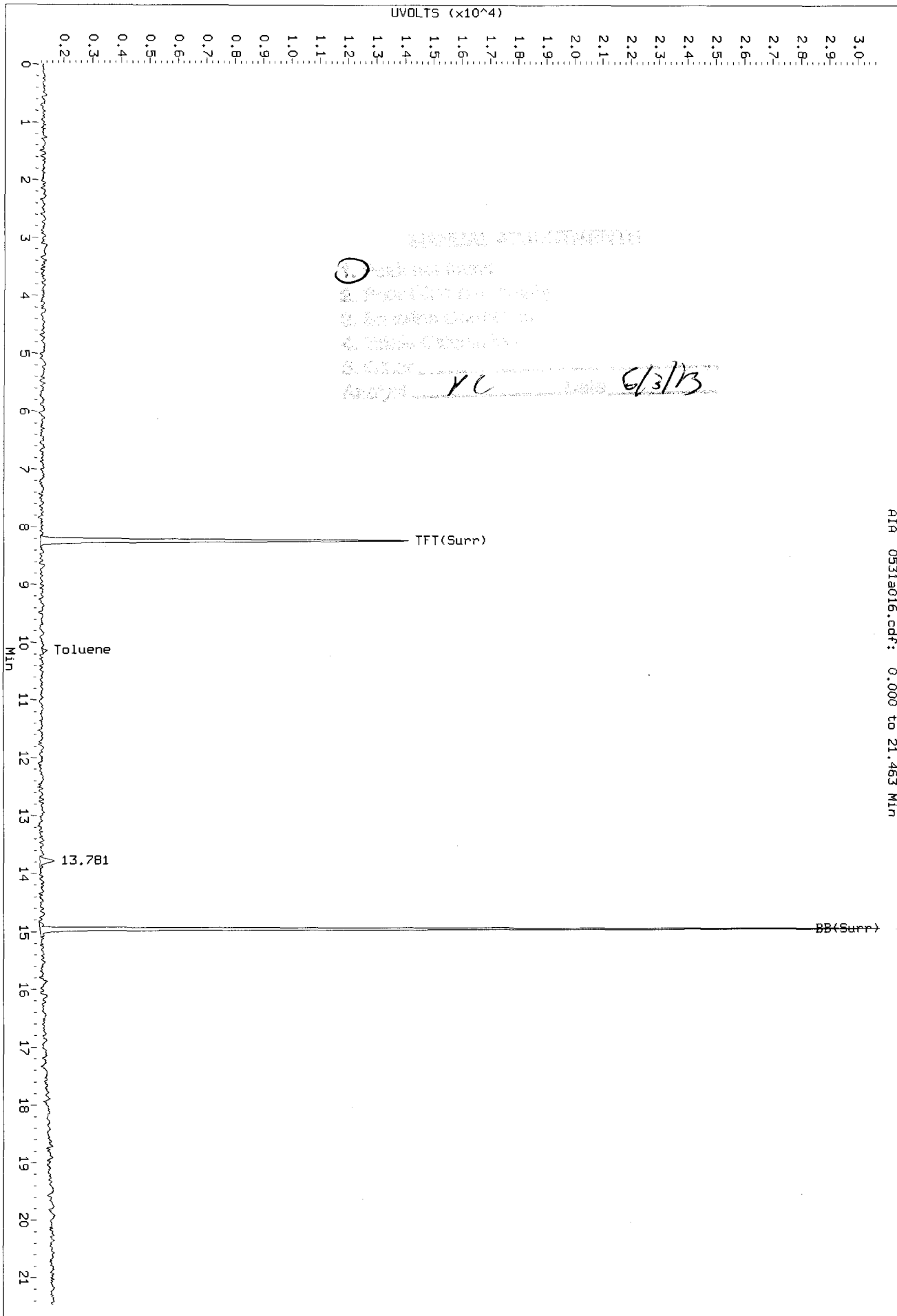
AIR 0531a016.cdf: 0.208 to 16.020 MIN



4507:0000R

Data File: /chem3/pid3.1/20130531-1.b/0531a016.d/0531a016.cdf
Injection Date: 31-MAY-2013 17:17
Instrument: pid3.1
Client Sample ID: SL-W12-S-4

AIR 0531a016.cdf: 0.000 to 21.463 MIN



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W13-S-4
SAMPLE

Lab Sample ID: WS07G
 LIMS ID: 13-11587
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 17:45
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 68 mg-dry-wt
 Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	18	< 18 U	
108-88-3	Toluene	18	21	
100-41-4	Ethylbenzene	18	< 18 U	
179601-23-1	m,p-Xylene	36	< 36 U	
95-47-6	o-Xylene	18	< 18 U	
Gasoline Range Hydrocarbons		7.3	< 7.3 U	---

BETX Surrogate Recovery

Trifluorotoluene	91.2%
Bromobenzene	92.6%

Gasoline Surrogate Recovery

Trifluorotoluene	91.6%
Bromobenzene	92.0%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 6/3/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a017.d ARI ID: WS07G
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a017.d Client ID: SL-W13-S-4
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 17:45
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.238	0.009	15844	234110	91.6	TFT(Surr)
14.959	0.004	10302	99803	92.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.03 to 17.32)	2099137	10825	0.005
8015B 2MP-TMB (4.56 to 15.68)	4363035	11620	0.003
AK101 nC6-nC10 (5.09 to 14.57)	3480628	11620	0.003
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	10825	0.005
CalGas nC6-nC12 (5.09 to 17.32)	4309570	11620	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.238	0.009	13153	91.2	TFT(Surr)
14.959	0.004	30388	92.6	BB(Surr)

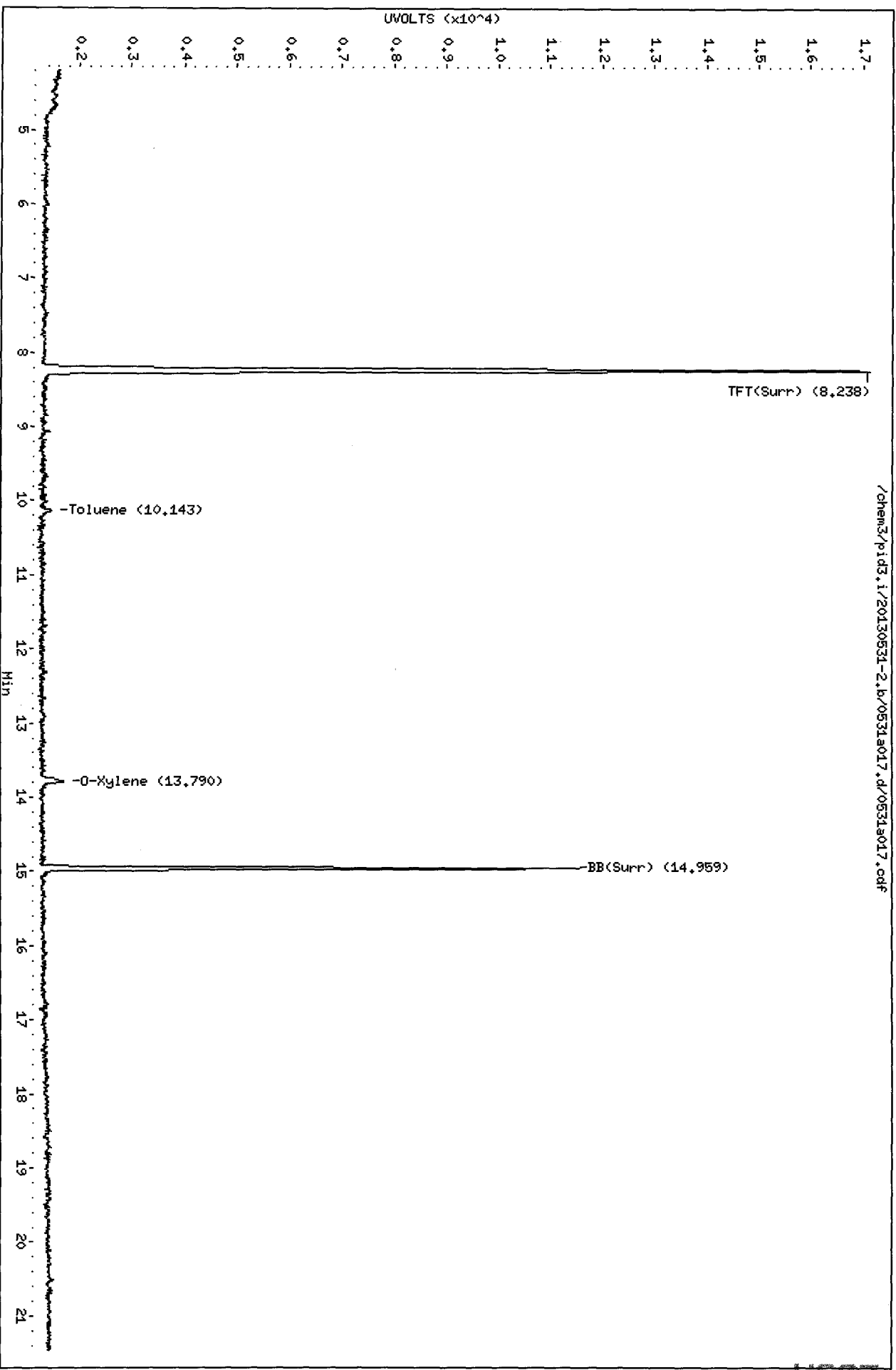
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
10.150	0.016	249	0.29N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a017.d
Date: 31-MAY-2013 17:45
Client ID: SL-N13-S-4
Sample Info: MS07C
Column phase: RTX 502-2 FID

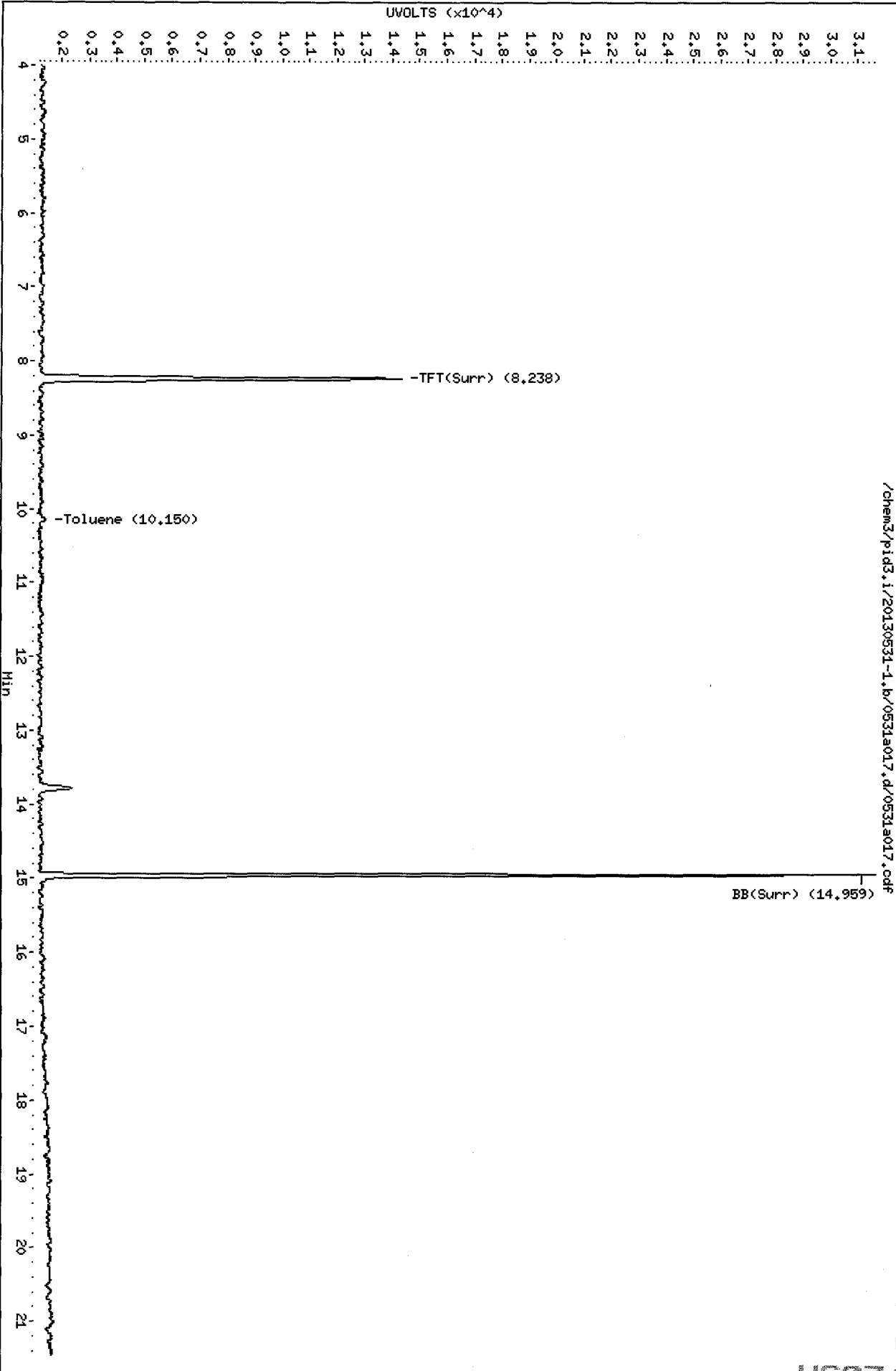
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



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Data File: /chem3/pid3.i/20130531-1.b/0531a017.d
Date: 31-MAY-2013 17:45
Client ID: SL-M13-9-4
Sample Info: MS07C
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

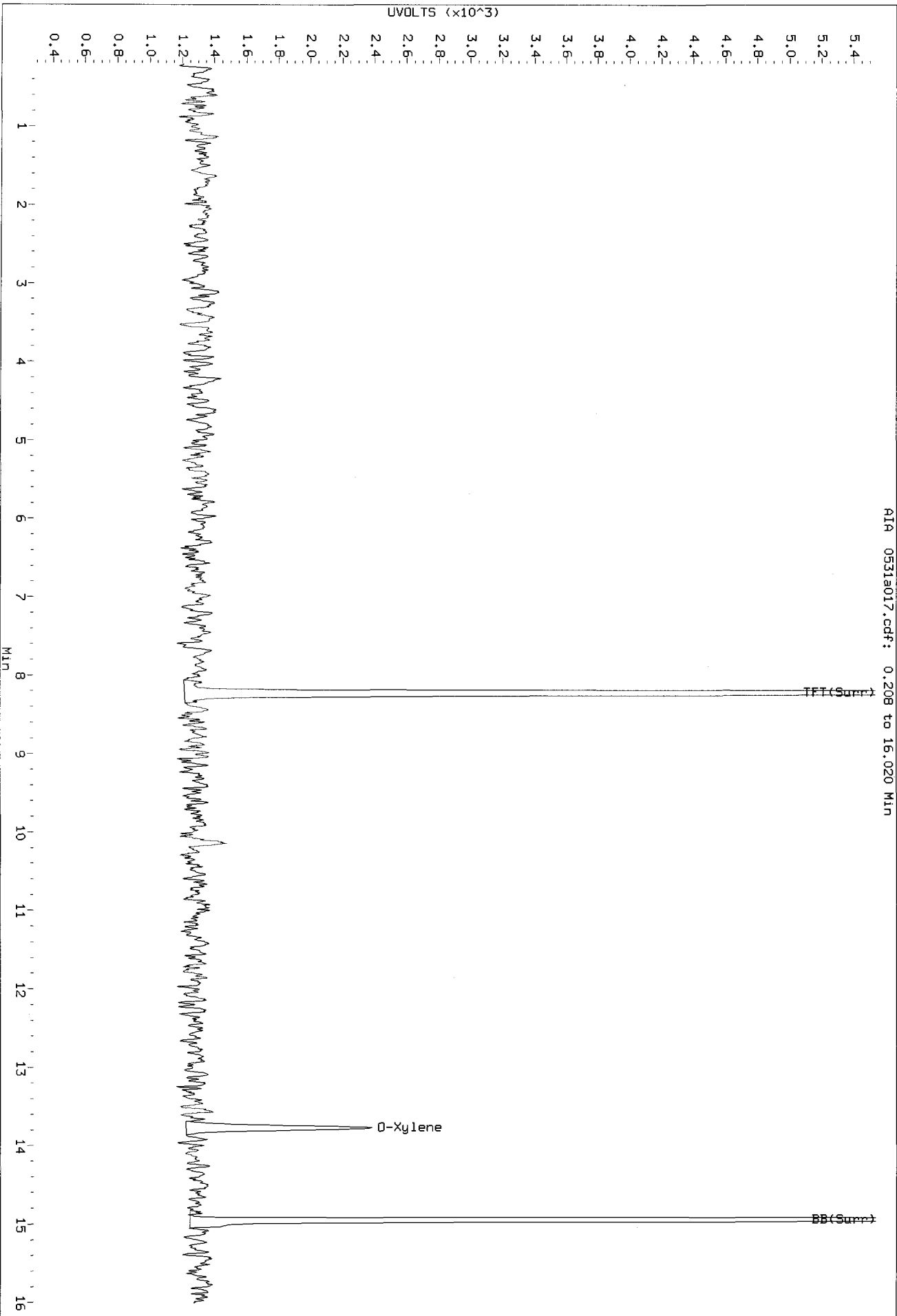


100100 1007

PK
6/3/13

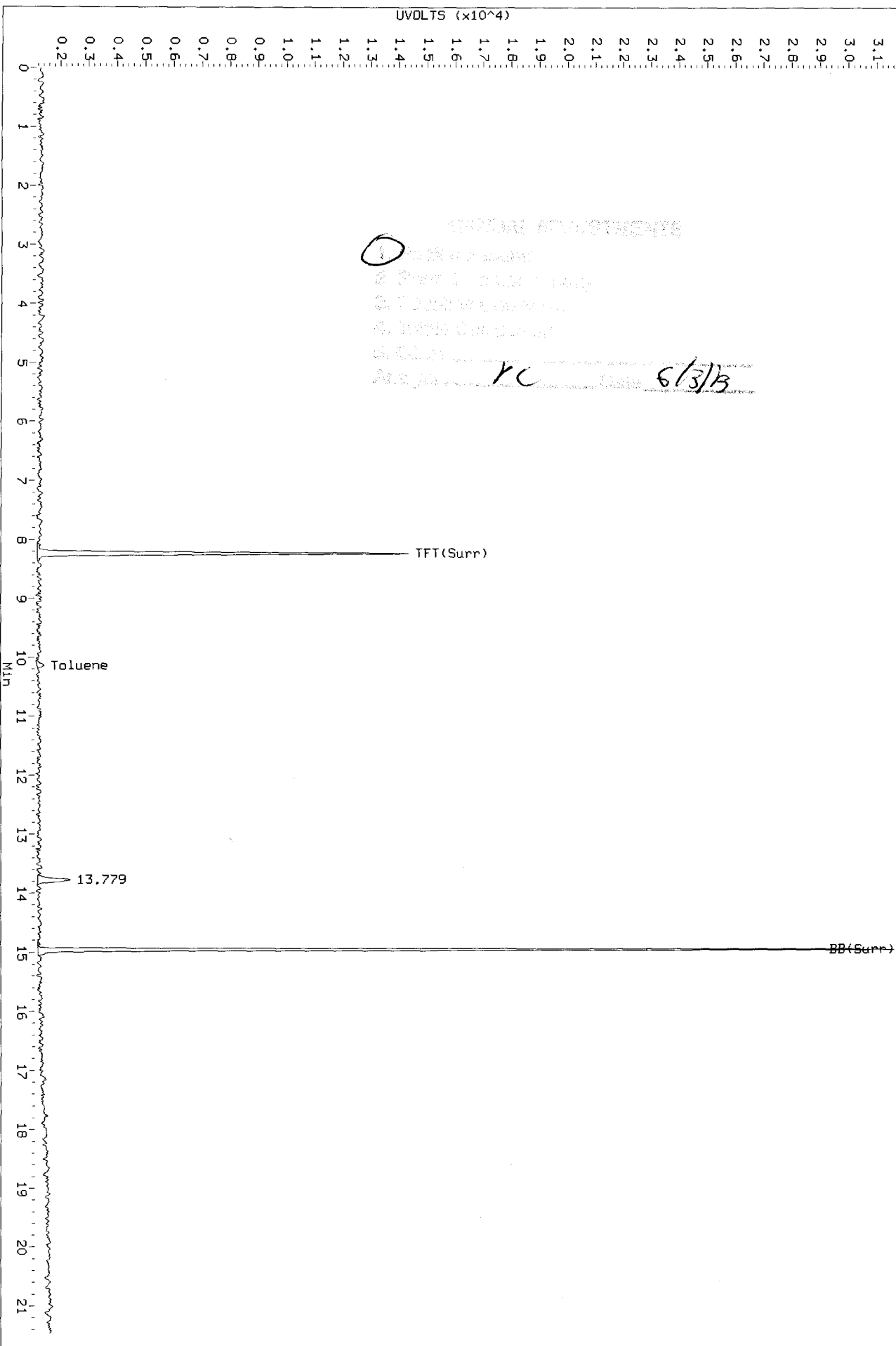
Data File: /chem3/pid3.1/20130531-1.b/0531a017.d/0531a017.cdf
Injection Date: 31-MAY-2013 17:45
Instrument: pid3.1
Client Sample ID: SL-W13-S-4

AIA 0531a017.cdf: 0.208 to 16.020 MIN




Data File: /chem3/pid3_1/20130531-1.b/0531a017.d/0531a017.cdf
Injection Date: 31-MAY-2013 17:45
Instrument: pid3.1
Client Sample ID: SL-W13-S-4

AIA 0531a017.cdf: 0.000 to 21.463 Min



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: SL-W14-S-4
SAMPLE

Lab Sample ID: WS07H
 LIMS ID: 13-11588
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 18:13
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 73 mg-dry-wt
 Percent Moisture: 15.4%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	17	< 17 U	
108-88-3	Toluene	17	34	
100-41-4	Ethylbenzene	17	< 17 U	
179601-23-1	m,p-Xylene	34	< 34 U	
95-47-6	o-Xylene	17	< 17 U	
	Gasoline Range Hydrocarbons	6.9	< 6.9 U	---

BETX Surrogate Recovery

Trifluorotoluene	90.0%
Bromobenzene	91.0%

Gasoline Surrogate Recovery

Trifluorotoluene	88.3%
Bromobenzene	89.8%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VLC
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a018.d ARI ID: WS07H
Data file 2: /chem3/pid3.i/20130531-1.b/0531a018.d Client ID: SL-W14-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 18:13
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.236	0.008	15282	228331	88.3	TFT(Surr)
14.959	0.004	10053	99176	89.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	55240	0.026
8015B 2MP-TMB (4.56 to 15.68)	4363035	38093	0.009
AK101 nC6-nC10 (5.09 to 14.57)	3480628	38092	0.011
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	67021	0.031
CalGas nC6-nC12 (5.09 to 17.32)	4309570	57393	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.008	12978	90.0	TFT(Surr)
14.959	0.004	29857	91.0	BB(Surr)

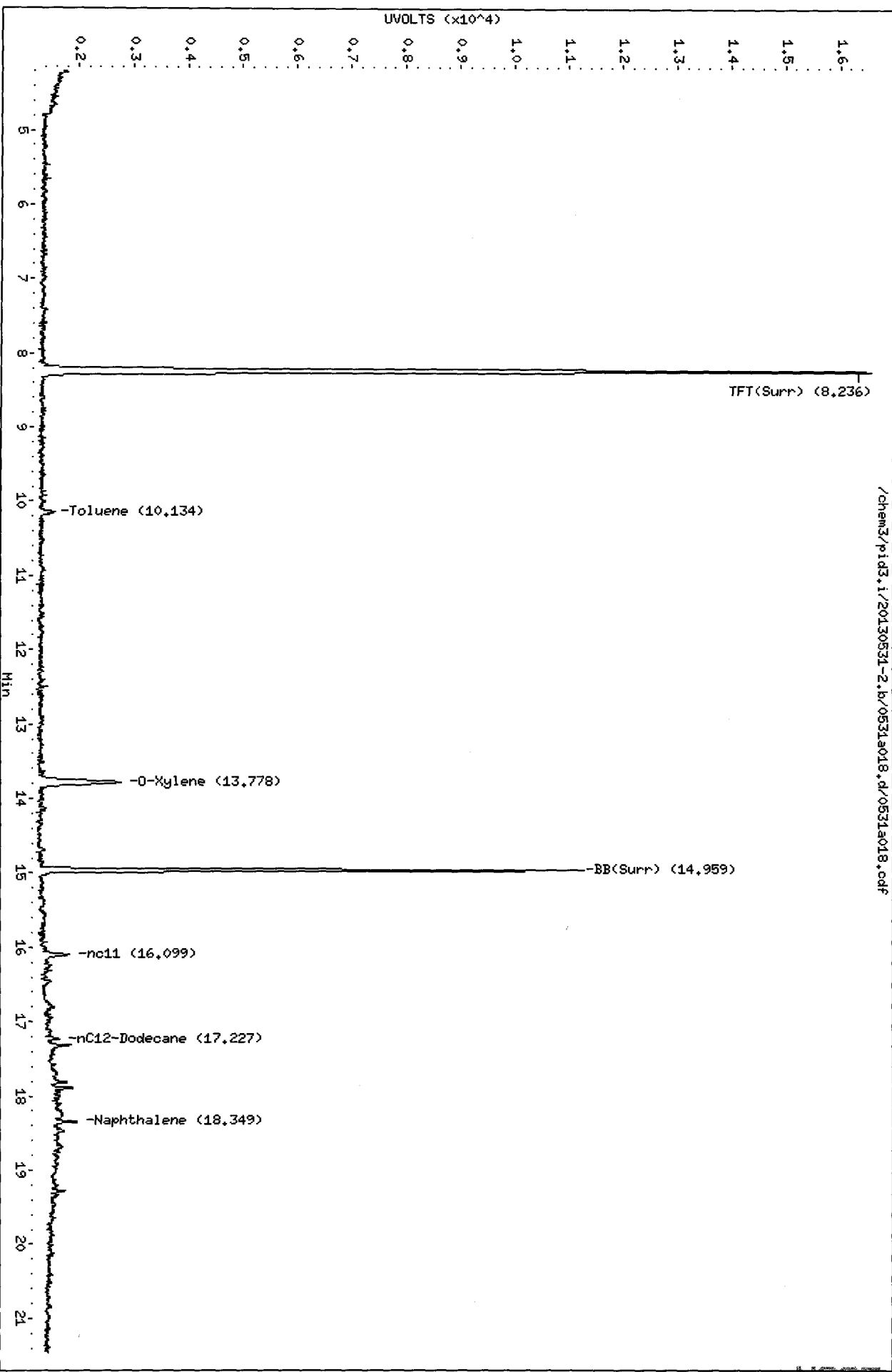
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.139	0.005	413	0.49	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a018.d
Date: 31-MAY-2013 18:13
Client ID: SL-M14-S-4
Sample Info: MS07H
Column phase: RTX 502-2 FID

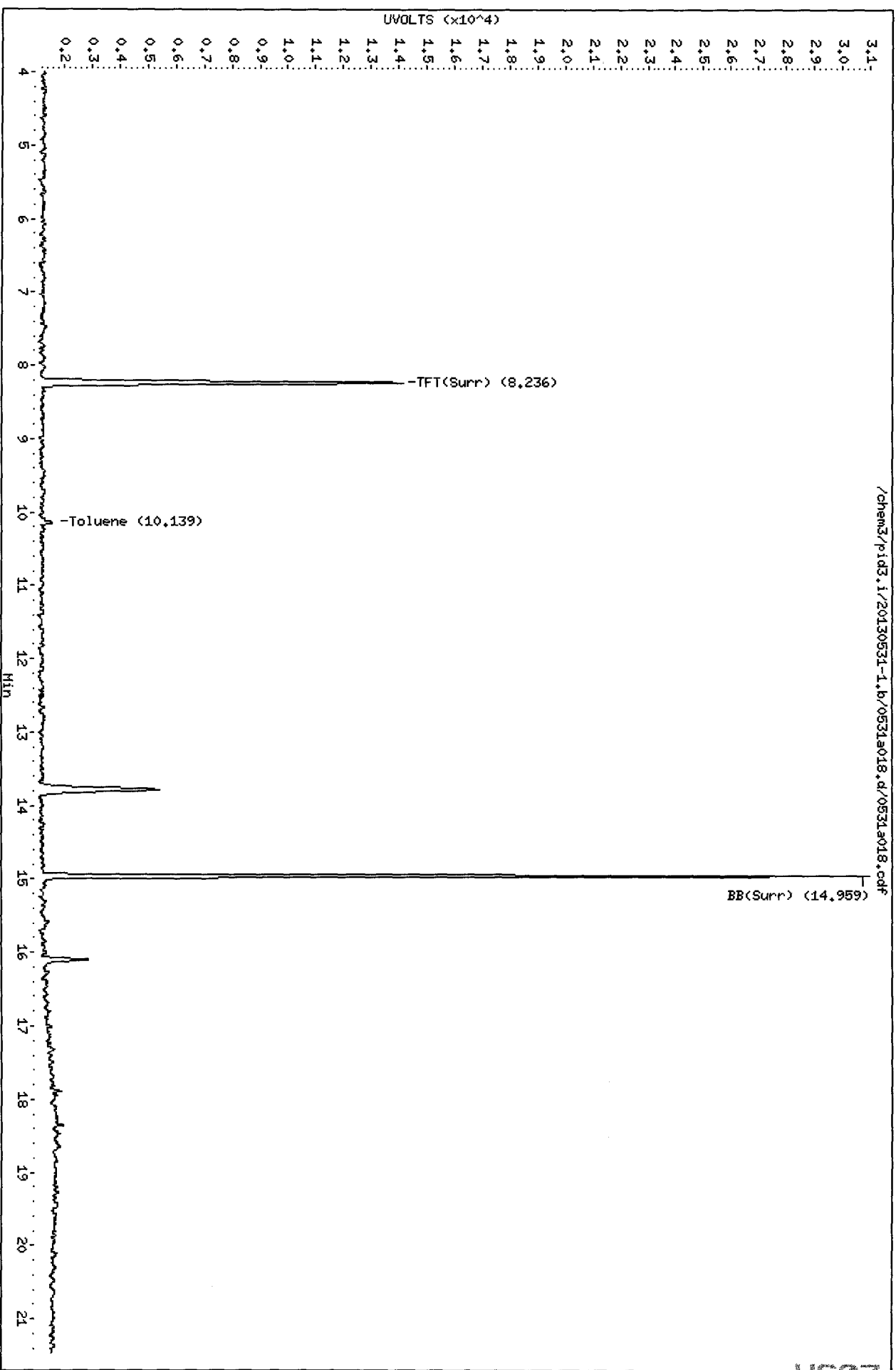
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130531-2.b/0531a018.d/0531a018.cdf

Data File: /chem3/pid3.i/20130531-1.b/0531a018.d
Date : 31-MAY-2013 18:13
Client ID: SL-M14-S-4
Sample Info: MS07H
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130531-1.b/0531a018.d/0531a018.cdf

00100
1007

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: A2-W28-S-4

SAMPLE

Lab Sample ID: WS07I

LIMS ID: 13-11589

Matrix: Soil

Data Release Authorized: 

Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 05/31/13 18:42

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 93 mg-dry-wt

Percent Moisture: 7.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	13	< 13 U
108-88-3	Toluene	13	20
100-41-4	Ethylbenzene	13	< 13 U
179601-23-1	m,p-Xylene	27	< 27 U
95-47-6	o-Xylene	13	< 13 U

Gasoline Range Hydrocarbons	5.4	< 5.4 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	93.9%
Bromobenzene	94.5%

Gasoline Surrogate Recovery

Trifluorotoluene	93.2%
Bromobenzene	95.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 6/3/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a019.d ARI ID: WS07I
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a019.d Client ID: A2-W28-S-4
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 18:42
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.234	0.006	16116	239601	93.2	TFT(Surr)
14.959	0.004	10637	103214	95.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	66258	0.032
8015B 2MP-TMB (4.56 to 15.68)	4363035	34981	0.008
AK101 nC6-nC10 (5.09 to 14.57)	3480628	34981	0.010
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	66258	0.030
CalGas nC6-nC12 (5.09 to 17.32)	4309570	66258	0.015

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.234	0.006	13543	93.9	TFT(Surr)
14.959	0.004	30998	94.5	BB(Surr)

SW8021 (PID)

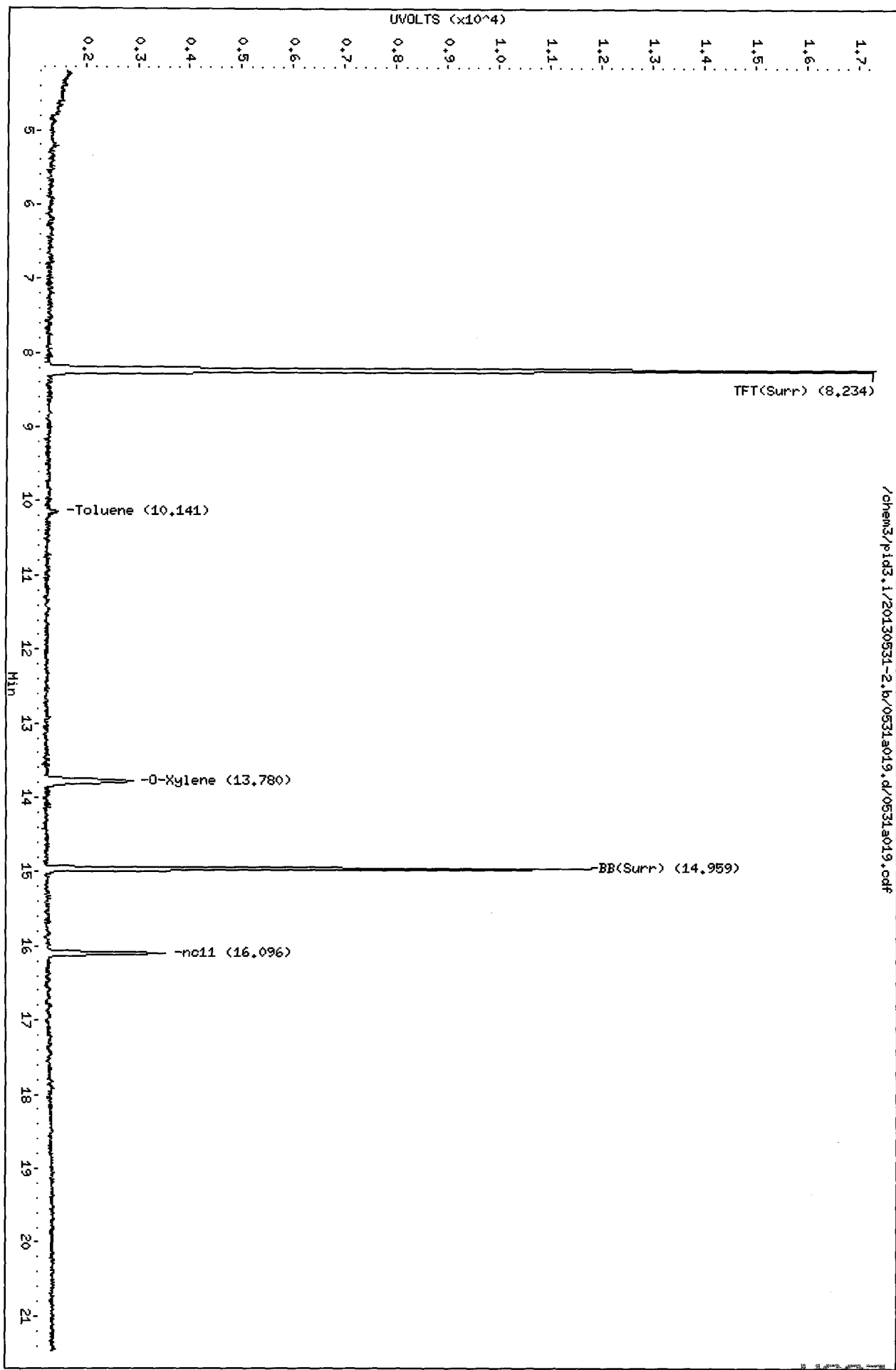
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.147	0.013	315	0.37N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a019.d
Date: 31-MAY-2013 18:42
Client ID: A2-M28-S-4
Sample Info: MS071

Column phase: RTX 502-2 FID

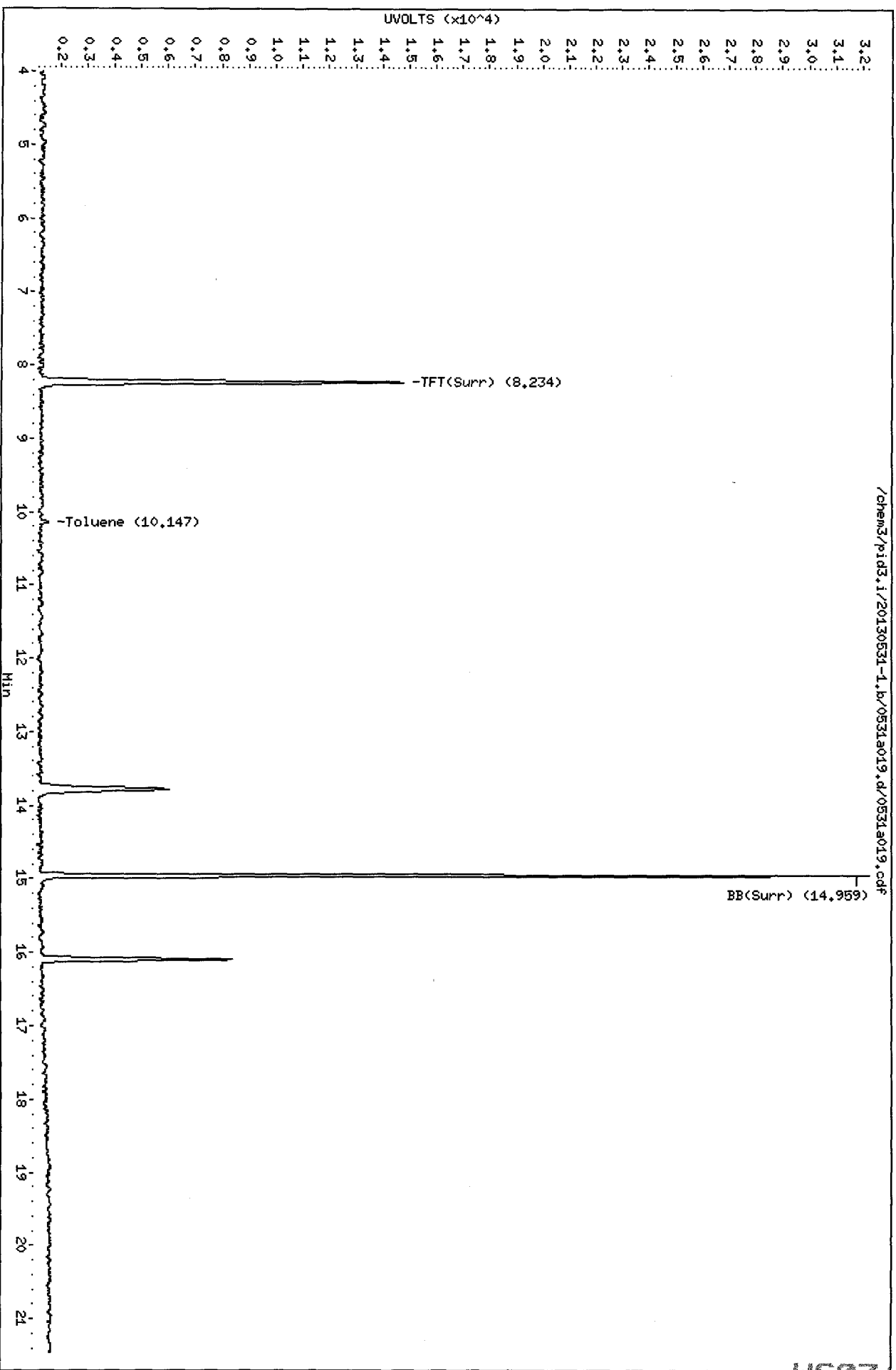
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



4507 001 12

Data File: /chem3/pid3.i/20130531-1.b/0531a019.d
Date: 31-MAY-2013 18:42
Client ID: A2-N28-S-4
Sample Info: MS071
Column phase: RTX 502-2 PID

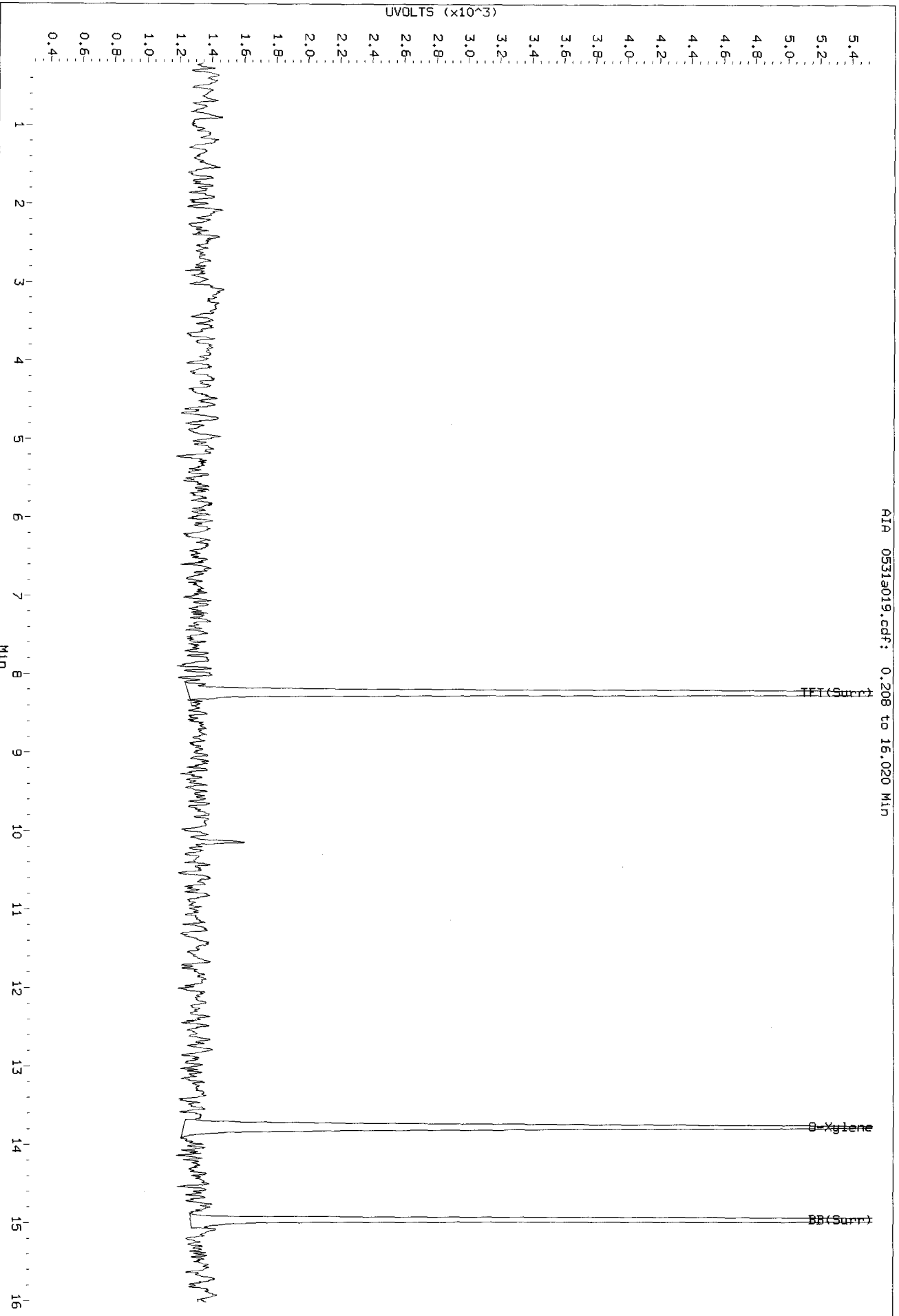
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



4507 001 10

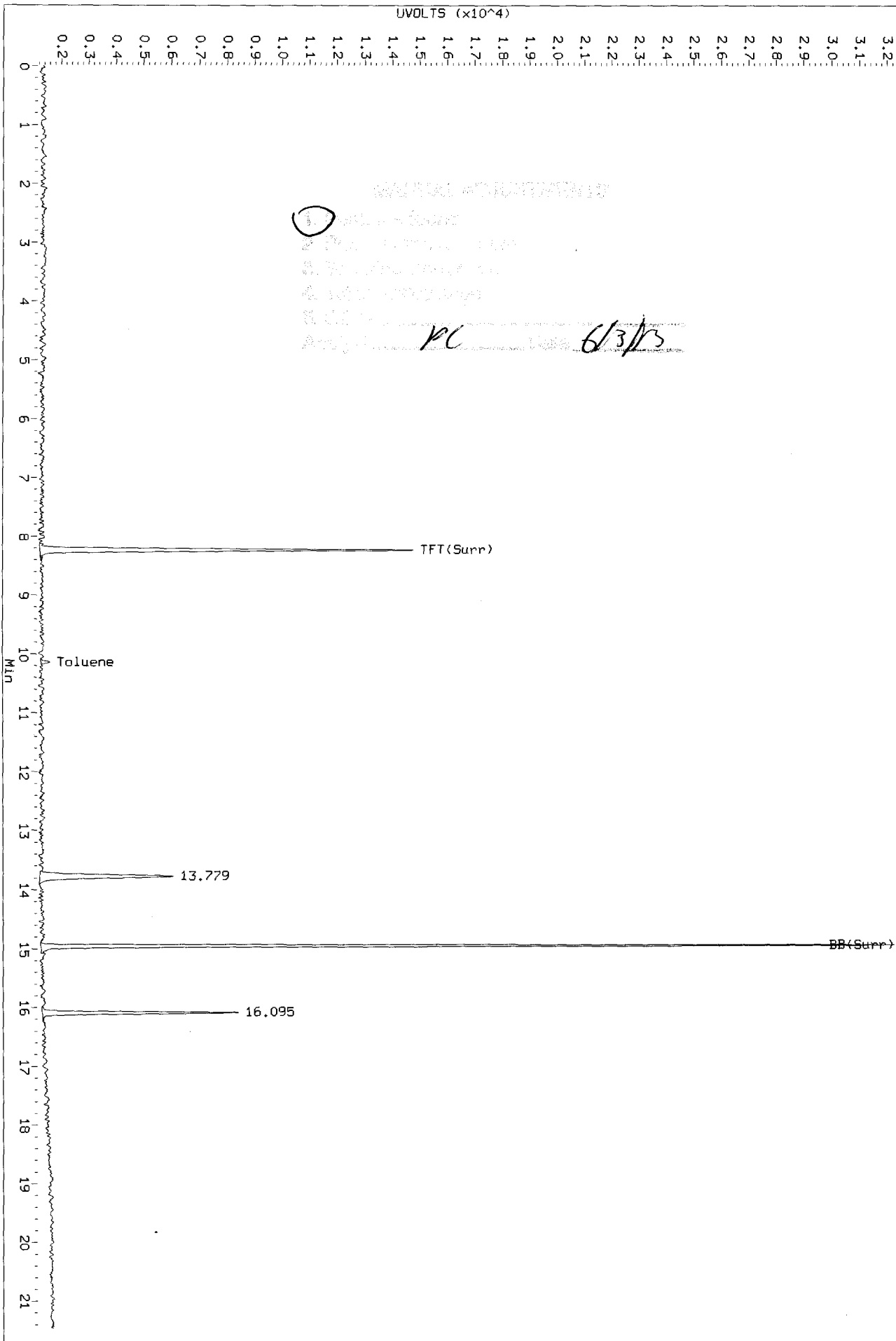
PL
6/3/13

Data File: /chem3/pid3.1/20130531-1.b/0531a019.d/0531a019.cdf
Injection Date: 31-MAY-2013 18:42
Instrument: pid3.1
Client Sample ID: A2-W28-S-4



Data File: /chem3/pid3.1/20130531-1.b/0531a019.d/0531a019.cdf
Injection Date: 31-MAY-2013 18:42
Instrument: pid3.1
Client Sample ID: A2-W28-S-4

AIR 0531a019.cdf: 0.000 to 21.463 MIN



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W29-S-4
SAMPLE

Lab Sample ID: WS07J
 LIMS ID: 13-11590
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 19:10
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 73 mg-dry-wt
 Percent Moisture: 19.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	17	< 17 U	
108-88-3	Toluene	17	28	
100-41-4	Ethylbenzene	17	< 17 U	
179601-23-1	m,p-Xylene	34	< 34 U	
95-47-6	o-Xylene	17	< 17 U	
	Gasoline Range Hydrocarbons	6.9	< 6.9 U	---

BETX Surrogate Recovery

Trifluorotoluene	86.9%
Bromobenzene	89.4%

Gasoline Surrogate Recovery

Trifluorotoluene	87.8%
Bromobenzene	90.1%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a020.d ARI ID: WS07J
Data file 2: /chem3/pid3.i/20130531-1.b/0531a020.d Client ID: A2-W29-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 19:10
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.237	0.008	15193	224089	87.8	TFT(Surr)
14.959	0.004	10086	98749	90.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.03 to 17.32)	2099137	16688	0.008
8015B 2MP-TMB (4.56 to 15.68)	4363035	14416	0.003
AK101 nC6-nC10 (5.09 to 14.57)	3480628	14415	0.004
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	18043	0.008
CalGas nC6-nC12 (5.09 to 17.32)	4309570	16688	0.004

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.237	0.008	12526	86.9	TFT(Surr)
14.959	0.004	29326	89.4	BB(Surr)

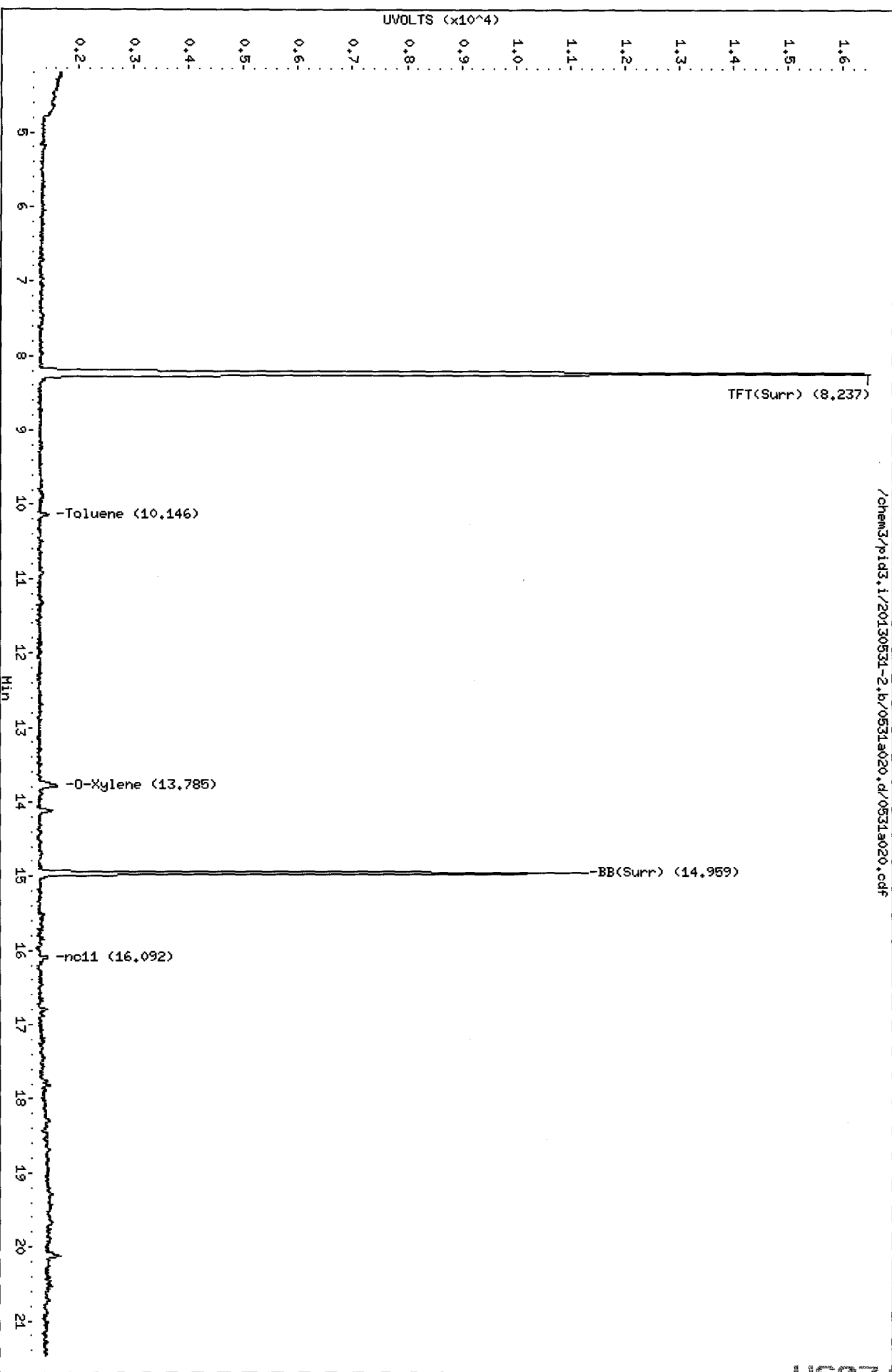
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
10.140	0.006	342	0.40N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a020.d
Date: 31-MAY-2013 19:10
Client ID: A2-M29-S-4
Sample Info: MS07J
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

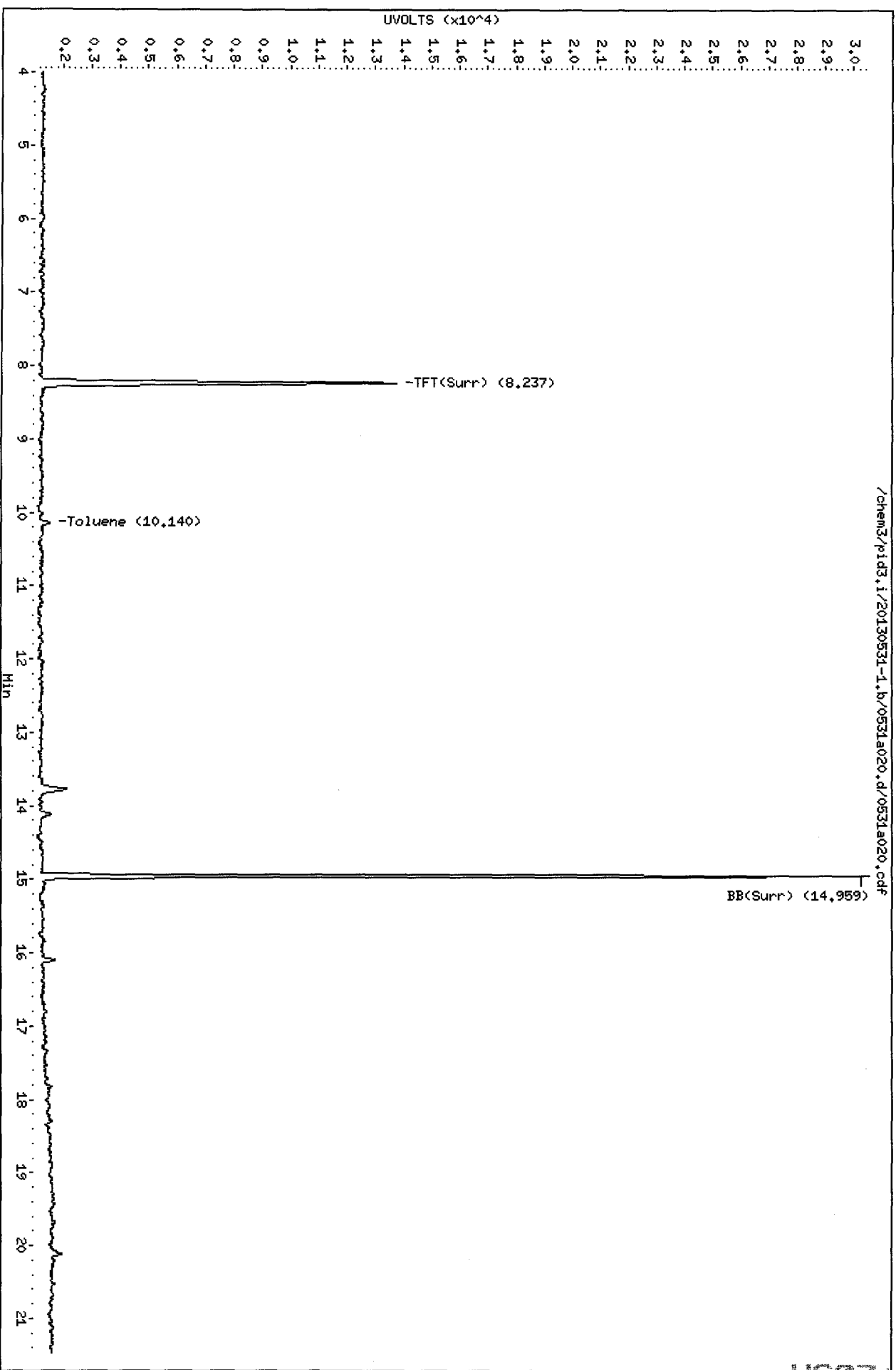


/chem3/pid3.i/20130531-2.b/0531a020.d/0531a020.cdf

MS07 001 10

Data File: /chem3/pid3.i/20130531-1.b/0531a020.d
Date: 31-MAY-2013 19:10
Client ID: A2-M29-S-4
Sample Info: MS07J
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

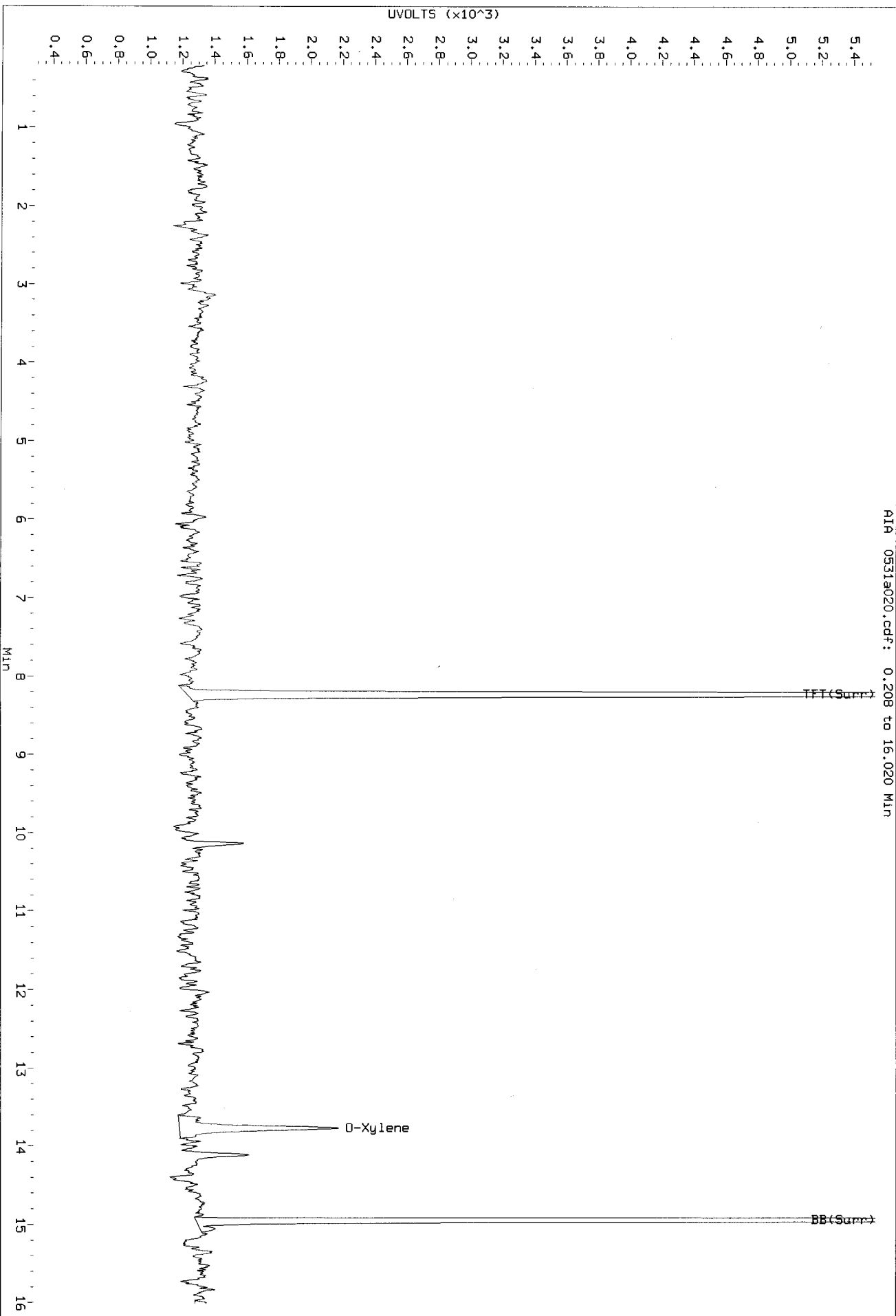


01001 1000

K/3/15

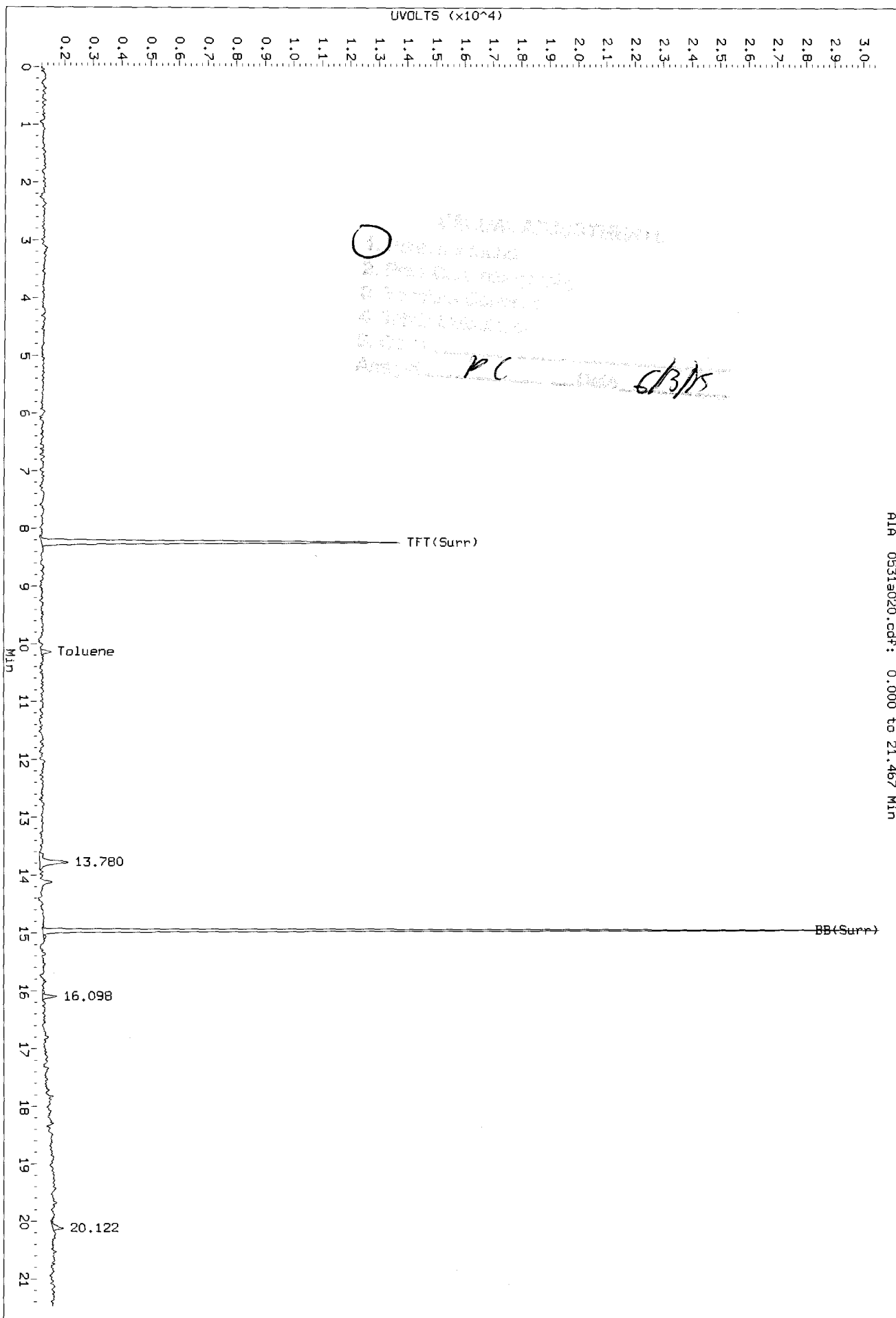
Data File: /chem3/pid3.1/20130531-1.b/0531a020.d/0531a020.cdf
Injection Date: 31-MAY-2013 19:10
Instrument: pid3.1
Client Sample ID: A2-W29-S-4

AIR 0531a020.cdf: 0.208 to 16.020 MIN



Data File: /chem3/pid3.1/20130531-1.b/0531a020.d/0531a020.cdf
Injection Date: 31-MAY-2013 19:10
Instrument: pid3.1
Client Sample ID: A2-W29-S-4

AIA 0531a020.cdf: 0.000 to 21.467 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W30-S-4

SAMPLE

Lab Sample ID: WS07K

LIMS ID: 13-11591

Matrix: Soil

Data Release Authorized:

Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 05/31/13 19:38

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 75 mg-dry-wt

Percent Moisture: 12.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	32
100-41-4	Ethylbenzene	17	29
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons	6.7	15	GAS ID GRO
------------------------------------	------------	-----------	-----------------------

BETX Surrogate Recovery

Trifluorotoluene	84.0%
Bromobenzene	88.3%

Gasoline Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	90.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

15
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a021.d ARI ID: WS07K
Data file 2: /chem3/pid3.i/20130531-1.b/0531a021.d Client ID: A2-W30-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 19:38
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.241	0.012	14859	220481	85.9	TFT(Surr)
14.959	0.004	10136	102068	90.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	389870	0.186
8015B 2MP-TMB (4.56 to 15.68)	4363035	376076	0.086
AK101 nC6-nC10 (5.09 to 14.57)	3480628	38657	0.011
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	487595	0.222
CalGas nC6-nC12 (5.09 to 17.32)	4309570	389870	0.090

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.241	0.012	12109	84.0	TFT(Surr)
14.959	0.004	28968	88.3	BB(Surr)

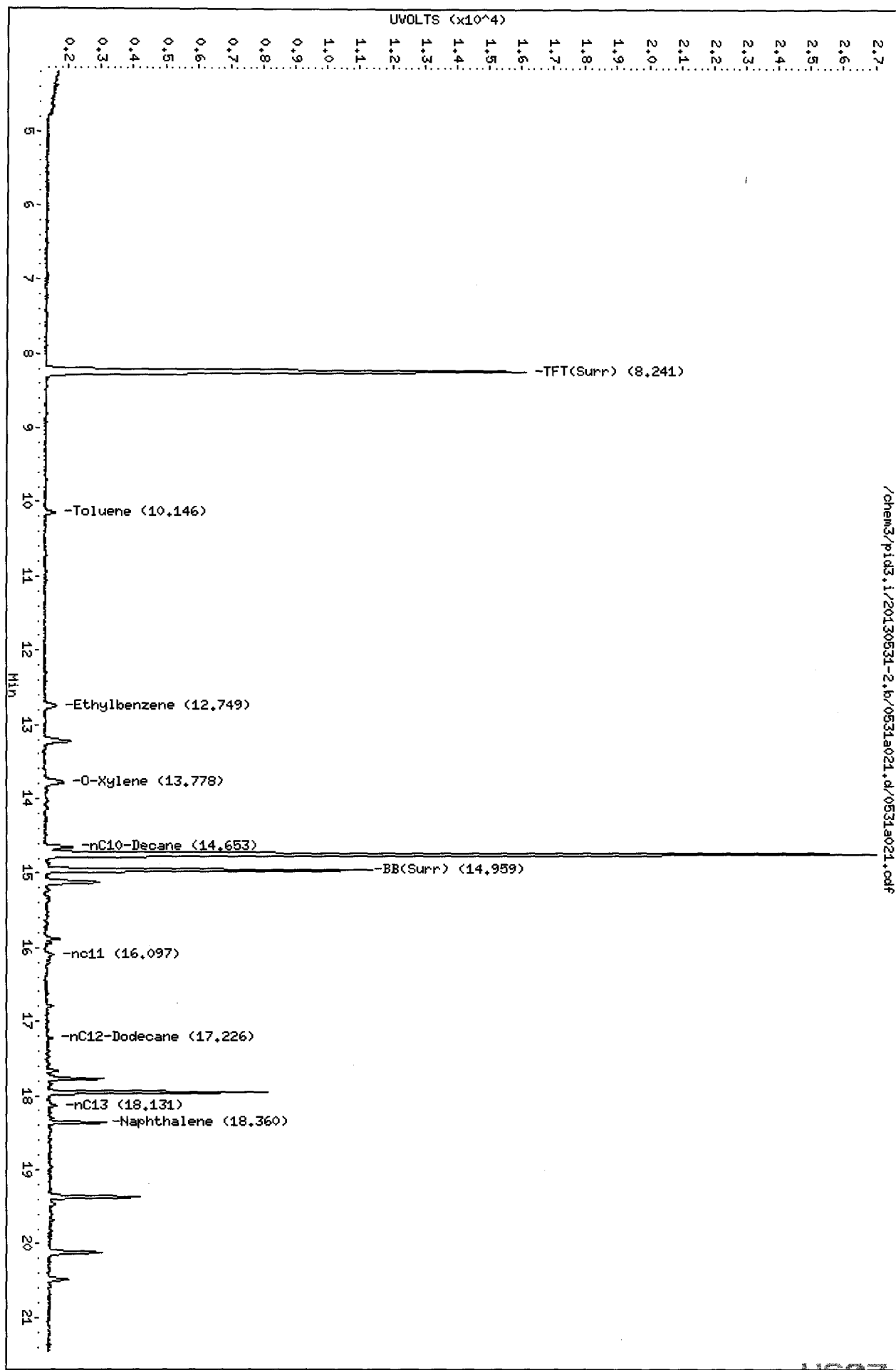
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.147	0.013	406	0.48N	Toluene
12.753	-0.009	322	0.44N	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a021.d
Date: 31-MAY-2013 19:38
Client ID: A2-M30-S-4
Sample Info: MS07K
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

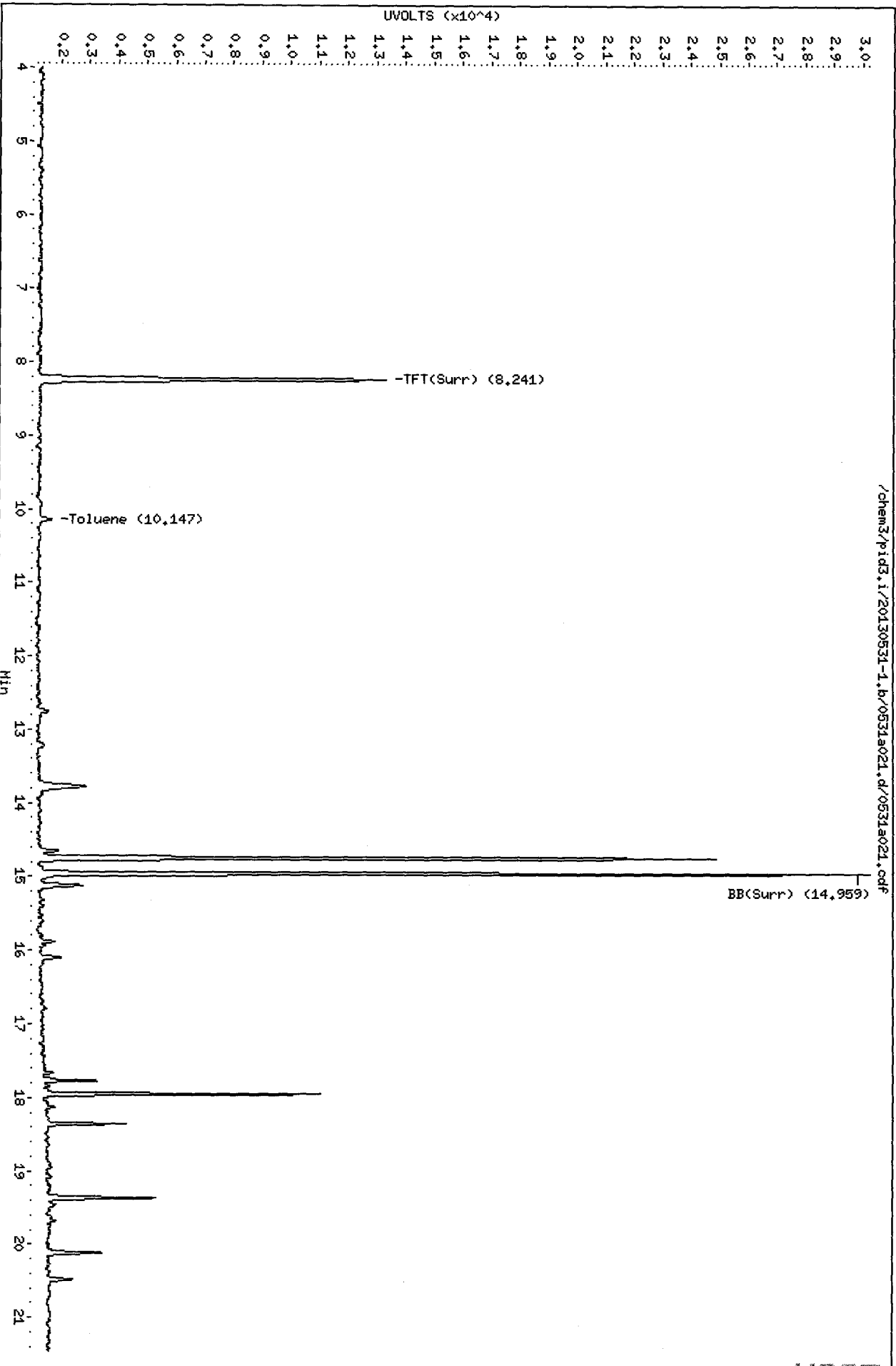


/chem3/pid3.i/20130531-2.b/0531a021.d/0531a021.cdf

4507 00104

Data File: /chem3/pid3.i/20130531-1.b/0531a021.d
Date: 31-May-2013 19:38
Client ID: A2-M30-S-4
Sample Info: MS07K
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



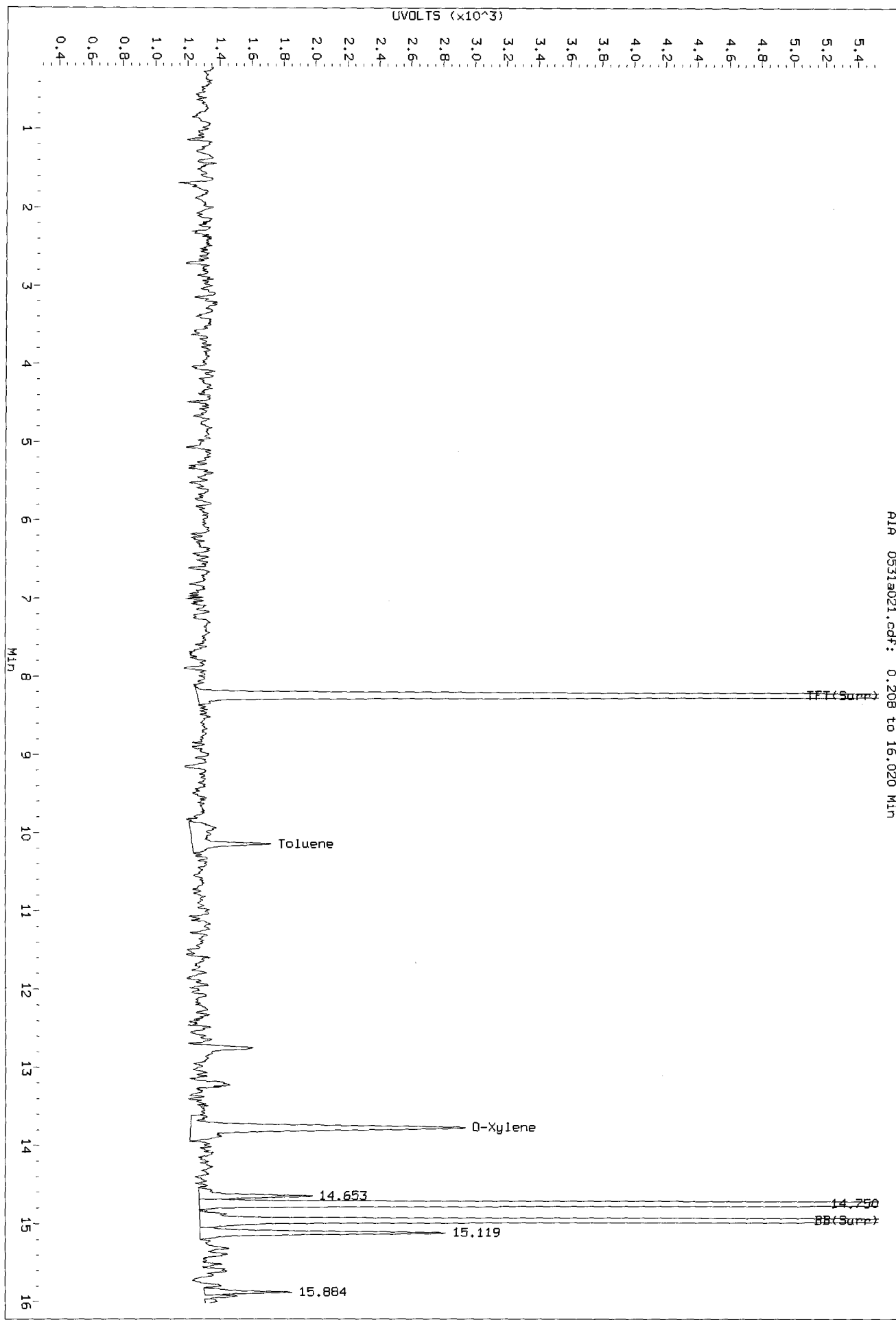
/chem3/pid3.i/20130531-1.b/0531a021.d/0531a021.cdf

001 20 1007

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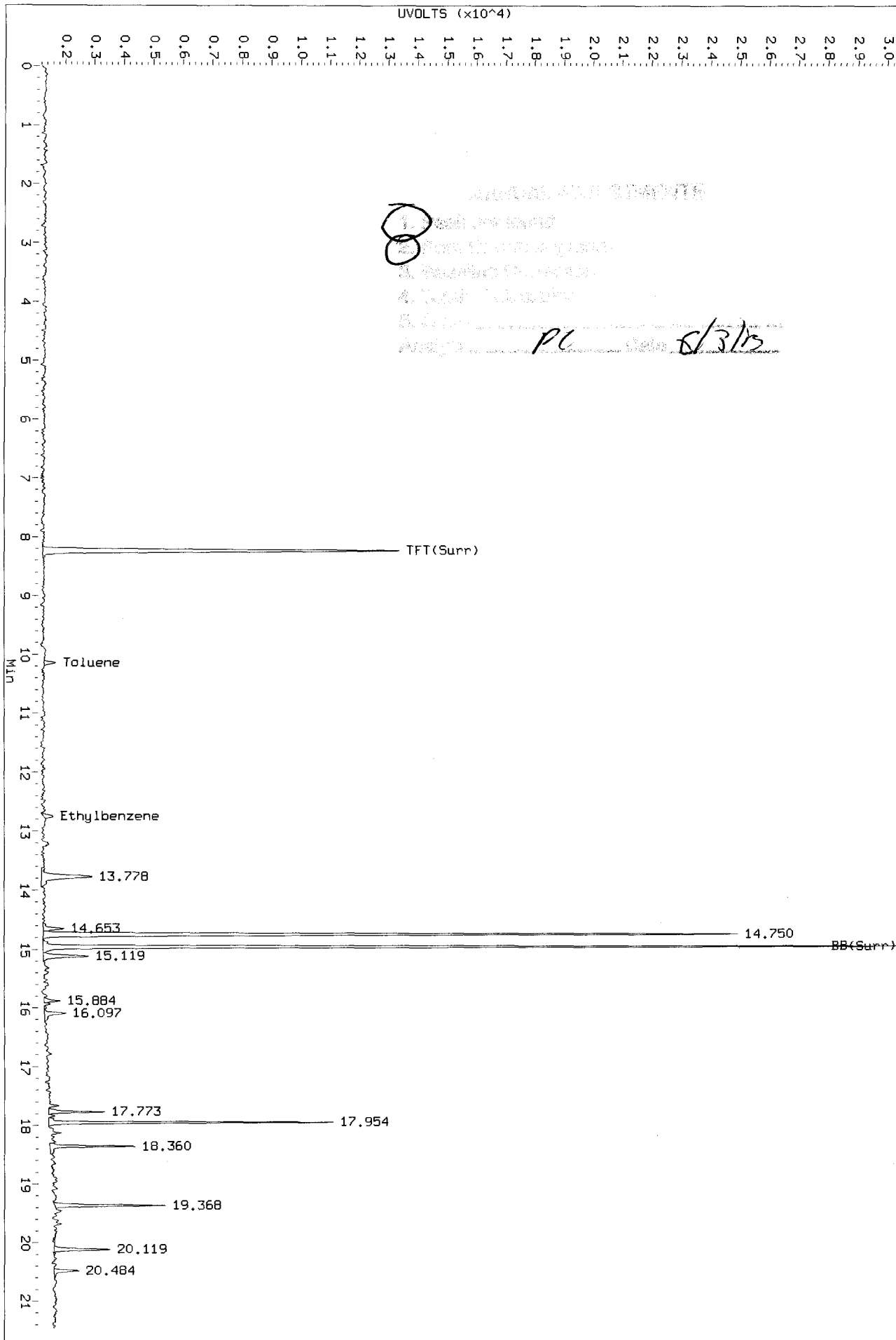
Data File: /chem3/pid3_1/20130531-1.b/0531a021.d/0531a021.cdf
Injection Date: 31-MAY-2013 19:38
Instrument: pid3_1
Client Sample ID: A2-W30-S-4

AIR 0531a021.cdf: 0.208 to 16.020 Min



Data File: /chem3/pid3.1/20130531-1.b/0531a021.d/0531a021.cdf
Injection Date: 31-May-2013 19:38
Instrument: pid3.1
Client Sample ID: A2-W30-S-4

AIR 0531a021.cdf: 0.000 to 21.465 Min



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W31-S-4
SAMPLE

Lab Sample ID: WS07L
 LIMS ID: 13-11592
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 20:06
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 84 mg-dry-wt
 Percent Moisture: 13.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	24
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons 5.9 < 5.9 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	90.8%
Bromobenzene	92.1%

Gasoline Surrogate Recovery

Trifluorotoluene	92.1%
Bromobenzene	93.9%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VC
6/3/8

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a022.d ARI ID: WS07L
Data file 2: /chem3/pid3.i/20130531-1.b/0531a022.d Client ID: A2-W31-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 20:06
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.239	0.011	15929	237623	92.1	TFT(Surr)
14.960	0.005	10519	102477	93.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.03 to 17.32)	2099137	54769	0.026
8015B 2MP-TMB (4.56 to 15.68)	4363035	45936	0.011
AK101 nC6-nC10 (5.09 to 14.57)	3480628	42057	0.012
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	59282	0.027
CalGas nC6-nC12 (5.09 to 17.32)	4309570	54770	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.239	0.011	13091	90.8	TFT(Surr)
14.959	0.005	30229	92.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
10.143	0.010	347	0.41N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

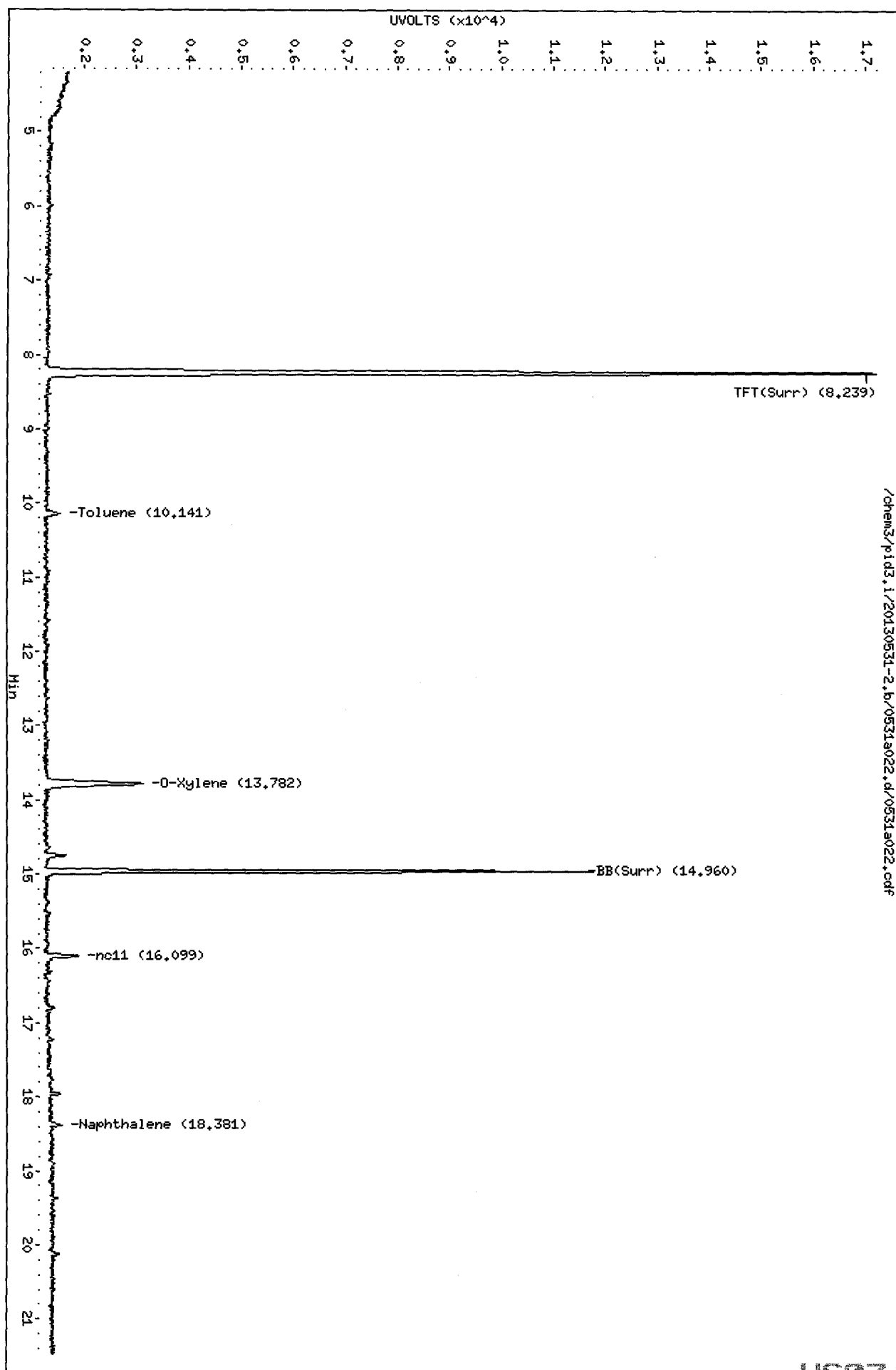
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.1b/0531a022.d
Date: 31-MAY-2013 20:06
Client ID: A2-M31-S-4
Sample Info: MS07L

Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

/chem3/pid3.i/20130531-2.1b/0531a022.d/0531a022.cdf

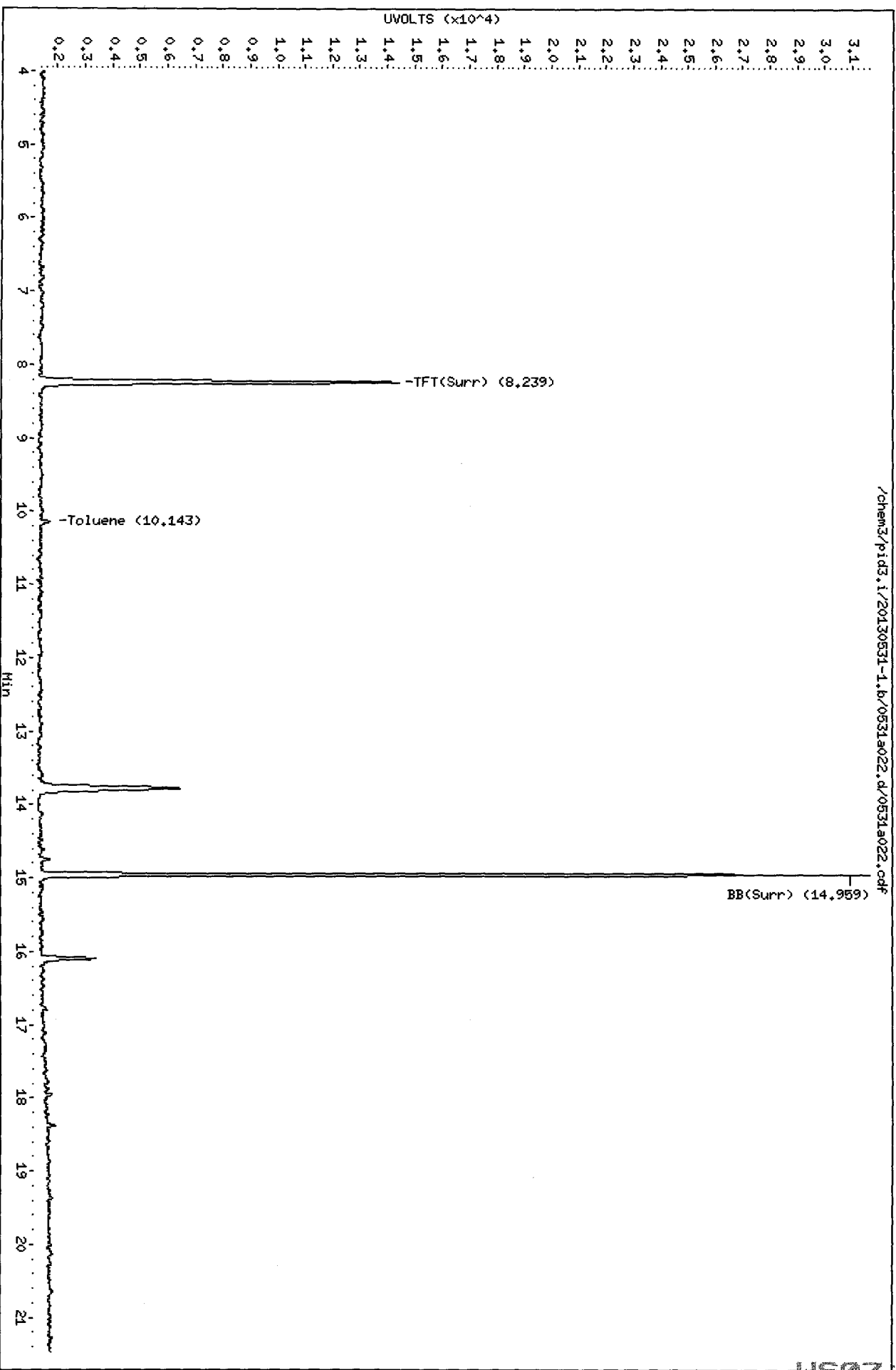


MS07 00130

Data File: /chem3/pid3.i/20130531-1.h/0531a022.d
Date : 31-MAY-2013 20:06
Client ID: 62-N31-S-4
Sample Info: MS07L

Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



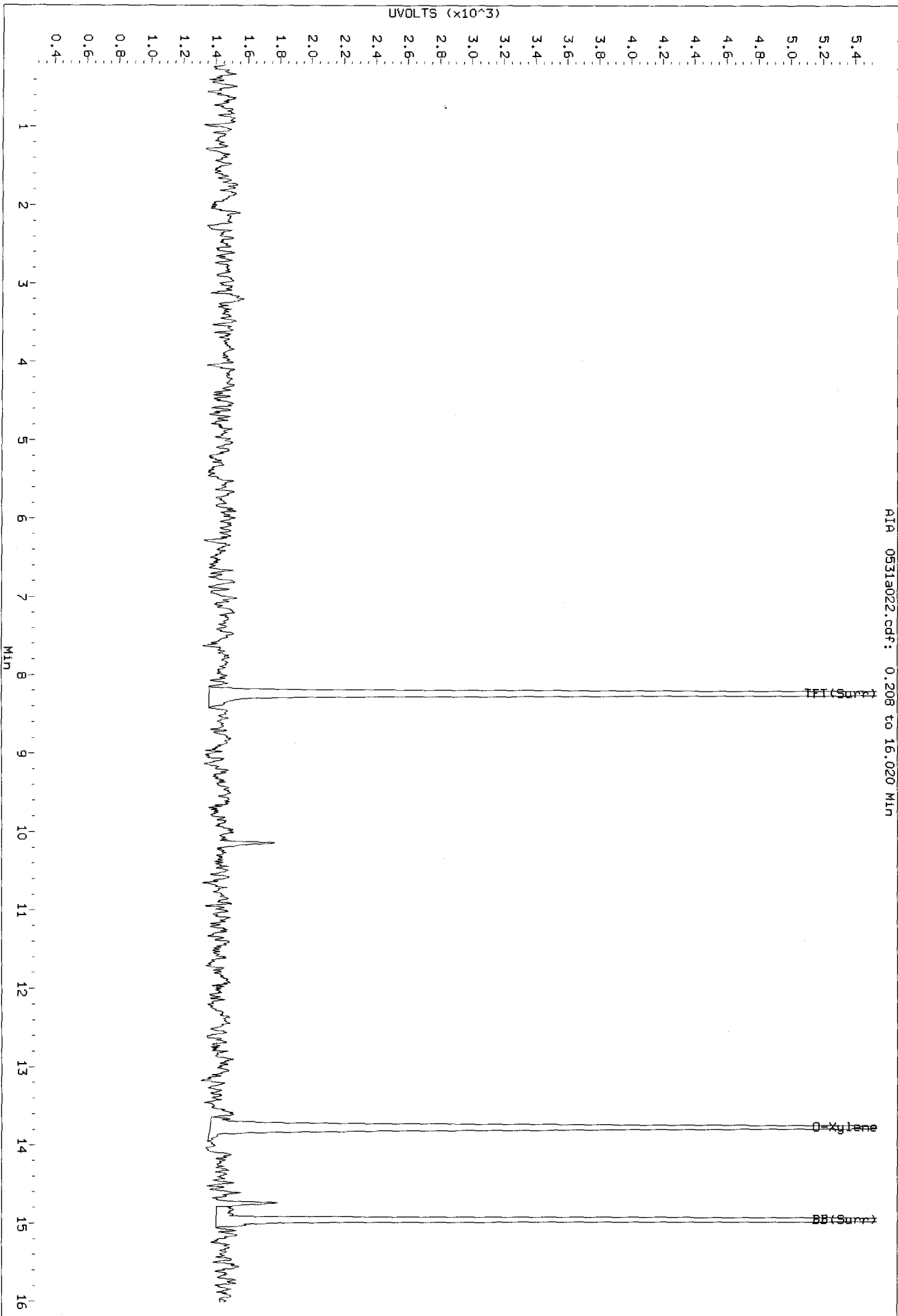
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10101
10001
10001

Handwritten initials: *W. B. B.*

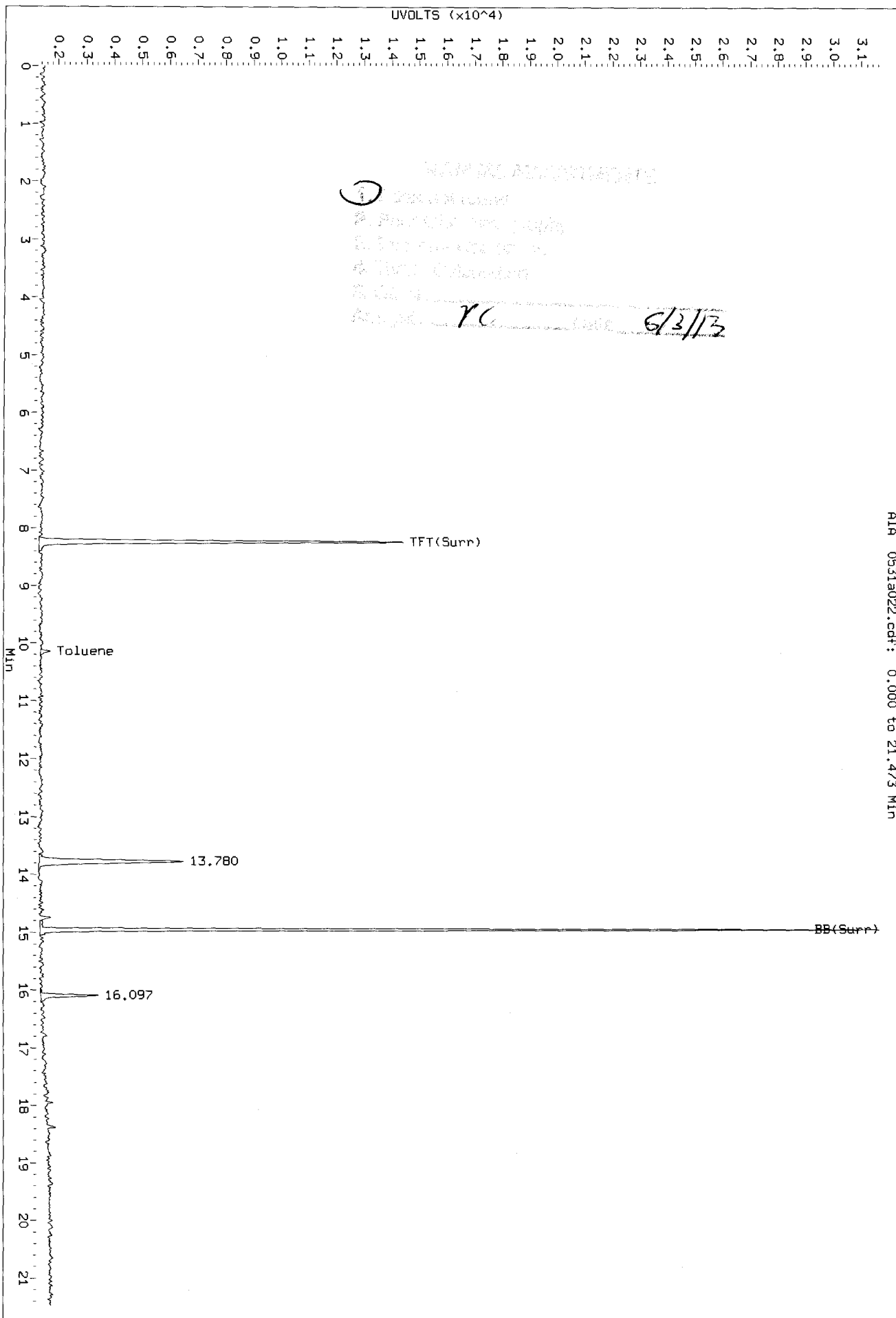
Data File: /chem3/pid3.1/20130531-1.b/0531a022.d/0531a022.cdf
Injection Date: 31-MAY-2013 20:06
Instrument: pid3.1
Client Sample ID: A2-W31-S-4

AIR 0531a022.cdf: 0.208 to 16.020 MIN



Data File: /chem3/pid3.1/20130531-1.b/0531a022.d/0531a022.cdf
Injection Date: 31-May-2013 20:06
Instrument: pid3.1
Client Sample ID: A2-W31-S-4

AIR 0531a022.cdf: 0.000 to 21.473 Min



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W33-S-4
SAMPLE

Lab Sample ID: WS07M
 LIMS ID: 13-11593
 Matrix: Soil
 Data Release Authorized: *B*
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Analyzed: 05/31/13 20:35
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 71 mg-dry-wt
 Percent Moisture: 18.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	18	< 18 U	
108-88-3	Toluene	18	26	
100-41-4	Ethylbenzene	18	< 18 U	
179601-23-1	m,p-Xylene	35	< 35 U	
95-47-6	o-Xylene	18	< 18 U	
	Gasoline Range Hydrocarbons	7.0	< 7.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	87.6%
Bromobenzene	88.8%

Gasoline Surrogate Recovery

Trifluorotoluene	88.7%
Bromobenzene	89.7%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AC
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a023.d ARI ID: WS07M
Data file 2: /chem3/pid3.i/20130531-1.b/0531a023.d Client ID: A2-W33-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 20:35
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.239	0.011	15339	227752	88.7	TFT(Surr)
14.960	0.005	10043	97611	89.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.03 to 17.32)	2099137	38042	0.018
8015B 2MP-TMB (4.56 to 15.68)	4363035	28807	0.007
AK101 nC6-nC10 (5.09 to 14.57)	3480628	28806	0.008
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	38042	0.017
CalGas nC6-nC12 (5.09 to 17.32)	4309570	38043	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.239	0.010	12626	87.6	TFT(Surr)
14.959	0.004	29121	88.8	BB(Surr)

SW8021 (PID)

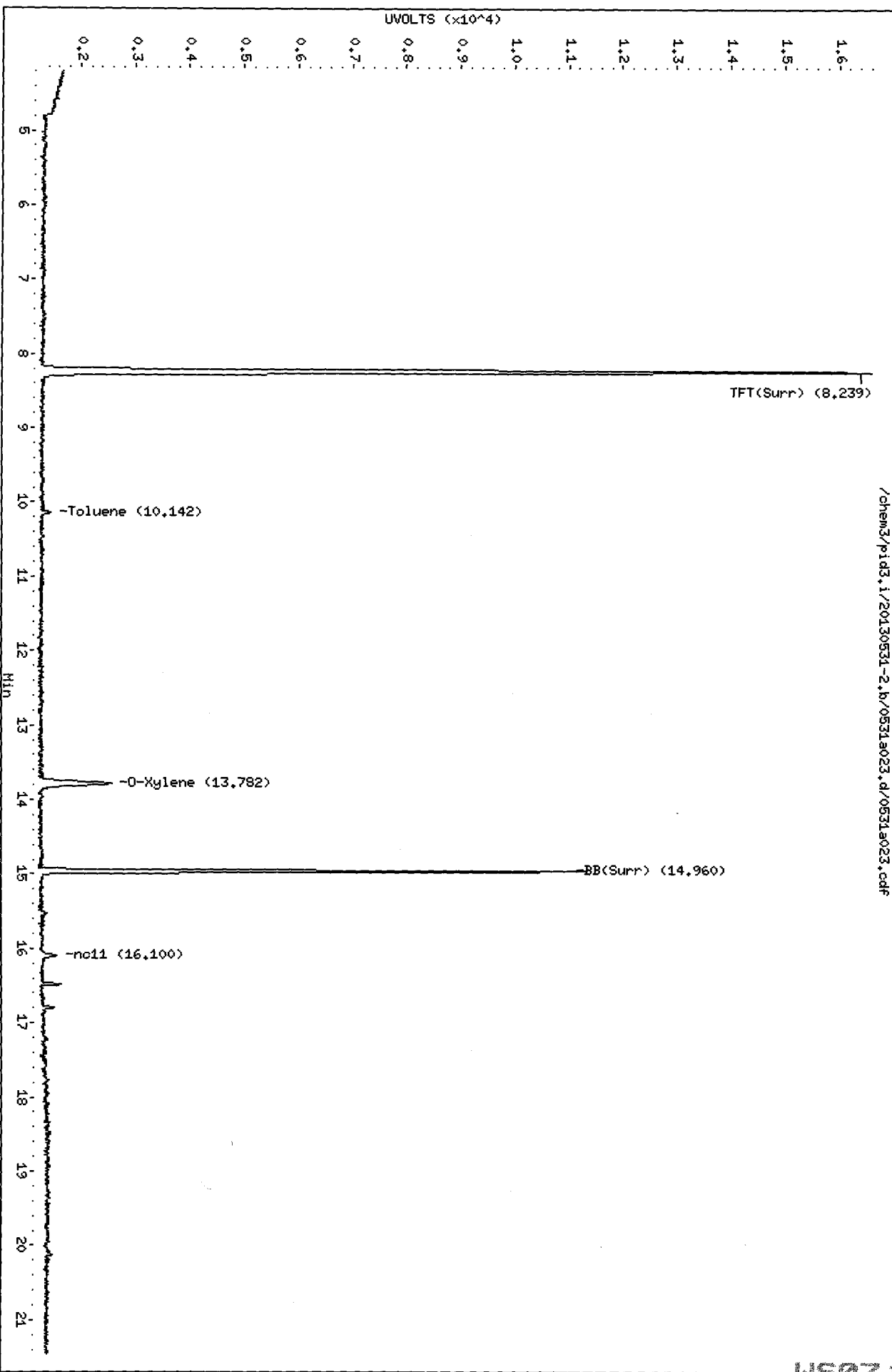
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
10.143	0.010	312	0.37N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a023.d
Date: 31-MAY-2013 20:35
Client ID: A2-M33-S-4
Sample Info: MS07M
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

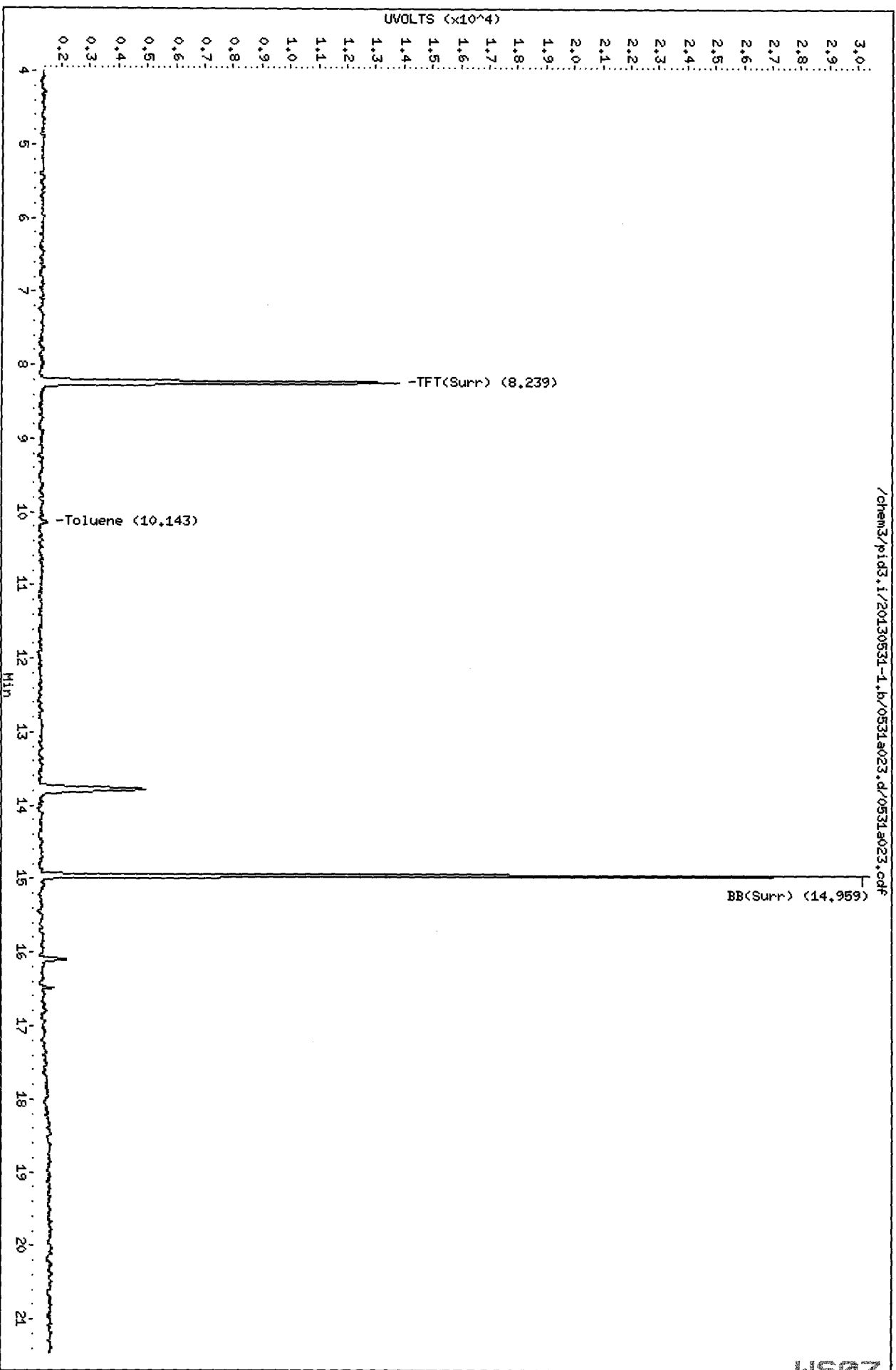
/chem3/pid3.i/20130531-2.b/0531a023.d/0531a023.cdf



MS07 00100

Data File: /chem3/pid3.i/20130531-1.b/0531a023.d
Date: 31-MAY-2013 20:35
Client ID: A2-M33-8-4
Sample Info: MS07H
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



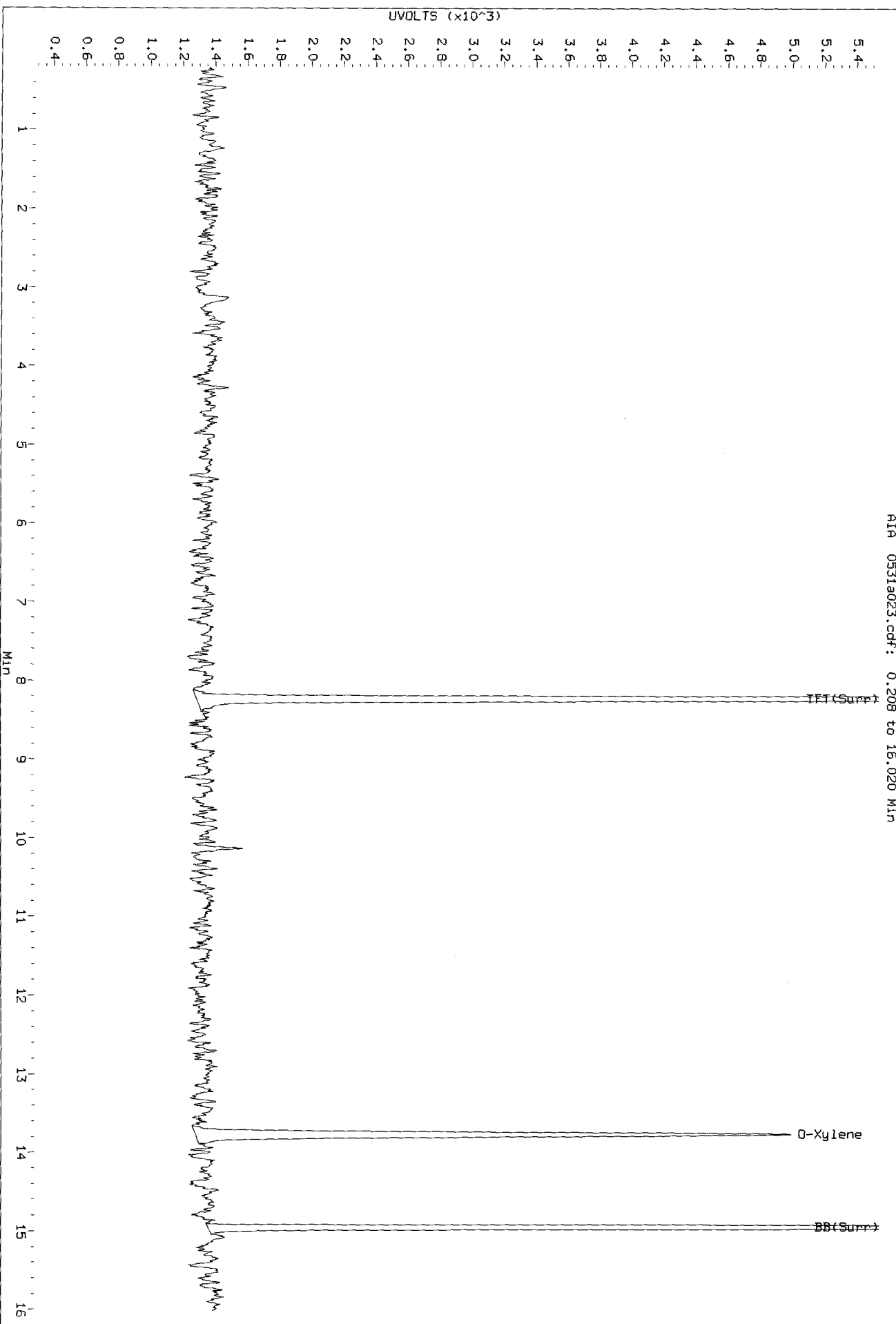
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MS07 00107

PC
6/3/15

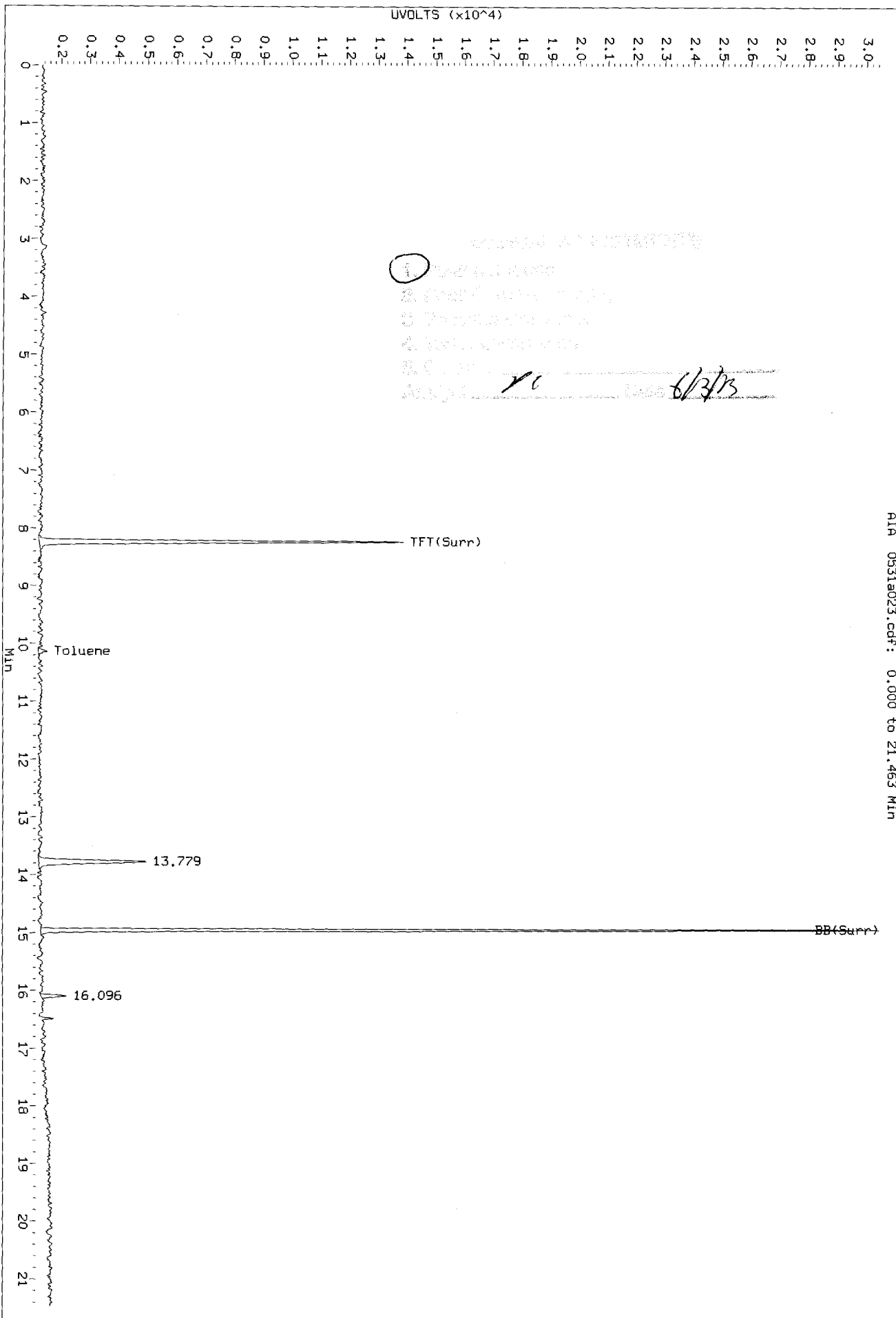
Data File: /chem3/pid3.1/20130531-1.b/0531a023.d/0531a023.cdf
Injection Date: 31-MAY-2013 20:35
Instrument: pid3.1
Client Sample ID: A2-W33-S-4

AIA_0531a023.cdf: 0.208 to 16.020 Min



Data File: /chem3/pid3.1/20130531-1.b/0531a023.d/0531a023.cdf
Injection Date: 31-MAY-2013 20:35
Instrument: pid3.1
Client Sample ID: A2-W33-S-4

AIA_0531a023.cdf: 0.000 to 21.463 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W32-S-4

SAMPLE

Lab Sample ID: WS07N

LIMS ID: 13-11594

Matrix: Soil

Data Release Authorized: *B*

Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 05/31/13 21:03

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 72 mg-dry-wt

Percent Moisture: 19.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	17	< 17 U	
108-88-3	Toluene	17	36	
100-41-4	Ethylbenzene	17	< 17 U	
179601-23-1	m,p-Xylene	35	< 35 U	
95-47-6	o-Xylene	17	< 17 U	
	Gasoline Range Hydrocarbons	6.9	< 6.9 U	---

BETX Surrogate Recovery

Trifluorotoluene	86.3%
Bromobenzene	88.4%

Gasoline Surrogate Recovery

Trifluorotoluene	87.3%
Bromobenzene	88.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
6/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130531-2.b/0531a024.d ARI ID: WS07N
Data file 2: /chem3/pid3.i/20130531-1.b/0531a024.d Client ID: A2-W32-S-4
Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 21:03
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	-----	-----
8.241	0.012	15110	224521	87.3	TFT(Surr)
14.960	0.005	9929	97063	88.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.03 to 17.32)	2099137	27349	0.013
8015B 2MP-TMB (4.56 to 15.68)	4363035	24427	0.006
AK101 nC6-nC10 (5.09 to 14.57)	3480628	24426	0.007
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	31519	0.014
CalGas nC6-nC12 (5.09 to 17.32)	4309570	27350	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.240	0.012	12444	86.3	TFT(Surr)
14.959	0.005	29002	88.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
10.143	0.010	445	0.52N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

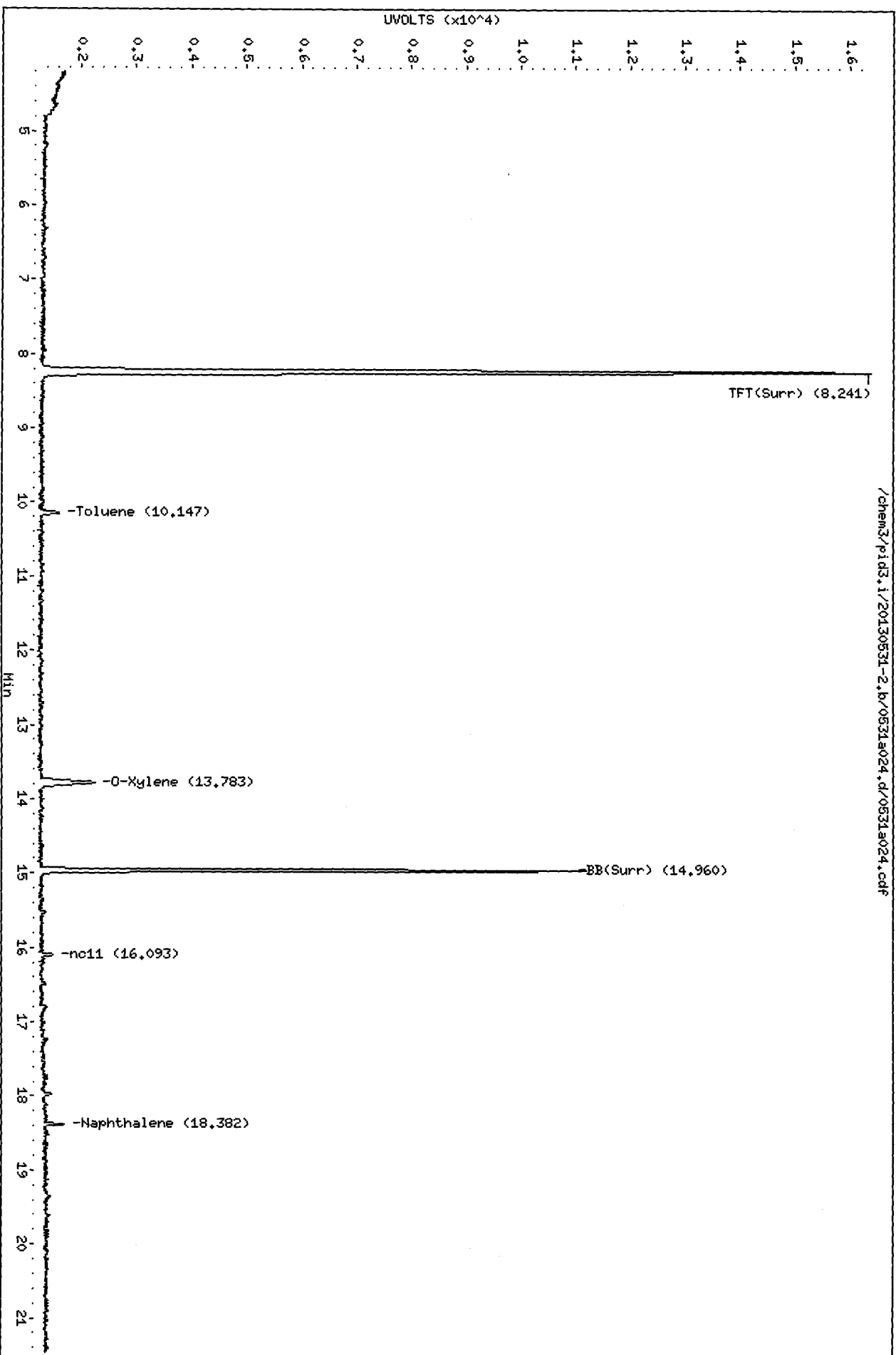
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.1/20130531-2.b/0531a024.d
Date: 31-MAY-2013 21:03
Client ID: A2-M32-S-4
Sample Info: MS07N

Column phase: RTX 502-2 FID

Instrument: pid3.1
Operator: PC
Column diameter: 0.18

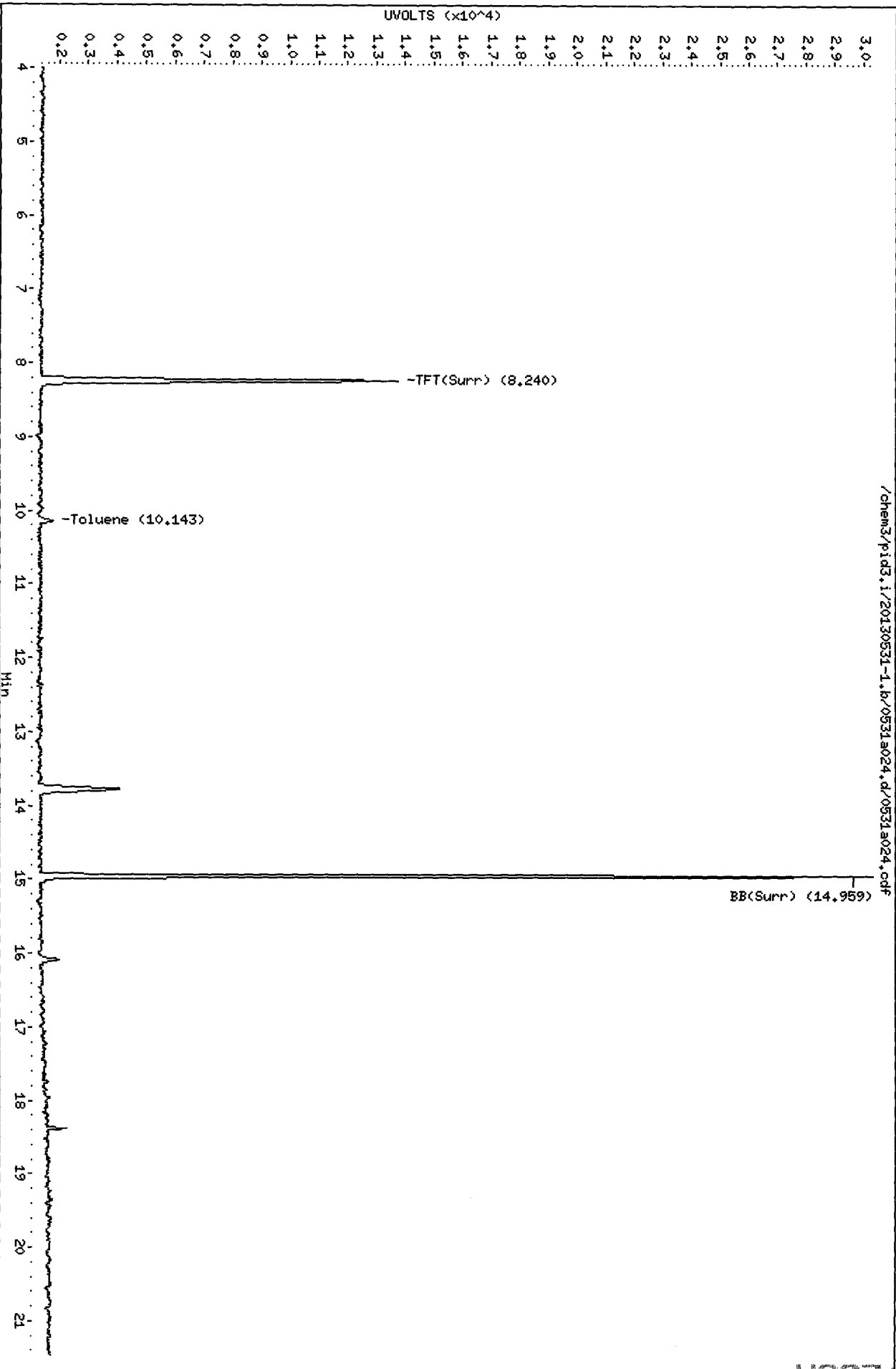
/chem3/pid3.1/20130531-2.b/0531a024.d/0531a024.cdf



MS07 00142

Data File: /chem3/pid3.i/20130531-1.b/0531a024.d
Date: 31-MAY-2013 21:03
Client ID: A2-M32-S-4
Sample Info: MS07N
Column phase: RTX 502-2 PID

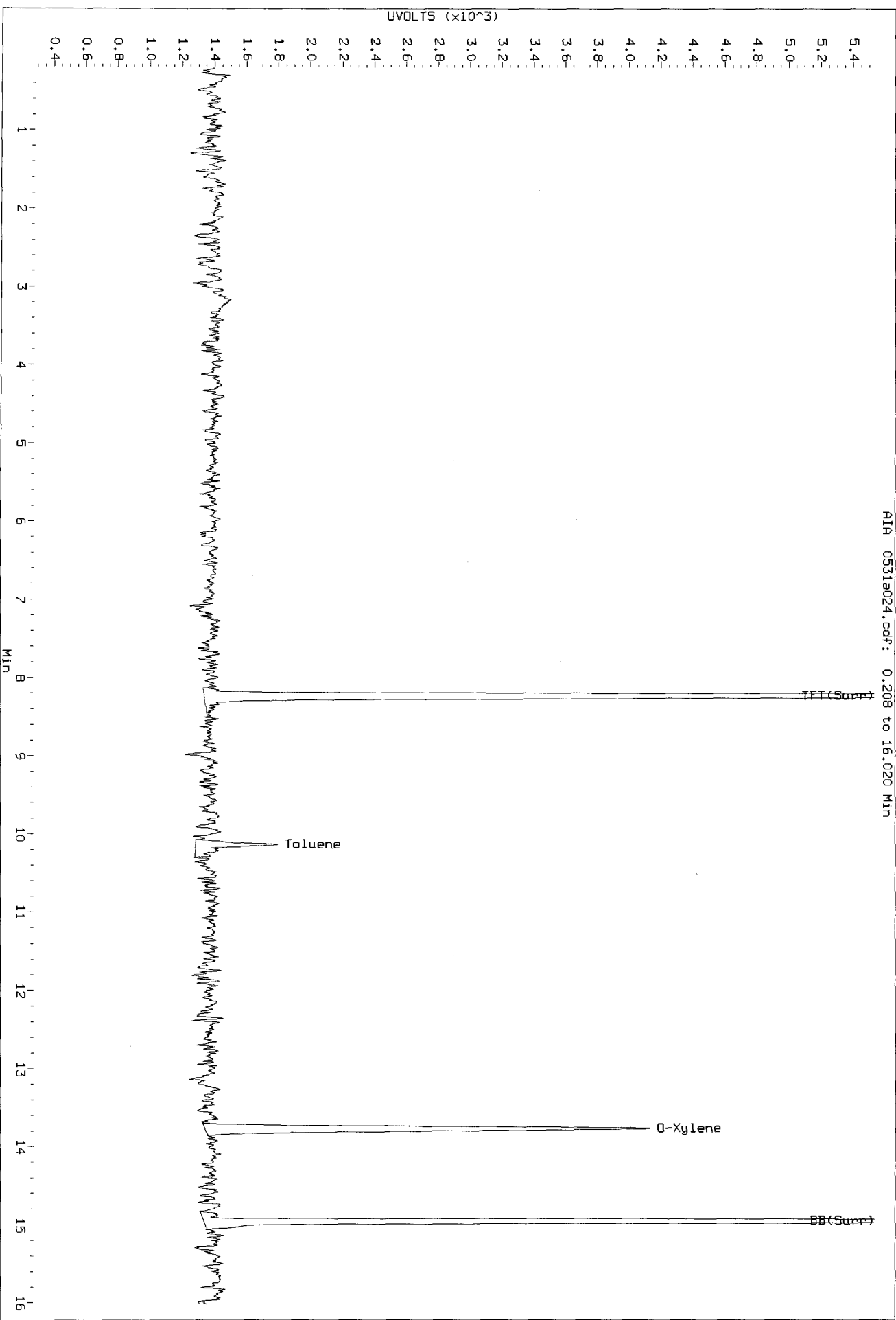
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



MS07 0011

✓
6/3/13

Data File: /chem3/p103.1/20130531-1.b/0531a024.d/0531a024.cdf
Injection Date: 31-MAY-2013 21:03
Instrument: p103.1
Client Sample ID: A2-W32-S-4



AIR 0531a024.cdf: 0.208 to 16.020 Min

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS07
Matrix: Soil

QC Report No: WS07-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-053113	NA	95.2%	94.8%	0	
LCS-053113	NA	97.4%	97.6%	0	
LCSD-053113	NA	95.3%	96.3%	0	
SL-W7-S-4	NA	93.3%	90.7%	0	
SL-W8-S-4	NA	93.3%	92.2%	0	
SL-W9-S-4	NA	89.3%	88.1%	0	
SL-W10-S-4	NA	93.6%	92.7%	0	
SL-W11-S-4	NA	89.9%	90.1%	0	
SL-W12-S-4	NA	88.1%	89.5%	0	
SL-W13-S-4	NA	91.6%	92.0%	0	
SL-W14-S-4	NA	88.3%	89.8%	0	
A2-W28-S-4	NA	93.2%	95.0%	0	
A2-W29-S-4	NA	87.8%	90.1%	0	
A2-W30-S-4	NA	85.9%	90.5%	0	
A2-W31-S-4	NA	92.1%	93.9%	0	
A2-W33-S-4	NA	88.7%	89.7%	0	
A2-W32-S-4	NA	87.3%	88.7%	0	

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11581 to 13-11594

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS07
Matrix: Soil

QC Report No: WS07-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-053113	95.5%	95.0%	0
LCS-053113	97.8%	95.7%	0
LCSD-053113	94.4%	94.6%	0
SL-W7-S-4	94.1%	89.0%	0
SL-W8-S-4	94.2%	91.9%	0
SL-W9-S-4	89.2%	87.9%	0
SL-W10-S-4	95.5%	91.8%	0
SL-W11-S-4	90.5%	91.0%	0
SL-W12-S-4	89.7%	90.3%	0
SL-W13-S-4	91.2%	92.6%	0
SL-W14-S-4	90.0%	91.0%	0
A2-W28-S-4	93.9%	94.5%	0
A2-W29-S-4	86.9%	89.4%	0
A2-W30-S-4	84.0%	88.3%	0
A2-W31-S-4	90.8%	92.1%	0
A2-W33-S-4	87.6%	88.8%	0
A2-W32-S-4	86.3%	88.4%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11581 to 13-11594

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: LCS-053113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-053113

LIMS ID: 13-11581

Matrix: Soil

Data Release Authorized: 

Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/31/13 11:03

LCSD: 05/31/13 11:32

Instrument/Analyst LCS: PID3/PKC

LCSD: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	47.0	50.0	94.0%	44.2	50.0	88.4%	6.1%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.4%	95.3%
Bromobenzene	97.6%	96.3%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-053113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-053113

LIMS ID: 13-11581

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/31/13 11:03

LCSD: 05/31/13 11:32

Instrument/Analyst LCS: PID3/PKC

LCSD: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	172	185	93.0%	154	185	83.2%	11.0%
Toluene	1920	1980	97.0%	1790	1980	90.4%	7.0%
Ethylbenzene	500	580	86.2%	476	580	82.1%	4.9%
m,p-Xylene	1870	2120	88.2%	1760	2120	83.0%	6.1%
o-Xylene	840	960	87.5%	792	960	82.5%	5.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.8%	94.4%
Bromobenzene	95.7%	94.6%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

6/5/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a004.d ARI ID: LCS0531
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a004.d Client ID:
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 11:03
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.237	0.008	16848	284734	97.4	TFT(Surr)
14.959	0.004	10927	108018	97.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	1974268	0.941 M
8015B 2MP-TMB (4.56 to 15.68)	4363035	4284805	0.982 M
AK101 nC6-nC10 (5.09 to 14.57)	3480628	3415258	0.981 M
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	2060819	0.939 M
CalGas nC6-nC12 (5.09 to 17.32)	4309570	4157884	0.965 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.236	0.008	14101	97.8	TFT(Surr)
14.958	0.004	31406	95.7	BB(Surr)

SW8021 (PID)

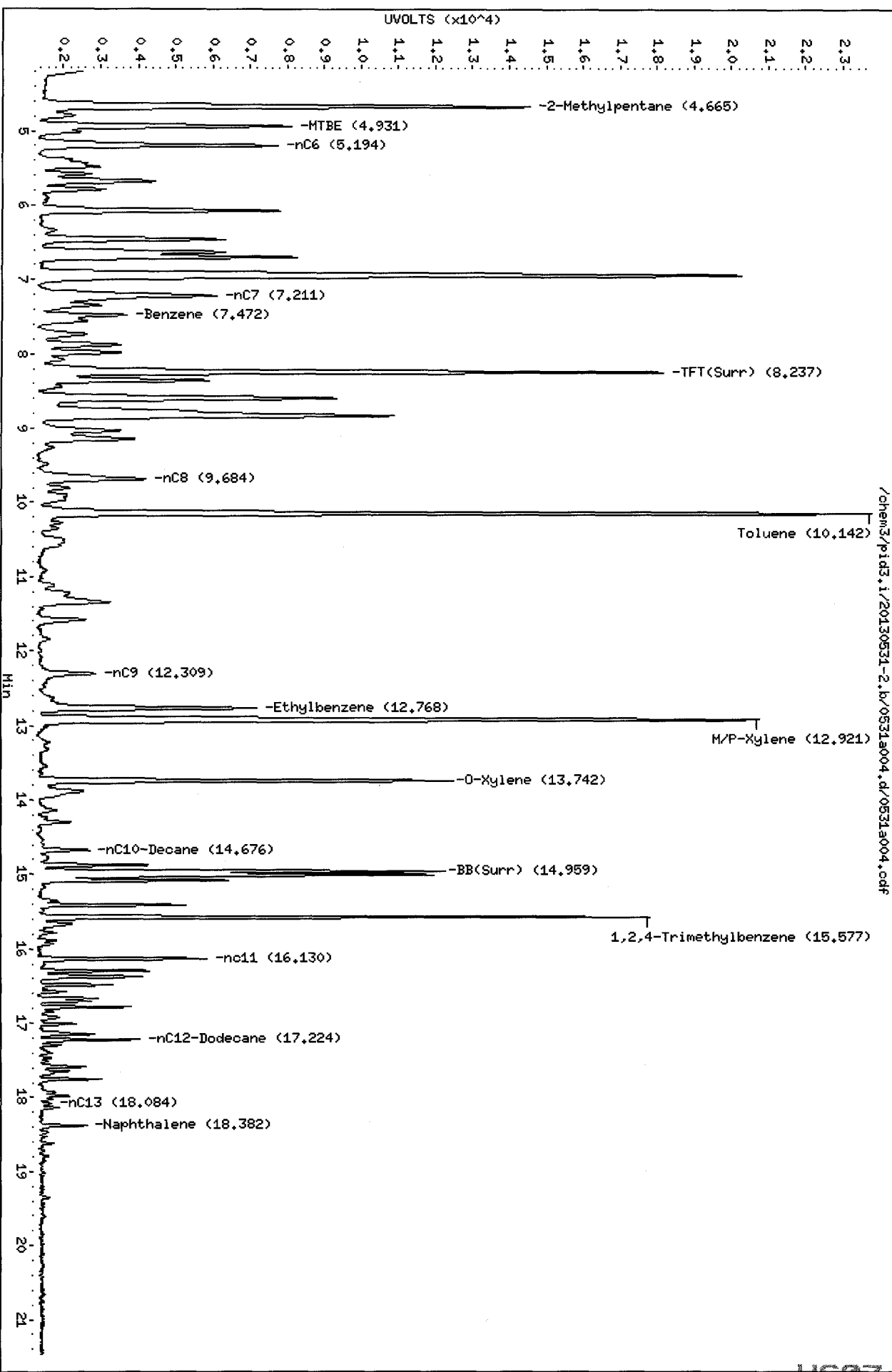
RT	Shift	Response	Amount	Compound
7.471	0.008	3673	3.43	Benzene
10.141	0.008	32611	38.31	Toluene
12.768	0.006	7310	10.00	Ethylbenzene
12.921	0.009	29151	37.34	M/P-Xylene
13.742	0.005	14079	16.79	O-Xylene
4.927	-0.024	957	2.13	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a004.d
Date: 31-MAY-2013 11:03
Client ID:
Sample Info: LCS0531
Column phase: RTX 502-2 FID

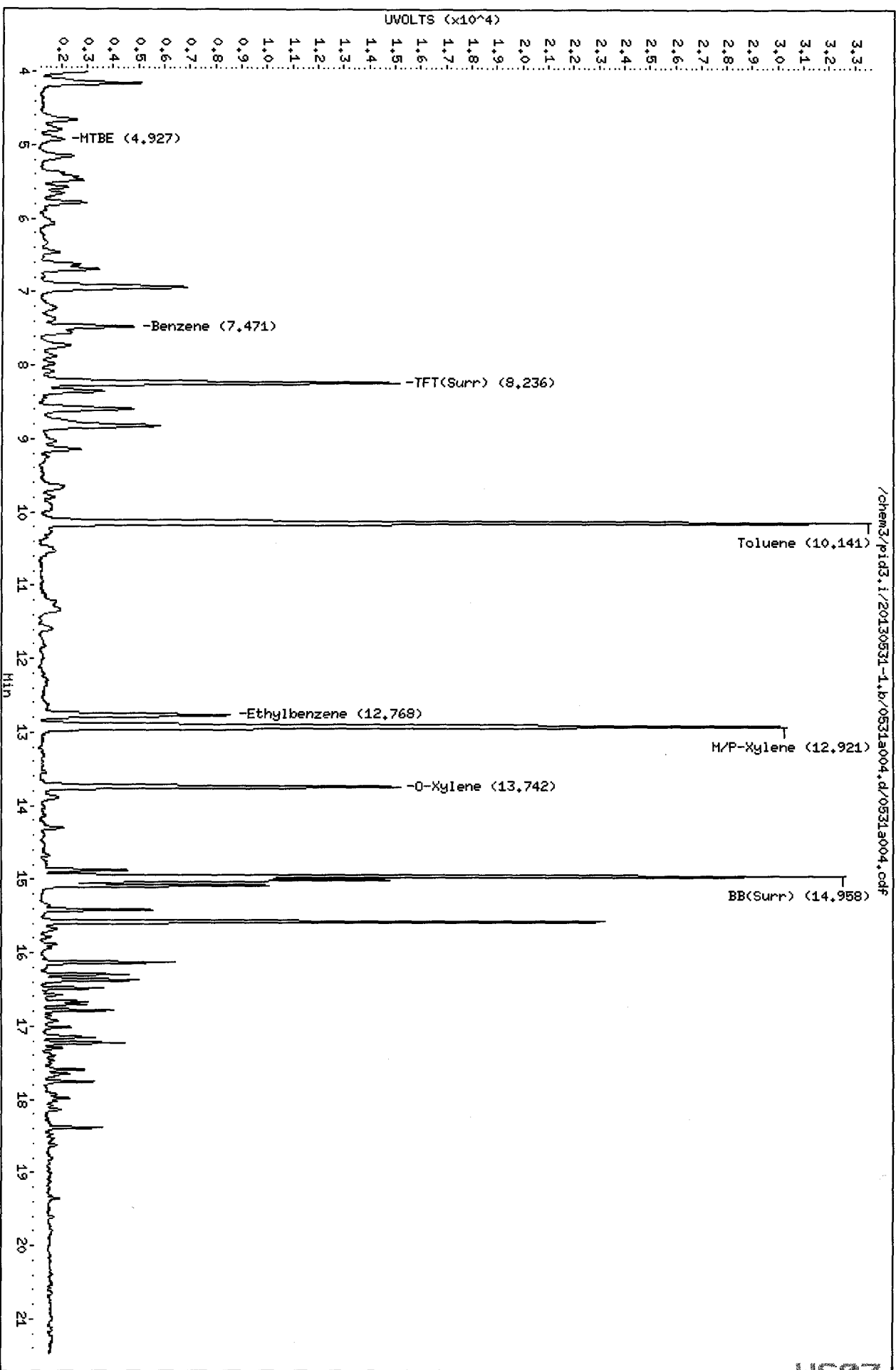
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130531-2.b/0531a004.d/0531a004.cdf

Data File: /chem3/pid3.i/20130531-1.b/0531a004.d
Date: 31-MAY-2013 11:03
Client ID:
Sample Info: LCS0531
Column phase: RTX 502-2 PID

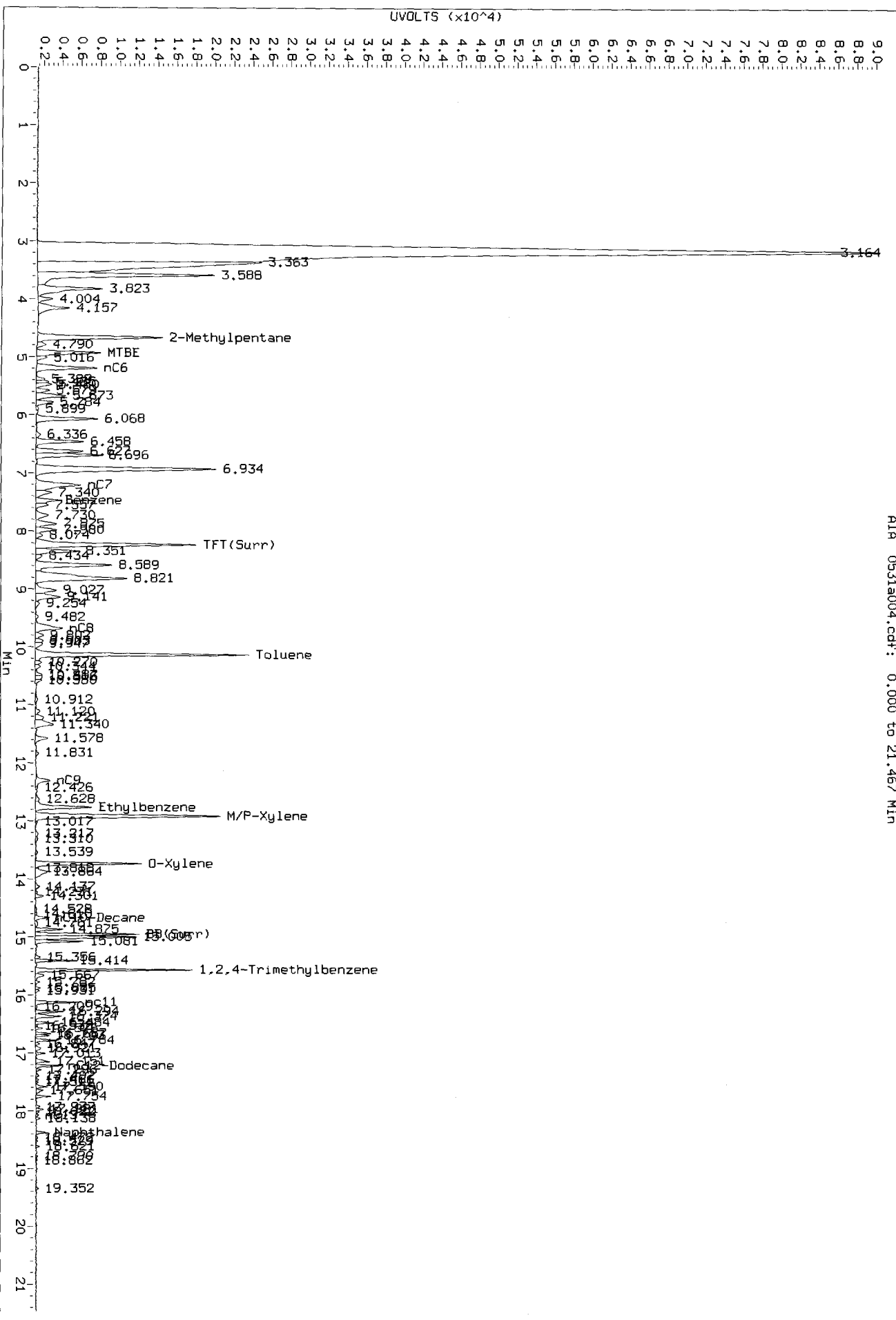
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130531-1.b/0531a004.d/0531a004.cdf

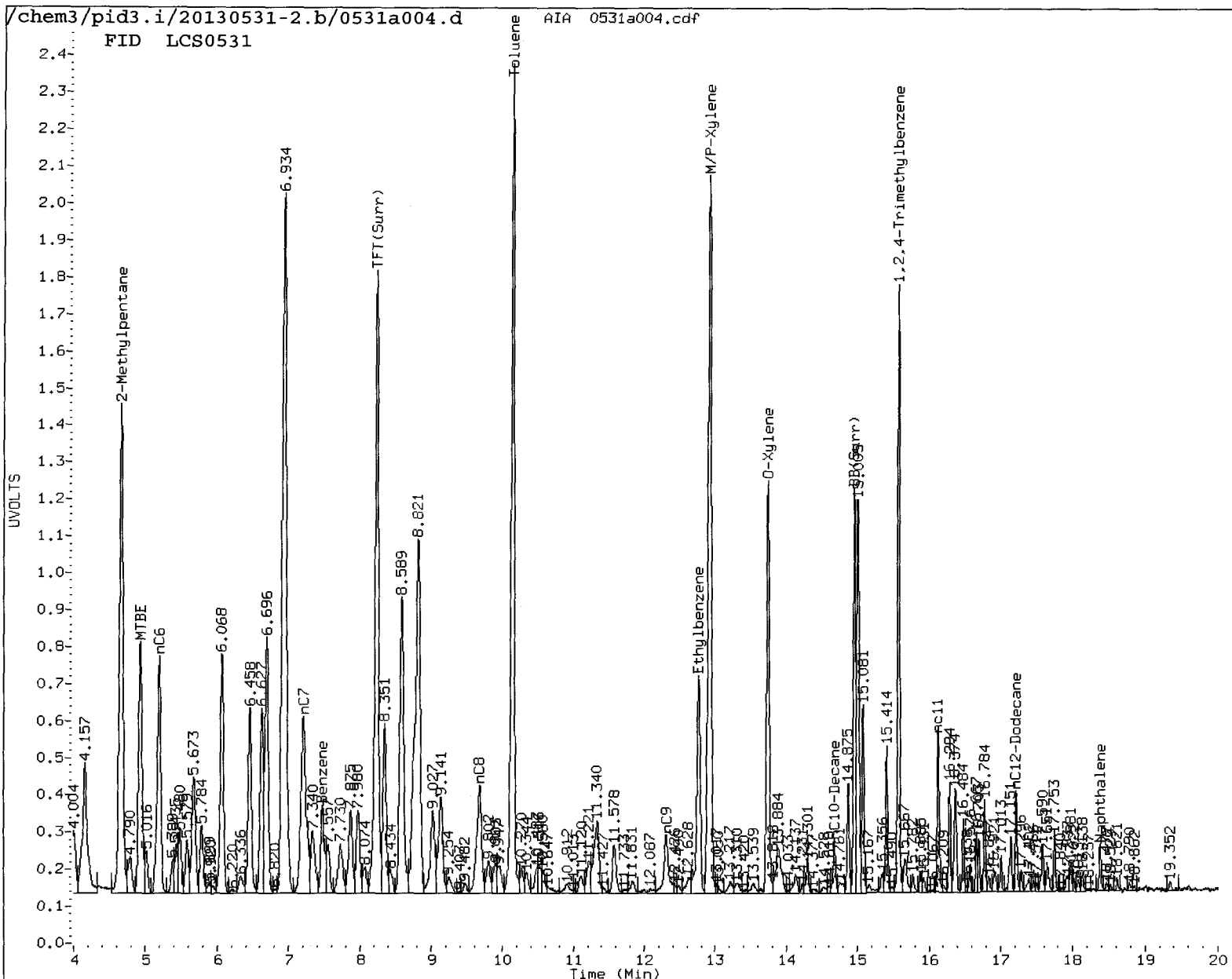
PC
6/3/13

Data File: /chem3/pid3_1/20130531-2.b/0531a004.d/0531a004.cdf
Injection Date: 31-MAY-2013 11:03
Instrument: pid3.1
Client Sample ID:



AIA 0531a004.cdf: 0.000 to 21.467 Min

FID LCS0531



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: WC

Date: 6/3/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 6/3/15

Data file 1: /chem3/pid3.i/20130531-2.b/0531a005.d ARI ID: LCSD0531
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a005.d Client ID:
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 11:32
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.239	0.010	16481	276939	95.3	TFT(Surr)
14.960	0.005	10782	108889	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	1854930	0.884 M
8015B 2MP-TMB (4.56 to 15.68)	4363035	3967796	0.909 M
AK101 nC6-nC10 (5.09 to 14.57)	3480628	3148568	0.905 M
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	1941598	0.884 M
CalGas nC6-nC12 (5.09 to 17.32)	4309570	3863834	0.897 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.238	0.010	13608	94.4	TFT(Surr)
14.960	0.005	31033	94.6	BB(Surr)

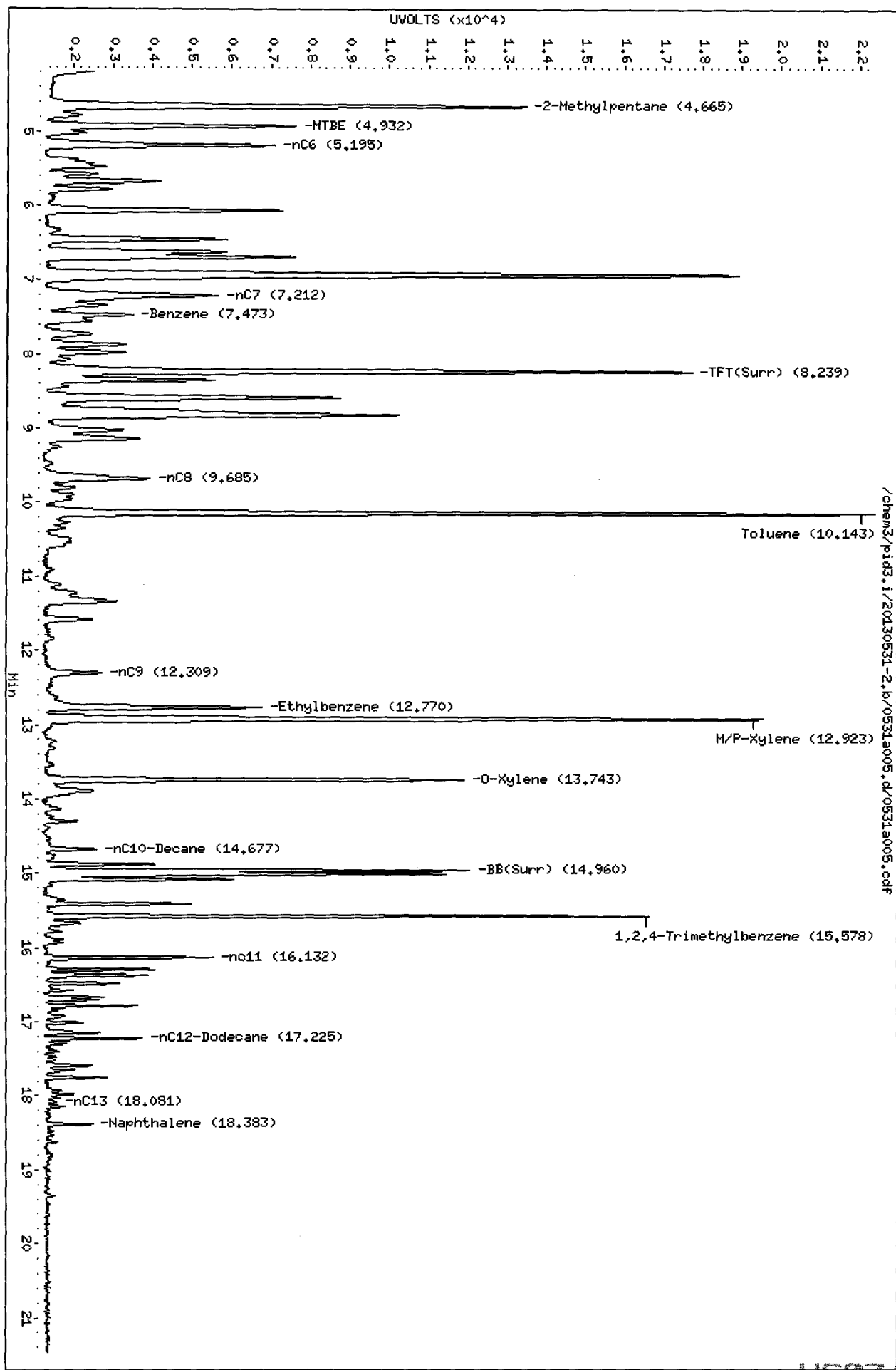
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.472	0.009	3301	3.08	Benzene
10.143	0.009	30449	35.77	Toluene
12.770	0.008	6963	9.52	Ethylbenzene
12.923	0.011	27545	35.29	M/P-Xylene
13.743	0.006	13294	15.85	O-Xylene
4.924	-0.027	868	1.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.l/0531a005.d
Date: 31-MAY-2013 11:32
Client ID:
Sample Info: LCSD0531
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

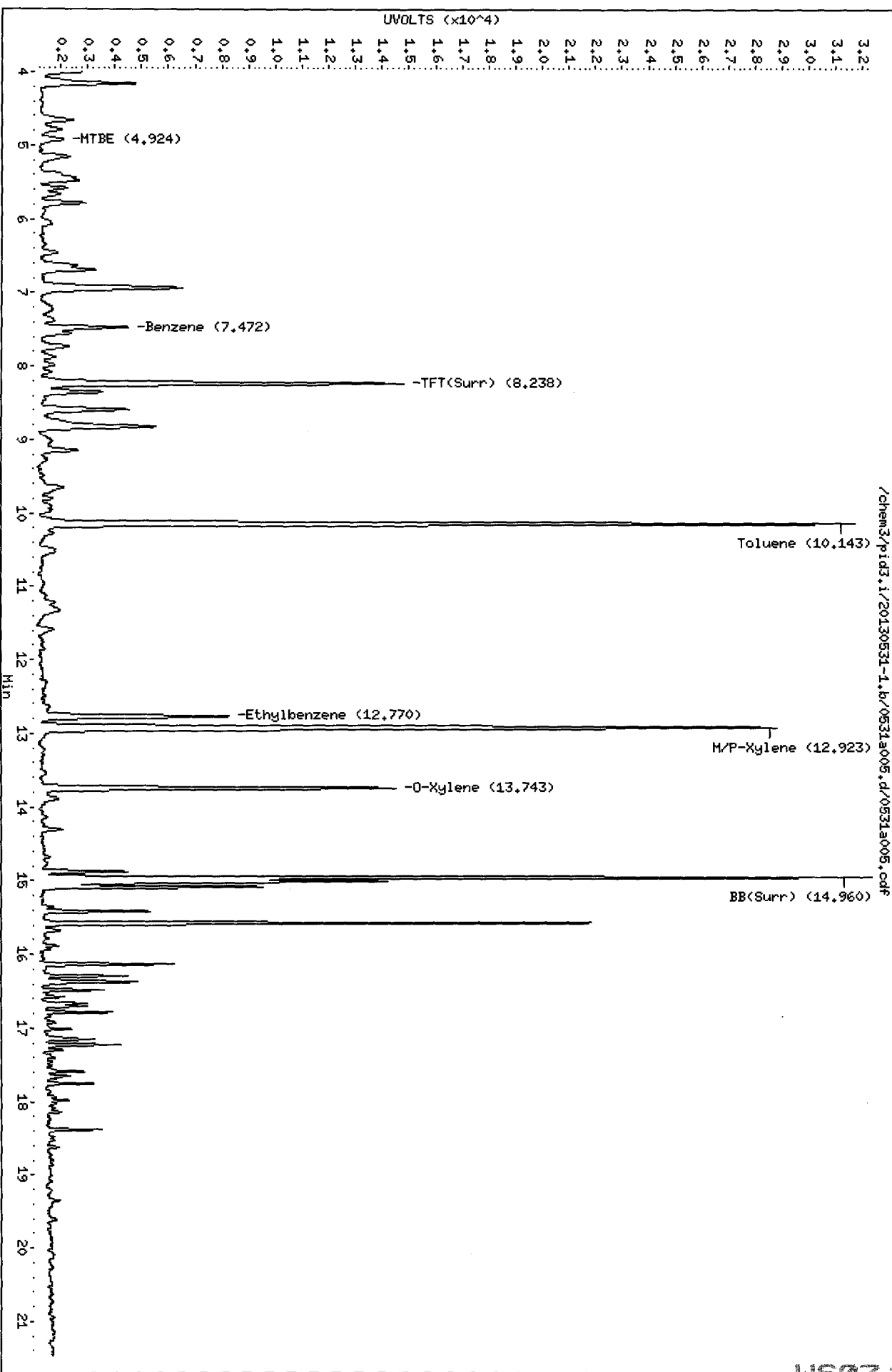


/chem3/pid3.i/20130531-2.l/0531a005.d/0531a005.cdf

4507 00150

Data File: /chem3/pid3.i/20130531-1.b/0531a005.d
Date: 31-MAY-2013 11:32
Client ID:
Sample Info: LCSID0531
Column phase: RTX 502-2 PID

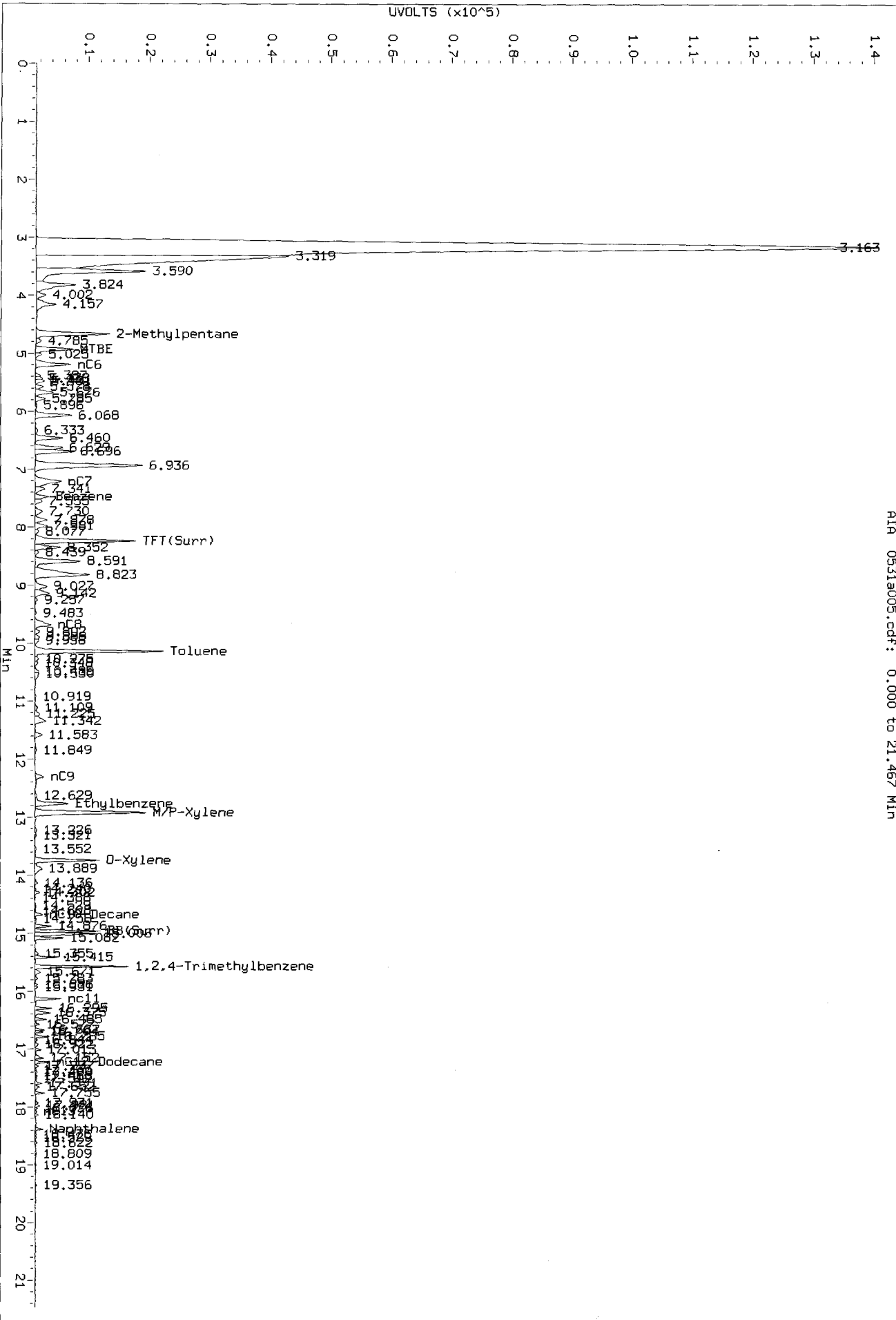
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



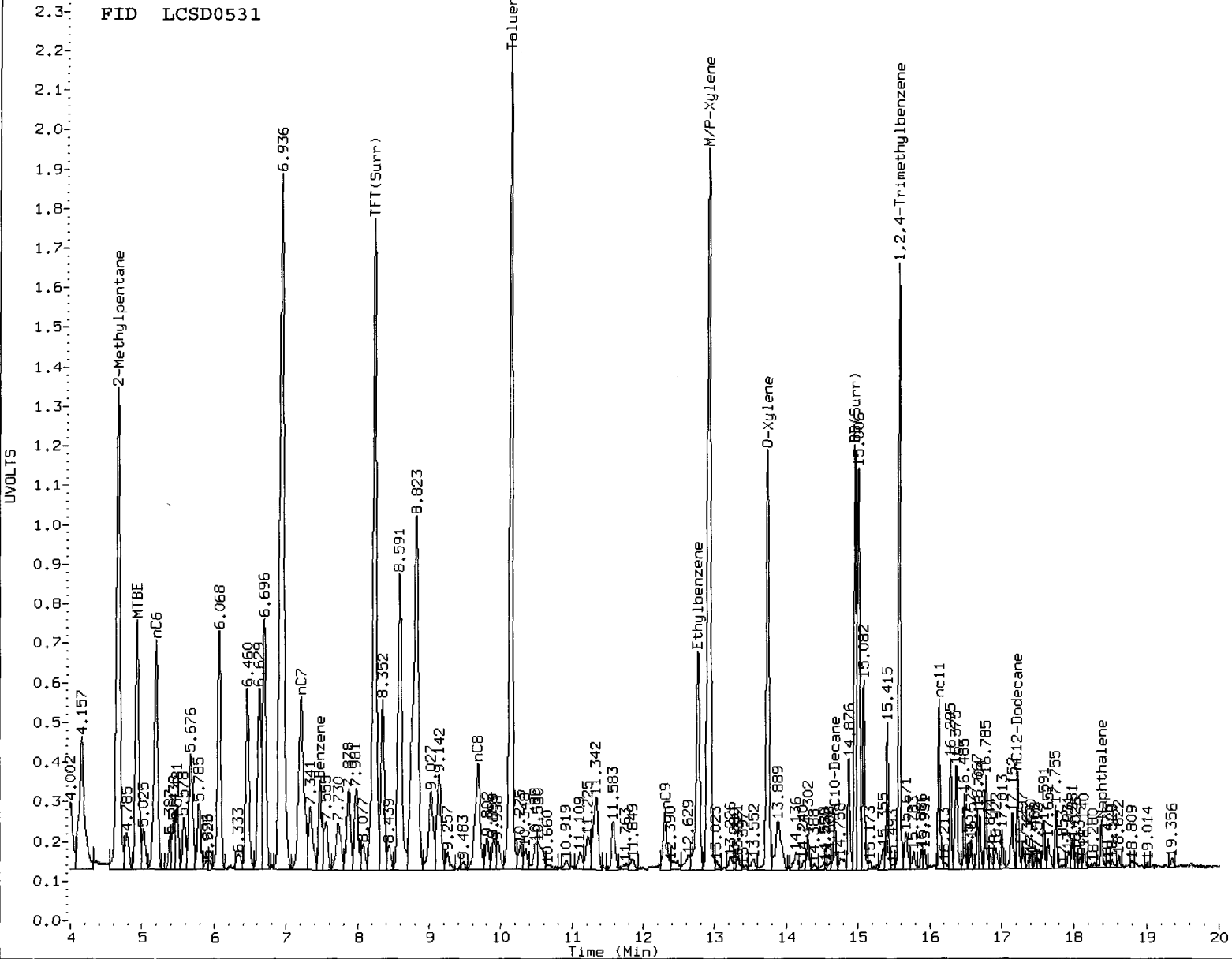
/chem3/pid3.i/20130531-1.b/0531a005.d/0531a005.cdf

PK
6/13/13

Data File: /chem3/pid3.1/20130531-2.b/0531a005.d/0531a005.cdf
Injection Date: 31-MAY-2013 11:32
Instrument: pid3.1
Client Sample ID:



AIR 0531a005.cdf: 0.000 to 21.467 Min



MANUAL INTEGRATION

- 1 Baseline correction
- 2 Poor chromatography
- 3 Peak not found
- 4 Totals calculation


5. Other _____

Analyst: PC

Date: 6/3/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: MB-053113
METHOD BLANK

Lab Sample ID: MB-053113
 LIMS ID: 13-11581
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/03/13

QC Report No: WS07-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed: 05/31/13 12:00
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	95.5%
Bromobenzene	95.0%

Gasoline Surrogate Recovery

Trifluorotoluene	95.2%
Bromobenzene	94.8%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

16
 4/3/13

Data file 1: /chem3/pid3.i/20130531-2.b/0531a006.d ARI ID: MB0531
 Data file 2: /chem3/pid3.i/20130531-1.b/0531a006.d Client ID:
 Method: /chem3/pid3.i/20130531-1.b/PIDB.m Injection Date: 31-MAY-2013 12:00
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.237	0.009	16463	243470	95.2	TFT(Surr)
14.960	0.005	10621	103318	94.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.03 to 17.32)	2099137	5004	0.002
8015B 2MP-TMB (4.56 to 15.68)	4363035	2000	0.000
AK101 nC6-nC10 (5.09 to 14.57)	3480628	2000	0.001
NWTPHG Tol-Nap (10.03 to 18.48)	2195301	5004	0.002
CalGas nC6-nC12 (5.09 to 17.32)	4309570	5005	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.237	0.008	13764	95.5	TFT(Surr)
14.960	0.005	31156	95.0	BB(Surr)

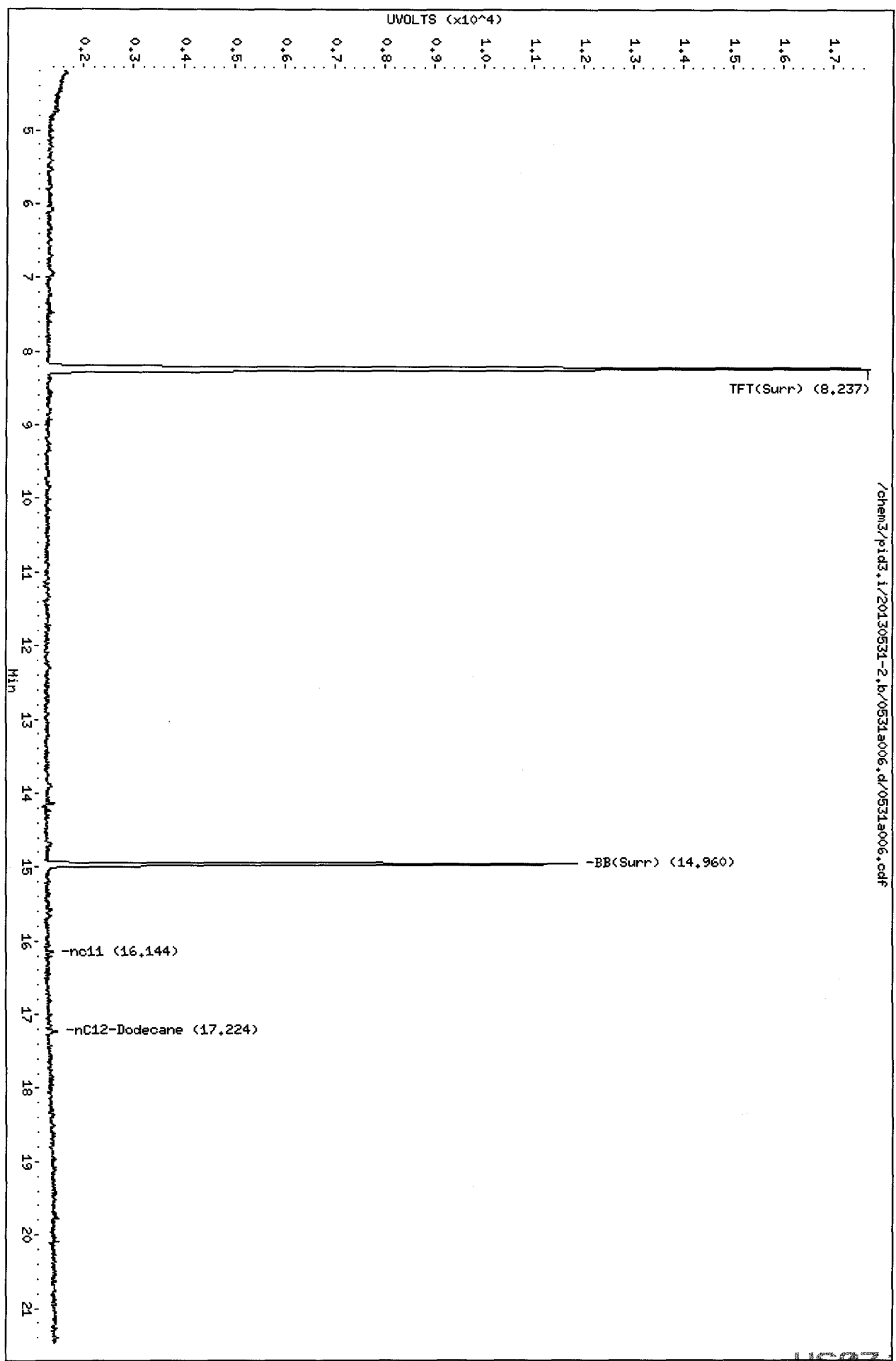
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130531-2.b/0531a006.d
Date : 31-MAY-2013 12:00
Client ID:
Sample Info: HB0531
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

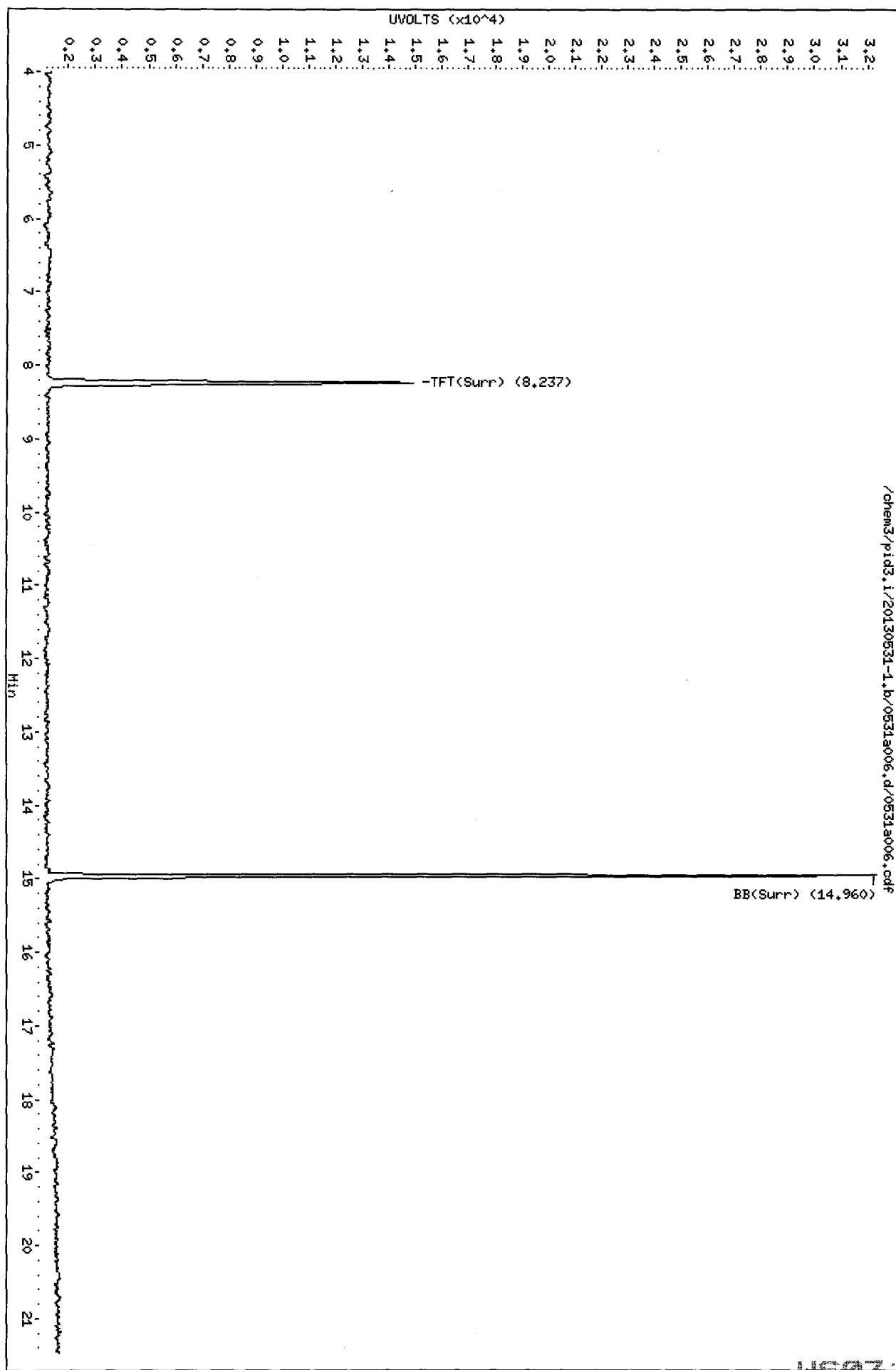


/chem3/pid3.i/20130531-2.b/0531a006.d/0531a006.cdf

0007 00152

Data File: /chem3/pid3.i/20130531-1.b/0531a006.d
Date : 31-May-2013 12:00
Client ID:
Sample Info: HB0531
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130531-1.b/0531a006.d/0531a006.cdf



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 7, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01/03
ARI Job No.: WO44

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted three soil samples on May 1, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx, NWTPH-Gx/BETX, and Metals, as requested on the COC.

The LCSD percent recoveries of m,p-Xylene and o-Xylene fell outside the control limits low for **LCS-050313**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WO44

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: <i>W2044</i>	Turn-around Requested: <i>Standard Turnaround</i>	Page: <i>1</i> of <i>1</i>
ARI Client Company: <i>MFA, Inc.</i>	Phone: <i>503-209-2518</i>	Date: _____ Ice Present? _____
Client Contact: <i>Tony Silva</i>	<i>tsilva@maulfraser.com</i>	No. of Coolers: _____ Cooler Temps: _____

Client Project Name: <i>Cashmere</i>					Analysis Requested					Notes/Comments	
Client Project #: <i>0779.02.01/03</i>		Samplers: <i>Tony Silva</i>			Gasoline GX 5035	BTX 8021/5035	Diesel Dx and Silica Gel Clean	Metals 6010 As, Cr, Cu, Pb	EDS, EDC, MTBE 8200 only if GX detected		
Sample ID	Date	Time	Matrix	No. Containers							
<i>WL1-S-3.5</i>	<i>04/29/13</i>	<i>14:00</i>	<i>Soil</i>	<i>7</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>WL2-S-3.0</i>	<i>04/29/13</i>	<i>14:15</i>	<i>Soil</i>	<i>7</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>WL3-S-3.5</i>	<i>04/29/13</i>	<i>14:30</i>	<i>Soil</i>	<i>7</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
Comments/Special Instructions <i>Please provide GIS key 4 file EDD. Email to Tony Silva and Eric Naylor at MFA.</i>		Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)	Printed Name: <i>Tony Silva</i>		Printed Name: <i>A. Volgardsen</i>		Printed Name:	
		Company: <i>maulfraser and Alongi.</i>	Company: <i>ARI</i>	Company:	Company:	Date & Time: <i>04/30/13 15:00</i>		Date & Time: <i>5/1/13 1022</i>		Date & Time:	

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other _____

Assigned ARI Job No: W044

Tracking No: K0466847047 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc) YES NO

Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry) 4.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by: AV Date: 5/1/13 Time: 1022

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI. (NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment _____ Split by: _____

Samples Logged by: AV Date: 5/1/13 Time: 1501

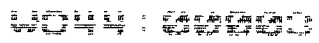
**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:
W2-5-3.0 4oz jar received broken, some sample volume lost, retained volume placed in new jar.

By AV Date: 5/1/13

<p>Small Air Bubbles = 2mm</p>	<p>Peabubbles 2-4 mm</p>	<p>LARGE Air Bubbles > 4 mm</p>	<p>Small → "sm"</p> <p>Peabubbles → "pb"</p> <p>Large → "lg"</p> <p>Headspace → "hs"</p>
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Sample ID Cross Reference Report



ARI Job No: W044
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. WL1-S-3.5	W044A	13-9401	Soil	04/29/13 14:00	05/01/13 10:22
2. WL2-S-3.0	W044B	13-9402	Soil	04/29/13 14:15	05/01/13 10:22
3. WL3-S-3.5	W044C	13-9403	Soil	04/29/13 14:30	05/01/13 10:22

W1044: 04R BE 6/4/13



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($<20\%$ RSD, $<20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**




Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: W044-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Matrix: Soil
Data Release Authorized: 
Reported: 05/07/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050213 13-9401	Method Blank HC ID: ---	05/02/13	05/06/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 98.4%
W044A 13-9401	WL1-S-3.5 HC ID: DIESEL/MOTOR OIL	05/02/13	05/06/13 FID4A	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	30 59	610 1800 81.4%
W044B 13-9402	WL2-S-3.0 HC ID: DIESEL/MOTOR OIL	05/02/13	05/06/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	27 110 88.7%
W044C 13-9403	WL3-S-3.5 HC ID: DIESEL/MOTOR OIL	05/02/13	05/06/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.3 13	200 500 78.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130506.b/0506a015.d
Method: /chem3/fid4a.i/20130506.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/07/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO44MBS1
Client ID:
Injection: 06-MAY-2013 13:26
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		883489	56.85
C8	----				WATPHD (C12-C24)		147830	10.18 ✓
C10	2.858	0.002	735	914	WATPHM (C24-C38)		66945	4.92 ✓
C12	3.818	-0.003	2350	2692	AK102 (C10-C25)		177184	10.29
C14	4.501	-0.005	4576	3917	AK103 (C25-C36)		57078	6.20
C16	5.086	-0.002	2572	2834				
C18	5.624	-0.003	1497	905				
C20	6.167	-0.005	1190	1748				
C22	6.706	-0.004	947	1902	MIN.OIL (C24-C38)		66945	3.92
C24	7.217	-0.010	554	994				
C25	7.465	-0.008	425	359				
C26	7.729	0.007	268	148				
C28	8.173	0.006	670	722				
C32	8.984	-0.001	8400	8470				
C34	9.364	-0.004	407	823				
Filter Peak	11.452	-0.001	1416	2162	CREOSOT (C12-C22)		136877	62.73 M
C36	9.736	-0.006	567	1131				
C38	10.101	-0.003	496	962				
C40	10.475	0.013	744	436				
o-terph	5.763	-0.001	957891	853548				
Triacon Surr	8.598	0.001	674746	774978				

Range Times: NW Diesel(3.821 - 7.227) AK102(2.86 - 7.47) Jet A(2.86 - 5.63)
NW M.Oil(7.23 - 10.10) AK103(7.47 - 9.74) OR Diesel(2.86 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	853548	44.3	98.4 ✓
Triacontane	774978	42.6	94.6

JW
5/7/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a,1/20130506,b/0506a015.d

Date: 06-MAY-2013 13:26

Client ID:

Sample Info: M044HBS1

Column phase: RTX-1

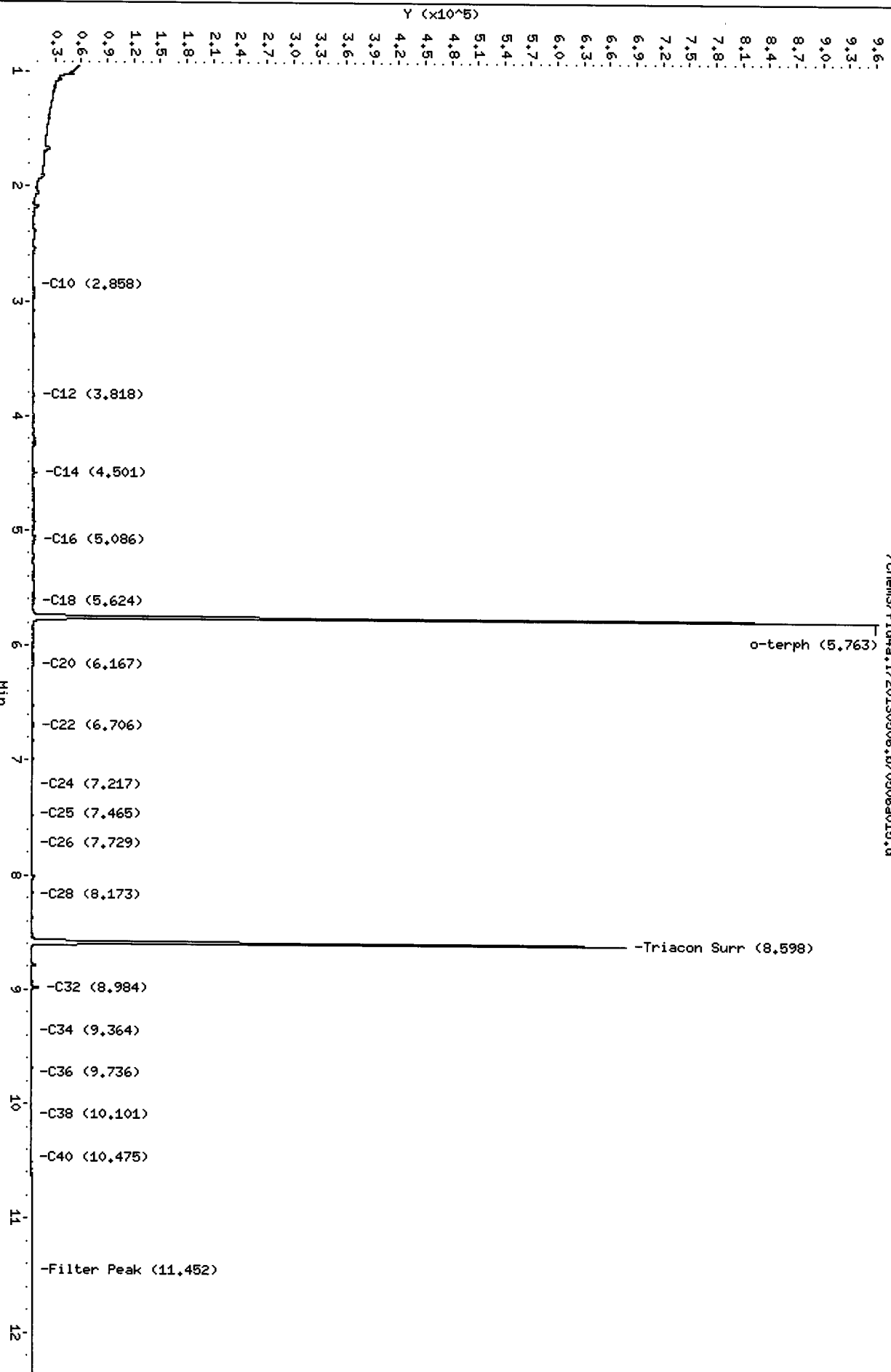
Instrument: fid4a,1

Operator: JR/VTS/JM

Column diameter: 0.25

Page 1

/chem3/fid4a,1/20130506,b/0506a015.d



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130506.b/0506a019.d
Method: /chem3/fid4a.i/20130506.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/07/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO44A
Client ID:
Injection: 06-MAY-2013 14:48
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1152167	74.14
C8	----				WATPHD	(C12-C24)	14930430	1028.65
C10	2.850	-0.006	8906	10076	WATPHM	(C24-C38)	42428630	3118.84
C12	3.815	-0.006	22002	28271	AK102	(C10-C25)	17580777	1021.26
C14	4.508	0.002	33726	59778	AK103	(C25-C36)	40284748	4377.79
C16	5.087	-0.001	38703	45000				
C18	5.621	-0.006	48141	75269				
C20	6.167	-0.005	81723	131675				
C22	6.712	0.001	137063	137554	MIN.OIL	(C24-C38)	42428630	2487.18
C24	7.231	0.004	207904	142681				
C25	7.477	0.004	262356	221912				
C26	7.725	0.003	285764	100973				
C28	8.168	0.001	424270	383649				
C32	8.983	-0.002	347028	663510				
C34	9.369	0.001	198414	89385				
Filter Peak	11.444	-0.009	15298	63068	CREOSOT	(C12-C22)	9358547	4289.17 M
C36	9.753	0.011	44587	80683				
C38	10.101	-0.003	15786	18487				
C40	10.469	0.007	13807	4921				
o-terph	5.758	-0.005	202779	141364				
Triacon Surr	8.612	0.014	194558	154683				

Range Times: NW Diesel(3.821 - 7.227) AK102(2.86 - 7.47) Jet A(2.86 - 5.63)
NW M.Oil(7.23 - 10.10) AK103(7.47 - 9.74) OR Diesel(2.86 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	141364	7.3	81.5 M
Triacontane	154683	8.5	94.5 M

JW
5/7/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130506.b/0506a019.d

Date: 06-MAY-2013 14:48

Client ID:

Sample Info: M044A.5

Column phase: RTX-1

Instrument: fid4a.i

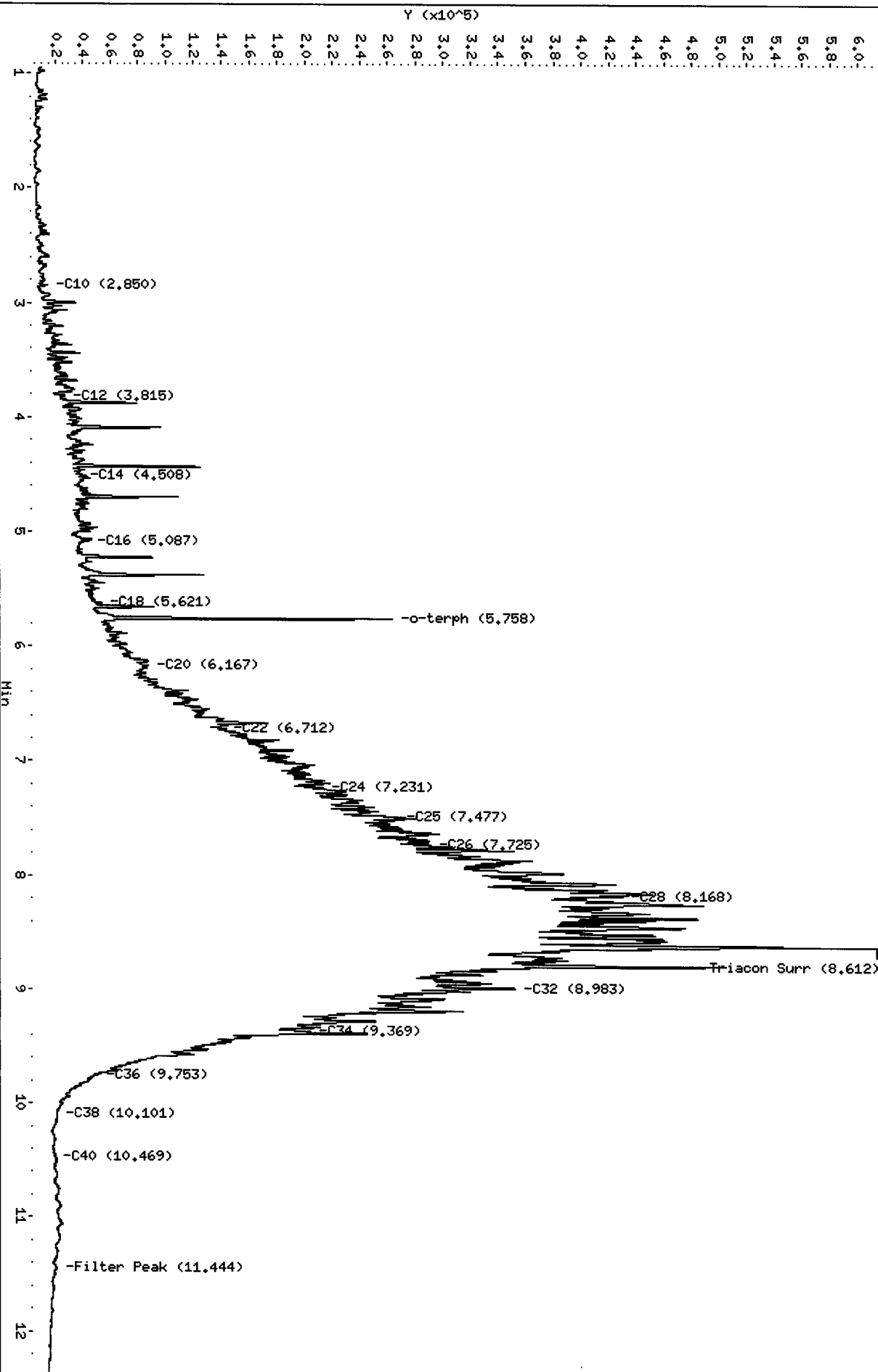
Operator: JR/VTS/JM

Column diameter: 0.25

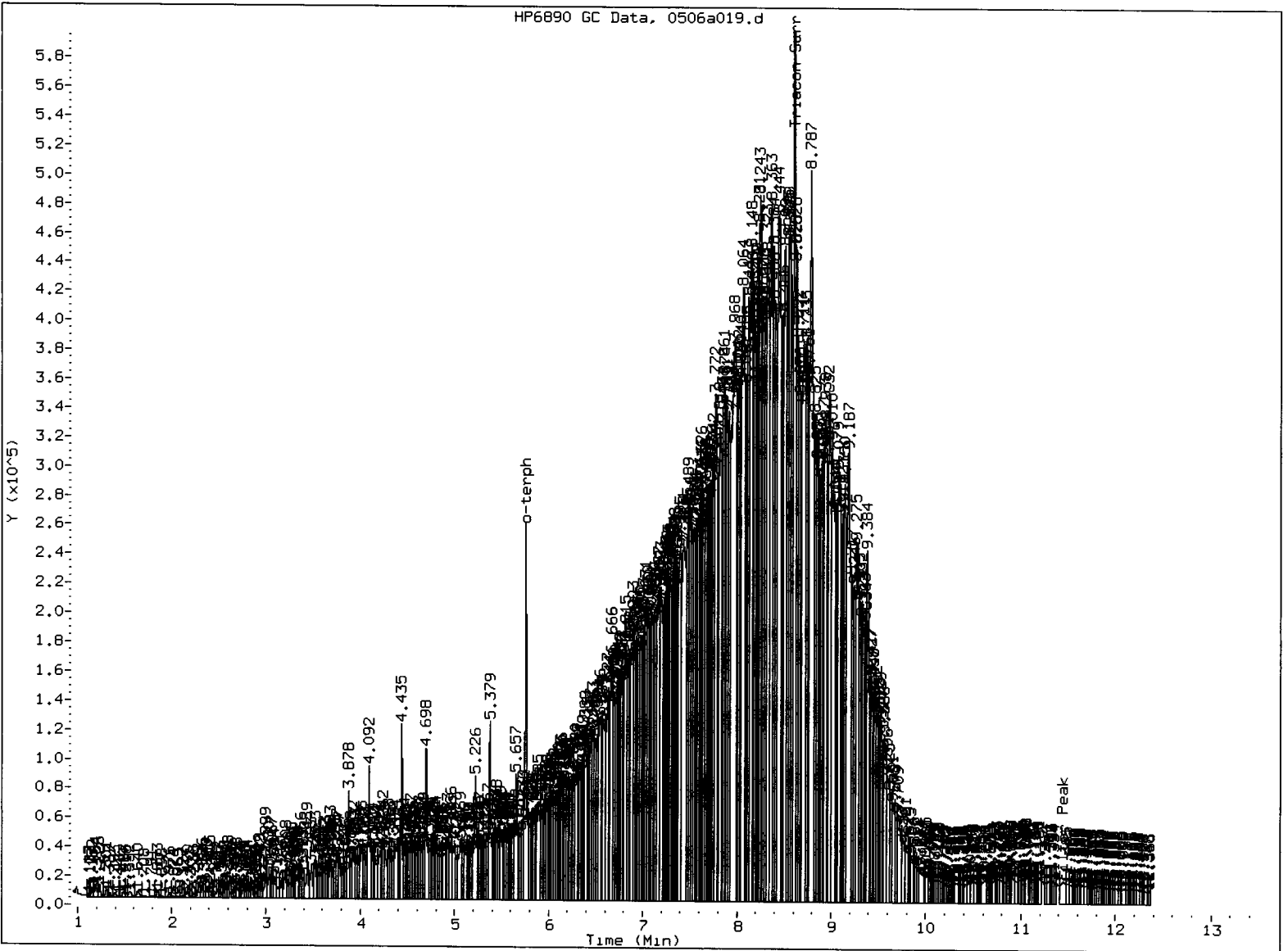
/chem3/fid4a.i/20130506.b/0506a019.d

JW
5/7/13

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HP6890 GC Data, 0506a019.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/1/03

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130506.b/0506a020.d
Method: /chem3/fid4a.i/20130506.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/07/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO44B
Client ID:
Injection: 06-MAY-2013 15:09
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	196355	12.64
C8	----				WATPHD	(C12-C24)	3377889	232.72 ✓
C10	2.853	-0.003	1822	1724	WATPHM	(C24-C38)	12407732	912.07 ✓
C12	3.818	-0.003	5239	6750	AK102	(C10-C25)	3940766	228.92
C14	4.502	-0.004	10705	10974	AK103	(C25-C36)	10989069	1194.19
C16	5.085	-0.003	10297	13432				
C18	5.625	-0.002	14045	21097				
C20	6.169	-0.003	20371	46487				
C22	6.710	-0.001	32768	36455	MIN.OIL	(C24-C38)	12407732	727.34
C24	7.226	-0.001	50274	38125				
C25	7.473	0.000	64615	83463				
C26	7.727	0.004	69339	66490				
C28	8.156	-0.011	98191	122635				
C32	8.984	-0.001	90348	202235				
C34	9.379	0.011	64545	45366				
Filter Peak	11.484	0.031	6671	7055	CREOSOT	(C12-C22)	2106761	965.56 M
C36	9.750	0.008	60201	75749				
C38	10.101	-0.004	38798	76142				
C40	10.462	0.000	14279	23664				
o-terph	5.763	-0.001	859284	769716				
Triacon Surr	8.598	0.001	736594	765001				

Range Times: NW Diesel(3.821 - 7.227) AK102(2.86 - 7.47) Jet A(2.86 - 5.63)
NW M.Oil(7.23 - 10.10) AK103(7.47 - 9.74) OR Diesel(2.86 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	769716	39.9	88.7 M ✓
Triacotane	765001	42.0	93.4 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW
5/7/13

Data File: /chem3/fid4a.i/20130506.b/0506a020.d

Date: 06-MAY-2013 15:09

Client ID:

Sample Info: M044B

Column phase: RTX-1

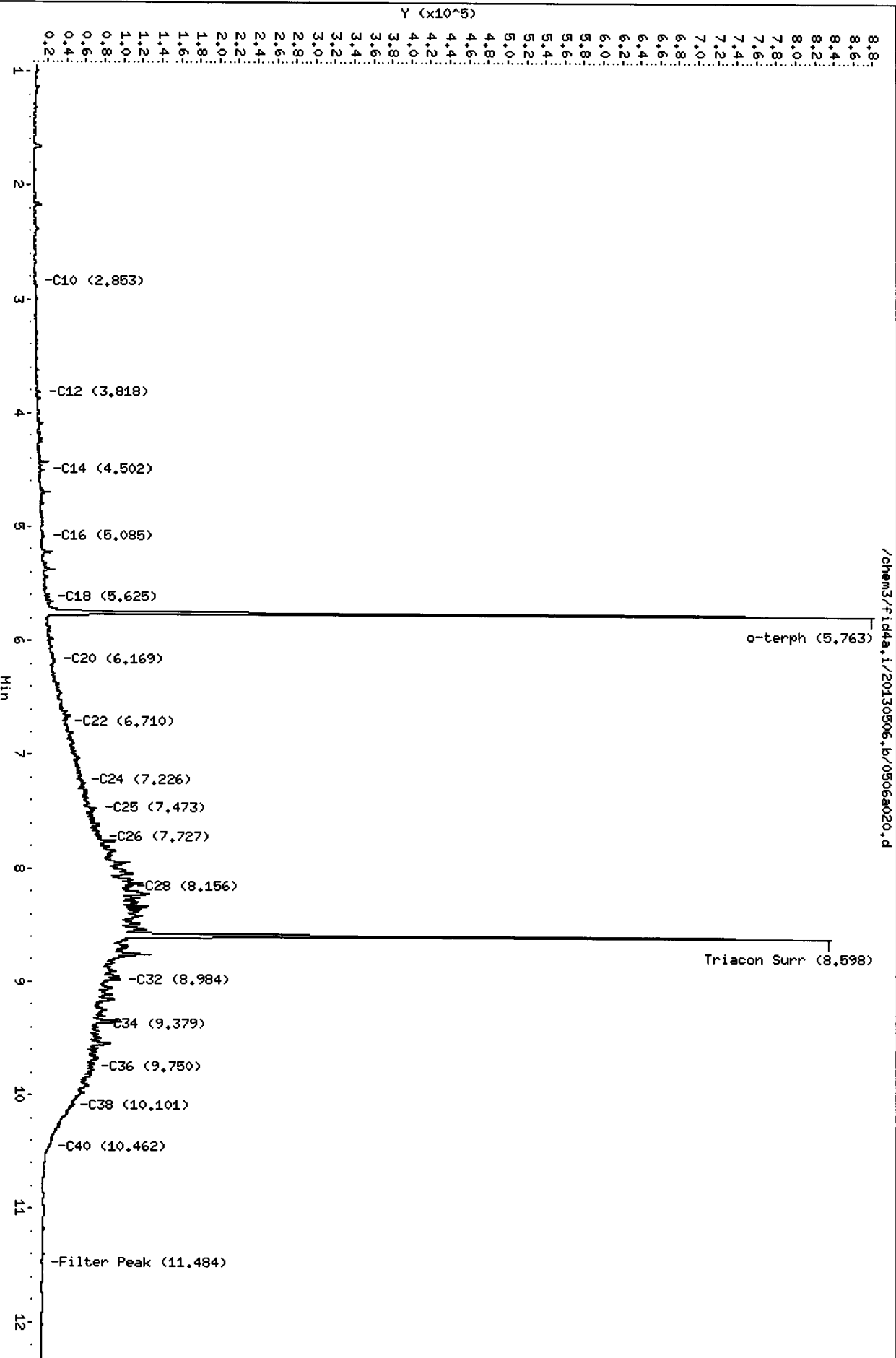
Instrument: fid4a.i

Operator: JR/VTS/JM

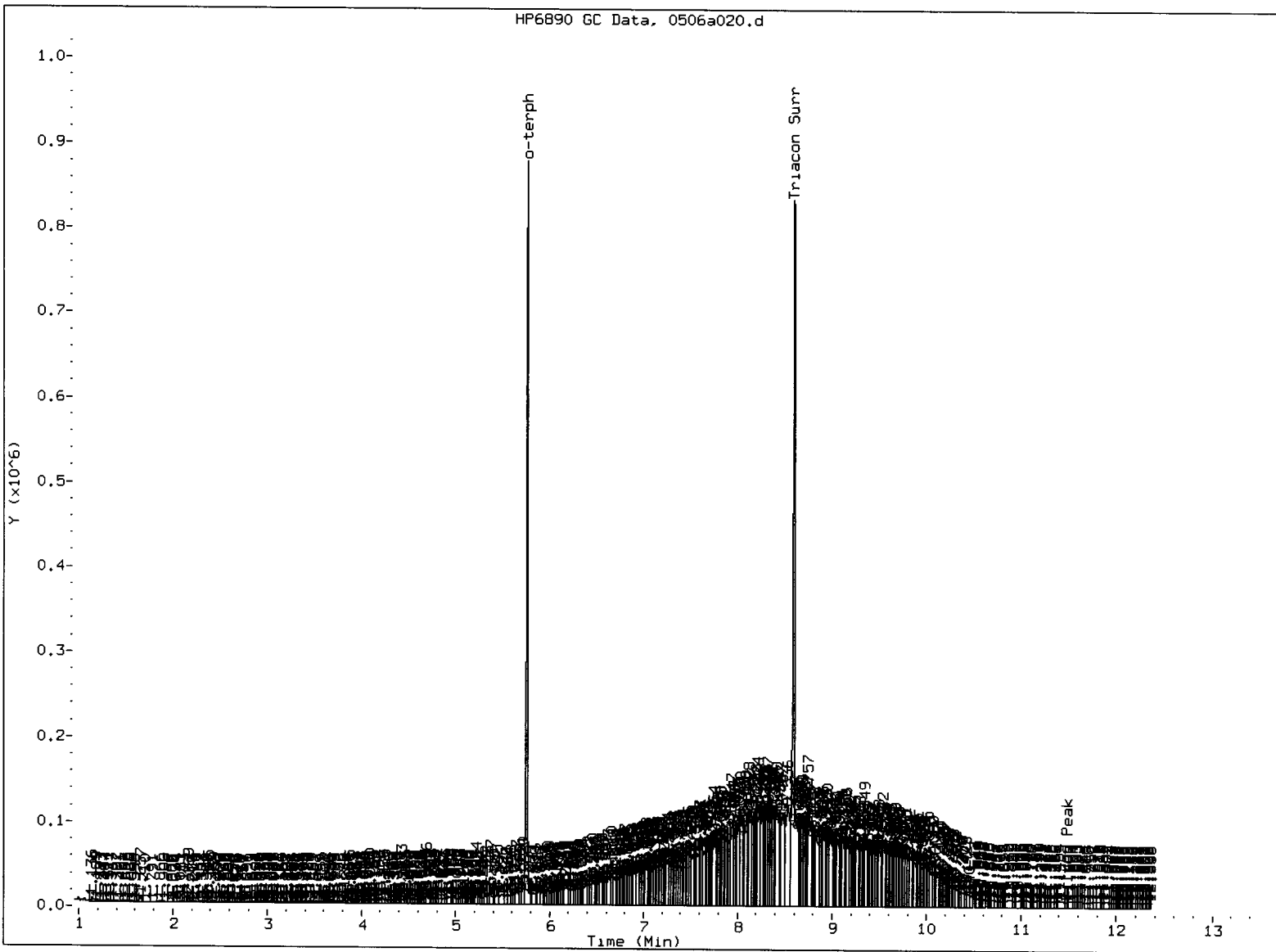
Column diameter: 0.25

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0/4/5
R



HP6890 GC Data, 0506a020.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/7/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130506.b/0506a021.d
Method: /chem3/fid4a.i/20130506.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/07/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO44C
Client ID:
Injection: 06-MAY-2013 15:30
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1159744	74.63
C8	----				WATPHD	(C12-C24)	22784762	1569.79
C10	2.853	-0.003	9325	10092	WATPHM	(C24-C38)	54295049	3991.12
C12	3.815	-0.006	24566	48266	AK102	(C10-C25)	26719938	1552.15
C14	4.507	0.001	46710	37836	AK103	(C25-C36)	50930890	5534.72
C16	5.087	-0.001	53658	96455				
C18	5.628	0.001	71452	105505				
C20	6.172	0.000	117631	83907				
C22	6.713	0.003	218533	188183	MIN.OIL	(C24-C38)	54295049	3182.79
C24	7.226	-0.001	333225	196698				
C25	7.475	0.002	398457	256240				
C26	7.721	-0.002	432020	161243				
C28	8.175	0.008	603050	360614				
C32	8.980	-0.005	402075	598908				
C34	9.355	-0.013	187515	264353				
Filter Peak	11.449	-0.003	10456	10262	CREOSOT	(C12-C22)	13555147	6212.54 M
C36	9.733	-0.009	27707	32237				
C38	10.097	-0.007	11252	3552				
C40	10.461	-0.001	12164	4547				
o-terph	5.766	0.002	751691	679442				
Triacon Surr	8.619	0.022	677183	738733				

Range Times: NW Diesel(3.821 - 7.227) AK102(2.86 - 7.47) Jet A(2.86 - 5.63)
NW M.Oil(7.23 - 10.10) AK103(7.47 - 9.74) OR Diesel(2.86 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	679442	35.2	78.3 M ✓
Triacontane	738733	40.6	90.2 M

JW
5/7/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

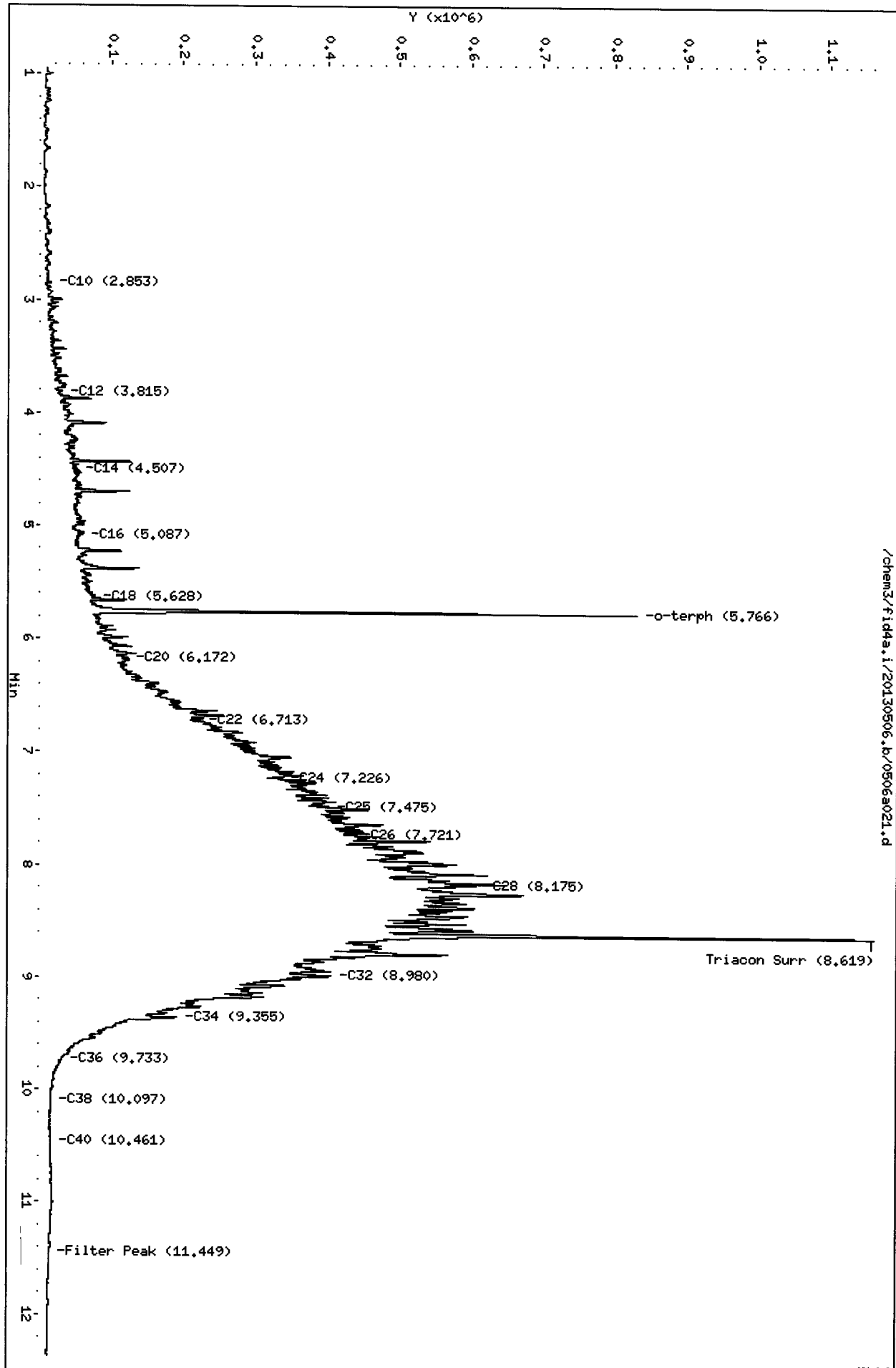
Data File: /chem3/fid4a,i/20130506,b/0506a021.d
Date: 06-MAY-2013 15:30
Client ID:
Sample Info: M044C

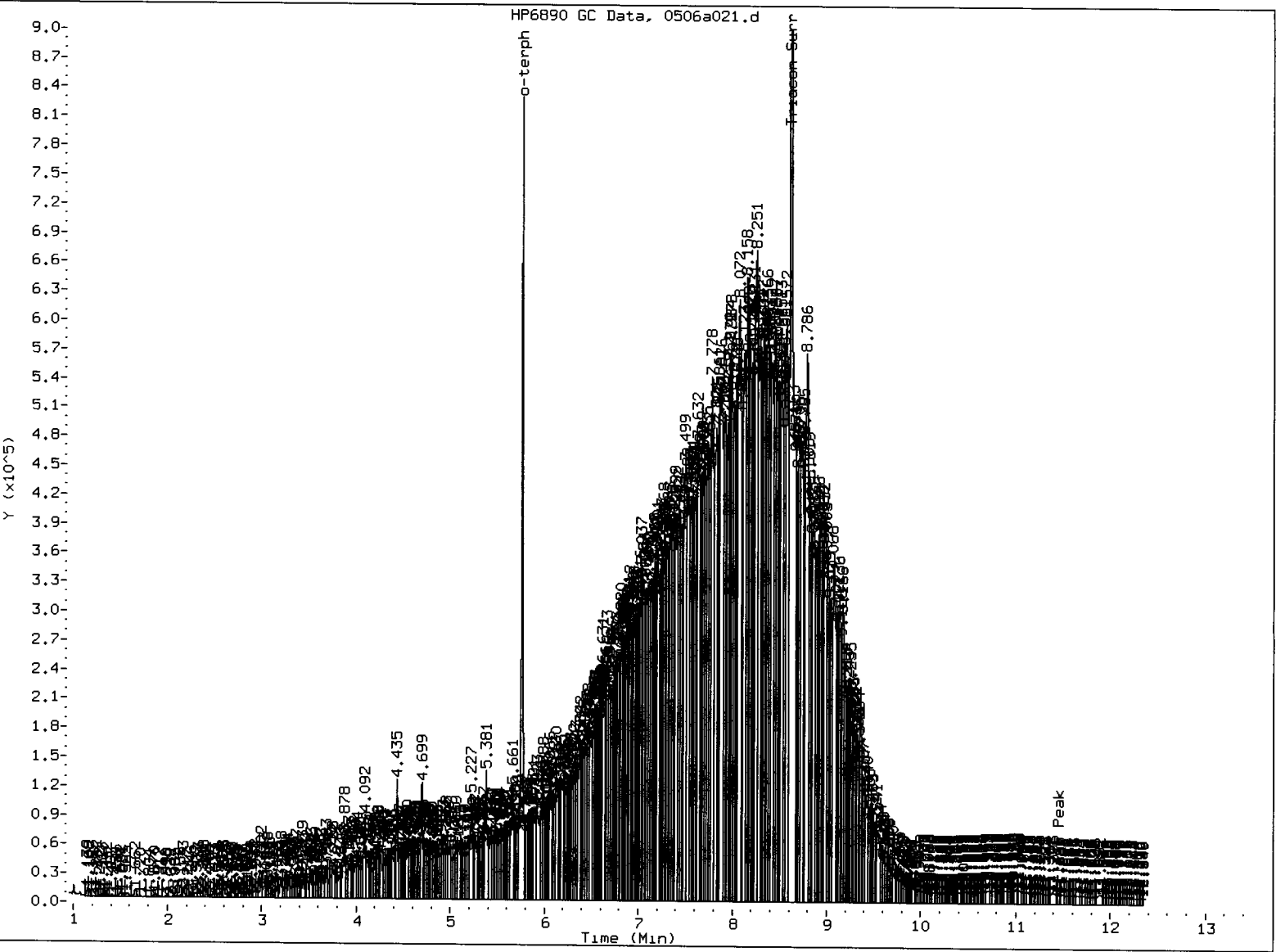
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
5/7/13

/chem3/fid4a,i/20130506,b/0506a021.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW Date: 5/7/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: W044-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050213	98.4%	0
LCS-050213	106%	0
LCSD-050213	106%	0
WL1-S-3.5	81.4%	0
WL2-S-3.0	88.7%	0
WL3-S-3.5	78.3%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-9401 to 13-9403

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1

Sample ID: LCS-050213
LCS/LCSD

Lab Sample ID: LCS-050213
LIMS ID: 13-9401
Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 05/07/13

QC Report No: W044-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03
Date Sampled: 04/30/13
Date Received: 05/01/13

Date Extracted LCS/LCSD: 05/02/13

Sample Amount LCS: 10.0 g
LCSD: 10.0 g

Date Analyzed LCS: 05/06/13 13:46
LCSD: 05/06/13 14:07

Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW
LCSD: FID/JLW

Dilution Factor LCS: 1.0
LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	136	150	90.7%	139	150	92.7%	2.2%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	106%	106%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130506.b/0506a016.d
Method: /chem3/fid4a.i/20130506.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/07/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO44LCSS1
Client ID:
Injection: 06-MAY-2013 13:46
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		4684540	301.46
C8	----				WATPHD (C12-C24)		19767468	1361.91
C10	2.856	0.000	113726	100938	WATPHM (C24-C38)		205198	15.08
C12	3.821	0.000	213073	233846	AK102 (C10-C25)		23114966	1342.74
C14	4.506	0.001	351735	369050	AK103 (C25-C36)		153002	16.63
C16	5.091	0.003	549668	819645				
C18	5.630	0.003	468478	577433				
C20	6.172	0.000	323723	488243				
C22	6.709	-0.002	170775	198821	MIN.OIL (C24-C38)		205198	12.03
C24	7.218	-0.009	47435	56874				
C25	7.466	-0.007	19153	37801				
C26	7.705	-0.018	7830	12964				
C28	8.159	-0.008	2041	3795				
C32	8.983	-0.002	8565	8412				
C34	9.364	-0.004	234	284				
Filter Peak	11.458	0.006	1149	908	CREOSOT (C12-C22)		19092019	8750.18 M
C36	9.734	-0.008	415	781				
C38	10.093	-0.012	300	231				
C40	10.474	0.012	460	509				
o-terph	5.767	0.004	979361	920787				
Triacon Surr	8.598	0.000	775651	786545				

Range Times: NW Diesel(3.821 - 7.227) AK102(2.86 - 7.47) Jet A(2.86 - 5.63)
NW M.Oil(7.23 - 10.10) AK103(7.47 - 9.74) OR Diesel(2.86 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	920787	47.8	106.1 M
Triacontane	786545	43.2	96.1

JW
5/7/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.1/20130506.b/0506a016.d

Date: 06-MAY-2013 13:46

Client ID:

Sample Info: M044LCSS1

Column phase: RTX-1

Instrument: fid4a.1

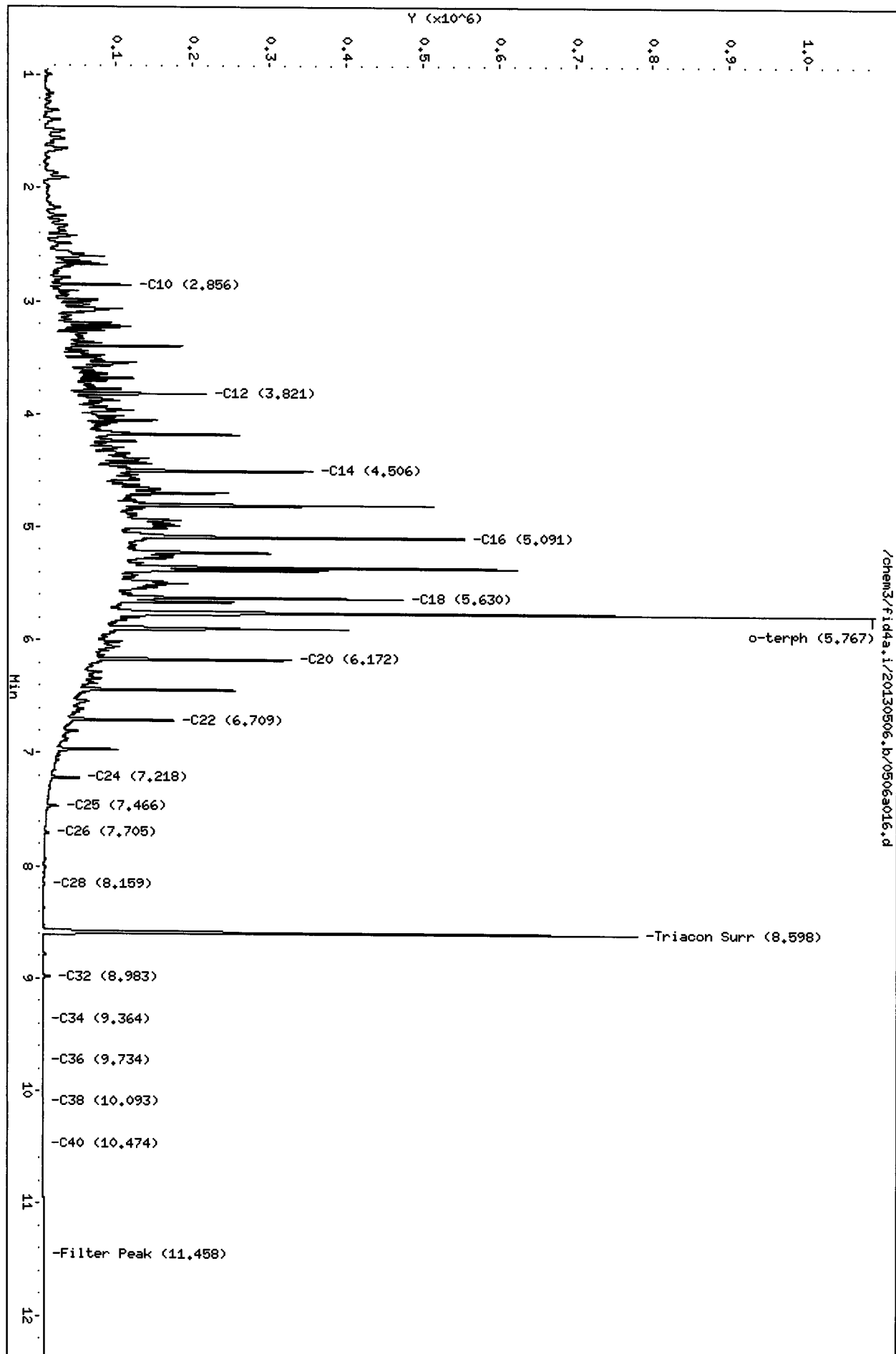
Operator: JR/VTS/JM

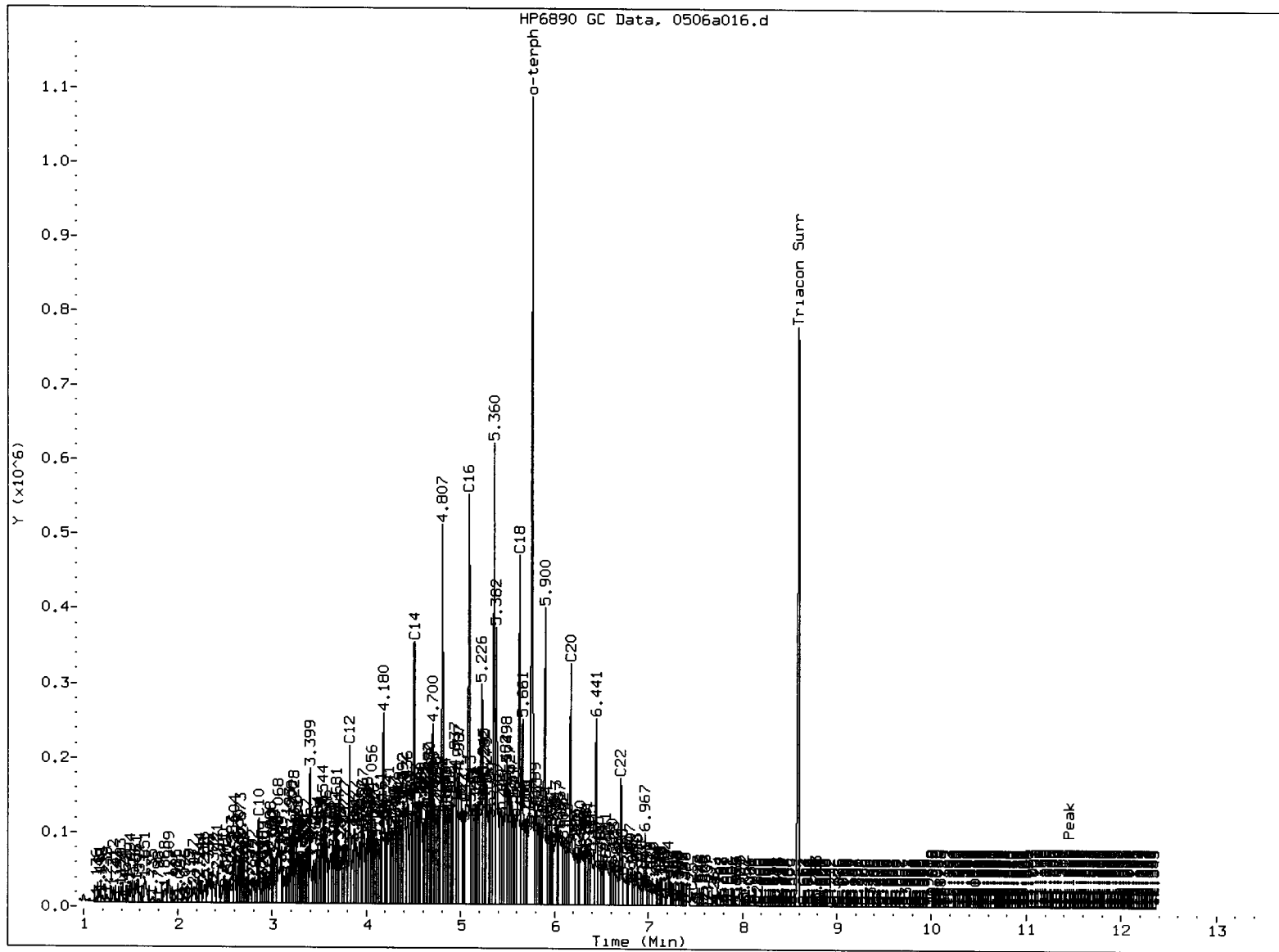
Column diameter: 0.25

/chem3/fid4a.1/20130506.b/0506a016.d

JW
5/7/13

Page 1





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/1/83

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130506.b/0506a017.d
Method: /chem3/fid4a.i/20130506.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/07/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WO44LCSDS1
Client ID:
Injection: 06-MAY-2013 14:07
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		4761264	306.40
C8	----				WATPHD (C12-C24)		20166859	1389.43
C10	2.857	0.001	115308	104037	WATPHM (C24-C38)		233005	17.13
C12	3.821	0.000	214930	240984	AK102 (C10-C25)		23574075	1369.41
C14	4.508	0.002	351595	445186	AK103 (C25-C36)		162739	17.68
C16	5.091	0.004	585292	783046				
C18	5.630	0.003	473339	527256				
C20	6.172	0.000	312297	500284				
C22	6.708	-0.003	167369	197000	MIN.OIL (C24-C38)		233005	13.66
C24	7.221	-0.006	49176	57517				
C25	7.464	-0.009	21007	28447				
C26	7.705	-0.018	8618	12340				
C28	8.158	-0.009	2198	4350				
C32	8.982	-0.003	8984	8335				
C34	9.381	0.012	56	16				
Filter Peak	11.459	0.007	1017	688	CREOSOT (C12-C22)		19502109	8938.13 M
C36	9.728	-0.014	359	556				
C38	10.097	-0.008	269	363				
C40	10.457	-0.005	429	681				
o-terph	5.767	0.003	928421	917507				
Triacon Surr	8.597	0.000	787413	798339				

Range Times: NW Diesel (3.821 - 7.227) AK102 (2.86 - 7.47) Jet A (2.86 - 5.63)
NW M.Oil (7.23 - 10.10) AK103 (7.47 - 9.74) OR Diesel (2.86 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	917507	47.6	105.7 M
Triacontane	798339	43.9	97.5

JW
5/7/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130506.b/0506a017.d

Date: 06-MAY-2013 14:07

Client ID:

Sample Info: M044LCSDS1

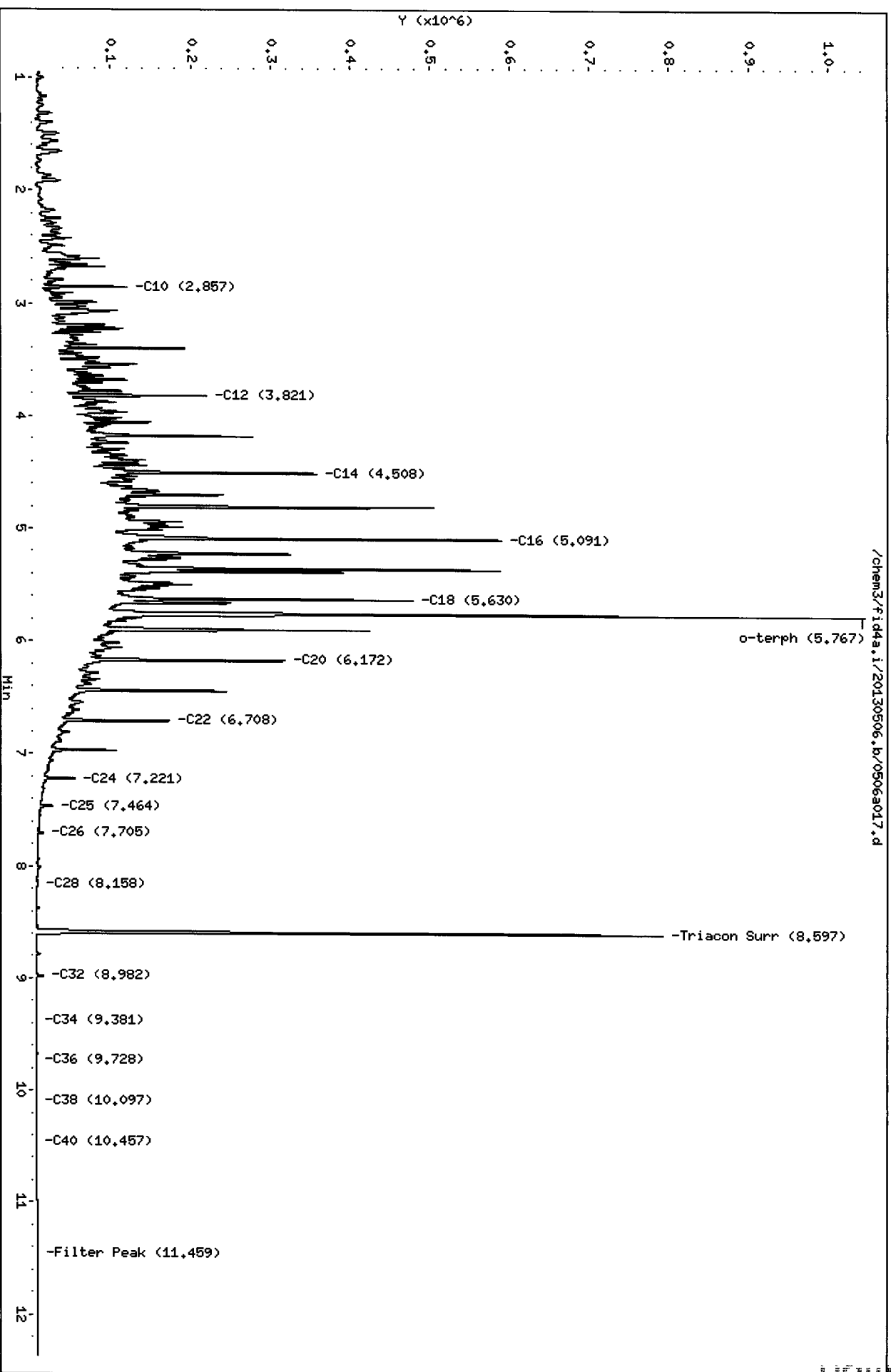
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JM

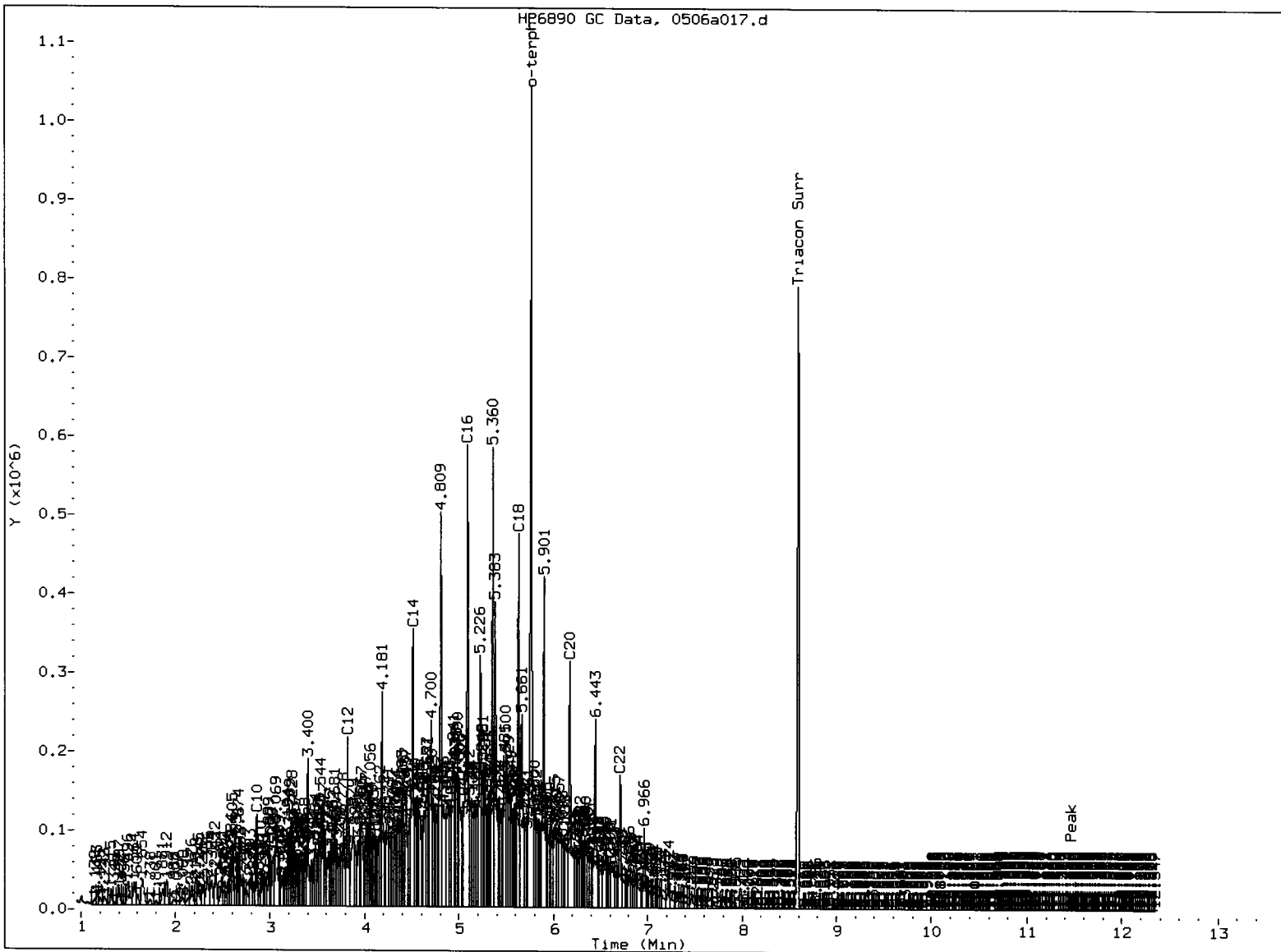
Column diameter: 0.25

/chem3/fid4a.i/20130506.b/0506a017.d



30
5/7/13

HP6890 GC Data, 0506a017.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/1/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/01/13

ARI Job: W044
Project: Cashmere
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-9401-050213MB1	Method Blank	10.0 g	1.00 mL	-	05/02/13
13-9401-050213LCS1	Lab Control	10.0 g	1.00 mL	-	05/02/13
13-9401-050213LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	05/02/13
13-9401-WO44A	WL1-S-3.5	8.46 g	1.00 mL	D	05/02/13
13-9402-WO44B	WL2-S-3.0	8.59 g	1.00 mL	D	05/02/13
13-9403-WO44C	WL3-S-3.5	7.94 g	1.00 mL	D	05/02/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: WL1-S-3.5
SAMPLE

Lab Sample ID: WO44A

LIMS ID: 13-9401

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: WO44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: 04/29/13

Date Received: 05/01/13

Date Analyzed: 05/02/13 13:35

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 16.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	55
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons **6.3** **110** GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	90.0%
Bromobenzene	88.5%

Gasoline Surrogate Recovery

Trifluorotoluene	89.1%
Bromobenzene	97.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
5/6/13

Data file 1: /chem3/pid1.i/20130502-1.b/0502a008.d ARI ID: WO44A
 Data file 2: /chem3/pid1.i/20130502-2.b/0502a008.d Client ID: WL1-S-3.5
 Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 13:35
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.839	0.007	3090	37612	89.1	TFT(Surr)
15.378	0.004	2230	24296	97.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	502955	1.404 M
8015C 2MP-TMB (4.17 to 16.20)	723723	200667	0.277 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	96116	0.165 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	683930	1.823 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.846	0.007	3573	90.0	TFT(Surr)
15.386	0.004	7777	88.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.742	-0.018	171	0.88	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

questionable - poor match, RT shift

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130502-1.b/0502a008.d
 Lab Smp Id: WO44A Client Smp ID: WL1-S-3.5
 Inj Date : 02-MAY-2013 13:35
 Operator : LH Inst ID: pid1.i
 Smp Info : WO44A
 Misc Info : 13-9401
 Comment :
 Method : /chem3/pid1.i/20130502-1.b/FID.m
 Meth Date : 02-May-2013 11:04 lanih Quant Type: ESTD
 Cal Date : 02-MAY-2013 08:47 Cal File: 0502a002.d
 Als bottle: 1
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: standard.sub
 Target Version: 3.50
 Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
\$ 10 TFT(Surr)	7.839	7.831	0.008	3090	89.0823	89.08
13 nC9	12.387	12.385	0.002	149		(M)
14 ETHYLBENZENE	12.731	12.752	-0.021	186	1.62083	1.62
16 O-XYLENE	13.903	13.859	0.044	2014	1.39705	1.40
17 nC10-Decane	15.166	15.193	-0.027	284		
\$ 18 BB(Surr)	15.378	15.374	0.004	2230	97.7081	97.71
20 1,2,4-Trimethylbenzene	16.104	16.097	0.007	878		
21 nc11	16.754	16.753	0.001	670		
22 nC12-Dodecane	17.757	17.788	-0.031	1721		
23 nC13	18.585	18.590	-0.005	778		
24 Naphthalene	18.794	18.788	0.006	434		

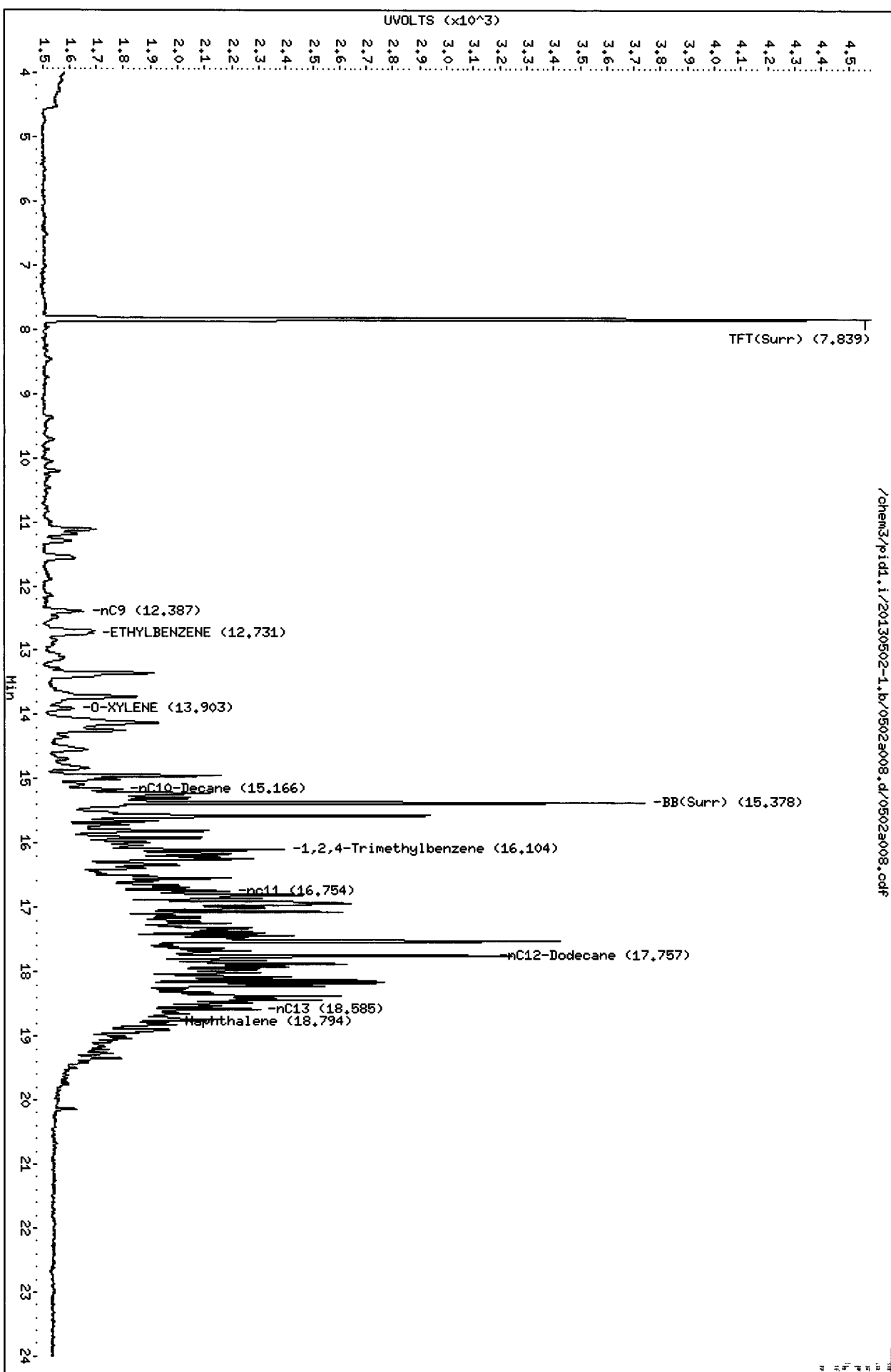
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130502-1.b/0502a008.d
Date: 02-MAY-2013 13:35
Client ID: ML1-S-3,5
Sample Info: M044A

Column phase: RTX 502-2 FID

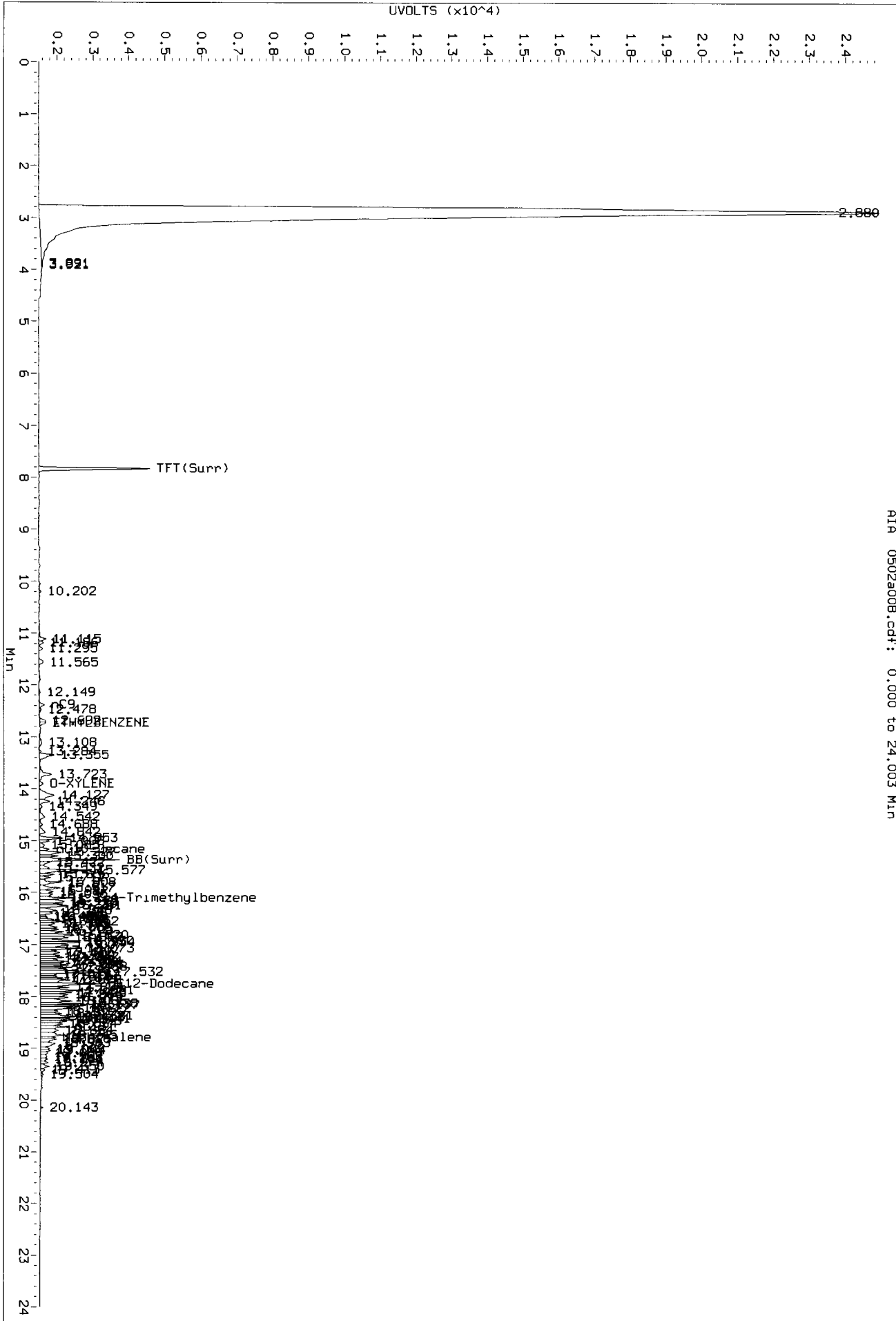
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



10
5/6/13

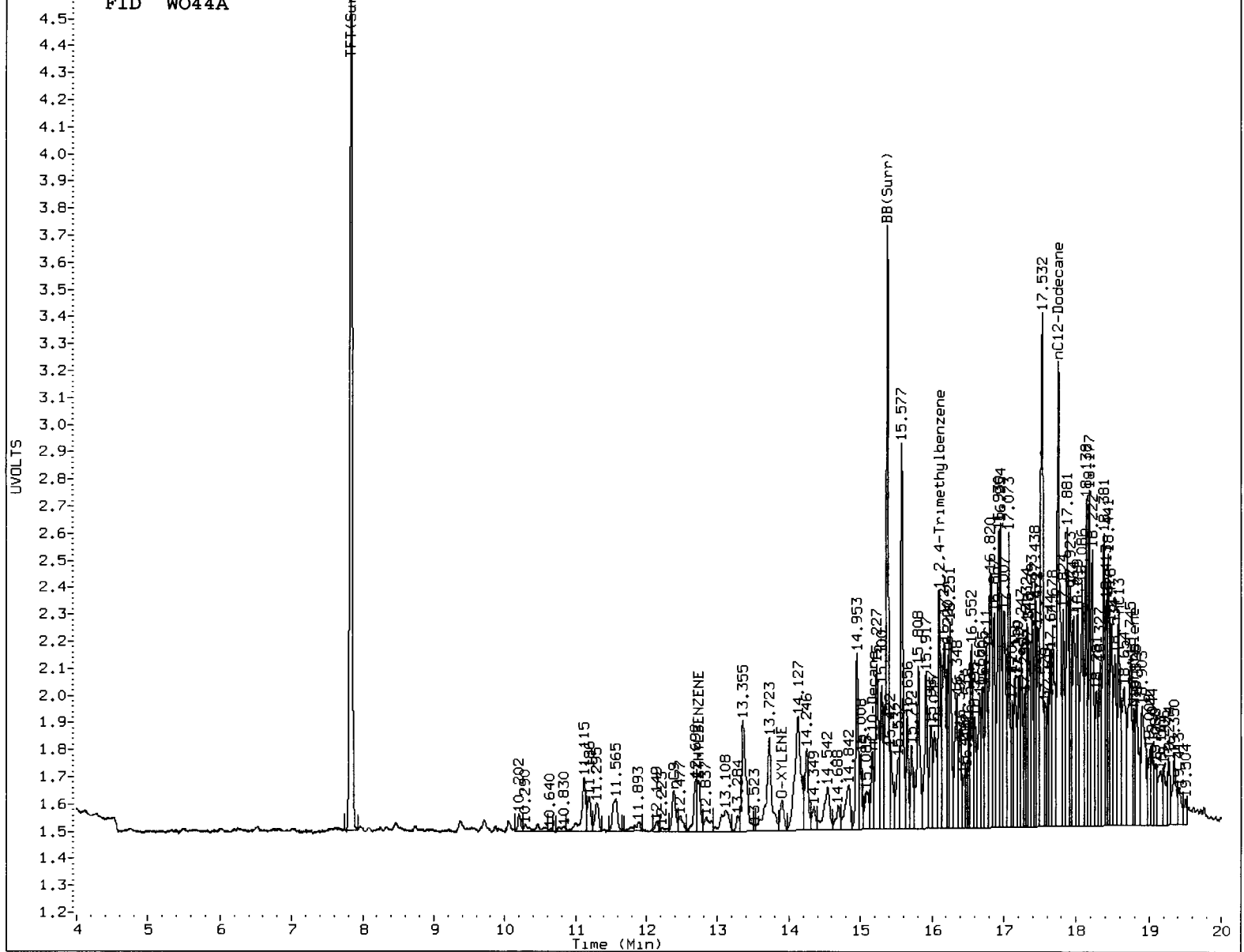
Data File: /chem3/pid1.i/20130502-1.b/0502a008.d/0502a008.cdf
Injection Date: 02-MAY-2013 13:35
Instrument: pid1.1
Client Sample ID: WL1-S-3.5

AIA 0502a008.cdf: 0.000 to 24.003 Min



10
11
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FID WO44A



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: YC Date: 5/6/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: WL2-S-3.0

SAMPLE

Lab Sample ID: WO44B

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: WO44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: 04/29/13

Date Received: 05/01/13

Date Analyzed: 05/03/13 15:22

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 81 mg-dry-wt

Percent Moisture: 14.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	15	< 15 U

	GAS ID
Gasoline Range Hydrocarbons	6.2 < 6.2 U ---

BETX Surrogate Recovery

Trifluorotoluene	86.5%
Bromobenzene	84.7%

Gasoline Surrogate Recovery

Trifluorotoluene	87.9%
Bromobenzene	85.7%

BETX values reported in $\mu\text{g}/\text{kg}$ (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
5/1/13

Data file 1: /chem3/pid1.i/20130503-1.b/0503a009.d ARI ID: WO44B2
 Data file 2: /chem3/pid1.i/20130503-2.b/0503a009.d Client ID: WL2-S-3.0
 Method: /chem3/pid1.i/20130503-2.b/PIDB.m Injection Date: 03-MAY-2013 15:22
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	0.003	3049	37446	87.9	TFT(Surr)
15.377	0.002	1955	16286	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.90)	358114	4486	0.013
8015C 2MP-TMB (4.17 to 16.20)	723723	3637	0.005
AK101 nC6-nC10 (4.66 to 15.09)	582885	3637	0.006
NWTPHG Tol-Nap (9.76 to 18.90)	375093	4486	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.844	0.003	3435	86.5	TFT(Surr)
15.385	0.002	7447	84.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130503-1.b/0503a009.d

Date : 03-MAY-2013 15:22

Client ID: ML2-S-3.0

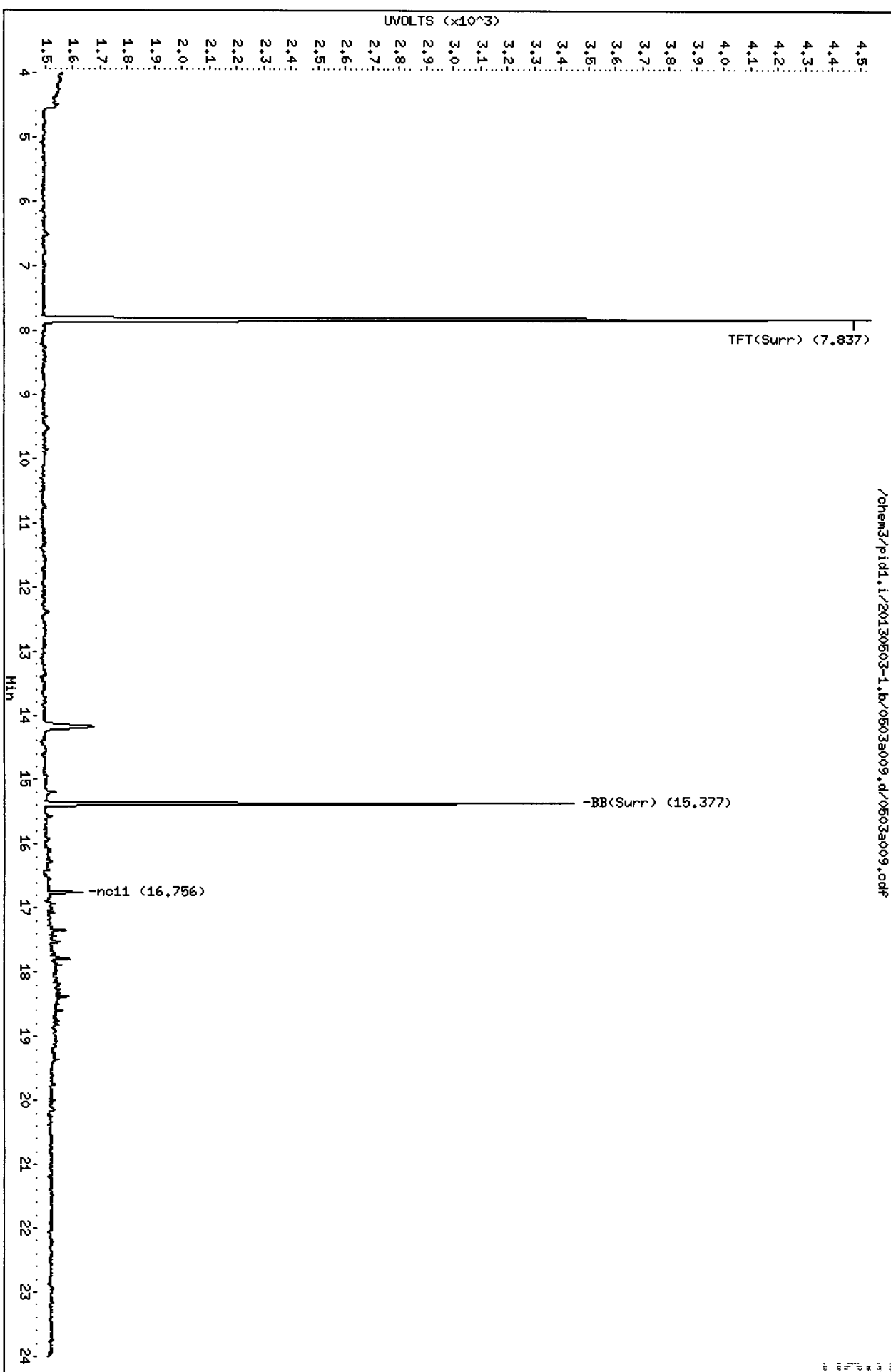
Sample Info: M044B2

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

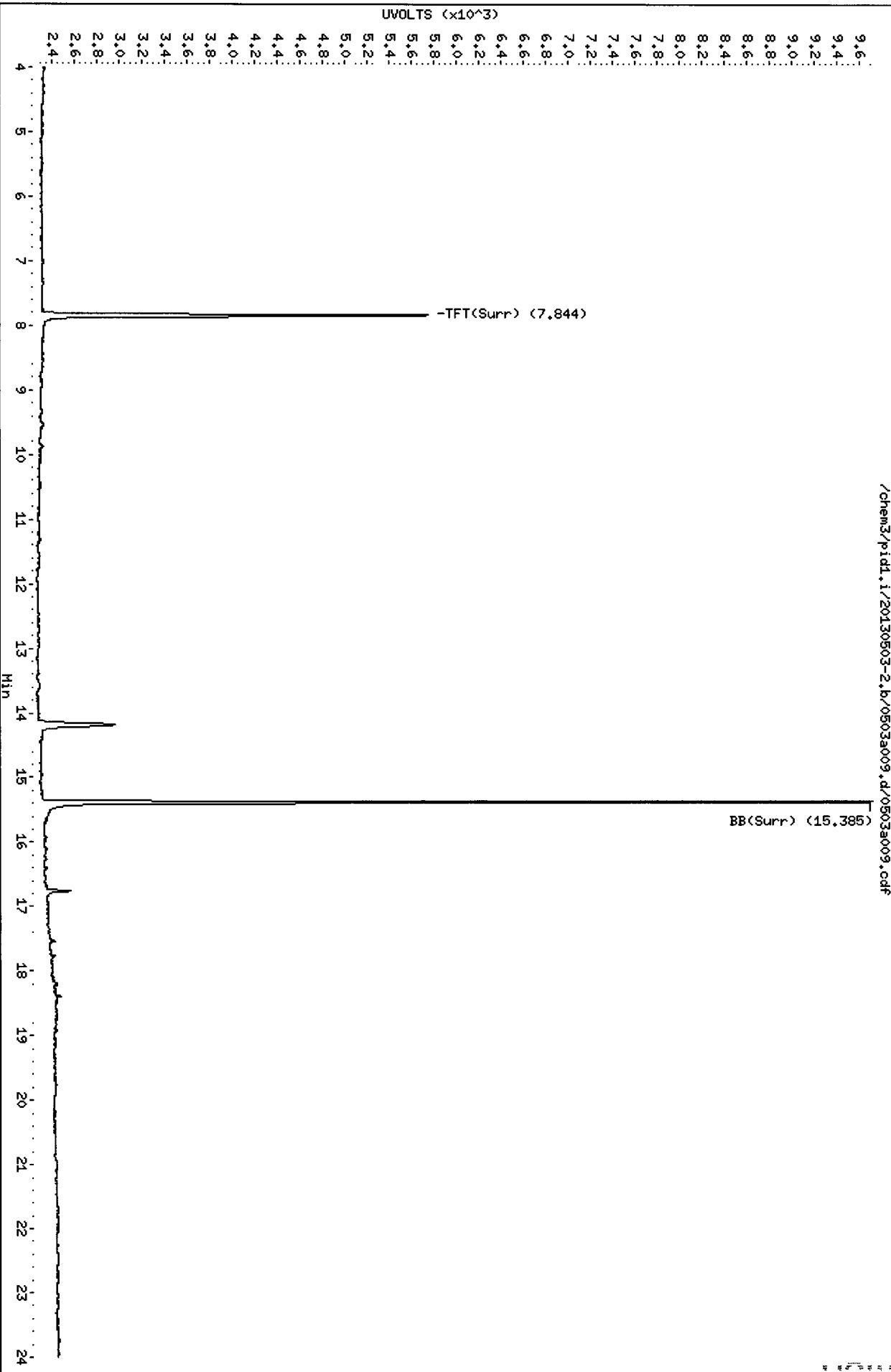
Column diameter: 0.18



Data File: /chem3/pid1.i/20130503-2.b/0503a009.d
Date : 03-MAY-2013 15:22
Client ID: ML2-S-3.0
Sample Info: M044B2

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130503-2.b/0503a009.d/0503a009.cdf

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: WL3-S-3.5
 SAMPLE

Lab Sample ID: WO44C
 LIMS ID: 13-9403
 Matrix: Soil
 Data Release Authorized:
 Reported: 06/04/13

QC Report No: WO44-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 04/29/13
 Date Received: 05/01/13

Date Analyzed: 05/02/13 14:34
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 73 mg-dry-wt
 Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons	6.8	21	GAS ID GRO
------------------------------------	------------	-----------	-----------------------

BETX Surrogate Recovery

Trifluorotoluene	86.3%
Bromobenzene	83.6%

Gasoline Surrogate Recovery

Trifluorotoluene	86.5%
Bromobenzene	85.0%

BETX values reported in $\mu\text{g}/\text{kg}$ (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
5/6/13

Data file 1: /chem3/pid1.i/20130502-1.b/0502a010.d ARI ID: WO44C
 Data file 2: /chem3/pid1.i/20130502-2.b/0502a010.d Client ID: WL3-S-3.5
 Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 14:34
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.835	0.003	3001	36625	86.5	TFT(Surr)
15.376	0.002	1940	17301	85.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	73694	0.206 M
8015C 2MP-TMB (4.17 to 16.20)	723723	18041	0.025 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	3810	0.007
NWTPHG Tol-Nap (9.76 to 18.89)	375093	118073	0.315 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.843	0.004	3426	86.3	TFT(Surr)
15.383	0.002	7349	83.6	BB(Surr)

SW8021 (PID)

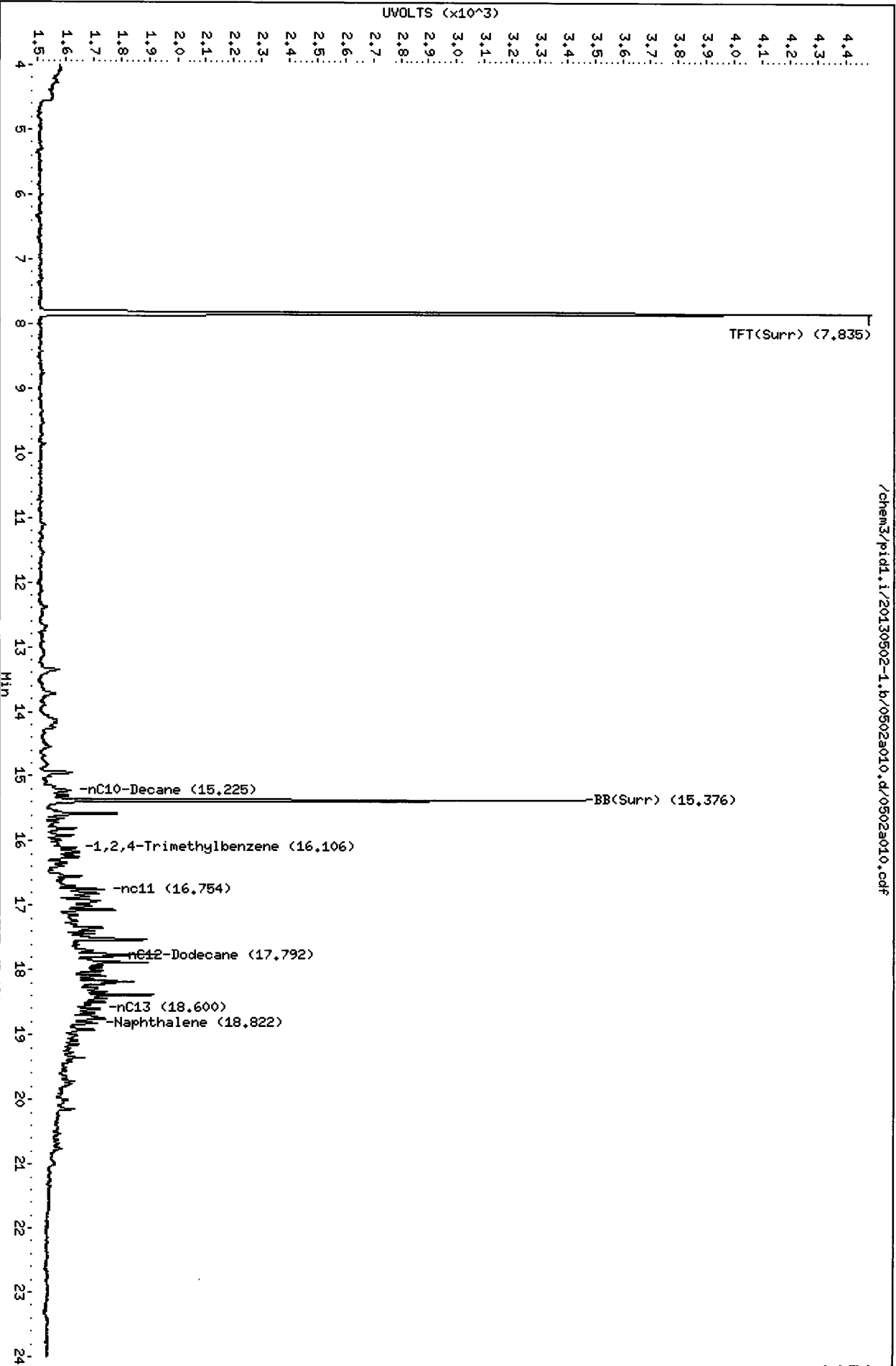
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130502-1.b/0502a010.d
Date : 02-MAY-2013 14:34
Client ID: ML3-S-3.5
Sample Info: M044C

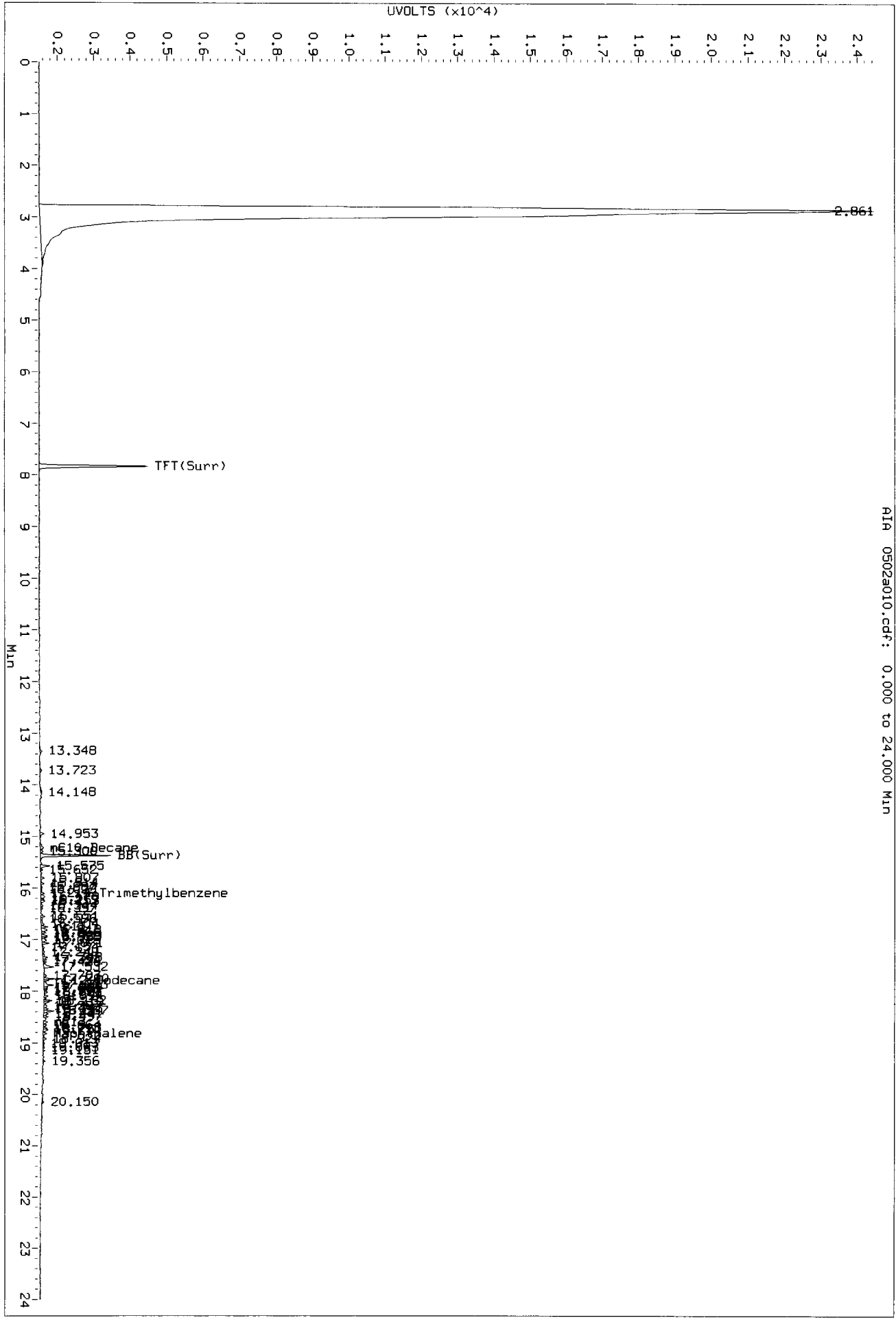
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



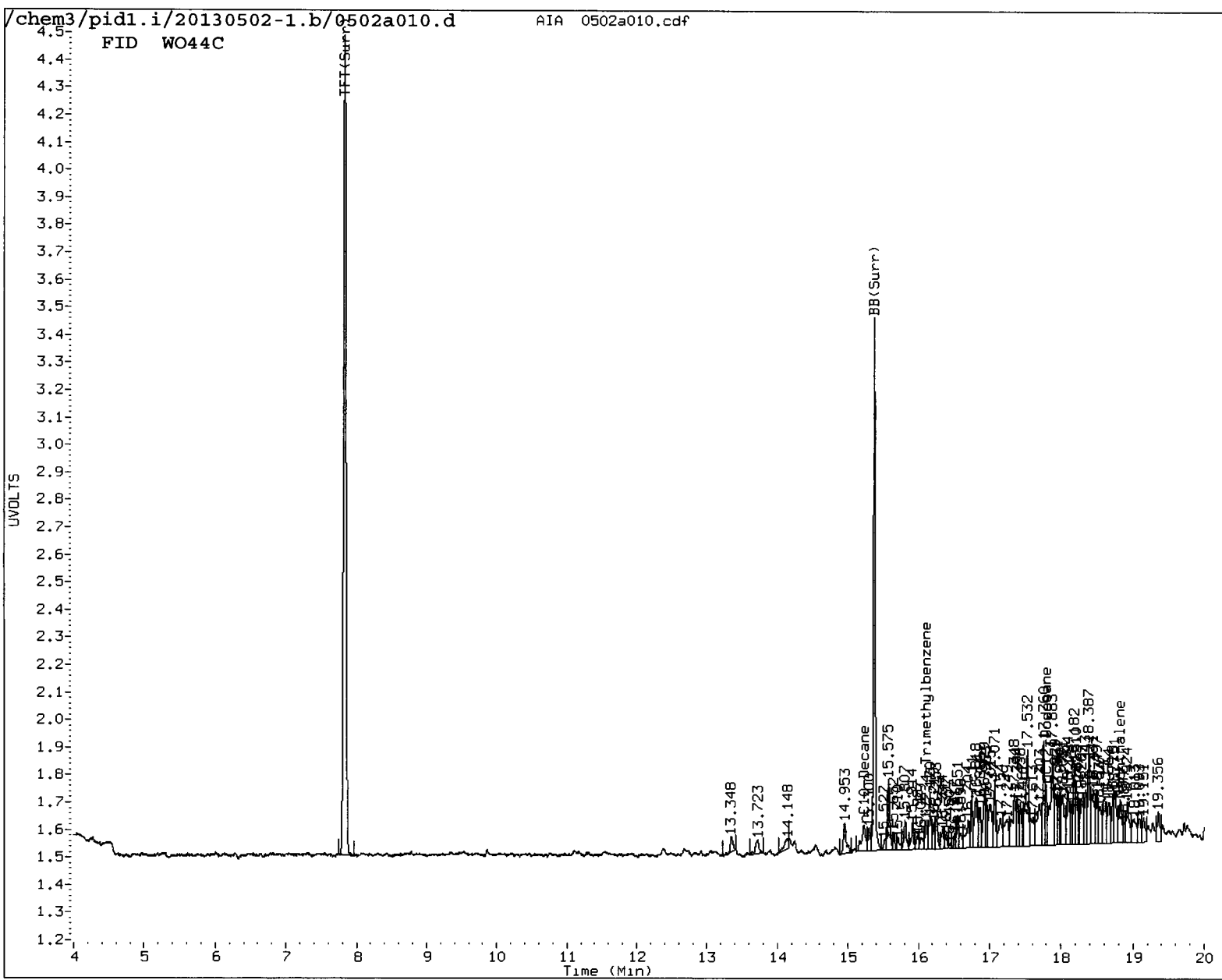
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Data File: /chem3/pid1_1/20130502-1.b/0502a010.d/0502a010.cdf
Injection Date: 02-MAY-2013 14:34
Instrument: pid1.1
Client Sample ID: WL3-5-3.5



AIA 0502a010.cdf: 0.000 to 24.000 Min

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MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: IC Date: 5/18/15

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WO44
Matrix: Soil

QC Report No: WO44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	BFB	TFT	BBZ	TOT OUT
MB-050213	NA	85.6%	84.7%	0
LCS-050213	NA	92.6%	87.0%	0
LCSD-050213	NA	88.8%	84.6%	0
WL1-S-3.5	NA	89.1%	97.7%	0
MB-050313	NA	85.9%	85.1%	0
LCS-050313	NA	92.1%	83.4%	0
LCSD-050313	NA	88.6%	86.4%	0
WL2-S-3.0	NA	87.9%	85.7%	0
WL3-S-3.5	NA	86.5%	85.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-9401 to 13-9403

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WO44
Matrix: Soil

QC Report No: WO44-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-050213	85.2%	84.1%	0
LCS-050213	91.5%	87.2%	0
LCSD-050213	87.5%	84.2%	0
WL1-S-3.5	90.0%	88.5%	0
MB-050313	85.0%	83.9%	0
LCS-050313	90.3%	84.1%	0
LCSD-050313	89.1%	85.8%	0
WL2-S-3.0	86.5%	84.7%	0
WL3-S-3.5	86.3%	83.6%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-9401 to 13-9403

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1



Sample ID: LCS-050213

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050213

LIMS ID: 13-9401

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/06/13

QC Report No: WO44-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/02/13 09:45

LCSD: 05/02/13 10:15

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	46.0	50.0	92.0%	47.4	50.0	94.8%	3.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	92.6%	88.8%
Bromobenzene	87.0%	84.6%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-050213

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050213

LIMS ID: 13-9401

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/06/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/02/13 09:45

LCSD: 05/02/13 10:15

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	Spike		LCS		Spike		LCSD	
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD	
Benzene	163	185	88.1%	178	185	96.2%	8.8%	
Toluene	1710	1980	86.4%	1850	1980	93.4%	7.9%	
Ethylbenzene	480	580	82.8%	512	580	88.3%	6.5%	
m,p-Xylene	1770	2120	83.5%	1900	2120	89.6%	7.1%	
o-Xylene	802	960	83.5%	852	960	88.8%	6.0%	

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.5%	87.5%
Bromobenzene	87.2%	84.2%

PL
5/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130502-1.b/0502a004.d ARI ID: LCS0502
Data file 2: /chem3/pid1.i/20130502-2.b/0502a004.d Client ID:
Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 09:45
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.832	0.001	3212	43737	92.6	TFT(Surr)
15.374	0.000	1986	17584	87.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.76 to 17.89)	358114	325055	0.908 M
8015C 2MP-TMB (4.17 to 16.20)	723723	651653	0.900 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	529384	0.908 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	345192	0.920 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.840	0.001	3634	91.5	TFT(Surr)
15.382	0.001	7661	87.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.009	0.000	783	3.26	Benzene
9.868	0.001	7841	34.24	Toluene
12.761	0.001	1856	9.59	Ethylbenzene
12.924	0.003	7571	35.45	M/P-Xylene
13.869	0.001	2738	16.05	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130502-1.b/0502a004.d

Date : 02-MAY-2013 09:45

Client ID:

Sample Info: LCS0502

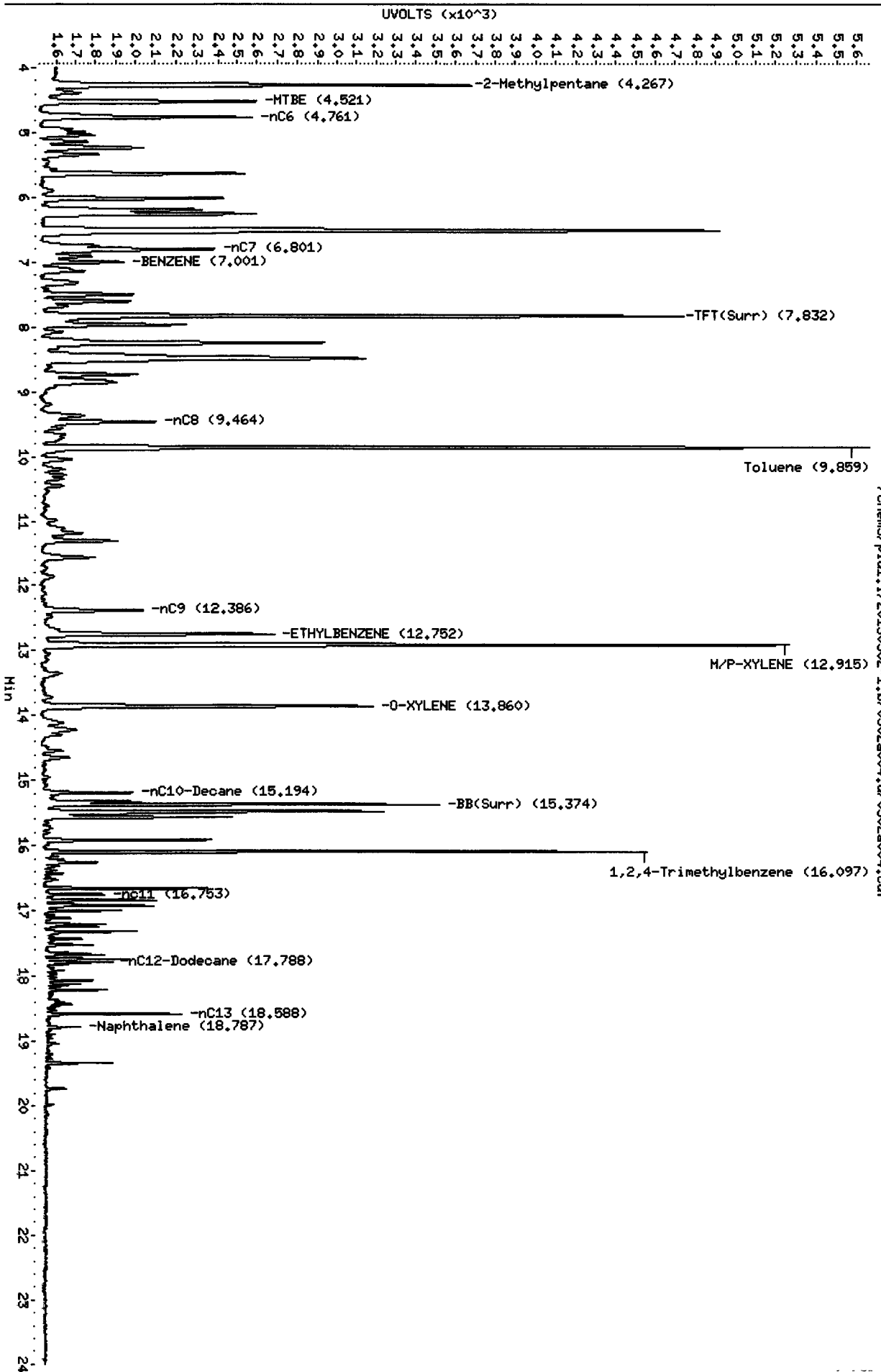
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 FID

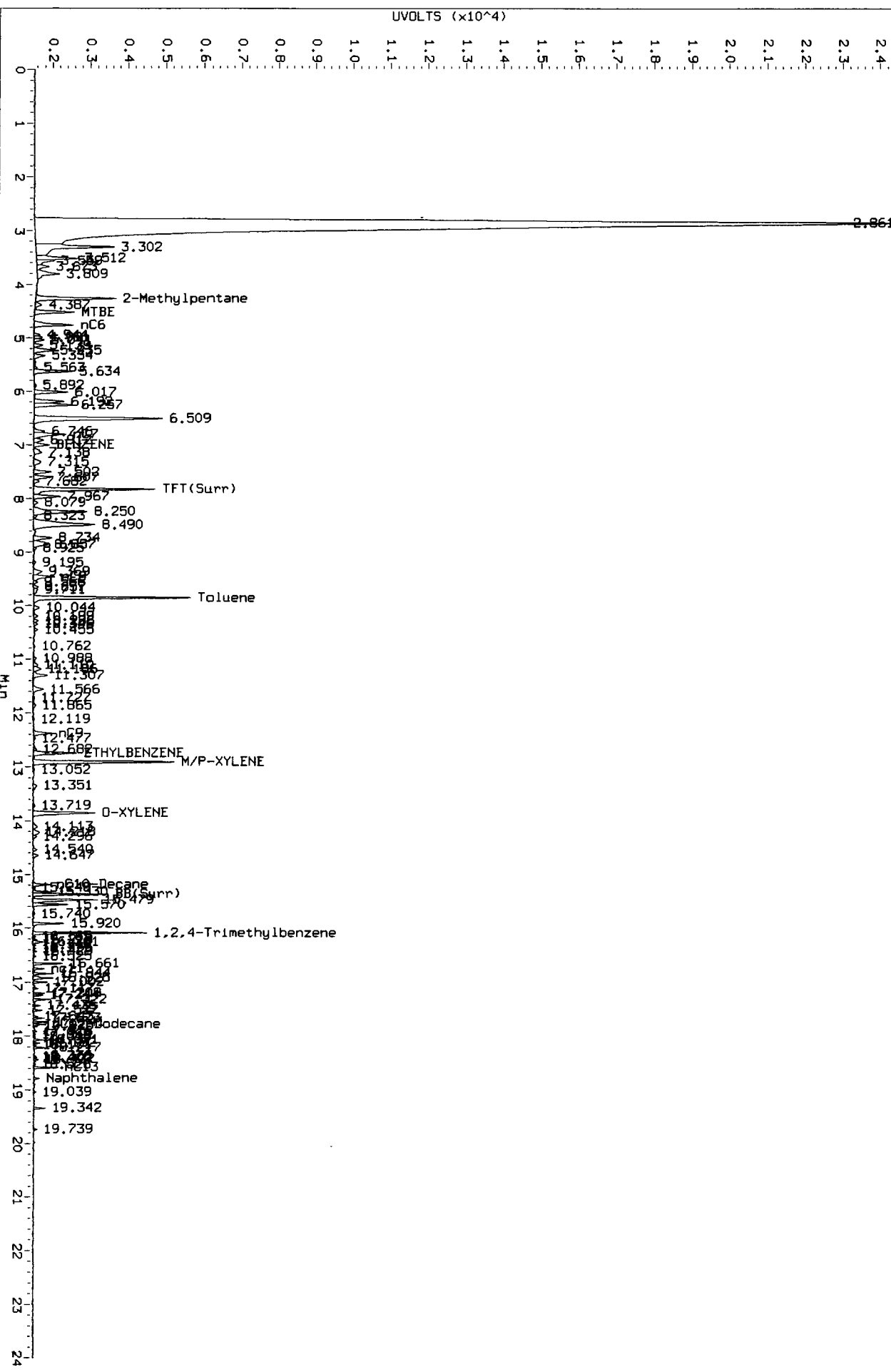
/chem3/pid1.i/20130502-1.b/0502a004.d/0502a004.cdf

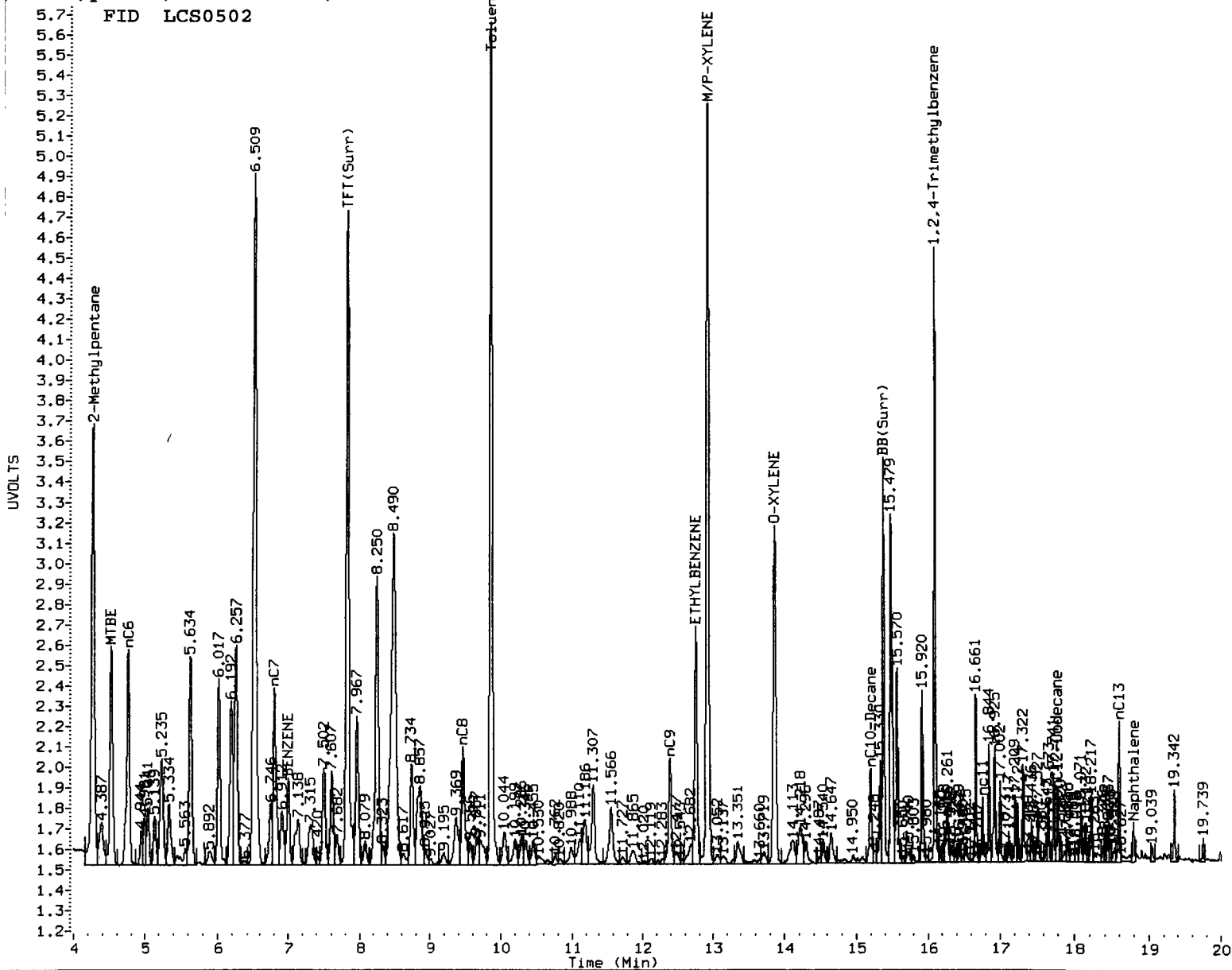


PC
5/3/13

Data File: /chem3/pid1.1/20130502-1.b/0502a004.d/0502a004.cdf
Injection Date: 02-MAY-2013 09:45
Instrument: pid1.1
Client Sample ID:

RI 0502a004.cdf: 0.000 to 24.007 Min





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: YL Date: 5/13/13

Data File: /chem3/pid1.i/20130502-2.b/0502a004.d

Date: 02-MAY-2013 09:45

Client ID:

Sample Info: LCS0502

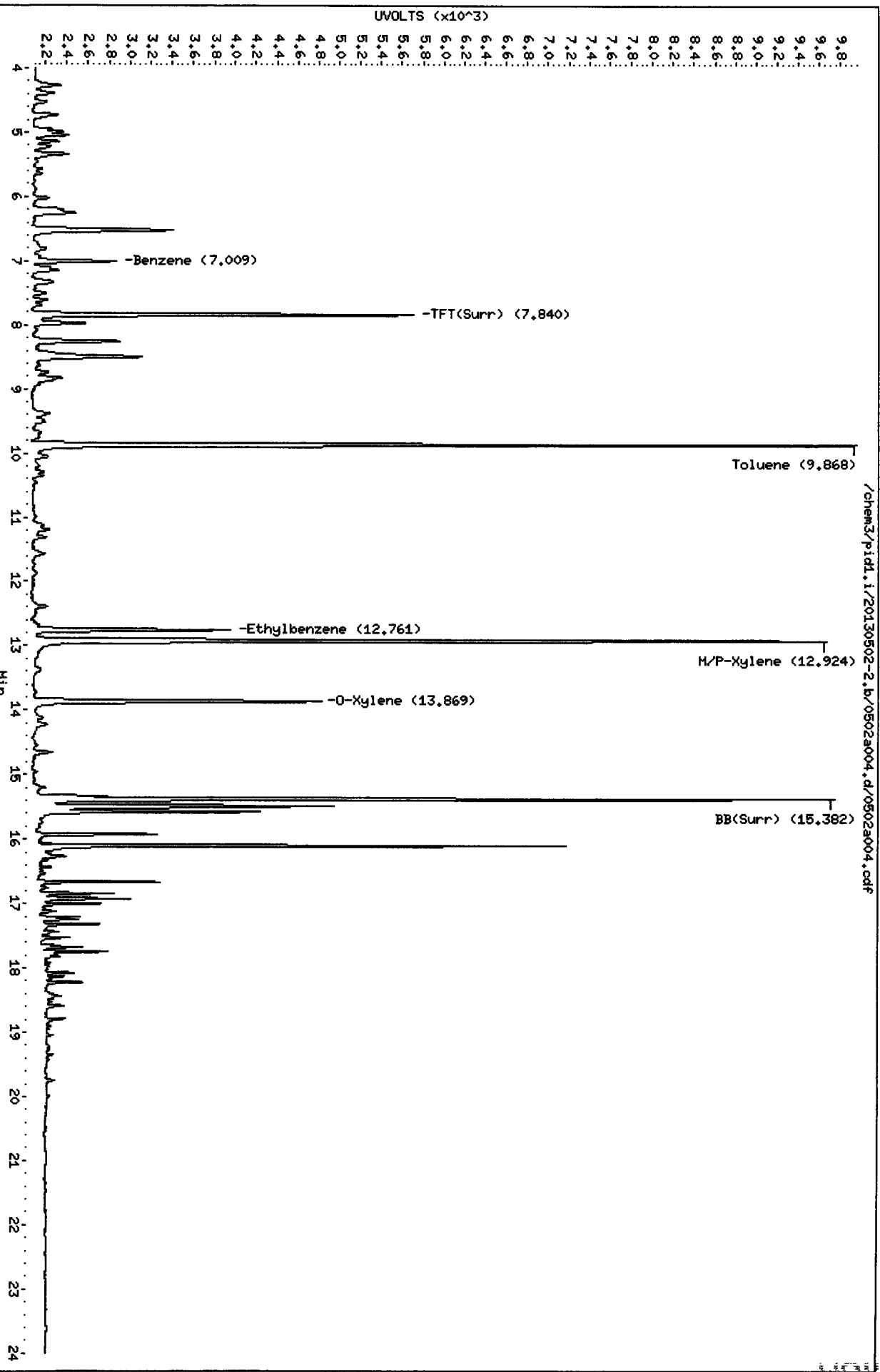
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130502-2.b/0502a004.d/0502a004.cdf



PC
5/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130502-1.b/0502a005.d ARI ID: LCSD0502
Data file 2: /chem3/pid1.i/20130502-2.b/0502a005.d Client ID:
Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 10:15
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.832	0.001	3080	41890	88.8	TFT(Surr)
15.374	0.001	1931	16919	84.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	338526	0.945 M
8015C 2MP-TMB (4.17 to 16.20)	723723	676993	0.935 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	547428	0.939 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	355192	0.947 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.840	0.001	3473	87.5	TFT(Surr)
15.382	0.001	7401	84.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.009	0.000	851	3.55	Benzene
9.868	0.001	8485	37.05	Toluene
12.761	0.001	1984	10.25	Ethylbenzene
12.924	0.003	8099	37.93	M/P-Xylene
13.869	0.002	2909	17.05	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130502-1.b/0502a005.d

Date: 02-MAY-2013 10:15

Client ID:

Sample Info: LCSD0502

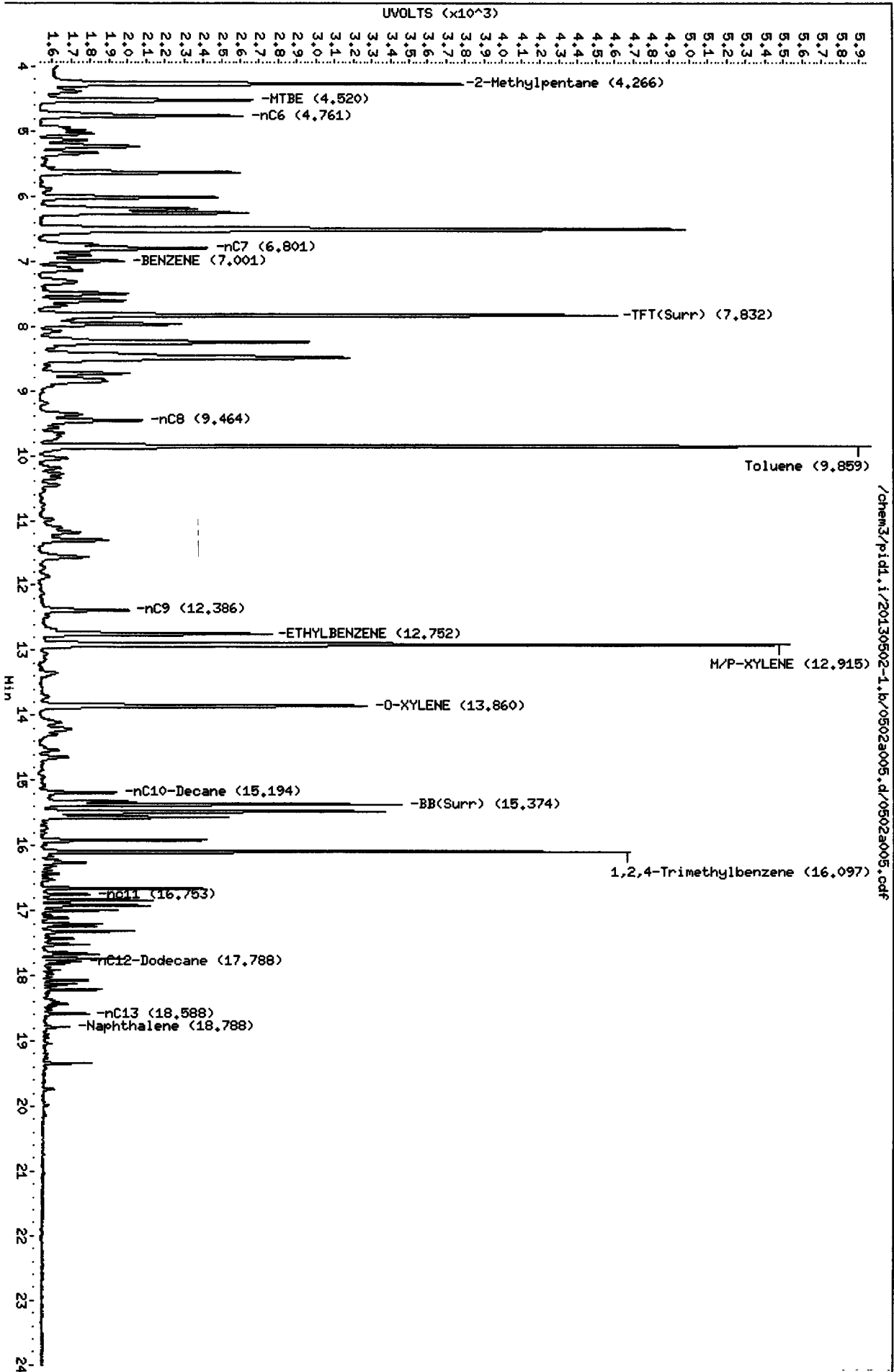
Column Phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

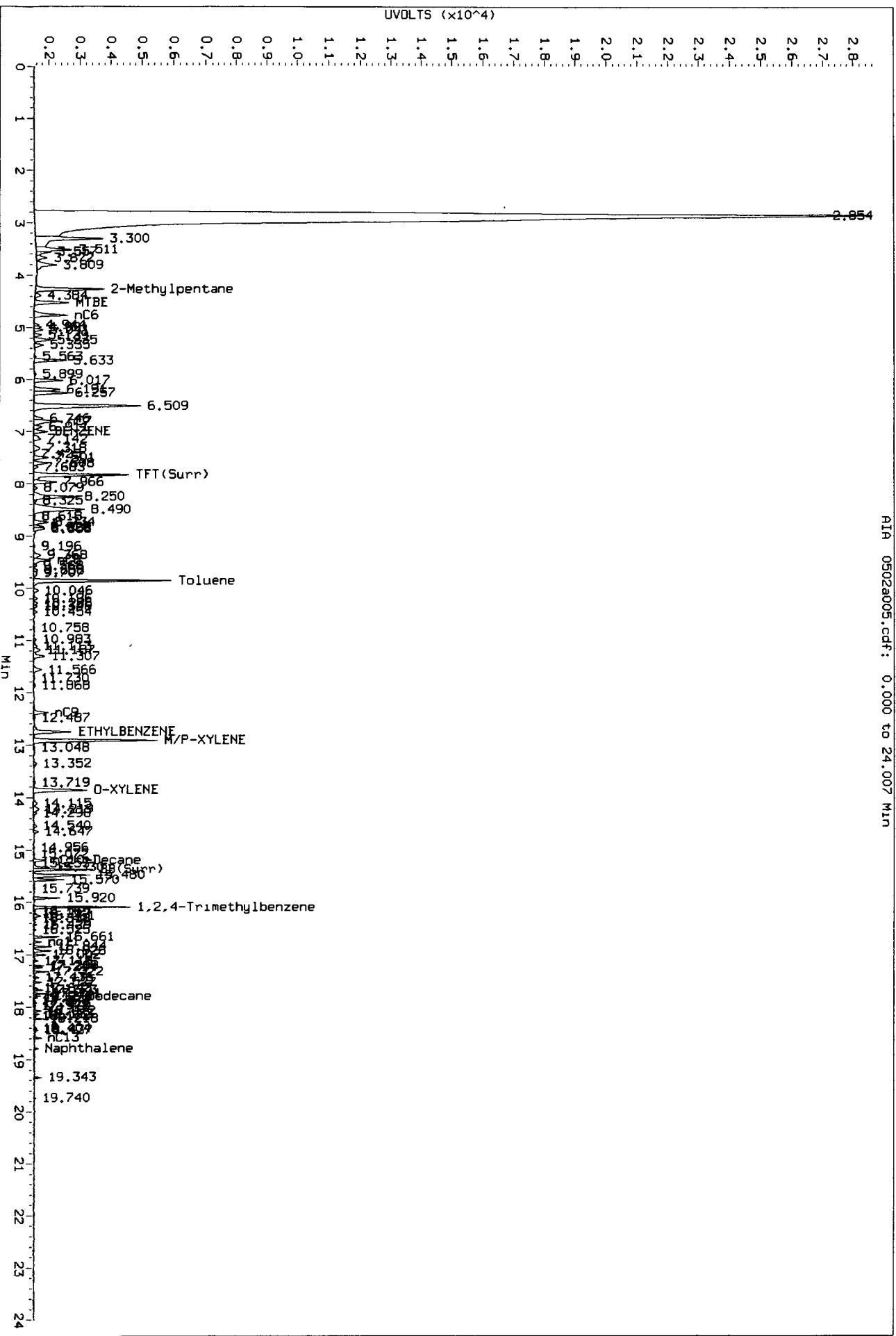
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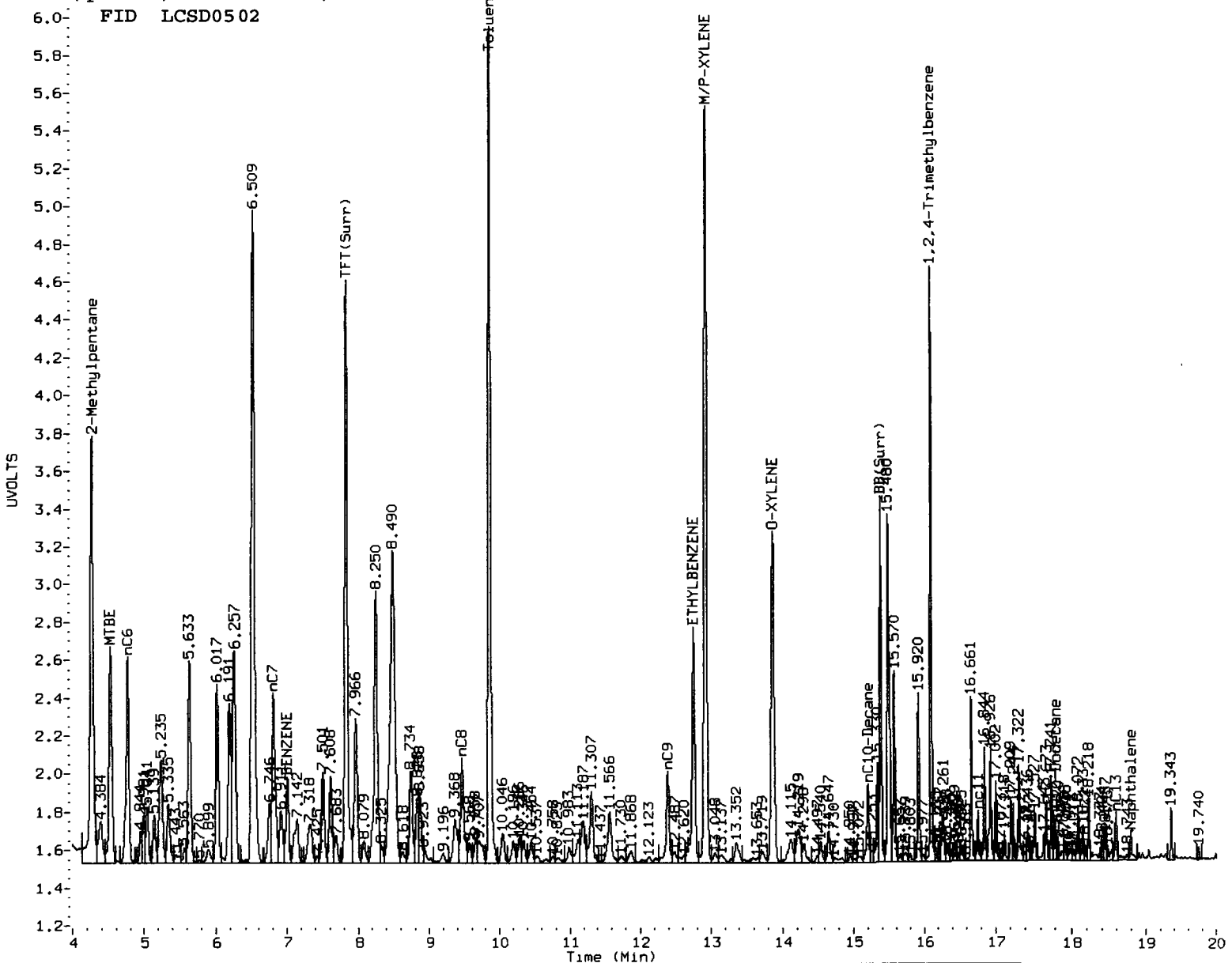
Page 1



PC
5/13/13
Data File: /chem3/pid1.1/20130502-1.b/0502a005.d/0502a005.cdf
Injection Date: 02-MAY-2013 10:15
Instrument: pid1.1
Client Sample ID:

AIA 0502a005.cdf: 0.000 to 24.007 Min





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: rc Date: 5/3/13

Data File: /chem3/pid1.i/20130502-2.b/0502a005.d

Date: 02-MAY-2013 10:15

Client ID:

Sample Info: LCSJ0502

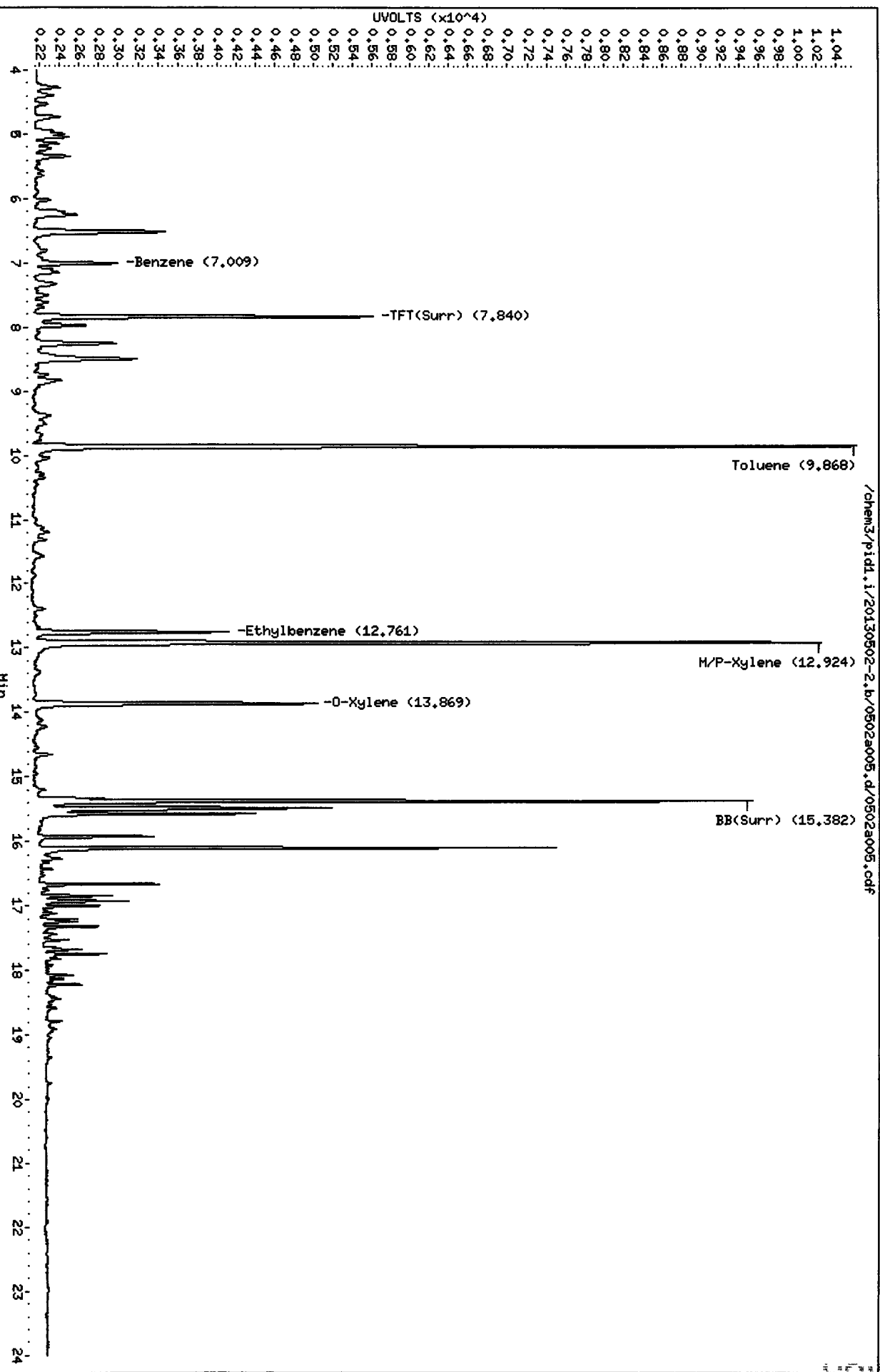
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130502-2.b/0502a005.d/0502a005.cdf



ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050313

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050313

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/06/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/03/13 13:41

LCSD: 05/03/13 12:28

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	49.6	50.0	99.2%	41.9	50.0	83.8%	16.8%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	92.1%	88.6%
Bromobenzene	83.4%	86.4%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-050313

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050313

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/06/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/03/13 13:41

LCSD: 05/03/13 12:28

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS		LCSD		Spike		RPD
	Added	Recovery	Added	Recovery	Added	Recovery	
Benzene	184	99.5%	152	99.5%	185	82.2%	19.0%
Toluene	1920	97.0%	1610	97.0%	1980	81.3%	17.6%
Ethylbenzene	544	93.8%	448	93.8%	580	77.2%	19.4%
m,p-Xylene	1980	93.4%	1650	93.4%	2120	77.8%	18.2%
o-Xylene	887	92.4%	742	92.4%	960	77.3%	17.8%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	90.3%	89.1%
Bromobenzene	84.1%	85.8%

11/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130503-1.b/0503a007.d ARI ID: LCS0503
Data file 2: /chem3/pid1.i/20130503-2.b/0503a007.d Client ID:
Method: /chem3/pid1.i/20130503-2.b/PIDB.m Injection Date: 03-MAY-2013 13:41
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.839	0.006	3194	43400	92.1	TFT(Surr)
15.379	0.004	1904	16872	83.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.90)	358114	353727	0.988 M
8015C 2MP-TMB (4.17 to 16.20)	723723	710326	0.981 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	575008	0.986 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	372268	0.992 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.847	0.005	3584	90.3	TFT(Surr)
15.387	0.004	7393	84.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.016	0.005	887	3.69	Benzene
9.875	0.006	8791	38.39	Toluene
12.768	0.006	2107	10.88	Ethylbenzene
12.931	0.008	8463	39.63	M/P-Xylene
13.877	0.007	3026	17.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.1/20130503-1.b/0503a007.d

Date : 03-MAY-2013 13:41

Client ID:

Sample Info: LCS0503

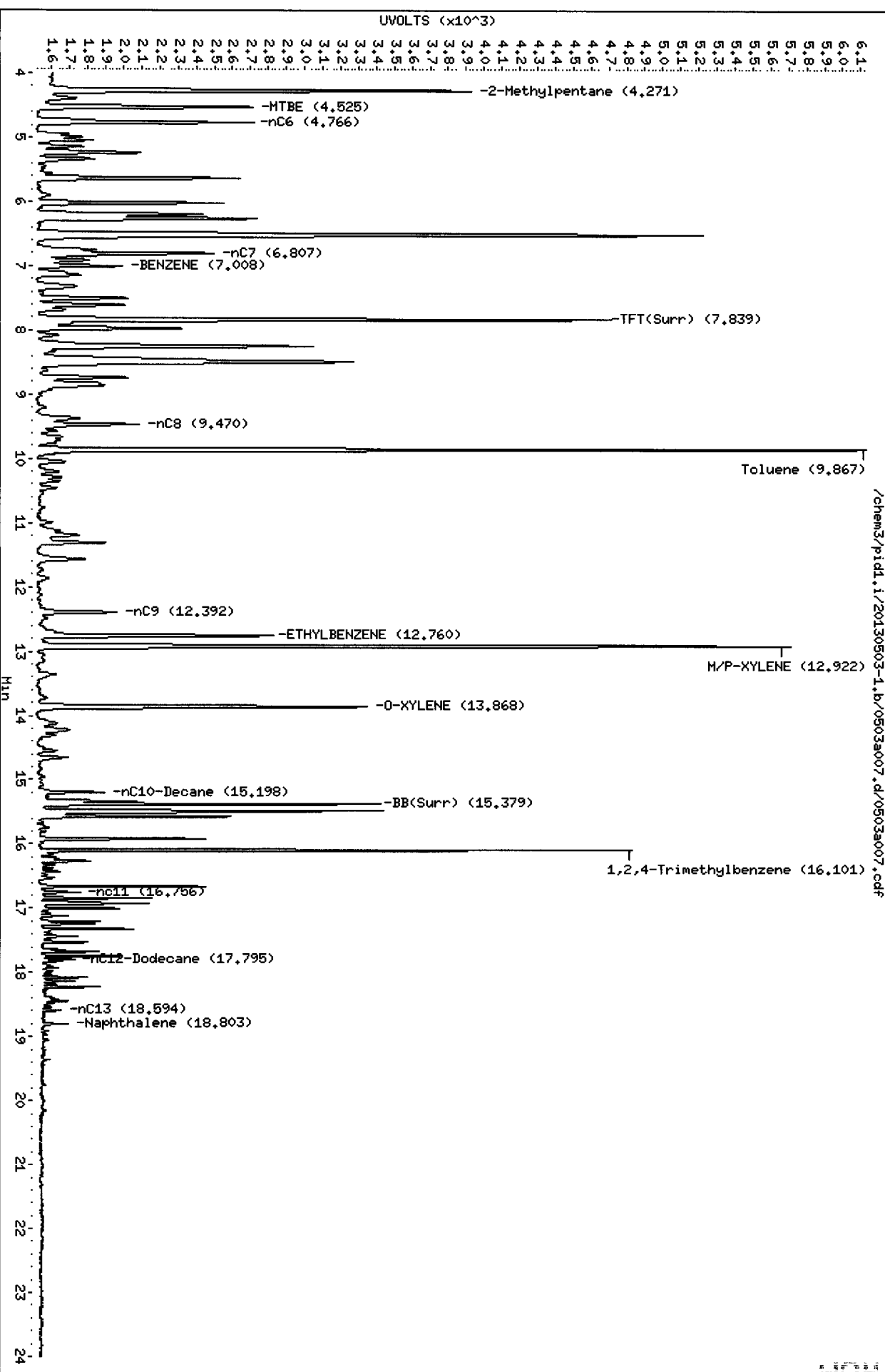
Column phase: RTX 502-2 FID

Instrument: pid1.1

Operator: PC

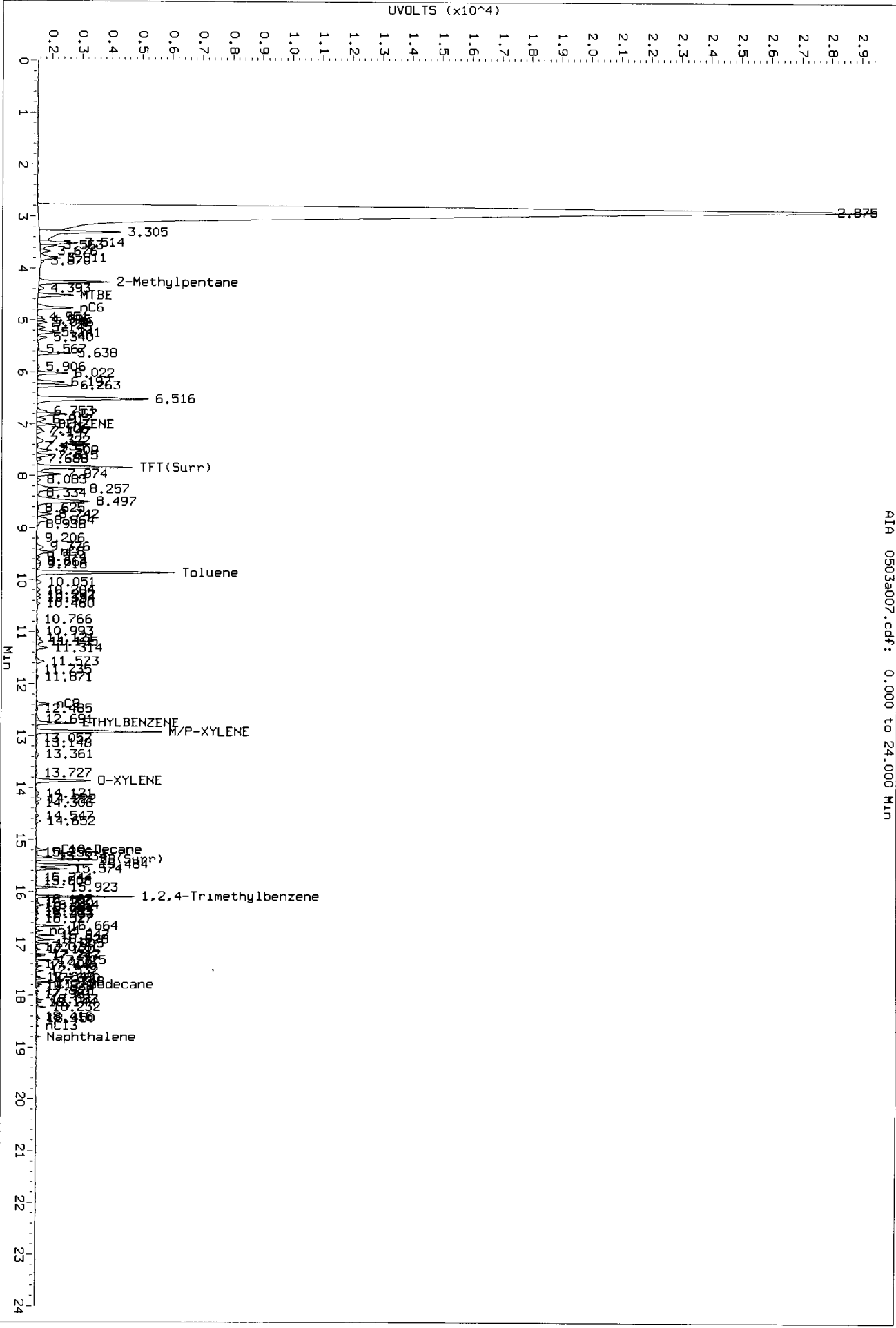
Column diameter: 0.18

/chem3/pid1.1/20130503-1.b/0503a007.d/0503a007.cdf



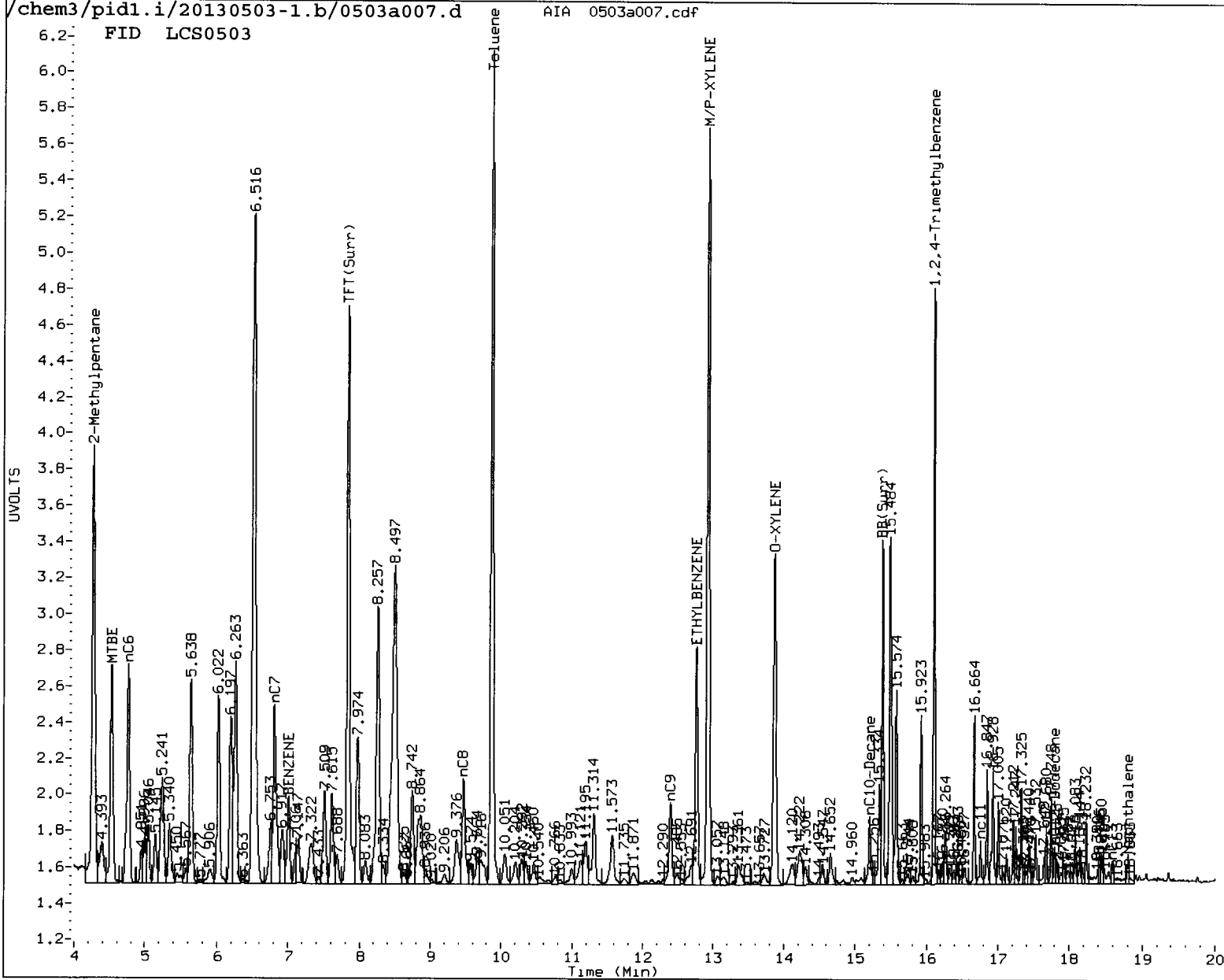
M
5/16/13

Data File: /chem3/pid1.1/20130503-1.b/0503a007.d/0503a007.cdf
Injection Date: 03-MAY-2013 13:41
Instrument: pid1.1
Client Sample ID:



AIA 0503a007.cdf: 0.000 to 24.000 Min

FID LCS0503



MANUAL INTEGRATION

- ① Baseline correction
2. Poor chromatography
- ③ Peak not found
4. Totals calculation

5. Other _____

Analyst: Date:

PL
5/6/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130503-1.b/0503a005.d ARI ID: LCSD0503
Data file 2: /chem3/pid1.i/20130503-2.b/0503a005.d Client ID:
Method: /chem3/pid1.i/20130503-2.b/PIDB.m Injection Date: 03-MAY-2013 12:28
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.836	0.002	3074	41668	88.6	TFT(Surr)
15.376	0.001	1972	17048	86.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.90)	358114	298303	0.833 M
8015C 2MP-TMB (4.17 to 16.20)	723723	587432	0.812 M
AK101 nC6-nC10 (4.66 to 15.09)	582885	473592	0.812 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	314284	0.838 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.844	0.002	3536	89.1	TFT(Surr)
15.384	0.001	7541	85.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.002	732	3.05	Benzene
9.871	0.002	7388	32.26	Toluene
12.764	0.002	1737	8.97	Ethylbenzene
12.927	0.004	7046	32.99	M/P-Xylene
13.872	0.003	2534	14.85	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130503-1.b/0503a005.d
Date: 03-MAY-2013 12:28

Client ID:

Sample Info: LCSD0503

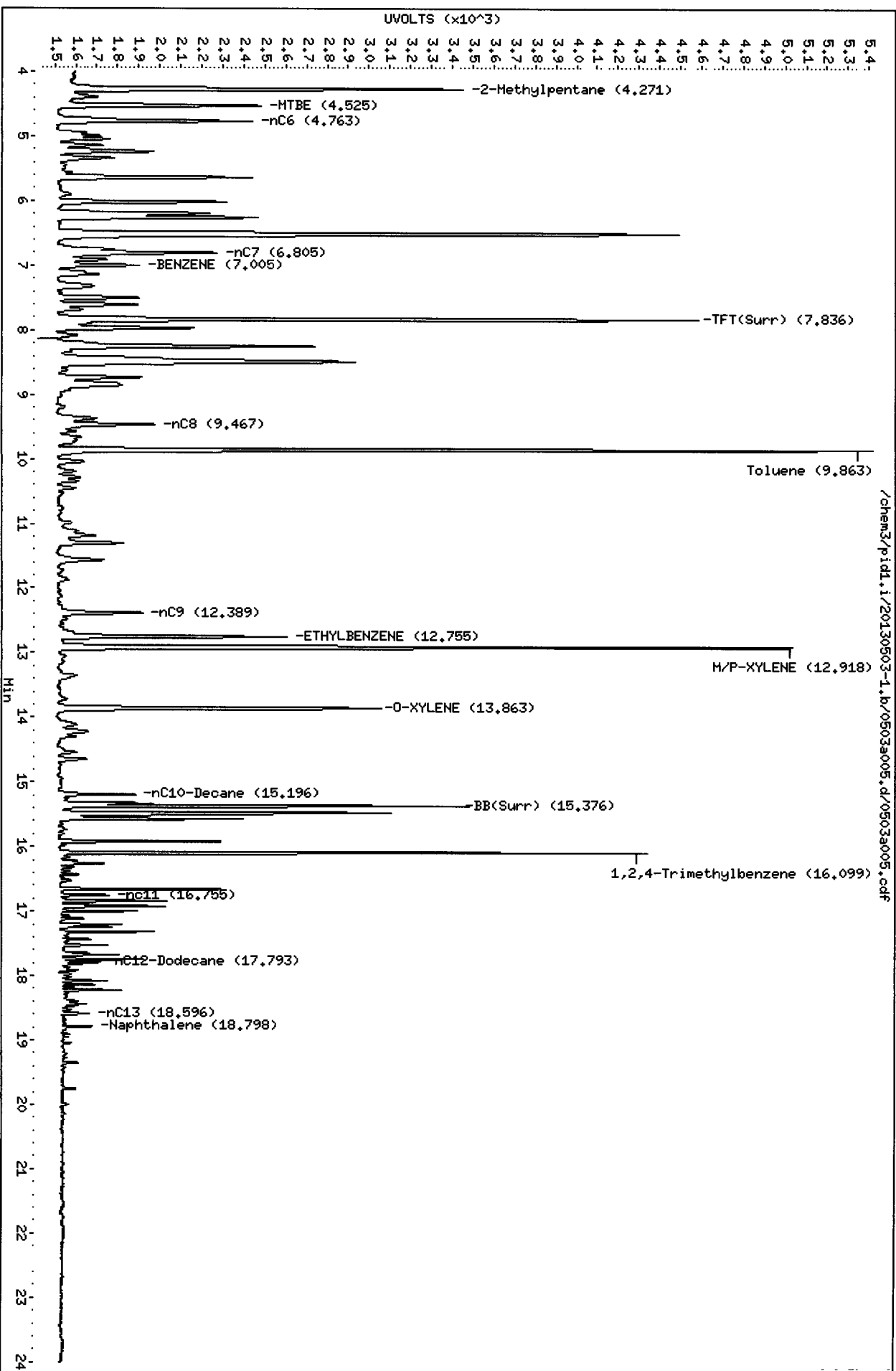
Column phase: RTX 502-2 FID

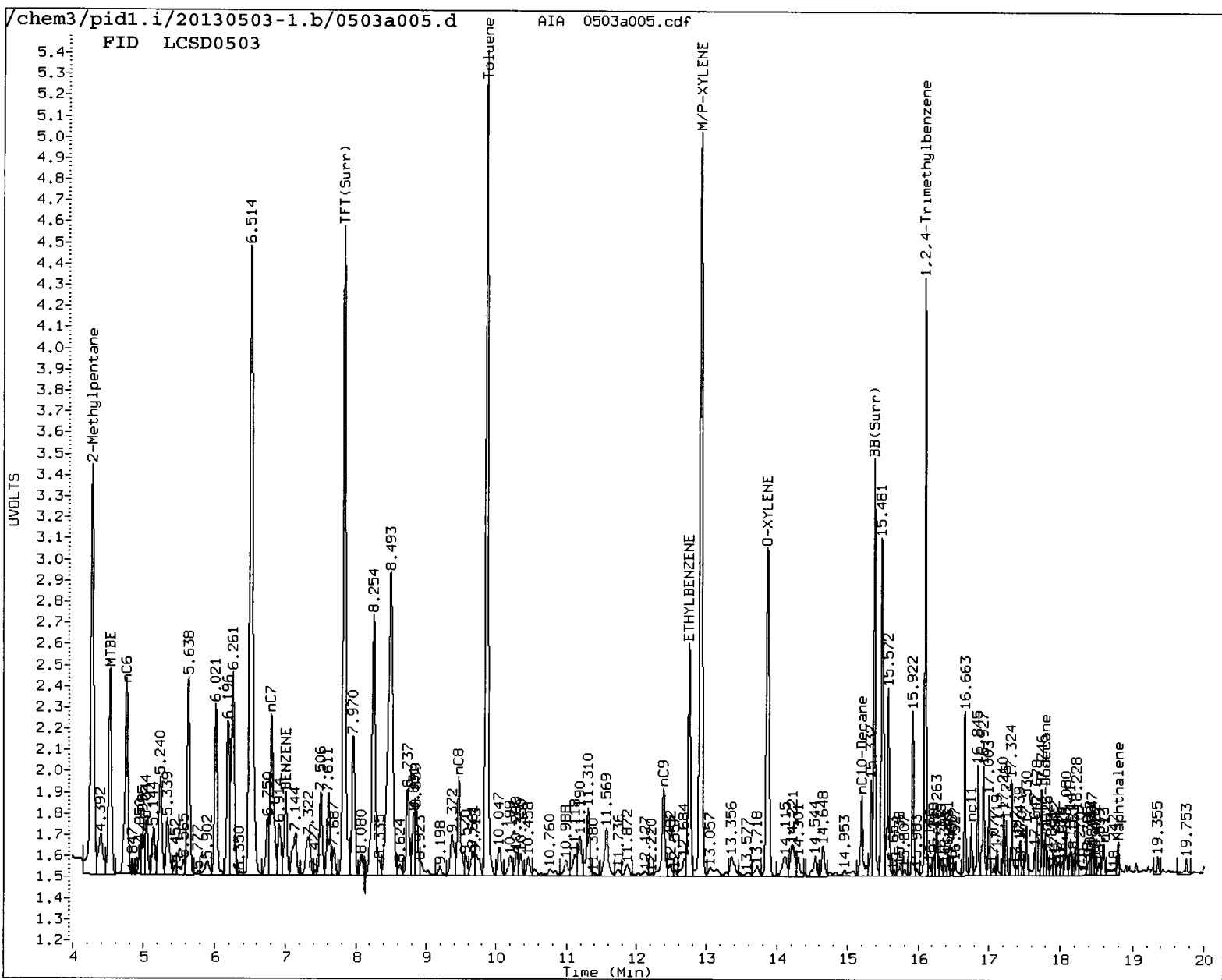
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1





MANUAL INTEGRATION

- 1) Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: xl

Date: 5/6/13

Data File: /chem3/pid1.i/20130503-2.b/0503a005.d

Date: 03-MAY-2013 12:28

Client ID:

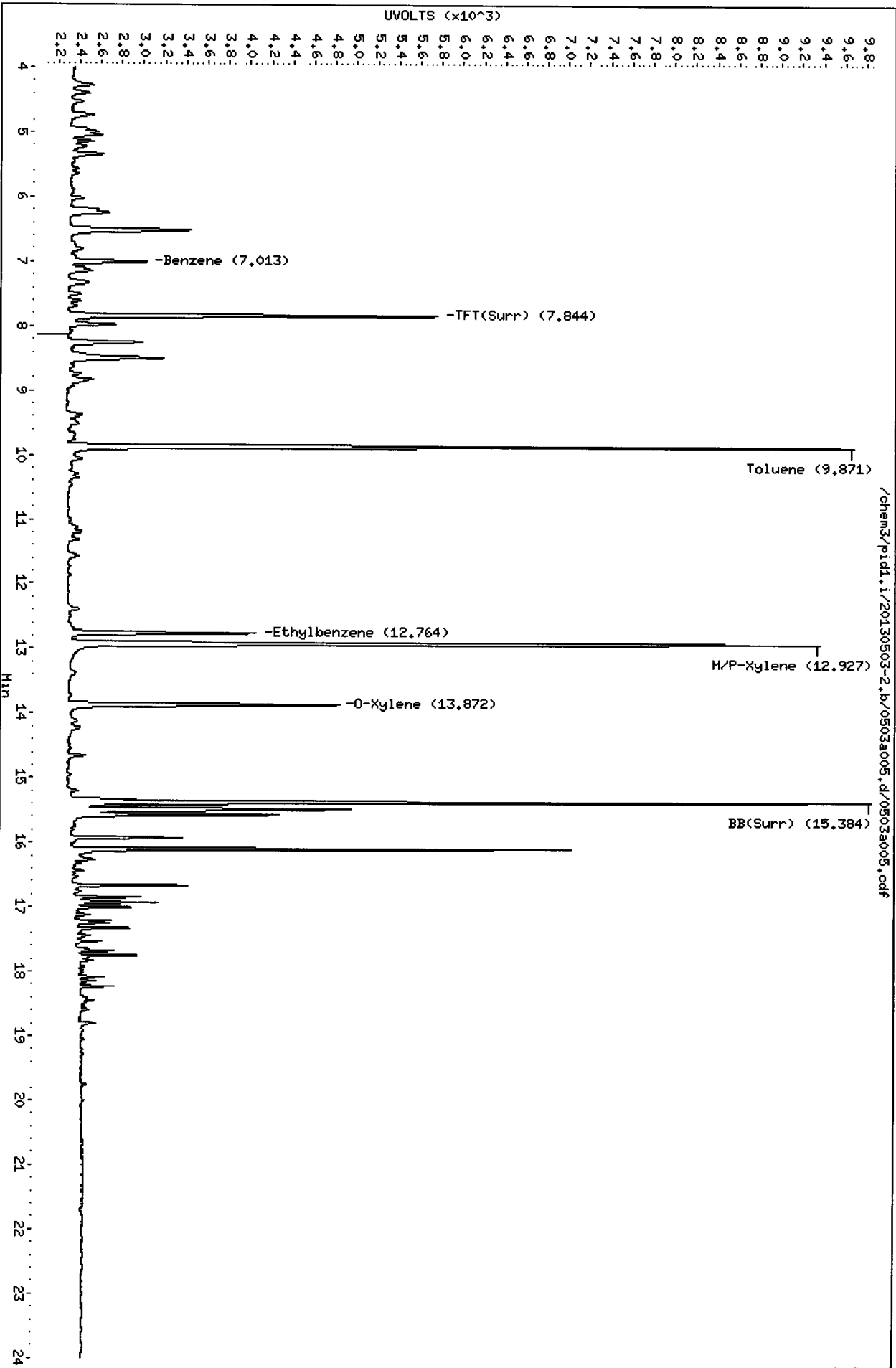
Sample Info: LCSD0503

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID



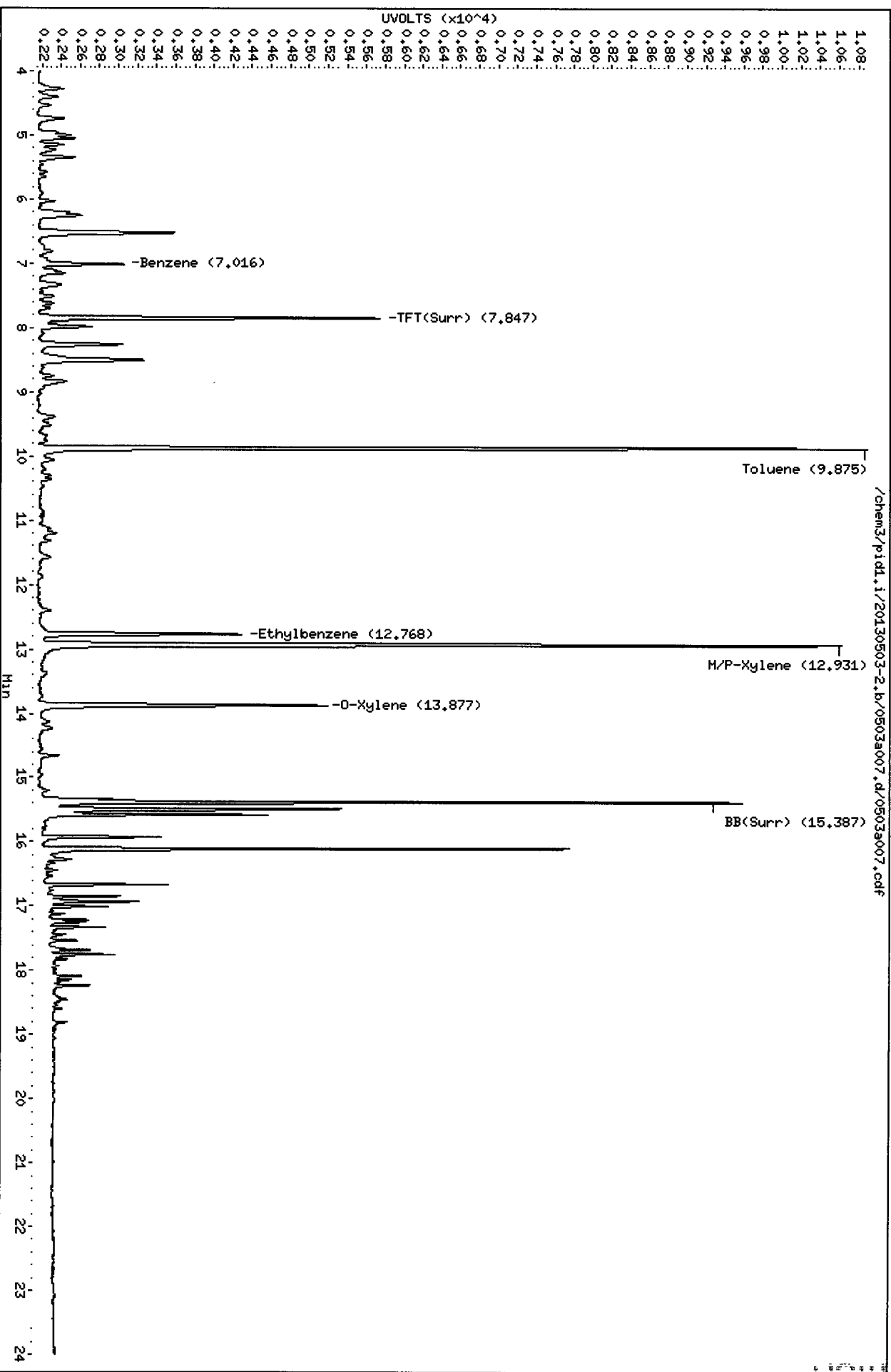
Data File: /chem3/pid1.i/20130503-2.b/0503a007.d
Date: 03-MAY-2013 13:41

Client ID:
Sample Info: LCS0503

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050213

METHOD BLANK

Lab Sample ID: MB-050213

LIMS ID: 13-9401

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/02/13 10:44

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	85.2%
Bromobenzene	84.1%

Gasoline Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	84.7%

BETX values reported in $\mu\text{g}/\text{kg}$ (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

VC
 7/13/13

Data file 1: /chem3/pid1.i/20130502-1.b/0502a006.d ARI ID: MB0502
 Data file 2: /chem3/pid1.i/20130502-2.b/0502a006.d Client ID:
 Method: /chem3/pid1.i/20130502-2.b/PIDB.m Injection Date: 02-MAY-2013 10:44
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.833	0.002	2969	36063	85.6	TFT (Surr)
15.375	0.001	1933	16061	84.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	2744	0.008
8015C 2MP-TMB (4.17 to 16.20)	723723	4187	0.006
AK101 nC6-nC10 (4.66 to 15.09)	582885	3564	0.006
NWTPHG Tol-Nap (9.76 to 18.89)	375093	3280	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.841	0.002	3382	85.2	TFT (Surr)
15.383	0.001	7392	84.1	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 V Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130502-1.b/0502a006.d

Date : 02-MAY-2013 10:44

Client ID:

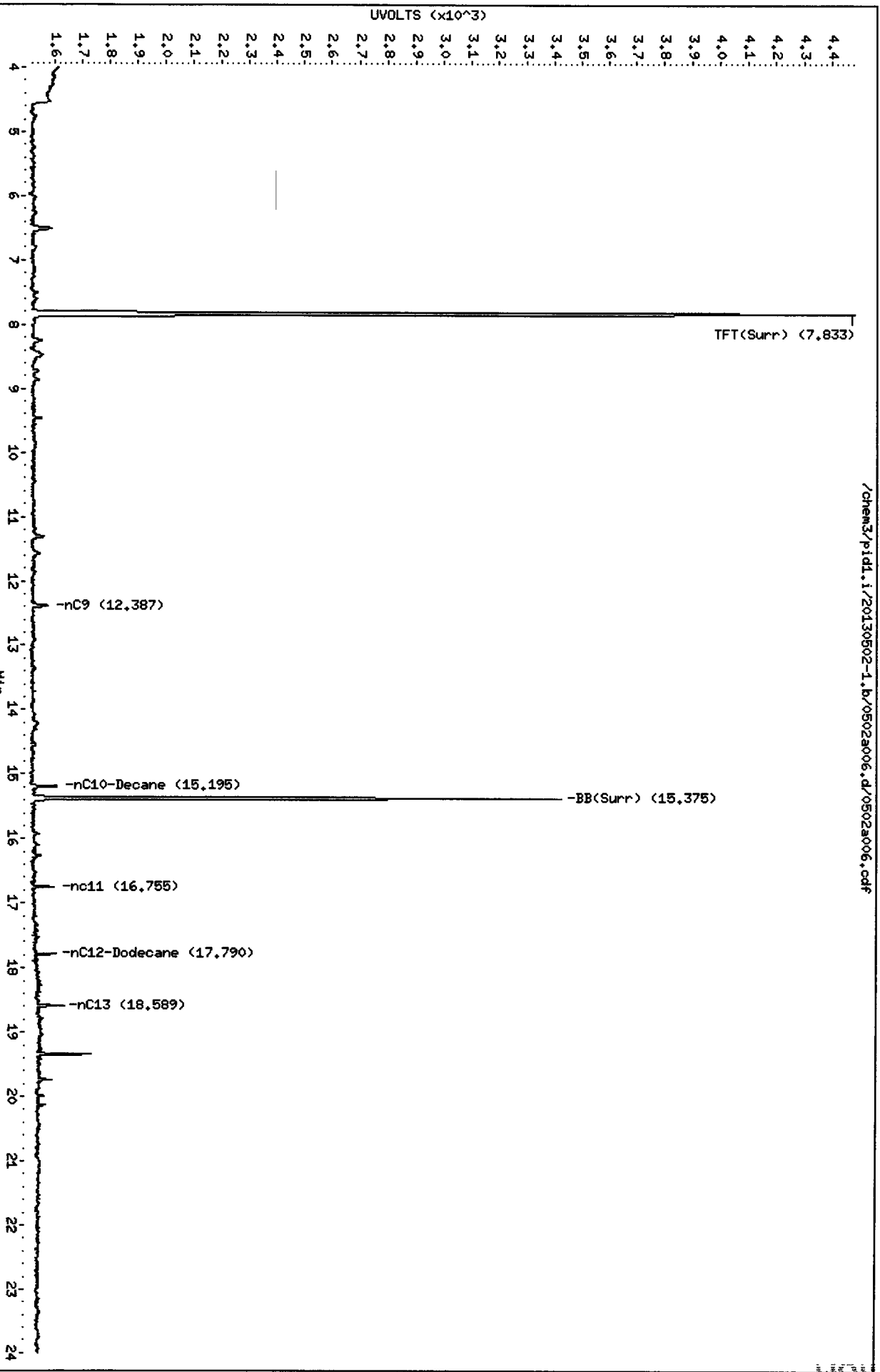
Sample Info: MB0502

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



/chem3/pid1.i/20130502-1.b/0502a006.d/0502a006.cdf

Data File: /chem3/pidl.i/20130502-2.b/0502a006.d

Date: 02-MAY-2013 10:44

Client ID:

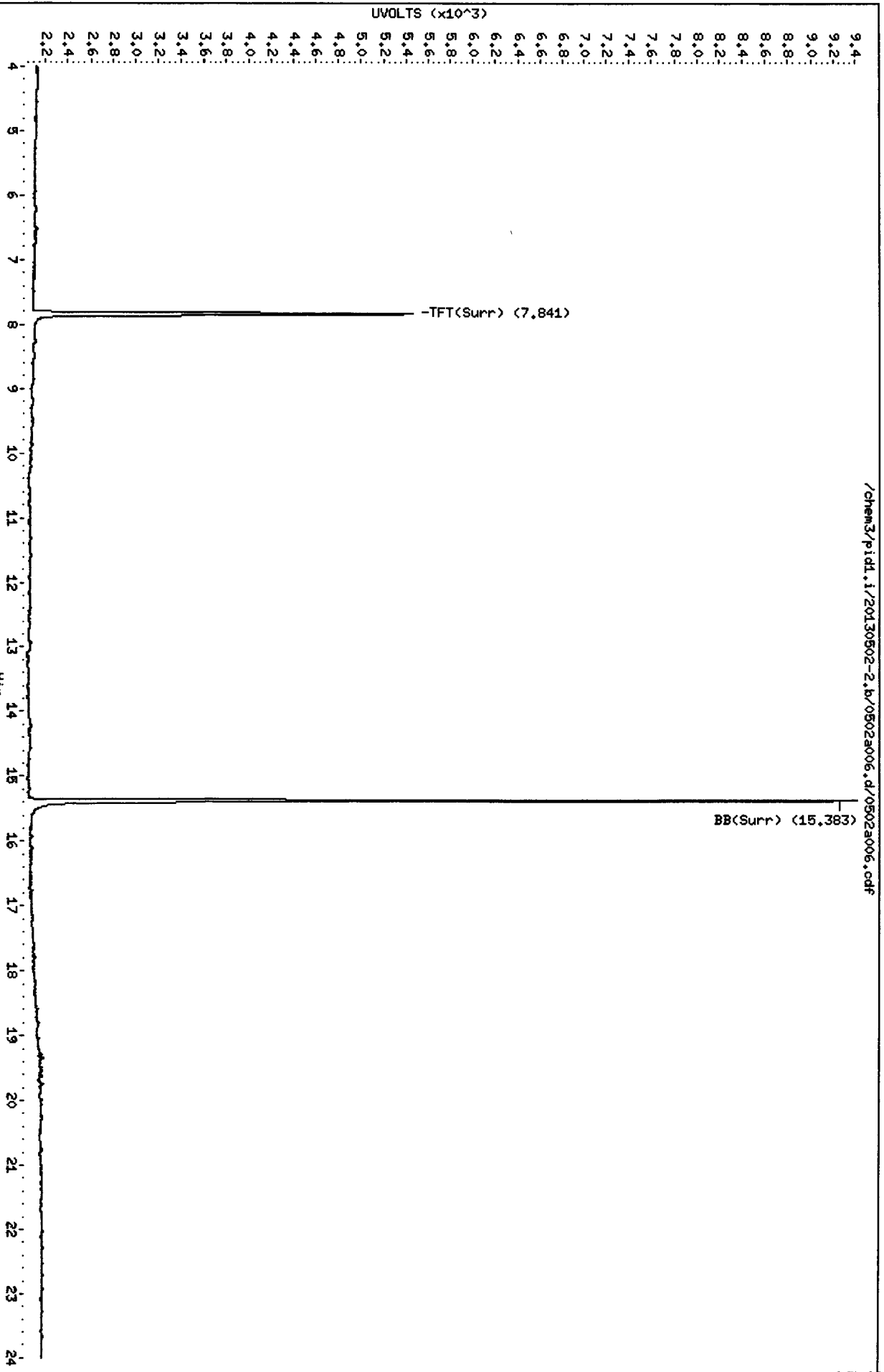
Sample Info: MB0502

Column phase: RTX 502-2 PID

Instrument: pidl.i

Operator: LH

Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050313

METHOD BLANK

Lab Sample ID: MB-050313

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/03/13 12:58

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	85.0%
Bromobenzene	83.9%

Gasoline Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	85.1%

BETX values reported in $\mu\text{g}/\text{kg}$ (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

15/6/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130503-1.b/0503a006.d ARI ID: MB0503
Data file 2: /chem3/pid1.i/20130503-2.b/0503a006.d Client ID:
Method: /chem3/pid1.i/20130503-2.b/PIDB.m Injection Date: 03-MAY-2013 12:58
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.836	0.003	2979	36336	85.9	TFT(Surr)
15.377	0.002	1943	16073	85.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.76 to 17.90)	358114	2739	0.008
8015C 2MP-TMB (4.17 to 16.20)	723723	3983	0.006
AK101 nC6-nC10 (4.66 to 15.09)	582885	3120	0.005
NWTPHG Tol-Nap (9.76 to 18.90)	375093	2739	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.844	0.003	3374	85.0	TFT(Surr)
15.385	0.002	7373	83.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

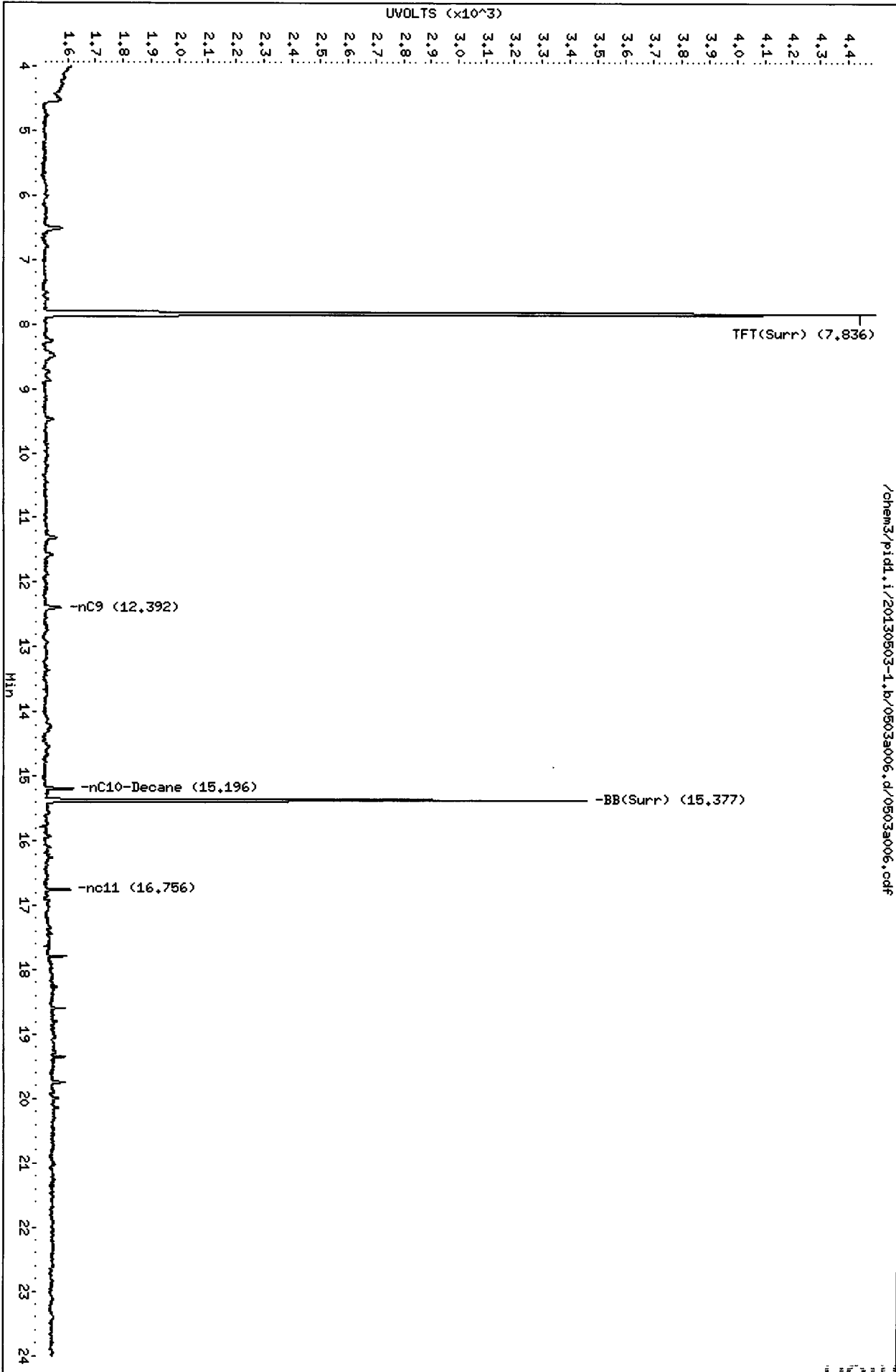
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130503-1.b/05033006.d
Date: 03-MAY-2013 12:58
Client ID:
Sample Info: HB0503

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130503-1.b/05033006.d/05033006.cdf

Data File: /chem3/pid1.i/20130503-2.b/0503a006.d
Date : 03-MAY-2013 12:58

Client ID:

Sample Info: MB0503

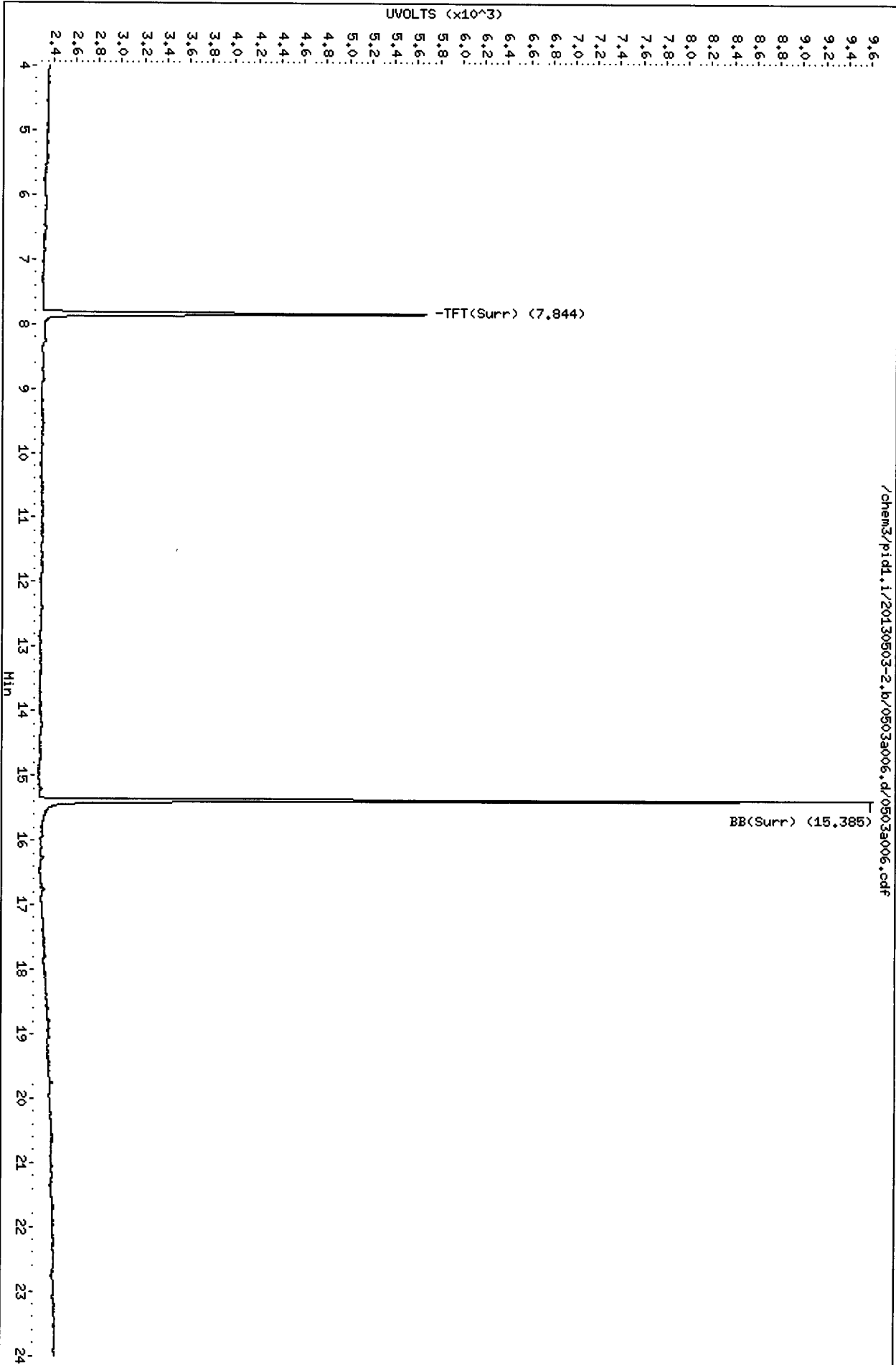
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: WL1-S-3.5
SAMPLE

Lab Sample ID: WO44A

LIMS ID: 13-9401

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: WO44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: 04/29/13

Date Received: 05/01/13

Percent Total Solids: 83.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/02/13	6010C	05/03/13	7440-38-2	Arsenic	6	6	U
3050B	05/02/13	6010C	05/03/13	7440-47-3	Chromium	0.6	63.7	
3050B	05/02/13	6010C	05/03/13	7440-50-8	Copper	0.2	21.7	
3050B	05/02/13	6010C	05/03/13	7439-92-1	Lead	2	24	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: WL2-S-3.0

SAMPLE

Lab Sample ID: W044B

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: 04/29/13

Date Received: 05/01/13

Percent Total Solids: 85.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/02/13	6010C	05/03/13	7440-38-2	Arsenic	6	6	U
3050B	05/02/13	6010C	05/03/13	7440-47-3	Chromium	0.6	39.7	
3050B	05/02/13	6010C	05/03/13	7440-50-8	Copper	0.2	12.0	
3050B	05/02/13	6010C	05/03/13	7439-92-1	Lead	2	3	

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation

W044: 792 BC 6/4/13

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: WL3-S-3.5
SAMPLE

Lab Sample ID: W044C

LIMS ID: 13-9403

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: 04/29/13

Date Received: 05/01/13

Percent Total Solids: 79.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/02/13	6010C	05/03/13	7440-38-2	Arsenic	6	6	U
3050B	05/02/13	6010C	05/03/13	7440-47-3	Chromium	0.6	73.0	
3050B	05/02/13	6010C	05/03/13	7440-50-8	Copper	0.2	17.5	
3050B	05/02/13	6010C	05/03/13	7439-92-1	Lead	2	11	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WO44LCS

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized:

Reported: 05/03/13

QC Report No: WO44-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA



BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	205	200	102%	
Chromium	6010C	50.3	50.0	101%	
Copper	6010C	49.4	50.0	98.8%	
Lead	6010C	196	200	98.0%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: W044MB

LIMS ID: 13-9402

Matrix: Soil

Data Release Authorized:

Reported: 06/04/13

QC Report No: W044-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	05/02/13	6010C	05/03/13	7440-38-2	Arsenic	5	5	U
3050B	05/02/13	6010C	05/03/13	7440-47-3	Chromium	0.5	0.5	U
3050B	05/02/13	6010C	05/03/13	7440-50-8	Copper	0.2	0.2	U
3050B	05/02/13	6010C	05/03/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 5, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job Nos.: WR39 & WR40

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted nineteen soil samples on May 24, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

Three of the thirteen samples required an expedited turn-around-time and were logged under a separate cover (ARI job WR33). The remaining sixteen samples were logged under the ARI job numbers referenced above.

The samples were analyzed for NWTPH-Dx and BTEX, as requested on the COCs.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WR39_WR40

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WK39	Turn-around Requested:	Page: 2 of 3
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA	TSILVA@MAILFOSTER.COM	Ice Present? Y
Client Project Name: CASHMERE	Client Project #: 0779.02.01-03	No. of Coolers: 3
Samplers: LINDSEY CROSBY		Cooler Temps: 3.0, 4.9, 5.6

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested				Notes/Comments
					DX SILVA Gel Cleanup	BTEX	VPH	EPH	
A2-F30-S-6	5/22	1540	S	4	X	X			
A2-F31-S-6		1545		4					
A2-F32-S-6		1550		7			X	X	
A2-F33-S-6		1600		4					
A2-F34-S-6		1610		4					
A2-F35-S-6		1620		4					
A2-F36-S-6		1620		4					
A2-F37-S-6		1650		7			X	X	
A2-F38-S-6		1700		4					
A2-F39-S-6		1715		4					

Comments/Special Instructions PLEASE RUSH VPH/EPH. ALL OTHERS ARE STANDARD TAT	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Joshua Raines</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Joshua Raines	Printed Name:	Printed Name:
	Company: MFA	Company: Analytical Resources, Inc.	Company:	Company:
	Date & Time: 5/24 0700	Date & Time: 05/24/13 06:52	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20000:5500



Cooler Receipt Form

ARI Client: MEA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WR39

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.0 4.9 5.6

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JR (AV) Date: 5/24/13 Time: 651

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: (NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/24/13 Time: 1448

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
A2-F38-S-6	A2-F38-S-6		

Additional Notes, Discrepancies, & Resolutions:
* Same date and time as COC.

By: AV Date: 5/28/13

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WR39
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-F30-S-6	WR39A	13-11251	Soil	05/22/13 15:40	05/24/13 06:52
2. A2-F31-S-6	WR39B	13-11252	Soil	05/22/13 15:45	05/24/13 06:52
3. A2-F33-S-6	WR39C	13-11253	Soil	05/22/13 16:00	05/24/13 06:52
4. A2-F34-S-6	WR39D	13-11254	Soil	05/22/13 16:10	05/24/13 06:52
5. A2-F35-S-6	WR39E	13-11255	Soil	05/22/13 16:20	05/24/13 06:52
6. A2-F36-S-6	WR39F	13-11256	Soil	05/22/13 16:20	05/24/13 06:52
7. A2-F38-S-6	WR39G	13-11257	Soil	05/22/13 17:00	05/24/13 06:52
8. A2-F39-S-6	WR39H	13-11258	Soil	05/22/13 17:15	05/24/13 06:52
9. A2-F40-S-6	WR39I	13-11259	Soil	05/22/13 17:15	05/24/13 06:52
10. A2-F41-S-6	WR39J	13-11260	Soil	05/23/13 10:30	05/24/13 06:52

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WR40	Turn-around Requested:	Page: 1 of 3
ARI Client Company: MFA, INC.	Phone:	Date: 05/24/13
Client Contact: TONY SILVA TSVIA@MAMFOSTER.COM		Ice Present? yes
Client Project Name: CASHMERE		No. of Coolers: 2 of 3
Client Project #: 0779-02.0-03	Samplers: LINDSEY CROSBY	Cooler Temps: 3



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments
					Dx Sulfur	BTEX					
SL-F1-S-6	5/22	1235	S	5	X	X					
SL-F2-S-6		1240		6	X	X					
SL-F3-S-6		1250		5	X	X					
SL-F4-S-6		1300		5	X	X					
SL-F5-S-6		1315		5	X	X					
SL-F6-S-6		1330		5	X	X					

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Joshua Kains</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Joshua Kains	Printed Name:	Printed Name:
	Company: MFA	Company: Analytical Resources, Inc.	Company:	Company:
	Date & Time: 5/24 07:20	Date & Time: 05/24/13 06:53	Date & Time:	Date & Time:

50000:66211

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Sample ID Cross Reference Report



ARI Job No: WR40
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SL-F1-S-6	WR40A	13-11261	Soil	05/22/13 12:35	05/24/13 06:53
2. SL-F2-S-6	WR40B	13-11262	Soil	05/22/13 12:40	05/24/13 06:53
3. SL-F3-S-6	WR40C	13-11263	Soil	05/22/13 12:50	05/24/13 06:53
4. SL-F4-S-6	WR40D	13-11264	Soil	05/22/13 13:00	05/24/13 06:53
5. SL-F5-S-6	WR40E	13-11265	Soil	05/22/13 13:15	05/24/13 06:53
6. SL-F6-S-6	WR40F	13-11266	Soil	05/22/13 13:30	05/24/13 06:53



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WR40

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.0 4.9 5.6

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: JR (AV)

Date: 5/24/13

Time: 651

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

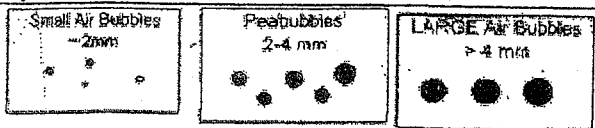
Samples Logged by: JM Date: 5/24/13 Time: 1530

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WR39-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *BB*
Reported: 06/05/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WR39A 13-11251	A2-F30-S-6 HC ID: DRO/MOTOR OIL	05/28/13	05/31/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	33 58 65.2%
MB-052813 13-11252	Method Blank HC ID: ---	05/28/13	05/31/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 72.5%
WR39B 13-11252	A2-F31-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	20 39 62.6%
WR39C 13-11253	A2-F33-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	12 21 69.9%
WR39D 13-11254	A2-F34-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	32 56 64.7%
WR39E 13-11255	A2-F35-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	7.2 14 73.5%
WR39F 13-11256	A2-F36-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/01/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	11 20 65.3%
WR39G 13-11257	A2-F38-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	9.8 45 65.2%
WR39H 13-11258	A2-F39-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	25 54 68.4%
WR39I 13-11259	A2-F40-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	75 200 54.5%
WR39J 13-11260	A2-F41-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	630 1300	7500 22000 D

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 2

QC Report No: WR39-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *BB*
Reported: 06/05/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
--------	-----------	-----------------	---------------	--------	-----------------	----	--------

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b046.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39MBS1
Client ID:
Injection: 31-MAY-2013 23:18
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		127597	9
C8	0.821	0.004	5179	1952	WATPHD (C12-C24)		166176	16.04
C10	2.235	-0.002	378	162	WATPHM (C24-C38)		77203	7.82
C12	3.037	-0.002	447	222	AK102 (C10-C25)		185140	14.98
C14	3.622	0.004	1697	735	AK103 (C25-C36)		64485	9.07
C16	4.118	0.002	1980	497				
C18	4.565	0.005	1640	994				
C20	4.974	-0.005	648	500				
C22	5.376	0.001	459	265	MSPiRIT (Tol-C12)		127597	9.29
C24	5.745	0.000	239	85				
C25	5.921	0.003	56	7				
C26	6.091	-0.003	170	81				
C28	6.398	-0.008	264	91				
C32	6.946	-0.004	812	175				
C34	7.185	0.000	606	140				
Filter Peak	----							
C36	7.406	0.005	865	343				
o-terph	4.672	0.002	721587	438640	JET-A (C10-C18)		128766	11.90
Triacon Surr	6.702	0.002	710944	495244				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

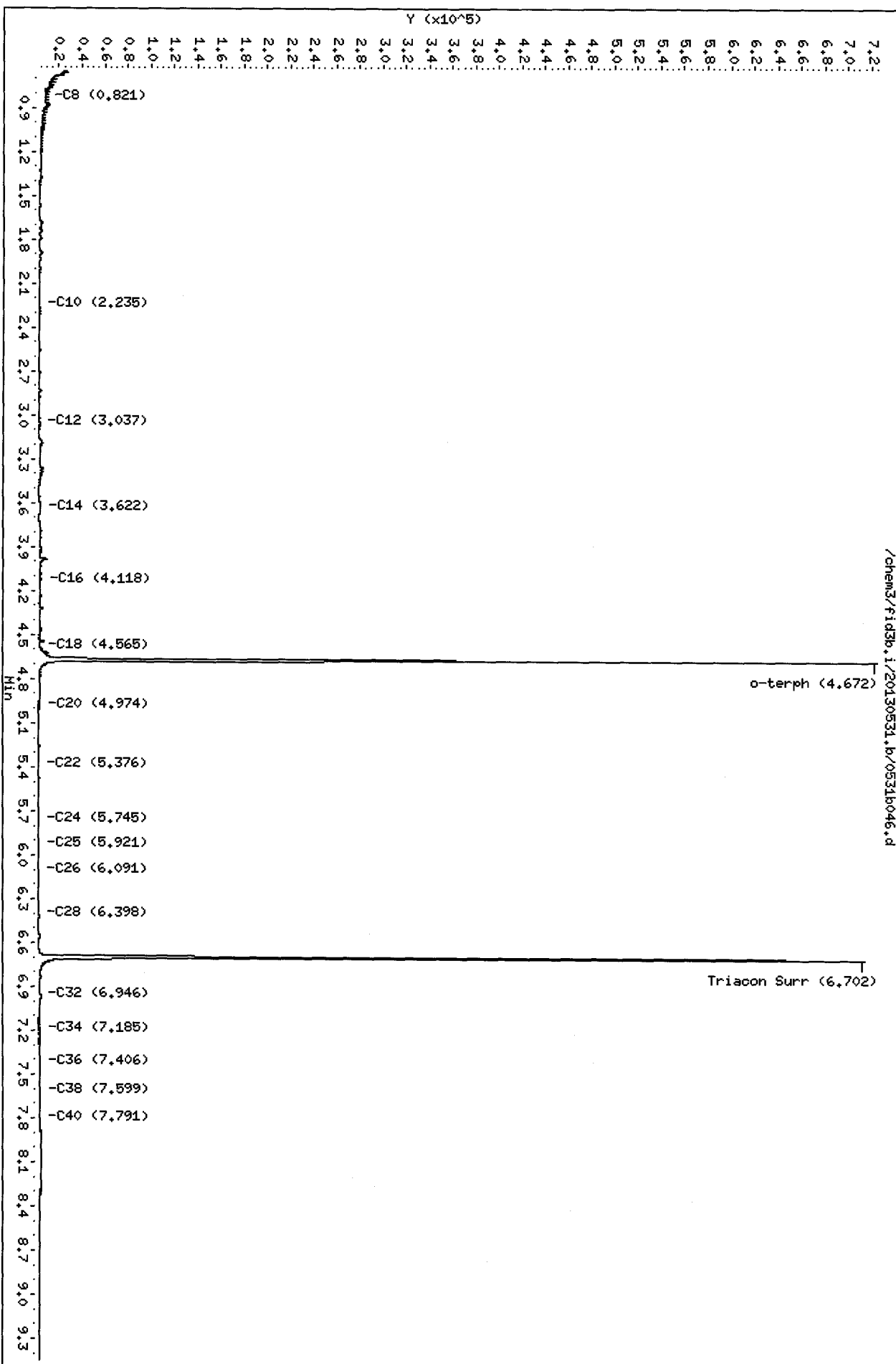
Surrogate	Area	Amount	%Rec
o-Terphenyl	438640	32.6	72.5
Triacontane	495244	38.0	84.3

JW
6/3/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.1/20130531.b/0531b046.d
 Date: 31-MAY-2013 23:18
 Client ID:
 Sample Info: MR39MBS1
 Column phase: RTX-1

Instrument: fid3b.1
 Operator: JM
 Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b048.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39A
Client ID:
Injection: 31-MAY-2013 23:56
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		90328	7
C8	0.819	0.001	3117	1908	WATPHD (C12-C24)		2924869	282.39 ✓
C10	2.238	0.000	919	680	WATPHM (C24-C38)		4872427	493.52 ✓
C12	3.033	-0.006	641	479	AK102 (C10-C25)		3256098	263.51 M
C14	3.620	0.002	1842	792	AK103 (C25-C36)		4425547	622.57 M
C16	4.117	0.000	2343	2000				
C18	4.563	0.002	13224	11871				
C20	4.978	-0.002	23128	7658				
C22	5.382	0.006	50863	22603	MSPIRIT (Tol-C12)		90328	6.57
C24	5.749	0.004	71041	25083				
C25	5.922	0.003	76193	39563				
C26	6.091	-0.003	69158	22793				
C28	6.409	0.003	66279	17536				
C32	6.952	0.002	43391	36072				
C34	7.189	0.003	25820	19349				
Filter Peak	----							
C36	7.403	0.002	15086	6915				
o-terph	4.671	0.001	745886	394942	JET-A (C10-C18)		242283	22.38
Triacon Surr	6.700	-0.001	664972	483238				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	394942	29.4	65.3 ✓
Triacontane	483238	37.0	82.3

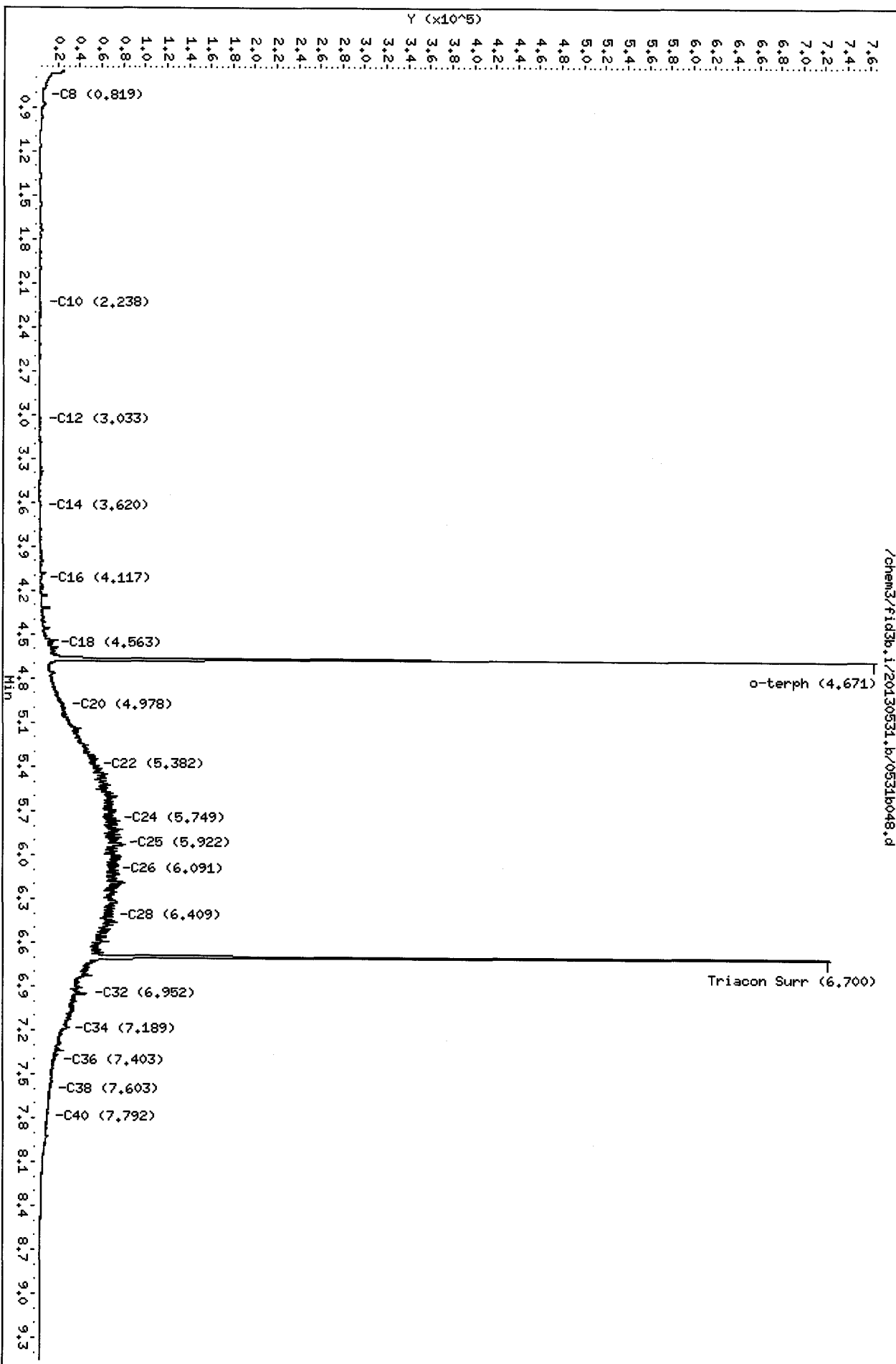
JCO
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

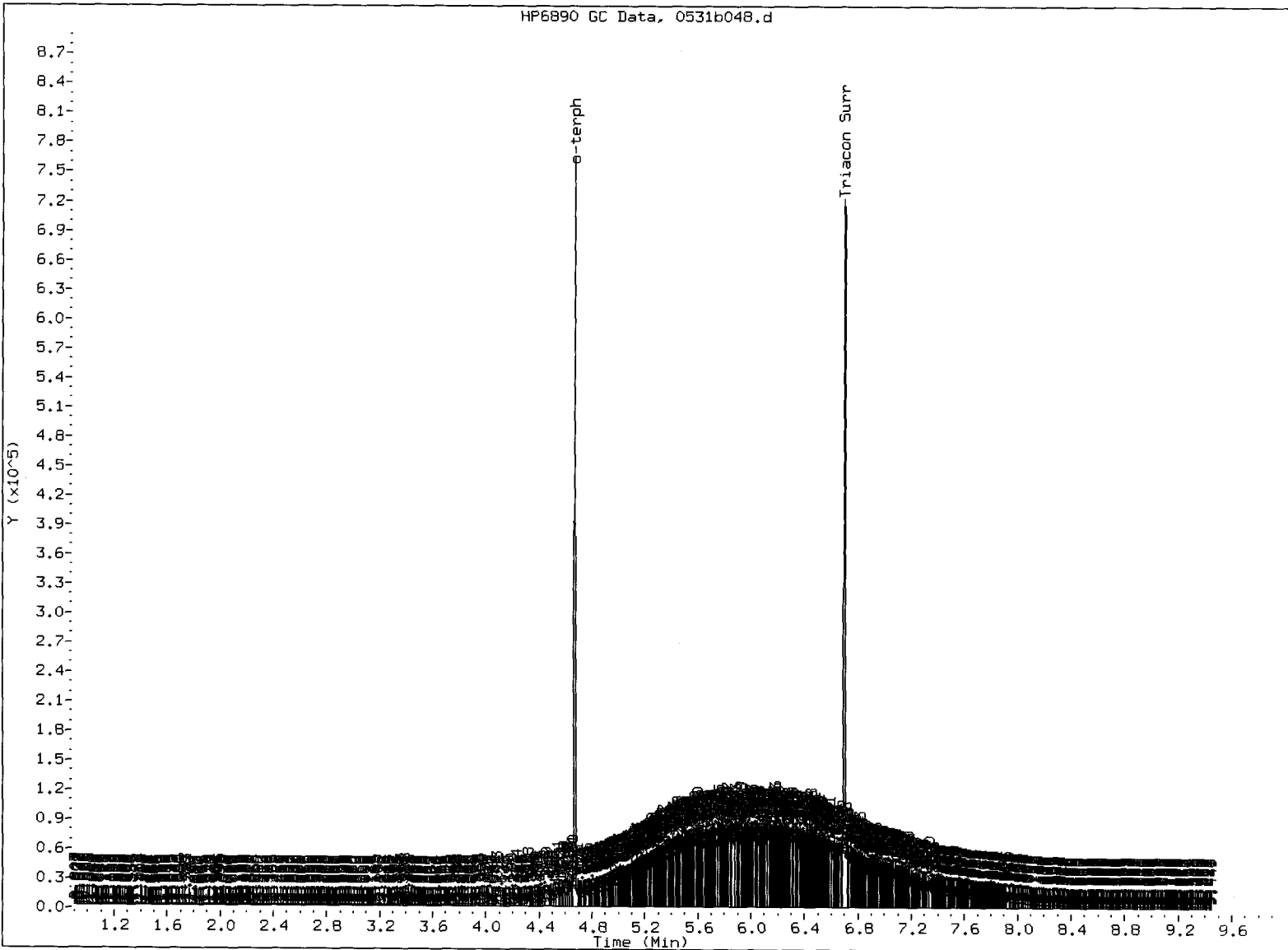
Data File: /chem3/fid3b.1/20130531.b/0531b048.d
Date: 31-MAY-2013 23:56
Client ID:
Sample Info: WR39A
Column phase: RTX-1

Instrument: fid3b.1
Operator: JM
Column diameter: 0.25

JW
6/4/13



WR39 00017



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: jw

Date: 6/4/73

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b049.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39B
Client ID:
Injection: 01-JUN-2013 00:15
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		85960	6
C8	0.813	-0.004	2858	1135	WATPHD (C12-C24)		1709243	165.03
C10	2.238	0.001	935	839	WATPHM (C24-C38)		3127762	316.80
C12	3.038	-0.001	602	259	AK102 (C10-C25)		1892398	153.15 M
C14	3.612	-0.005	810	173	AK103 (C25-C36)		2864387	402.95 M
C16	4.117	0.001	1948	303				
C18	4.559	-0.001	6112	1190				
C20	4.979	-0.001	11866	2529				
C22	5.376	0.001	30388	11438	MSPIRIT (Tol-C12)		85960	6.26
C24	5.741	-0.003	39367	16546				
C25	5.912	-0.006	40231	24578				
C26	6.095	0.001	41980	15228				
C28	6.411	0.005	41545	8007				
C32	6.948	-0.002	25040	9044				
C34	7.183	-0.002	18262	3580				
Filter Peak	----							
C36	7.405	0.004	12263	4556				
o-terph	4.679	0.009	718412	378934	JET-A (C10-C18)		207014	19.13
Triacon Surr	6.709	0.009	751371	441427				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	378934	28.2	62.6
Triacontane	441427	33.8	75.2

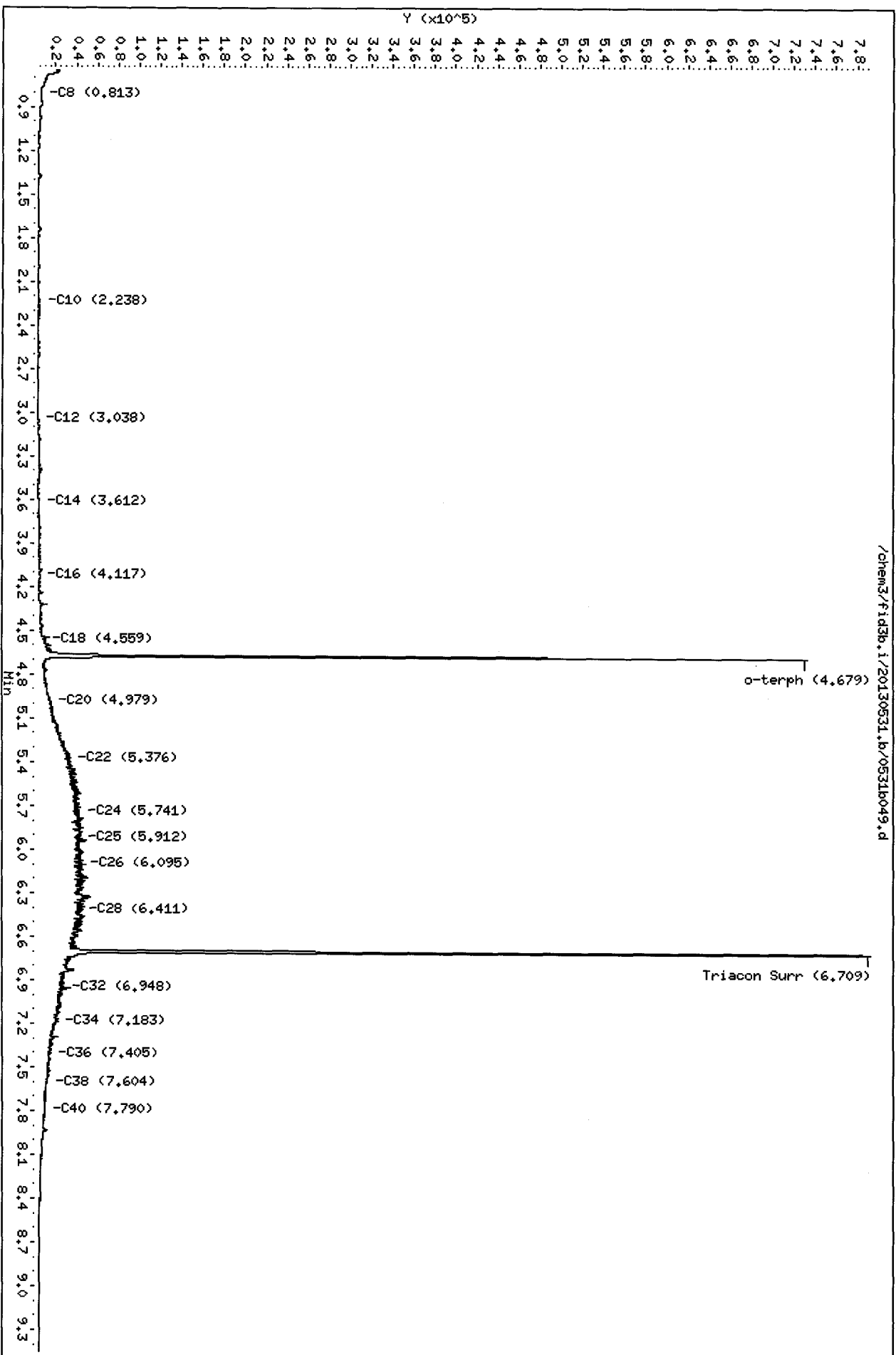
Handwritten: 6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

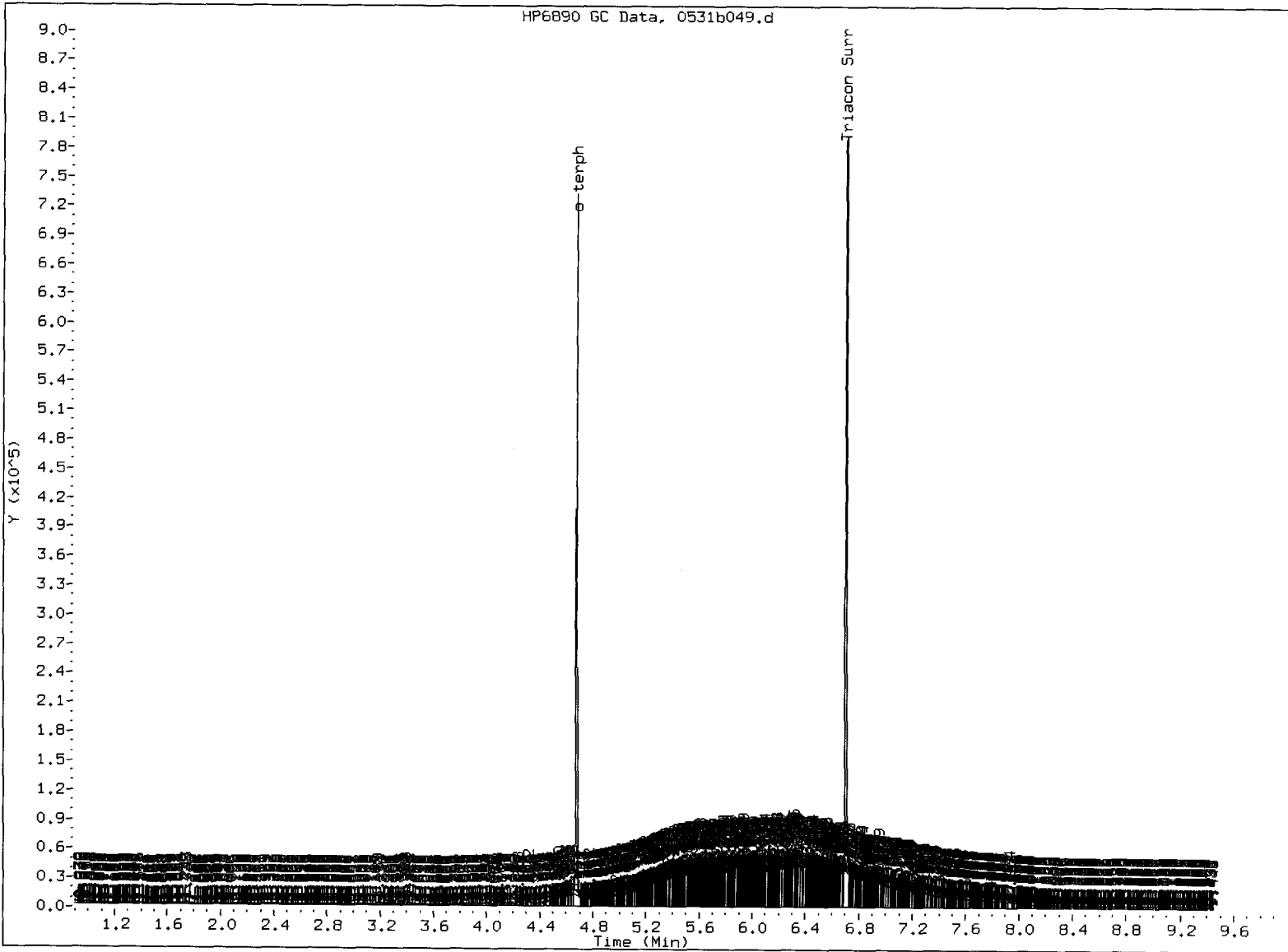
Data File: /chem3/fid3b.i/20130531.b/0531b049.d
Date: 01-JUN-2013 00:15
Client ID:
Sample Info: MR39B
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

820
6/14/13



MR39B 00020



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/4/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b052.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39C
Client ID:
Injection: 01-JUN-2013 01:12
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73919	5
C8	0.816	-0.001	3066	3058	WATPHD (C12-C24)		1056647	102.02
C10	2.237	-0.001	577	183	WATPHM (C24-C38)		1766233	178.90
C12	3.039	0.000	541	372	AK102 (C10-C25)		1178213	95.35 M
C14	3.628	0.010	1690	2081	AK103 (C25-C36)		1576309	221.75 M
C16	4.119	0.003	1790	1955				
C18	4.564	0.004	6001	3457				
C20	4.977	-0.002	6269	1610				
C22	5.378	0.003	17679	8933	MSPIRIT (Tol-C12)		73919	5.38
C24	5.748	0.003	22003	9753				
C25	5.920	0.002	25888	10434				
C26	6.093	-0.001	24583	16282				
C28	6.407	0.001	21805	4692				
C32	6.952	0.002	20438	8881				
C34	7.188	0.003	12028	7163				
Filter Peak	----							
C36	7.402	0.001	8305	3706				
o-terph	4.670	0.000	635639	422812	JET-A (C10-C18)		184399	17.04
Triacon Surr	6.702	0.001	714073	496652				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	422812	31.4	69.9
Triacotane	496652	38.1	84.6

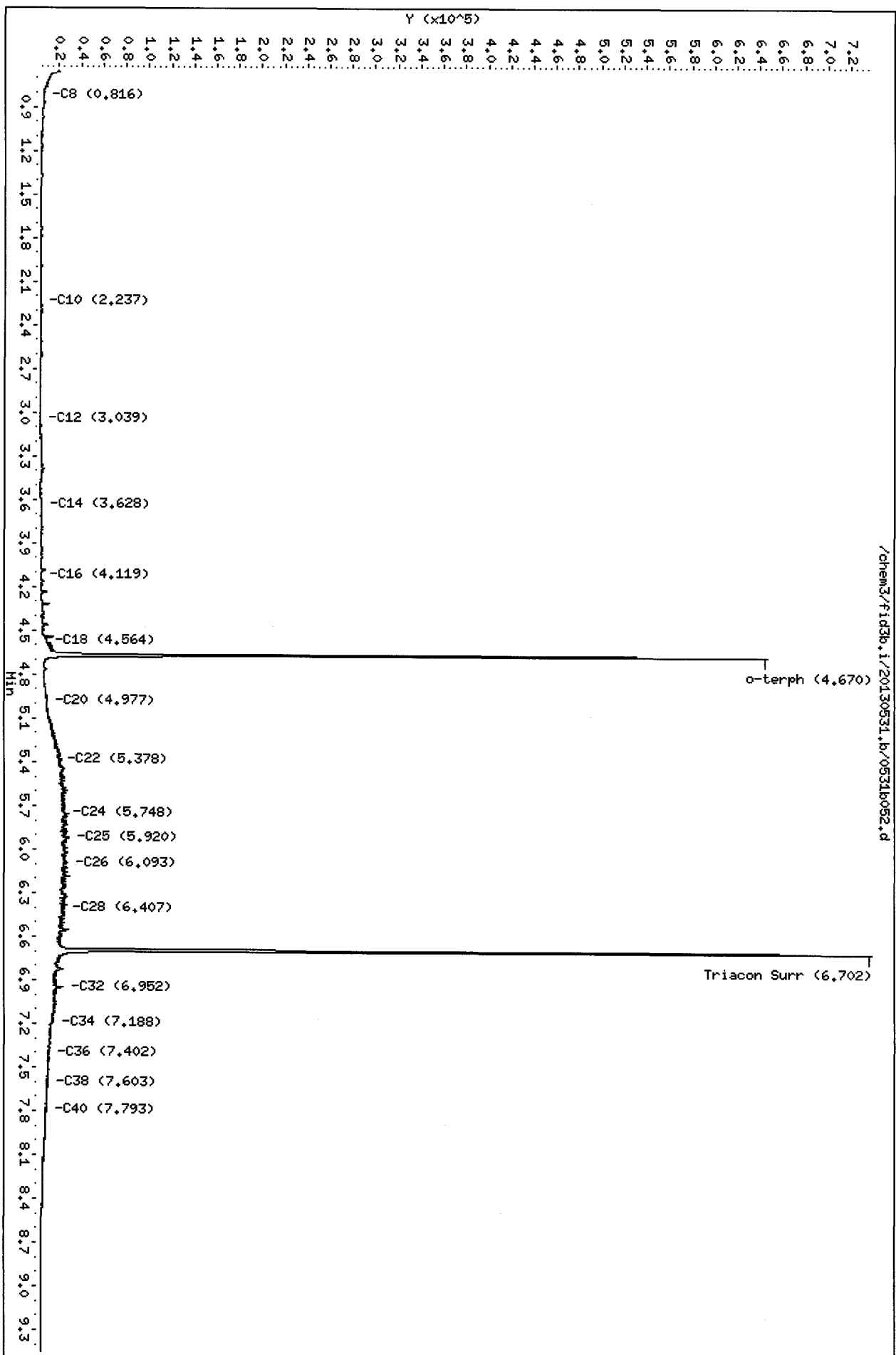
JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

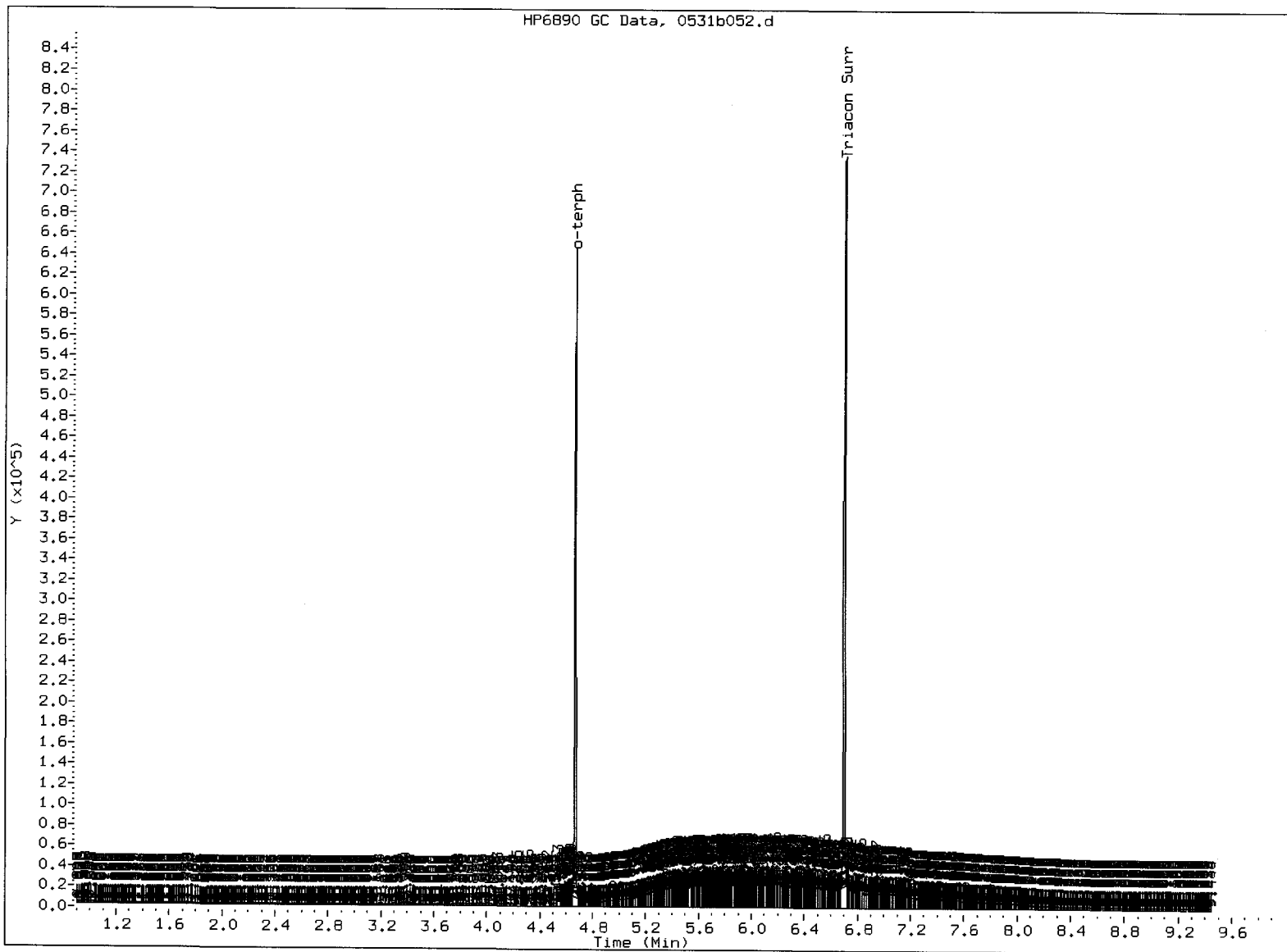
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Date: 01-JUN-2013 01:12
Client ID:
Sample Info: MR39C
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JC
6/4/13



MR39 00020



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JS

Date: 6/4/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b053.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39D
Client ID:
Injection: 01-JUN-2013 01:31
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		71118	5
C8	0.819	0.001	2891	1488	WATPHD (C12-C24)		2904616	280.44
C10	2.242	0.005	570	460	WATPHM (C24-C38)		4747472	480.86
C12	3.035	-0.004	485	411	AK102 (C10-C25)		3200694	259.02 M
C14	3.626	0.008	1953	2218	AK103 (C25-C36)		4348245	611.70 M
C16	4.116	0.000	2161	1868				
C18	4.559	-0.001	10093	6648				
C20	4.980	0.001	19801	6201				
C22	5.379	0.003	55170	23432	MSPIRIT (Tol-C12)		71118	5.18
C24	5.746	0.001	69821	38620				
C25	5.919	0.001	73003	22907				
C26	6.094	0.000	75653	37810				
C28	6.405	-0.001	62863	25997				
C32	6.948	-0.002	40729	43474				
C34	7.184	-0.001	28951	18025				
Filter Peak	----							
C36	7.399	-0.002	14373	10953				
o-terph	4.671	0.001	767695	391397	JET-A (C10-C18)		221840	20.49
Triacon Surr	6.699	-0.001	765190	496245				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	391397	29.1	64.7
Triacontane	496245	38.0	84.5

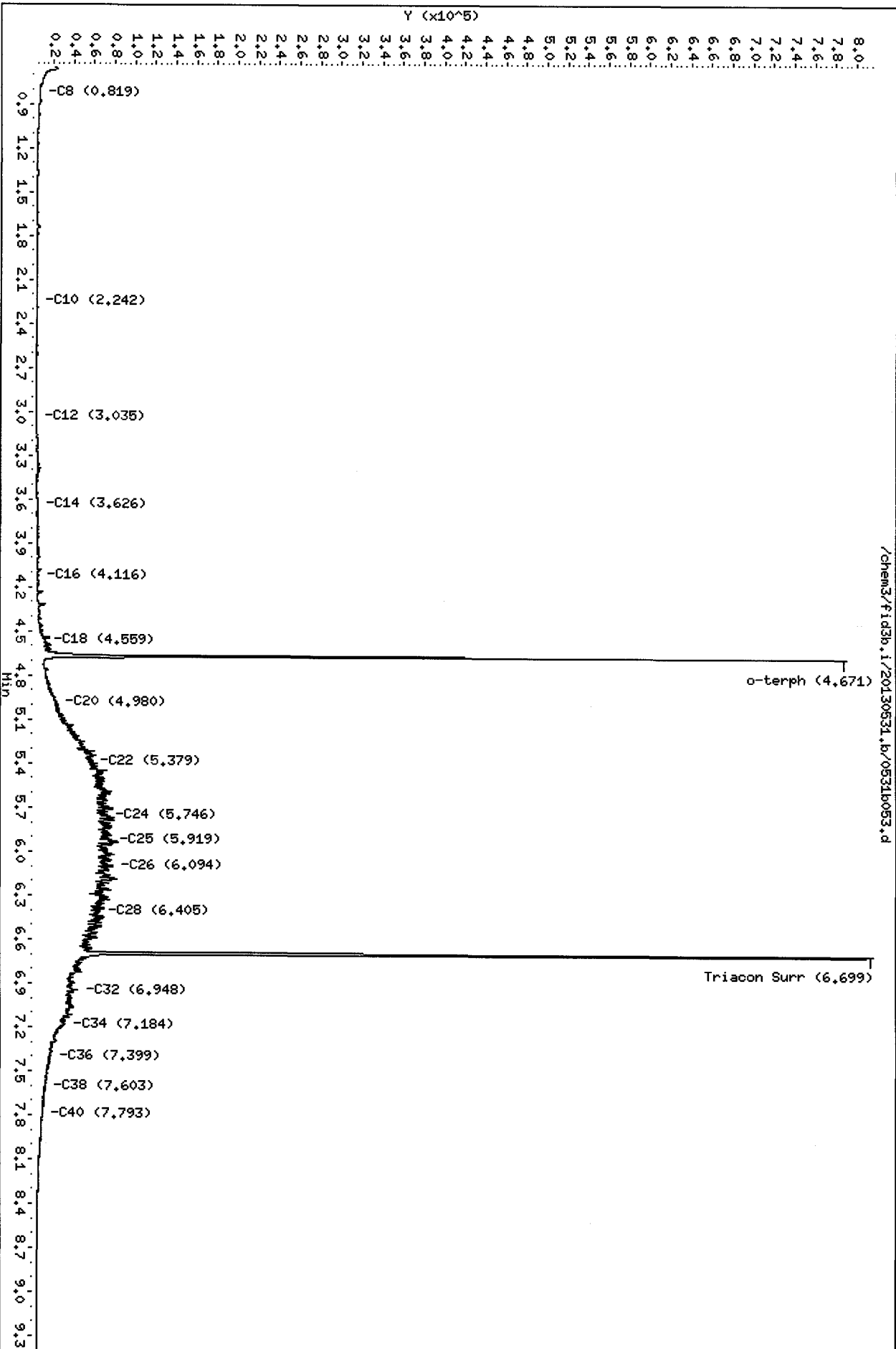
JW
6/4/13

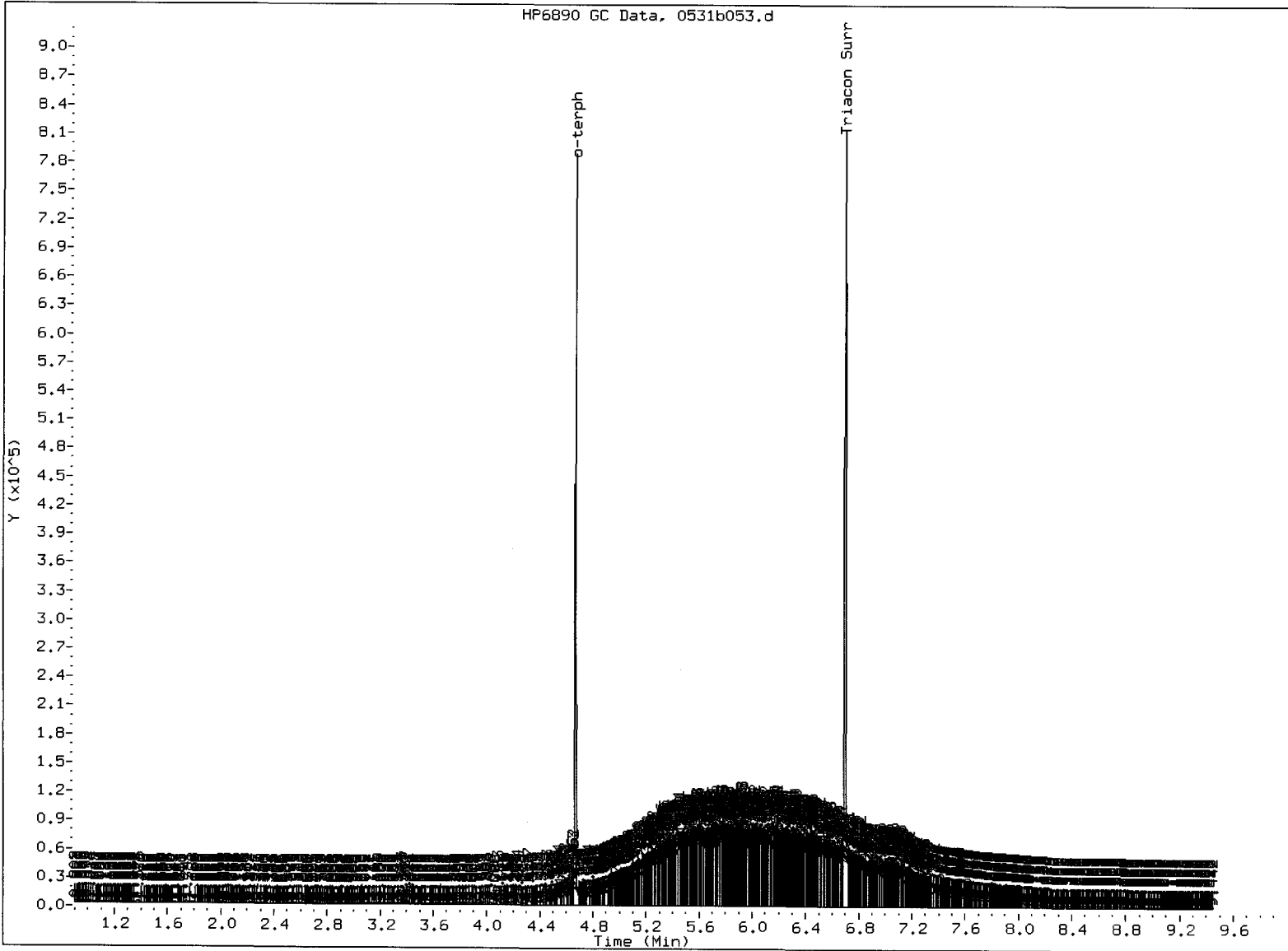
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130531.b/0531b053.d
Date: 01-JUN-2013 01:31
Client ID:
Sample Info: MR39D
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/4/10





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/4/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b054.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39E
Client ID:
Injection: 01-JUN-2013 01:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73832	5
C8	0.817	-0.001	2926	1540	WATPHD (C12-C24)		636205	61.42
C10	2.242	0.005	556	478	WATPHM (C24-C38)		1217305	123.30
C12	3.040	0.001	455	294	AK102 (C10-C25)		706078	57.14 M
C14	3.624	0.006	1425	2089	AK103 (C25-C36)		1113289	156.61 M
C16	4.116	0.000	1337	210				
C18	4.559	-0.002	4091	1760				
C20	4.983	0.003	3975	468				
C22	5.380	0.005	8456	2156	MSPiRIT (Tol-C12)		73832	5.37
C24	5.740	-0.005	12414	9262				
C25	5.917	-0.001	13446	2381				
C26	6.090	-0.004	14416	7326				
C28	6.408	0.002	15566	7759				
C32	6.950	0.000	15745	23831				
C34	7.181	-0.004	9738	7153				
Filter Peak	----							
C36	7.404	0.002	5705	2318				
o-terph	4.669	-0.001	807211	444887	JET-A (C10-C18)		152887	14.12
Triacon Surr	6.701	0.000	833325	507760				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	444887	33.1	73.5
Triacontane	507760	38.9	86.5

JLW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130531.b/0531b054.d

Date: 01-JUN-2013 01:50

Client ID:

Sample Info: MR39E

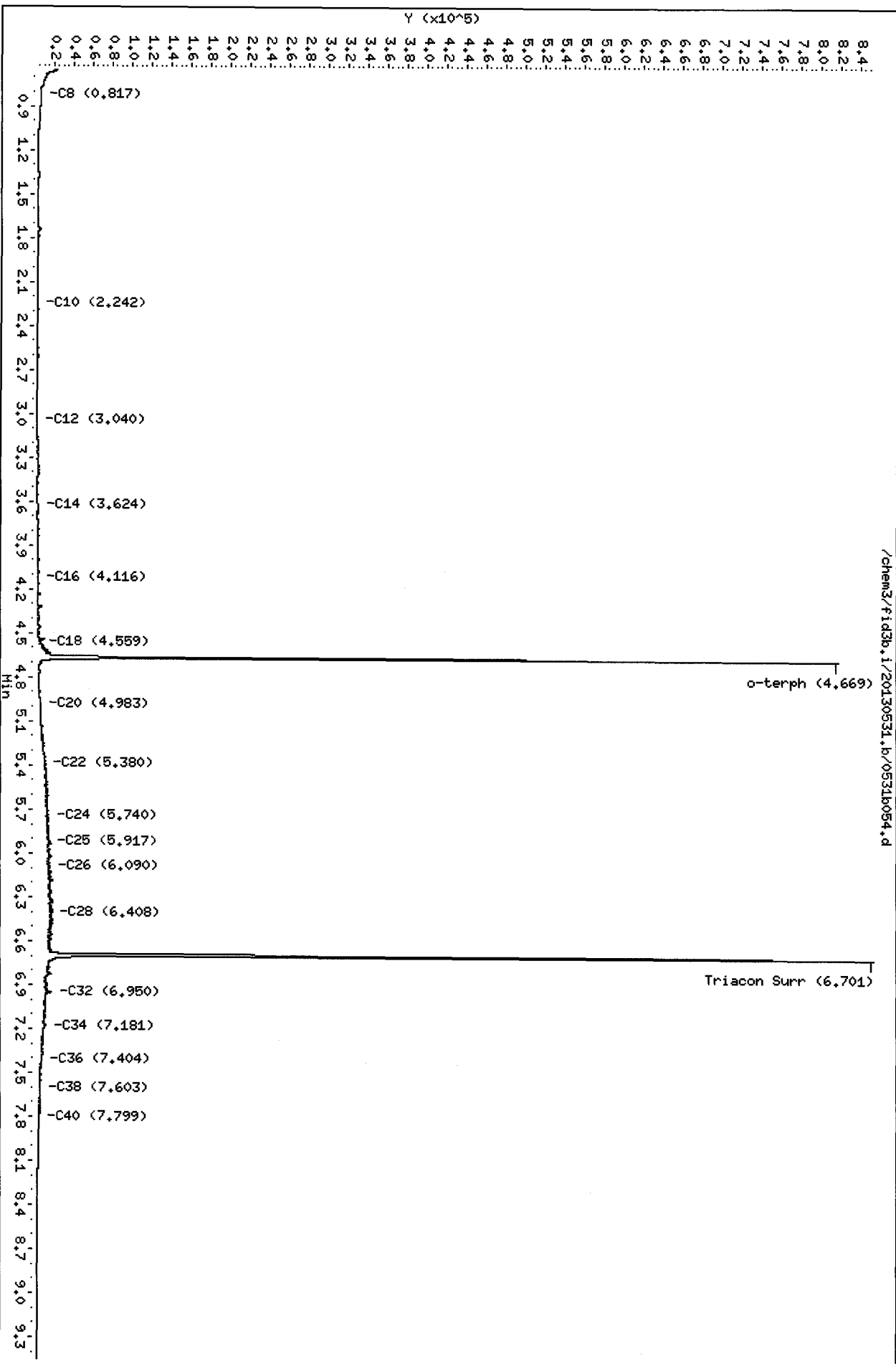
Column phase: RTX-1

Instrument: fid3b.i

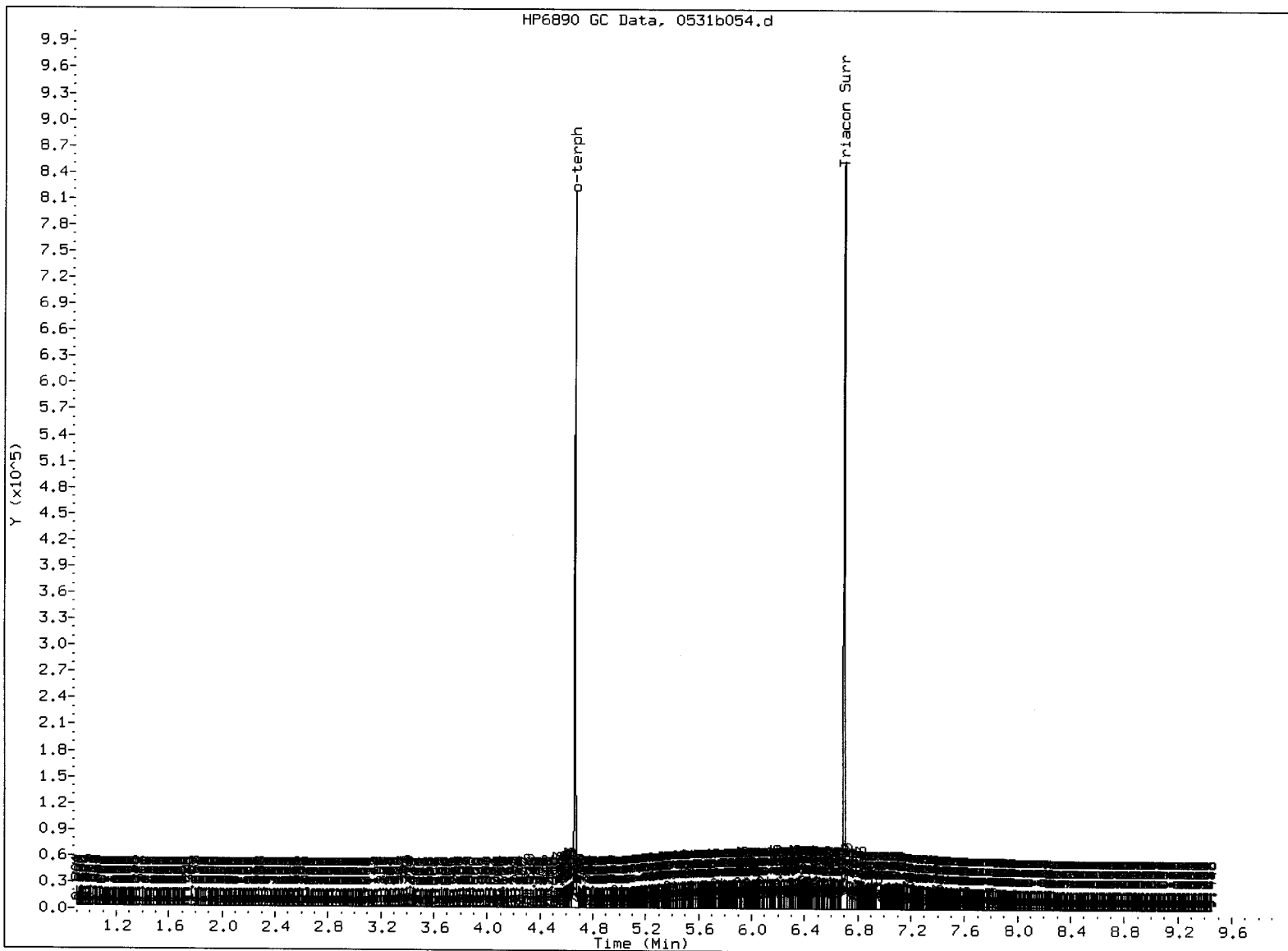
Operator: JM

Column diameter: 0.25

JW
6/4/13



MR39E 000020



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- 5. Skimmed surrogate

Analyst: JCW

Date: 6/4/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b055.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39F
Client ID:
Injection: 01-JUN-2013 02:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		96275	7
C8	0.815	-0.003	3061	1457	WATPHD (C12-C24)		955089	92.21
C10	2.236	-0.002	640	387	WATPHM (C24-C38)		1726705	174.89
C12	3.044	0.004	485	177	AK102 (C10-C25)		1056686	85.52 M
C14	3.622	0.004	1635	1440	AK103 (C25-C36)		1582765	222.66 M
C16	4.115	-0.001	1680	727				
C18	4.567	0.007	5777	3782				
C20	4.976	-0.003	6390	2075				
C22	5.379	0.003	13922	2739	MSPIRIT (Tol-C12)		96275	7.01
C24	5.747	0.002	19032	10266				
C25	5.916	-0.002	20199	4388				
C26	6.094	0.000	22936	12968				
C28	6.407	0.000	22557	7419				
C32	6.950	0.000	19801	20020				
C34	7.184	-0.001	13386	6900				
Filter Peak	----							
C36	7.400	-0.001	6815	1989				
o-terph	4.668	-0.002	732649	395242	JET-A (C10-C18)		156289	14.44
Triacon Surr	6.699	-0.002	727994	487324				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	395242	29.4	65.3
Triacontane	487324	37.3	83.0

JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130531.b/0531b055.d

Date: 01-JUN-2013 02:08

Client ID:

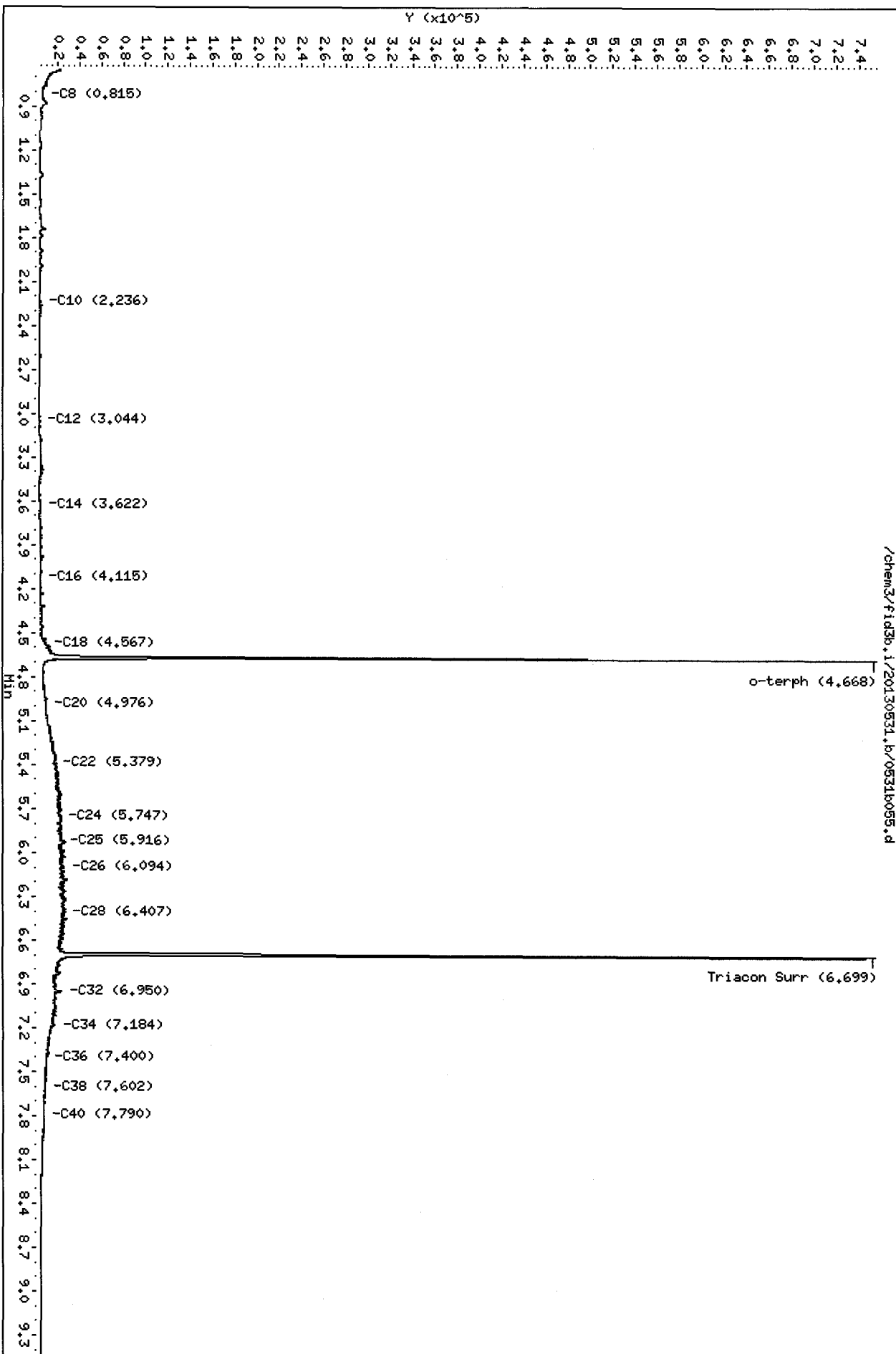
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Column phase: RTX-1

Instrument: fid3b.i

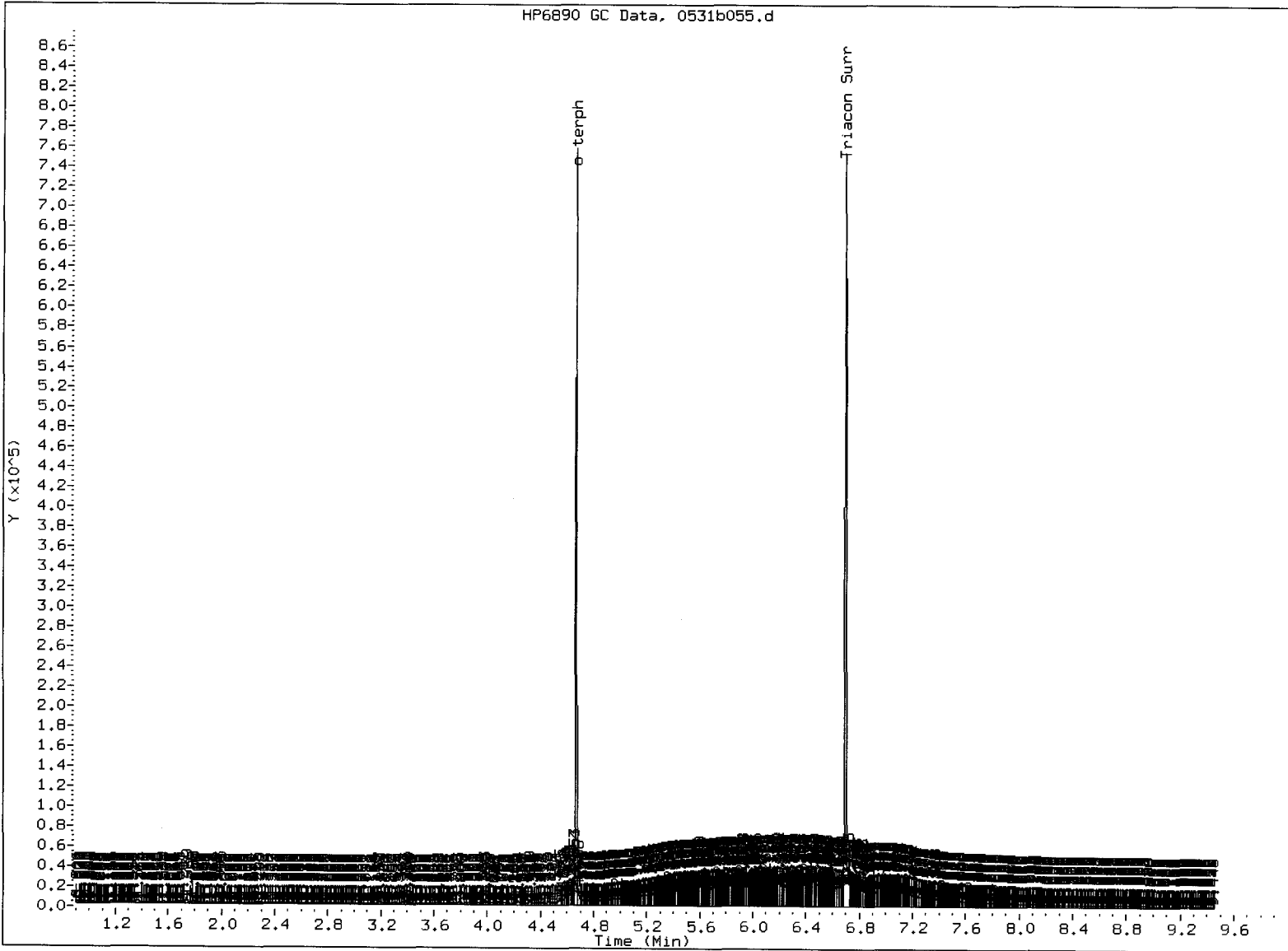
Operator: JM

Column diameter: 0.25



JW
6/4/13

UR30:00002



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/4/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b017.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR39G
Client ID: A2-F38-S-6
Injection: 03-JUN-2013 14:36
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	99543	7
C8	0.818	-0.012	8516	16884	WATPHD	(C12-C24)	868893	83.89
C10	2.244	0.006	700	739	WATPHM	(C24-C38)	3792919	384.18
C12	3.042	0.003	722	332	AK102	(C10-C25)	968521	78.38 M
C14	3.619	0.001	2570	2497	AK103	(C25-C36)	3267590	459.67 M
C16	4.114	0.002	2774	1078				
C18	4.558	0.000	5909	1113				
C20	4.978	0.000	6927	1632				
C22	5.373	0.001	9950	1951	MSPiRIT	(Tol-C12)	99543	7.25
C24	5.743	0.001	14503	7226				
C25	5.917	0.001	20195	21992				
C26	6.094	0.001	22118	4343				
C28	6.405	0.002	38626	19159				
C32	6.949	0.000	51528	47092				
C34	7.186	0.001	40855	14144				
Filter Peak	----							
C36	7.403	0.002	42923	14473				
o-terph	4.668	0.002	679969	394707	JET-A	(C10-C18)	248897	22.99
Triacon Surr	6.700	0.006	748722	453867				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	394707	29.3	65.2
Triacontane	453867	34.8	77.3

JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b017.d

Date: 03-JUN-2013 14:36

Client ID: 62-F38-S-6

Sample Info: MR39G

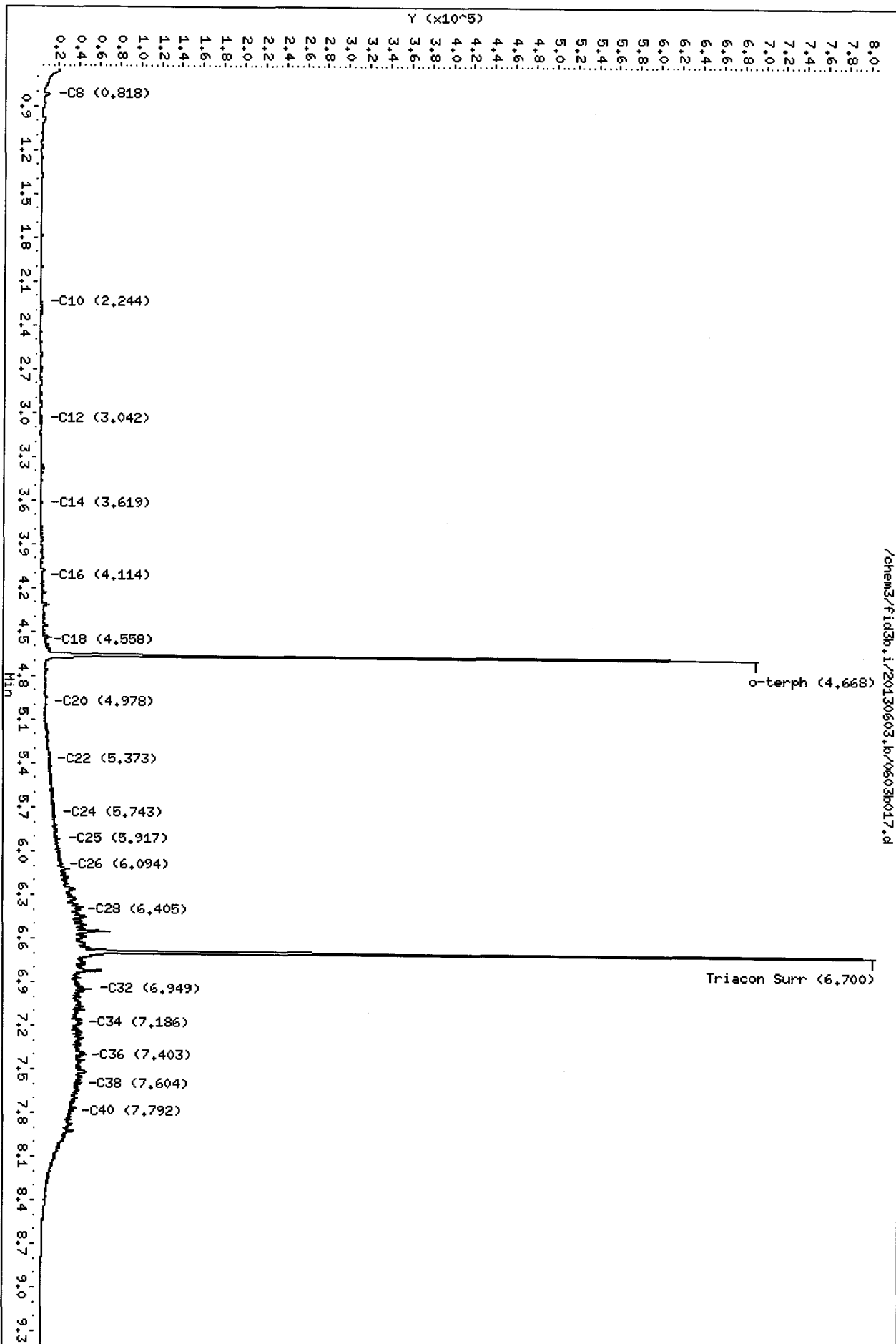
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Instrument: fid3b.i

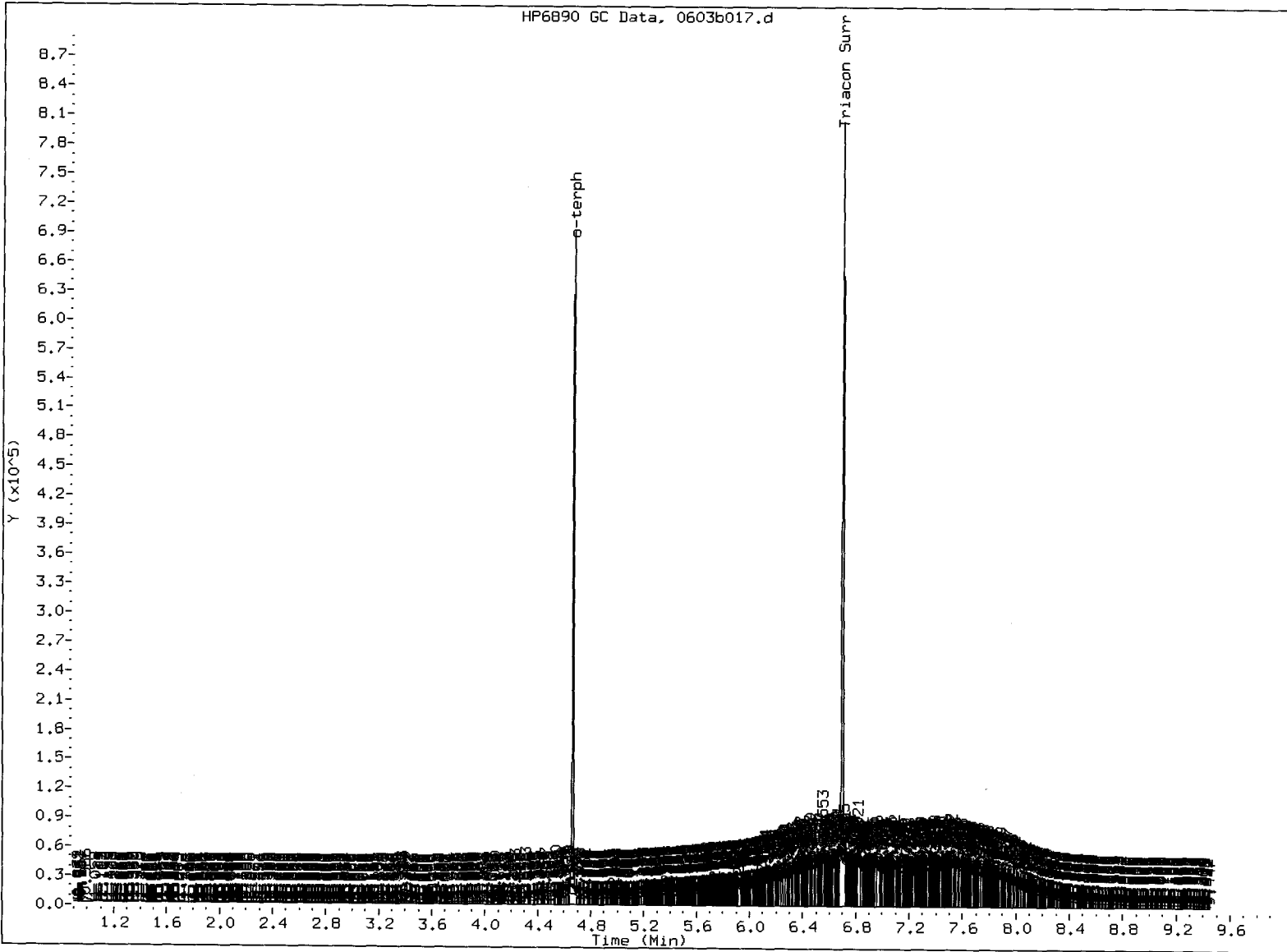
Operator: JM

Column diameter: 0.25

300
6/4/13



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MR39G



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5) Skimmed surrogate

Analyst: JCO

Date: 6/4/03

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b018.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR39H
Client ID: A2-F39-S-6
Injection: 03-JUN-2013 14:55
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		70058	5
C8	0.817	-0.013	3764	7707	WATPHD (C12-C24)		2202331	212.63
C10	2.236	-0.003	501	140	WATPHM (C24-C38)		4447892	450.52
C12	3.042	0.003	563	189	AK102 (C10-C25)		2442647	197.68 M
C14	3.619	0.001	1902	2775	AK103 (C25-C36)		4090257	575.40 M
C16	4.112	0.001	3135	3259				
C18	4.559	0.000	8109	4166				
C20	4.979	0.001	17244	3979				
C22	5.371	-0.001	37216	13117	MSPiRIT (Tol-C12)		70058	5.10
C24	5.740	-0.001	53880	12256				
C25	5.918	0.001	58930	22988				
C26	6.096	0.002	61715	37731				
C28	6.400	-0.003	62158	44857				
C32	6.949	0.000	41166	27753				
C34	7.185	0.000	29298	13355				
Filter Peak	----							
C36	7.404	0.002	14022	5235				
o-terph	4.667	0.001	737974	413860	JET-A (C10-C18)		211433	19.53
Triacon Surr	6.699	0.005	715776	502509				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	413860	30.8	68.4
Triacontane	502509	38.5	85.6

JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b018.d

Date: 03-JUN-2013 14:55

Client ID: A2-F39-S-6

Sample Info: MR39H

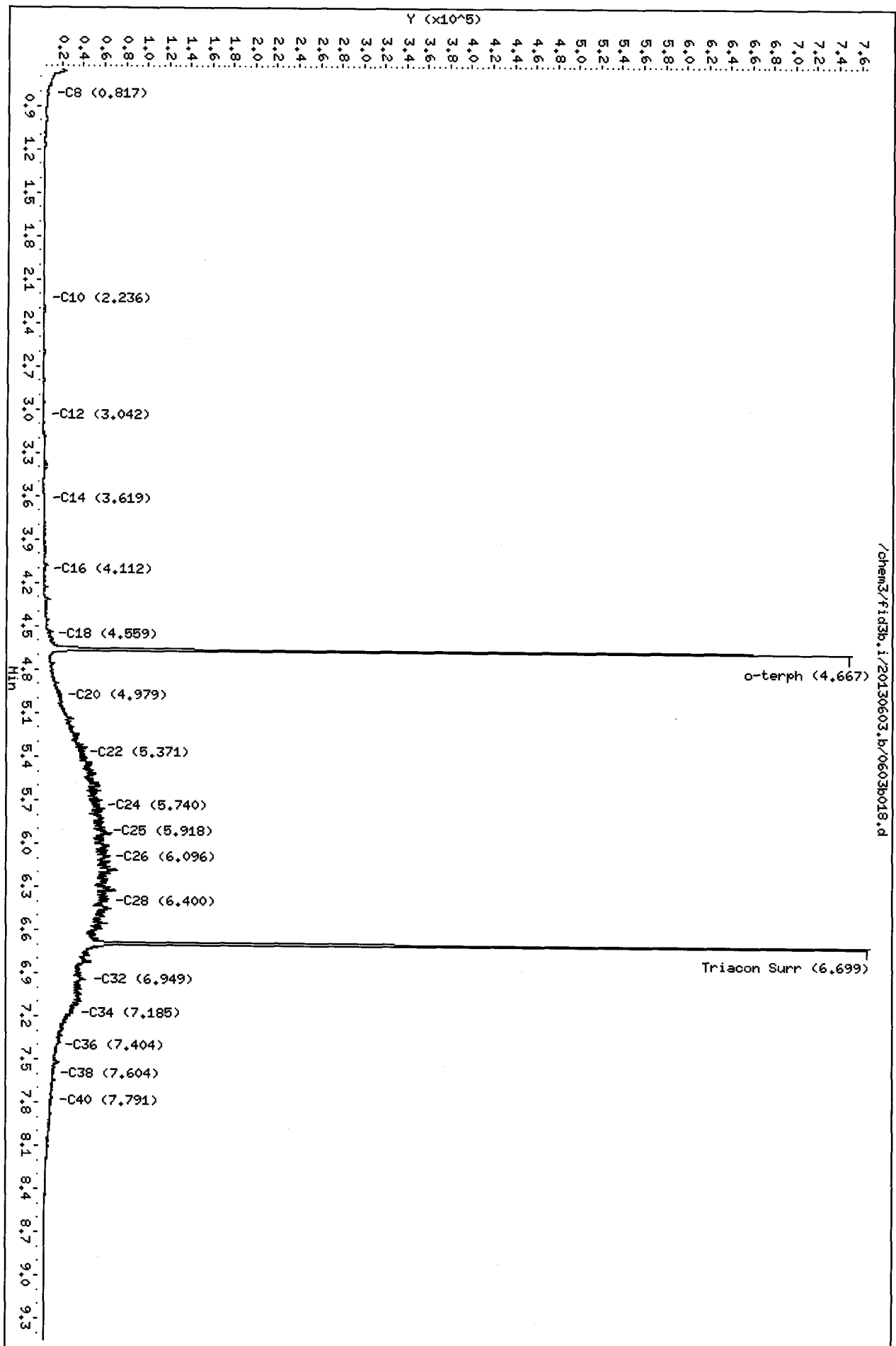
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

ISO auto



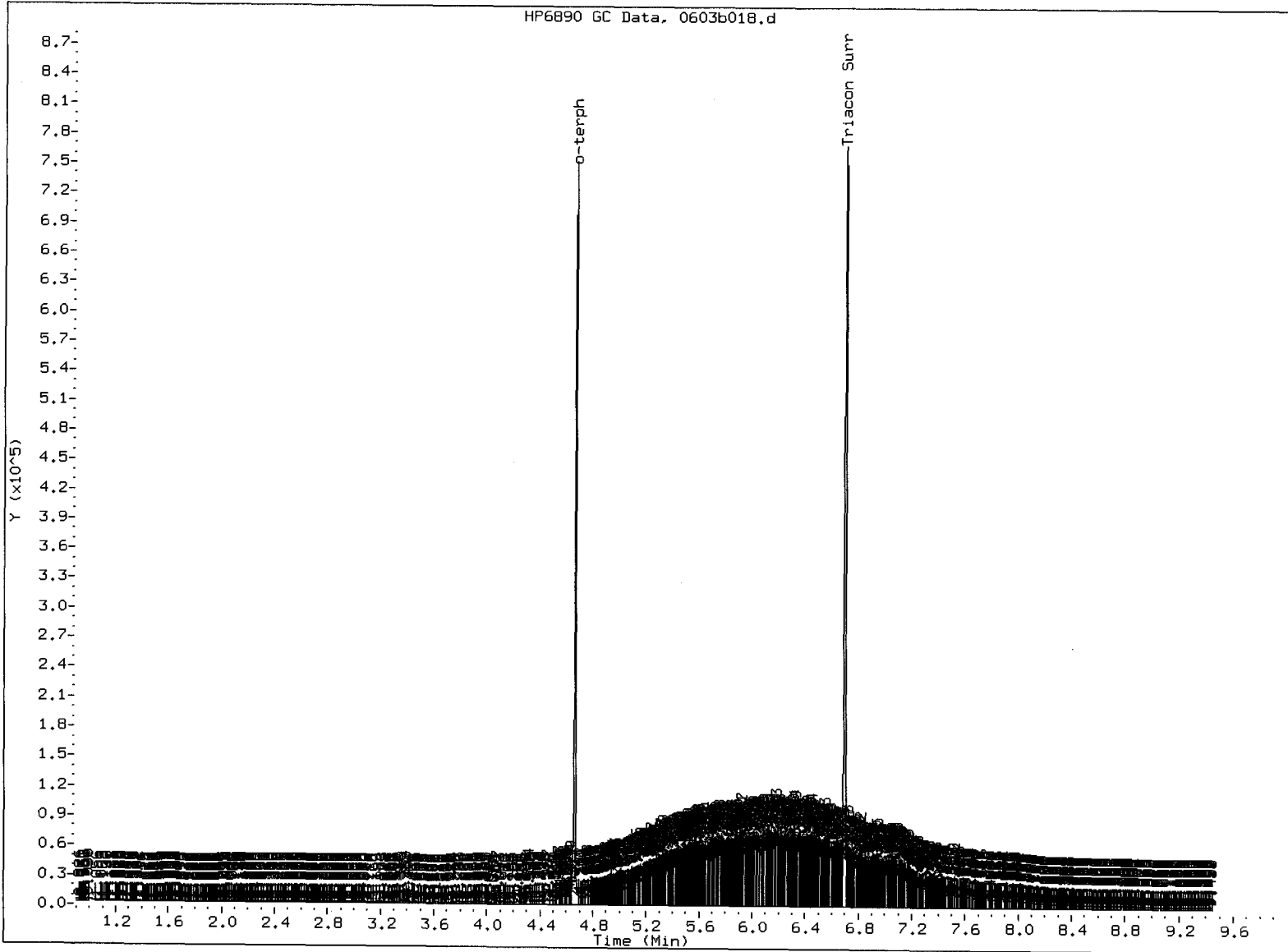
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FID:3B-2C/RTX-1 WR39H

FID:3B SIGNAL

HP6890 GC Data, 0603b018.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/4/83

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b019.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR39I
Client ID: A2-F40-S-6
Injection: 03-JUN-2013 15:14
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	104563	8
C8	0.821	-0.009	8271	16226	WATPHD	(C12-C24)	6659369	642.96
C10	2.244	0.006	679	635	WATPHM	(C24-C38)	17319205	1754.22
C12	3.039	0.001	1120	1412	AK102	(C10-C25)	7366406	596.15 M
C14	3.616	-0.002	3411	3287	AK103	(C25-C36)	15591464	2193.36 M
C16	4.112	0.001	4964	3138				
C18	4.558	0.000	18799	6913				
C20	4.980	0.002	60883	23291				
C22	5.373	0.001	116436	52384	MSPiRIT	(Tol-C12)	104563	7.61
C24	5.745	0.004	170170	110136				
C25	5.915	-0.001	187216	39626				
C26	6.097	0.003	207124	85027				
C28	6.401	-0.002	224430	65157				
C32	6.952	0.003	152126	37674				
C34	7.186	0.002	123068	45911				
Filter Peak	----							
C36	7.402	0.000	96833	11490				
o-terph	4.667	0.001	594240	329892	JET-A	(C10-C18)	446803	41.28
Triacon Surr	6.704	0.010	756080	503179				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	329892	24.5	54.5
Triacontane	503179	38.6	85.7

*JW
6/4/13*

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b019.d

Date: 03-JUN-2013 15:14

Client ID: A2-F40-S-6

Sample Info: MR391

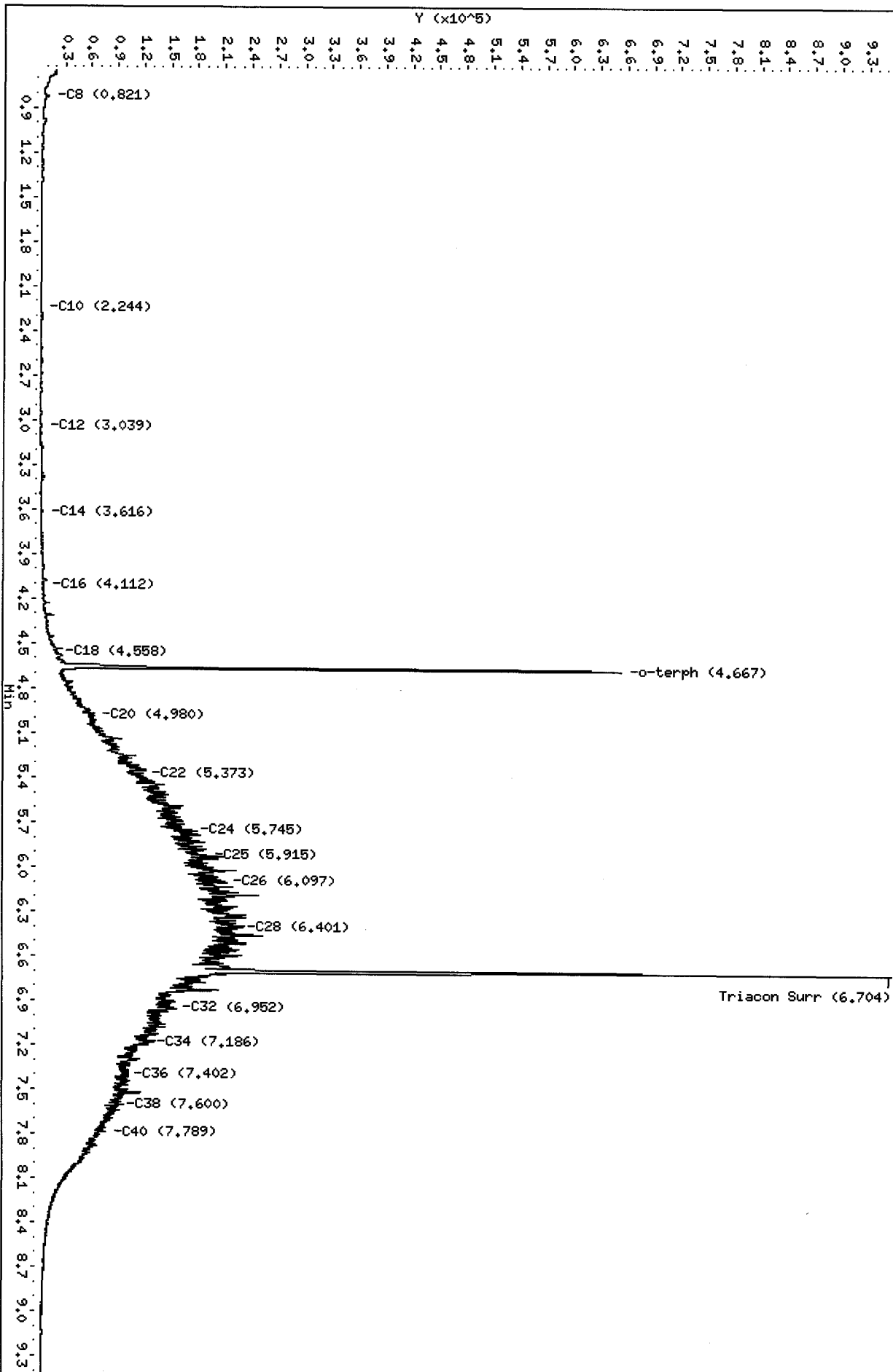
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Instrument: fid3b.i

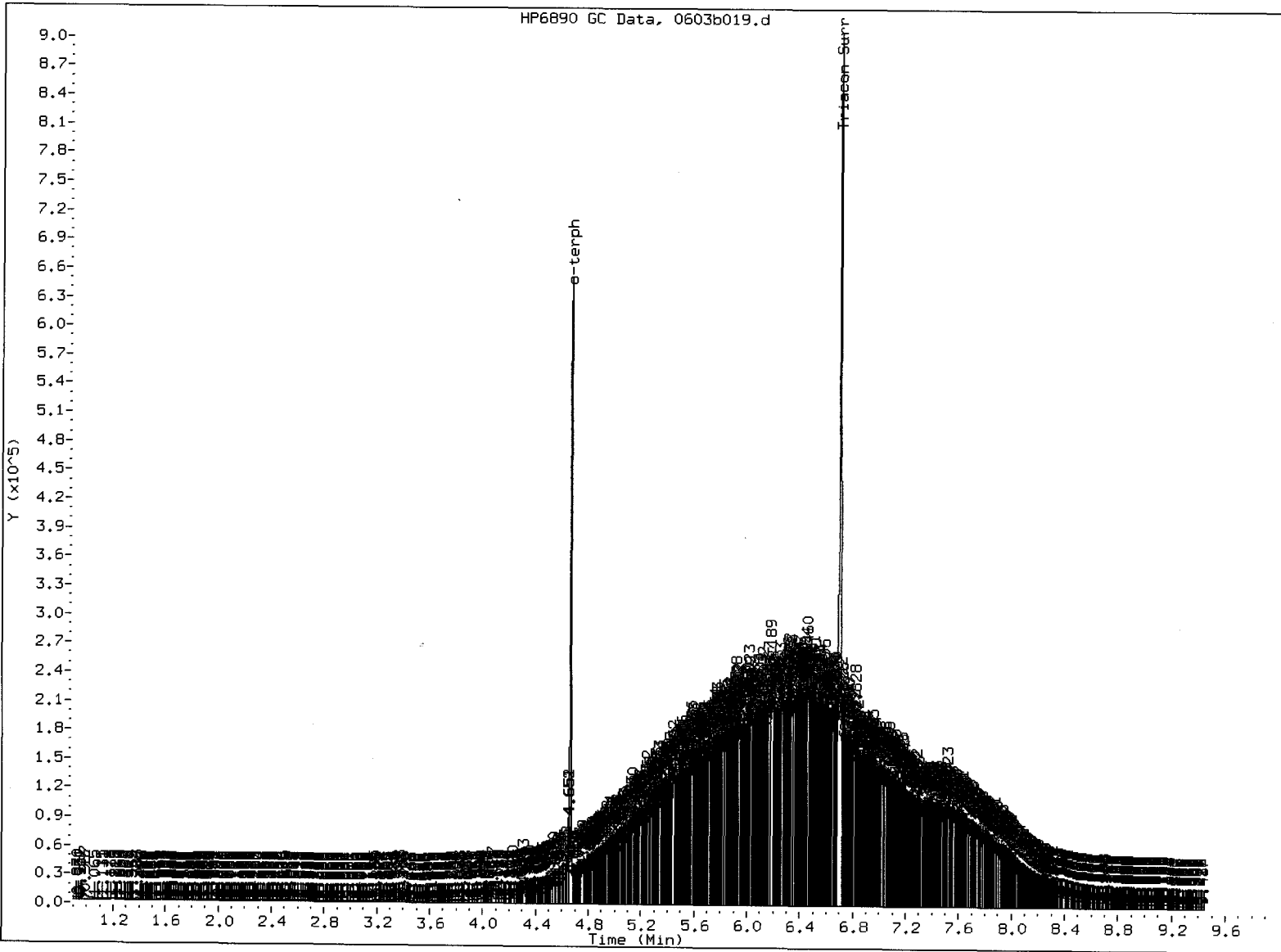
Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130603.b/0603b019.d



JW
6/4/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: jw

Date: 6/4/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b020.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR39J
Client ID: A2-F41-S-6
Injection: 03-JUN-2013 15:34
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		56960	4
C8	0.828	-0.002	3738	6206	WATPHD (C12-C24)		6164081	595.14
C10	2.242	0.003	282	227	WATPHM (C24-C38)		17564425	1779.06
C12	3.033	-0.006	326	281	AK102 (C10-C25)		6669695	539.76
C14	3.620	0.002	2485	1413	AK103 (C25-C36)		15988083	2249.15
C16	4.111	-0.001	11449	2674				
C18	4.559	0.001	35915	19287				
C20	4.981	0.002	60169	23364				
C22	5.376	0.003	78274	18464	MSPIRIT (Tol-C12)		56960	4.15
C24	5.744	0.002	104959	42858				
C25	5.920	0.004	123794	74983				
C26	6.091	-0.003	144241	84934				
C28	6.406	0.002	252378	126246				
C32	6.949	-0.001	162842	18920				
C34	7.186	0.001	177891	230179				
Filter Peak	----							
C36	7.403	0.001	113291	34716				
o-terph	----				JET-A (C10-C18)		895207	82.70
Triacon Surr	----							

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b020.d

Date: 03-JUN-2013 15:34

Client ID: A2-F41-S-6

Sample Info: MR39J,100

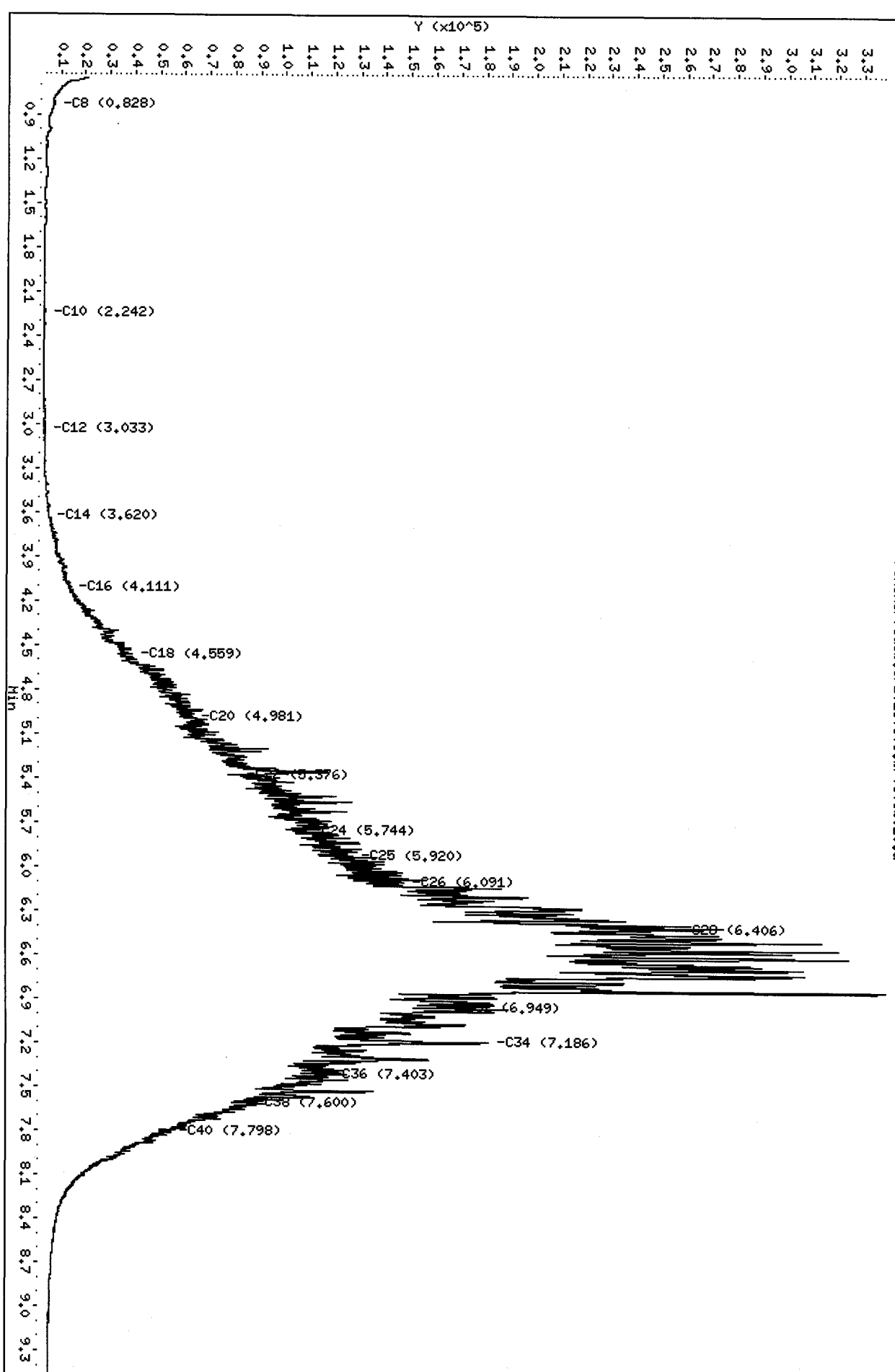
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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MR39J.100

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR39-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
A2-F30-S-6	65.2%	0
MB-052813	72.5%	0
LCS-052813	63.5%	0
A2-F31-S-6	62.6%	0
A2-F31-S-6 MS	56.7%	0
A2-F31-S-6 MSD	64.2%	0
A2-F33-S-6	69.9%	0
A2-F34-S-6	64.7%	0
A2-F35-S-6	73.5%	0
A2-F36-S-6	65.3%	0
A2-F38-S-6	65.2%	0
A2-F39-S-6	68.4%	0
A2-F40-S-6	54.5%	0
A2-F41-S-6	D	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)


(50-150)

Prep Method: SW3546
Log Number Range: 13-11251 to 13-11260

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WR40-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: 
Reported: 06/05/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-052813 13-11261	Method Blank HC ID: ---	05/28/13	05/31/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 72.5%
WR40A 13-11261	SL-F1-S-6 HC ID: DRO/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	62 120	220 720 58.9%
WR40B 13-11262	SL-F2-S-6 HC ID: DIESEL/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	64 130	680 2300 54.9%
WR40C 13-11263	SL-F3-S-6 HC ID: DIESEL/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	620 1200	3800 10000 D
WR40D 13-11264	SL-F4-S-6 HC ID: DIESEL/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	64 130	1200 3500 51.1%
WR40E 13-11265	SL-F5-S-6 HC ID: DIESEL/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	15 44 73.3%
WR40F 13-11266	SL-F6-S-6 HC ID: DIESEL/MOTOR OIL	05/28/13	06/03/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	62 120	1100 3200 51.1%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b021.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR40A
Client ID: SL-F1-S-6
Injection: 03-JUN-2013 15:53
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	55244	4
C8	0.829	-0.001	3183	887	WATPHD	(C12-C24)	1814831	175.22
C10	2.238	0.000	314	213	WATPHM	(C24-C38)	5728738	580.25
C12	3.035	-0.004	451	381	AK102	(C10-C25)	2057274	166.49 M
C14	3.618	0.000	987	226	AK103	(C25-C36)	5244413	737.77 M
C16	4.110	-0.002	2215	633				
C18	4.561	0.003	6041	1292				
C20	4.979	0.001	13225	3330				
C22	5.369	-0.003	27405	6895	MSPiRIT	(Tol-C12)	55244	4.02
C24	5.743	0.002	45094	12225				
C25	5.922	0.005	62034	35320				
C26	6.094	0.000	66128	20570				
C28	6.400	-0.003	80319	38775				
C32	6.947	-0.002	48918	23546				
C34	7.183	-0.001	47091	37685				
Filter Peak	----							
C36	7.398	-0.004	29028	20747				
o-terph	4.661	-0.005	68820	35634	JET-A	(C10-C18)	209712	19.37
Triacon Surr	6.691	-0.003	66762	36933				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	35634	2.6	58.9
Triacontane	36933	2.8	62.9

30
6/4/13

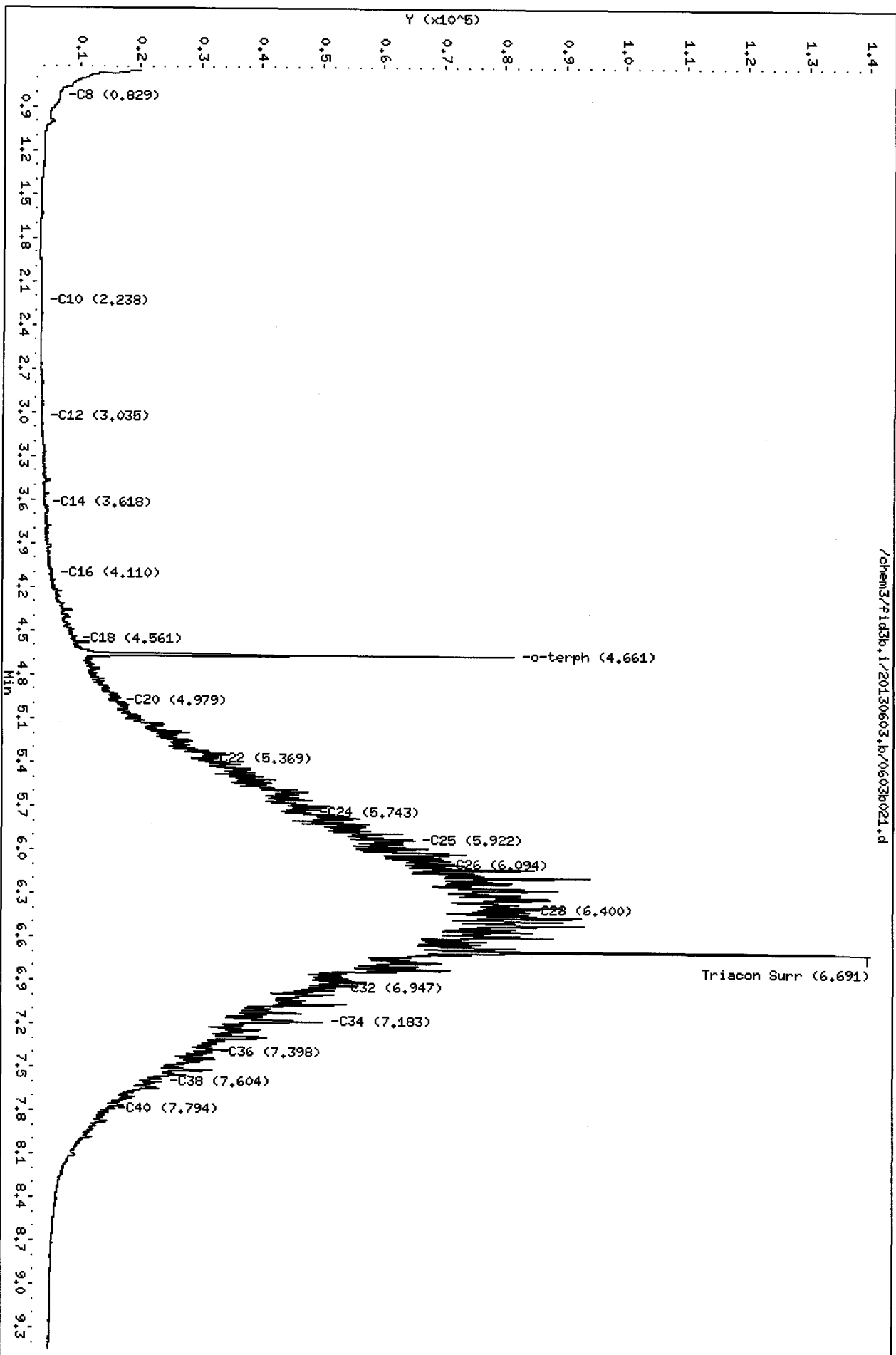
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b021.d
Date: 03-JUN-2013 15:53
Client ID: SL-F1-S-6
Sample Info: MR409,10

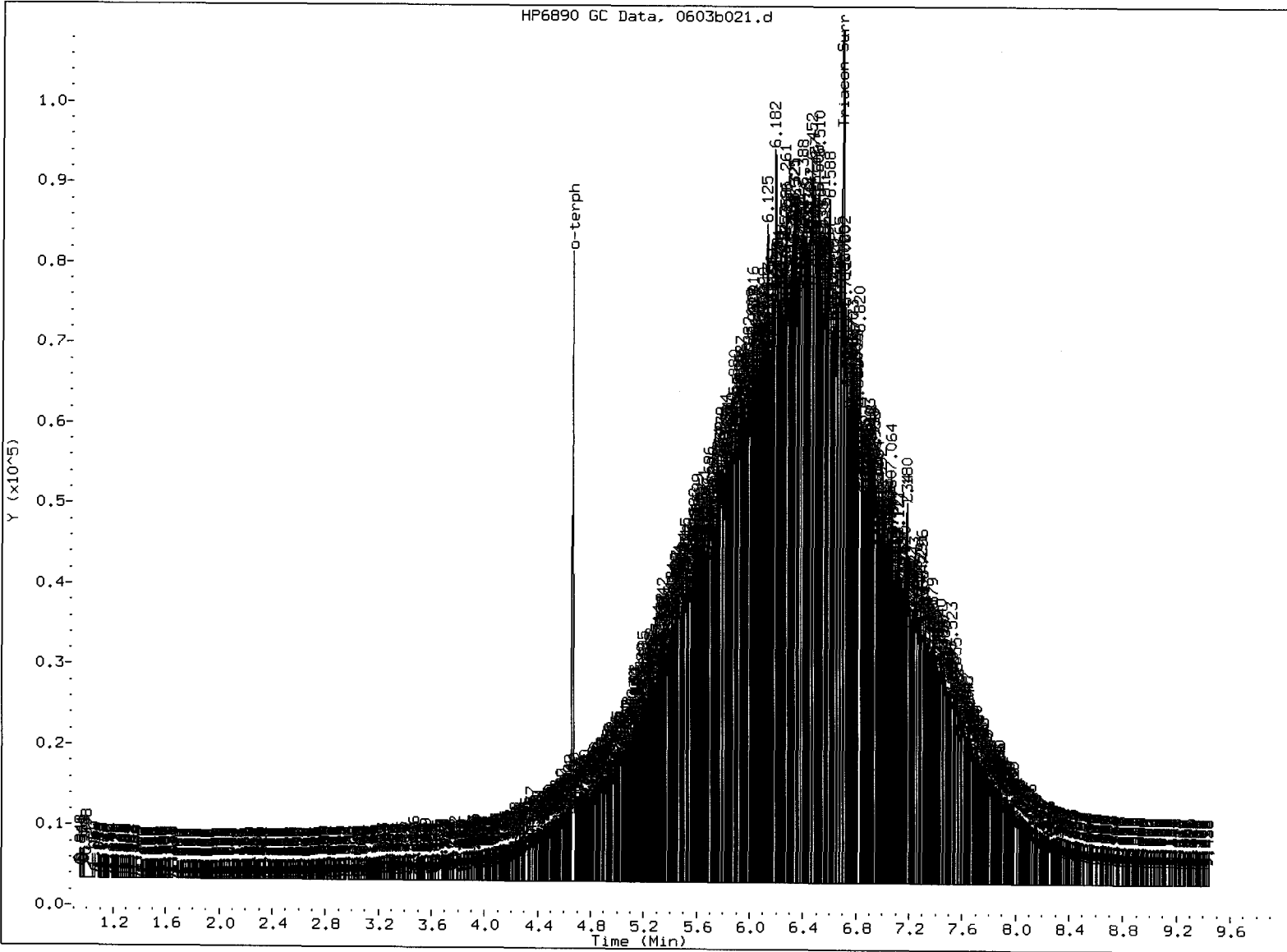
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

HW
6/4/13



/chem3/fid3b.i/20130603.b/0603b021.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/4/15

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b022.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR40B
Client ID: SL-F2-S-6
Injection: 03-JUN-2013 16:12
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73962	5
C8	0.837	0.006	2781	1546	WATPHD (C12-C24)		5455206	526.69
C10	2.234	-0.004	521	337	WATPHM (C24-C38)		17607791	1783.45
C12	3.036	-0.003	1269	625	AK102 (C10-C25)		6183547	500.42 M
C14	3.617	-0.001	3057	1396	AK103 (C25-C36)		16229203	2283.07 M
C16	4.109	-0.003	6604	1636				
C18	4.558	-0.001	18196	9370				
C20	4.980	0.002	42245	13894				
C22	5.365	-0.008	86823	65033	MSPIRIT (Tol-C12)		73962	5.38
C24	5.743	0.002	136354	68299				
C25	5.917	0.000	178802	27867				
C26	6.098	0.005	223188	242421				
C28	6.403	-0.001	251825	92285				
C32	6.948	-0.002	157791	58604				
C34	7.182	-0.003	146895	140138				
Filter Peak	----							
C36	7.404	0.002	86777	34588				
o-terph	4.664	-0.003	69815	33235	JET-A (C10-C18)		593646	54.84
Triacon Surr	6.698	0.004	81915	41487				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	33235	2.5	54.9
Triacontane	41487	3.2	70.7

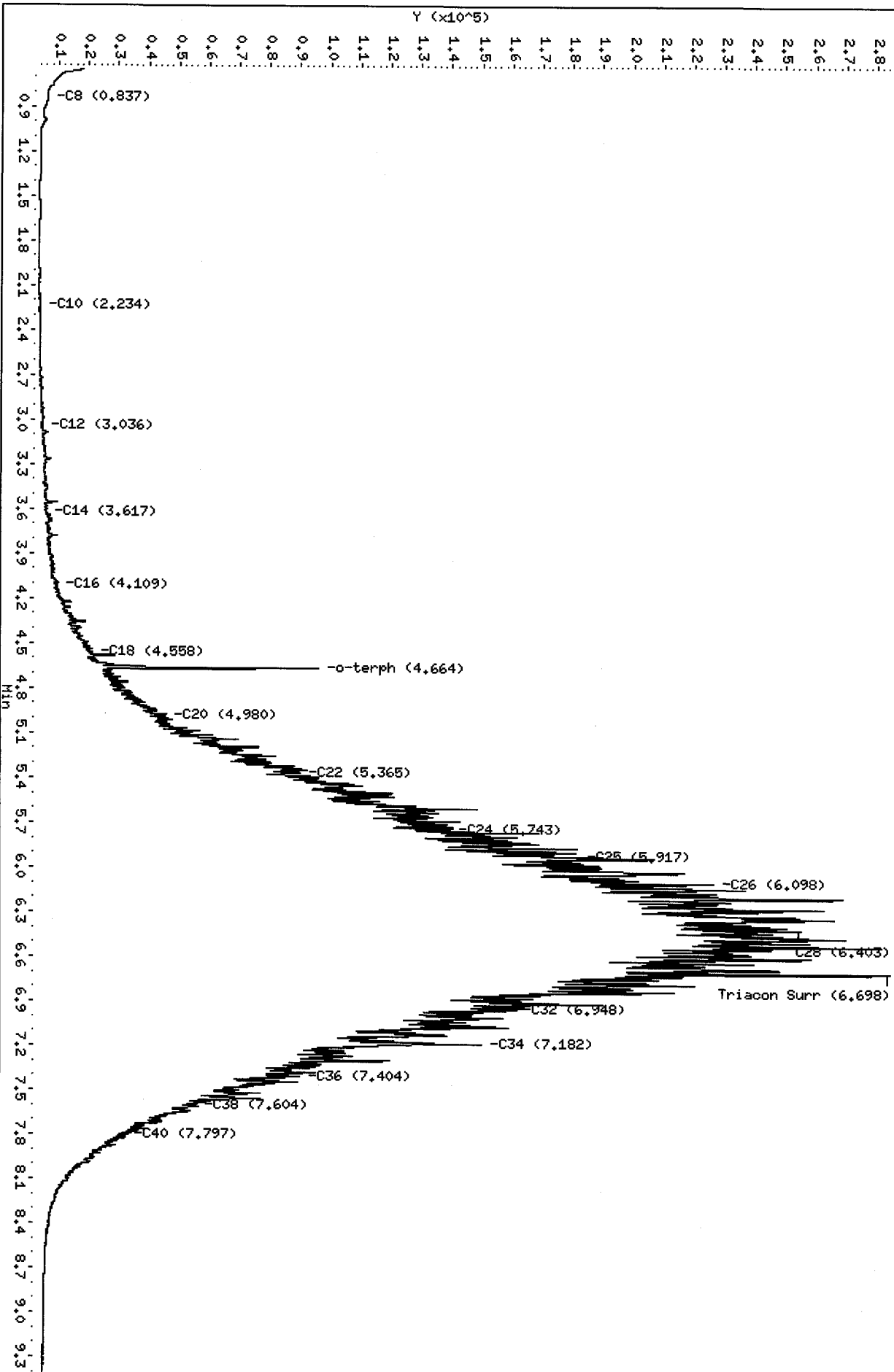
JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

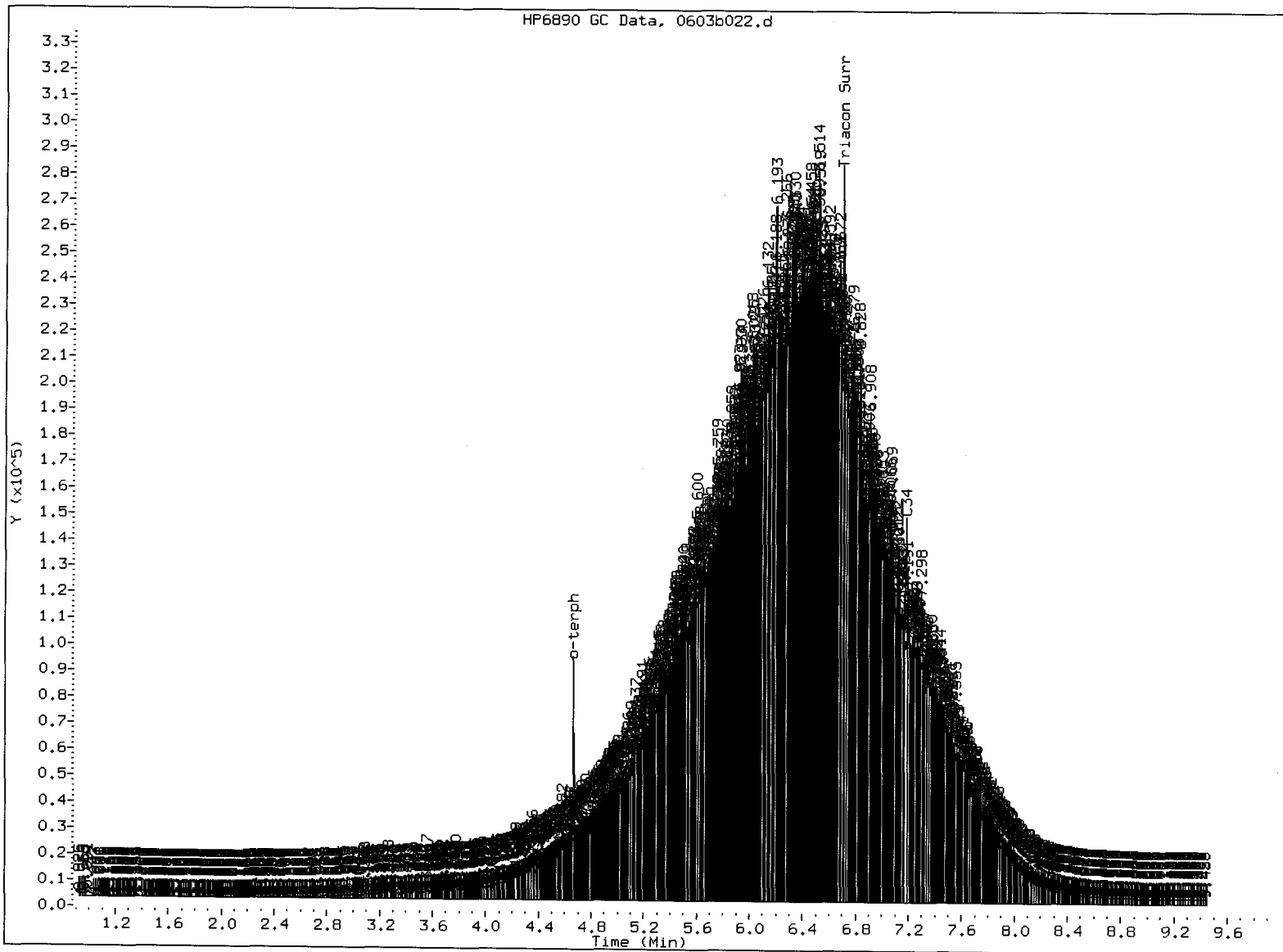
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Date: 03-JUN-2013 16:12
Client ID: SL-F2-S-6
Sample Info: MR40B,10
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/4/13



/chem3/fid3b.i/20130603.b/0603b022.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 6. Skimmed surrogate

Analyst: SW

Date: 6/4/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b023.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR40C
Client ID: SL-F3-S-6
Injection: 03-JUN-2013 16:31
Dilution Factor: 100

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		64273	5
C8	0.826	-0.005	3303	2416	WATPHD (C12-C24)		3169269	305.99
C10	2.241	0.003	441	403	WATPHM (C24-C38)		8145216	825.01
C12	3.035	-0.004	741	442	AK102 (C10-C25)		3547769	287.11 M
C14	3.616	-0.002	1336	338	AK103 (C25-C36)		7467587	1050.52
C16	4.114	0.002	3191	678				
C18	4.556	-0.002	11659	7867				
C20	4.976	-0.002	28032	20068				
C22	5.372	0.000	46769	21851	MSPIRIT (Tol-C12)		64273	4.68
C24	5.740	-0.001	73637	15458				
C25	5.912	-0.004	93926	23477				
C26	6.093	-0.001	116904	40721				
C28	6.406	0.003	122969	30582				
C32	6.949	-0.001	51536	19410				
C34	7.182	-0.003	57795	47929				
Filter Peak	----							
C36	7.401	-0.001	34480	14210				
o-terph	----				JET-A (C10-C18)		346809	32.04
Triacon Surr	----							

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

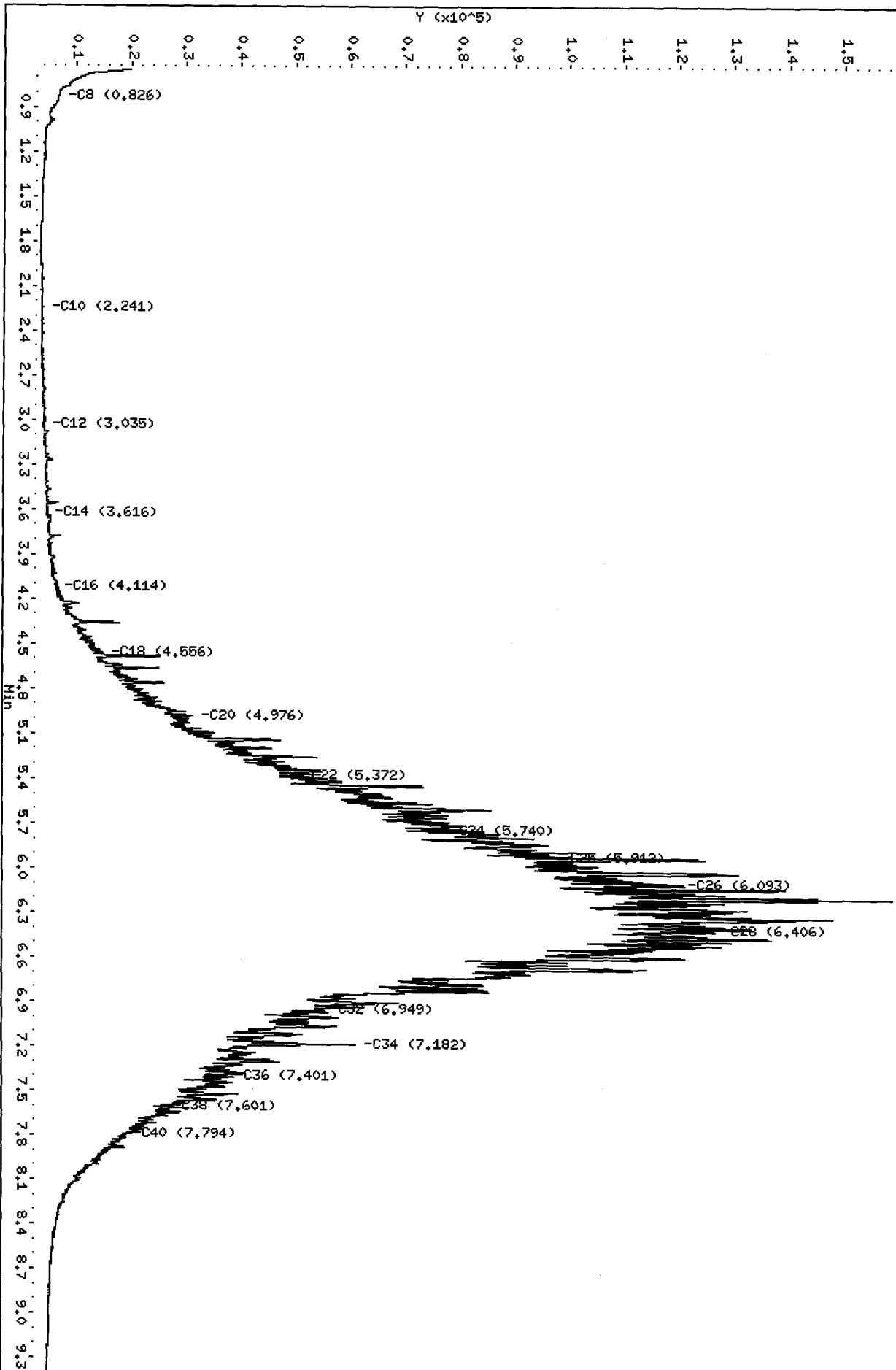
JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
Jeta	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b023.d
Date: 03-JUN-2013 16:31
Client ID: SL-F3-S-6
Sample Info: MR40C,100

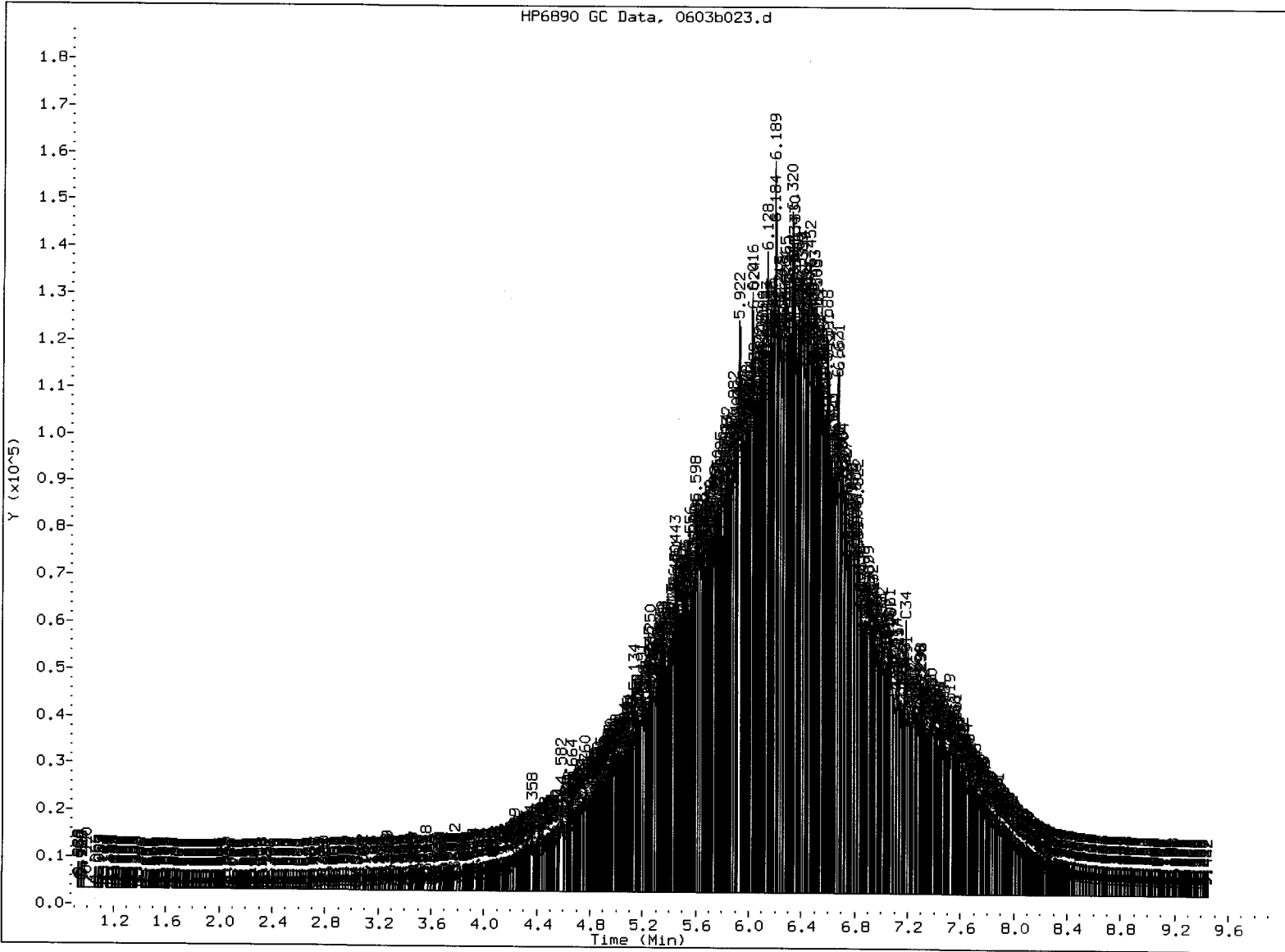
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



/chem3/fid3b.i/20130603.b/0603b023.d

JM
6/4/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate - removed due to dilution factor

Analyst:

Date:

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b024.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR40D
Client ID: SL-F4-S-6
Injection: 03-JUN-2013 16:50
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		109077	8
C8	0.839	0.009	2768	715	WATPHD (C12-C24)		9373604	905.01
C10	2.240	0.001	735	633	WATPHM (C24-C38)		26945979	2729.29
C12	3.033	-0.006	2514	1730	AK102 (C10-C25)		10579157	856.15 M
C14	3.619	0.001	5221	1866	AK103 (C25-C36)		24496914	3446.15
C16	4.113	0.001	10315	4591				
C18	4.559	0.001	35406	8183				
C20	4.979	0.001	77280	36763				
C22	5.376	0.004	136228	29066	MSPIRIT (Tol-C12)		109077	7.94
C24	5.741	-0.001	224125	71885				
C25	5.912	-0.004	291194	194101				
C26	6.092	-0.001	320273	135619				
C28	6.405	0.002	418481	131921				
C32	6.946	-0.003	195640	97735				
C34	7.184	-0.001	198205	53477				
Filter Peak	----							
C36	7.405	0.003	137185	44917				
o-terph	4.662	-0.004	59603	30965	JET-A (C10-C18)		1112892	102.82
Triacon Surr	----							

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	30965	2.3	51.2
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

JCW
6/4/13

Data File: /chem3/fid3b.i/20130603.b/0603b024.d
Date: 03-JUN-2013 16:50

Client ID: SL-F4-S-6
Sample Info: WR40D,10

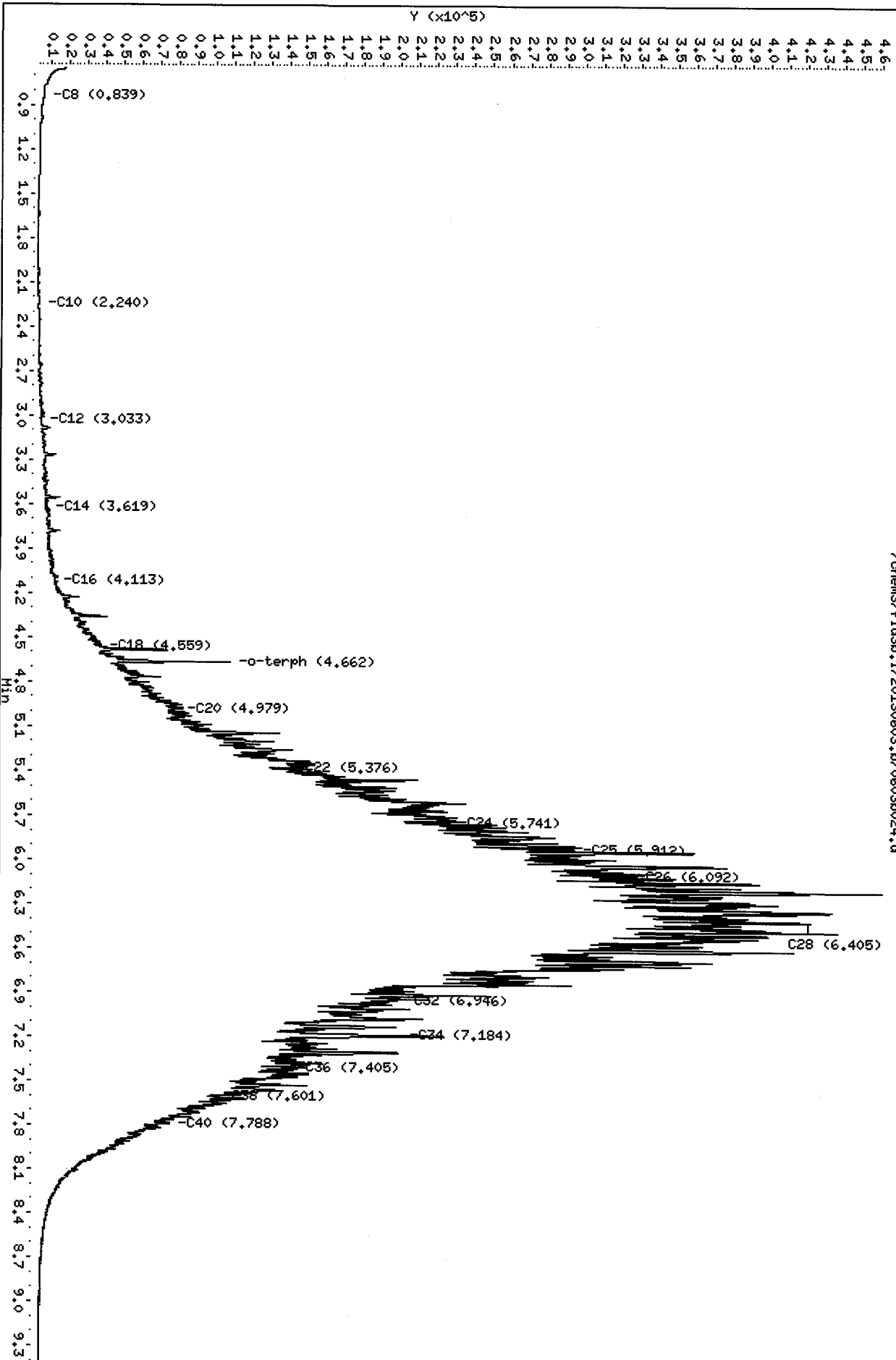
Column phase: RTX-1

Instrument: fid3b.i

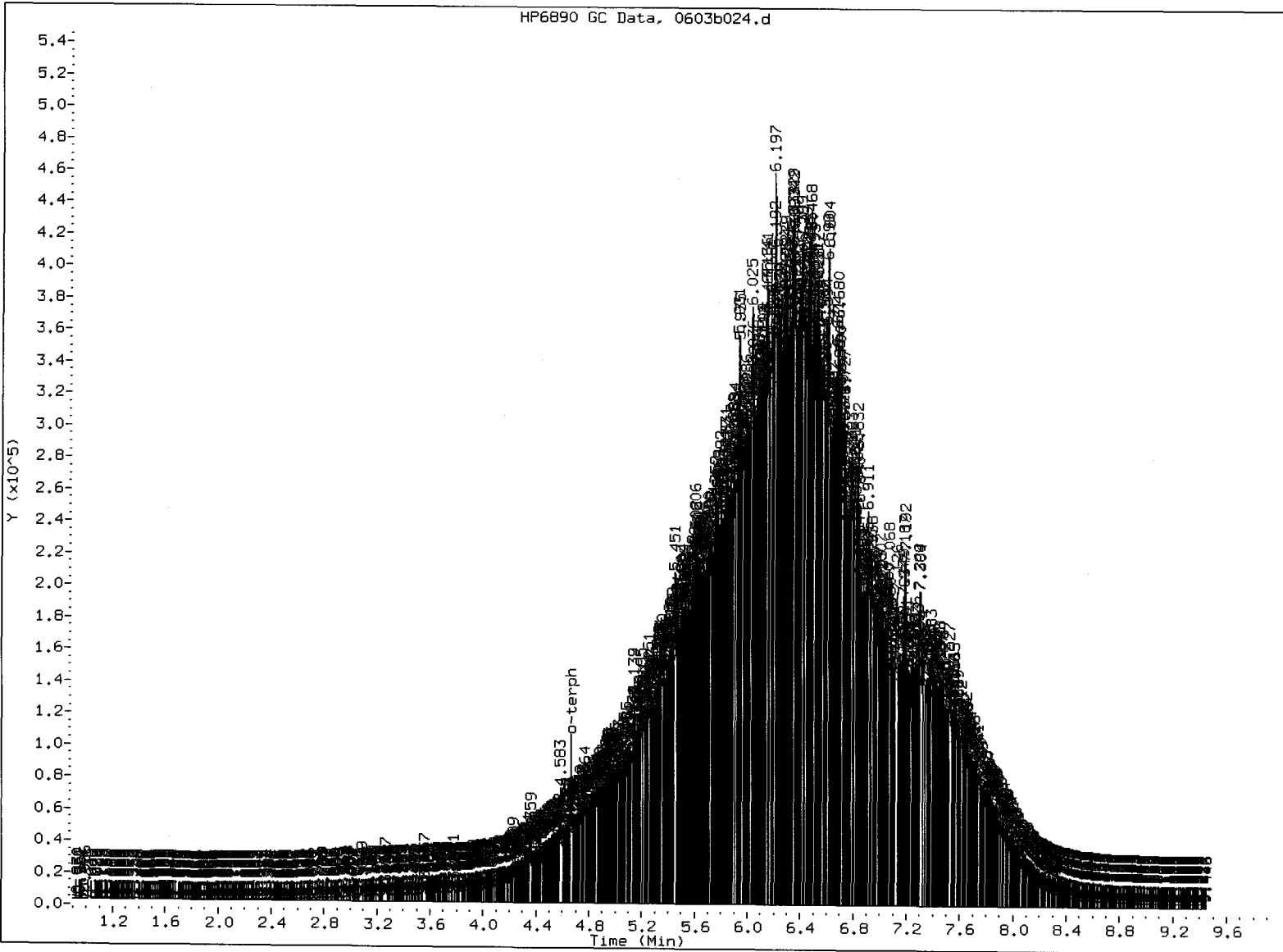
Operator: JM

Column diameter: 0.25

6/4/13



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/4/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b025.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR40E
Client ID: SL-F5-S-6
Injection: 03-JUN-2013 17:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		70419	5
C8	0.837	0.007	3177	2006	WATPHD (C12-C24)		1333285	128.73
C10	2.240	0.001	710	706	WATPHM (C24-C38)		3649563	369.66
C12	3.037	-0.002	1739	1244	AK102 (C10-C25)		1490850	120.65 M
C14	3.619	0.000	2932	3230	AK103 (C25-C36)		3291235	463.00 M
C16	4.113	0.001	3796	4039				
C18	4.561	0.003	8206	6729				
C20	4.977	-0.002	9848	4361				
C22	5.375	0.003	18124	15215	MSPiRIT (Tol-C12)		70419	5.13
C24	5.741	-0.001	29068	7749				
C25	5.918	0.001	37502	7317				
C26	6.093	-0.001	41178	24466				
C28	6.398	-0.005	51304	15953				
C32	6.949	0.000	38314	31347				
C34	7.185	0.000	30090	16358				
Filter Peak	----							
C36	7.402	0.000	23373	16476				
o-terph	4.666	0.000	806769	443901	JET-A (C10-C18)		273039	25.22
Triacon Surr	6.700	0.005	786311	503830				

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

Surrogate	Area	Amount	%Rec
o-Terphenyl	443901	33.0	73.3
Triacantane	503830	38.6	85.8

JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetaA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130603.b/0603b025.d

Date: 03-JUN-2013 17:09

Client ID: SL-F5-S-6

Sample Info: WR40E

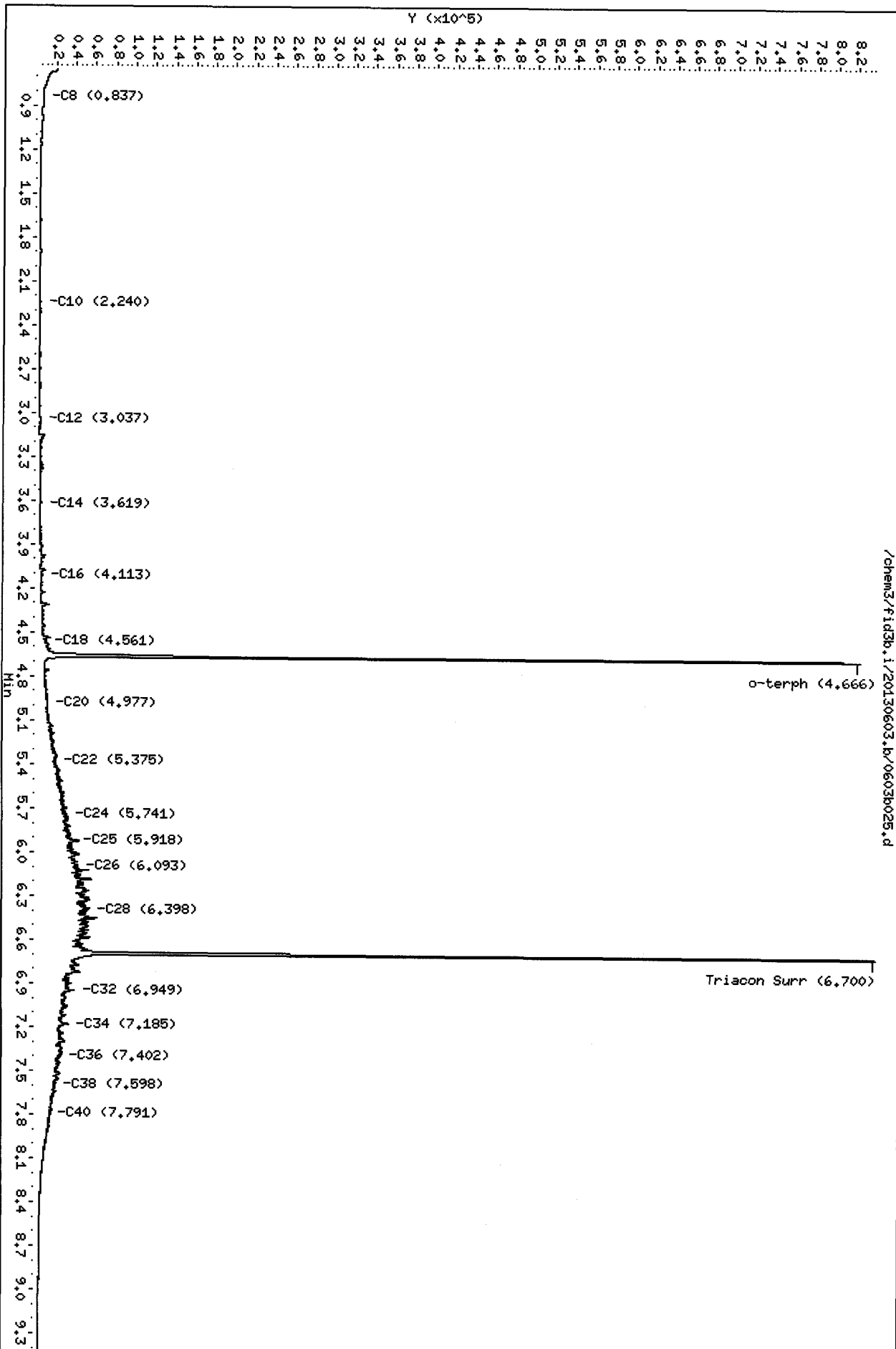
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

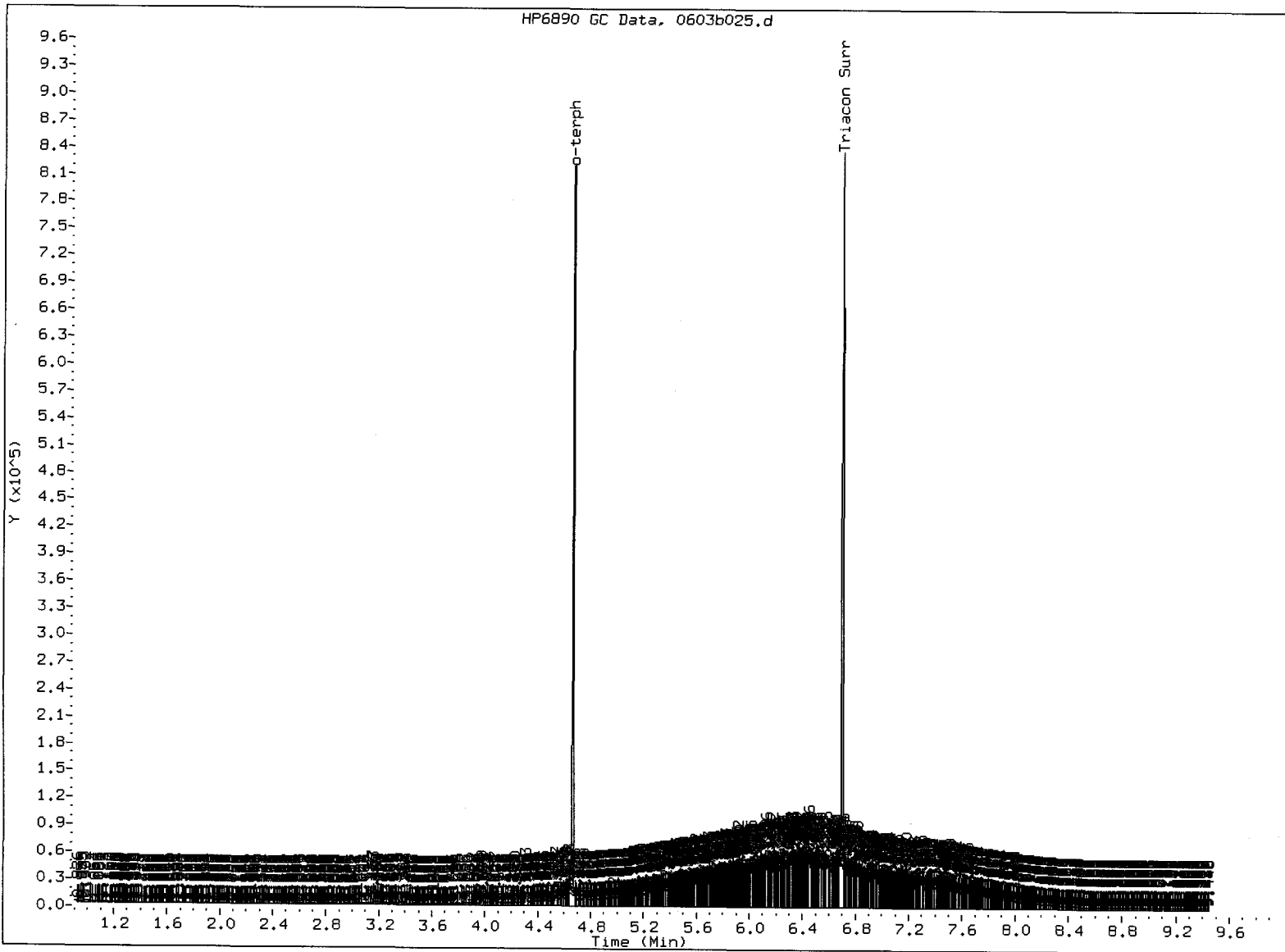
Column diameter: 0.25

JCB
6/4/13



/chem3/fid3b.i/20130603.b/0603b025.d

WR39: 00060



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/1/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130603.b/0603b026.d
Method: /chem3/fid3b.i/20130603.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WR40F
Client ID: SL-F6-S-6
Injection: 03-JUN-2013 17:28
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		106967	8
C8	0.829	-0.001	3573	4700	WATPHD (C12-C24)		9155772	883.98
C10	2.238	-0.001	767	739	WATPHM (C24-C38)		25219991	2554.47
C12	3.034	-0.005	1864	1852	AK102 (C10-C25)		10296562	833.28 M
C14	3.617	-0.001	4200	1968	AK103 (C25-C36)		23211239	3265.29
C16	4.110	-0.002	8451	2395				
C18	4.558	-0.001	29418	11348				
C20	4.979	0.001	74464	39466				
C22	5.372	0.000	143266	60361	MSPIRIT (Tol-C12)		106967	7.79
C24	5.743	0.001	216593	42636				
C25	5.917	0.001	287346	116963				
C26	6.094	0.000	345573	182032				
C28	6.406	0.003	389887	103425				
C32	6.950	0.000	160735	37920				
C34	7.186	0.001	154280	83218				
Filter Peak	----							
C36	7.404	0.002	102427	74038				
o-terph	4.663	-0.004	66012	30900	JET-A (C10-C18)		877207	81.04
Triacon Surr	----							

Range Times: NW Diesel(3.089 - 5.791) NW Gas(0.610 - 3.089) NW M.Oil(5.791 - 7.651)
AK102(2.188 - 5.866) AK103(5.866 - 7.452) Jet A(2.188 - 4.608)

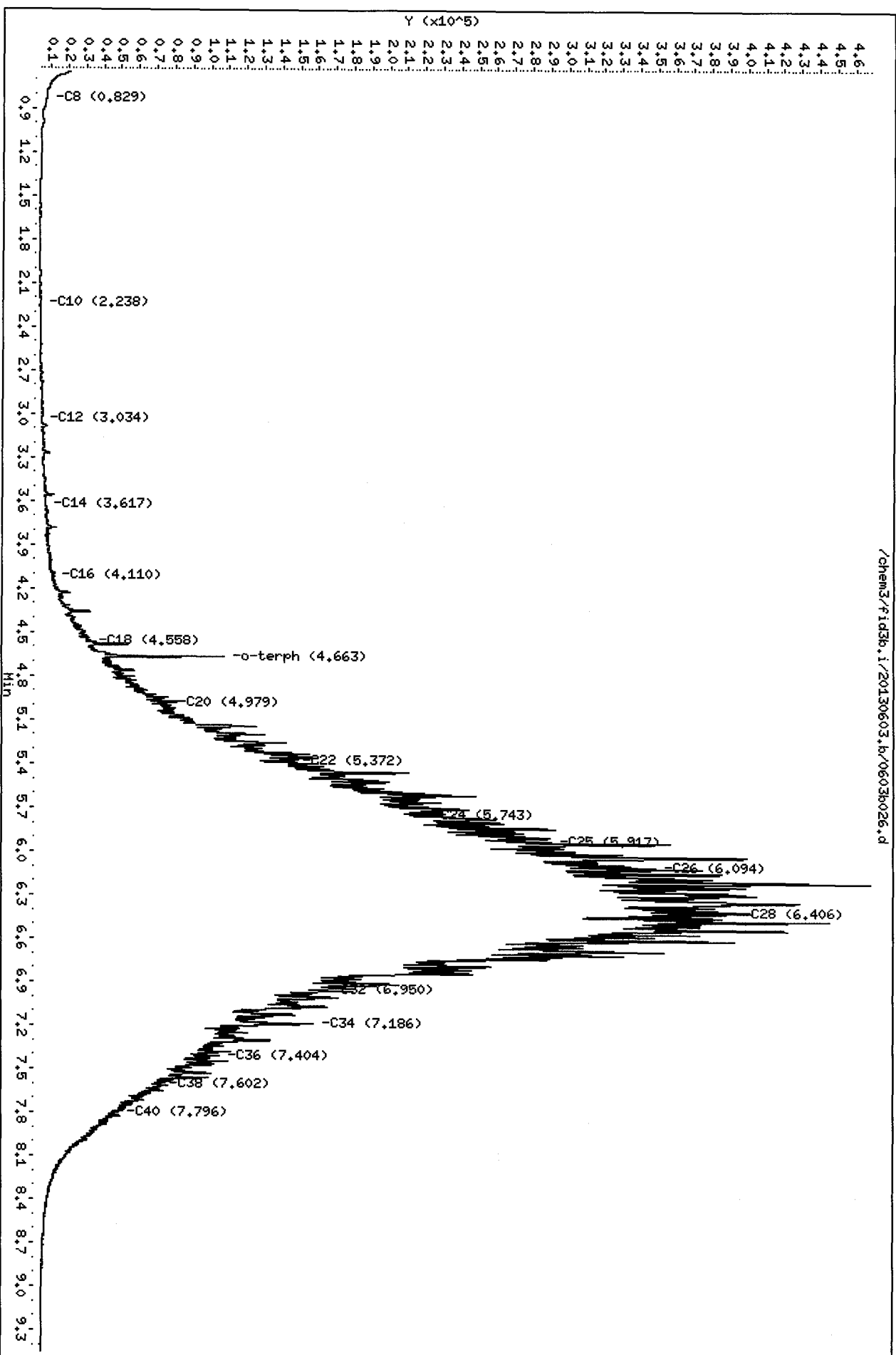
Surrogate	Area	Amount	%Rec
o-Terphenyl	30900	2.3	51.1
Triacotane	0	0.0	0.0

309
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

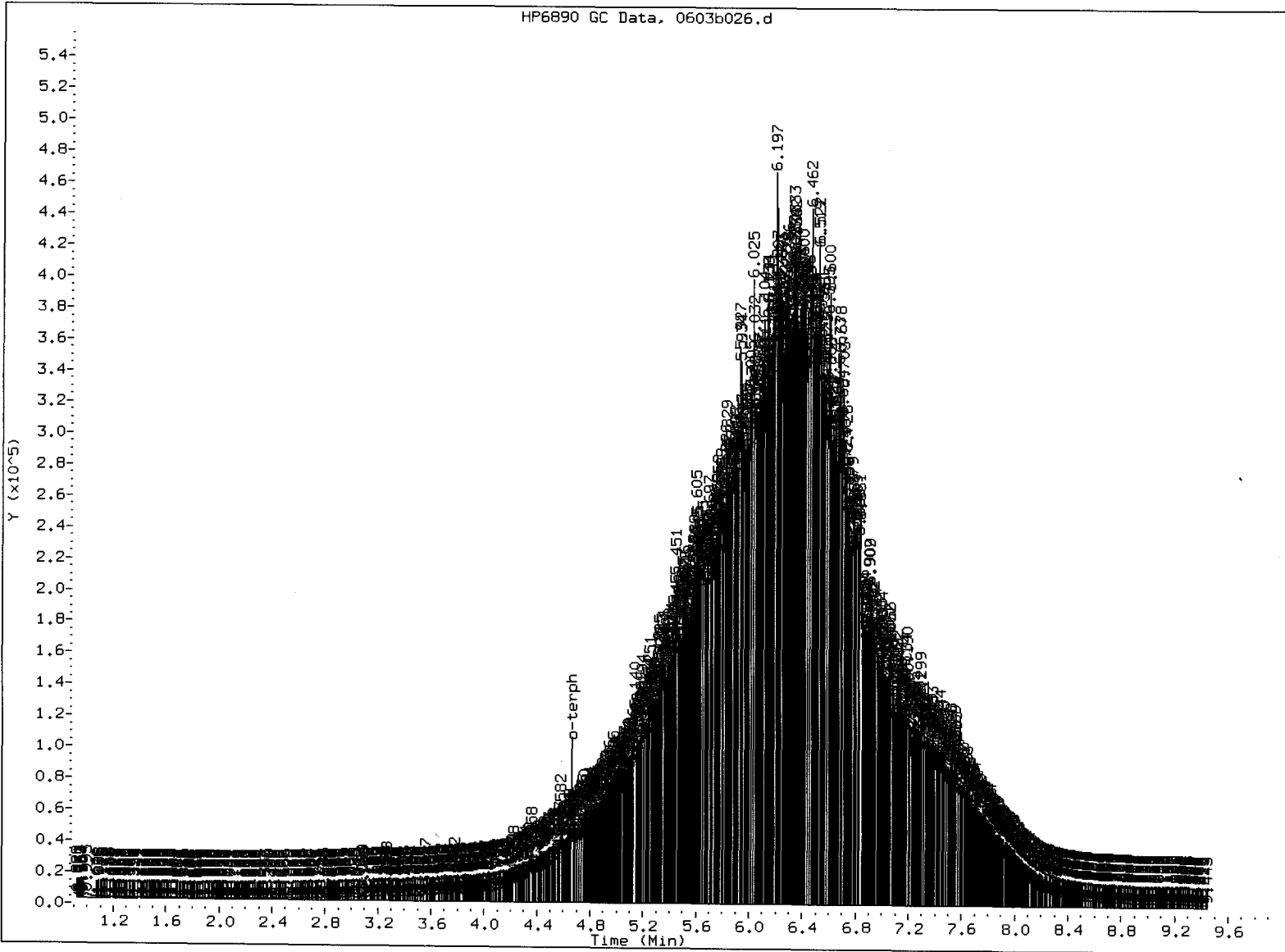
Data File: /chem3/fid3b.i/20130603.b/0603b026.d
 Date: 03-JUN-2013 17:28
 Client ID: SL-F6-S-6
 Sample Info: MR40F,10
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25



/chem3/fid3b.i/20130603.b/0603b026.d

JW
6/4/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: ju

Date: 4/4/03

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WR40-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-052813	72.5%	0
LCS-052813	63.5%	0
SL-F1-S-6	58.9%	0
SL-F2-S-6	54.9%	0
SL-F3-S-6	D	0
SL-F4-S-6	51.1%	0
SL-F5-S-6	73.3%	0
SL-F6-S-6	51.1%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl


(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11261 to 13-11266

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: A2-F31-S-6
MS/MSD

Lab Sample ID: WR39B
 LIMS ID: 13-11252
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/05/13

QC Report No: WR39-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Extracted MS/MSD: 05/28/13
 Date Analyzed MS: 06/01/13 00:34
 MSD: 06/01/13 00:53
 Instrument/Analyst MS: FID/JLW
 MSD: FID/JLW

Sample Amount MS: 8.21 g-dry-wt
 MSD: 8.20 g-dry-wt
 Final Extract Volume MS: 1.0 mL
 MSD: 1.0 mL
 Dilution Factor MS: 1.0
 MSD: 1.0
 Percent Moisture: 18.3%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	20	132	183	61.2%	138	183	64.5%	4.4%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	56.7%	64.2%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b050.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39BMS
Client ID:
Injection: 01-JUN-2013 00:34
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2427237	180
C8	0.828	0.011	8196	14024	WATPHD	(C12-C24)	11261043	1087.24
C10	2.240	0.003	62271	45013	WATPHM	(C24-C38)	2809628	284.58
C12	3.044	0.005	108785	116772	AK102	(C10-C25)	13206636	1068.78 M
C14	3.622	0.004	203934	168128	AK103	(C25-C36)	2555691	359.53 M
C16	4.118	0.002	267823	213218				
C18	4.564	0.004	260158	255912				
C20	4.984	0.004	158525	144143				
C22	5.380	0.004	100186	91454	MSPIRIT	(Tol-C12)	2427237	176.67
C24	5.745	0.000	62042	74317				
C25	5.920	0.002	51317	45224				
C26	6.094	0.000	41117	31848				
C28	6.407	0.001	37003	9350				
C32	6.951	0.001	26646	22569				
C34	7.186	0.001	16378	10148				
Filter Peak	----							
C36	7.399	-0.002	10028	6595				
o-terph	4.674	0.004	698733	342978	JET-A	(C10-C18)	9011267	832.51
Triacon Surr	6.702	0.001	702714	452484				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	342978	25.5	56.7
Triacotane	452484	34.7	77.1

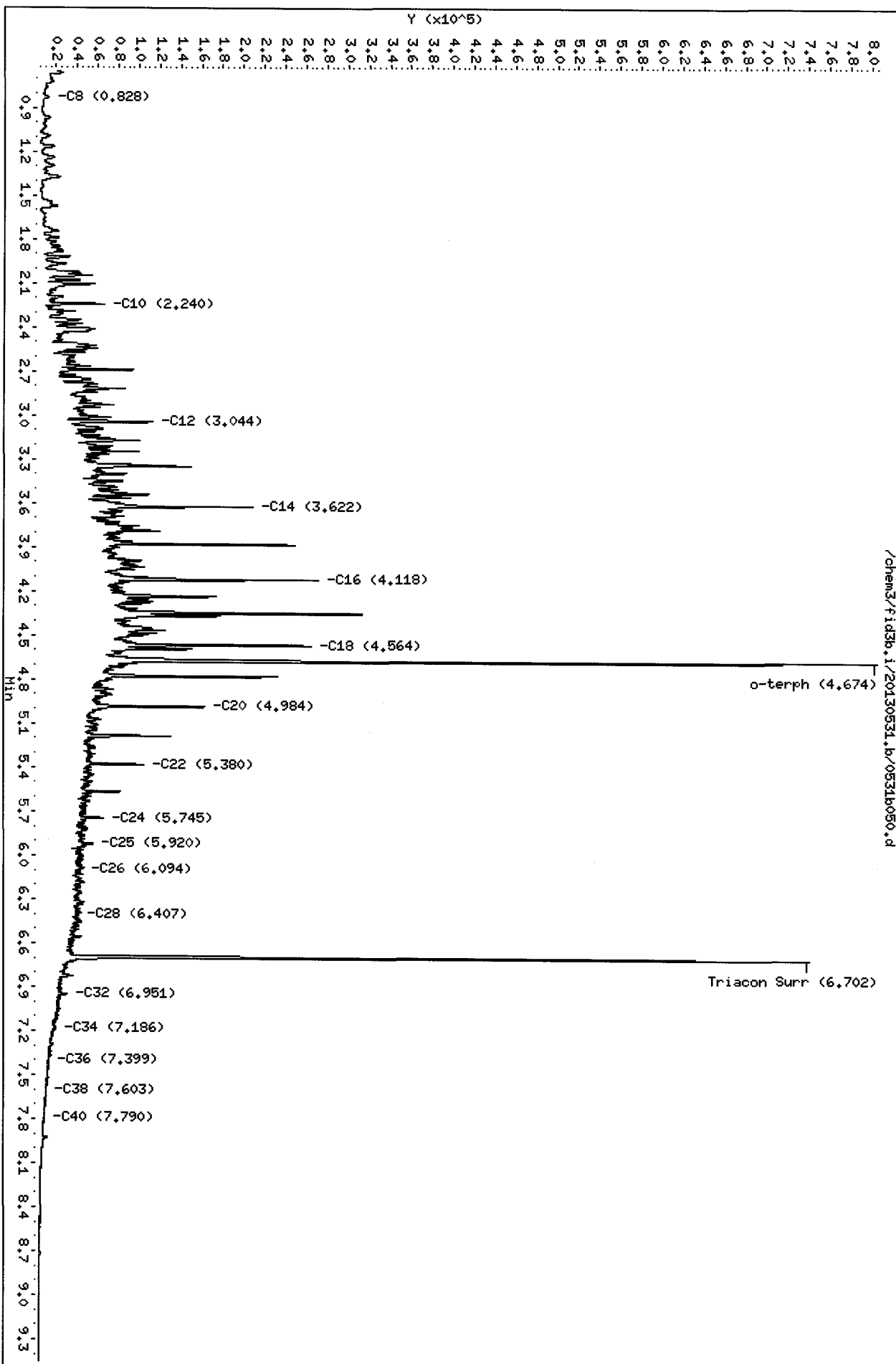
JW
6/4/13

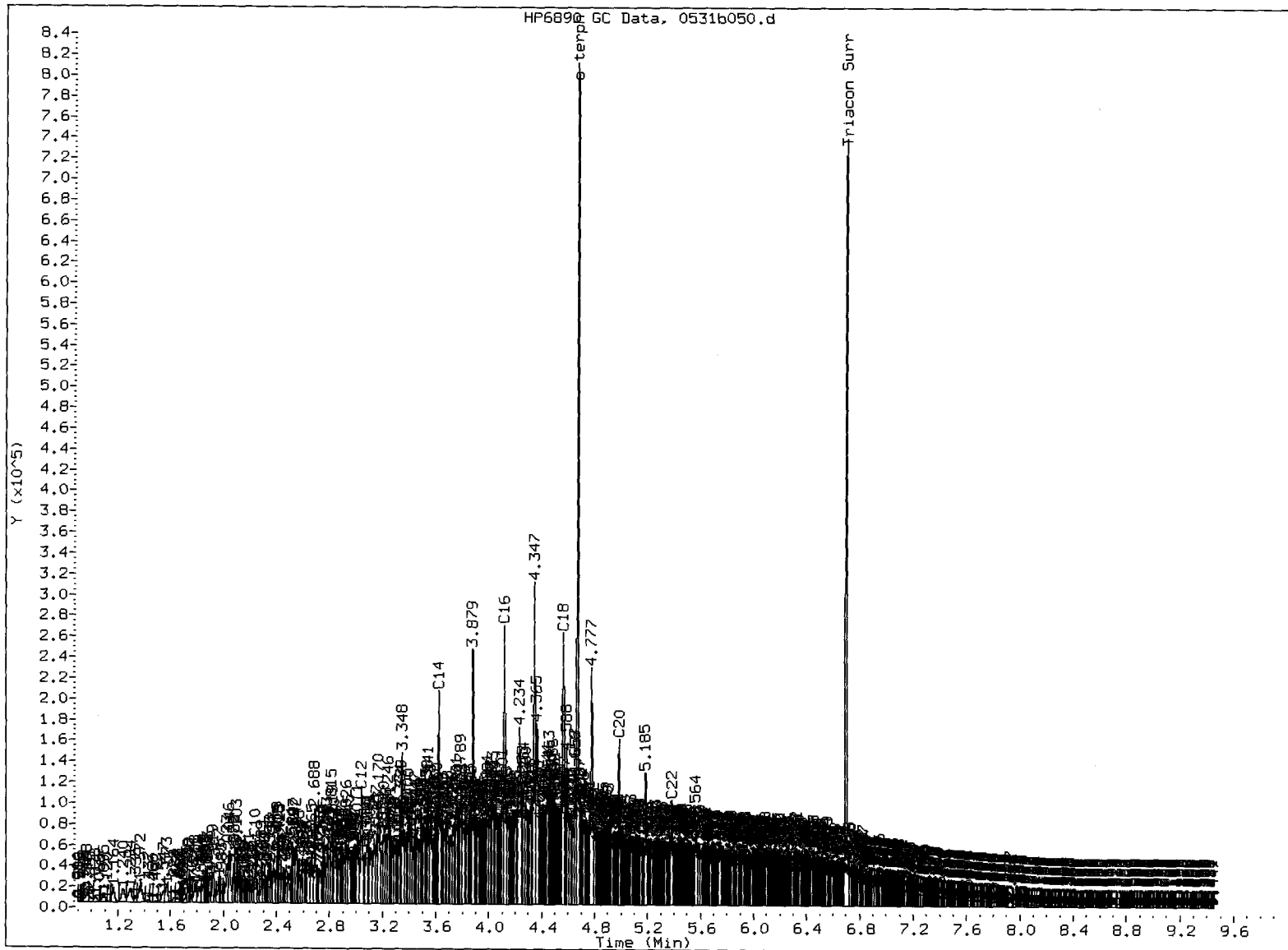
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
Jeta	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130531.b/0531b050.d
Date: 01-JUN-2013 00:34
Client ID:
Sample Info: WR39BMS
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

300
6/4/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skipped surrogate

Analyst: JCS Date: 6/4/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b051.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39BMSD
Client ID:
Injection: 01-JUN-2013 00:53
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2502218	185
C8	0.807	-0.011	3542	2053	WATPHD (C12-C24)		11718644	1131.42
C10	2.240	0.002	55806	45593	WATPHM (C24-C38)		2943098	298.10
C12	3.044	0.005	110528	117188	AK102 (C10-C25)		13677376	1106.88 M
C14	3.621	0.003	191455	175990	AK103 (C25-C36)		2693608	378.93 M
C16	4.119	0.002	272363	244914				
C18	4.566	0.006	305515	249471				
C20	4.982	0.003	177392	145928				
C22	5.377	0.002	93874	104113	MSPIRIT (Tol-C12)		2502218	182.13
C24	5.744	-0.001	65283	50556				
C25	5.917	-0.001	54440	37546				
C26	6.099	0.005	40534	17095				
C28	6.407	0.001	38790	10507				
C32	6.951	0.001	25488	18495				
C34	7.180	-0.005	17040	15835				
Filter Peak	----							
C36	7.401	-0.001	9916	4434				
o-terph	4.672	0.001	647697	388374	JET-A (C10-C18)		9300138	859.20
Triacon Surr	6.703	0.002	710433	473232				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	388374	28.9	64.2
Triacantane	473232	36.3	80.6

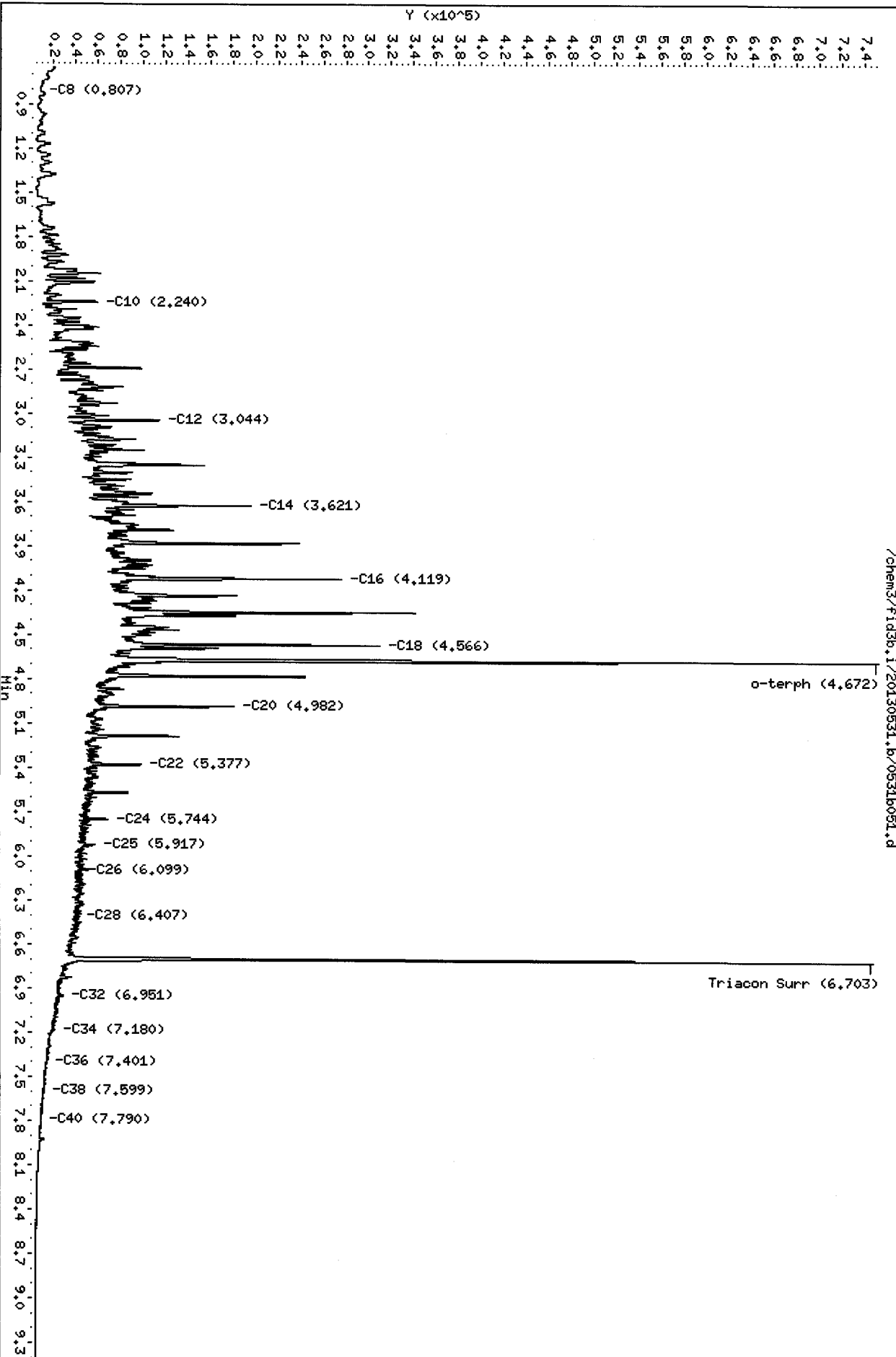
JW
6/4/13

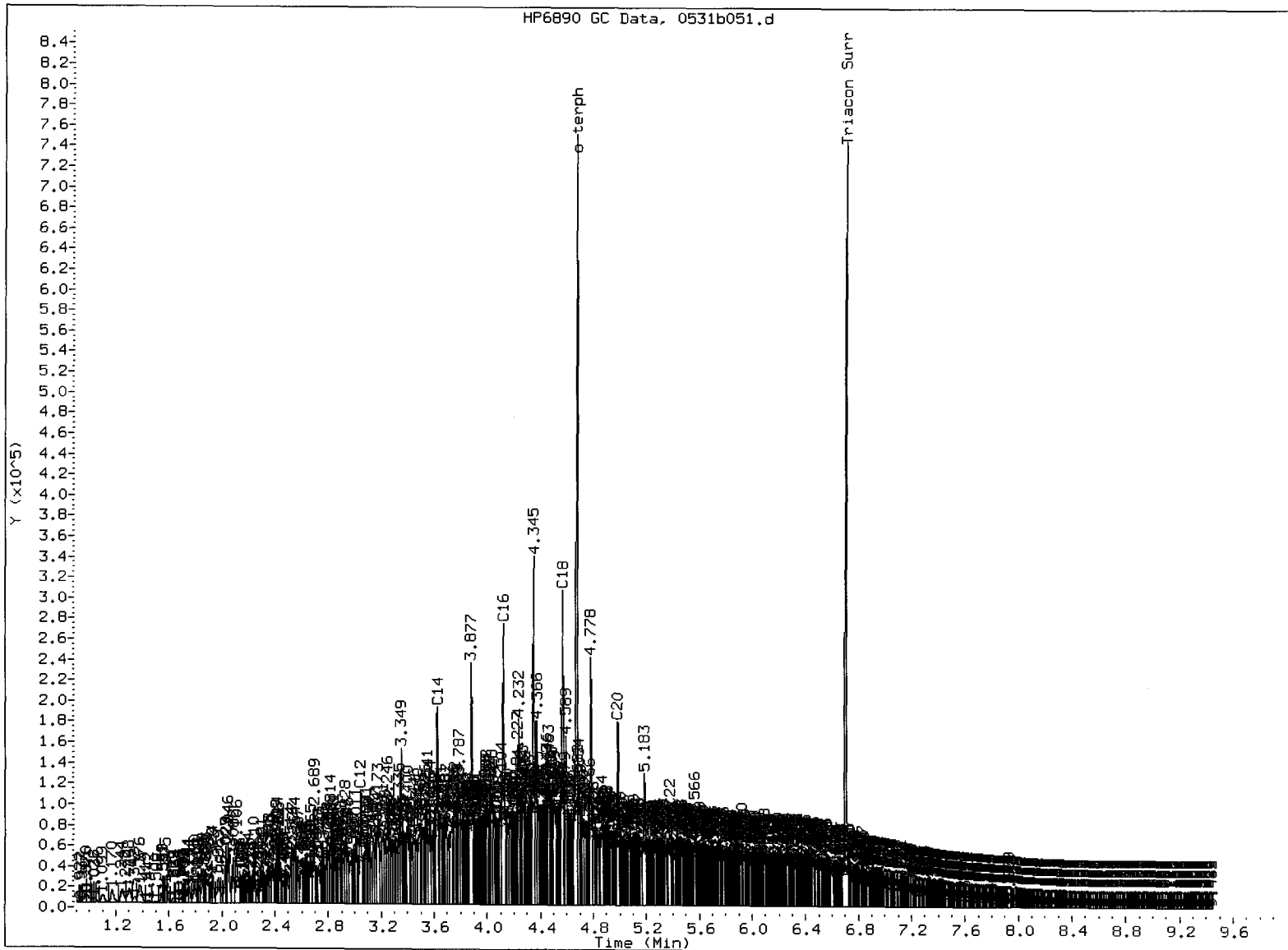
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130531.b/0531b051.d
Date: 01-JUN-2013 00:53
Client ID:
Sample Info: MR39BMSD
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JM
6/4/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 6. Skipped surrogate

Analyst: JW

Date: 6/1/13

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-052813

Page 1 of 1

LAB CONTROL

Lab Sample ID: LCS-052813

QC Report No: WR39-Maul Foster & Alongi, Inc

LIMS ID: 13-11252

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AS*

Date Sampled: 05/22/13

Reported: 06/05/13

Date Received: 05/24/13

Date Extracted: 05/28/13

Sample Amount: 10.0 g

Date Analyzed: 05/31/13 23:37

Final Extract Volume: 1.0 mL

Instrument/Analyst: FID/JLW

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	113	150	75.3%

TPHD Surrogate Recovery

o-Terphenyl	63.5%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130531.b/0531b047.d
Method: /chem3/fid3b.i/20130531.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/03/2013
Macro: FID:3B052113

ARI ID: WR39LCSS1
Client ID:
Injection: 31-MAY-2013 23:37
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2929897	217
C8	0.805	-0.013	3606	359	WATPHD (C12-C24)		11669072	1126.64
C10	2.241	0.003	65045	51835	WATPHM (C24-C38)		181131	18.35
C12	3.044	0.004	128312	129551	AK102 (C10-C25)		13795800	1116.46 M
C14	3.621	0.003	226882	157749	AK103 (C25-C36)		146116	20.56
C16	4.118	0.002	338337	239895				
C18	4.564	0.004	343055	257977				
C20	4.985	0.005	164857	204166				
C22	5.379	0.003	78912	87767	MSPIRIT (Tol-C12)		2929897	213.26
C24	5.749	0.004	25423	27249				
C25	5.920	0.002	12478	5507				
C26	6.089	-0.005	6376	6854				
C28	6.404	-0.003	1460	284				
C32	6.936	-0.014	592	365				
C34	7.185	0.000	63	14				
Filter Peak	----							
C36	7.408	0.007	207	104				
o-terph	4.674	0.004	788614	384256	JET-A (C10-C18)		10595656	978.89
Triacon Surr	6.702	0.001	760287	526328				

Range Times: NW Diesel(3.089 - 5.795) NW Gas(0.595 - 3.089) NW M.Oil(5.795 - 7.654)
AK102(2.188 - 5.868) AK103(5.868 - 7.451) Jet A(2.188 - 4.610)

Surrogate	Area	Amount	%Rec
o-Terphenyl	384256	28.6	63.5
Triacotane	526328	40.3	89.6

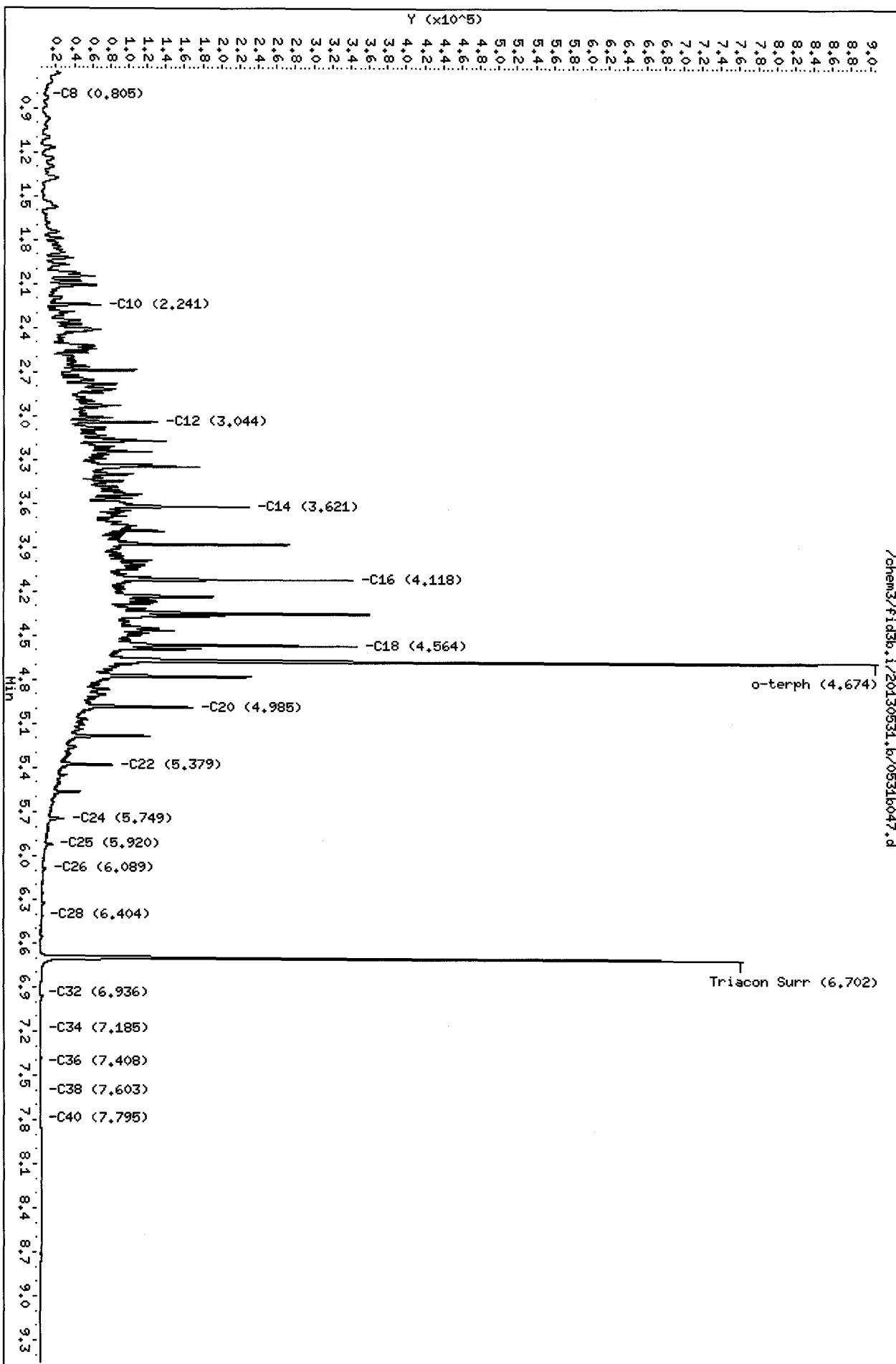
JCO
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

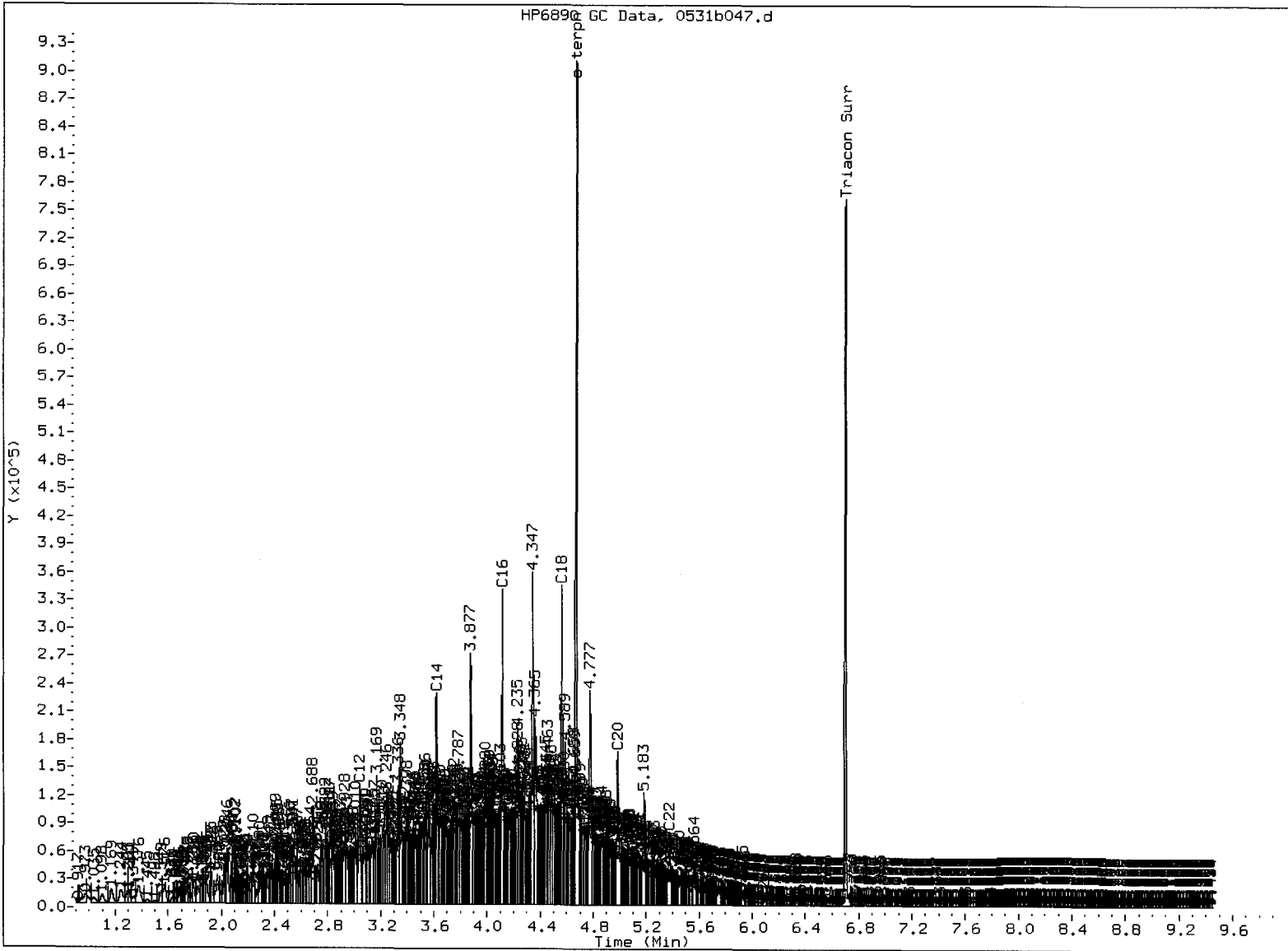
Data File: /chem3/fid3b.i/20130531.b/0531b047.d
Date: 31-MAY-2013 23:37
Client ID:
Sample Info: MR39LCSS1
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

25
C/M/7



/chem3/fid3b.i/20130531.b/0531b047.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤. Skipped surrogate

Analyst: JW Date: 6/4/10

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/24/13

ARI Job: WR39
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11251-WR39A	A2-F30-S-6	8.48 g	1.00 mL	D	05/28/13
13-11252-052813MB1	Method Blank	10.0 g	1.00 mL	-	05/28/13
13-11252-052813LCS1	Lab Control	10.0 g	1.00 mL	-	05/28/13
13-11252-WR39B	A2-F31-S-6	8.20 g	1.00 mL	D	05/28/13
13-11252-WR39BMS	A2-F31-S-6	8.21 g	1.00 mL	D	05/28/13
13-11252-WR39BMSD	A2-F31-S-6	8.20 g	1.00 mL	D	05/28/13
13-11253-WR39C	A2-F33-S-6	8.66 g	1.00 mL	D	05/28/13
13-11254-WR39D	A2-F34-S-6	8.64 g	1.00 mL	D	05/28/13
13-11255-WR39E	A2-F35-S-6	8.53 g	1.00 mL	D	05/28/13
13-11256-WR39F	A2-F36-S-6	8.70 g	1.00 mL	D	05/28/13
13-11257-WR39G	A2-F38-S-6	8.52 g	1.00 mL	D	05/28/13
13-11258-WR39H	A2-F39-S-6	8.42 g	1.00 mL	D	05/28/13
13-11259-WR39I	A2-F40-S-6	8.62 g	1.00 mL	D	05/28/13
13-11260-WR39J	A2-F41-S-6	7.91 g	1.00 mL	D	05/28/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/24/13

ARI Job: WR40
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11261-052813MB1	Method Blank	10.0 g	1.00 mL	-	05/28/13
13-11261-052813LCS1	Lab Control	10.0 g	1.00 mL	-	05/28/13
13-11261-WR40A	SL-F1-S-6	8.01 g	1.00 mL	D	05/28/13
13-11262-WR40B	SL-F2-S-6	7.76 g	1.00 mL	D	05/28/13
13-11263-WR40C	SL-F3-S-6	8.01 g	1.00 mL	D	05/28/13
13-11264-WR40D	SL-F4-S-6	7.75 g	1.00 mL	D	05/28/13
13-11265-WR40E	SL-F5-S-6	8.35 g	1.00 mL	D	05/28/13
13-11266-WR40F	SL-F6-S-6	8.05 g	1.00 mL	D	05/28/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F30-S-6

SAMPLE

Lab Sample ID: WR39A

LIMS ID: 13-11251

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 13:21

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	97.5%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a008.d ARI ID: WR39A
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a008.d Client ID: A2-F30-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 13:21
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.000	2958	37798	100.0	TFT(Surr)
15.383	0.002	1935	16153	97.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.001	3240	100.5	TFT(Surr)
15.391	0.001	7046	97.5	BB(Surr)

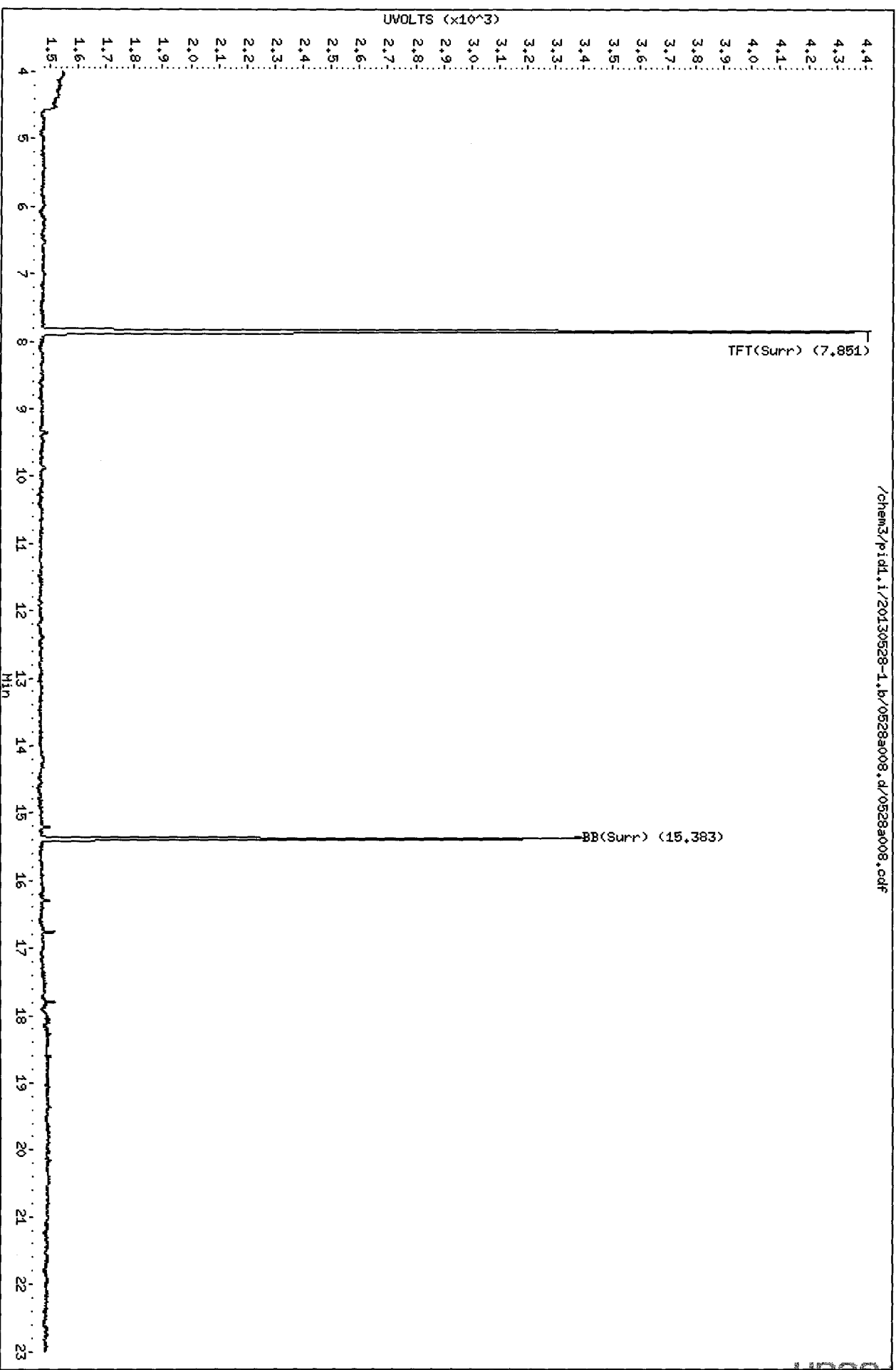
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidd,i/20130528-1,b/0528a008.d
Date : 28-MAY-2013 13:21
Client ID: A2-F30-S-6
Sample Info: MR39A
Column phase: RTX 502-2 FID

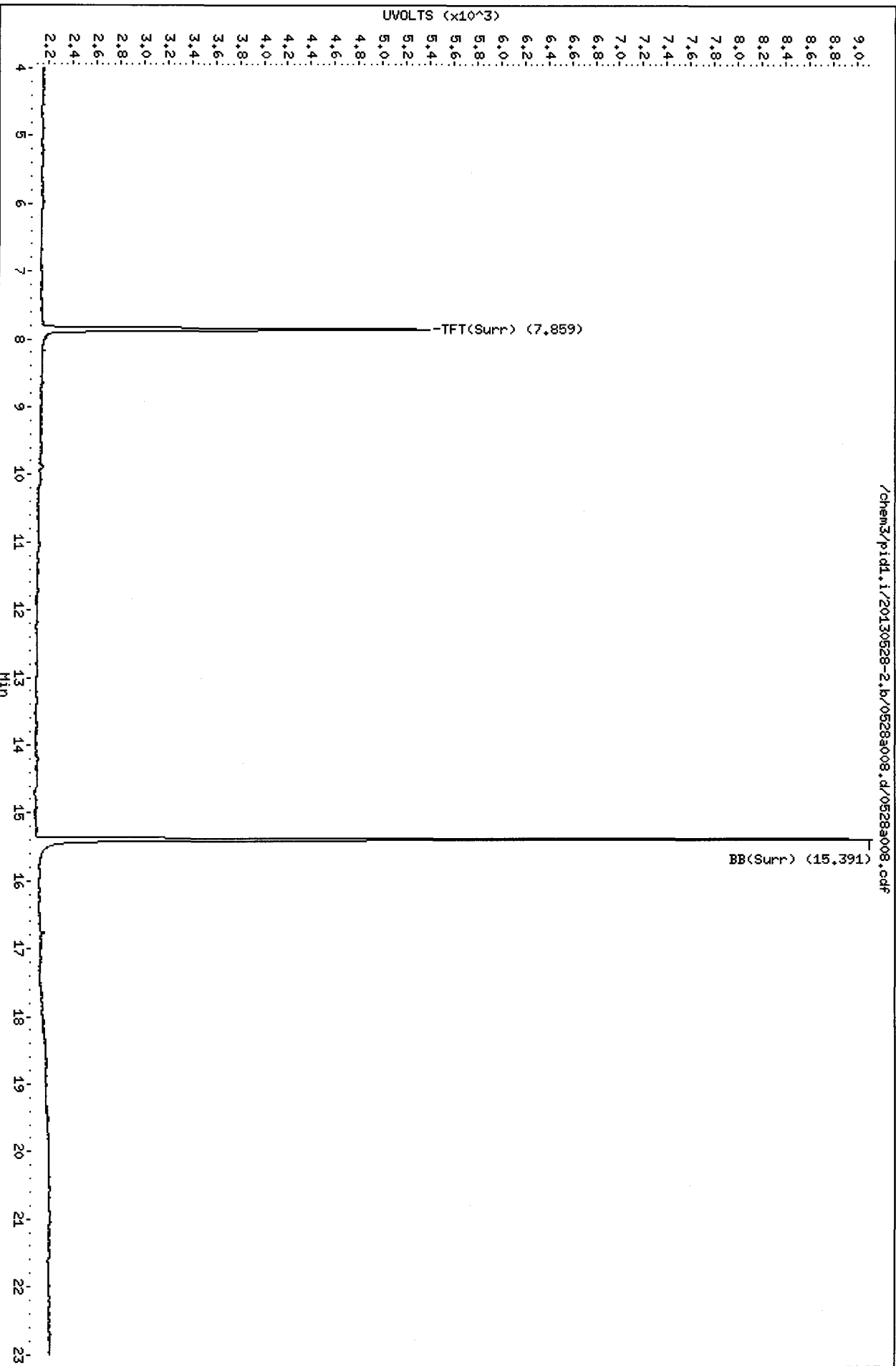
Instrument: pidd,i
Operator: PC
Column diameter: 0.18



/chem3/pidd,i/20130528-1,b/0528a008.d/0528a008.cdf

Data File: /chem3/pidd,i/20130528-2,b/0528a008.d
Date : 28-MAY-2013 13:21
Client ID: A2-F30-S-6
Sample Info: MR39A
Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F31-S-6

SAMPLE

Lab Sample ID: WR39B

LIMS ID: 13-11252

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 13:49

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 73 mg-dry-wt

Percent Moisture: 18.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	99.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a009.d ARI ID: WR39B
Data file 2: /chem3/pid1.i/20130528-2.b/0528a009.d Client ID: A2-F31-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 13:49
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.849	-0.002	3014	37928	101.9	TFT(Surr)
15.382	0.001	1970	16631	99.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	1	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.857	-0.001	3280	101.8	TFT(Surr)
15.390	0.000	7165	99.1	BB(Surr)

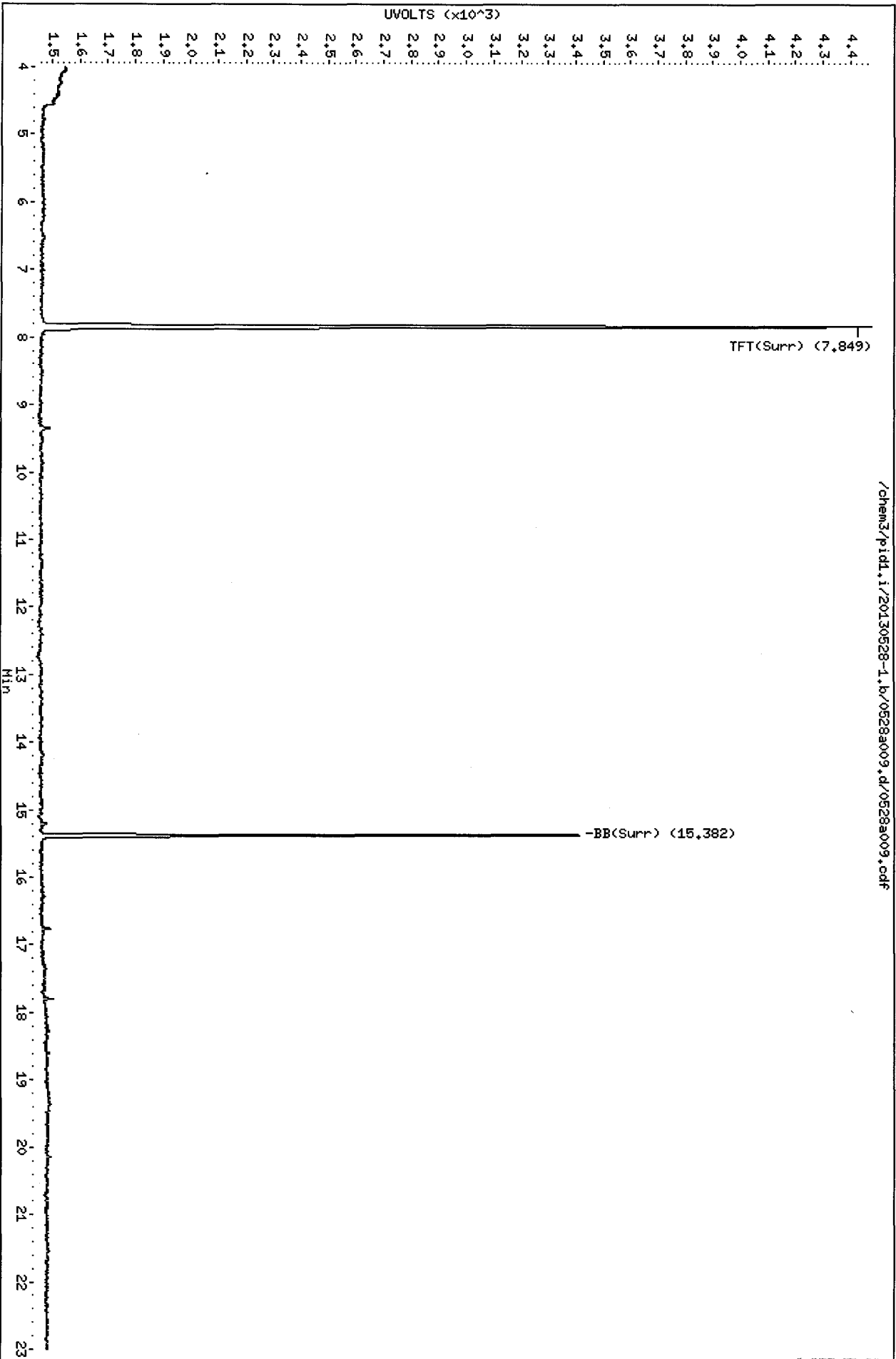
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a009.d
Date: 28-MAY-2013 13:49
Client ID: A2-F31-S-6
Sample Info: NR39B
Column phase: RTX 502-2 FID

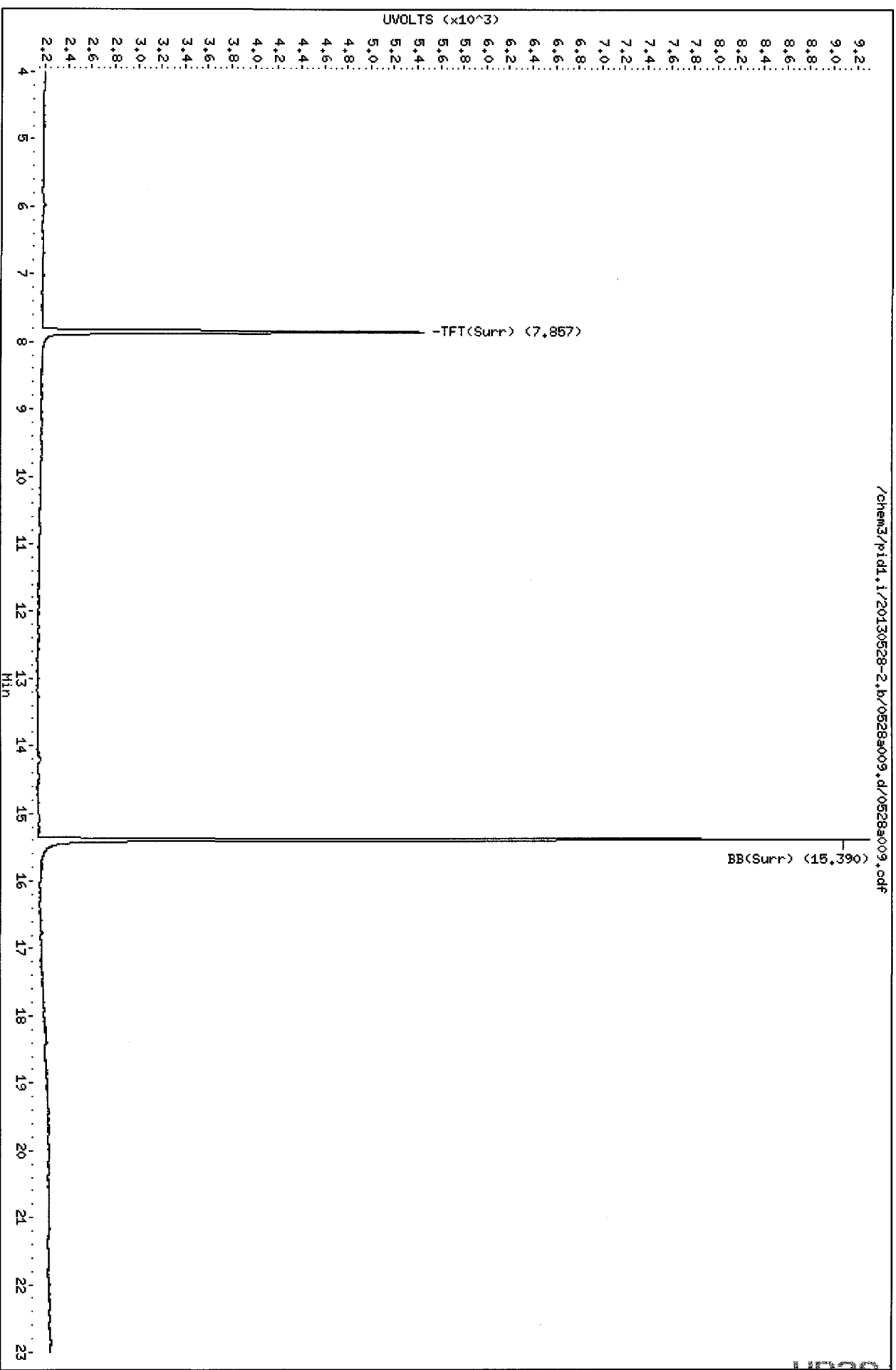
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a009.d/0528a009.cdf

Data File: /chem3/pidl.1/20130528-2.b/0528a009.d
Date : 28-MAY-2013 13:49
Client ID: A2-F31-S-6
Sample Info: MR39B
Column phase: RTX 502-2 PID

Instrument: pidl.i
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F33-S-6

SAMPLE

Lab Sample ID: WR39C

LIMS ID: 13-11253

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 14:18

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 13.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

BETX Surrogate Recovery

Trifluorotoluene	104%
Bromobenzene	103%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a010.d ARI ID: WR39C
Data file 2: /chem3/pid1.i/20130528-2.b/0528a010.d Client ID: A2-F33-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 14:18
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.851	0.000	3101	39643	104.8	TFT(Surr)
15.383	0.002	2034	17144	102.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	1	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	2	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.859	0.000	3359	104.2	TFT(Surr)
15.391	0.001	7431	102.8	BB(Surr)

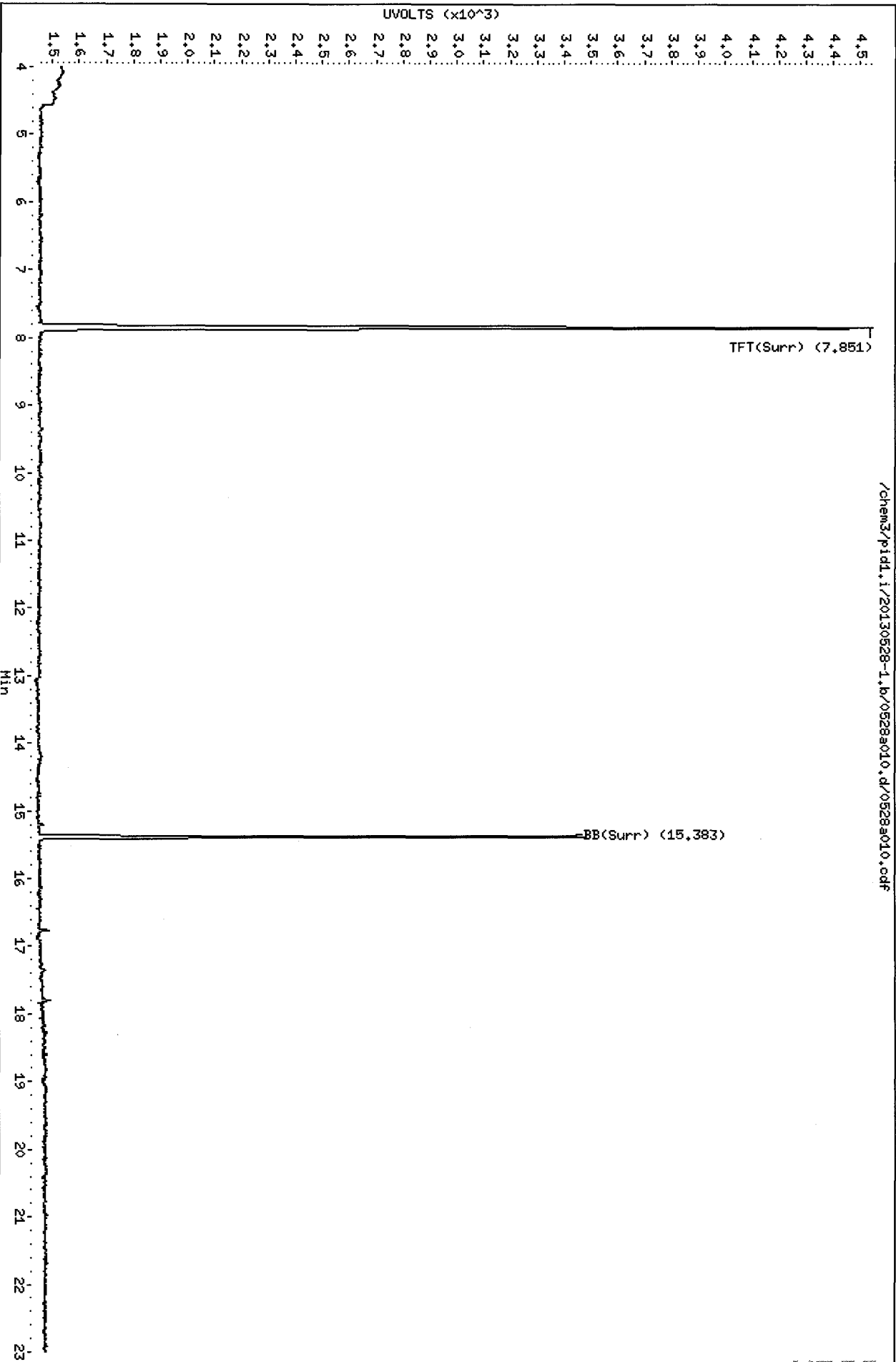
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a010.d
Date: 28-MAY-2013 14:18
Client ID: A2-F33-S-6
Sample Info: MR39C
Column phase: RTX 502-2 FID

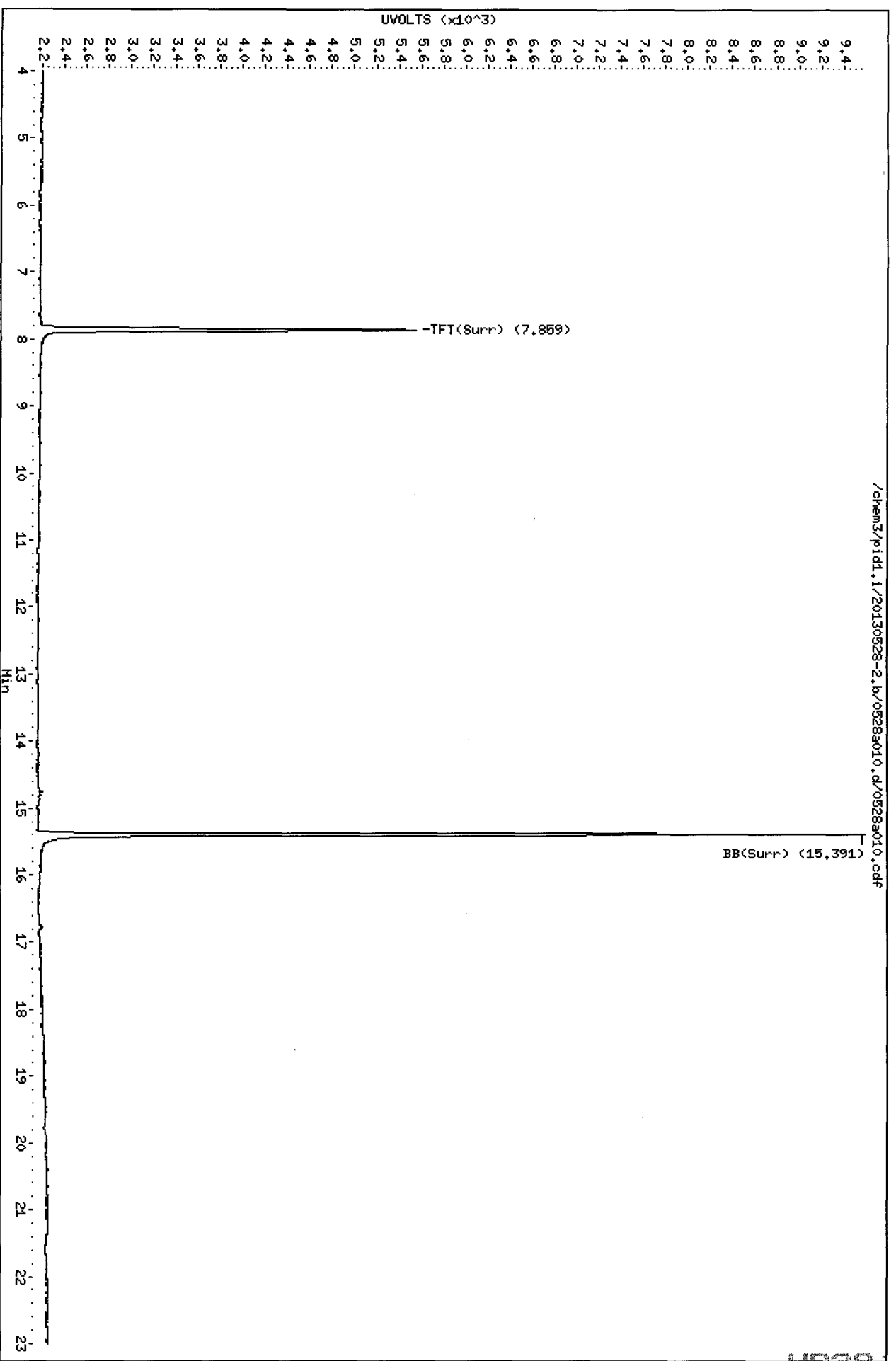
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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Data File: /chem3/pid1.i/20130528-2.b/0528a010.d
Date : 28-MAY-2013 14:18
Client ID: A2-F33-S-6
Sample Info: MR39C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F34-S-6

SAMPLE

Lab Sample ID: WR39D

LIMS ID: 13-11254

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 14:46

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 13.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

BETX Surrogate Recovery

Trifluorotoluene	92.2%
Bromobenzene	91.5%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a011.d ARI ID: WR39D
Data file 2: /chem3/pid1.i/20130528-2.b/0528a011.d Client ID: A2-F34-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 14:46
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.852	0.001	2762	35399	93.3	TFT(Surr)
15.384	0.002	1821	15625	91.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	605	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	605	0.001
NWTPHG Tol-Nap (9.78 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.860	0.001	2973	92.2	TFT(Surr)
15.391	0.002	6615	91.5	BB(Surr)

SW8021 (PID)

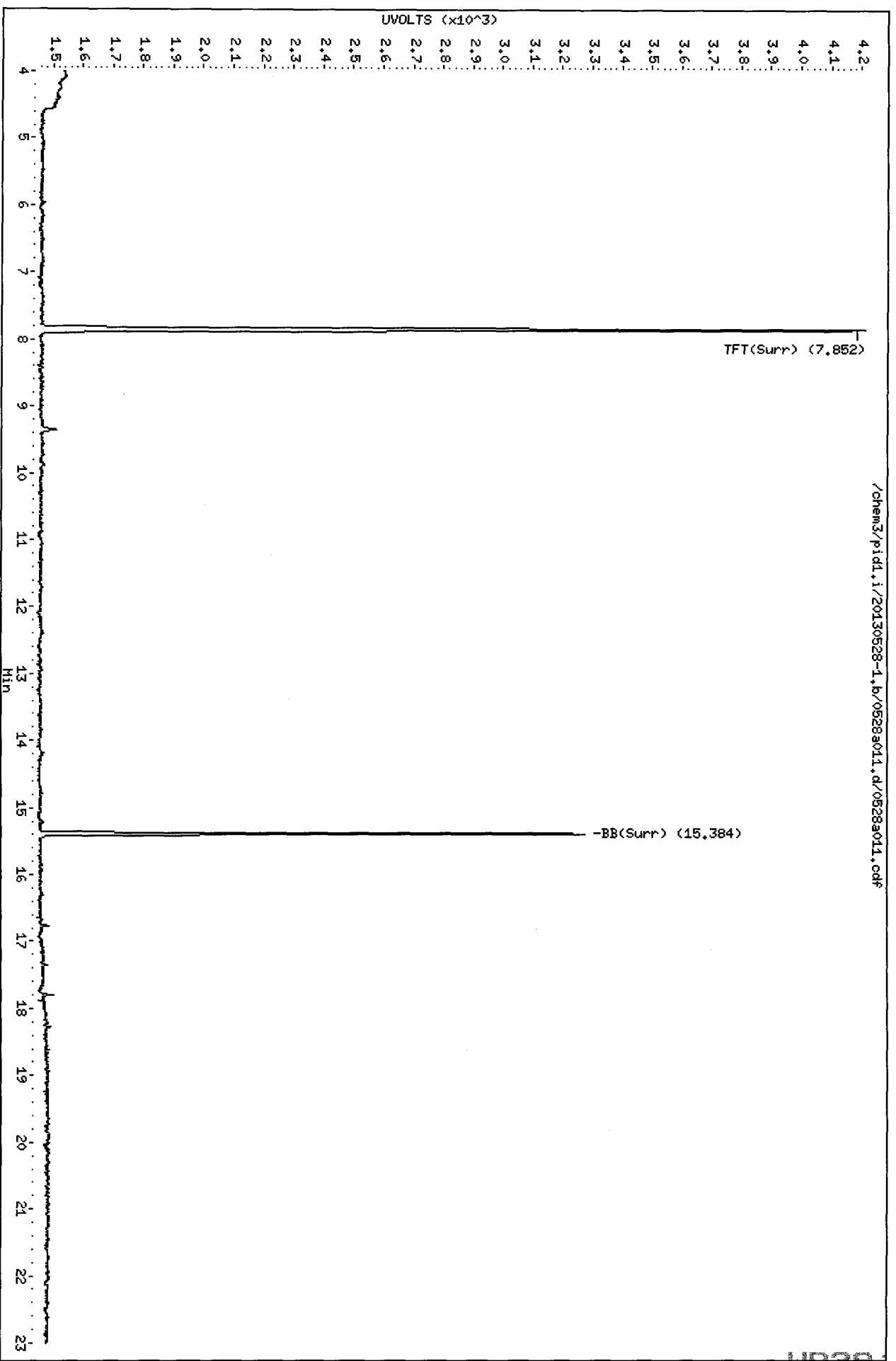
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a011.d
Date: 28-MAY-2013 14:46
Client ID: A2-F34-S-6
Sample Info: MR39D

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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Data File: /chem3/pid1.i/20130528-2.b/0528a011.d

Date : 28-MAY-2013 14:46

Client ID: A2-F34-S-6

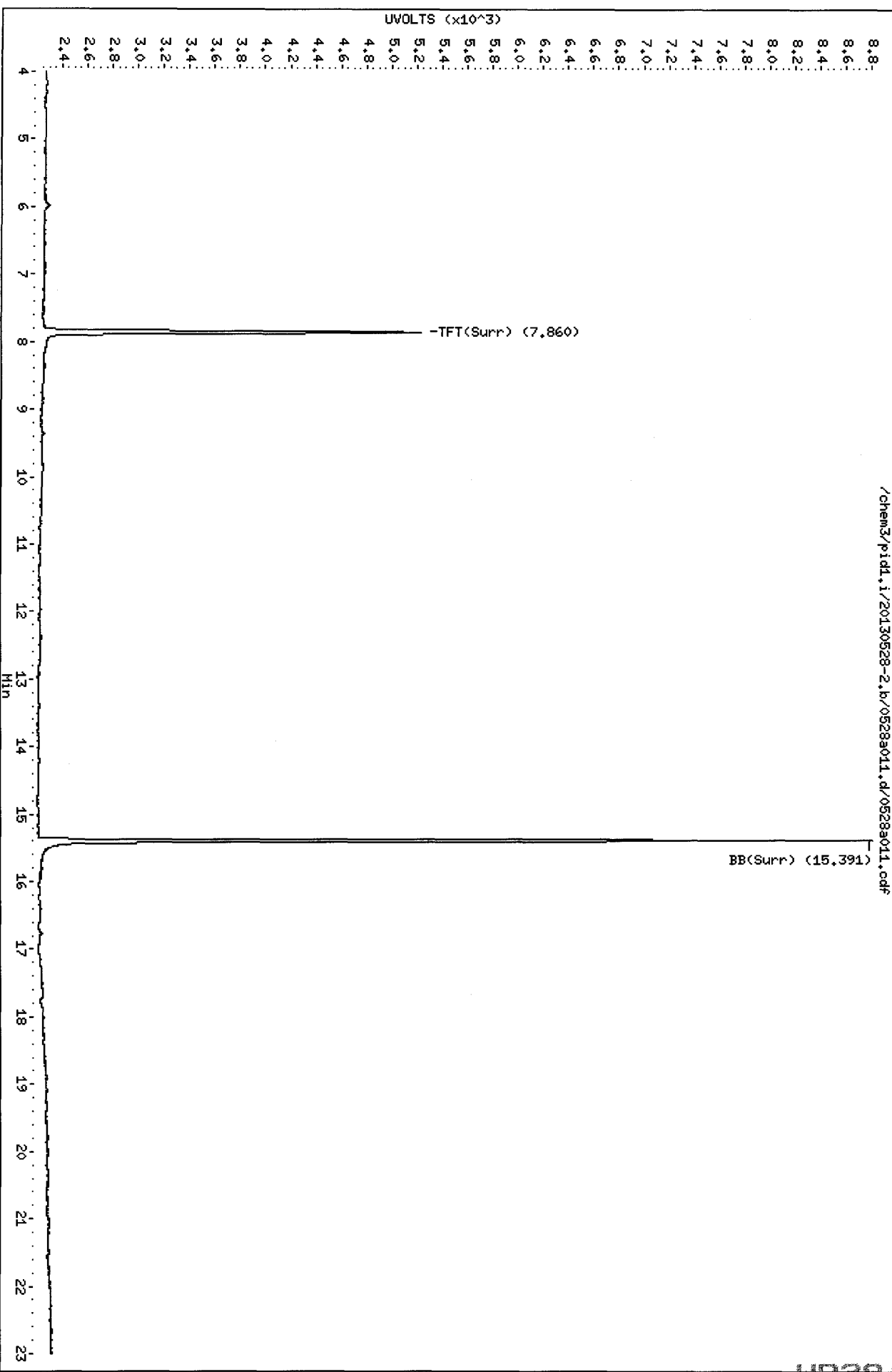
Sample Info: MR39D

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F35-S-6

SAMPLE

Lab Sample ID: WR39E

LIMS ID: 13-11255

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 15:14

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 55 mg-dry-wt

Percent Moisture: 14.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	22	< 22 U
108-88-3	Toluene	22	< 22 U
100-41-4	Ethylbenzene	22	< 22 U
179601-23-1	m,p-Xylene	45	< 45 U
95-47-6	o-Xylene	22	< 22 U

BETX Surrogate Recovery

Trifluorotoluene	98.3%
Bromobenzene	97.2%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AK
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a012.d ARI ID: WR39E
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a012.d Client ID: A2-F35-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 15:14
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.852	0.000	2913	37126	98.4	TFT(Surr)
15.382	0.001	1931	16499	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.861	0.002	3168	98.3	TFT(Surr)
15.391	0.001	7027	97.2	BB(Surr)

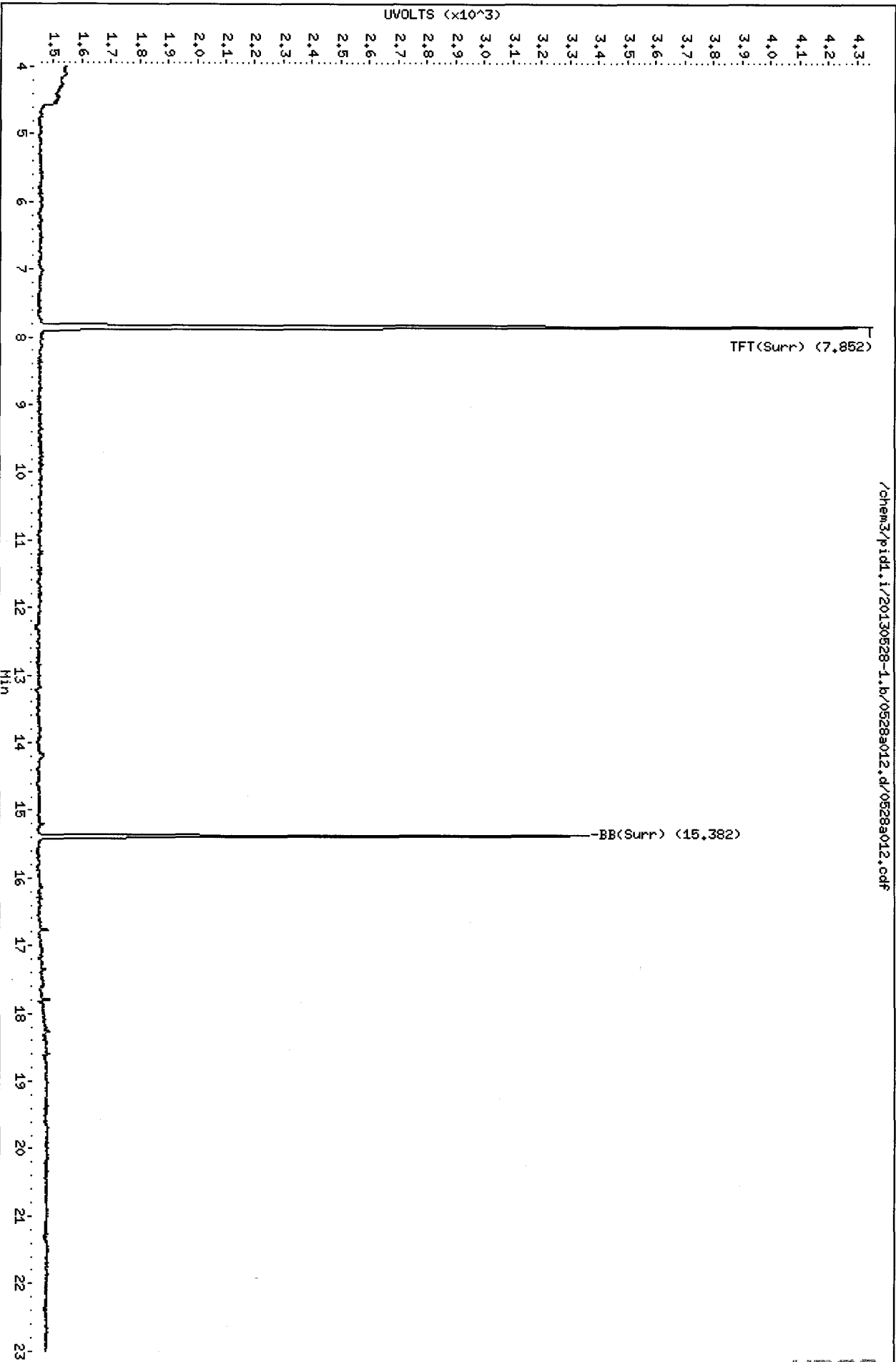
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

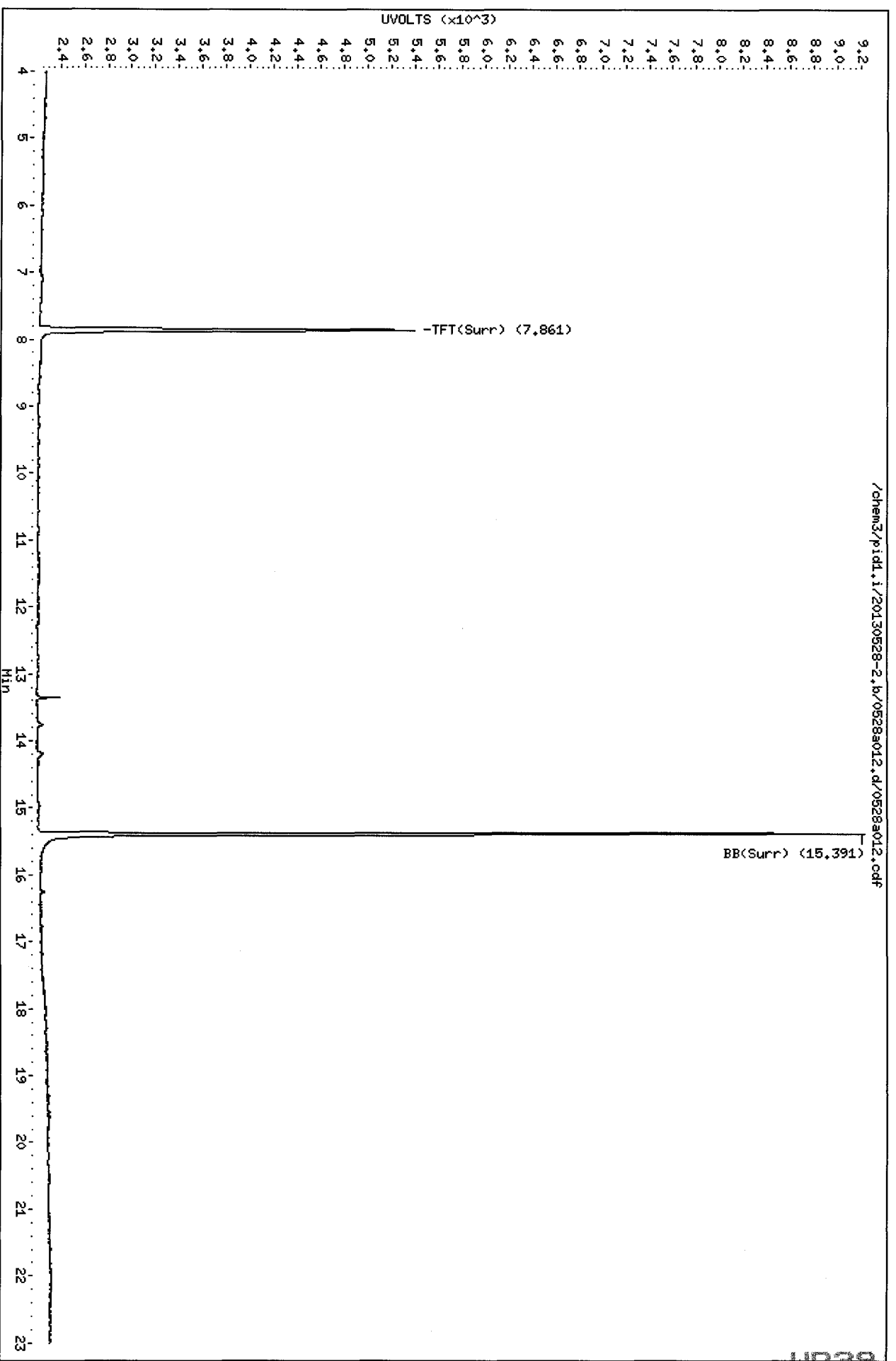
Data File: /chem3/pidd1.i/20130528-1.b/0528a012.d
Date : 28-MAY-2013 15:14
Client ID: A2-F35-S-6
Sample Info: MR39E
Column phase: RTX 502-2 FID

Instrument: pidd1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pidd,i/20130528-2,b/0528a012.d
Date : 28-MAY-2013 15:14
Client ID: A2-F35-S-6
Sample Info: MR39E
Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



/chem3/pidd,i/20130528-2,b/0528a012.d/0528a012.cdf

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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F36-S-6

SAMPLE

Lab Sample ID: WR39F

LIMS ID: 13-11256

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 15:42

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 89 mg-dry-wt

Percent Moisture: 13.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	28	< 28 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	99.6%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a013.d ARI ID: WR39F
Data file 2: /chem3/pid1.i/20130528-2.b/0528a013.d Client ID: A2-F36-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 15:42
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.851	0.000	2969	37868	100.3	TFT(Surr)
15.382	0.001	1992	16755	100.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	1	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.859	0.001	3225	100.0	TFT(Surr)
15.390	0.001	7201	99.6	BB(Surr)

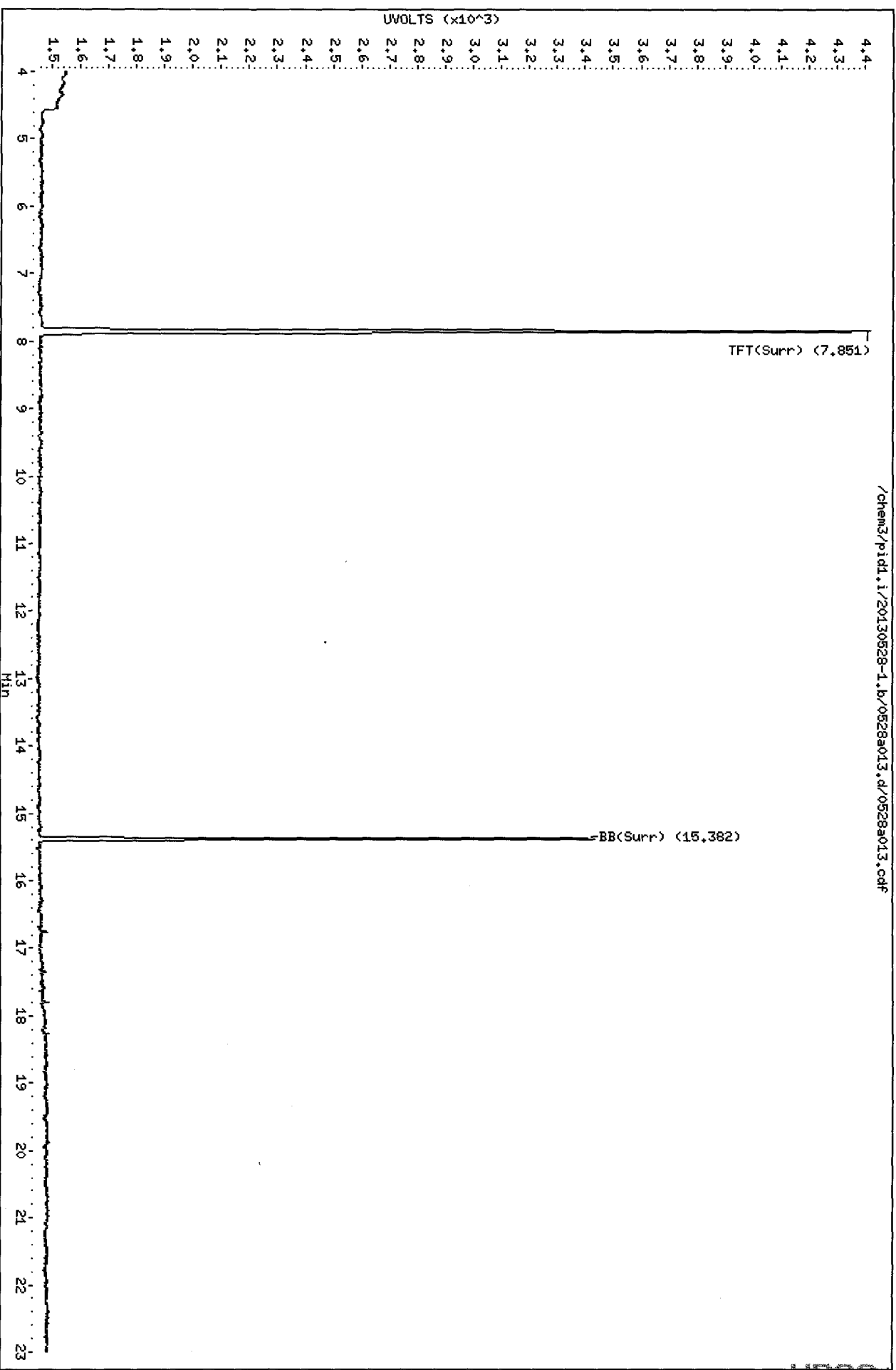
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd1.i/20130528-1.b/0528a013.d
Date : 28-MAY-2013 15:42
Client ID: A2-F36-S-6
Sample Info: MR39F
Column phase: RTX 502-2 FID

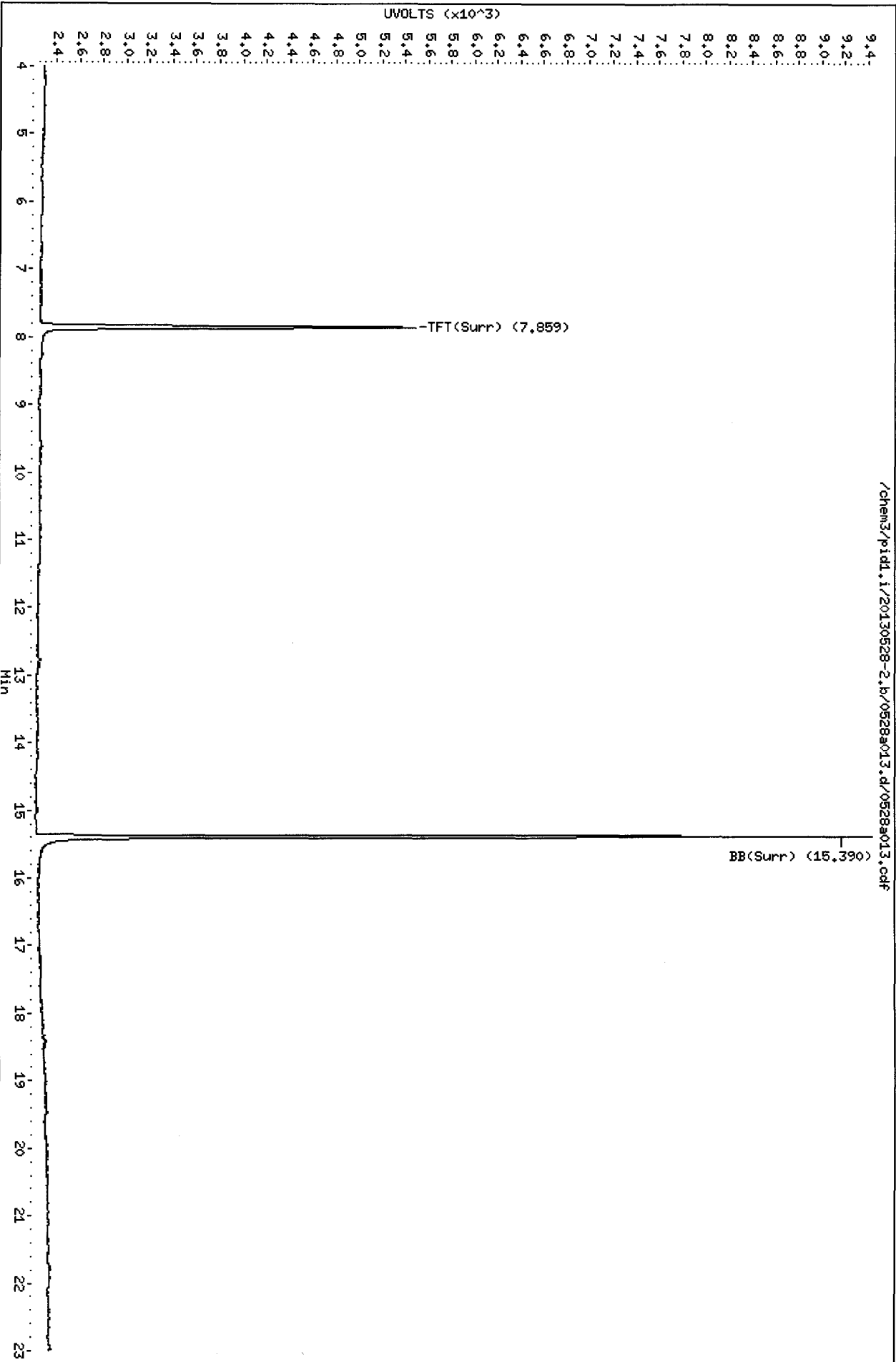
Instrument: pidd1.i
Operator: PC
Column diameter: 0.18



10101 00101

Data File: /chem3/pid1.i/20130528-2.b/0528a013.d
Date : 28-MAY-2013 15:42
Client ID: A2-F36-S-6
Sample Info: MR39F
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F38-S-6

SAMPLE

Lab Sample ID: WR39G

LIMS ID: 13-11257

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 17:07

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 74 mg-dry-wt

Percent Moisture: 14.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	97.9%
Bromobenzene	98.4%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a016.d ARI ID: WR39G
Data file 2: /chem3/pid1.i/20130528-2.b/0528a016.d Client ID: A2-F38-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 17:07
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.851	0.000	2891	36961	97.7	TFT(Surr)
15.382	0.001	1956	16444	98.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	9166	0.026
8015C 2MP-TMB (4.19 to 16.20)	723723	17799	0.025
AK101 nC6-nC10 (4.68 to 15.10)	582885	17799	0.031
NWTPHG Tol-Nap (9.78 to 18.90)	375093	9166	0.024

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.859	0.000	3156	97.9	TFT(Surr)
15.390	0.001	7115	98.4	BB(Surr)

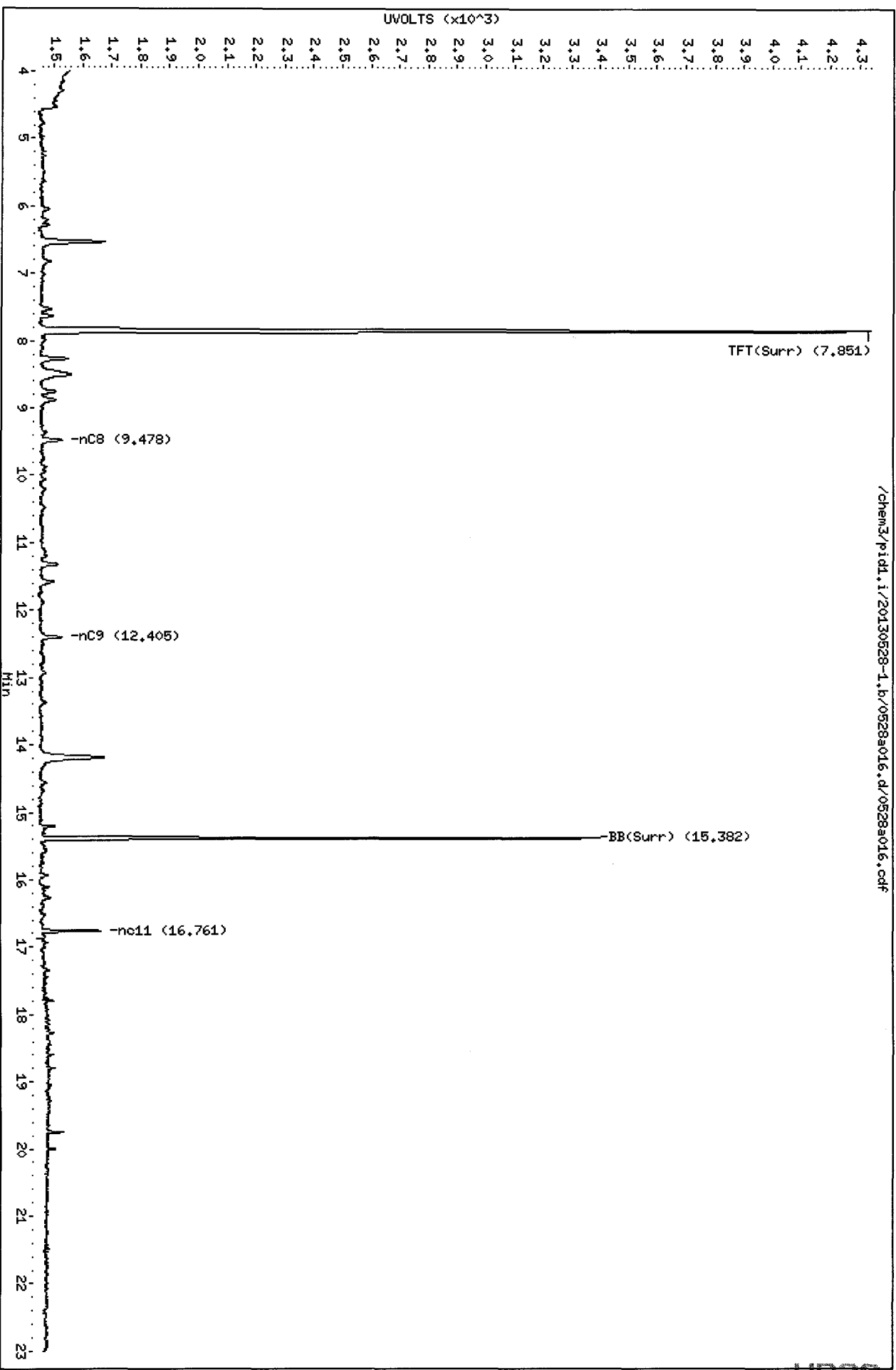
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a016.d
Date : 28-MAY-2013 17:07
Client ID: A2-F38-S-6
Sample Info: MR39C
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



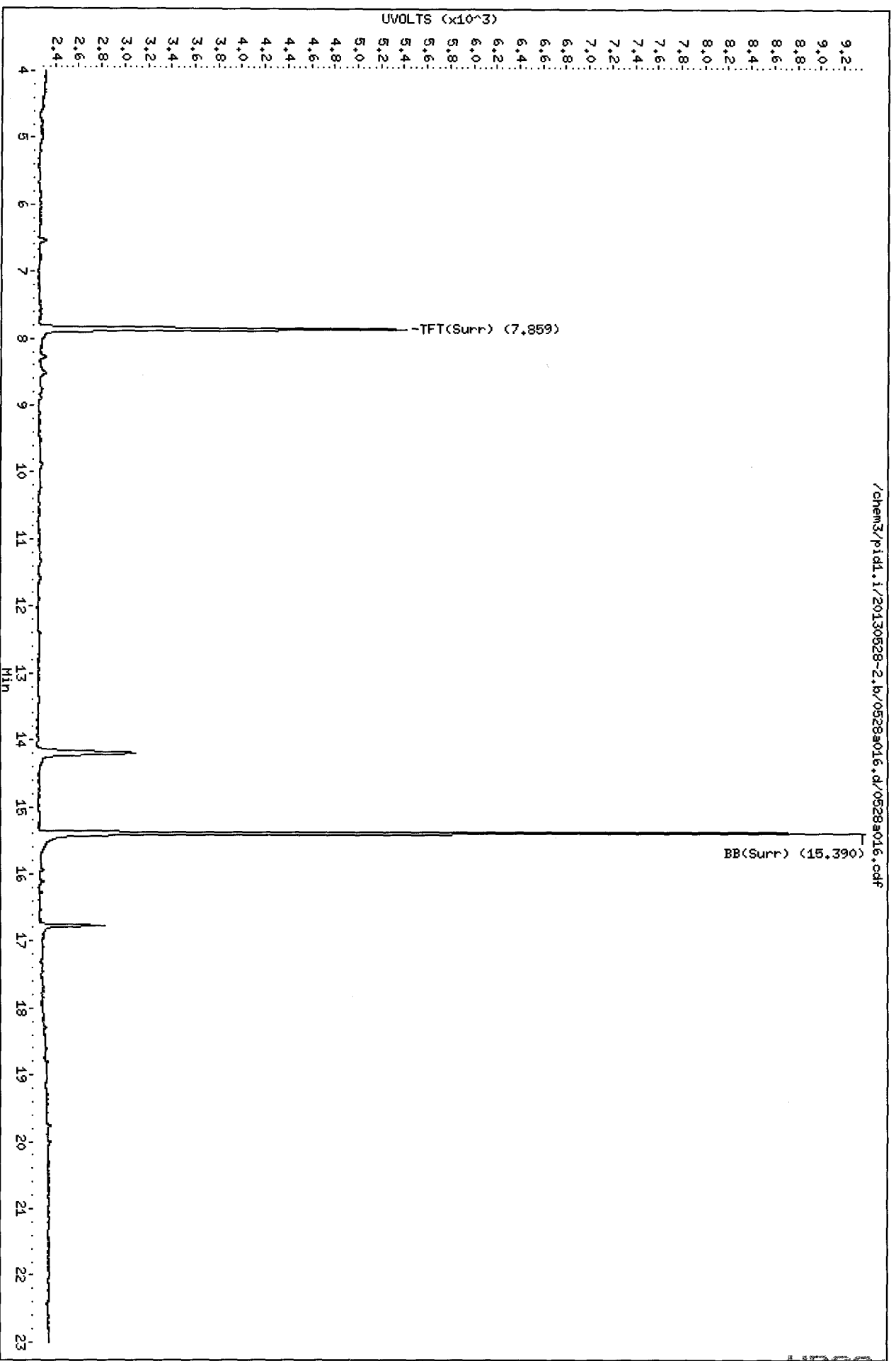
/chem3/pid1.i/20130528-1.b/0528a016.d/0528a016.cdf

50109 . DCPM

Data File: /chem3/pid1.i/20130528-2.b/0528a016.d
Date: 28-MAY-2013 17:07
Client ID: A2-F38-S-6
Sample Info: MR39G

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-2.b/0528a016.d/0528a016.cdf

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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F39-S-6

SAMPLE

Lab Sample ID: WR39H

LIMS ID: 13-11258

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 17:36

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 16.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	103%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a017.d ARI ID: WR39H
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a017.d Client ID: A2-F39-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 17:36
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.005	2971	37729	100.4	TFT(Surr)
15.382	0.001	2021	17085	101.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	-0.004	3238	100.5	TFT(Surr)
15.390	0.000	7441	102.9	BB(Surr)

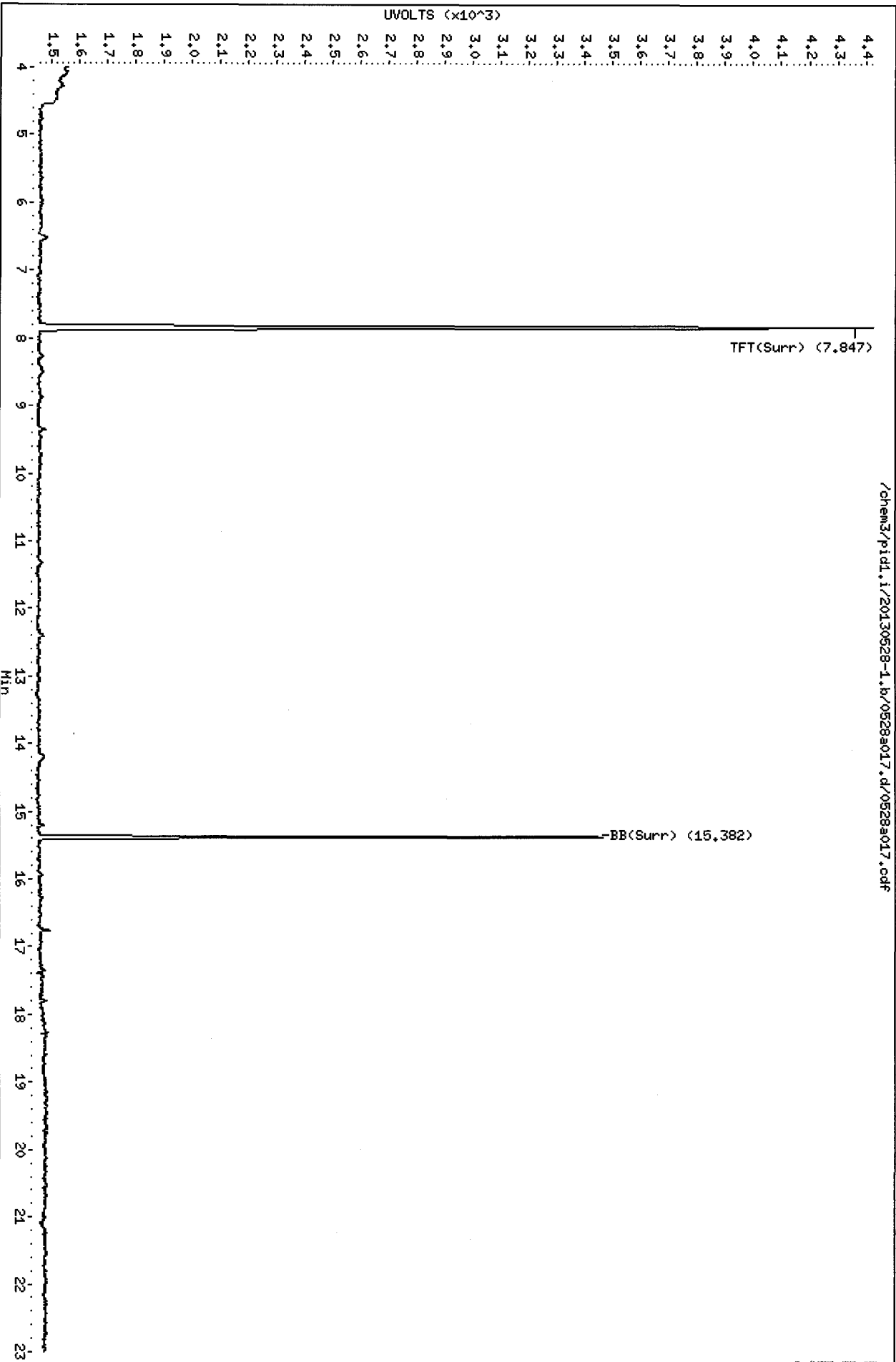
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a017.d
Date : 28-MAY-2013 17:36
Client ID: A2-F39-S-6
Sample Info: MR39H
Column phase: RTX 502-2 FID

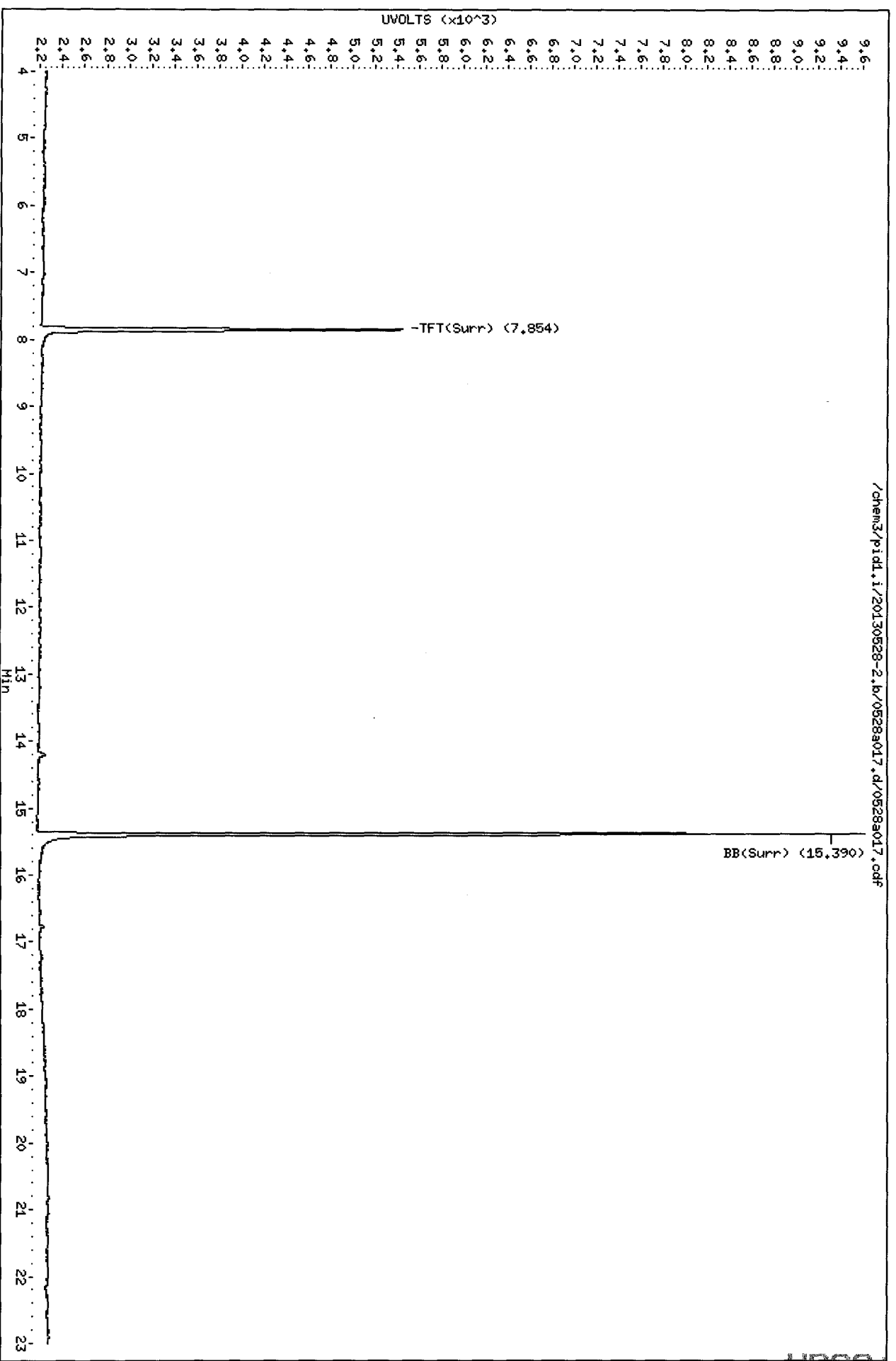
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a017.d/0528a017.cdf

Data File: /chem3/pid1.i/20130528-2.b/0528a017.d
Date: 28-MAY-2013 17:36
Client ID: A2-F39-S-6
Sample Info: MR39H
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F40-S-6

SAMPLE

Lab Sample ID: WR39I

LIMS ID: 13-11259

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 18:04

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 91 mg-dry-wt

Percent Moisture: 14.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	27	< 27 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	98.5%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a018.d ARI ID: WR39I
Data file 2: /chem3/pid1.i/20130528-2.b/0528a018.d Client ID: A2-F40-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 18:04
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.851	0.000	2927	37345	98.9	TFT(Surr)
15.382	0.001	2001	16646	100.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	133482	0.373
8015C 2MP-TMB (4.19 to 16.20)	723723	73830	0.102
AK101 nC6-nC10 (4.68 to 15.10)	582885	54188	0.093
NWTPHG Tol-Nap (9.78 to 18.90)	375093	133482	0.356

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
--	----	-----	----	-----
7.859	0.001	3175	98.5	TFT(Surr)
15.390	0.000	7272	100.6	BB(Surr)

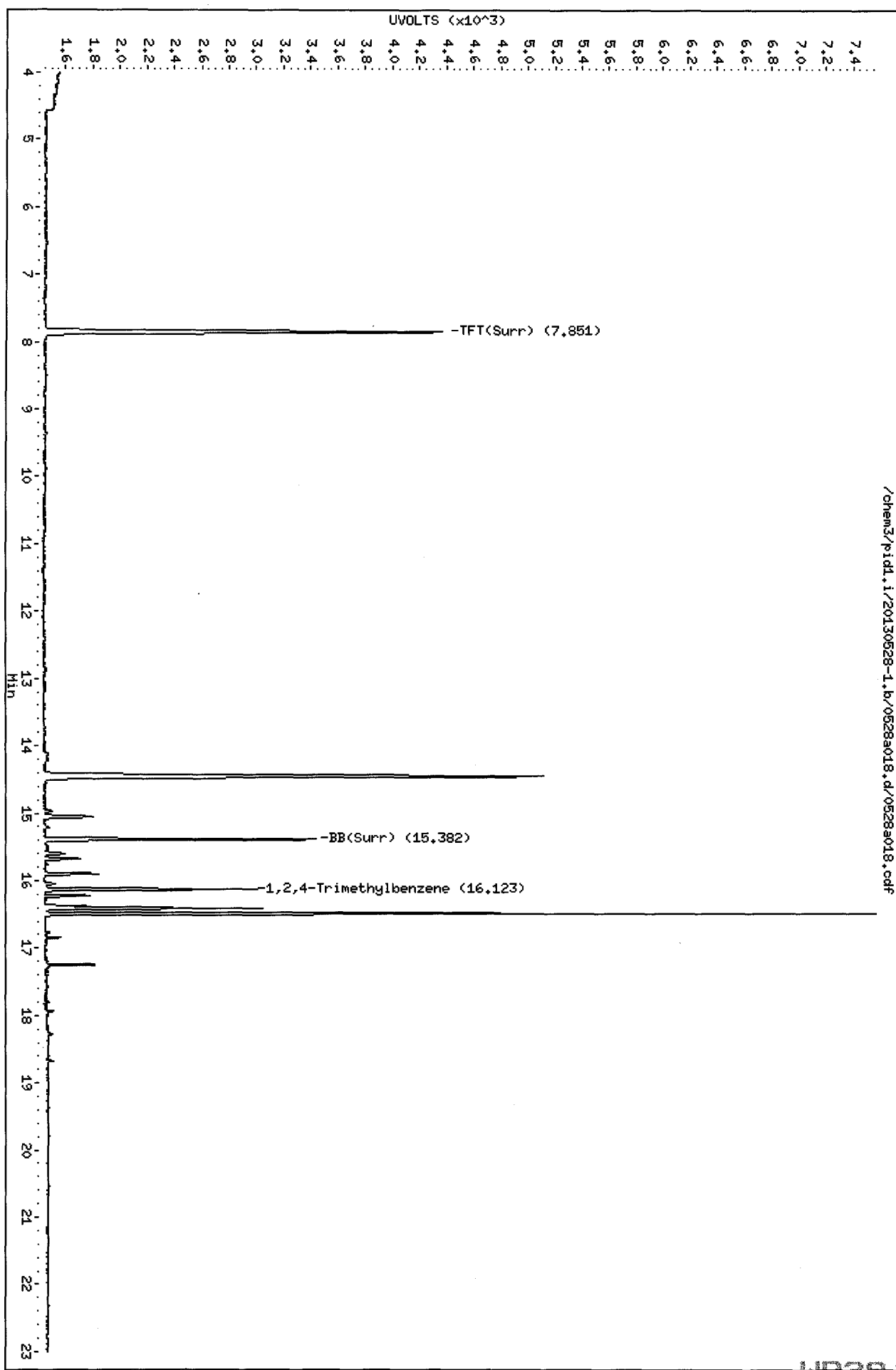
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a018.d
Date: 28-MAY-2013 18:04
Client ID: A2-F40-S-6
Sample Info: MR391
Column phase: RTX 502-2 FID

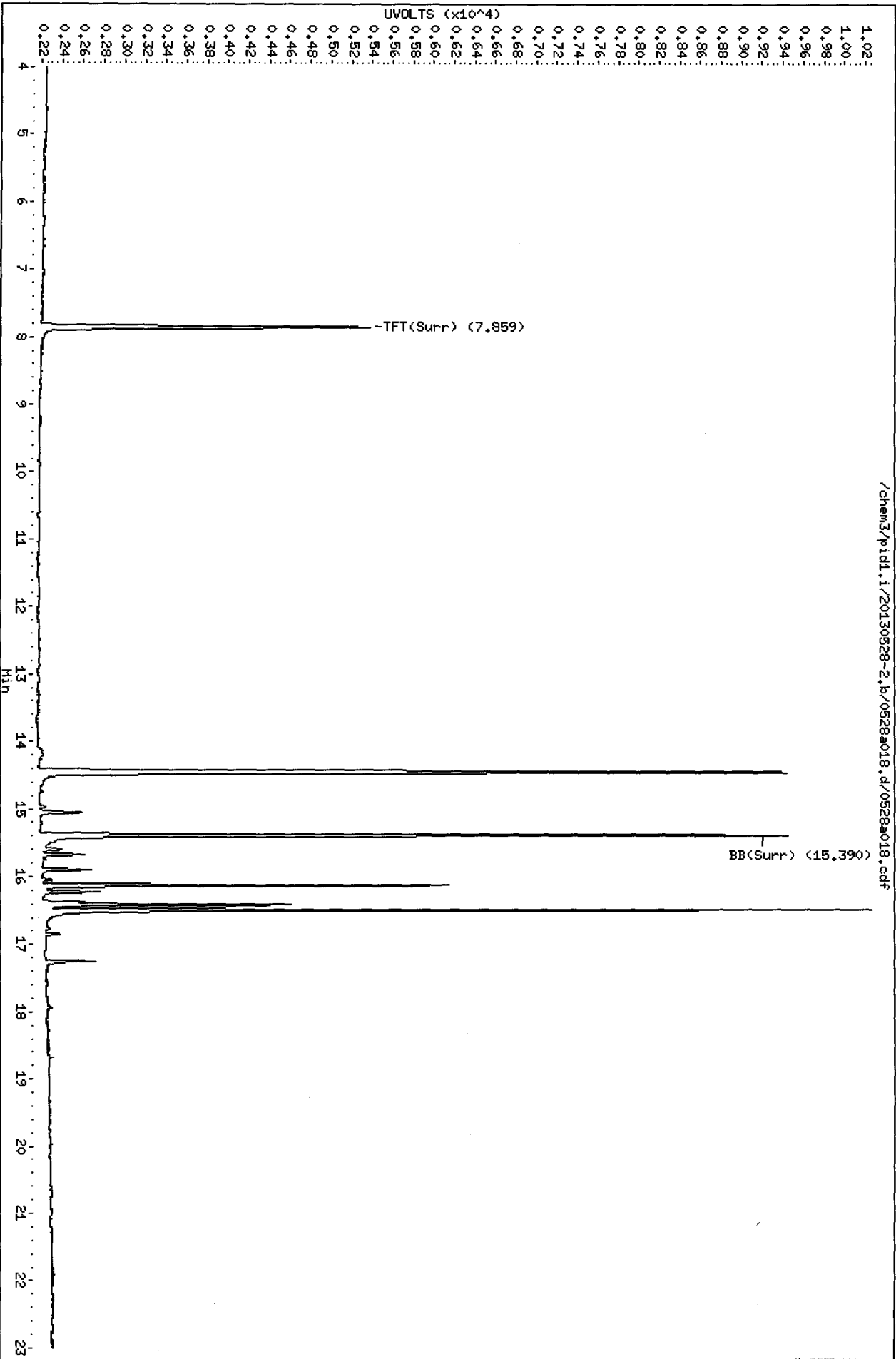
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a018.d/0528a018.cdf

Data File: /chem3/pid1.i/20130528-2.b/0528a018.d
Date : 28-MAY-2013 18:04
Client ID: A2-F40-S-6
Sample Info: MR391
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F41-S-6

SAMPLE

Lab Sample ID: WR39J

LIMS ID: 13-11260

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/23/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 18:32

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 67 mg-dry-wt

Percent Moisture: 21.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	< 19 U
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	19	< 19 U

BETX Surrogate Recovery

Trifluorotoluene	96.2%
Bromobenzene	99.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a019.d ARI ID: WR39J
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a019.d Client ID: A2-F41-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 18:32
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.000	2862	36349	96.7	TFT(Surr)
15.383	0.002	1968	16453	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	6406	0.018
8015C 2MP-TMB (4.19 to 16.20)	723723	4616	0.006
AK101 nC6-nC10 (4.68 to 15.10)	582885	4142	0.007
NWTPHG Tol-Nap (9.78 to 18.90)	375093	6406	0.017

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.000	3100	96.2	TFT(Surr)
15.391	0.001	7163	99.1	BB(Surr)

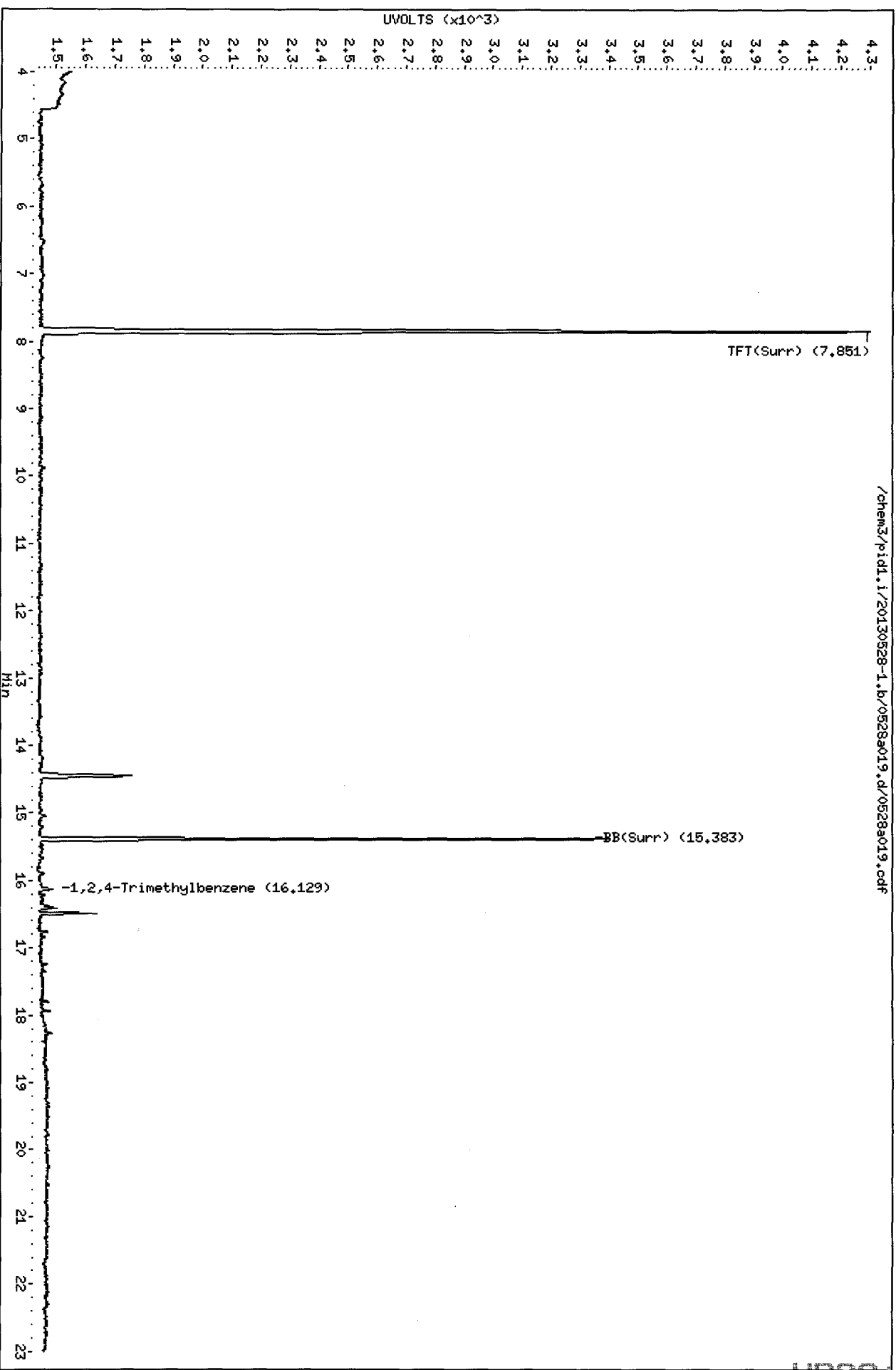
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a019.d
Date: 28-MAY-2013 18:32
Client ID: A2-F41-S-6
Sample Info: MR39J
Column phase: RTX 502-2 FID

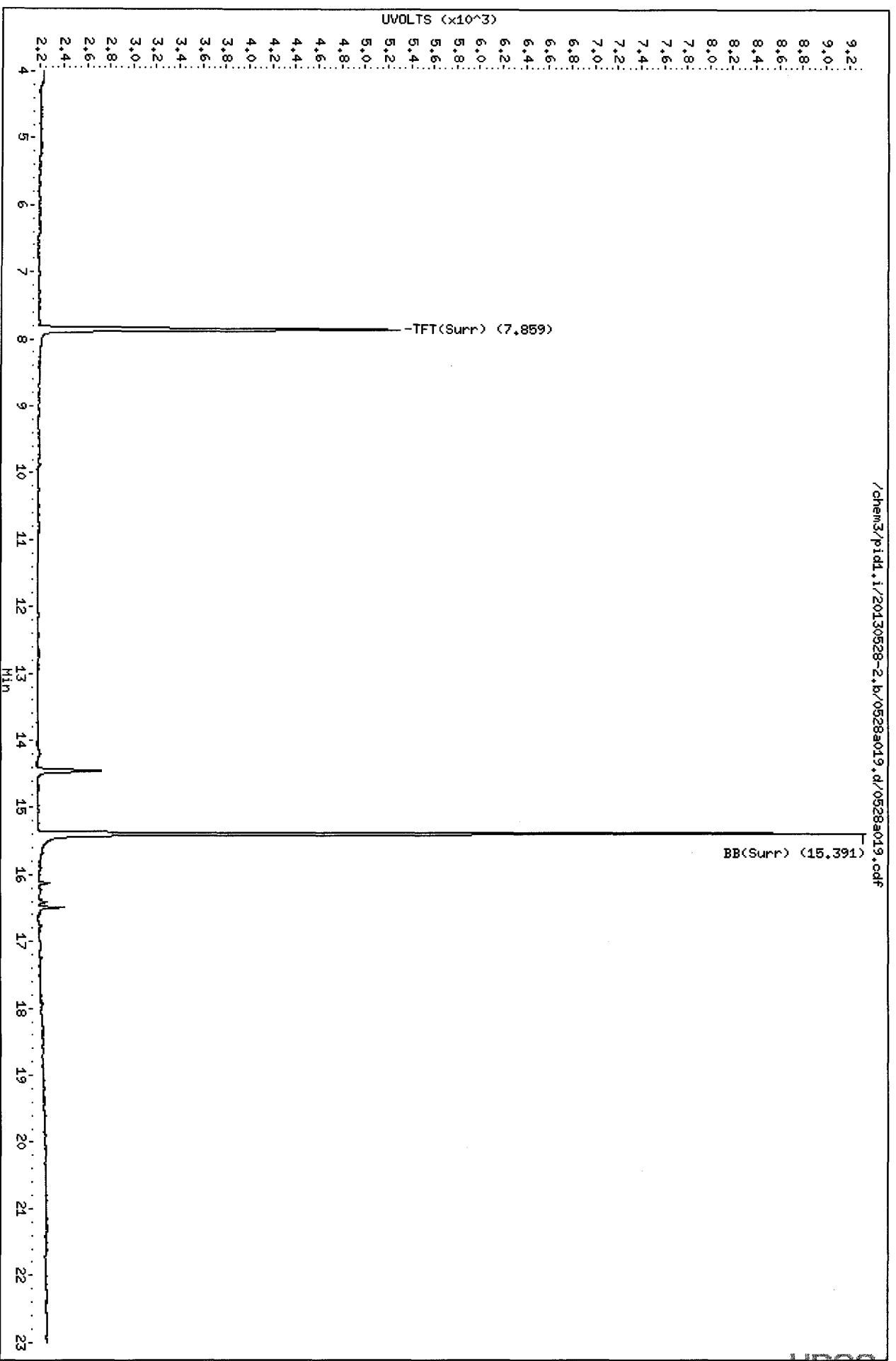
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



MR39J 00117

Data File: /chem3/pid1.i/20130528-2.b/0528a019.d
Date : 28-MAY-2013 18:32
Client ID: A2-F41-S-6
Sample Info: MR39J
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-2.b/0528a019.d/0528a019.cdf

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR39
Matrix: Soil

QC Report No: WR39-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
MB-052813	102%	99.4%	0
LCS-052813	107%	99.6%	0
LCSD-052813	108%	103%	0
A2-F30-S-6	100%	97.5%	0
A2-F31-S-6	102%	99.1%	0
A2-F33-S-6	104%	103%	0
A2-F34-S-6	92.2%	91.5%	0
A2-F35-S-6	98.3%	97.2%	0
A2-F36-S-6	100%	99.6%	0
A2-F38-S-6	97.9%	98.4%	0
A2-F39-S-6	100%	103%	0
A2-F40-S-6	98.5%	101%	0
A2-F41-S-6	96.2%	99.1%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11251 to 13-11260

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Sample ID: SL-F1-S-6

Page 1 of 1

SAMPLE

Lab Sample ID: WR40A


QC Report No: WR40-Maul Foster & Alongi, Inc

LIMS ID: 13-11261

Project: Cashmere

Matrix: Soil

Event: 0779.02.01-03

Data Release Authorized: 

Date Sampled: 05/22/13

Reported: 05/29/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 19:00

Purge Volume: 5.0 mL

Instrument/Analyst: PID1/PKC

Sample Amount: 66 mg-dry-wt

Percent Moisture: 20.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	21
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	38	< 38 U
95-47-6	o-Xylene	19	< 19 U

BETX Surrogate Recovery

Trifluorotoluene	96.8%
Bromobenzene	99.8%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a020.d ARI ID: WR40A
Data file 2: /chem3/pid1.i/20130528-2.b/0528a020.d Client ID: SL-F1-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 19:00
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.853	0.002	2880	36798	97.3	TFT(Surr)
15.384	0.002	1955	16469	98.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	10075	0.028
8015C 2MP-TMB (4.19 to 16.20)	723723	8490	0.012
AK101 nC6-nC10 (4.68 to 15.10)	582885	8489	0.015
NWTPHG Tol-Nap (9.78 to 18.90)	375093	10075	0.027

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.861	0.002	3121	96.8	TFT(Surr)
15.391	0.002	7212	99.8	BB(Surr)

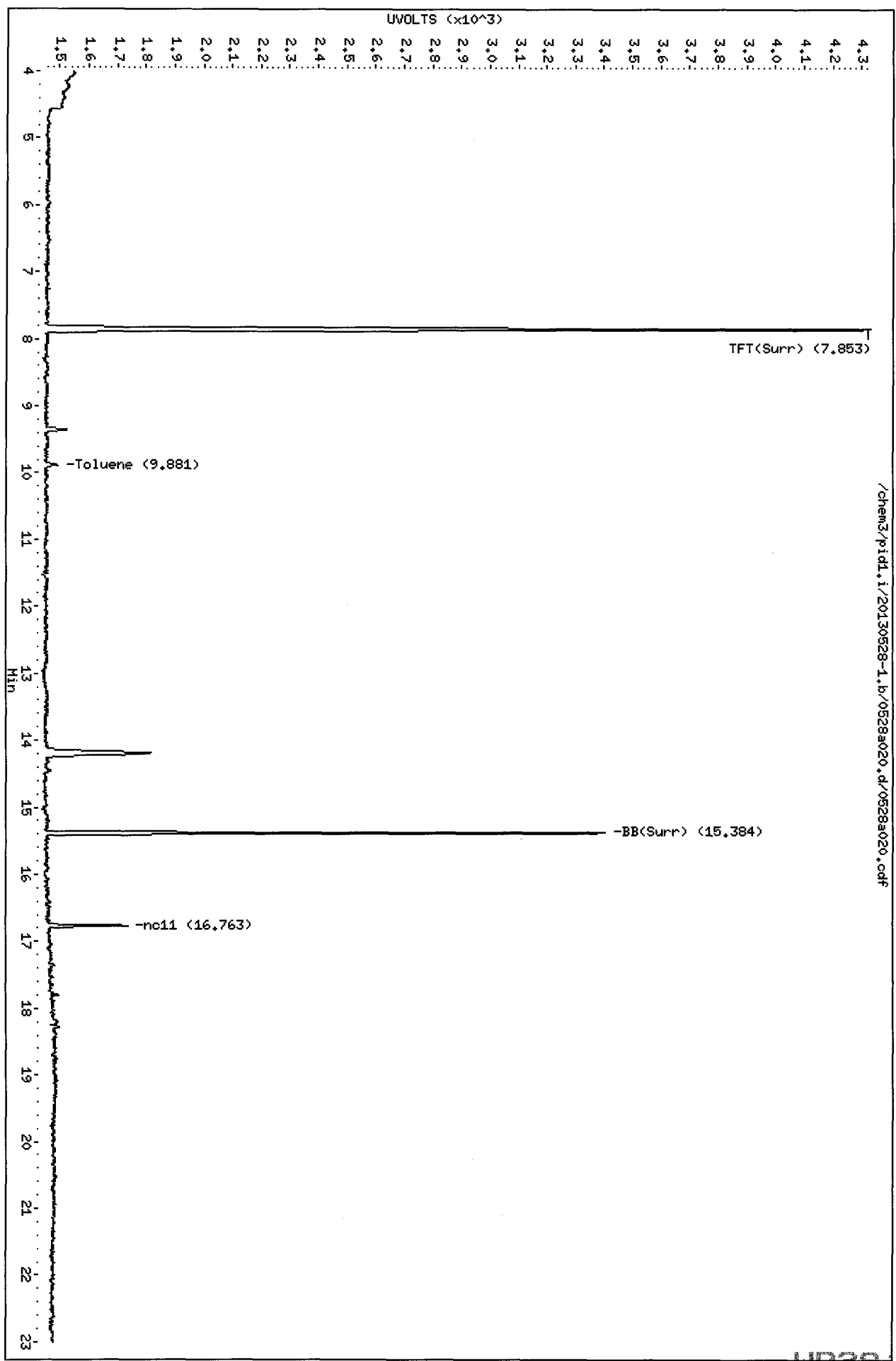
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.887	0.003	54	0.27N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130528-1.b/0528a020.d
Date : 28-MAY-2013 19:00
Client ID: SL-F1-S-6
Sample Info: MR40A
Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



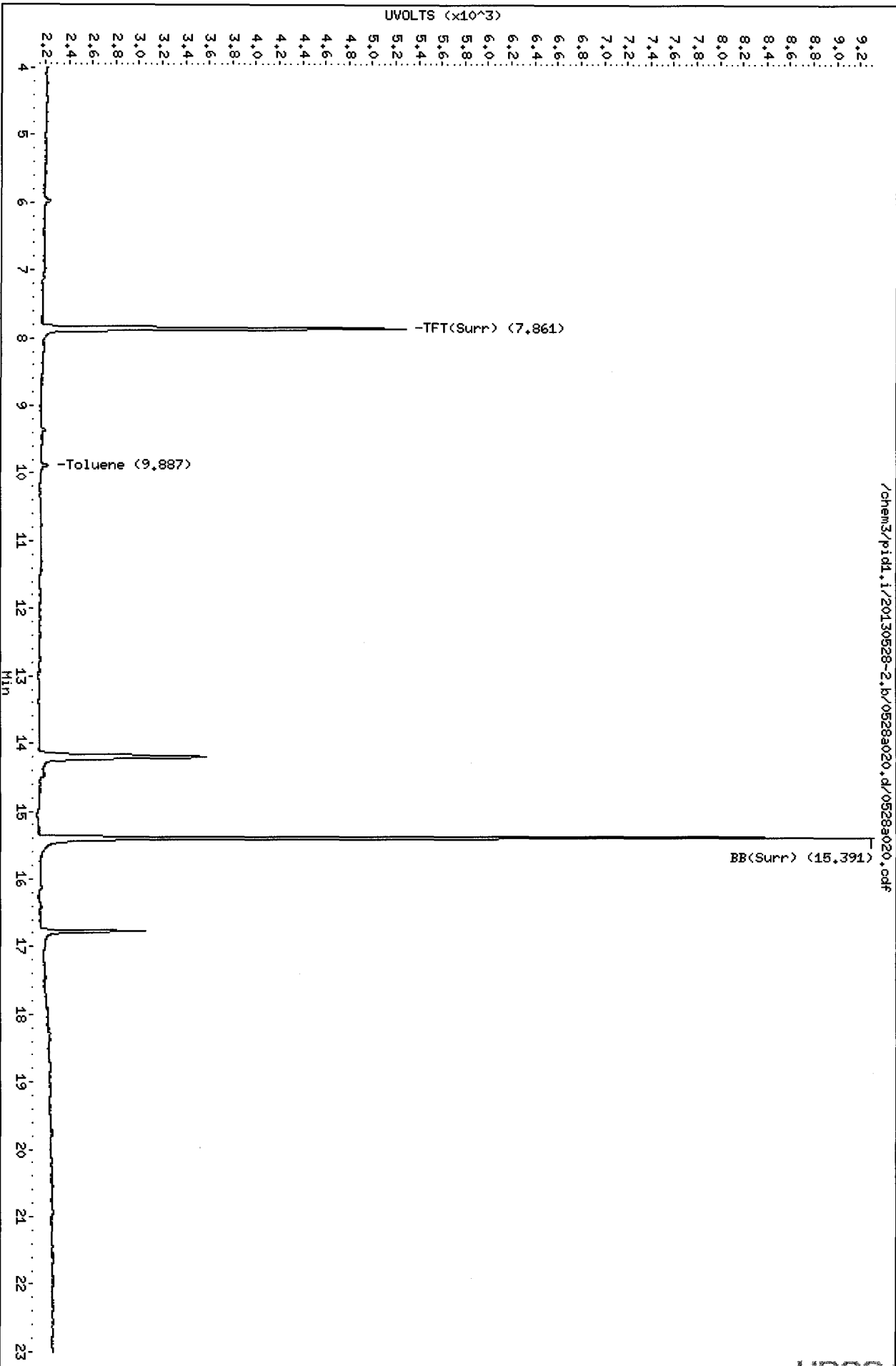
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Data File: /chem3/piddl.i/20130528-2.b/0528a020.d
Date: 28-MAY-2013 19:00
Client ID: SL-F1-S-6
Sample Info: MR409

Instrument: piddl.i
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 PID

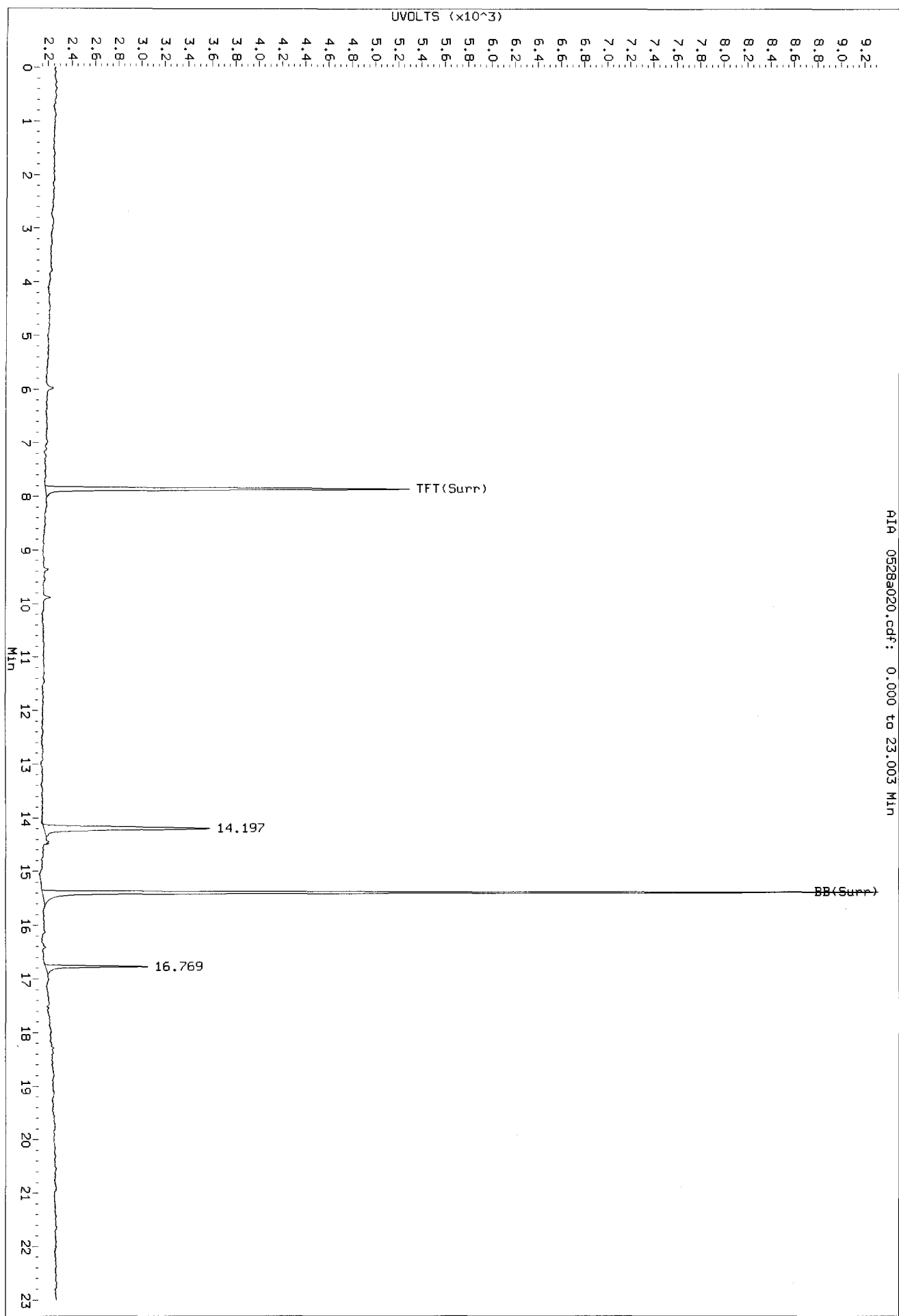
/chem3/piddl.i/20130528-2.b/0528a020.d/0528a020.cdf



12
5/29/15

Data File: /chem3/pid1.1/20130528-2.1b/0528a020.d/0528a020.cdf
Injection Date: 28-May-2013 19:00
Instrument: pid1.1
Client Sample ID: SL-F1-S-6

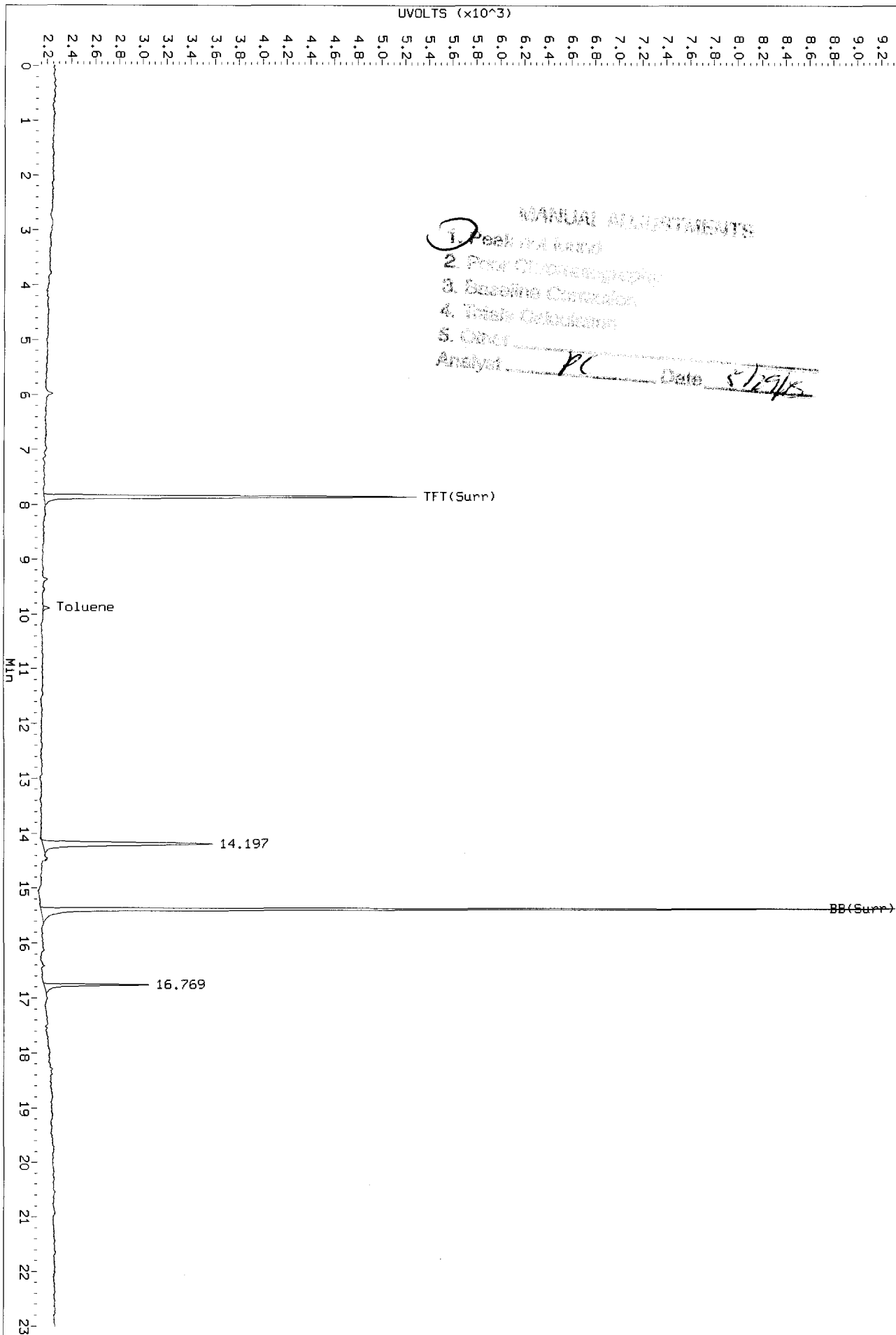
RII 0528a020.cdf: 0.000 to 23.003 Min



Data File: /chem3/pid1.1/20130528-2.b/0528a020.d/0528a020.cdf
Injection Date: 28-May-2013 19:00
Instrument: pid1.1
Client Sample ID: SL-F1-5-6

AIR 0528a020.cdf: 0.000 to 23.003 Min

UVOLTS (x10³)



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Sample ID: SL-F2-S-6

Page 1 of 1

SAMPLE

Lab Sample ID: WR40B
 LIMS ID: 13-11262
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 05/29/13

QC Report No: WR40-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/22/13
 Date Received: 05/24/13

Date Analyzed: 05/28/13 19:29
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 62 mg-dry-wt
 Percent Moisture: 22.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	20
100-41-4	Ethylbenzene	20	< 20 U
179601-23-1	m,p-Xylene	40	< 40 U
95-47-6	o-Xylene	20	< 20 U

BETX Surrogate Recovery

Trifluorotoluene	97.3%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

JK
5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a021.d ARI ID: WR40B
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a021.d Client ID: SL-F2-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 19:29
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.000	2907	36922	98.2	TFT(Surr)
15.383	0.001	2009	17312	101.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	12282	0.034
8015C 2MP-TMB (4.19 to 16.20)	723723	3449	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	1304	0.002
NWTPHG Tol-Nap (9.78 to 18.90)	375093	16098	0.043

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.001	3135	97.3	TFT(Surr)
15.390	0.001	7292	100.9	BB(Surr)

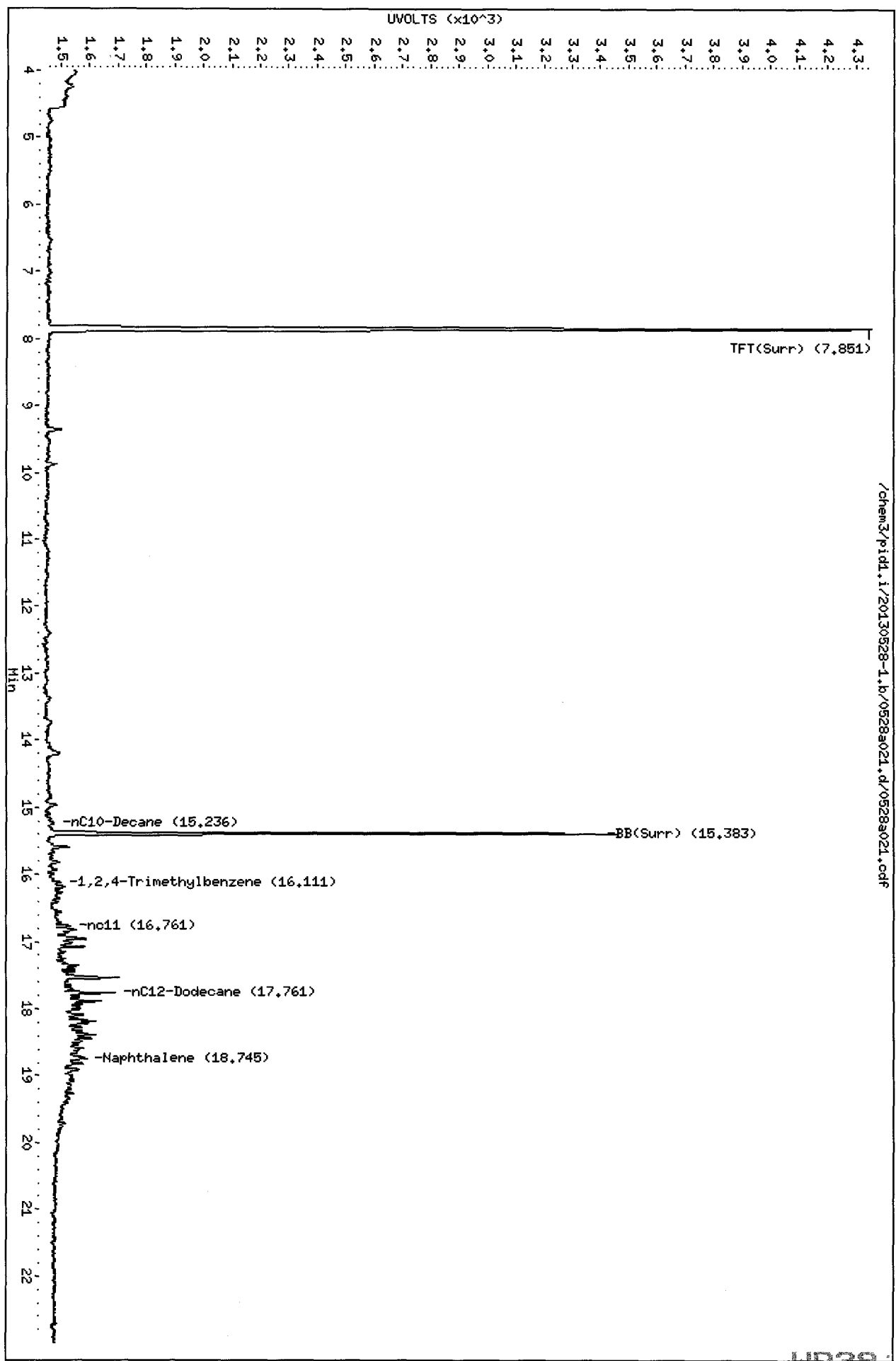
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.000	49	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a021.d
Date : 28-MAY-2013 19:29
Client ID: SL-F2-S-6
Sample Info: MR408
Column phase: RTX 502-2 FID

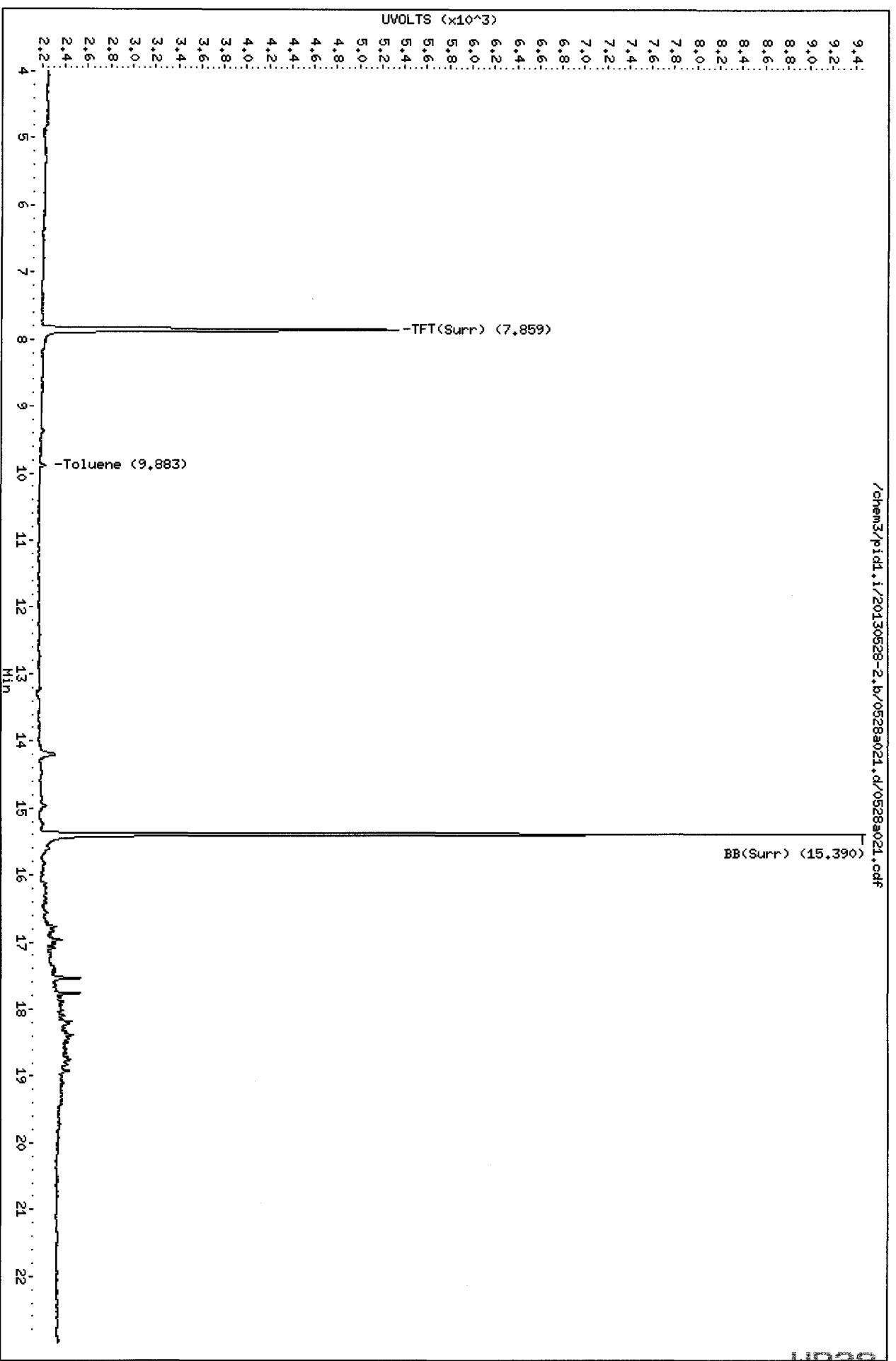
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a021.d/0528a021.cdf

Data File: /chem3/pid1.i/20130528-2.b/0528a021.d
Date : 28-MAY-2013 19:29
Client ID: SL-F2-S-6
Sample Info: MR408
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

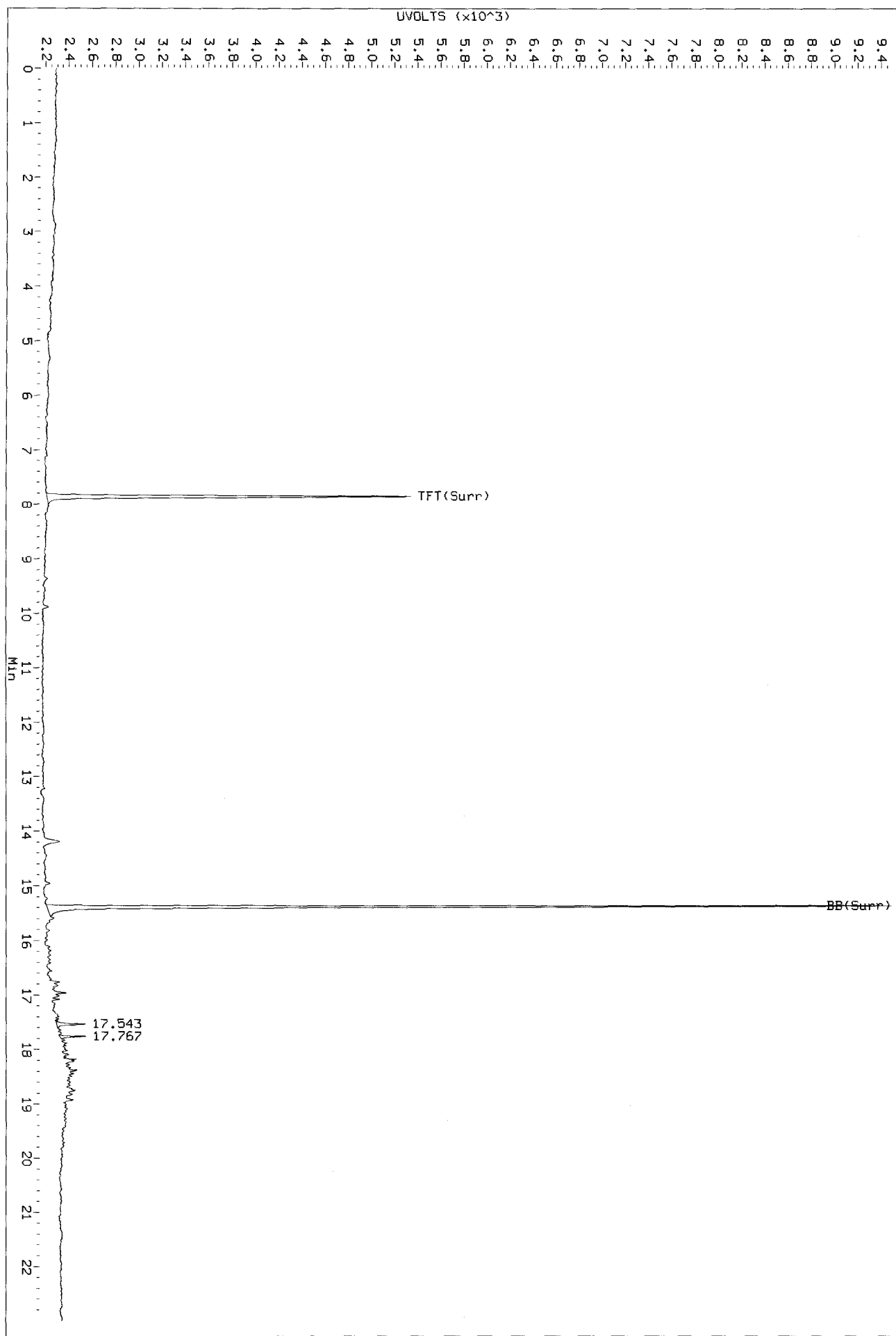


/chem3/pid1.i/20130528-2.b/0528a021.d/0528a021.cdf

VC
5/29/13

Data File: /chem3/pid1.1/20130528-2.b/0528a021.d/0528a021.cdf
Injection Date: 28-MAY-2013 19:29
Instrument: pid1.1
Client Sample ID: SL-F2-S-6

AIR 0528a021.cdf: 0.000 to 22.997 MIN



Data File: /chem3/pid1.1/20130528-2.b/0528a021.d/0528a021.cdf
Injection Date: 28-May-2013 19:29
Instrument: pid1.1
Client Sample ID: SL-F2-9-6

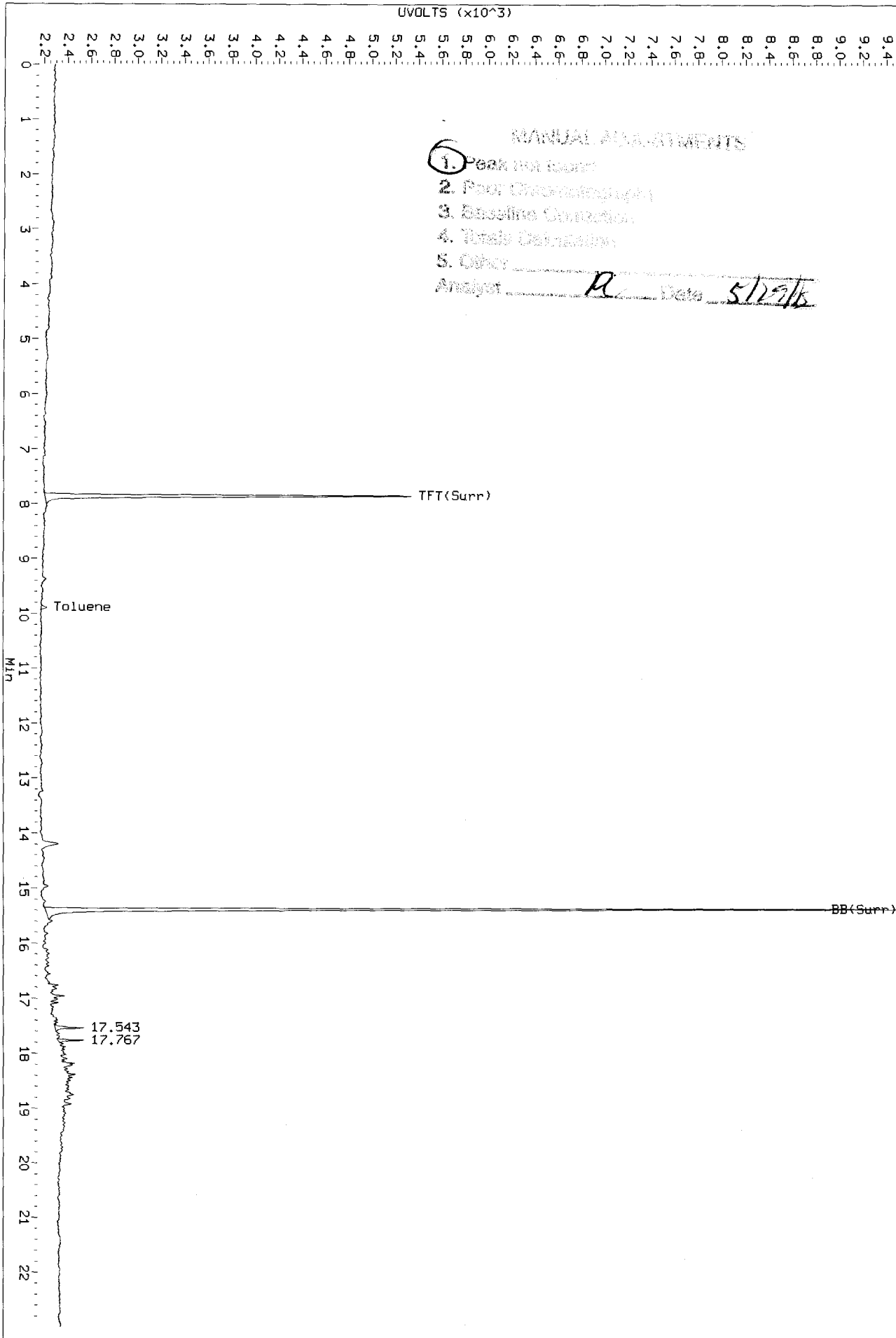
AIR 0528a021.cdf: 0.000 to 22.997 MIN

UVOLTS (x10³)

MANUAL ADJUSTMENTS

- 1. Peak Not Count
- 2. Poor Chromatogram
- 3. Baseline Correction
- 4. Retain Determination
- 5. Other

Analyst R Date 5/29/13



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: SL-F3-S-6

SAMPLE

Lab Sample ID: WR40C

LIMS ID: 13-11263

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR40-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 19:57

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 74 mg-dry-wt

Percent Moisture: 19.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	94.7%
Bromobenzene	99.2%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a022.d ARI ID: WR40C
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a022.d Client ID: SL-F3-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 19:57
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.002	2845	36343	96.1	TFT(Surr)
15.383	0.002	2025	17921	101.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	109753	0.306
8015C 2MP-TMB (4.19 to 16.20)	723723	31491	0.044
AK101 nC6-nC10 (4.68 to 15.10)	582885	13508	0.023
NWTPHG Tol-Nap (9.78 to 18.90)	375093	169067	0.451

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.002	3054	94.7	TFT(Surr)
15.391	0.001	7172	99.2	BB(Surr)

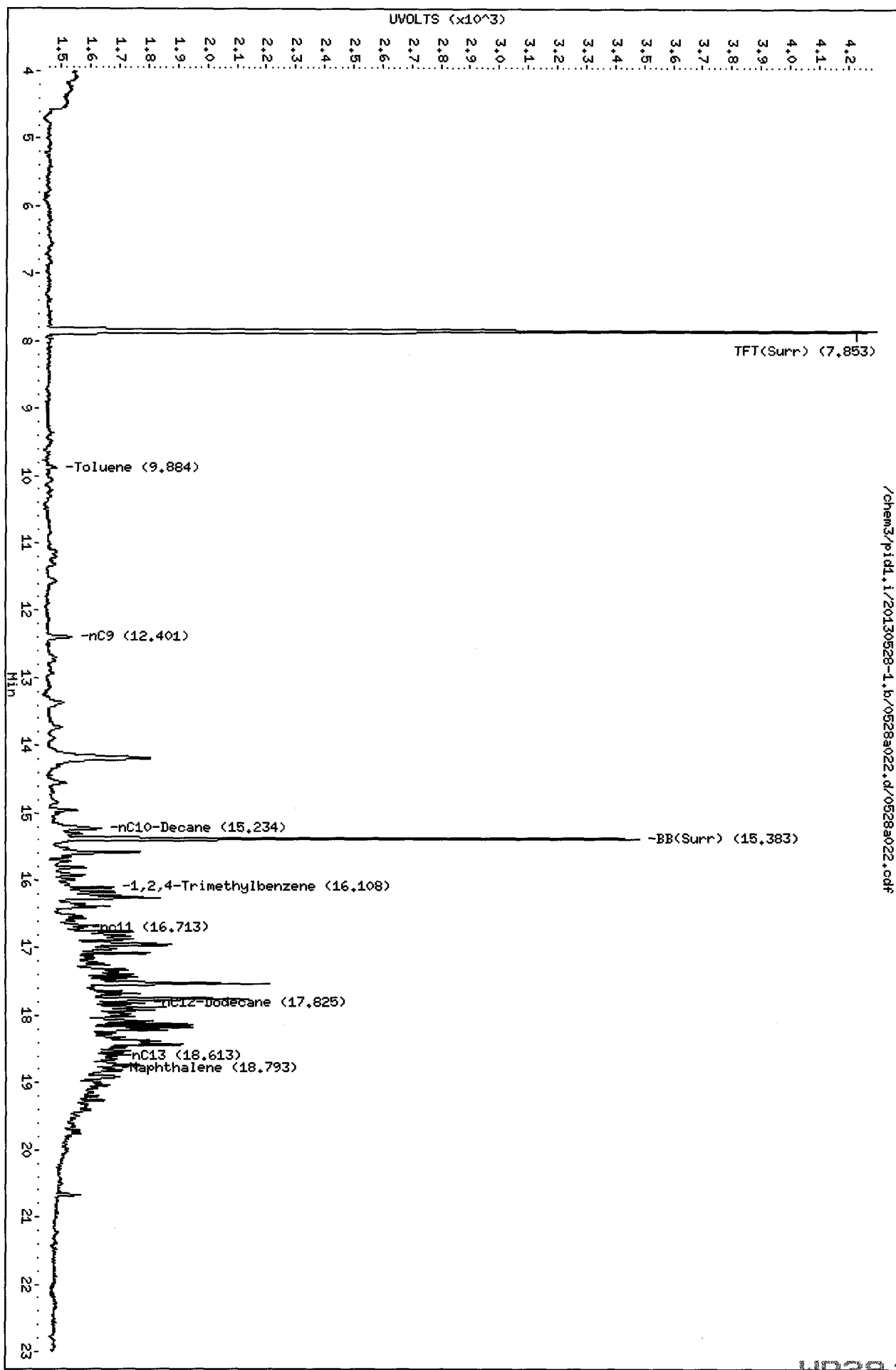
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.000	46	0.23N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a022.d
Date: 28-MAY-2013 19:57
Client ID: SL-F3-S-6
Sample Info: MR40C
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

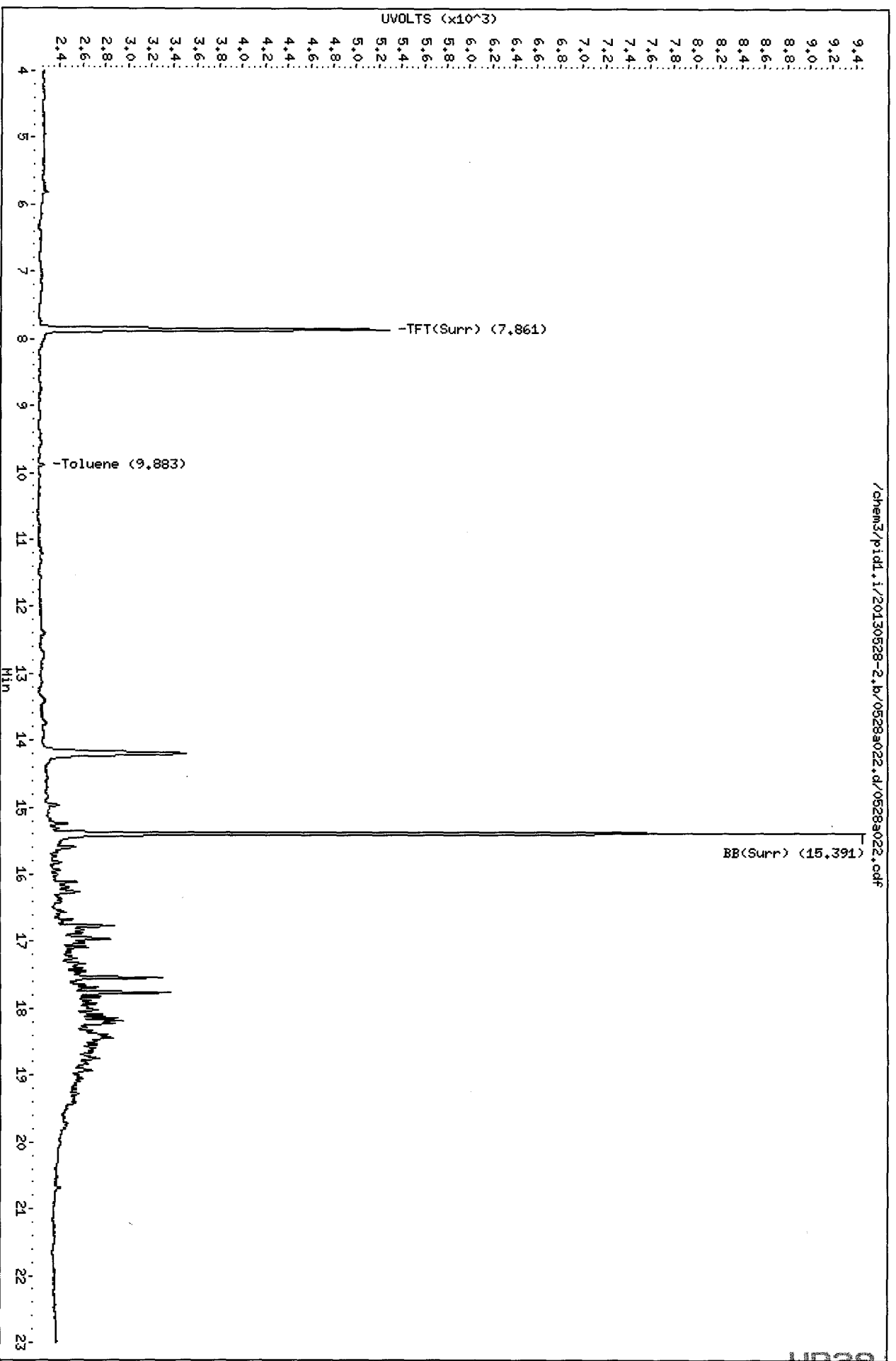


/chem3/pid1.i/20130528-1.b/0528a022.d/0528a022.cdf

00134 0039

Data File: /chem3/pid1.i/20130528-2.b/0528a022.d
Date : 28-MAY-2013 19:57
Client ID: SL-F3-S-6
Sample Info: MR40C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

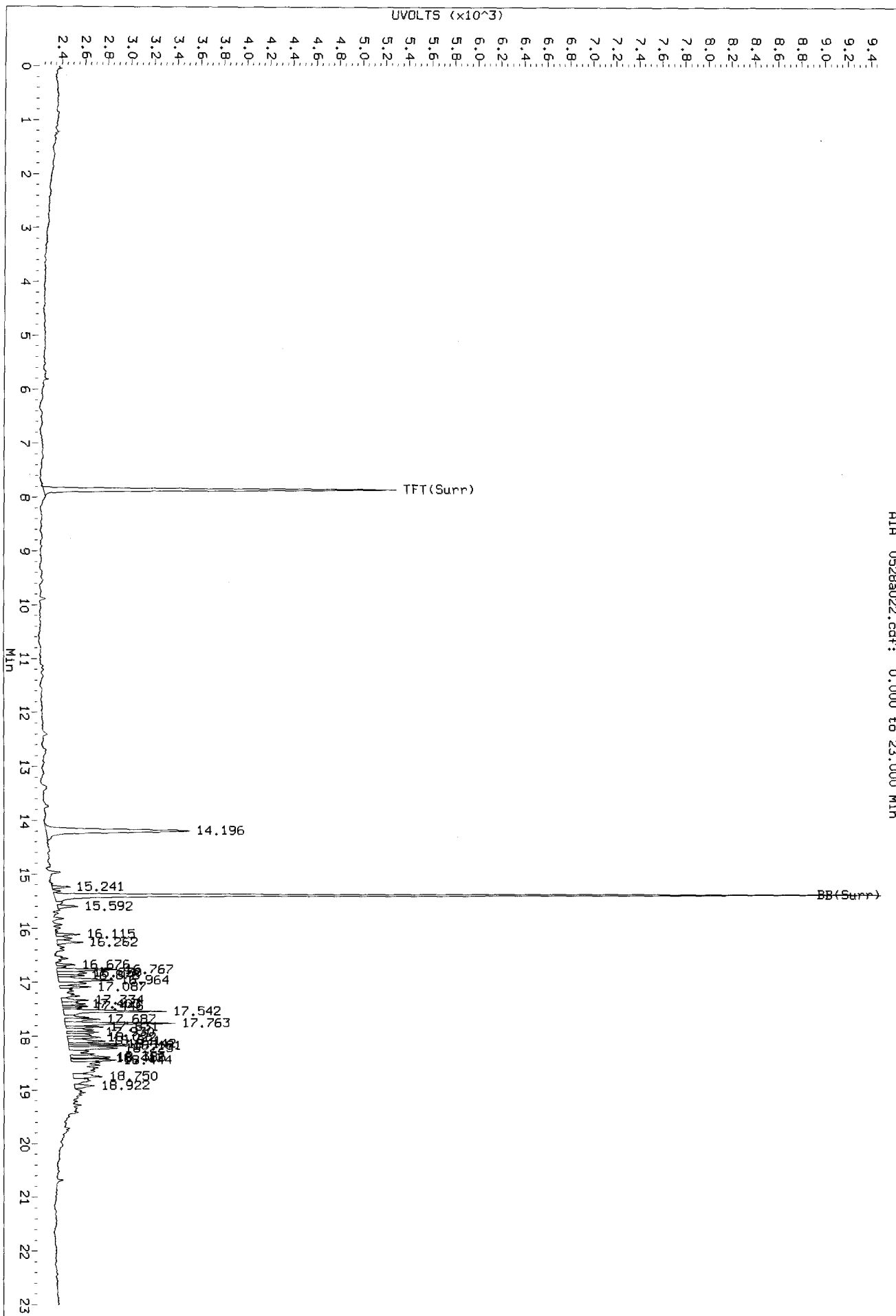


/chem3/pid1.i/20130528-2.b/0528a022.d/0528a022.cdf

PK
5/29/13

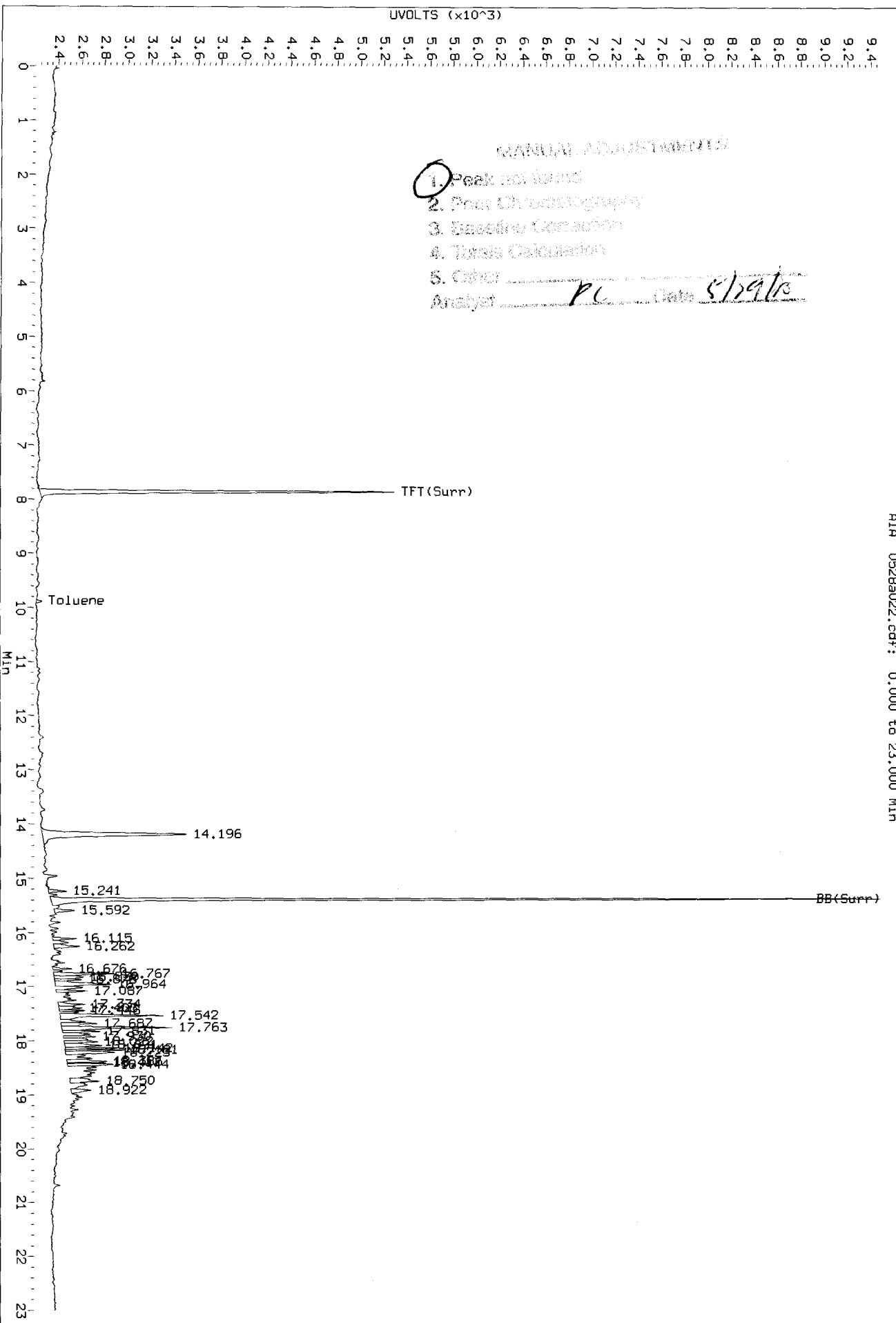
Data File: /chem3/pid1.1/20130528-2.b/0528a022.d/0528a022.cdf
Injection Date: 28-MAY-2013 19:57
Instrument: pid1.1
Client Sample ID: SL-F3-5-6

AIR 0528a022.cdf: 0.000 to 23.000 Min



Data File: /chem3/pid1.i/20130528-2.b/0528a022.d/0528a022.cdf
Injection Date: 28-May-2013 19:57
Instrument: pid1.1
Client Sample ID: SL-F3-5-6

RI# 0528a022.cdf: 0.000 to 23.000 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: SL-F4-S-6

SAMPLE

Lab Sample ID: WR40D

LIMS ID: 13-11264

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/29/13

QC Report No: WR40-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 20:25

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 67 mg-dry-wt

Percent Moisture: 22.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	< 19 U
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	19	< 19 U

BETX Surrogate Recovery

Trifluorotoluene	93.9%
Bromobenzene	97.4%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AL
5/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a023.d ARI ID: WR40D
Data file 2: /chem3/pid1.i/20130528-2.b/0528a023.d Client ID: SL-F4-S-6
Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 20:25
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.854	0.002	2828	36310	95.6	TFT(Surr)
15.383	0.002	1944	16347	97.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	5233	0.015
8015C 2MP-TMB (4.19 to 16.20)	723723	3595	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	3594	0.006
NWTPHG Tol-Nap (9.78 to 18.90)	375093	5233	0.014

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.861	0.003	3028	93.9	TFT(Surr)
15.391	0.002	7040	97.4	BB(Surr)

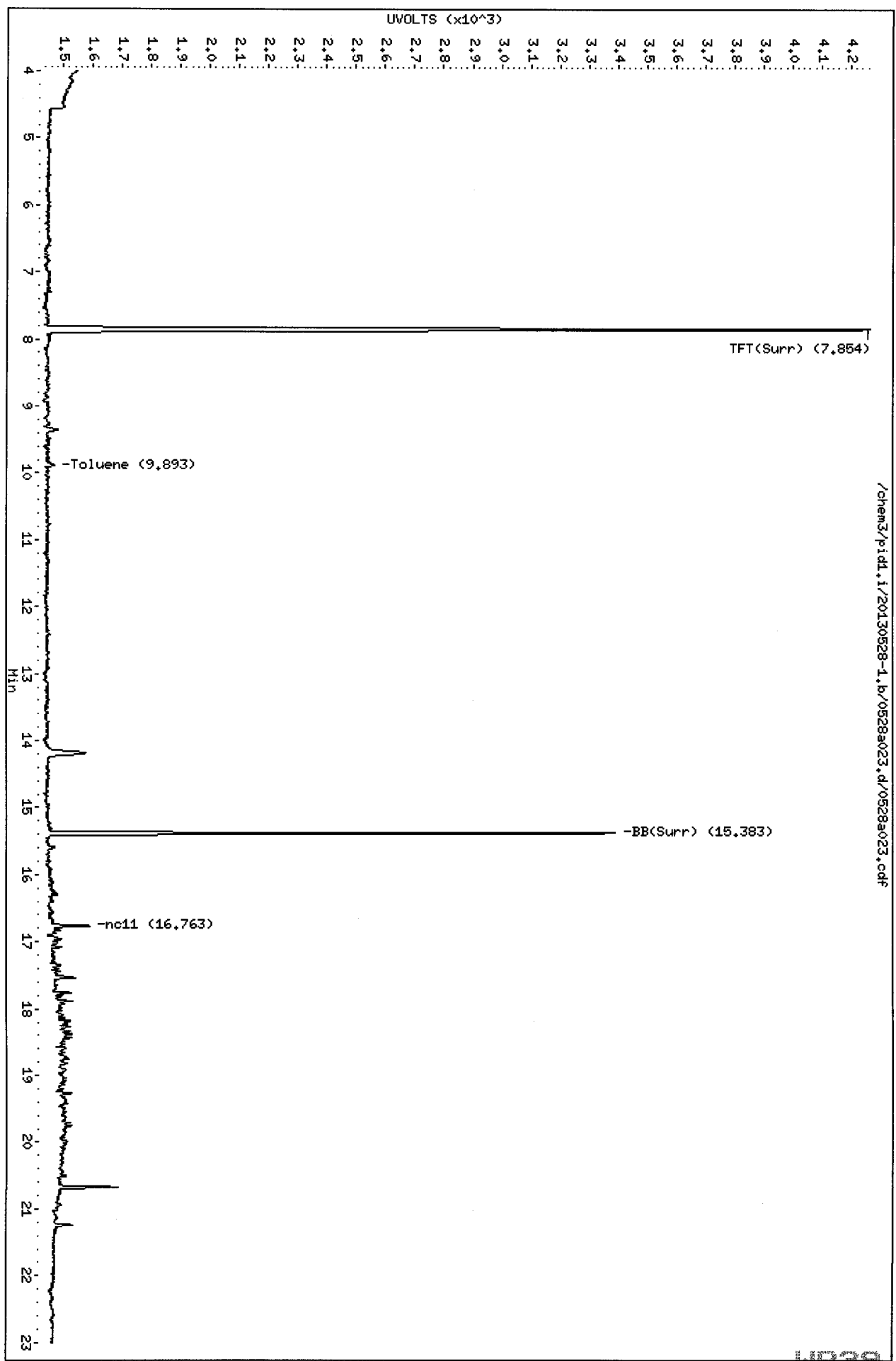
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd,1/20130528-1,b/0528a023.d
Date : 28-MAY-2013 20:25
Client ID: SL-F4-S-6
Sample Info: MR40D
Column phase: RTX 502-2 FID

Instrument: pidd,1
Operator: PC
Column diameter: 0.18



/chem3/pidd,1/20130528-1,b/0528a023,d/0528a023.cdf

WR39 00140

Data File: /chem3/pid1.i/20130528-2.b/0528a023.d

Date: 28-May-2013 20:25

Client ID: SL-F4-S-6

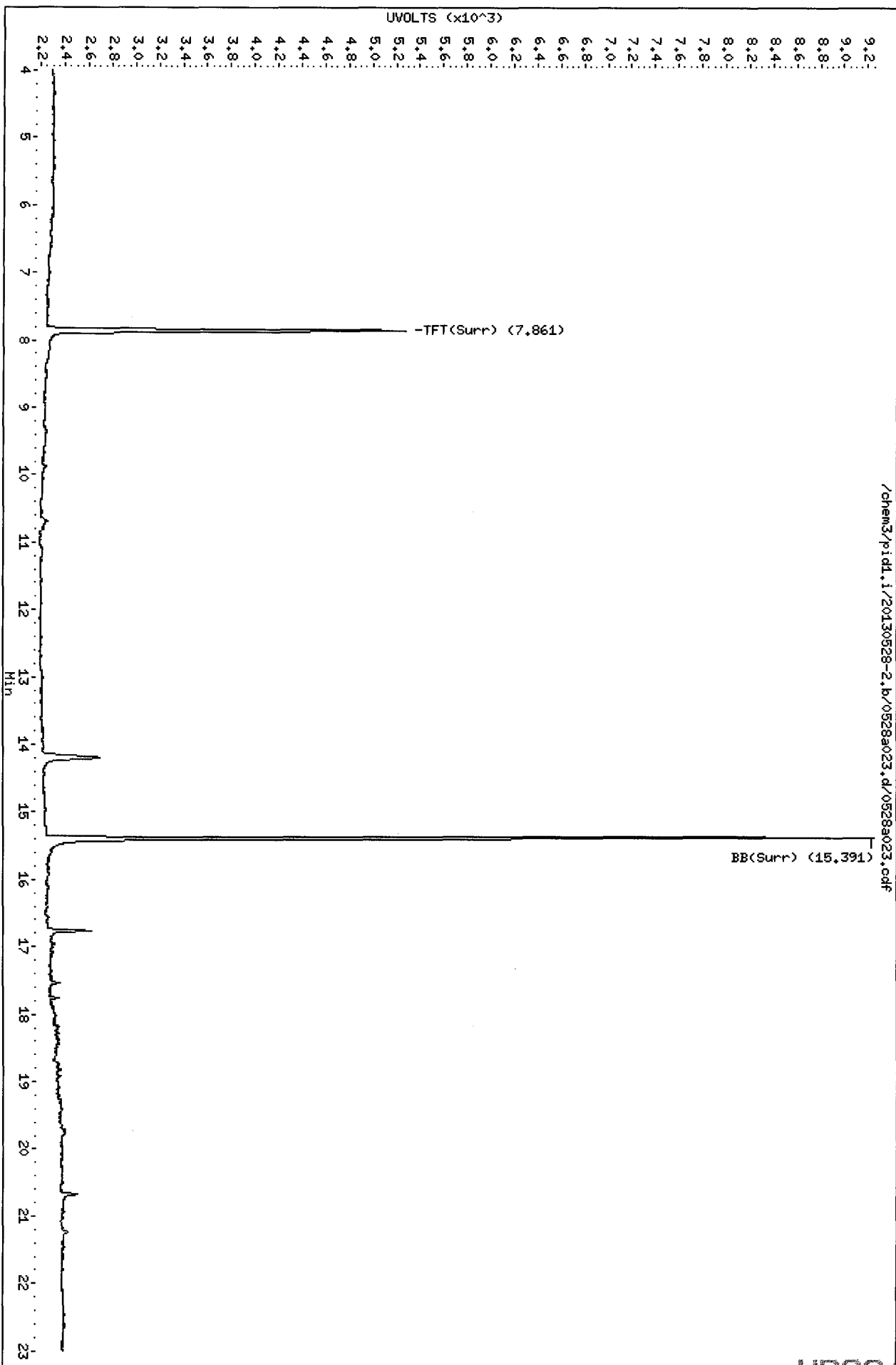
Sample Info: MR40D

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: SL-F5-S-6

SAMPLE

Lab Sample ID: WR40E

LIMS ID: 13-11265

Matrix: Soil

Data Release Authorized: 

Reported: 05/29/13

QC Report No: WR40-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 20:54

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 78 mg-dry-wt

Percent Moisture: 17.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	98.5%
Bromobenzene	102%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a024.d ARI ID: WR40E
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a024.d Client ID: SL-F5-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 20:54
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.852	0.000	2962	37356	100.1	TFT(Surr)
15.383	0.002	2040	17028	102.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	1206	0.003
8015C 2MP-TMB (4.19 to 16.20)	723723	1767	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	1766	0.003
NWTPHG Tol-Nap (9.78 to 18.90)	375093	1206	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.860	0.001	3175	98.5	TFT(Surr)
15.391	0.002	7392	102.2	BB(Surr)

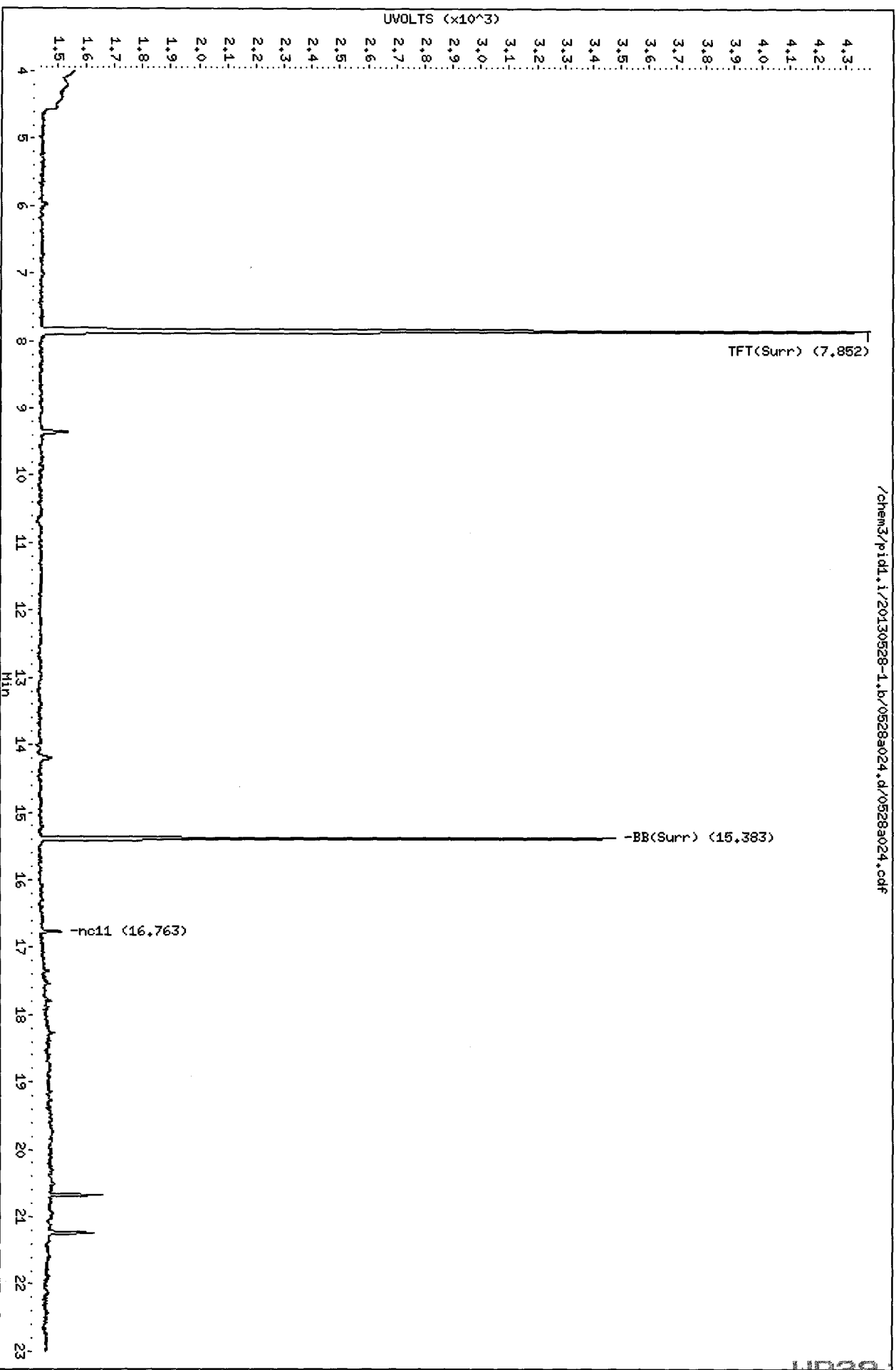
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a024.d
Date : 28-MAY-2013 20:54
Client ID: SL-F5-S-6
Sample Info: MR40E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a024.d/0528a024.cdf

Data File: /chem3/pidd,1/20130528-2,b/0528a024.d

Date : 28-MAY-2013 20:54

Client ID: SL-F5-S-6

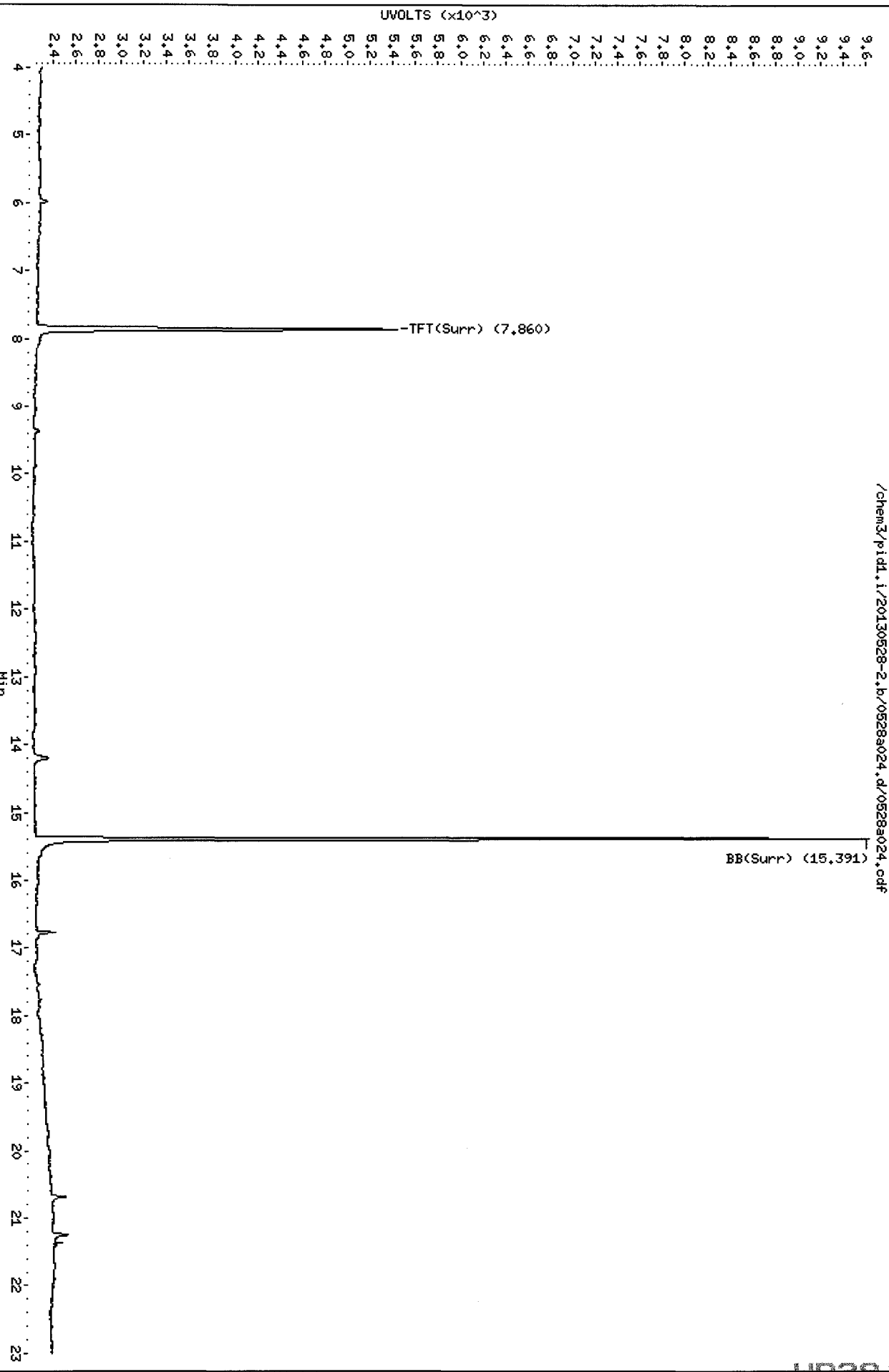
Sample Info: MR40E

Column phase: RTX 502-2 PID

Instrument: pidd,1

Operator: PC

Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: SL-F6-S-6

SAMPLE

Lab Sample ID: WR40F

LIMS ID: 13-11266

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/29/13

QC Report No: WR40-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/22/13

Date Received: 05/24/13

Date Analyzed: 05/28/13 21:22

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 73 mg-dry-wt

Percent Moisture: 19.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	102%

BETX values reported in $\mu\text{g}/\text{kg}$ (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130528-1.b/0528a025.d ARI ID: WR40F
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a025.d Client ID: SL-F6-S-6
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 21:22
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.001	2909	37053	98.3	TFT(Surr)
15.383	0.001	2034	17355	102.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	40294	0.113
8015C 2MP-TMB (4.19 to 16.20)	723723	10715	0.015
AK101 nC6-nC10 (4.68 to 15.10)	582885	4671	0.008
NWTPHG Tol-Nap (9.78 to 18.90)	375093	67410	0.180

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.003	3129	97.1	TFT(Surr)
15.391	0.002	7347	101.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.000	48	0.24N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

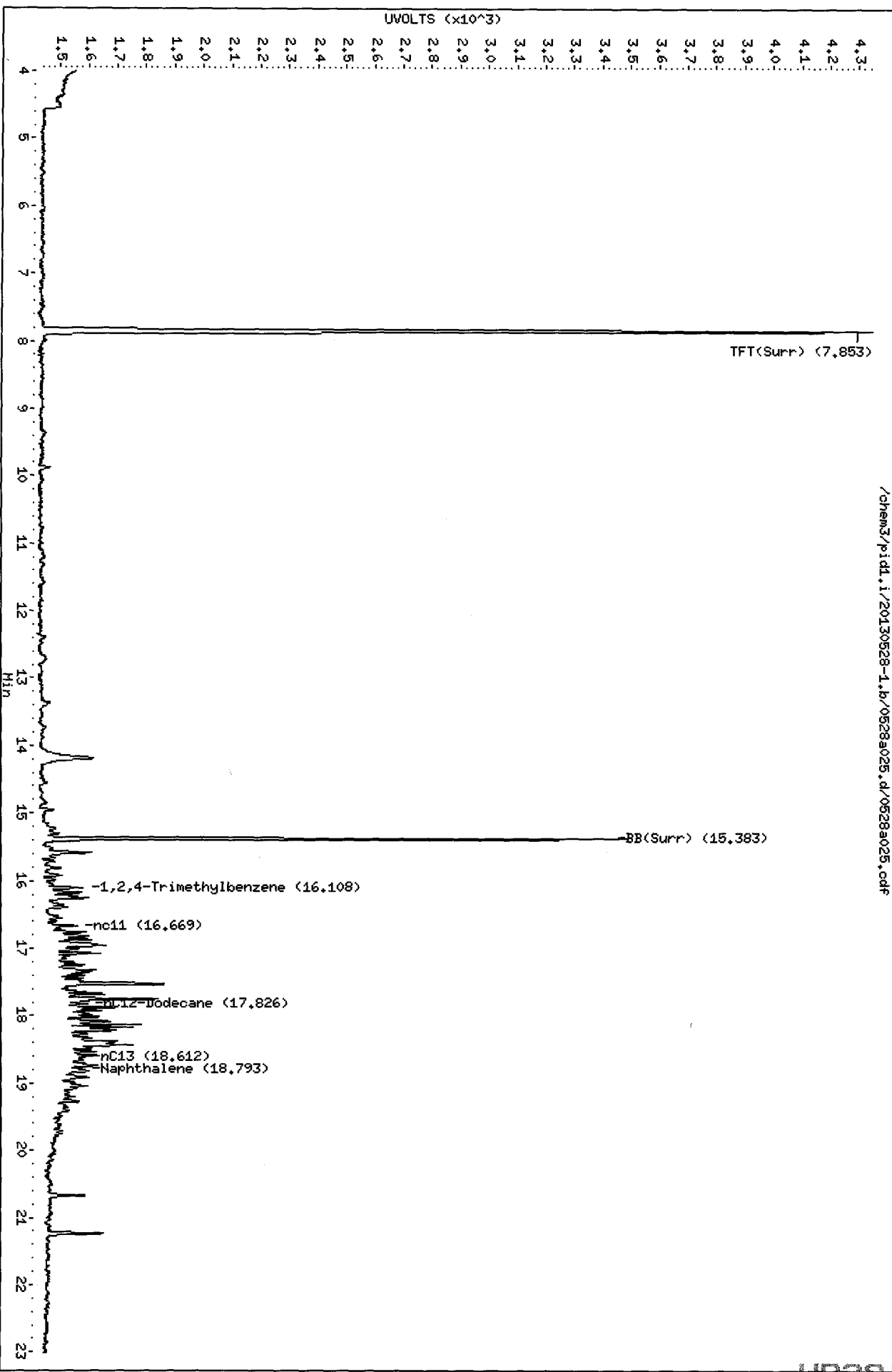
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a025.d
Date: 28-MAY-2013 21:22
Client ID: SL-F6-S-6
Sample Info: MR40F
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

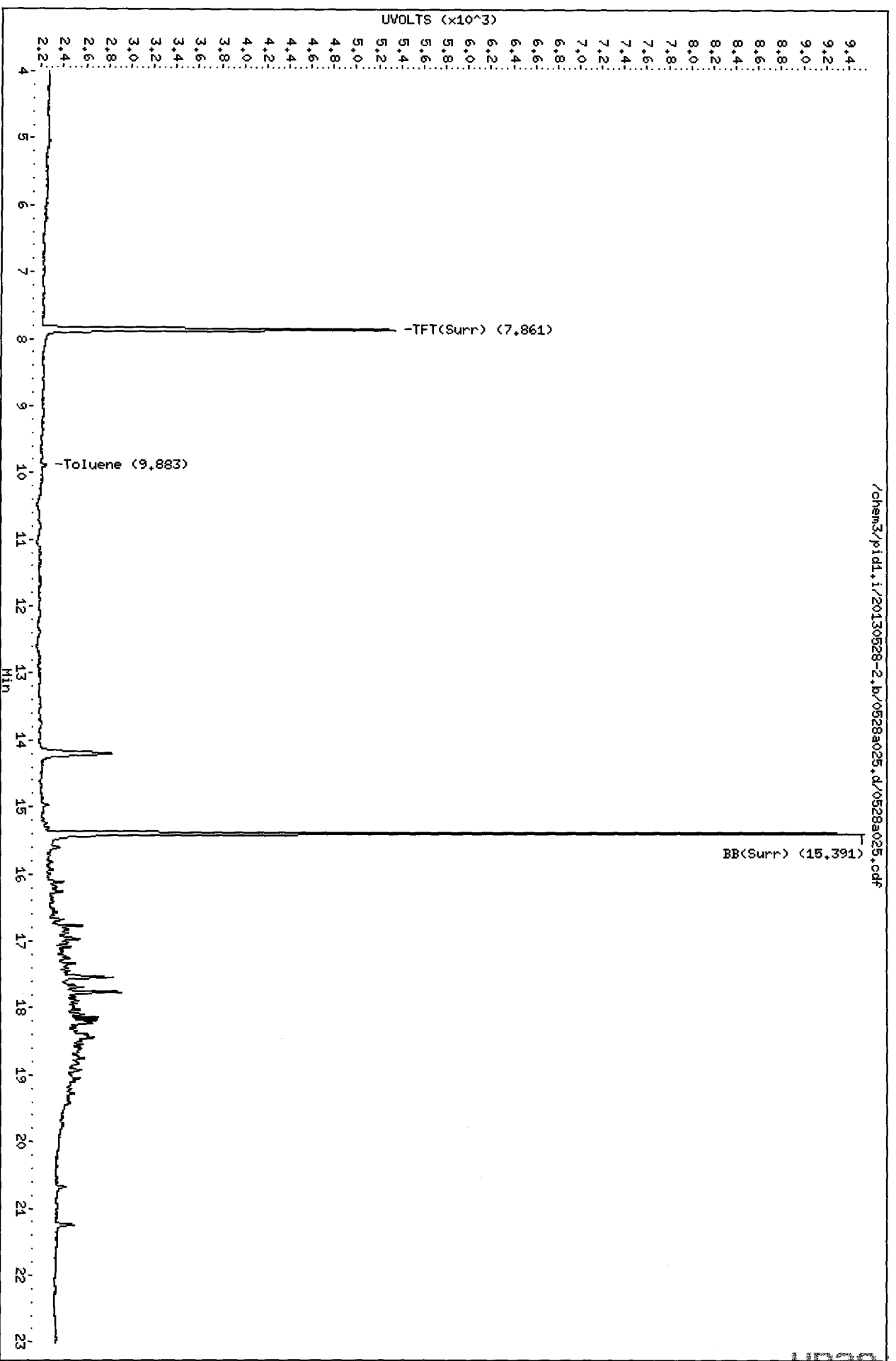
/chem3/pid1.i/20130528-1.b/0528a025.d/0528a025.cdf



0000000148

Data File: /chem3/pid1.i/20130528-2.b/0528a025.d
Date : 28-MAY-2013 21:22
Client ID: SL-Fe-S-6
Sample Info: MR40F
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



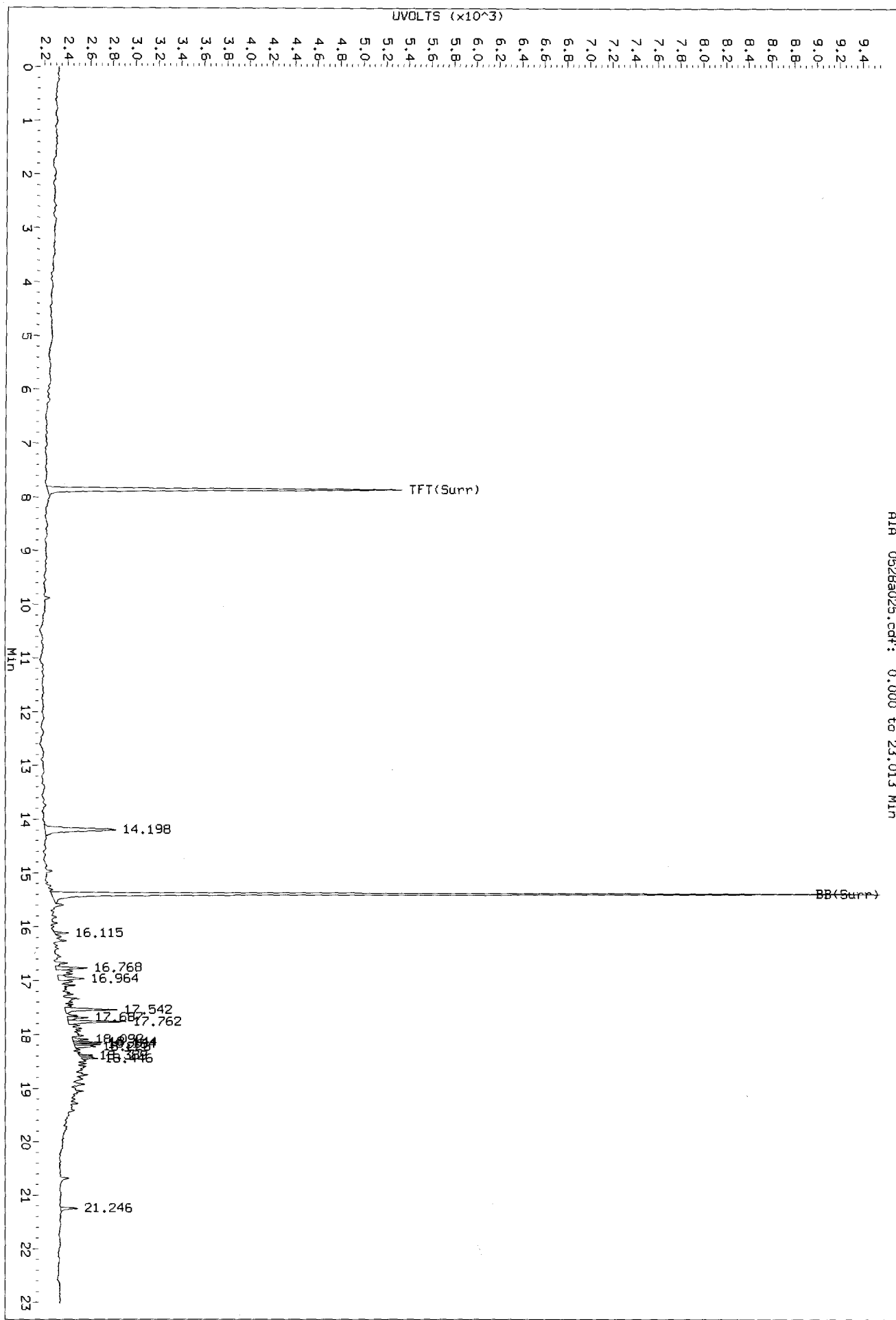
/chem3/pid1.i/20130528-2.b/0528a025.d/0528a025.cdf

001100 0000

PC
5/29/13

Data File: /chem3/pid1.1/20130528-2.b/0528a025.d/0528a025.cdf
Injection Date: 28-MAY-2013 21:22
Instrument: pid1.1
Client Sample ID: SL-F6-S-6

ALA 0528a025.cdf: 0.000 to 23.013 Min



Data File: /chem3/pid1.1/20130528-2.b/0528a025.d/0528a025.cdf
Injection Date: 28-MAY-2013 21:22
Instrument: pid1.1
Client Sample ID: SL-F6-S-6

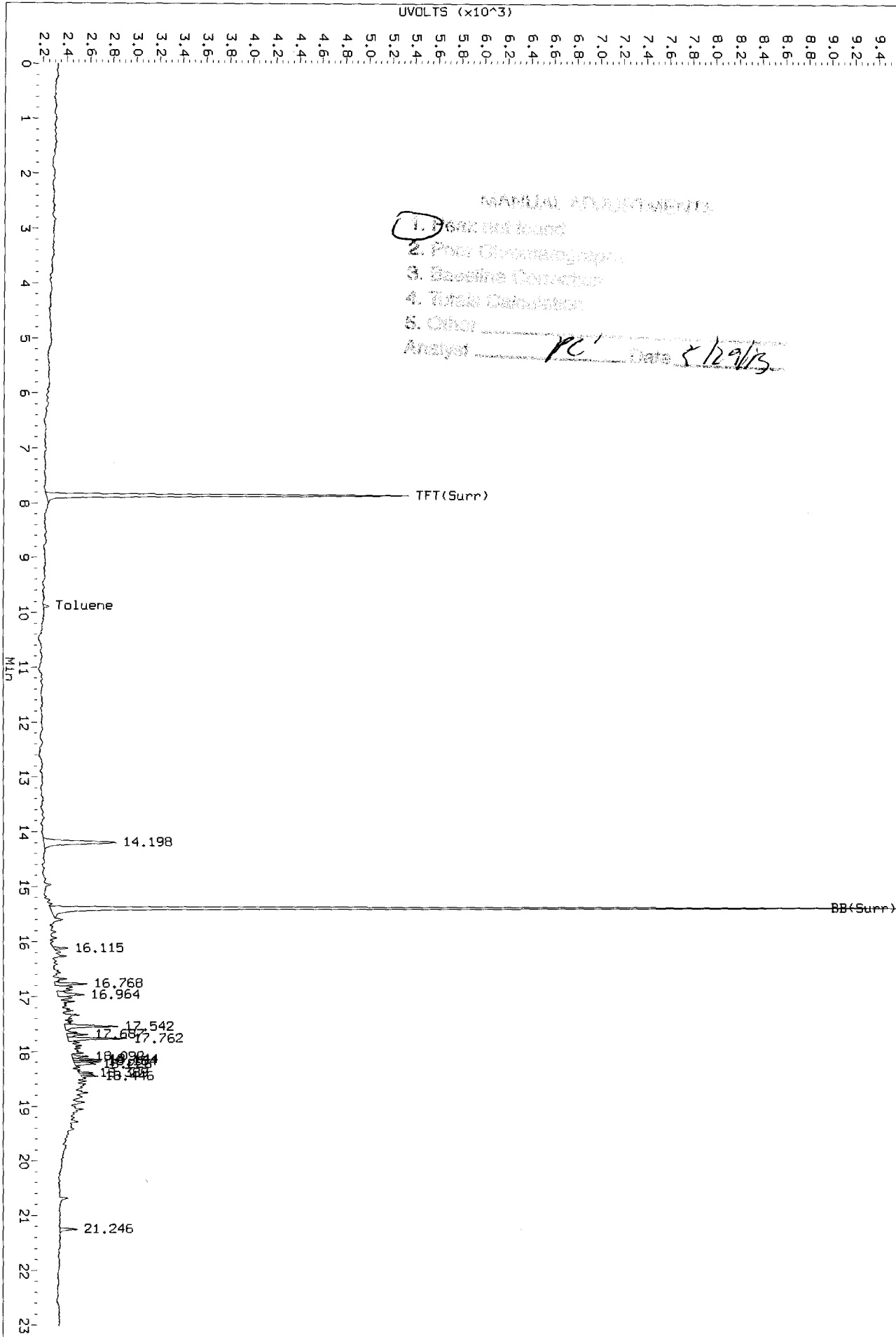
RI# 0528a025.cdf: 0.000 to 23.013 Min

UVOLTS (x10³)

MANUAL ADJUSTMENTS:

- 1. 7.682 not found
- 2. Peak Clustering
- 3. Baseline Correction
- 4. Total Calculation
- 5. Other

Analyst: PC Date: 5/29/13



BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WR40
Matrix: Soil

QC Report No: WR40-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
MB-052813	102%	99.4%	0
LCS-052813	107%	99.6%	0
LCS-052813	108%	103%	0
SL-F1-S-6	96.8%	99.8%	0
SL-F2-S-6	97.3%	101%	0
SL-F3-S-6	94.7%	99.2%	0
SL-F4-S-6	93.9%	97.4%	0
SL-F5-S-6	98.5%	102%	0
SL-F6-S-6	97.1%	102%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11261 to 13-11266

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-052813
LAB CONTROL SAMPLE

Lab Sample ID: LCS-052813
 LIMS ID: 13-11251
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/28/13 10:52
 LCSD: 05/28/13 11:20
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	172	185	93.0%	176	185	95.1%	2.3%
Toluene	1870	1980	94.4%	1910	1980	96.5%	2.1%
Ethylbenzene	549	580	94.7%	554	580	95.5%	0.9%
m,p-Xylene	1970	2120	92.9%	2000	2120	94.3%	1.5%
o-Xylene	903	960	94.1%	926	960	96.5%	2.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	107%	108%
Bromobenzene	99.6%	103%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a004.d ARI ID: LCS0528
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a004.d Client ID:
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 10:52
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.853	0.002	3157	44264	106.7	TFT(Surr)
15.385	0.003	1965	17645	98.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.78 to 17.90)	358114	333496	0.931 M
8015C 2MP-TMB (4.19 to 16.20)	723723	681166	0.941 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	548528	0.941 M
NWTPHG Tol-Nap (9.78 to 18.90)	375093	351647	0.937 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.861	0.002	3446	106.9	TFT(Surr)
15.392	0.003	7200	99.6	BB(Surr)

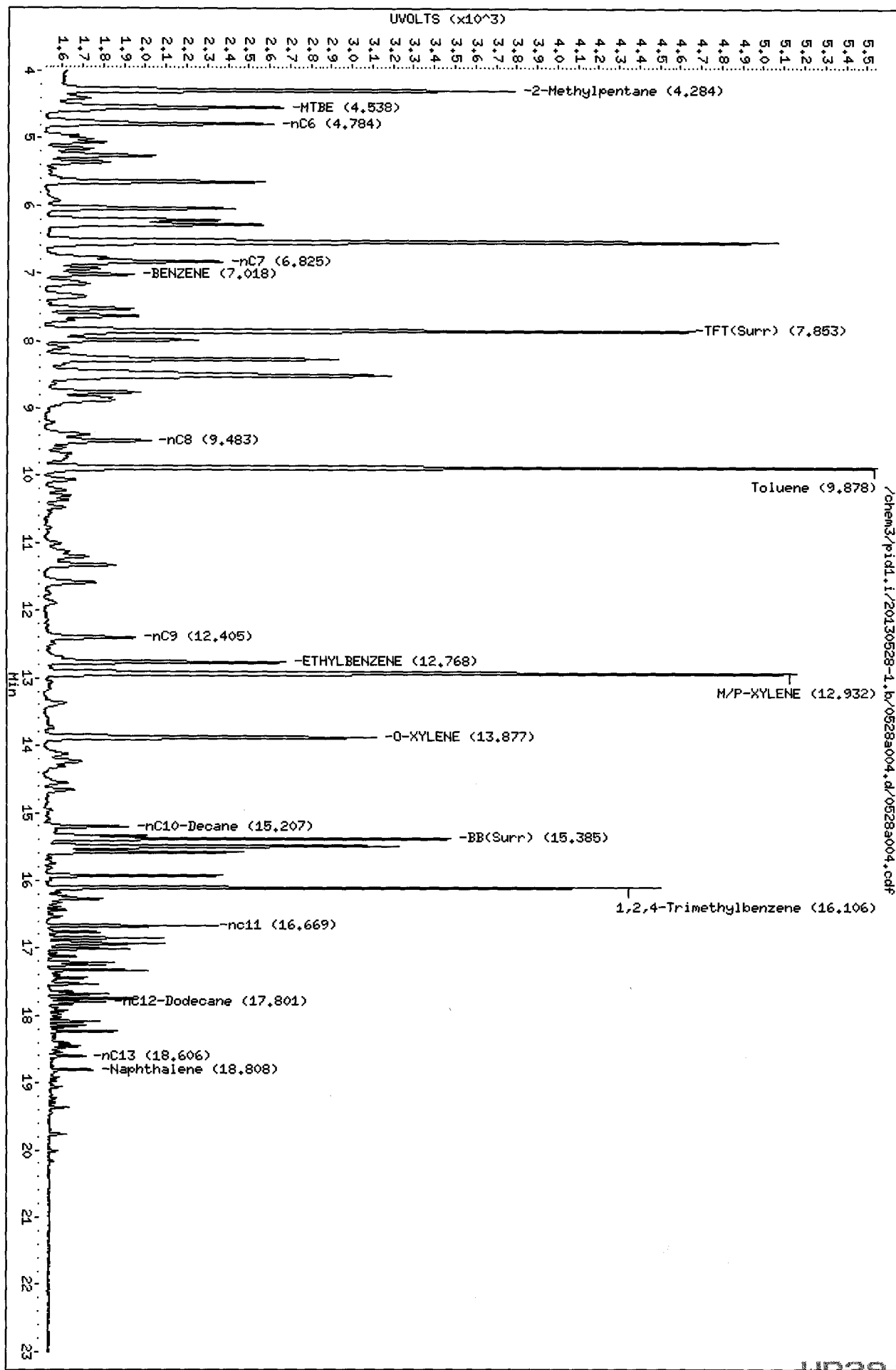
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.026	0.002	774	3.44	Benzene
9.886	0.003	7423	37.46	Toluene
12.777	0.003	1793	10.98	Ethylbenzene
12.941	0.006	7079	39.34	M/P-Xylene
13.886	0.004	2564	18.06	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a004.d
Date: 28-MAY-2013 10:52
Client ID:
Sample Info: LCS0528
Column phase: RTX 502-2 FID

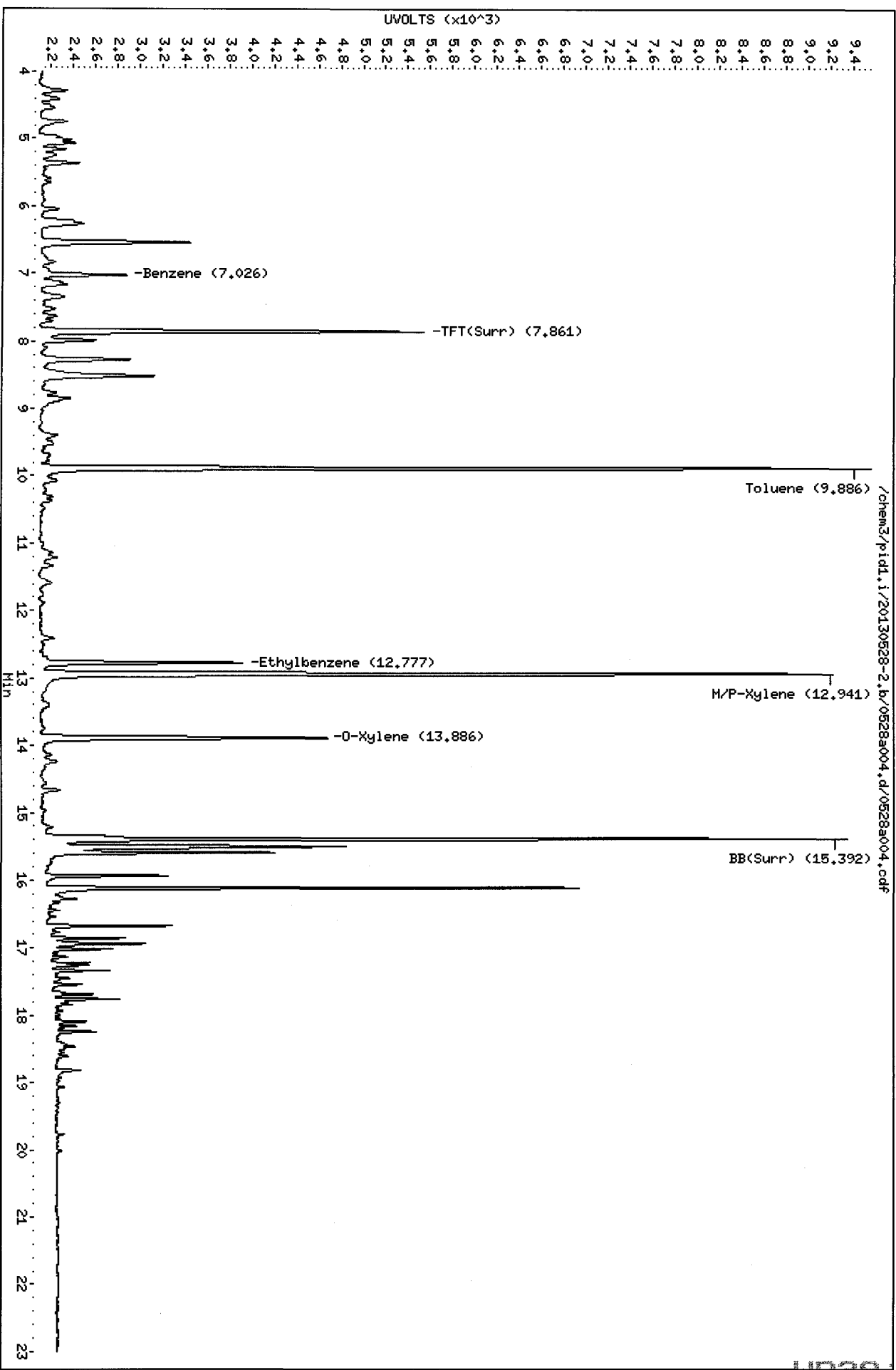
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a004.d/0528a004.cdf

Data File: /chem3/pid1.i/20130528-2.b/0528a004.d
Date : 28-MAY-2013 10:52
Client ID:
Sample Info: LCS0528
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

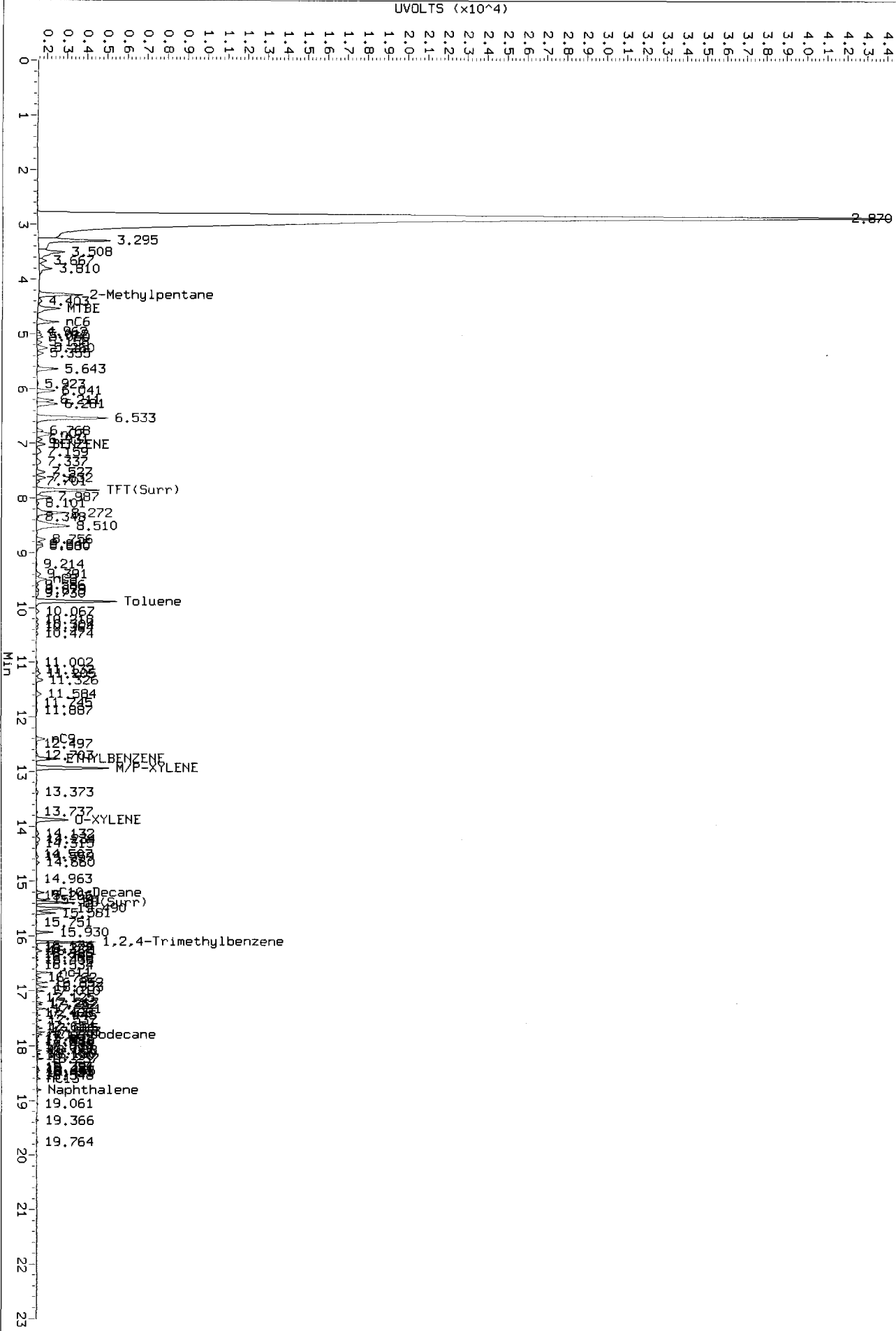


00155 0000

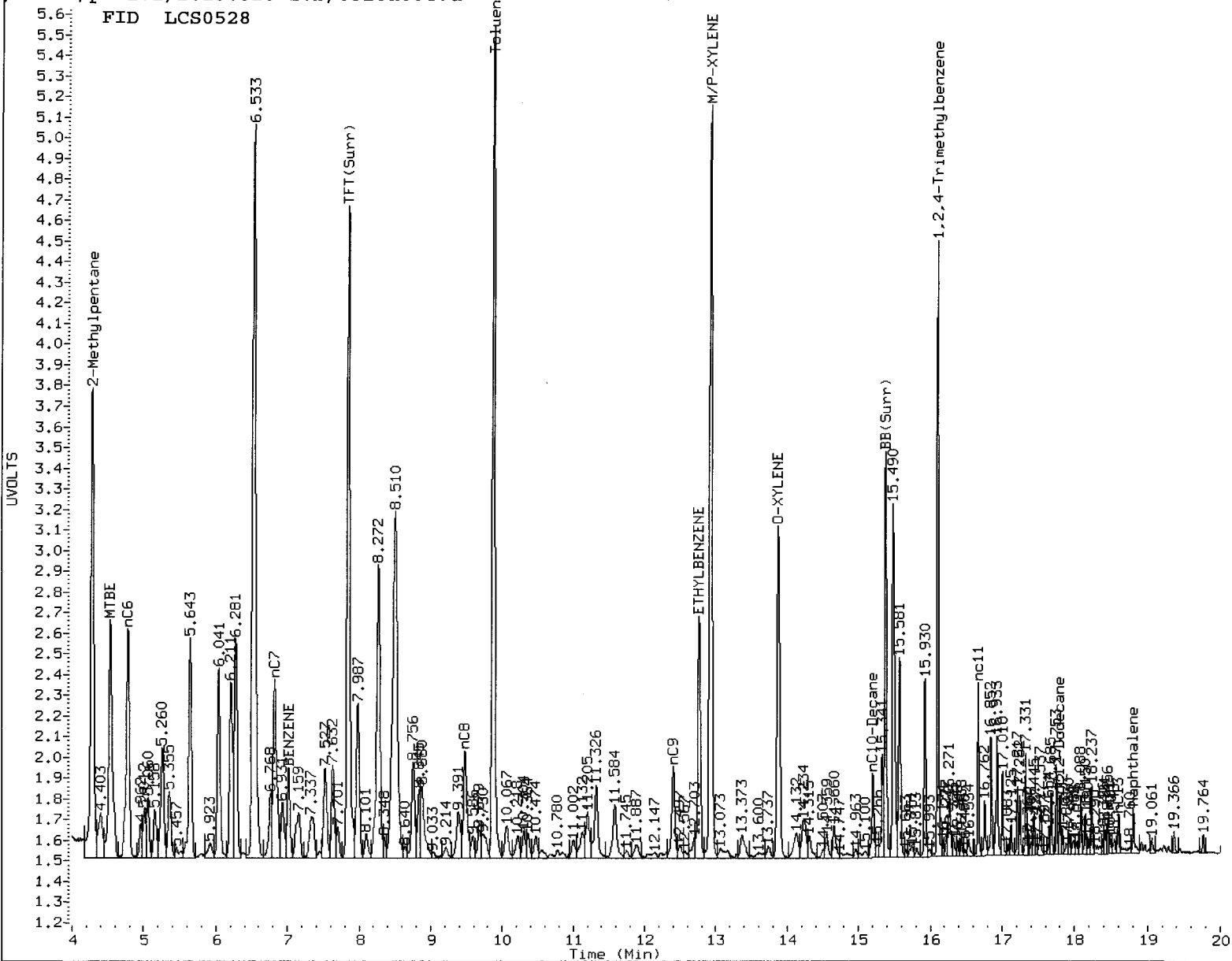
PC
5/29/11

Data File: /chem3/pid1.i/20130528-1.b/0528A004.d/0528A004.cdf
Injection Date: 28-MAY-2013 10:52
Instrument: pid1.1
Client Sample ID:

UVOLTS (x10⁴)



AIA 0528A004.cdf: 0.000 to 23.003 Min



MANUAL INTEGRATION

- 1 Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: PL

Date: 5/29/15

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PL
 5/29/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a005.d ARI ID: LCSD0528
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a005.d Client ID:
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 11:20
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.000	3218	45139	108.8	TFT(Surr)
15.383	0.001	2022	17952	101.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	329555	0.920 M
8015C 2MP-TMB (4.19 to 16.20)	723723	678742	0.938 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	544980	0.935 M
NWTPHG Tol-Nap (9.78 to 18.90)	375093	346448	0.924 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.000	3480	108.0	TFT(Surr)
15.390	0.001	7461	103.2	BB(Surr)

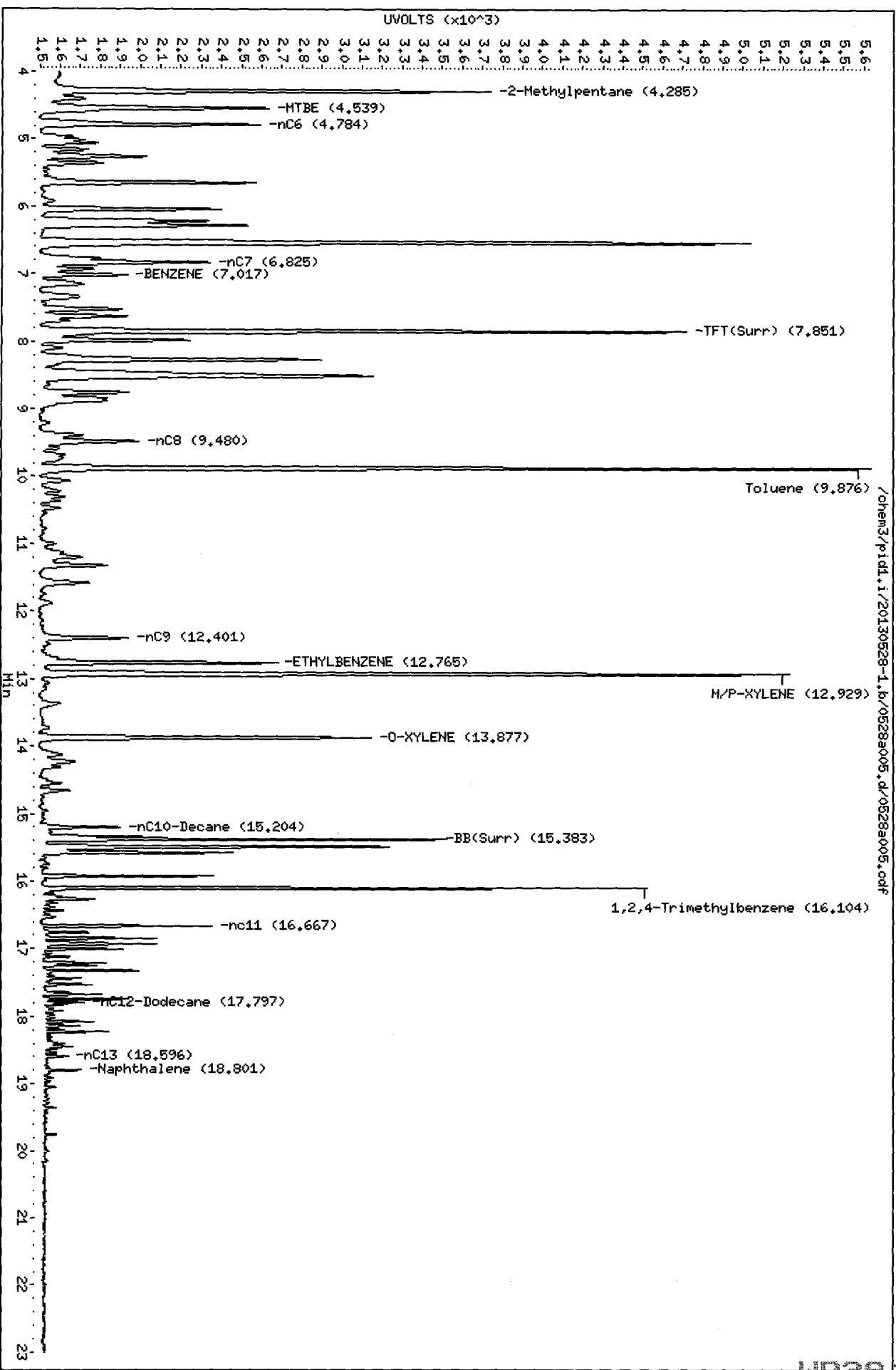
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.024	0.000	789	3.51	Benzene
9.884	0.000	7556	38.14	Toluene
12.774	0.000	1811	11.09	Ethylbenzene
12.938	0.003	7205	40.04	M/P-Xylene
13.884	0.001	2629	18.51	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

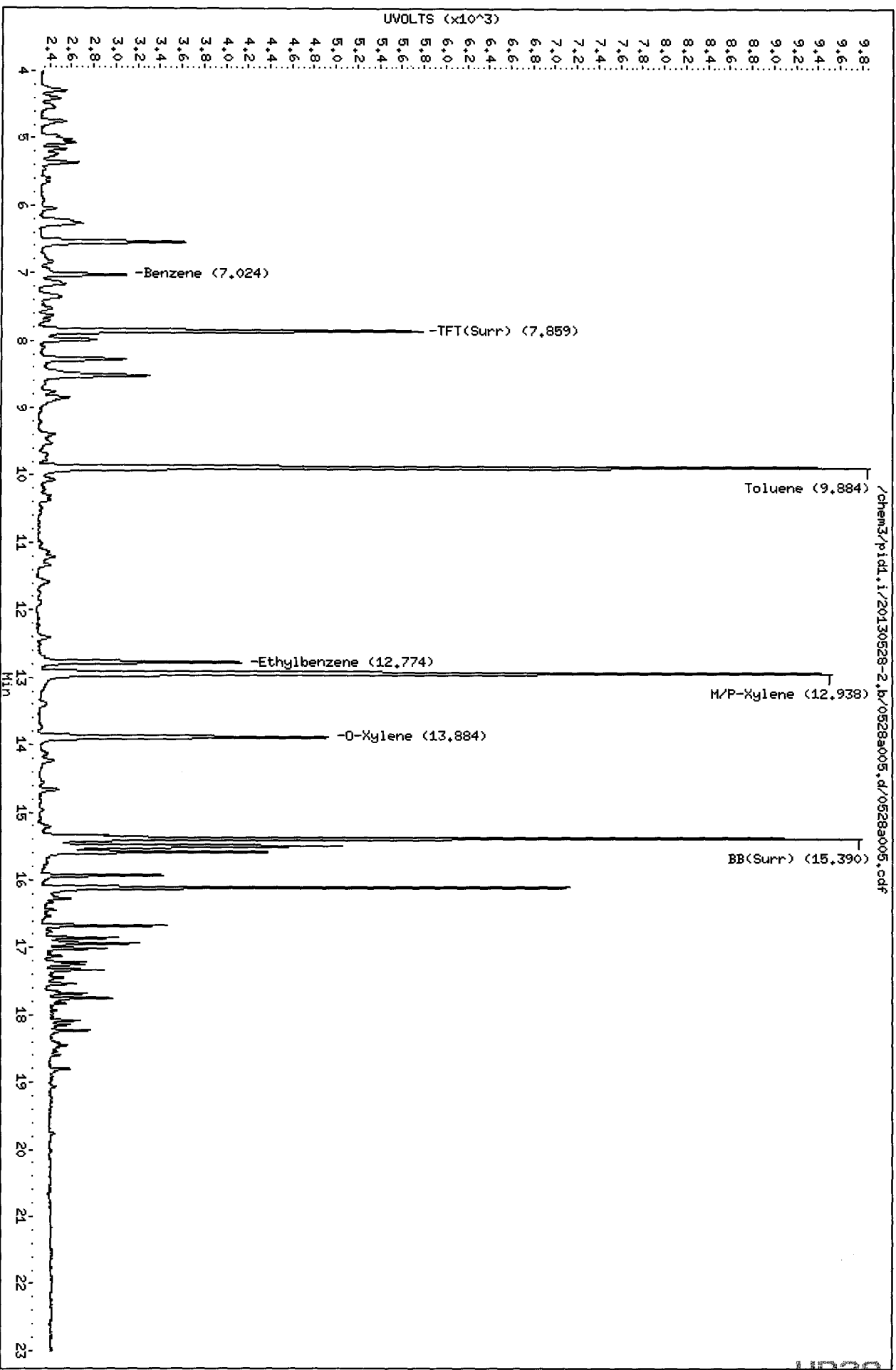
Data File: /chem3/pid1.i/20130528-1.b/0528a005.d
Date: 28-MAY-2013 11:20
Client ID:
Sample Info: LCSD0528
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pidd.i/20130528-2.b/0528a005.d
Date: 28-MAY-2013 11:20
Client ID:
Sample Info: LCSD0528
Column phase: RTX 502-2 PID

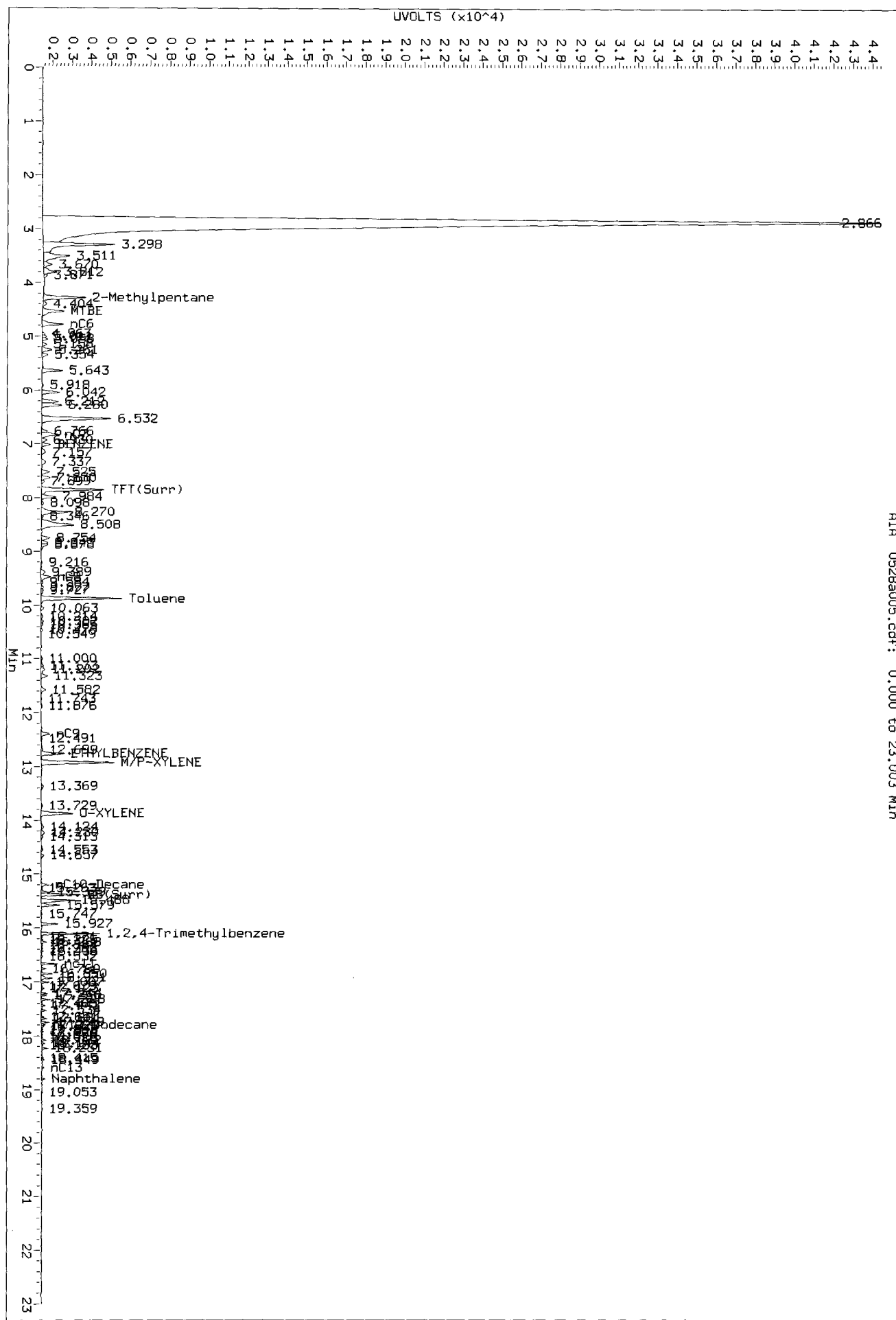
Instrument: pidd.i
Operator: PC
Column diameter: 0.18

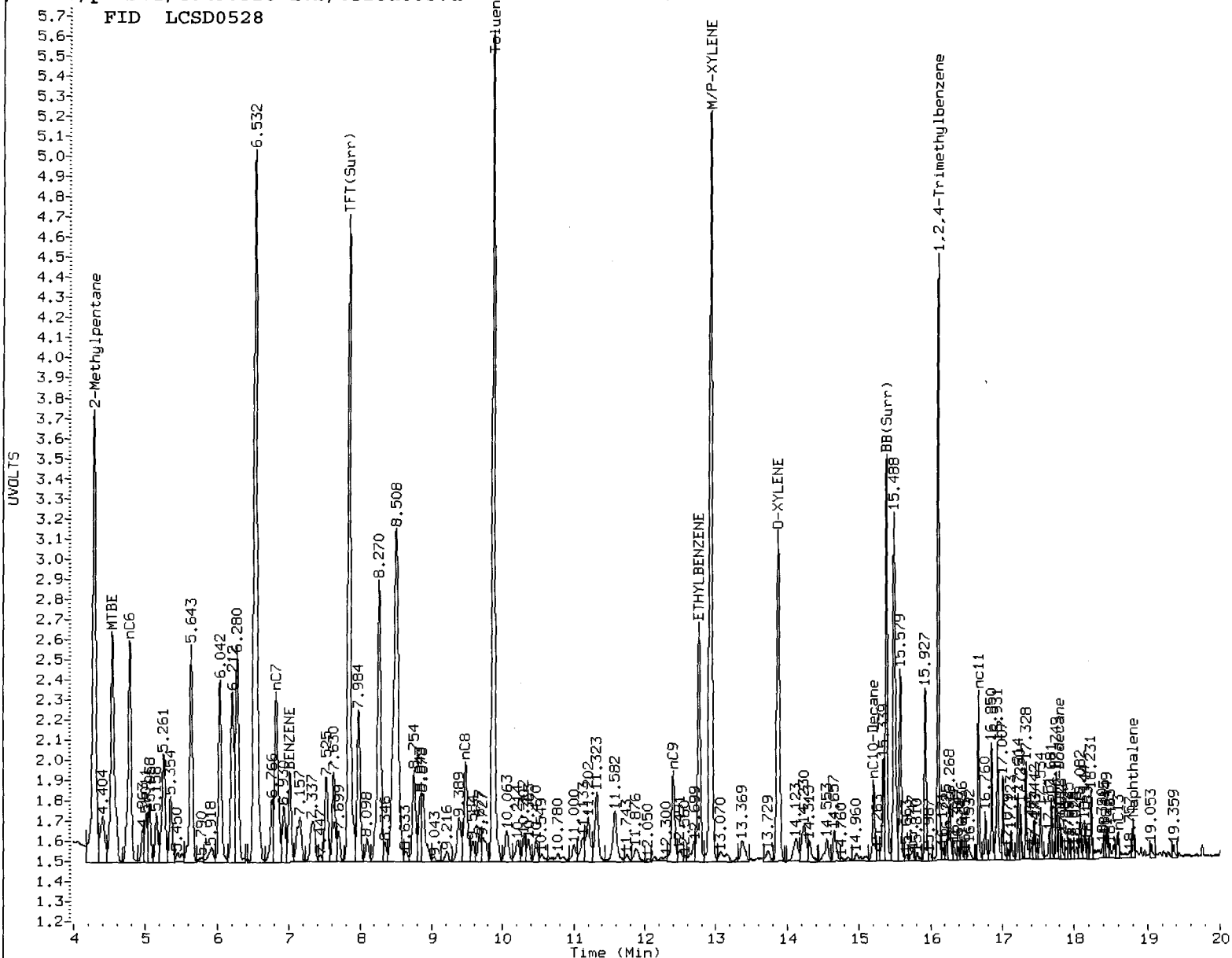


PK
5/19/13

Data File: /chem3/pid1.1/20130528-1.b/0528a005.d/0528a005.cdf
Injection Date: 28-MAY-2013 11:20
Instrument: pid1.1
Client Sample ID:

AIR 0528a005.cdf: 0.000 to 23.003 Min





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst:

Date: 5/29/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: MB-052813

METHOD BLANK

Lab Sample ID: MB-052813

LIMS ID: 13-11251

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/29/13

QC Report No: WR39-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/28/13 11:49

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	99.4%

BETX values reported in µg/kg (ppb)

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AC
 5/27/13

Data file 1: /chem3/pid1.i/20130528-1.b/0528a006.d ARI ID: MB0528
 Data file 2: /chem3/pid1.i/20130528-2.b/0528a006.d Client ID:
 Method: /chem3/pid1.i/20130528-2.b/PIDB.m Injection Date: 28-MAY-2013 11:49
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.001	3018	38489	102.0	TFT(Surr)
15.383	0.001	1963	16664	98.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	929	0.003
8015C 2MP-TMB (4.19 to 16.20)	723723	3724	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	3198	0.005
NWTPHG Tol-Nap (9.78 to 18.90)	375093	929	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.002	3279	101.7	TFT(Surr)
15.390	0.001	7185	99.4	BB(Surr)

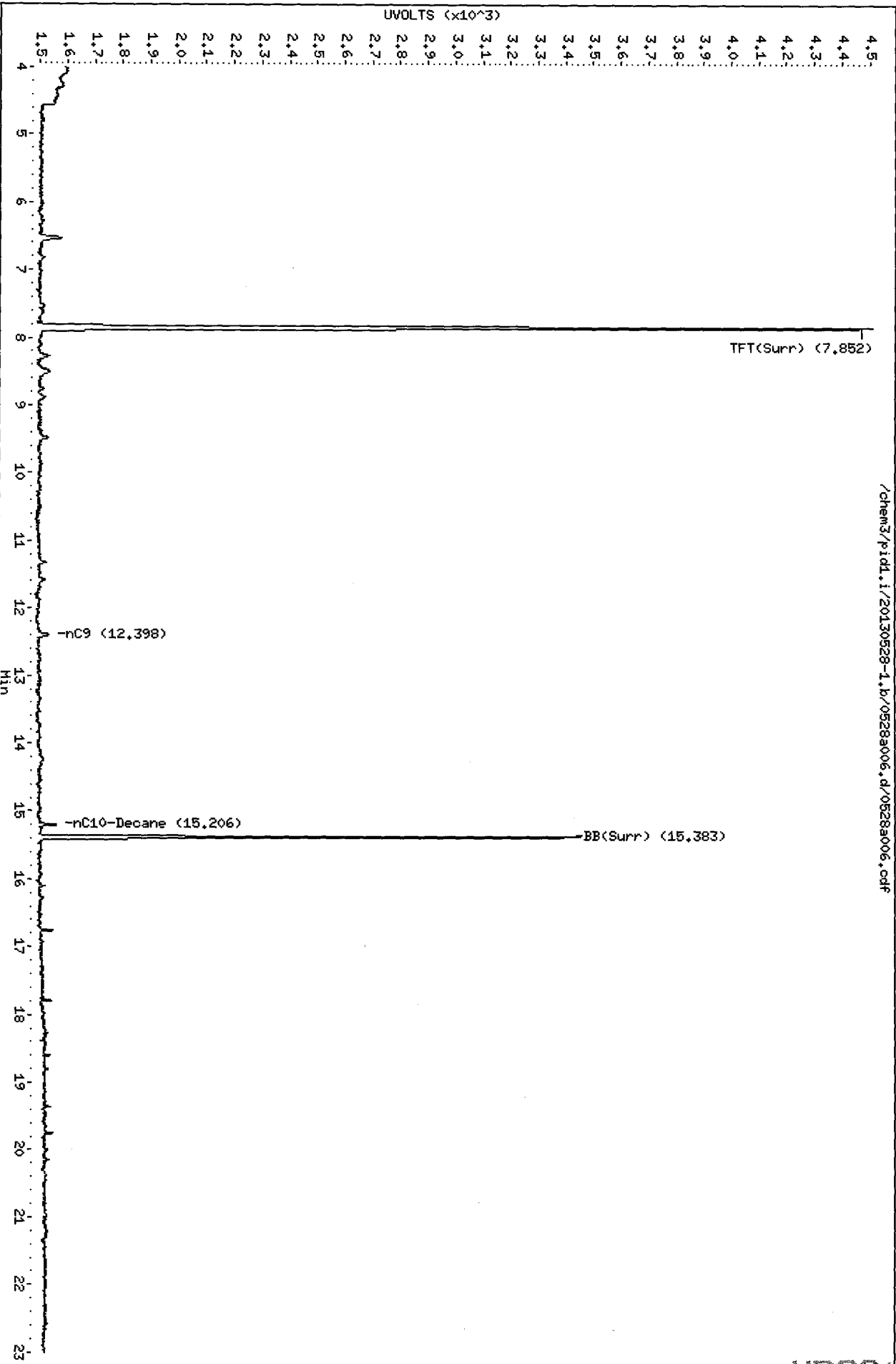
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130528-1.b/0528a006.d
Date : 28-MAY-2013 11:49
Client ID:
Sample Info: HB0528
Column phase: RTX 502-2 FID

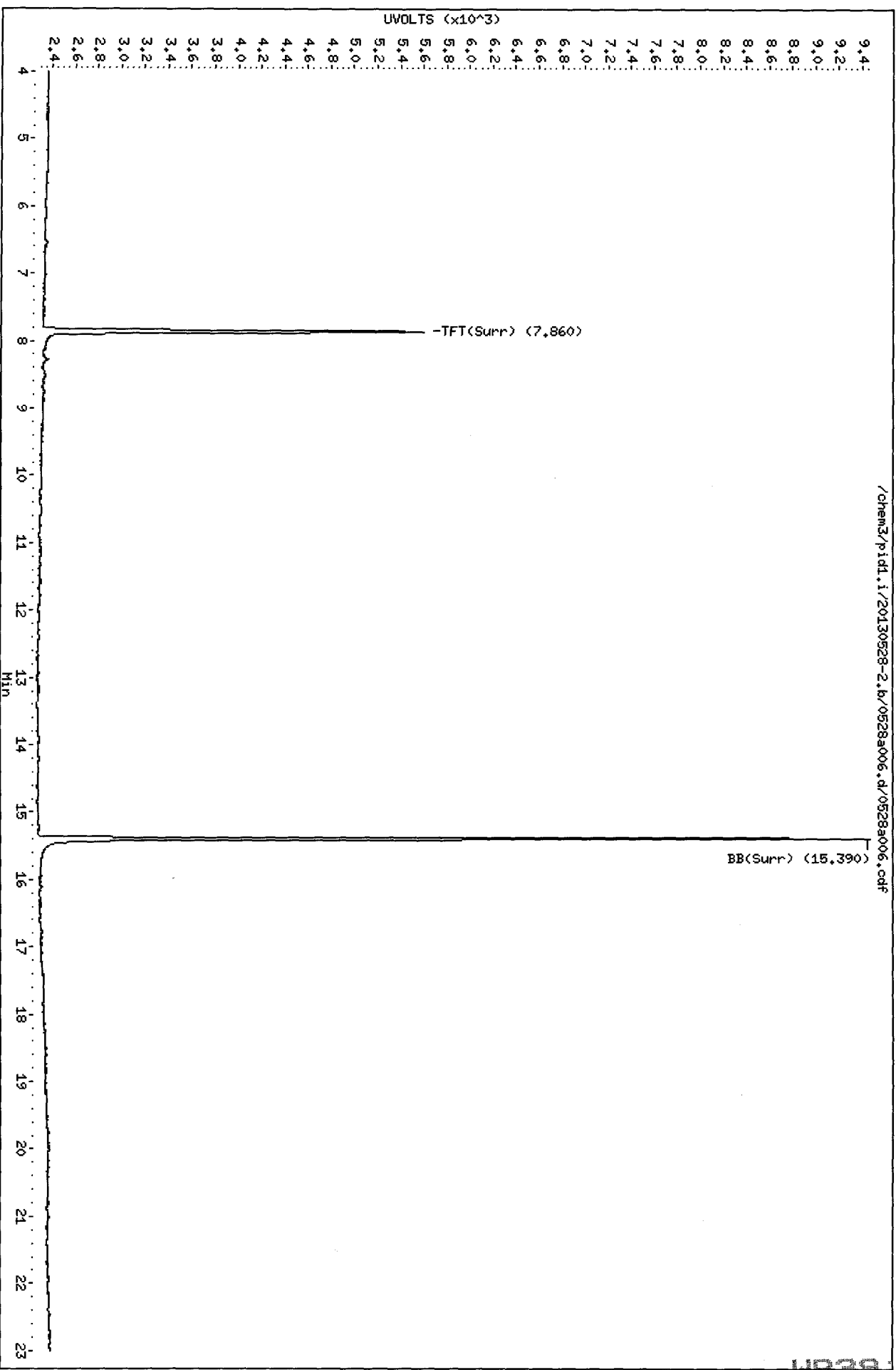
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130528-1.b/0528a006.d/0528a006.cdf

Data File: /chem3/pidd,i/20130528-2.b/0528a006.d
Date : 28-May-2013 11:49
Client ID:
Sample Info: HB0528
Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



00107 0000



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 3, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS51

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted fourteen soil samples on May 31, 2013 under ARI job WS07. For details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

One sample was removed from archive on June 4, 2013 and logged under the ARI job referenced above. The sample was analyzed for VOCs and Lead, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a horizontal line.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS51

Enclosures

Subject: RE: WS07 Cashmere Report
From: "Tony Silva" <tsilva@maulfoster.com>
Date: 6/4/2013 9:22 AM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Lindsey Crosby" <lcrosby@maulfoster.com>, "Erik Naylor" <enaylor@maulfoster.com>, "Justin Clary" <jclary@maulfoster.com>, "Mary Benzinger" <mbenzinger@maulfoster.com>

Yes please proceed with the analysis.

I understand that the pattern did not match for gasoline.
Our work plan simply states that if there is a Gx detection we will run the follow ups.

As a side note, there were Gx detections in wall samples in previous lab reports that we did not run the follow ups on. That is because those samples were above MTCA criteria (either for Gx or Dx) and the soils needed to be excavated and did not remain in place. In those cases, the follow up analysis were not required.

TONY SILVA RG, IG | MAUL FOSTER & ALONGI, INC.
d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 | www.maulfoster.com
2001 NW 19th Avenue, Suite 200, Portland, OR 97209

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From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Tuesday, June 04, 2013 9:11 AM
To: Tony Silva
Cc: Lindsey Crosby; Erik Naylor; Justin Clary; Mary Benzinger
Subject: Re: WS07 Cashmere Report

Good Morning Tony,

As with past samples, this result was identified by the analyst as a Gasoline Range Organic or 'GRO' which is a positive result that does not match an identifiable gasoline pattern. Would you still like to do follow-up analyses on this sample?

-Cheronne

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

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If you have received this correspondence in error, please notify sender immediately. Thank you.

On 6/4/2013 8:30 AM, Tony Silva wrote:

Cheronne,

For the lab report you issued yesterday (WS07) there was a gasoline detection in one sample, A2-W30-S-4.

Per the chain of custody, we need to do follow up analysis on this one sample for:

- Lead
- Other VOCs (EDB, EDC, MTBE)

Will you please analyze this one sample for the follow up analysis on a 24-hour rush turnaround.

We do not need to run these follow up analysis on the other samples since they did not have a gasoline detection.

I assume this will mean that you will issue a new lab report.

Thank you.

TONY SILVA RG, LG | MAUL FOSTER & ALONGI, INC.
d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 |
www.maulfoster.com
2001 NW 19th Avenue, Suite 200, Portland, OR 97209

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express written consent of MFA.

-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]

Sent: Monday, June 03, 2013 4:25 PM

To: Tony Silva

Cc: Lindsey Crosby; Erik Naylor

Subject: WS07 Cashmere Report

Hi Tony,

Please see attached.

Thanks,

-Cheronne

--

Cheronne Oreiro

Project Manager

Analytical Resources, Inc.

4611 S. 134th Place, Suite 100

Tukwila, WA 98168-3240

cheronneo@arilabs.com

(206)-695-6214

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: W307	Turn-around Requested: RUSH - 24 HR	Page: 2 of 2
ARI Client Company: MFA Inc.	Phone:	Date:
Client Contact: TONY SILVA	TSILVA@MAINFOSR.COM	Ice Present? ✓
Client Project Name: CASHMERE		No. of Coolers: 1
Client Project #: 0779.02.01-03	Samplers: Lindsey Crosby	Cooler Temps: 3.9



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments	
					Dr Silver Gel Cleanup	Gx/BTEX	LEAD (ONLY IF Car Detected)	VOCs (ED13, MRBC, EDC)	ONLY IF Car Detected		
A2-W30-S-4	5/30	1250	S	5	X	X	X	X	X		
A2-W31-S-4		1610		1							
A2-W33-S-4		1615		1							
A2-W32-S-4		1620		1							
Comments/Special Instructions					Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Jennifer Millsap</i>	Relinquished by: (Signature)	Received by: (Signature)			
					Printed Name: Lindsey Crosby	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:			
					Company: MFA	Company: ARI	Company:	Company:			
					Date & Time: 5/30/13 1800	Date & Time: 5/31/13 1005	Date & Time:	Date & Time:			

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

50000:1551

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W507	Turn-around Requested: RUSH - 24 hr.	Page: 1 of 2
ARI Client Company: MFA, Inc	Phone:	Date:
Client Contact: Tony Silva	TSILVA@MAVLFOSTER.COM	Ice Present? Y
Client Project Name: CASHMERE		No. of Coolers: 1
Client Project #: 0779.02.01-03	Samplers: Lindsey Crosby	Cooler Temps: 3.9

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
					Dx Silica Grel Cleanup	Gx/BTEX	LEAD (only if Gx detected)	VOCs (EDS, MTBE, EDC)	only if Gx detected	
SL-W7-S-4	5/30	0830	S	5	X	X	X	X	X	
SL-W8-S-4		0840			X	X	X	X	X	
SL-W9-S-4		0850			X	X	X	X	X	
SL-W10-S-4		0930			X	X	X	X	X	
SL-W11-S-4		0940			X	X	X	X	X	
SL-W12-S-4		1050			X	X	X	X	X	
SL-W13-S-4		1140			X	X	X	X	X	
SL-W14-S-4		1150			X	X	X	X	X	
A2-W28-S-4		1230			X	X	X	X	X	
A2-W29-S-4		1240			X	X	X	X	X	

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Jennifer Millsep</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: <i>Jennifer Millsep</i>	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/30/13 1800	Date & Time: 5/31/13 1005	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

MS51:00006



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmore

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WS07

Tracking No: 6046 684 6753 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.9

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 5/31/13 Time: 1005

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/31/13 Time: 1031

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WS51
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-W30-S-4	WS51A	13-11820	Soil	05/30/13 12:50	05/31/13 10:05



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



Analytical Resources, Incorporated
Analytical Chemists and Consultants

- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-W30-S-4

Page 1 of 1

SAMPLE

Lab Sample ID: WS51A

QC Report No: WS51-Maul Foster & Alongi, Inc

LIMS ID: 13-11820

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *MW*

Date Sampled: 05/30/13

Reported: 06/05/13

Date Received: 05/31/13

Instrument/Analyst: NT5/PAB

Sample Amount: 5.21 g-dry-wt

Date Analyzed: 06/04/13 14:52

Purge Volume: 5.0 mL

Moisture: 12.7%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
106-93-4	1,2-Dibromoethane	1.0	< 1.0	U
1634-04-4	Methyl tert-Butyl Ether	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	116%
d8-Toluene	103%
Bromofluorobenzene	97.5%
d4-1,2-Dichlorobenzene	100%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Soil

QC Report No: WS51-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-060413A	Method Blank	Low	113%	102%	101%	103%	0
LCS-060413A	Lab Control	Low	108%	101%	102%	101%	0
LCSD-060413A	Lab Control Dup	Low	110%	101%	101%	102%	0
WS51A	A2-W30-S-4	Low	116%	103%	97.5%	100%	0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-11820 to 13-11820

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-060413A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413A

QC Report No: WS51-Maul Foster & Alongi, Inc

LIMS ID: 13-11820

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *WWW*

Date Sampled: NA

Reported: 06/05/13

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: NT5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 06/04/13 13:11

Purge Volume LCS: 5.0 mL

LCSD: 06/04/13 13:35

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	45.4	50.0	90.8%	46.5	50.0	93.0%	2.4%
1,2-Dibromoethane	46.2	50.0	92.4%	48.1	50.0	96.2%	4.0%
Methyl tert-Butyl Ether	54.1	50.0	108%	56.0	50.0	112%	3.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	108%	110%
d8-Toluene	101%	101%
Bromofluorobenzene	102%	101%
d4-1,2-Dichlorobenzene	101%	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-060413A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-060413A

QC Report No: WS51-Maul Foster & Alongi, Inc

LIMS ID: 13-11820

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *YMW*

Date Sampled: NA

Reported: 06/05/13

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 06/04/13 13:59

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
106-93-4	1,2-Dibromoethane	1.0	< 1.0	U
1634-04-4	Methyl tert-Butyl Ether	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	113%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	103%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: A2-W30-S-4
SAMPLE

Lab Sample ID: WS51A

LIMS ID: 13-11820

Matrix: Soil

Data Release Authorized: 

Reported: 06/06/13

QC Report No: WS51-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Percent Total Solids: 86.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/04/13	6010C	06/05/13	7439-92-1	Lead	2	18	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation


INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS51LCS
 LIMS ID: 13-11820
 Matrix: Soil
 Data Release Authorized
 Reported: 06/06/13



QC Report No: WS51-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Lead	6010C	201	200	100%	

Reported in mg/kg-dry

N-Control limit not met
 NA-Not Applicable, Analyte Not Spiked
 Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: WS51MB
LIMS ID: 13-11820
Matrix: Soil
Data Release Authorized:
Reported: 06/06/13



QC Report No: WS51-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/04/13	6010C	06/05/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 6, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS54

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted seven soil samples on June 4, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS54

Enclosures



Cooler Receipt Form

ARI Client: Maul Foster

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WS54

Tracking No: K046 684 6762 / K046 684 6771 / NA
K046 684 6799

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.8 3.1 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877852

Cooler Accepted by: JM Date: 6/4/13 Time: 1020

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 6/4/13 Time: 1032

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WS54
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-W40-S-4	WS54A	13-11825	Soil	06/03/13 11:30	06/04/13 10:20
2. A2-W41-S-4	WS54B	13-11826	Soil	06/03/13 11:45	06/04/13 10:20
3. A2-W42-S-4	WS54C	13-11827	Soil	06/03/13 12:00	06/04/13 10:20
4. A2-W43-S-4	WS54D	13-11828	Soil	06/03/13 12:15	06/04/13 10:20
5. A2-W44-S-4	WS54E	13-11829	Soil	06/03/13 12:30	06/04/13 10:20
6. A2-W45-S-4	WS54F	13-11830	Soil	06/03/13 12:35	06/04/13 10:20
7. A2-W46-S-4	WS54G	13-11831	Soil	06/03/13 12:45	06/04/13 10:20



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



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Analytical Chemists and Consultants

- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Analytical Chemists and Consultants


Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WS54-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: 
Reported: 06/06/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-060413 13-11825	Method Blank HC ID: ---	06/04/13	06/05/13	1.00	Diesel Range	5.0	< 5.0 U
			FID9	1.0	Motor Oil Range o-Terphenyl	10	< 10 U 79.4%
WS54A 13-11825	A2-W40-S-4 HC ID: ---	06/04/13	06/05/13	1.00	Diesel Range	5.8	< 5.8 U
			FID9	1.0	Motor Oil Range o-Terphenyl	12	< 12 U 81.7%
WS54B 13-11826	A2-W41-S-4 HC ID: ---	06/04/13	06/05/13	1.00	Diesel Range	5.8	< 5.8 U
			FID9	1.0	Motor Oil Range o-Terphenyl	12	< 12 U 77.4%
WS54C 13-11827	A2-W42-S-4 HC ID: ---	06/04/13	06/05/13	1.00	Diesel Range	5.4	< 5.4 U
			FID9	1.0	Motor Oil Range o-Terphenyl	11	< 11 U 76.7%
WS54D 13-11828	A2-W43-S-4 HC ID: DRO/MOTOR OIL	06/04/13	06/05/13	1.00	Diesel Range	5.6	21
			FID9	1.0	Motor Oil Range o-Terphenyl	11	68 74.8%
WS54E 13-11829	A2-W44-S-4 HC ID: DRO/MOTOR OIL	06/04/13	06/05/13	1.00	Diesel Range	5.7	8.2
			FID9	1.0	Motor Oil Range o-Terphenyl	11	31 79.9%
WS54F 13-11830	A2-W45-S-4 HC ID: MOTOR OIL	06/04/13	06/05/13	1.00	Diesel Range	5.7	< 5.7 U
			FID9	1.0	Motor Oil Range o-Terphenyl	11	13 50.4%
WS54G 13-11831	A2-W46-S-4 HC ID: DRO/MOTOR OIL	06/04/13	06/05/13	1.00	Diesel Range	6.8	140
			FID9	1.0	Motor Oil Range o-Terphenyl	14	240 67.1%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a013.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54MBS1
 Client ID: WS54MBS1
 Injection: 05-JUN-2013 13:14
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	82320	2
C8	1.068	-0.017	6114	13392	DIESEL (C12-C24)	316424	16.94 ✓
C10	2.858	0.002	161	163	M.OIL (C24-C38)	206741	12.89 ✓
C12	3.869	0.007	1380	1262	AK-102 (C10-C25)	339099	15.62
C14	4.563	0.002	1487	660	AK-103 (C25-C36)	172231	14.82
C16	5.146	-0.007	3062	5992			
C18	5.724	0.005	2558	3781			
C20	6.281	-0.001	1564	649			
C22	6.823	-0.011	1519	475			
C24	7.357	-0.001	1176	961			
C25	7.612	0.007	1129	1102			
C26	7.862	0.000	1121	772			
C28	8.300	-0.005	1638	2433	IT.DIES (C10-C24)	331533	15.32
C32	9.100	0.012	3223	8062			
C34	9.433	0.004	1299	538	BUNKERC (C10-C38)	538274	58.09
Filter Peak	11.479	-0.002	1970	784	HYDRAUL (C24-C38)	206741	13.03
C36	9.736	-0.013	1925	3368			
C38	10.044	-0.003	1692	1183			
C40	10.331	-0.002	1917	835			
o-terph	5.855	0.002	1177391	915022			
Triacon Surr	8.719	-0.005	769922	807779	IT.MOIL (C24-C40)	1051314	15.74

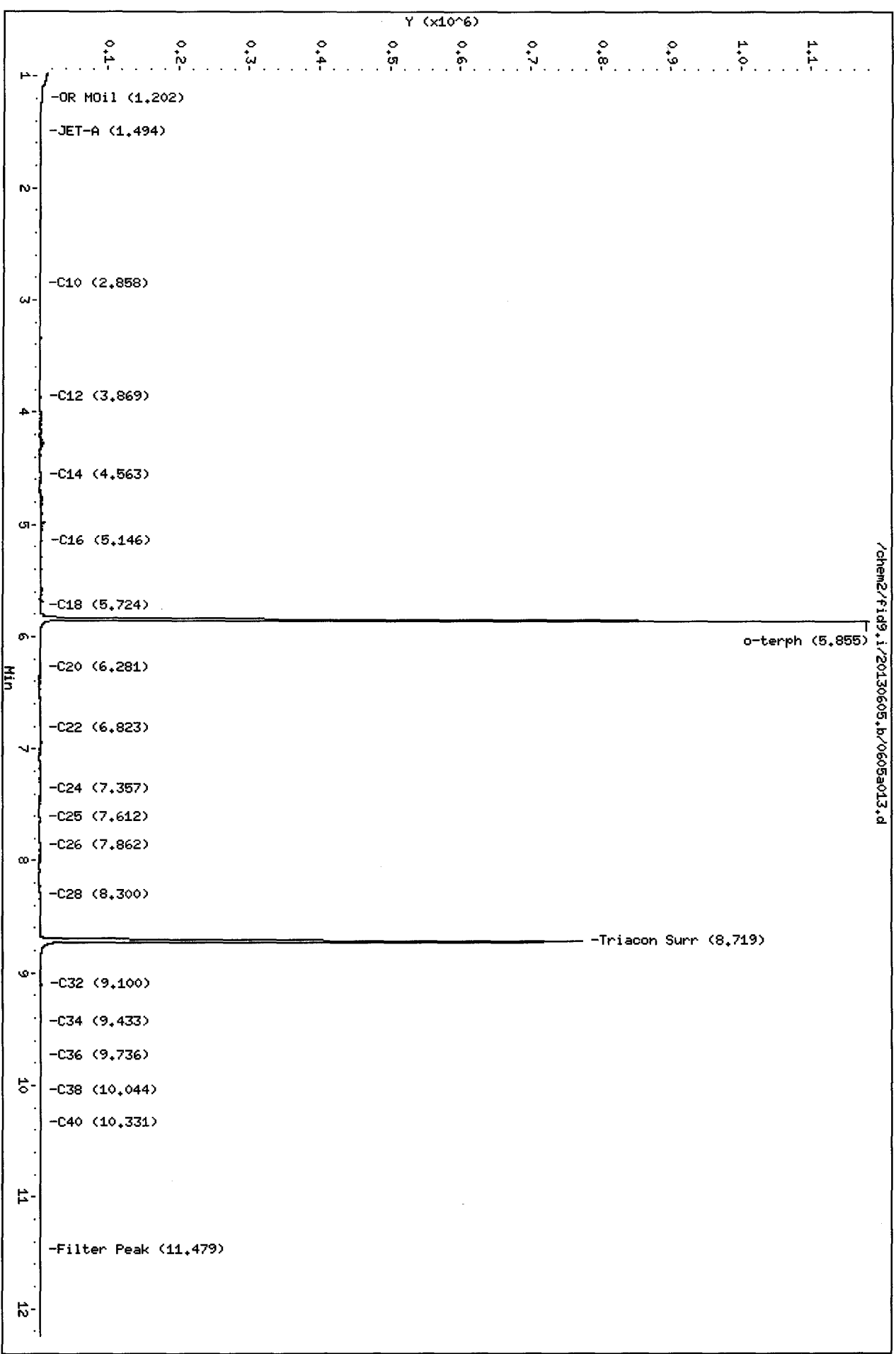
M Indicates manual integration within range.

Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	915022	35.7	79.4 ✓
Triacontane	807779	42.7	95.0

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013



MS54: 00010

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a006.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54A
 Client ID: A2-W40-S-4
 Injection: 05-JUN-2013 10:35
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	104969	3
C8	1.083	-0.002	1313	1103	DIESEL (C12-C24)	608183	32.56
C10	2.861	0.005	489	627	M.OIL (C24-C38)	1247190	77.78
C12	3.860	-0.002	263	160	AK-102 (C10-C25)	690209	31.80
C14	4.572	0.011	1346	1875	AK-103 (C25-C36)	1103264	94.96
C16	5.157	0.003	2496	3582			
C18	5.718	-0.001	3424	2376			
C20	6.282	0.000	2682	2022			
C22	6.834	0.000	4897	3389			
C24	7.356	-0.002	6708	6823			
C25	7.602	-0.003	7708	8438			
C26	7.859	-0.003	8361	2944			
C28	8.303	-0.003	12426	6017	IT.DIES (C10-C24)	627936	29.01
C32	9.086	-0.002	12033	14335			
C34	9.431	0.001	6773	7274	BUNKERC (C10-C38)	1875127	202.35
Filter Peak	11.480	-0.001	2386	951	HYDRAUL (C24-C38)	1247190	78.58
C36	9.751	0.001	5922	4136			
C38	10.041	-0.006	4768	4526			
C40	10.325	-0.007	3390	3067			
o-terph	5.857	0.004	1059970	941652			
Triacon Surr	8.729	0.004	754403	840692	IT.MOIL (C24-C40)	2148876	84.54

M Indicates manual integration within range.

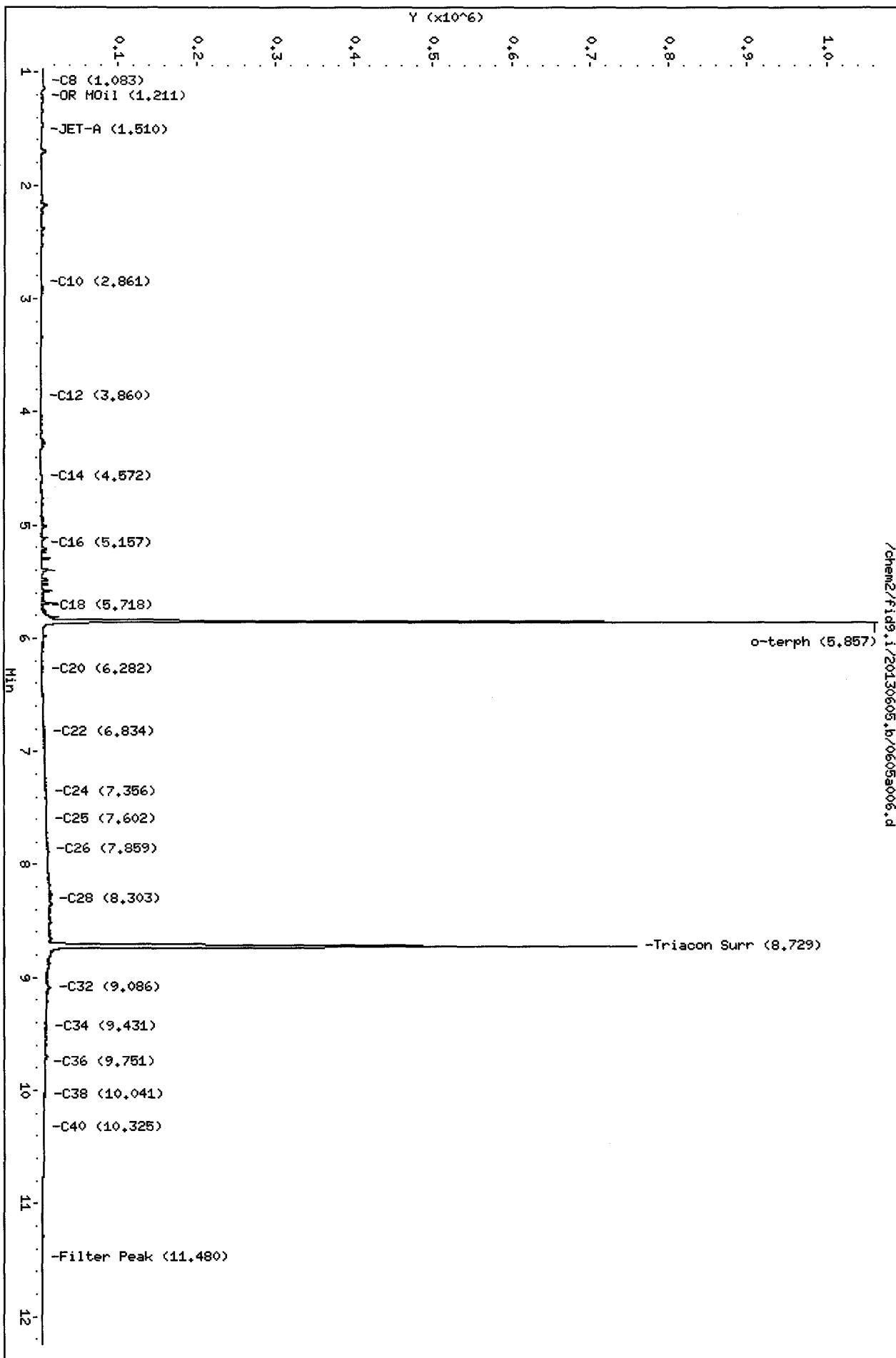
Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	941652	36.8	81.7
Triacontane	840692	44.5	98.8

SC
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

/chem2/fid9.i/20130605.b/0605a006.d



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a007.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54B
 Client ID: A2-W41-S-4
 Injection: 05-JUN-2013 10:57
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	89457	3
C8	1.084	-0.001	1291	591	DIESEL (C12-C24)	588450	31.50 ✓
C10	2.861	0.004	379	482	M.OIL (C24-C38)	1198001	74.71 ✓
C12	3.863	0.001	223	86	AK-102 (C10-C25)	656624	30.25
C14	4.569	0.008	1326	1267	AK-103 (C25-C36)	1064273	91.61
C16	5.152	-0.001	2498	3481			
C18	5.721	0.002	3360	1054			
C20	6.287	0.004	2865	1576			
C22	6.839	0.005	4601	6549			
C24	7.360	0.002	5696	6244			
C25	7.609	0.004	6665	6787			
C26	7.864	0.001	7197	5788			
C28	8.307	0.002	10295	3030	IT.DIES (C10-C24)	606093	28.00
C32	9.080	-0.009	12210	22671			
C34	9.431	0.001	6979	4493	BUNKERC (C10-C38)	1804094	194.69
Filter Peak	11.481	-0.001	1663	1411	HYDRAUL (C24-C38)	1198001	75.48
C36	9.747	-0.003	5928	1170			
C38	10.044	-0.004	4492	2366			
C40	10.325	-0.008	3252	1884			
o-terph	5.854	0.000	1018097	892643			
Triacon Surr	8.721	-0.004	711465	804805	IT.MOIL (C24-C40)	2063238	81.32

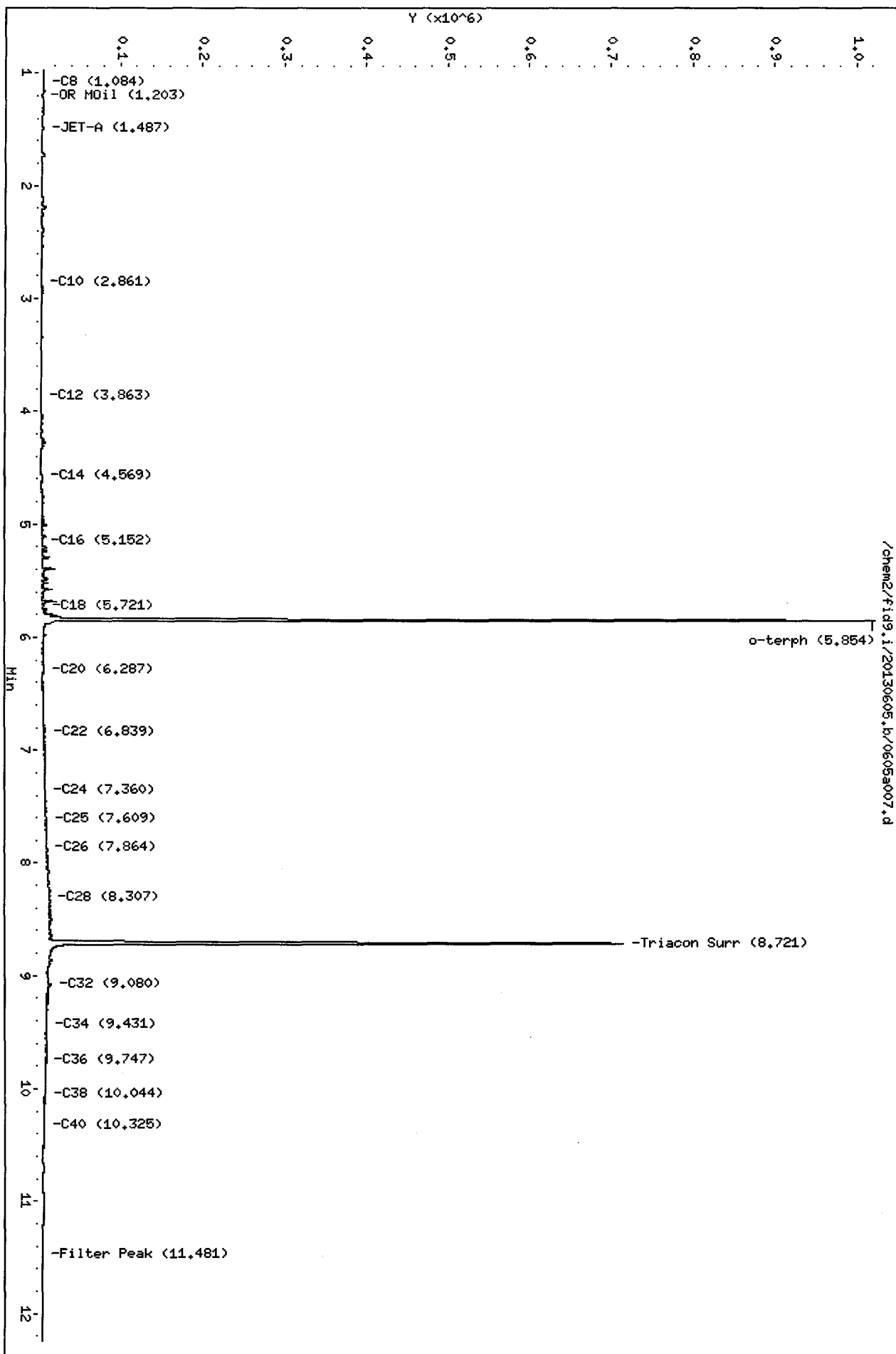
M Indicates manual integration within range.

Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	892643	34.9	77.5
Triacontane	804805	42.6	94.6

Handwritten: 50
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a008.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54C
 Client ID: A2-W42-S-4
 Injection: 05-JUN-2013 11:20
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	93016	3
C8	1.080	-0.005	1367	1334	DIESEL (C12-C24)	496619	26.59 ✓
C10	2.864	0.008	432	536	M.OIL (C24-C38)	708382	44.18 ✓
C12	3.860	-0.003	204	162	AK-102 (C10-C25)	546447	25.17
C14	4.569	0.009	1199	1058	AK-103 (C25-C36)	622237	53.56
C16	5.154	0.001	2631	3838			
C18	5.721	0.002	3513	2382			
C20	6.276	-0.007	2574	1185			
C22	6.836	0.002	3339	3988			
C24	7.358	0.000	3901	3206			
C25	7.606	0.001	4408	2748			
C26	7.861	-0.002	4697	1474			
C28	8.313	0.007	5951	3126	IT.DIES (C10-C24)	514996	23.79
C32	9.083	-0.005	7544	13366			
C34	9.434	0.004	4237	923	BUNKERC (C10-C38)	1223378	132.02
Filter Peak	11.467	-0.014	2613	5372	HYDRAUL (C24-C38)	708382	44.63
C36	9.752	0.002	3941	2199			
C38	10.048	0.001	2936	875			
C40	10.329	-0.004	2842	1747			
o-terph	5.856	0.002	984483	884475			
Triacon Surr	8.722	-0.003	706915	769189	IT.MOIL (C24-C40)	1526868	48.96

M Indicates manual integration within range.

Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	884475	34.5	76.7 ✓
Triacontane	769189	40.7	90.4

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Date: 05-JUN-2013 11:20

Client ID: A2-W42-S-4

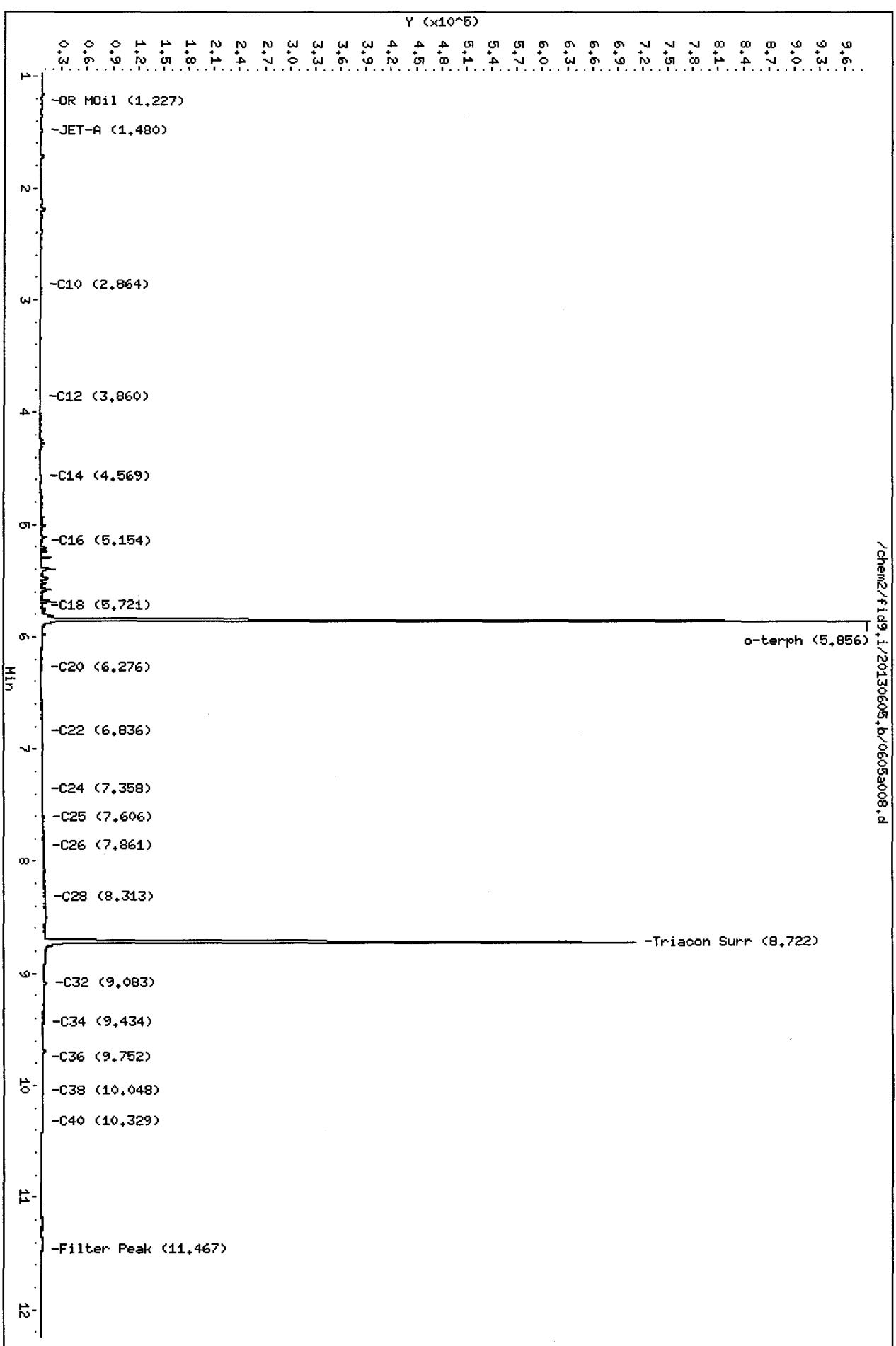
Sample Info: MS54C

Instrument: fid9.i

Column phase: RTX-1

Operator: JM

Column diameter: 0.25



MS54: 00016

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a009.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54D
 Client ID: A2-W43-S-4
 Injection: 05-JUN-2013 11:43
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	109291	3
C8	1.088	0.003	1595	3781	DIESEL (C12-C24)	3604349	192.95 ✓
C10	2.861	0.005	539	643	M.OIL (C24-C38)	9859792	614.88 ✓
C12	3.868	0.006	2079	3721	AK-102 (C10-C25)	4026677	185.50 M
C14	4.559	-0.002	3584	6674	AK-103 (C25-C36)	8705551	749.33 M
C16	5.158	0.005	8681	3575			
C18	5.720	0.001	17856	15358			
C20	6.283	0.001	21866	5980			
C22	6.827	-0.007	31958	25204			
C24	7.358	0.000	45284	25773			
C25	7.611	0.006	51626	32371			
C26	7.866	0.004	57007	15869			
C28	8.308	0.003	79454	21683	IT.DIES (C10-C24)	3627886	167.60 M
C32	9.087	-0.001	70691	68365			
C34	9.424	-0.006	68521	60780	BUNKERC (C10-C38)	13487678	1455.50 M
Filter Peak	11.484	0.003	4503	1598	HYDRAUL (C24-C38)	9859792	621.20
C36	9.751	0.002	47846	35871			
C38	10.044	-0.003	38270	21862			
C40	10.336	0.004	24489	16872			
o-terph	5.849	-0.004	843338	861844			
Triacon Surr	8.726	0.001	658094	783475	IT.MOIL (C24-C40)	11097112	666.48 M

M Indicates manual integration within range.

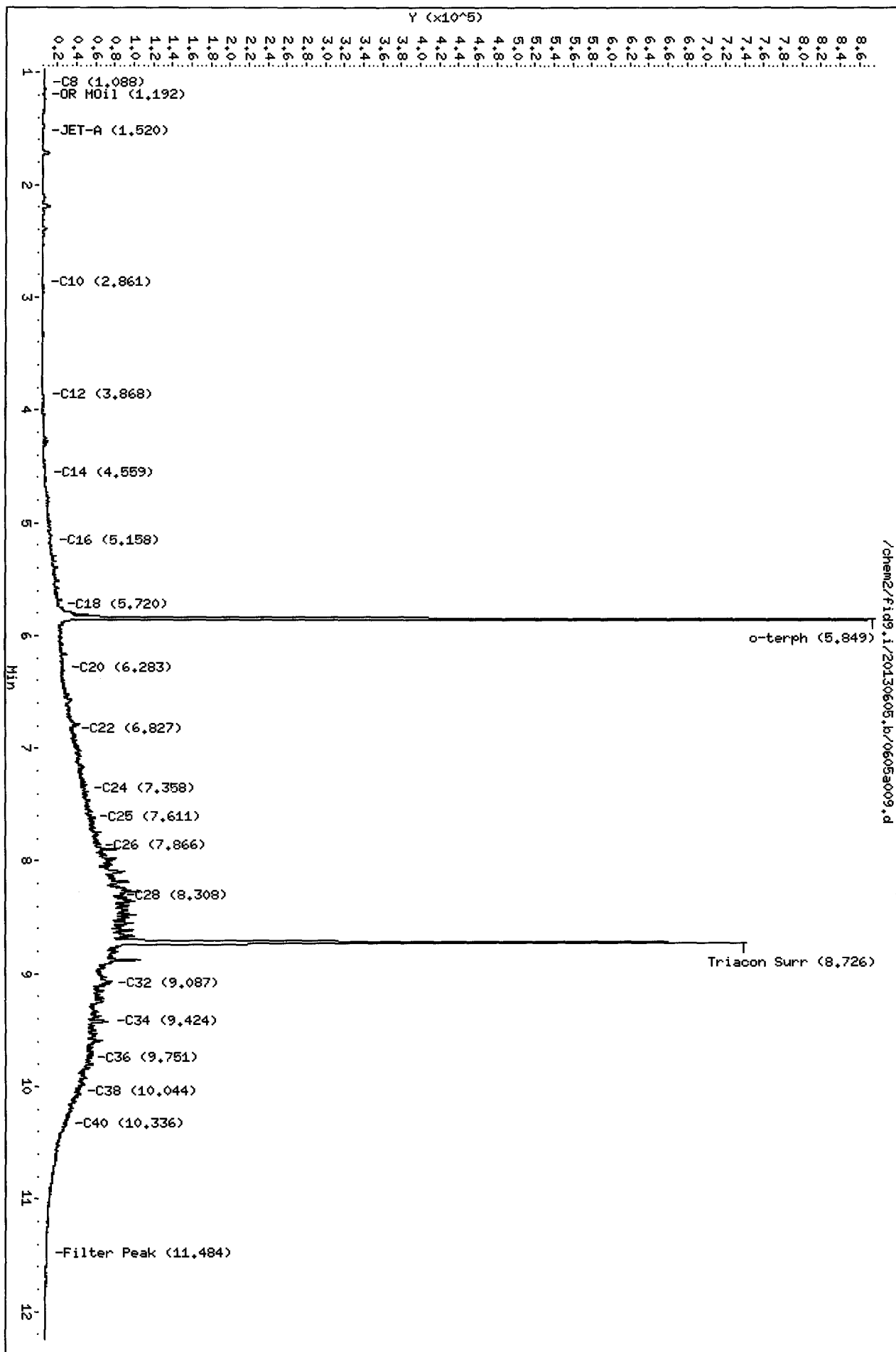
Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

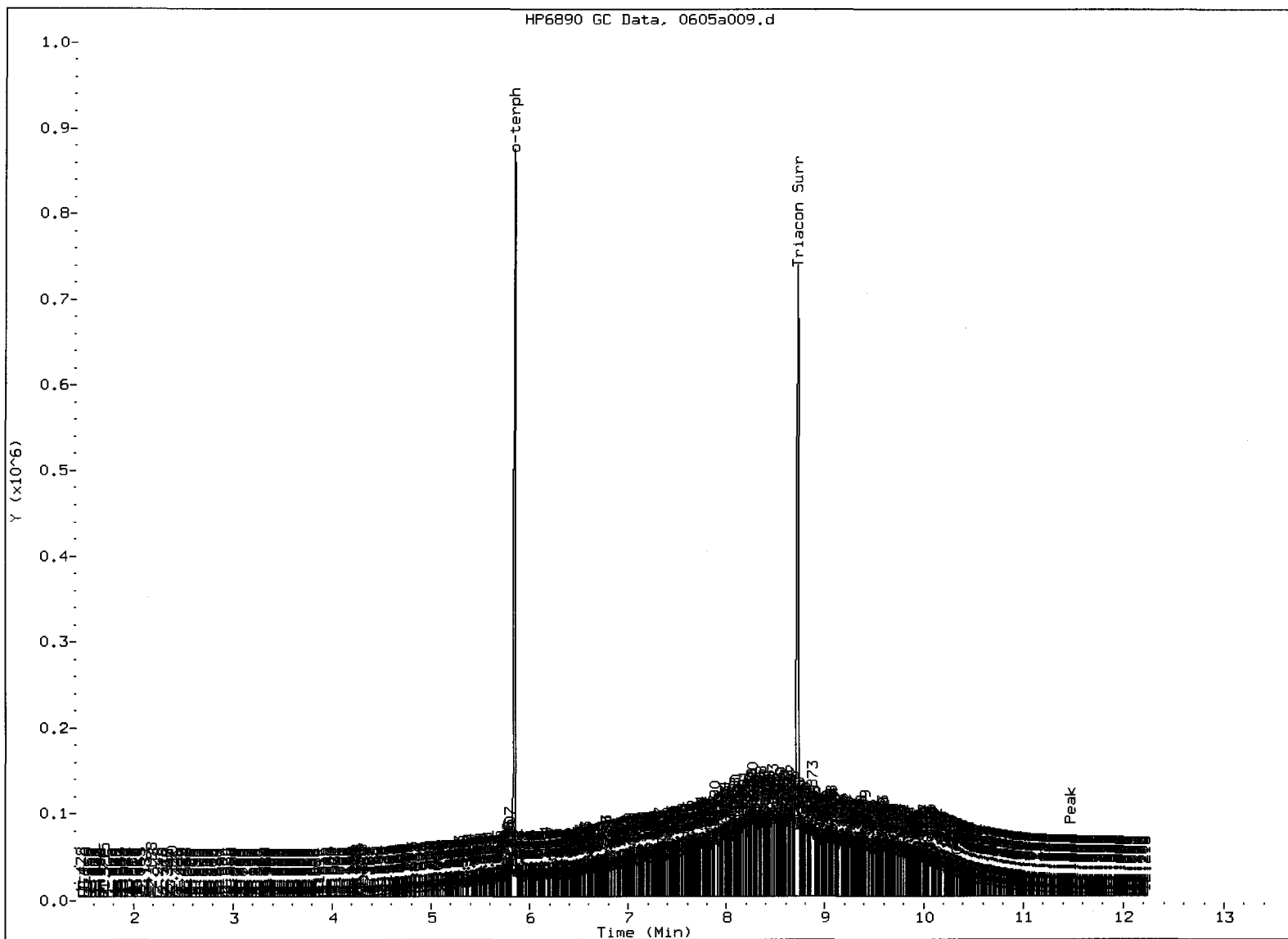
Surrogate	Area	Amount	%Rec
o-Terphenyl	861844	33.7	74.8
Triacontane	783475	41.5	92.1

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

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6/5/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: ju

Date: 6/5/10

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a010.d
Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 06/05/2013

ARI ID: WS54E
Client ID: A2-W44-S-4
Injection: 05-JUN-2013 12:06
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	93779	3
C8	1.086	0.001	1301	987	DIESEL (C12-C24)	1350336	72.29 ✓
C10	2.862	0.006	586	669	M.OIL (C24-C38)	4393929	274.02 ✓
C12	3.859	-0.004	178	142	AK-102 (C10-C25)	1548876	71.35 M
C14	4.568	0.007	1365	2095	AK-103 (C25-C36)	3919466	337.37 M
C16	5.154	0.001	2848	3972			
C18	5.718	-0.001	5510	2259			
C20	6.284	0.002	7643	1509			
C22	6.836	0.002	12127	3105			
C24	7.357	-0.001	18523	6857			
C25	7.609	0.004	22535	6676			
C26	7.862	-0.001	27049	13353			
C28	8.302	-0.003	36701	25470	IT.DIES (C10-C24)	1369332	63.26 M
C32	9.083	-0.005	35525	41025			
C34	9.438	0.008	24115	14883	BUNKERC (C10-C38)	5763261	621.93 M
Filter Peak	11.475	-0.006	2699	1940	HYDRAUL (C24-C38)	4393929	276.83
C36	9.756	0.006	21621	7132			
C38	10.052	0.004	16121	6287			
C40	10.333	0.001	10379	3273			
o-terph	5.855	0.001	895218	920948			
Triacon Surr	8.725	0.000	688343	809867	IT.MOIL (C24-C40)	5417948	297.78 M

M Indicates manual integration within range.

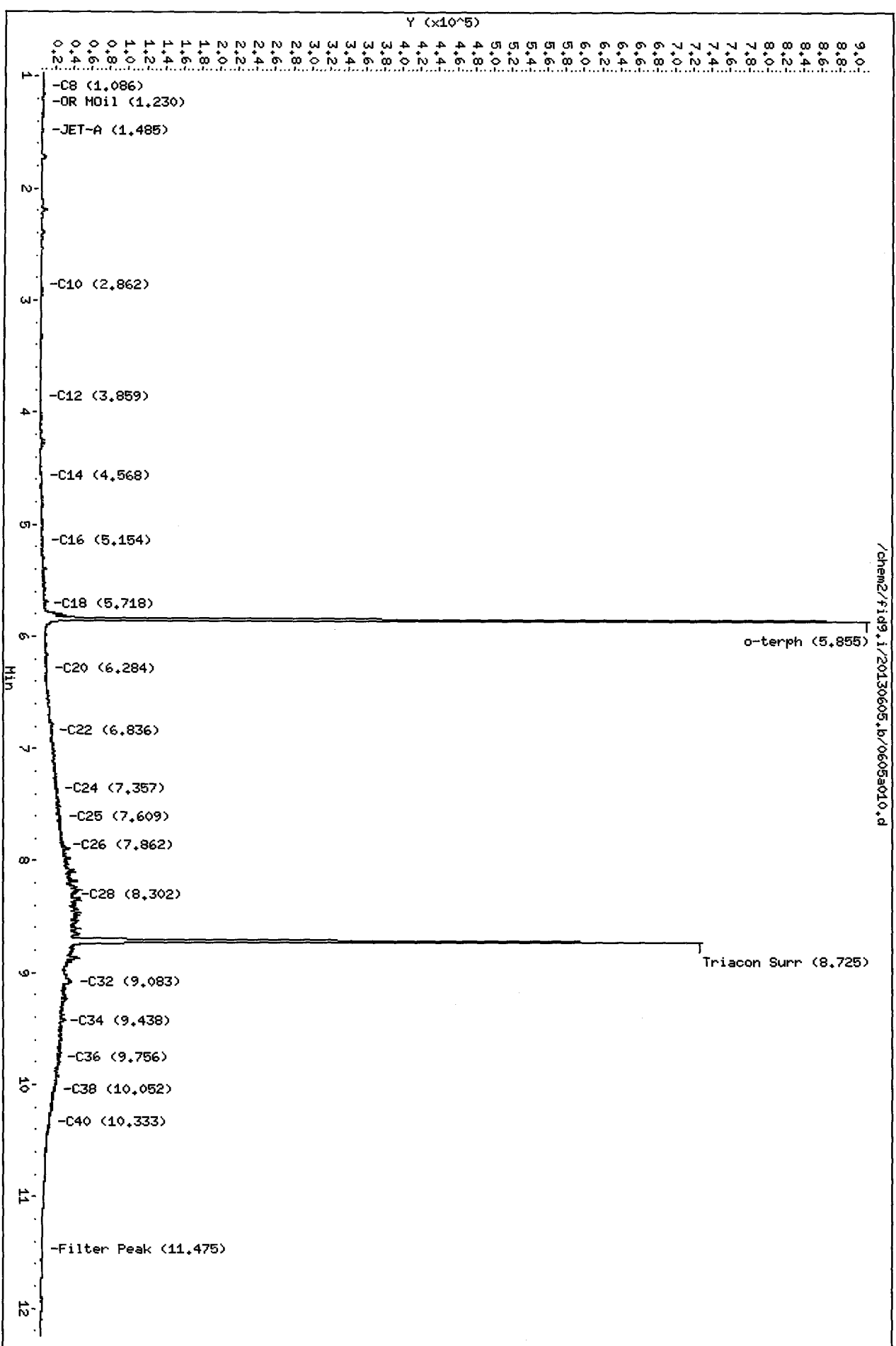
Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

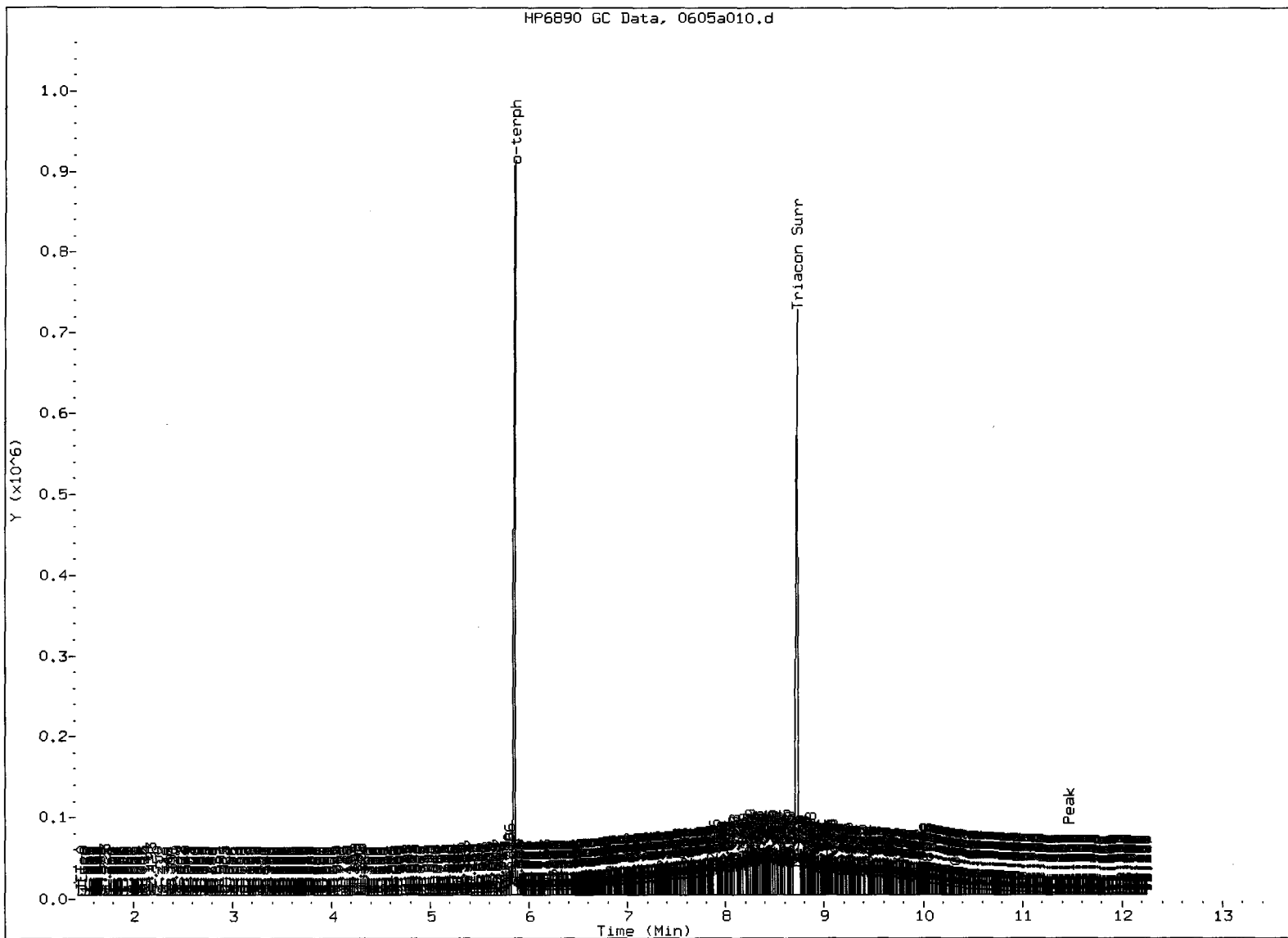
Surrogate	Area	Amount	%Rec
o-Terphenyl	920948	36.0	79.9
Triacontane	809867	42.9	95.2

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

JW
6/5/12





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JL

Date: 6/5/12

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a011.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54F
 Client ID: A2-W45-S-4
 Injection: 05-JUN-2013 12:29
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	101297	3
C8	1.092	0.007	1381	2260	DIESEL (C12-C24)	512560	27.44 ✓
C10	2.862	0.005	506	555	M.OIL (C24-C38)	1815645	113.23 ✓
C12	3.859	-0.004	198	60	AK-102 (C10-C25)	580451	26.74
C14	4.566	0.005	1137	1313	AK-103 (C25-C36)	1564294	134.65 M
C16	5.154	0.000	2229	3167			
C18	5.722	0.003	3423	3669			
C20	6.287	0.005	2691	481			
C22	6.831	-0.003	4059	4522			
C24	7.354	-0.004	5525	3616			
C25	7.602	-0.003	6856	5179			
C26	7.862	-0.001	7521	3325			
C28	8.309	0.003	11821	12311	IT.DIES (C10-C24)	531176	24.54
C32	9.096	0.007	14012	11629			
C34	9.428	-0.002	13401	10825	BUNKERC (C10-C38)	2346822	253.25 M
Filter Peak	11.484	0.003	2060	1615	HYDRAUL (C24-C38)	1815645	114.39
C36	9.753	0.003	13561	15347			
C38	10.047	0.000	10643	8872			
C40	10.335	0.002	6708	3666			
o-terph	5.849	-0.004	657750	580321			
Triacon Surr	8.715	-0.010	437618	465314	IT.MOIL (C24-C40)	2417420	126.15 M

M Indicates manual integration within range.

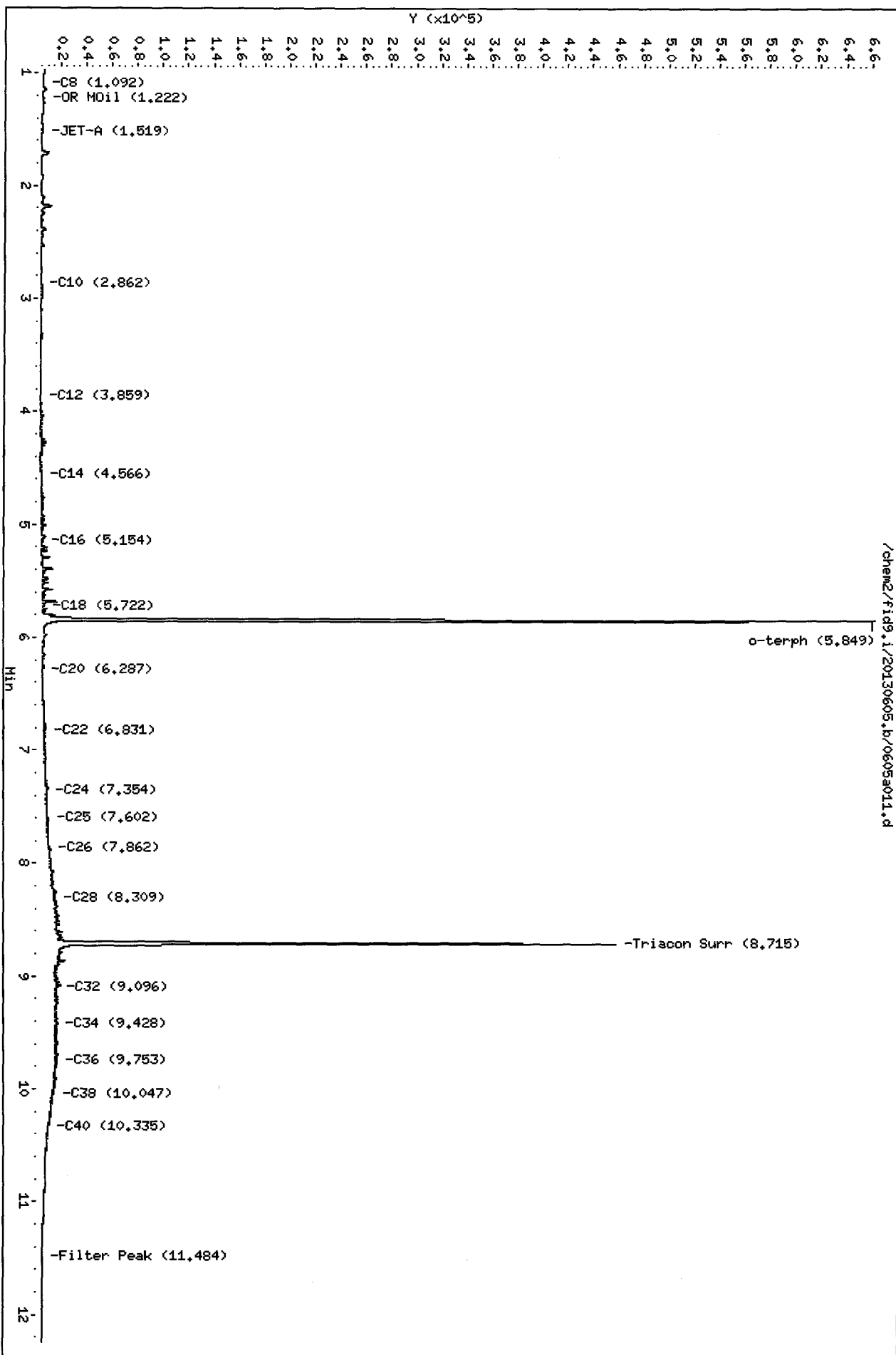
Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

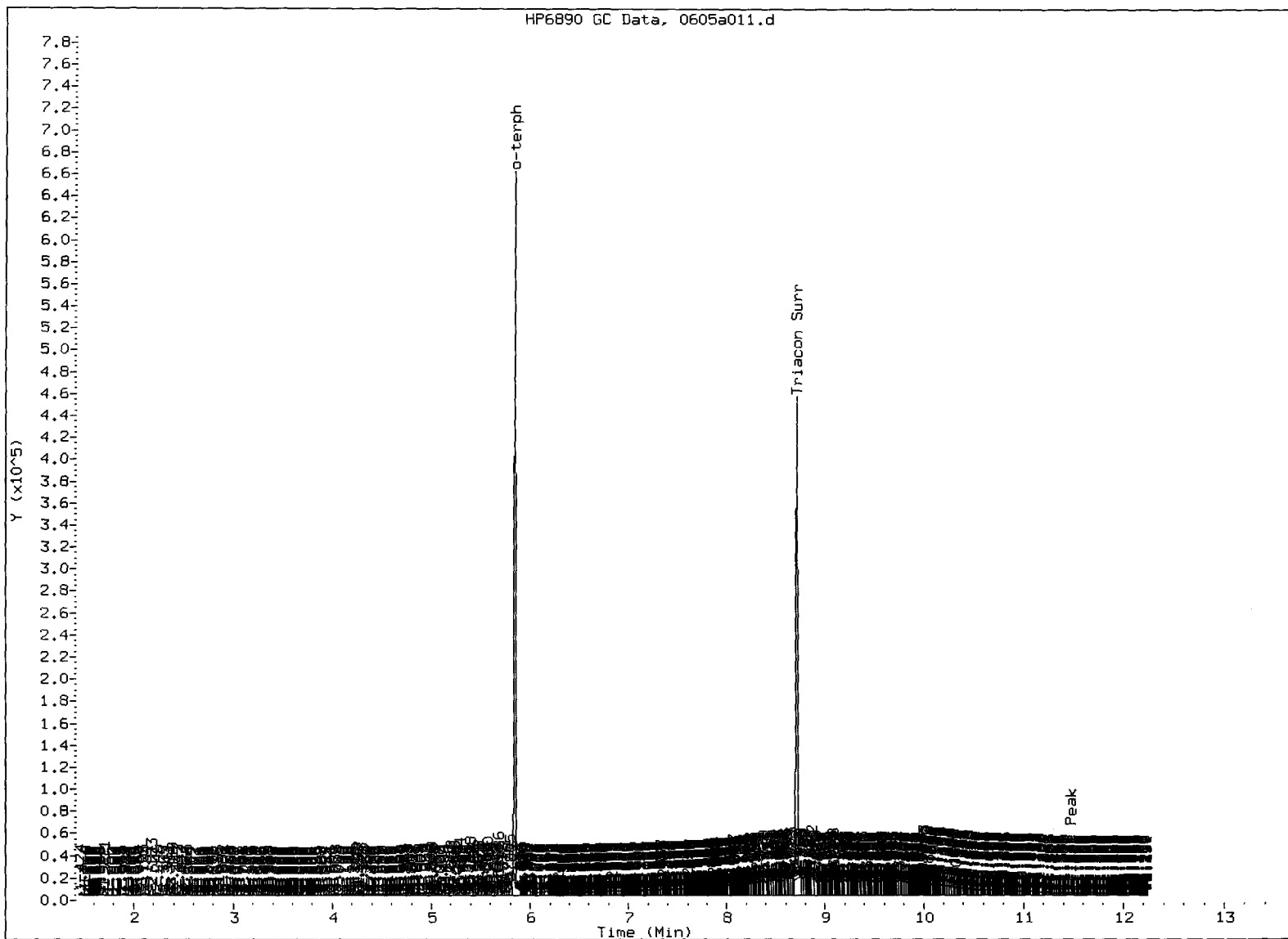
Surrogate	Area	Amount	%Rec
o-Terphenyl	580321	22.7	50.4 ✓
Triacontane	465314	24.6	54.7

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

JW
6/5/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ⑤. Surrogate Skimmed

Analyst: ju

Date: 6/5/10

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a012.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54G
 Client ID: A2-W46-S-4
 Injection: 05-JUN-2013 12:51
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	163022	5
C8	1.084	0.000	4842	10438	DIESEL (C12-C24)	19845814	1062.42
C10	2.858	0.002	720	847	M.OIL (C24-C38)	28604604	1783.86
C12	3.861	-0.001	5676	5554	AK-102 (C10-C25)	21473782	989.25 M
C14	4.557	-0.004	9328	11584	AK-103 (C25-C36)	25804391	2221.10 M
C16	5.152	-0.001	27083	23743			
C18	5.721	0.003	91898	37784			
C20	6.282	0.000	173481	126804			
C22	6.834	0.001	204499	76718			
C24	7.364	0.007	182763	46910			
C25	7.611	0.006	193454	106897			
C26	7.859	-0.003	193627	60926			
C28	8.308	0.002	251002	112646	IT.DIES (C10-C24)	19885945	918.69 M
C32	9.087	-0.001	193981	63519			
C34	9.434	0.005	170003	193236	BUNKERC (C10-C38)	48490549	5232.77 M
Filter Peak	11.482	0.001	4025	3196	HYDRAUL (C24-C38)	28604604	1802.19
C36	9.755	0.006	108566	71920			
C38	10.049	0.002	67932	32723			
C40	10.337	0.005	33427	11227			
o-terph	5.854	0.001	780159	773059			
Triacon Surr	8.738	0.014	501770	698639	IT.MOIL (C24-C40)	30013156	1894.33 M

M Indicates manual integration within range.

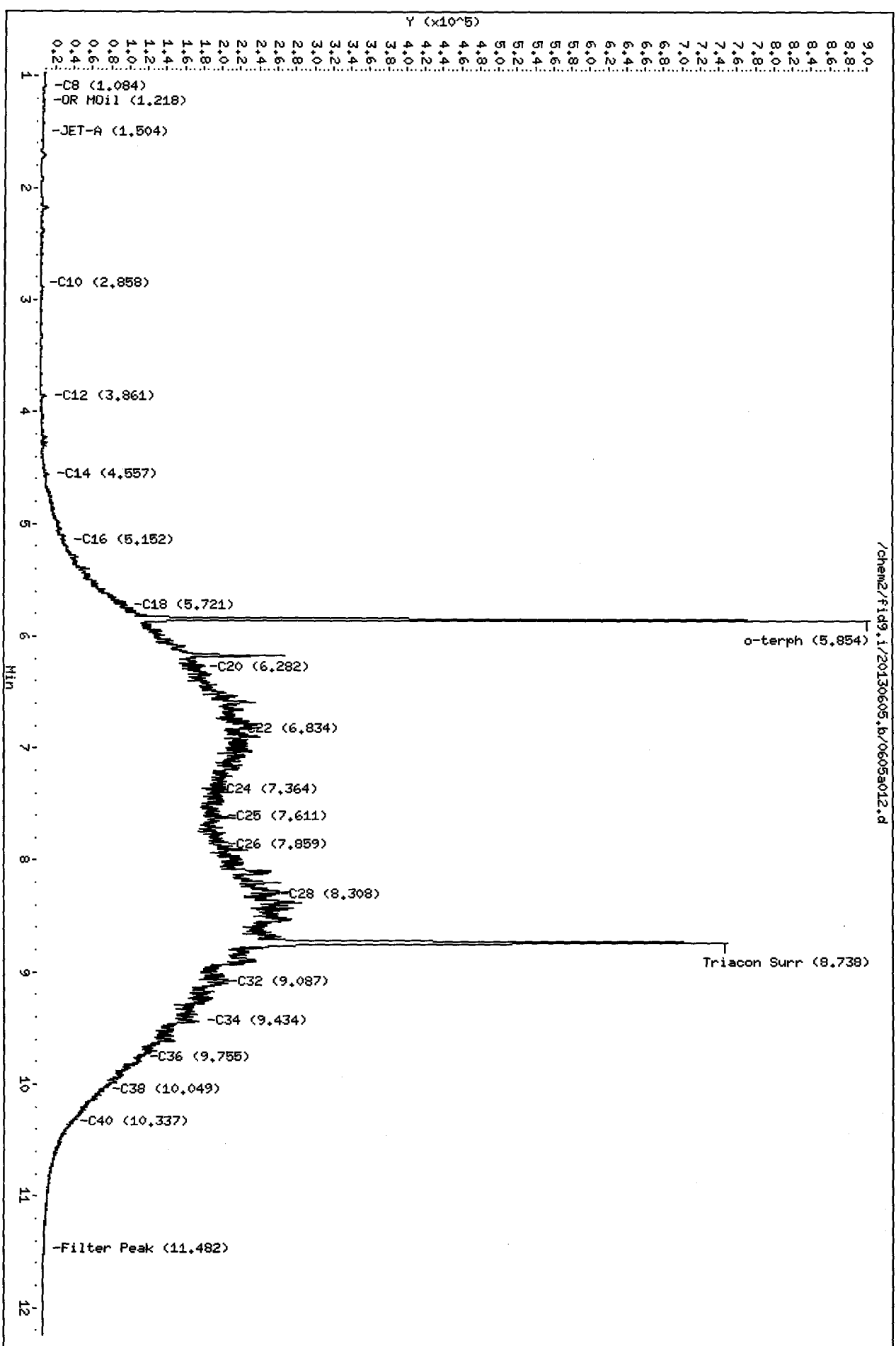
Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

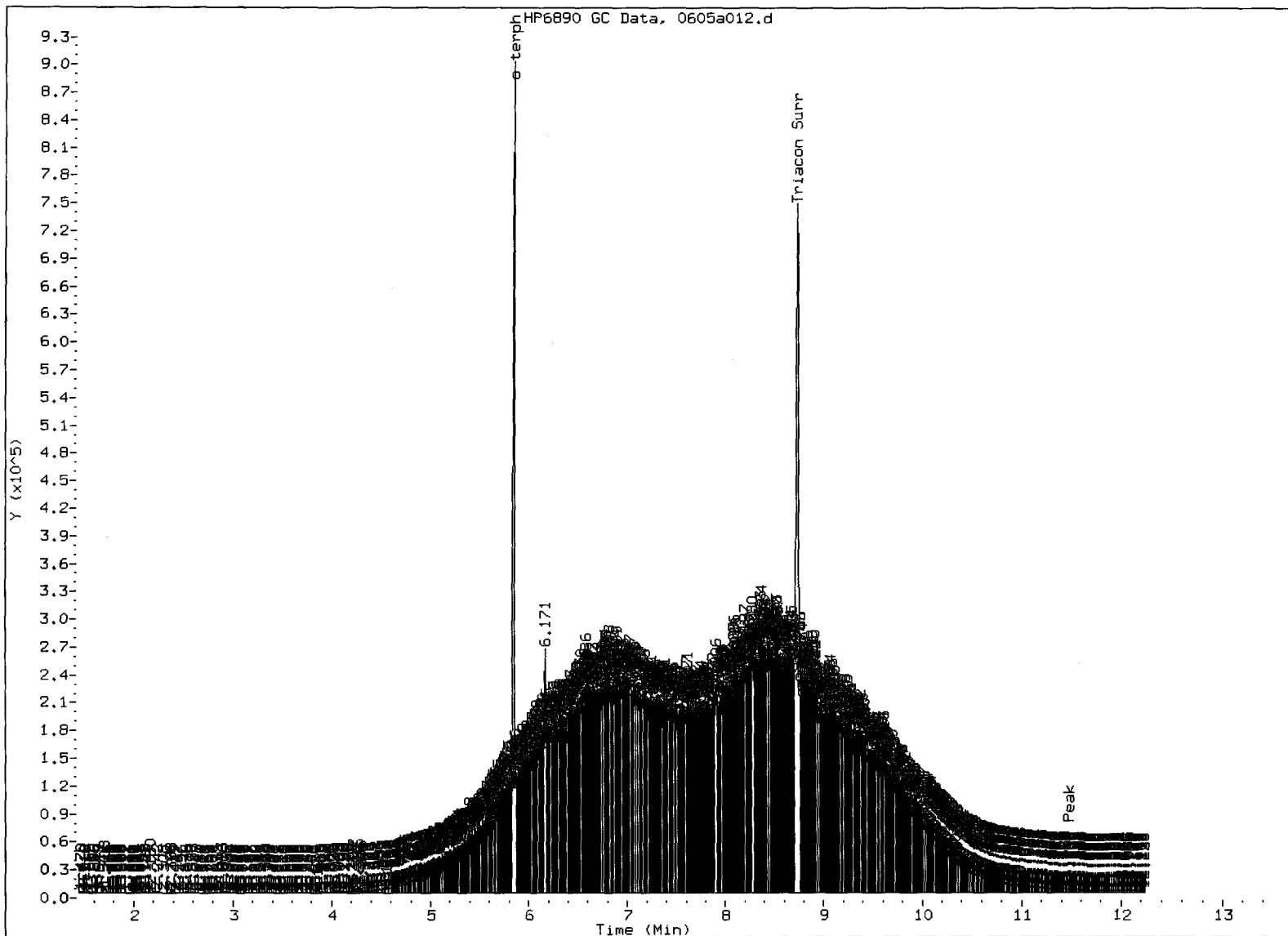
Surrogate	Area	Amount	%Rec
o-Terphenyl	773059	30.2	67.1
Triacontane	698639	37.0	82.1

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

300
6/5/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JW

Date: 6/5/10

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS54-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-060413	79.4%	0
LCS-060413	82.5%	0
A2-W40-S-4	81.7%	0
A2-W41-S-4	77.4%	0
A2-W42-S-4	76.7%	0
A2-W43-S-4	74.8%	0
A2-W44-S-4	79.9%	0
A2-W45-S-4	50.4%	0
A2-W46-S-4	67.1%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11825 to 13-11831

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-060413
LAB CONTROL

Lab Sample ID: LCS-060413
 LIMS ID: 13-11825
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/06/13

QC Report No: WS54-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 06/03/13
 Date Received: 06/04/13

Date Extracted: 06/04/13
 Date Analyzed: 06/05/13 13:37
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	116	150	77.3%

TPHD Surrogate Recovery

o-Terphenyl	82.5%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a014.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54LCSS1
 Client ID: WS54LCSS1
 Injection: 05-JUN-2013 13:37
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4838585	141
C8	1.097	0.012	11144	15853	DIESEL (C12-C24)	21583914	1155.47 ✓
C10	2.858	0.002	88904	89500	M.OIL (C24-C38)	332898	20.76 ✓
C12	3.859	-0.003	205505	236400	AK-102 (C10-C25)	25138737	1158.09 M
C14	4.559	-0.002	362214	417079	AK-103 (C25-C36)	244529	21.05
C16	5.155	0.001	532115	568222			
C18	5.723	0.004	478143	603812			
C20	6.280	-0.002	295264	376184			
C22	6.827	-0.007	125402	170531			
C24	7.348	-0.010	40760	57298			
C25	7.599	-0.006	18692	31935			
C26	7.844	-0.019	8142	17785			
C28	8.297	-0.009	3190	5664	IT.DIES (C10-C24)	25054363	1157.46 M
C32	9.101	0.013	2028	2328			
C34	9.430	0.000	95	27	BUNKERC (C10-C38)	25387261	2739.62 M
Filter Peak	11.479	-0.002	495	165	HYDRAUL (C24-C38)	332898	20.97
C36	9.739	-0.011	580	760			
C38	10.043	-0.004	310	211			
C40	10.328	-0.004	663	284			
o-terph	5.859	0.005	1037659	950393			
Triacon Surr	8.721	-0.004	770842	855691	IT.MOIL (C24-C40)	1198154	22.13

M Indicates manual integration within range.

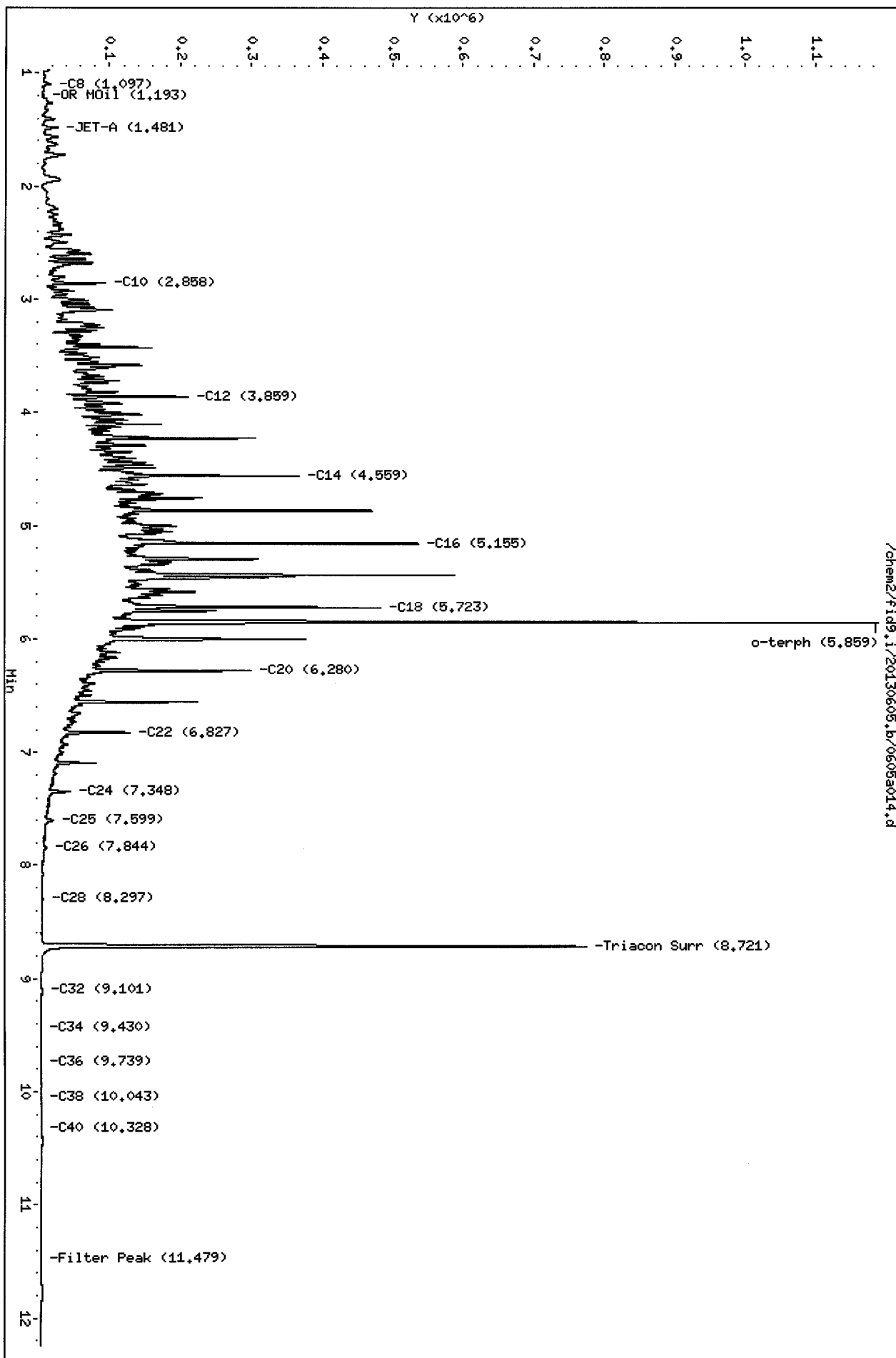
Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

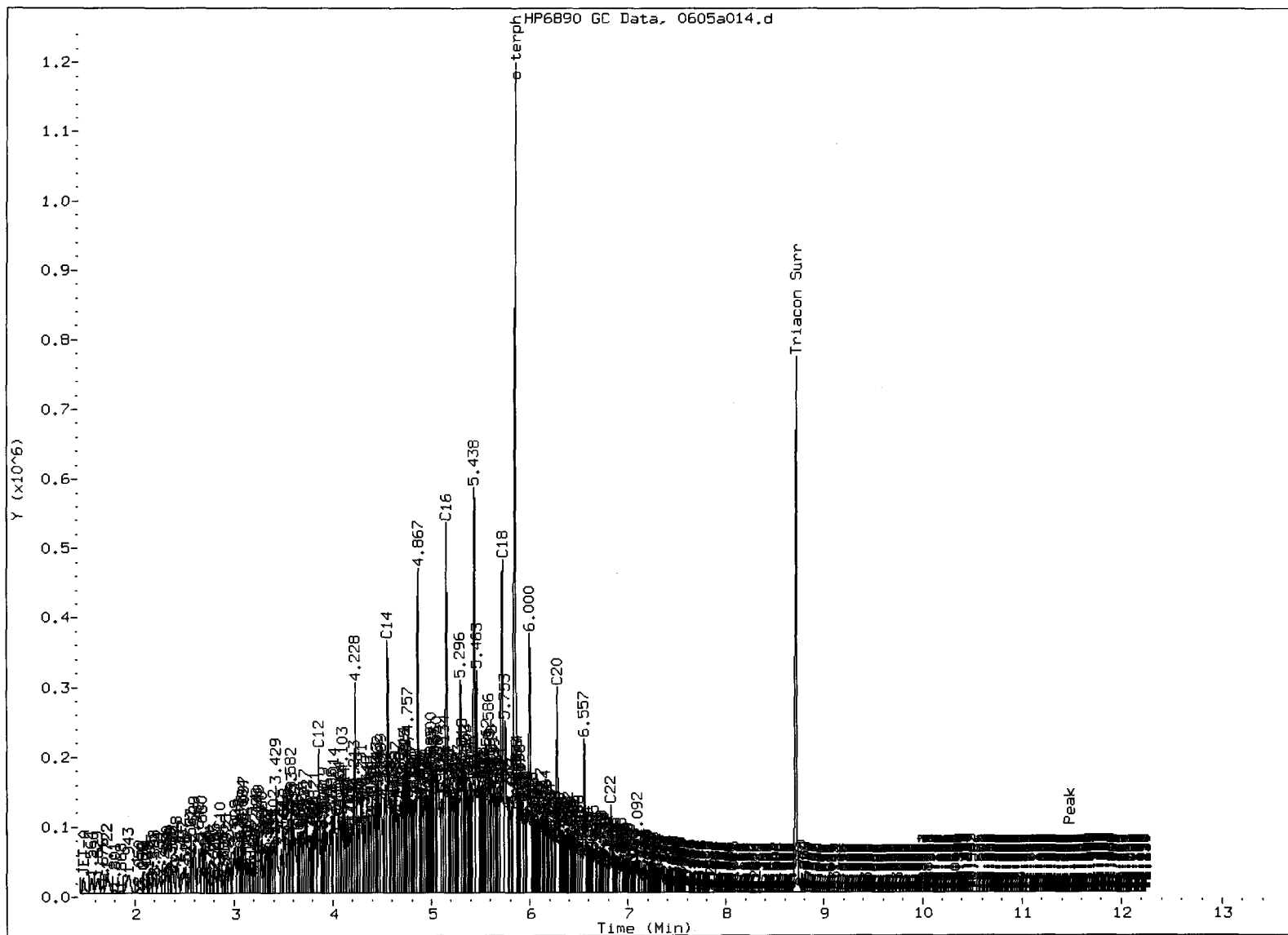
Surrogate	Area	Amount	%Rec
o-Terphenyl	950393	37.1	82.5
Triacontane	855691	45.3	100.6

JW
6/5/10

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

JM
6/5/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JL

Date: 6/5/17

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 06/04/13

ARI Job: WS54
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11825-060413MB1	Method Blank	10.0 g	1.00 mL	-	06/04/13
13-11825-060413LCS1	Lab Control	10.0 g	1.00 mL	-	06/04/13
13-11825-WS54A	A2-W40-S-4	8.70 g	1.00 mL	D	06/04/13
13-11826-WS54B	A2-W41-S-4	8.59 g	1.00 mL	D	06/04/13
13-11827-WS54C	A2-W42-S-4	9.23 g	1.00 mL	D	06/04/13
13-11828-WS54D	A2-W43-S-4	9.00 g	1.00 mL	D	06/04/13
13-11829-WS54E	A2-W44-S-4	8.84 g	1.00 mL	D	06/04/13
13-11830-WS54F	A2-W45-S-4	8.74 g	1.00 mL	D	06/04/13
13-11831-WS54G	A2-W46-S-4	7.38 g	1.00 mL	D	06/04/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W40-S-4

SAMPLE

Lab Sample ID: WS54A

LIMS ID: 13-11825

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 12:44

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 88 mg-dry-wt

Percent Moisture: 13.3%

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	14	< 14 U	
108-88-3	Toluene	14	< 14 U	
100-41-4	Ethylbenzene	14	< 14 U	
179601-23-1	m,p-Xylene	29	< 29 U	
95-47-6	o-Xylene	14	< 14 U	
	Gasoline Range Hydrocarbons	5.7	< 5.7 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	88.9%
Bromobenzene	88.7%

Gasoline Surrogate Recovery

Trifluorotoluene	88.6%
Bromobenzene	87.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a007.d ARI ID: WS54A
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a007.d Client ID: A2-W40-S-4
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 12:44
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.227	-0.007	15328	228743	88.6	TFT(Surr)
14.956	0.000	9778	95693	87.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	3166	0.002
8015B 2MP-TMB (4.57 to 15.67)	4363035	3167	0.001
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3166	0.001
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	3166	0.001
CalGas nC6-nC12 (5.10 to 17.32)	4309570	3167	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.227	-0.007	12813	88.9	TFT(Surr)
14.955	0.000	29089	88.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.133	-0.004	203	0.24N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.1/20130604-2.b/0604a007.d

Page 1

Date : 04-JUN-2013 12:44

Client ID: A2-M40-S-4

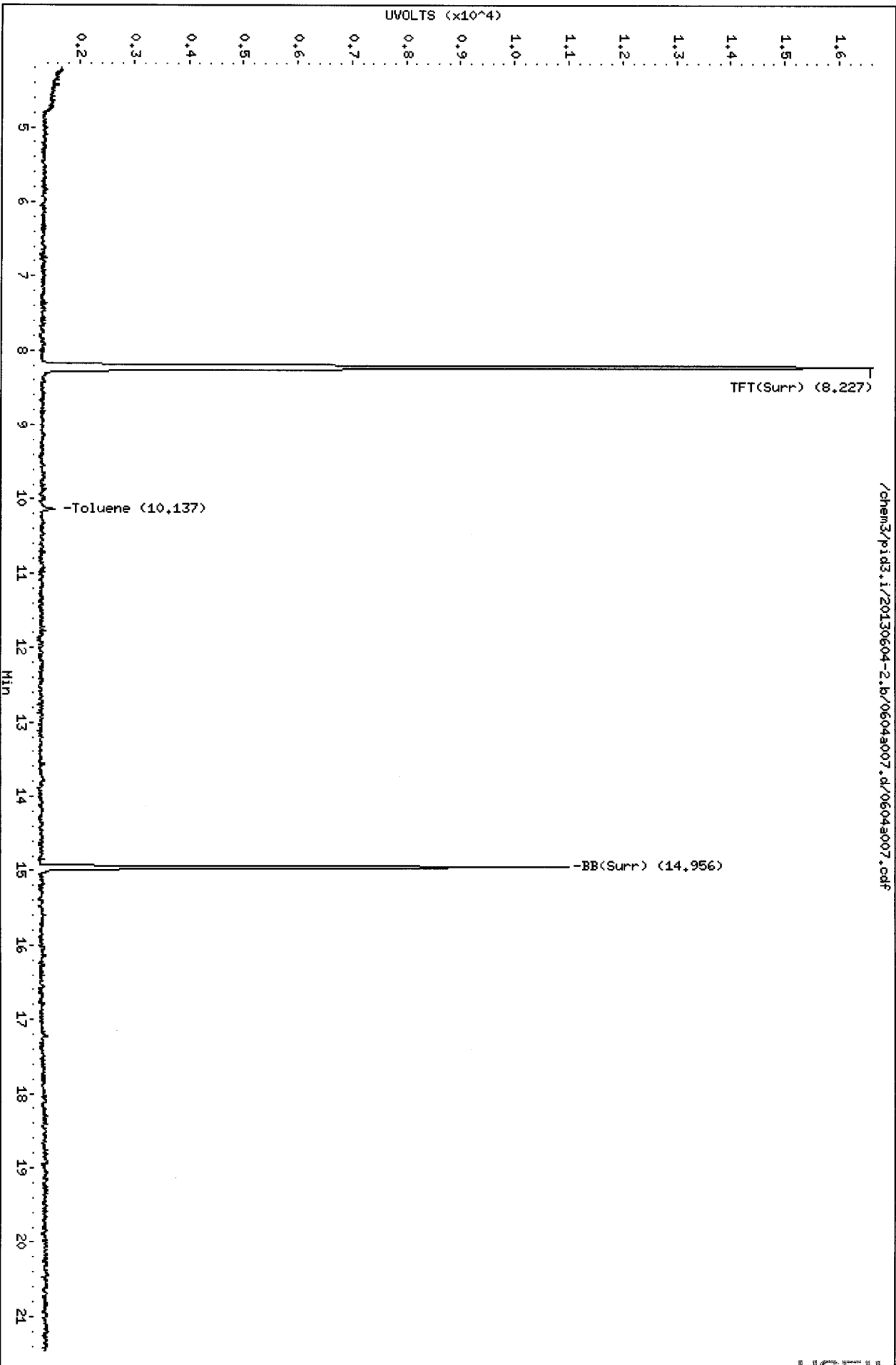
Sample Info: MS54A

Instrument: pid3.1

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 FID

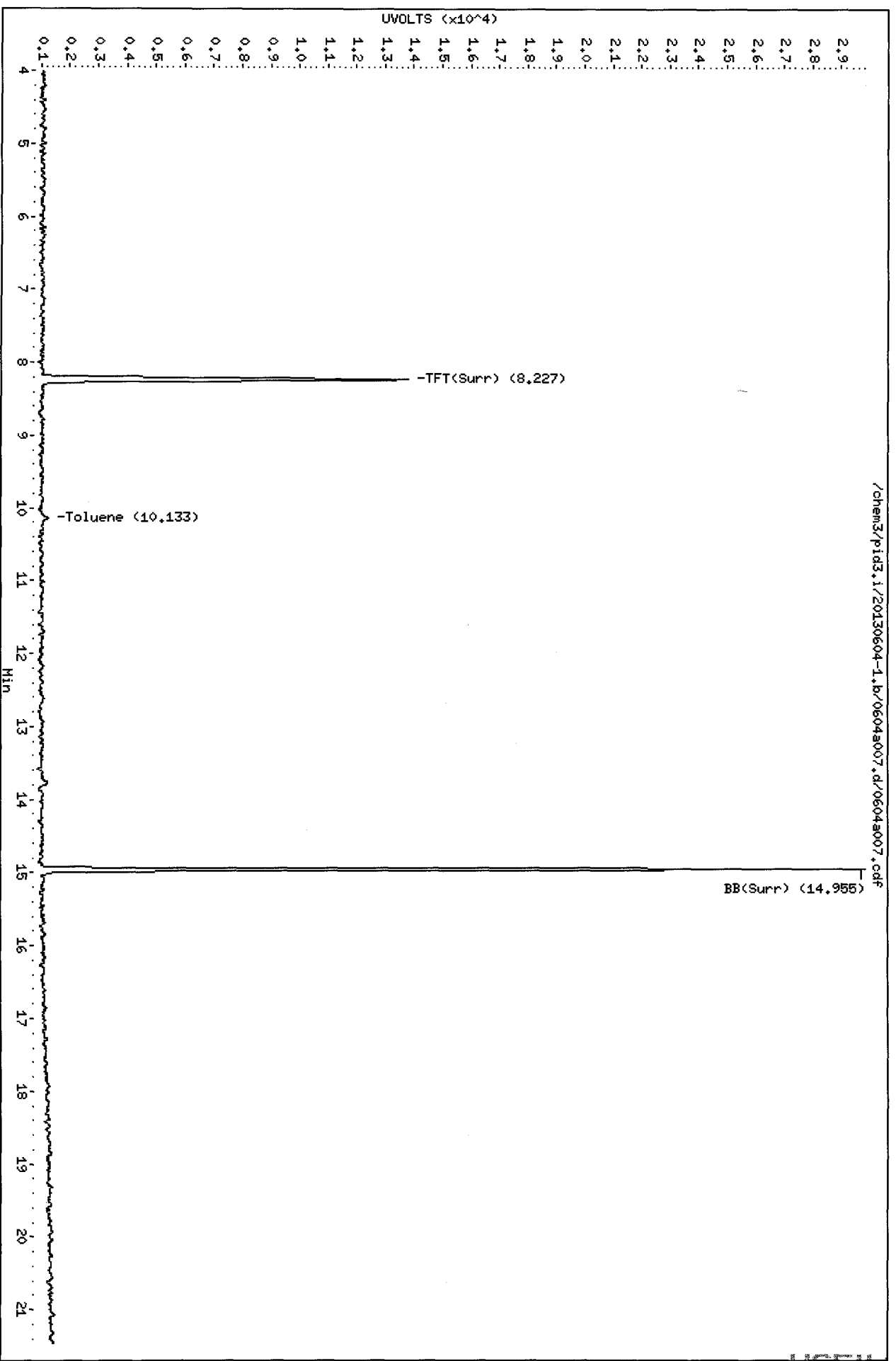


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MS54 00037

Data File: /chem3/pid3.i/20130604-1.b/0604s007.d
Date : 04-JUN-2013 12:44
Client ID: A2-M40-S-4
Sample Info: MS549
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



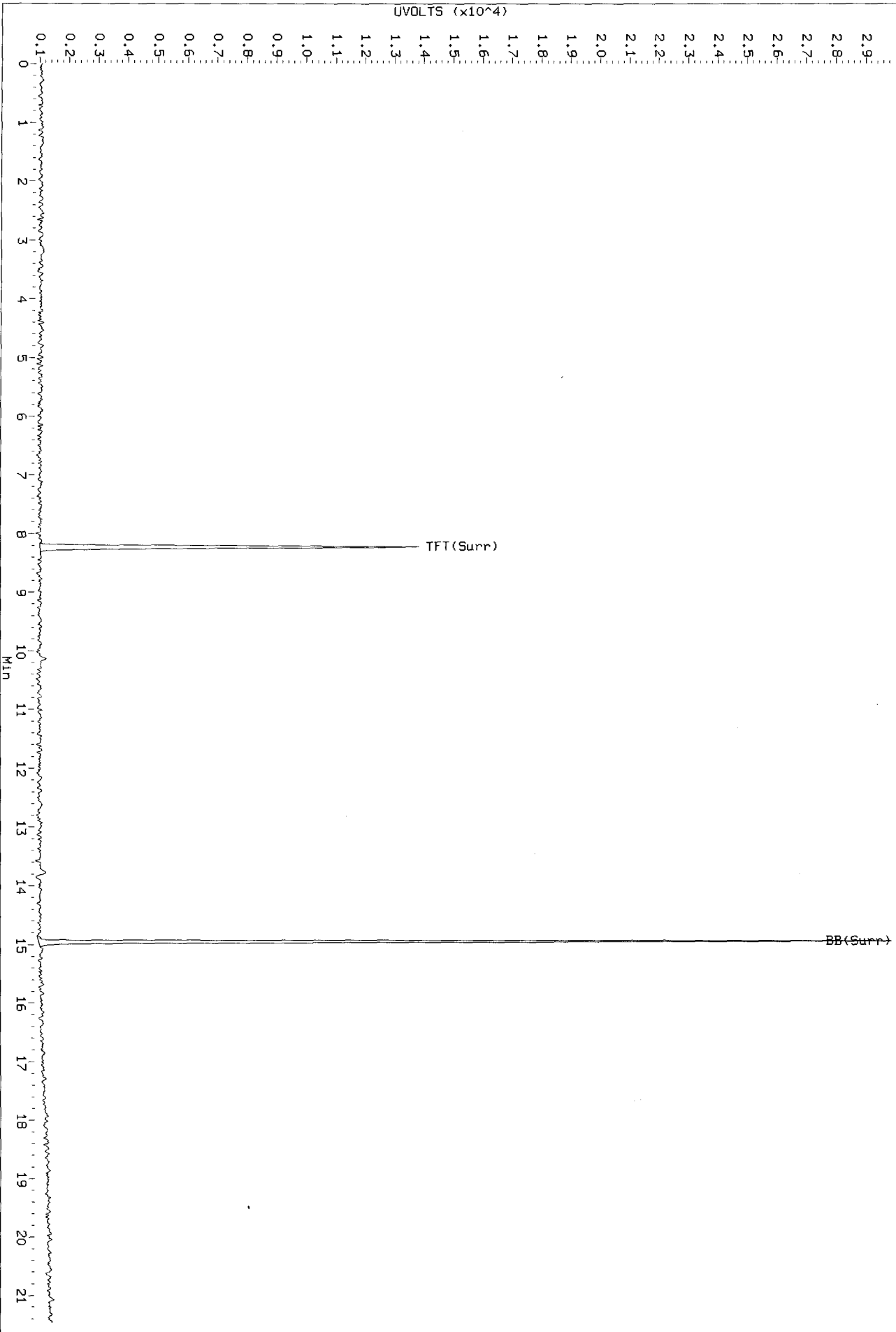
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000000 12003

PC
6/5/13

Data File: /chem3/pid3.1/20130604-1.b/0604a007.d/0604a007.cdf
Injection Date: 04-JUN-2013 12:44
Instrument: pid3.1
Client Sample ID: A2-W40-S-4

R1A 0604a007.cdf: 0.000 to 21.463 MIN

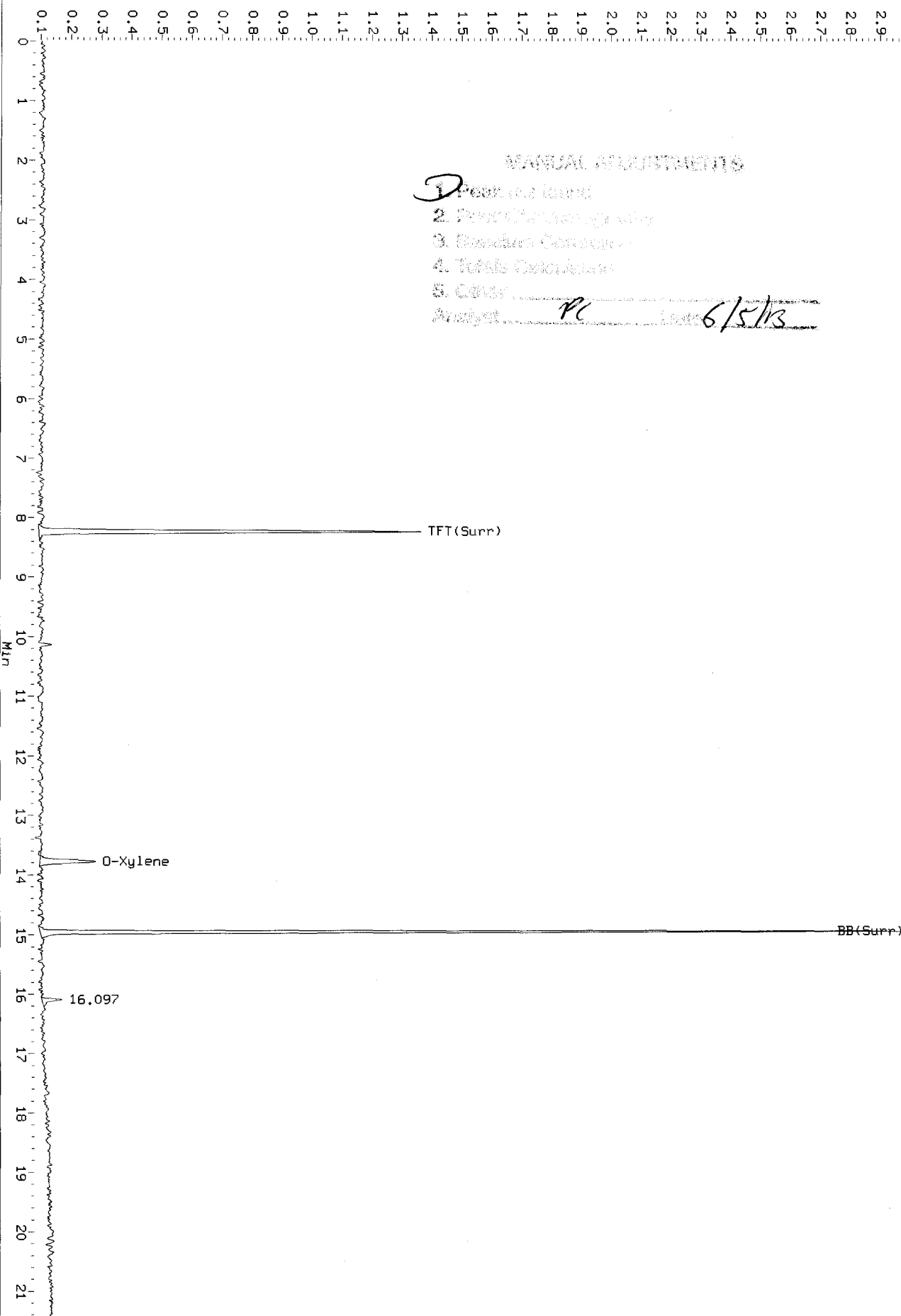


00000 : 1503

Data File: /chem3/pid3.1/20130604-1.b/0604a008.d/0604a008.cdf
Injection Date: 04-JUN-2013 13:13
Instrument: pid3.1
Client Sample ID: A2-W41-S-4

H1A 0604a008.cdf: 0.000 to 21.467 MIN

UVOLTS (x10⁴)



WS54 : 00040

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W41-S-4

SAMPLE

Lab Sample ID: WS54B

LIMS ID: 13-11826

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 13:13

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 14.4%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	31	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	32	< 32 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.5	< 6.5 U	---

BETX Surrogate Recovery

Trifluorotoluene	88.5%
Bromobenzene	87.9%

Gasoline Surrogate Recovery

Trifluorotoluene	90.3%
Bromobenzene	88.9%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a008.d ARI ID: WS54B
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a008.d Client ID: A2-W41-S-4
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 13:13
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.235	0.002	15614	230283	90.3	TFT(Surr)
14.959	0.004	9961	96863	88.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	26638	0.013
8015B 2MP-TMB (4.57 to 15.67)	4363035	20600	0.005
AK101 nC6-nC10 (5.10 to 14.57)	3480628	19248	0.006
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	26638	0.012
CalGas nC6-nC12 (5.10 to 17.32)	4309570	26638	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.235	0.001	12755	88.5	TFT(Surr)
14.959	0.004	28830	87.9	BB(Surr)

SW8021 (PID)

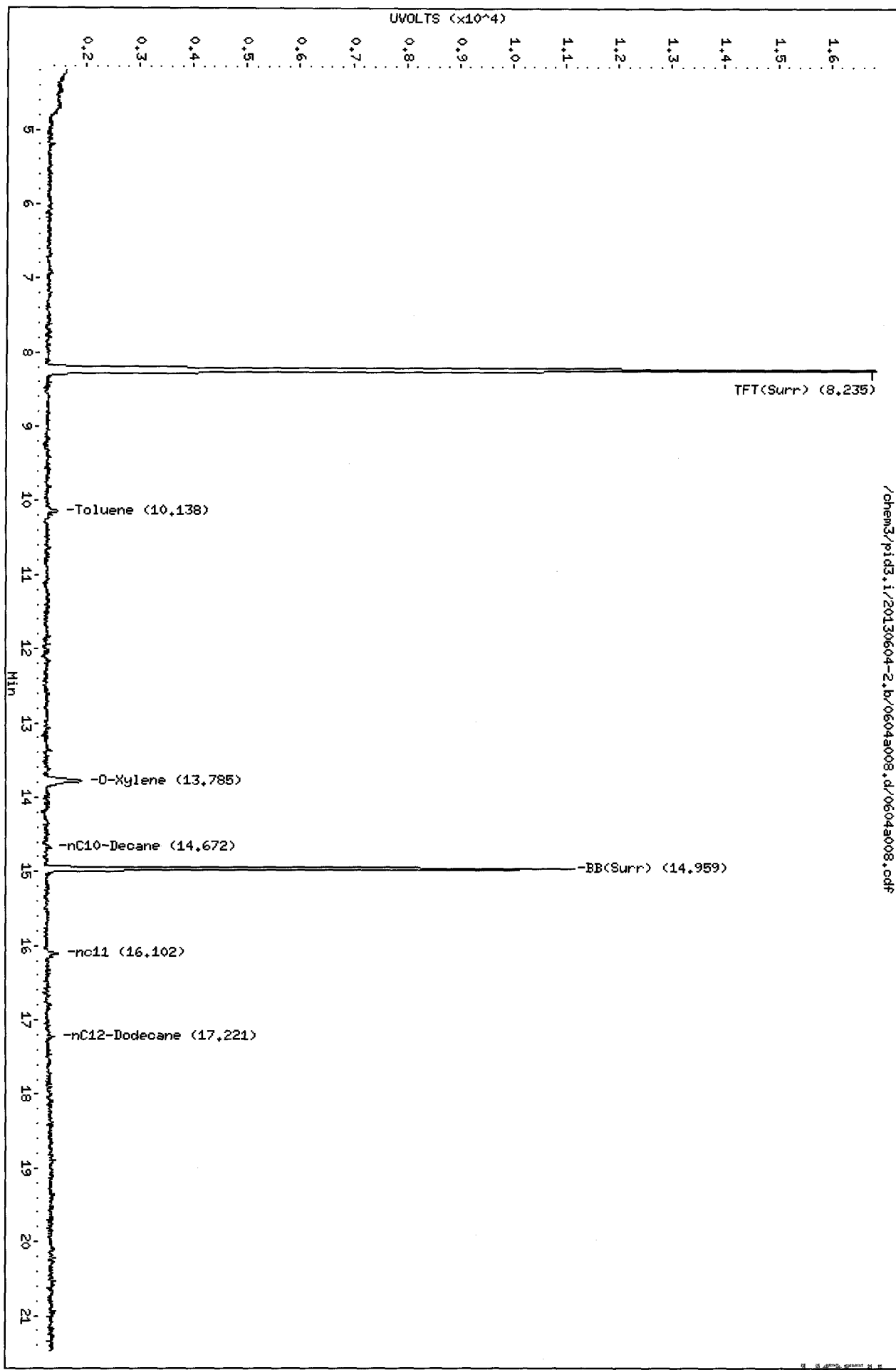
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.143	0.006	412	0.48N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a008.d
Date : 04-JUN-2013 13:13
Client ID: A2-M41-S-4
Sample Info: MS548
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

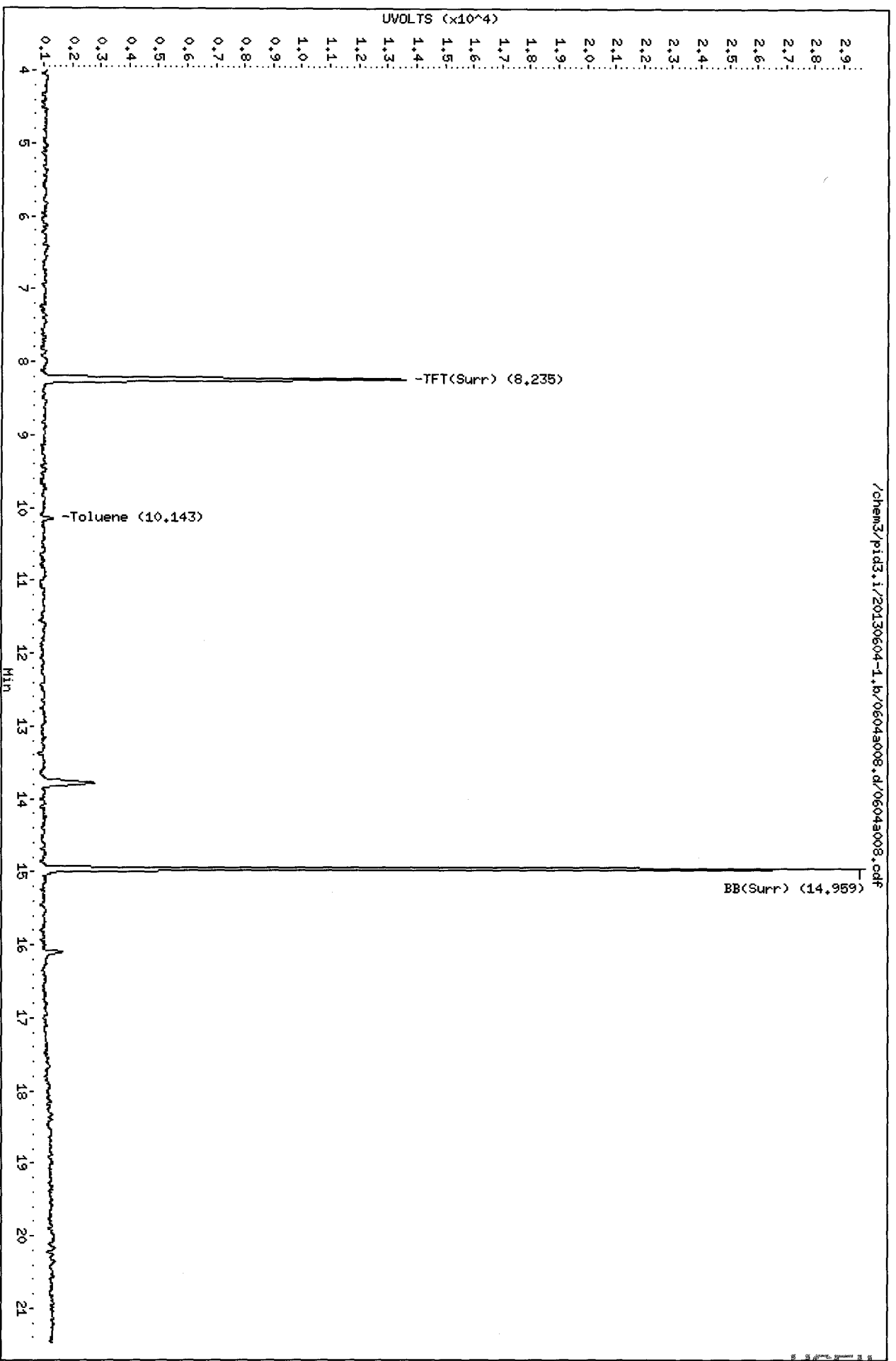


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01000 1155

Data File: /chem3/pid3.i/20130604-1.b/0604a008.d
Date : 04-JUN-2013 13:13
Client ID: A2-M41-S-4
Sample Info: MS548
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

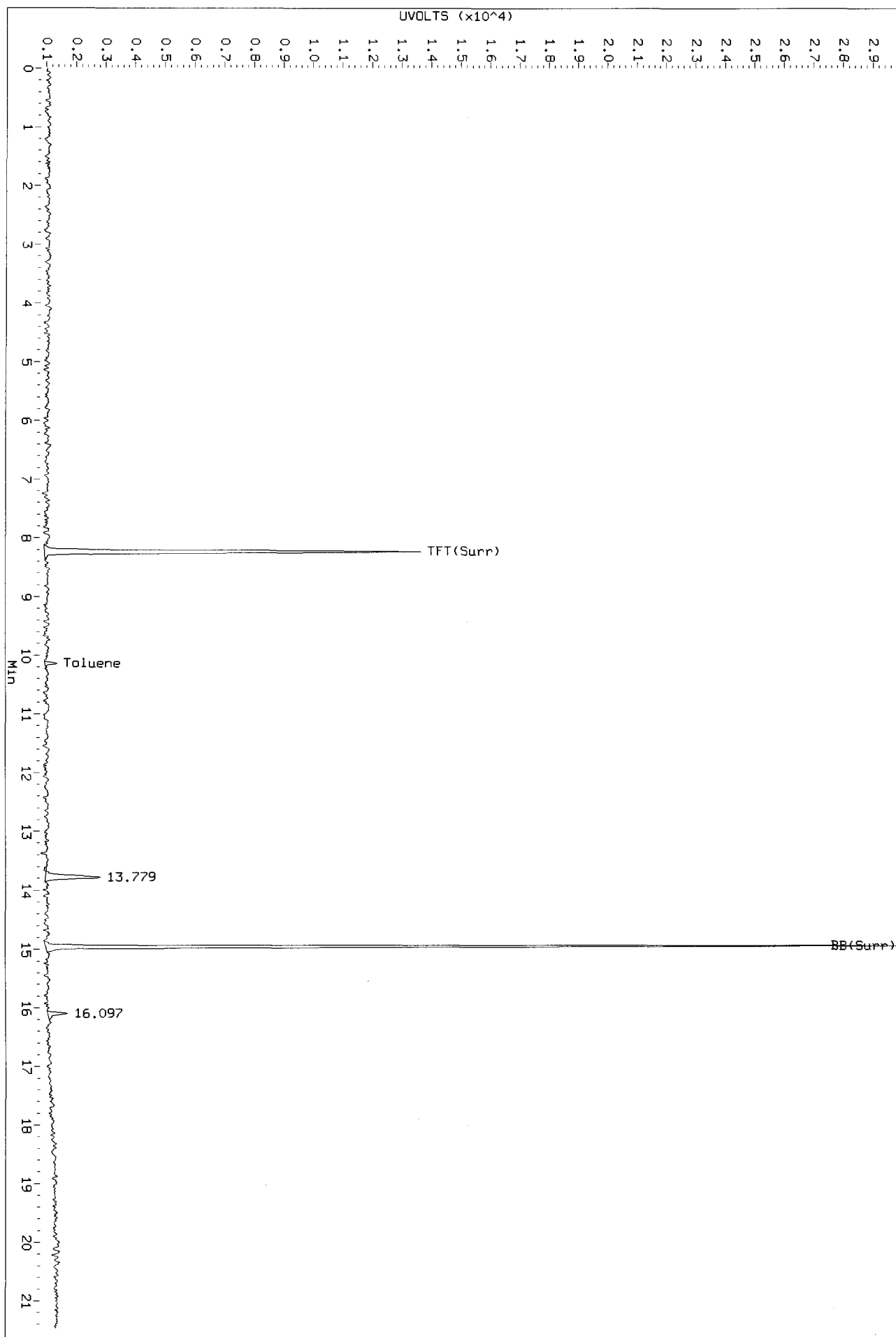


MS548 0004

PK
6/5/13

Data File: /chem3/pid3.1/20130604-1.b/0604a008.d/0604a008.cdf
Injection Date: 04-JUN-2013 13:13
Instrument: pid3.1
Client Sample ID: A2-W41-S-4

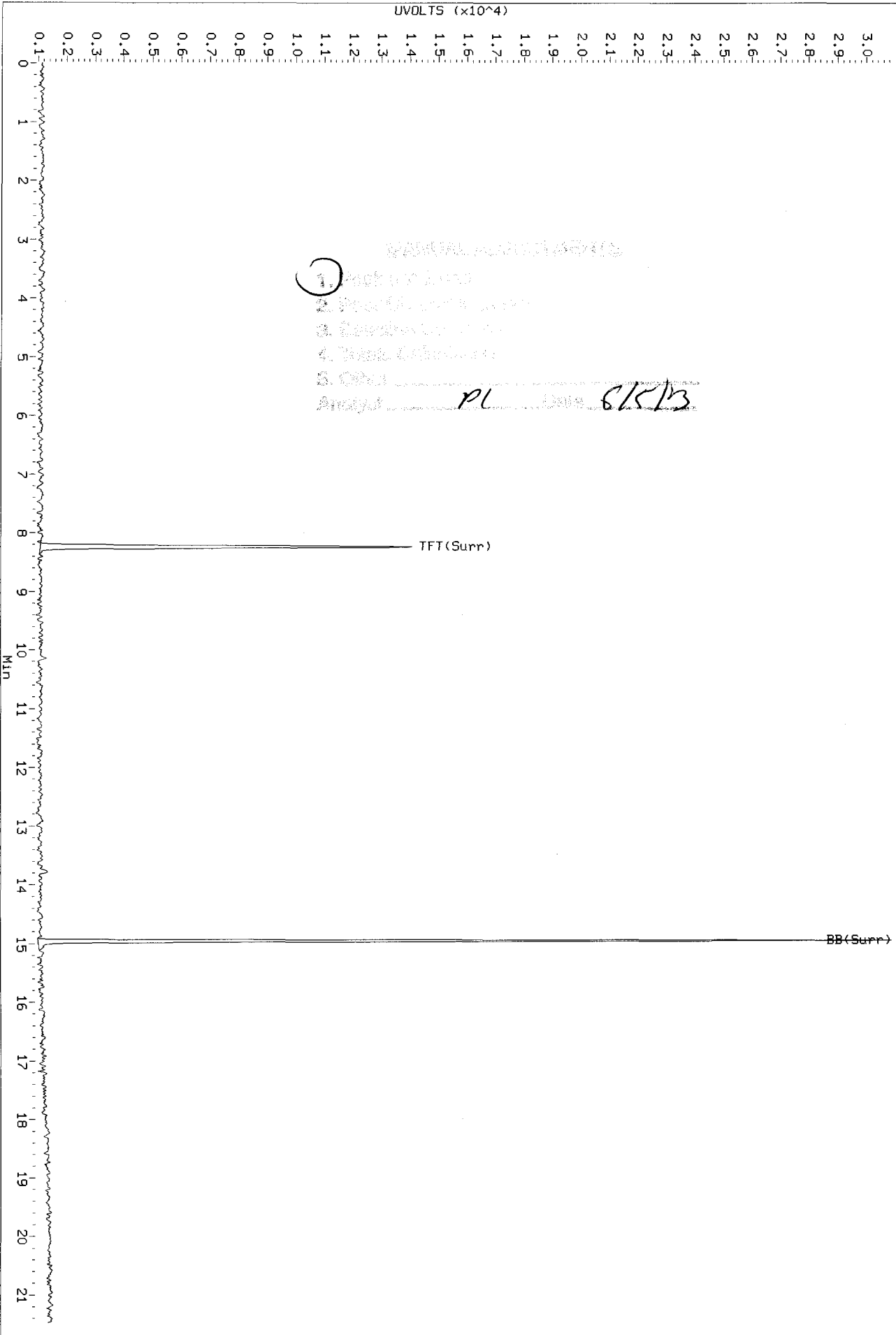
AIR 0604a008.cdf: 0.000 to 21.467 MIN



0604 : 1355

Data File: /chem3/pid3.1/20130604-1.b/0604a009.d/0604a009.cdf
Injection Date: 04-JUN-2013 13:41
Instrument: pid3.1
Client Sample ID: A2-W42-S-4

RIR 0604a009.cdf: 0.000 to 21.473 MIN



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W42-S-4
SAMPLE

Lab Sample ID: WS54C
 LIMS ID: 13-11827
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 06/03/13
 Date Received: 06/04/13

Date Analyzed: 06/04/13 13:41
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 85 mg-dry-wt
 Percent Moisture: 7.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	15	< 15 U	
108-88-3	Toluene	15	18	
100-41-4	Ethylbenzene	15	< 15 U	
179601-23-1	m,p-Xylene	29	< 29 U	
95-47-6	o-Xylene	15	< 15 U	
Gasoline Range Hydrocarbons		5.9	< 5.9 U	---

BETX Surrogate Recovery

Trifluorotoluene	90.2%
Bromobenzene	90.8%

Gasoline Surrogate Recovery

Trifluorotoluene	90.0%
Bromobenzene	90.4%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a009.d ARI ID: WS54C
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a009.d Client ID: A2-W42-S-4
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 13:41
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.238	0.005	15573	229264	90.0	TFT(Surr)
14.960	0.005	10124	98885	90.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.04 to 17.32)	2099137	5496	0.003
8015B 2MP-TMB (4.57 to 15.67)	4363035	3467	0.001
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3467	0.001
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	5496	0.003
CalGas nC6-nC12 (5.10 to 17.32)	4309570	5496	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.238	0.005	13013	90.2	TFT(Surr)
14.960	0.005	29786	90.8	BB(Surr)

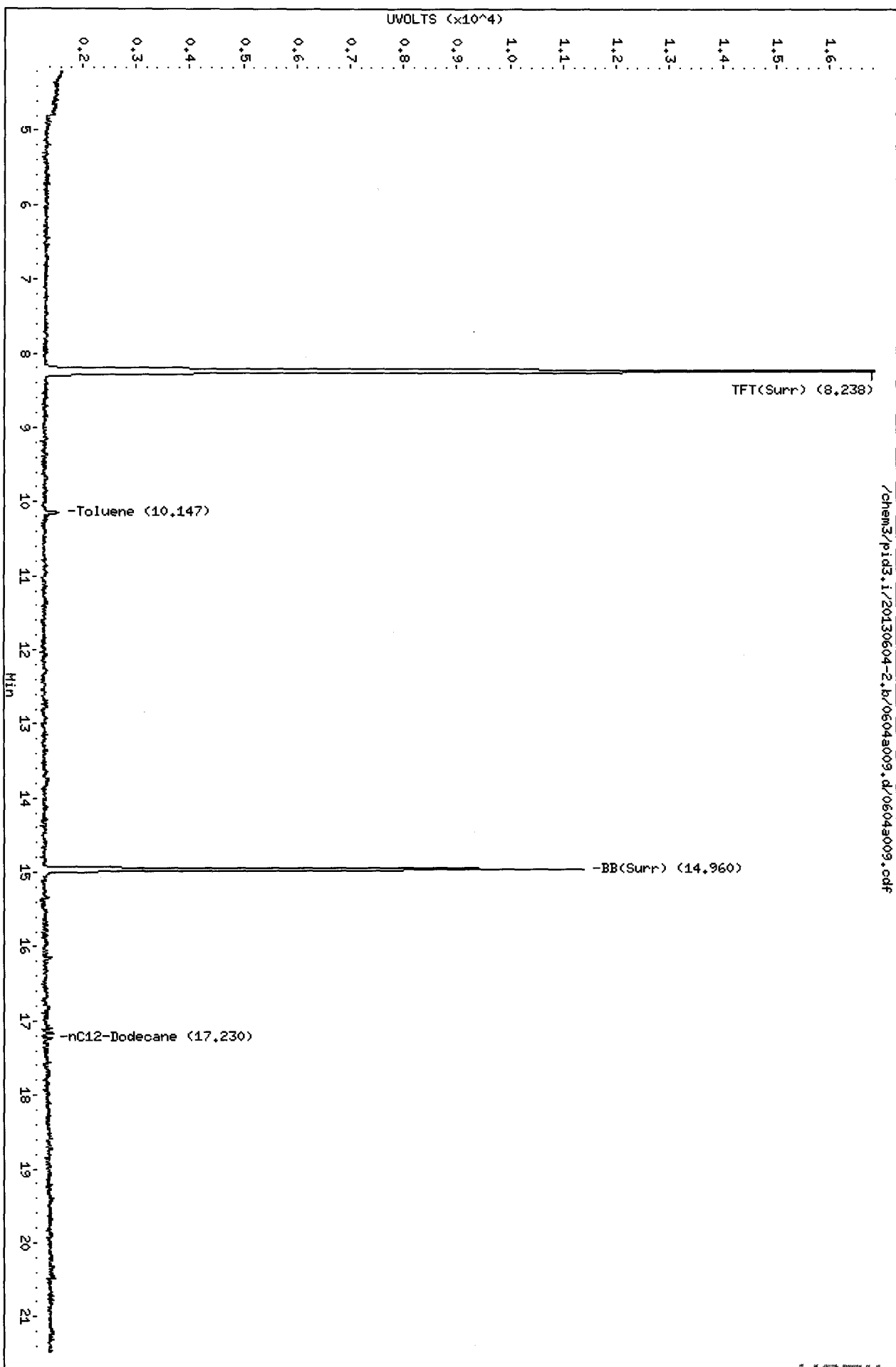
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
10.143	0.006	259	0.30N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.1/20130604-2.b/0604s009.d
Date : 04-JUN-2013 13:41
Client ID: A2-M42-S-4
Sample Info: MS54C
Column phase: RTX 502-2 FID

Instrument: pid3.1
Operator: PC
Column diameter: 0.18

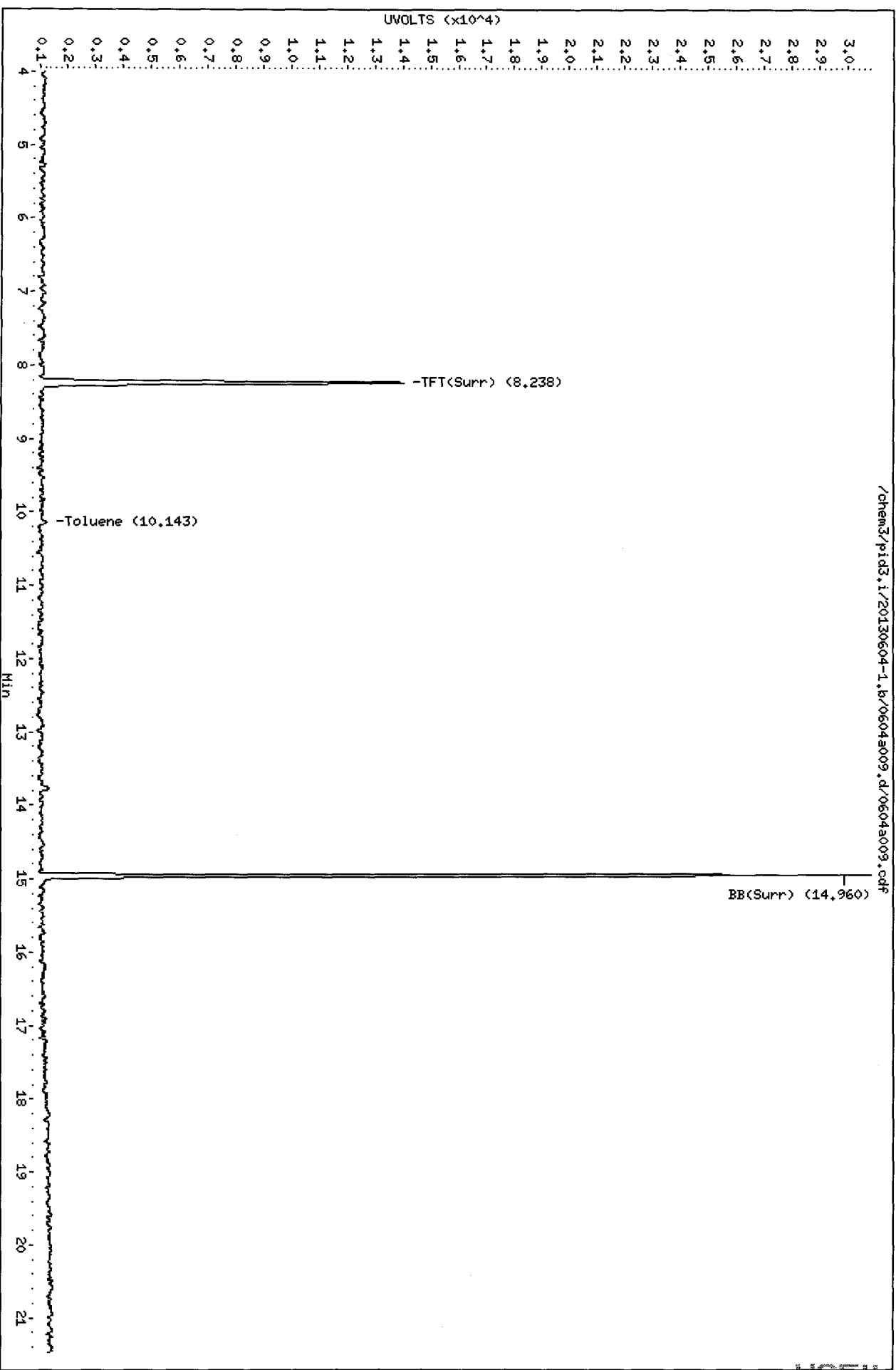


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07800 11253

Data File: /chem3/pid3.i/20130604-1.b/0604a009.d
Date : 04-JUN-2013 13:41
Client ID: A2-N42-S-4
Sample Info: MS54C
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



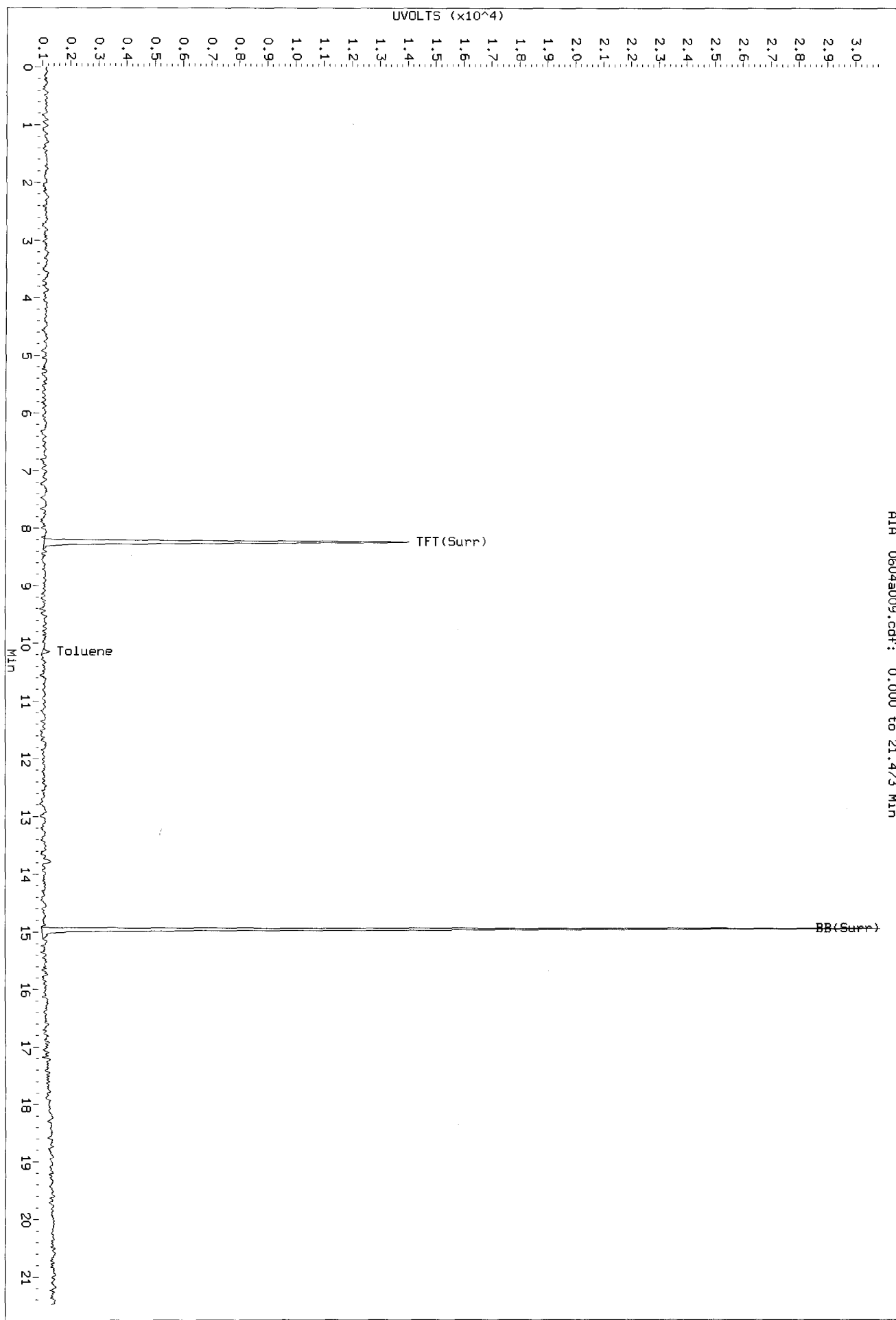
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05000 10000

PK
6/5/13

Data File: /chem3/pid3.1/20130604-1.b/0604a009.d/0604a009.cdf
Injection Date: 04-JUN-2013 13:41
Instrument: pid3.1
Client Sample ID: A2-W42-S-4

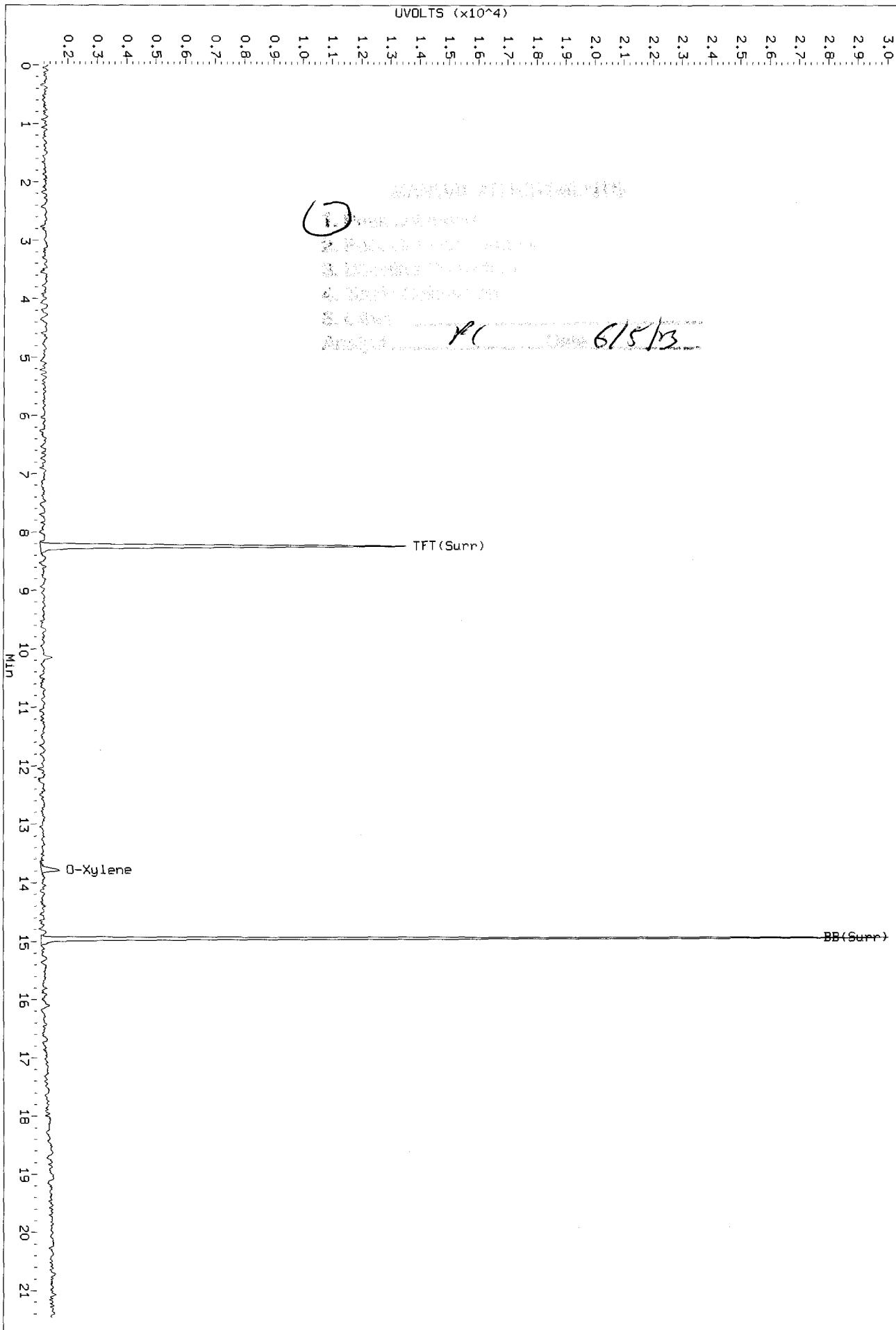
AIR 0604a009.cdf: 0.000 to 21.473 Min



15000 : 00051

Data File: /chem3/pid3.1/20130604-1.b/0604a011.d/0604a011.cdf
Injection Date: 04-JUN-2013 14:37
Instrument: pid3.1
Client Sample ID: A2-W44-S-4

AIR 0604a011.cdf: 0.000 to 21.463 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W43-S-4

SAMPLE

Lab Sample ID: WS54D

LIMS ID: 13-11828

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 14:09

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 90 mg-dry-wt

Percent Moisture: 10.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	14	< 14 U	
108-88-3	Toluene	14	< 14 U	
100-41-4	Ethylbenzene	14	< 14 U	
179601-23-1	m,p-Xylene	28	< 28 U	
95-47-6	o-Xylene	14	< 14 U	
	Gasoline Range Hydrocarbons	5.5	< 5.5 U	---

BETX Surrogate Recovery

Trifluorotoluene	88.5%
Bromobenzene	89.7%

Gasoline Surrogate Recovery

Trifluorotoluene	88.4%
Bromobenzene	90.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130604-2.b/0604a010.d ARI ID: WS54D
Data file 2: /chem3/pid3.i/20130604-1.b/0604a010.d Client ID: A2-W43-S-4
Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 14:09
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.240	0.007	15301	226740	88.4	TFT(Surr)
14.961	0.006	10102	98720	90.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	5522	0.003
8015B 2MP-TMB (4.57 to 15.67)	4363035	5522	0.001
AK101 nC6-nC10 (5.10 to 14.57)	3480628	5522	0.002
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	7047	0.003
CalGas nC6-nC12 (5.10 to 17.32)	4309570	5522	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.240	0.007	12755	88.5	TFT(Surr)
14.961	0.006	29436	89.7	BB(Surr)

SW8021 (PID)

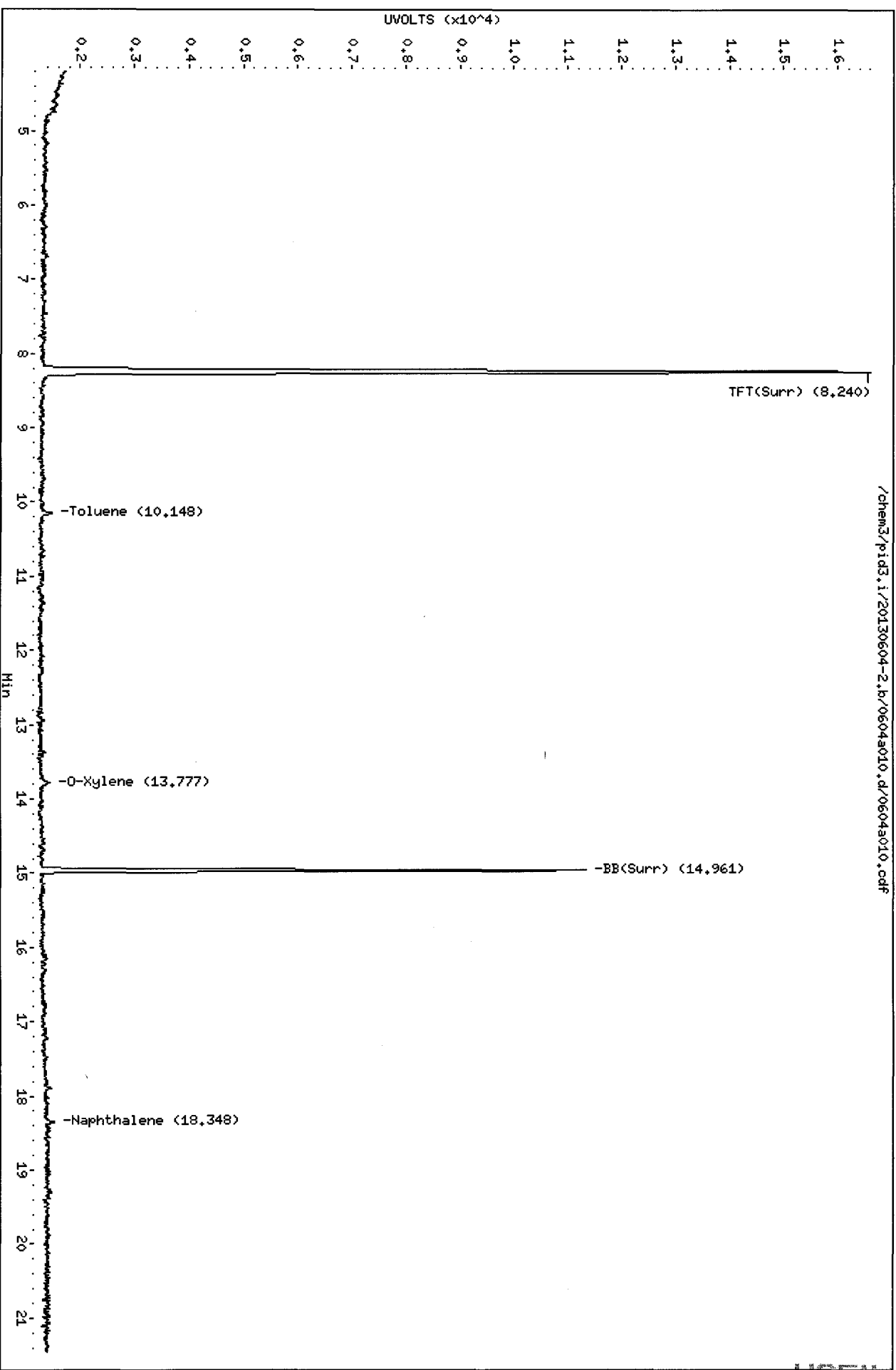
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a010.d
Date : 04-JUN-2013 14:09
Client ID: A2-N43-S-4
Sample Info: MSS4D
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130604-2.b/0604a010.d/0604a010.cdf

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Data File: /chem3/pid3.i/20130604-1.b/0604a010.d

Date : 04-JUN-2013 14:09

Client ID: A2-M43-S-4

Sample Info: MS54D

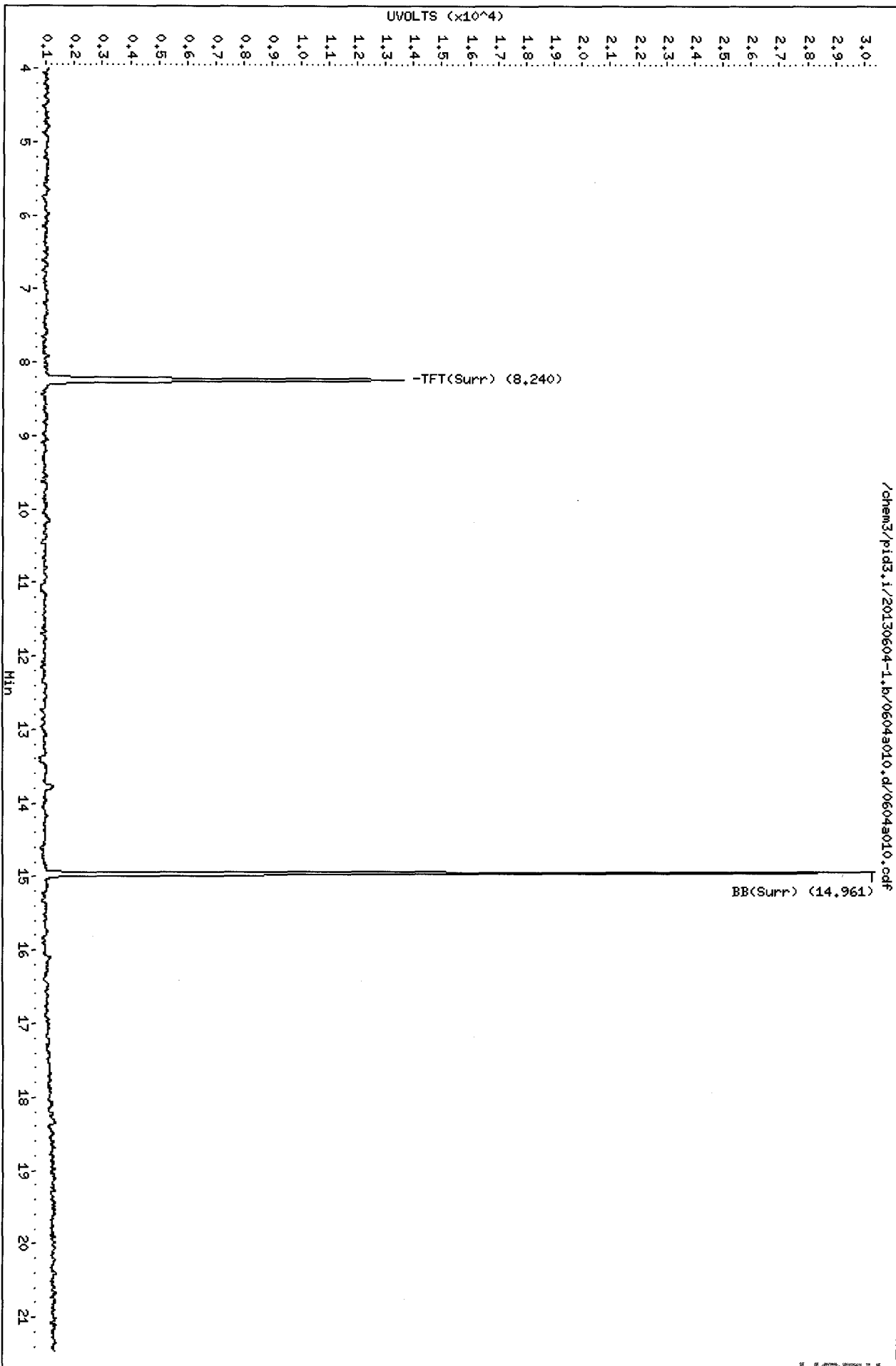
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: PC

Column diameter: 0.18

Page 1



05000 11000

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W44-S-4
SAMPLE

Lab Sample ID: WS54E
 LIMS ID: 13-11829
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 06/03/13
 Date Received: 06/04/13

Date Analyzed: 06/04/13 14:37
 Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL
 Sample Amount: 83 mg-dry-wt
 Percent Moisture: 11.6%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	15	< 15 U	
108-88-3	Toluene	15	21	
100-41-4	Ethylbenzene	15	< 15 U	
179601-23-1	m,p-Xylene	30	< 30 U	
95-47-6	o-Xylene	15	< 15 U	
	Gasoline Range Hydrocarbons	6.0	< 6.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	86.3%
Bromobenzene	88.0%

Gasoline Surrogate Recovery

Trifluorotoluene	86.7%
Bromobenzene	88.1%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a011.d ARI ID: WS54E
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a011.d Client ID: A2-W44-S-4
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 14:37
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.241	0.007	15000	224104	86.7	TFT (Surr)
14.960	0.005	9868	96593	88.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	9478	0.005
8015B 2MP-TMB (4.57 to 15.67)	4363035	8521	0.002
AK101 nC6-nC10 (5.10 to 14.57)	3480628	8521	0.002
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	9478	0.004
CalGas nC6-nC12 (5.10 to 17.32)	4309570	9478	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.241	0.007	12444	86.3	TFT (Surr)
14.960	0.005	28881	88.0	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.150	0.013	300	0.35N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

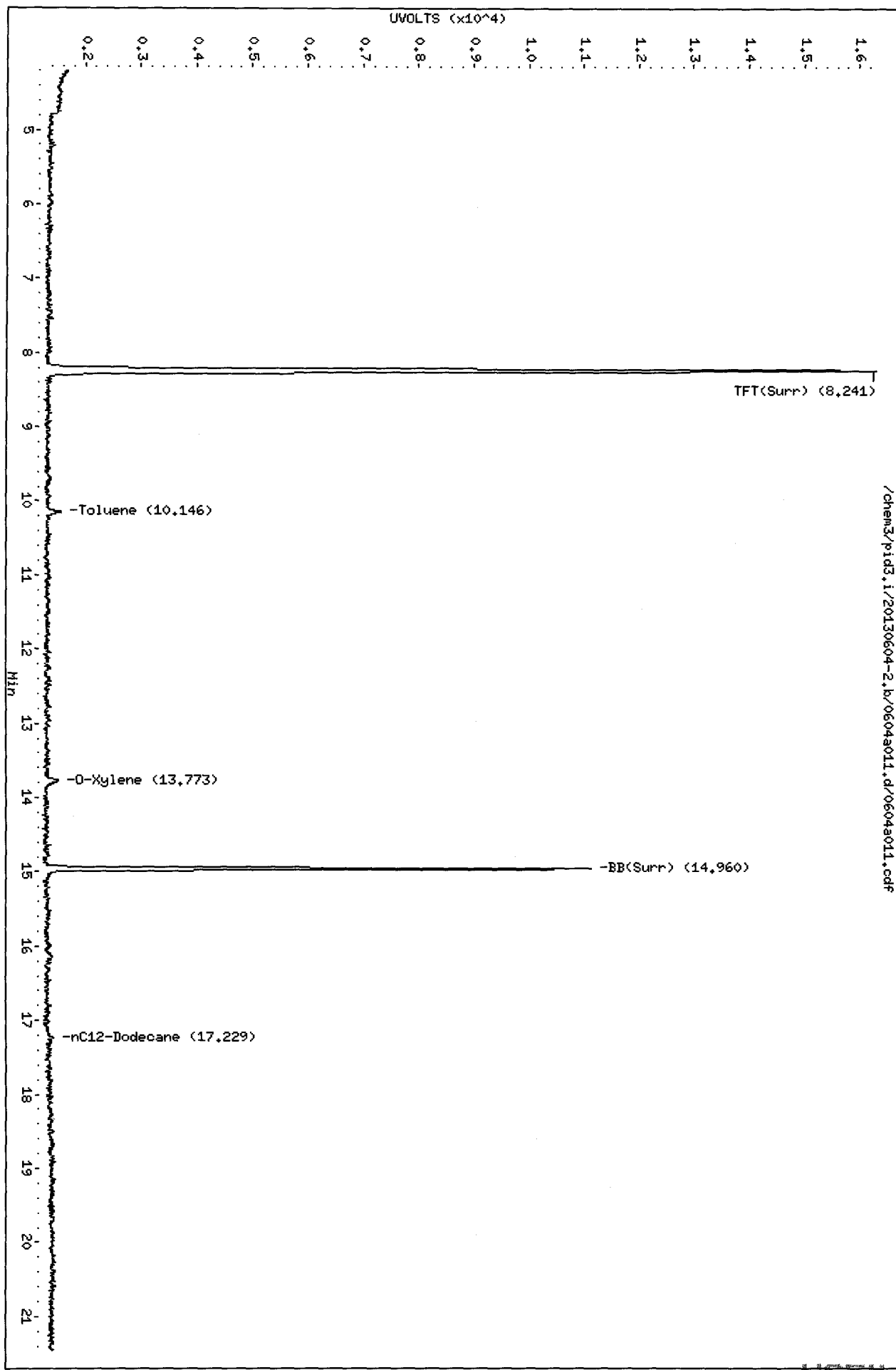
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604s011.d
Date : 04-JUN-2013 14:37
Client ID: A2-M44-S-4
Sample Info: MS54E
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

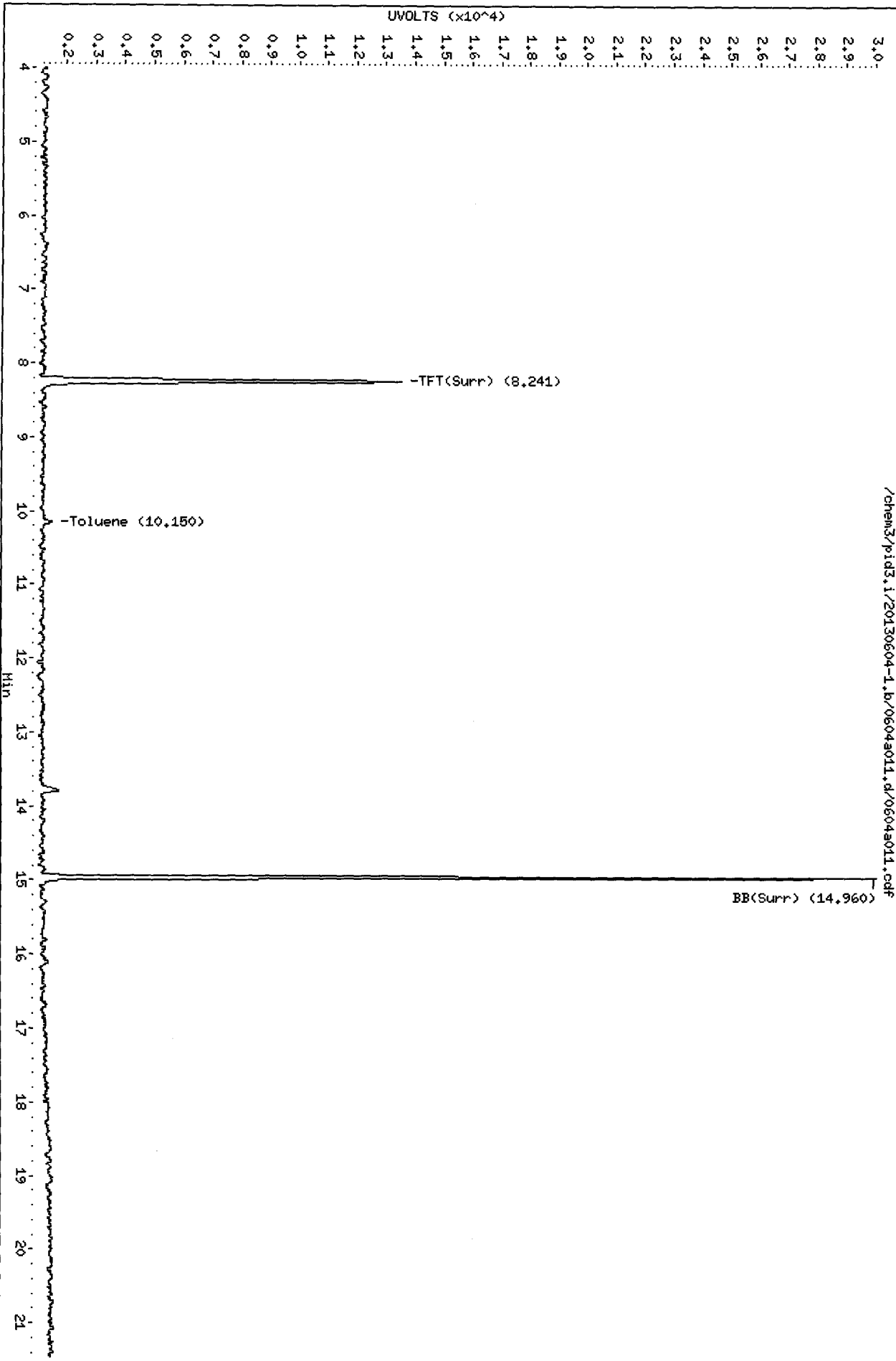
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MS54 00059

Data File: /chem3/pid3.i/20130604-1.b/0604a011.d
Date : 04-JUN-2013 14:37
Client ID: A2-M44-S-4
Sample Info: MSS4E
Column phase: RTX 502-2 PID

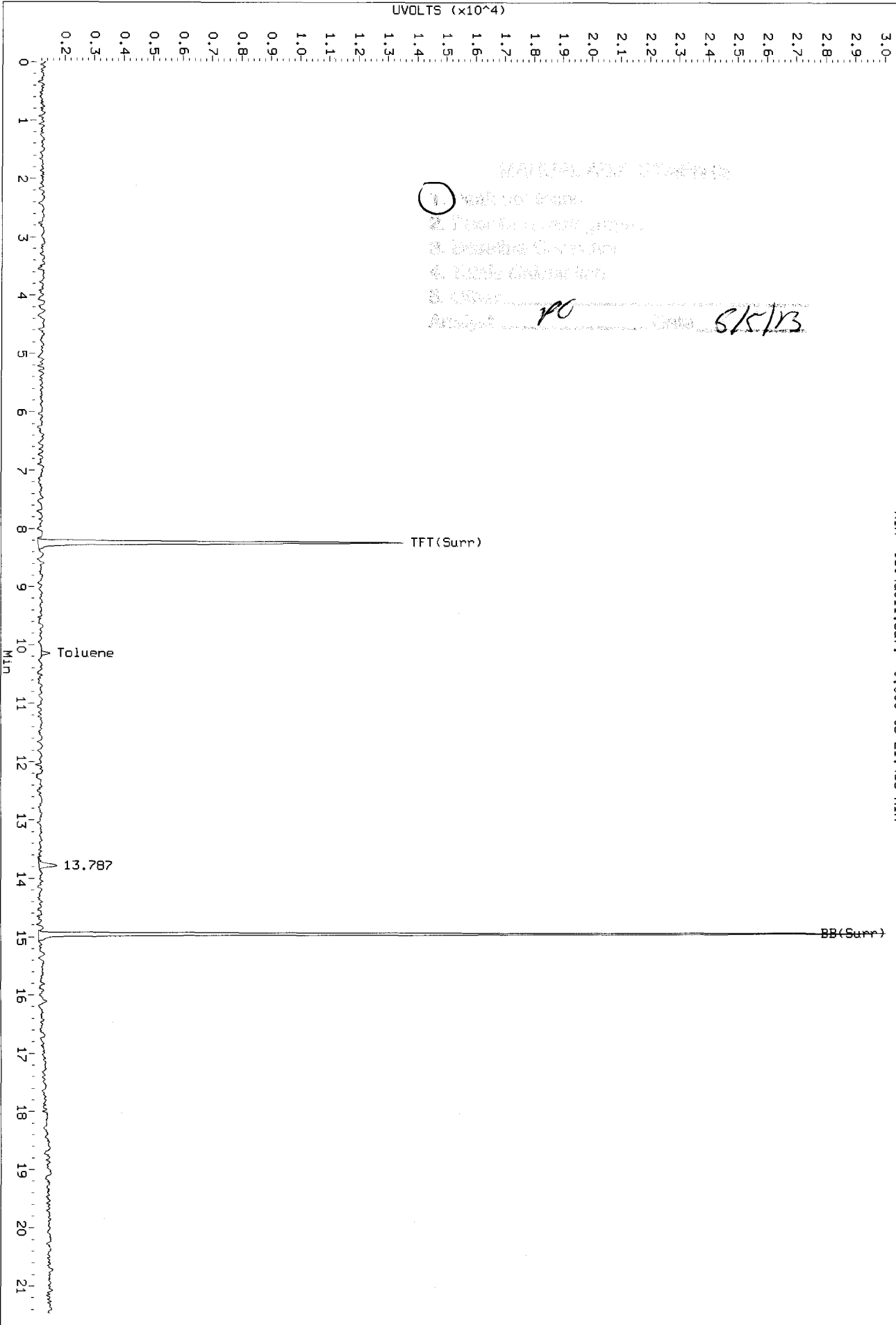
Instrument: pid3.1
Operator: PC
Column diameter: 0.18



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15000

Data File: /chem3/p103.1/20130604-1.b/0604a011.d/0604a011.cdf
Injection Date: 04-JUN-2013 14:37
Instrument: p103.1
Client Sample ID: A2-W44-S-4

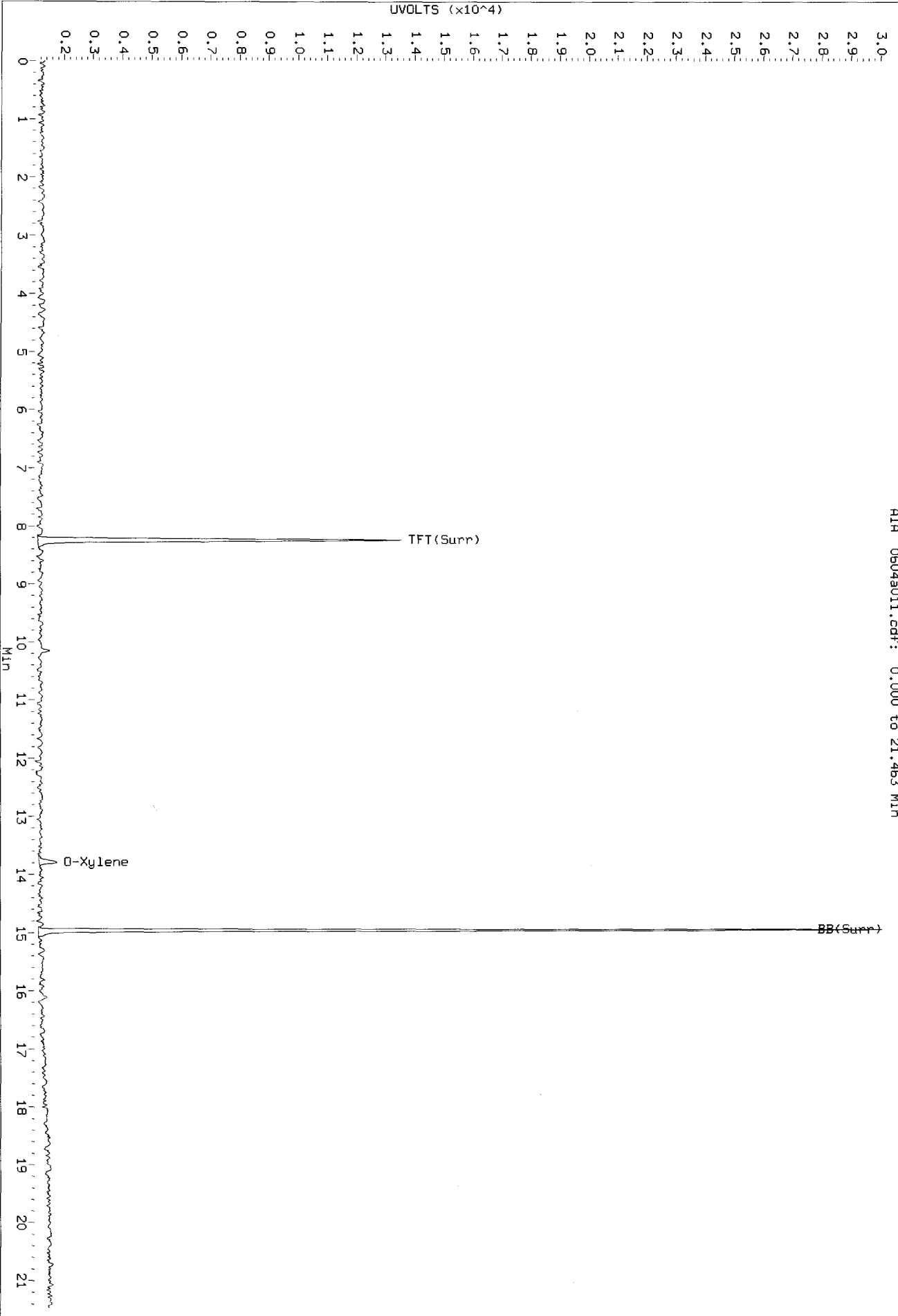
RIR 0604a011.cdf: 0.000 to 21.463 MIN



PK
6/5/13

Data File: /chem3/pid3.1/20130604-1.b/0604a011.d/0604a011.cdf
Injection Date: 04-JUN-2013 14:37
Instrument: pid3.1
Client Sample ID: A2-W44-S-4

AIR 0604a011.cdf: 0.000 to 21.463 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W45-S-4

SAMPLE

Lab Sample ID: WS54F

LIMS ID: 13-11830

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 15:06

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 86 mg-dry-wt

Percent Moisture: 12.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	15	< 15 U	
108-88-3	Toluene	15	21	
100-41-4	Ethylbenzene	15	< 15 U	
179601-23-1	m,p-Xylene	29	< 29 U	
95-47-6	o-Xylene	15	< 15 U	
	Gasoline Range Hydrocarbons	5.8	< 5.8 U	---

BETX Surrogate Recovery

Trifluorotoluene	88.9%
Bromobenzene	91.0%

Gasoline Surrogate Recovery

Trifluorotoluene	89.9%
Bromobenzene	91.1%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a012.d ARI ID: WS54F
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a012.d Client ID: A2-W45-S-4
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 15:06
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====
 FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.240	0.007	15560	229412	89.9	TFT(Surr)
14.961	0.006	10207	100691	91.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	6828	0.003
8015B 2MP-TMB (4.57 to 15.67)	4363035	6828	0.002
AK101 nC6-nC10 (5.10 to 14.57)	3480628	6828	0.002
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	6828	0.003
CalGas nC6-nC12 (5.10 to 17.32)	4309570	6828	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====
 PID Surrogates

RT	Shift	Response	%Rec	Compound
8.240	0.007	12821	88.9	TFT(Surr)
14.961	0.006	29848	91.0	BB(Surr)

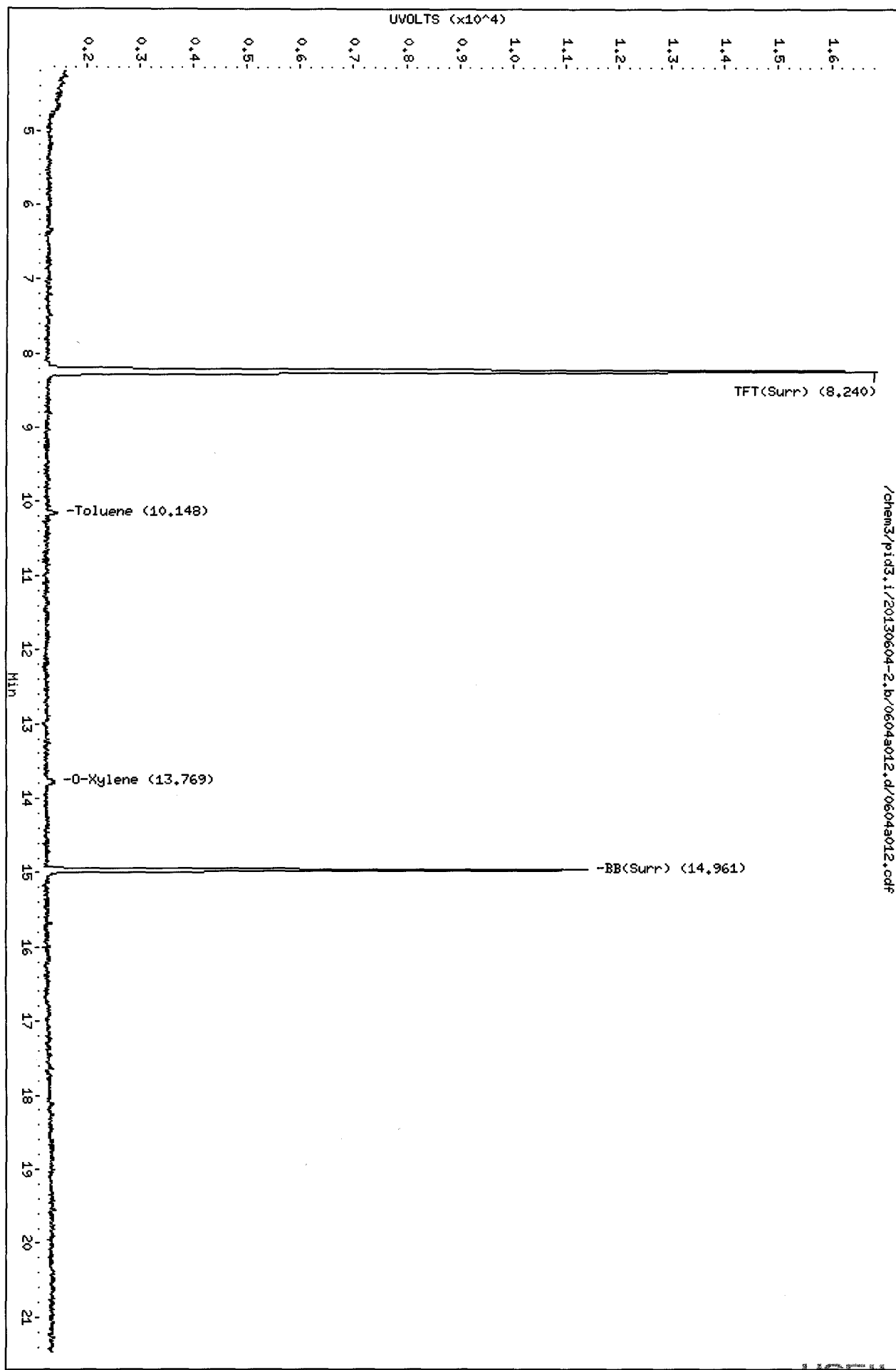
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.147	0.009	309	0.36N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a012.d
Date : 04-JUN-2013 15:06
Client ID: A2-N45-S-4
Sample Info: MS54F
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130604-2.b/0604a012.d/0604a012.cdf

150000 150000

Data File: /chem3/pid3.i/20130604-1.b/0604a012.d

Page 1

Date : 04-JUN-2013 15:06

Client ID: A2-M45-S-4

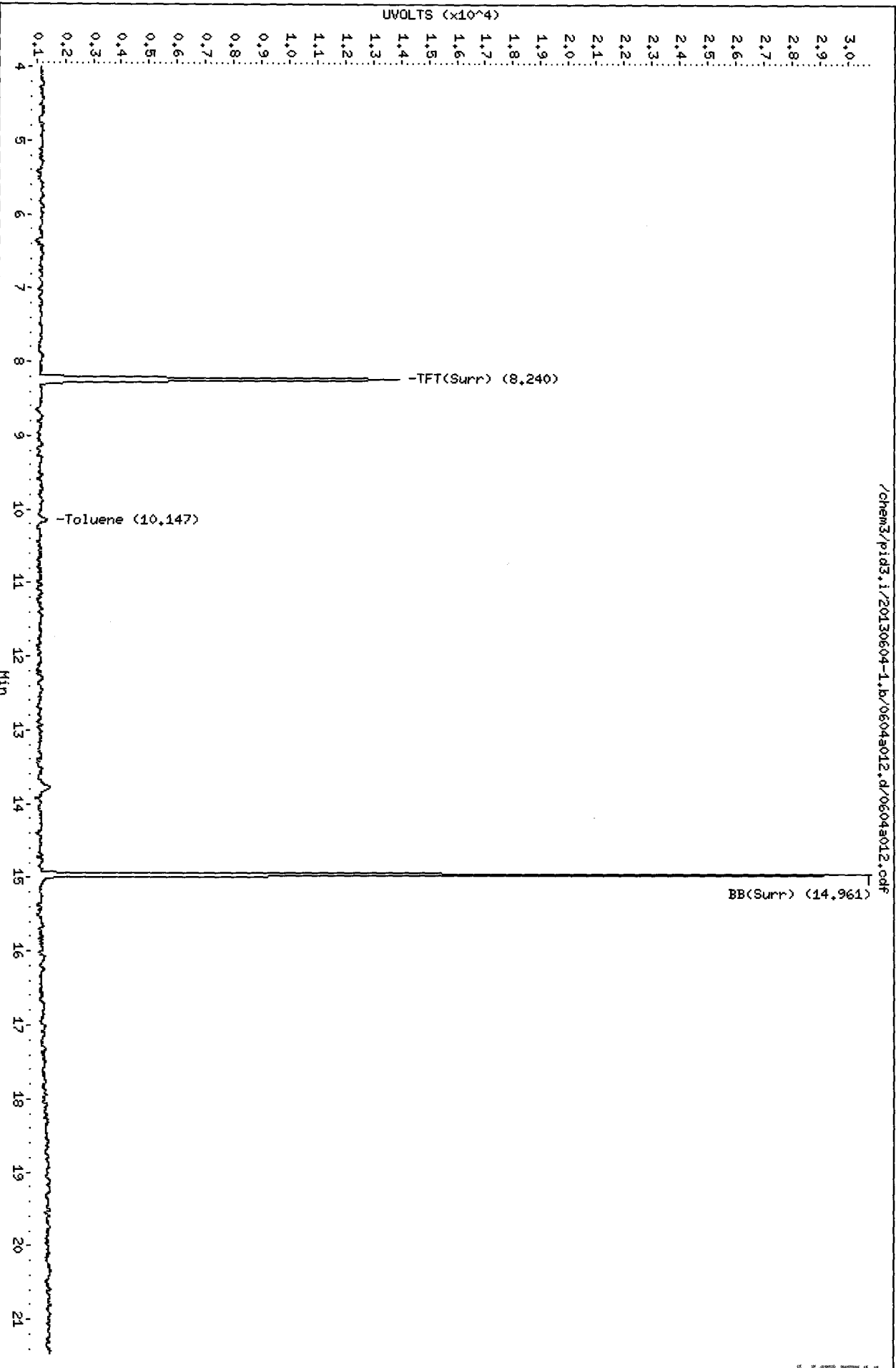
Sample Info: MS54F

Instrument: pid3.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

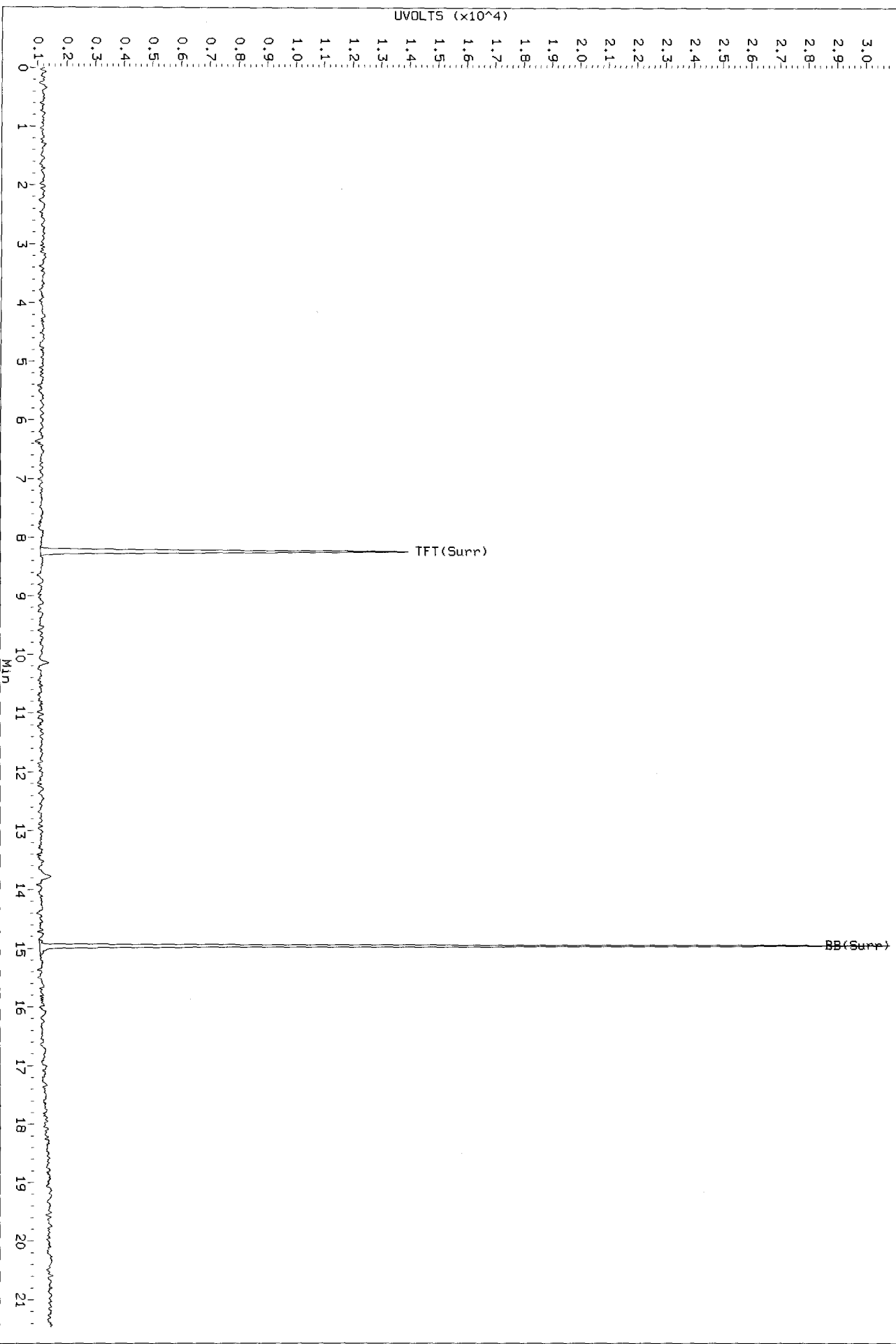


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PK
6/5/13

Data File: /chem3/pid3.1/20130604-1.b/0604a012.d/0604a012.cdf
Injection Date: 04-JUN-2013 15:06
Instrument: pid3.1
Client Sample ID: A2-W45-S-4

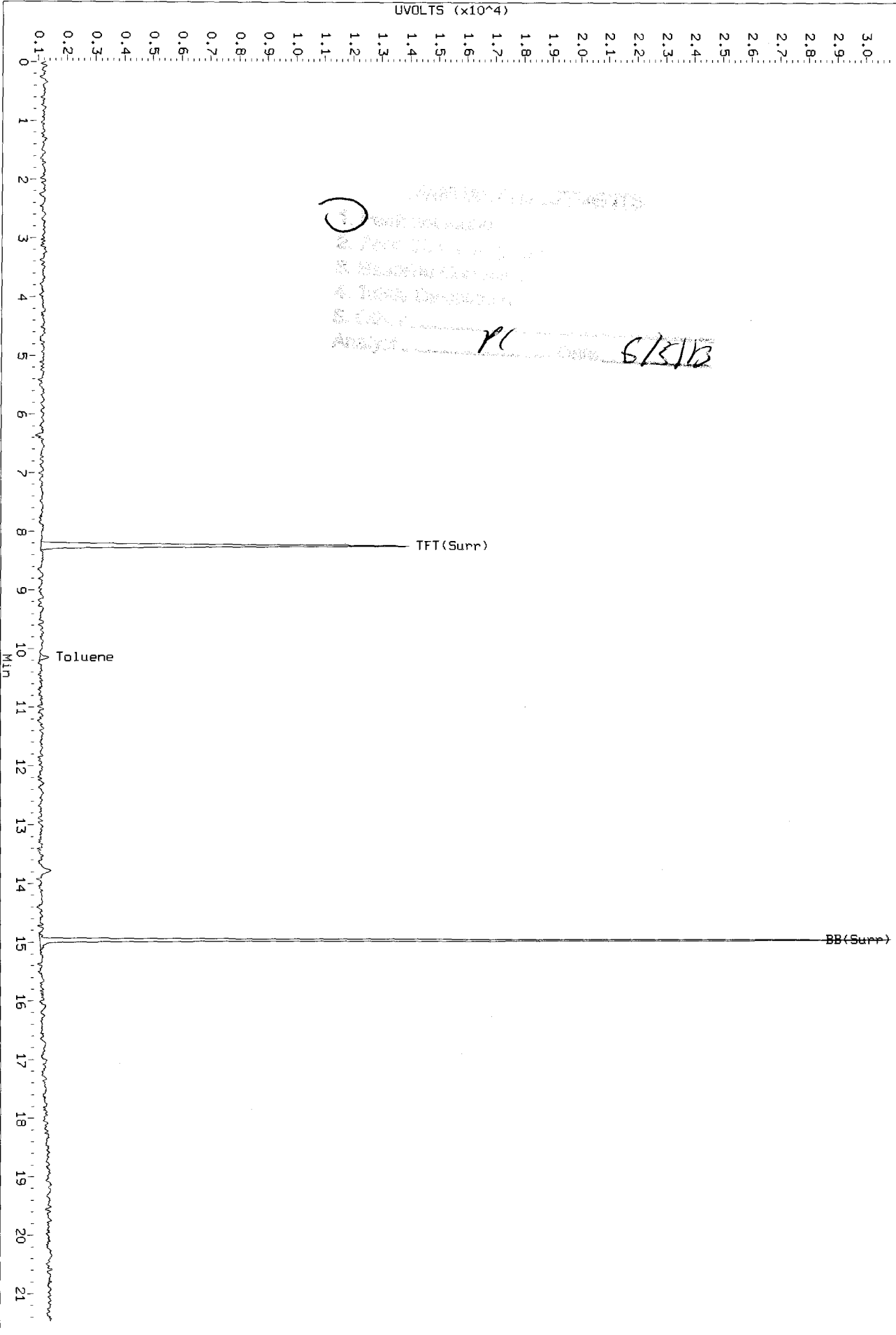
AIA 0604a012.cdf: 0.000 to 21.463 Min



79000 : 12037

Data File: /chem3/p103.1/20130604-1.b/0604a012.d/0604a012.cdf
Injection Date: 04-JUN-2013 15:06
Instrument: P103.1
Client Sample ID: A2-W45-S-4

AIR 0604a012.cdf: 0.000 to 21.463 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: A2-W46-S-4

SAMPLE

Lab Sample ID: WS54G

LIMS ID: 13-11831

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 15:34

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 64 mg-dry-wt

Percent Moisture: 26.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	27
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	39	< 39 U
95-47-6	o-Xylene	19	< 19 U

Gasoline Range Hydrocarbons	7.8	< 7.8 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	88.7%
Bromobenzene	90.2%

Gasoline Surrogate Recovery

Trifluorotoluene	88.4%
Bromobenzene	90.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130604-2.b/0604a013.d ARI ID: WS54G
Data file 2: /chem3/pid3.i/20130604-1.b/0604a013.d Client ID: A2-W46-S-4
Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 15:34
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.240	0.006	15297	228084	88.4	TFT(Surr)
14.961	0.006	10116	99959	90.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	4466	0.002
8015B 2MP-TMB (4.57 to 15.67)	4363035	4466	0.001
AK101 nC6-nC10 (5.10 to 14.57)	3480628	4466	0.001
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	4466	0.002
CalGas nC6-nC12 (5.10 to 17.32)	4309570	4466	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.240	0.006	12788	88.7	TFT(Surr)
14.961	0.006	29601	90.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.153	0.016	301	0.35N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

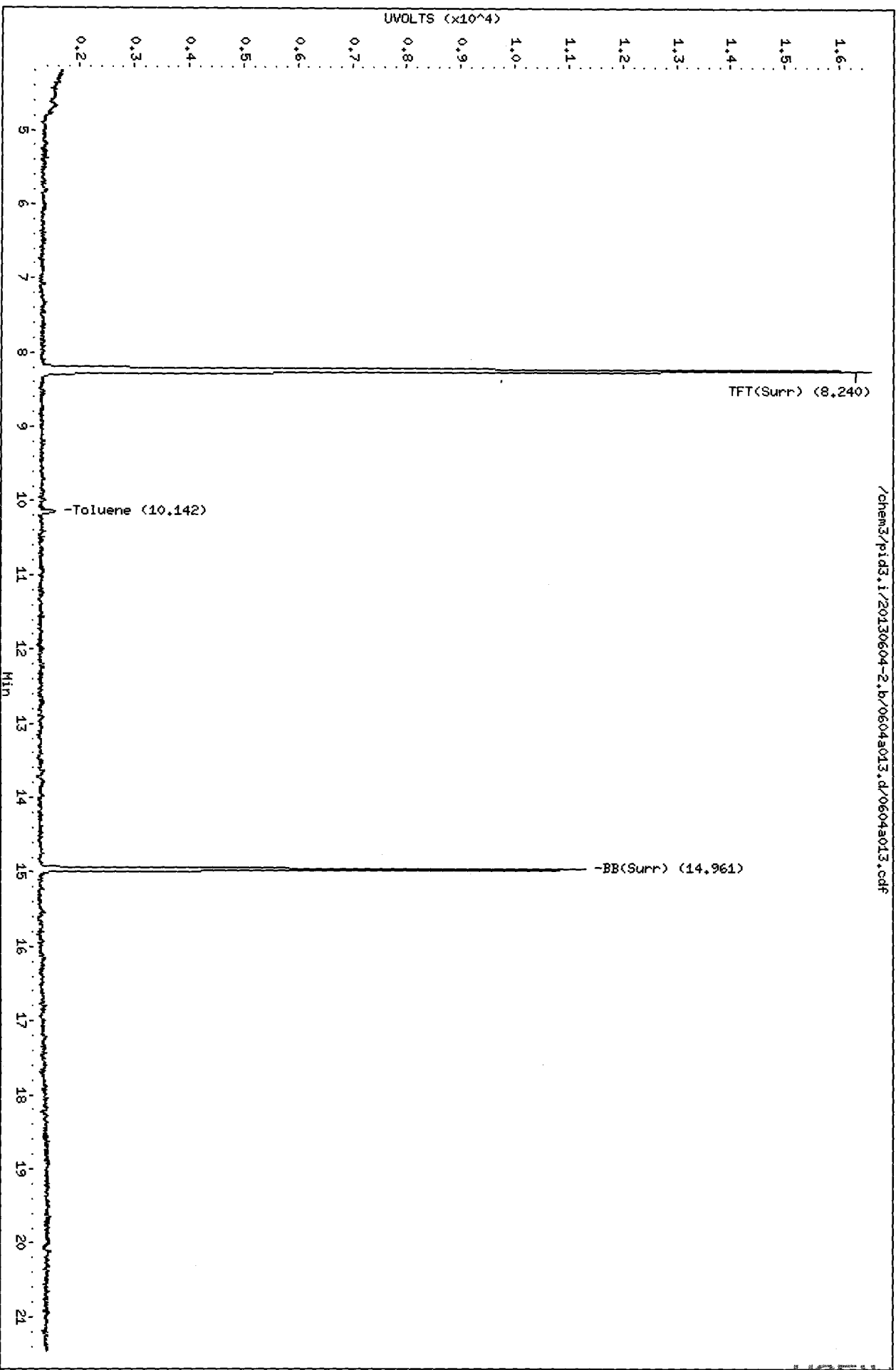
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a013.d
Date : 04-JUN-2013 15:34
Client ID: A2-M46-S-4
Sample Info: MS54G

Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

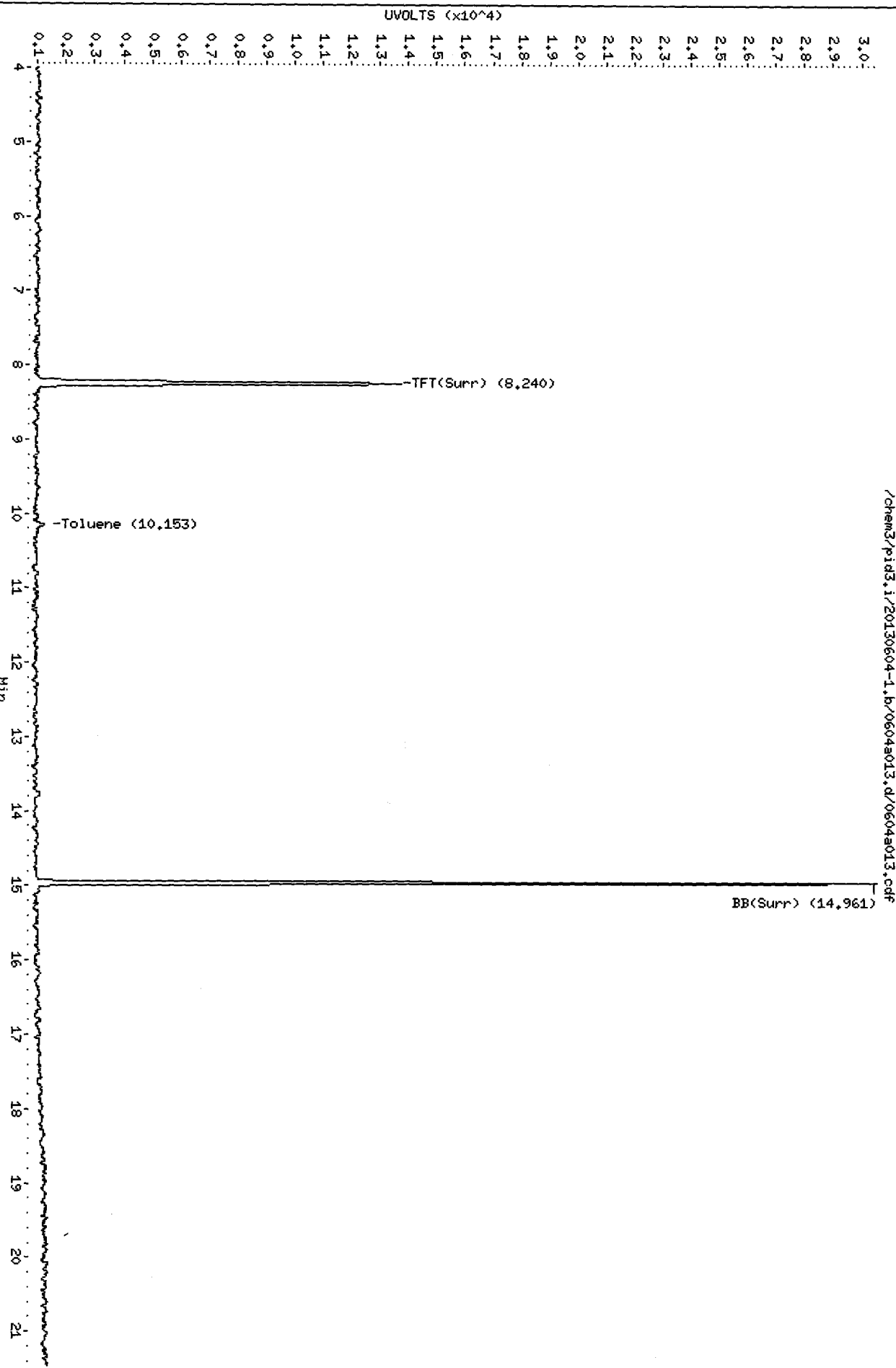
/chem3/pid3.i/20130604-2.b/0604a013.d/0604a013.cdf



12000 4554

Data File: /chem3/pid3.i/20130604-1.b/0604a013.d
Date : 04-JUN-2013 15:34
Client ID: A2-M46-S-4
Sample Info: MS54G
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



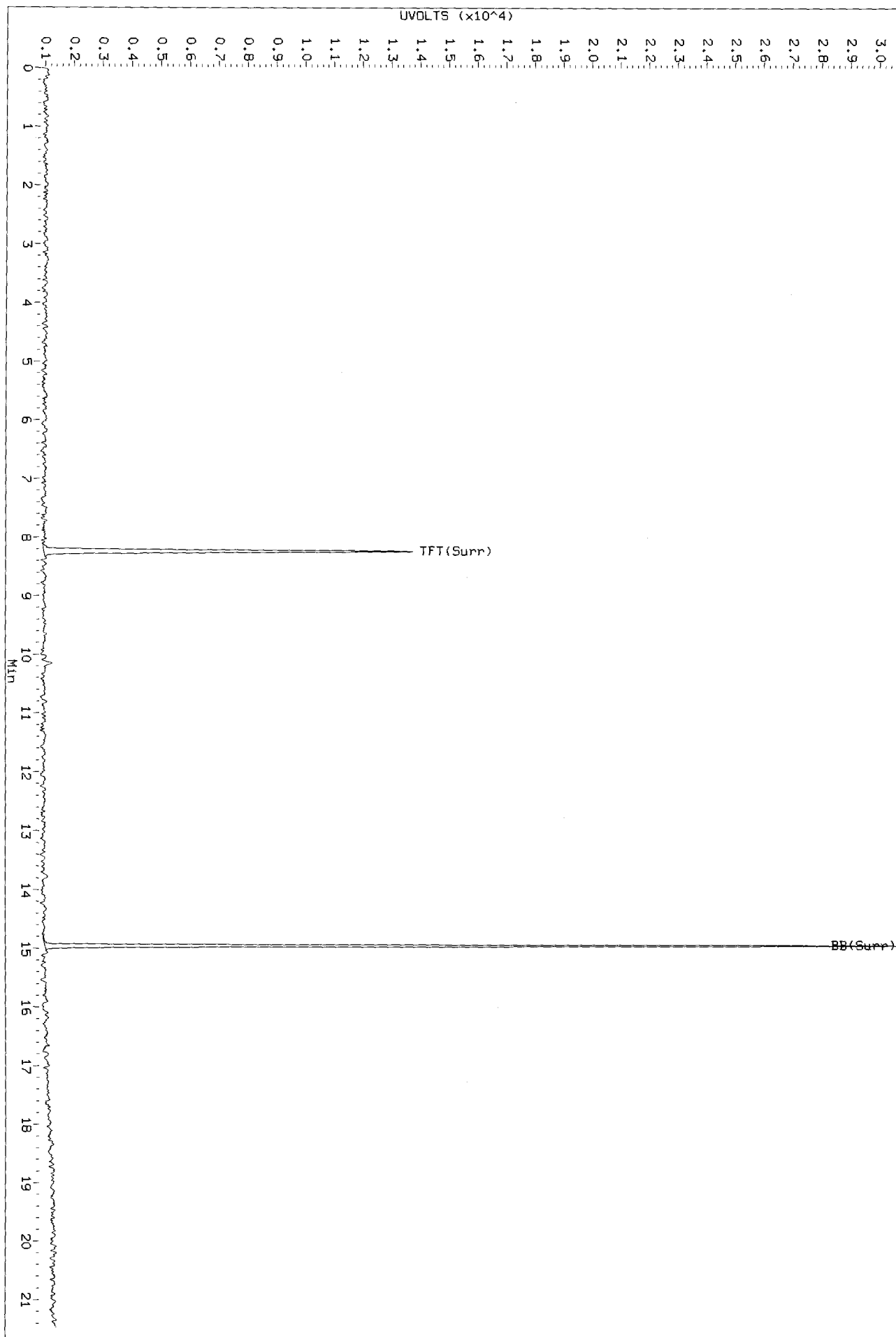
/chem3/pid3.i/20130604-1.b/0604a013.d/0604a013.cdf

21.000 1555

PC
6/5/13

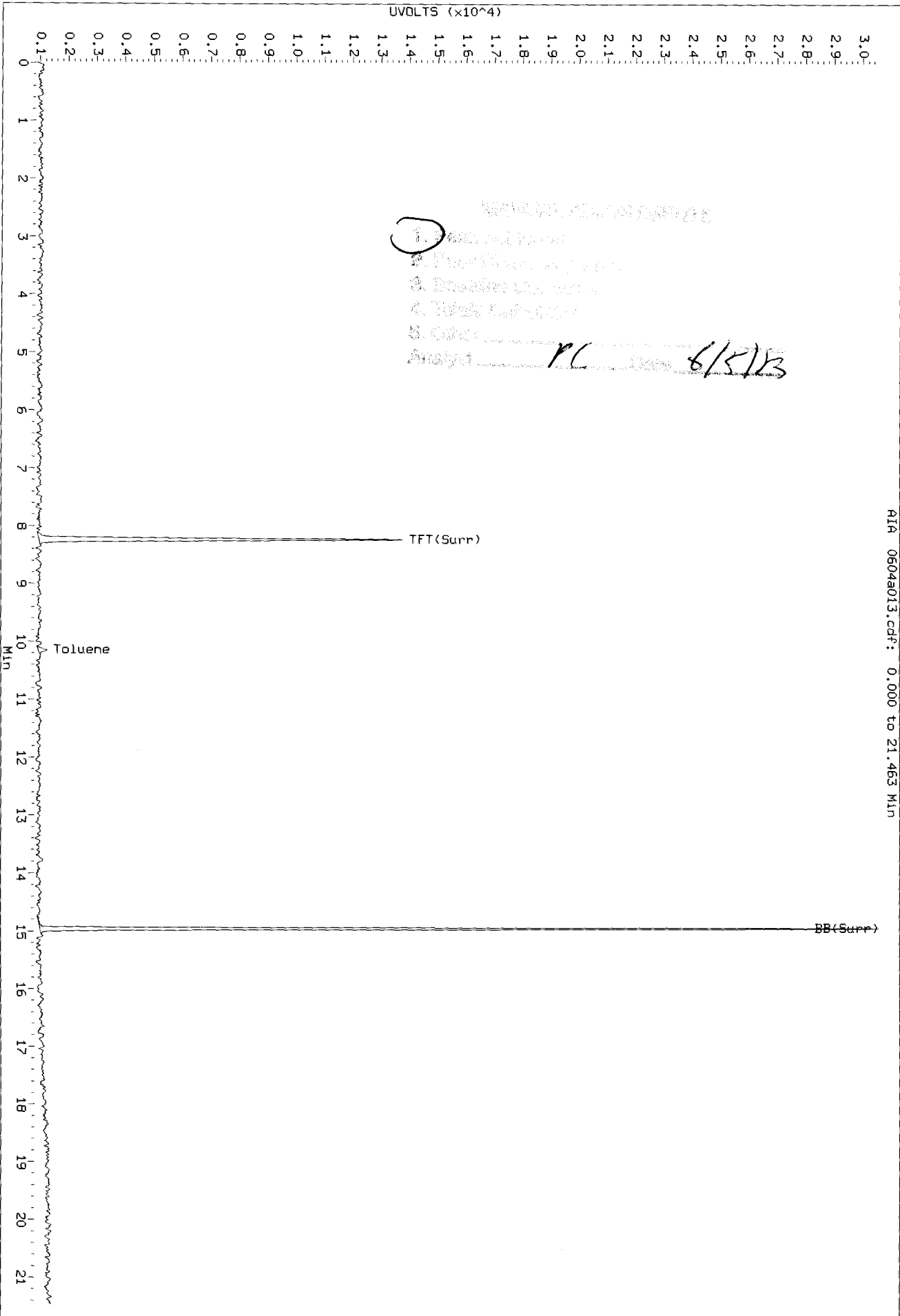
Data File: /chem3/pid3.1/20130604-1.b/0604a013.d/0604a013.cdf
Injection Date: 04-JUN-2013 15:34
Instrument: pid3.1
Client Sample ID: A2-W46-S-4

ALA 0604a013.cdf: 0.000 to 21.463 Min



Data File: /chem3/pid3.1/20130604-1.b/0604a013.d/0604a013.cdf
Injection Date: 04-JUN-2013 15:34
Instrument: pid3.1
Client Sample ID: A2-W46-S-4

AIR 0604a013.cdf: 0.000 to 21.463 Min



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS54
Matrix: Soil

QC Report No: WS54-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	BFB	TFT	BBZ	TOT OUT
MB-060413	NA	90.2%	90.5%	0
LCS-060413	NA	94.6%	95.2%	0
LCSD-060413	NA	98.0%	99.3%	0
A2-W40-S-4	NA	88.6%	87.3%	0
A2-W41-S-4	NA	90.3%	88.9%	0
A2-W42-S-4	NA	90.0%	90.4%	0
A2-W43-S-4	NA	88.4%	90.2%	0
A2-W44-S-4	NA	86.7%	88.1%	0
A2-W45-S-4	NA	89.9%	91.1%	0
A2-W46-S-4	NA	88.4%	90.3%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11825 to 13-11831

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS54
Matrix: Soil

QC Report No: WS54-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
MB-060413	91.7%	91.0%	0
LCS-060413	95.1%	94.8%	0
LCS-D-060413	100%	98.7%	0
A2-W40-S-4	88.9%	88.7%	0
A2-W41-S-4	88.5%	87.9%	0
A2-W42-S-4	90.2%	90.8%	0
A2-W43-S-4	88.5%	89.7%	0
A2-W44-S-4	86.3%	88.0%	0
A2-W45-S-4	88.9%	91.0%	0
A2-W46-S-4	88.7%	90.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11825 to 13-11831

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-060413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413

LIMS ID: 13-11825

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/04/13 11:04

LCSD: 06/04/13 11:32

Instrument/Analyst LCS: PID3/PKC

LCSD: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	46.0	50.0	92.0%	47.4	50.0	94.8%	3.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	94.6%	98.0%
Bromobenzene	95.2%	99.3%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-060413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413

LIMS ID: 13-11825

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/04/13 11:04

LCSD: 06/04/13 11:32

Instrument/Analyst LCS: PID3/PKC

LCSD: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	LCS		LCSD	LCSD		RPD
		Spike Added-LCS	Recovery		Spike Added-LCSD	Recovery	
Benzene	154	185	83.2%	167	185	90.3%	8.1%
Toluene	1780	1980	89.9%	1840	1980	92.9%	3.3%
Ethylbenzene	480	580	82.8%	497	580	85.7%	3.5%
m,p-Xylene	1770	2120	83.5%	1870	2120	88.2%	5.5%
o-Xylene	790	960	82.3%	840	960	87.5%	6.1%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.1%	100%
Bromobenzene	94.8%	98.7%

PC
6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130604-2.b/0604a004.d ARI ID: LCS0604
Data file 2: /chem3/pid3.i/20130604-1.b/0604a004.d Client ID:
Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 11:04
Instrument: pid3.i Matrix: WATER
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.230	-0.004	16364	276725	94.6	TFT(Surr)
14.956	0.001	10665	110705	95.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	1927918	0.918 M
8015B 2MP-TMB (4.57 to 15.67)	4363035	4093508	0.938 M
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3262208	0.937 M
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	2021674	0.921 M
CalGas nC6-nC12 (5.10 to 17.32)	4309570	4006706	0.930 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.229	-0.004	13716	95.1	TFT(Surr)
14.955	0.000	31114	94.8	BB(Surr)

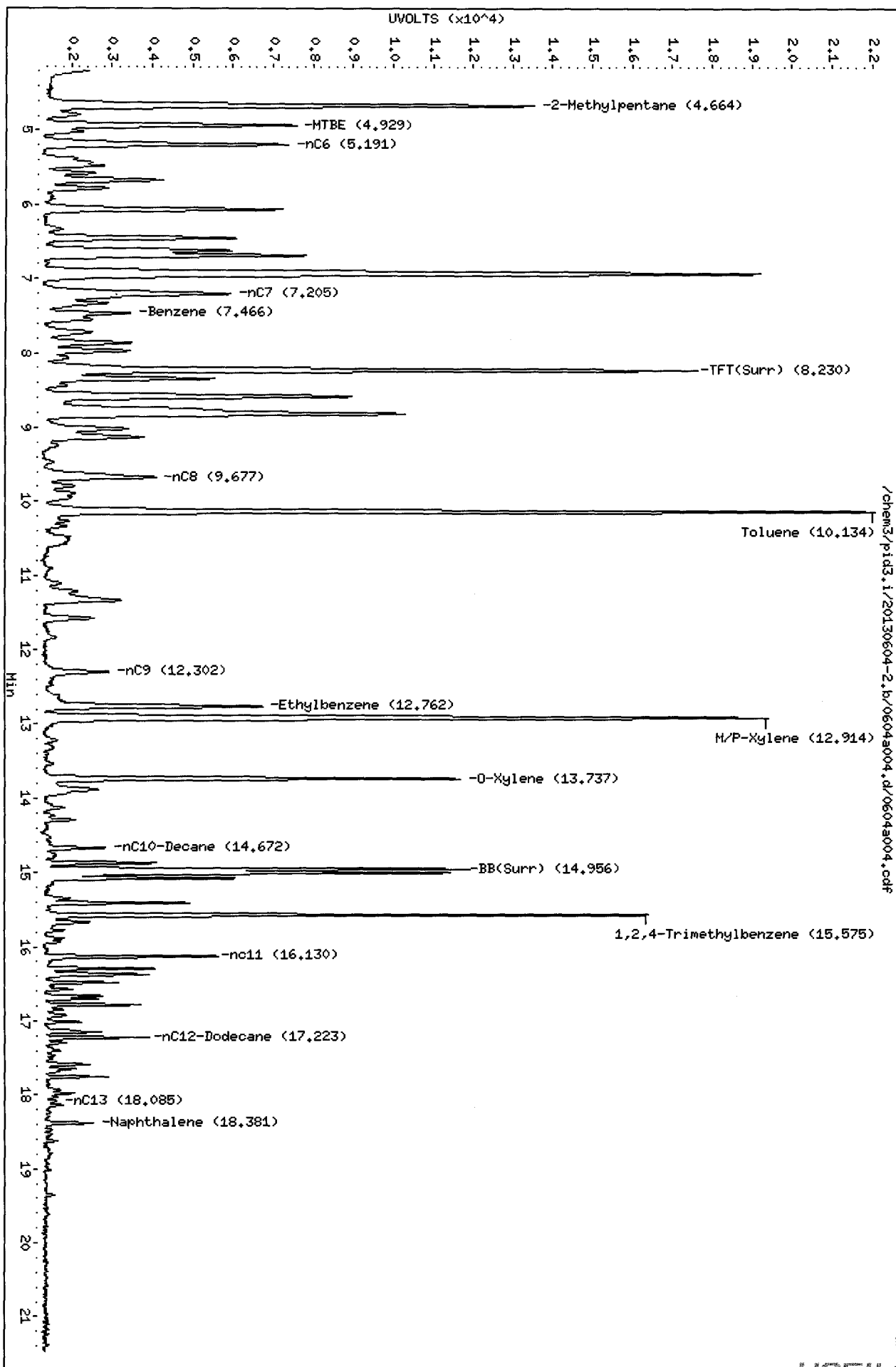
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.465	-0.004	3290	3.07	Benzene
10.134	-0.003	30221	35.50	Toluene
12.762	-0.002	7010	9.59	Ethylbenzene
12.914	0.001	27672	35.45	M/P-Xylene
13.737	-0.001	13256	15.81	O-Xylene
4.924	-0.036	840	1.87	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a004.d
Date: 04-JUN-2013 11:04
Client ID:
Sample Info: LCS0604
Column phase: RTX 502-2 FID

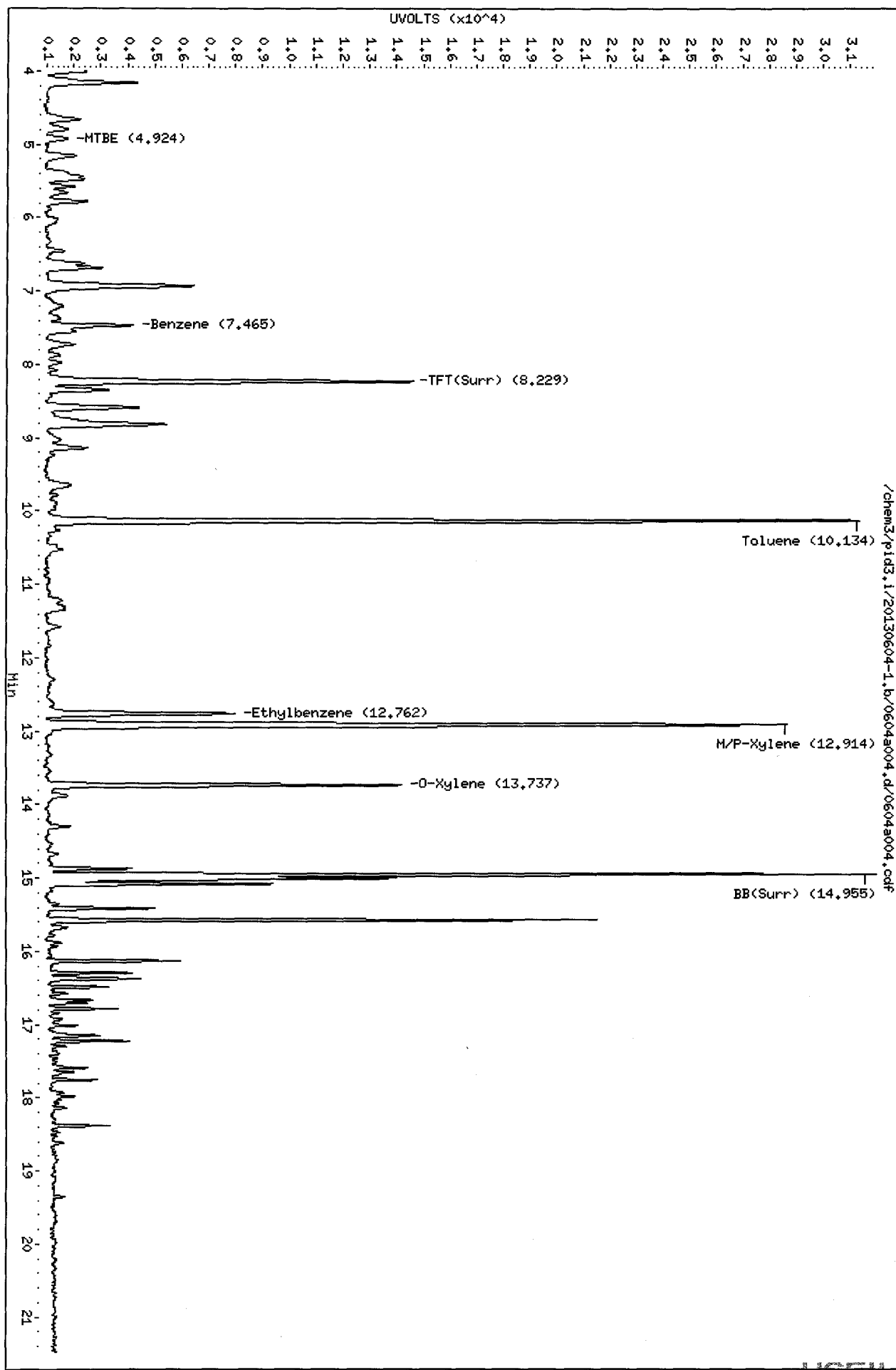
Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130604-2.b/0604a004.d/0604a004.cdf

Data File: /chem3/pid3.1/20130604-1.b/0604a004.d
Date : 04-JUN-2013 11:04
Client ID:
Sample Info: LCS0604
Column phase: RTX 502-2 PID

Instrument: pid3.1
Operator: PC
Column diameter: 0.18

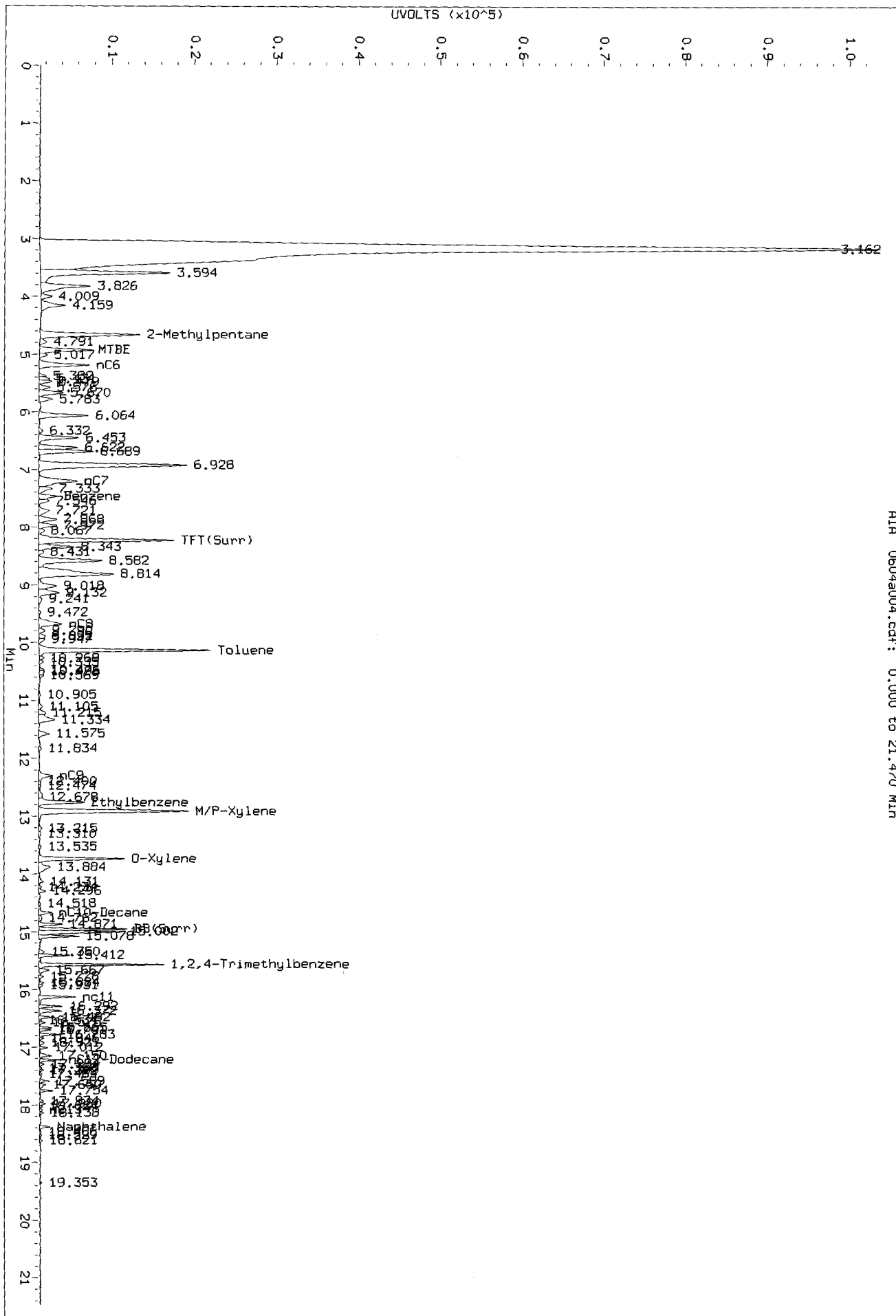


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10000 10000

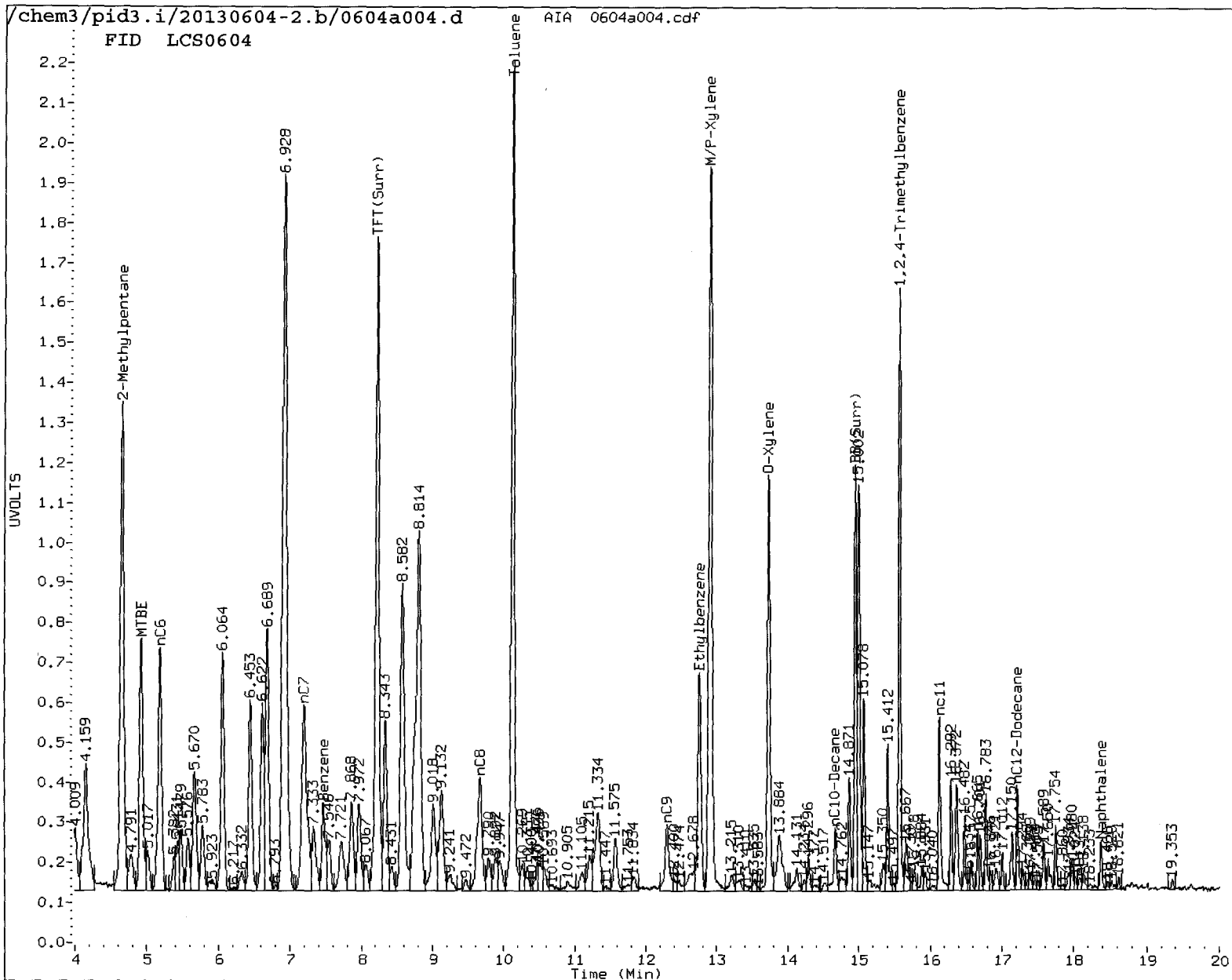
PC
C/S/125
Data File: /chem3/pid3.1/20130604-2.b/0604s004.d/0604s004.cdf
Injection Date: 04-JUN-2013 11:04
Instrument: pid3.1
Client Sample ID:

AIR 0604s004.cdf: 0.000 to 21.470 Min



4554:00082

FID LCS0604



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: KC

Date: 6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

PK
6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a005.d ARI ID: LCSD0604
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a005.d Client ID:
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 11:32
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.238	0.005	16951	287733	98.0	TFT(Surr)
14.959	0.003	11119	111000	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	1984986	0.946 M
8015B 2MP-TMB (4.57 to 15.67)	4363035	4249921	0.974 M
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3388381	0.973 M
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	2083527	0.949 M
CalGas nC6-nC12 (5.10 to 17.32)	4309570	4156303	0.964 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.238	0.004	14437	100.1	TFT(Surr)
14.958	0.003	32380	98.7	BB(Surr)

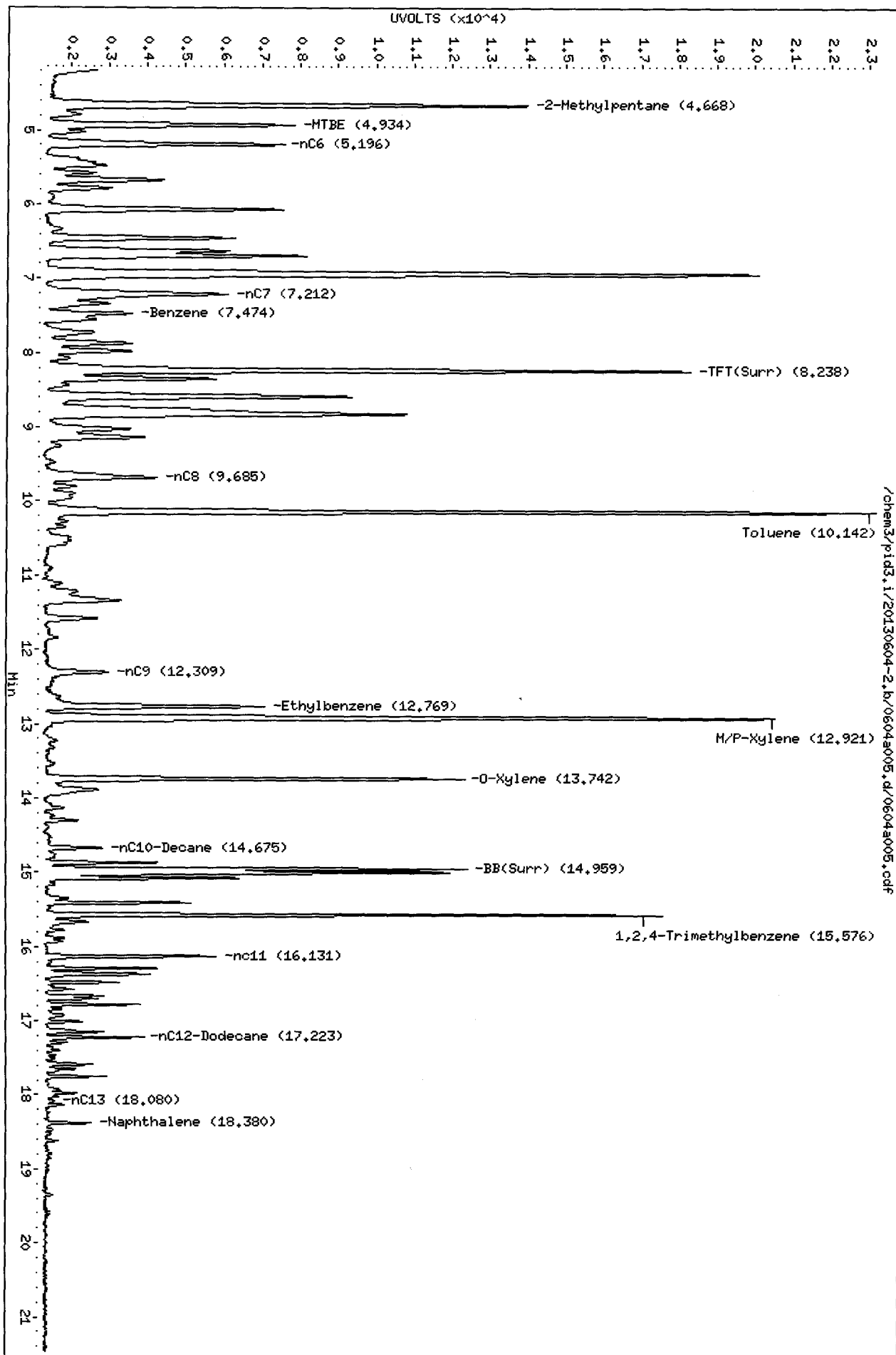
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.472	0.003	3572	3.34	Benzene
10.142	0.004	31351	36.83	Toluene
12.768	0.005	7271	9.94	Ethylbenzene
12.921	0.007	29190	37.39	M/P-Xylene
13.742	0.004	14080	16.79	O-Xylene
4.927	-0.032	1057	2.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a005.d
Date: 04-JUN-2013 11:32
Client ID:
Sample Info: LCSID0604
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

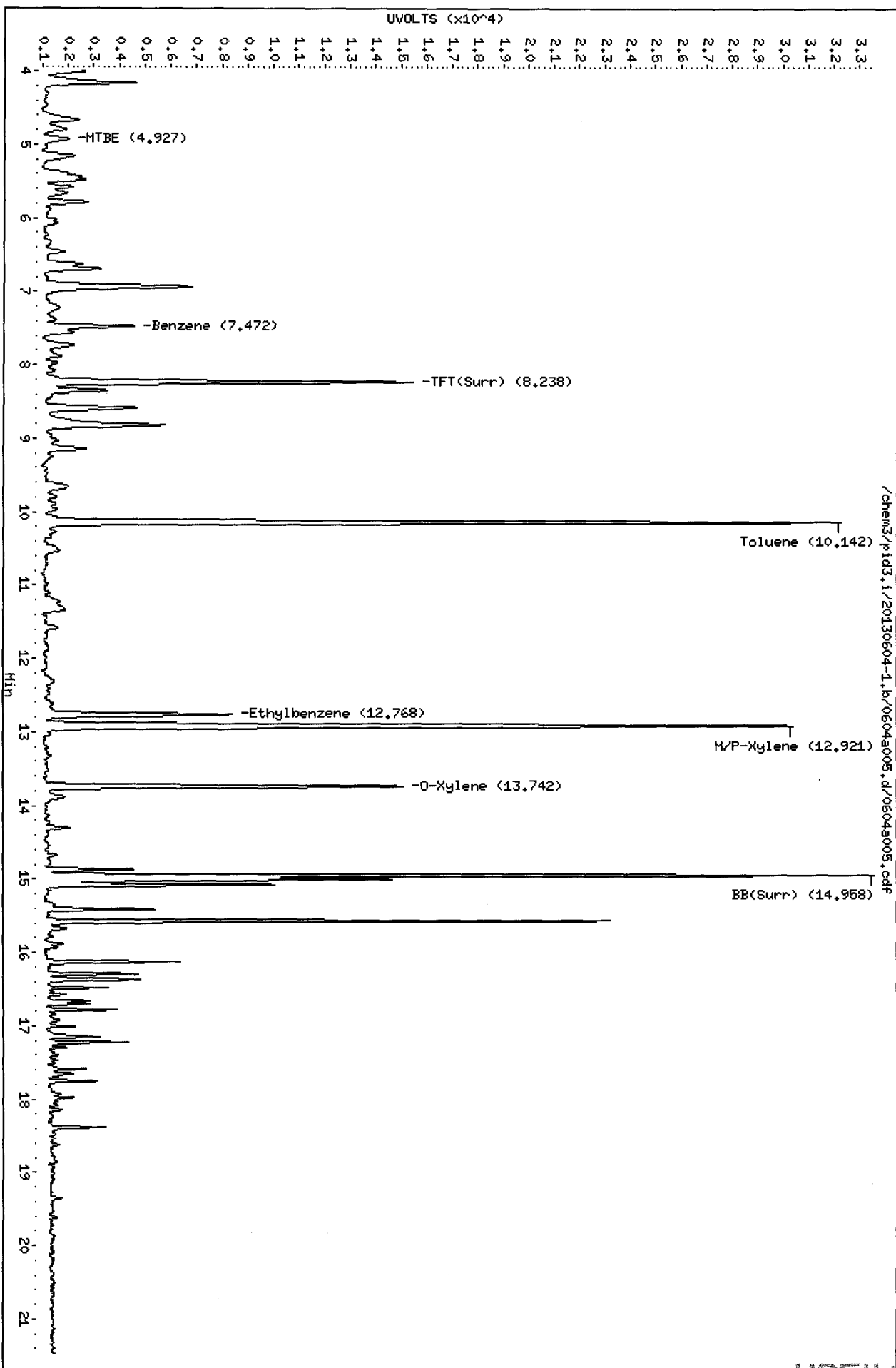


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4554:00085

Data File: /chem3/pid3.i/20130604-1.b/0604a005.d
Date : 04-JUN-2013 11:32
Client ID:
Sample Info: LCSD0604
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

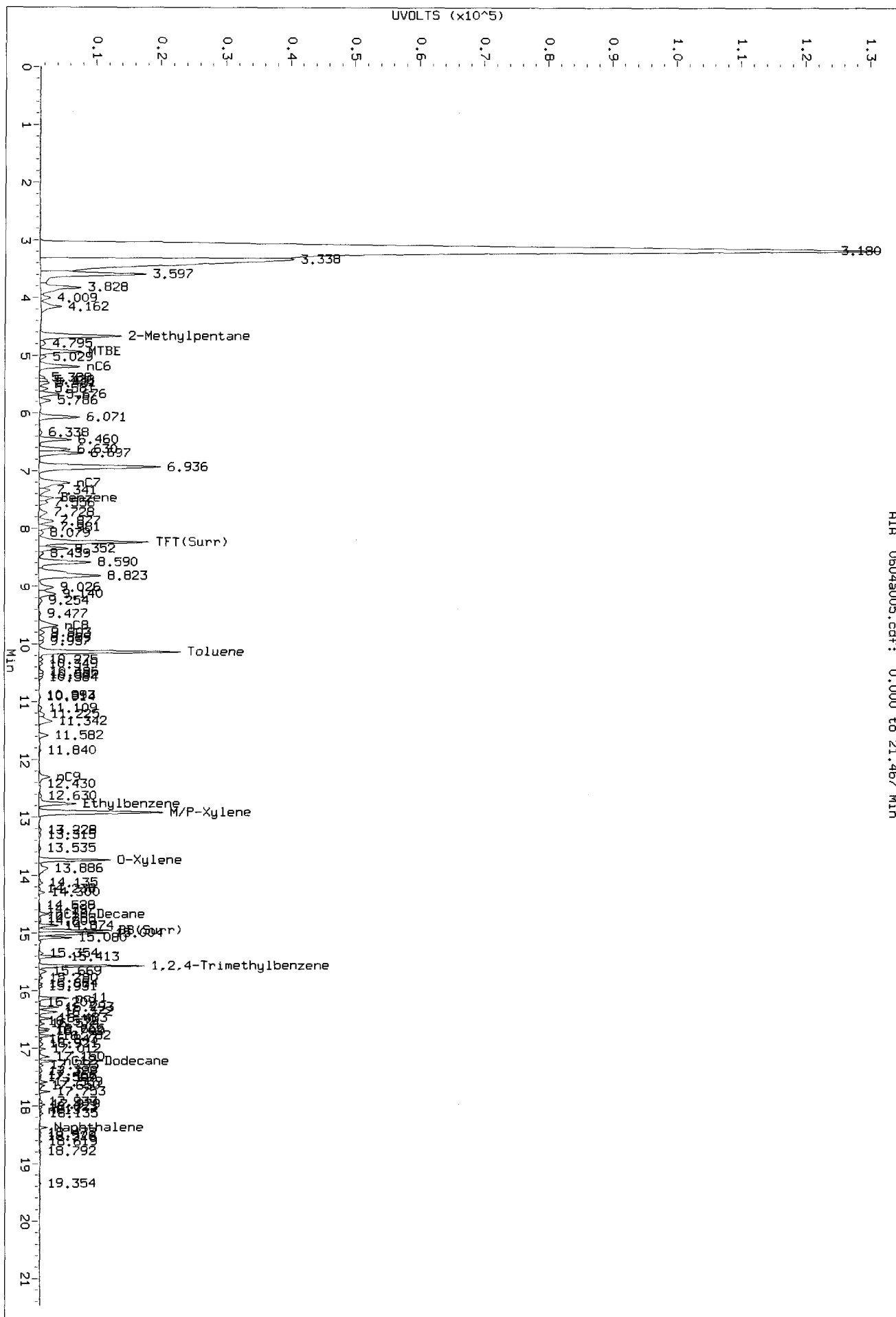


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1554 00086

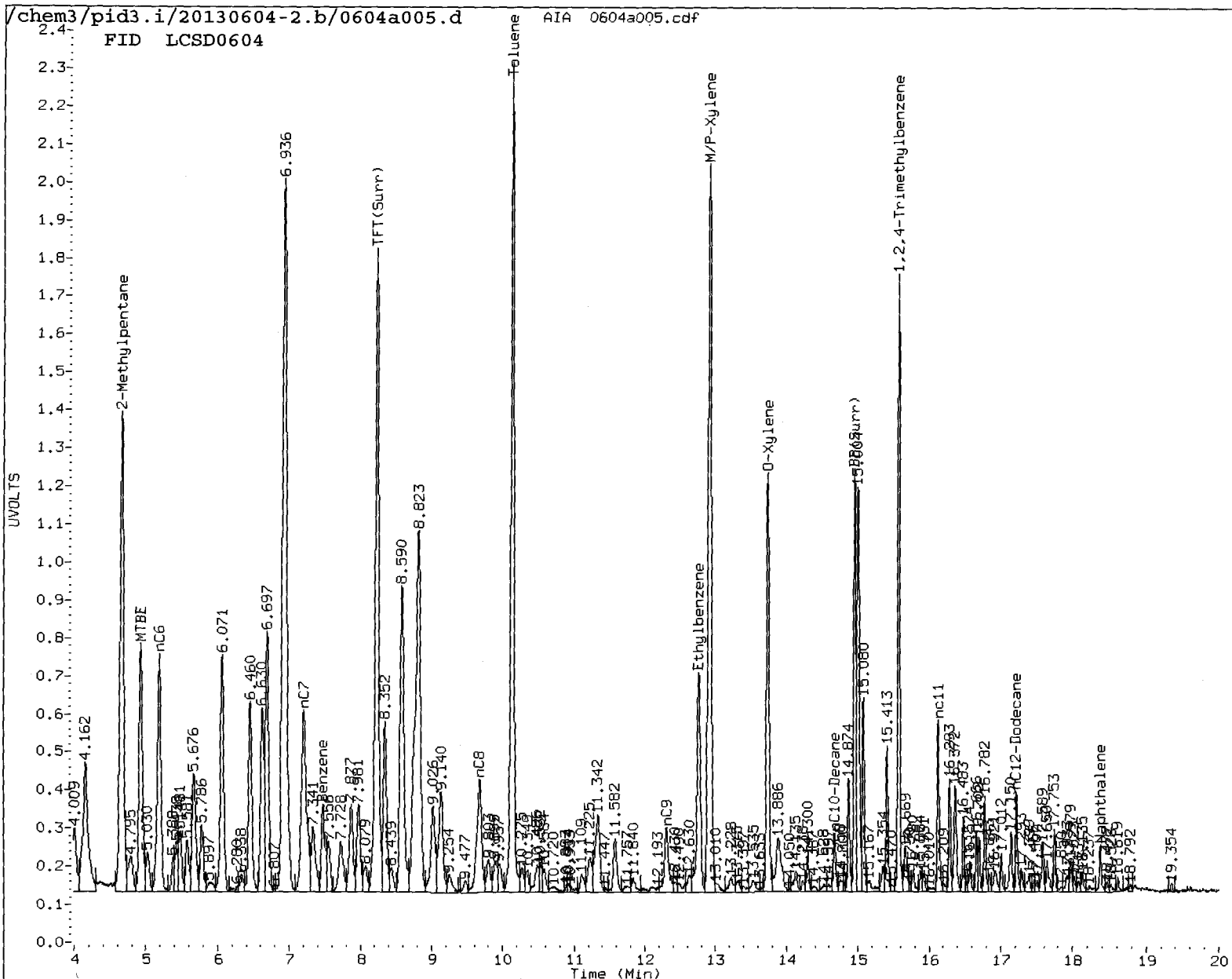
6/5/13

Data File: /chem3/pid3.1/20130604-2.1/0604a005.d/0604a005.cdf
Injection Date: 04-JUN-2013 11:32
Instrument: pid3.1
Client Sample ID:



AIR 0604a005.cdf: 0.000 to 21.467 MIN

FID LCSD0604



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other

Analyst: VL

Date: 6/5/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-060413

METHOD BLANK

Lab Sample ID: MB-060413

LIMS ID: 13-11825

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/05/13

QC Report No: WS54-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 06/04/13 12:01

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	91.7%
Bromobenzene	91.0%

Gasoline Surrogate Recovery

Trifluorotoluene	90.2%
Bromobenzene	90.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a006.d ARI ID: MB0604
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a006.d Client ID:
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 12:01
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.239	0.006	15598	231515	90.2	TFT(Surr)
14.959	0.004	10141	99005	90.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	1954	0.001
8015B 2MP-TMB (4.57 to 15.67)	4363035	1328	0.000
AK101 nC6-nC10 (5.10 to 14.57)	3480628	1327	0.000
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	3379	0.002
CalGas nC6-nC12 (5.10 to 17.32)	4309570	3281	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.006	13226	91.7	TFT(Surr)
14.959	0.004	29843	91.0	BB(Surr)

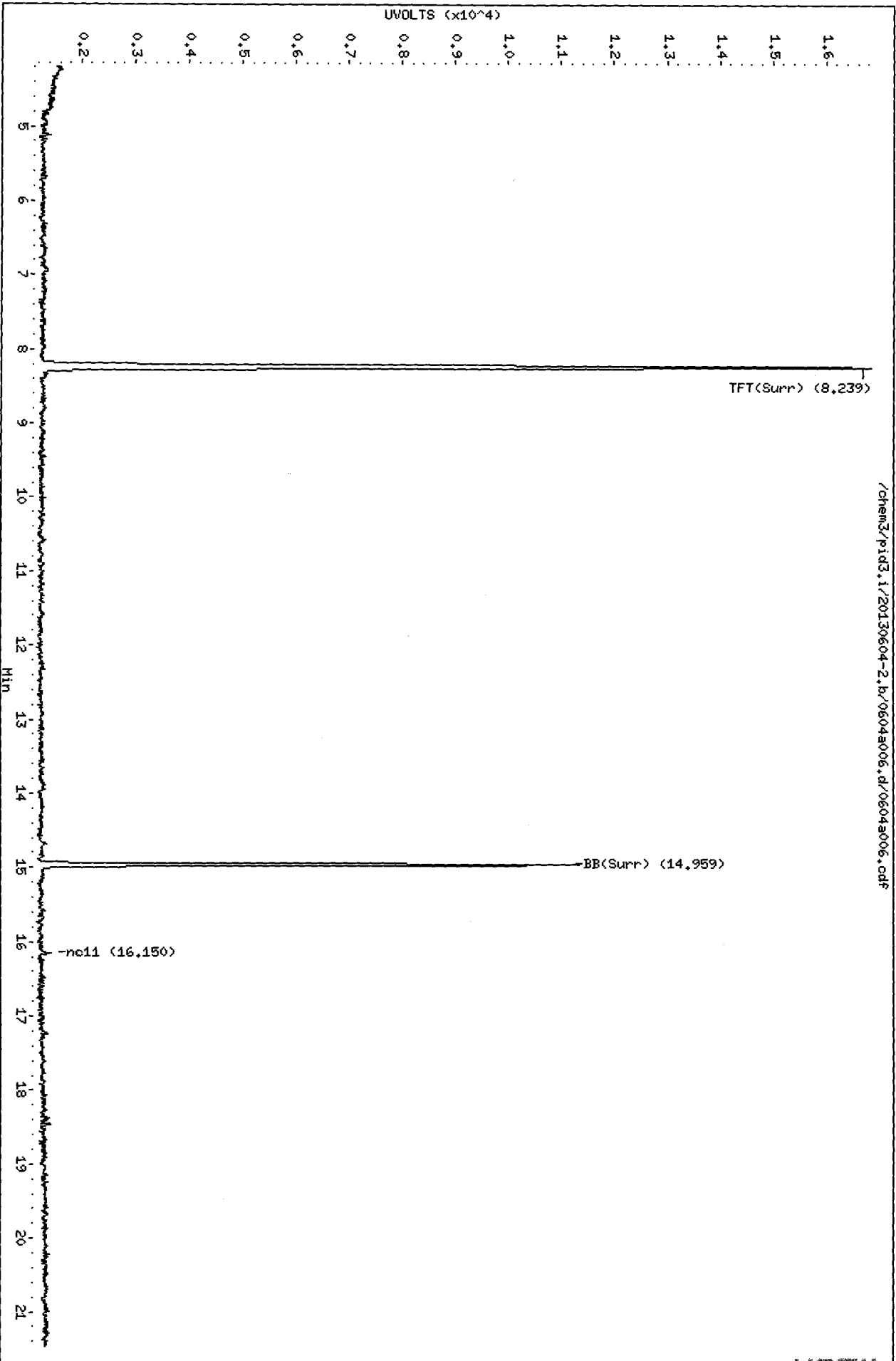
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.1/20130604-2.b/0604a006.d
Date : 04-JUN-2013 12:01
Client ID:
Sample Info: HB0604
Column phase: RTX 502-2 FID

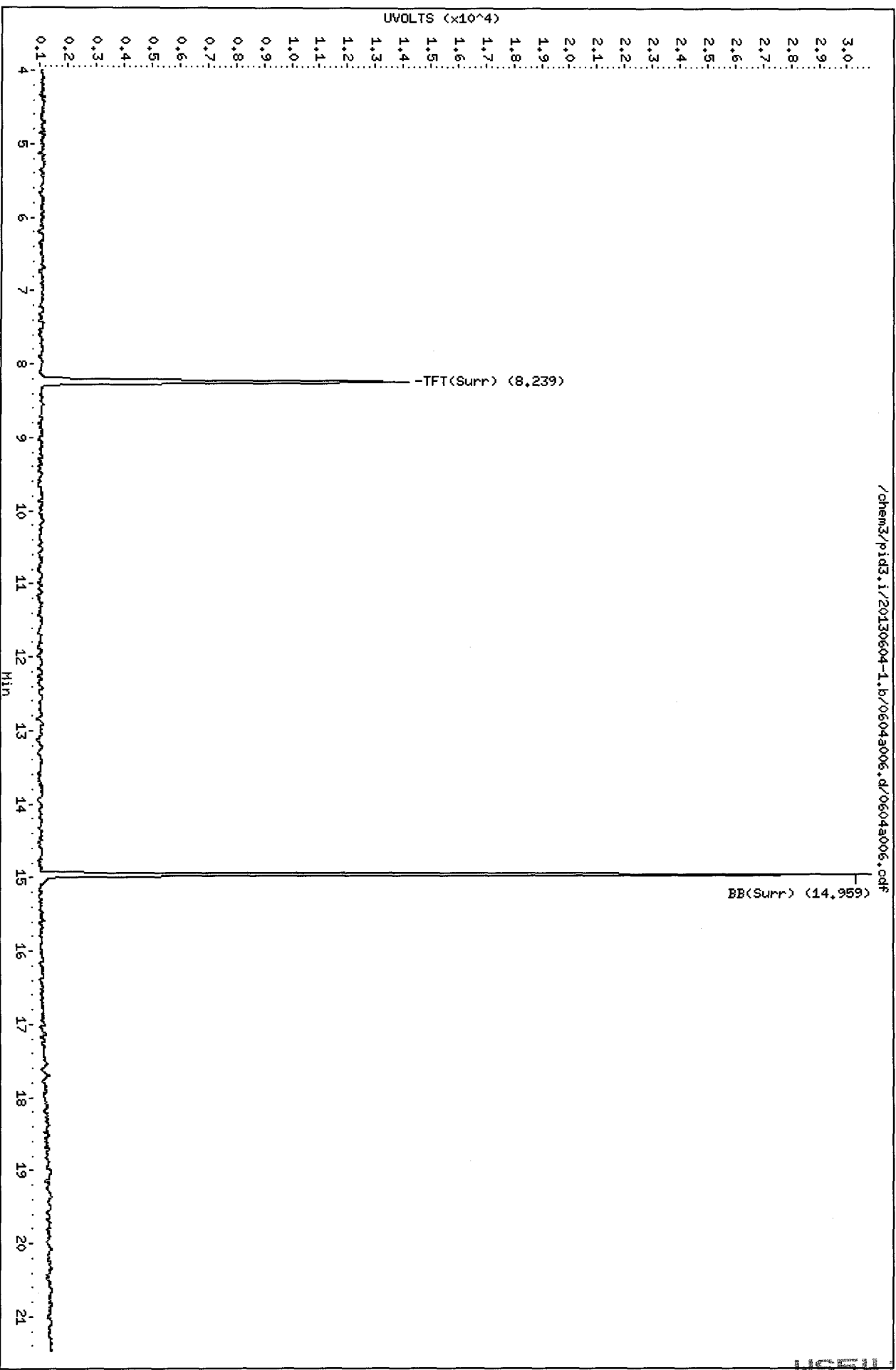
Instrument: pid3.1
Operator: PC
Column diameter: 0.18



160000 1000

Data File: /chem3/pid3.i/20130604-1.b/0604a006.d
Date: 04-JUN-2013 12:01
Client ID:
Sample Info: MB0604
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130604-1.b/0604a006.d/0604a006.cdf

W554 00092



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 6, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS55

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted six soil samples on June 4, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx, NWTPH-Gx/BTEX, and Lead, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS55

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WS55	Turn-around Requested:	Date:
ARI Client Company: Tony Silva, Maul Foster and Alongi, Inc. (MFA)	Phone: 503-209-2518 Cell	Page: 1 of 1
Client Contact: Tony Silva, MFA; tsilva@maulfoster.com; office 503-209-2518		No. of Coolers: 1 Cooler Temps:

Client Project Name: Former Cashmere Mill Site					Analysis Requested							Notes/Comments	
Client Project #: 0779.02.01 / 03		Samplers:			Dx	Gx/BTE	Lead (only if Gx detected)						
Sample ID	Date	Time	Matrix	No. Containers									
SL-053013-SP-1	6/3/2013	1530	S	5									
SL-053013-SP-2	6/3/2013	1600	S	5									
AREA2-053013-SP-1	6/3/2013	1630	S	5									
AREA2-053013-SP-2	6/3/2013	1645	S	5									
AREA2-053013-SP-3	6/3/2013	1700	S	5									
AREA2-053013-SP-4	6/3/2013	1730	S	5									
Comments/Special Instructions Provide PDF lab report and EQUIS 4 file EDD. Email data to Tony Silva and Erik Naylor at MFA. enaylor@maulfoster.com Erik office 503-501-5243					Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)		Received by: (Signature)		
					Printed Name: Lindsey Crosby		Printed Name: A. Volgardsen		Printed Name:		Printed Name:		
					Company: MFA		Company: ARI		Company:		Company:		
					Date & Time:		Date & Time: 6/4/13 1020		Date & Time:		Date & Time:		

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

WS55:00002



Cooler Receipt Form

ARI Client: Maul Foster

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WS555

Tracking No: K046 684 6762 / K046 684 6771 /
K046 684 6799 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.8 3.7 5.3
 If cooler temperature is out of compliance fill out form 00070F
 Cooler Accepted by: JM Date: 6/4/13 Time: 1020 Temp Gun ID#: 90877952

Complete custody forms and attach all shipping documents

Log-In Phase:



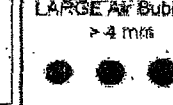
Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI..... NA
 Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____
 Samples Logged by: AV Date: 6/4/13 Time: 1139

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:
Coc's not received with cooler, and the Coc's are not signed.

By: AV Date: 6/4/13

 Small Air Bubbles ~2mm	 Pea bubbles 2-4 mm	 LARGE Air Bubbles > 4 mm	Small → "sm" Pea bubbles → "pb" Large → "lg" Headspace → "hs"
--	--	--	--

Subject: RE: Cashmere Samples, 6/4/13
From: "Lindsey Crosby" <lindsay@maulfoster.com>
Date: 6/4/2013 11:11 AM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Tony Silva" <tsilva@maulfoster.com>

Hi Cherrone,
Sorry about that. You are correct. The first COC is standard turnaround time (A2-F#-S-6) while the other COC with only 6 samples is rush 24-hour turnaround time. Also, lead should be run regardless for the 6 samples. Please run all analysis listed.

Thanks,

LINDSEY CROSBY EIT | MAUL FOSTER & ALONGI, INC.

d. 360 433 0223 | c. 360 989 4836 | p. 360 694 2691 | f. 360 906 1958 |
www.maulfoster.com

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]
Sent: Tuesday, June 04, 2013 11:07 AM
To: Lindsey Crosby
Cc: Tony Silva
Subject: Re: Cashmere Samples, 6/4/13

Hi Lindsey,

Samples are not marked on the COC for analyses. Should we assume stock pile samples need NWTPH-Dx (w/ clean-ups) and NWTPH-Gx/BTEX. And the floor samples need NWTPH-Dx (w/ clean-ups) and BTEX only?

Standard TAT?

-Cheronne

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

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immediately. Thank you.

On 6/4/2013 11:05 AM, Lindsey Crosby wrote:

Cherrone,
Please see the attached chain of custodies.
Thanks!

LINDSEY CROSBY EIT | MAUL FOSTER & ALONGI, INC.

d. 360 433 0223 | c. 360 989 4836 | p. 360 694 2691 | f. 360 906
1958 | www.maulfoster.com

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]
Sent: Tuesday, June 04, 2013 10:54 AM
To: Tony Silva; Lindsey Crosby
Subject: Cashmere Samples, 6/4/13

Hi Tony and Lindsey,

We received the rush samples this morning, thank you. However, we only received
one COC for three coolers. When can we expect COCs for all other samples received?
-Cheronne

--

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

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Sample ID Cross Reference Report



ARI Job No: WS55
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Former Cashmere Mill Site

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SL-053013-SP-1	WS55A	13-11842	Soil	06/03/13 15:30	06/04/13 10:20
2. SL-053013-SP-2	WS55B	13-11843	Soil	06/03/13 16:00	06/04/13 10:20
3. AREA2-053013-SP-1	WS55C	13-11844	Soil	06/03/13 16:30	06/04/13 10:20
4. AREA2-053013-SP-2	WS55D	13-11845	Soil	06/03/13 16:45	06/04/13 10:20
5. AREA2-053013-SP-3	WS55E	13-11846	Soil	06/03/13 17:00	06/04/13 10:20
6. AREA2-053013-SP-4	WS55F	13-11847	Soil	06/03/13 17:30	06/04/13 10:20



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



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Analytical Chemists and Consultants

- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03


Matrix: Soil
Data Release Authorized: *AS*
Reported: 06/06/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-060413 13-11842	Method Blank HC ID: ---	06/04/13	06/05/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 79.4%
WS55A 13-11842	SL-053013-SP-1 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 12	59 83 53.4%
WS55B 13-11843	SL-053013-SP-2 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	50 160 54.1%
WS55C 13-11844	AREA2-053013-SP-1 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	550 E 2800 ES 62.8%
WS55C DL 13-11844	AREA2-053013-SP-1 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	56 110	460 2800 50.4%
WS55D 13-11845	AREA2-053013-SP-2 HC ID: DRO/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	98 620 E 61.2%
WS55D DL 13-11845	AREA2-053013-SP-2 HC ID: DRO/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	29 57	86 580 70.1%
WS55E 13-11846	AREA2-053013-SP-3 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	320 E 2200 ES 59.6%
WS55E DL 13-11846	AREA2-053013-SP-3 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	58 120	260 2100 62.2%
WS55F 13-11847	AREA2-053013-SP-4 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	200 1600 ES 57.9%
WS55F DL 13-11847	AREA2-053013-SP-4 HC ID: DIESEL/MOTOR OIL	06/04/13	06/05/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	59 120	180 1500 60.9%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 2

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

Matrix: Soil
Data Release Authorized: 
Reported: 06/06/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
--------	-----------	-----------------	---------------	--------	-----------------	----	--------

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a013.d
Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 06/05/2013

ARI ID: WS54MBS1
Client ID: WS54MBS1
Injection: 05-JUN-2013 13:14
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	82320	2
C8	1.068	-0.017	6114	13392	DIESEL (C12-C24)	316424	16.94
C10	2.858	0.002	161	163	M.OIL (C24-C38)	206741	12.89
C12	3.869	0.007	1380	1262	AK-102 (C10-C25)	339099	15.62
C14	4.563	0.002	1487	660	AK-103 (C25-C36)	172231	14.82
C16	5.146	-0.007	3062	5992			
C18	5.724	0.005	2558	3781			
C20	6.281	-0.001	1564	649			
C22	6.823	-0.011	1519	475			
C24	7.357	-0.001	1176	961			
C25	7.612	0.007	1129	1102			
C26	7.862	0.000	1121	772			
C28	8.300	-0.005	1638	2433	IT.DIES (C10-C24)	331533	15.32
C32	9.100	0.012	3223	8062			
C34	9.433	0.004	1299	538	BUNKERC (C10-C38)	538274	58.09
Filter Peak	11.479	-0.002	1970	784	HYDRAUL (C24-C38)	206741	13.03
C36	9.736	-0.013	1925	3368			
C38	10.044	-0.003	1692	1183			
C40	10.331	-0.002	1917	835			
o-terph	5.855	0.002	1177391	915022			
Triacon Surr	8.719	-0.005	769922	807779	IT.MOIL (C24-C40)	1051314	15.74

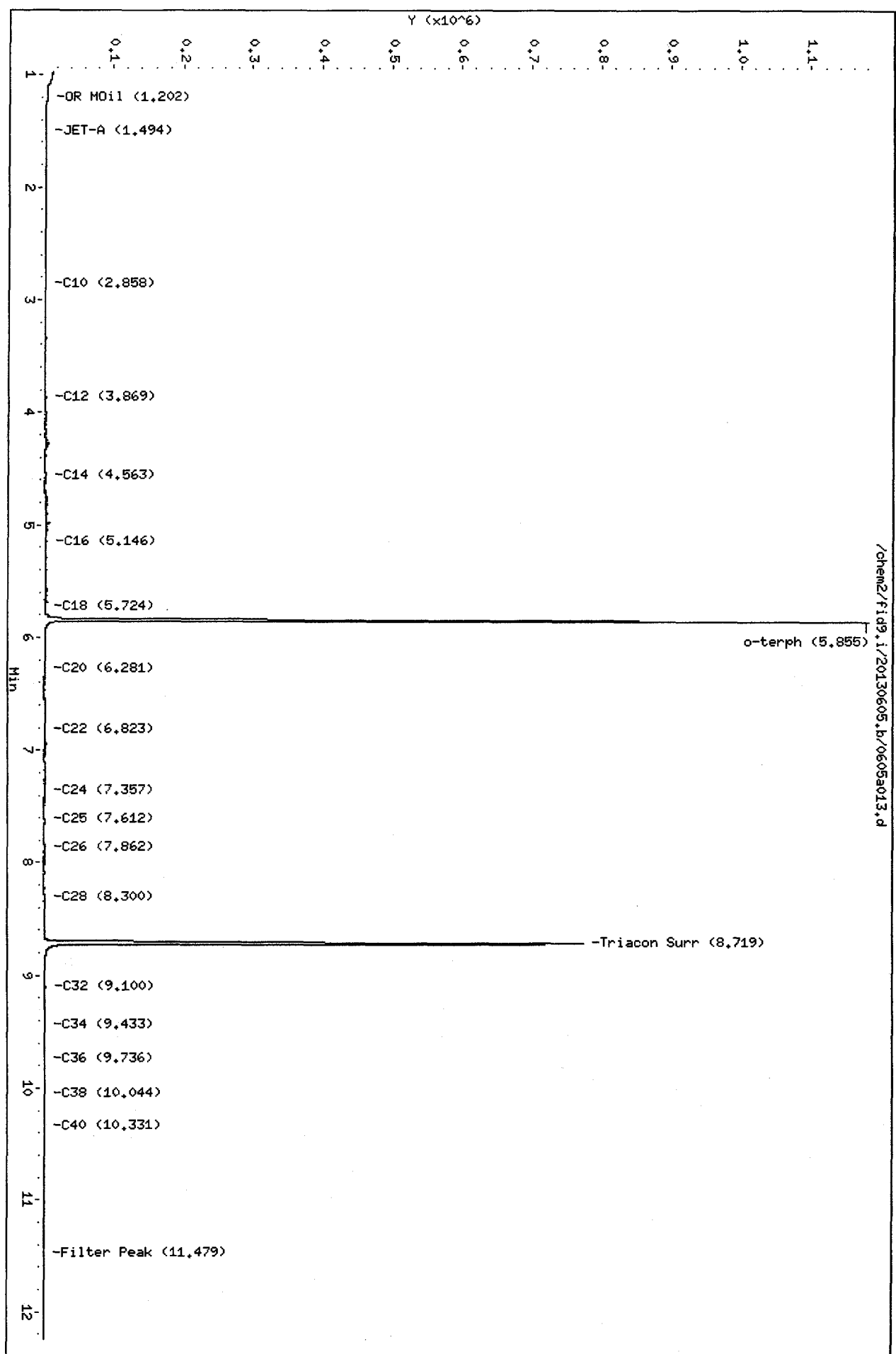
M Indicates manual integration within range.

Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	915022	35.7	79.4
Triacotane	807779	42.7	95.0

Handwritten: 80
6/5/10

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b008.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/05/2013
Macro: FID:3B052113

ARI ID: WS55A
Client ID: SL-053013-SP-1
Injection: 05-JUN-2013 11:46
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		307704	23
C8	0.814	0.046	3606	8313	WATPHD (C12-C24)		5348730	516.41
C10	2.227	0.014	5225	3492	WATPHM (C24-C38)		7171530	726.39
C12	3.017	-0.004	8040	4168	AK102 (C10-C25)		5780520	467.80 M
C14	3.605	0.002	21628	15967	AK103 (C25-C36)		6253605	879.74 M
C16	4.102	-0.001	29373	9980				
C18	4.551	-0.003	76177	116371				
C20	4.972	-0.005	40729	28155				
C22	5.376	0.001	40143	10818	MSPIRIT (Tol-C12)		307704	22.40
C24	5.748	0.000	49534	38169				
C25	5.927	0.001	46884	29659				
C26	6.102	0.001	55788	17387				
C28	6.418	-0.002	95650	58226				
C32	6.974	0.003	61611	21199				
C34	7.210	-0.001	55509	16061				
Filter Peak	----							
C36	7.432	0.001	63367	45342				
o-terph	4.632	-0.028	785988	323082	JET-A (C10-C18)		2661571	245.89
Triacon Surr	6.666	-0.050	747296	448660				

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	323082	24.0	53.4
Triacotane	448660	34.4	76.4

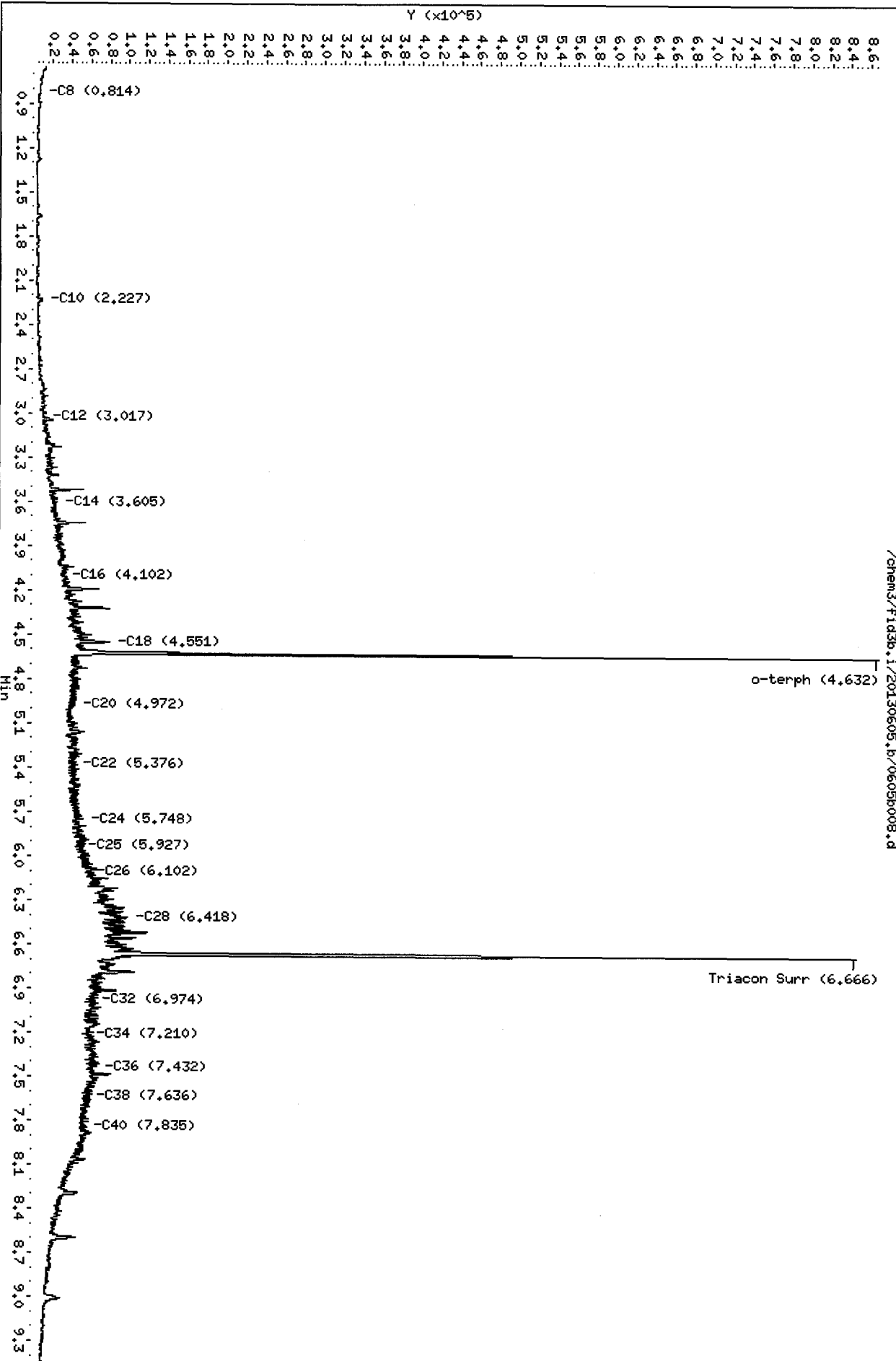
Handwritten: JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

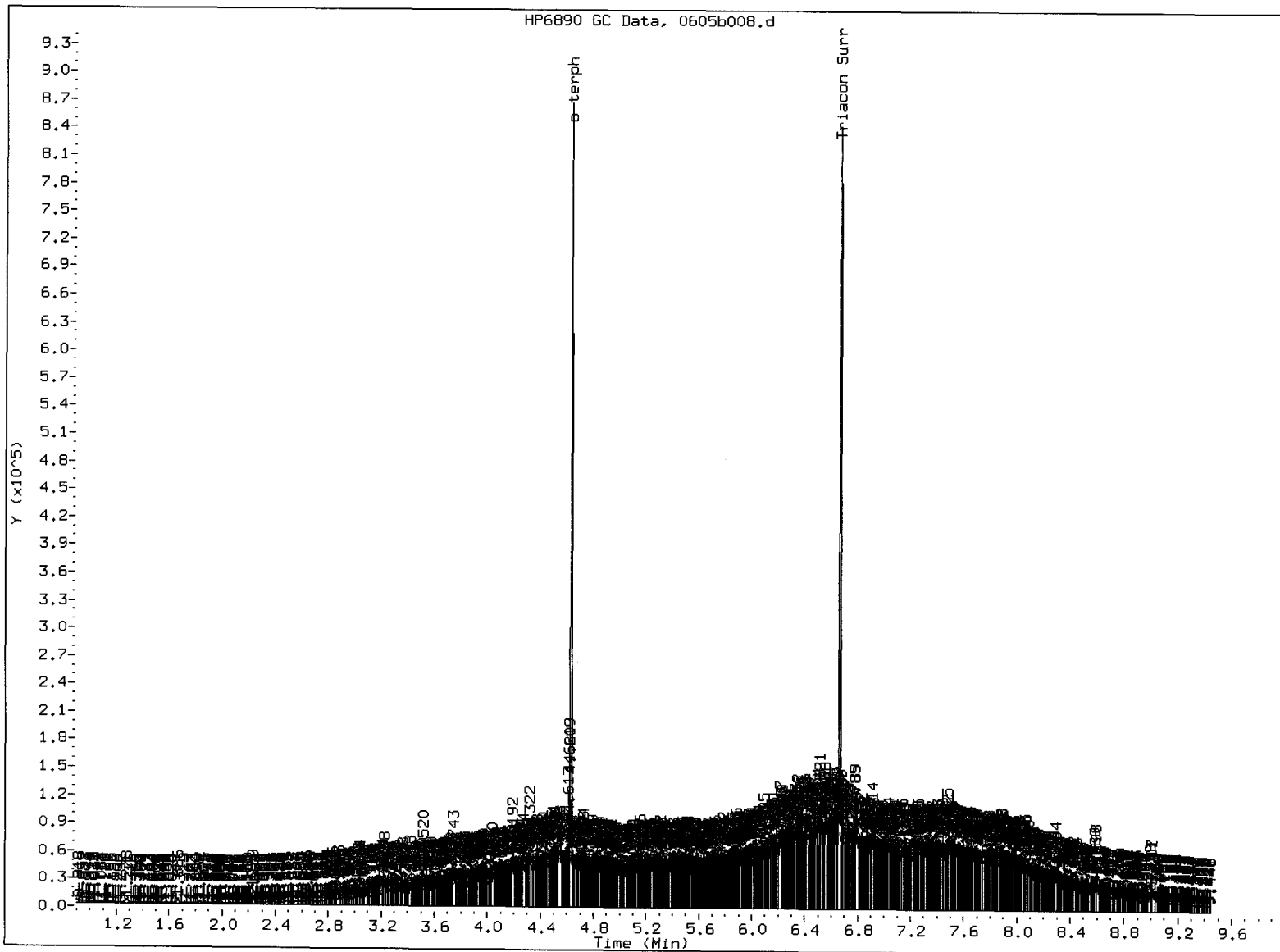
Data File: /chem3/fid3b.i/20130605.b/0605b008.d
Date: 05-JUN-2013 11:46
Client ID: SL-053013-SP-1
Sample Info: MS55A
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

MS
6/5/13



/chem3/fid3b.i/20130605.b/0605b008.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: *BW*

Date: 6/5/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b009.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/05/2013
Macro: FID:3B052113

ARI ID: WS55B
Client ID: SL-053013-SP-2
Injection: 05-JUN-2013 12:04
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		159696	12
C8	0.810	0.042	4280	2732	WATPHD (C12-C24)		4387528	423.61
C10	2.207	-0.006	1901	1615	WATPHM (C24-C38)		13419927	1359.27
C12	3.020	-0.001	2139	1136	AK102 (C10-C25)		4887670	395.55 M
C14	3.606	0.003	6416	6760	AK103 (C25-C36)		12057526	1696.22 M
C16	4.100	-0.003	9919	4146				
C18	4.552	-0.002	35052	23468				
C20	4.977	0.001	32922	6486				
C22	5.377	0.002	60490	20803	MSPIRIT (Tol-C12)		159696	11.62
C24	5.756	0.009	89526	58367				
C25	5.924	-0.001	109878	52955				
C26	6.103	0.001	138831	85127				
C28	6.423	0.003	172971	104067				
C32	6.975	0.003	109888	42985				
C34	7.213	0.002	96974	37082				
Filter Peak	----							
C36	7.429	-0.002	99170	47183				
o-terph	4.631	-0.030	615836	327636	JET-A (C10-C18)		976067	90.17
Triacon Surr	6.668	-0.048	788401	429703				

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	327636	24.4	54.1
Triacontane	429703	32.9	73.2

800
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130605.b/0605b009.d

Date: 05-JUN-2013 12:04

Client ID: SL-053013-SP-2

Sample Info: W555B

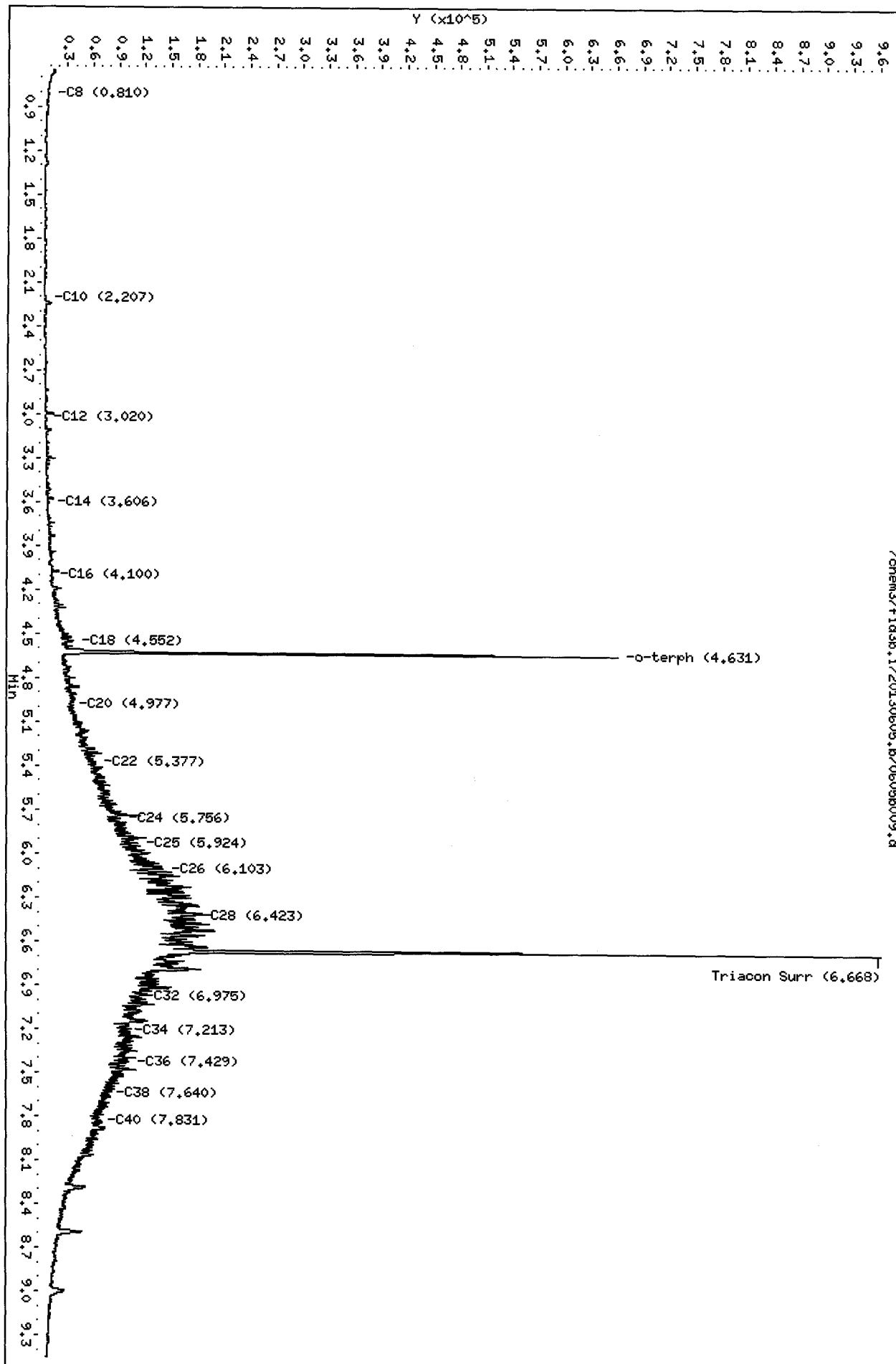
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Instrument: fid3b.i

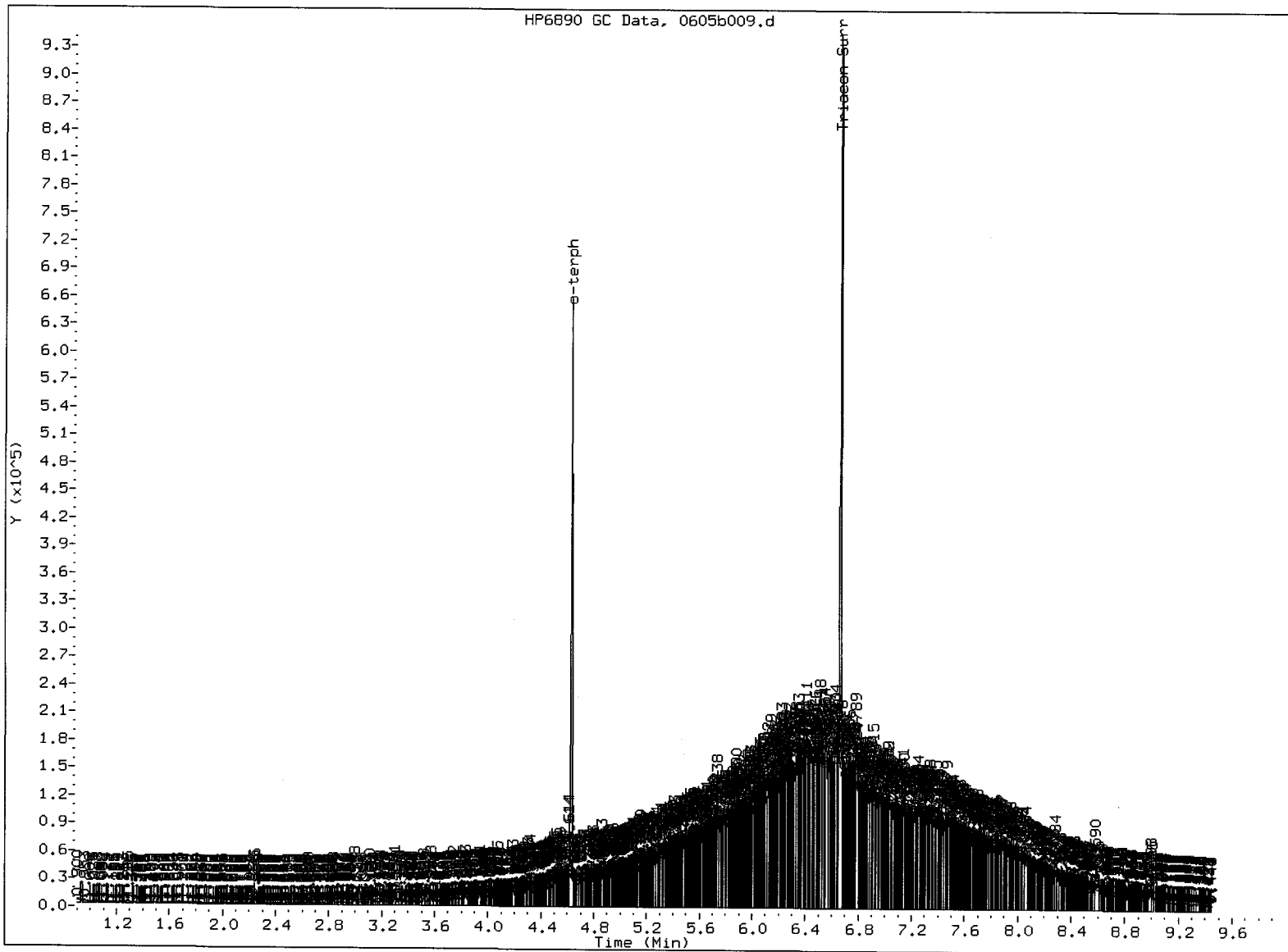
Operator: JM

Column diameter: 0.25

/chem3/fid3b.i/20130605.b/0605b009.d



500
6/5/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JD

Date: 6/5/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b010.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/05/2013
Macro: FID:3B052113

ARI ID: WS55C
Client ID: AREA2-053013-SP-1
Injection: 05-JUN-2013 12:22
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		580395	43
C8	0.803	0.035	3575	2040	WATPHD (C12-C24)		50235446	4850.18
C10	2.208	-0.005	2271	1508	WATPHM (C24-C38)		240181561	24327.40
C12	3.021	0.001	21874	17097	AK102 (C10-C25)		57423257	4647.12
C14	3.606	0.002	60914	36102	AK103 (C25-C36)		224420567	31570.80
C16	4.104	0.001	62036	15388				
C18	4.556	0.002	157295	188307				
C20	4.975	-0.001	287790	55900				
C22	5.372	-0.003	756902	260879	MSPIRIT (Tol-C12)		580395	42.25
C24	5.746	-0.002	1414155	720496				
C25	5.928	0.002	1683006	397211				
C26	6.103	0.001	1858148	255332				
C28	6.422	0.002	2702931	895181				
C32	6.968	-0.004	2727780	641172				
C34	7.214	0.003	2611749	1110795				
Filter Peak	----							
C36	7.432	0.001	1475171	424218				
o-terph	4.636	-0.025	720854	379821	JET-A (C10-C18)		5591498	516.58
Triacon Surr	----							

E
ES
M

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	379821	28.2	62.8
Triacontane	0	0.0	0.0

NR

JW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chems3/fid3b.i/20130605.b/0605b010.d

Date: 05-JUN-2013 12:22

Client ID: AREA-053013-SP-1

Sample Info: MSS5C

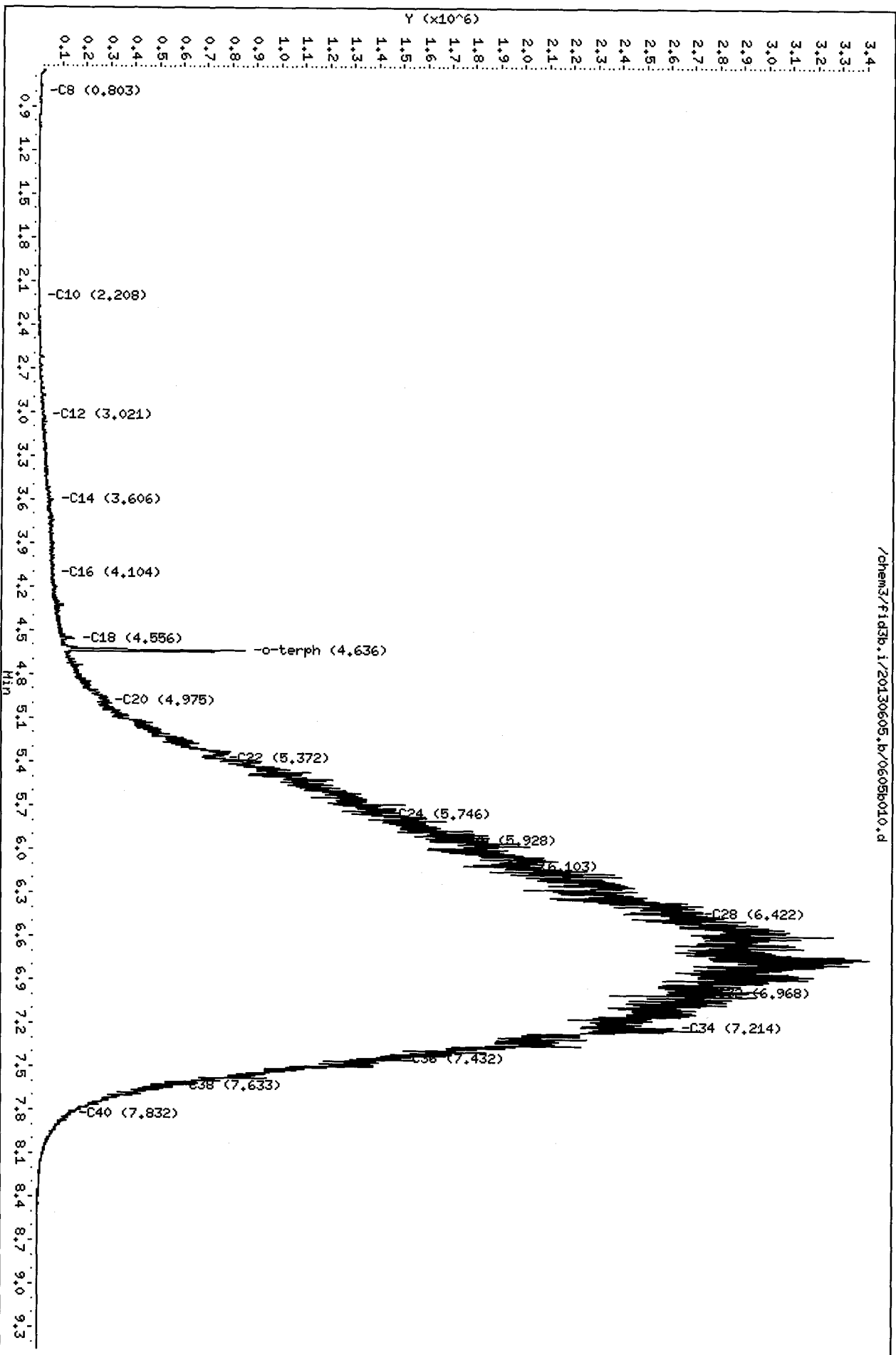
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Instrument: fid3b.i

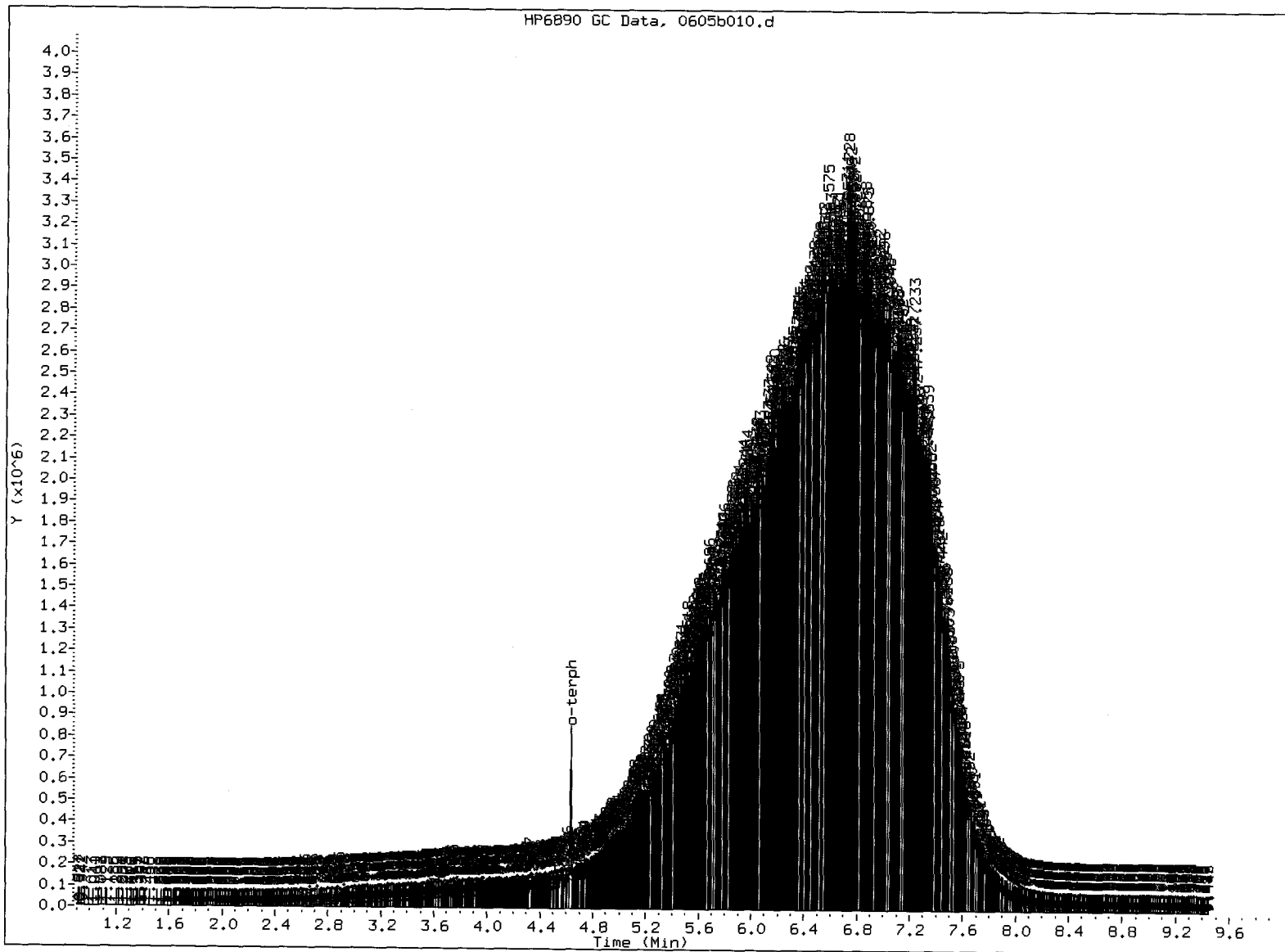
Operator: JM

Column diameter: 0.25

Handwritten: 50
6/5/10



/chems3/fid3b.i/20130605.b/0605b010.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/5/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b014.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WS55C
Client ID: AREA2-053013-SP-1
Injection: 05-JUN-2013 13:36
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	113509	8
C8	0.805	0.037	3393	405	WATPHD	(C12-C24)	4230247	408.43
C10	2.208	-0.006	992	666	WATPHM	(C24-C38)	24469969	2478.50
C12	3.014	-0.006	2367	1540	AK102	(C10-C25)	5016839	406.00 M
C14	3.598	-0.005	5403	5682	AK103	(C25-C36)	22140068	3114.60
C16	4.104	0.001	6951	5436				
C18	4.556	0.002	10055	3613				
C20	4.977	0.001	24359	6721				
C22	5.374	-0.001	61710	16701	MSPiRIT	(Tol-C12)	113509	8.26
C24	5.746	-0.002	125756	32651				
C25	5.925	0.000	172034	102626				
C26	6.103	0.001	204144	122442				
C28	6.418	-0.002	274749	62744				
C32	6.973	0.001	257968	77307				
C34	7.215	0.004	284669	194462				
Filter Peak	----							
C36	7.432	0.001	193934	78703				
o-terph	4.656	-0.004	68171	30549	JET-A	(C10-C18)	561632	51.89
Triacon Surr	----							

Range Times: NW Diesel (3.070 - 5.798) NW Gas (0.609 - 3.070) NW M.Oil (5.798 - 7.687)
AK102 (2.163 - 5.875) AK103 (5.875 - 7.481) Jet A (2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	30549	2.3	50.5
Triacontane	0	0.0	0.0

N2

JW
6/6/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130605.b/0605b014.d

Date: 05-JUN-2013 13:36

Client ID: AREA2-053013-SP-1

Sample Info: MS55C.10

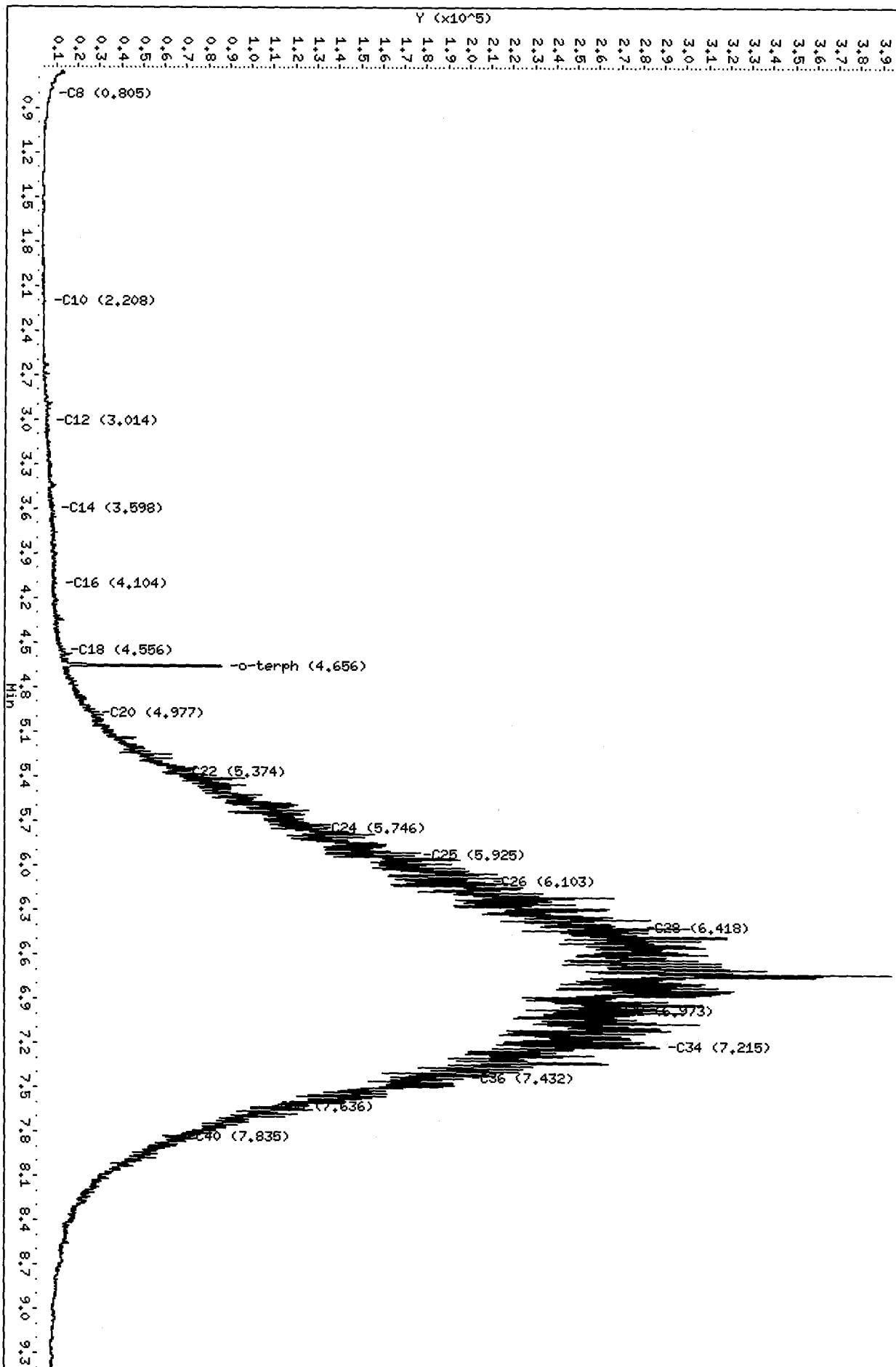
Column phase: RTX-1

Instrument: fid3b.i

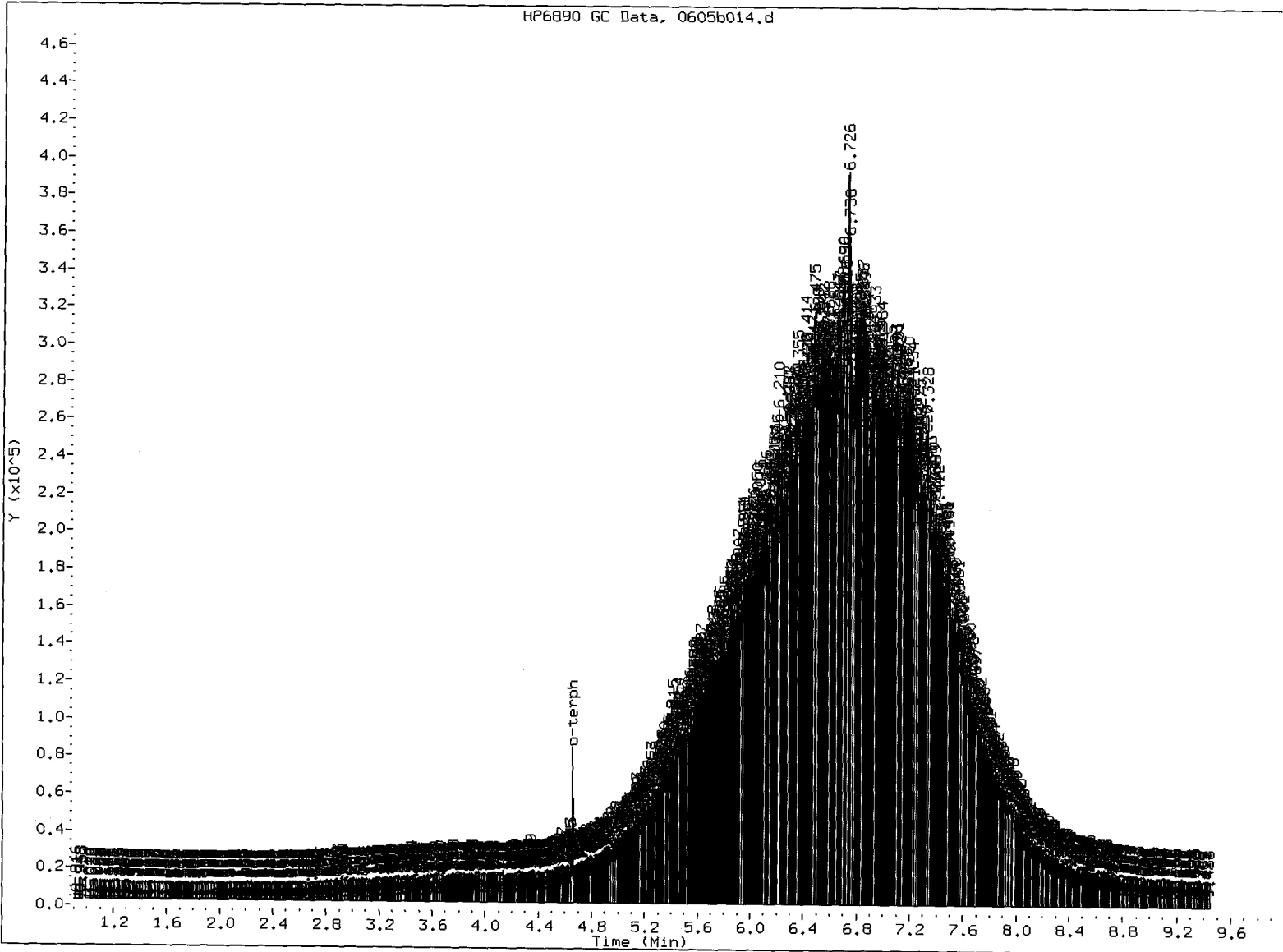
Operator: JM

Column diameter: 0.25

Handwritten: 50
6/6/13



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 6/6/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b011.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/05/2013
Macro: FID:3B052113

ARI ID: WS55D
Client ID: AREA2-053013-SP-2
Injection: 05-JUN-2013 12:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	156654	12
C8	0.804	0.036	3378	1968	WATPHD	(C12-C24)	8838631	853.36
C10	2.208	-0.006	3977	2725	WATPHM	(C24-C38)	53453317	5414.16
C12	3.021	0.001	1770	1167	AK102	(C10-C25)	10217821	826.90 M
C14	3.608	0.004	3096	2716	AK103	(C25-C36)	48028386	6756.49 M
C16	4.099	-0.005	5751	3074				
C18	4.554	0.000	32466	12125				
C20	4.973	-0.004	55751	33809				
C22	5.378	0.003	149221	50803	MSPiRIT	(Tol-C12)	156654	11.40
C24	5.751	0.003	275953	78925				
C25	5.931	0.005	308723	54027				
C26	6.102	0.000	445091	200130				
C28	6.416	-0.004	589503	346872				
C32	6.973	0.001	570699	109023				
C34	7.215	0.003	510054	104919				
Filter Peak	----							
C36	7.429	-0.003	478468	350816				
o-terph	4.633	-0.028	644514	370583	JET-A	(C10-C18)	708894	65.49
Triacon Surr	6.698	-0.019	662896	458506				

Range Times: NW Diesel (3.070 - 5.798) NW Gas (0.609 - 3.070) NW M.Oil (5.798 - 7.687)
AK102 (2.163 - 5.875) AK103 (5.875 - 7.481) Jet A (2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	370583	27.6	61.2
Triacontane	458506	35.1	78.1

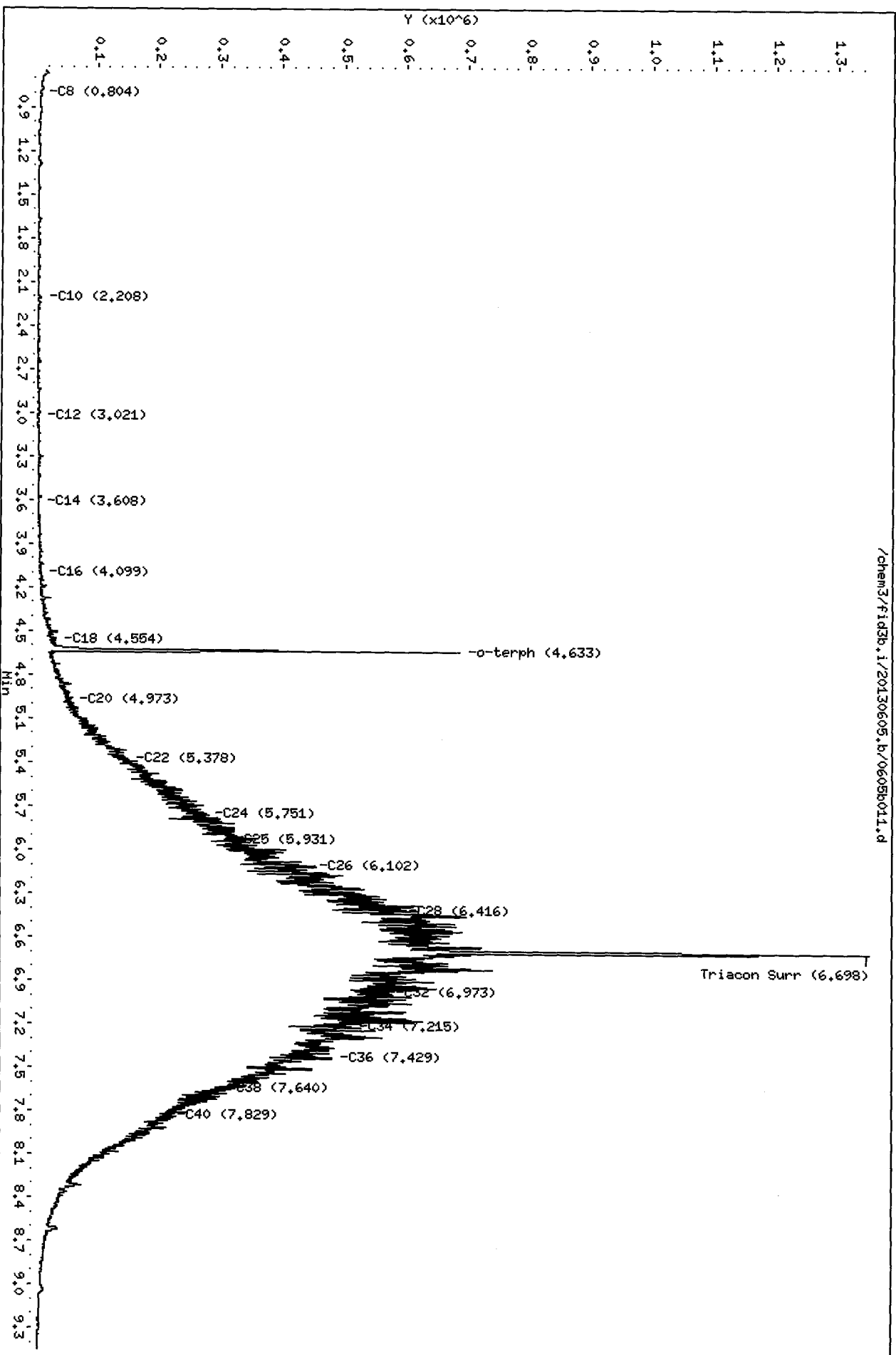
SW
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

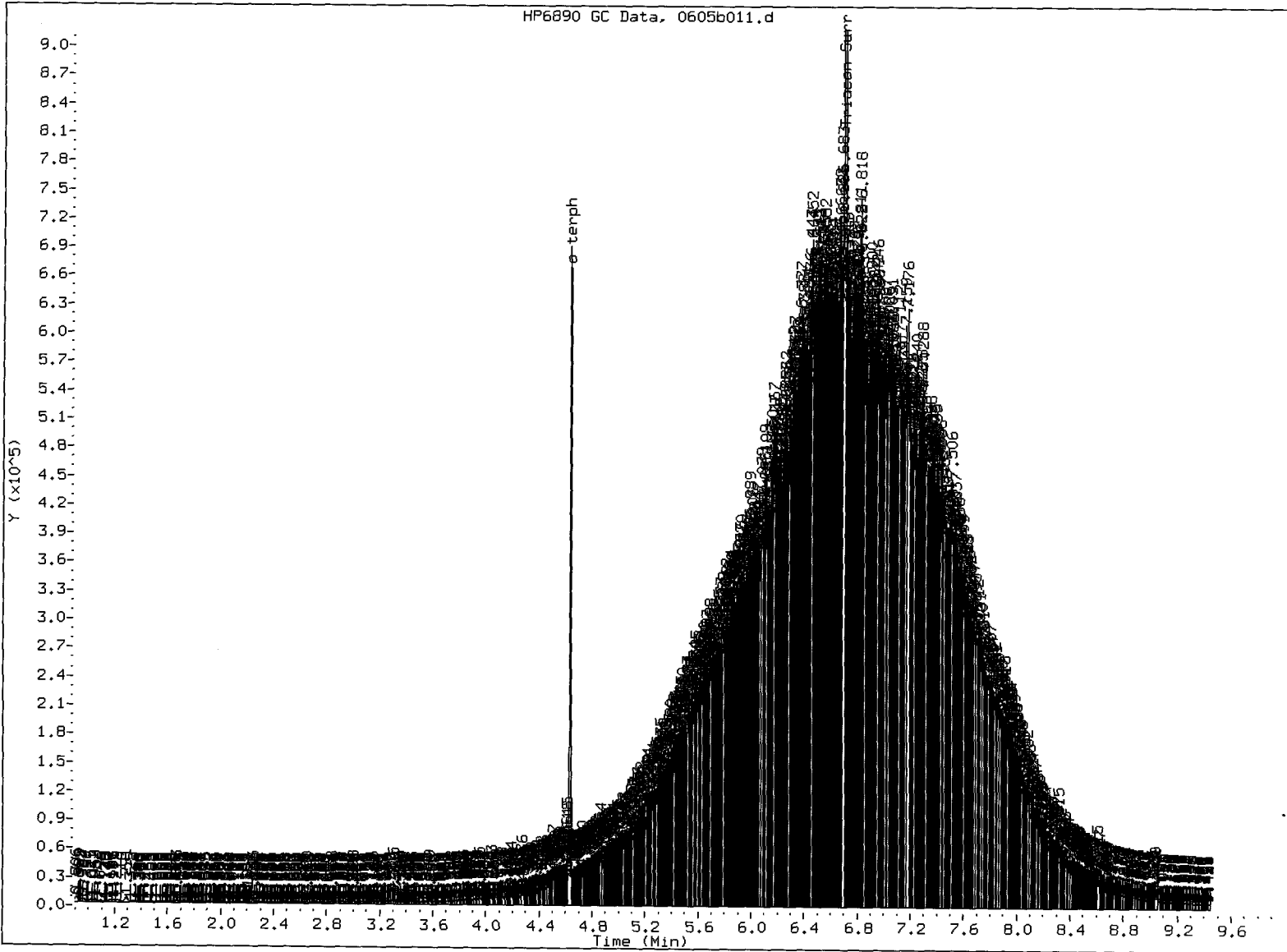
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Date: 05-JUN-2013 12:40
Client ID: AREA2-053013-SP-2
Sample Info: MSSSD
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JM
6/13



/chem3/fid3b.i/20130605.b/0605b011.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/5/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b015.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WS55D
Client ID: AREA2-053013-SP-2
Injection: 05-JUN-2013 13:54
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	77979	6
C8	0.803	0.034	3687	735	WATPHD	(C12-C24)	1559493	150.57 ✓
C10	2.207	-0.007	1193	592	WATPHM	(C24-C38)	10082170	1021.20 ✓
C12	3.026	0.006	497	365	AK102	(C10-C25)	1818968	147.20 M
C14	3.608	0.005	432	118	AK103	(C25-C36)	8945220	1258.39 M
C16	4.109	0.005	944	202				
C18	4.552	-0.002	4010	1374				
C20	4.975	-0.001	10634	5335				
C22	5.378	0.002	25760	17830	MSPiRIT	(Tol-C12)	77979	5.68
C24	5.746	-0.002	49829	32503				
C25	5.923	-0.003	58069	10198				
C26	6.102	0.000	65480	16304				
C28	6.414	-0.006	110843	54777				
C32	6.968	-0.004	129602	77173				
C34	7.213	0.001	102601	22090				
Filter Peak	----							
C36	7.431	-0.001	87165	55167				
o-terph	4.652	-0.009	170686	84841	JET-A	(C10-C18)	137698	12.72
Triacon Surr	6.715	-0.002	172573	114388				

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	84841	6.3	70.1 ✓
Triacontane	114388	8.8	97.4

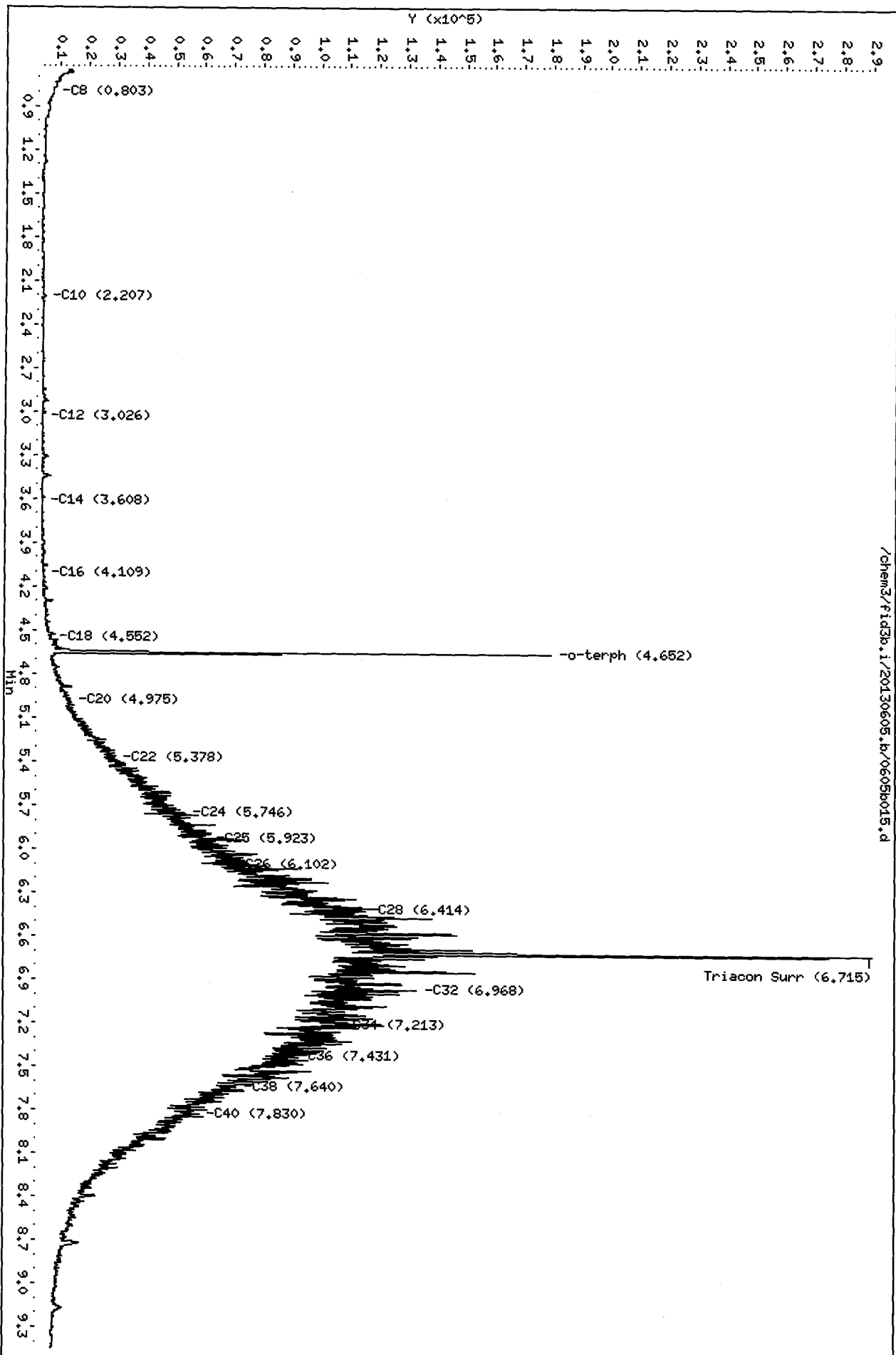
503
6/6/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

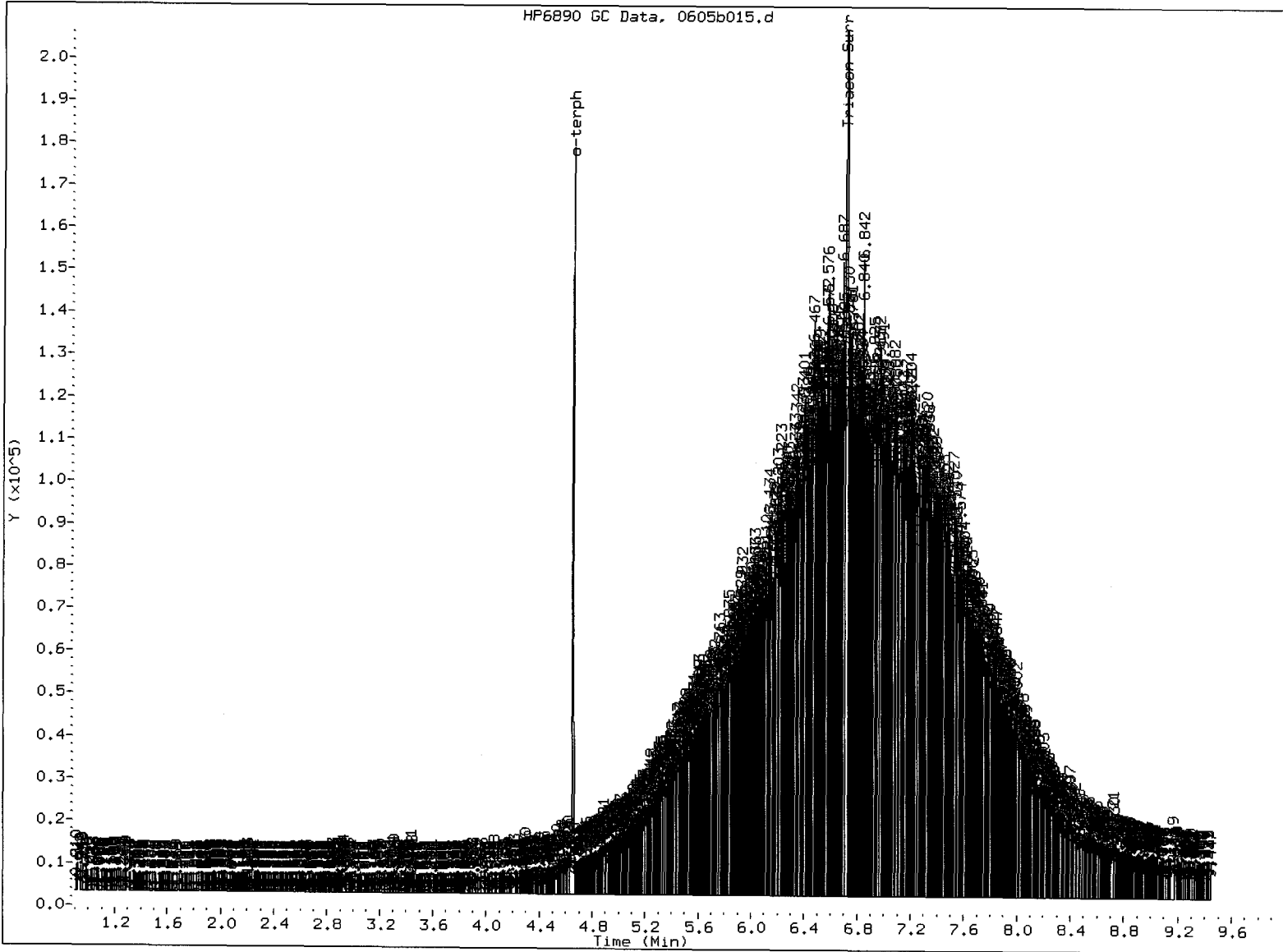
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Date: 05-JUN-2013 13:54
Client ID: AREA2-063013-SP-2
Sample Info: MS55D,5
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130605.b/0605b015.d



510
6/6/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/6/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b012.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/05/2013
Macro: FID:3B052113

ARI ID: WS55E
Client ID: AREA2-053013-SP-3
Injection: 05-JUN-2013 12:59
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		174705	13
C8	0.803	0.035	3704	5491	WATPHD (C12-C24)		28399028	2741.90
C10	2.206	-0.007	1886	1637	WATPHM (C24-C38)		184263146	18663.56
C12	3.022	0.001	2186	915	AK102 (C10-C25)		32479334	2628.47 M
C14	3.603	0.000	5056	1492	AK103 (C25-C36)		168544324	23710.30
C16	4.102	-0.001	13359	2543				
C18	4.556	0.002	60404	15709				
C20	4.975	-0.001	182126	35154				
C22	5.371	-0.004	461448	175413	MSPIRIT (Tol-C12)		174705	12.72
C24	5.746	-0.002	847603	224411				
C25	5.927	0.001	1022870	460659				
C26	6.101	-0.001	1263632	306682				
C28	6.414	-0.005	2048438	1151732				
C32	6.973	0.001	2173303	1356548				
C34	7.214	0.003	1971919	462858				
Filter Peak	----							
C36	7.428	-0.003	1476757	567515				
o-terph	4.644	-0.017	653572	360552	JET-A (C10-C18)		1480702	136.80
Triacon Surr	----							

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

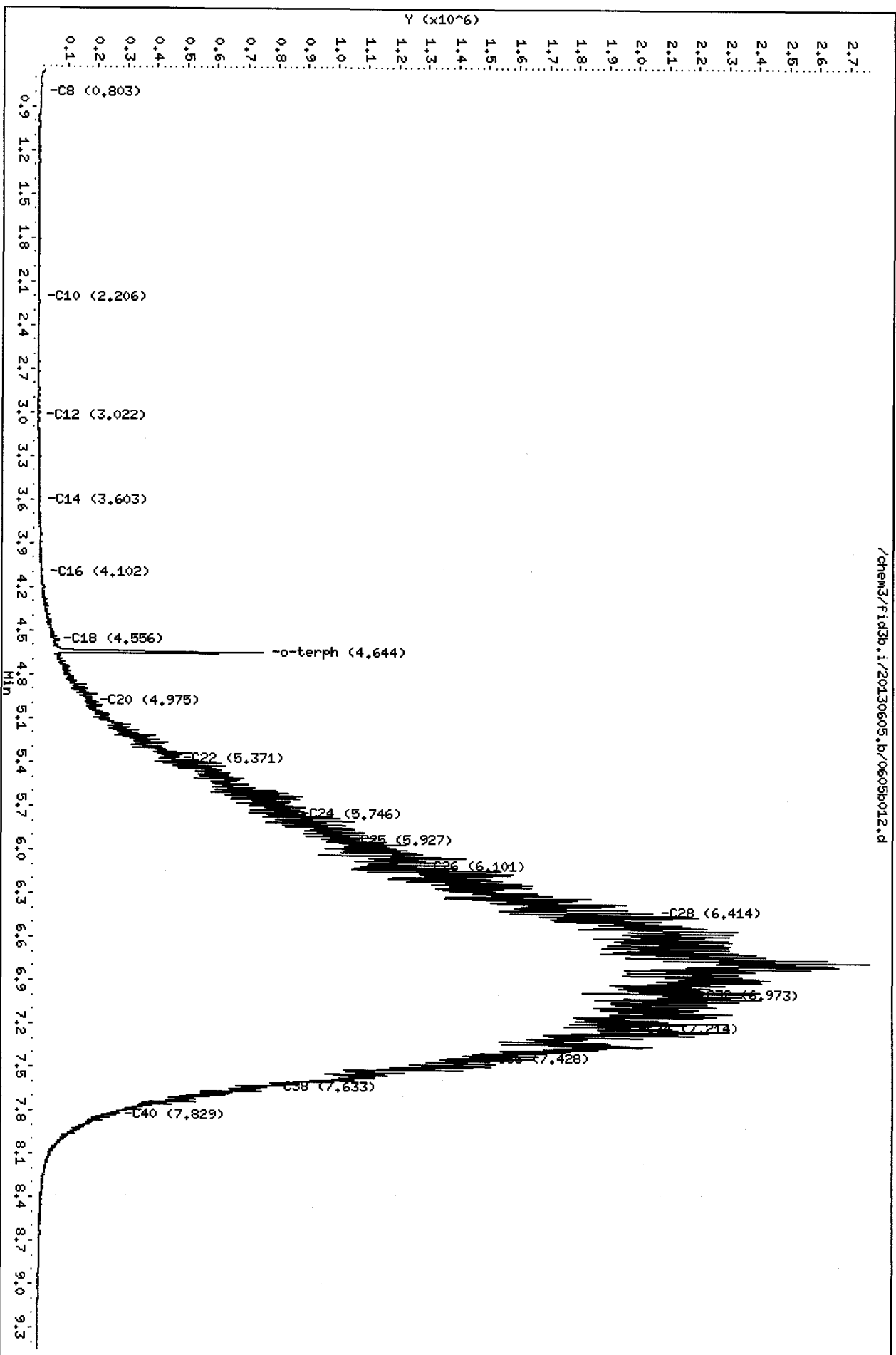
Surrogate	Area	Amount	%Rec
o-Terphenyl	360552	26.8	59.6
Triacotane	0	0.0	0.0

JW
4/5/10

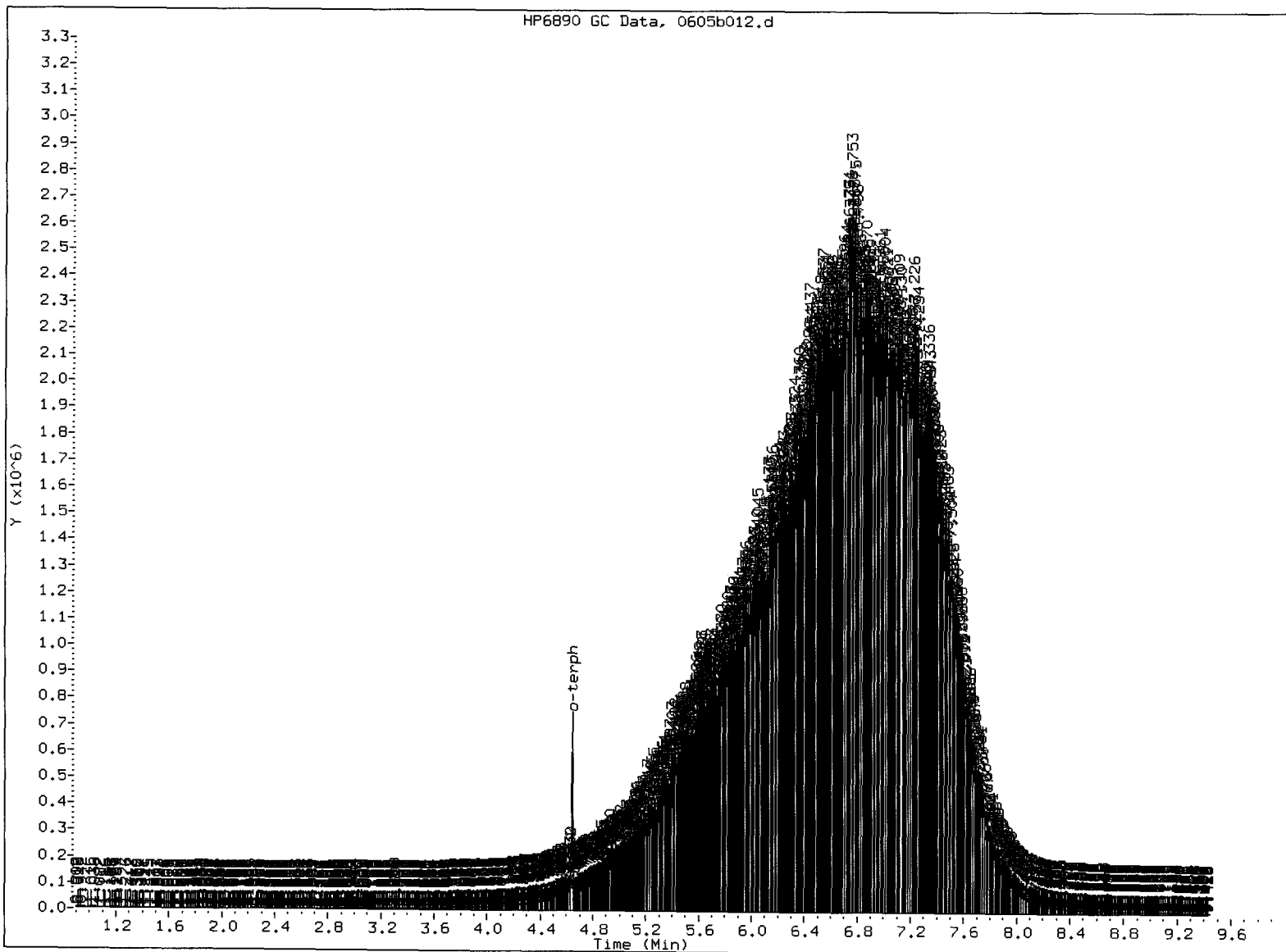
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130605.b/0605b012.d
Date: 05-JUN-2013 12:59
Client ID: AREA2-053013-SP-3
Sample Info: MS55E

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25
Column phase: RTX-1



JW
6/5/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JK

Date: 6/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b016.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WS55E
Client ID: AREA2-053013-SP-3
Injection: 05-JUN-2013 14:12
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		75891	6
C8	0.801	0.033	3641	1305	WATPHD (C12-C24)		2363427	228.19
C10	2.219	0.006	377	94	WATPHM (C24-C38)		18004861	1823.67
C12	3.018	-0.003	360	92	AK102 (C10-C25)		2755607	223.00 M
C14	3.599	-0.004	607	298	AK103 (C25-C36)		15994702	2250.09 M
C16	4.104	0.001	1289	583				
C18	4.550	-0.004	5003	3636				
C20	4.972	-0.004	15771	8158				
C22	5.378	0.003	41896	42101	MSPIRIT (Tol-C12)		75891	5.52
C24	5.749	0.001	71627	25364				
C25	5.927	0.002	100894	28448				
C26	6.100	-0.002	110553	27791				
C28	6.419	-0.001	171121	32786				
C32	6.973	0.001	244490	174335				
C34	7.214	0.003	210289	56058				
Filter Peak	----							
C36	7.429	-0.002	163737	63954				
o-terph	4.651	-0.009	81909	37605	JET-A (C10-C18)		147261	13.60
Triacon Surr	6.724	0.007	77475	39371				

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	37605	2.8	62.1
Triacontane	39371	3.0	67.1

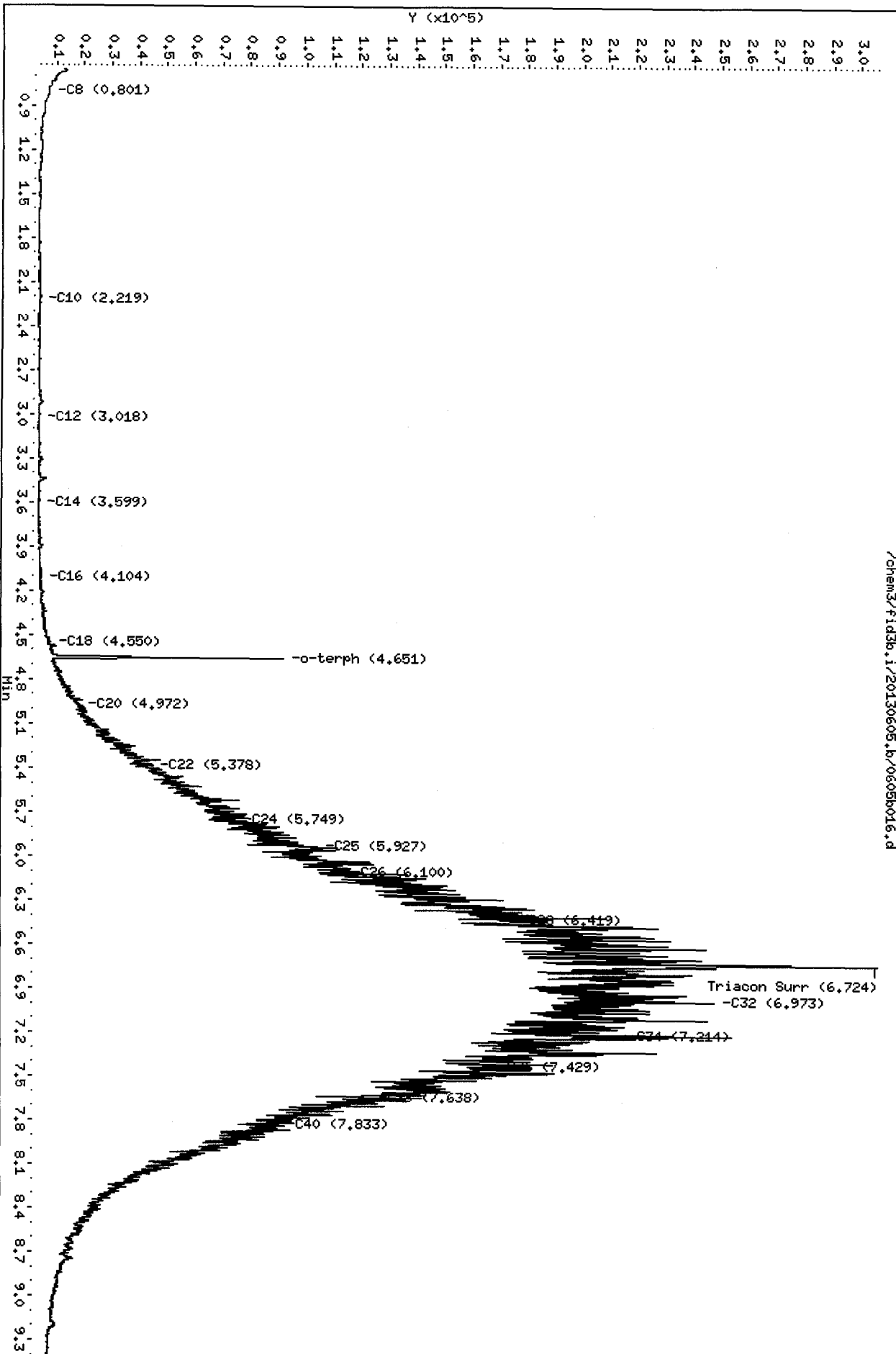
JW
6/6/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

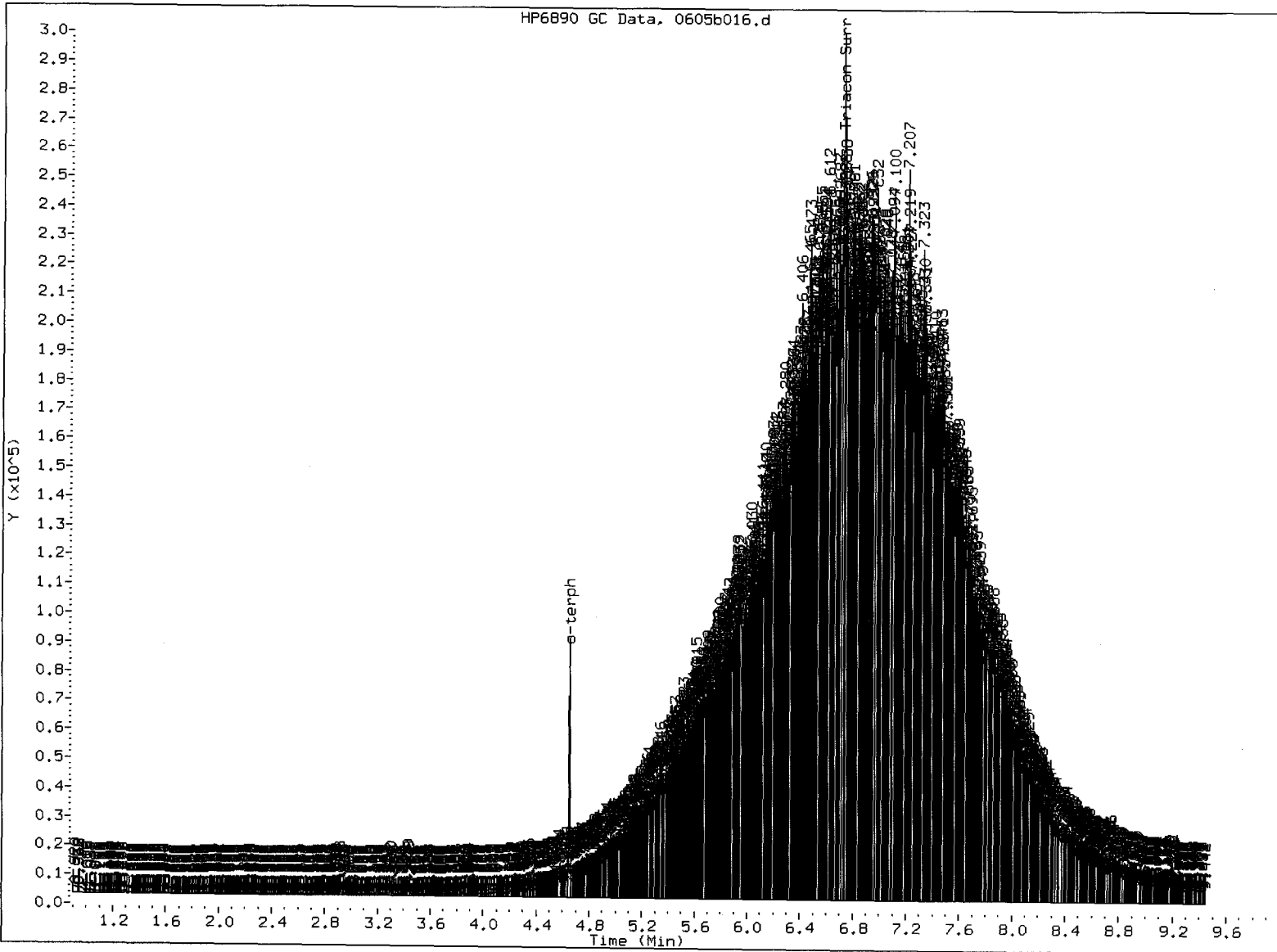
Data File: /chem3/fid3b.i/20130605.b/0605b016.d
Date: 05-JUN-2013 14:12
Client ID: AREA2-053013-SP-3
Sample Info: MS55E,10
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/6/13



/chem3/fid3b.i/20130605.b/0605b016.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ③. Skipped surrogate

Analyst: JW

Date: 6/6/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b013.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/05/2013
Macro: FID:3B052113

ARI ID: WS55F
Client ID: AREA2-053013-SP-4
Injection: 05-JUN-2013 13:17
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		200006	15
C8	0.803	0.035	3642	2098	WATPHD (C12-C24)		17422621	1682.14
C10	2.210	-0.003	2171	1957	WATPHM (C24-C38)		130987127	13267.37
C12	3.025	0.004	1718	1298	AK102 (C10-C25)		20278839	1641.12 M
C14	3.604	0.001	4015	1755	AK103 (C25-C36)		116149725	16339.59
C16	4.103	0.000	11260	3987				
C18	4.550	-0.004	43727	11242				
C20	4.979	0.003	130675	90369				
C22	5.375	0.000	275592	129023	MSPiRIT (Tol-C12)		200006	14.56
C24	5.748	0.000	525847	154098				
C25	5.926	0.000	633042	99008				
C26	6.098	-0.003	929317	587676				
C28	6.419	-0.001	1327304	378834				
C32	6.971	-0.001	1373931	270578				
C34	7.210	-0.001	1382059	620800				
Filter Peak	----							
C36	7.431	0.000	1210416	258481				
o-terph	4.652	-0.009	821433	350312	JET-A (C10-C18)		1199807	110.85
Triacon Surr	----							

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	350312	26.0	57.9
Triacontane	0	0.0	0.0

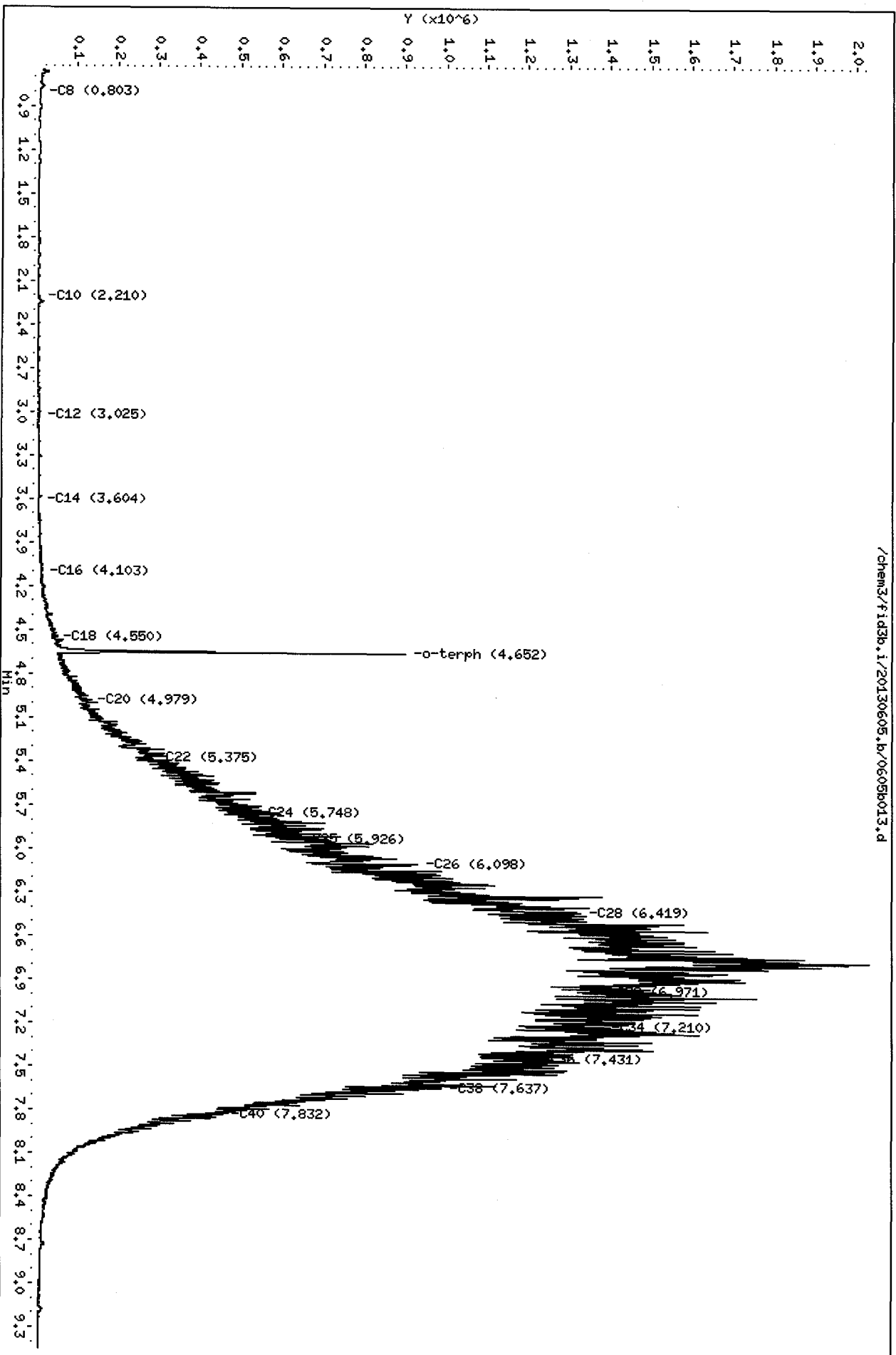
300
6/5/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

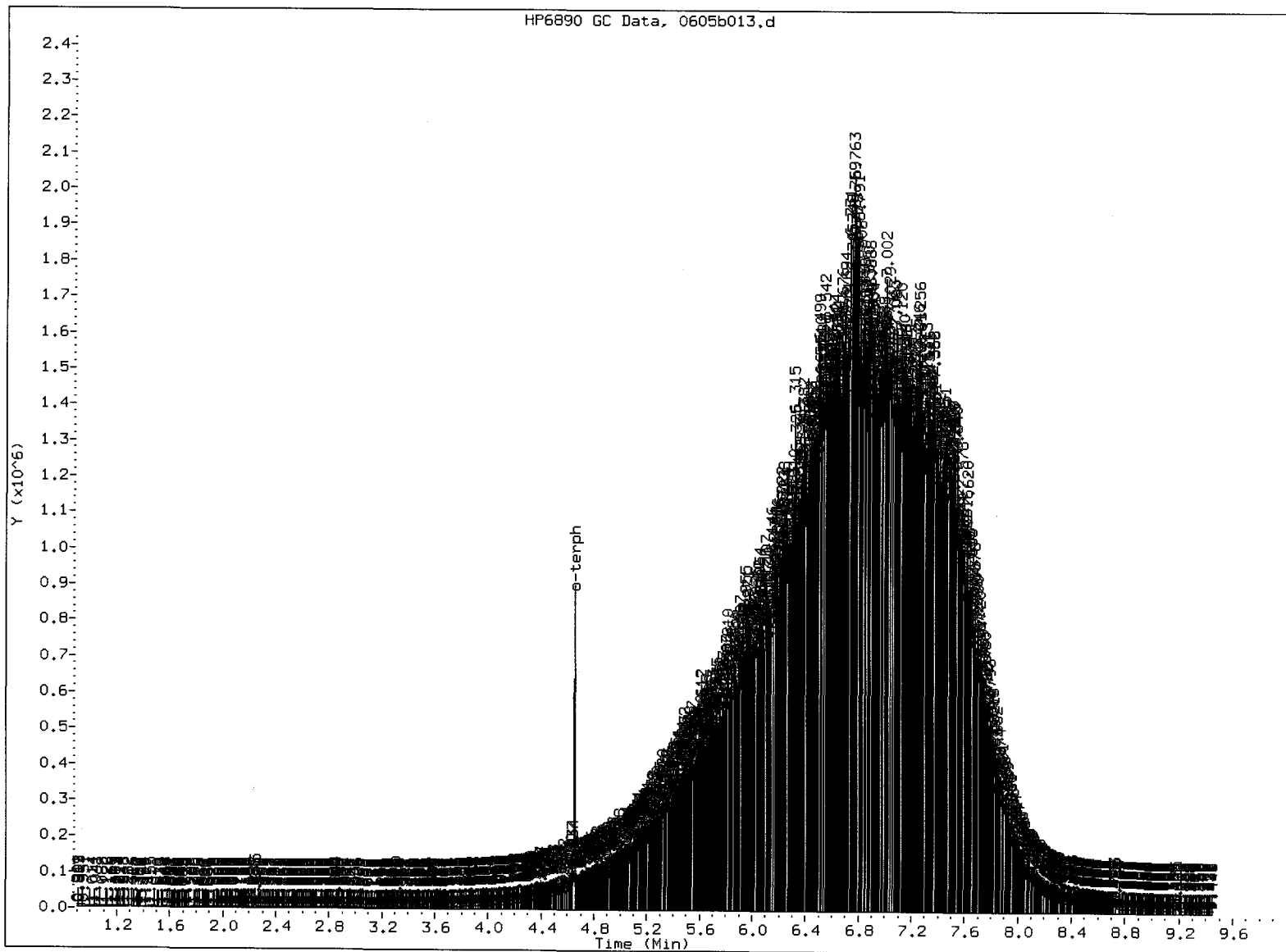
Data File: /chem3/fid3b.i/20130605.b/0605b013.d
Date: 05-JUN-2013 13:17
Client ID: AREA2-053013-SP-4
Sample Info: MSSSF
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
6/5/13



/chem3/fid3b.i/20130605.b/0605b013.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/5/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130605.b/0605b017.d
Method: /chem3/fid3b.i/20130605.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/06/2013
Macro: FID:3B052113

ARI ID: WS55F
Client ID: AREA2-053013-SP-4
Injection: 05-JUN-2013 14:31
Dilution Factor: 10

FID:3B RESULTS

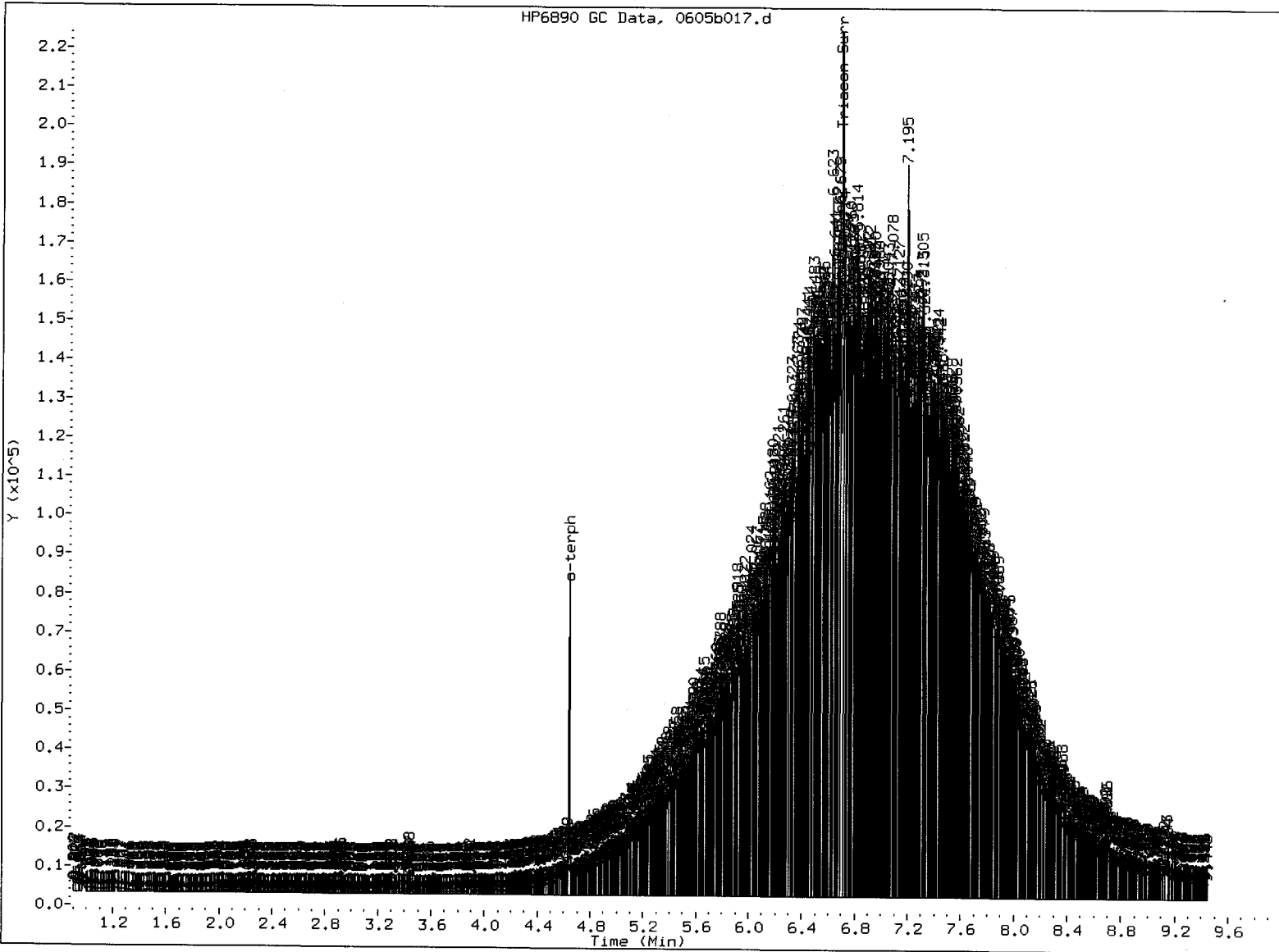
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	72806	5
C8	0.803	0.035	3710	1989	WATPHD	(C12-C24)	1557023	150.33
C10	2.222	0.009	300	61	WATPHM	(C24-C38)	12379823	1253.92
C12	3.019	-0.001	352	80	AK102	(C10-C25)	1819253	147.23 M
C14	3.603	0.000	403	120	AK103	(C25-C36)	10887944	1531.68 M
C16	4.103	0.000	981	333				
C18	4.553	-0.001	3667	1169				
C20	4.974	-0.002	10332	1796				
C22	5.374	-0.001	25492	12417	MSPIRIT	(Tol-C12)	72806	5.30
C24	5.746	-0.002	46282	28304				
C25	5.926	0.001	72369	42896				
C26	6.101	-0.001	76775	21510				
C28	6.420	0.000	125316	55990				
C32	6.973	0.001	137732	26889				
C34	7.208	-0.003	142735	87032				
Filter Peak	----							
C36	7.437	0.006	117647	40380				
o-terph	4.644	-0.017	75373	36803	JET-A	(C10-C18)	121871	11.26
Triacon Surr	6.701	-0.016	113413	63446				

Range Times: NW Diesel(3.070 - 5.798) NW Gas(0.609 - 3.070) NW M.Oil(5.798 - 7.687)
AK102(2.163 - 5.875) AK103(5.875 - 7.481) Jet A(2.163 - 4.604)

Surrogate	Area	Amount	%Rec
o-Terphenyl	36803	2.7	60.8
Triacontane	63446	4.9	108.1

560
6/6/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/6/13

Data File: /chem3/fid3b.i/20130605.b/0605b017.d

Date: 05-JUN-2013 14:31

Client ID: AREA-063013-SP-4

Sample Info: MS55F.10

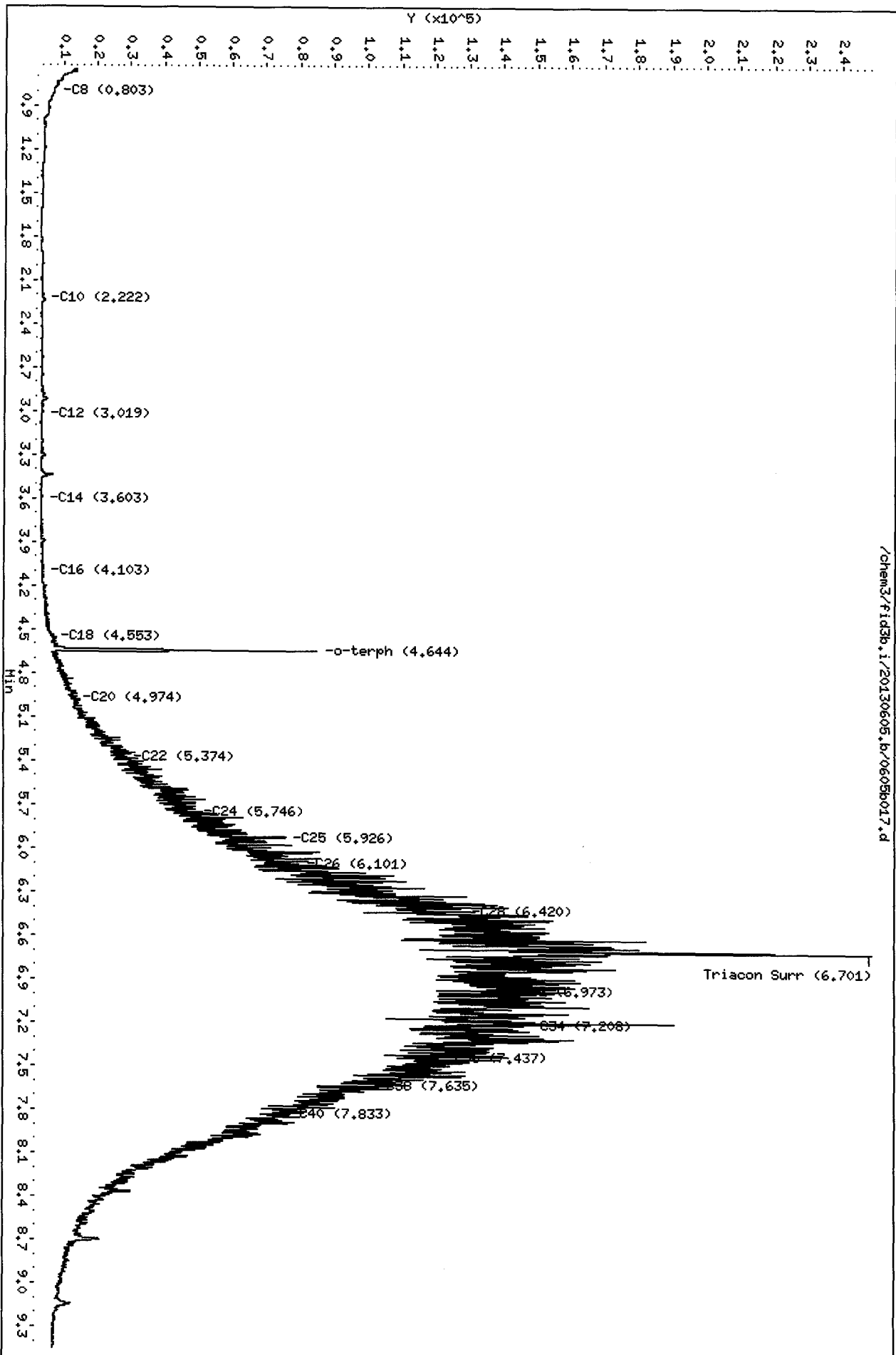
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

JW
6/6/13



/chem3/fid3b.i/20130605.b/0605b017.d

MS55-00043

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-060413	79.4%	0
LCS-060413	82.5%	0
SL-053013-SP-1	53.4%	0
SL-053013-SP-2	54.1%	0
AREA2-053013-SP-1	62.8%	0
AREA2-053013-SP-1 DL	50.4%	0
AREA2-053013-SP-2	61.2%	0
AREA2-053013-SP-2 DL	70.1%	0
AREA2-053013-SP-3	59.6%	0
AREA2-053013-SP-3 DL	62.2%	0
AREA2-053013-SP-4	57.9%	0
AREA2-053013-SP-4 DL	60.9%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-11842 to 13-11847

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-060413

Page 1 of 1

LAB CONTROL

Lab Sample ID: LCS-060413

QC Report No: WS55-Maul Foster & Alongi, Inc

LIMS ID: 13-11842

Project: Former Cashmere Mill Site

Matrix: Soil

0779.02.01/03

Data Release Authorized: *AB*

Date Sampled: 06/03/13

Reported: 06/06/13

Date Received: 06/04/13

Date Extracted: 06/04/13

Sample Amount: 10.0 g

Date Analyzed: 06/05/13 13:37

Final Extract Volume: 1.0 mL

Instrument/Analyst: FID/JLW

Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	116	150	77.3%

TPHD Surrogate Recovery

o-Terphenyl	82.5%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a014.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/05/2013

ARI ID: WS54LCSS1
 Client ID: WS54LCSS1
 Injection: 05-JUN-2013 13:37
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4838585	141
C8	1.097	0.012	11144	15853	DIESEL (C12-C24)	21583914	1155.47 ✓
C10	2.858	0.002	88904	89500	M.OIL (C24-C38)	332898	20.76 ✓
C12	3.859	-0.003	205505	236400	AK-102 (C10-C25)	25138737	1158.09 M
C14	4.559	-0.002	362214	417079	AK-103 (C25-C36)	244529	21.05
C16	5.155	0.001	532115	568222			
C18	5.723	0.004	478143	603812			
C20	6.280	-0.002	295264	376184			
C22	6.827	-0.007	125402	170531			
C24	7.348	-0.010	40760	57298			
C25	7.599	-0.006	18692	31935			
C26	7.844	-0.019	8142	17785			
C28	8.297	-0.009	3190	5664	IT.DIES (C10-C24)	25054363	1157.46 M
C32	9.101	0.013	2028	2328			
C34	9.430	0.000	95	27	BUNKERC (C10-C38)	25387261	2739.62 M
Filter Peak	11.479	-0.002	495	165	HYDRAUL (C24-C38)	332898	20.97
C36	9.739	-0.011	580	760			
C38	10.043	-0.004	310	211			
C40	10.328	-0.004	663	284			
o-terph	5.859	0.005	1037659	950393			
Triacon Surr	8.721	-0.004	770842	855691	IT.MOIL (C24-C40)	1198154	22.13

M Indicates manual integration within range.

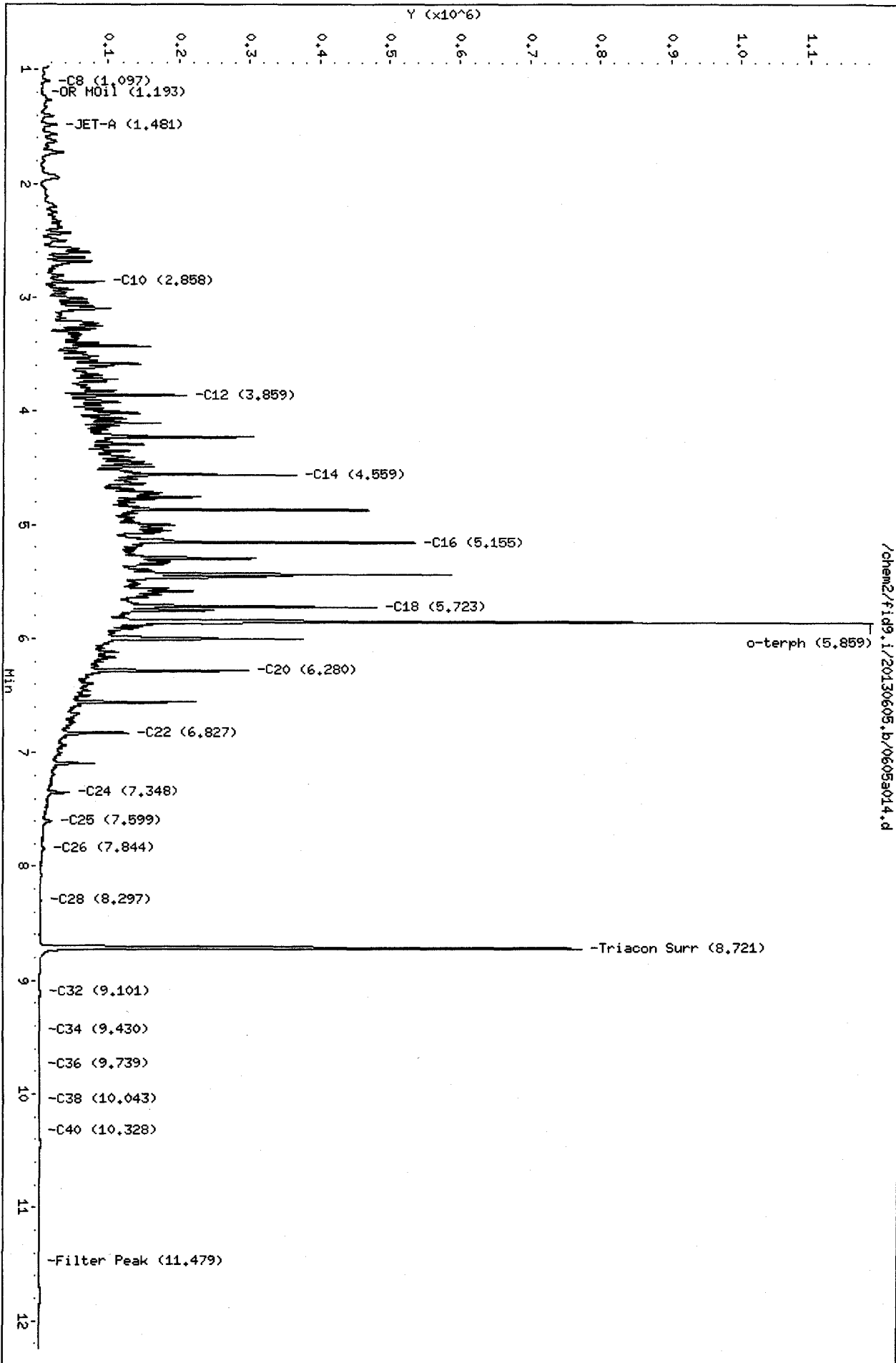
Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	950393	37.1	82.5
Triacotane	855691	45.3	100.6

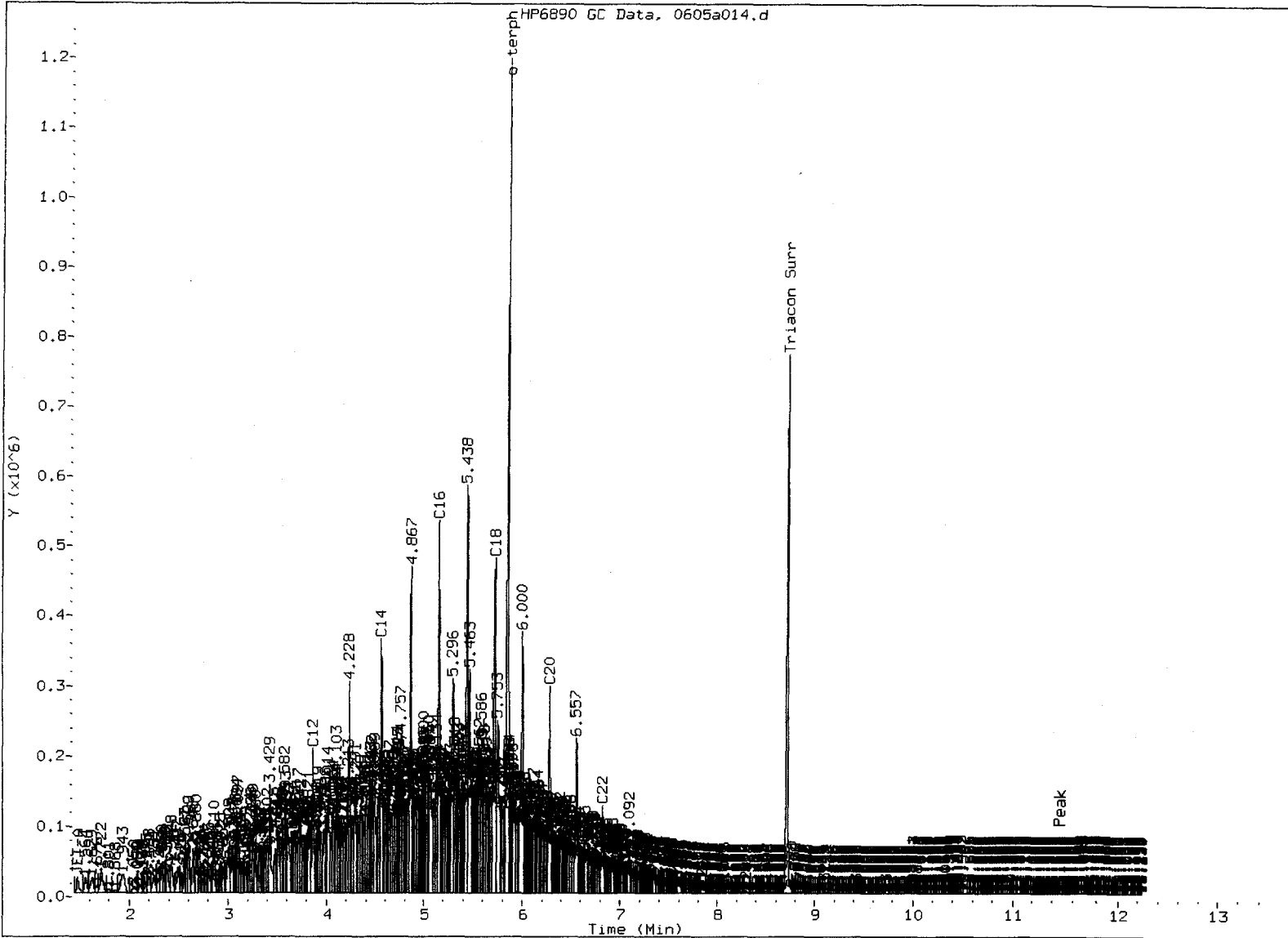
JW
6/5/10

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

JW
4/5/13



/chem2/fid9.i/20130605.b/0605a014.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst: JH

Date: 6/5/17

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 06/04/13

ARI Job: WS55
Project: Former Cashmere Mill Site
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11842-060413MB1	Method Blank	10.0 g	1.00 mL	-	06/04/13
13-11842-060413LCS1	Lab Control	10.0 g	1.00 mL	-	06/04/13
13-11842-WS55A	SL-053013-SP-1	8.72 g	1.00 mL	D	06/04/13
13-11843-WS55B	SL-053013-SP-2	8.49 g	1.00 mL	D	06/04/13
13-11844-WS55C	AREA2-053013-SP-1	8.85 g	1.00 mL	D	06/04/13
13-11845-WS55D	AREA2-053013-SP-2	8.75 g	1.00 mL	D	06/04/13
13-11846-WS55E	AREA2-053013-SP-3	8.63 g	1.00 mL	D	06/04/13
13-11847-WS55F	AREA2-053013-SP-4	8.42 g	1.00 mL	D	06/04/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: SL-053013-SP-1

SAMPLE

Lab Sample ID: WS55A

LIMS ID: 13-11842

Matrix: Soil

Data Release Authorized: 

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 16:57

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 13.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	36
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons

6.1

9.2

GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	83.9%
Bromobenzene	86.8%

Gasoline Surrogate Recovery

Trifluorotoluene	83.4%
Bromobenzene	85.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a016.d ARI ID: WS55A
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a016.d Client ID: SL-053013-SP-1
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 16:57
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.244	0.010	14421	212142	83.4	TFT(Surr)
14.962	0.007	9573	94857	85.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	122112	0.058 M
8015B 2MP-TMB (4.57 to 15.67)	4363035	15808	0.004 M
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3682	0.001
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	331837	0.151 M
CalGas nC6-nC12 (5.10 to 17.32)	4309570	122112	0.028 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.243	0.010	12099	83.9	TFT(Surr)
14.961	0.007	28485	86.8	BB(Surr)

SW8021 (PID)

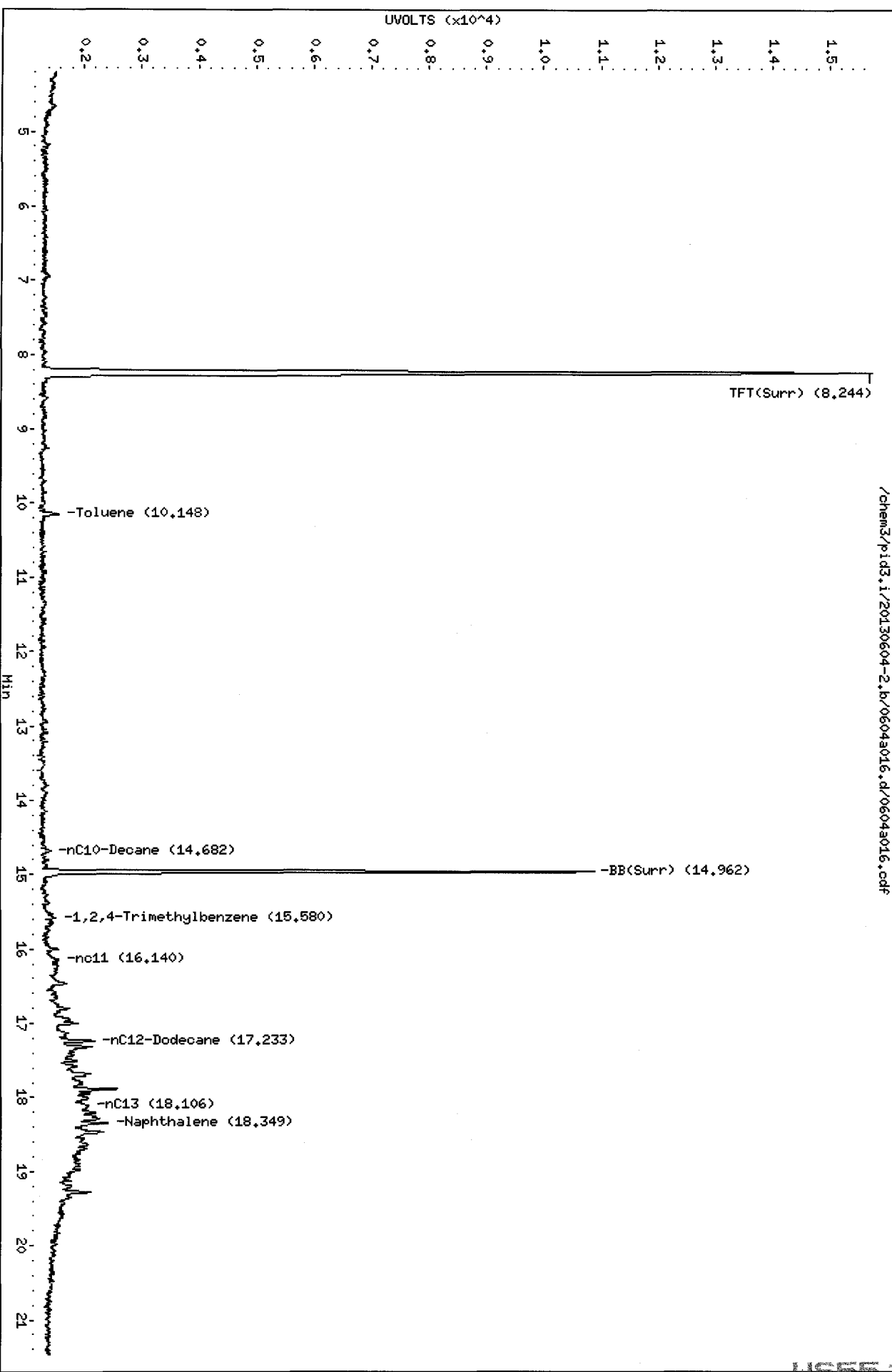
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.146	0.008	500	0.59	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a016.d
Date : 04-JUN-2013 16:57
Client ID: SL-053013-SP-1
Sample Info: MSS5A
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

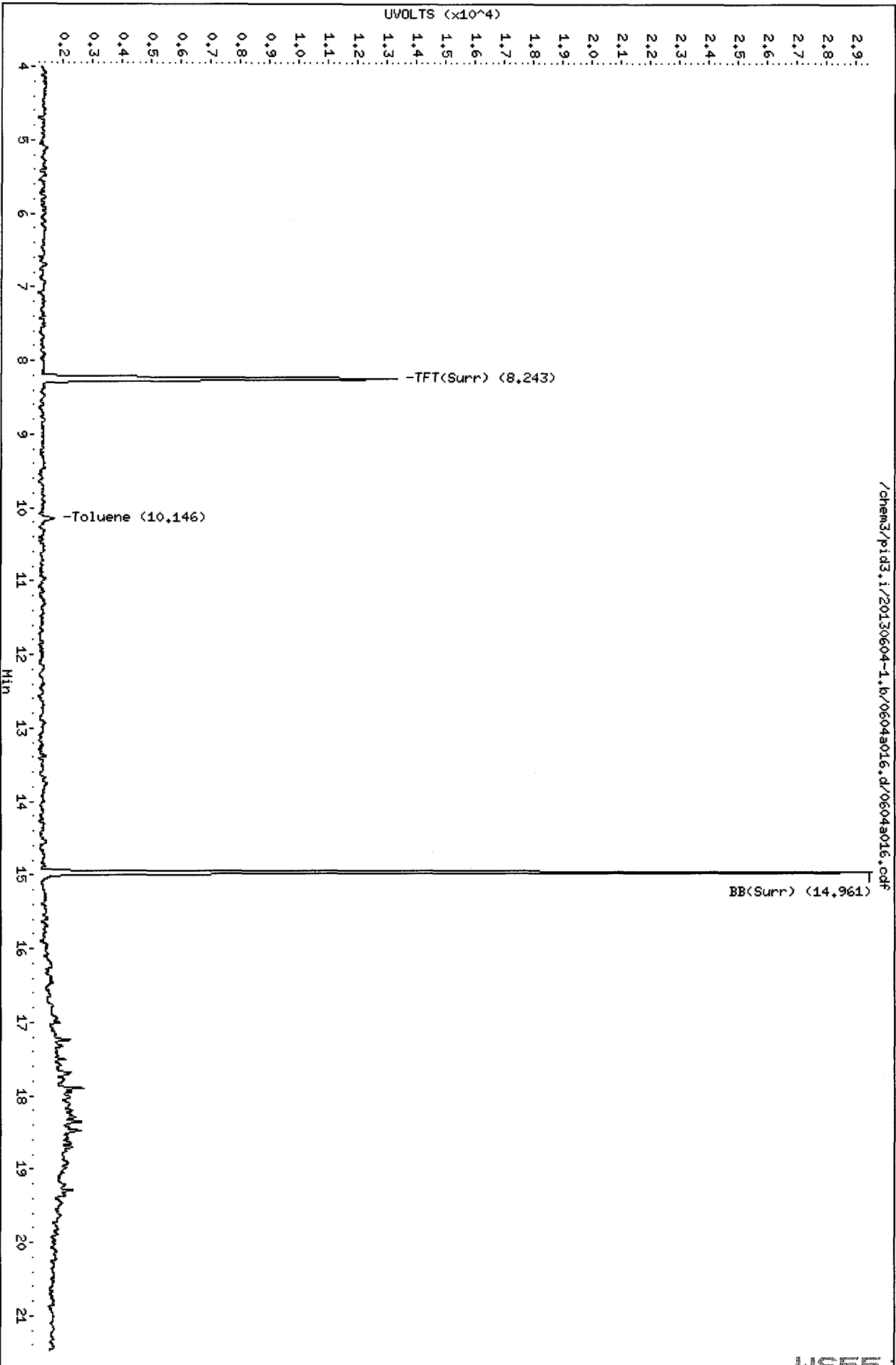
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Data File: /chem3/pid3.i/20130604-1.b/0604a016.d
Date : 04-JUN-2013 16:57
Client ID: SL-053013-SP-1
Sample Info: MS55A

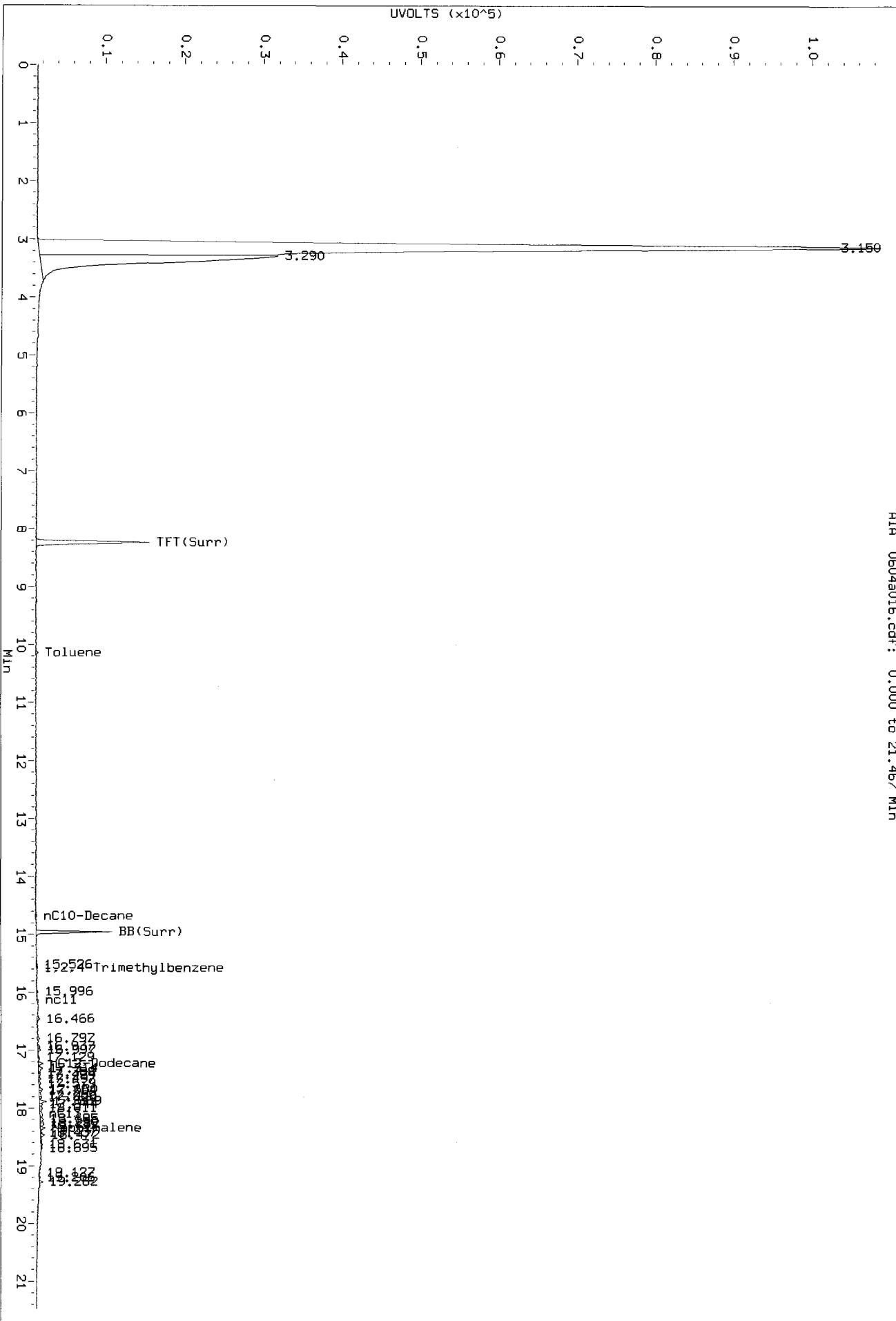
Instrument: pid3.i
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 PID



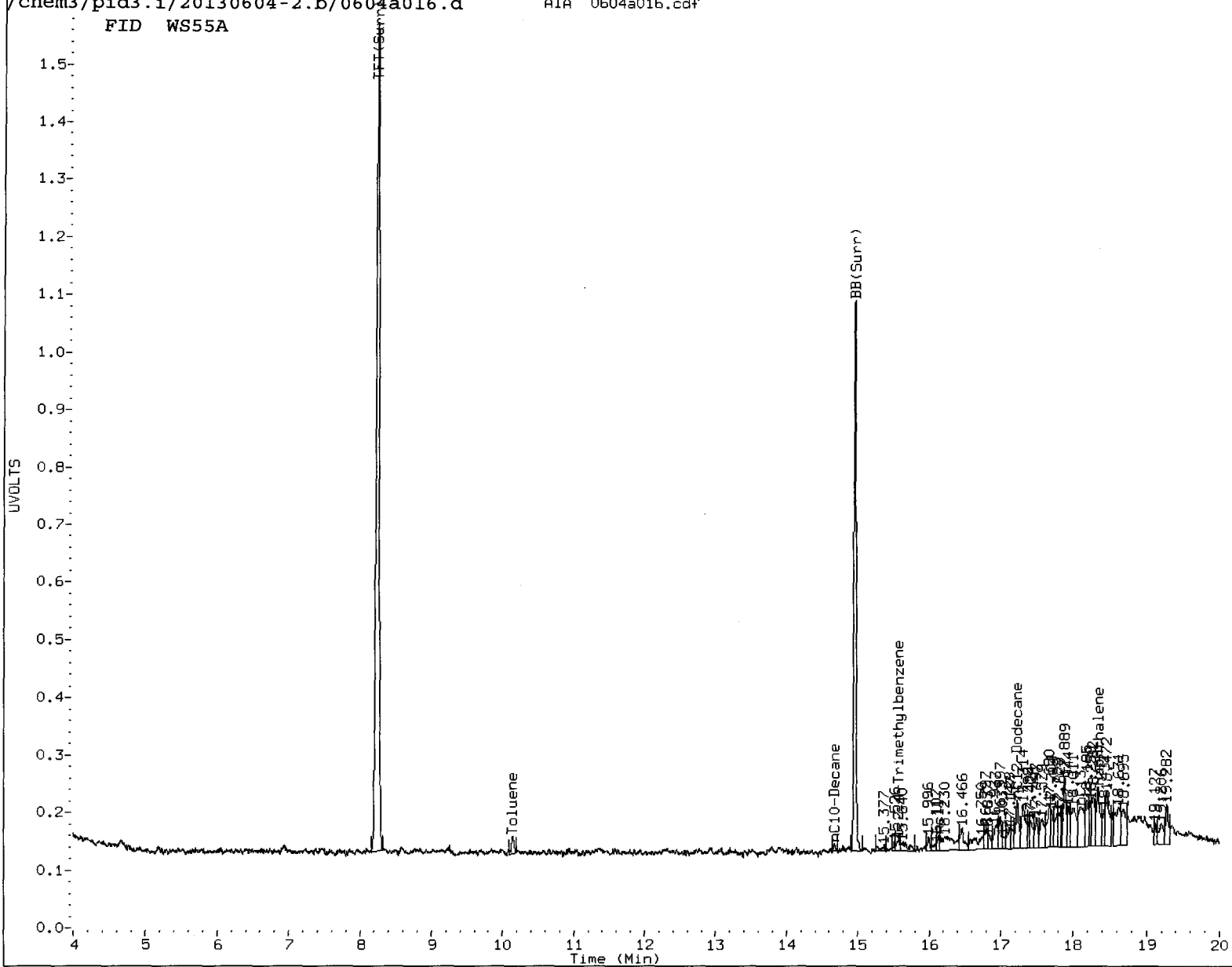
PK
6/1/13

Data File: /chem3/pld3.1/20130604-2.1.b/0604a016.d/0604a016.cdf
Injection Date: 04-JUN-2013 16:57
Instrument: pld3.1
Client Sample ID: SL-053013-SP-1



AIR 0604a016.cdf: 0.000 to 21.467 Min

FID WS55A



MANUAL INTEGRATION

- 1 Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: TC

Date: 6/5/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: SL-053013-SP-2

SAMPLE

Lab Sample ID: WS55B

LIMS ID: 13-11843

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 17:24

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 15.5%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	25	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	33	< 33 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.6	< 6.6 U	---

BETX Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	88.5%

Gasoline Surrogate Recovery

Trifluorotoluene	83.8%
Bromobenzene	87.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a017.d ARI ID: WS55B
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a017.d Client ID: SL-053013-SP-2
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 17:24
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.241	0.008	14501	215420	83.8	TFT(Surr)
14.962	0.007	9817	96152	87.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	7706	0.004
8015B 2MP-TMB (4.57 to 15.67)	4363035	3441	0.001
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3440	0.001
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	11673	0.005
CalGas nC6-nC12 (5.10 to 17.32)	4309570	7707	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
8.240	0.007	12385	85.9	TFT(Surr)
14.961	0.006	29041	88.5	BB(Surr)

SW8021 (PID)

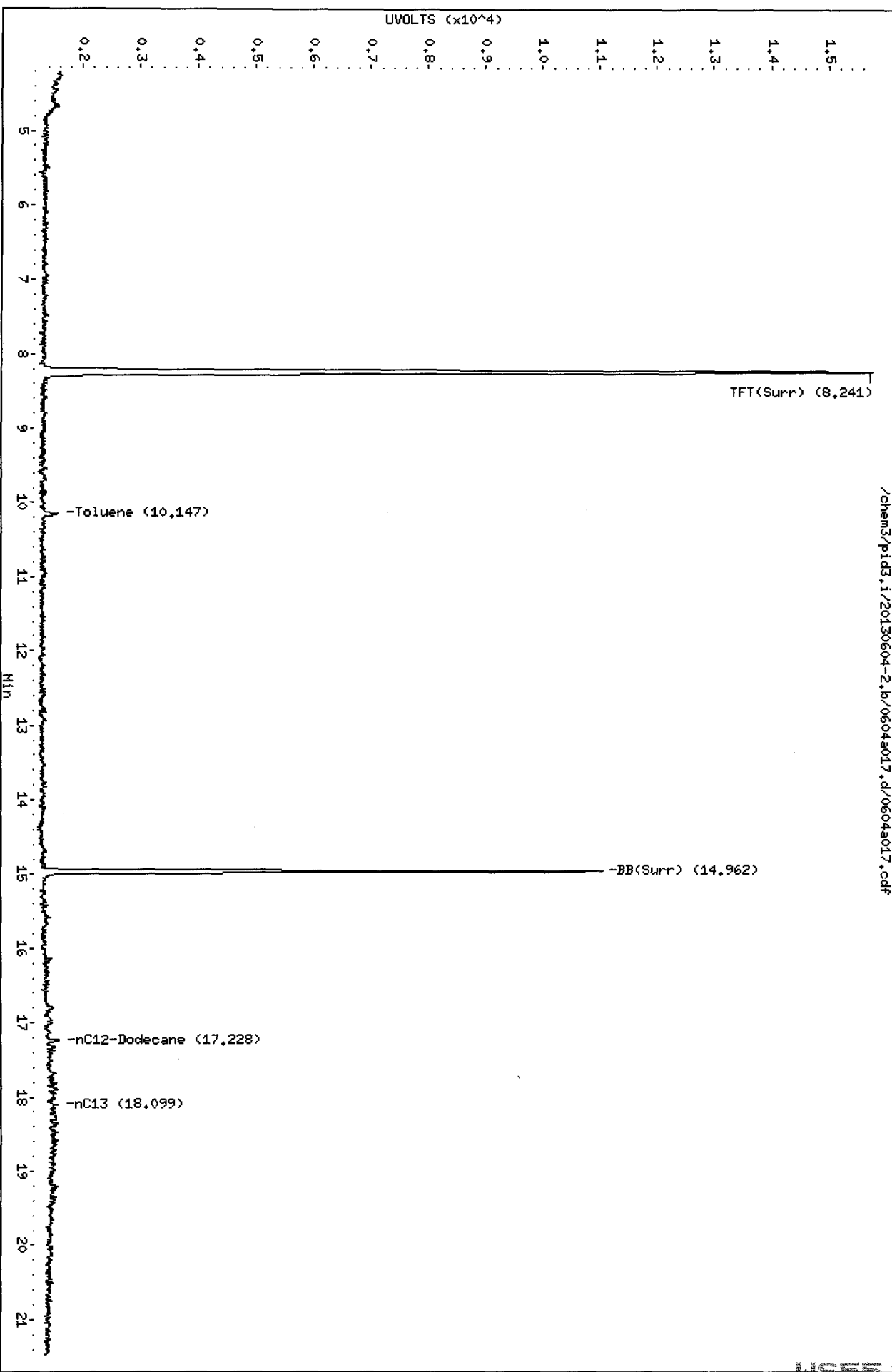
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.150	0.013	322	0.38N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a017.d
Date : 04-JUN-2013 17:24
Client ID: SL-053013-SP-2
Sample Info: MS55B
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

/chem3/pid3.i/20130604-2.b/0604a017.d/0604a017.cdf

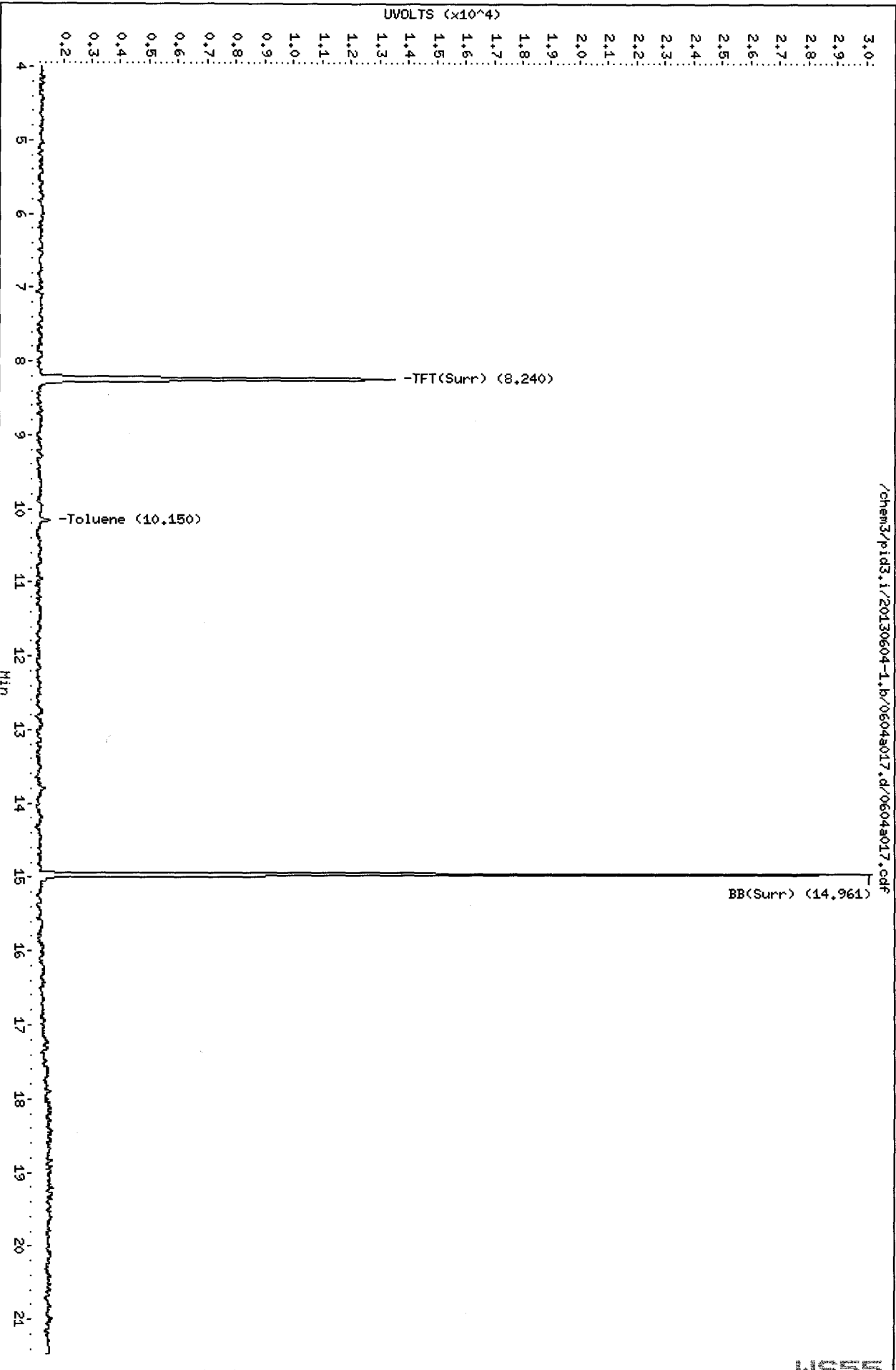


WS55 00058

Data File: /chem3/pid3.i/20130604-1.b/0604a017.d
Date: 04-JUN-2013 17:24
Client ID: SL-053013-SP-2
Sample Info: MS55B

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 PID

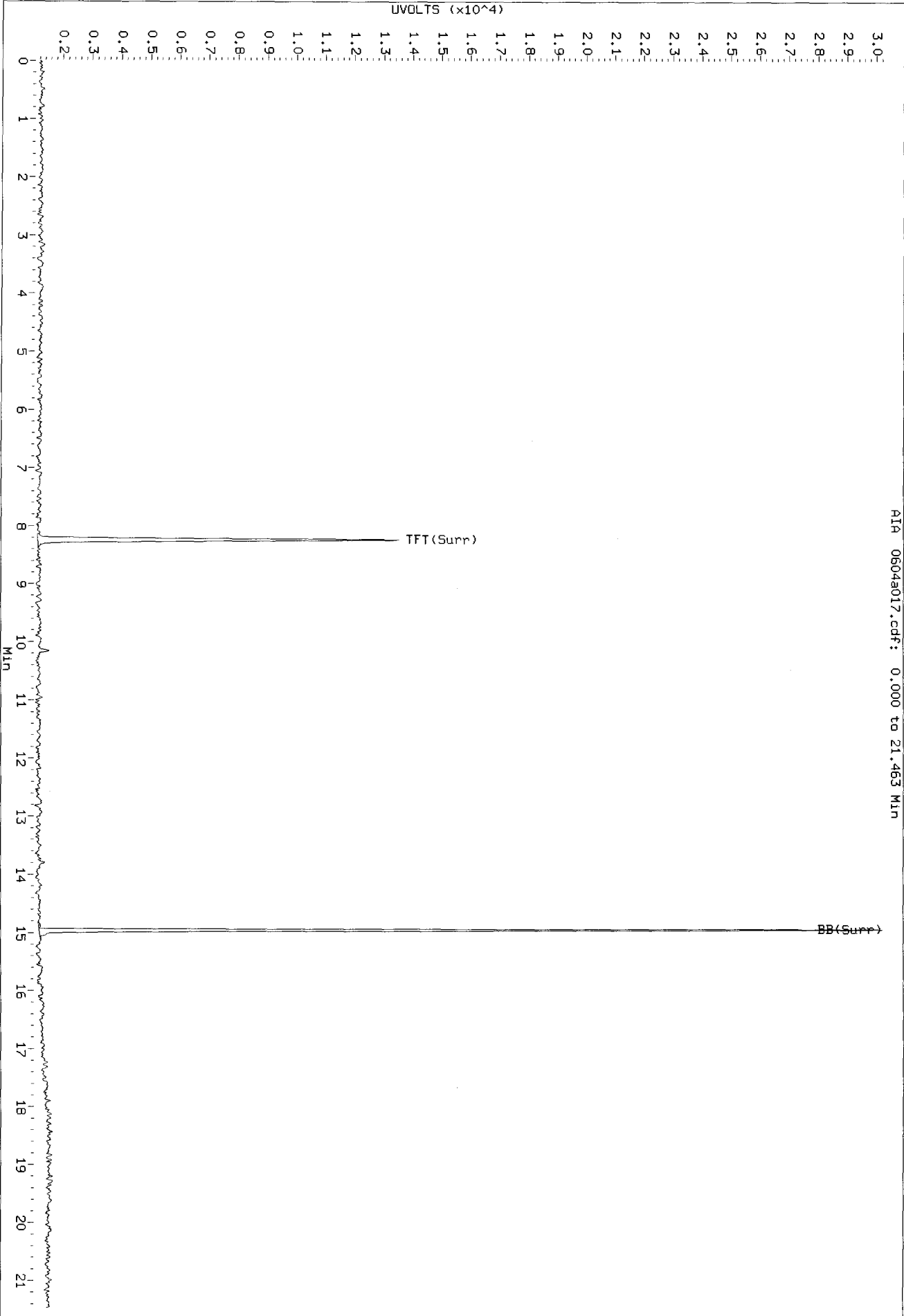


/chem3/pid3.i/20130604-1.b/0604a017.d/0604a017.cdf

MS55 00050

6/15/03

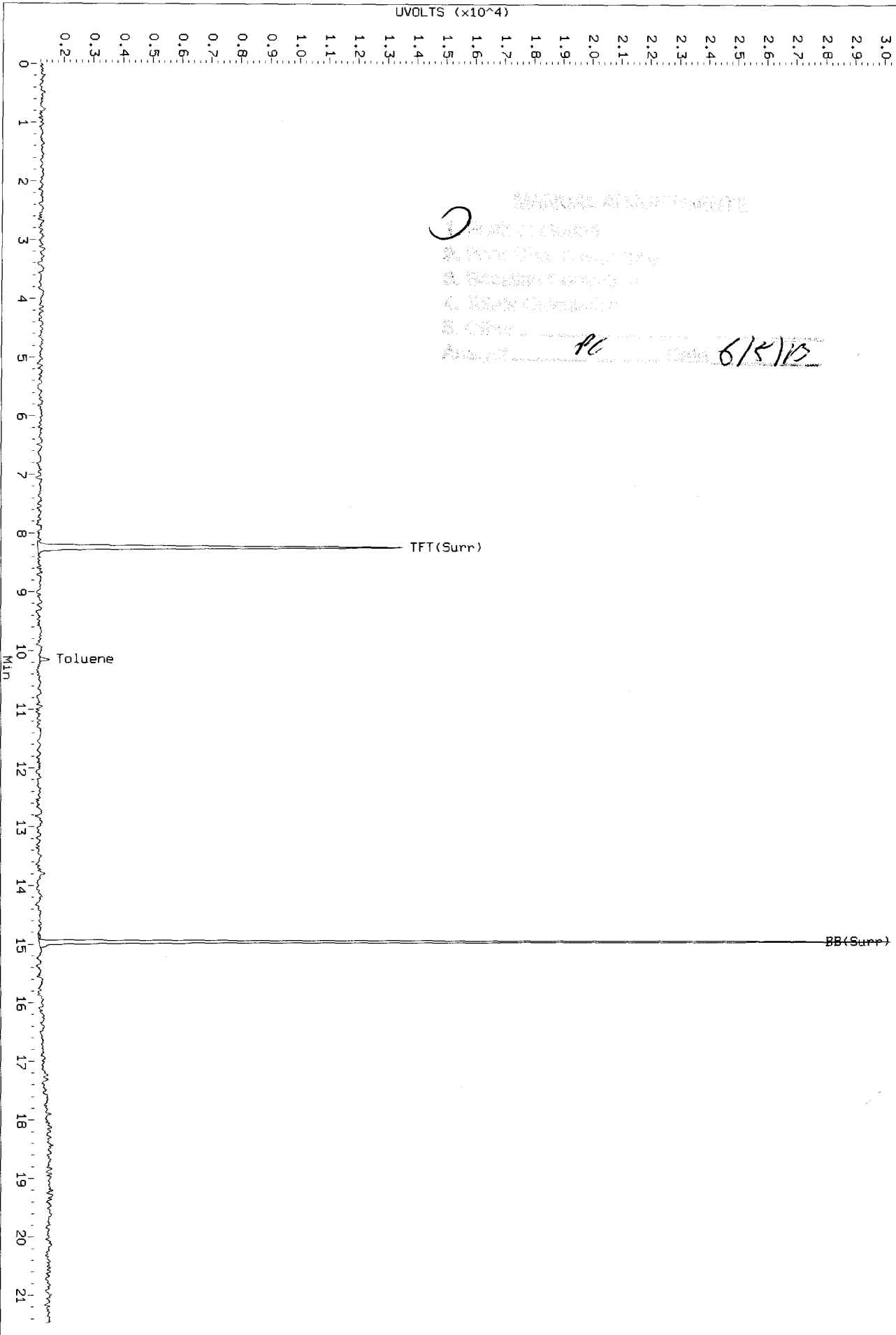
Data File: /chem3/pid3_1/20130604-1.b/0604a017.d/0604a017.cdf
Injection Date: 04-JUN-2013 17:24
Instrument: pid3_1
Client Sample ID: SL-053013-SP-2



AIR 0604a017.cdf: 0.000 to 21.463 Min

Data File: /chem3/pid3.1/20130604-1.b/0604s017.d/0604s017.cdf
Injection Date: 04-JUN-2013 17:24
Instrument: pid3.1
Client Sample ID: SL-053013-SP-2

AIR 0604s017.cdf: 0.000 to 21.463 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: AREA2-053013-SP-1

SAMPLE

Lab Sample ID: WS55C

LIMS ID: 13-11844

Matrix: Soil

Data Release Authorized: 

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 17:53

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 89 mg-dry-wt

Percent Moisture: 12.0%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	14	< 14 U	
108-88-3	Toluene	14	32	
100-41-4	Ethylbenzene	14	< 14 U	
179601-23-1	m,p-Xylene	28	< 28 U	
95-47-6	o-Xylene	14	< 14 U	
	Gasoline Range Hydrocarbons	5.6	< 5.6 U	---

BETX Surrogate Recovery

Trifluorotoluene	85.6%
Bromobenzene	86.9%

Gasoline Surrogate Recovery

Trifluorotoluene	85.1%
Bromobenzene	88.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130604-2.b/0604a018.d
Data file 2: /chem3/pid3.i/20130604-1.b/0604a018.d
Method: /chem3/pid3.i/20130604-1.b/PIDB.m
Instrument: pid3.i
Gas Ical Date: 30-MAY-2013
BETX Ical Date: 30-MAY-2013

ARI ID: WS55C
Client ID: AREA2-053013-SP-1
Injection Date: 04-JUN-2013 17:53
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.239	0.006	14716	218727	85.1	TFT(Surr)
14.962	0.006	9852	95680	88.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	2893	0.001
8015B 2MP-TMB (4.57 to 15.67)	4363035	2894	0.001
AK101 nC6-nC10 (5.10 to 14.57)	3480628	2893	0.001
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	2893	0.001
CalGas nC6-nC12 (5.10 to 17.32)	4309570	2894	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.006	12343	85.6	TFT(Surr)
14.961	0.006	28520	86.9	BB(Surr)

SW8021 (PID)

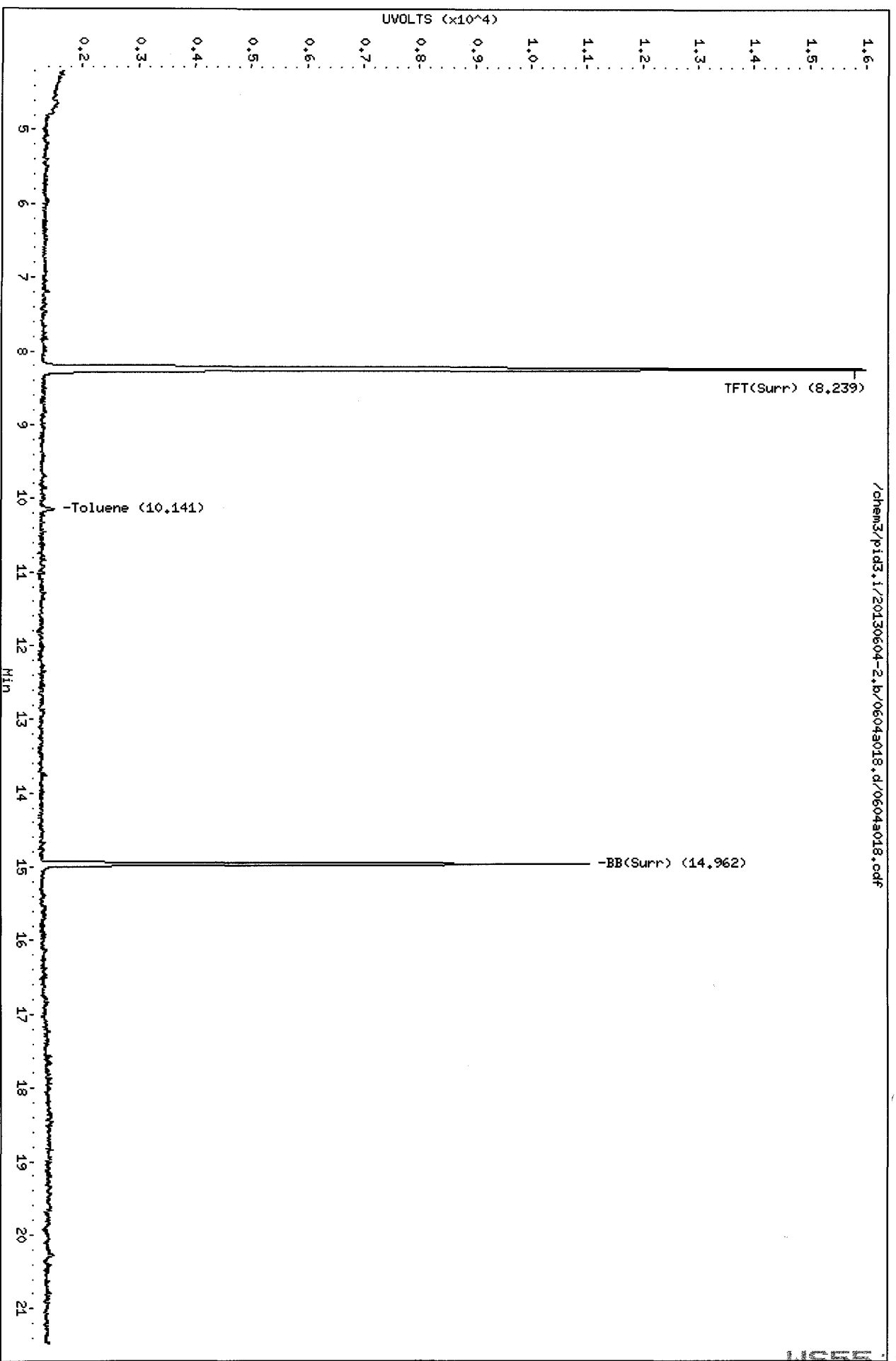
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.146	0.009	487	0.57	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.1/20130604-2.b/0604a018.d
Date : 04-JUN-2013 17:53
Client ID: AREA2-053013-SP-1
Sample Info: MS55C
Column phase: RTX 502-2 FID

Instrument: pid3.1
Operator: PC
Column diameter: 0.18

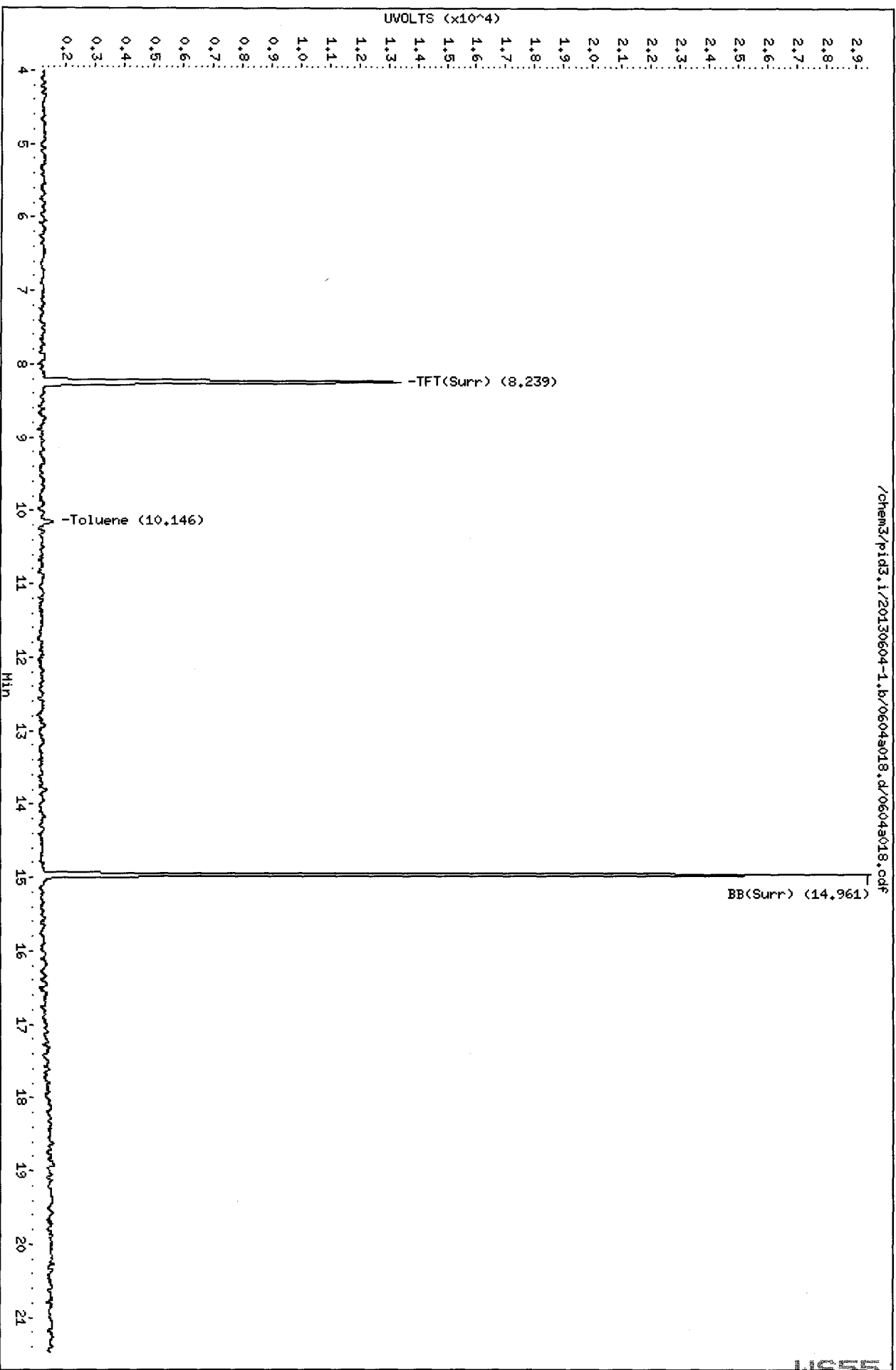


/chem3/pid3.1/20130604-2.b/0604a018.d/0604a018.cdf

MS55C 00004

Data File: /chem3/pid3.1/20130604-1.b/0604s018.d
Date : 04-JUN-2013 17:53
Client ID: AREA2-053013-SP-1
Sample Info: MSS5C
Column phase: RTX 502-2 PID

Instrument: pid3.1
Operator: PC
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-053013-SP-2

SAMPLE

Lab Sample ID: WS55D

LIMS ID: 13-11845

Matrix: Soil

Data Release Authorized: 

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 18:21

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 12.5%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	16	< 16 U	
108-88-3	Toluene	16	33	
100-41-4	Ethylbenzene	16	< 16 U	
179601-23-1	m,p-Xylene	33	< 33 U	
95-47-6	o-Xylene	16	< 16 U	
	Gasoline Range Hydrocarbons	6.5	< 6.5 U	---

BETX Surrogate Recovery

Trifluorotoluene	92.8%
Bromobenzene	93.5%

Gasoline Surrogate Recovery

Trifluorotoluene	94.0%
Bromobenzene	93.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

K
6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a019.d ARI ID: WS55D
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a019.d Client ID: AREA2-053013-SP-2
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 18:21
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.240	0.006	16269	240676	94.0	TFT(Surr)
14.961	0.006	10467	102503	93.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	93405	0.044
8015B 2MP-TMB (4.57 to 15.67)	4363035	60982	0.014
AK101 nC6-nC10 (5.10 to 14.57)	3480628	59418	0.017
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	94373	0.043
CalGas nC6-nC12 (5.10 to 17.32)	4309570	93406	0.022

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.006	13388	92.8	TFT(Surr)
14.961	0.006	30687	93.5	BB(Surr)

SW8021 (PID)

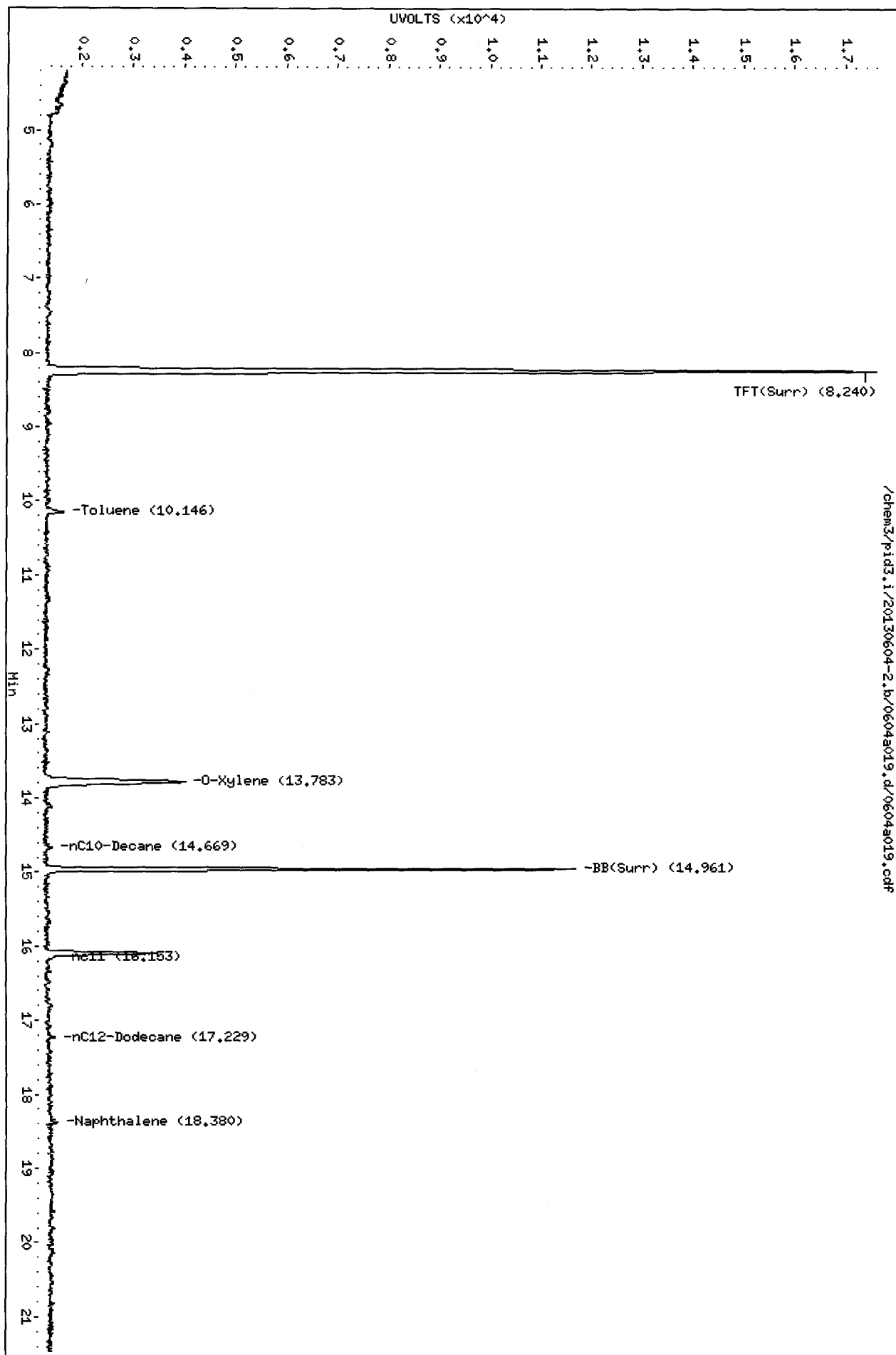
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.150	0.012	432	0.51	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604s019.d
Date: 04-JUN-2013 18:21
Client ID: AREA2-053013-SP-2
Sample Info: MSSGD
Column phase: RTX 502-2 FID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130604-2.b/0604s019.d/0604s019.cdf

4555 00058

Data File: /chem3/pid3.1/20130604-1.b/0604a019.d

Date : 04-JUN-2013 18:21

Client ID: AREA2-053013-SF-2

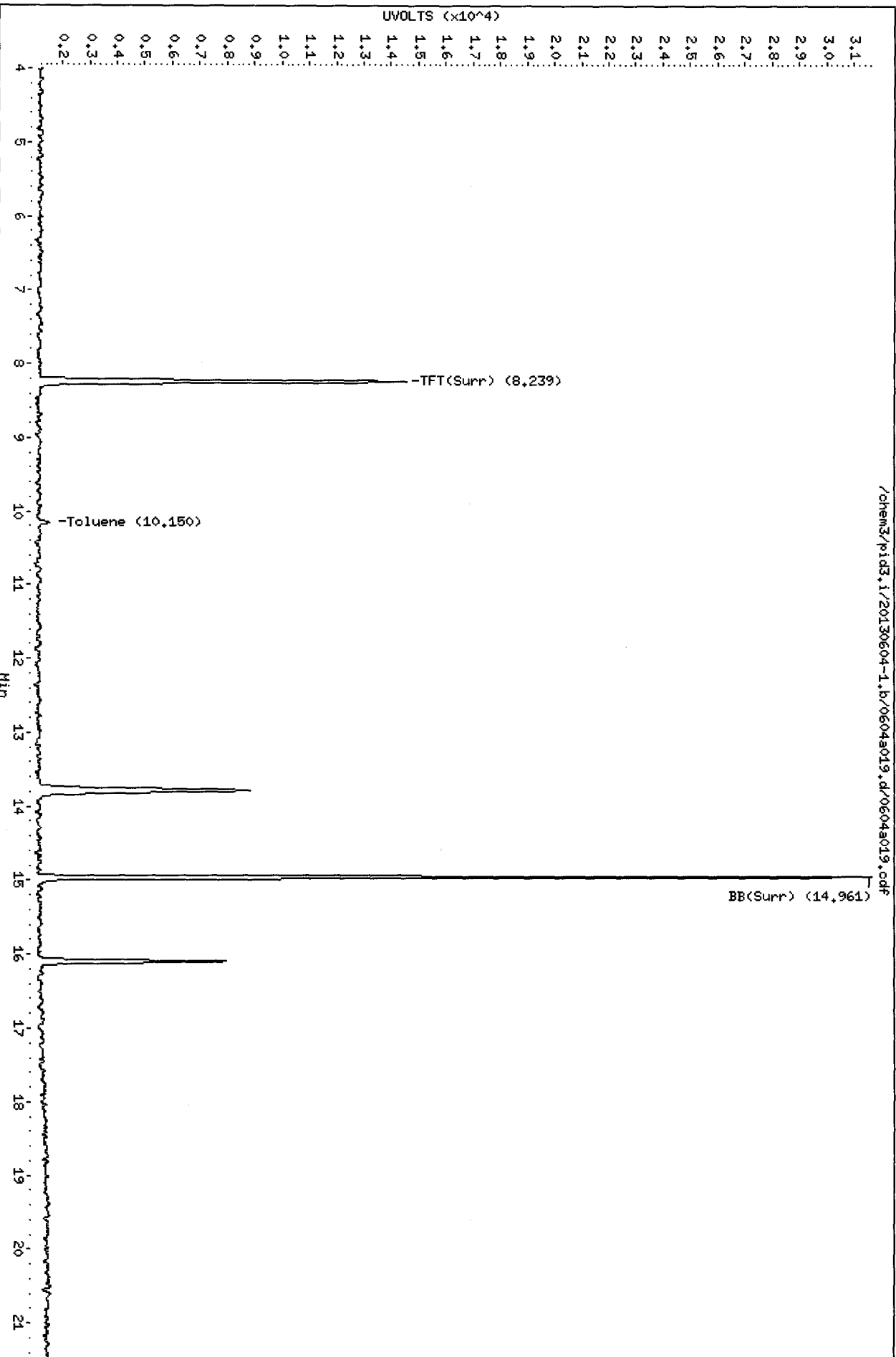
Sample Info: MSSSD

Column phase: RTX 502-2 PID

Instrument: pid3.1

Operator: PC

Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-053013-SP-3

SAMPLE

Lab Sample ID: WS55E

LIMS ID: 13-11846

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 18:49

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 84 mg-dry-wt

Percent Moisture: 13.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	19
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons	6.0	< 6.0 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	94.7%
Bromobenzene	96.4%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	94.3%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AC
6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130604-2.b/0604a020.d ARI ID: WS55E
Data file 2: /chem3/pid3.i/20130604-1.b/0604a020.d Client ID: AREA2-053013-SP-3
Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 18:49
Instrument: pid3.i Matrix: SOIL
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.240	0.006	16213	240560	93.7	TFT(Surr)
14.961	0.006	10558	101364	94.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	6436	0.003
8015B 2MP-TMB (4.57 to 15.67)	4363035	7996	0.002
AK101 nC6-nC10 (5.10 to 14.57)	3480628	6435	0.002
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	6436	0.003
CalGas nC6-nC12 (5.10 to 17.32)	4309570	6436	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
8.240	0.006	13655	94.7	TFT(Surr)
14.961	0.006	31618	96.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.147	0.009	270	0.32N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

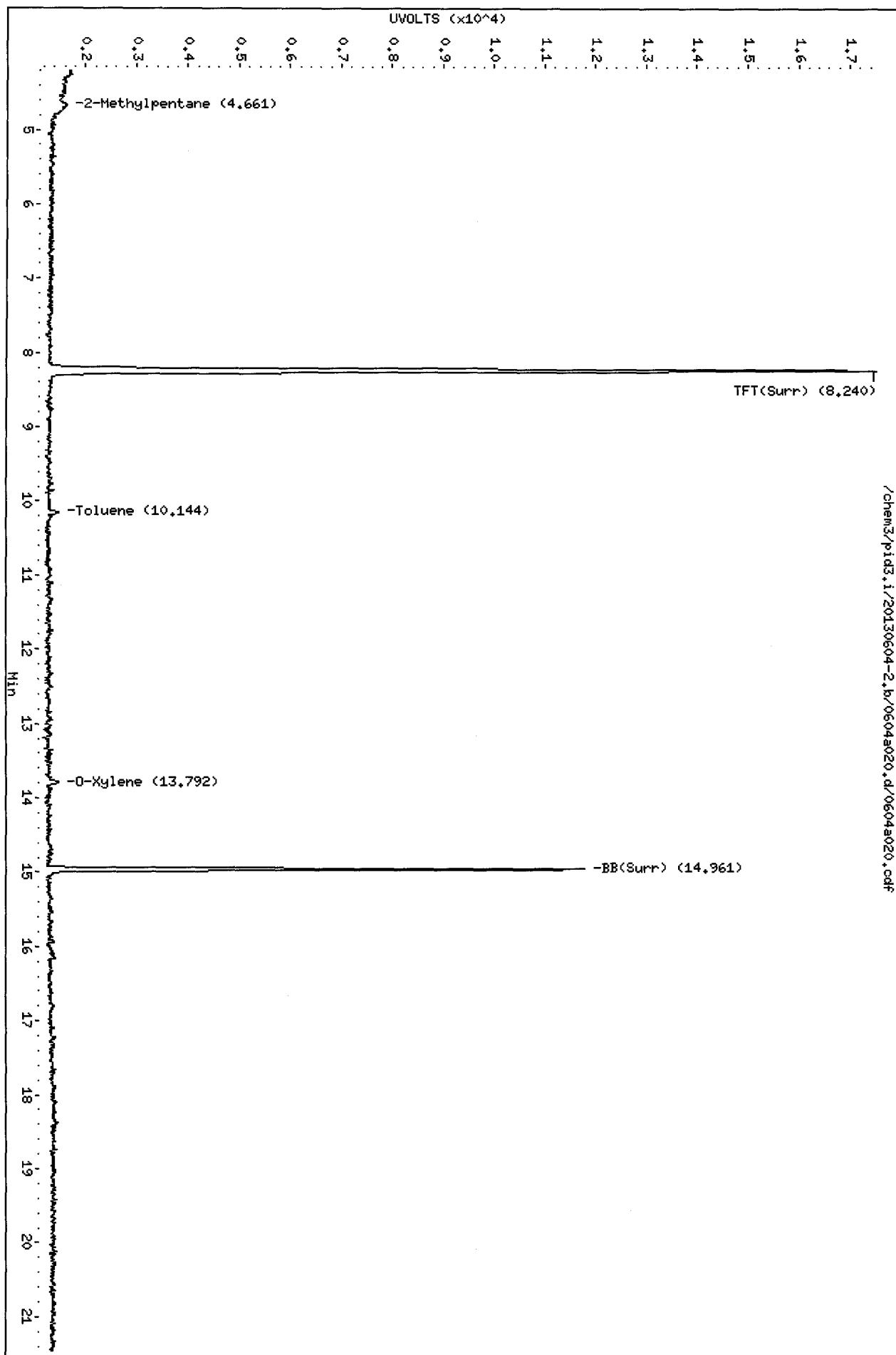
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid3,1/20130604-2,b/0604a020.d
Date: 04-JUN-2013 18:49
Client ID: AREA2-053013-SF-3
Sample Info: MS55E
Column phase: RTX 502-2 FID

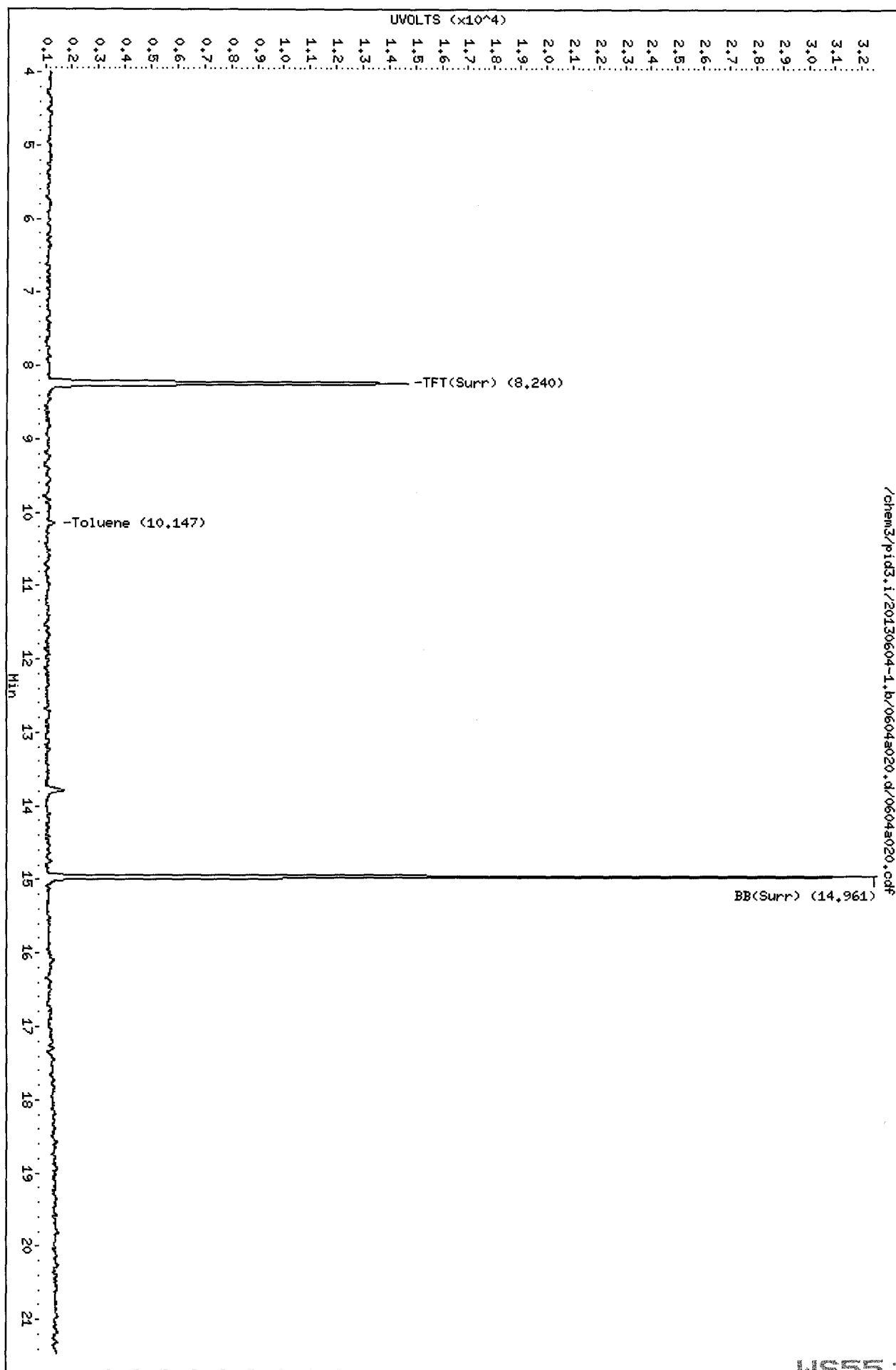
Instrument: pid3,1
Operator: PC
Column diameter: 0.18

/chem3/pid3,1/20130604-2,b/0604a020.d/0604a020.cdf



Data File: /chem3/pid3.i/20130604-1.b/0604a020.d
Date : 04-JUN-2013 18:49
Client ID: ARES2-053013-SP-3
Sample Info: MSSGE
Column phase: RTX 502-2 PID

Instrument: pid3.i
Operator: PC
Column diameter: 0.18

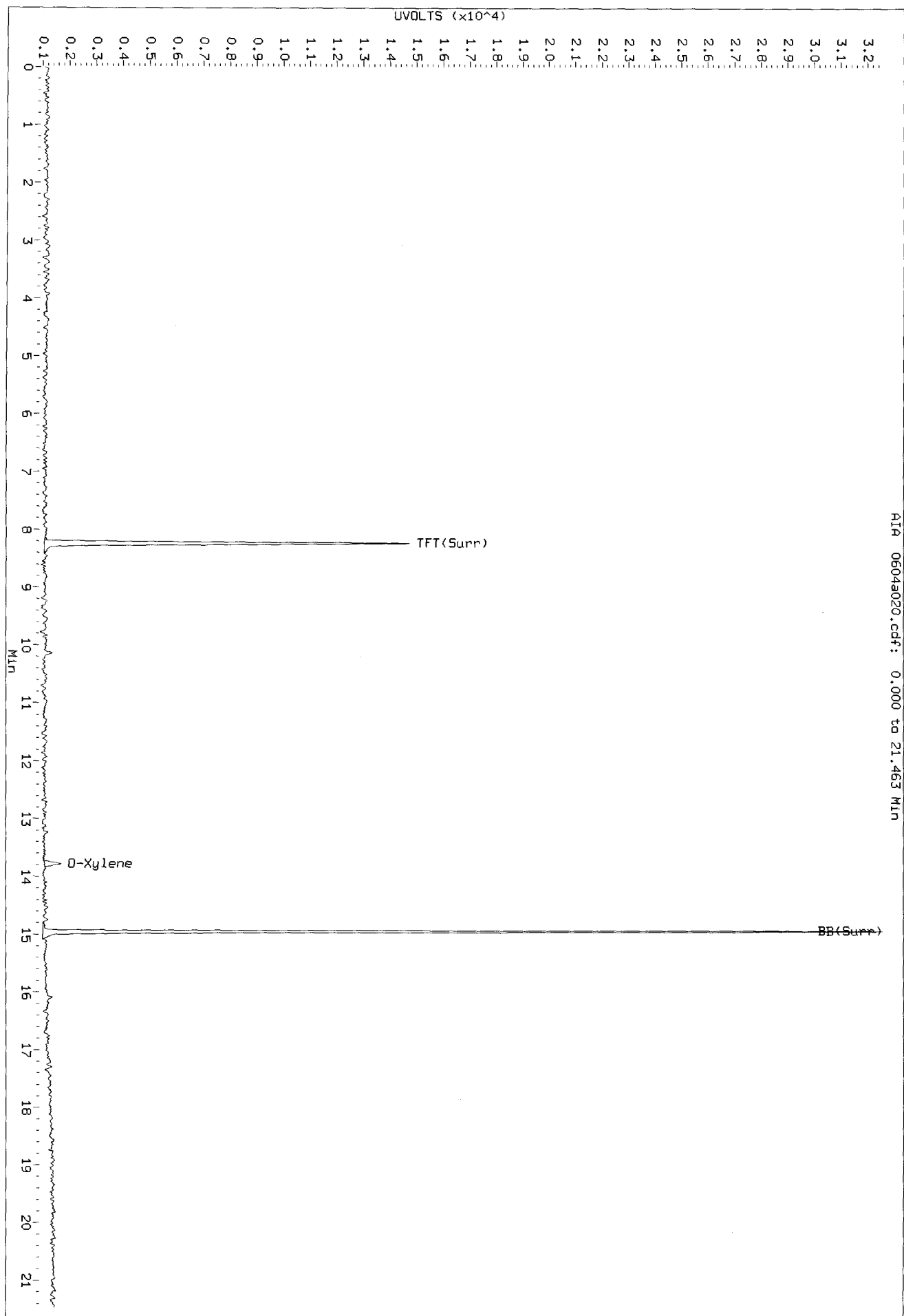


/chem3/pid3.i/20130604-1.b/0604a020.d/0604a020.cdf

MS/MS

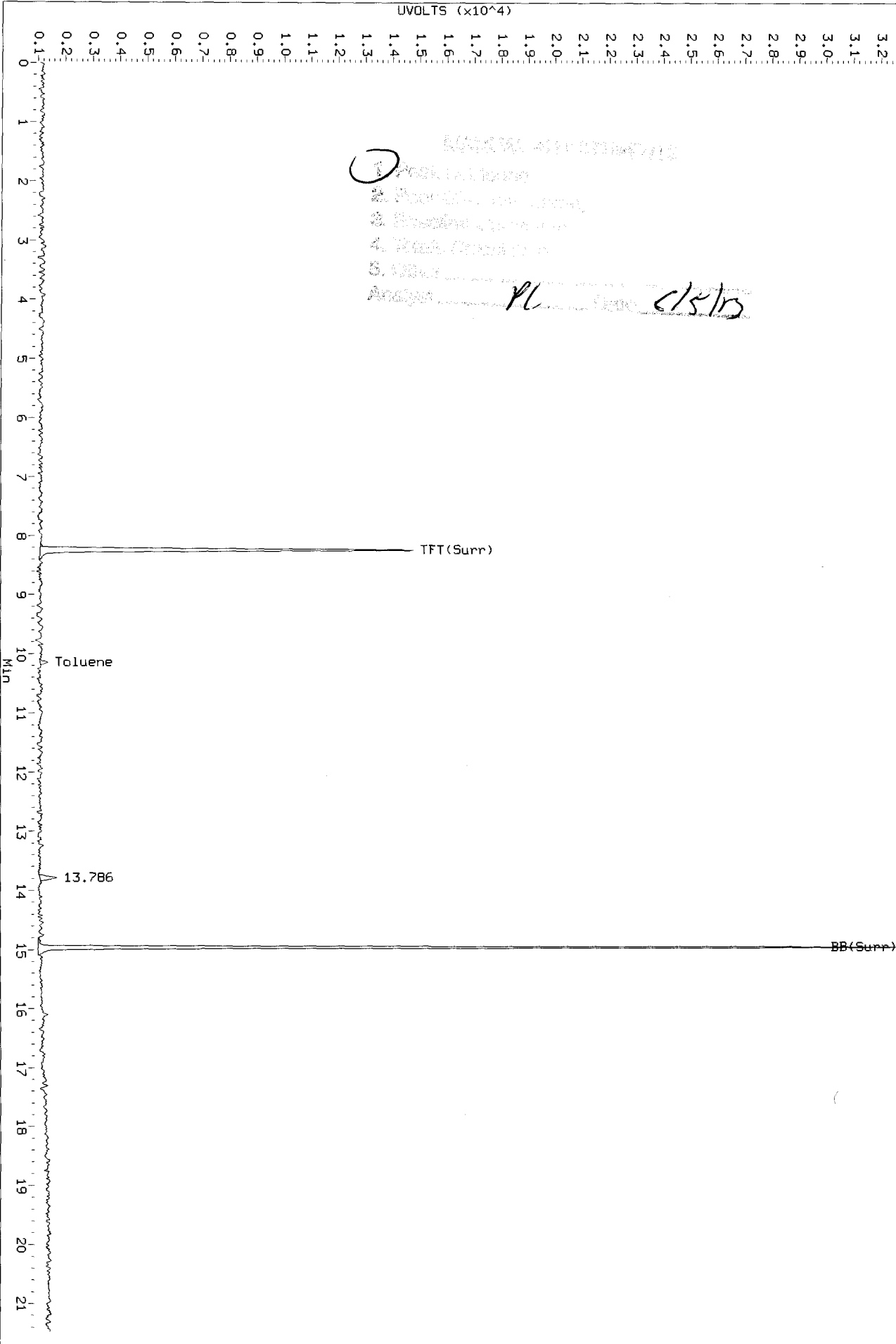
Data File: /chem3/p1d3.1/20130604-1.b/0604a020.d/0604a020.cdf
Injection Date: 04-JUN-2013 18:49
Instrument: p1d3.1
Client Sample ID: AREA2-053013-SP-3

AIR 0604a020.cdf: 0.000 to 21.463 Min



Data File: /chem3/p103.1/20130604-1.b/0604s020.d/0604s020.cdf
Injection Date: 04-JUN-2013 18:49
Instrument: p103.1
Client Sample ID: AREA2-053013-9P-3

AIR 0604s020.cdf: 0.000 to 21.463 Min



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: AREA2-053013-SP-4

SAMPLE

Lab Sample ID: WS55F

LIMS ID: 13-11847

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/04/13 19:17

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 81 mg-dry-wt

Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	25
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.2	< 6.2 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	92.1%
Bromobenzene	93.7%

Gasoline Surrogate Recovery

Trifluorotoluene	93.1%
Bromobenzene	93.4%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Handwritten: 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a021.d ARI ID: WS55F
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a021.d Client ID: AREA2-053013-SP-4
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 19:17
 Instrument: pid3.i Matrix: SOIL
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.238	0.004	16109	237640	93.1	TFT(Surr)
14.962	0.006	10460	100663	93.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	8503	0.004
8015B 2MP-TMB (4.57 to 15.67)	4363035	6971	0.002
AK101 nC6-nC10 (5.10 to 14.57)	3480628	6970	0.002
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	8503	0.004
CalGas nC6-nC12 (5.10 to 17.32)	4309570	9363	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.238	0.004	13284	92.1	TFT(Surr)
14.961	0.006	30731	93.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.143	0.006	349	0.41N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a021.d

Date: 04-JUN-2013 19:17

Client ID: AREA2-053013-SP-4

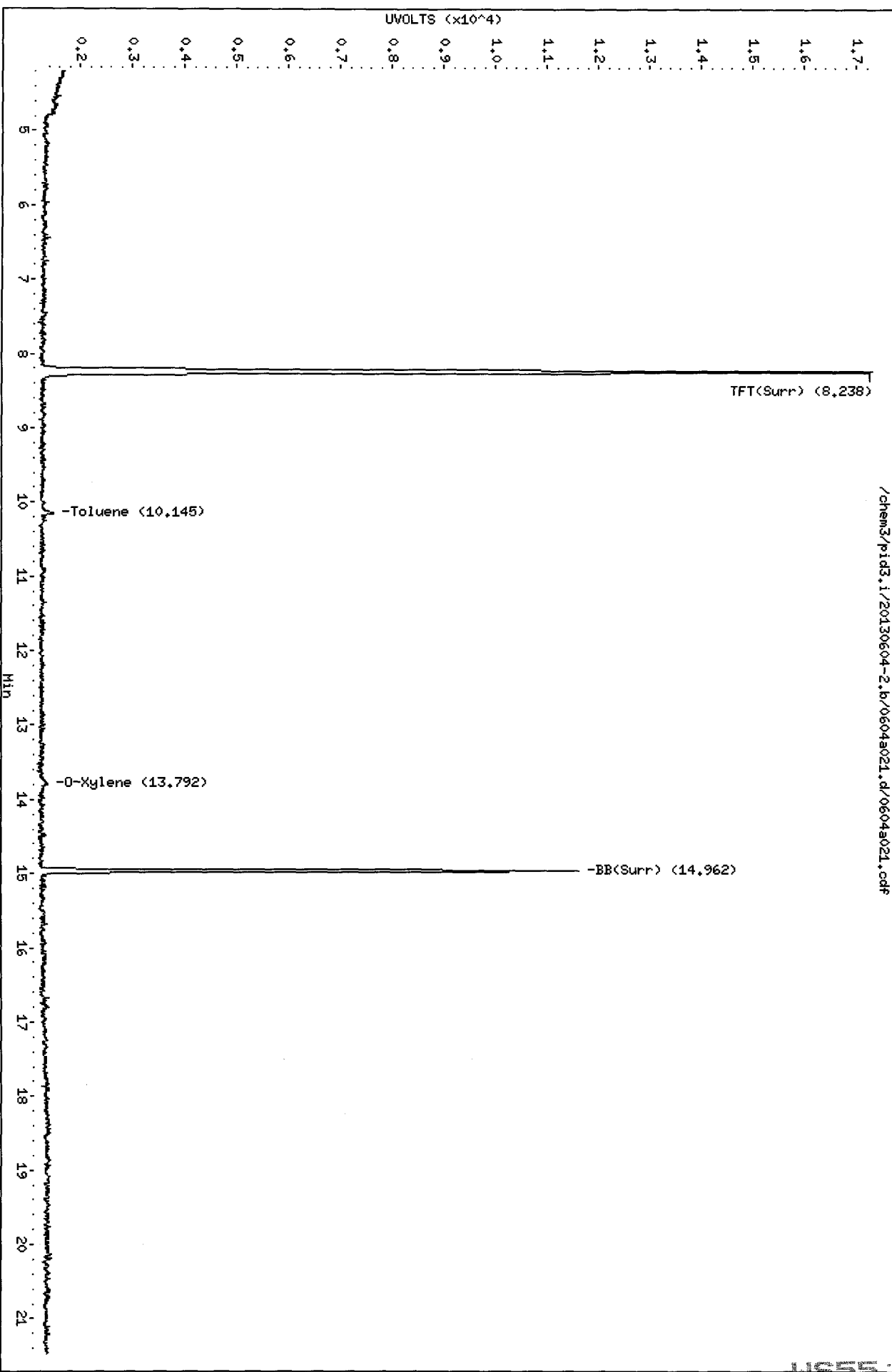
Sample Info: MSSSF

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: PC

Column diameter: 0.18



/chem3/pid3.i/20130604-2.b/0604a021.d/0604a021.cdf

US55-00078

Data File: /chem3/pid3.1/20130604-1.b/0604a021.d

Page 1

Date : 04-JUN-2013 19:17

Client ID: AREA2-053013-SP-4

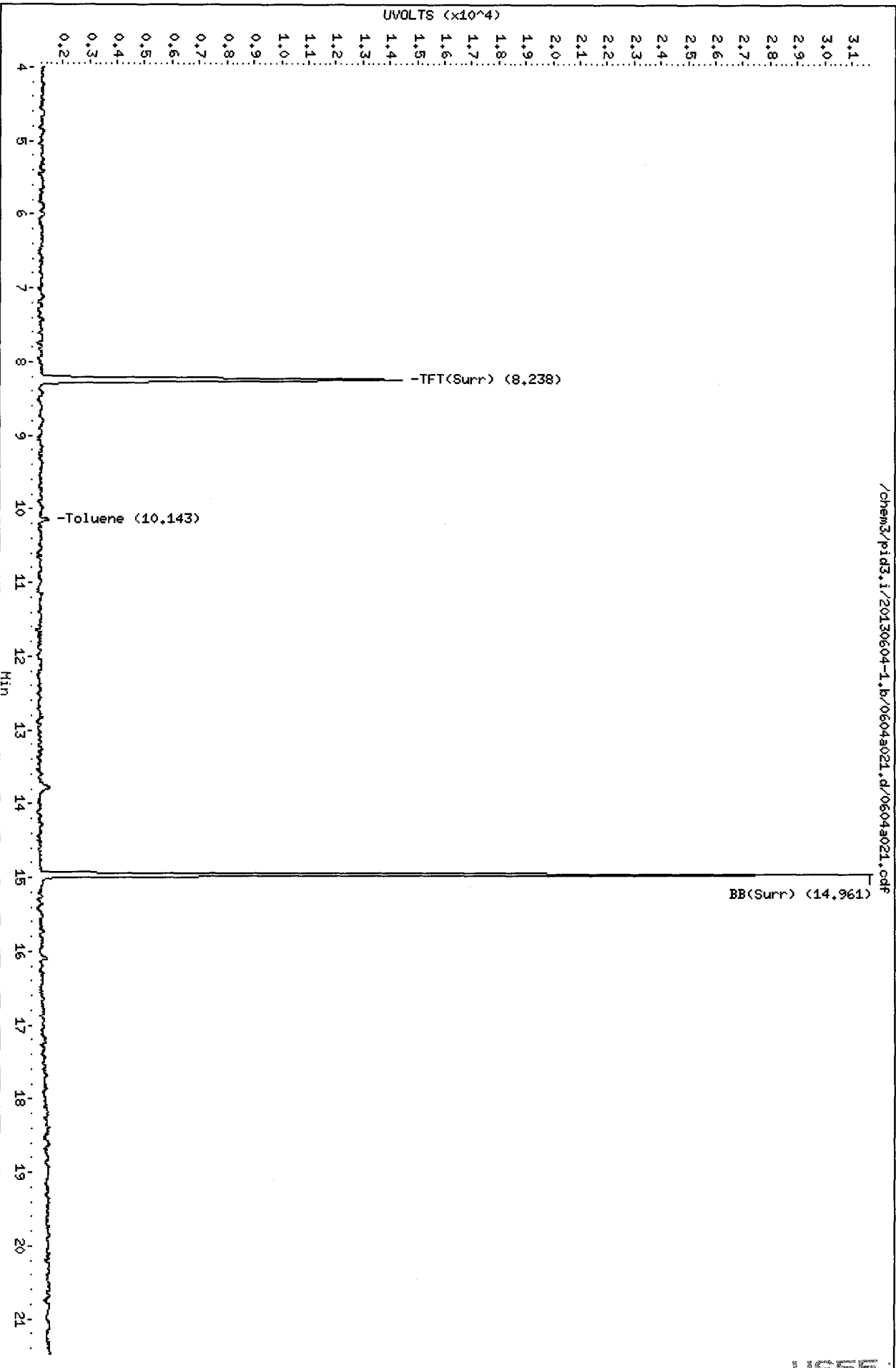
Sample Info: MSSGF

Instrument: pid3.1

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

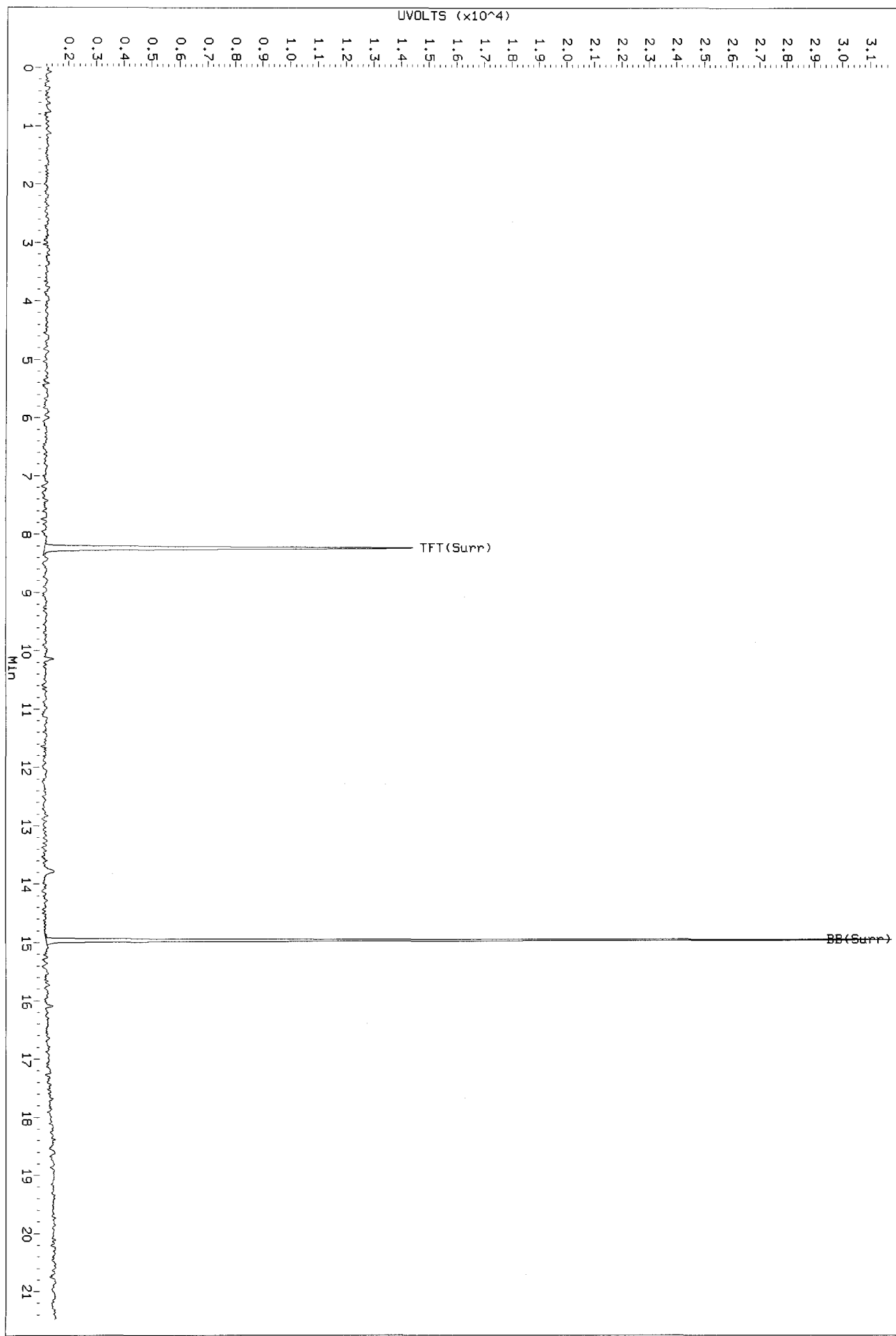


4655 00079

PC
6/5/13

Data File: /chem3/pid3.1/20130604-1.b/0604a021.d/0604a021.cdf
Injection Date: 04-JUN-2013 19:17
Instrument: pid3.1
Client Sample ID: AREA2-053013-SP-4

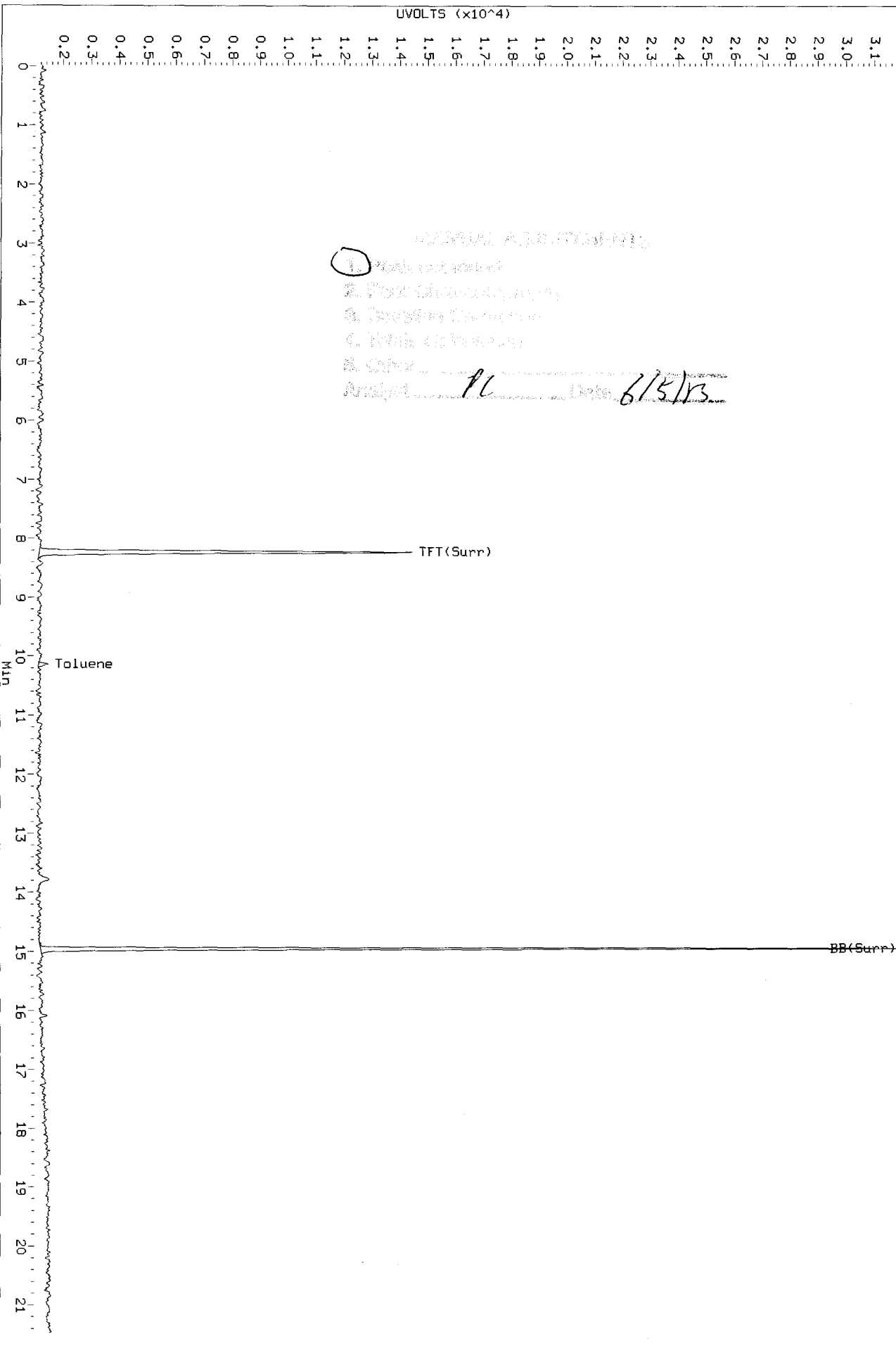
Area 0604a021.cdf: 0.000 to 21.470 MIN



4555 : 00000

Data File: /chem3/p1d3.i/20130604-1.b/0604a021.d/0604a021.cdf
Injection Date: 04-JUN-2013 19:17
Instrument: p1d3.1
Client Sample ID: AREF2-053013-SP-4

AIR 0604a021.cdf: 0.000 to 21.470 Min



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS55
Matrix: Soil

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
Event: 0779.02.01/03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-060413	NA	90.2%	90.5%	0	
LCS-060413	NA	94.6%	95.2%	0	
LCSD-060413	NA	98.0%	99.3%	0	
SL-053013-SP-1	NA	83.4%	85.5%	0	
SL-053013-SP-2	NA	83.8%	87.7%	0	
AREA2-053013-SP-1	NA	85.1%	88.0%	0	
AREA2-053013-SP-2	NA	94.0%	93.5%	0	
AREA2-053013-SP-3	NA	93.7%	94.3%	0	
AREA2-053013-SP-4	NA	93.1%	93.4%	0	

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11842 to 13-11847

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS55
Matrix: Soil

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-060413	91.7%	91.0%	0
LCS-060413	95.1%	94.8%	0
LCSD-060413	100%	98.7%	0
SL-053013-SP-1	83.9%	86.8%	0
SL-053013-SP-2	85.9%	88.5%	0
AREA2-053013-SP-1	85.6%	86.9%	0
AREA2-053013-SP-2	92.8%	93.5%	0
AREA2-053013-SP-3	94.7%	96.4%	0
AREA2-053013-SP-4	92.1%	93.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11842 to 13-11847

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-060413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413

LIMS ID: 13-11842

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/04/13 11:04

LCS D: 06/04/13 11:32

Instrument/Analyst LCS: PID3/PKC

LCS D: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCS D: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Gasoline Range Hydrocarbons	46.0	50.0	92.0%	47.4	50.0	94.8%	3.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCS D
Trifluorotoluene	94.6%	98.0%
Bromobenzene	95.2%	99.3%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: LCS-060413

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060413

LIMS ID: 13-11842

Matrix: Soil

Data Release Authorized: 

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/04/13 11:04

LCSD: 06/04/13 11:32

Instrument/Analyst LCS: PID3/PKC

LCSD: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	LCS		LCSD	LCSD		RPD
		Spike Added-LCS	Recovery		Spike Added-LCSD	Recovery	
Benzene	154	185	83.2%	167	185	90.3%	8.1%
Toluene	1780	1980	89.9%	1840	1980	92.9%	3.3%
Ethylbenzene	480	580	82.8%	497	580	85.7%	3.5%
m,p-Xylene	1770	2120	83.5%	1870	2120	88.2%	5.5%
o-Xylene	790	960	82.3%	840	960	87.5%	6.1%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.1%	100%
Bromobenzene	94.8%	98.7%

AC
6/5/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20130604-2.b/0604a004.d ARI ID: LCS0604
Data file 2: /chem3/pid3.i/20130604-1.b/0604a004.d Client ID:
Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 11:04
Instrument: pid3.i Matrix: WATER
Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
BETX Ical Date: 30-MAY-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.230	-0.004	16364	276725	94.6	TFT(Surr)
14.956	0.001	10665	110705	95.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.04 to 17.32)	2099137	1927918	0.918 M
8015B 2MP-TMB (4.57 to 15.67)	4363035	4093508	0.938 M
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3262208	0.937 M
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	2021674	0.921 M
CalGas nC6-nC12 (5.10 to 17.32)	4309570	4006706	0.930 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.229	-0.004	13716	95.1	TFT(Surr)
14.955	0.000	31114	94.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.465	-0.004	3290	3.07	Benzene
10.134	-0.003	30221	35.50	Toluene
12.762	-0.002	7010	9.59	Ethylbenzene
12.914	0.001	27672	35.45	M/P-Xylene
13.737	-0.001	13256	15.81	O-Xylene
4.924	-0.036	840	1.87	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a004.d

Date: 04-JUN-2013 11:04

Client ID:

Sample Info: LCS0604

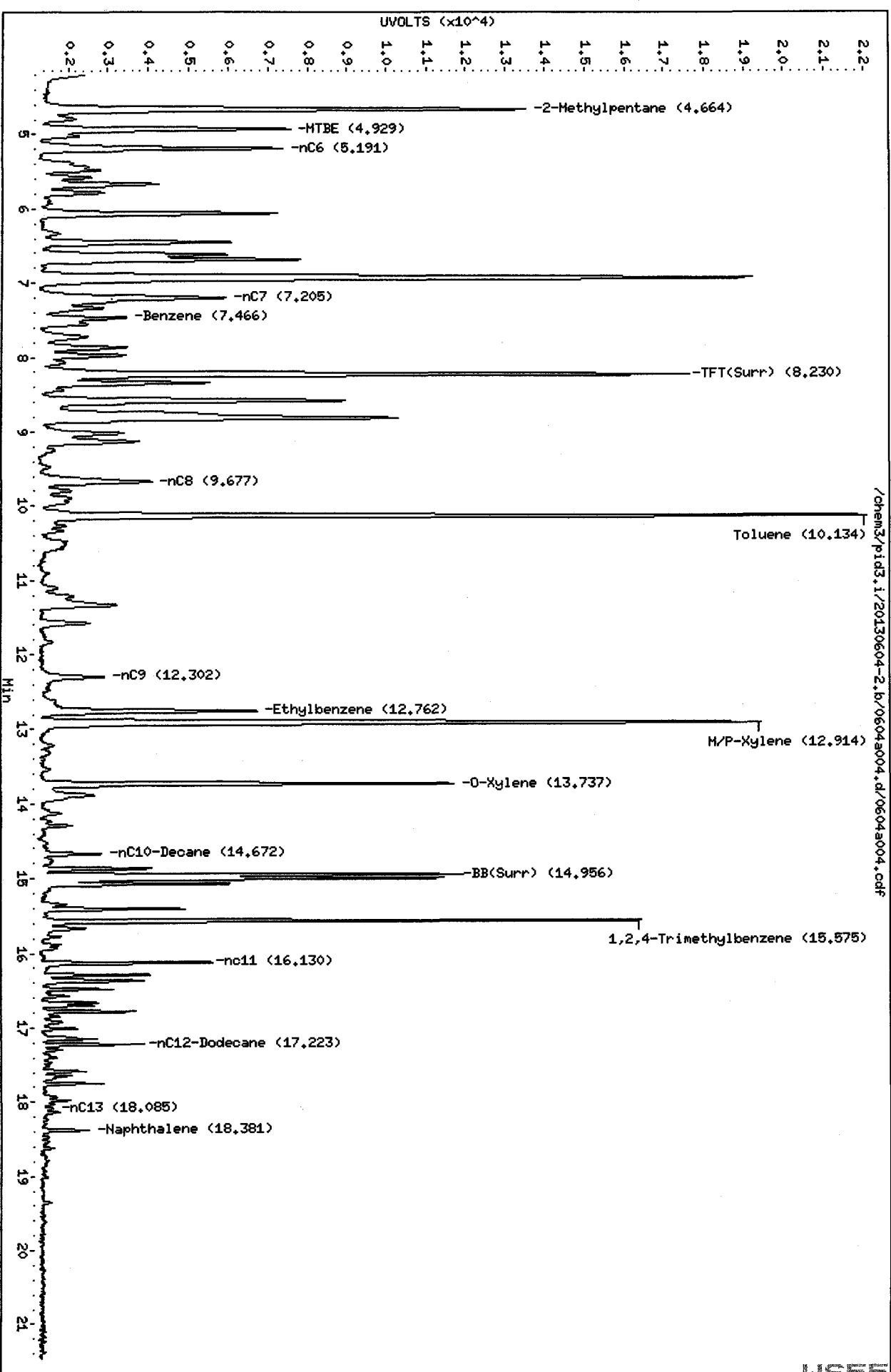
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: PC

Column diameter: 0.18

/chem3/pid3.i/20130604-2.b/0604a004.d/0604a004.cdf

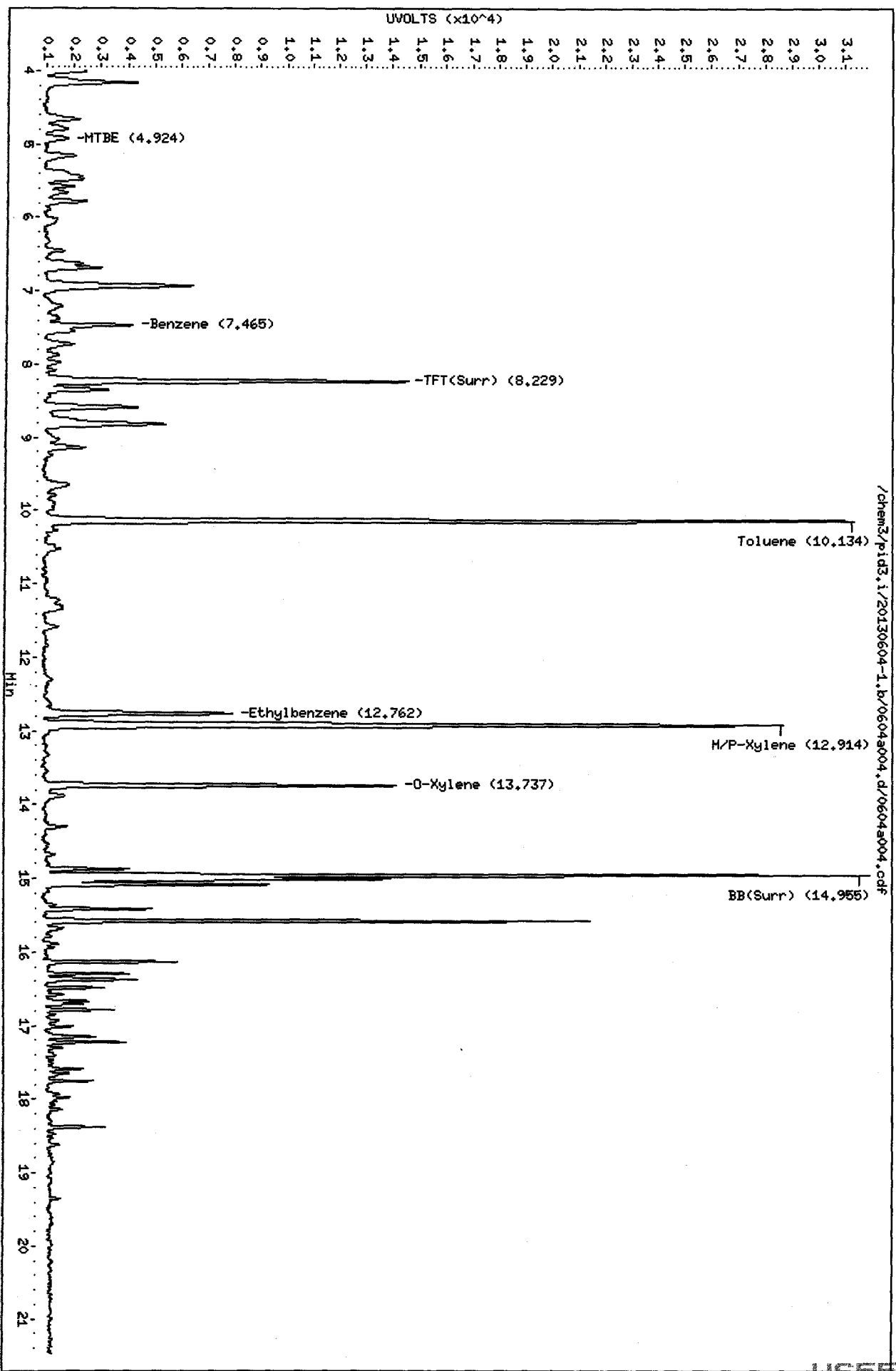


Data File: /chem3/pid3.i/20130604-1.b/0604s004.d
Date: 04-JUN-2013 11:04
Client ID:
Sample Info: LCS0604

Instrument: pid3.i

Column phase: RTX 502-2 PID

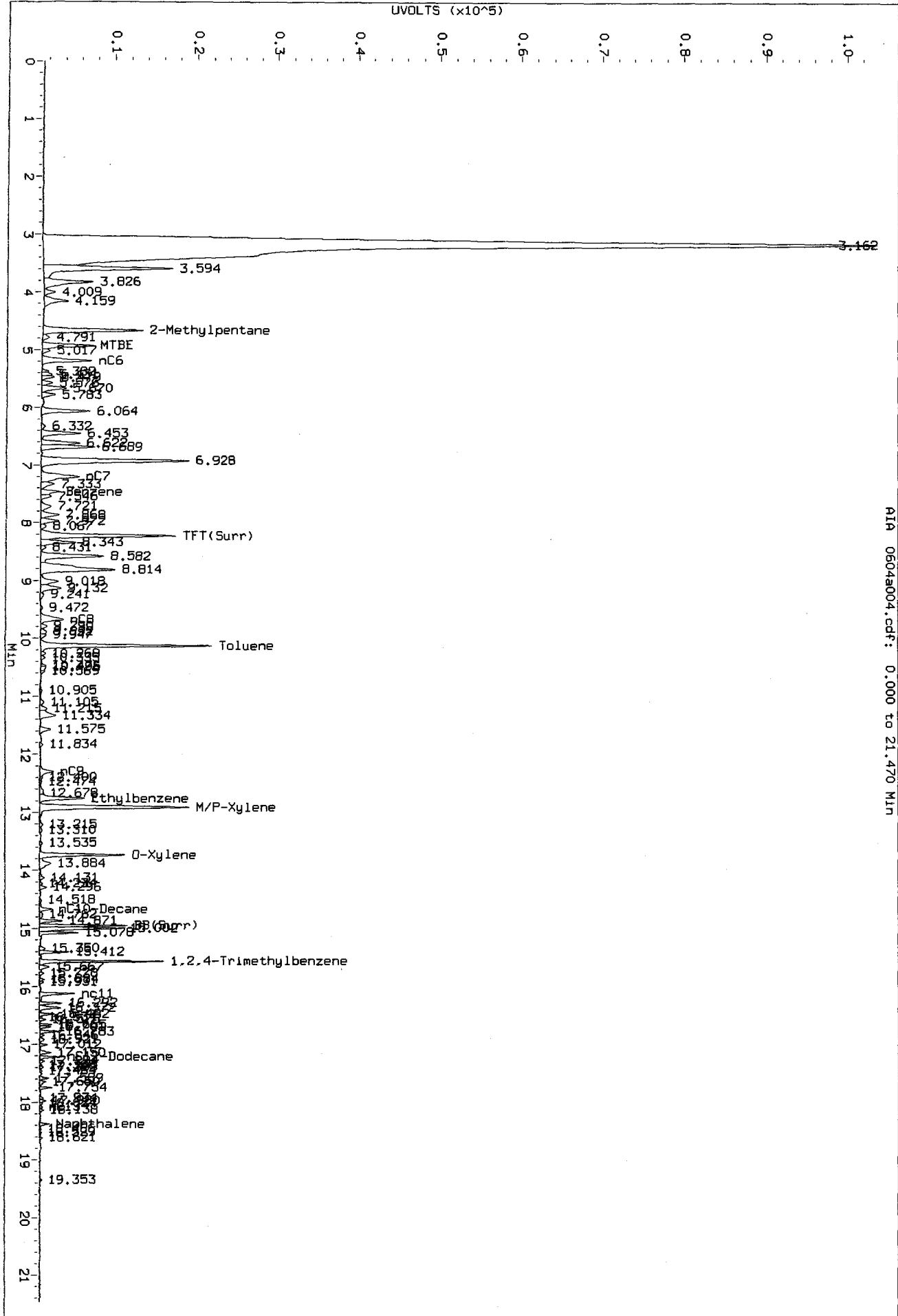
Operator: PC
Column diameter: 0.18



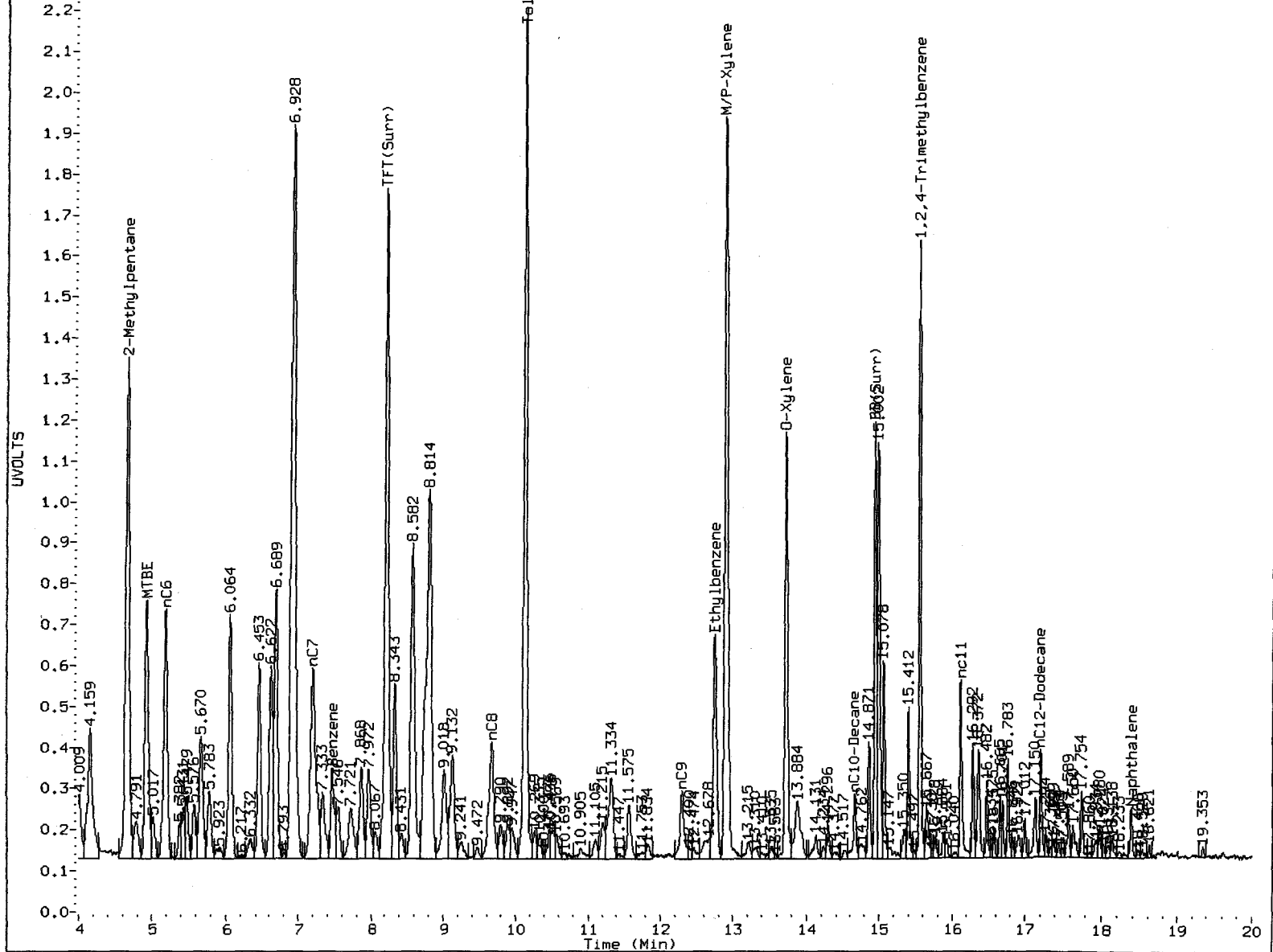
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000000 : 000000

PC
C/S/KS
Data File: /chem3/p1d3.1/20130604-2.b/0604s004.d/0604s004.cdf
Injection Date: 04-JUN-2013 11:04
Instrument: p1d3.1
Client Sample ID:



AIA 0604s004.cdf: 0.000 to 21.470 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: KC

Date: 6/5/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a005.d ARI ID: LCSD0604
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a005.d Client ID:
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 11:32
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.238	0.005	16951	287733	98.0	TFT(Surr)
14.959	0.003	11119	111000	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	1984986	0.946 M
8015B 2MP-TMB (4.57 to 15.67)	4363035	4249921	0.974 M
AK101 nC6-nC10 (5.10 to 14.57)	3480628	3388381	0.973 M
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	2083527	0.949 M
CalGas nC6-nC12 (5.10 to 17.32)	4309570	4156303	0.964 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.238	0.004	14437	100.1	TFT(Surr)
14.958	0.003	32380	98.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.472	0.003	3572	3.34	Benzene
10.142	0.004	31351	36.83	Toluene
12.768	0.005	7271	9.94	Ethylbenzene
12.921	0.007	29190	37.39	M/P-Xylene
13.742	0.004	14080	16.79	O-Xylene
4.927	-0.032	1057	2.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604a005.d

Date: 04-JUN-2013 14:32

Client ID:

Sample Info: LCSJ0604

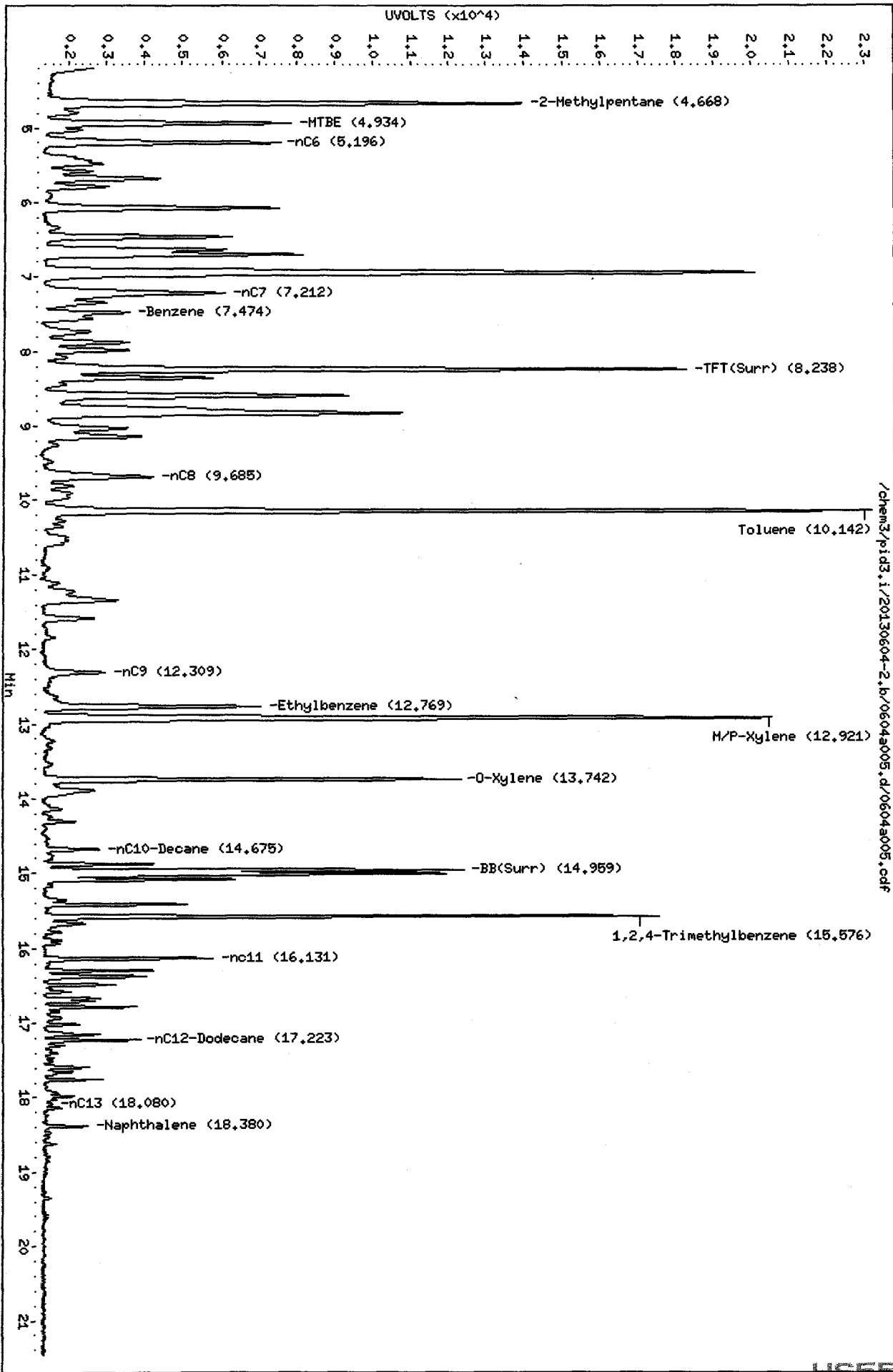
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: PC

Column diameter: 0.18

Page 1



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00092 : 0055

Data File: /chem3/pid3.i/20130604-1.b/0604a005.d

Date: 04-JUN-2013 14:32

Client ID:

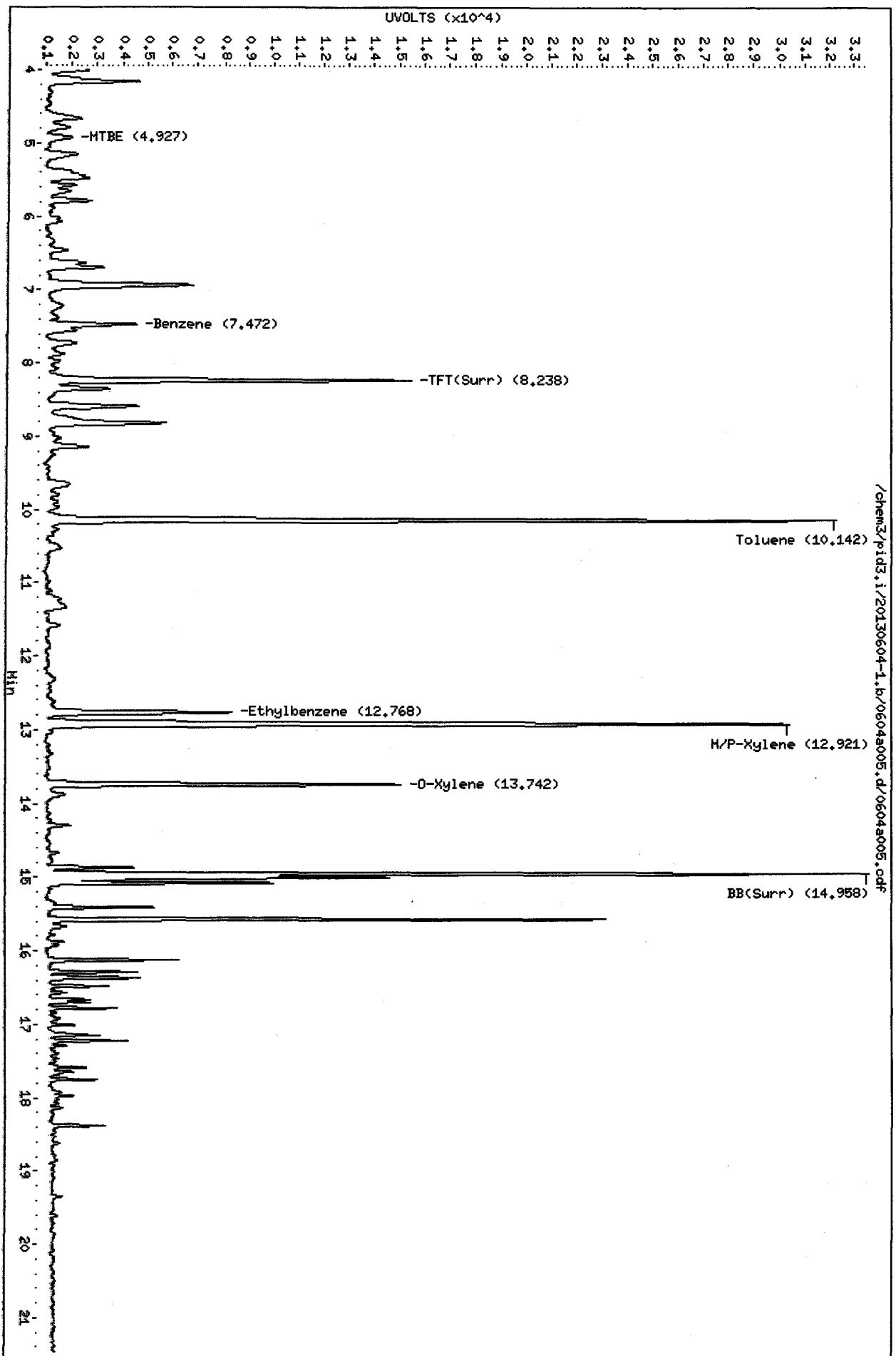
Sample Info: LCSD0604

Instrument: pid3.i

Page 1

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

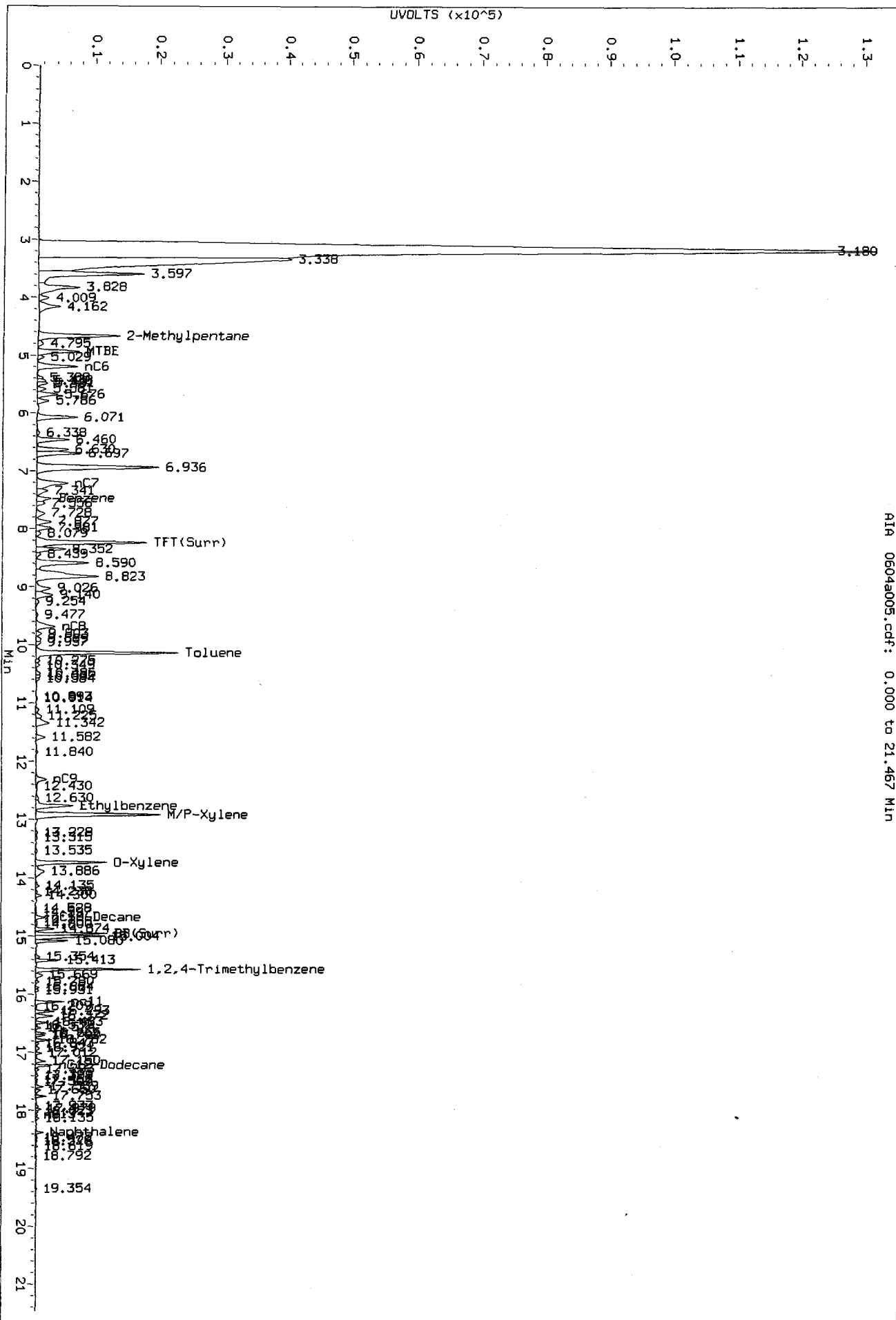


/chem3/pid3.i/20130604-1.b/0604a005.d/0604a005.cdf

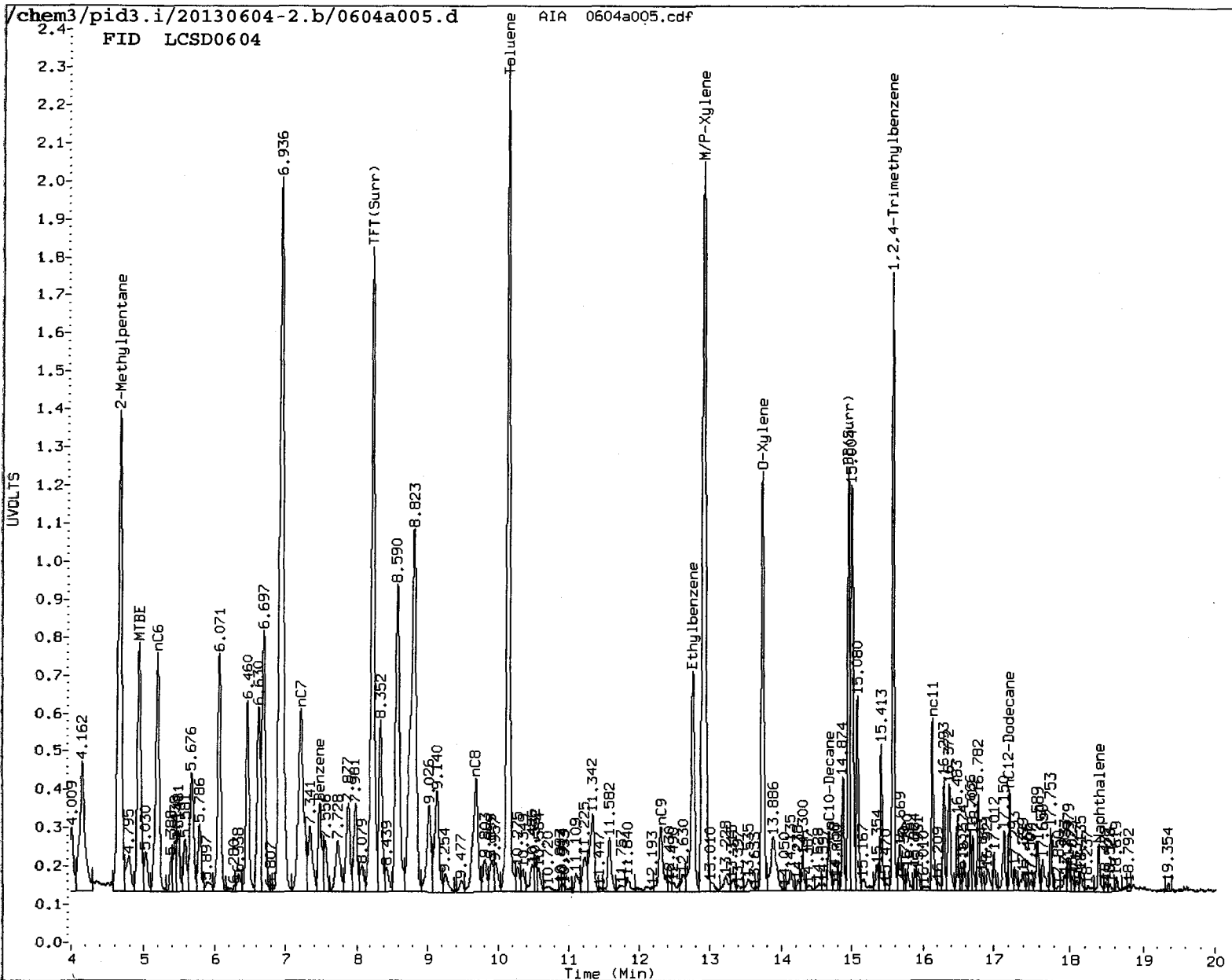
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61513

Data File: /chem3/pid3.1/20130604-2.b/0604a005.d/0604a005.cdf
Injection Date: 04-JUN-2013 11:32
Instrument: pid3.1
Client Sample ID:



AIA 0604a005.cdf: 0.000 to 21.467 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: VC

Date: 6/5/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-060413

METHOD BLANK

Lab Sample ID: MB-060413

LIMS ID: 13-11842

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/05/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 06/04/13 12:01

Instrument/Analyst: PID3/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	91.7%
Bromobenzene	91.0%

Gasoline Surrogate Recovery

Trifluorotoluene	90.2%
Bromobenzene	90.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 6/5/13

Data file 1: /chem3/pid3.i/20130604-2.b/0604a006.d ARI ID: MB0604
 Data file 2: /chem3/pid3.i/20130604-1.b/0604a006.d Client ID:
 Method: /chem3/pid3.i/20130604-1.b/PIDB.m Injection Date: 04-JUN-2013 12:01
 Instrument: pid3.i Matrix: WATER
 Gas Ical Date: 30-MAY-2013 Dilution Factor: 1.000
 BETX Ical Date: 30-MAY-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.239	0.006	15598	231515	90.2	TFT(Surr)
14.959	0.004	10141	99005	90.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.04 to 17.32)	2099137	1954	0.001
8015B 2MP-TMB (4.57 to 15.67)	4363035	1328	0.000
AK101 nC6-nC10 (5.10 to 14.57)	3480628	1327	0.000
NWTPHG Tol-Nap (10.04 to 18.48)	2195301	3379	0.002
CalGas nC6-nC12 (5.10 to 17.32)	4309570	3281	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.239	0.006	13226	91.7	TFT(Surr)
14.959	0.004	29843	91.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid3.i/20130604-2.b/0604s006.d

Date : 04-JUN-2013 12:01

Client ID:

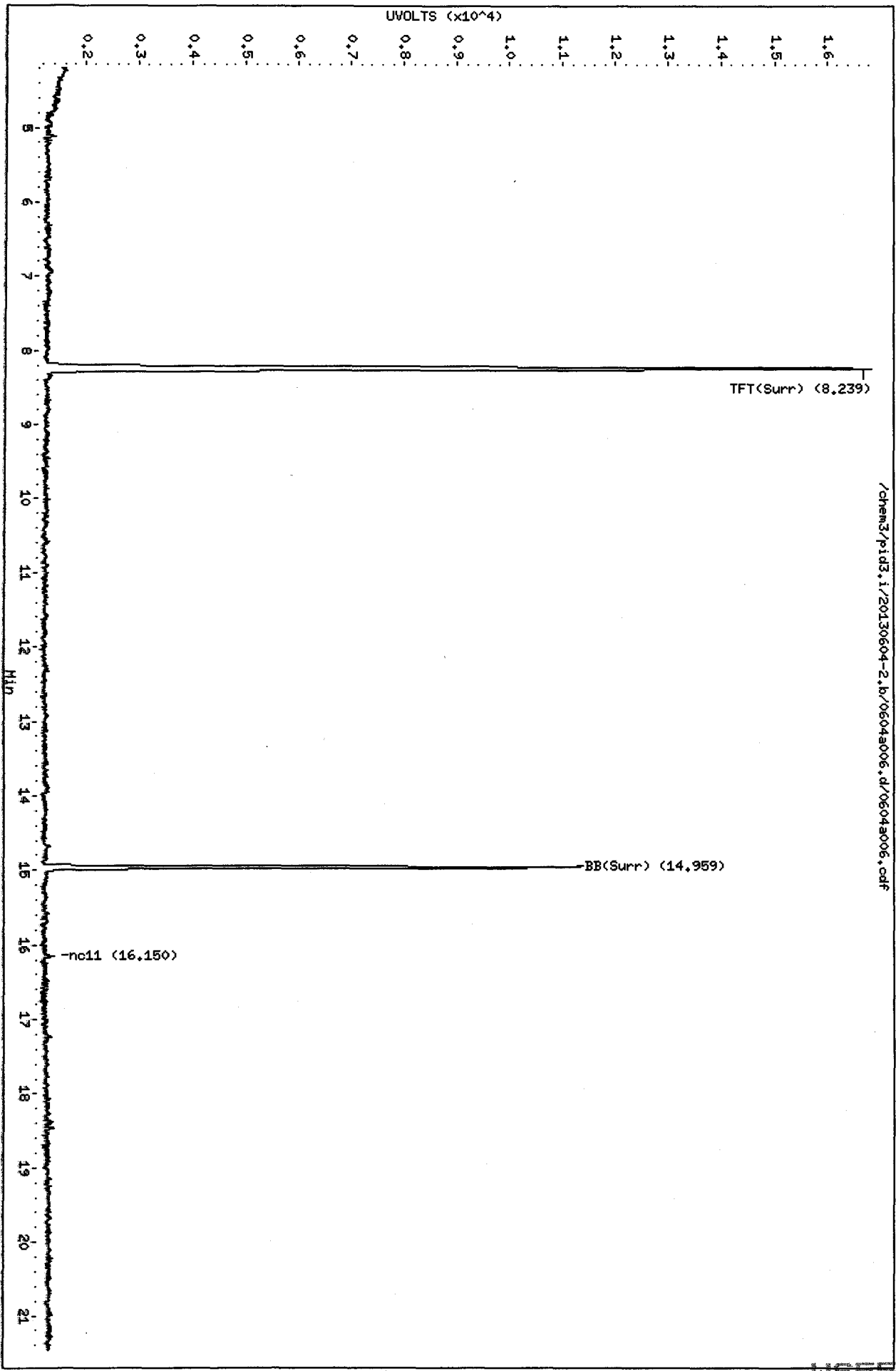
Sample Info: HB0604

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: PC

Column diameter: 0.18



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Data File: /chem3/pid3.i/20130604-1.b/0604a006.d

Date: 04-JUN-2013 12:01

Client ID:

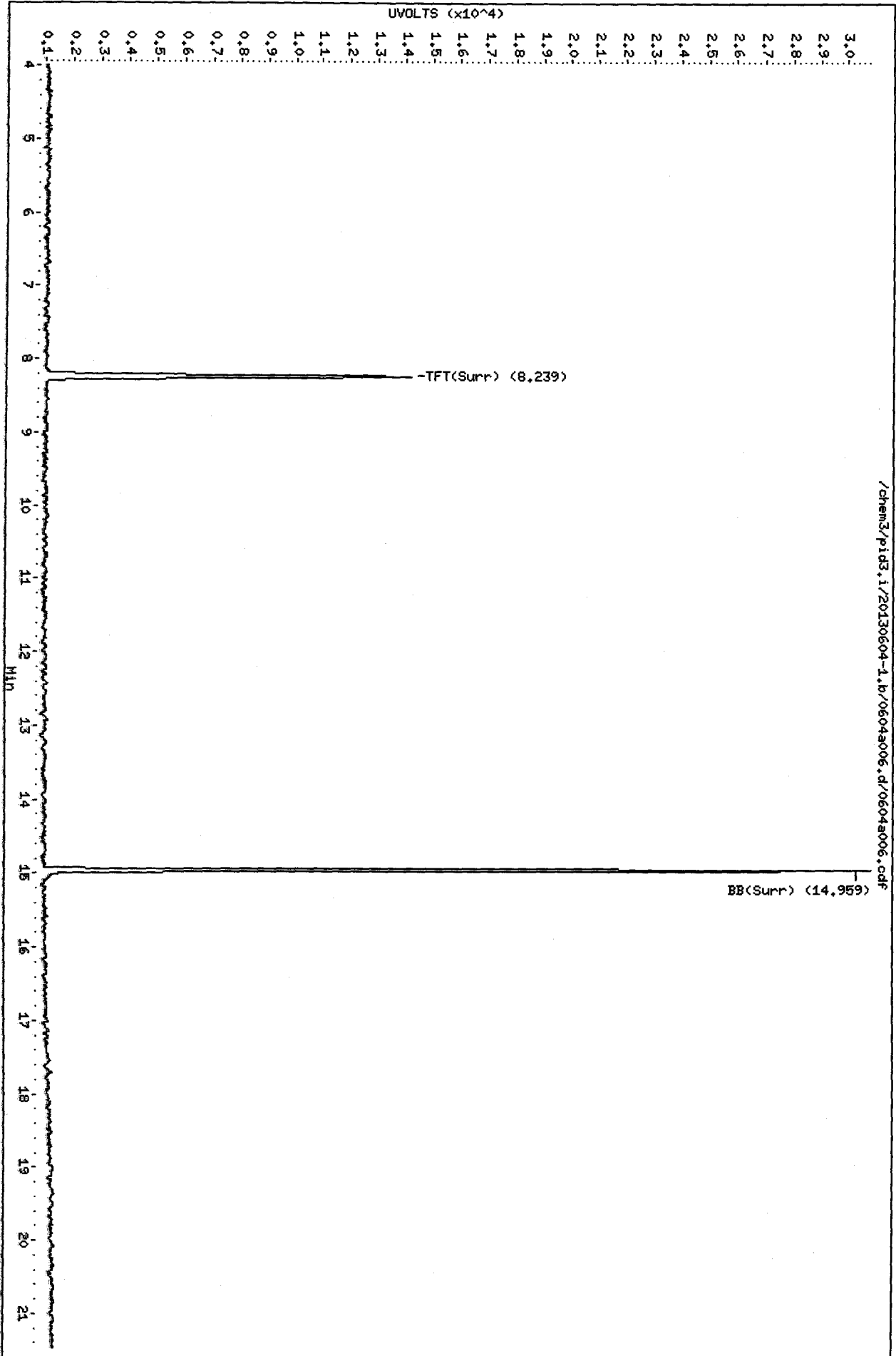
Sample Info: HB0604

Instrument: pid3.i

Page 1

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18



/chem3/pid3.i/20130604-1.b/0604a006.d/0604a006.cdf


000000 : 000000

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: SL-053013-SP-1
SAMPLE

Lab Sample ID: WS55A
LIMS ID: 13-11842
Matrix: Soil
Data Release Authorized: 
Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03
Date Sampled: 06/03/13
Date Received: 06/04/13

Percent Total Solids: 86.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	7	


U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

**Sample ID: SL-053013-SP-2
SAMPLE**

Lab Sample ID: WS55B
LIMS ID: 13-11843
Matrix: Soil
Data Release Authorized: 
Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03
Date Sampled: 06/03/13
Date Received: 06/04/13

Percent Total Solids: 83.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	12	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: AREA2-053013-SP-1
SAMPLE

Lab Sample ID: WS55C

LIMS ID: 13-11844

Matrix: Soil

Data Release Authorized: 

Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Percent Total Solids: 89.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	9	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: AREA2-053013-SP-2
SAMPLE

Lab Sample ID: WS55D

LIMS ID: 13-11845

Matrix: Soil

Data Release Authorized: 

Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Percent Total Solids: 88.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	12	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: AREA2-053013-SP-3
SAMPLE

Lab Sample ID: WS55E

LIMS ID: 13-11846

Matrix: Soil

Data Release Authorized: 

Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Percent Total Solids: 84.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	20	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: AREA2-053013-SP-4
SAMPLE

Lab Sample ID: WS55F

LIMS ID: 13-11847

Matrix: Soil

Data Release Authorized: 

Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Percent Total Solids: 84.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	27	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

**Sample ID: SL-053013-SP-1
MATRIX SPIKE**

Lab Sample ID: WS55A

LIMS ID: 13-11842

Matrix: Soil

Data Release Authorized: 

Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Lead	6010C	7	227	229	96.1%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: SL-053013-SP-1
DUPLICATE

Lab Sample ID: WS55A
LIMS ID: 13-11842
Matrix: Soil
Data Release Authorized:
Reported: 06/06/13



QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03
Date Sampled: 06/03/13
Date Received: 06/04/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Lead	6010C	7	7	0.0%	+/- 2	L

Reported in mg/kg-dry

*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS55LCS
 LIMS ID: 13-11843
 Matrix: Soil
 Data Release Authorized:
 Reported: 06/06/13

QC Report No: WS55-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Lead	6010C	197	200	98.5%	

Reported in mg/kg-dry

N-Control limit not met
 NA-Not Applicable, Analyte Not Spiked
 Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: WS55MB
LIMS ID: 13-11843
Matrix: Soil
Data Release Authorized
Reported: 06/06/13



QC Report No: WS55-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-dry	Q
3050B	06/05/13	6010C	06/05/13	7439-92-1	Lead	2	2	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 11, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS28

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted seventeen soil samples on May 31, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and BTEX, as requested on the COCs.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a faint circular stamp or watermark.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS28

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WS28	Turn-around Requested:	Page: 1 of 2
ARI Client Company: MFA	Phone:	Date:
Client Contact: TOMY SILVA TSILVA@MAINFABRI.COM	No. of Coolers: 2	Ice Present? Y
Client Project Name: CASHMERE	Cooler Temps: 4.8	

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
					DX SILICA GEL CLEANUP	BTEX	VPH	HP3		
SL-F7-S-6	5/30	0900	S	5	X	X				
SL-F8-S-6	5/30	1100	S	5						
SL-F9-S-6	5/30	1110	S	5						
SL-F10-S-6	5/30	1120	S	5						
SL-F11-S-6	5/30	1130	S	5						
A2-F43-S-6	5/30	1300	S	5						
A2-F44-S-6	5/30	1630	S	4						
A2-F45-S-6	5/30	1640	S	4						
A2-F46-S-6	5/30	1650	S	4						
A2-F47-S-6	5/30	1700	S	4						

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Tomy Silva	Printed Name:	Printed Name:
	Company: MFA	Company: ART	Company:	Company:
	Date & Time: 5/31/13 1550	Date & Time: 5-31-13 1550	Date & Time:	Date & Time:

WS28:00002

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 2
ARI Client Company: MFA	Phone:	Date:
Client Contact: TONY SILVA	TSILVA@MANUFACTURER.CO	Ice Present?
Client Project Name: CASAMINE		No. of Coolers:
Client Project #: 0779.01.02.03	Samplers: LINDSEY CROSBY	Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested					Notes/Comments
					Dx SILICA GEL CLEANUP	BTEX	VPH	HPH		
A2-548-S-6	5/30	1710	S	4	X	X				
A2-549-S-6	5/31	0845	S	4						
A2-550-S-6	5/31	1050	S	4						
A2-F51-S-6	5/31	1050	S	4						
A2-F52-S-6	5/31	1100	S	4						
A2-F53-S-6	5/31	1200	S	4						
A2-54-S-6	5/31	1215	S	4						

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>Tony Silva</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Tony Silva	Printed Name:	Printed Name:
	Company: MFA	Company: MFA	Company:	Company:
	Date & Time: 5/31/13 1550	Date & Time: 5-31-13 1550	Date & Time:	Date & Time:

MS28:0000

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA
 COC No(s): _____ (NA)
 Assigned ARI Job No: WS28

Project Name: Cashmere
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.8

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877915

Cooler Accepted by: TB Date: 5-31-13 Time: 1556

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI... NA
 Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 5/31/13 Time: 1730

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>A2-FS4-S-6</u>	<u>A2-54-S-6</u>		

Additional Notes, Discrepancies, & Resolutions:

By: AV Date: 5/31/13

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WS28
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SL-F7-S-6	WS28A	13-11702	Soil	05/30/13 09:00	05/31/13 15:50
2. SL-F8-S-6	WS28B	13-11703	Soil	05/30/13 11:00	05/31/13 15:50
3. SL-F9-S-6	WS28C	13-11704	Soil	05/30/13 11:10	05/31/13 15:50
4. SL-F10-S-6	WS28D	13-11705	Soil	05/30/13 11:20	05/31/13 15:50
5. SL-F11-S-6	WS28E	13-11706	Soil	05/30/13 11:30	05/31/13 15:50
6. A2-F43-S-6	WS28F	13-11707	Soil	05/30/13 13:00	05/31/13 15:50
7. A2-F44-S-6	WS28G	13-11708	Soil	05/30/13 16:30	05/31/13 15:50
8. A2-F45-S-6	WS28H	13-11709	Soil	05/30/13 16:40	05/31/13 15:50
9. A2-F46-S-6	WS28I	13-11710	Soil	05/30/13 16:50	05/31/13 15:50
10. A2-F47-S-6	WS28J	13-11711	Soil	05/30/13 17:00	05/31/13 15:50
11. A2-F48-S-6	WS28K	13-11712	Soil	05/30/13 17:10	05/31/13 15:50
12. A2-F49-S-6	WS28L	13-11713	Soil	05/31/13 08:45	05/31/13 15:50
13. A2-F50-S-6	WS28M	13-11714	Soil	05/31/13 10:50	05/31/13 15:50
14. A2-F51-S-6	WS28N	13-11715	Soil	05/31/13 10:50	05/31/13 15:50
15. A2-F52-S-6	WS28O	13-11716	Soil	05/31/13 11:00	05/31/13 15:50
16. A2-F53-S-6	WS28P	13-11717	Soil	05/31/13 12:00	05/31/13 15:50
17. A2-F54-S-6	WS28Q	13-11718	Soil	05/31/13 12:15	05/31/13 15:50



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



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- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WS28-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03


Matrix: Soil
Data Release Authorized:
Reported: 06/11/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-060313 13-11702	Method Blank HC ID: ---	06/03/13	06/04/13	1.00	Diesel Range	5.0	< 5.0 U
			FID9	1.0	Motor Oil Range o-Terphenyl	10	< 10 U 77.0%
WS28A 13-11702	SL-F7-S-6 HC ID: RRO	06/03/13	06/04/13	1.00	Diesel Range	6.7	< 6.7 U
			FID9	1.0	Motor Oil Range o-Terphenyl	13	14 73.3%
WS28B 13-11703	SL-F8-S-6 HC ID: DRO	06/03/13	06/04/13	1.00	Diesel Range	6.1	6.3
			FID9	1.0	Motor Oil Range o-Terphenyl	12	< 12 U 74.5%
WS28C 13-11704	SL-F9-S-6 HC ID: MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	6.6	< 6.6 U
			FID9	1.0	Motor Oil Range o-Terphenyl	13	15 71.7%
WS28D 13-11705	SL-F10-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	5.9	59
			FID9	1.0	Motor Oil Range o-Terphenyl	12	67 74.0%
WS28E 13-11706	SL-F11-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	6.1	14
			FID9	1.0	Motor Oil Range o-Terphenyl	12	36 76.2%
WS28F 13-11707	A2-F43-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	5.8	58
			FID9	1.0	Motor Oil Range o-Terphenyl	12	110 67.9%
WS28G 13-11708	A2-F44-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	6.2	35
			FID9	1.0	Motor Oil Range o-Terphenyl	12	180 70.2%
WS28H 13-11709	A2-F45-S-6 HC ID: DRO/MOTOR OIL	06/03/13	06/05/13	1.00	Diesel Range	33	340
			FID9	5.0	Motor Oil Range o-Terphenyl	66	1400 69.2%
WS28I 13-11710	A2-F46-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/05/13	1.00	Diesel Range	34	190
			FID9	5.0	Motor Oil Range o-Terphenyl	68	1300 58.0%
WS28J 13-11711	A2-F47-S-6 HC ID: DRO/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	6.2	11
			FID9	1.0	Motor Oil Range o-Terphenyl	12	95 76.9%
WS28K 13-11712	A2-F48-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	6.5	55
			FID9	1.0	Motor Oil Range o-Terphenyl	13	400 71.9%
WS28L 13-11713	A2-F49-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13	1.00	Diesel Range	7.2	53
			FID9	1.0	Motor Oil Range o-Terphenyl	14	240 71.8%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 2

QC Report No: WS28-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: 
Reported: 06/11/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WS28M 13-11714	A2-F50-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.4 13	16 33 74.7%
WS28N 13-11715	A2-F51-S-6 HC ID: MOTOR OIL	06/03/13	06/04/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	< 5.8 U 18 77.6%
WS28O 13-11716	A2-F52-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.2 12	1800 ES 4500 ES NR
WS28O DL 13-11716	A2-F52-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/05/13 FID9	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	620 1200	2500 20000 D
WS28P 13-11717	A2-F53-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/05/13 FID9	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	29 57	110 600 70.1%
WS28Q 13-11718	A2-F54-S-6 HC ID: DIESEL/MOTOR OIL	06/03/13	06/05/13 FID9	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	57 110	740 4100 64.4%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a007.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28MBS1
 Client ID:
 Injection: 04-JUN-2013 15:02
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	103623	3
C8	1.077	-0.011	14853	18829	DIESEL (C12-C24)	366257	19.61
C10	2.859	0.004	122	117	M.OIL (C24-C38)	167656	10.46
C12	3.855	-0.006	524	277	AK-102 (C10-C25)	391314	18.03
C14	4.560	-0.002	2243	2773	AK-103 (C25-C36)	144260	12.42
C16	5.143	-0.012	4266	6663			
C18	5.722	0.001	2458	2190			
C20	6.278	-0.007	1350	867			
C22	6.833	-0.004	1209	739			
C24	7.359	-0.002	886	435			
C25	7.613	0.002	809	583			
C26	7.869	0.002	1035	708			
C28	8.306	-0.001	1451	1253	IT.DIES (C10-C24)	384264	17.75
C32	9.089	-0.003	1350	874			
C34	9.433	-0.003	1021	1186	BUNKERC (C10-C38)	551920	59.56
Filter Peak	11.494	0.009	1303	519	HYDRAUL (C24-C38)	167656	10.56
C36	9.761	0.009	1010	406			
C38	10.057	0.004	958	579			
C40	10.345	0.003	1199	617			
o-terph	5.854	-0.003	1073017	887524			
Triacon Surr	8.717	-0.015	498649	532410	IT.MOIL (C24-C40)	718138	12.00

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	887524	34.7	77.0
Triacontane	532410	28.2	62.6

JW
6/11/13

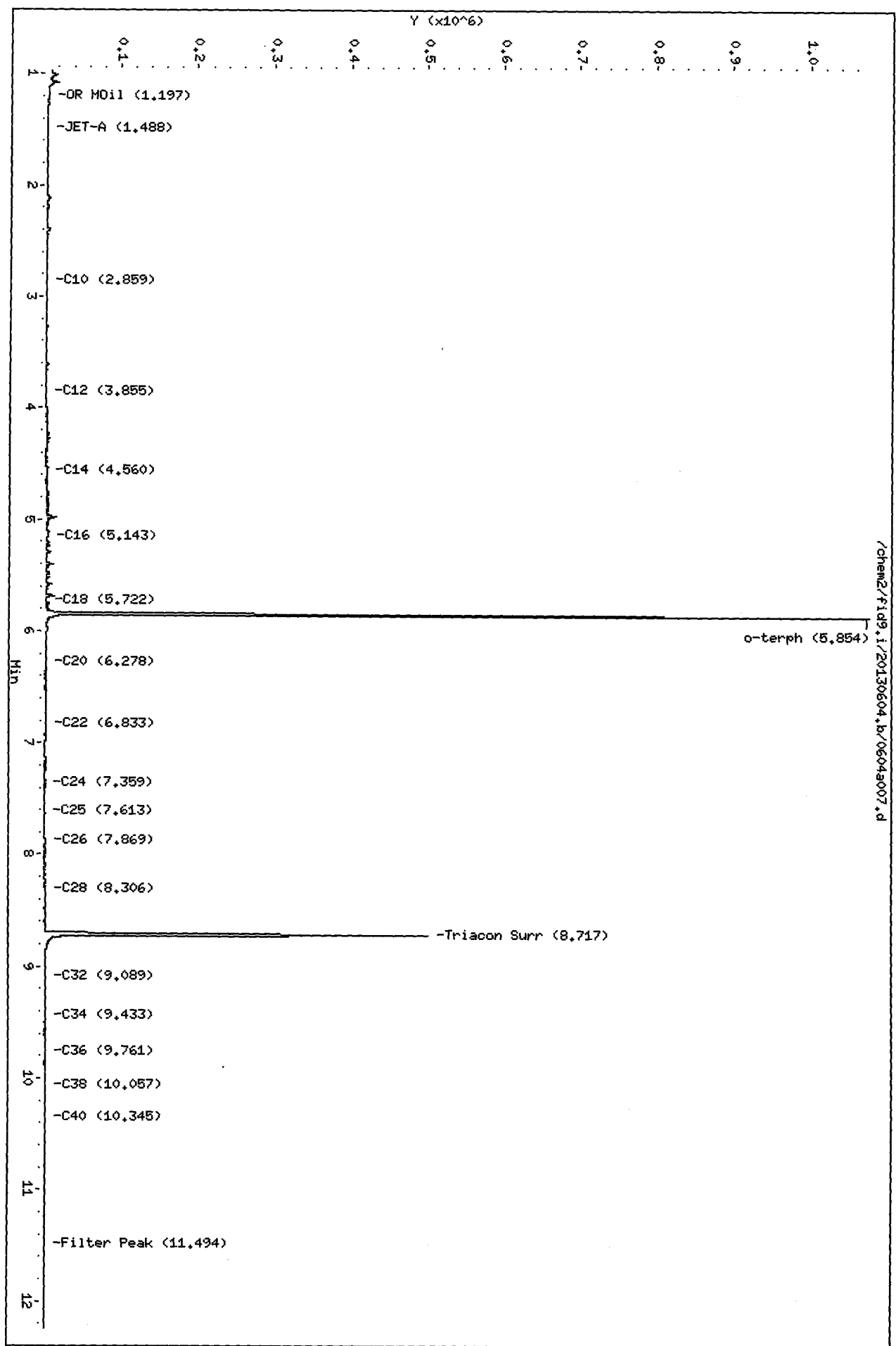
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:
Sample Info: MS28HBS1

Column phase: RTX-1

Instrument: fid9.i

Operator: JM
Column diameter: 0.25



0528:00012

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a010.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28A
 Client ID:
 Injection: 04-JUN-2013 16:09
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	125517	4
C8	1.099	0.011	2189	5126	DIESEL (C12-C24)	539104	28.86 -
C10	2.864	0.009	804	956	M.OIL (C24-C38)	1671876	104.26 -
C12	3.868	0.006	632	202	AK-102 (C10-C25)	614383	28.30 M
C14	4.561	0.000	2270	2361	AK-103 (C25-C36)	1586090	136.52 M
C16	5.151	-0.004	3014	3960			
C18	5.725	0.004	3771	3296			
C20	6.285	0.000	3230	1704			
C22	6.834	-0.003	4915	6495			
C24	7.352	-0.009	5221	5116			
C25	7.599	-0.012	16501	26168			
C26	7.864	-0.003	4593	1433			
C28	8.297	-0.009	10753	20311	IT.DIES (C10-C24)	578366	26.72 M
C32	9.085	-0.007	16326	24492			
C34	9.430	-0.006	83566	104024	BUNKERC (C10-C38)	2250243	242.83 M
Filter Peak	11.485	-0.001	1347	320	HYDRAUL (C24-C38)	1671876	105.33
C36	9.750	-0.003	4162	2362			
C38	10.059	0.006	2480	1597			
C40	10.335	-0.007	1991	1323			
o-terph	5.853	-0.005	961997	845129			
Triacon Surr	8.721	-0.010	602696	644986	IT.MOIL (C24-C40)	2349419	110.14 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	845129	33.0	73.3
Triacontane	644986	34.1	75.8

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:

Sample Info: MS28A

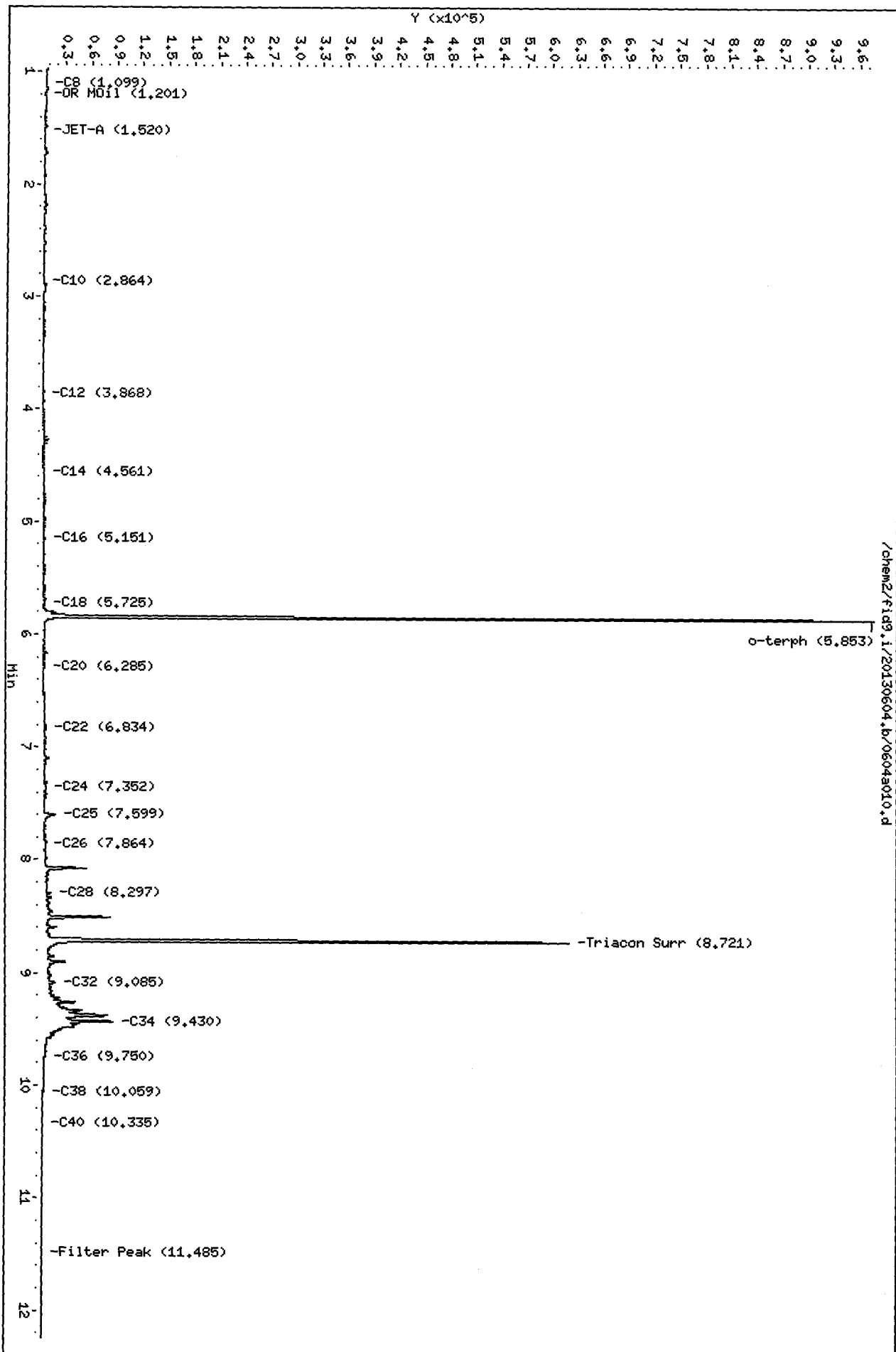
Column phase: RTX-1

Instrument: fid9.i

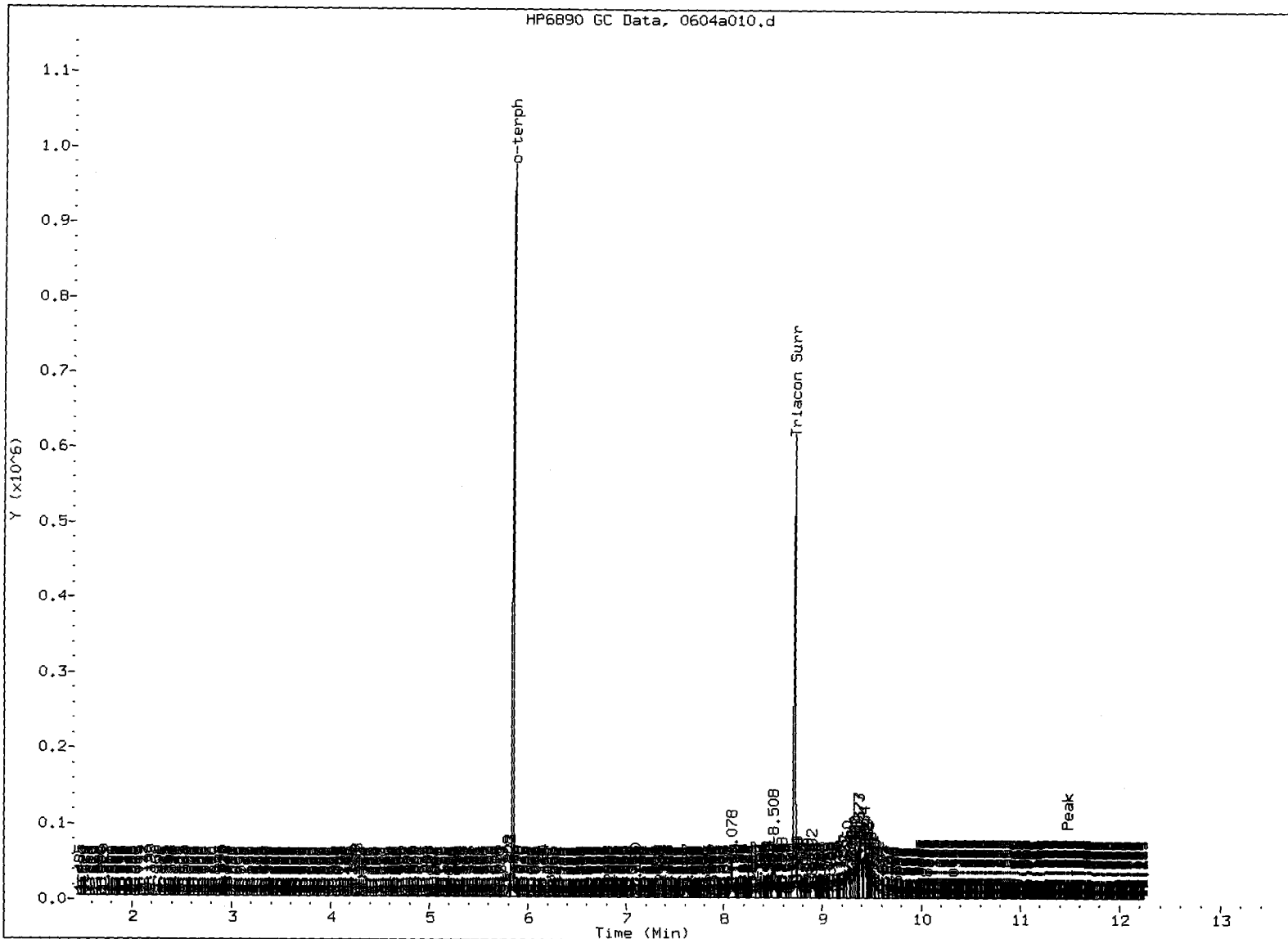
Operator: JM

Column diameter: 0.25

JW
6/11/13



HP6890 GC Data, 0604a010.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JD

Date: 6/1/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a013.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28B
 Client ID:
 Injection: 04-JUN-2013 17:16
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	62084	2
C8	1.092	0.003	1193	994	DIESEL (C12-C24)	968889	51.87 M
C10	2.862	0.006	294	368	M.OIL (C24-C38)	1553162	96.86 M
C12	3.849	-0.013	366	392	AK-102 (C10-C25)	1049476	48.35 M
C14	4.563	0.002	2086	2301	AK-103 (C25-C36)	1394901	120.07 M
C16	5.151	-0.004	3249	5243			
C18	5.721	0.000	4874	1051			
C20	6.283	-0.002	5240	6375			
C22	6.834	-0.004	6714	5807			
C24	7.368	0.006	8904	8130			
C25	7.613	0.002	10482	3627			
C26	7.869	0.002	10027	5504			
C28	8.308	0.001	12858	3047	IT.DIES (C10-C24)	986315	45.57 M
C32	9.101	0.009	10345	10789			
C34	9.438	0.002	8446	5472	BUNKERC (C10-C38)	2539477	274.04 M
Filter Peak	11.486	0.001	1483	558	HYDRAUL (C24-C38)	1553162	97.85
C36	9.751	-0.002	6837	3731			
C38	10.056	0.003	4648	2328			
C40	10.341	-0.002	3006	1241			
o-terph	5.856	-0.002	919853	858436			
Triacon Surr	8.720	-0.012	686105	740302	IT.MOIL (C24-C40)	2349475	103.99 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.862 - 7.362) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	858436	33.5	74.5
Triacontane	740302	39.2	87.0

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

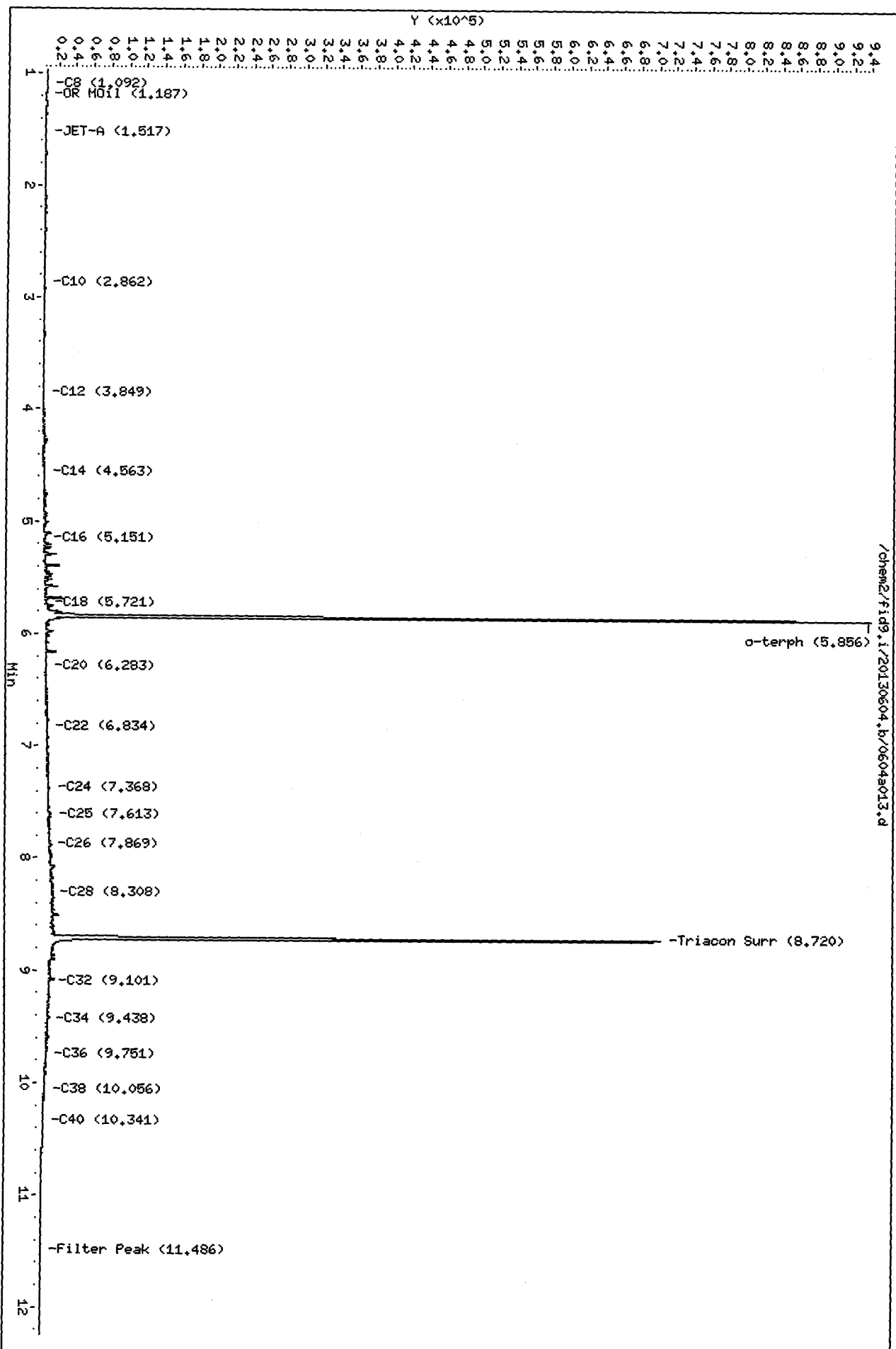
Client ID:
Sample Info: MS28B

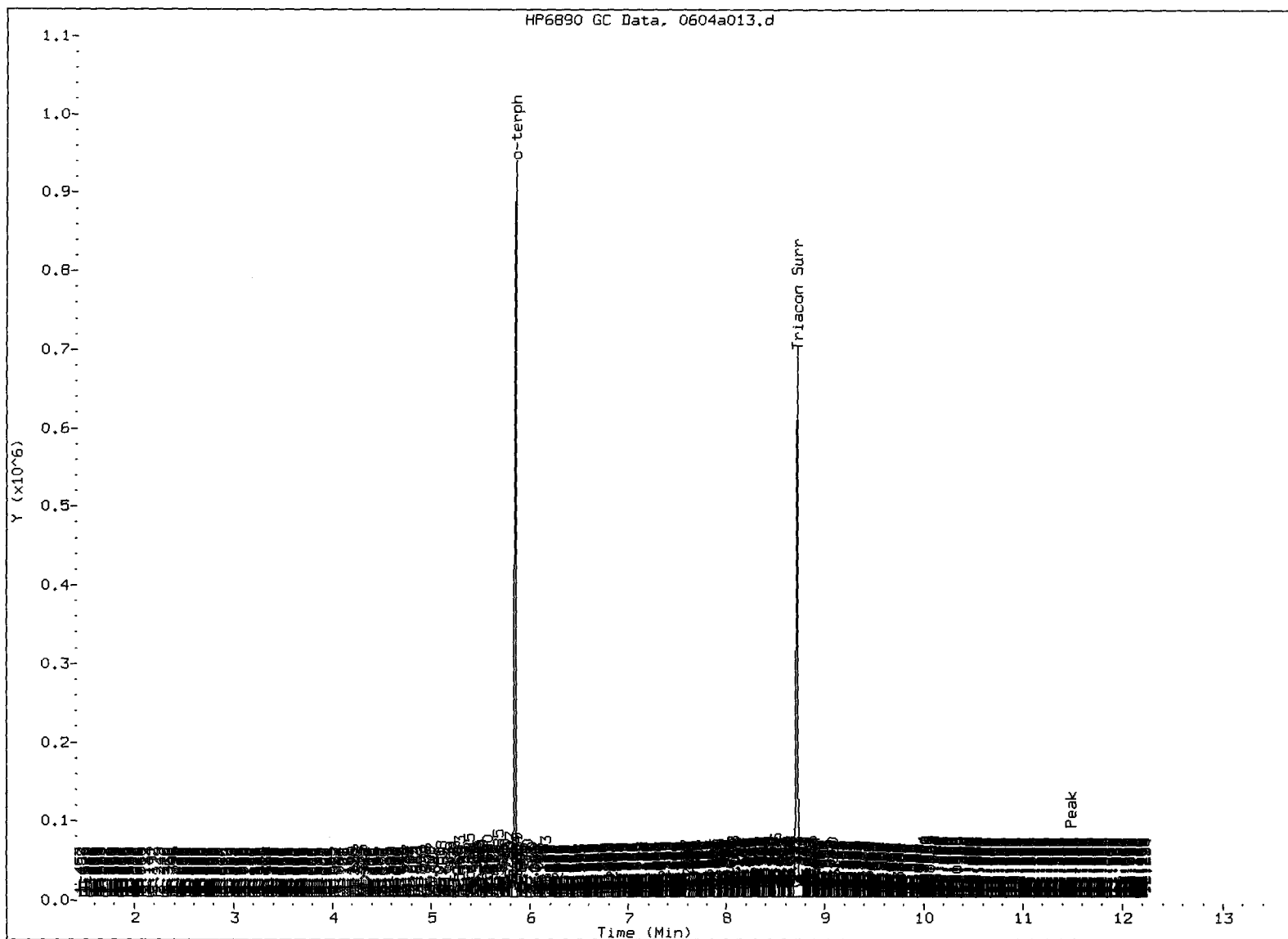
Instrument: fid9.i

Column phase: RTX-1

Operator: JM
Column diameter: 0.25

JSC
6/11/10





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JW

Date: 6/11/10

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a014.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28C
 Client ID:
 Injection: 04-JUN-2013 17:38
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	82946	2
C8	1.099	0.011	1409	3388	DIESEL (C12-C24)	879321	47.07
C10	2.860	0.004	637	741	M.OIL (C24-C38)	1779898	111.00
C12	3.869	0.008	1441	3183	AK-102 (C10-C25)	980730	45.18 M
C14	4.561	0.000	3013	4683	AK-103 (C25-C36)	1588692	136.75 M
C16	5.151	-0.004	5038	7308			
C18	5.713	-0.008	7083	11159			
C20	6.278	-0.007	5726	7997			
C22	6.840	0.002	6808	4242			
C24	7.357	-0.005	8025	6577			
C25	7.607	-0.004	10238	9804			
C26	7.870	0.003	9644	4322			
C28	8.306	0.000	14535	6018	IT.DIES (C10-C24)	909410	42.01 M
C32	9.082	-0.009	16632	35351			
C34	9.438	0.002	8924	1944	BUNKERC (C10-C38)	2689308	290.21 M
Filter Peak	11.489	0.004	1695	1348	HYDRAUL (C24-C38)	1779898	112.14
C36	9.756	0.003	8053	1438			
C38	10.050	-0.004	6189	6921			
C40	10.340	-0.002	4403	5491			
o-terph	5.853	-0.005	879614	826422			
Triacon Surr	8.723	-0.008	676219	699225	IT.MOIL (C24-C40)	2558749	120.16 M

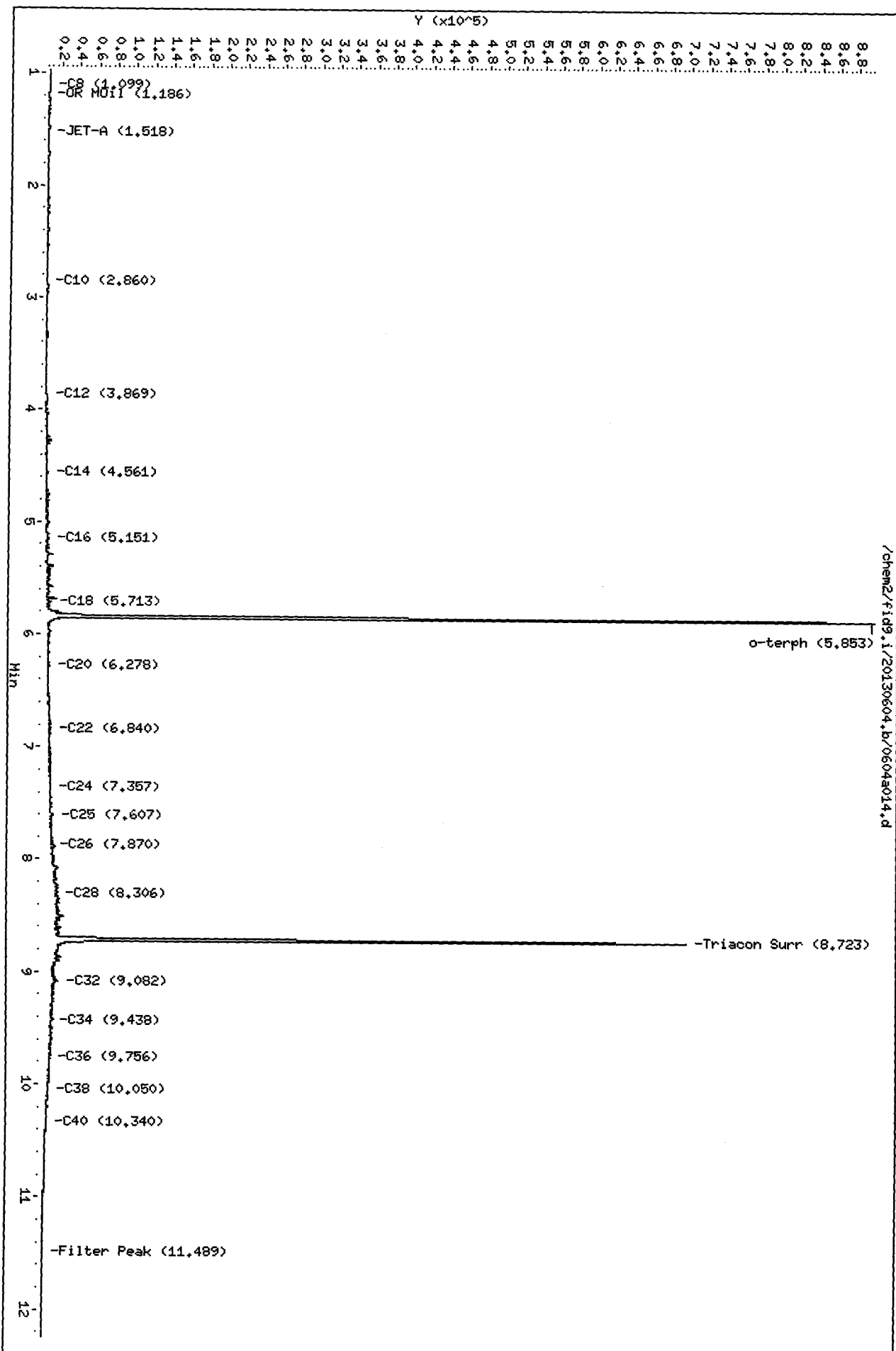
M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

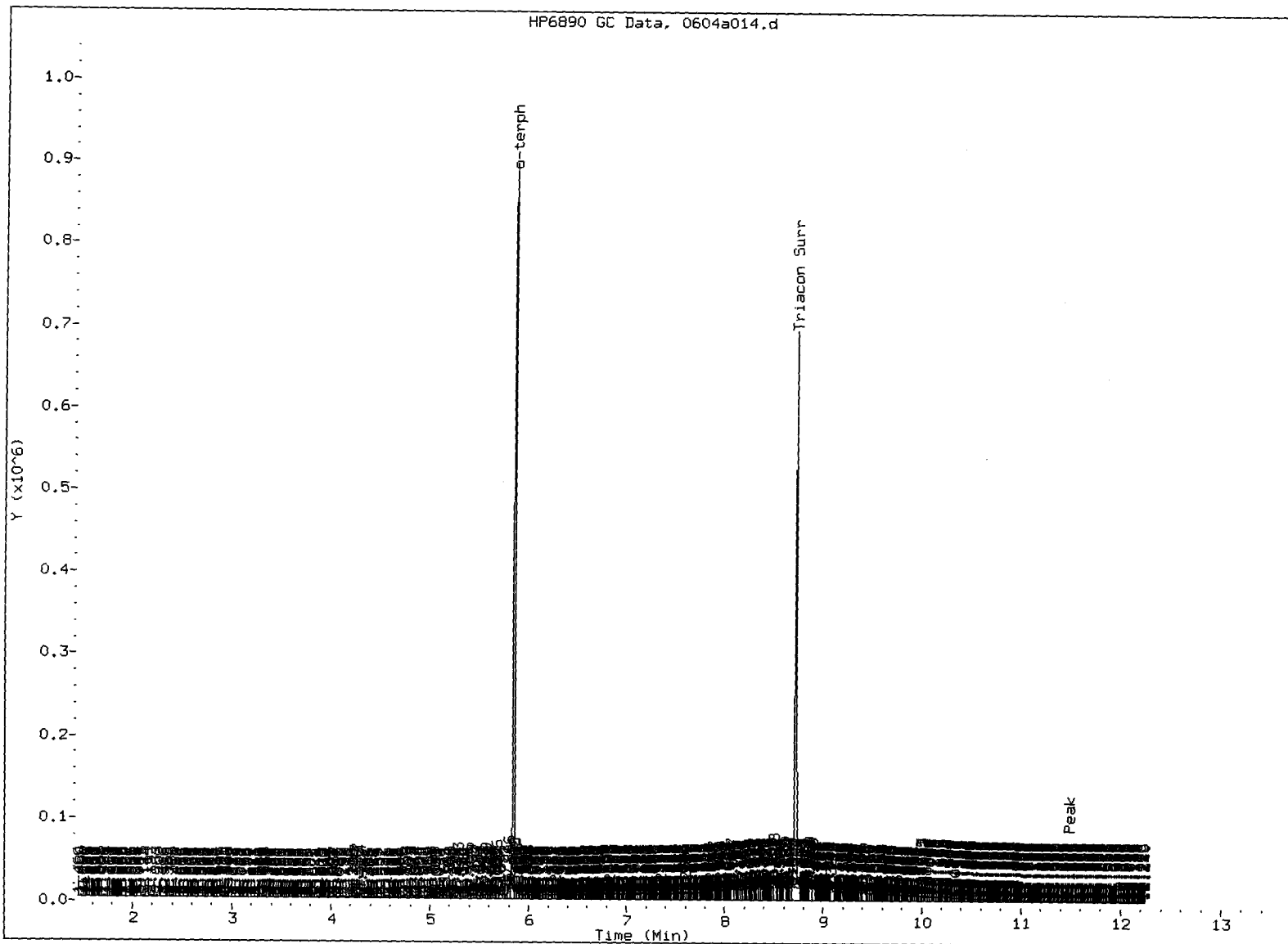
Surrogate	Area	Amount	%Rec
o-Terphenyl	826422	32.3	71.7
Triacontane	699225	37.0	82.2

JED
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013



JM
6/11/13



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JW

Date: 6/1/72

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a015.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28D
 Client ID:
 Injection: 04-JUN-2013 18:01
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	349764	10
C8	1.102	0.014	2526	4859	DIESEL (C12-C24)	9342906	500.16
C10	2.864	0.009	1952	2329	M.OIL (C24-C38)	9066270	565.40
C12	3.858	-0.004	10873	13938	AK-102 (C10-C25)	9998265	460.60 M
C14	4.564	0.002	27254	7474	AK-103 (C25-C36)	7998872	688.50 M
C16	5.150	-0.005	54031	75870			
C18	5.719	-0.002	67464	50282			
C20	6.289	0.004	49483	15688			
C22	6.844	0.006	45559	23492			
C24	7.362	0.000	44698	21160			
C25	7.609	-0.002	46216	24178			
C26	7.870	0.003	53023	40761			
C28	8.308	0.001	80645	48786	IT.DIES (C10-C24)	9614396	444.16 M
C32	9.097	0.005	58581	23769			
C34	9.436	0.000	49432	38436	BUNKERC (C10-C38)	18680666	2015.89 M
Filter Peak	11.482	-0.003	3753	2352	HYDRAUL (C24-C38)	9066270	571.21
C36	9.748	-0.005	44521	36456			
C38	10.057	0.003	35029	17890			
C40	10.342	-0.001	21185	18660			
o-terph	5.855	-0.003	957078	852595			
Triacon Surr	8.727	-0.005	674164	741137	IT.MOIL (C24-C40)	10212330	612.04 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	852595	33.3	74.0
Triacontane	741137	39.2	87.1

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:

Sample Info: MS28D

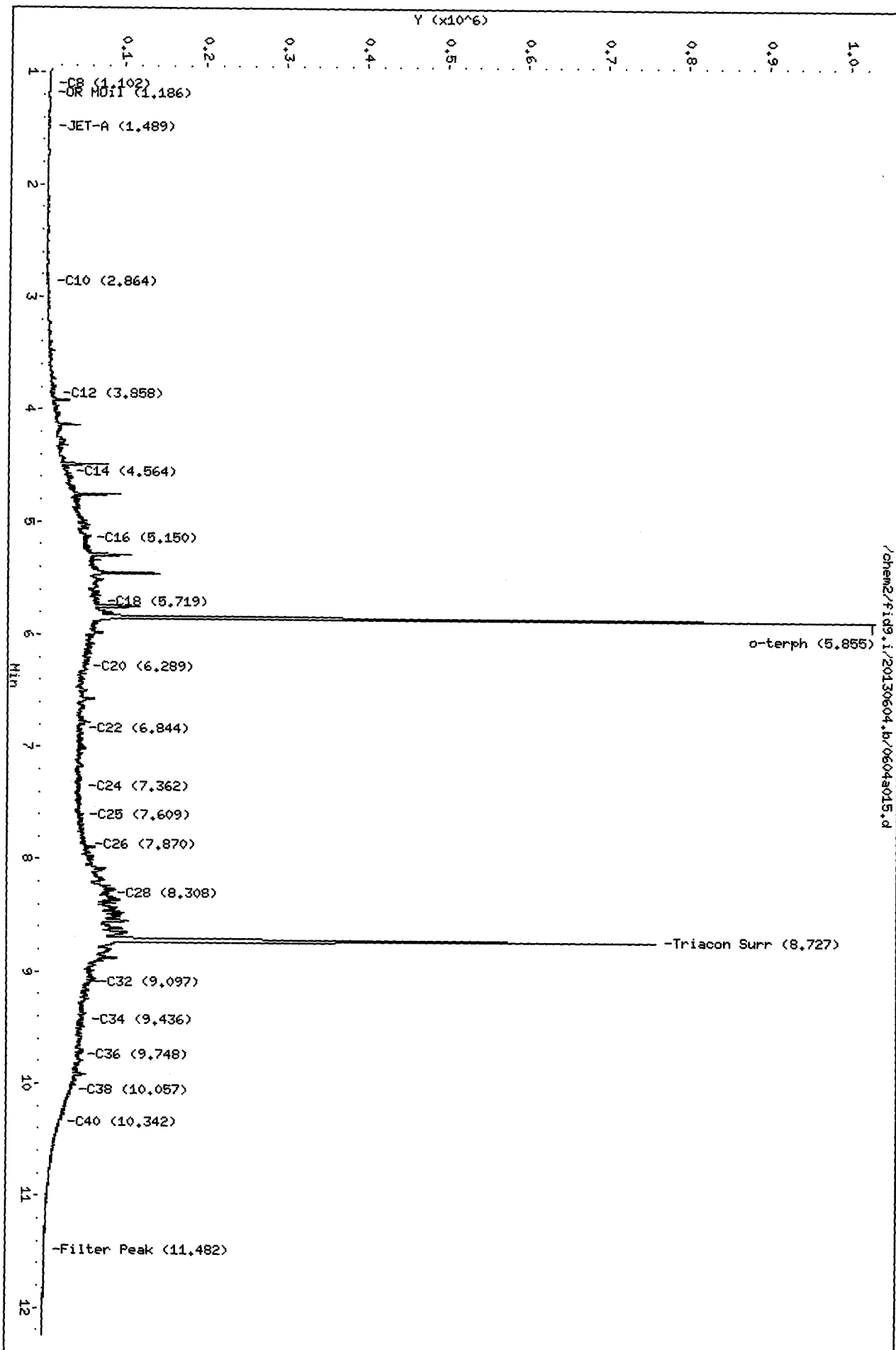
Column phase: RTX-1

Instrument: fid9.i

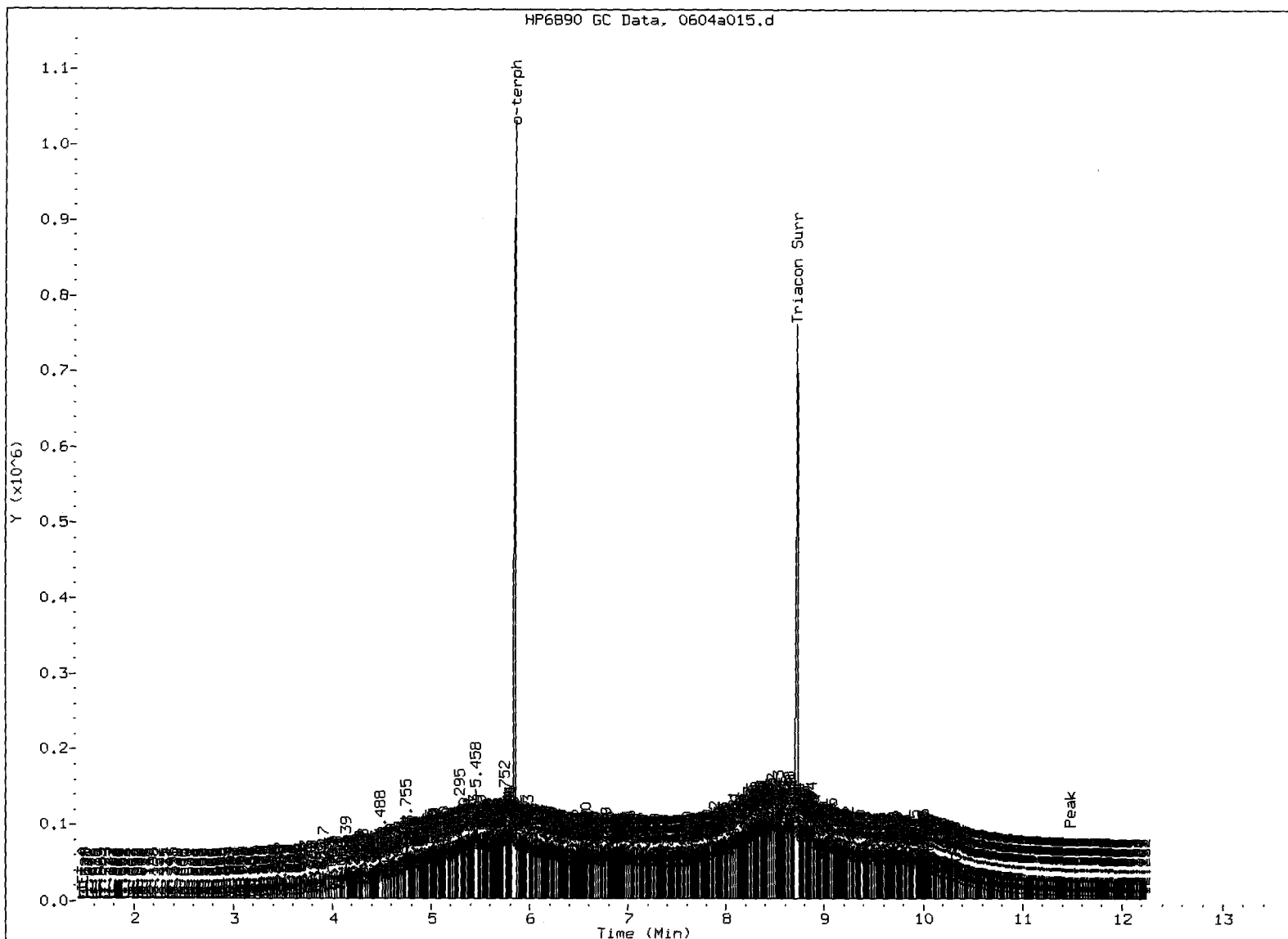
Operator: JM

Column diameter: 0.25

SW
6/11/13



HP6890 GC Data, 0604a015.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: JCO

Date: 6/14/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a016.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28E
 Client ID:
 Injection: 04-JUN-2013 18:23
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	102733	3
C8	1.102	0.014	1746	4160	DIESEL (C12-C24)	2141614	114.65
C10	2.863	0.008	714	460	M.OIL (C24-C38)	4711264	293.81
C12	3.868	0.006	1406	1431	AK-102 (C10-C25)	2374203	109.37 M
C14	4.557	-0.005	5649	9095	AK-103 (C25-C36)	4225540	363.71 M
C16	5.148	-0.007	8252	12405			
C18	5.721	0.000	11557	6475			
C20	6.290	0.005	13007	6575			
C22	6.838	0.000	17465	13313			
C24	7.357	-0.005	21197	8320			
C25	7.622	0.010	35106	41299			
C26	7.866	-0.001	26800	7414			
C28	8.315	0.008	41896	41323	IT.DIES (C10-C24)	2181971	100.80 M
C32	9.084	-0.008	38737	51022			
C34	9.429	-0.007	32929	37415	BUNKERC (C10-C38)	6893235	743.87 M
Filter Peak	11.488	0.002	2741	2719	HYDRAUL (C24-C38)	4711264	296.83
C36	9.756	0.003	20041	8170			
C38	10.048	-0.005	15345	22039			
C40	10.340	-0.002	9141	8156			
o-terph	5.851	-0.007	1067140	878081			
Triacon Surr	8.726	-0.006	720350	760404	IT.MOIL (C24-C40)	5658790	316.54 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.862 - 7.362) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	878081	34.3	76.2
Triacontane	760404	40.2	89.4

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Data File: /chem2/fid9.i/20130604.b/0604a016.d
Date : 04-JUN-2013 18:23

Client ID:

Sample Infor: MS28E

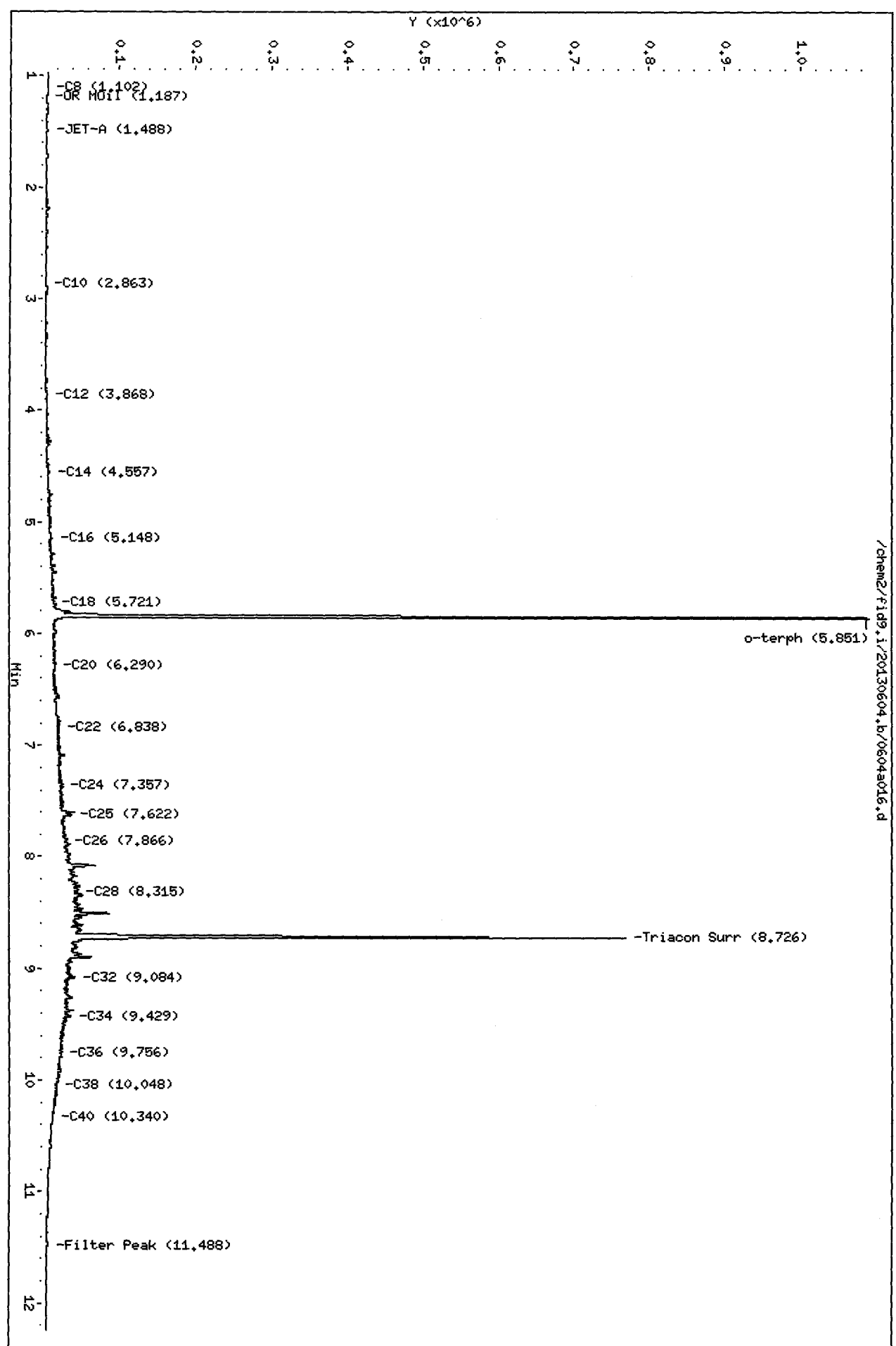
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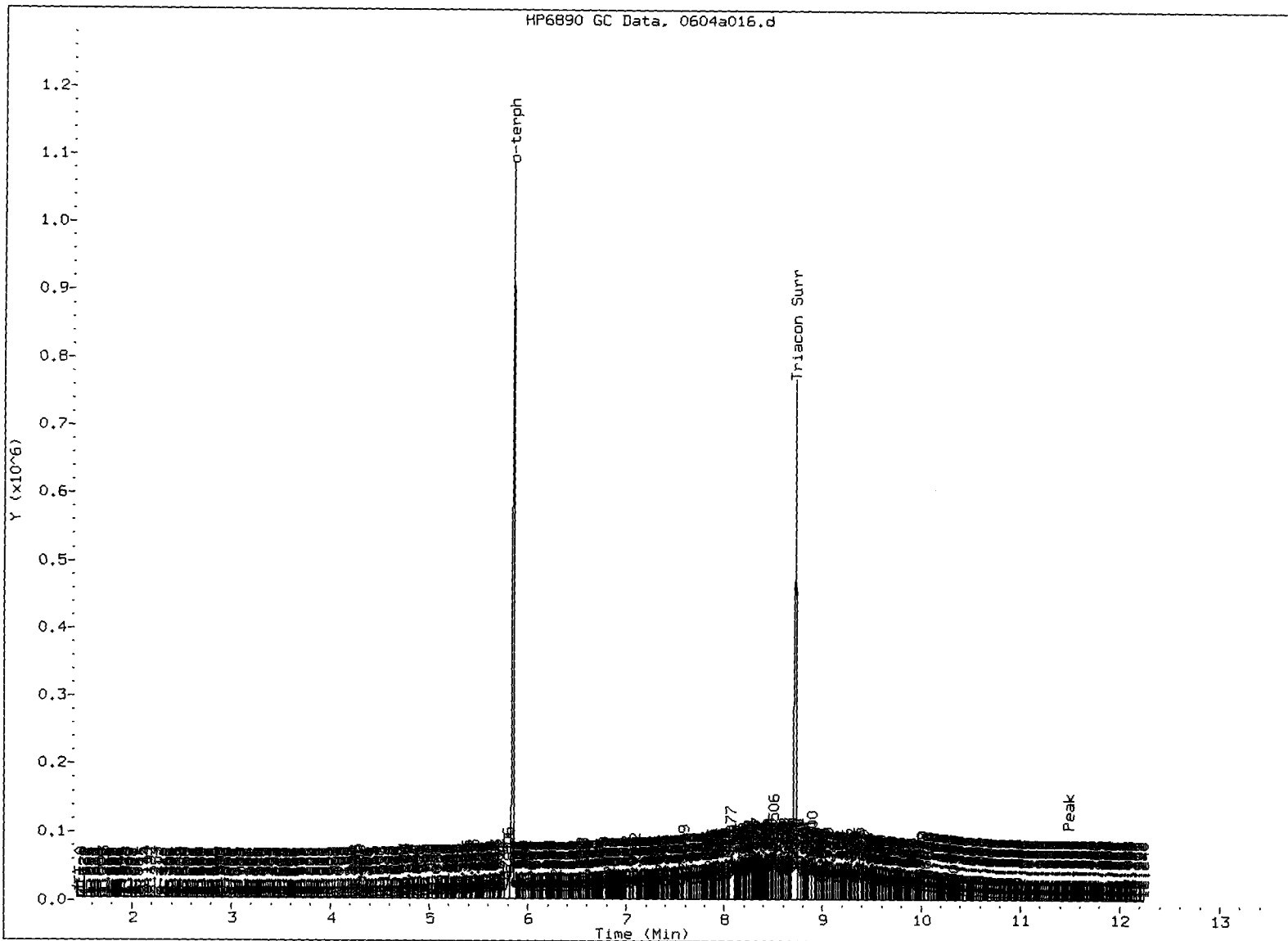
Instrument: fid9.i

Operator: JM

Column diameter: 0.25

JM
6/11/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst:

Date: 6/10/83

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a017.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28F
 Client ID:
 Injection: 04-JUN-2013 18:45
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	72391	2
C8	1.090	0.002	1237	1257	DIESEL (C12-C24)	9318901	498.88
C10	2.860	0.005	409	470	M.OIL (C24-C38)	15451692	963.61
C12	3.856	-0.006	428	327	AK-102 (C10-C25)	10661060	491.13 M
C14	4.559	-0.002	3070	4028	AK-103 (C25-C36)	13830857	1190.48 M
C16	5.149	-0.006	4325	6139			
C18	5.723	0.002	18593	10286			
C20	6.286	0.001	64016	26460			
C22	6.837	-0.001	117629	68845			
C24	7.366	0.004	155089	130798			
C25	7.611	-0.001	169967	52021			
C26	7.871	0.003	164376	77735			
C28	8.314	0.007	140465	36436	IT.DIES (C10-C24)	9338441	431.42 M
C32	9.088	-0.004	78869	110462			
C34	9.434	-0.002	45945	44375	BUNKERC (C10-C38)	24790133	2675.18 M
Filter Peak	11.481	-0.005	2278	2411	HYDRAUL (C24-C38)	15451692	973.51
C36	9.751	-0.002	22676	9377			
C38	10.059	0.005	13497	4032			
C40	10.339	-0.003	8343	6259			
o-terph	5.853	-0.005	816981	782109			
Triacon Surr	8.733	0.001	681895	679540	IT.MOIL (C24-C40)	16297816	1009.27 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	782109	30.5	67.9
Triacontane	679540	36.0	79.9

JCO
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

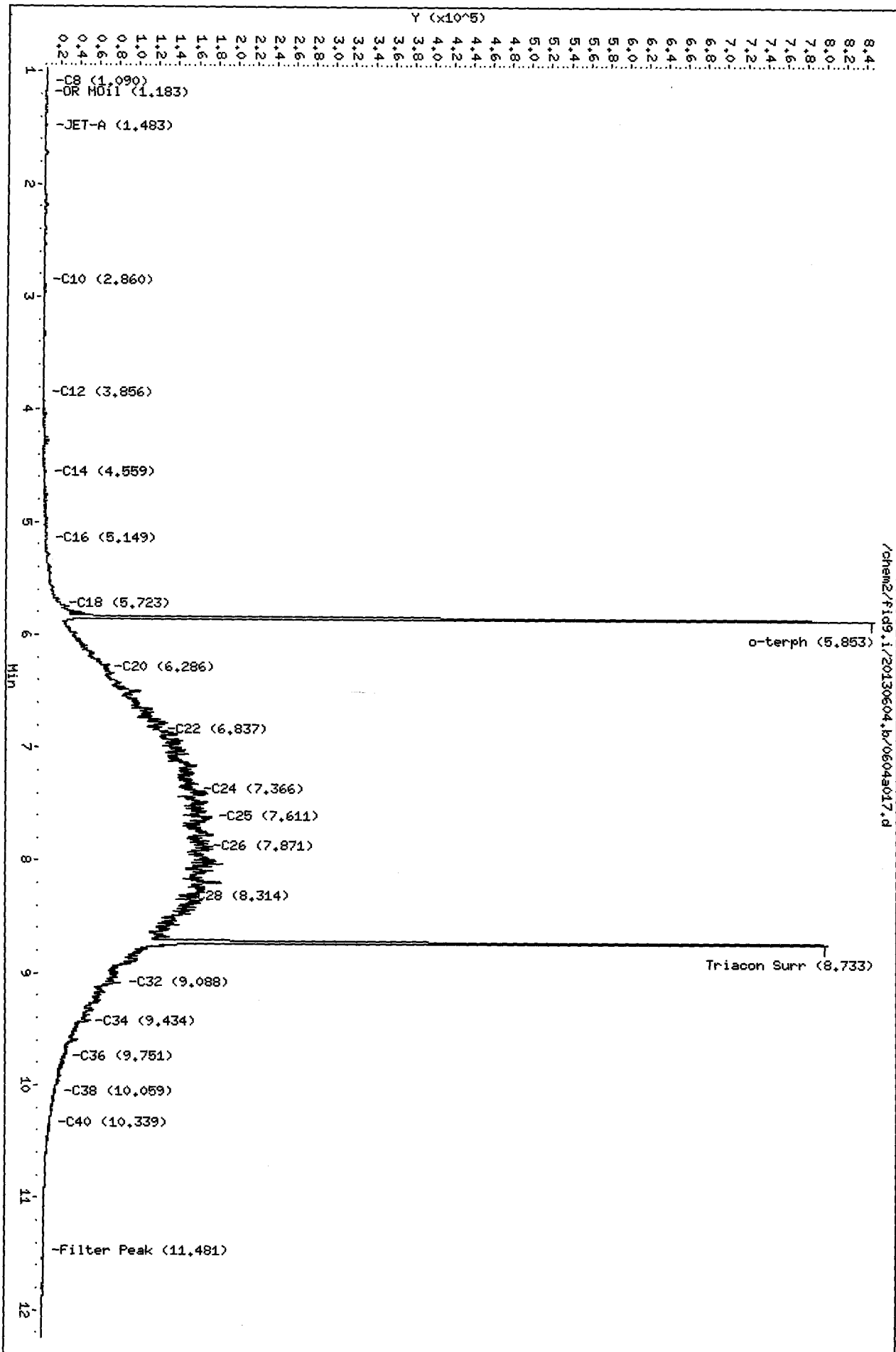
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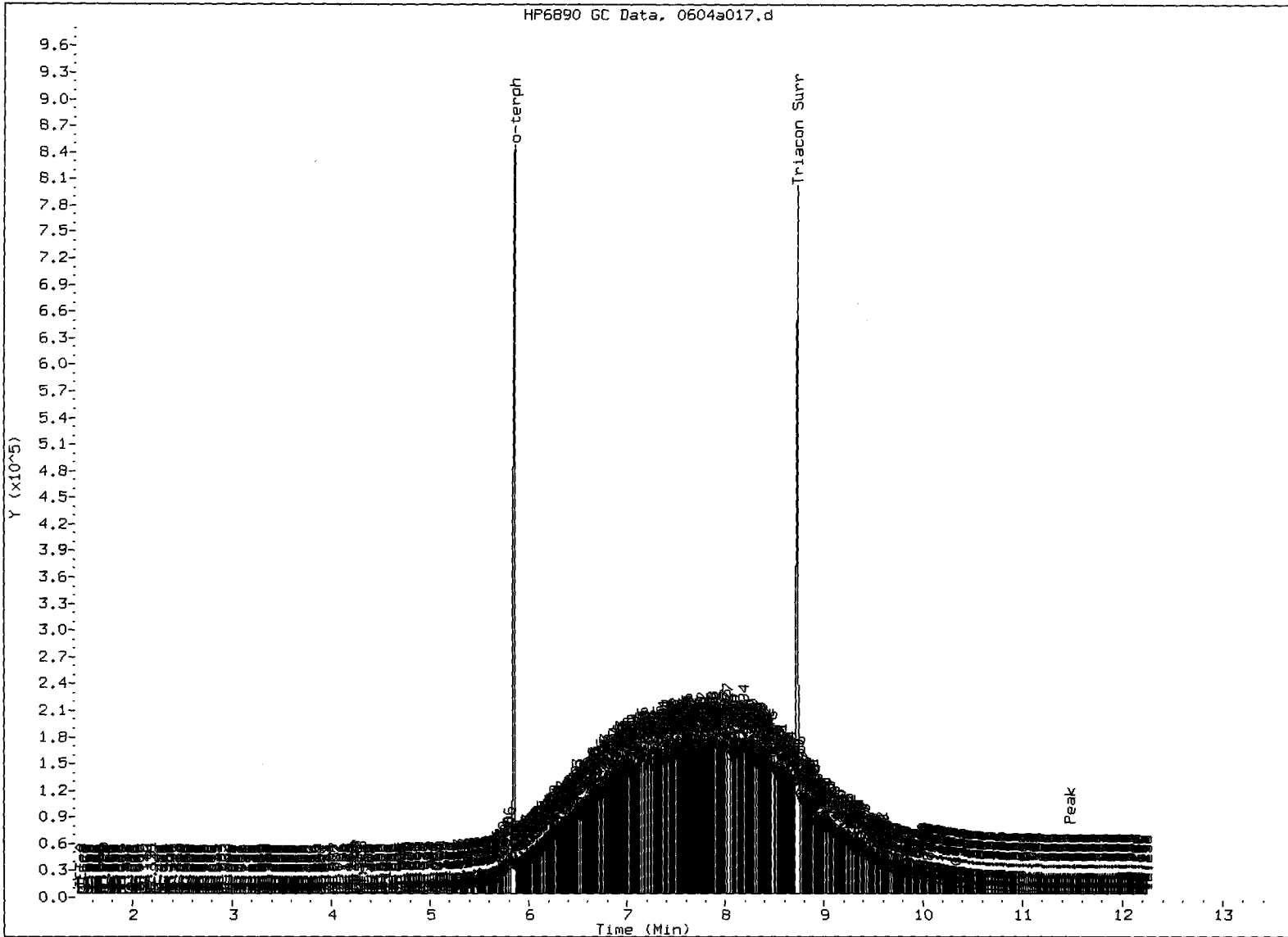
Instrument: fid9.i

Column phase: RTX-1

Operator: JM
Column diameter: 0.25

6/14/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: aw

Date: 6/11/0

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a018.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28G
 Client ID:
 Injection: 04-JUN-2013 19:07
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	97960	3
C8	1.095	0.007	1851	3850	DIESEL (C12-C24)	5221452	279.52
C10	2.862	0.007	551	609	M.OIL (C24-C38)	22783363	1420.84
C12	3.866	0.004	2162	2698	AK-102 (C10-C25)	6066115	279.45 M
C14	4.558	-0.004	3399	4304	AK-103 (C25-C36)	20205993	1739.22 M
C16	5.150	-0.004	7053	9811			
C18	5.724	0.004	22188	20168			
C20	6.286	0.001	32686	23478			
C22	6.836	-0.001	57039	45051			
C24	7.358	-0.003	82701	30302			
C25	7.617	0.006	110425	85832			
C26	7.872	0.005	118333	79549			
C28	8.315	0.008	174890	194953	IT.DIES (C10-C24)	5248333	242.46 M
C32	9.095	0.004	188236	105763			
C34	9.438	0.002	206023	206535	BUNKERC (C10-C38)	28031697	3024.99 M
Filter Peak	11.490	0.005	4325	3813	HYDRAUL (C24-C38)	22783363	1435.43
C36	9.751	-0.001	127136	95086			
C38	10.054	0.001	85052	35470			
C40	10.345	0.003	50110	40560			
o-terph	5.853	-0.005	891861	808901			
Triacon Surr	8.735	0.004	530236	682200	IT.MOIL (C24-C40)	24488917	1538.41 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	808901	31.6	70.2
Triacontane	682200	36.1	80.2

JW/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:

Sample Info: MS28C

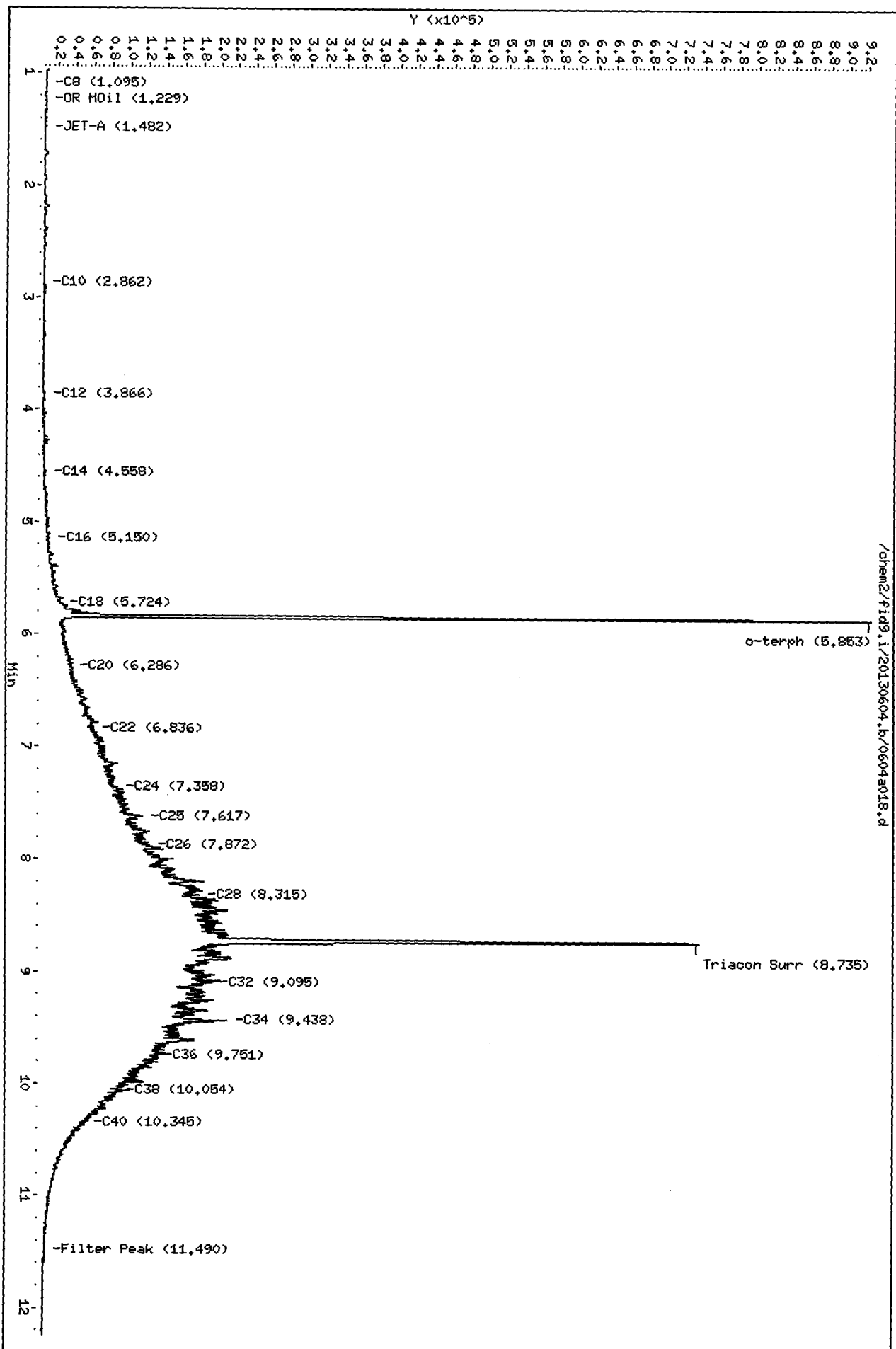
Column phase: RTX-1

Instrument: fid9.i

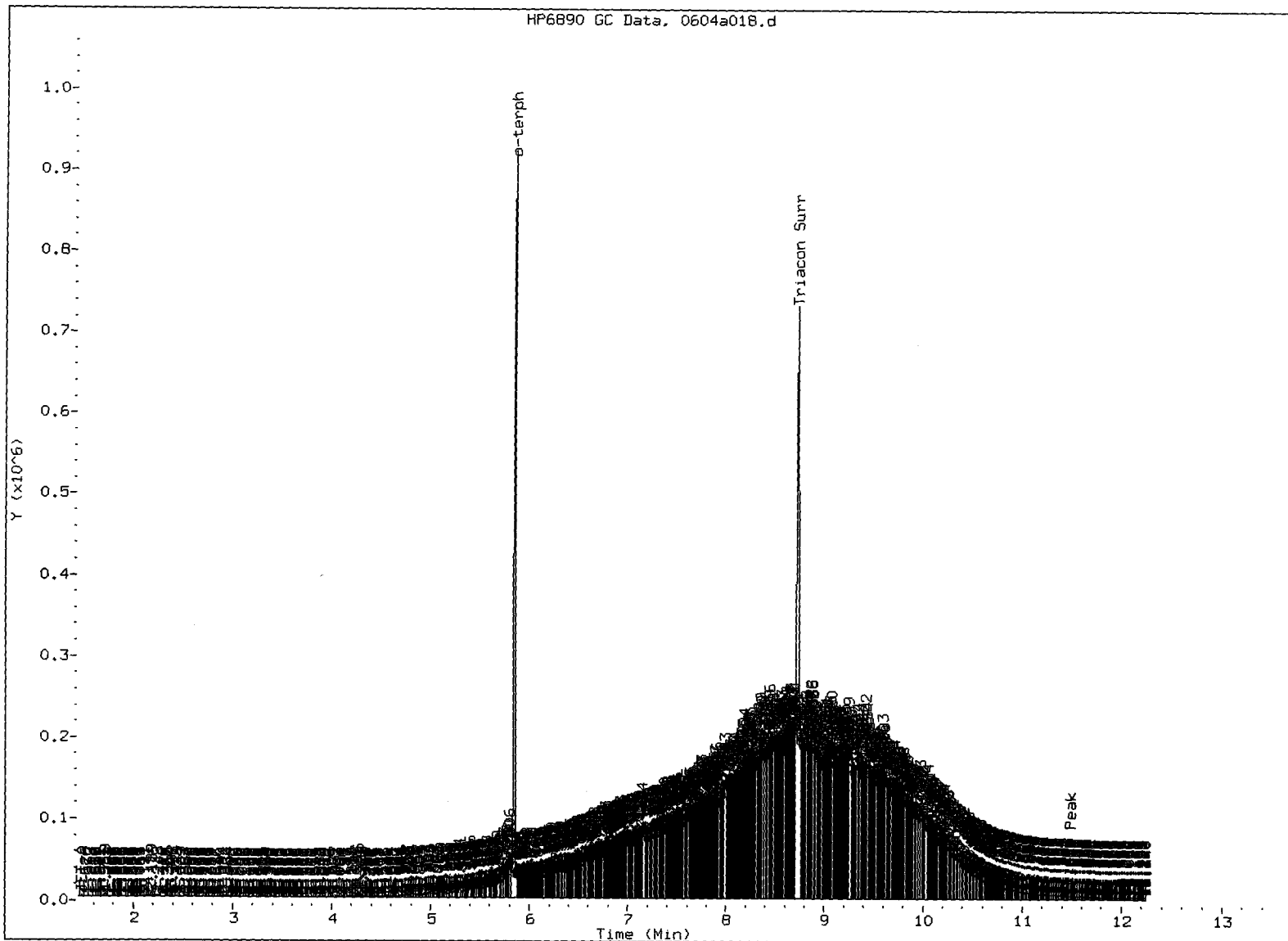
Operator: JM

Column diameter: 0.25

MS
6/10/13



HP6890 GC Data, 0604a018.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ⑤ Surrogate Skimmed

Analyst: SW

Date: 6/11/10

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a017.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28H
 Client ID:
 Injection: 05-JUN-2013 14:44
 Dilution Factor: 5
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	57792	2
C8	1.085	0.000	2160	3828	DIESEL (C12-C24)	9728061	520.78 M
C10	2.857	0.001	229	238	M.OIL (C24-C38)	34914534	2177.37 M
C12	3.872	0.009	521	388	AK-102 (C10-C25)	11516730	530.55 M
C14	4.562	0.001	2008	816	AK-103 (C25-C36)	31264078	2691.04 M
C16	5.153	-0.001	5120	2188			
C18	5.713	-0.006	17486	22526			
C20	6.281	-0.002	53047	17805			
C22	6.839	0.005	112866	57640			
C24	7.359	0.001	181690	71496			
C25	7.603	-0.003	225532	148075			
C26	7.862	-0.001	261635	244310			
C28	8.304	-0.002	344752	183171	IT.DIES (C10-C24)	9746812	450.28 M
C32	9.089	0.001	207063	131840			
C34	9.432	0.002	188935	87873	BUNKERC (C10-C38)	44661346	4819.55 M
Filter Peak	11.485	0.004	5490	3372	HYDRAUL (C24-C38)	34914534	2199.74
C36	9.751	0.001	129782	66233			
C38	10.043	-0.005	90488	47532			
C40	10.329	-0.004	57149	60073			
o-terph	5.842	-0.011	222289	159593			
Triacon Surr	8.726	0.001	96051	186823	IT.MOIL (C24-C40)	36213369	2328.07 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	159593	6.2	69.2
Triacantane	186823	9.9	109.8

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:

Sample Info: MS28H,5

Column phase: RTX-1

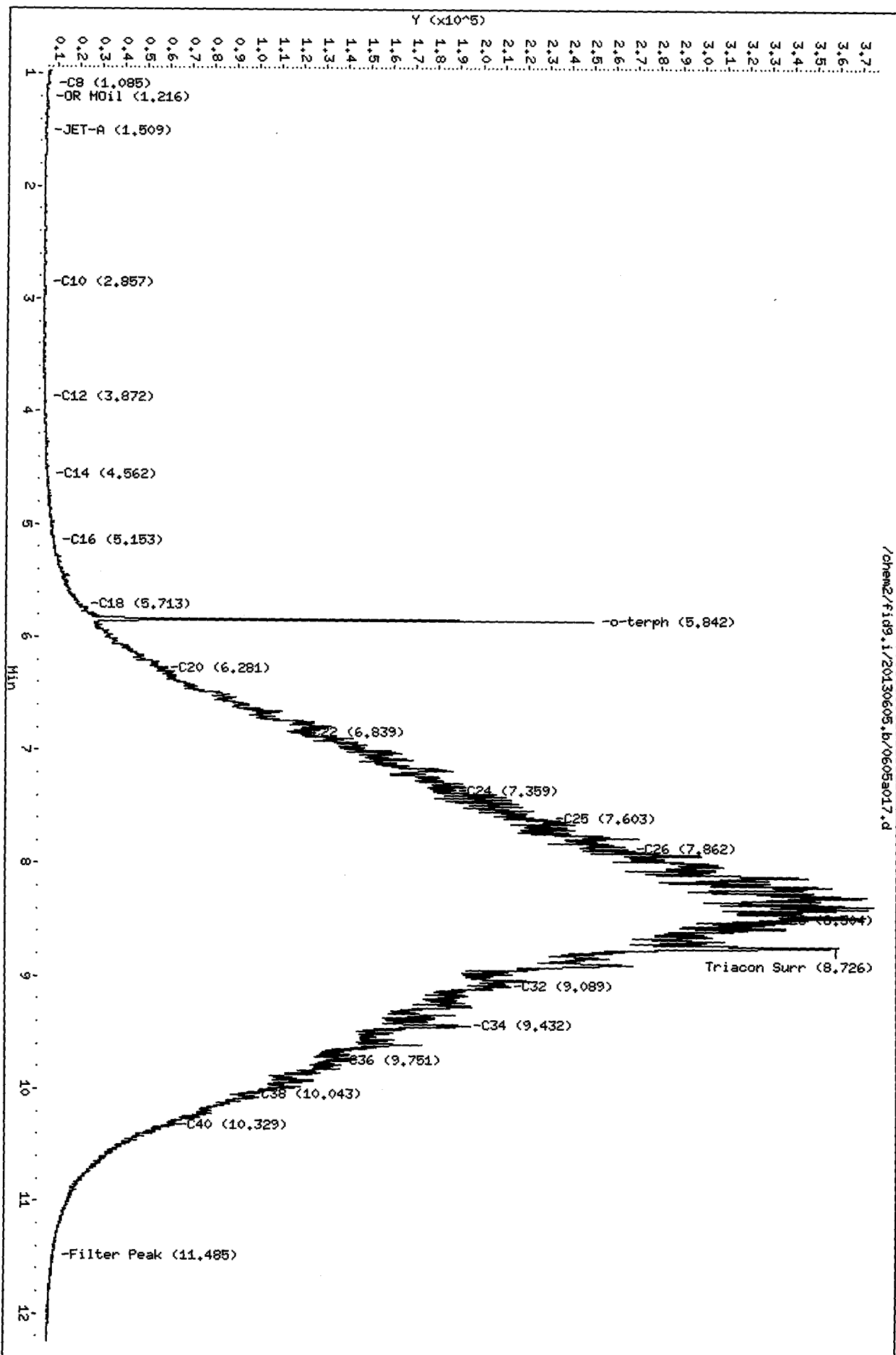
Instrument: fid9.i

Operator: JM

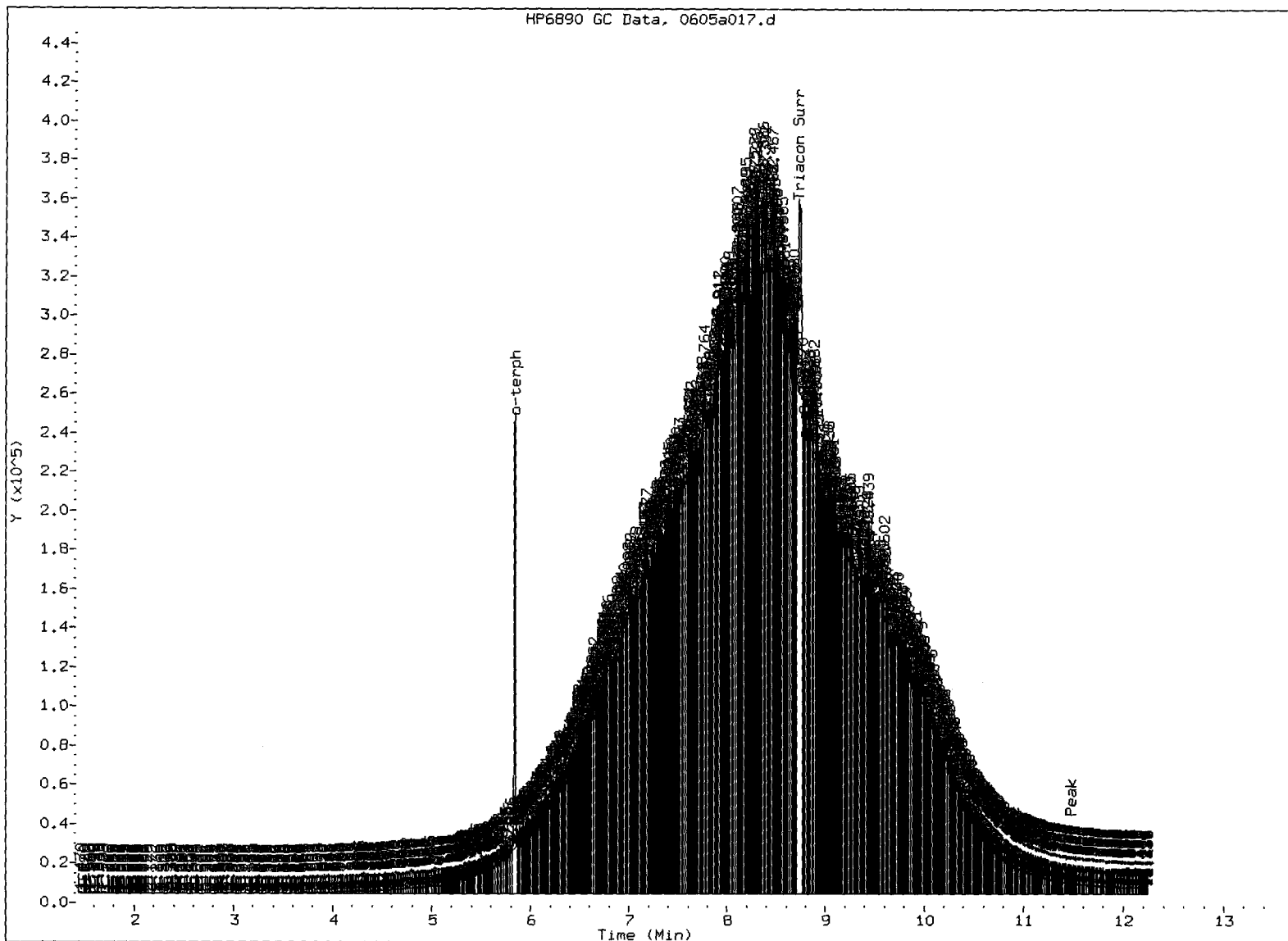
Column diameter: 0.25

50
6/10

/chem2/fid9.i/20130605.b/0605a017.d



HP6890 GC Data, 0605a017.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: SW

Date: 6/14/03

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a018.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28I
 Client ID:
 Injection: 05-JUN-2013 15:07
 Dilution Factor: 5
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	55708	2
C8	1.086	0.001	1567	4085	DIESEL (C12-C24)	5149418	275.67 ✓
C10	2.858	0.002	377	527	M.OIL (C24-C38)	30553417	1905.40 ✓
C12	3.867	0.005	517	142	AK-102 (C10-C25)	6099652	281.00 M
C14	4.559	-0.002	2404	2142	AK-103 (C25-C36)	26916429	2316.82 M
C16	5.150	-0.003	5641	2850			
C18	5.722	0.003	13531	8051			
C20	6.282	0.000	28376	18925			
C22	6.839	0.006	58172	60433			
C24	7.357	-0.001	96404	84512			
C25	7.604	-0.001	130206	128615			
C26	7.866	0.003	145032	61883			
C28	8.306	0.001	216044	167119	IT.DIES (C10-C24)	5173843	239.02 M
C32	9.084	-0.004	251682	135888			
C34	9.433	0.003	239936	130285	BUNKERC (C10-C38)	35727260	3855.45 M
Filter Peak	11.486	0.005	7202	7767	HYDRAUL (C24-C38)	30553417	1924.97
C36	9.754	0.004	199808	154676			
C38	10.054	0.007	143340	44832			
C40	10.329	-0.003	96726	62168			
o-terph	5.840	-0.013	170066	133762			
Triacon Surr	8.722	-0.003	101398	160487	IT.MOIL (C24-C40)	32616773	2097.36 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	133762	5.2	58.0 ✓
Triacotane	160487	8.5	94.4

JTC
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:

Sample Info: MSC281,5

Column phase: RTX-1

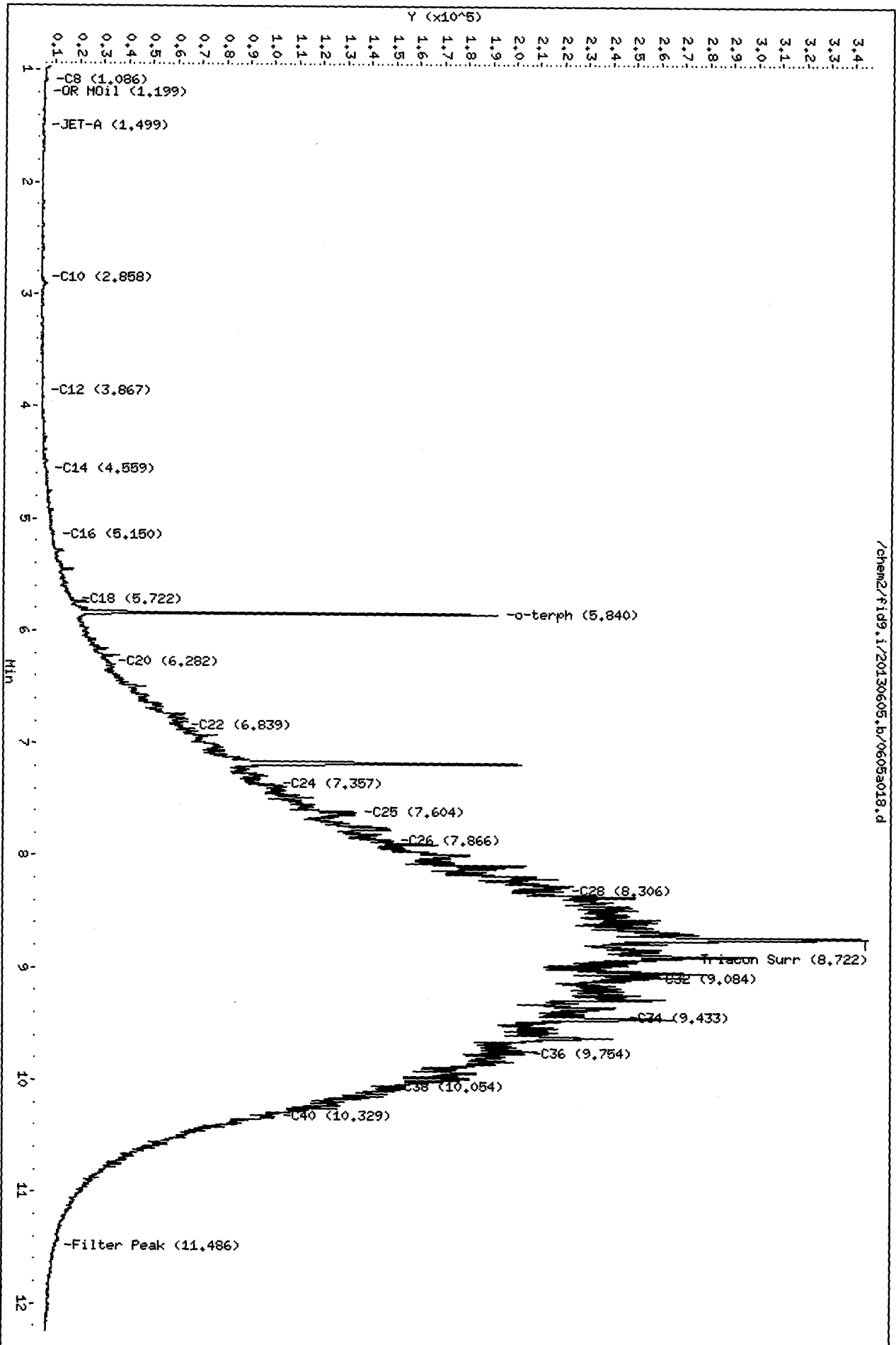
Instrument: fid9.i

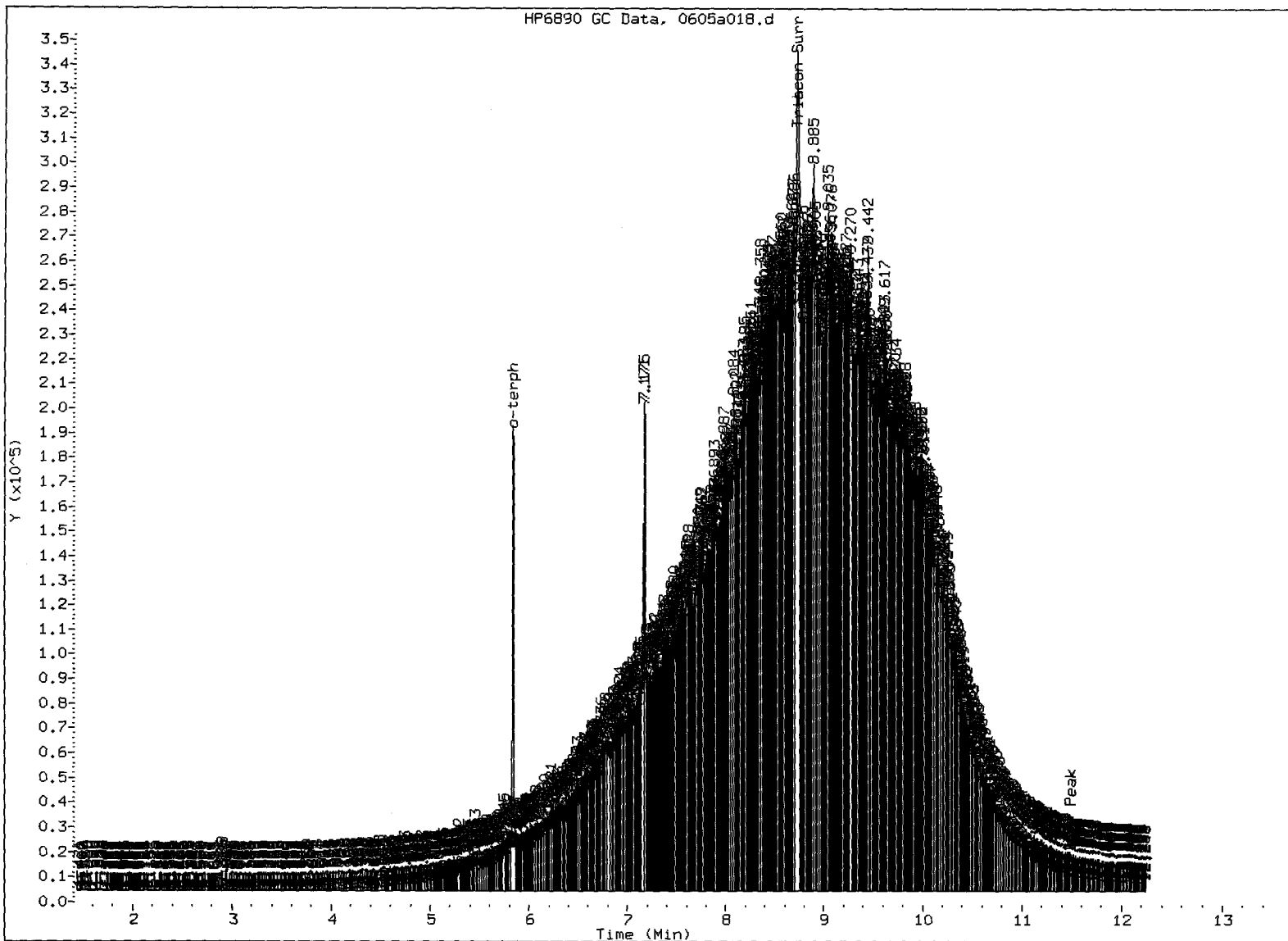
Operator: JM

Column diameter: 0.25

/chem2/fid9.i/20130605.b/0605a018.d

JW
6/11/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst: SW

Date: 6/1/0

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a023.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28J
 Client ID:
 Injection: 04-JUN-2013 20:59
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	116838	3
C8	1.103	0.015	3181	7130	DIESEL (C12-C24)	1713174	91.71
C10	2.863	0.008	529	653	M.OIL (C24-C38)	12289831	766.43
C12	3.855	-0.006	696	175	AK-102 (C10-C25)	2019499	93.03 M
C14	4.557	-0.004	3420	4931	AK-103 (C25-C36)	10459640	900.31 M
C16	5.149	-0.006	4082	5091			
C18	5.722	0.001	6339	4949			
C20	6.282	-0.003	8802	6400			
C22	6.836	-0.001	17001	6923			
C24	7.358	-0.004	27741	14678			
C25	7.616	0.005	35600	35446			
C26	7.865	-0.002	43496	17049			
C28	8.312	0.006	76523	34447	IT.DIES (C10-C24)	1747165	80.72 M
C32	9.088	-0.003	96634	61402			
C34	9.430	-0.005	99048	58500	BUNKERC (C10-C38)	14036996	1514.78 M
Filter Peak	11.488	0.002	5925	2341	HYDRAUL (C24-C38)	12289831	774.30
C36	9.755	0.003	100394	97653			
C38	10.054	0.001	76069	40554			
C40	10.344	0.002	45502	16990			
o-terph	5.851	-0.007	917271	886576			
Triacon Surr	8.723	-0.009	684609	796592	IT.MOIL (C24-C40)	14074681	858.04 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	886576	34.6	76.9
Triacontane	796592	42.1	93.7

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

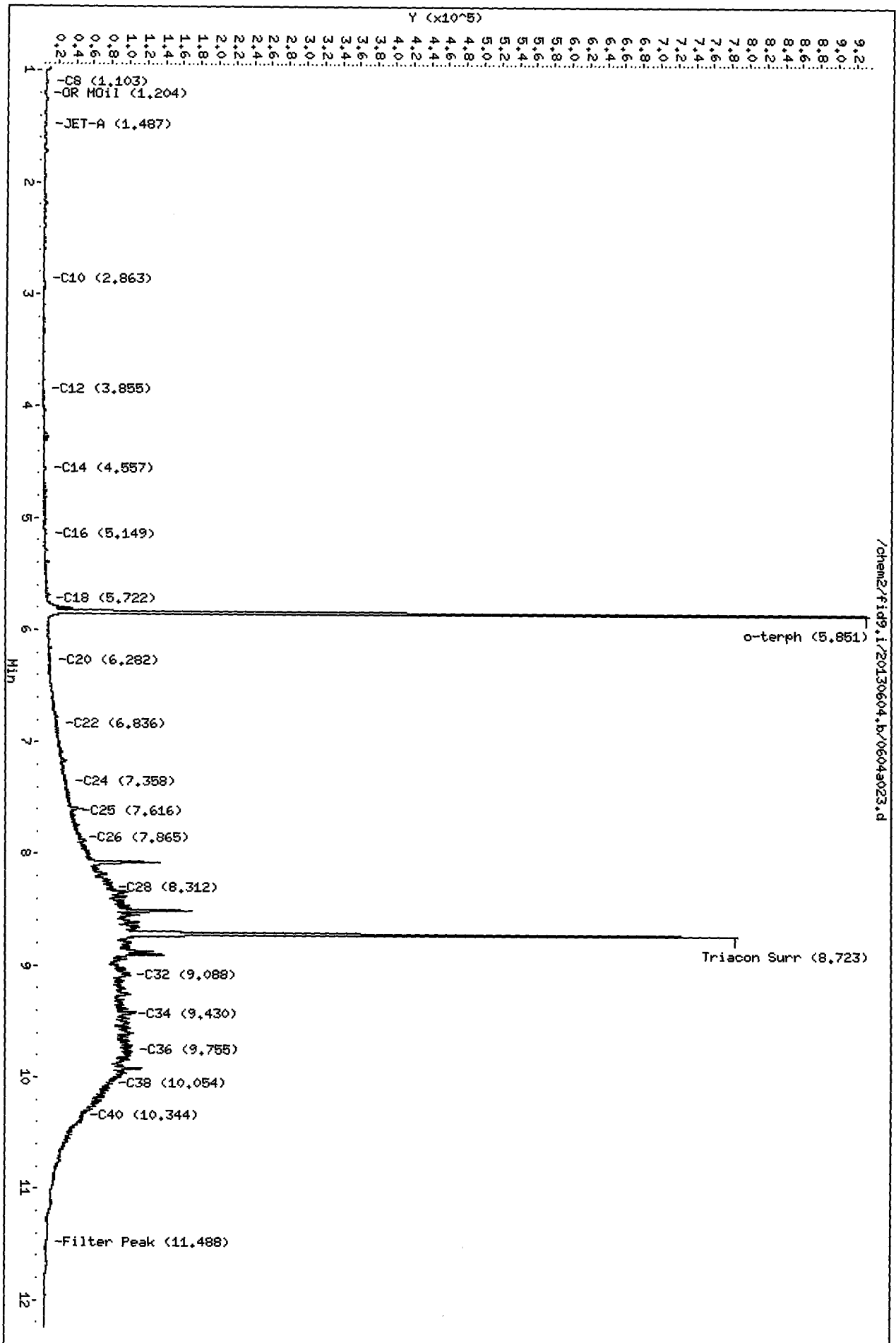
Client ID:
Sample Info: MS28J

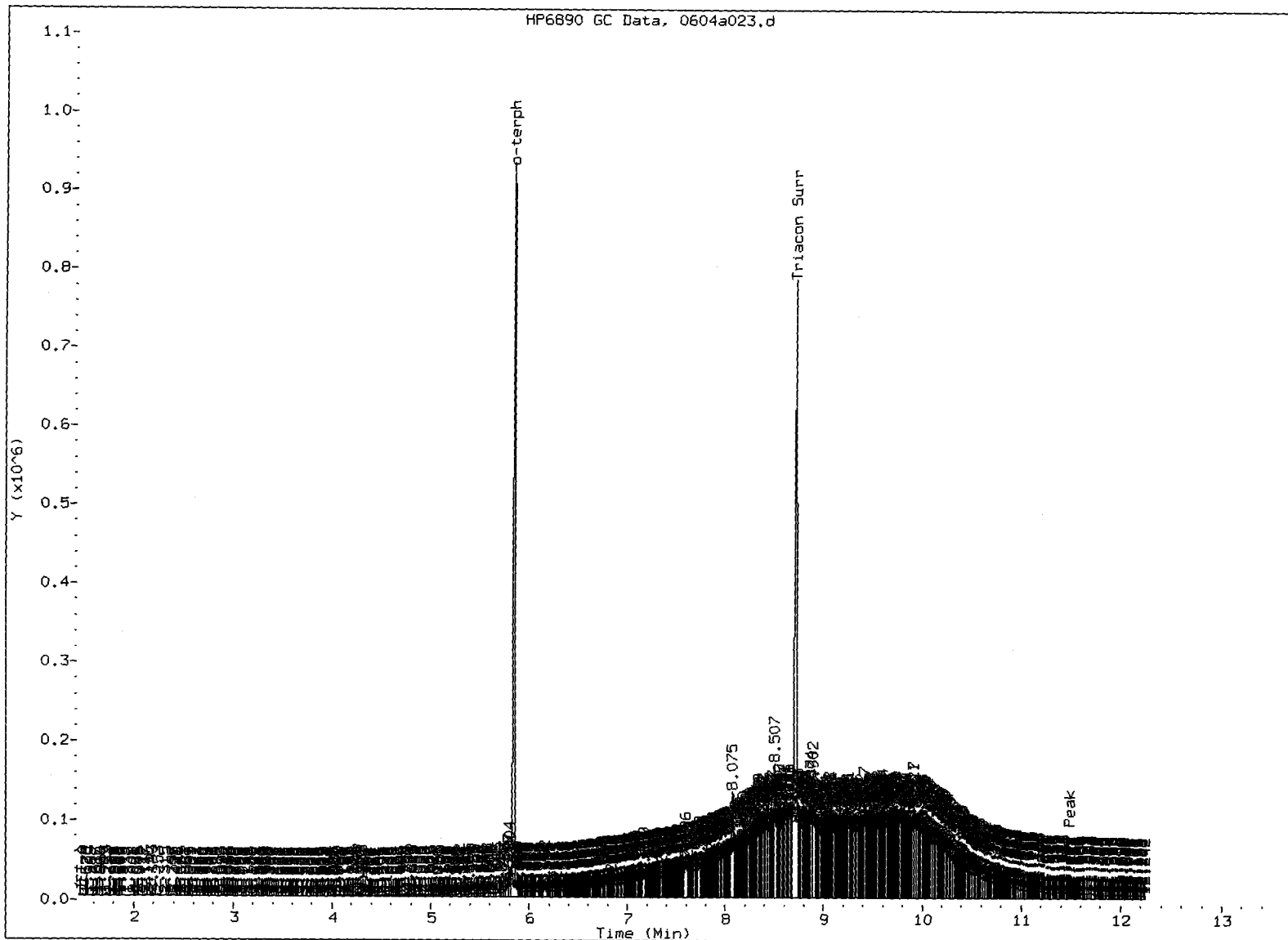
Instrument: fid9.i

Column phase: RTX-1

Operator: JM
Column diameter: 0.25

300
6/14/10





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
- ⑤ Surrogate Skipped

Analyst: jed

Date: 4/1/83

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a024.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28K
 Client ID:
 Injection: 04-JUN-2013 21:21
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	120307	4
C8	1.089	0.001	2794	2554	DIESEL (C12-C24)	8003262	428.44
C10	2.860	0.005	796	966	M.OIL (C24-C38)	49356463	3078.01
C12	3.861	-0.001	1734	2869	AK-102 (C10-C25)	9557876	440.31 M
C14	4.555	-0.007	6631	6512	AK-103 (C25-C36)	43280430	3725.34 M
C16	5.148	-0.007	8670	12904			
C18	5.724	0.003	25086	15833			
C20	6.288	0.002	42807	16055			
C22	6.839	0.001	91689	71256			
C24	7.364	0.002	145714	40144			
C25	7.610	-0.002	179496	42665			
C26	7.869	0.002	228898	106596			
C28	8.299	-0.008	362758	298928	IT.DIES (C10-C24)	8045215	371.67 M
C32	9.089	-0.003	399906	222968			
C34	9.435	-0.001	321835	63730	BUNKERC (C10-C38)	57401677	6194.40 M
Filter Peak	11.492	0.006	11494	3438	HYDRAUL (C24-C38)	49356463	3109.63
C36	9.760	0.008	296854	156168			
C38	10.054	0.000	223696	202746			
C40	10.342	0.000	116119	82027			
o-terph	5.850	-0.008	1017571	829119			
Triacon Surr	8.752	0.020	396314	875264	IT.MOIL (C24-C40)	52710248	3349.63 M

M Indicates manual integration within range.

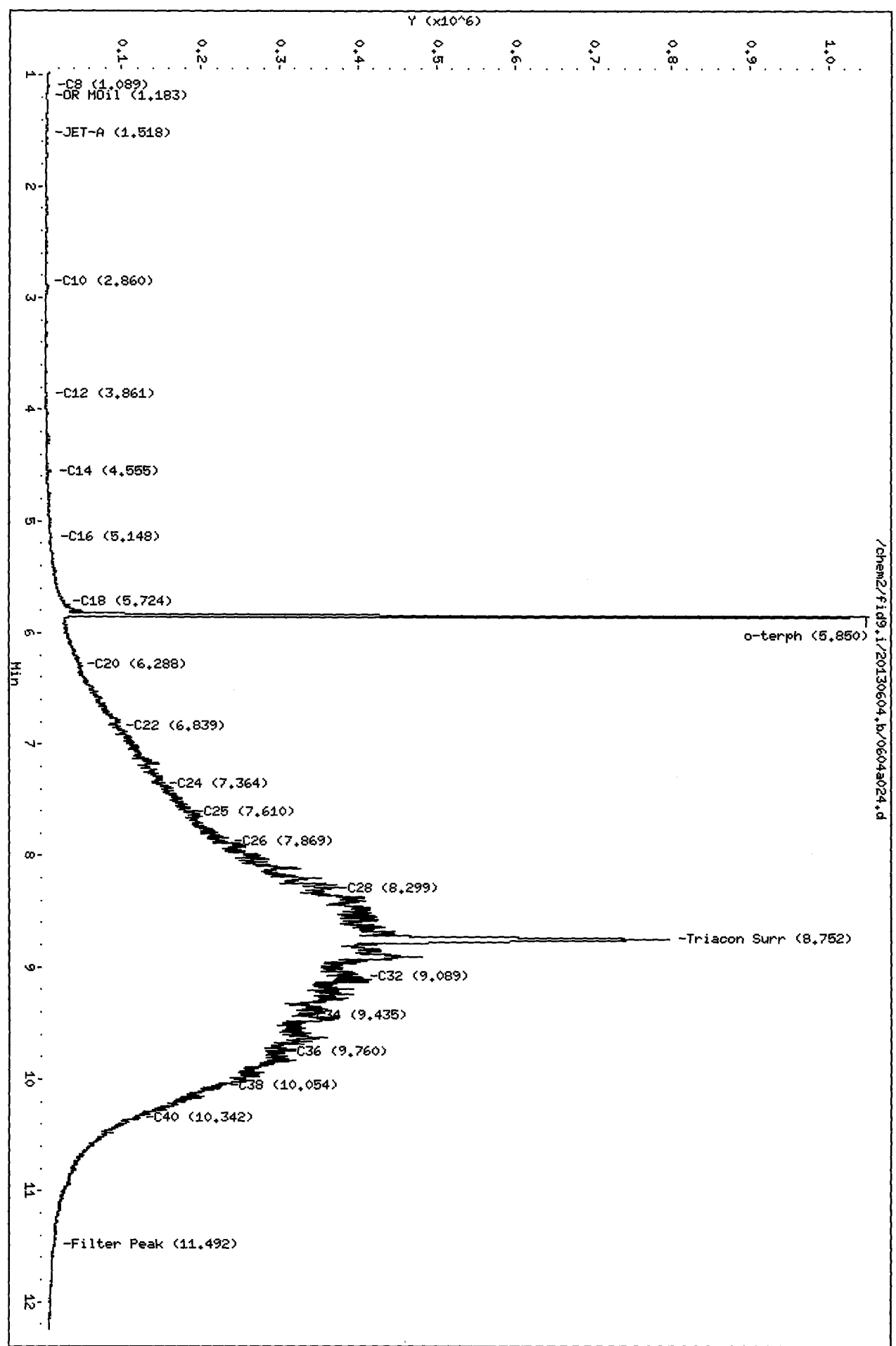
Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	829119	32.4	71.9
Triacontane	875264	46.3	102.9

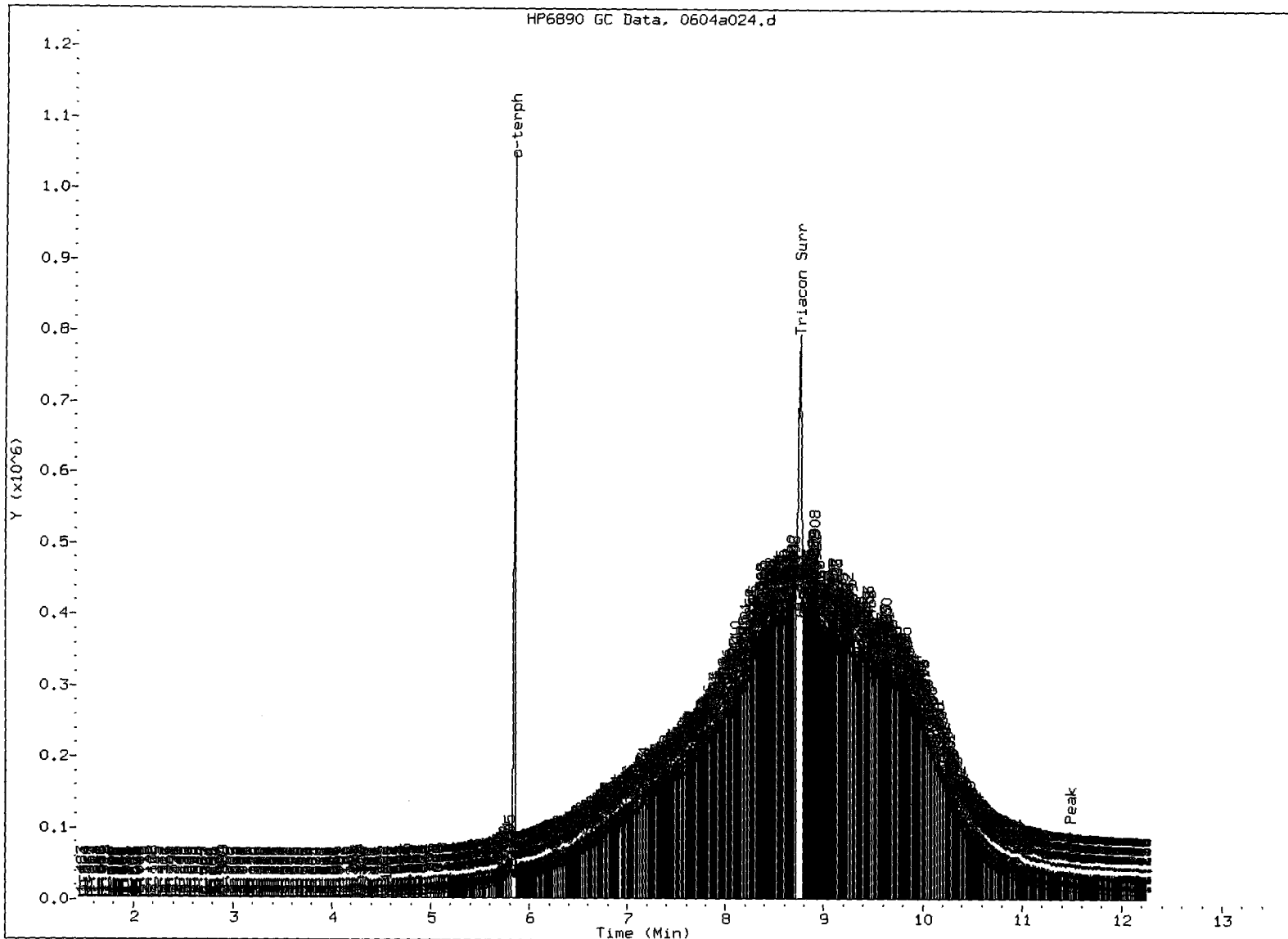
JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

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6/6/13



/chem2/fig9.i/20130604.b/0604a024.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JCS

Date: 6/11/0

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a025.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28L
 Client ID:
 Injection: 04-JUN-2013 21:44
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	142718	4
C8	1.100	0.012	2267	5374	DIESEL (C12-C24)	6809958	364.56
C10	2.860	0.004	919	1166	M.OIL (C24-C38)	27143514	1692.75
C12	3.862	0.000	3023	3294	AK-102 (C10-C25)	8076866	372.08 M
C14	4.556	-0.006	9382	10184	AK-103 (C25-C36)	24356124	2096.44 M
C16	5.150	-0.005	9117	12941			
C18	5.717	-0.004	28328	16321			
C20	6.290	0.005	46019	54744			
C22	6.840	0.002	65963	14429			
C24	7.365	0.003	116944	29975			
C25	7.612	0.001	157002	84915			
C26	7.865	-0.002	175909	106176			
C28	8.305	-0.002	244240	91870	IT.DIES (C10-C24)	6876585	317.68 M
C32	9.092	0.000	185553	168152			
C34	9.436	0.000	210690	370688	BUNKERC (C10-C38)	34020099	3671.22 M
Filter Peak	11.494	0.008	5486	5444	HYDRAUL (C24-C38)	27143514	1710.13
C36	9.749	-0.003	115092	64117			
C38	10.061	0.008	78892	54826			
C40	10.349	0.006	39284	29565			
o-terph	5.851	-0.007	953312	827048			
Triacon Surr	8.736	0.004	540558	750621	IT.MOIL (C24-C40)	28789845	1811.92 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	827048	32.3	71.8
Triacontane	750621	39.7	88.3

JW
6/10/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:

Sample Info: MS28L

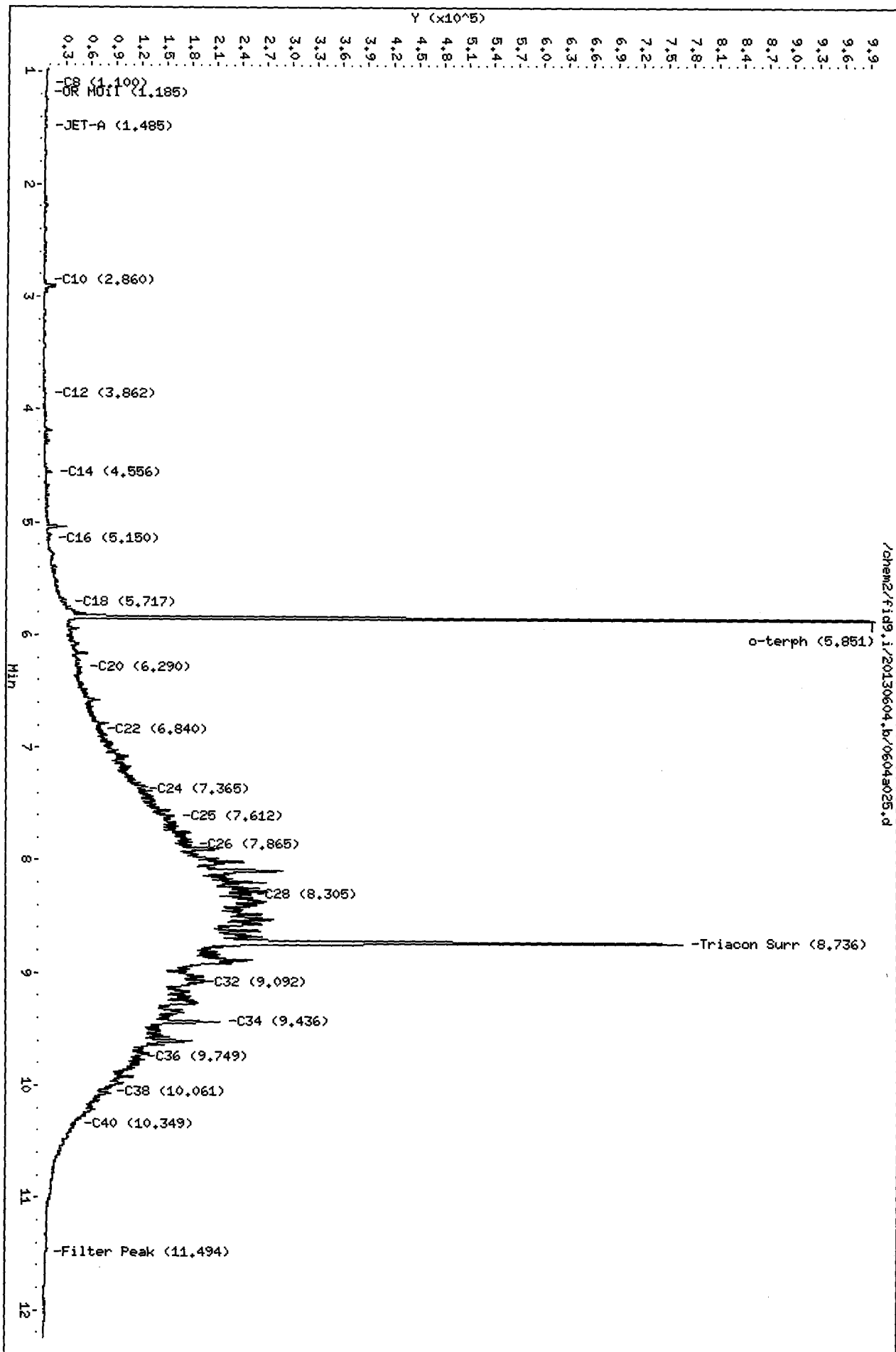
Column phase: RTX-1

Instrument: fid9.i

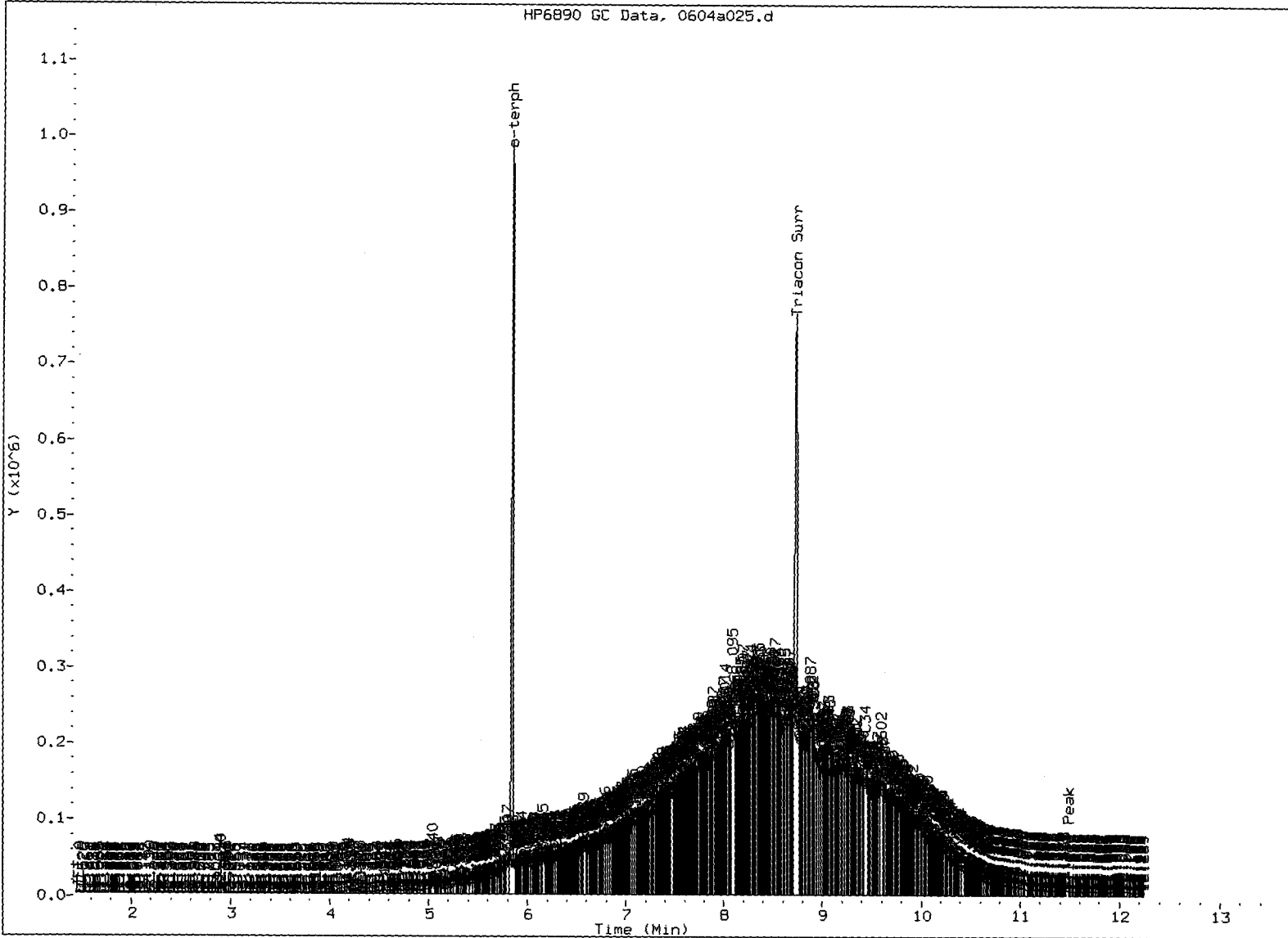
Operator: JM

Column diameter: 0.25

3/11/13
JSP



HP6890 GC Data, 0604a025.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: SW

Date: 6/11/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a026.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28M
 Client ID:
 Injection: 04-JUN-2013 22:06
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	112474	3
C8	1.096	0.008	1464	3709	DIESEL (C12-C24)	2276641	121.88 M
C10	2.861	0.006	684	848	M.OIL (C24-C38)	4111442	256.40 M
C12	3.863	0.001	1807	2812	AK-102 (C10-C25)	2470678	113.82 M
C14	4.556	-0.006	8853	10198	AK-103 (C25-C36)	3587022	308.75 M
C16	5.148	-0.007	10199	11597			
C18	5.716	-0.004	12455	16715			
C20	6.287	0.002	11815	2113			
C22	6.852	0.015	14704	3198			
C24	7.365	0.004	17661	16579			
C25	7.612	0.000	17996	8868			
C26	7.866	-0.001	19710	11357			
C28	8.311	0.005	31222	24134	IT.DIES (C10-C24)	2329103	107.60 M
C32	9.094	0.002	28621	13196			
C34	9.443	0.007	25086	5453	BUNKERC (C10-C38)	6440545	695.02 M
Filter Peak	11.479	-0.006	3493	4614	HYDRAUL (C24-C38)	4111442	259.03
C36	9.749	-0.003	26929	9447			
C38	10.053	0.000	22210	5214			
C40	10.340	-0.002	13654	7989			
o-terph	5.853	-0.005	968136	860896			
Triacon Surr	8.721	-0.011	719192	784498	IT.MOIL (C24-C40)	5177055	283.85 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	860896	33.6	74.7
Triacontane	784498	41.5	92.2

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Data File: /chem2/fid9.i/20130604.b/0604a026.d
Date: 04-JUN-2013 22:06

Client ID:

Sample Info: MS28H

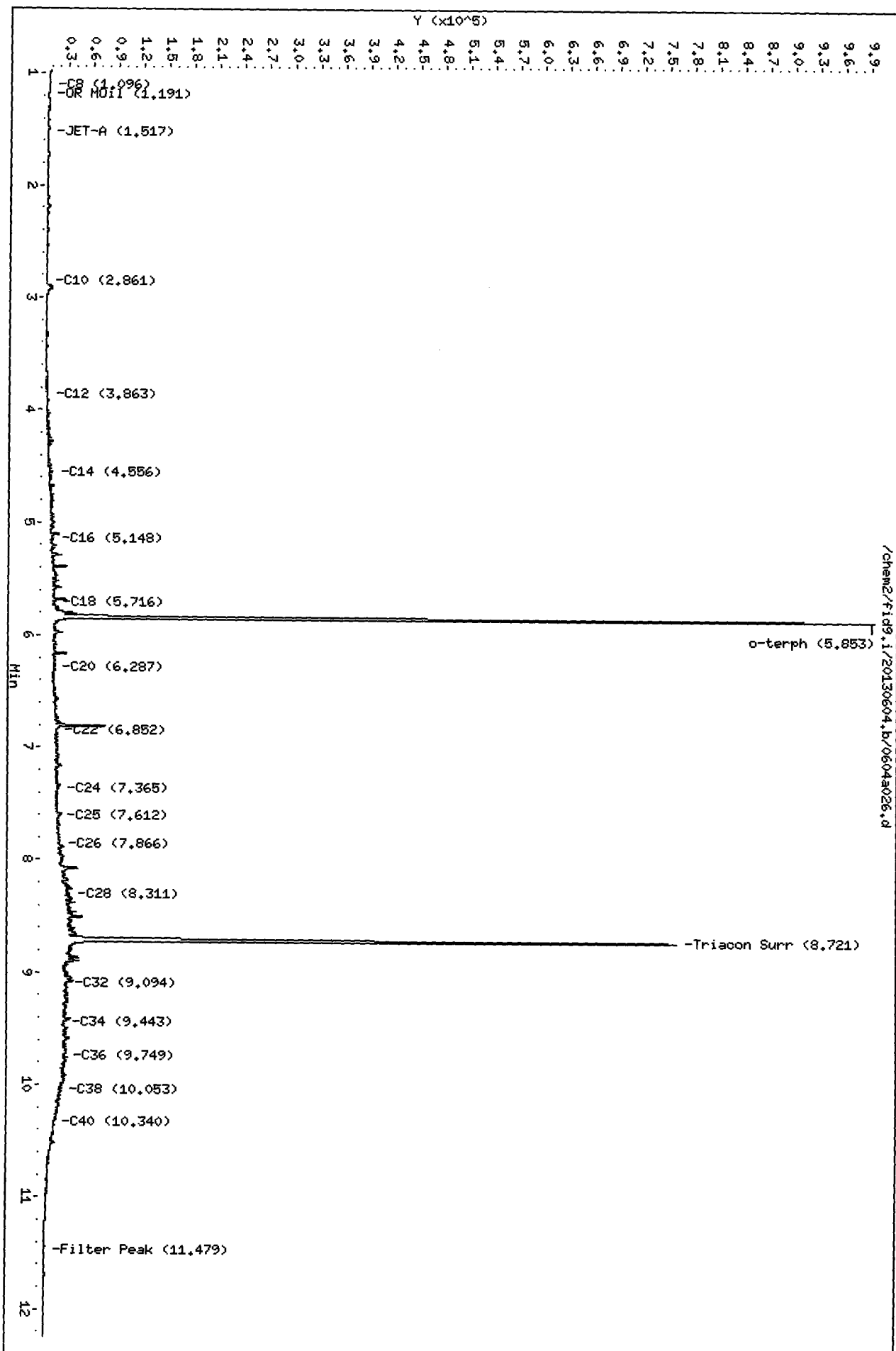
Column phase: RTX-1

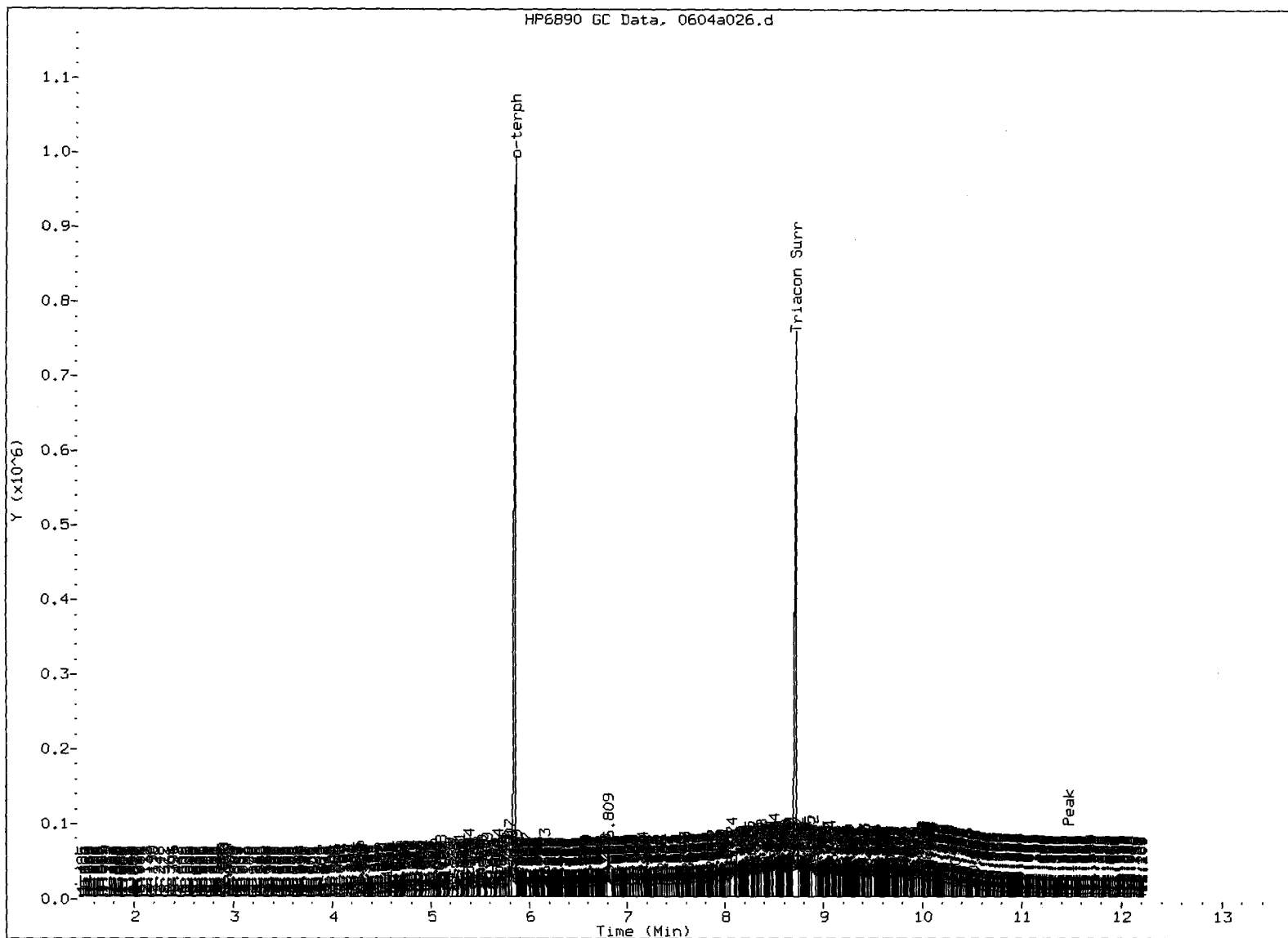
Instrument: fid9.i

Operator: JM

Column diameter: 0.25

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MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst:

Date: 6/11/0

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a027.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28N
 Client ID:
 Injection: 04-JUN-2013 22:28
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	102612	3
C8	1.086	-0.002	1665	946	DIESEL (C12-C24)	748510	40.07 ✓
C10	2.861	0.005	629	757	M.OIL (C24-C38)	2493501	155.50 ✓
C12	3.856	-0.006	422	230	AK-102 (C10-C25)	867213	39.95 M
C14	4.567	0.005	1829	2902	AK-103 (C25-C36)	2188866	188.41 M
C16	5.151	-0.004	2155	2143			
C18	5.725	0.005	3341	3328			
C20	6.286	0.001	3597	1278			
C22	6.847	0.009	6828	6065			
C24	7.364	0.003	9301	3290			
C25	7.613	0.002	12015	9629			
C26	7.870	0.002	12395	3428			
C28	8.303	-0.004	17777	9935	IT.DIES (C10-C24)	779543	36.01 M
C32	9.101	0.009	17283	7513			
C34	9.437	0.001	16508	5790	BUNKERC (C10-C38)	3273044	353.20 M
Filter Peak	11.483	-0.002	2386	2248	HYDRAUL (C24-C38)	2493501	157.10
C36	9.749	-0.004	16046	20368			
C38	10.054	0.000	11220	4858			
C40	10.345	0.002	7123	3938			
o-terph	5.855	-0.003	950785	893715			
Triacon Surr	8.721	-0.010	724342	812780	IT.MOIL (C24-C40)	3448953	170.35 M

M Indicates manual integration within range.

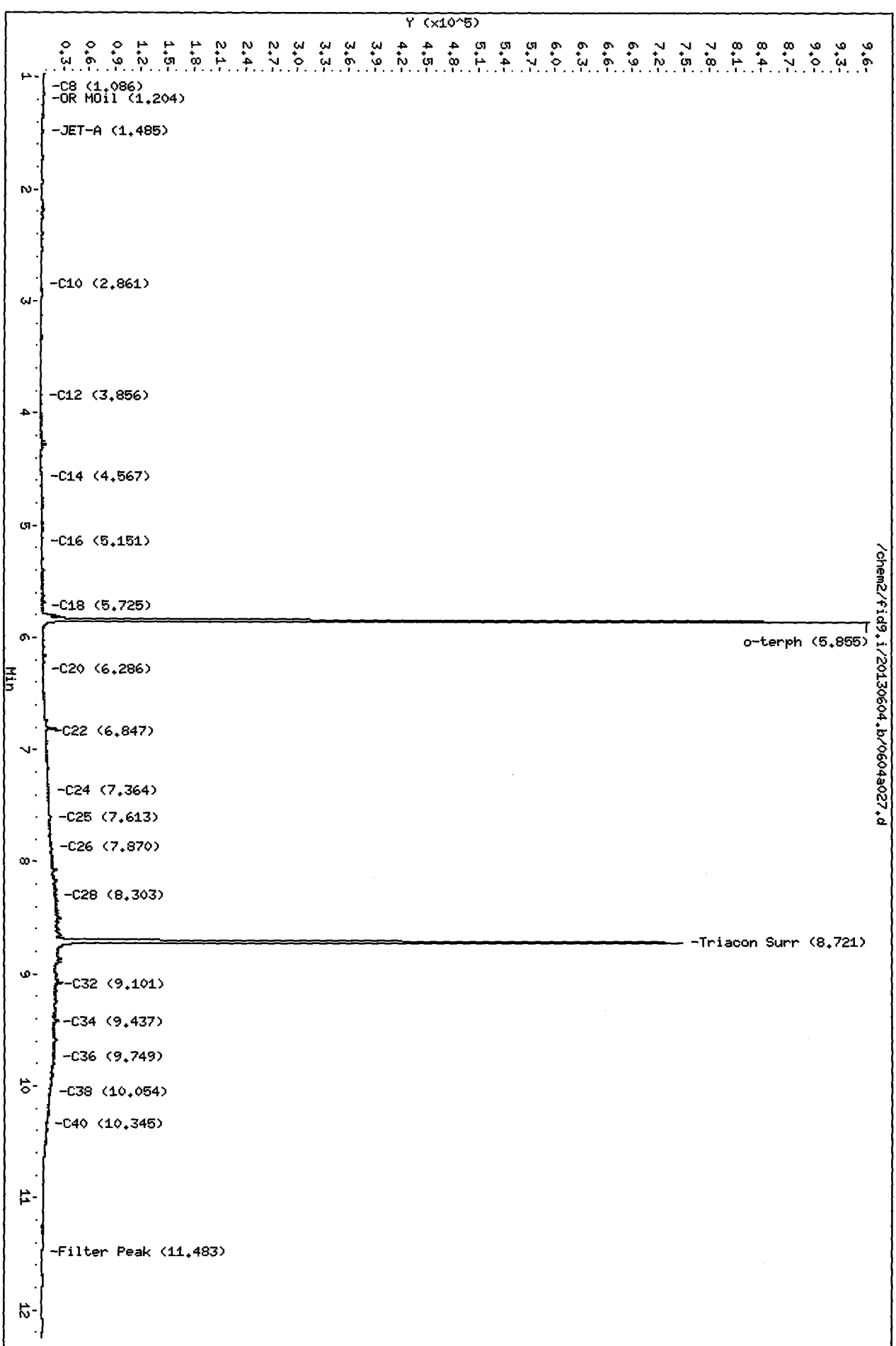
Range Times: NW Diesel (3.862 - 7.362) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	893715	34.9	77.5
Triacontane	812780	43.0	95.6

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

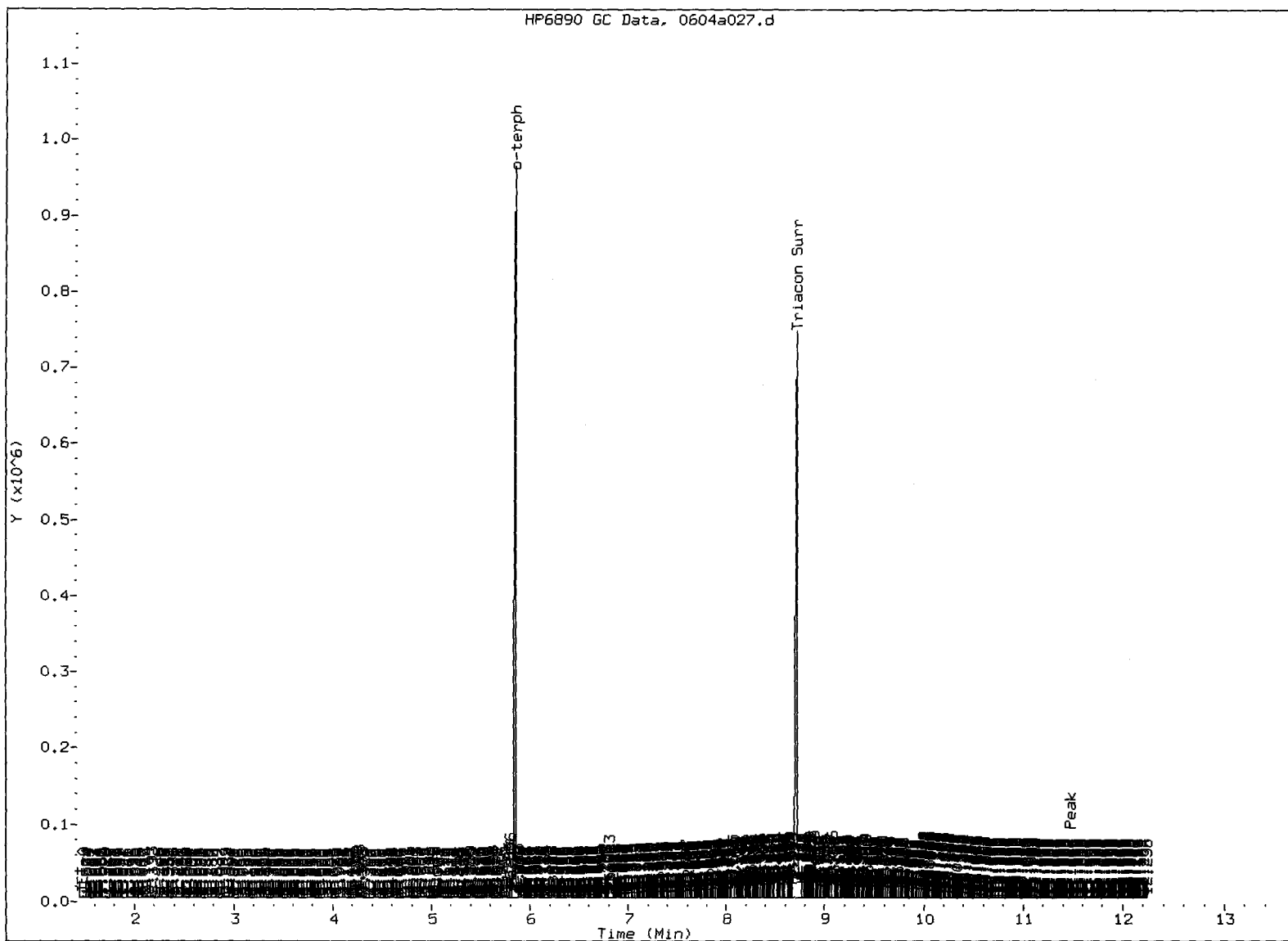
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6/10



FID: 9A-2C/RTX-1 WS28N

FID: 9A SIGNAL

HP6890 GC Data, 0604a027.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JL

Date: 6/1/13

WS28: 00054

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a028.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS280
 Client ID:
 Injection: 04-JUN-2013 22:50
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1311292	38
C8	1.094	0.006	926	825	DIESEL (C12-C24)	267665902	14329.14 ES
C10	2.847	-0.008	14483	20437	M.OIL (C24-C38)	589533568	36764.99 ES
C12	3.862	0.000	31444	46564	AK-102 (C10-C25)	320602228	14769.48
C14	4.559	-0.002	78282	43067	AK-103 (C25-C36)	521234905	44865.01
C16	5.160	0.005	285276	153647			
C18	5.722	0.002	606372	499133			
C20	6.291	0.006	1303316	466097			
C22	6.837	0.000	3136109	3478861			
C24	7.357	-0.004	5659697	4511047			
C25	7.615	0.004	5704618	2116760			
C26	7.866	-0.001	6269118	6474142			
C28	8.307	0.001	6001049	4845716	IT.DIES (C10-C24)	268755000	12415.92
C32	9.095	0.004	2825307	1255607			
C34	9.436	0.000	1544294	1723436	BUNKERC (C10-C38)	858288568	92620.73
Filter Peak	11.488	0.003	147887	46471	HYDRAUL (C24-C38)	589533568	37142.65
C36	9.750	-0.003	1126518	970235			
C38	10.052	-0.001	924755	446943			
C40	10.337	-0.005	708664	798328			
o-terph	----						
Triacon Surr	----				IT.MOIL (C24-C40)	602855770	38957.16

M Indicates manual integration within range.

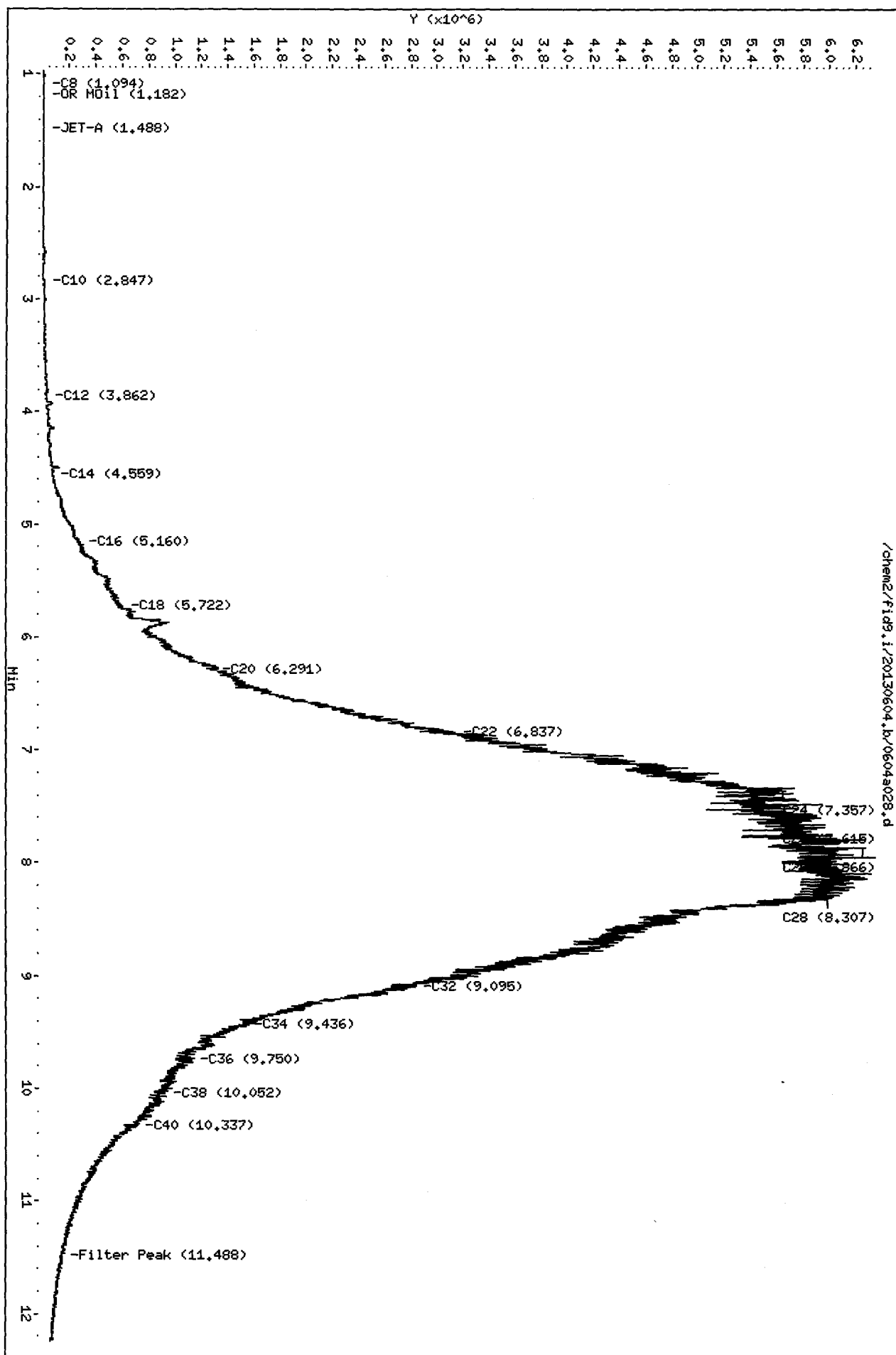
Range Times: NW Diesel (3.862 - 7.362) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0 NR
Triacotane	0	0.0	0.0 NR

30
 WND

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

MS
2/1/13



/chem2/fid9.i/20130604.b/0604a028.d

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a023.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS280
 Client ID:
 Injection: 05-JUN-2013 16:59
 Dilution Factor: 100
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	25946	1
C8	1.070	-0.015	790	1043	DIESEL (C12-C24)	3793280	203.07
C10	2.857	0.001	165	184	M.OIL (C24-C38)	25702689	1602.89
C12	3.860	-0.003	238	120	AK-102 (C10-C25)	4581721	211.07 M
C14	4.561	0.000	776	657	AK-103 (C25-C36)	22824270	1964.59
C16	5.153	0.000	2708	1011			
C18	5.726	0.007	6114	2151			
C20	6.279	-0.003	18161	19835			
C22	6.830	-0.004	45894	32929			
C24	7.358	0.000	84173	50097			
C25	7.604	-0.002	111790	50328			
C26	7.859	-0.004	130706	30770			
C28	8.310	0.004	174391	84317	IT.DIES (C10-C24)	3802348	175.66 M
C32	9.085	-0.003	213457	70755			
C34	9.429	-0.001	210209	80667	BUNKERC (C10-C38)	29505037	3183.99 M
Filter Peak	11.486	0.004	6529	3994	HYDRAUL (C24-C38)	25702689	1619.36
C36	9.749	-0.001	153761	115343			
C38	10.042	-0.005	103310	52192			
C40	10.328	-0.005	66384	40630			
o-terph	----						
Triacon Surr	----				IT.MOIL (C24-C40)	27070073	1749.30

M Indicates manual integration within range.

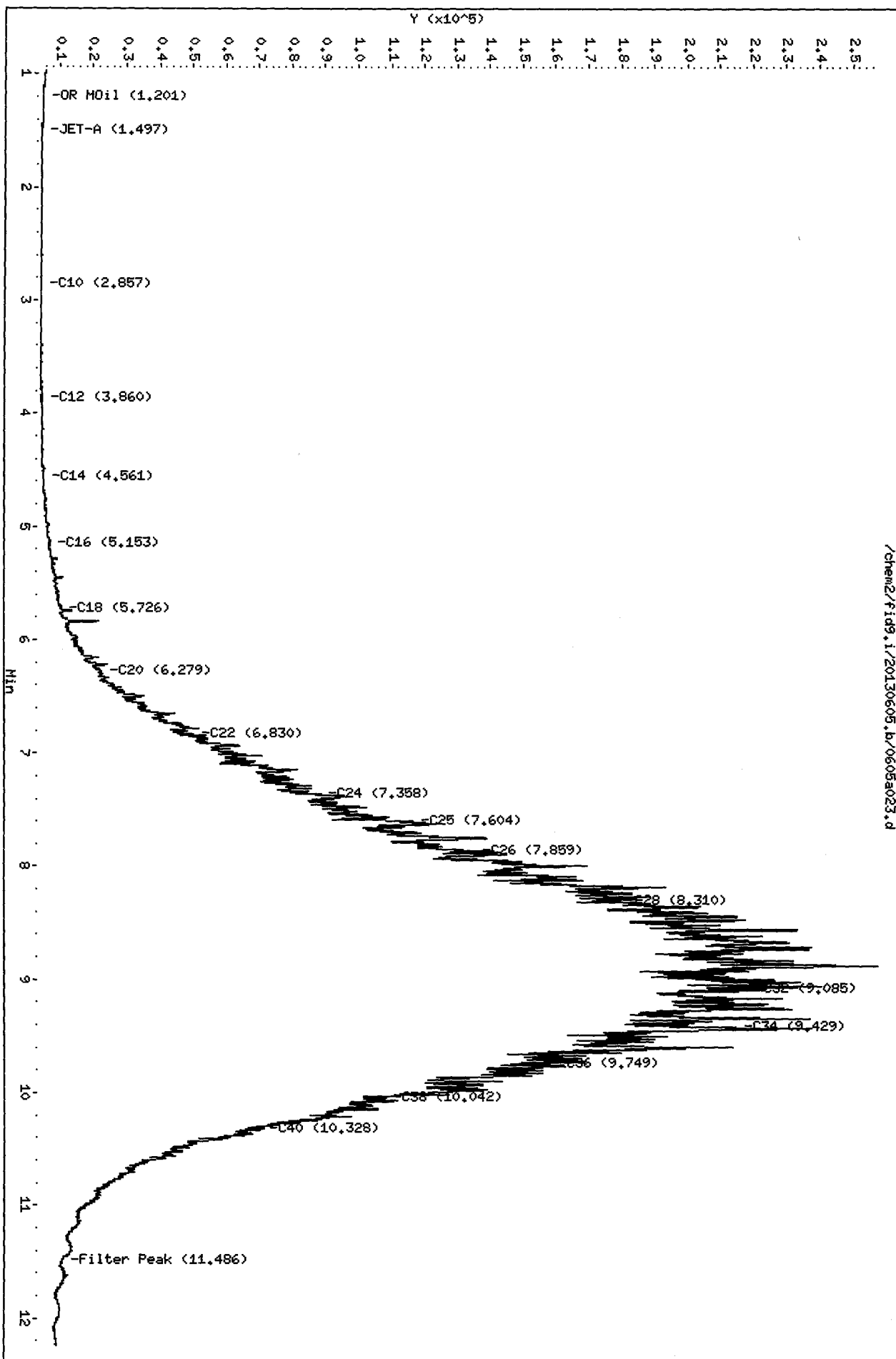
Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

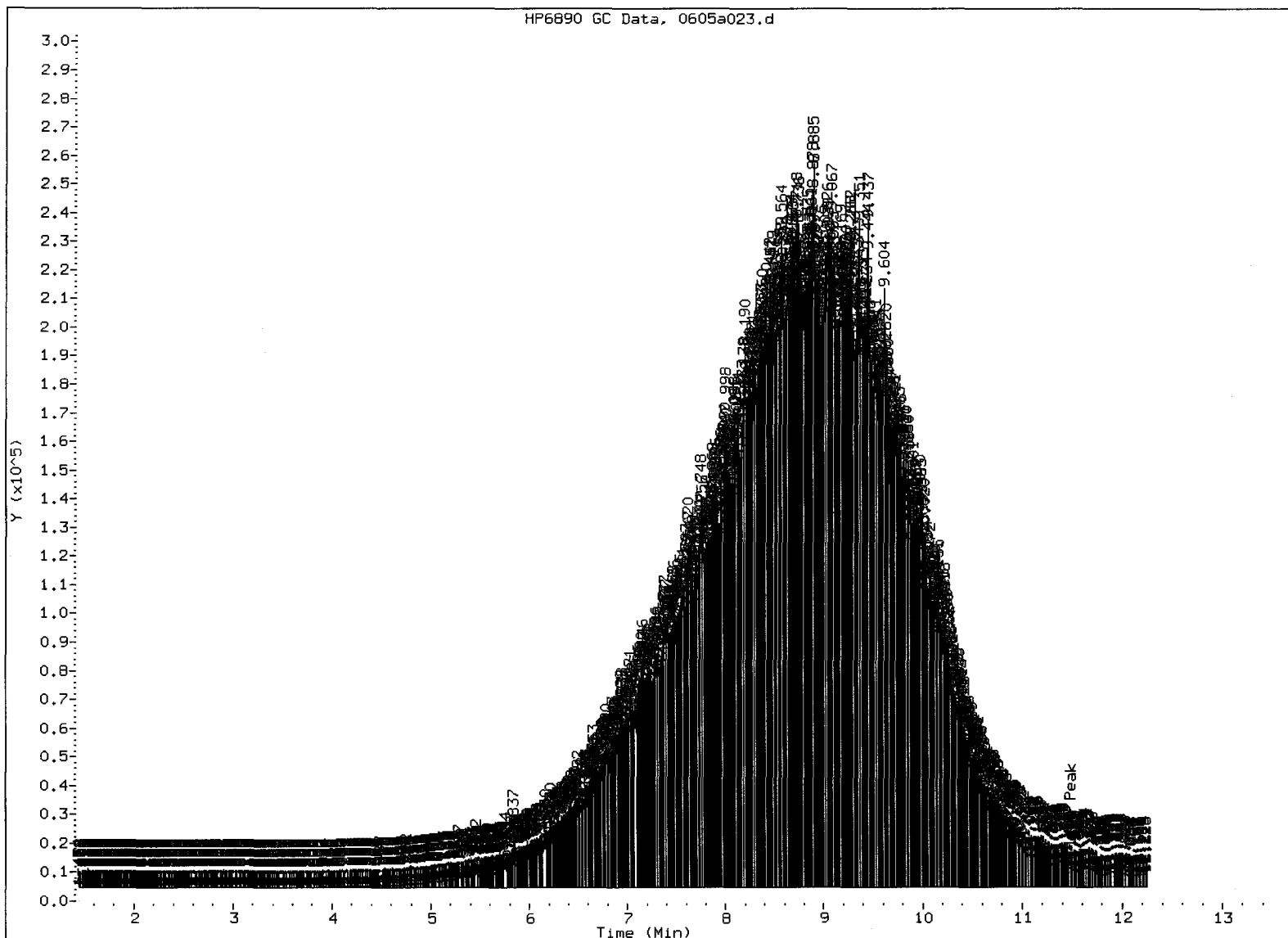
JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

/chem2/fid9.i/20130605.b/0605a023.d



020
6/11/13



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a020.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28P
 Client ID:
 Injection: 05-JUN-2013 15:52
 Dilution Factor: 5
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	41536	1
C8	1.082	-0.003	1248	2797	DIESEL (C12-C24)	3494015	187.05
C10	2.859	0.002	135	176	M.OIL (C24-C38)	16819557	1048.92
C12	3.864	0.001	373	122	AK-102 (C10-C25)	4165621	191.90 M
C14	4.564	0.003	1516	1021	AK-103 (C25-C36)	15332363	1319.72 M
C16	5.152	-0.001	2179	630			
C18	5.723	0.004	4839	3065			
C20	6.284	0.002	16118	3195			
C22	6.832	-0.002	42013	48015			
C24	7.355	-0.003	75780	82641			
C25	7.607	0.002	97164	53938			
C26	7.863	0.000	99600	27167			
C28	8.300	-0.006	125064	39617	IT.DIES (C10-C24)	3508185	162.07 M
C32	9.085	-0.003	136353	127206			
C34	9.427	-0.003	129068	93294	BUNKERC (C10-C38)	20327742	2193.63 M
Filter Peak	11.494	0.012	3843	3023	HYDRAUL (C24-C38)	16819557	1059.69
C36	9.750	0.000	77249	30822			
C38	10.044	-0.003	35417	26149			
C40	10.333	0.001	17018	4382			
o-terph	5.841	-0.012	178927	161729			
Triacon Surr	8.714	-0.011	150281	151125	IT.MOIL (C24-C40)	17367875	1112.56 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.863 - 7.358) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	161729	6.3	70.2
Triacontane	151125	8.0	88.8

*JCS
6/11/13*

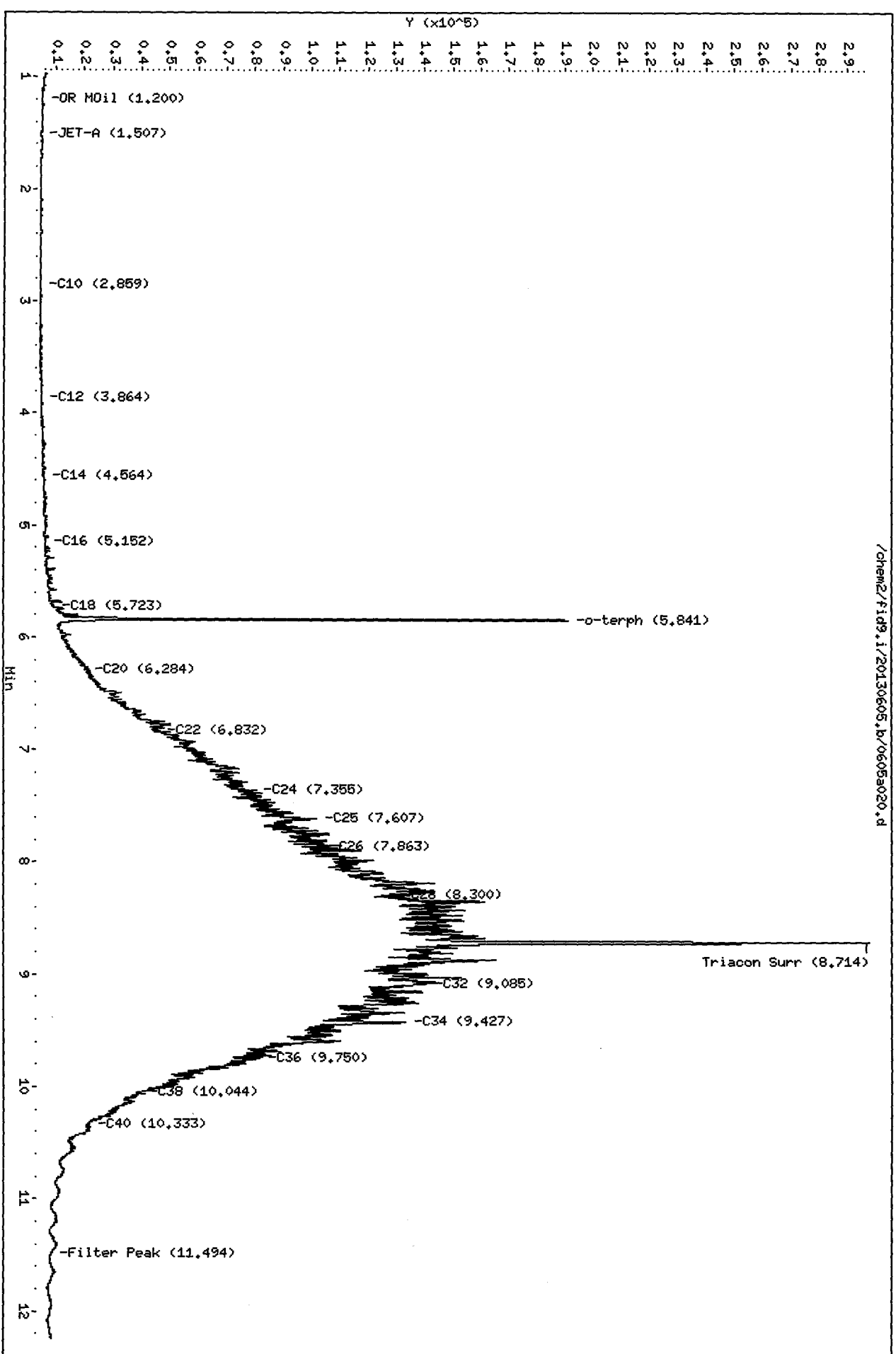
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Column phase: RTX-1

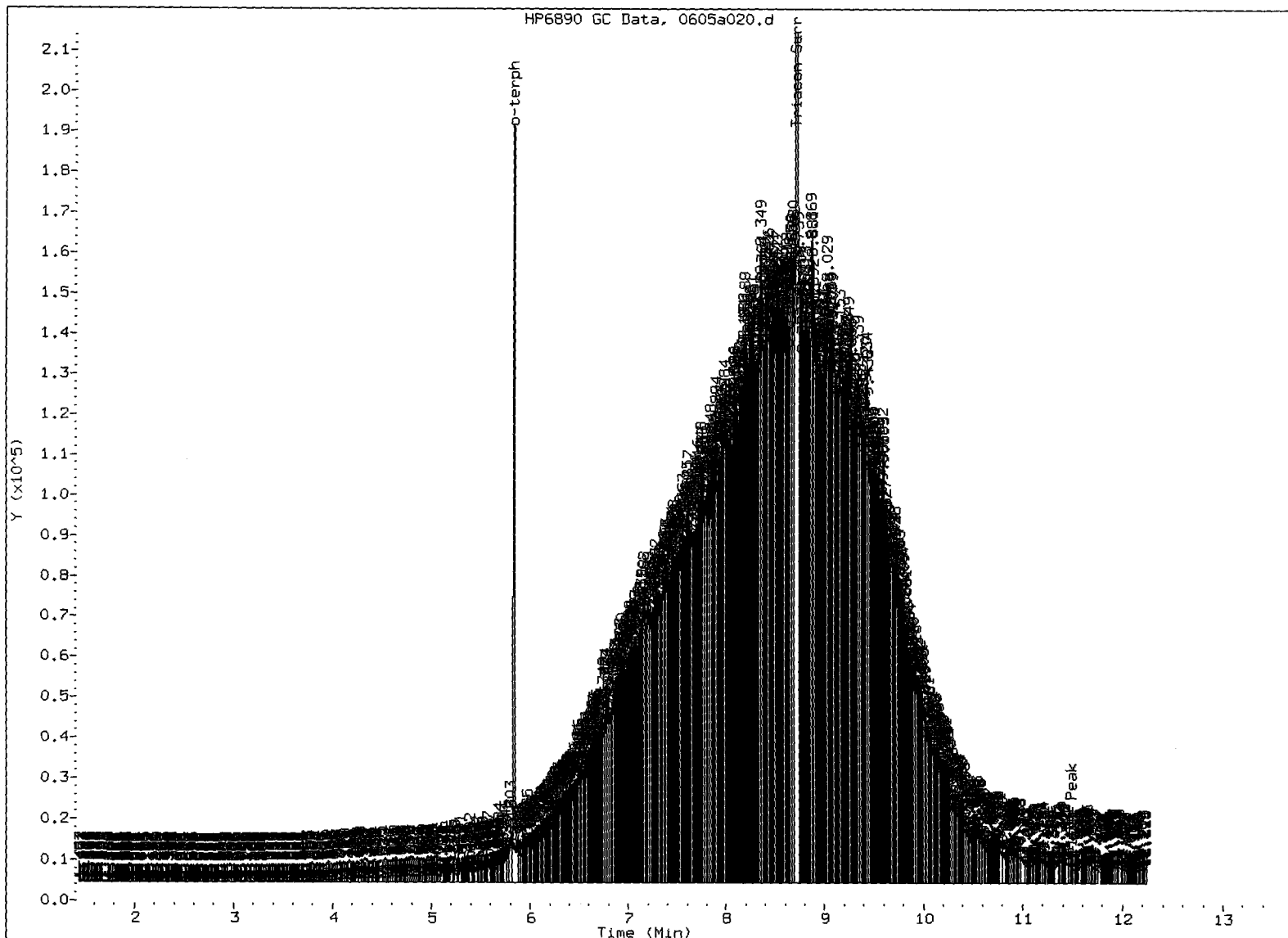
Instrument: fid9.i
Operator: JM
Column diameter: 0.25

510
6/11/13

/chem2/fid9.i/20130605.b/0605a020.d



MS28: 00061



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skimmed

Analyst: *SW*

Date: 6/11/0

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130605.b/0605a021.d
 Method: /chem2/fid9.i/20130605.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28Q
 Client ID:
 Injection: 05-JUN-2013 16:14
 Dilution Factor: 10
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	30125	1
C8	1.083	-0.002	1091	2524	DIESEL (C12-C24)	12149976	650.43 ✓
C10	2.853	-0.003	86	22	M.OIL (C24-C38)	58256322	3633.03 ✓
C12	3.862	0.000	166	87	AK-102 (C10-C25)	14482473	667.18 M
C14	4.560	-0.001	896	604	AK-103 (C25-C36)	52920073	4555.07
C16	5.153	-0.001	3027	1349			
C18	5.719	0.000	14893	9550			
C20	6.281	-0.001	69582	54825			
C22	6.837	0.003	161247	102928			
C24	7.358	0.000	244784	123342			
C25	7.604	-0.002	283039	78233			
C26	7.864	0.001	355031	250496			
C28	8.308	0.003	451292	357507	IT.DIES (C10-C24)	12156761	561.62 M
C32	9.086	-0.002	480865	241197			
C34	9.436	0.006	369796	163439	BUNKERC (C10-C38)	70413083	7598.51 M
Filter Peak	11.472	-0.010	4288	6105	HYDRAUL (C24-C38)	58256322	3670.35
C36	9.755	0.005	268899	109156			
C38	10.043	-0.004	132323	67139			
C40	10.327	-0.005	51161	33118			
o-terph	5.838	-0.015	105773	74378			
Triacon Surr	----				IT.MOIL (C24-C40)	59425839	3840.16

M Indicates manual integration within range.

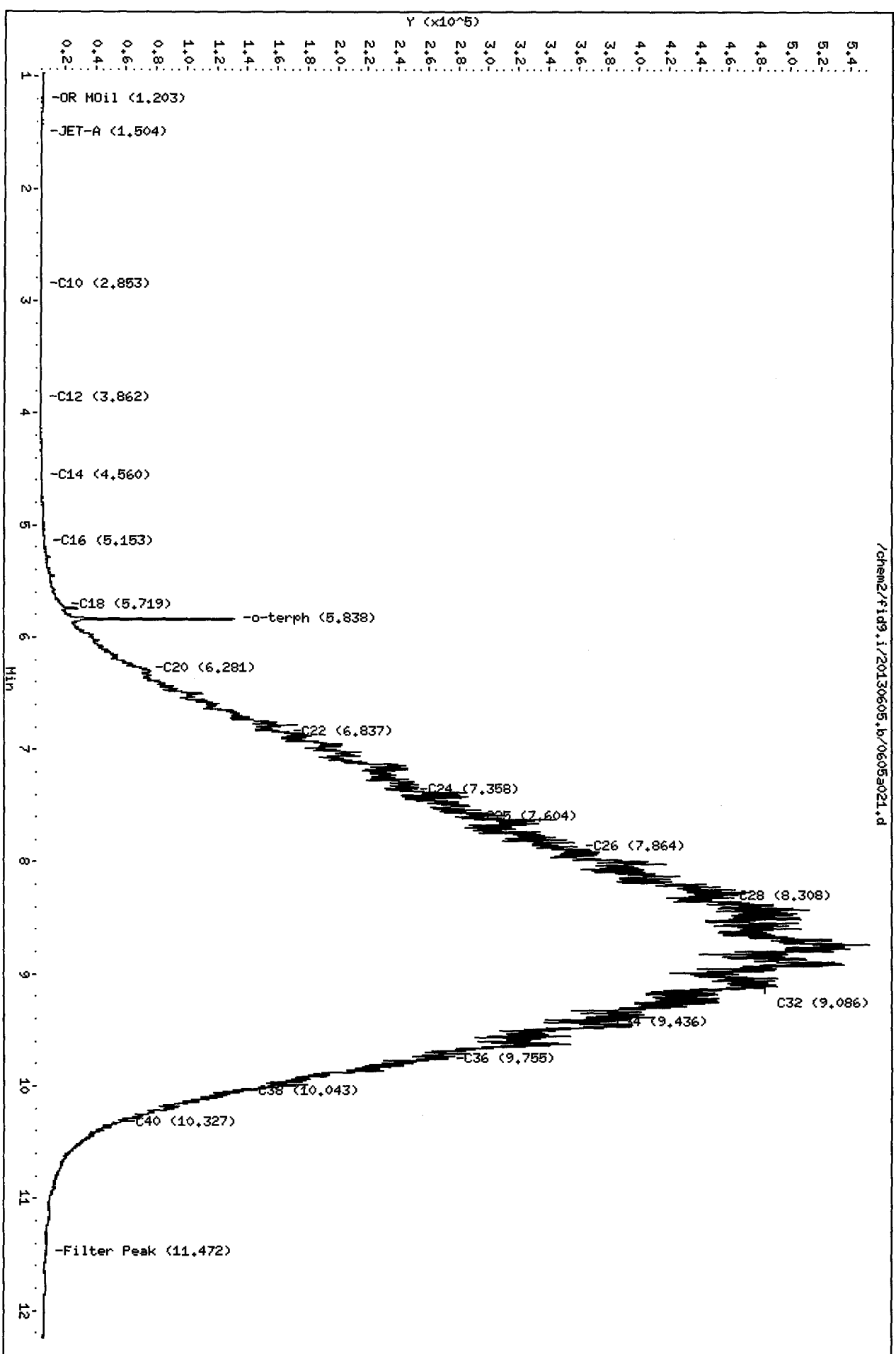
Range Times: NW Diesel(3.863 - 7.358) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	74378	2.9	64.5 ✓
Triacontane	0	0.0	0.0 NR

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

12/11/05



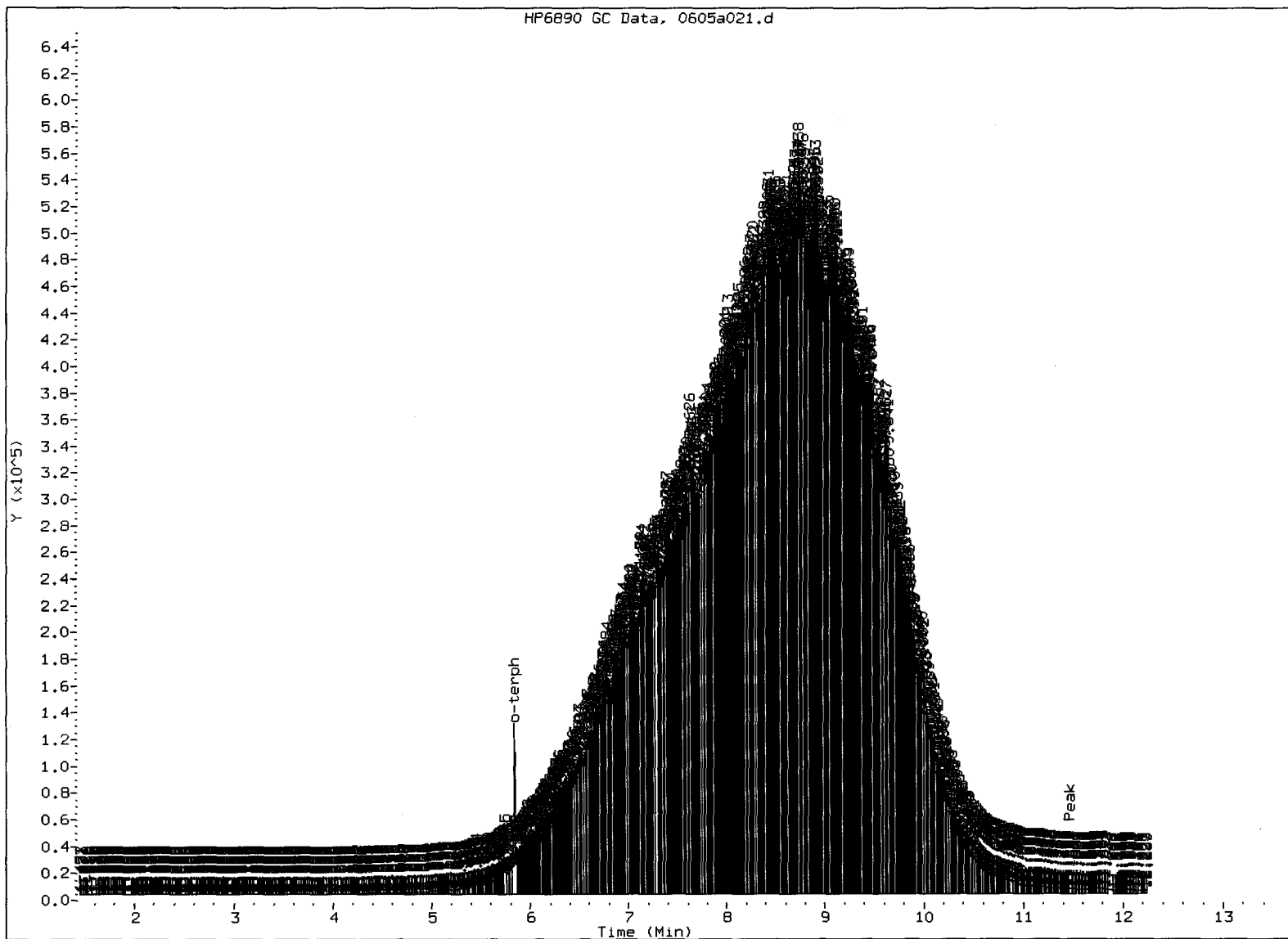
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MS28: 00064

FID: 9A-2C/RTX-1 WS28Q

FID: 9A SIGNAL

HP6890 GC Data, 0605a021.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: SW

Date: 6/11/79

WS28: 00065

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS28-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-060313	77.0%	0
LCS-060313	82.9%	0
SL-F7-S-6	73.3%	0
SL-F7-S-6 MS	75.6%	0
SL-F7-S-6 MSD	74.2%	0
SL-F8-S-6	74.5%	0
SL-F9-S-6	71.7%	0
SL-F10-S-6	74.0%	0
SL-F11-S-6	76.2%	0
A2-F43-S-6	67.9%	0
A2-F44-S-6	70.2%	0
A2-F45-S-6	69.2%	0
A2-F46-S-6	58.0%	0
A2-F47-S-6	76.9%	0
A2-F48-S-6	71.9%	0
A2-F49-S-6	71.8%	0
A2-F50-S-6	74.7%	0
A2-F51-S-6	77.6%	0
A2-F52-S-6	NR	0
A2-F52-S-6 DL	D	0
A2-F53-S-6	70.1%	0
A2-F54-S-6	64.4%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11702 to 13-11718

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: SL-F7-S-6
MS/MSD

Lab Sample ID: WS28A
 LIMS ID: 13-11702
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Extracted MS/MSD: 06/03/13

Sample Amount MS: 7.50 g-dry-wt
 MSD: 7.50 g-dry-wt

Date Analyzed MS: 06/04/13 16:31
 MSD: 06/04/13 16:54

Final Extract Volume MS: 1.0 mL
 MSD: 1.0 mL

Instrument/Analyst MS: FID/JLW
 MSD: FID/JLW

Dilution Factor MS: 1.0
 MSD: 1.0

Percent Moisture: 25.1%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 6.7	139	200	69.5%	136	200	68.0%	2.2%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	75.6%	74.2%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a011.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28AMS
 Client ID:
 Injection: 04-JUN-2013 16:31
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4180270	122
C8	1.097	0.009	9547	15439	DIESEL (C12-C24)	19532978	1045.67 M
C10	2.859	0.003	73674	79110	M.OIL (C24-C38)	1242525	77.49 M
C12	3.860	-0.002	191902	210460	AK-102 (C10-C25)	22682216	1044.92 M
C14	4.560	-0.002	334415	267496	AK-103 (C25-C36)	1104613	95.08 M
C16	5.155	0.000	494032	436179			
C18	5.720	-0.001	443182	513771			
C20	6.282	-0.004	254366	306767			
C22	6.828	-0.010	122043	169510			
C24	7.351	-0.010	42656	64284			
C25	7.603	-0.008	35514	67560			
C26	7.871	0.003	7622	2849			
C28	8.297	-0.010	13551	24810	IT.DIES (C10-C24)	22570888	1042.73 M
C32	9.082	-0.010	10937	19487			
C34	9.428	-0.008	5055	8988	BUNKERC (C10-C38)	23813413	2569.78 M
Filter Peak	11.487	0.001	332	64	HYDRAUL (C24-C38)	1242525	78.28
C36	9.747	-0.006	2501	2639			
C38	10.053	0.000	1251	442			
C40	10.338	-0.005	903	869			
o-terph	5.858	0.000	796167	871740			
Triacon Surr	8.722	-0.010	653916	710568	IT.MOIL (C24-C40)	1969040	81.32 M

M Indicates manual integration within range.

Range Times: NW Diesel (3.862 - 7.362) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871740	34.0	75.6
Triacontane	710568	37.6	83.5

JCO
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

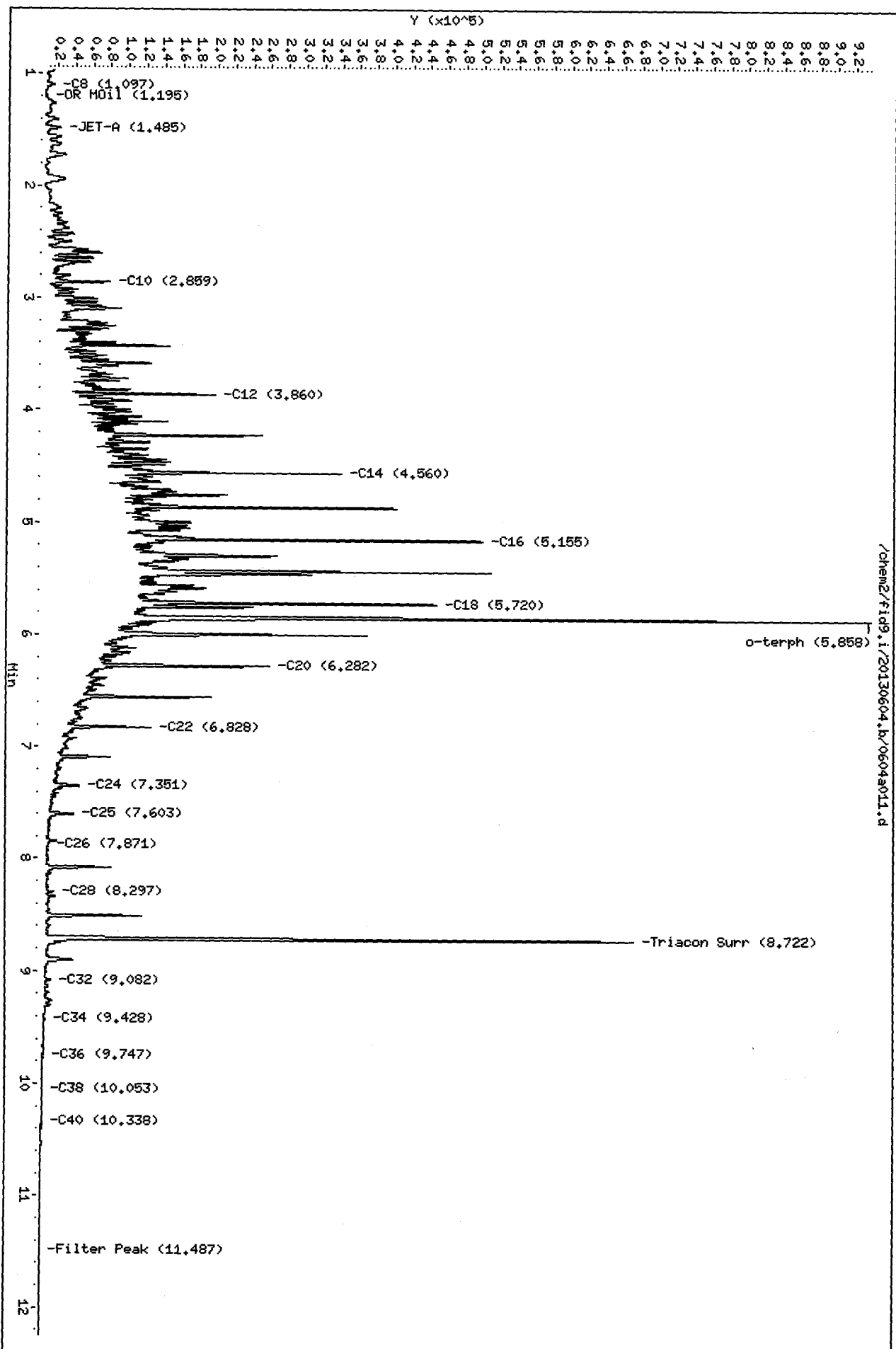
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Sample Info: MS28AHS

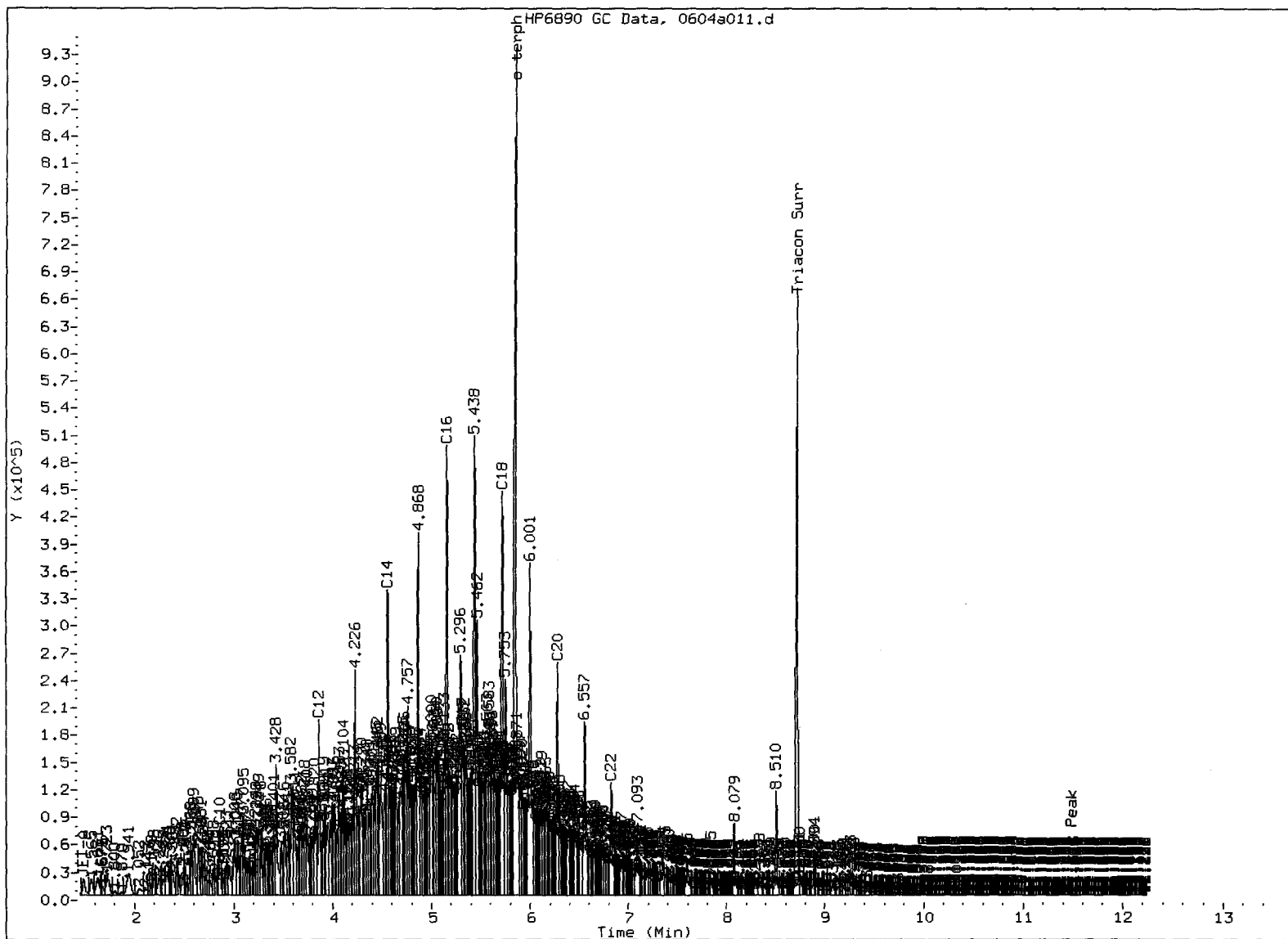
Instrument: fid9.i

Column phase: RTX-1

Operator: JM
Column diameter: 0.25

50
6/11/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
- ⑤. Surrogate Skipped

Analyst: JW

Date: 6/11/10

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a012.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28AMSD
 Client ID:
 Injection: 04-JUN-2013 16:54
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4088598	119
C8	1.099	0.010	11040	15140	DIESEL (C12-C24)	18983934	1016.28 ✓
C10	2.859	0.004	73541	74328	M.OIL (C24-C38)	1224157	76.34 ✓
C12	3.862	0.000	182376	195511	AK-102 (C10-C25)	22036148	1015.16 M
C14	4.561	-0.001	322274	292555	AK-103 (C25-C36)	1096493	94.38 M
C16	5.155	0.000	451344	465067			
C18	5.720	0.000	423512	511268			
C20	6.281	-0.005	246574	332915			
C22	6.829	-0.008	107757	163704			
C24	7.373	0.011	16330	13932			
C25	7.601	-0.011	45320	72629			
C26	7.877	0.009	7567	7529			
C28	8.294	-0.013	16797	24799	IT.DIES (C10-C24)	21933367	1013.28 M
C32	9.079	-0.013	11128	12911			
C34	9.442	0.006	3280	3730	BUNKERC (C10-C38)	23157524	2499.00 M
Filter Peak	11.478	-0.008	570	426	HYDRAUL (C24-C38)	1224157	77.13
C36	9.750	-0.002	2310	1442			
C38	10.054	0.000	1229	529			
C40	10.336	-0.007	934	435			
o-terph	5.857	-0.001	904042	855695			
Triacon Surr	8.719	-0.012	785347	733799	IT.MOIL (C24-C40)	1973296	80.10 M

M Indicates manual integration within range.

Range Times: NW Diesel(3.862 - 7.362) AK102(2.86 - 7.61) Jet A(2.86 - 5.72)
 NW M.Oil(7.36 - 10.05) AK103(7.61 - 9.75) OR Diesel(2.86 - 8.31)

Surrogate	Area	Amount	%Rec
o-Terphenyl	855695	33.4	74.2 ✓
Triacontane	733799	38.8	86.3

JLW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

Client ID:
Sample Info: MS28AHS0

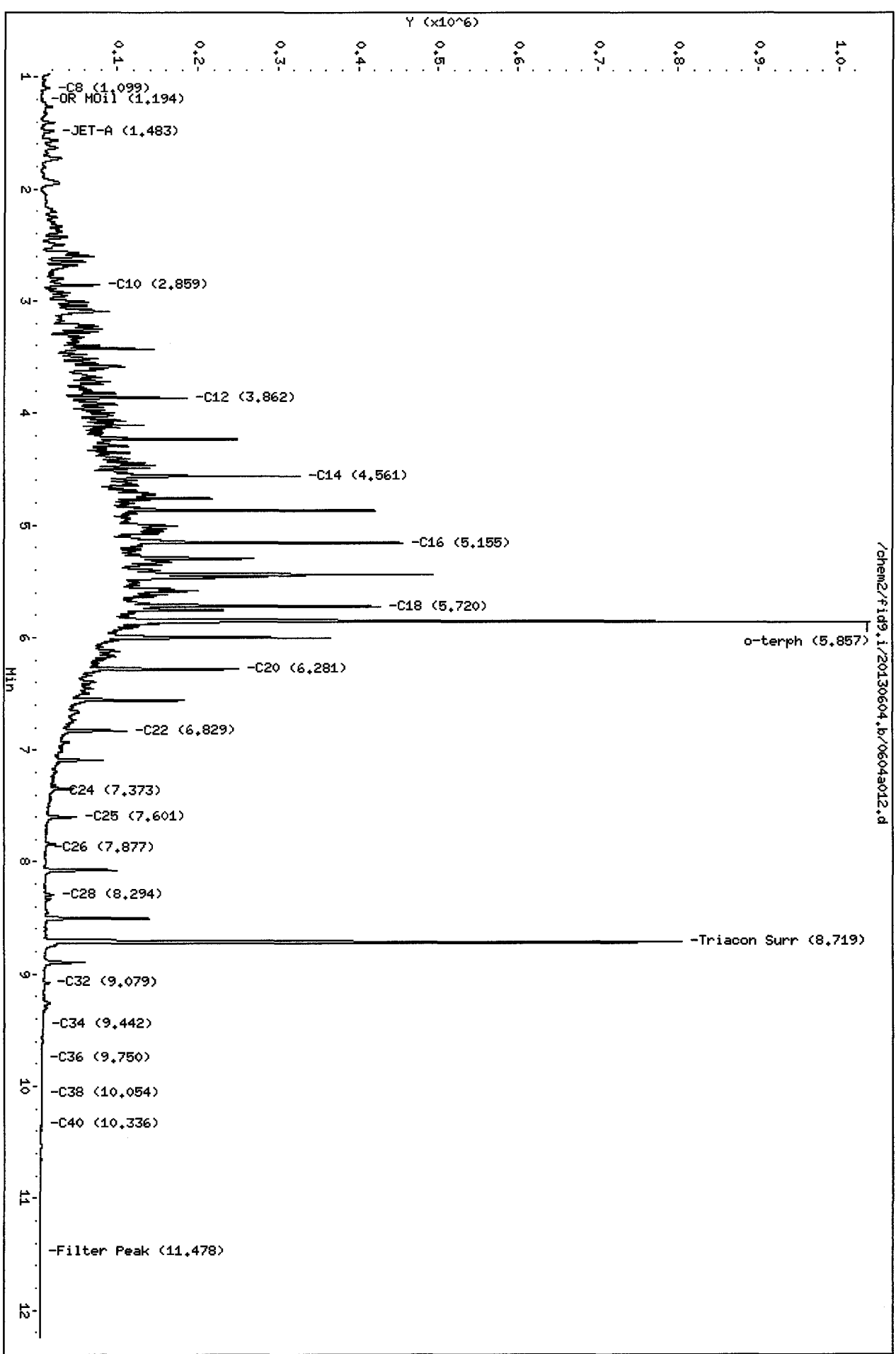
Column phase: RTX-1

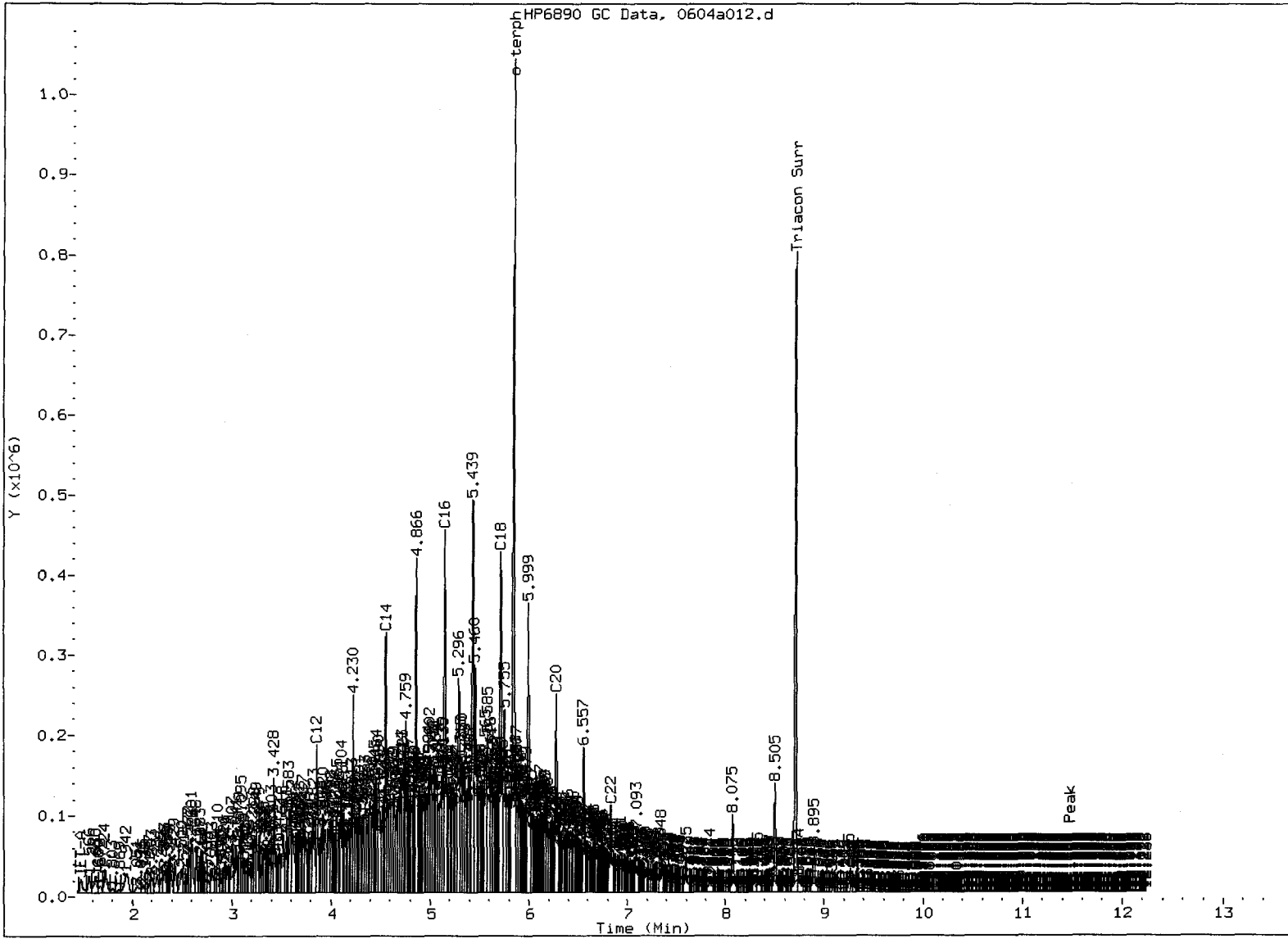
Instrument: fid9.i

Operator: JM

Column diameter: 0.25

JCC
6/11/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst: SW

Date: 6/11/13

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-060313
LAB CONTROL

Lab Sample ID: LCS-060313
 LIMS ID: 13-11702
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/30/13
 Date Received: 05/31/13

Date Extracted: 06/03/13
 Date Analyzed: 06/04/13 15:24
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	108	150	72.0%

TPHD Surrogate Recovery

o-Terphenyl	82.9%
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Results reported in mg/kg

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130604.b/0604a008.d
 Method: /chem2/fid9.i/20130604.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 06/11/2013

ARI ID: WS28LCSS1
 Client ID:
 Injection: 04-JUN-2013 15:24
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4395663	128
C8	1.100	0.012	10914	16302	DIESEL (C12-C24)	20244930	1083.79
C10	2.860	0.005	78099	82233	M.OIL (C24-C38)	338979	21.14
C12	3.863	0.001	193724	210650	AK-102 (C10-C25)	23501801	1082.68 M
C14	4.561	-0.001	350778	370060	AK-103 (C25-C36)	255810	22.02
C16	5.157	0.002	509317	479849			
C18	5.722	0.001	467435	541597			
C20	6.282	-0.004	285369	335293			
C22	6.832	-0.006	116034	152133			
C24	7.351	-0.011	36384	57669			
C25	7.604	-0.008	16533	28240			
C26	7.849	-0.018	7543	19088			
C28	8.309	0.002	2655	4615	IT.DIES (C10-C24)	23419639	1081.94 M
C32	9.082	-0.010	739	301			
C34	9.444	0.008	289	283	BUNKERC (C10-C38)	23758619	2563.87 M
Filter Peak	11.485	-0.001	330	131	HYDRAUL (C24-C38)	338979	21.36
C36	9.741	-0.012	369	563			
C38	10.050	-0.003	80	38			
C40	10.339	-0.003	307	95			
o-terph	5.860	0.002	950658	954955			
Triacon Surr	8.719	-0.012	604970	624845	IT.MOIL (C24-C40)	966941	22.11

M Indicates manual integration within range.

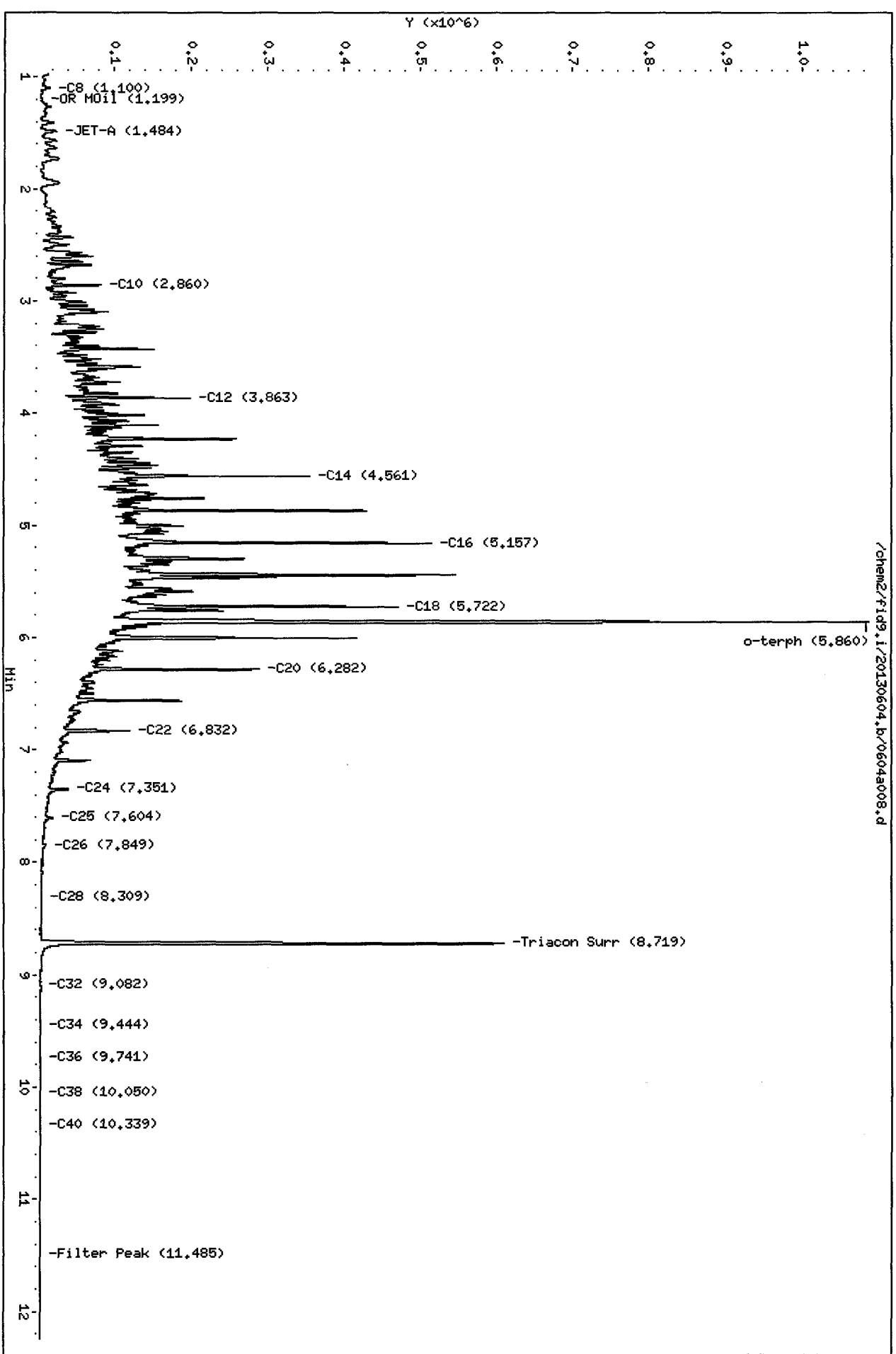
Range Times: NW Diesel (3.862 - 7.362) AK102 (2.86 - 7.61) Jet A (2.86 - 5.72)
 NW M.Oil (7.36 - 10.05) AK103 (7.61 - 9.75) OR Diesel (2.86 - 8.31)

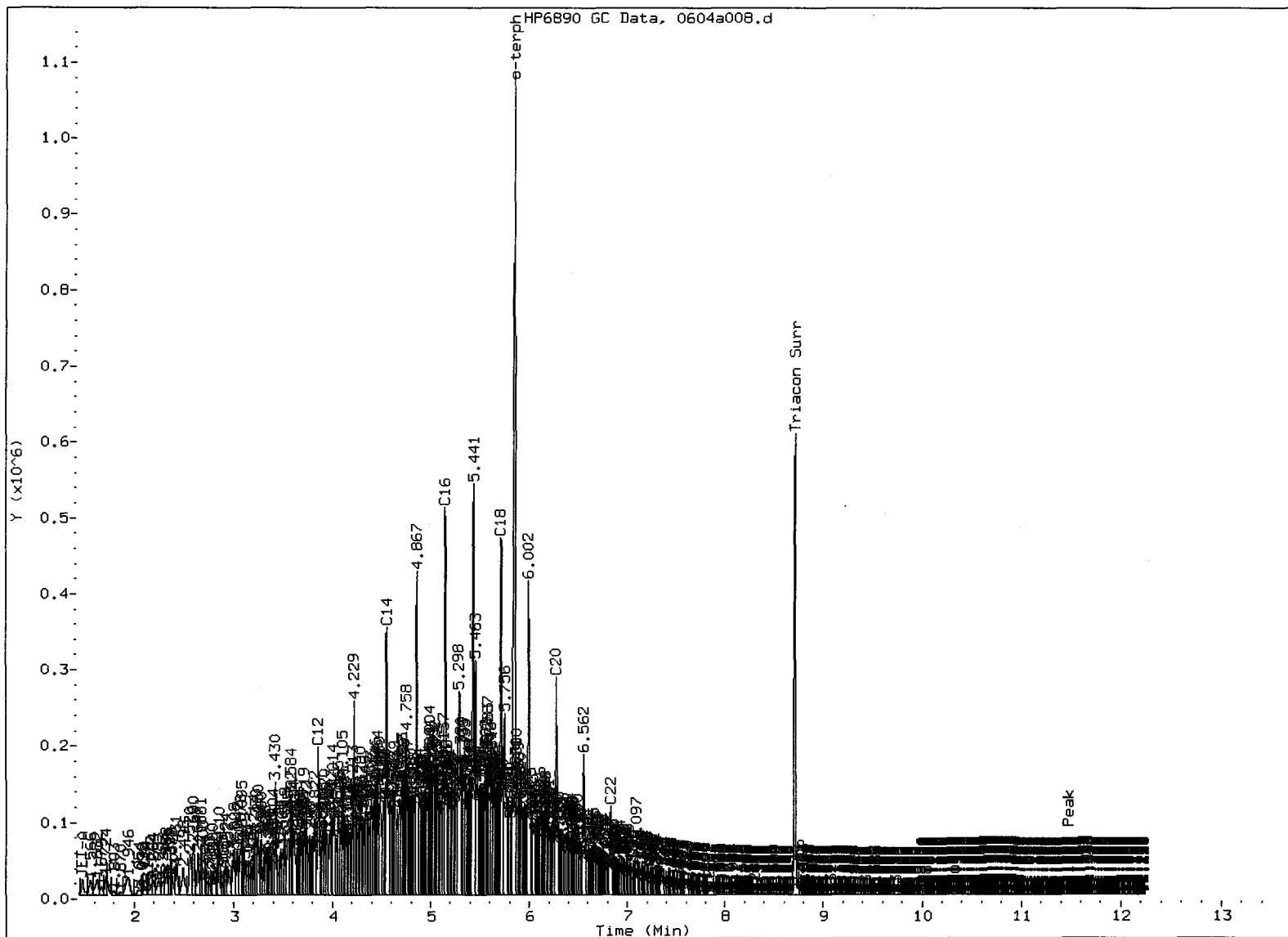
Surrogate	Area	Amount	%Rec
o-Terphenyl	954955	37.3	82.9
Triacontane	624845	33.1	73.5

JW
6/11/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
IT Diesel	21646.0	
IT M.Oil	15474.8	
Bunker C	9266.7	25-MAR-2013
Hydraulic	15872.1	29-MAY-2013

JCO
6/11/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: ju

Date: 6/11/0

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/31/13

ARI Job: WS28
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11702-060313MB1	Method Blank	10.0 g	1.00 mL	-	06/03/13
13-11702-060313LCS1	Lab Control	10.0 g	1.00 mL	-	06/03/13
13-11702-WS28A	SL-F7-S-6	7.51 g	1.00 mL	D	06/03/13
13-11702-WS28AMS	SL-F7-S-6	7.50 g	1.00 mL	D	06/03/13
13-11702-WS28AMSD	SL-F7-S-6	7.50 g	1.00 mL	D	06/03/13
13-11703-WS28B	SL-F8-S-6	8.20 g	1.00 mL	D	06/03/13
13-11704-WS28C	SL-F9-S-6	7.61 g	1.00 mL	D	06/03/13
13-11705-WS28D	SL-F10-S-6	8.47 g	1.00 mL	D	06/03/13
13-11706-WS28E	SL-F11-S-6	8.24 g	1.00 mL	D	06/03/13
13-11707-WS28F	A2-F43-S-6	8.61 g	1.00 mL	D	06/03/13
13-11708-WS28G	A2-F44-S-6	8.02 g	1.00 mL	D	06/03/13
13-11709-WS28H	A2-F45-S-6	7.54 g	1.00 mL	D	06/03/13
13-11710-WS28I	A2-F46-S-6	7.37 g	1.00 mL	D	06/03/13
13-11711-WS28J	A2-F47-S-6	8.08 g	1.00 mL	D	06/03/13
13-11712-WS28K	A2-F48-S-6	7.73 g	1.00 mL	D	06/03/13
13-11713-WS28L	A2-F49-S-6	6.91 g	1.00 mL	D	06/03/13
13-11714-WS28M	A2-F50-S-6	7.79 g	1.00 mL	D	06/03/13
13-11715-WS28N	A2-F51-S-6	8.61 g	1.00 mL	D	06/03/13
13-11716-WS28O	A2-F52-S-6	8.11 g	1.00 mL	D	06/03/13
13-11717-WS28P	A2-F53-S-6	8.71 g	1.00 mL	D	06/03/13
13-11718-WS28Q	A2-F54-S-6	8.83 g	1.00 mL	D	06/03/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: SL-F7-S-6

SAMPLE

Lab Sample ID: WS28A

LIMS ID: 13-11702

Matrix: Soil

Data Release Authorized: 

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 15:12

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 25.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	64
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	45
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MAC
 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a009.d ARI ID: WS28A
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a009.d Client ID: SL-F7-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 15:12
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2978	38175	100.6	TFT(Surr)
15.381	0.002	1995	16591	100.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	4423	0.012
8015C 2MP-TMB (4.19 to 16.20)	723723	4263	0.006
AK101 nC6-nC10 (4.68 to 15.10)	582885	4263	0.007
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4423	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3296	102.3	TFT(Surr)
15.388	0.002	7310	101.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.027	0.005	53	0.24N	Benzene
9.883	0.003	173	0.87N	Toluene
12.767	-0.003	21	0.13N	Ethylbenzene
12.937	0.006	112	0.62N	M/P-Xylene
13.883	0.006	29	0.20N	O-Xylene
ND	---	---	---	MTBE

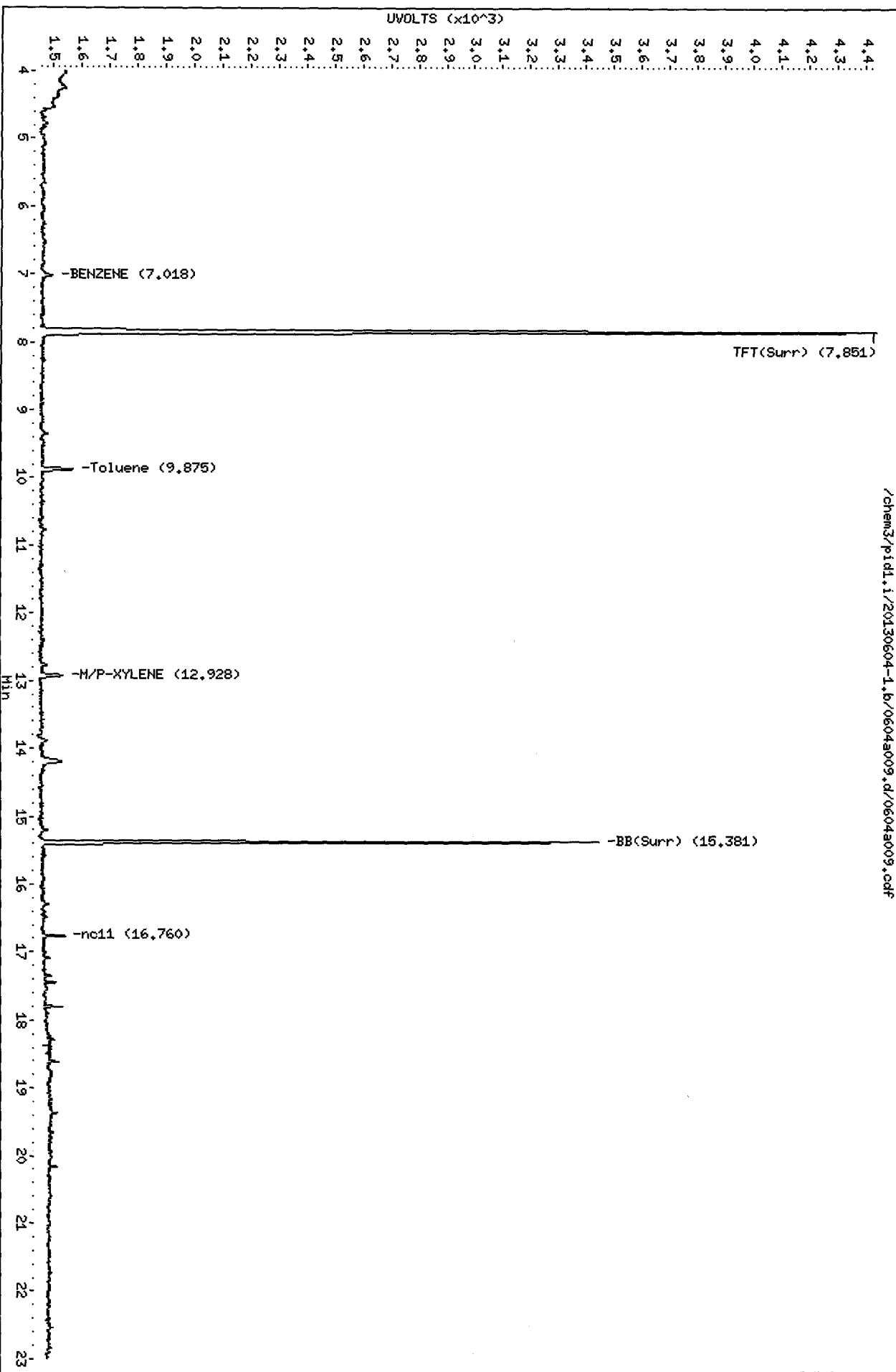
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

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Client ID: SL-F7-S-6
Sample Info: MS28A
Column phase: RTX 502-2 FID

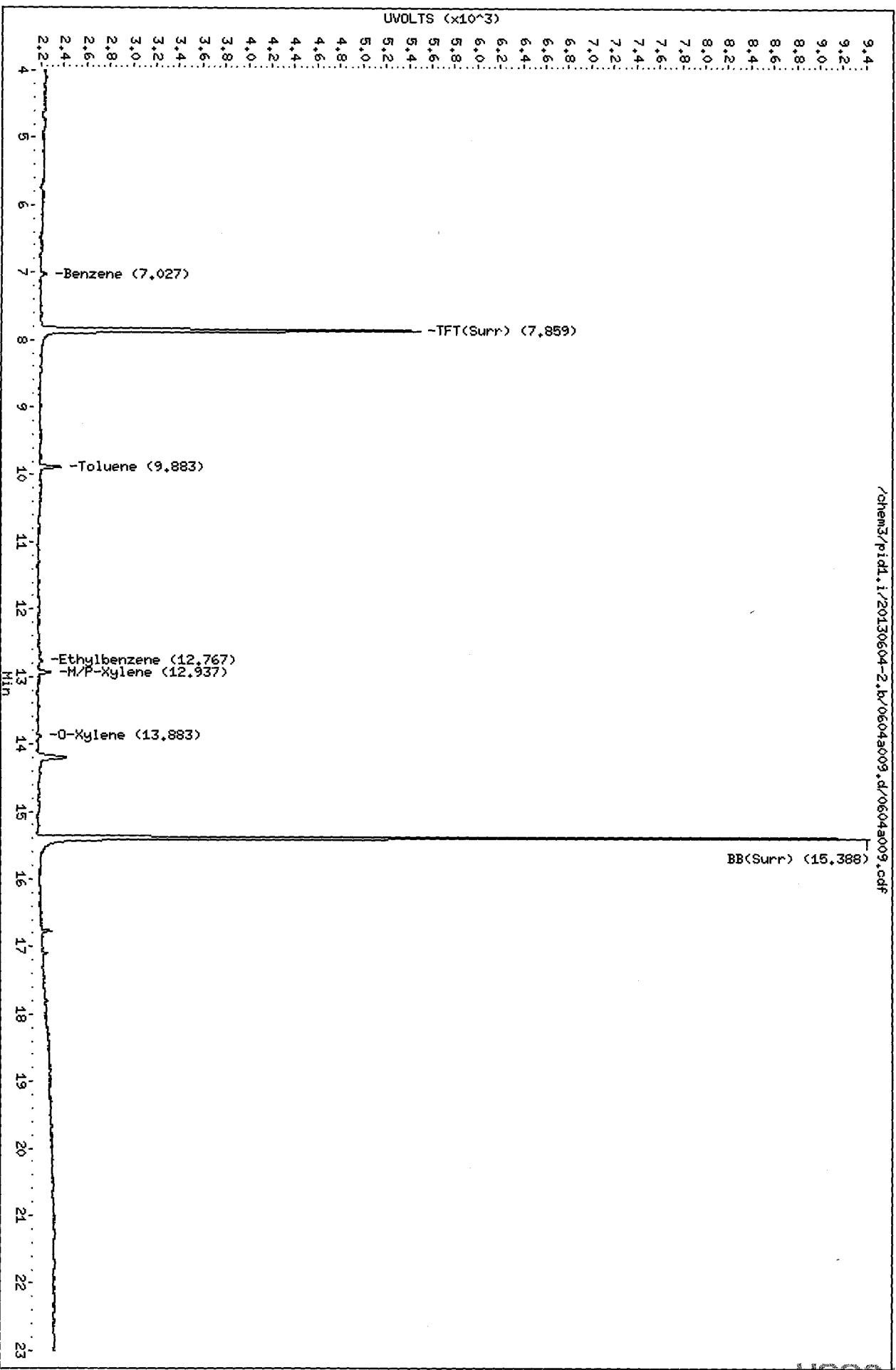
Instrument: pidl.i
Operator: PC
Column diameter: 0.18

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Date : 04-JUN-2013 15:12
Client ID: SL-F7-S-6
Sample Info: MS284
Column phase: RTX 502-2 PID

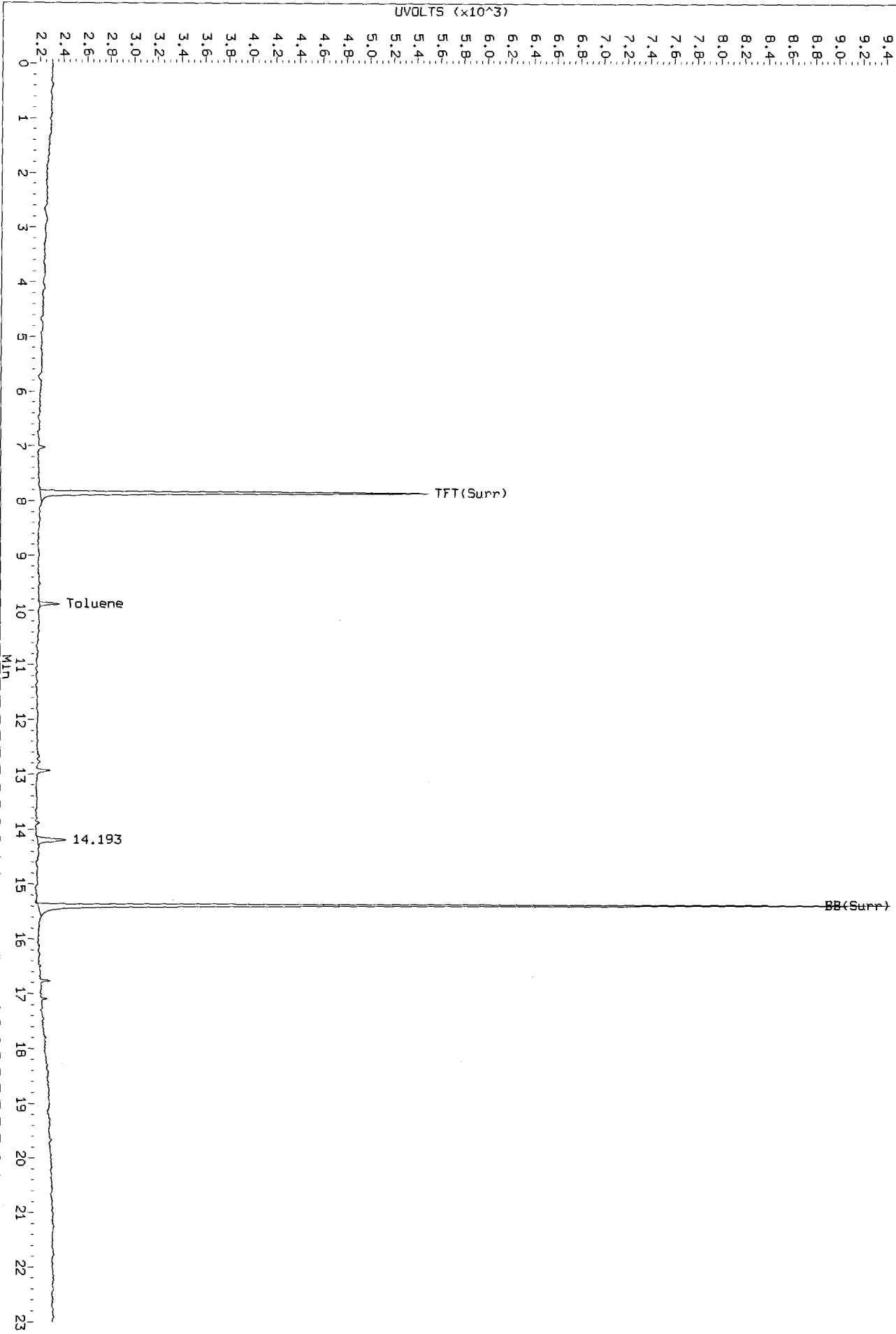
Instrument: pidd.i
Operator: PC
Column diameter: 0.18



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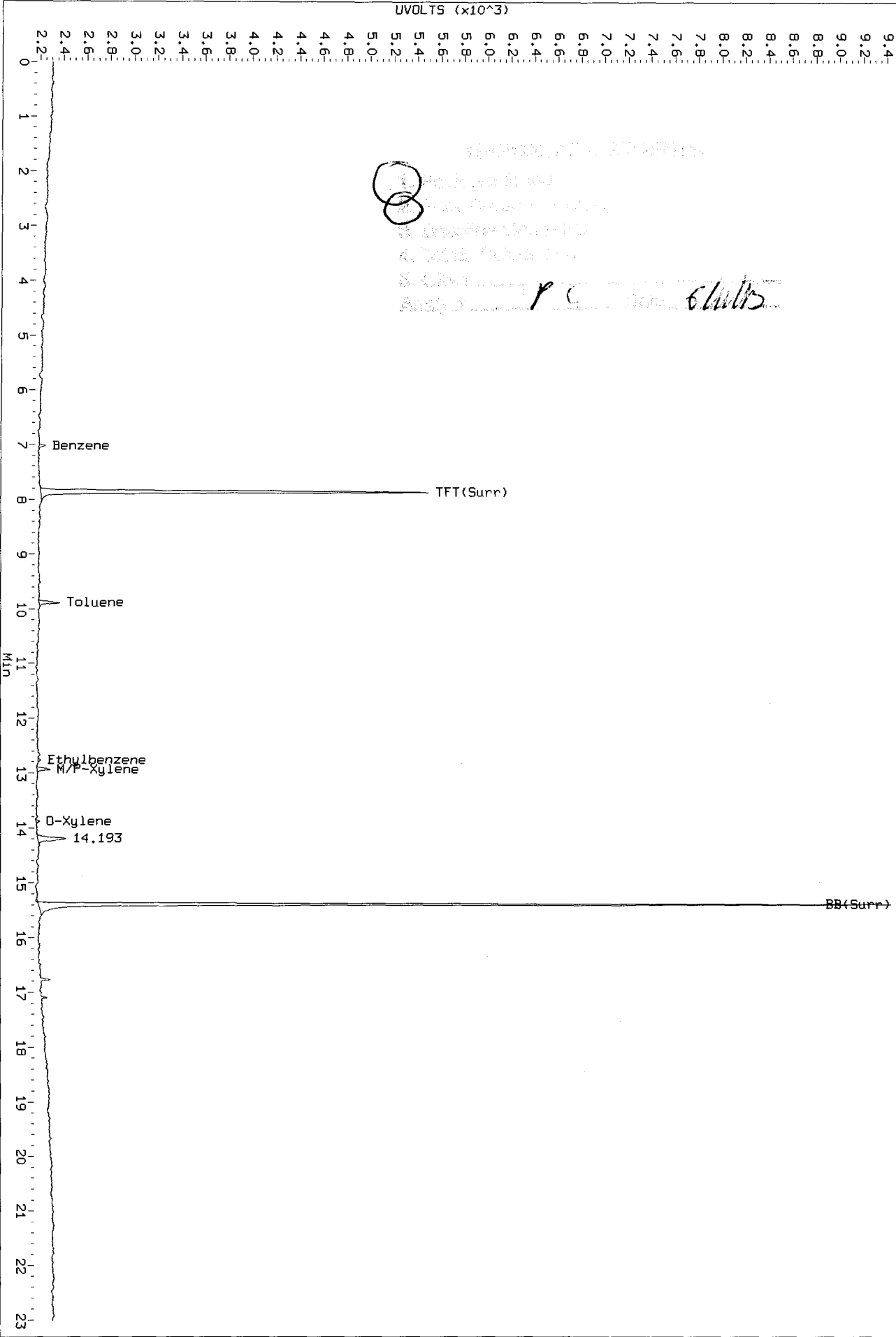
PC
6/11/13
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Injection Date: 04-JUN-2013 15:12
Instrument: pid1.1
Client Sample ID: SL-F7-S-6

AIR 0604a009.cdf: 0.000 to 23.003 MIN



Data File: /chem3/pid1.i/20130604-2.b/0604s009.d/0604s009.cdf
Injection Date: 04-JUN-2013 15:12
Instrument: pid1.1
Client Sample ID: SL-F7-5-6

AIR 0604s009.cdf: 0.000 to 23.003 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: SL-F8-S-6

SAMPLE

Lab Sample ID: WS28B

LIMS ID: 13-11703

Matrix: Soil

Data Release Authorized: 

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 15:40

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 18.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	18
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	95.6%
Bromobenzene	94.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a010.d ARI ID: WS28B
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a010.d Client ID: SL-F8-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 15:40
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2811	35844	95.0	TFT(Surr)
15.380	0.001	1864	15558	93.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3082	95.6	TFT(Surr)
15.388	0.002	6849	94.7	BB(Surr)

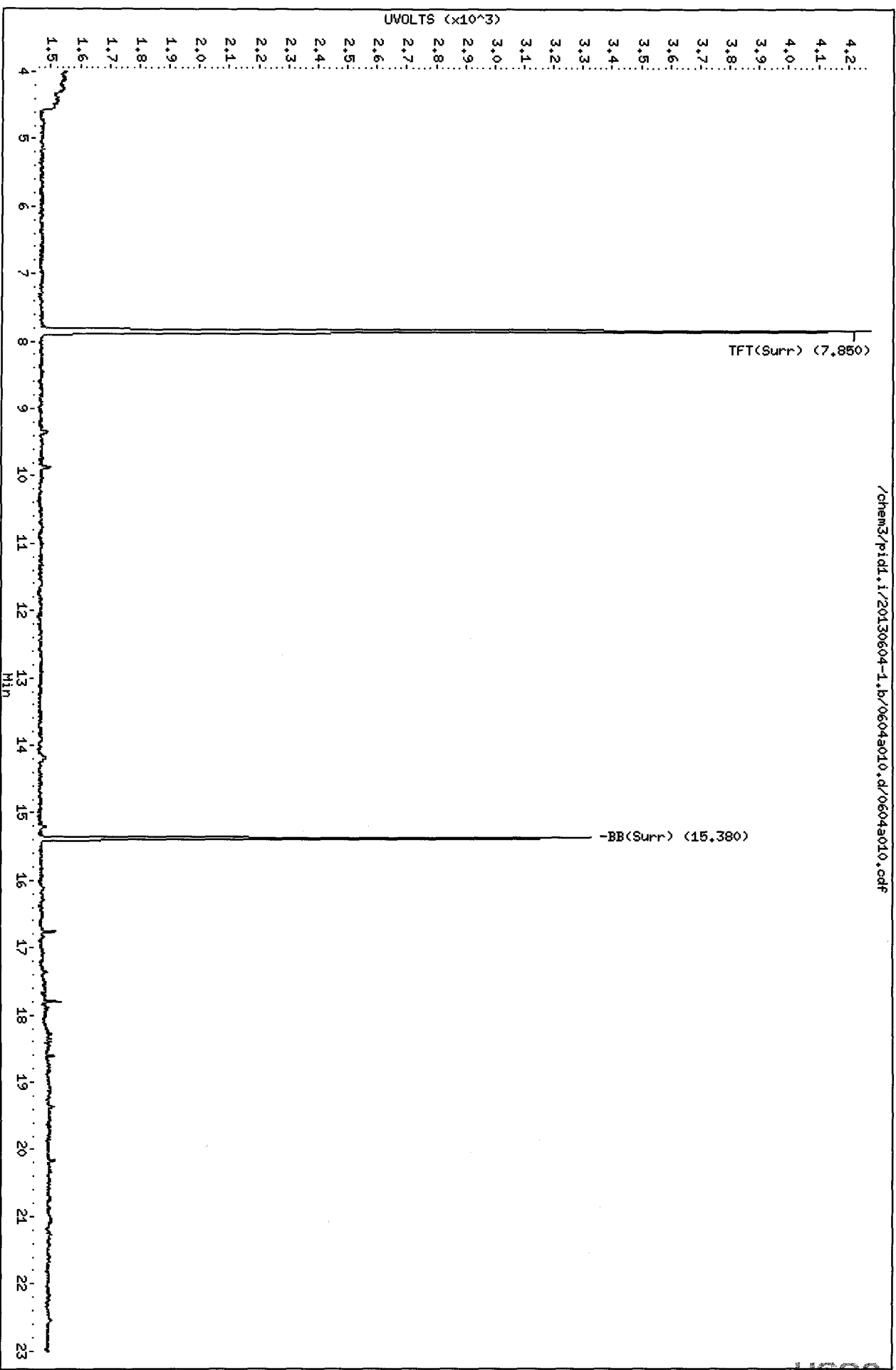
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.003	53	0.27N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a010.d
Date : 04-JUN-2013 15:40
Client ID: SL-F8-S-6
Sample Info: MS288
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-1.b/0604a010.d/0604a010.cdf

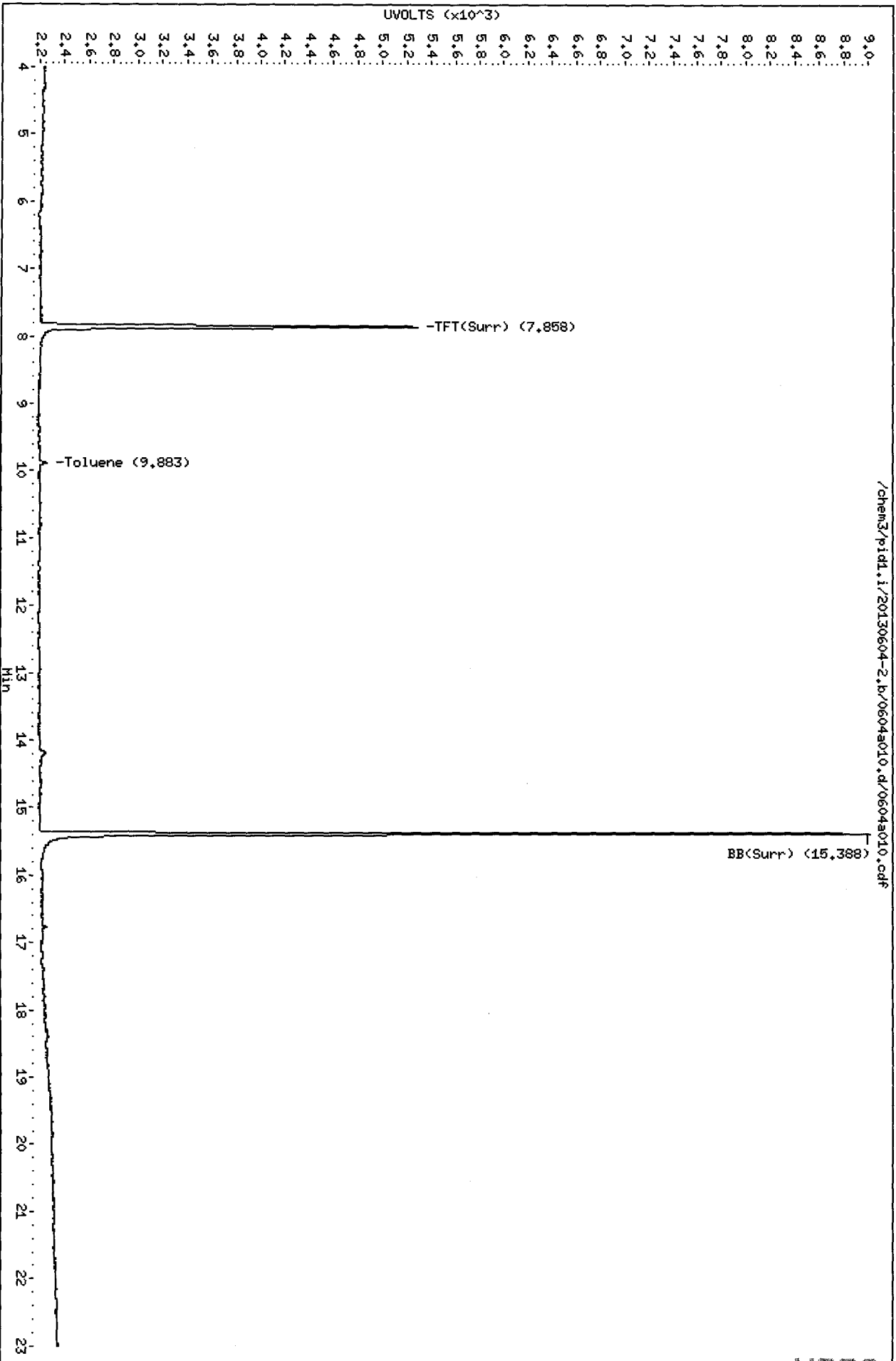
00001 0528

6/11/13

Data File: /chem3/pid1.i/20130604-2.b/0604a010.d
Date: 04-JUN-2013 15:40
Client ID: SL-F8-S-6
Sample Info: MS288

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



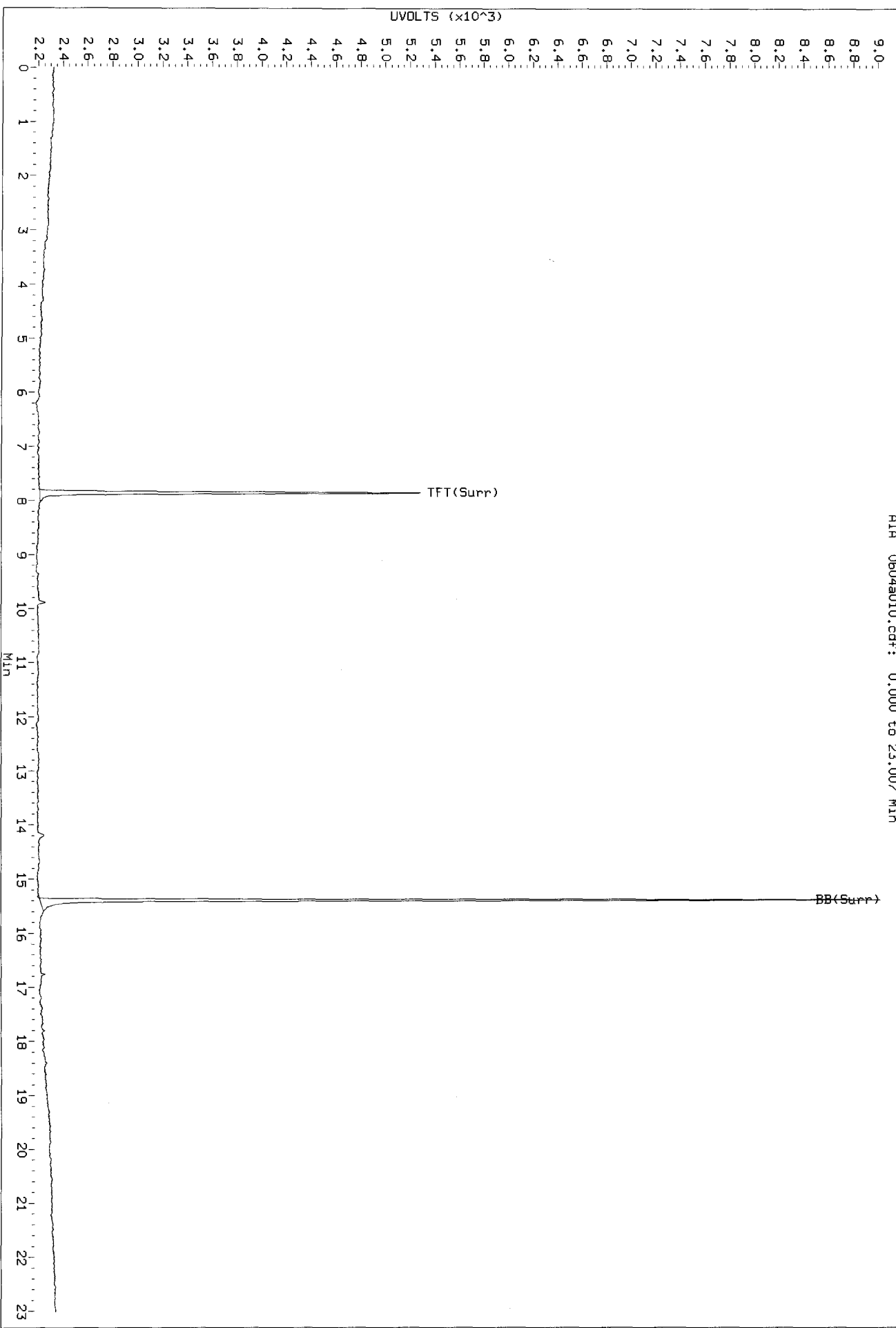
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00088 0528

Handwritten initials

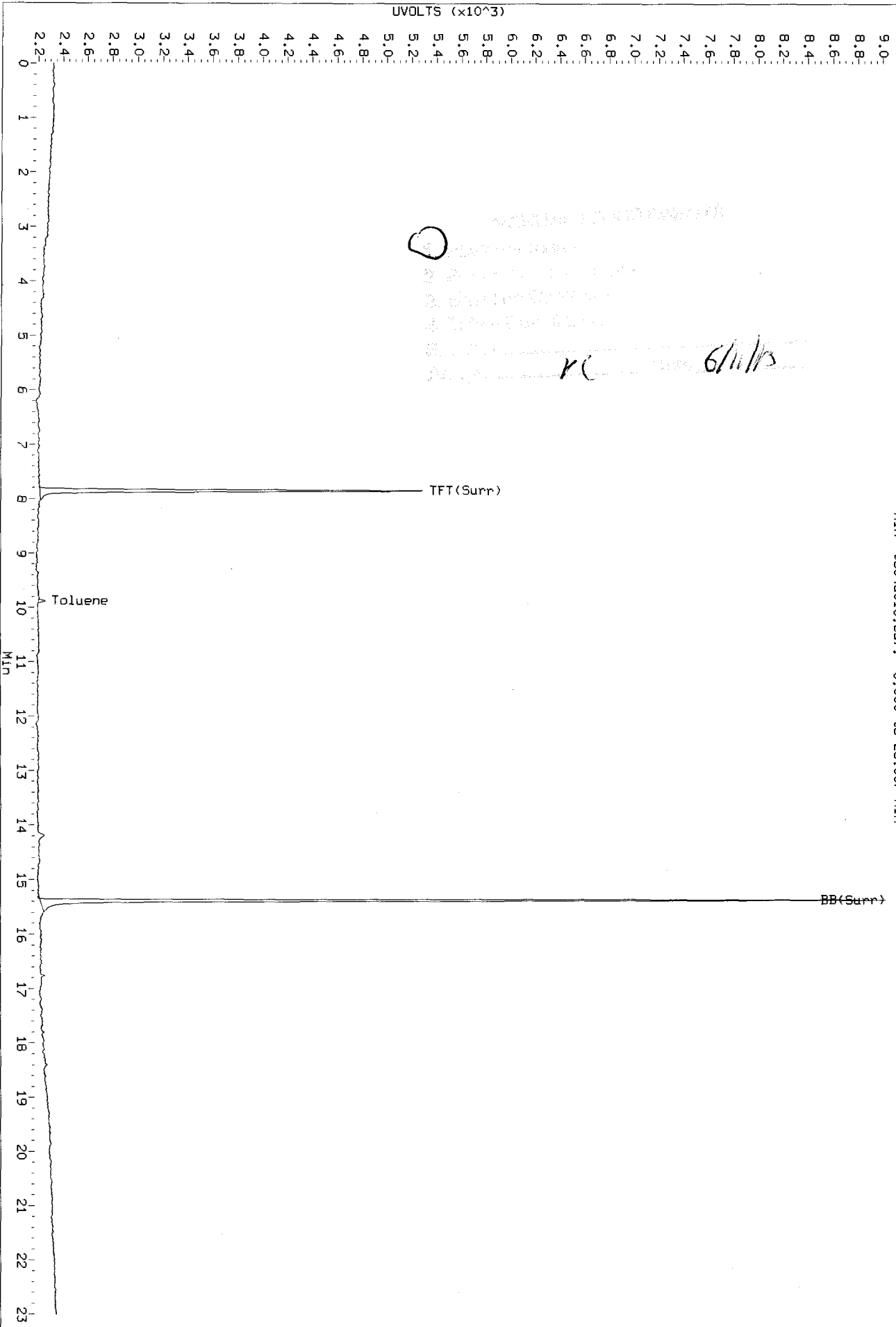
Data File: /chem3/pid1.i/20130604-2.i.b/0604#010.d/0604#010.cdf
Injection Date: 04-JUN-2013 15:40
Instrument: pid1.i
Client Sample ID: SL-F8-S-6

AIR 0604#010.cdf: 0.000 to 23.007 MIN



Data File: /chem3/pid1.1/20130604-2.b/0604a010.d/0604a010.cdf
Injection Date: 04-JUN-2013 15:40
Instrument: pid1.1
Client Sample ID: SL-F8-S-6

RI# 0604a010.cdf: 0.000 to 23.007 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: SL-F9-S-6

SAMPLE

Lab Sample ID: WS28C

LIMS ID: 13-11704

Matrix: Soil

Data Release Authorized:

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 16:08

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 66 mg-dry-wt

Percent Moisture: 24.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	19	< 19 U
108-88-3	Toluene	19	20
100-41-4	Ethylbenzene	19	< 19 U
179601-23-1	m,p-Xylene	38	< 38 U
95-47-6	o-Xylene	19	< 19 U

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	97.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

KE
6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a011.d ARI ID: WS28C
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a011.d Client ID: SL-F9-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 16:08
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2930	37376	99.0	TFT(Surr)
15.381	0.002	1954	16548	98.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	2678	0.007
8015C 2MP-TMB (4.19 to 16.20)	723723	1976	0.003
AK101 nC6-nC10 (4.68 to 15.10)	582885	1976	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2678	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.859	0.003	3225	100.0	TFT(Surr)
15.389	0.002	7066	97.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.003	54	0.27N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

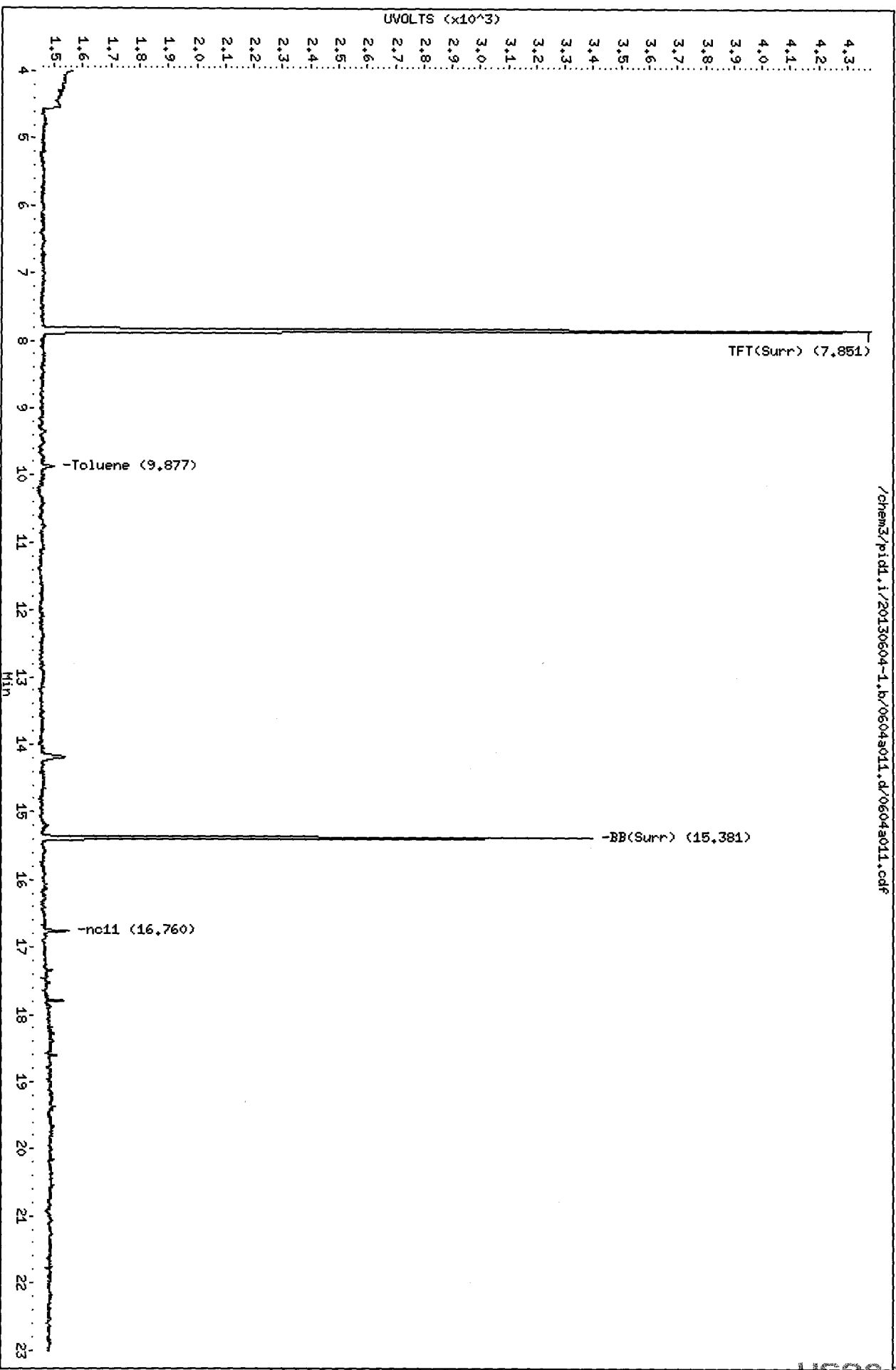
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a011.d
Date: 04-JUN-2013 16:08
Client ID: SL-F9-S-6
Sample Info: MS28C

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

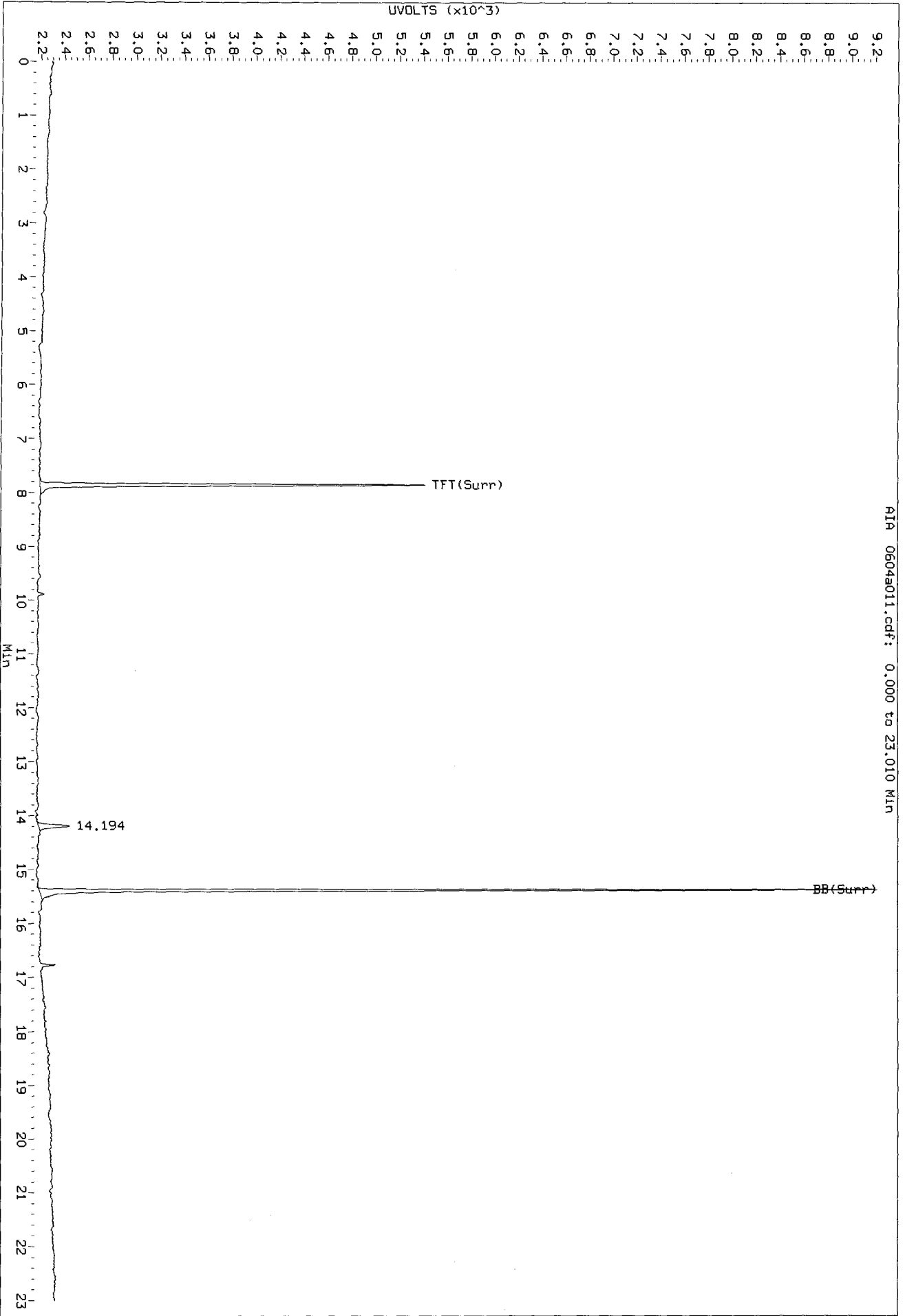
/chem3/pid1.i/20130604-1.b/0604a011.d/0604a011.cdf



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PC
6/11/13

Data File: /chem3/pid1.1/20130604-2.1.b/0604s011.d/0604s011.cdf
Injection Date: 04-JUN-2013 16:08
Instrument: pid1.1
Client Sample ID: SL-F9-5-6

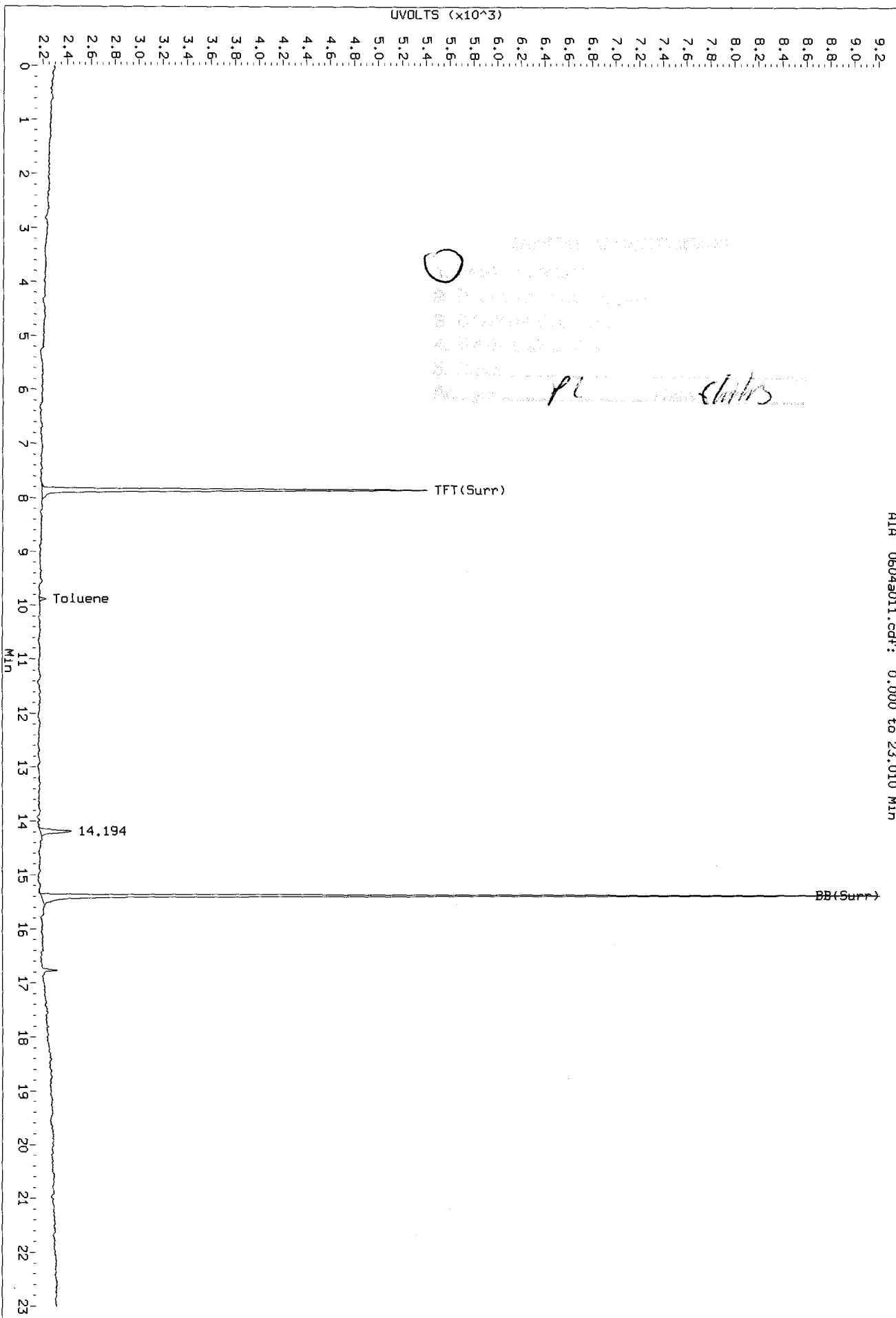


AIA 0604s011.cdf: 0.000 to 23.010 MIN

15000 : 825M

Data File: /chem3/pid1.1/20130604-2.b/0604s011.d/0604s011.cdf
Injection Date: 04-JUN-2013 16:08
Instrument: pid1.1
Client Sample ID: SL-F9-S-6

AIR 0604s011.cdf: 0.000 to 23.010 Min



Data File: /chem3/pid1.i/20130604-2.b/0604a011.d

Date : 04-JUN-2013 16:08

Client ID: SL-F9-S-6

Sample Infor: MS29C

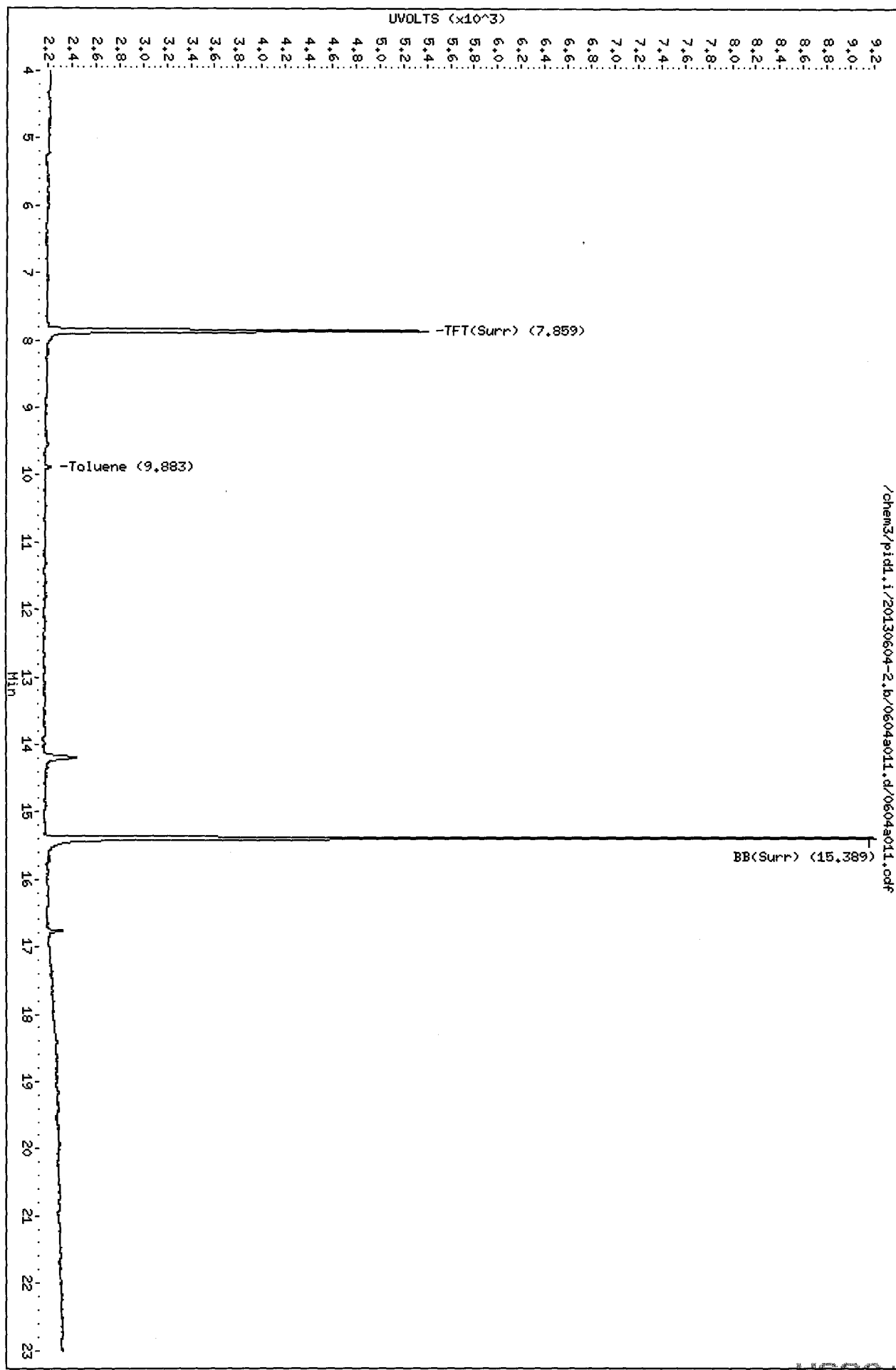
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

/chem3/pid1.i/20130604-2.b/0604a011.d/0604a011.cdf



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: SL-F10-S-6

SAMPLE

Lab Sample ID: WS28D

LIMS ID: 13-11705

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 16:37

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 78 mg-dry-wt

Percent Moisture: 15.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	18
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	99.3%
Bromobenzene	98.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AL
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a012.d ARI ID: WS28D
Data file 2: /chem3/pid1.i/20130604-2.b/0604a012.d Client ID: SL-F10-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 16:37
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2907	37080	98.2	TFT(Surr)
15.380	0.001	1995	17765	100.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	106102	0.296
8015C 2MP-TMB (4.19 to 16.20)	723723	21512	0.030
AK101 nC6-nC10 (4.68 to 15.10)	582885	6092	0.010
NWTPHG Tol-Nap (9.77 to 18.90)	375093	226508	0.604

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.004	3200	99.3	TFT(Surr)
15.389	0.002	7133	98.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.007	55	0.28N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

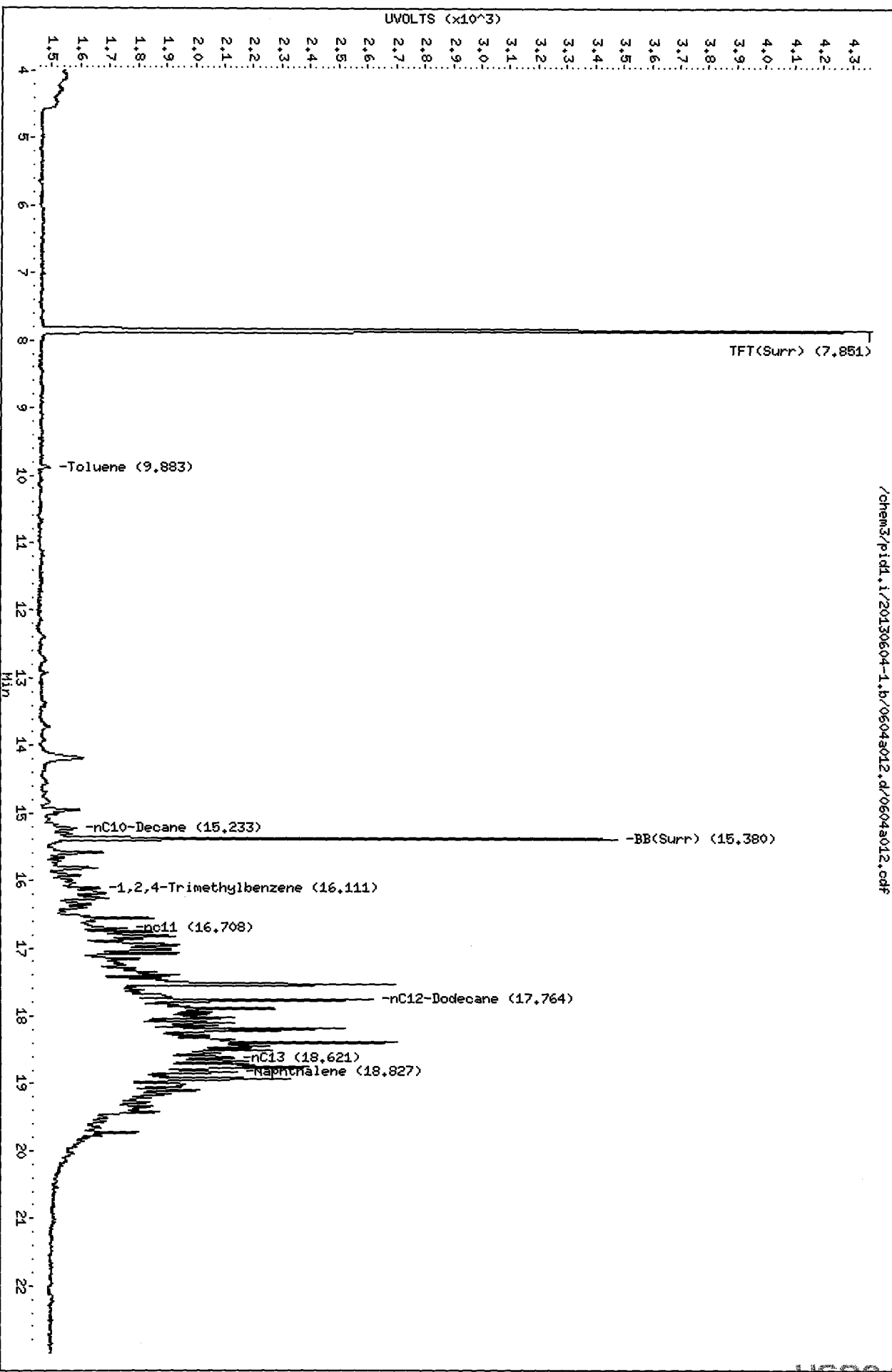
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130604-1.b/0604s012.d
Date : 04-JUN-2013 16:37
Client ID: SL-F10-S-6
Sample Info: MS28D
Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18

/chem3/pidd.i/20130604-1.b/0604s012.d/0604s012.cdf



00000000000000000000000000000000

Data File: /chem3/pid1.i/20130604-2.b/0604a012.d

Date : 04-JUN-2013 16:37

Client ID: SL-F10-S-6

Sample Info: MS28D

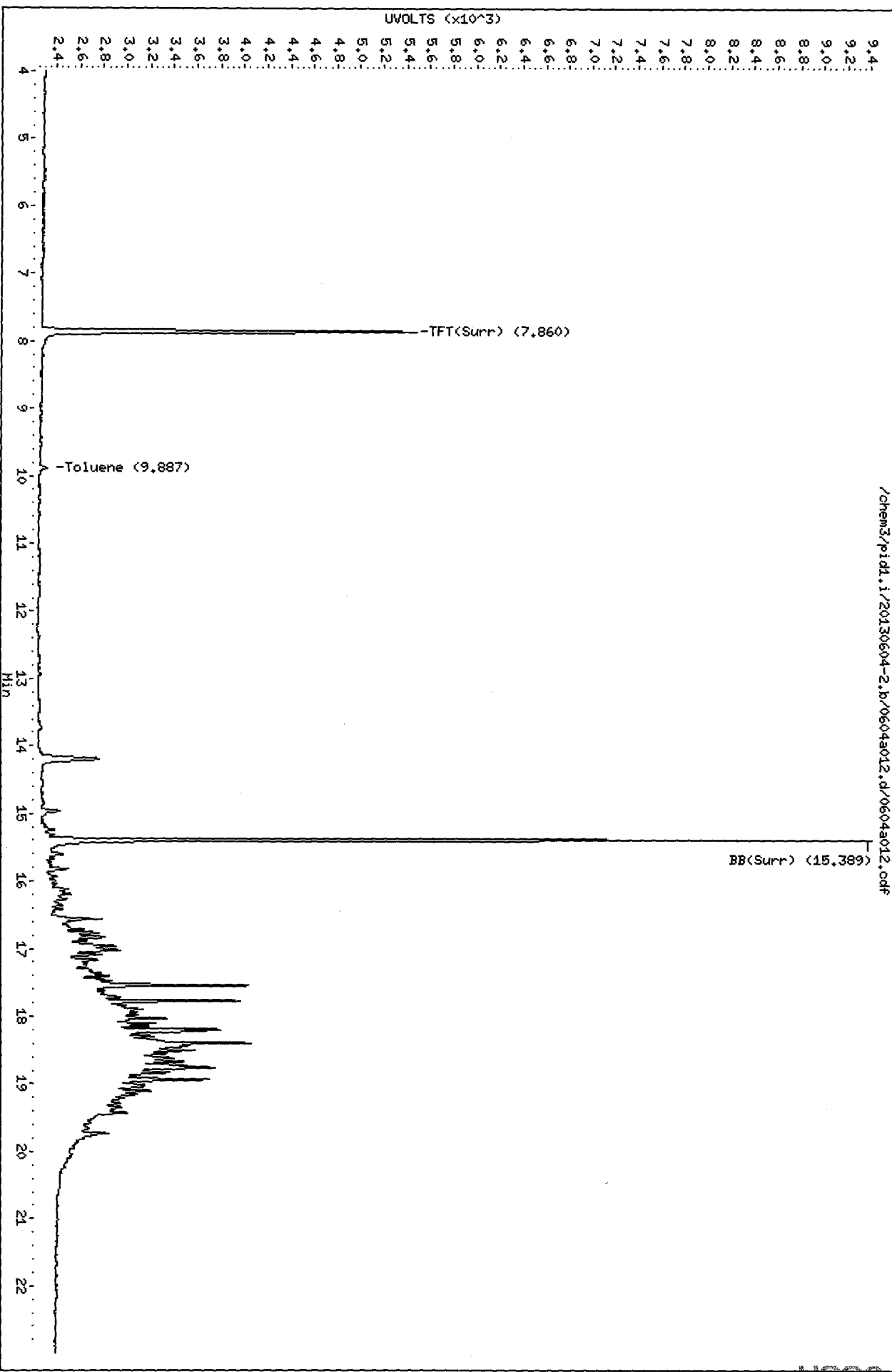
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

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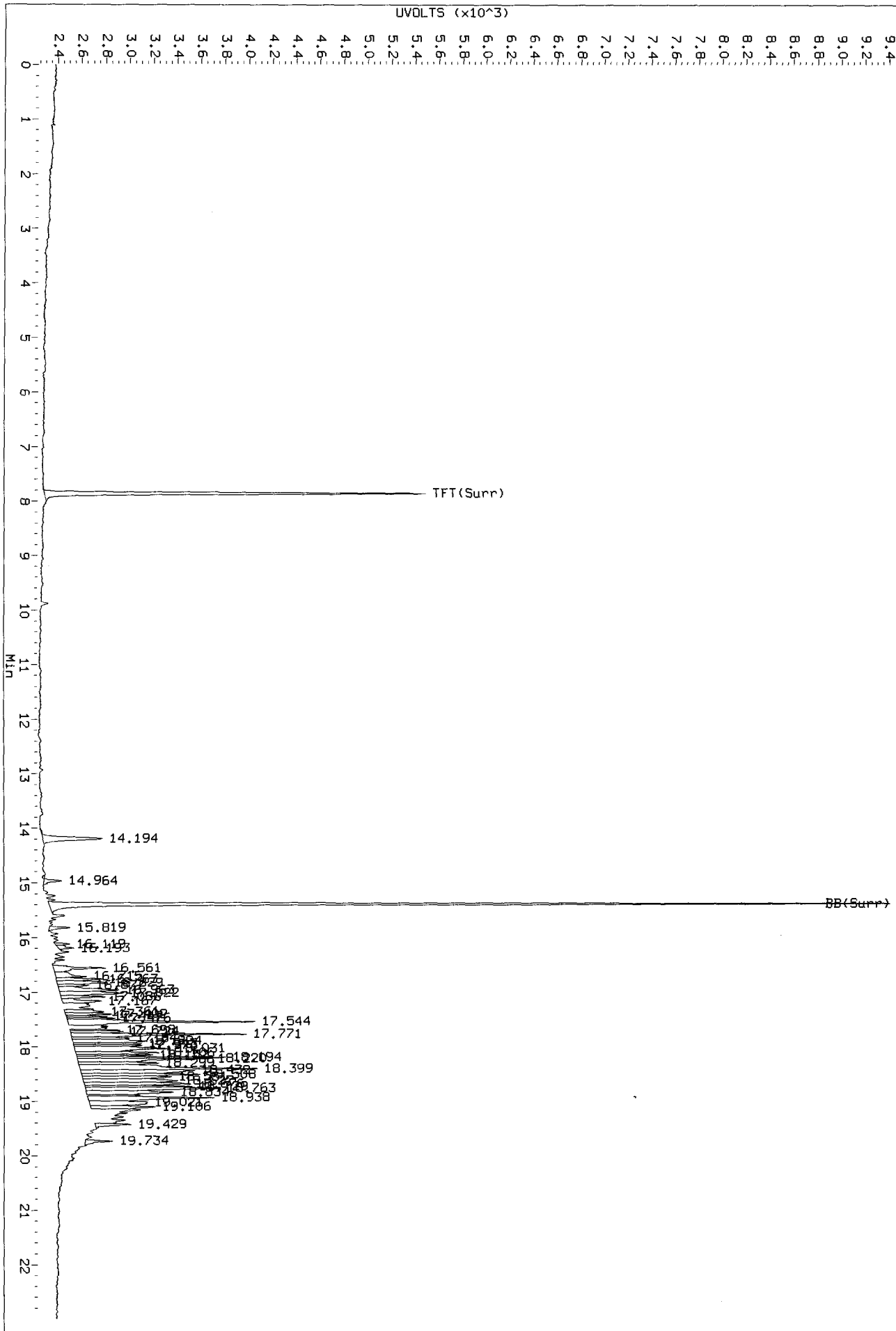


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6/11/13

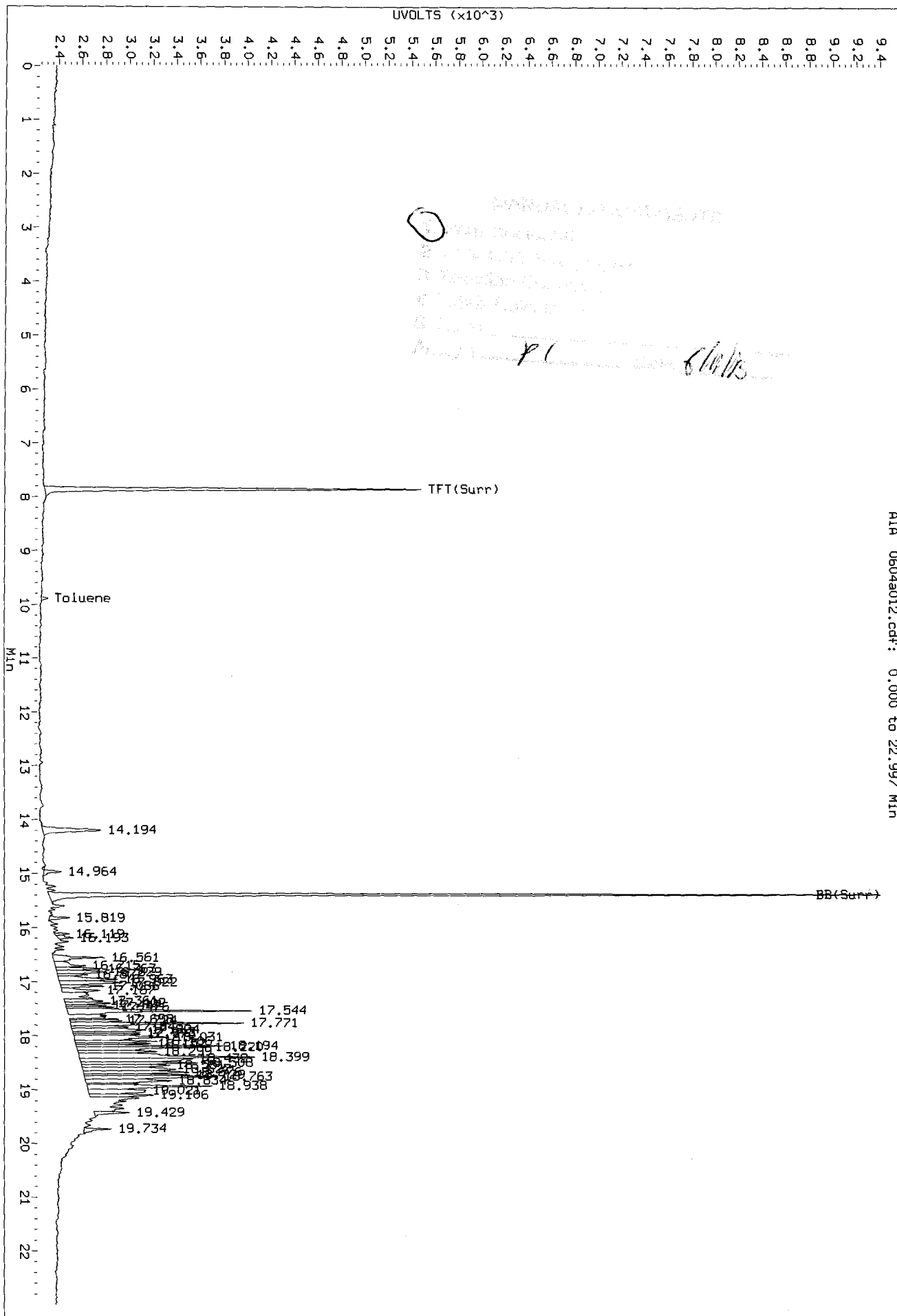
Data File: /chem3/pid1.1/20130604-2.b/0604s012.d/0604s012.cdf
Injection Date: 04-JUN-2013 16:37
Instrument: pid1.1
Client Sample ID: SL-F10-S-6

AIR 0604s012.cdf: 0.000 to 22.997 Min



Data File: /chem3/pid1.1/20130604-2.b/0604s012.d/0604s012.cdf
Injection Date: 04-JUN-2013 16:37
Instrument: pid1.1
Client Sample ID: SL-F10-S-6

AIA 0604s012.cdf: 0.000 to 22.997 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: SL-F11-S-6

SAMPLE

Lab Sample ID: WS28E

LIMS ID: 13-11706

Matrix: Soil

Data Release Authorized: 

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 17:05

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 85 mg-dry-wt

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	17
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

BETX Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a013.d ARI ID: WS28E
Data file 2: /chem3/pid1.i/20130604-2.b/0604a013.d Client ID: SL-F11-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 17:05
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2969	38056	100.3	TFT(Surr)
15.381	0.002	1985	16946	99.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1695	0.005
8015C 2MP-TMB (4.19 to 16.20)	723723	447	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	447	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	5125	0.014

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3285	101.9	TFT(Surr)
15.389	0.003	7293	100.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.003	57	0.29N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

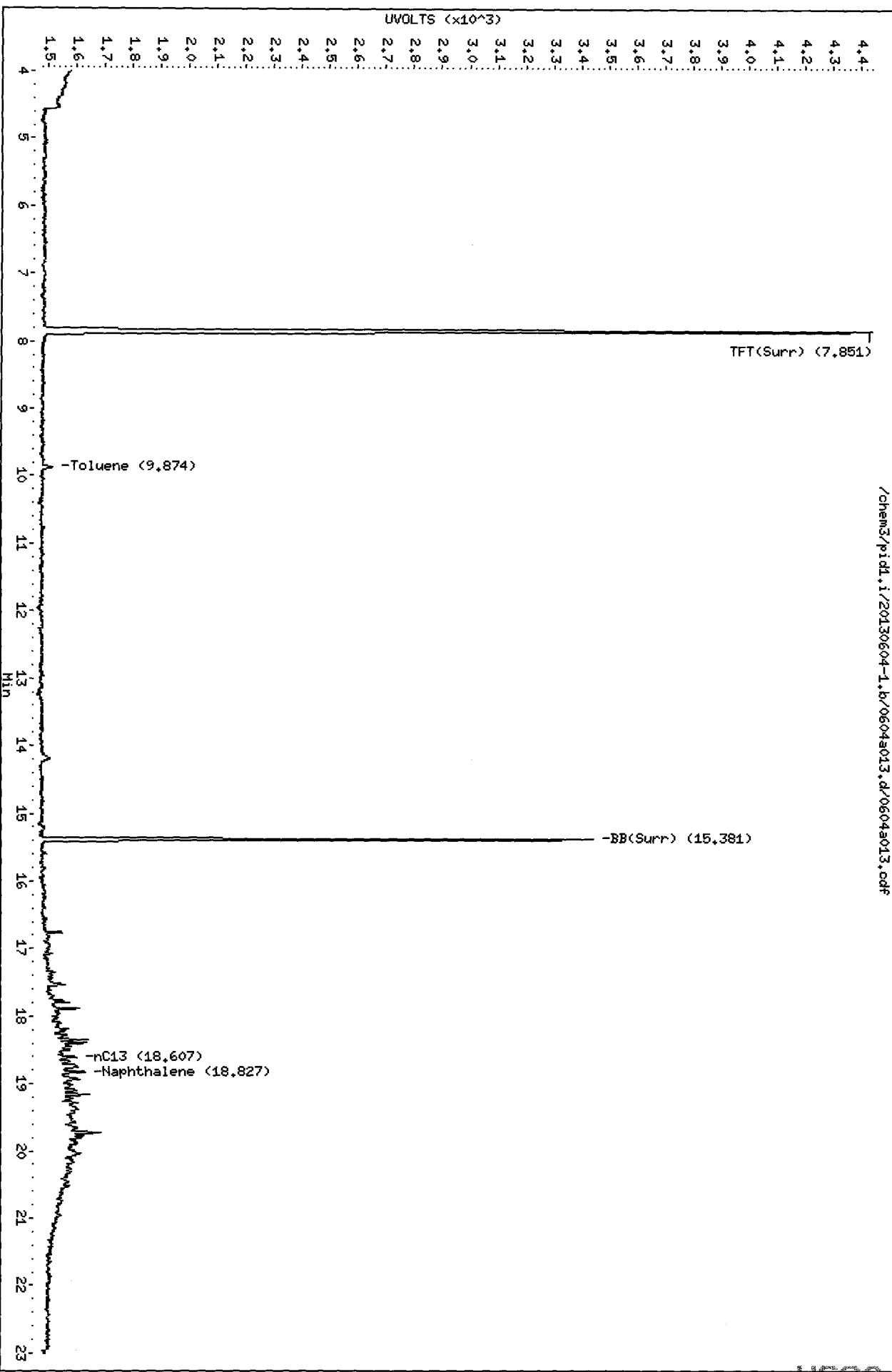
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a013.d
Date: 04-JUN-2013 17:05
Client ID: SL-F11-S-6
Sample Info: MS28E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

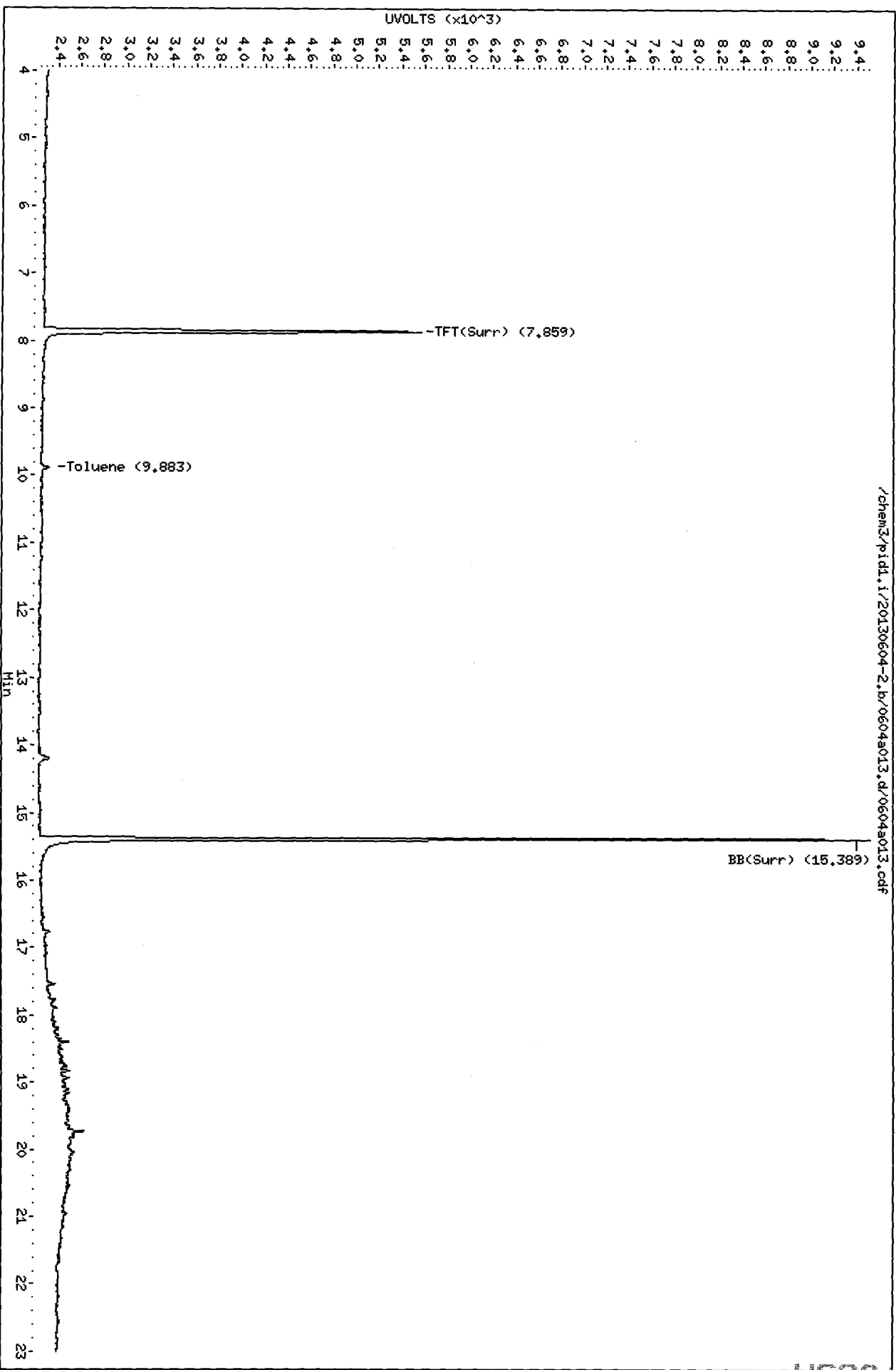
/chem3/pid1.i/20130604-1.b/0604a013.d/0604a013.cdf



Data File: /chem3/pid1.i/20130604-2.b/0604a013.d
Date: 04-JUN-2013 17:05
Client ID: SL-F11-S-6
Sample Info: MS28E

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

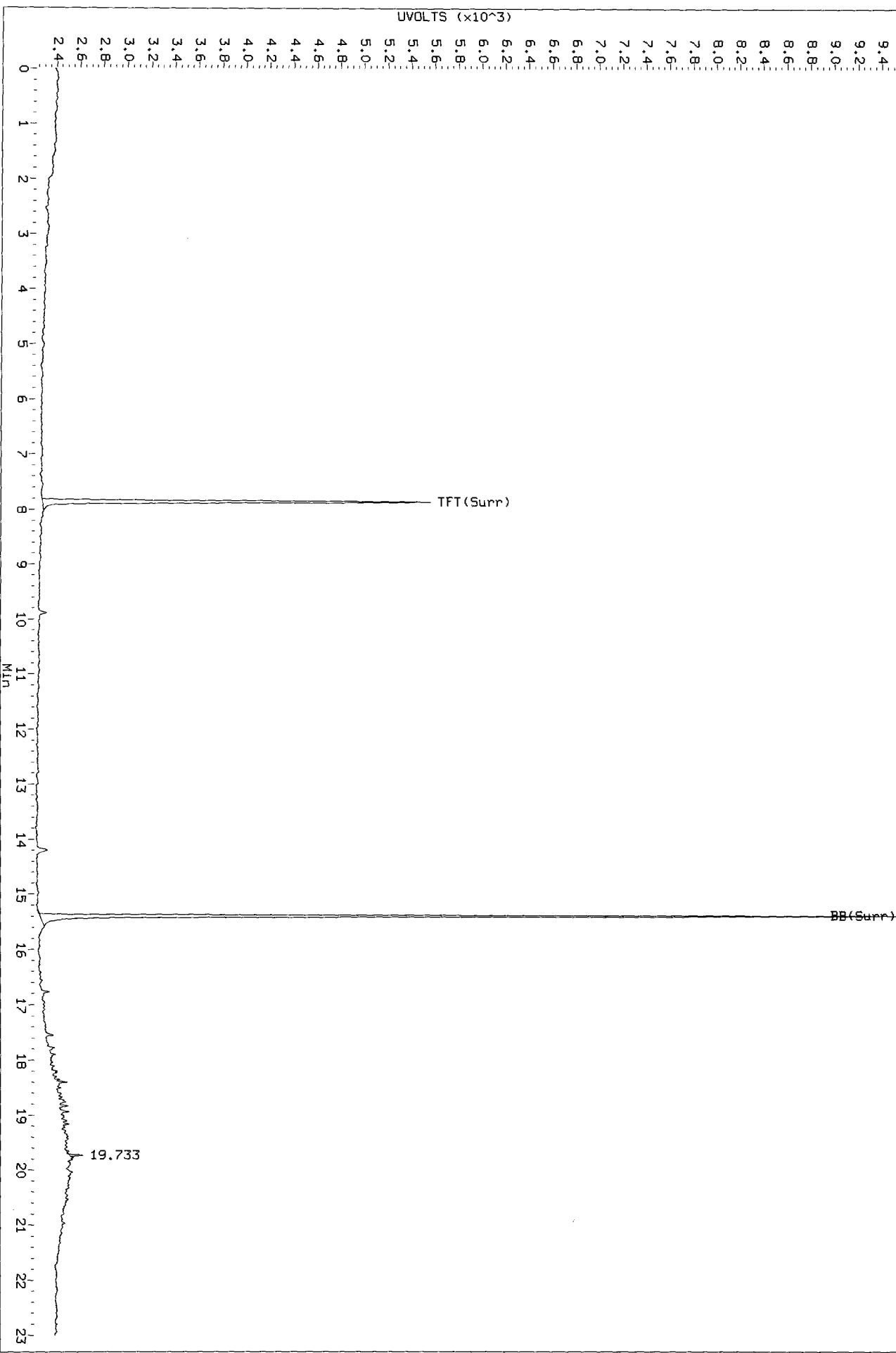


/chem3/pid1.i/20130604-2.b/0604a013.d/0604a013.cdf

PC
6/11/13

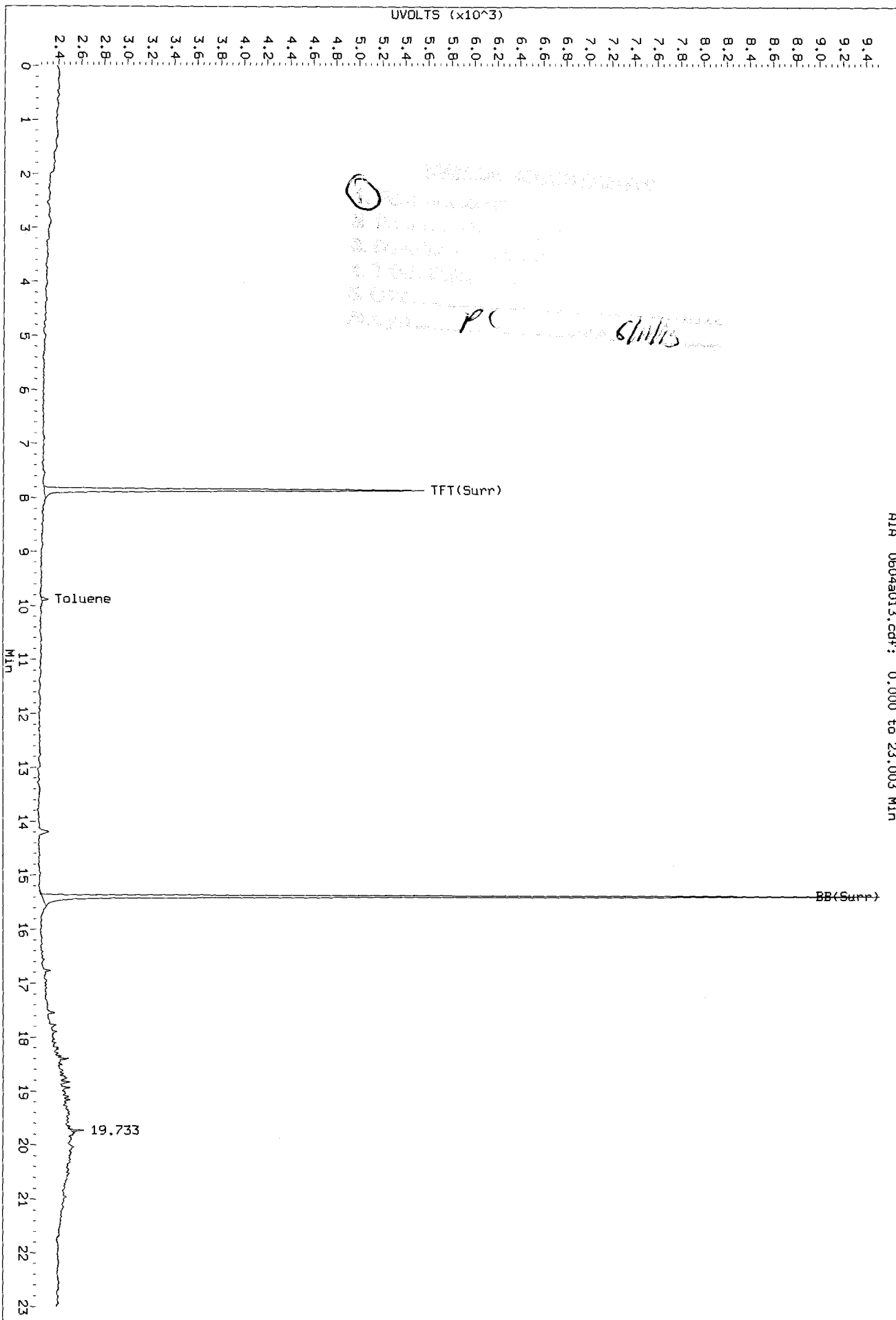
Data File: /chem3/pid1.1/20130604-2.b/0604a013.d/0604a013.cdf
Injection Date: 04-JUN-2013 17:05
Instrument: pid1.1
Client Sample ID: SL-F11-S-6

AIR 0604a013.cdf: 0.000 to 23.003 Min



Data File: /chem3/pid1.1/20130604-2.1b/0604a013.d/0604a013.cdf
Injection Date: 04-JUN-2013 17:05
Instrument: pid1.1
Client Sample ID: SL-F11-S-6

AIR 0604a013.cdf: 0.000 to 23.003 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F43-S-6

SAMPLE

Lab Sample ID: WS28F

LIMS ID: 13-11707

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 18:30

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 14.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	95.4%
Bromobenzene	95.5%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AL
6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a016.d ARI ID: WS28F
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a016.d Client ID: A2-F43-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 18:30
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	2830	35995	95.6	TFT(Surr)
15.381	0.002	1894	15920	95.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3892	0.011
8015C 2MP-TMB (4.19 to 16.20)	723723	14551	0.020
AK101 nC6-nC10 (4.68 to 15.10)	582885	13965	0.024
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4330	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.004	3076	95.4	TFT(Surr)
15.389	0.003	6907	95.5	BB(Surr)

SW8021 (PID)

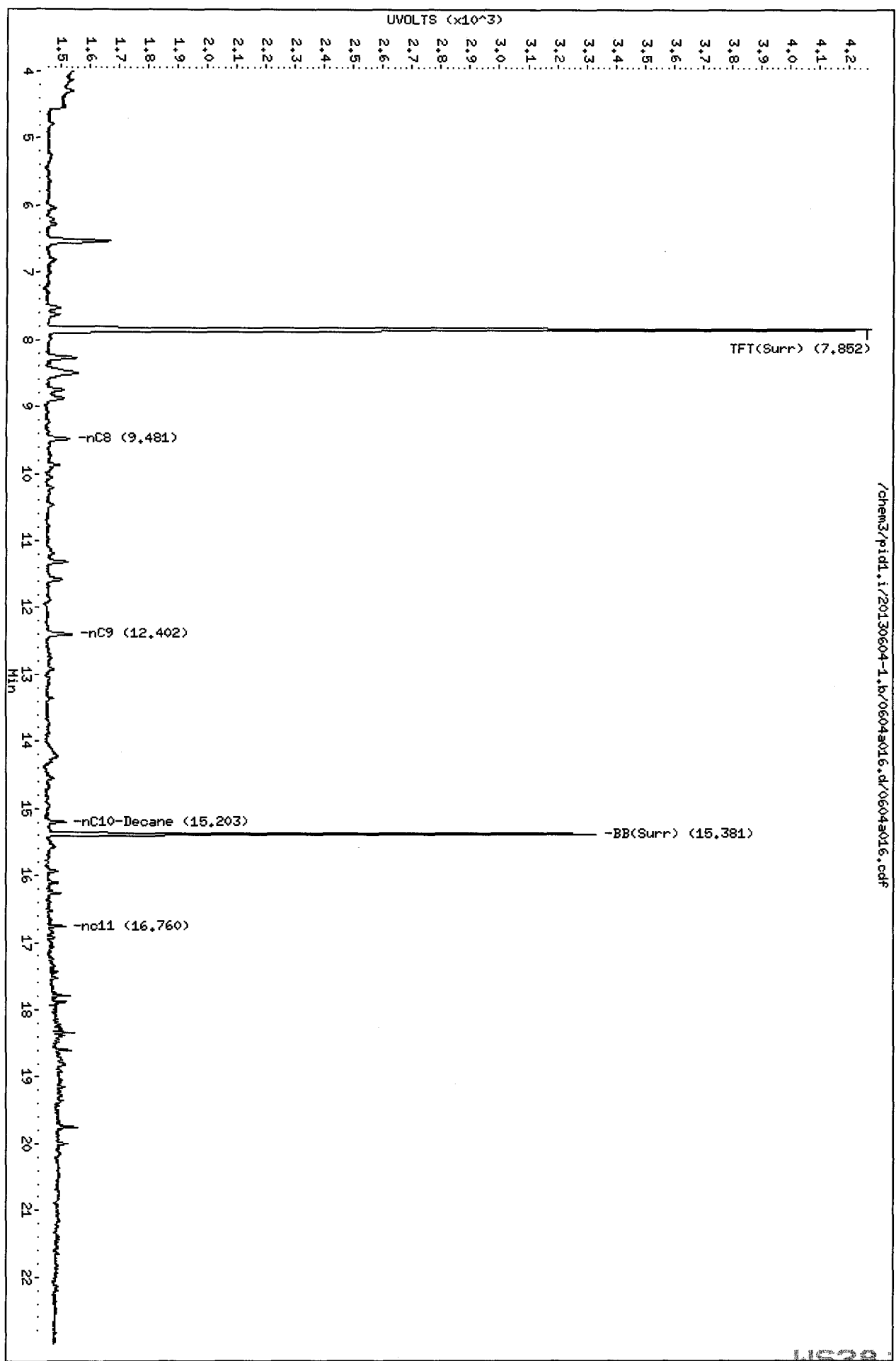
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a016.d
Date: 04-JUN-2013 18:30
Client ID: A2-F43-S-6
Sample Info: MS28F
Column phase: RTX 502-2 FID

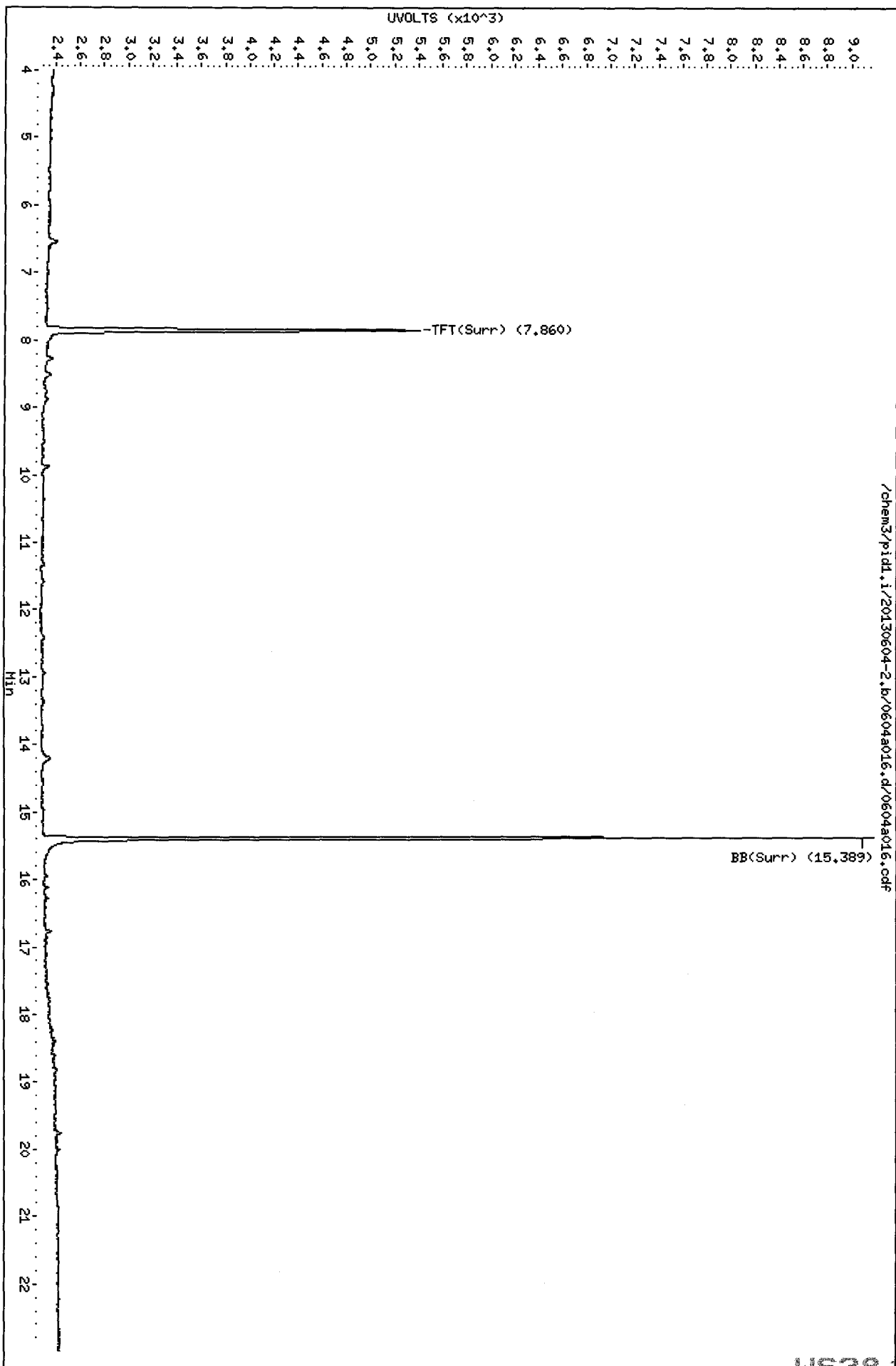
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-1.b/0604a016.d/0604a016.cdf

Data File: /chem3/pidd,i/20130604-2.b/0604a016.d
Date : 04-JUN-2013 18:30
Client ID: A2-F43-S-6
Sample Info: MS28F
Column phase: RTX 502-2 PID

Instrument: pidd,i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F44-S-6

SAMPLE

Lab Sample ID: WS28G

LIMS ID: 13-11708

Matrix: Soil

Data Release Authorized: *RB*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 18:58

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 71 mg-dry-wt

Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	35	< 35 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	95.4%
Bromobenzene	96.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PL
 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a017.d ARI ID: WS28G
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a017.d Client ID: A2-F44-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 18:58
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2808	35801	94.9	TFT(Surr)
15.381	0.002	1914	15921	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3221	0.009
8015C 2MP-TMB (4.19 to 16.20)	723723	2860	0.004
AK101 nC6-nC10 (4.68 to 15.10)	582885	2859	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3221	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3075	95.4	TFT(Surr)
15.388	0.002	6991	96.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	0.000	47	0.24N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

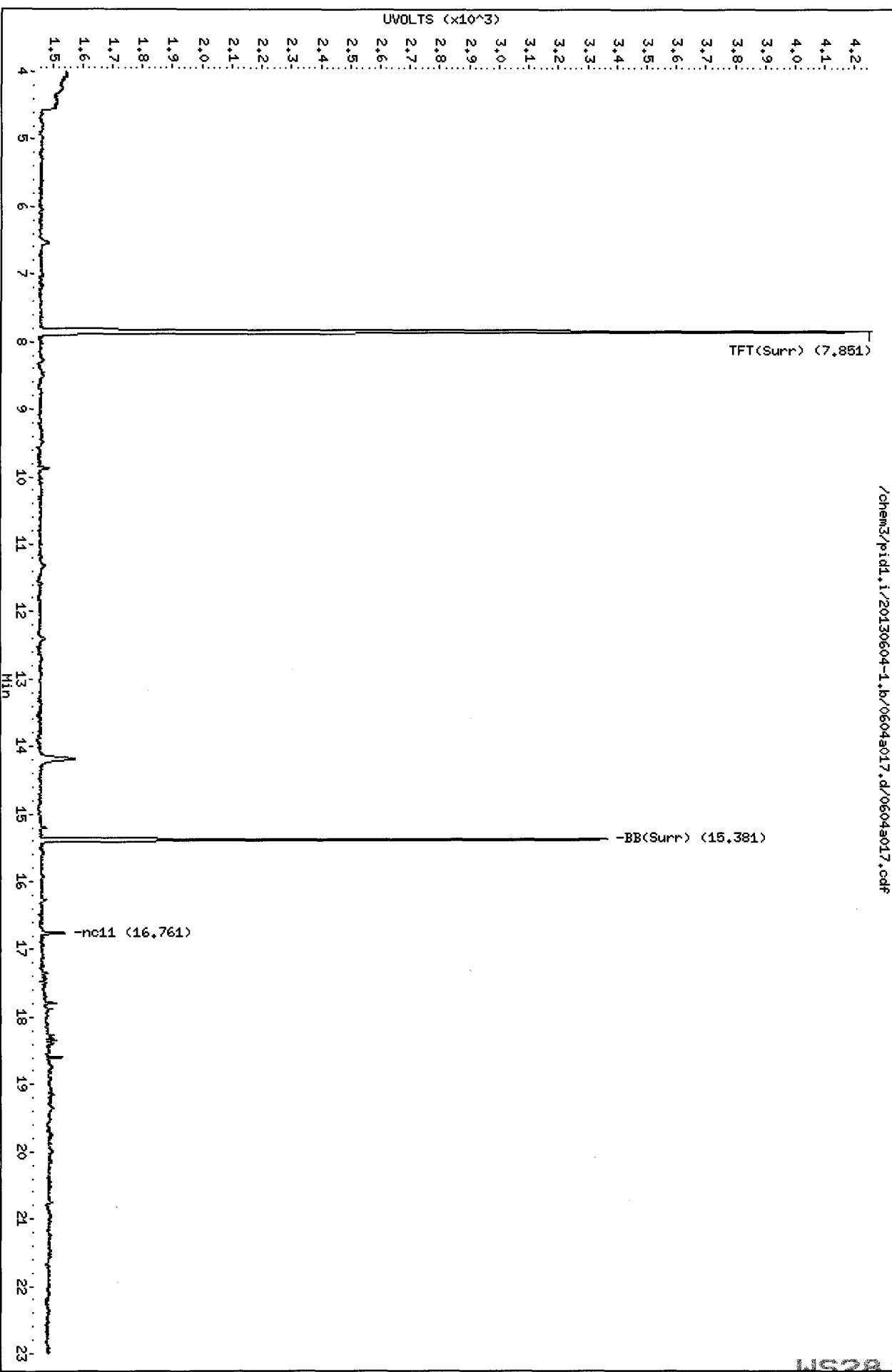
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidl.i/20130604-1.b/0604s017.d
Date : 04-JUN-2013 18:58
Client ID: A2-F44-S-6
Sample Info: MS28C
Column phase: RTX 502-2 FID

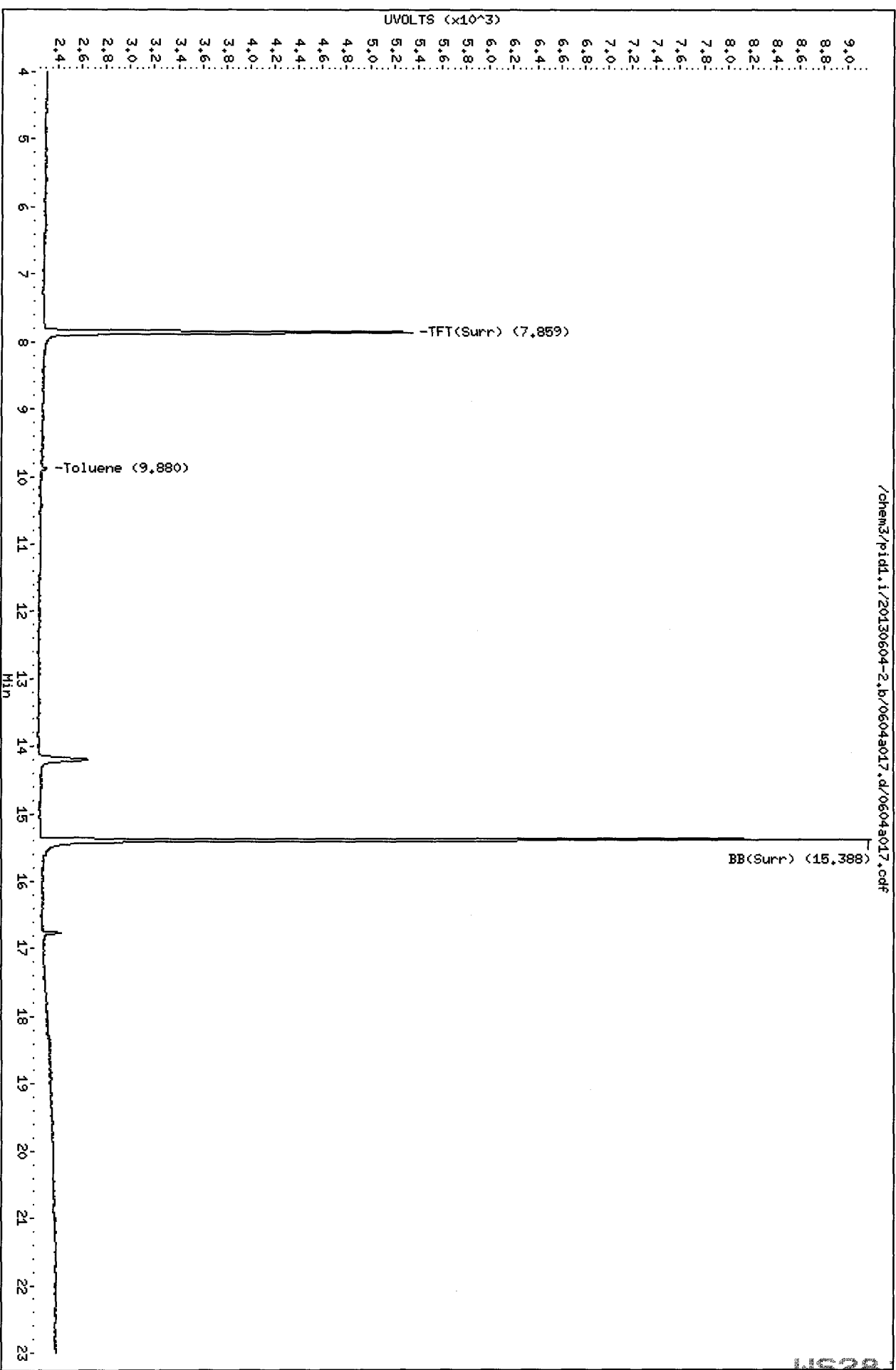
Instrument: pidl.i
Operator: PC
Column diameter: 0.18

/chem3/pidl.i/20130604-1.b/0604s017.d/0604s017.cdf



Data File: /chem3/pid1.i/20130604-2.b/0604s017.d
Date : 04-JUN-2013 18:58
Client ID: A2-F44-S-6
Sample Info: MS28G
Column phase: RTX 502-2 PID

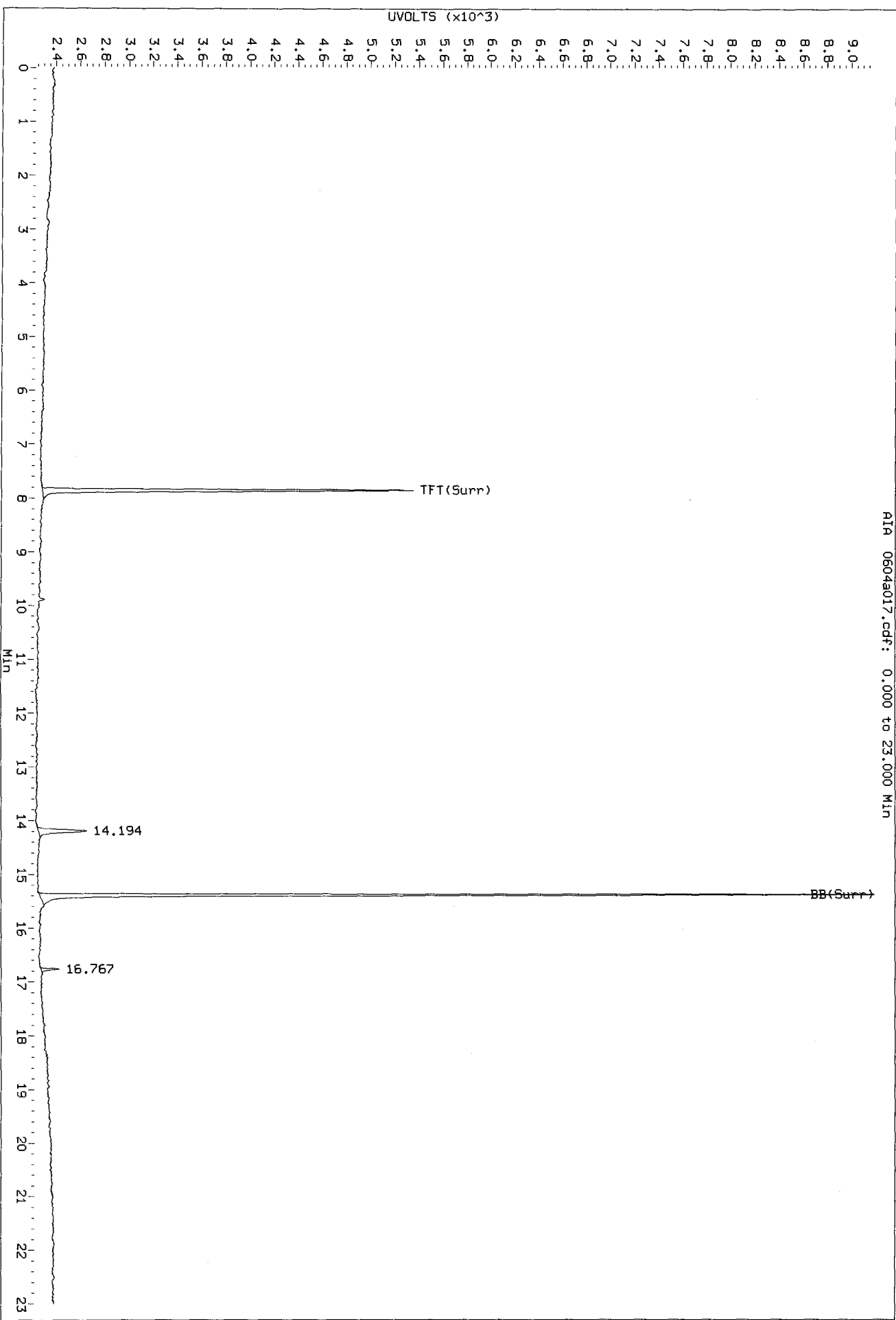
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-2.b/0604s017.d/0604s017.cdf

W
6/11/13

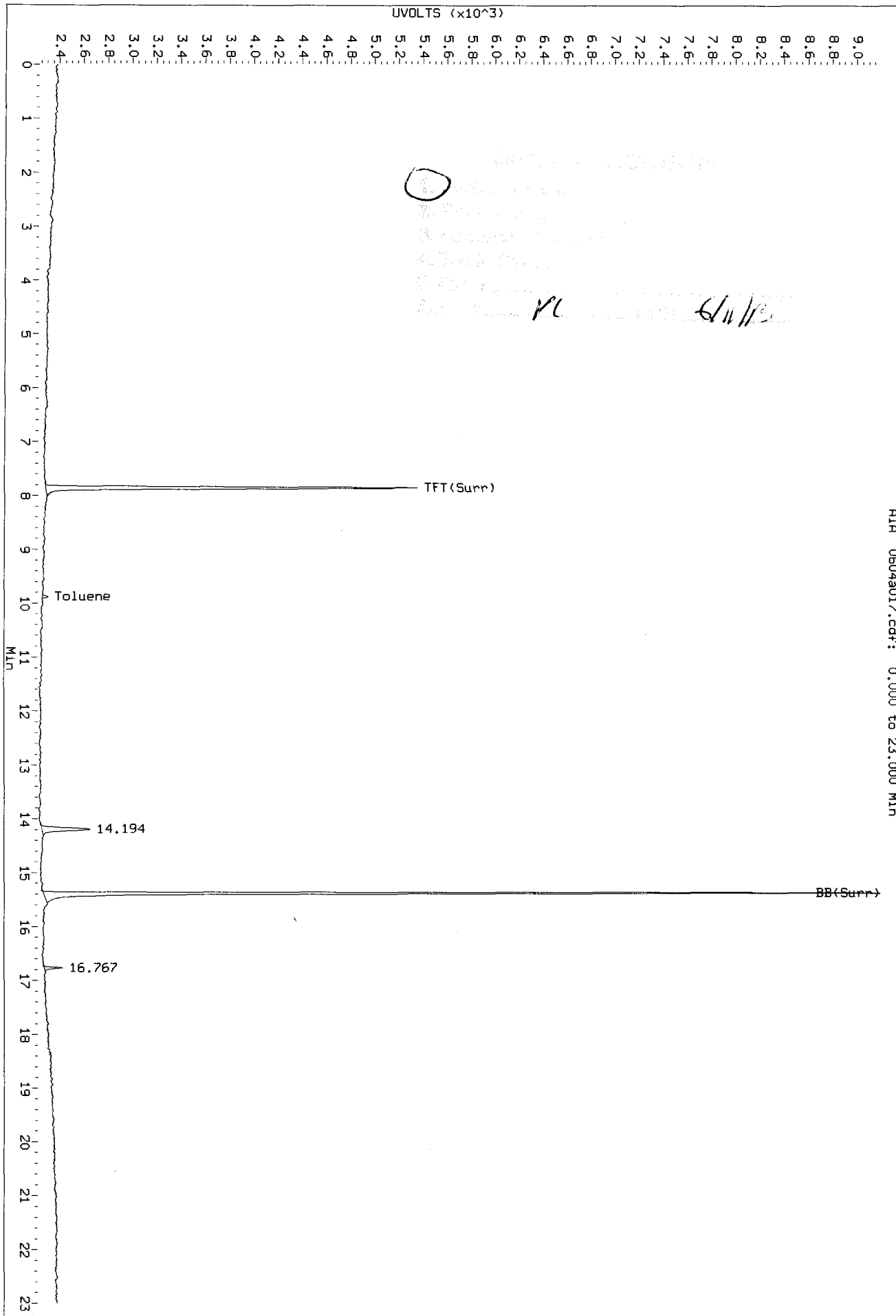
Data File: /chem3/pid1.1/20130604-2.b/0604a017.d/0604a017.cdf
Injection Date: 04-JUN-2013 18:58
Instrument: pid1.1
Client Sample ID: A2-F44-S-6



AIR 0604a017.cdf: 0.000 to 23.000 MIN

Data File: /chem3/pid1.1/20130604-2.b/0604a017.d/0604a017.cdf
Injection Date: 04-JUN-2013 18:58
Instrument: pid1.1
Client Sample ID: A2-F44-S-6

AIR 0604a017.cdf: 0.000 to 23.000 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F45-S-6

SAMPLE

Lab Sample ID: WS28H

LIMS ID: 13-11709

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 19:26

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 69 mg-dry-wt

Percent Moisture: 24.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	18
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	36	< 36 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	102%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PK
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a018.d ARI ID: WS28H
Data file 2: /chem3/pid1.i/20130604-2.b/0604a018.d Client ID: A2-F45-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 19:26
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.851	0.003	2946	37541	99.6	TFT(Surr)
15.381	0.002	1992	16794	100.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	4433	0.012
8015C 2MP-TMB (4.19 to 16.20)	723723	3661	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	3661	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4433	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.859	0.003	3229	100.2	TFT(Surr)
15.389	0.003	7339	101.5	BB(Surr)

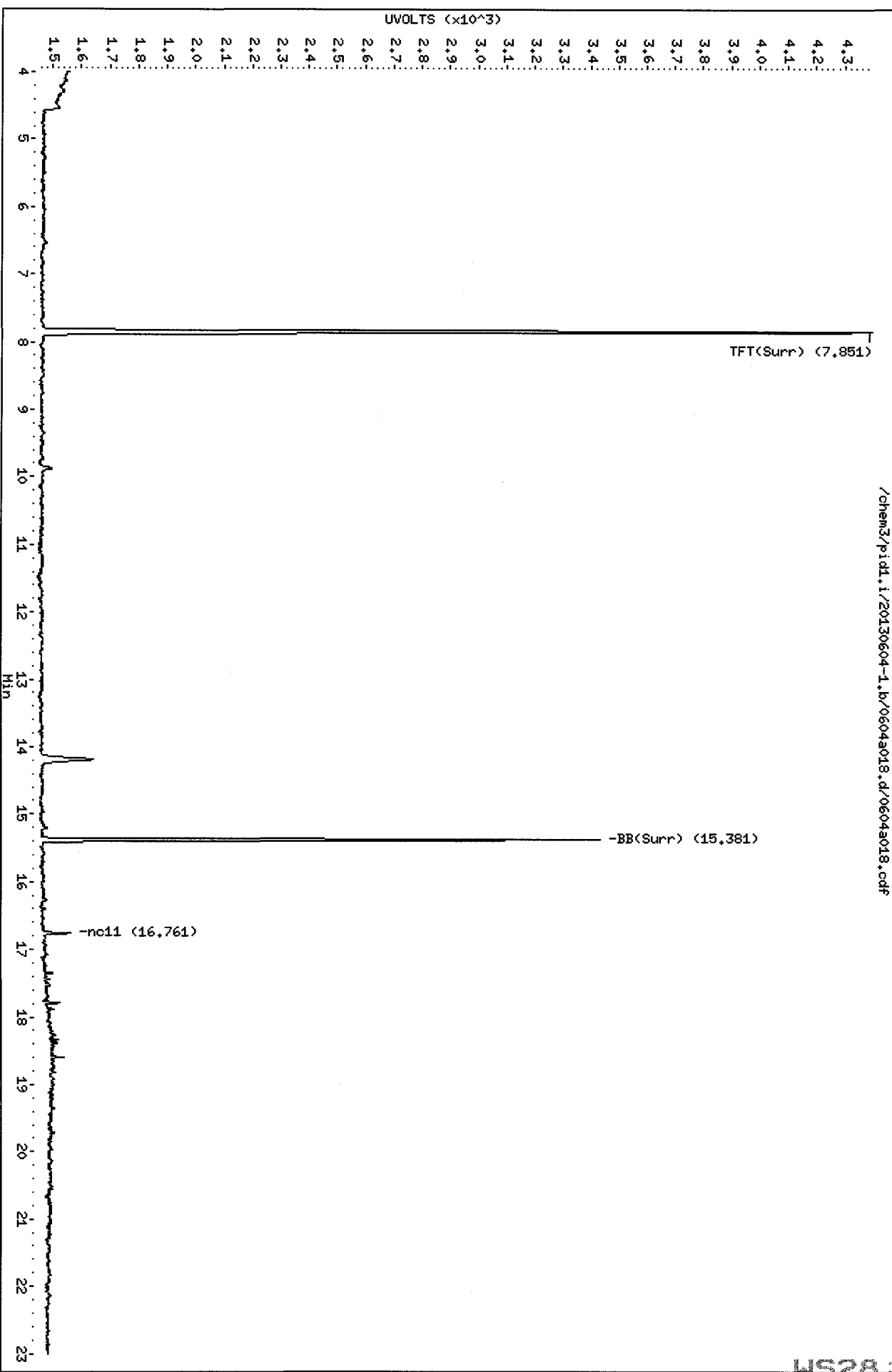
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.887	0.007	50	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a018.d
Date : 04-JUN-2013 19:26
Client ID: A2-F45-S-6
Sample Info: MS28H
Column phase: RTX 502-2 FID

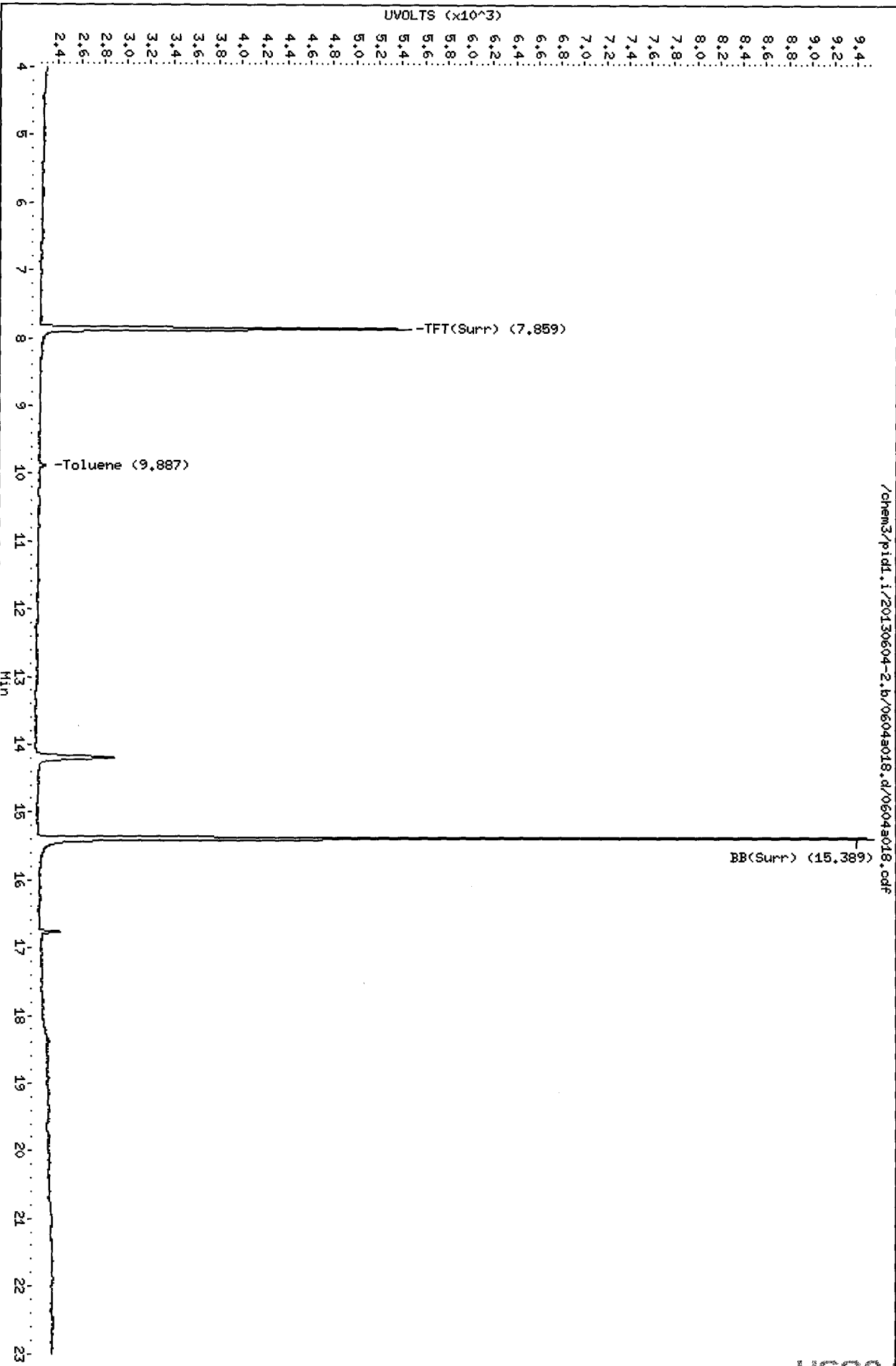
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-1.b/0604a018.d/0604a018.cdf

Data File: /chem3/pid1.i/20130604-2.b/0604s018.d
Date: 04-JUN-2013 19:26
Client ID: A2-F45-S-6
Sample Info: MS28H
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

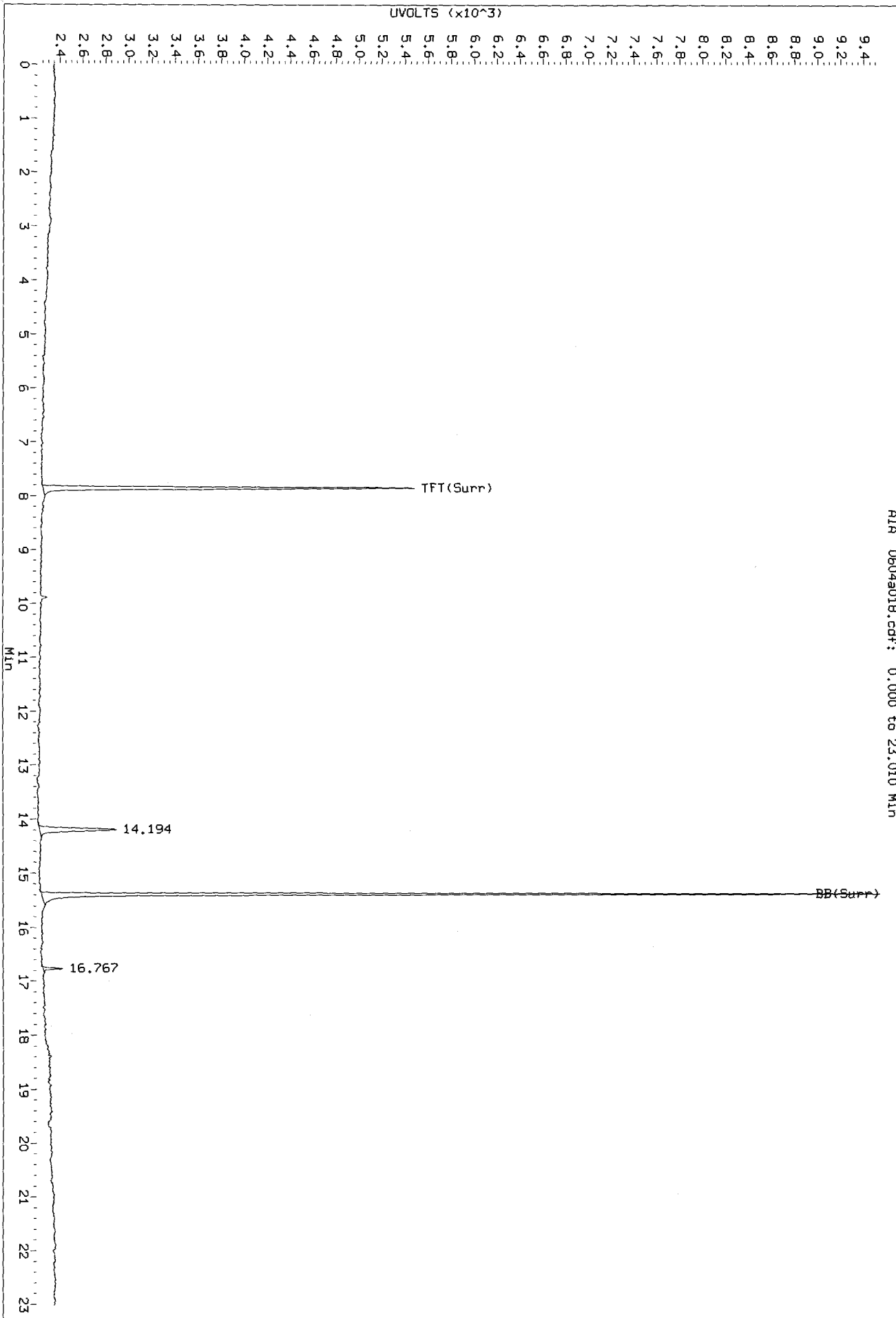


/chem3/pid1.i/20130604-2.b/0604s018.d/0604s018.cdf

PC
6/11/13

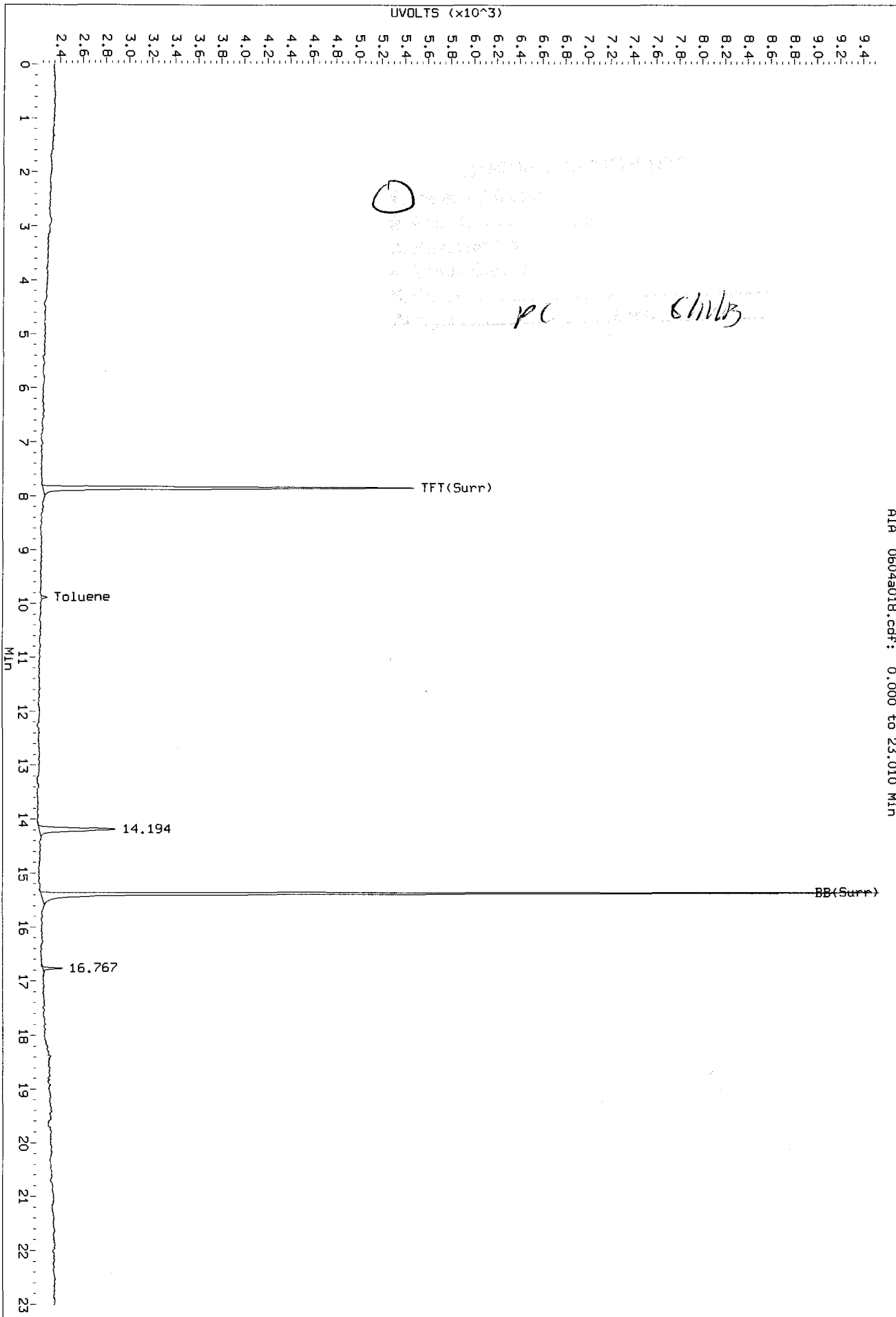
Data File: /chem3/pid1.i/20130604-2.b/0604a01b.d/0604a01b.cdf
Injection Date: 04-JUN-2013 19:26
Instrument: pid1.1
Client Sample ID: A2-F45-S-6

AIR 0604a01b.cdf: 0.000 to 23.010 MIN



Data File: /chem3/pid1.1/20130604-2.b/0604a018.d/0604a018.cdf
Injection Date: 04-JUN-2013 19:26
Instrument: pid1.1
Client Sample ID: A2-F45-S-6

AIA 0604a018.cdf: 0.000 to 23.010 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F46-S-6

SAMPLE

Lab Sample ID: WS28I

LIMS ID: 13-11710

Matrix: Soil

Data Release Authorized: *BS*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 19:54

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 62 mg-dry-wt

Percent Moisture: 26.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	35
100-41-4	Ethylbenzene	20	< 20 U
179601-23-1	m,p-Xylene	41	< 41 U
95-47-6	o-Xylene	20	< 20 U

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a019.d ARI ID: WS28I
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a019.d Client ID: A2-F46-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 19:54
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2936	37387	99.2	TFT(Surr)
15.381	0.002	2006	16699	101.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	2699	0.008
8015C 2MP-TMB (4.19 to 16.20)	723723	2223	0.003
AK101 nC6-nC10 (4.68 to 15.10)	582885	2223	0.004
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3197	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3224	100.0	TFT(Surr)
15.388	0.002	7273	100.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.003	86	0.43N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

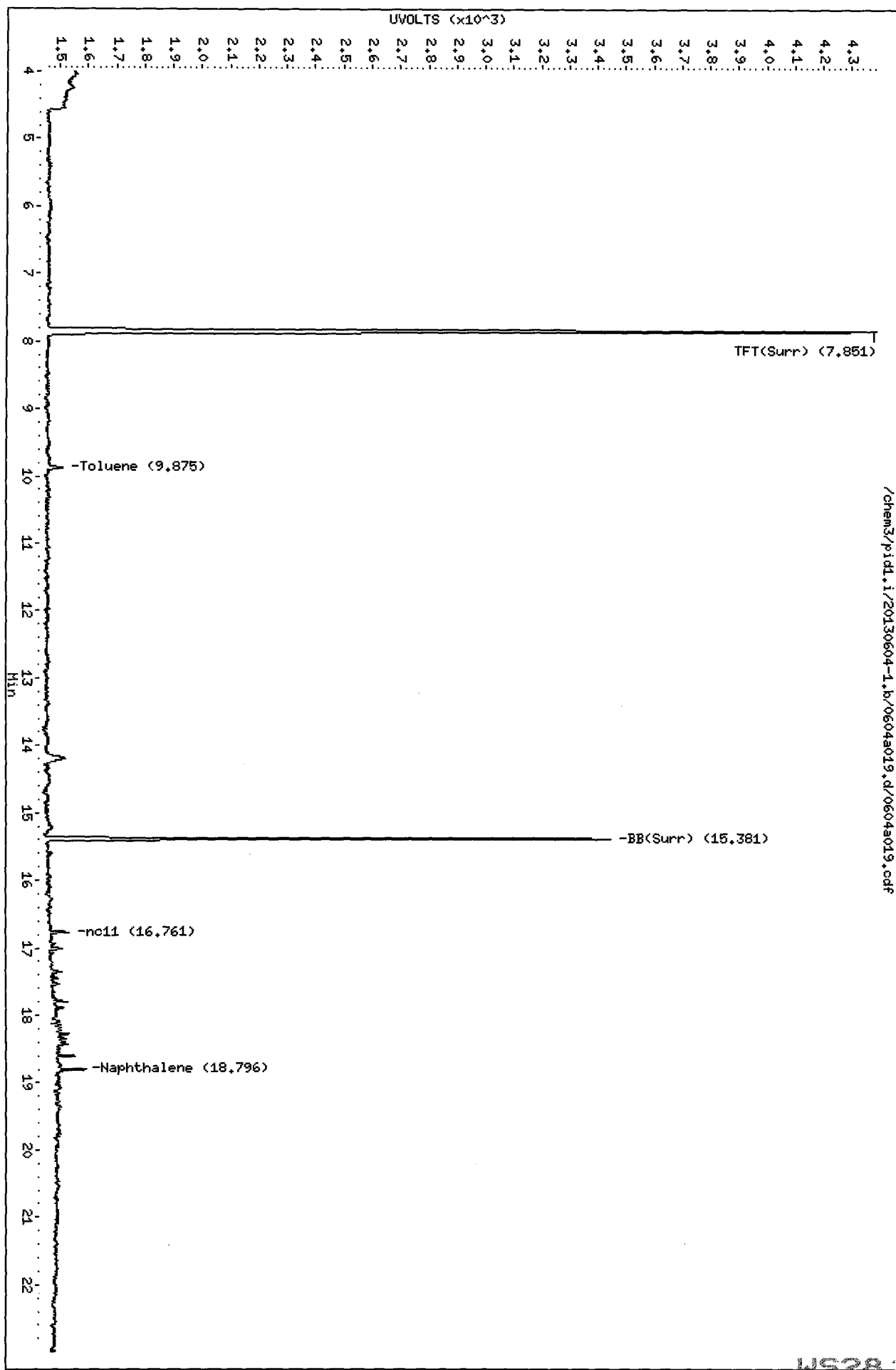
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidl.i/20130604-1.b/0604a019.d
Date: 04-JUN-2013 19:54
Client ID: A2-F46-S-6
Sample Info: MS281
Column phase: RTX 502-2 FID

Instrument: pidl.i
Operator: PC
Column diameter: 0.18

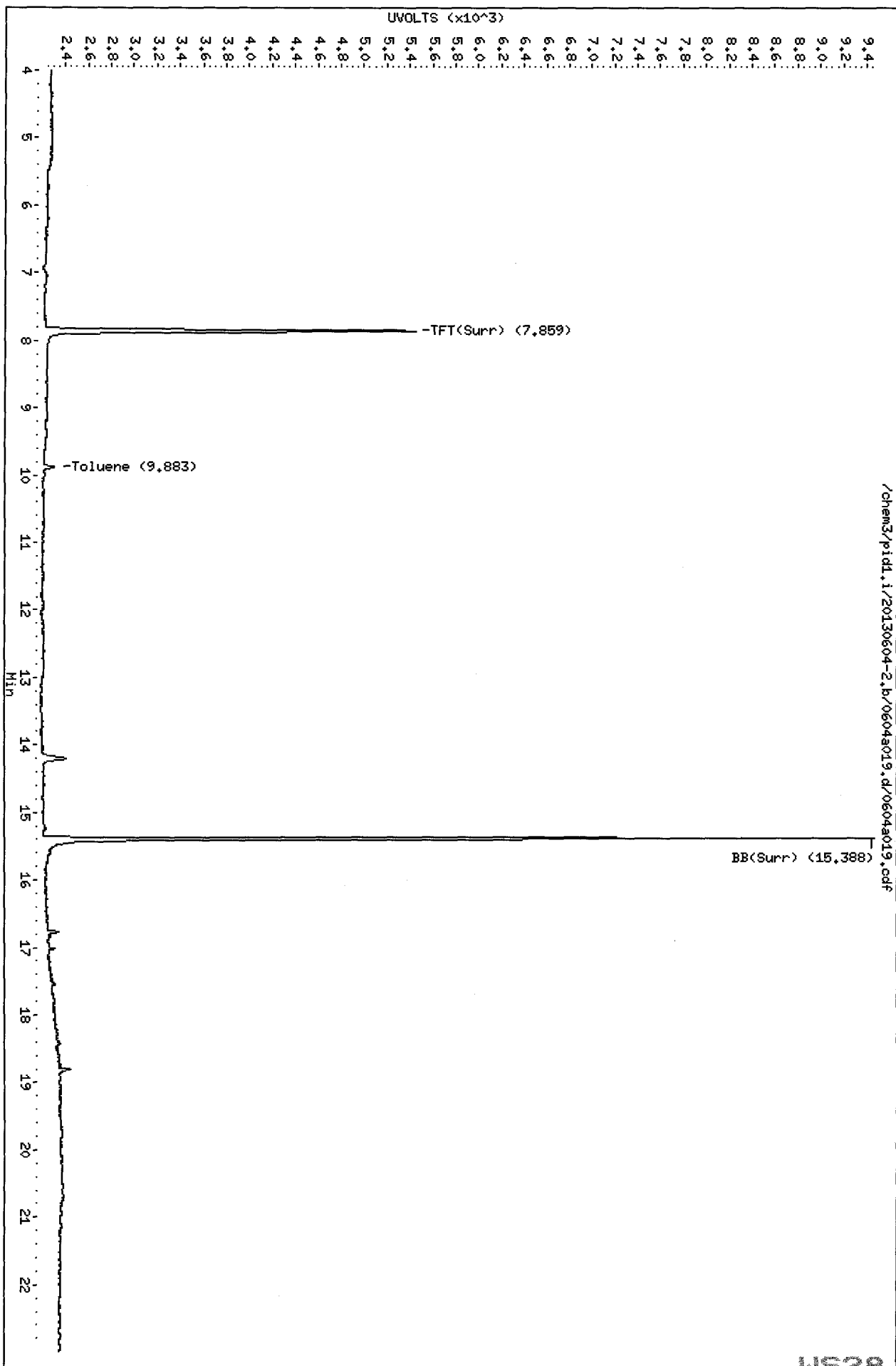
/chem3/pidl.i/20130604-1.b/0604a019.d/0604a019.cdf



Data File: /chem3/pid1.i/20130604-2.b/0604a019.d
Date : 04-JUN-2013 19:54
Client ID: A2-F46-S-6
Sample Info: MS281

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

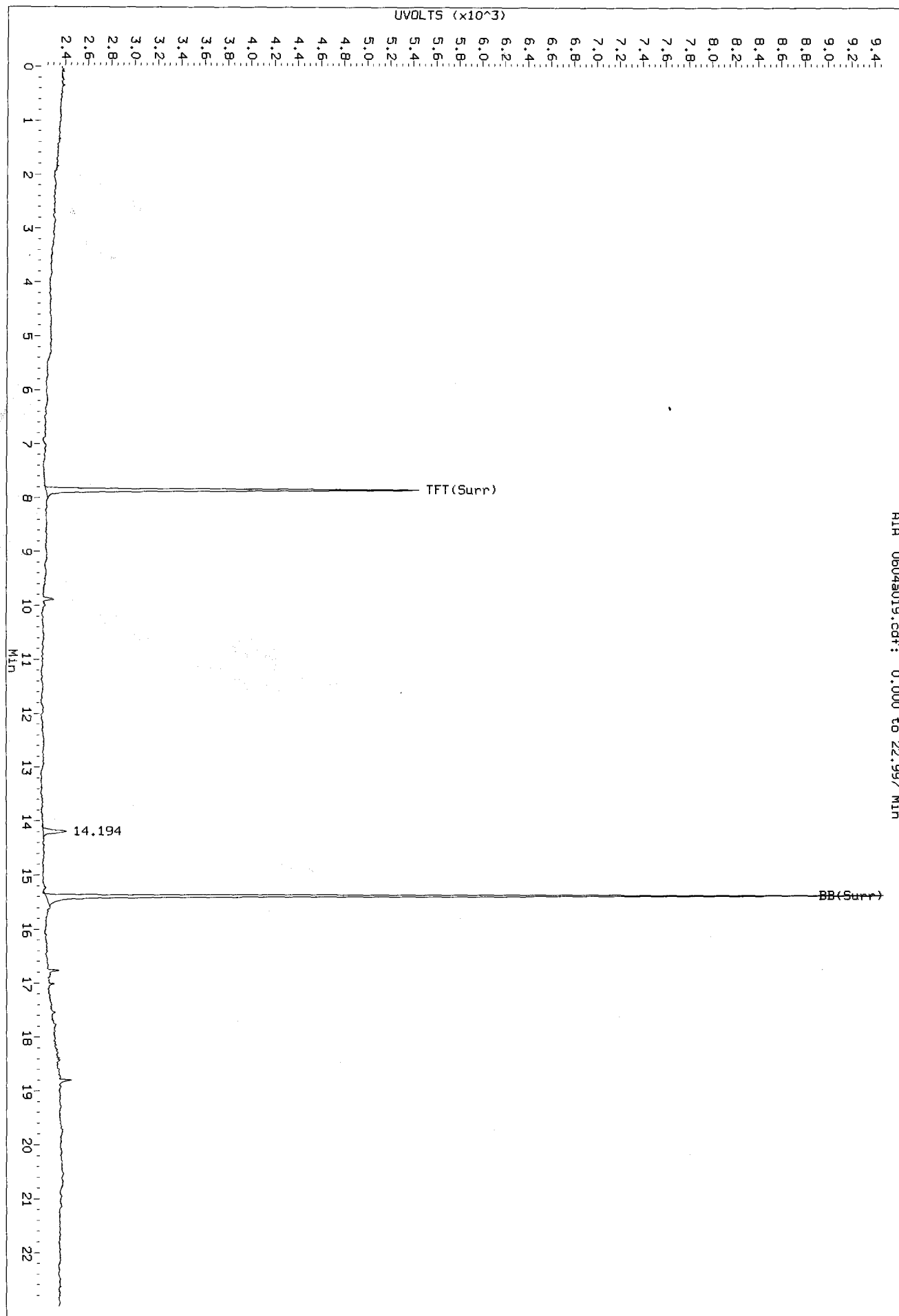
Page 1



PK
6/11/13

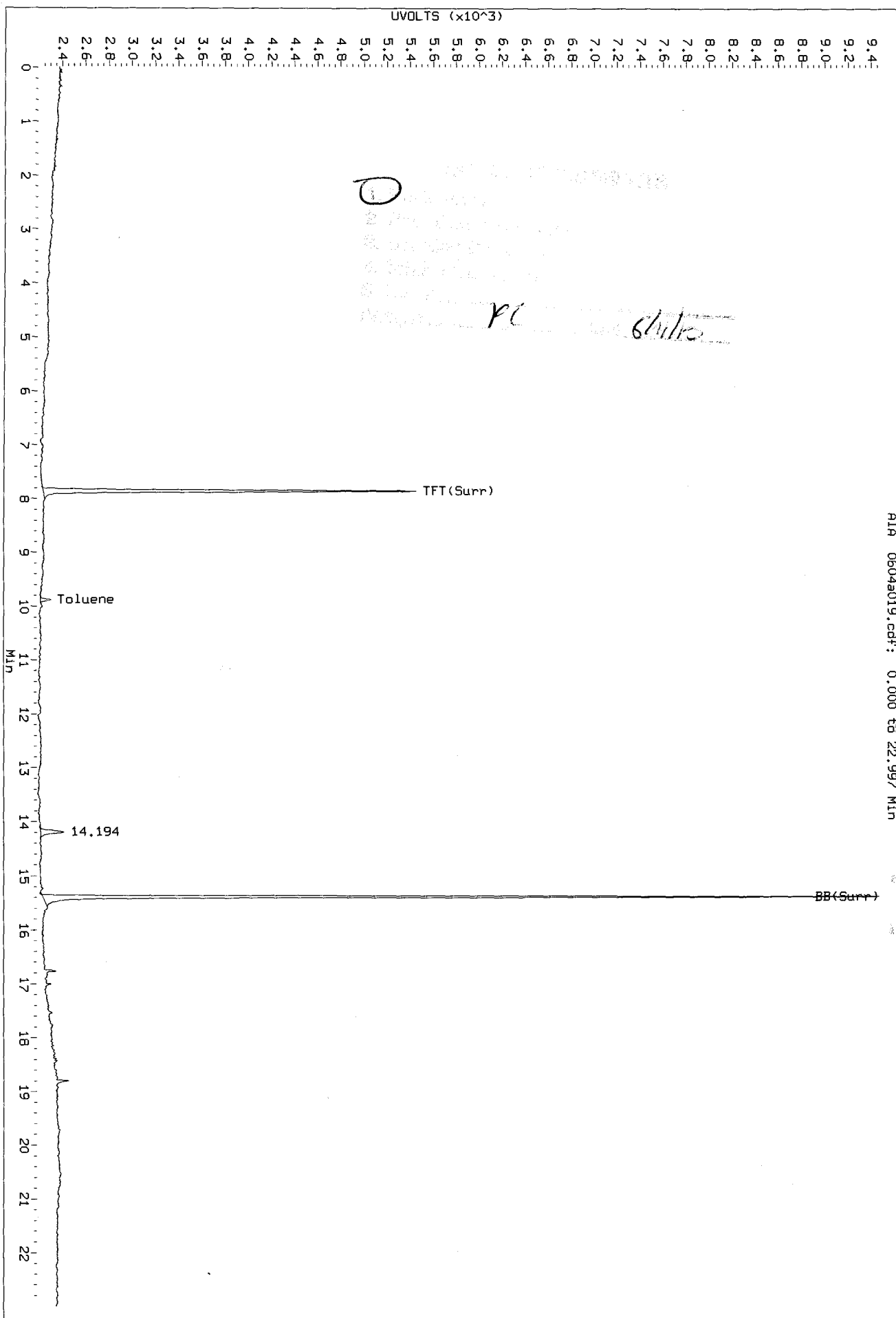
Data File: /chem3/pid1.1/20130604-2.l/0604a019.d/0604a019.cdf
Injection Date: 04-JUN-2013 19:54
Instrument: pid1.1
Client Sample ID: A2-F46-S-6

AIR 0604a019.cdf: 0.000 to 22.997 MIN



Data File: /chem3/pid1.1/20130604-2.b/0604a019.d/0604a019.cdf
Injection Date: 04-JUN-2013 19:54
Instrument: pid1.1
Client Sample ID: A2-F46-S-6

Ala 0604a019.cdf: 0.000 to 22.997 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F47-S-6

SAMPLE

Lab Sample ID: WS28J

LIMS ID: 13-11711

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 20:23

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 69 mg-dry-wt

Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	36	< 36 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	91.1%
Bromobenzene	93.2%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AL
 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a020.d ARI ID: WS28J
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a020.d Client ID: A2-F47-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 20:23
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	2732	34783	92.3	TFT(Surr)
15.381	0.002	1855	15722	93.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	494	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	2938	91.1	TFT(Surr)
15.389	0.003	6740	93.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.007	45	0.23N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a020.d

Date: 04-JUN-2013 20:23

Client ID: A2-F47-S-6

Sample Info: MS28J

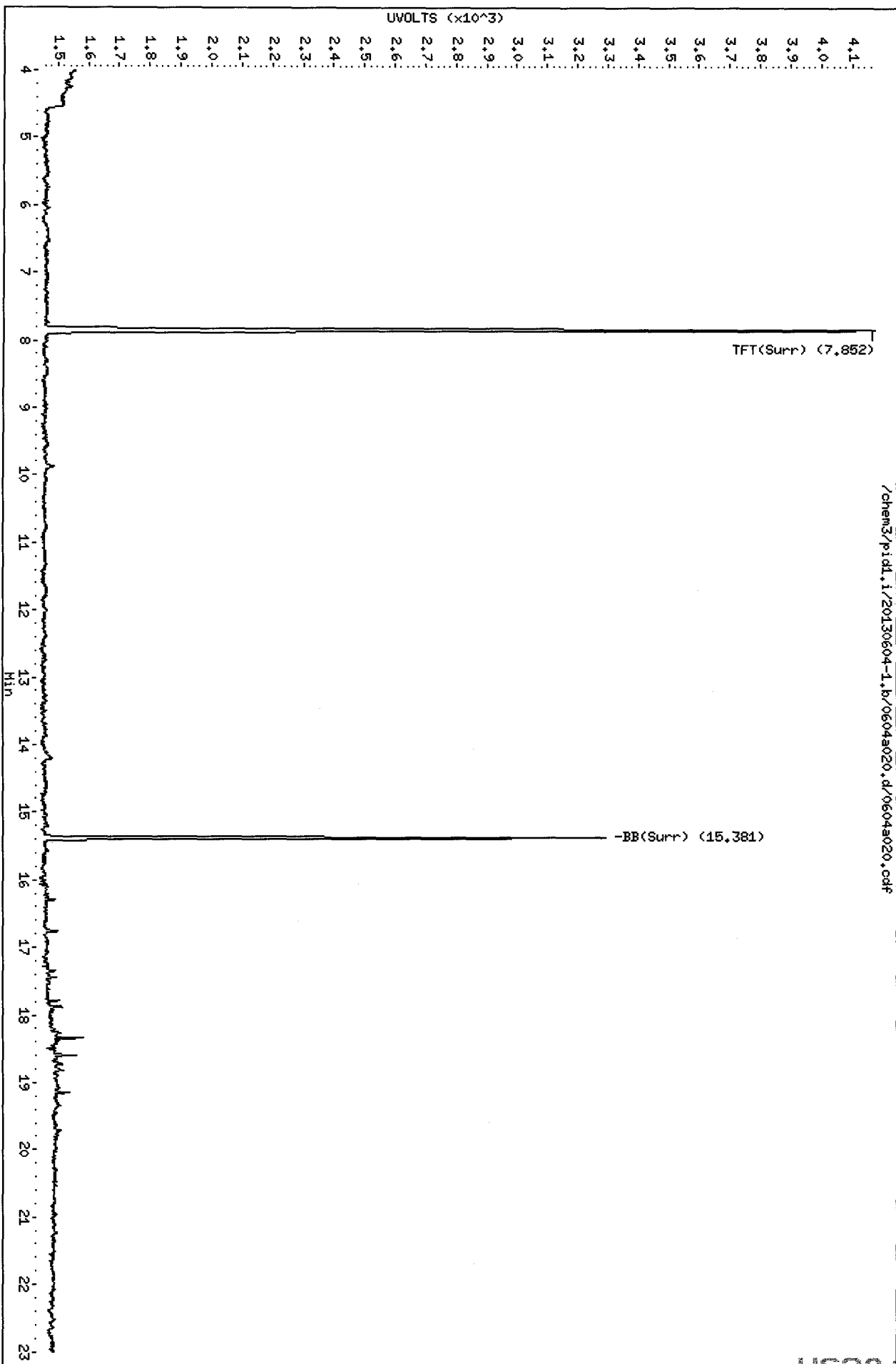
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

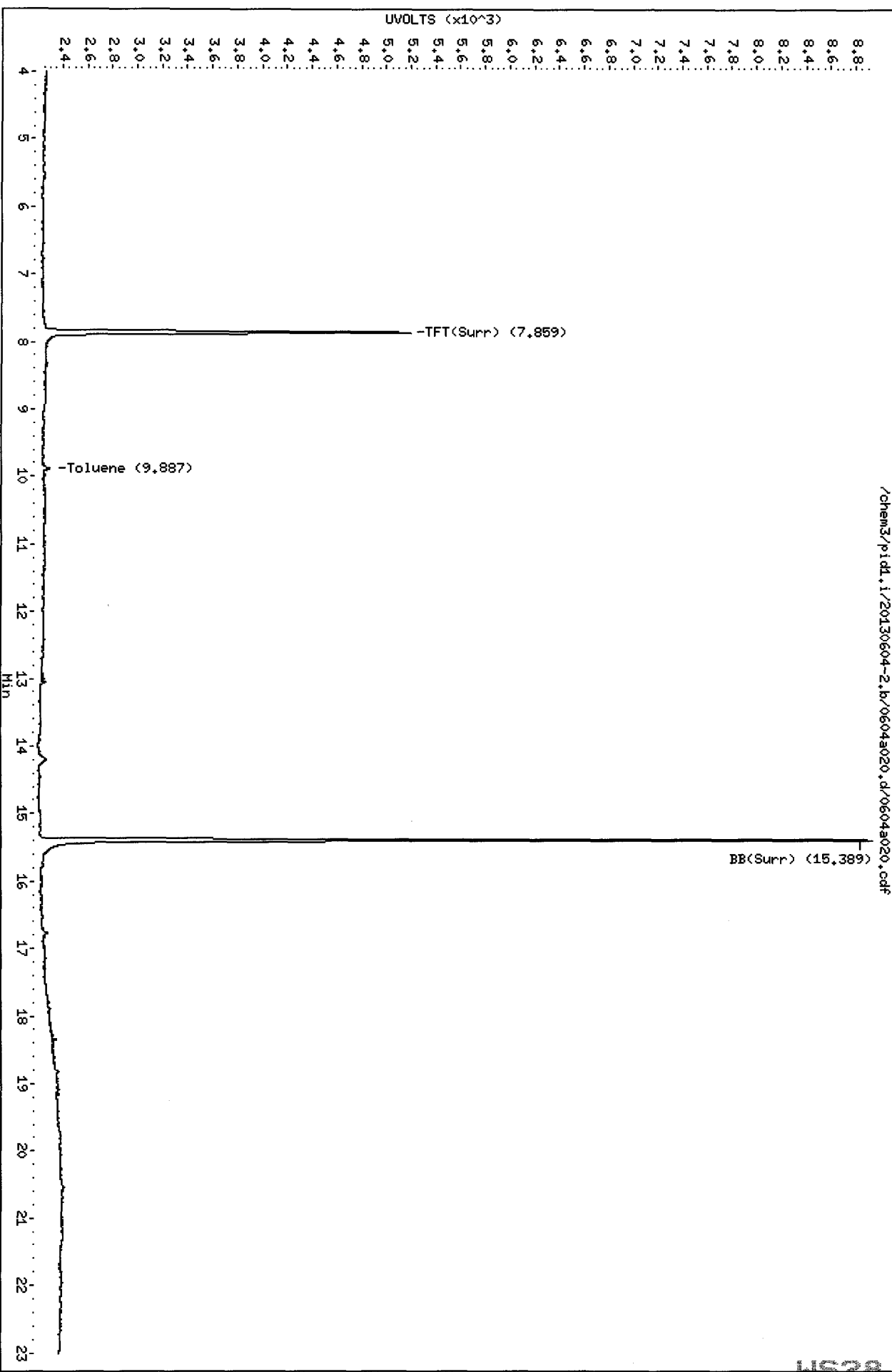
Page 1



MS28 00133

Data File: /chem3/pid1.i/20130604-2.b/0604a020.d
Date : 04-JUN-2013 20:23
Client ID: A2-F47-S-6
Sample Info: MS28J
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

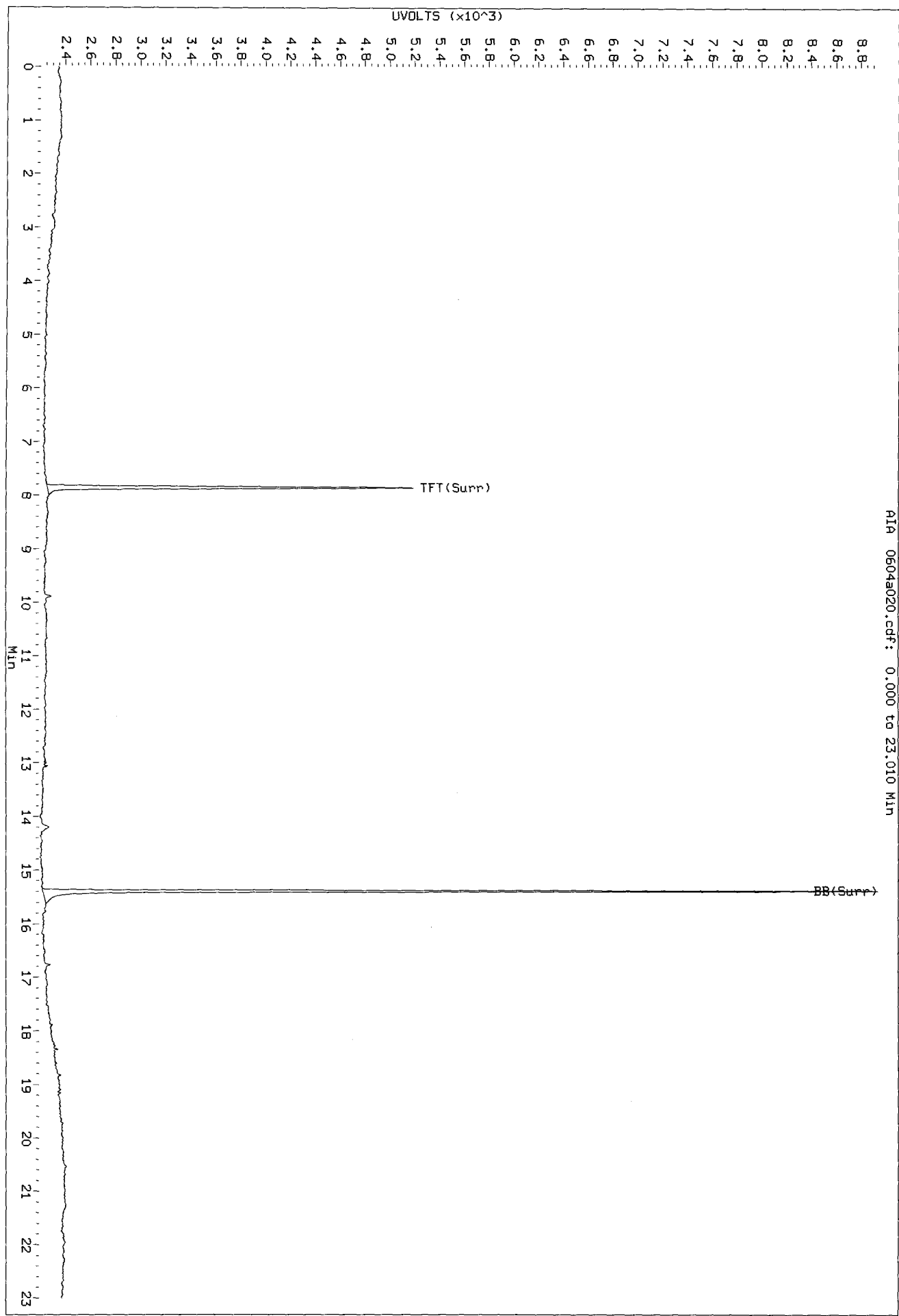


/chem3/pid1.i/20130604-2.b/0604a020.d/0604a020.cdf

Handwritten initials/signature

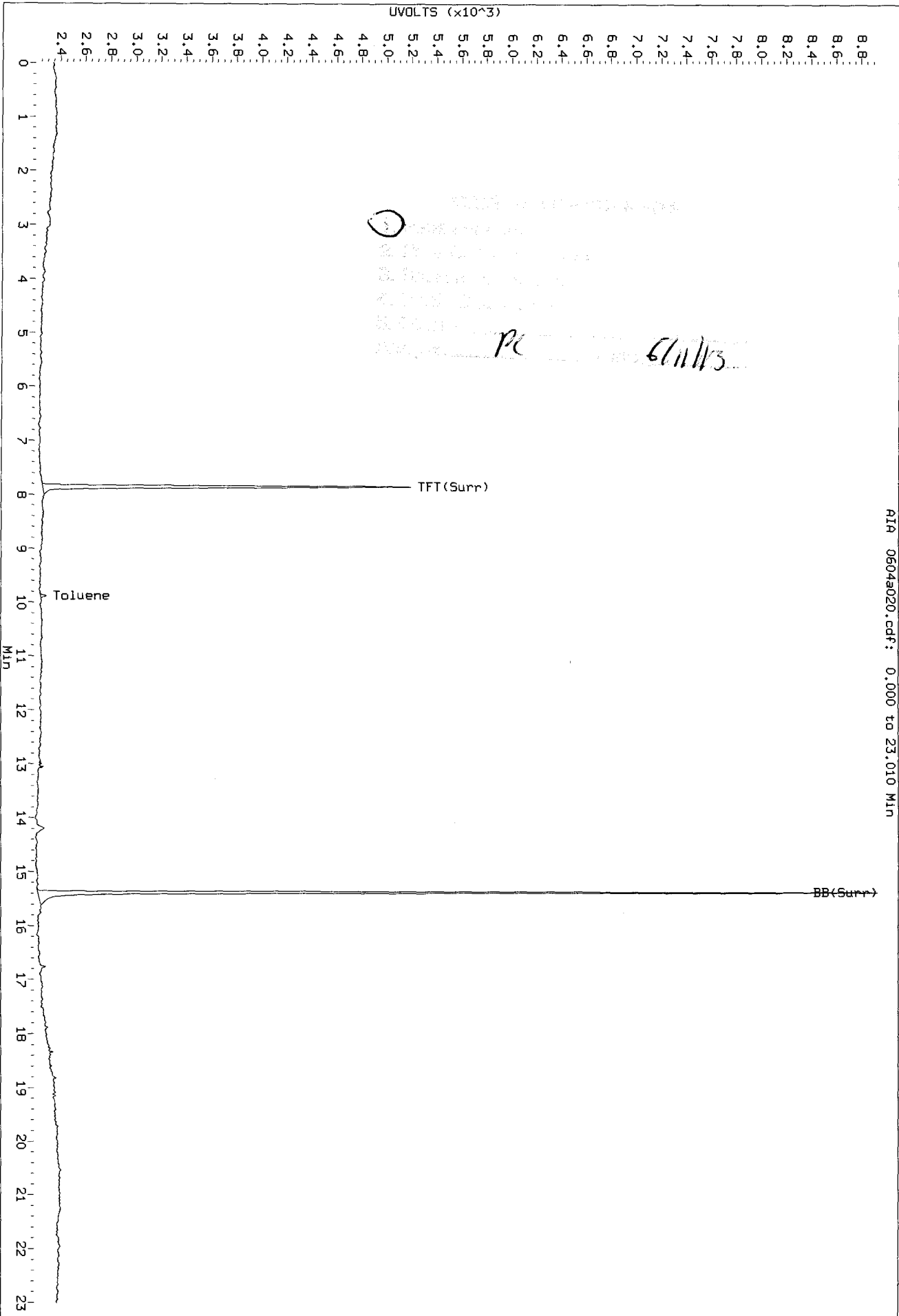
Data File: /chem3/pid1.1/20130604-2.1.b/0604a020.d/0604a020.cdf
Injection Date: 04-JUN-2013 20:23
Instrument: pid1.1
Client Sample ID: A2-F47-S-6

AIR 0604a020.cdf: 0.000 to 23.010 Min



Data File: /chem3/pid1.1/20130604-2.b/0604a020.d/0604a020.cdf
Injection Date: 04-JUN-2013 20:23
Instrument: pid1.1
Client Sample ID: A2-F47-S-6

AIR 0604a020.cdf: 0.000 to 23.010 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F48-S-6

SAMPLE

Lab Sample ID: WS28K

LIMS ID: 13-11712

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/30/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 20:51

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 23.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	19
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	94.3%
Bromobenzene	95.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a021.d ARI ID: WS28K
Data file 2: /chem3/pid1.i/20130604-2.b/0604a021.d Client ID: A2-F48-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 20:51
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.853	0.005	2806	35888	94.8	TFT(Surr)
15.382	0.003	1913	16003	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	457	0.001
8015C 2MP-TMB (4.19 to 16.20)	723723	457	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	457	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1041	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.861	0.005	3040	94.3	TFT(Surr)
15.390	0.003	6918	95.7	BB(Surr)

SW8021 (PID)

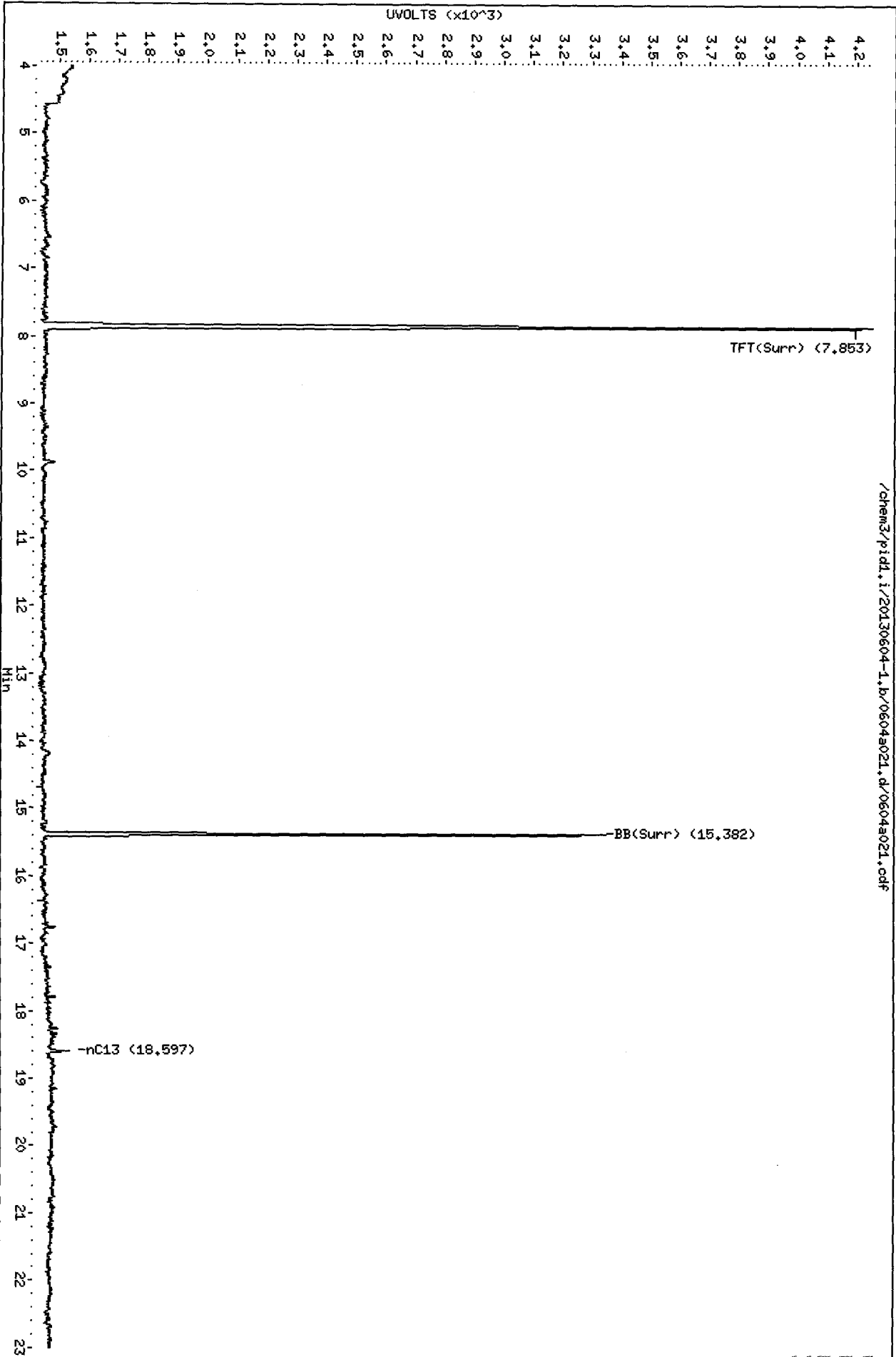
RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.883	0.003	52	0.26N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

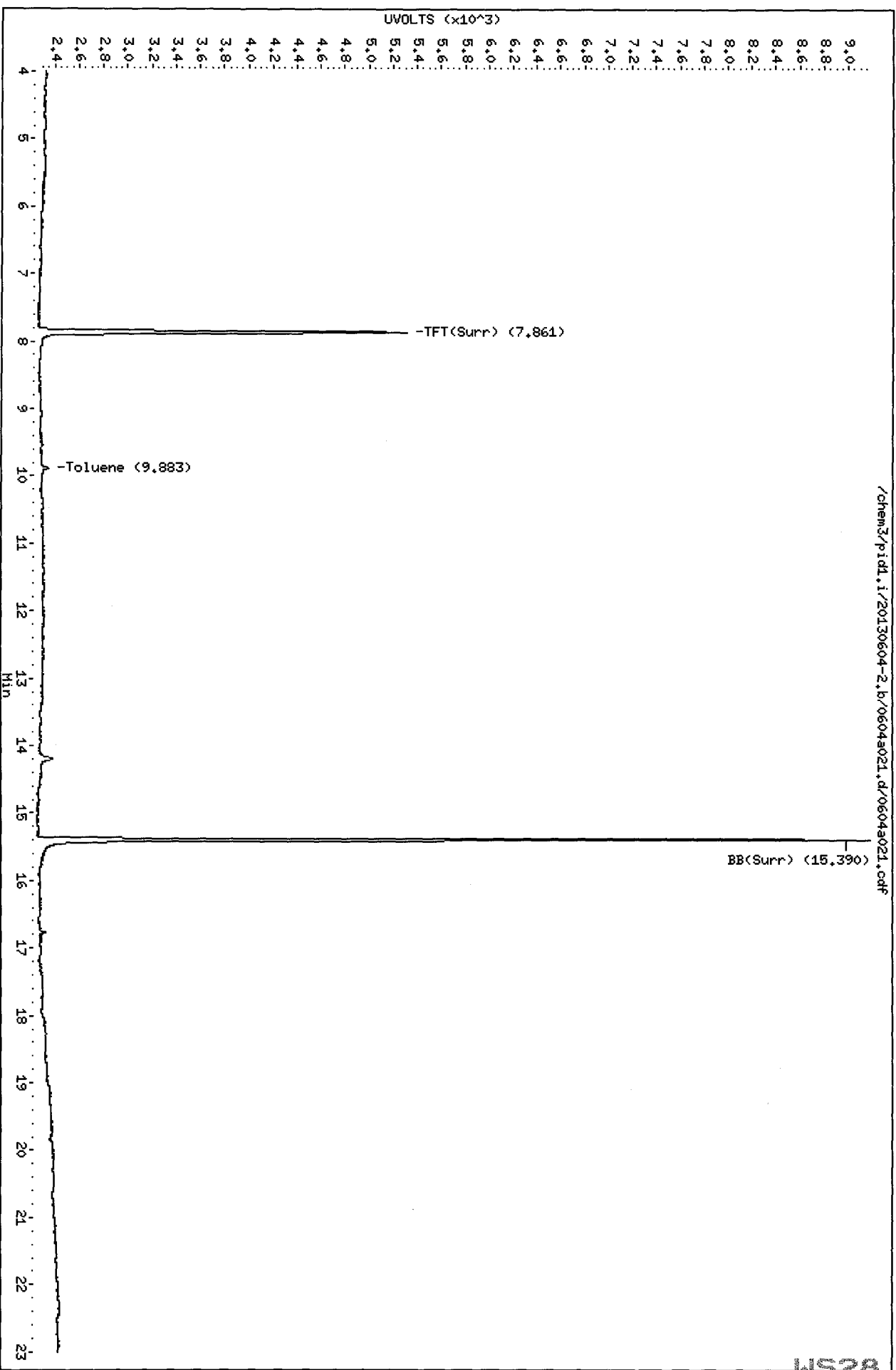
Data File: /chem3/pid1.i/20130604-1.b/0604a021.d
Date: 04-JUN-2013 20:51
Client ID: A2-F48-S-6
Sample Info: MS28K
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130604-2.b/0604a021.d
Date : 04-JUN-2013 20:51
Client ID: A2-F48-S-6
Sample Info: MS28K
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

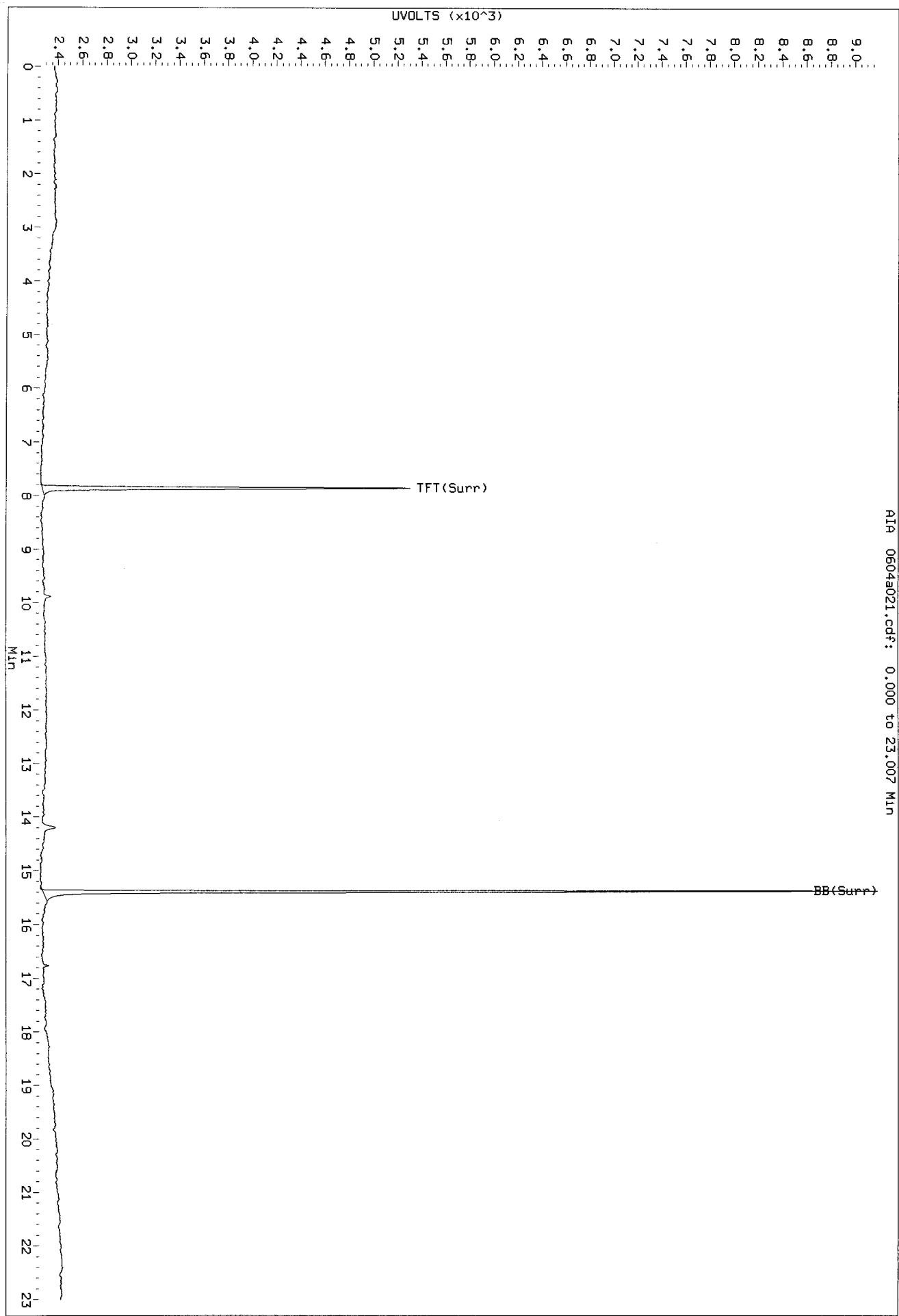


/chem3/pid1.i/20130604-2.b/0604a021.d/0604a021.cdf

PK
6/11/13

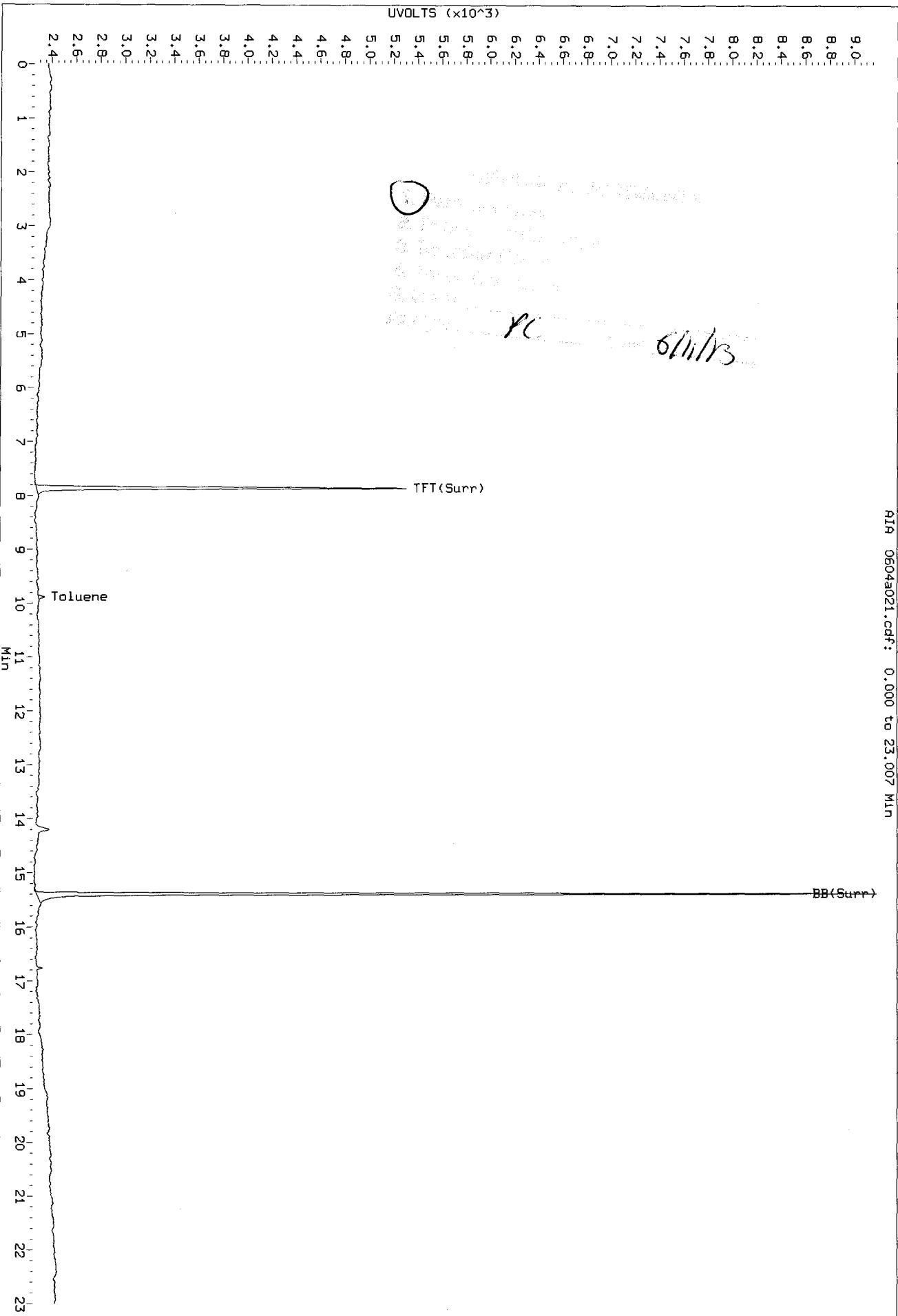
Data File: /chem3/pid1.1/20130604-2.1.b/0604a021.d/0604a021.cdf
Injection Date: 04-JUN-2013 20:51
Instrument: pid1.1
Client Sample ID: A2-F48-S-6

AIR 0604a021.cdf: 0.000 to 23.007 MIN



Data File: /chem3/pid1.1/20130604-2.1.b/0604a021.d/0604a021.cdf
Injection Date: 04-JUN-2013 20:51
Instrument: pid1.1
Client Sample ID: A2-F48-S-6

RII 0604a021.cdf: 0.000 to 23.007 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F49-S-6

SAMPLE

Lab Sample ID: WS28L

LIMS ID: 13-11713

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 21:20

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 53 mg-dry-wt

Percent Moisture: 31.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	24	< 24 U
108-88-3	Toluene	24	< 24 U
100-41-4	Ethylbenzene	24	< 24 U
179601-23-1	m,p-Xylene	47	< 47 U
95-47-6	o-Xylene	24	< 24 U

BETX Surrogate Recovery

Trifluorotoluene	95.3%
Bromobenzene	98.0%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a022.d ARI ID: WS28L
Data file 2: /chem3/pid1.i/20130604-2.b/0604a022.d Client ID: A2-F49-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 21:20
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.854	0.006	2828	36510	95.6	TFT(Surr)
15.382	0.003	1934	16328	97.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	4737	0.013
8015C 2MP-TMB (4.19 to 16.20)	723723	3361	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	3361	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4737	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.862	0.006	3071	95.3	TFT(Surr)
15.390	0.003	7085	98.0	BB(Surr)

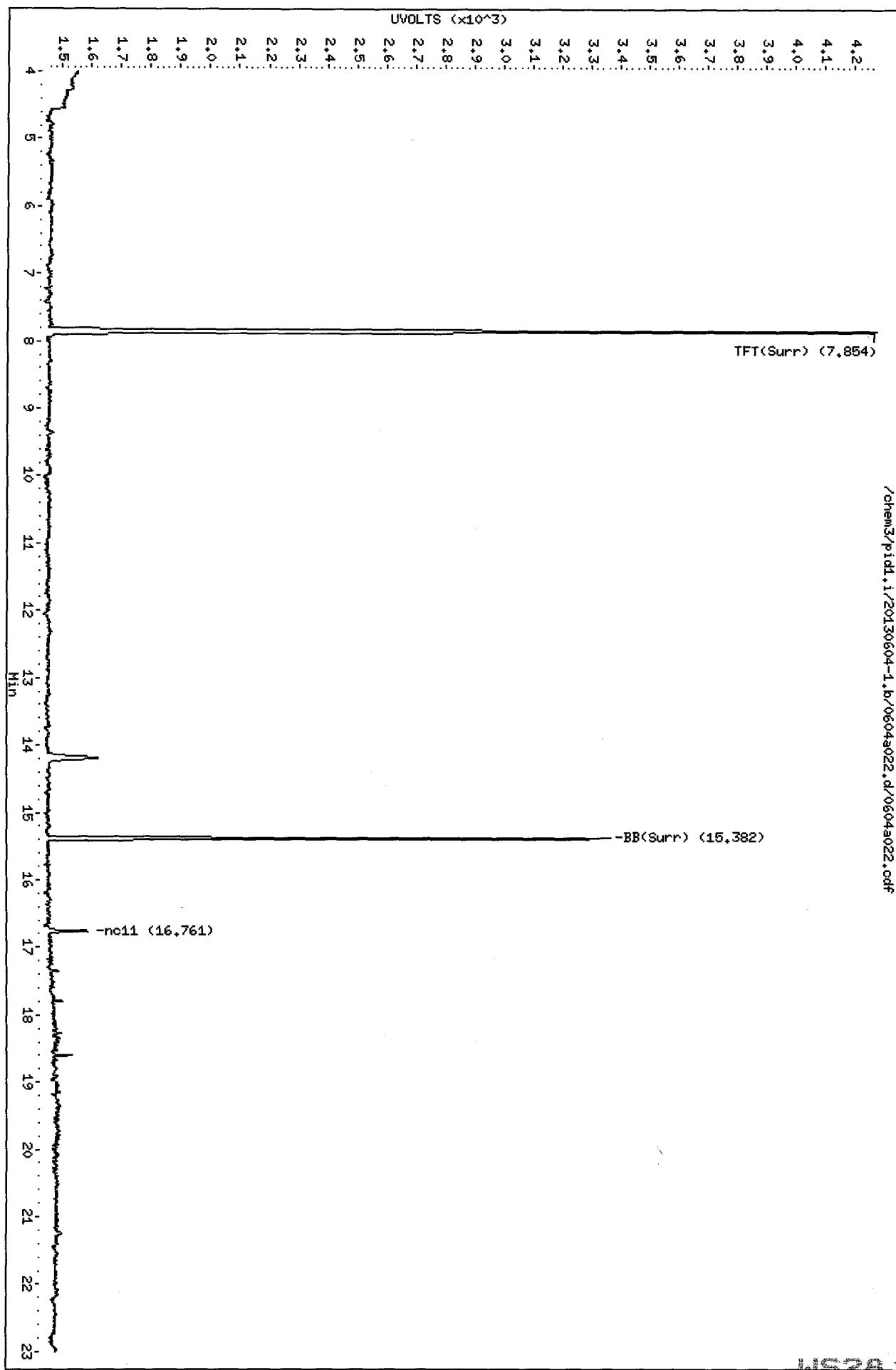
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a022.d
Date : 04-JUN-2013 21:20
Client ID: A2-F49-S-6
Sample Info: MS28L
Column phase: RTX 502-2 FID

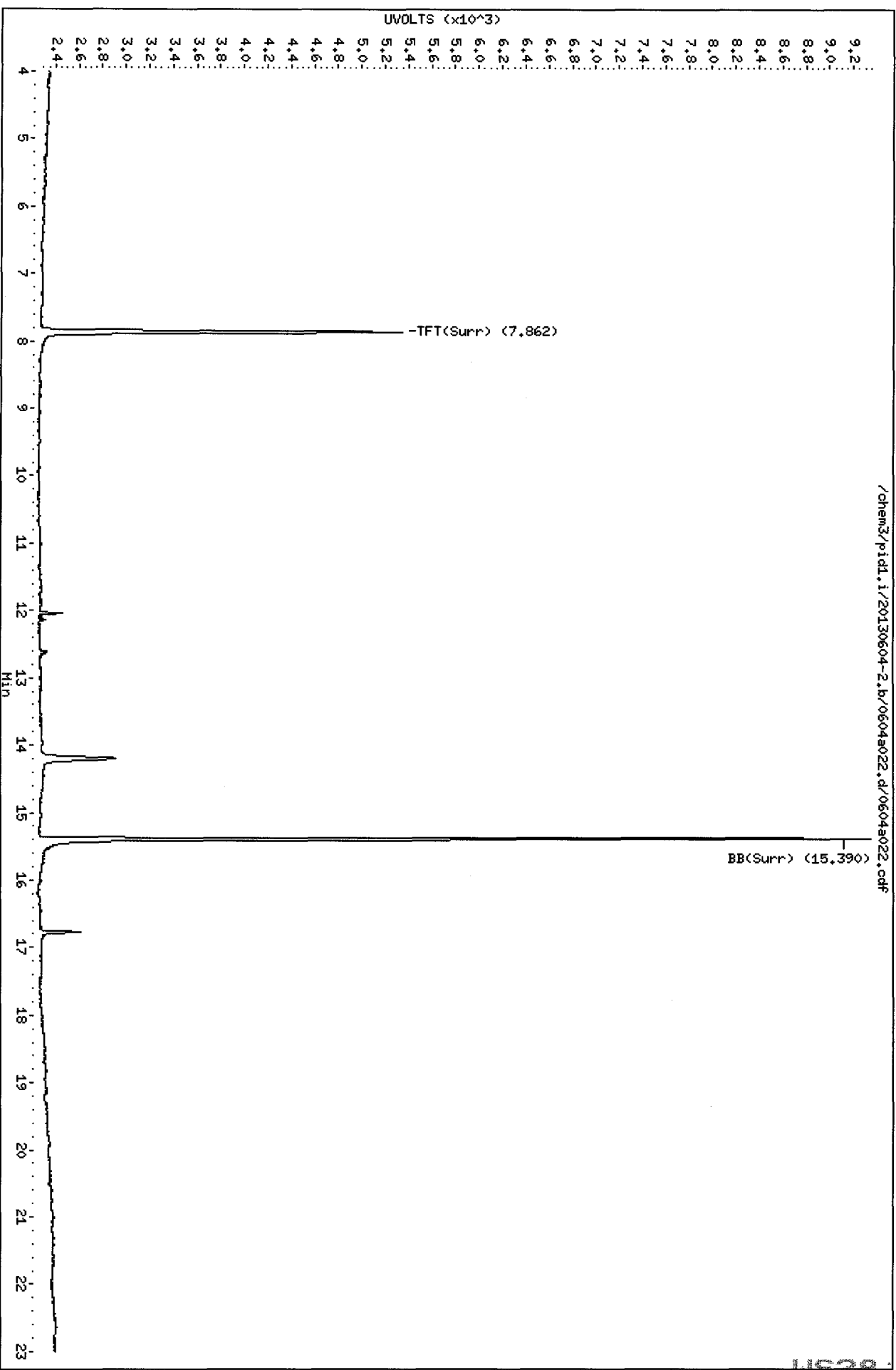
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-1.b/0604a022.d/0604a022.cdf

Data File: /chem3/pidd,i/20130604-2.b/0604s022.d
Date : 04-JUN-2013 21:20
Client ID: A2-F49-S-6
Sample Info: MS28L
Column phase: RTX 502-2 PID

Instrument: pidd,i
Operator: PC
Column diameter: 0.18



MS28 00146

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F50-S-6

SAMPLE

Lab Sample ID: WS28M

LIMS ID: 13-11714

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 21:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 72 mg-dry-wt

Percent Moisture: 22.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	35	< 35 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	96.6%
Bromobenzene	100%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a023.d ARI ID: WS28M
Data file 2: /chem3/pid1.i/20130604-2.b/0604a023.d Client ID: A2-F50-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 21:48
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.852	0.004	2861	36439	96.7	TFT(Surr)
15.381	0.003	1975	16482	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	1	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.860	0.004	3114	96.6	TFT(Surr)
15.389	0.003	7262	100.4	BB(Surr)

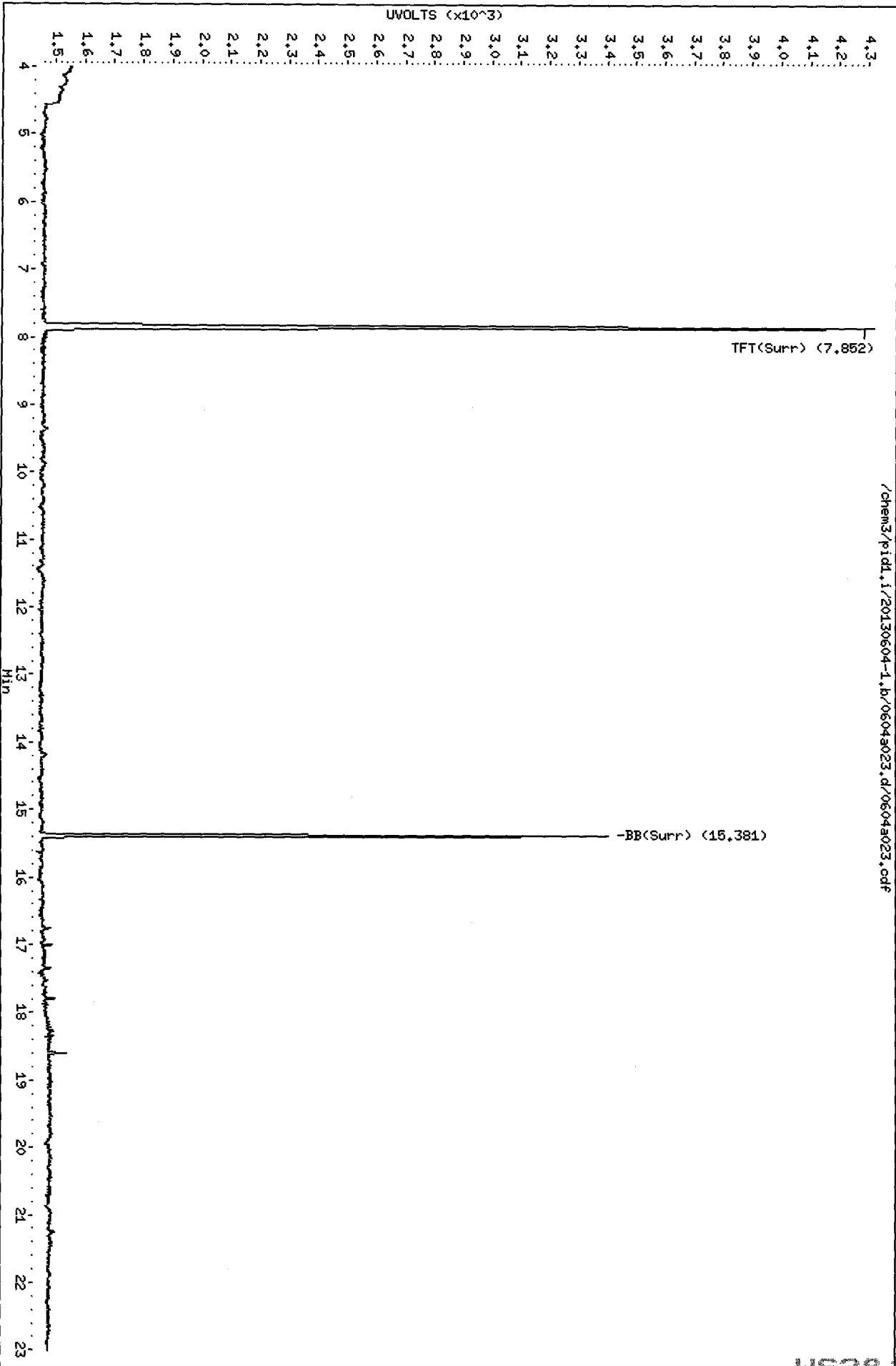
SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

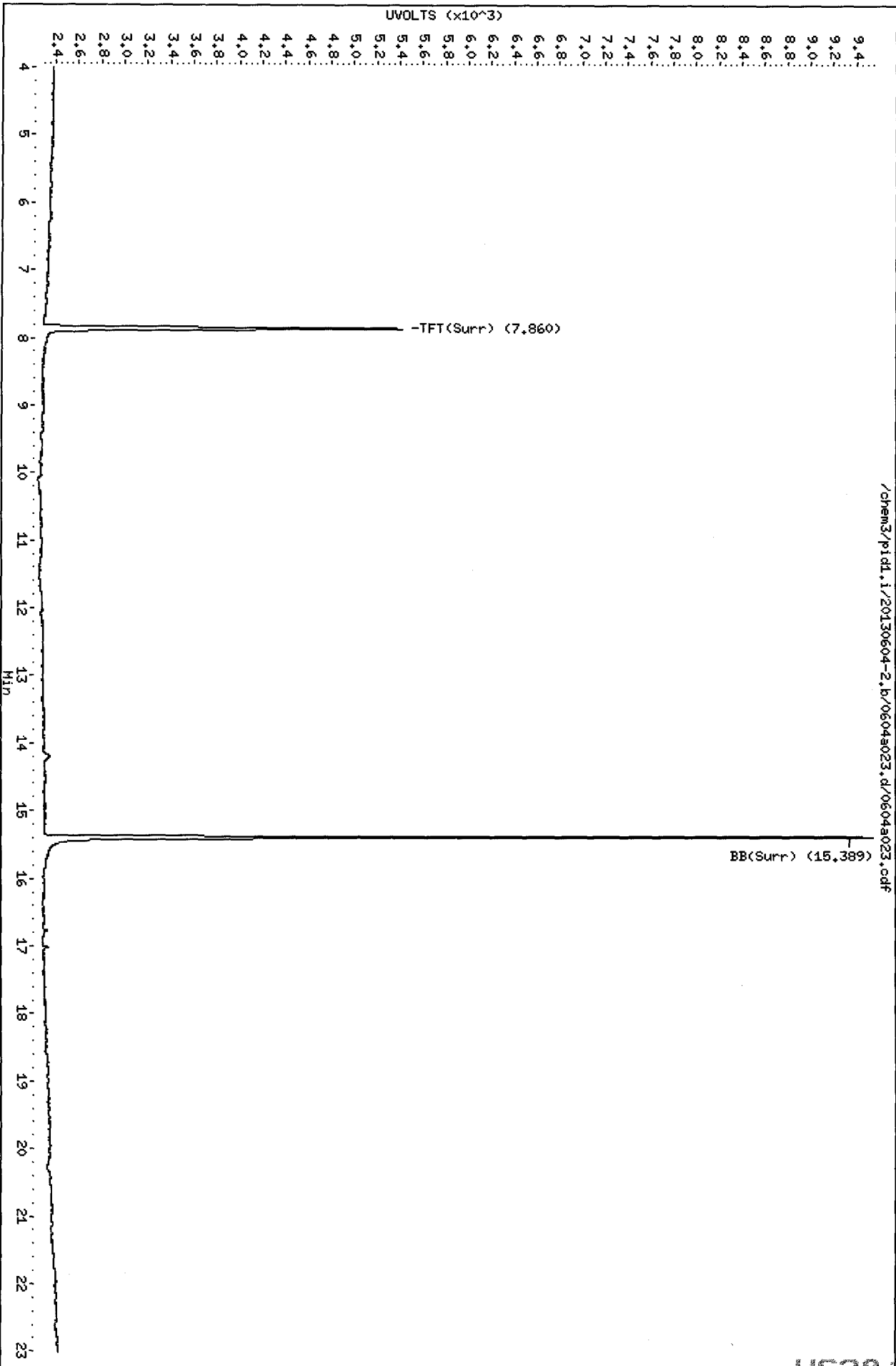
Data File: /chem3/pid1.i/20130604-1.b/0604a023.d
Date : 04-JUN-2013 21:48
Client ID: A2-F50-S-6
Sample Info: MS28M
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130604-2.b/0604a023.d
Date : 04-JUN-2013 21:48
Client ID: A2-F50-S-6
Sample Info: MS28M
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-2.b/0604a023.d/0604a023.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F51-S-6

SAMPLE

Lab Sample ID: WS28N

LIMS ID: 13-11715

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 22:17

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 13.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	92.3%
Bromobenzene	94.9%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a024.d ARI ID: WS28N
Data file 2: /chem3/pid1.i/20130604-2.b/0604a024.d Client ID: A2-F51-S-6
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 22:17
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	2740	34822	92.6	TFT(Surr)
15.382	0.003	1879	15850	94.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.004	2976	92.3	TFT(Surr)
15.389	0.003	6864	94.9	BB(Surr)

SW8021 (PID)

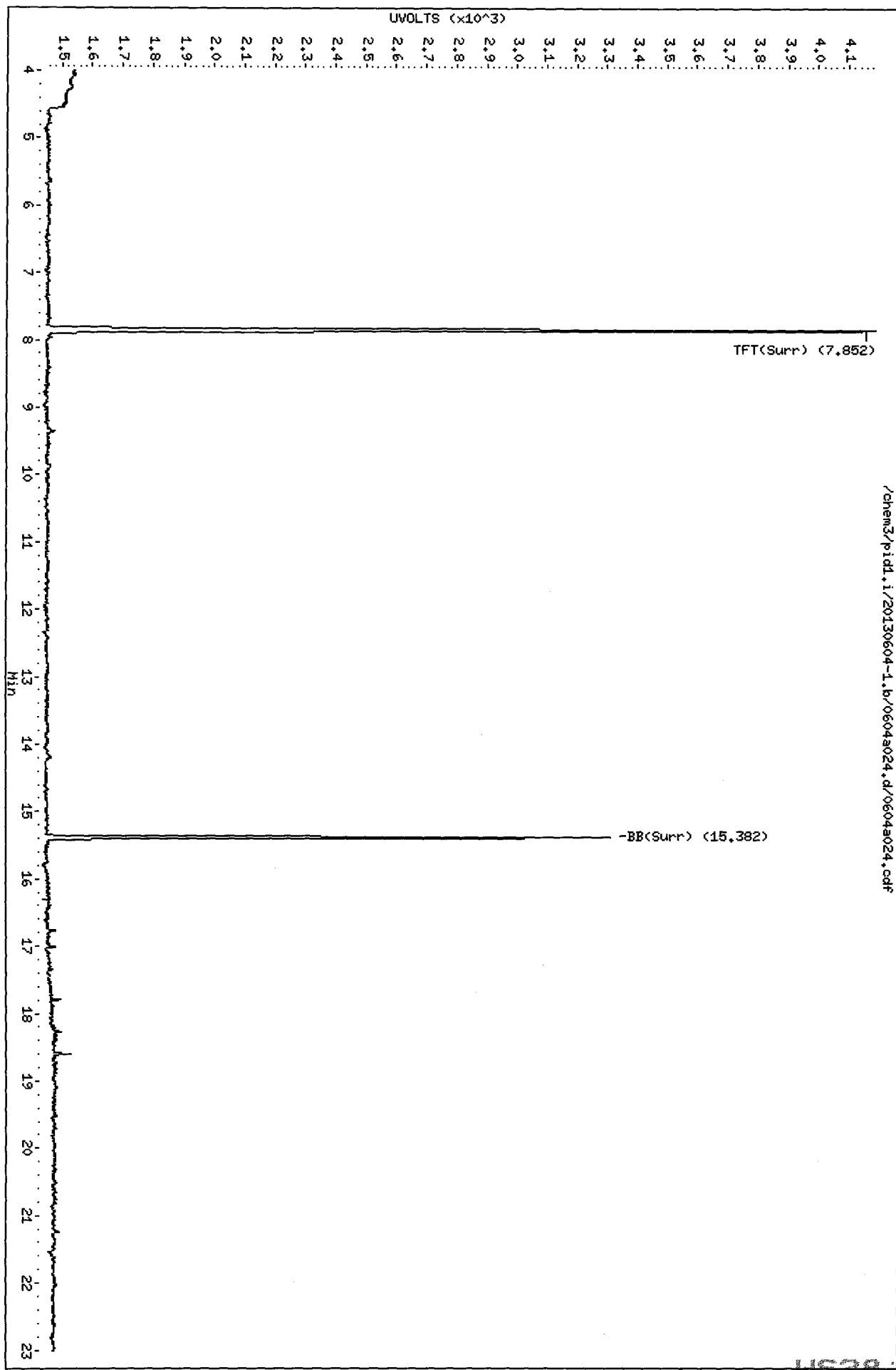
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidd,i/20130604-1.b/0604a024.d
Date : 04-JUN-2013 22:17
Client ID: A2-F51-S-6
Sample Info: MS28N
Column phase: RTX 502-2 FID

Instrument: pidd,i
Operator: PC
Column diameter: 0.18



/chem3/pidd,i/20130604-1.b/0604a024.d/0604a024.cdf

Data File: /chem3/pid1.i/20130604-2.b/0604a024.d

Date : 04-JUN-2013 22:17

Client ID: A2-F51-S-6

Sample Info: MS28N

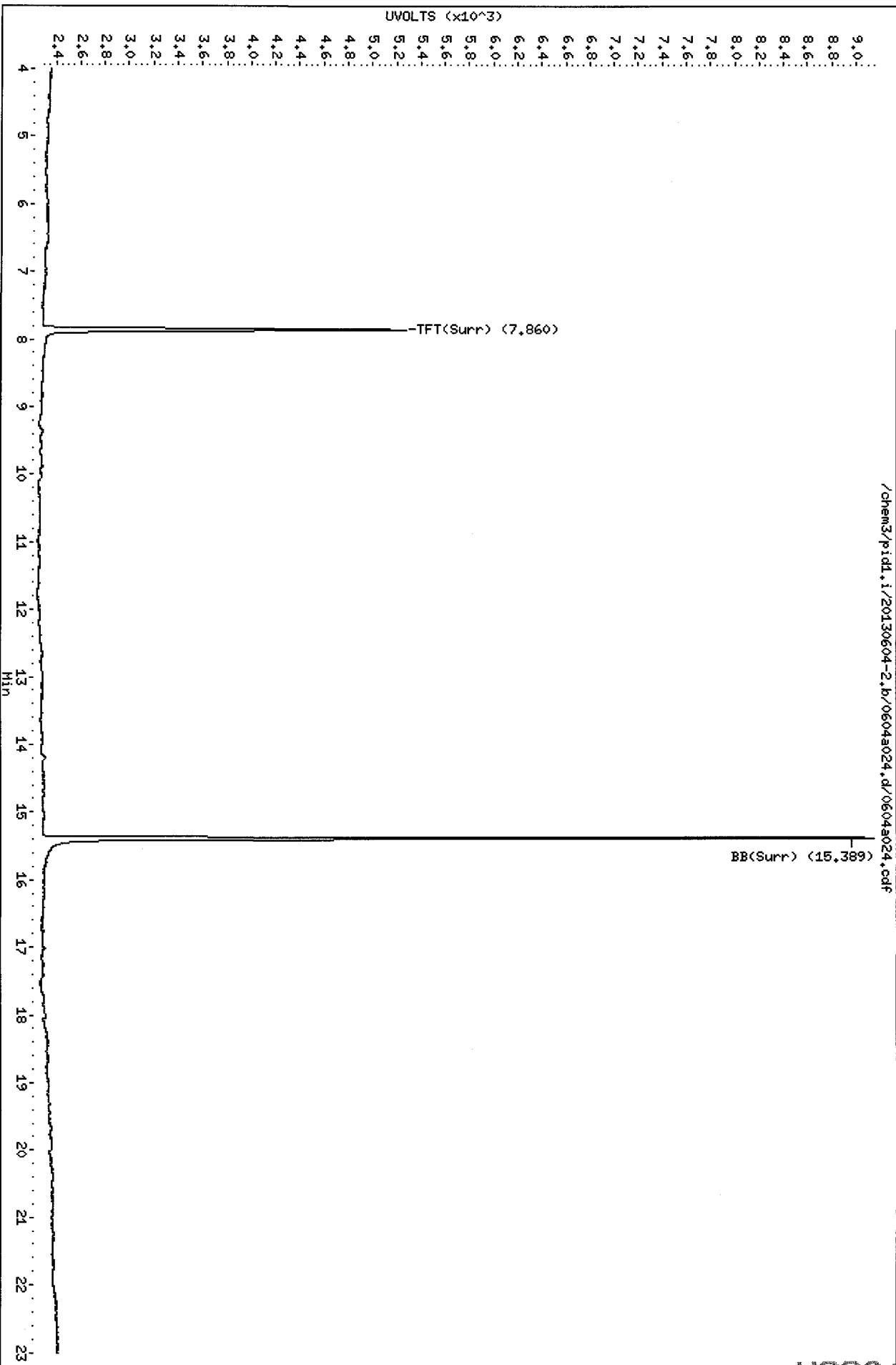
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

/chem3/pid1.i/20130604-2.b/0604a024.d/0604a024.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F52-S-6

SAMPLE

Lab Sample ID: WS280

LIMS ID: 13-11716

Matrix: Soil

Data Release Authorized:

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 22:45

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 64 mg-dry-wt

Percent Moisture: 19.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	< 20 U
100-41-4	Ethylbenzene	20	< 20 U
179601-23-1	m,p-Xylene	39	< 39 U
95-47-6	o-Xylene	20	< 20 U

BETX Surrogate Recovery

Trifluorotoluene	99.5%
Bromobenzene	103%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
slu/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a025.d ARI ID: WS280
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a025.d Client ID: A2-F52-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 22:45
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.005	2930	37226	99.0	TFT(Surr)
15.382	0.003	2024	17113	101.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	25336	0.071
8015C 2MP-TMB (4.19 to 16.20)	723723	11964	0.017
AK101 nC6-nC10 (4.68 to 15.10)	582885	4644	0.008
NWTPHG Tol-Nap (9.77 to 18.90)	375093	35169	0.094

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.005	3206	99.5	TFT(Surr)
15.389	0.003	7455	103.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

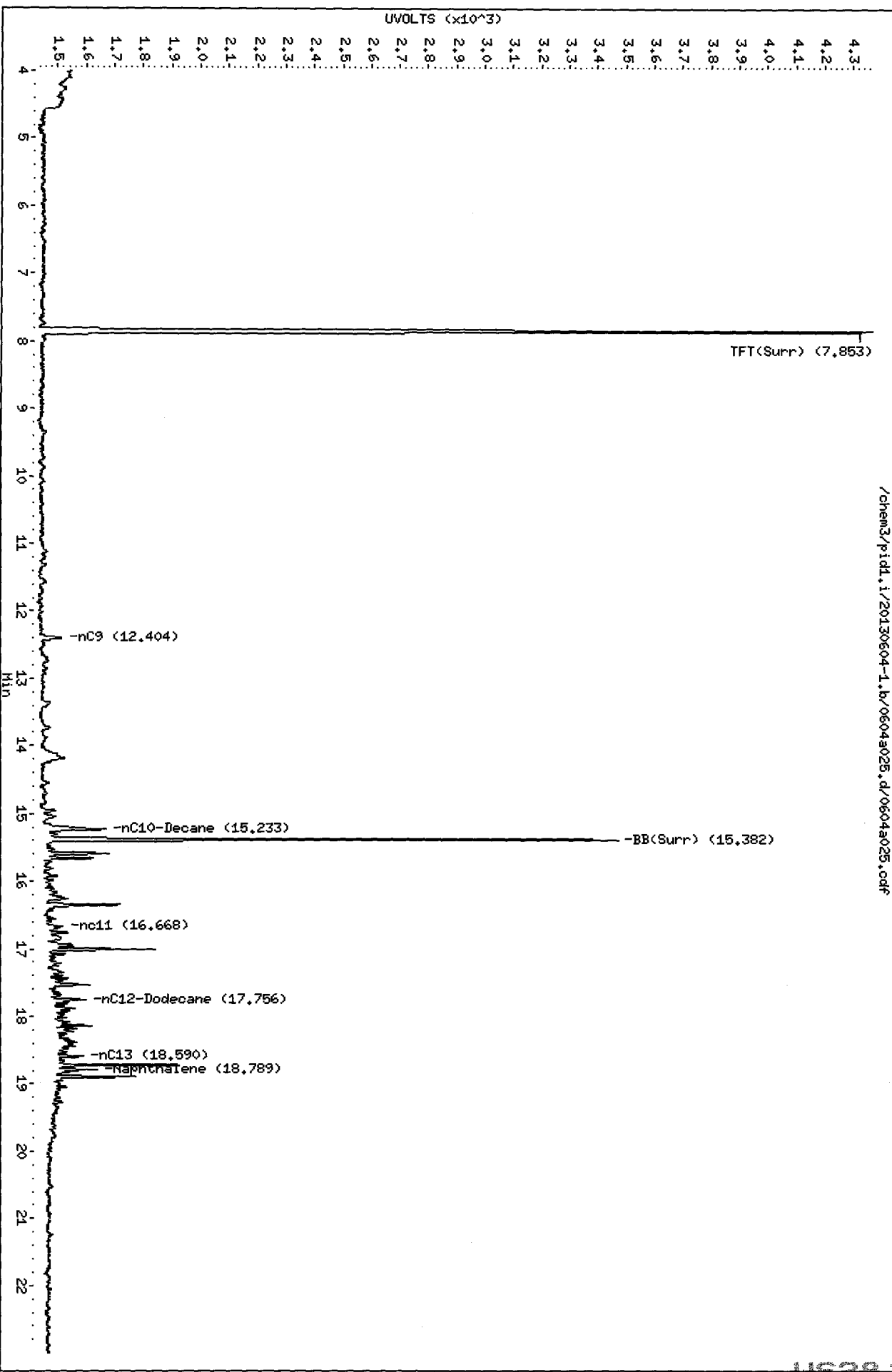
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130604-1.b/0604a025.d
Date : 04-JUN-2013 22:45
Client ID: A2-F52-S-6
Sample Info: MS280
Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18

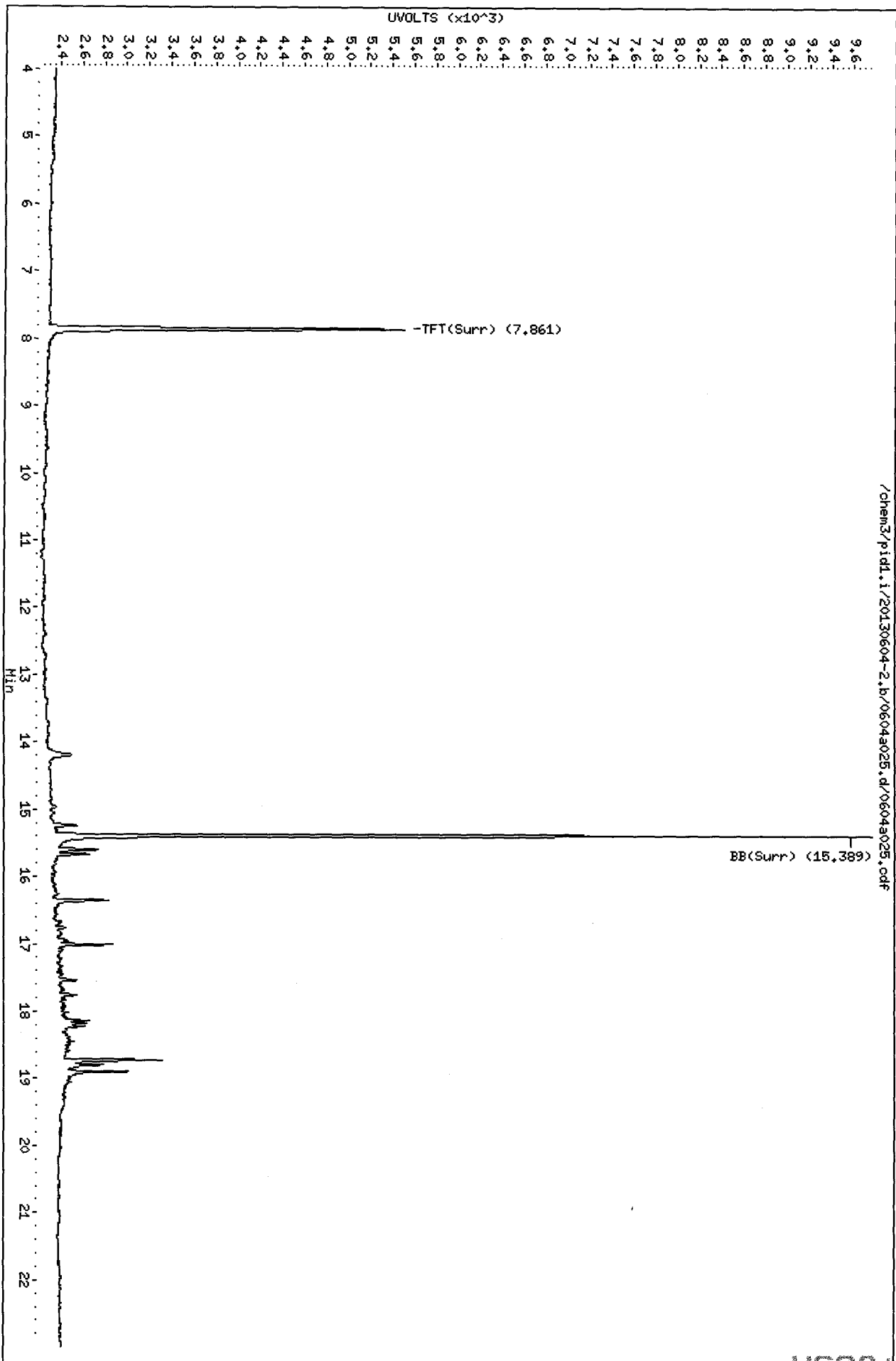
/chem3/pidd.i/20130604-1.b/0604a025.d/0604a025.cdf



Data File: /chem3/pidl.i/20130604-2.b/0604a025.d
Date: 04-JUN-2013 22:45
Client ID: A2-F52-S-6
Sample Info: MS280

Column phase: RTX 502-2 PID

Instrument: pidl.i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

Page 1 of 1


Sample ID: A2-F53-S-6

SAMPLE

Lab Sample ID: WS28P

LIMS ID: 13-11717

Matrix: Soil

Data Release Authorized: 

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/04/13 23:42

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 88 mg-dry-wt

Percent Moisture: 13.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	28	< 28 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	89.5%
Bromobenzene	93.0%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a027.d ARI ID: WS28P
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a027.d Client ID: A2-F53-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 23:42
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	2664	34096	90.0	TFT(Surr)
15.381	0.002	1852	15530	93.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.004	2886	89.5	TFT(Surr)
15.389	0.002	6725	93.0	BB(Surr)

SW8021 (PID)

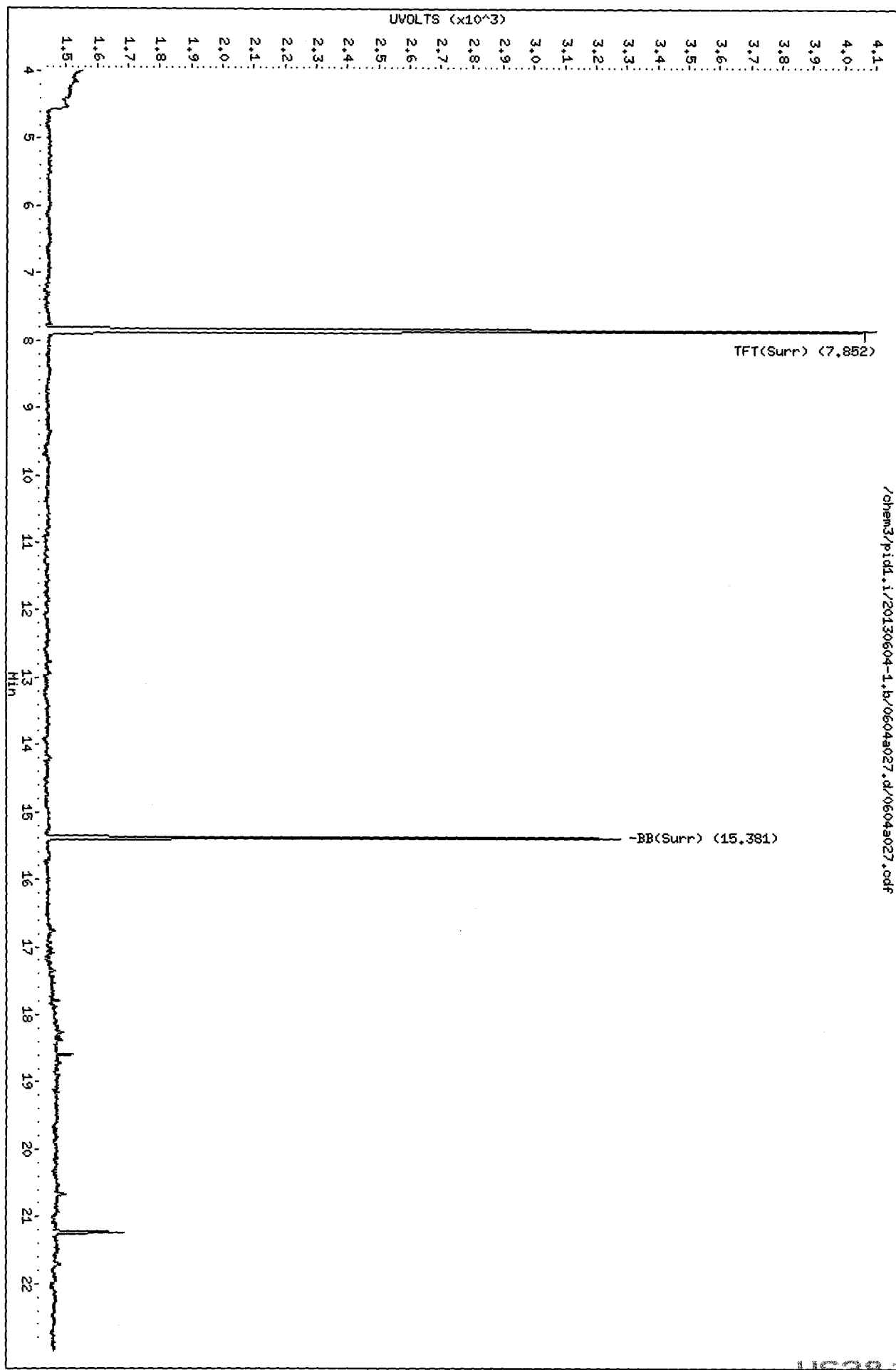
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130604-1.b/0604a027.d
Date: 04-JUN-2013 23:42
Client ID: 82-F53-S-6
Sample Info: MS28P
Column phase: RTX 502-2 FID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



MS28-00151

Data File: /chem3/pid1.i/20130604-2.b/0604a027.d

Date: 04-JUN-2013 23:42

Client ID: A2-F53-S-6

Sample Info: MS28P

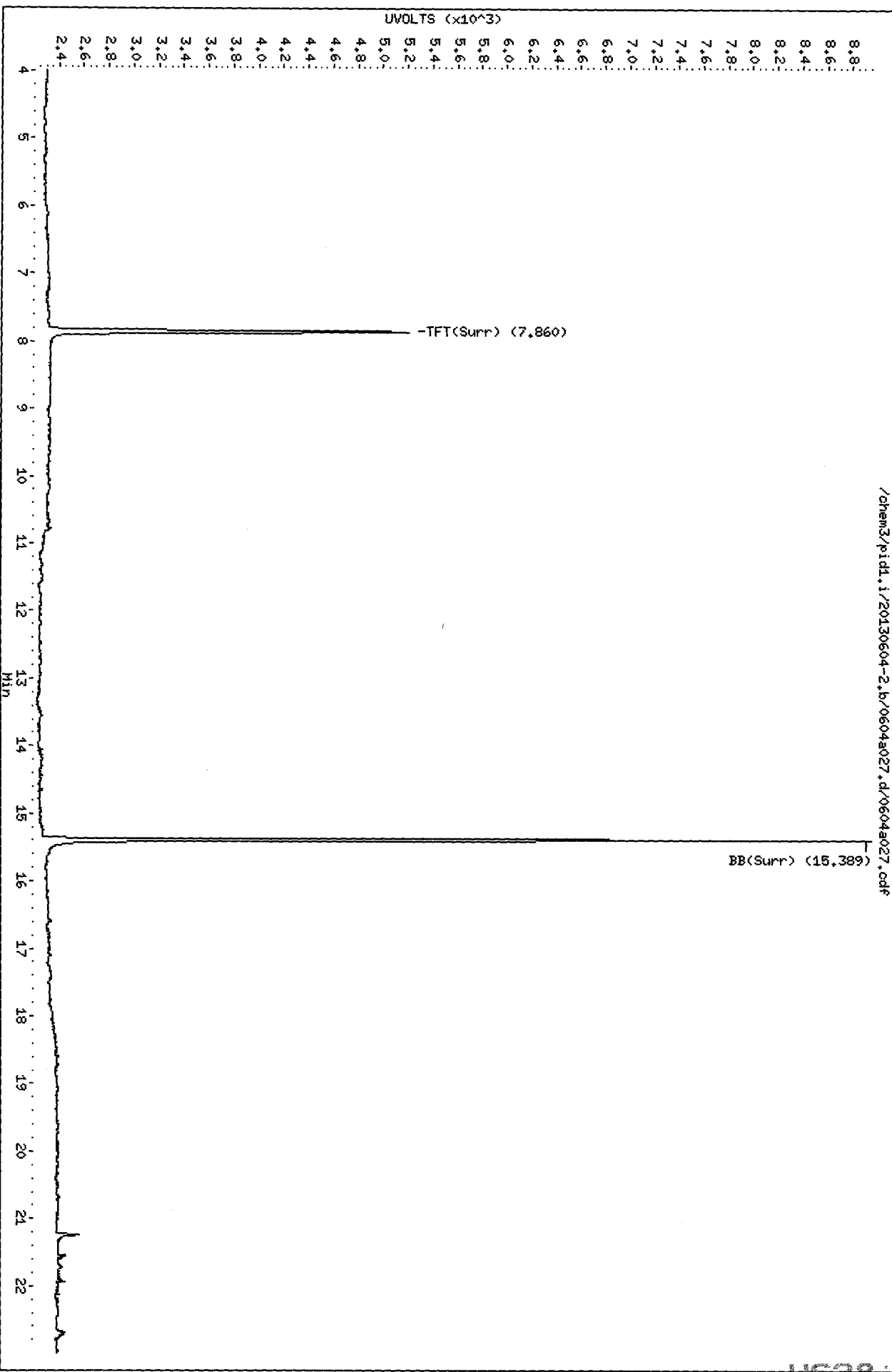
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

/chem3/pid1.i/20130604-2.b/0604a027.d/0604a027.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F54-S-6

SAMPLE

Lab Sample ID: WS28Q

LIMS ID: 13-11718

Matrix: Soil

Data Release Authorized:

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/05/13 00:10

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 12.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

BETX Surrogate Recovery

Trifluorotoluene	98.3%
Bromobenzene	102%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a028.d ARI ID: WS28Q
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a028.d Client ID: A2-F54-S-6
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 05-JUN-2013 00:10
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.005	2896	37169	97.9	TFT(Surr)
15.382	0.003	2006	16913	101.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1	0.000
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.862	0.006	3168	98.3	TFT(Surr)
15.389	0.003	7411	102.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

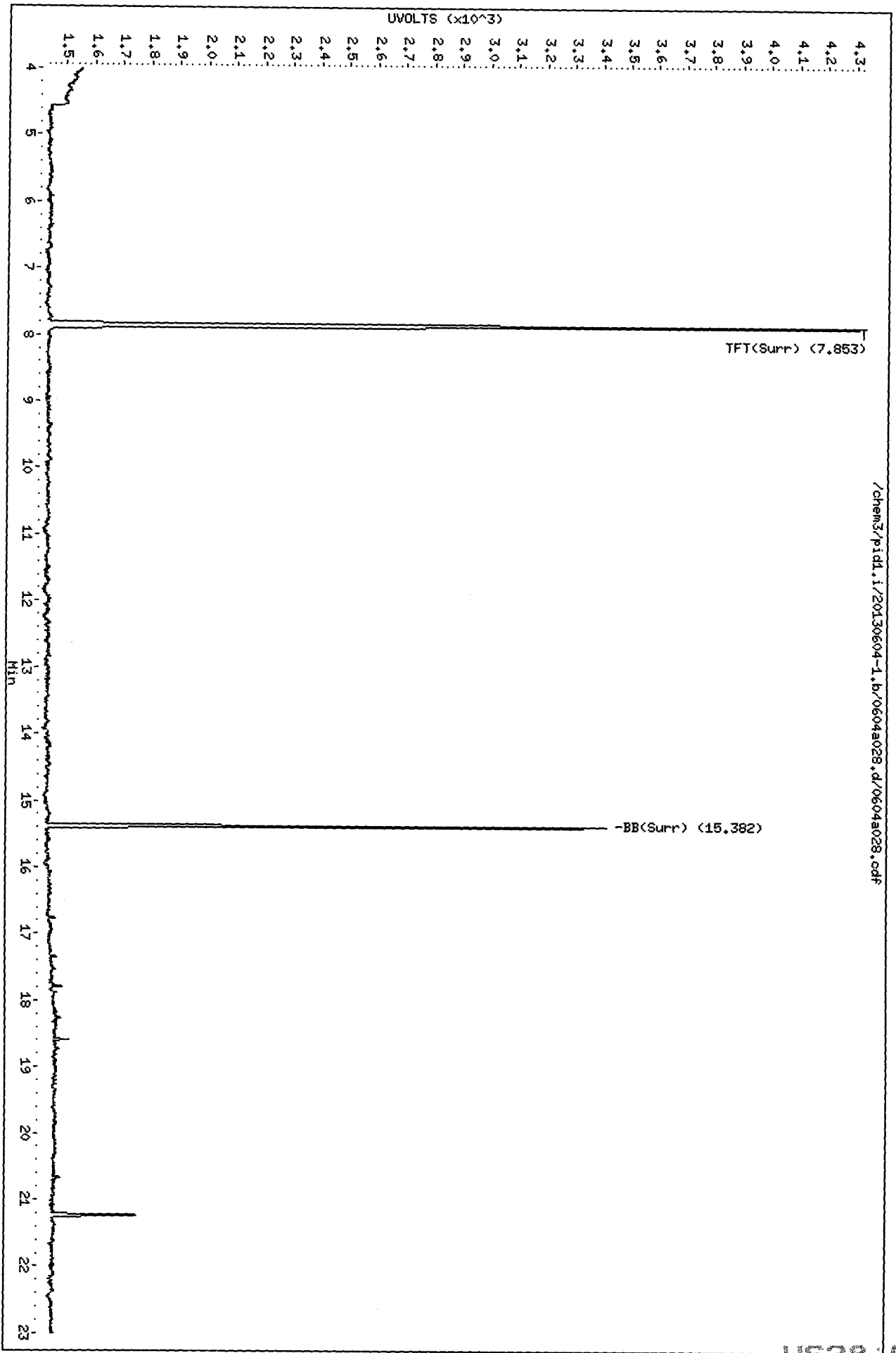
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/0604a028.d
Date: 05-JUN-2013 00:10
Client ID: A2-F54-S-6
Sample Info: MS28Q

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-1.b/0604a028.d/0604a028.cdf

Data File: /chem3/pid1.i/20130604-2.b/0604a028.d

Page 1

Date: 05-JUN-2013 00:10

Client ID: A2-F94-S-6

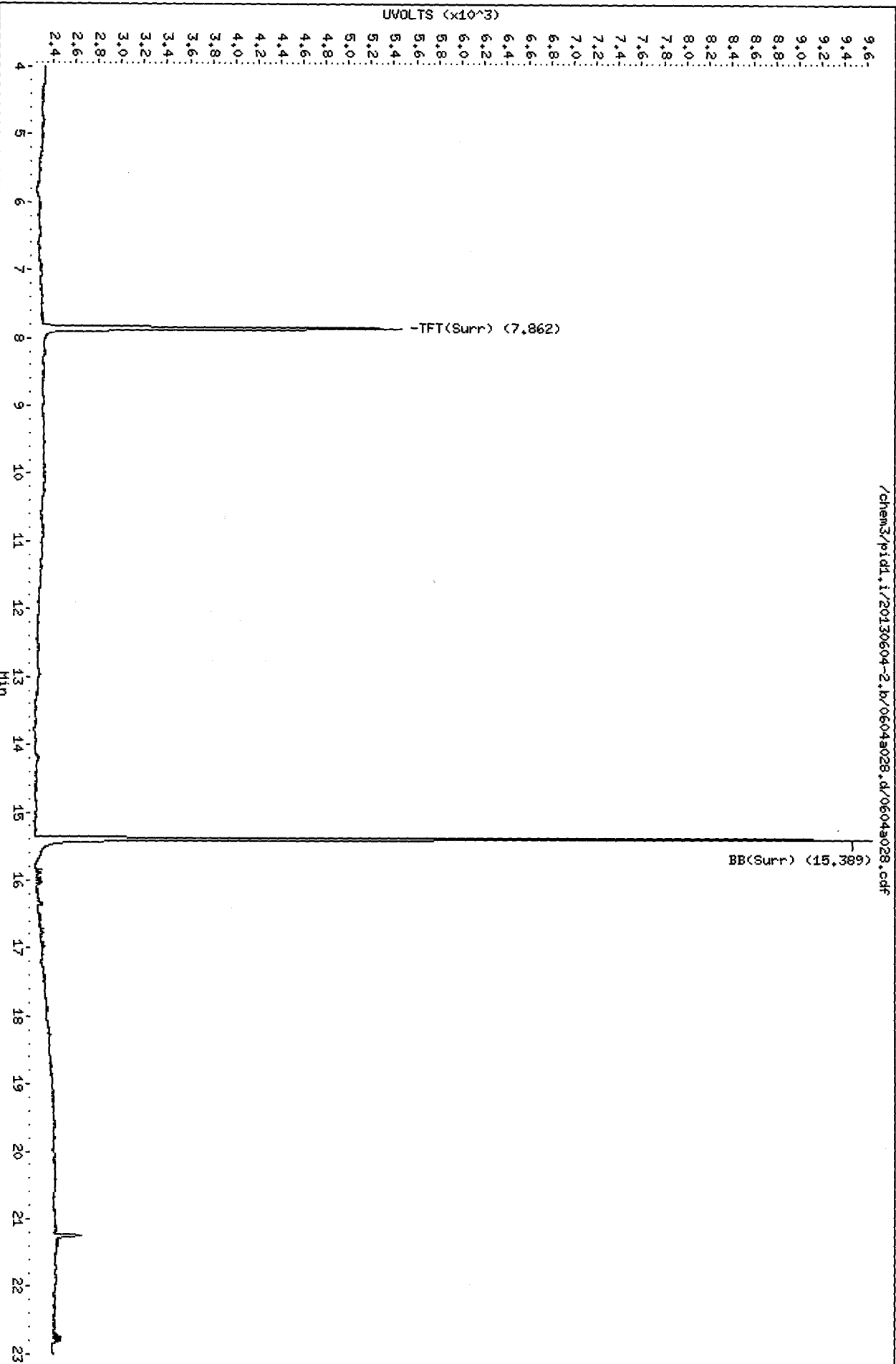
Sample Info: MS280

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID



MS28 00156

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS28
Matrix: Soil

QC Report No: WS28-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-060413	96.0%	96.4%	0
LCS-060413	100%	97.4%	0
LCSD-060413	96.9%	95.6%	0
SL-F7-S-6	102%	101%	0
SL-F8-S-6	95.6%	94.7%	0
SL-F9-S-6	100%	97.7%	0
SL-F10-S-6	99.3%	98.7%	0
SL-F11-S-6	102%	101%	0
A2-F43-S-6	95.4%	95.5%	0
A2-F44-S-6	95.4%	96.7%	0
A2-F45-S-6	100%	102%	0
A2-F46-S-6	100%	101%	0
A2-F47-S-6	91.1%	93.2%	0
A2-F48-S-6	94.3%	95.7%	0
A2-F49-S-6	95.3%	98.0%	0
A2-F50-S-6	96.6%	100%	0
A2-F51-S-6	92.3%	94.9%	0
A2-F52-S-6	99.5%	103%	0
A2-F53-S-6	89.5%	93.0%	0
A2-F54-S-6	98.3%	102%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11702 to 13-11718

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-060413

LAB CONTROL SAMPLE

Lab, Sample ID: LCS-060413

LIMS ID: 13-11702

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/04/13 11:09

LCSD: 06/04/13 11:37

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike		LCSD	Spike		RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	175	185	94.6%	176	185	95.1%	0.6%
Toluene	1950	1980	98.5%	1930	1980	97.5%	1.0%
Ethylbenzene	562	580	96.9%	568	580	97.9%	1.1%
m,p-Xylene	2030	2120	95.8%	2050	2120	96.7%	1.0%
o-Xylene	932	960	97.1%	934	960	97.3%	0.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	100%	96.9%
Bromobenzene	97.4%	95.6%

PC
6/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130604-1.b/0604a004.d ARI ID: LCS0604
Data file 2: /chem3/pid1.i/20130604-2.b/0604a004.d Client ID:
Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 11:09
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	2956	42029	99.9	TFT(Surr)
15.382	0.003	1911	16755	96.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	334122	0.933 M
8015C 2MP-TMB (4.19 to 16.20)	723723	681272	0.941 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	548142	0.940 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	351932	0.938 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.005	3235	100.4	TFT(Surr)
15.390	0.003	7042	97.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.026	0.004	788	3.50	Benzene
9.885	0.005	7725	38.99	Toluene
12.774	0.005	1835	11.24	Ethylbenzene
12.938	0.007	7304	40.59	M/P-Xylene
13.883	0.006	2646	18.63	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

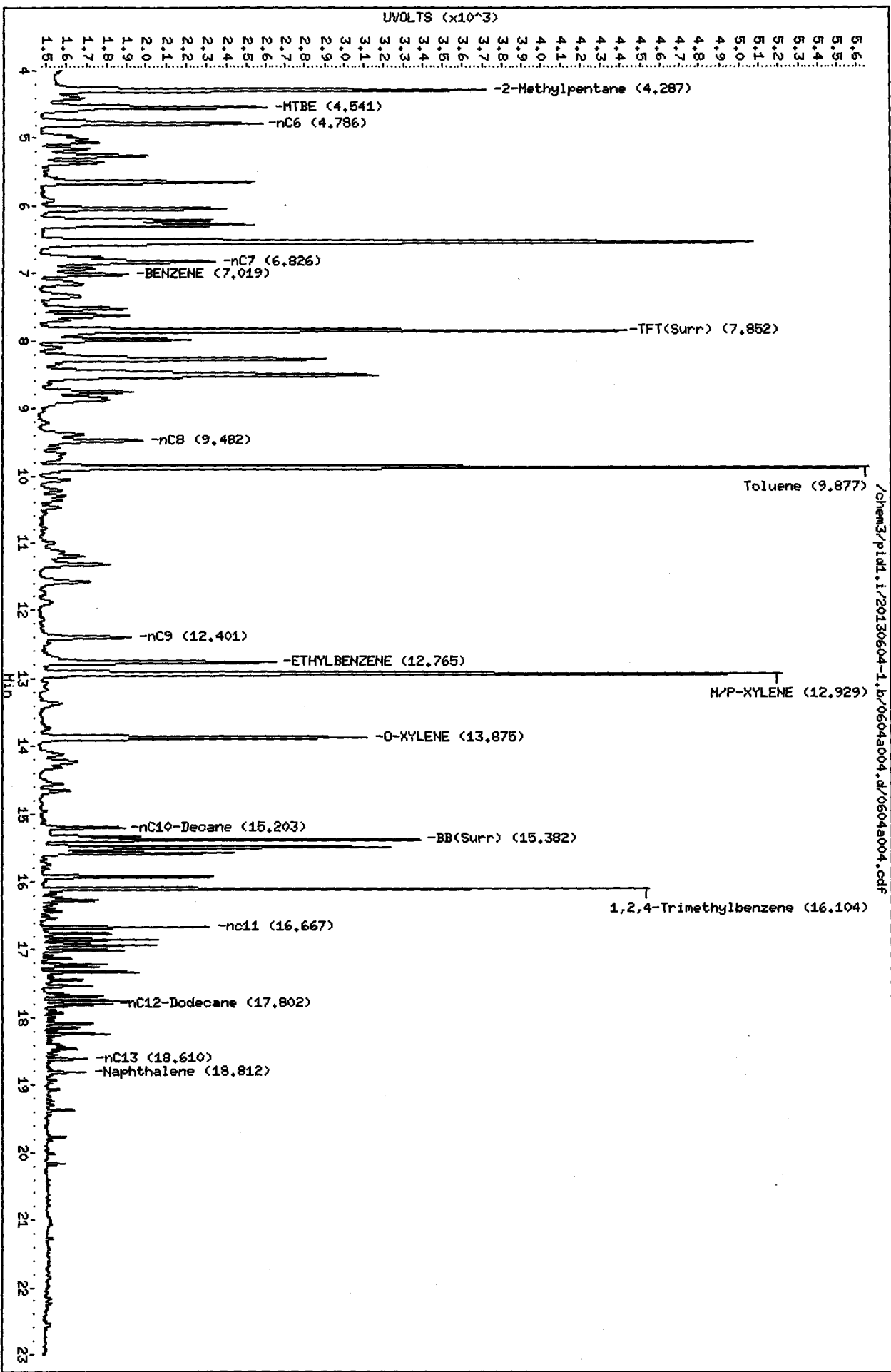
Data File: /chem3/pid1.i/20130604-1.b/0604a004.d
Date : 04-JUN-2013 11:09

Client ID:
Sample Info: LCS0604

Column phase: RTX 502-2 FID

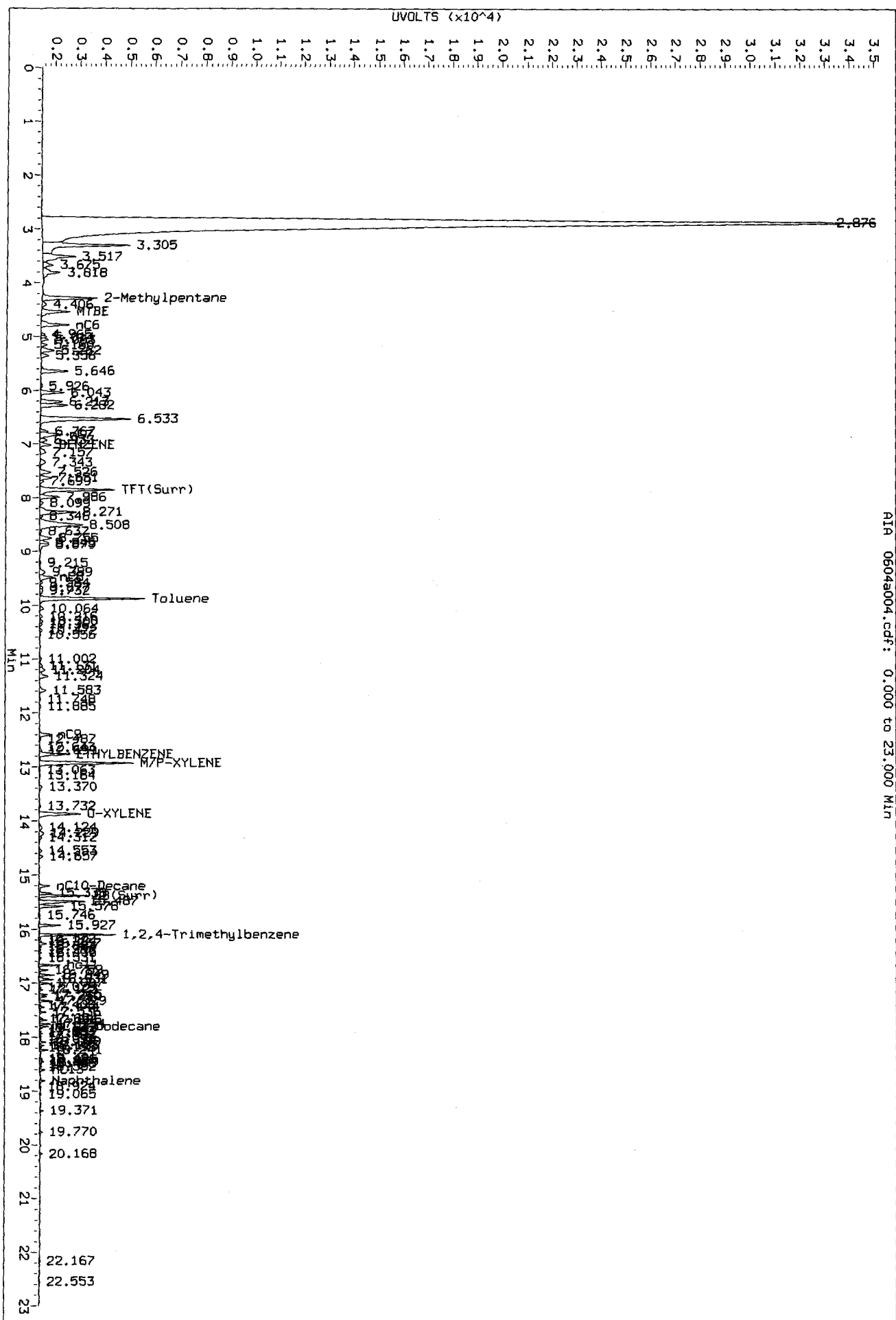
Instrument: pid1.i

Operator: PC
Column diameter: 0.18



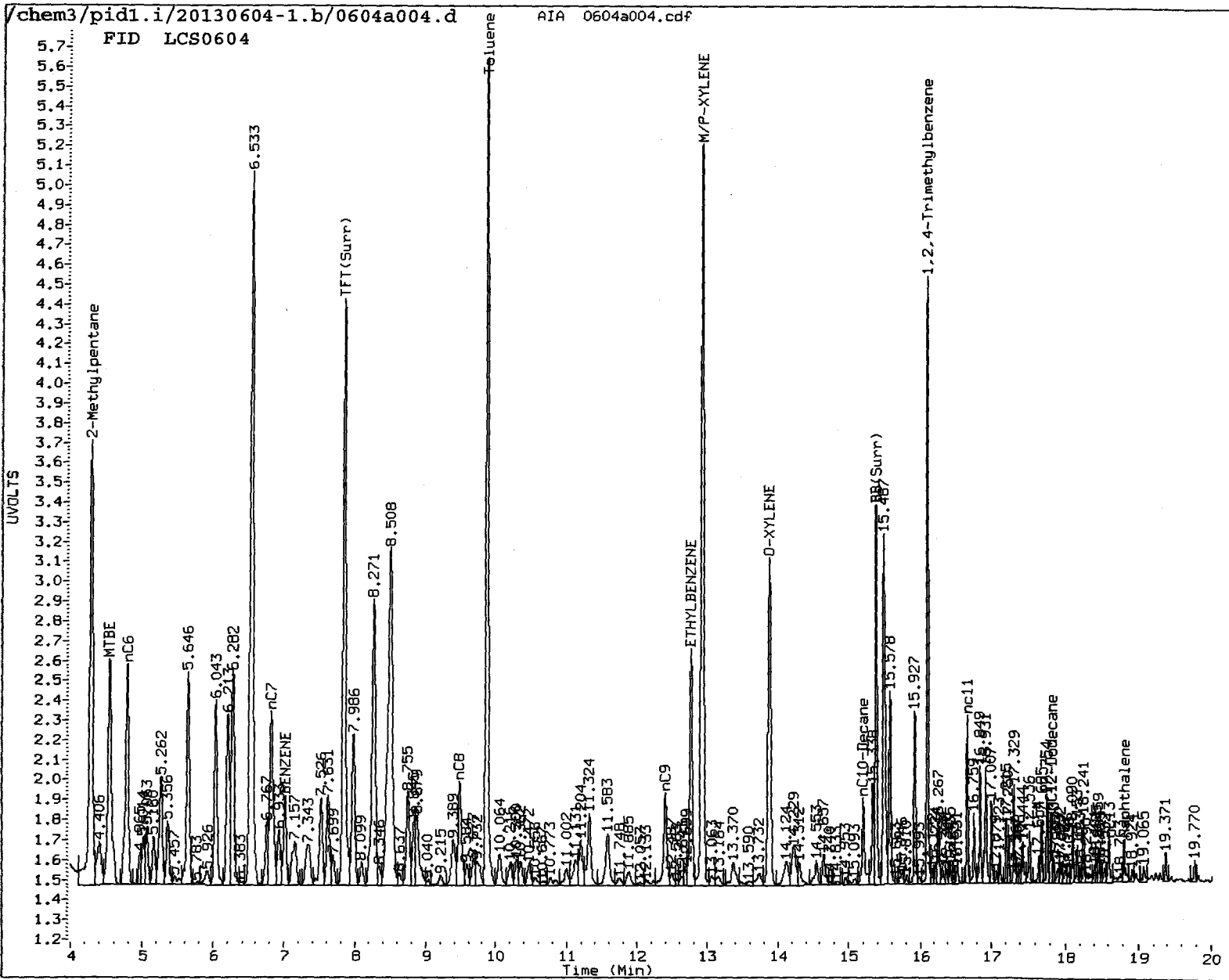
PK
6/11/13

Data File: /chem3/pid1.1/20130604-1.b/0604a004.d/0604a004.cdf
Injection Date: 04-JUN-2013 11:09
Instrument: pid1.1
Client Sample ID:



AIA 0604a004.cdf: 0.000 to 23.000 Min

FID LCS0604



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: YL

Date: 6/11/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Handwritten: 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a005.d ARI ID: LCSD0604
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a005.d Client ID:
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 11:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2887	40971	97.6	TFT(Surr)
15.380	0.001	1869	16448	94.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	329580	0.920 M
8015C 2MP-TMB (4.19 to 16.20)	723723	671952	0.928 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	540261	0.927 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	346777	0.925 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3125	96.9	TFT(Surr)
15.388	0.001	6912	95.6	BB(Surr)

SW8021 (PID)

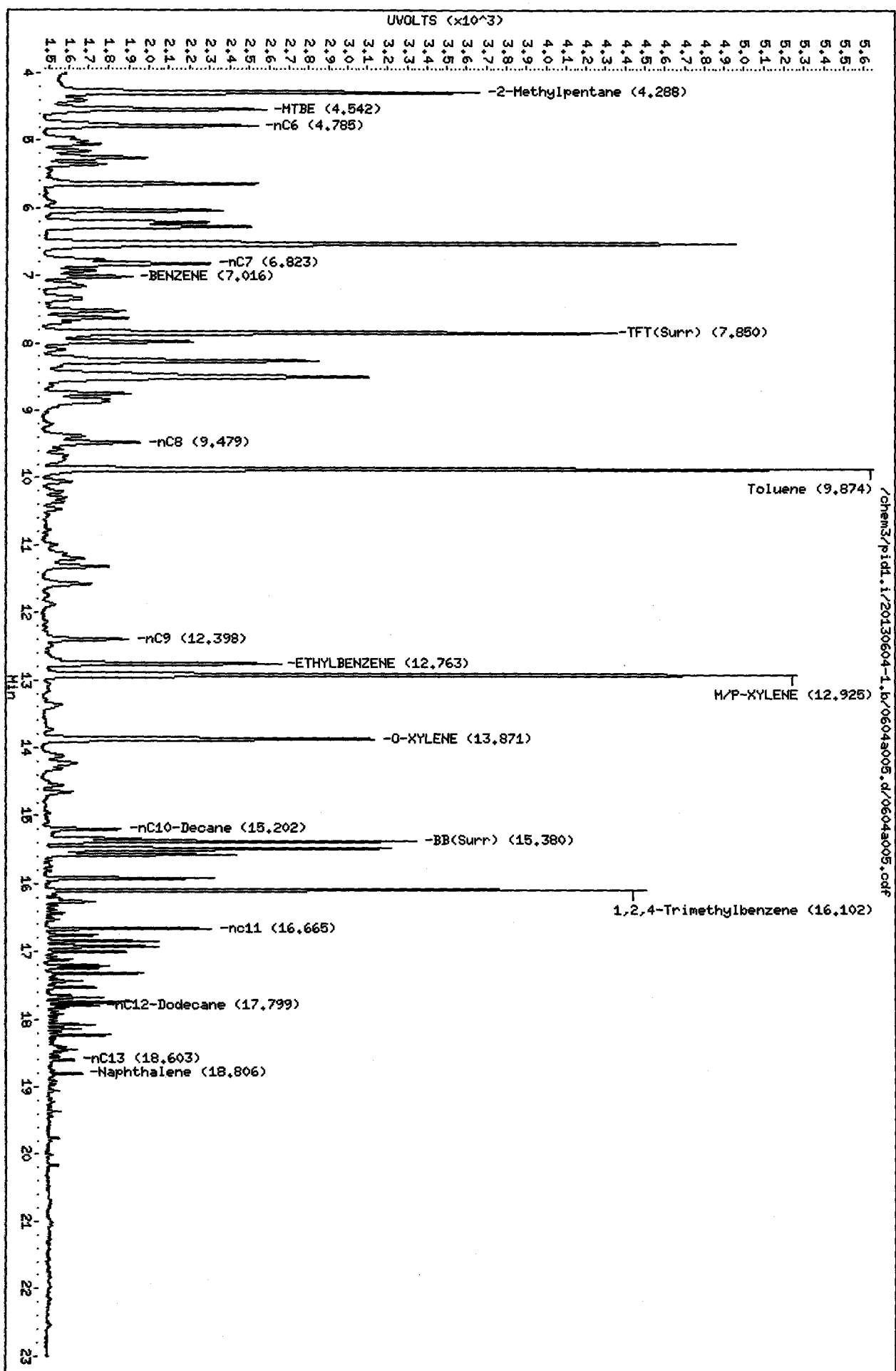
RT	Shift	Response	Amount	Compound
7.024	0.002	789	3.51	Benzene
9.882	0.002	7639	38.56	Toluene
12.771	0.001	1853	11.35	Ethylbenzene
12.934	0.004	7387	41.05	M/P-Xylene
13.880	0.002	2654	18.69	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130604-1.b/06048005.d
Date: 04-JUN-2013 11:37
Client ID:
Sample Info: LCS00604

Column phase: RTX 502-2 FID

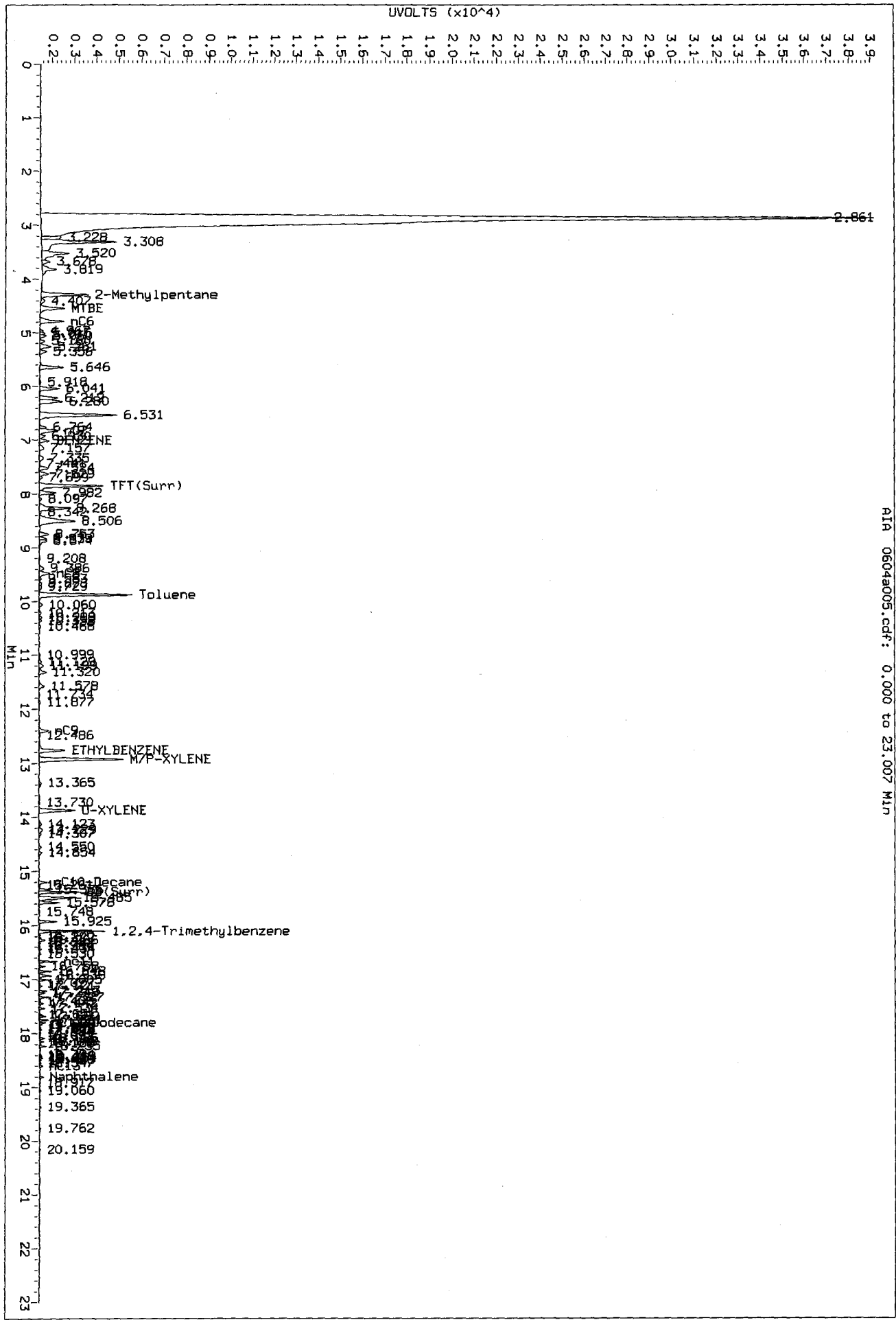
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130604-1.b/06048005.d/06048005.cdf

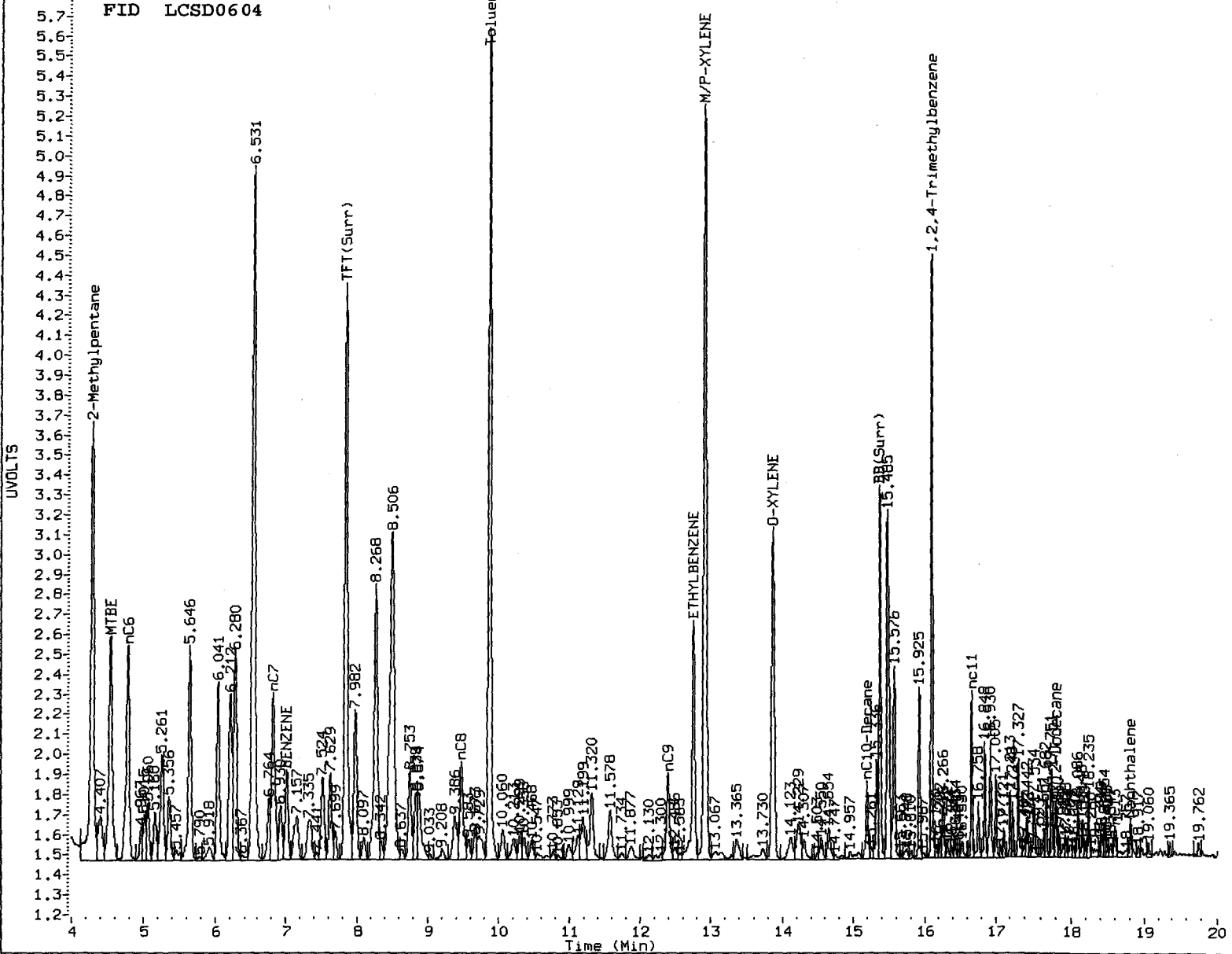
Handwritten initials/signature

Data File: /chem3/pid1.1/20130604-1.b/0604a005.d/0604a005.cdf
Injection Date: 04-JUN-2013 11:37
Instrument: pid1.1
Client Sample ID:



ATA 0604a005.cdf: 0.000 to 23.007 Min

FID LCSD0604



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other

Analyst: DL

Date: 6/11/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: MB-060413

METHOD BLANK

Lab Sample ID: MB-060413

LIMS ID: 13-11702

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/11/13

QC Report No: WS28-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 06/04/13 12:05

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	96.0%
Bromobenzene	96.4%

BETX values reported in µg/kg (ppb)

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
 6/11/13

Data file 1: /chem3/pid1.i/20130604-1.b/0604a006.d ARI ID: MB0604
 Data file 2: /chem3/pid1.i/20130604-2.b/0604a006.d Client ID:
 Method: /chem3/pid1.i/20130604-2.b/PIDB.m Injection Date: 04-JUN-2013 12:05
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2819	35925	95.3	TFT(Surr)
15.380	0.001	1893	15933	95.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	2591	0.007
8015C 2MP-TMB (4.19 to 16.20)	723723	4324	0.006
AK101 nC6-nC10 (4.68 to 15.10)	582885	3644	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2591	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3095	96.0	TFT(Surr)
15.388	0.002	6970	96.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidl.i/20130604-1.b/0604a006.d

Date : 04-JUN-2013 12:05

Client ID:

Sample Info: MB0604

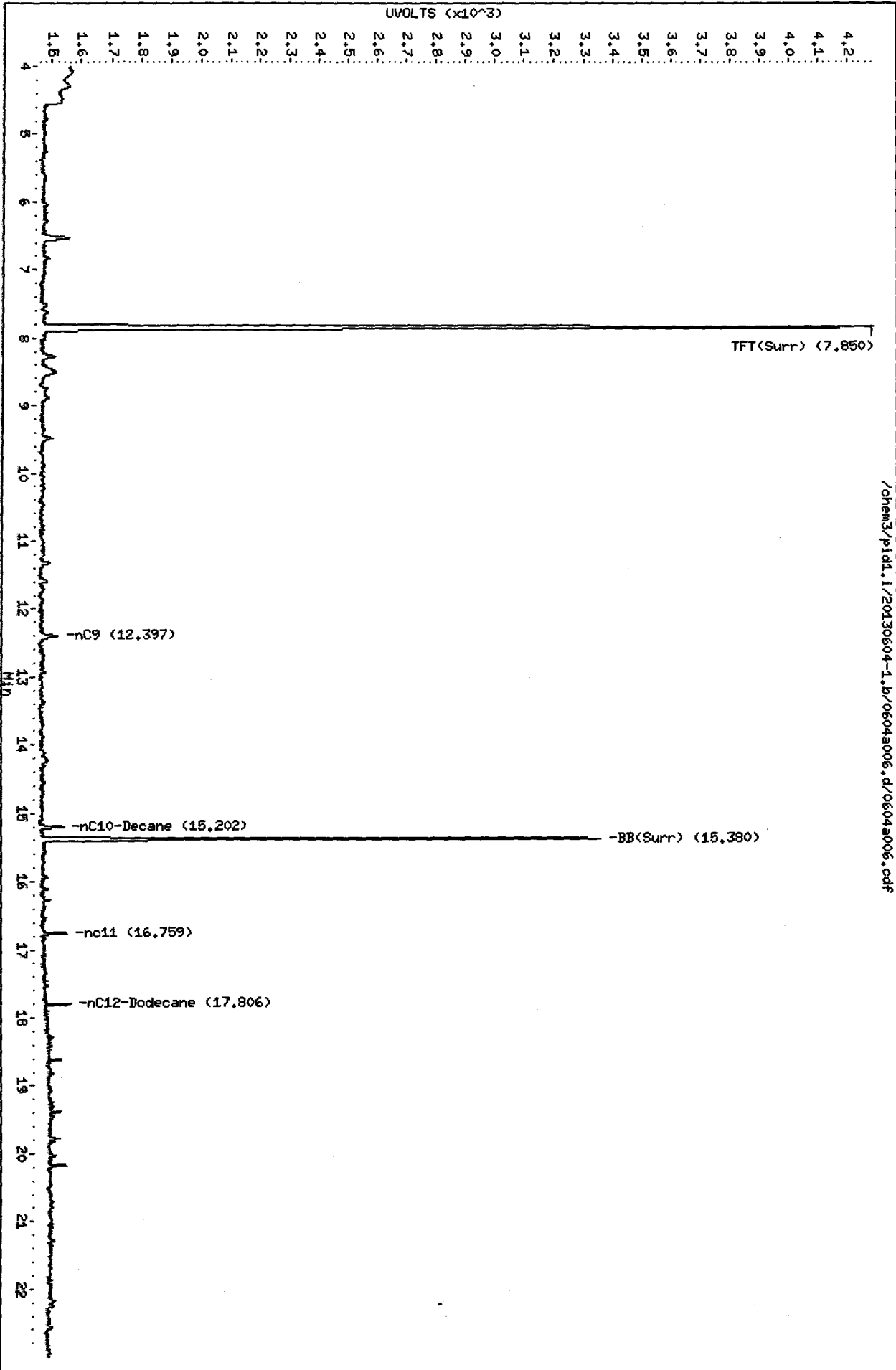
Column phase: RTX 502-2 FID

Instrument: pidl.i

Operator: PC

Column diameter: 0.18

/chem3/pidl.i/20130604-1.b/0604a006.d/0604a006.pdf





Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 12, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01/03
ARI Job No.: WS56

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted ten soil samples on June 4, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and BTEX, as requested on the COCs.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS56

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W356 Turn-around Requested:

ARI Client Company: Tony Silva, Maul Foster and Alongi, Inc. (MFA) Phone: 503-209-2518 Cell

Client Contact: Tony Silva, MFA; tsilva@maulfoster.com; office 503-209-2518

Client Project Name: Former Cashmere Mill Site

Client Project #: 0779.02.01 / 03 Samplers:

Sample ID	Date	Time	Matrix	No. Containers
-----------	------	------	--------	----------------

A2-F55-S-6	6/3/2013	1235	S	5
A2-F56-S-6	6/3/2013	1300	S	5
A2-F57-S-6	6/3/2013	1310	S	5
A2-F58-S-6	6/3/2013	1315	S	5
A2-F59-S-6	6/3/2013	1320	S	5
A2-F60-S-6	6/3/2013	1330	S	5
A2-F61-S-6	6/3/2013	1340	S	5
A2-F62-S-6	6/3/2013	1345	S	5
A2-F63-S-6	6/3/2013	1350	S	5
A2-F64-S-6	6/3/2013	1400	S	5

Comments/Special Instructions: Provide PDF lab report and EQUIS 4 file EDD. Email data to Tony Silva and Erik Naylor at MFA. enaylor@maulfoster.com Erik office 503-501-5243

Date:

Page: 1 of 1

No. of Coolers: Cooler Temps:

Analysis Requested								Notes/Comments
Dx Silic	BTEXT							

Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name: Lindsey Crosby	Printed Name:	Printed Name:	Printed Name:
Company: MFA	Company:	Company:	Company:
Date & Time:	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

00000 : 9955M



Cooler Receipt Form

ARI Client: Maul Foster

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: W556

Tracking No: K046 684 6762 / K046 684 6771 / K046 684 6799 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO OTS

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.8 3.1 5.3

If cooler temperature is out of compliance fill out form 00070F

Cooler Accepted by: JM Date: 6/4/13 Time: 1020 Temp Gun ID#: 90877352

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... (NA)

Was Sample Split by ARI: YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TS Date: 6-4-13 Time: 1142

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:
No COC was given with the samples & the copy printed was not relinquished.

By: TS Date: 6-4-13

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Subject: RE: Cashmere Samples, 6/4/13
From: "Lindsey Crosby" <lcrosby@maulfoster.com>
Date: 6/4/2013 11:11 AM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Tony Silva" <tsilva@maulfoster.com>

Hi Cherrone,

Sorry about that. You are correct. The first COC is standard turnaround time (A2-F#-S-6) while the other COC with only 6 samples is rush 24-hour turnaround time. Also, lead should be run regardless for the 6 samples. Please run all analysis listed.

Thanks,

LINDSEY CROSBY EIT | MAUL FOSTER & ALONGI, INC.

d. 360 433 0223 | c. 360 989 4836 | p. 360 694 2691 | f. 360 906 1958 |
www.maulfoster.com

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]
Sent: Tuesday, June 04, 2013 11:07 AM
To: Lindsey Crosby
Cc: Tony Silva
Subject: Re: Cashmere Samples, 6/4/13

Hi Lindsey,

Samples are not marked on the COC for analyses. Should we assume stock pile samples need NWTPH-Dx (w/ clean-ups) and NWTPH-Gx/BTEX. And the floor samples need NWTPH-Dx (w/ clean-ups) and BTEX only?

Standard TAT?

-Cheronne

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

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immediately. Thank you.

On 6/4/2013 11:05 AM, Lindsey Crosby wrote:

Cherrone,
Please see the attached chain of custodies.
Thanks!

LINDSEY CROSBY EIT | MAUL FOSTER & ALONGI, INC.

d. 360 433 0223 | c. 360 989 4836 | p. 360 694 2691 | f. 360 906

1958 | www.maulfooster.com

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]

Sent: Tuesday, June 04, 2013 10:54 AM

To: Tony Silva; Lindsey Crosby

Subject: Cashmere Samples, 6/4/13

Hi Tony and Lindsey,

We received the rush samples this morning, thank you. However, we only received one COC for three coolers. When can we expect COCs for all other samples received?
-Cheronne

--

Cheronne Oreiro

Project Manager

Analytical Resources, Inc.

4611 S. 134th Place, Suite 100

Tukwila, WA 98168-3240

cheronneo@arilabs.com

(206)-695-6214

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Sample ID Cross Reference Report



ARI Job No: WS56
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Former Cashmere Mill Site

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-F55-S-6	WS56A	13-11832	Soil	06/03/13 12:35	06/04/13 10:20
2. A2-F56-S-6	WS56B	13-11833	Soil	06/03/13 13:00	06/04/13 10:20
3. A2-F57-S-6	WS56C	13-11834	Soil	06/03/13 13:10	06/04/13 10:20
4. A2-F58-S-6	WS56D	13-11835	Soil	06/03/13 13:15	06/04/13 10:20
5. A2-F59-S-6	WS56E	13-11836	Soil	06/03/13 13:20	06/04/13 10:20
6. A2-F60-S-6	WS56F	13-11837	Soil	06/03/13 13:30	06/04/13 10:20
7. A2-F61-S-6	WS56G	13-11838	Soil	06/03/13 13:40	06/04/13 10:20
8. A2-F62-S-6	WS56H	13-11839	Soil	06/03/13 13:45	06/04/13 10:20
9. A2-F63-S-6	WS56I	13-11840	Soil	06/03/13 13:50	06/04/13 10:20
10. A2-F64-S-6	WS56J	13-11841	Soil	06/03/13 14:00	06/04/13 10:20



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($<20\%$ RSD, $<20\%$ Drift or minimum RRF).



Analytical Resources, Incorporated
Analytical Chemists and Consultants

- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WS56-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

Matrix: Soil
Data Release Authorized: *mmw*
Reported: 06/12/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WS56A 13-11832	A2-F55-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	86 360 85.0%
WS56B 13-11833	A2-F56-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	54 230 89.0%
WS56C 13-11834	A2-F57-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	8.2 28 94.2%
WS56D 13-11835	A2-F58-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	79 380 90.4%
WS56E 13-11836	A2-F59-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	41 200 90.6%
WS56F 13-11837	A2-F60-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	24 120 94.5%
WS56G 13-11838	A2-F61-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	88 380 84.7%
WS56H 13-11839	A2-F62-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	46 230 85.6%
MB-060613 13-11840	Method Blank HC ID: ---	06/06/13	06/08/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 88.5%
WS56I 13-11840	A2-F63-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	8.8 40 97.3%
WS56J 13-11841	A2-F64-S-6 HC ID: DIESEL/MOTOR OIL	06/06/13	06/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	14 43 88.5%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 2

QC Report No: WS56-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

Matrix: Soil
Data Release Authorized: *mw*
Reported: 06/12/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
--------	-----------	-----------------	---------------	--------	-----------------	----	--------

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a021.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013

ARI ID: WS49MBS1
Client ID: WS49MBS1
Injection: 08-JUN-2013 17:18

Dilution Factor: 1

Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.376	0.019	1214	2691	WATPHG	(Tol-C12)	107855	6.94
C8	1.659	-0.024	529	935	WATPHD	(C12-C24)	258126	17.78
C10	3.339	-0.004	593	666	WATPHM	(C24-C38)	209586	16.24
C12	4.238	-0.004	3070	1968	AK102	(C10-C25)	295870	17.19
C14	4.918	-0.004	4265	3617	AK103	(C25-C36)	156411	17.00
C16	5.514	-0.002	3863	3445				
C18	6.095	-0.004	1842	1452				
C20	6.670	-0.006	1443	1547				
C22	7.242	0.008	894	644				
C24	7.755	-0.008	945	1080	MSPiRIT	(Tol-C12)	107855	5.57
C25	8.009	-0.006	830	1089				
C26	8.289	0.020	1059	2158				
C28	8.700	-0.007	1724	2062				
C32	9.517	0.002	11758	10625				
C34	9.898	0.007	1523	3609				
Filter Peak	11.530	-0.001	3490	4246	CREOSOT	(C12-C22)	234868	107.64 M
C36	10.248	-0.011	2042	4434				
C38	10.604	-0.012	2481	2217				
C40	10.982	0.013	3476	9749				
o-terph	6.259	-0.001	988600	767874				
Triacon Surr	9.134	0.002	880409	755229				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate Area Amount %Rec

o-Terphenyl 767874 39.8 88.5 ✓
Triacontane 755229 39.1 86.8

JW
6/10/13

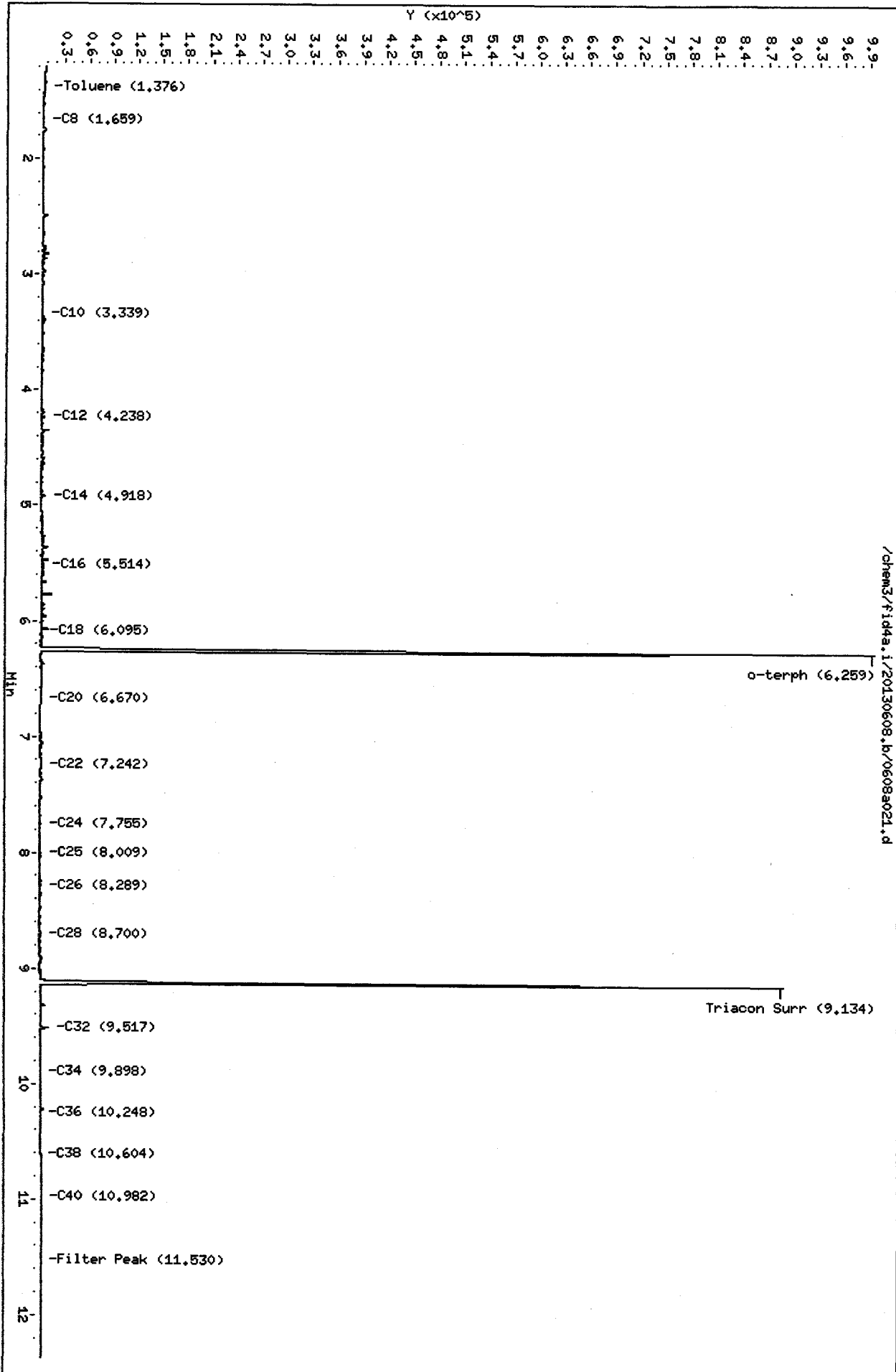
M Indicates the peak was manually integrated

Analyte RF Curve Date

o-Terph Surr 19283.0 13-APR-2013
Triacon Surr 19327.9 20-MAY-2013
Gas 15539.5 21-MAR-2013
Diesel 14514.5 13-APR-2013
Motor Oil 12905.1 20-MAY-2013
AK102 17214.8 11-APR-2013
AK103 9202.1 25-SEP-2012
Min Spirit 19366.4 06-FEB-2013
Creosote 2181.9 04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a021.d
Date: 08-JUN-2013 17:18
Client ID: MS49MBS1
Sample Info: MS49MBS1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



4556 : 00013

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a028.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56A
Client ID: A2-F55-S-6
Injection: 08-JUN-2013 20:26
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.349	-0.008	1811	2547	WATPHG	(Tol-C12)	280091	18.02
C8	1.661	-0.022	5863	9691	WATPHD	(C12-C24)	10769316	741.97
C10	3.337	-0.006	959	835	WATPHM	(C24-C38)	40177248	3113.28
C12	4.239	-0.002	4177	4618	AK102	(C10-C25)	12442718	722.79
C14	4.919	-0.003	6965	8386	AK103	(C25-C36)	38279715	4159.90
C16	5.514	-0.003	13508	18581				
C18	6.096	-0.002	29466	29484				
C20	6.675	-0.001	65666	116817				
C22	7.245	0.011	134210	233508				
C24	7.757	-0.005	193453	352989	MSPiRIT	(Tol-C12)	280091	14.46
C25	8.015	0.001	220847	64730				
C26	8.268	0.000	261272	114081				
C28	8.698	-0.010	420404	1075685				
C32	9.512	-0.003	294802	485119				
C34	9.895	0.004	151706	57013				
Filter Peak	11.538	0.007	6557	6528	CREOSOT	(C12-C22)	5597827	2565.57 M
C36	10.277	0.018	41221	33064				
C38	10.627	0.010	11302	3812				
C40	10.977	0.008	7728	10077				
o-terph	6.261	0.001	1006036	737181				
Triacon Surr	9.154	0.022	789281	665642				

Range Times: NW Diesel (4.242 - 7.763) AK102 (3.34 - 8.01) Jet A (3.34 - 6.10)
NW M.Oil (7.76 - 10.62) AK103 (8.01 - 10.26) OR Diesel (3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	737181	38.2	85.0 M
Triacontane	665642	34.4	76.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a028.d

Date: 08-JUN-2013 20:26

Client ID: A2-F55-S-6

Sample Infor: MS56A

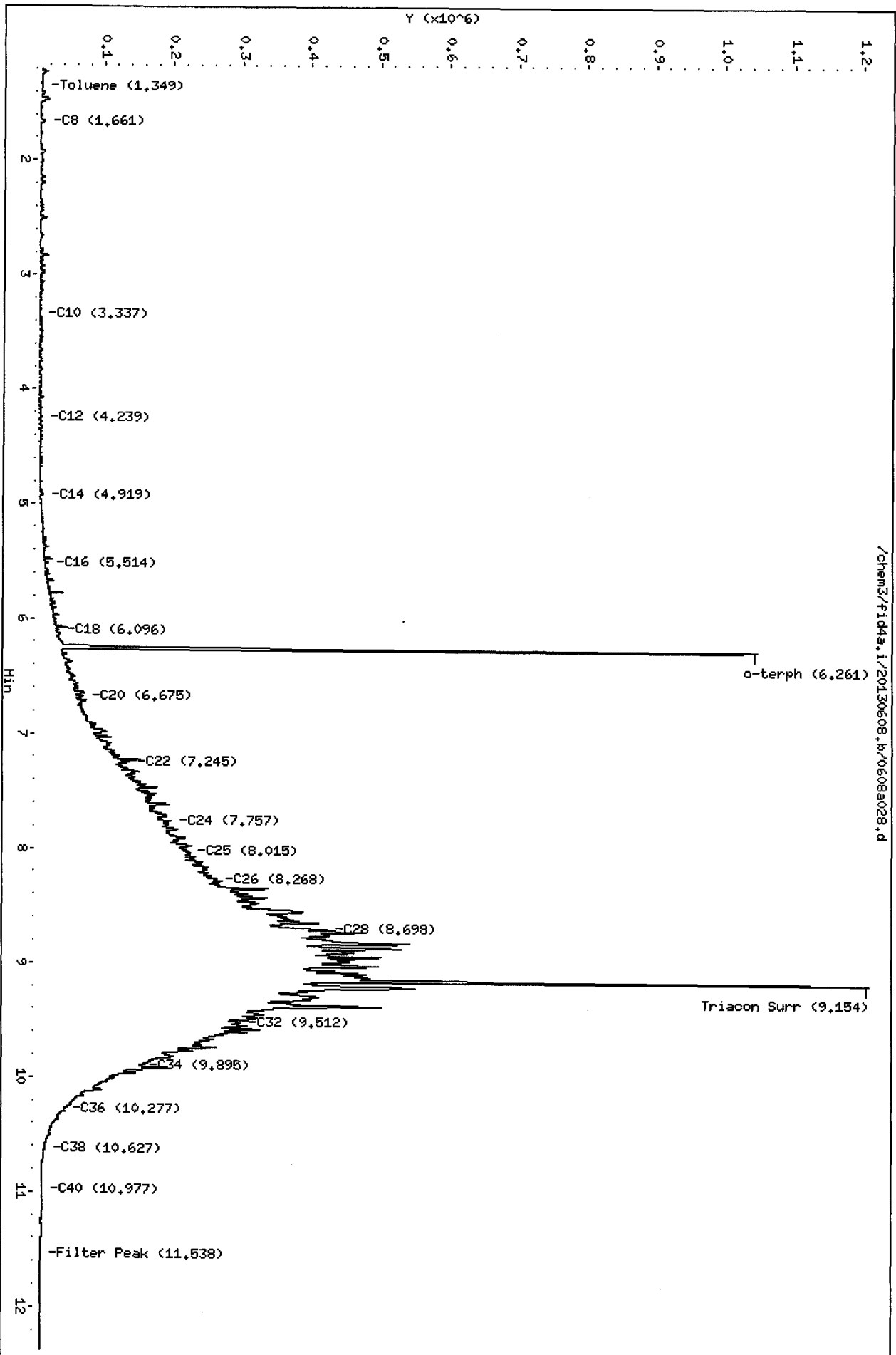
Column phase: RTX-1

Instrument: fid4a.i

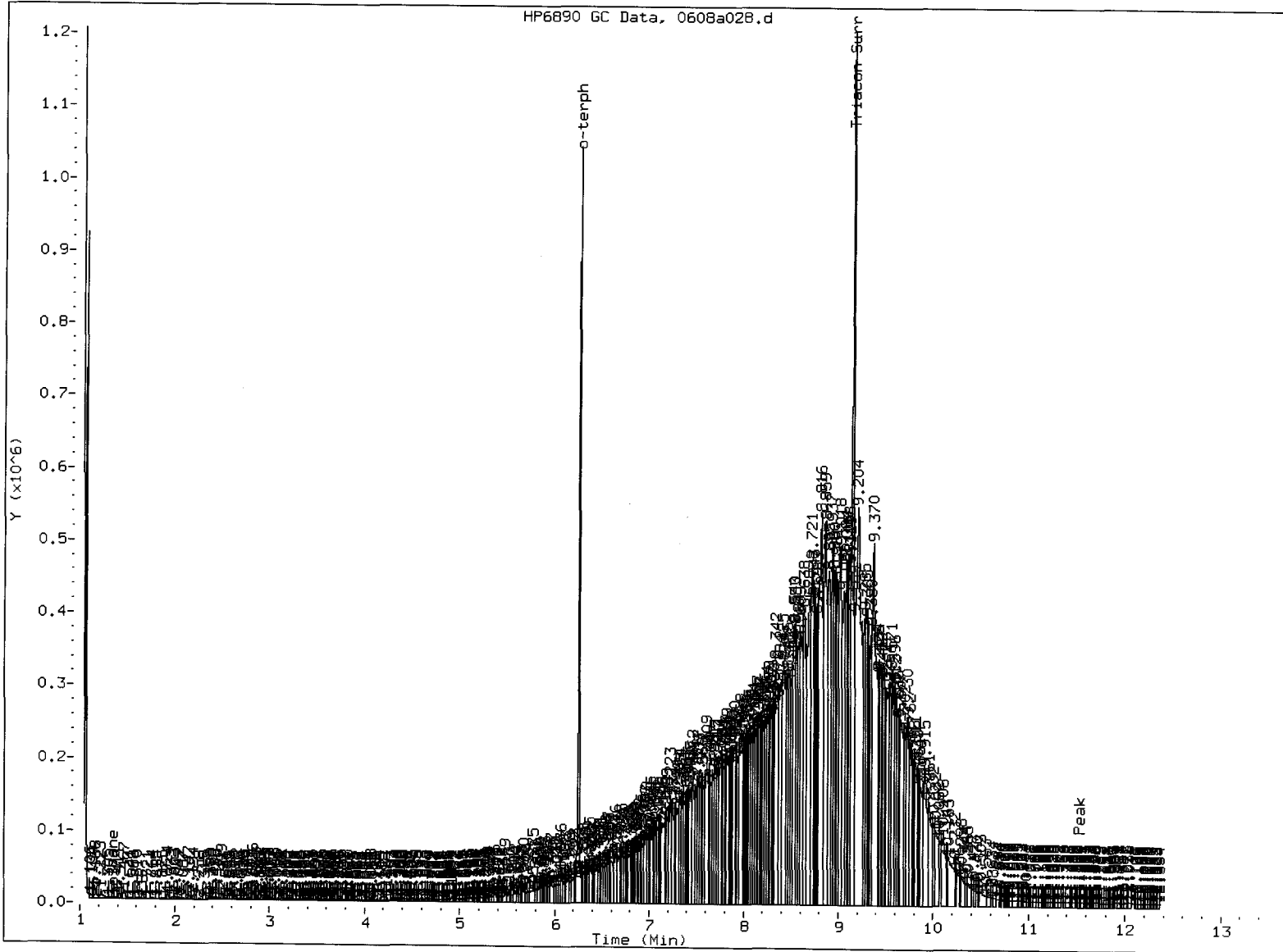
Operator: JR/VTS/JM

Column diameter: 0.25

JR
6/13



/chem3/fid4a.i/20130608.b/0608a028.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JLW Date: 6/10/15

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a029.d ARI ID: WS56B
 Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m Client ID: A2-F56-S-6
 Instrument: fid4a.i Injection: 08-JUN-2013 20:52
 Operator: JR/VTS/JW
 Report Date: 06/08/2013 Dilution Factor: 1
 Macro: 20-MAY-2013
 Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.360	0.003	2064	1703	WATPHG	(Tol-C12)	218100	14.04
C8	1.663	-0.020	4630	7385	WATPHD	(C12-C24)	7039061	484.97
C10	3.340	-0.003	713	538	WATPHM	(C24-C38)	26649370	2065.03
C12	4.239	-0.002	4272	3469	AK102	(C10-C25)	8081454	469.45
C14	4.919	-0.003	6891	7478	AK103	(C25-C36)	25233945	2742.20
C16	5.514	-0.002	9557	10298				
C18	6.096	-0.003	19860	18984				
C20	6.673	-0.003	44858	84016				
C22	7.244	0.010	89288	171144				
C24	7.754	-0.009	126620	305011	MSPIRIT	(Tol-C12)	218100	11.26
C25	8.019	0.004	140913	130083				
C26	8.278	0.009	170102	237980				
C28	8.711	0.004	293653	415846				
C32	9.509	-0.006	199322	161051				
C34	9.885	-0.006	140199	27661				
Filter Peak	11.528	-0.003	6263	2748	CREOSOT	(C12-C22)	3736100	1712.32 M
C36	10.276	0.017	63135	44560				
C38	10.623	0.006	18519	27875				
C40	10.977	0.008	8019	10433				
o-terph	6.261	0.001	1046045	772463				
Triacon Surr	9.147	0.014	811254	695168				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
 NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	772463	40.1	89.0 M
Triacontane	695168	36.0	79.9 M

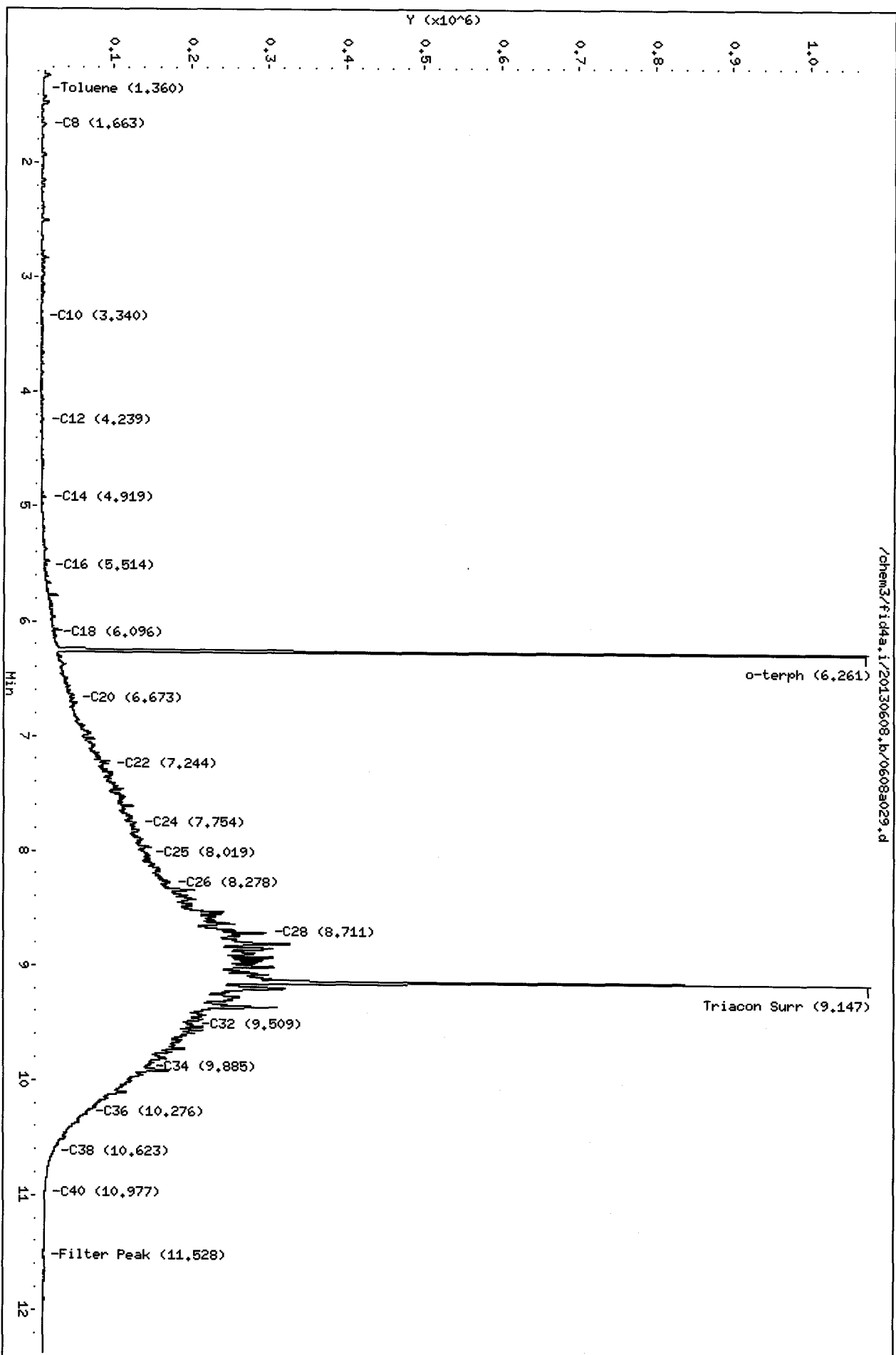
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

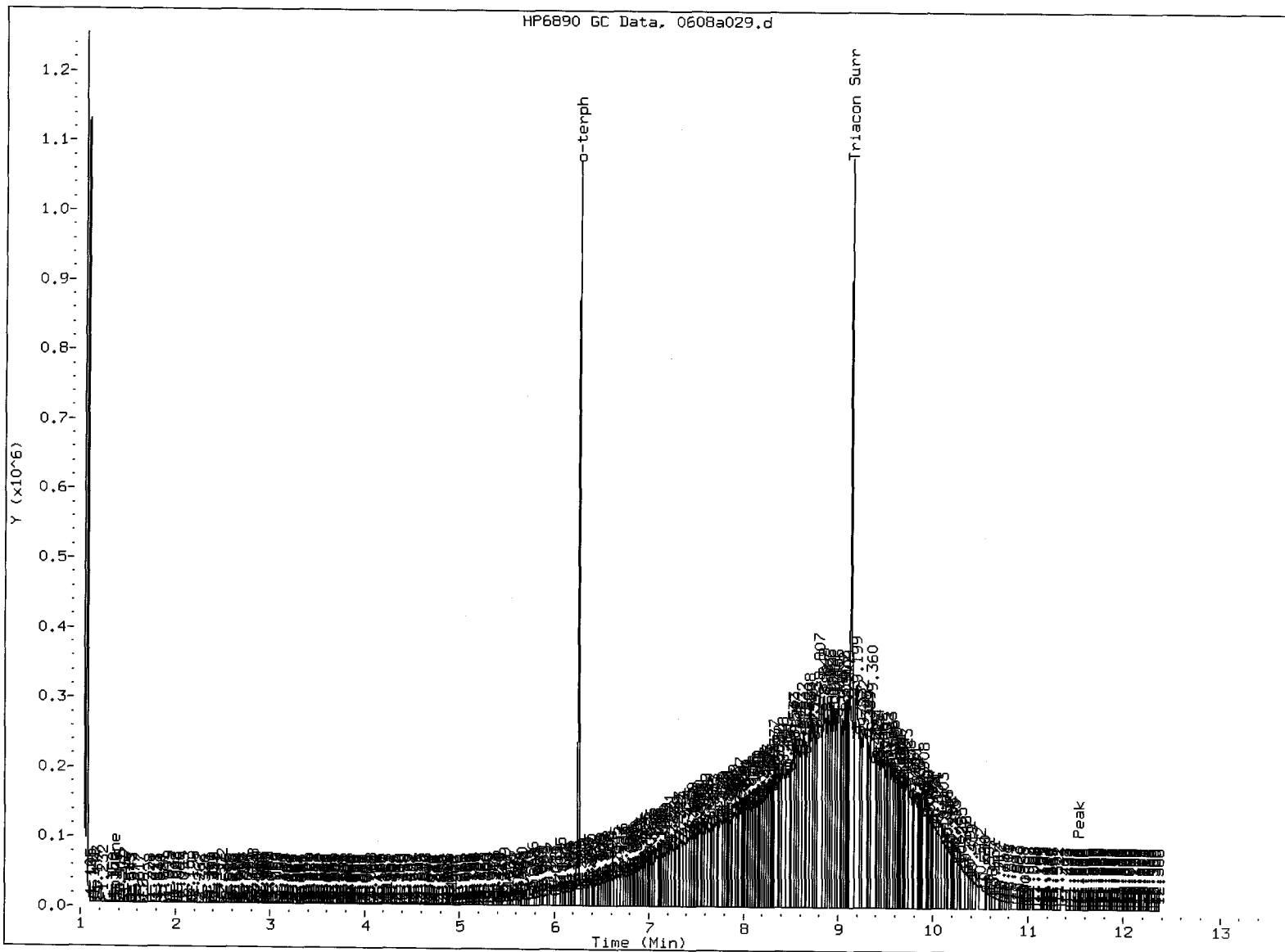
Data File: /chem3/fid4a.i/20130608.b/0608a029.d
Date: 08-JUN-2013 20:52
Client ID: 42-F56-S-6
Sample Info: MS56B
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
6/14/13



/chem3/fid4a.i/20130608.b/0608a029.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/10/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a032.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56C
Client ID: A2-F57-S-6
Injection: 08-JUN-2013 22:09
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.354	-0.003	3582	2950	WATPHG	(Tol-C12)	80359	5.17
C8	1.668	-0.015	542	1383	WATPHD	(C12-C24)	1031947	71.10
C10	3.340	-0.003	525	349	WATPHM	(C24-C38)	3179641	246.39
C12	4.238	-0.004	3212	2182	AK102	(C10-C25)	1222116	70.99
C14	4.918	-0.004	4442	3903	AK103	(C25-C36)	2763205	300.28
C16	5.513	-0.004	4453	5005				
C18	6.094	-0.005	4726	4364				
C20	6.670	-0.006	5972	9815				
C22	7.241	0.007	9025	6543				
C24	7.765	0.002	14000	2491	MSPIRIT	(Tol-C12)	80359	4.15
C25	8.008	-0.006	17704	21202				
C26	8.262	-0.007	20793	30714				
C28	8.713	0.006	24682	38439				
C32	9.511	-0.004	30917	42596				
C34	9.888	-0.003	22507	64451				
Filter Peak	11.534	0.003	5805	8758	CREOSOT	(C12-C22)	672073	308.02 M
C36	10.270	0.011	15387	49702				
C38	10.609	-0.007	12020	9224				
C40	10.984	0.015	8893	10919				
o-terph	6.260	0.000	1029136	817083				
Triacon Surr	9.132	-0.001	893297	773270				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	817083	42.4	94.2 M
Triacontane	773270	40.0	88.9 M

JCO
6/10/12

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a032.d

Date : 08-JUN-2013 22:09

Client ID: A2-F57-S-6

Sample Info: MS56C

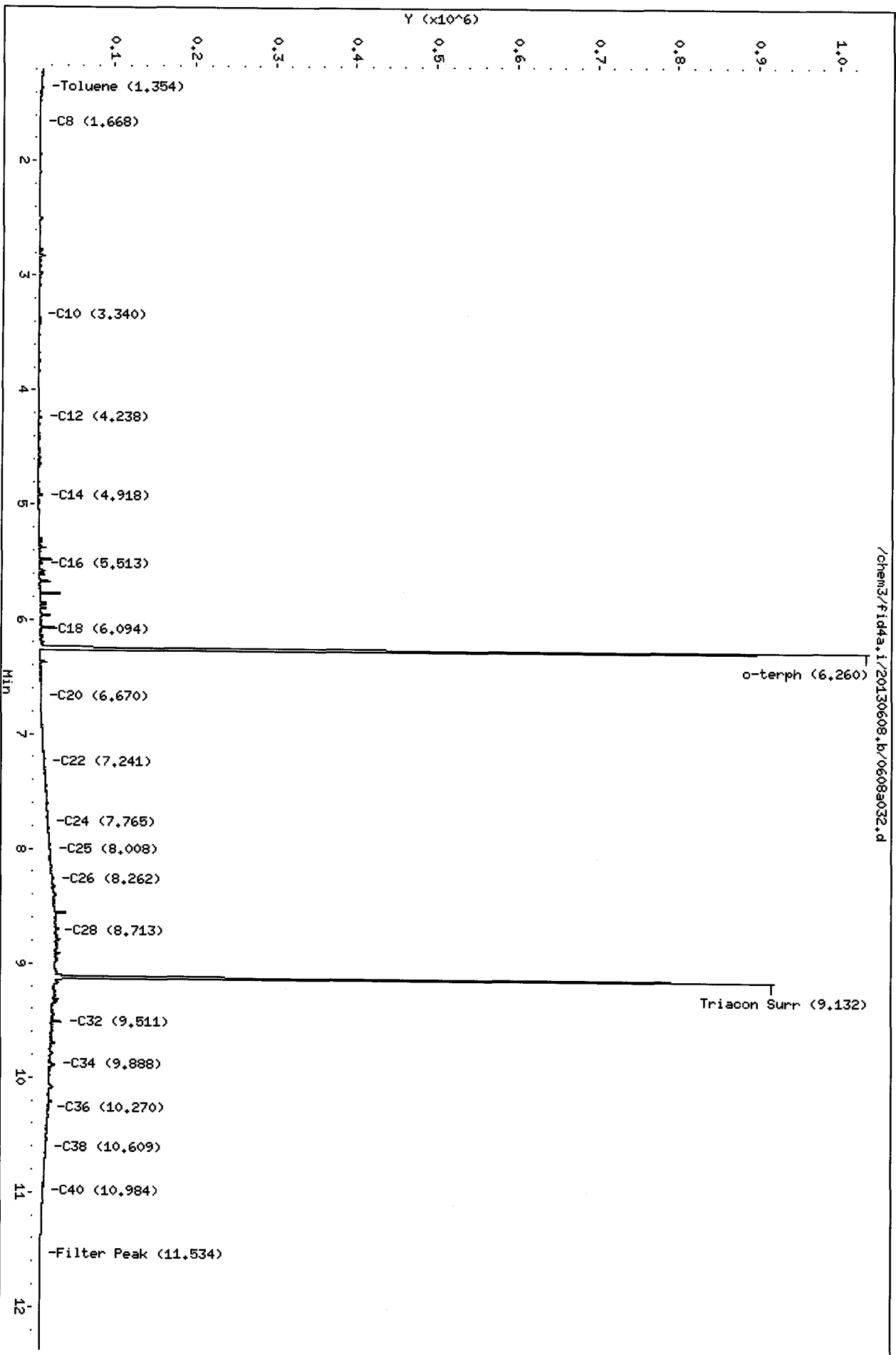
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Instrument: fid4a.i

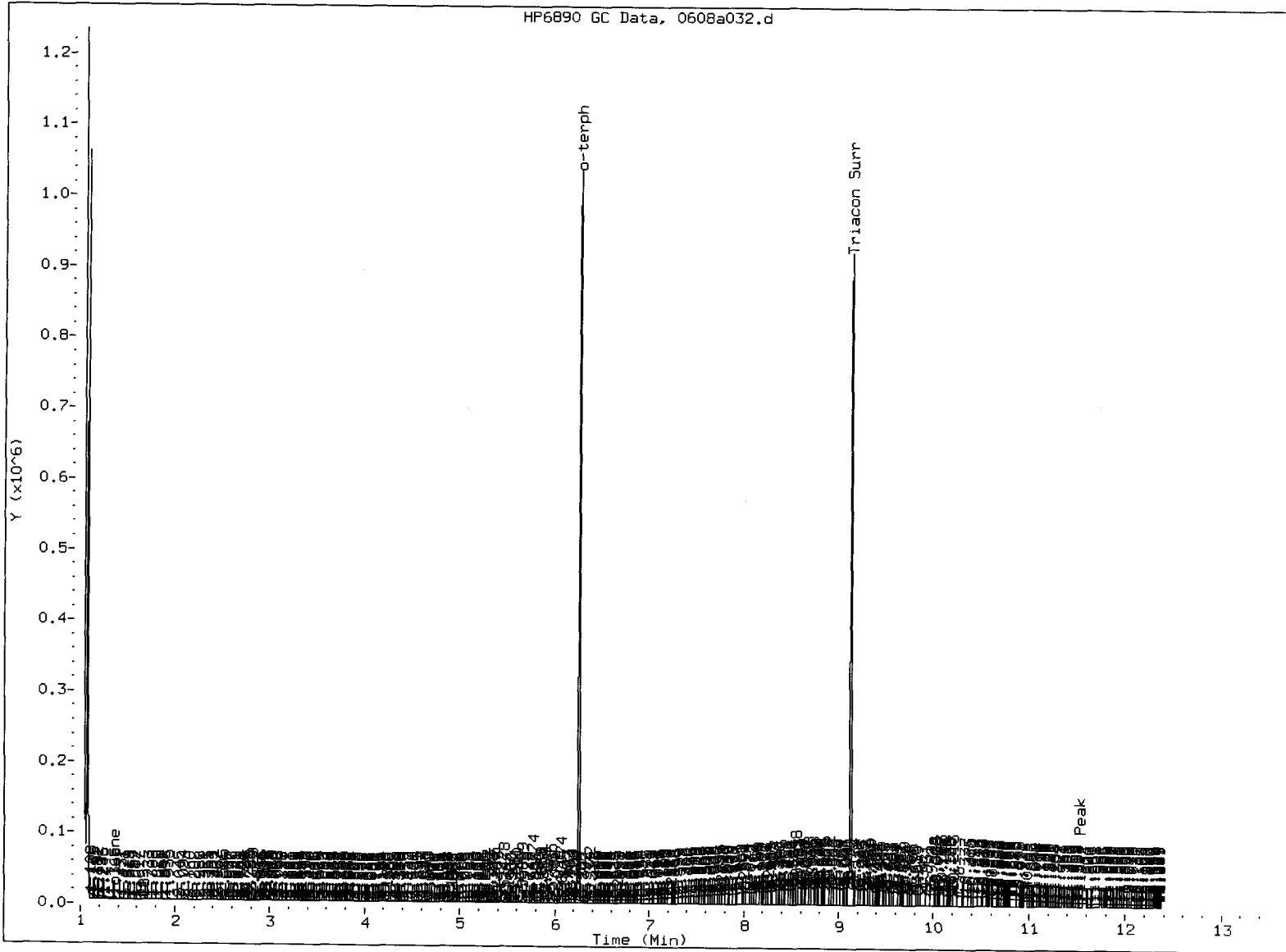
Operator: JR/VTS/JM

Column diameter: 0.25

JW
4/10



/chem3/fid4a.i/20130608.b/0608a032.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JK

Date: 6/14/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a033.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56D
Client ID: A2-F58-S-6
Injection: 08-JUN-2013 22:34
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.357	0.000	6415	6969	WATPHG	(Tol-C12)	210938	13.57
C8	1.671	-0.012	3304	5946	WATPHD	(C12-C24)	9607958	661.95
C10	3.351	0.008	1183	1265	WATPHM	(C24-C38)	41318578	3201.72
C12	4.240	-0.002	3491	2503	AK102	(C10-C25)	11658229	677.22
C14	4.920	-0.002	4253	4312	AK103	(C25-C36)	39033847	4241.85
C16	5.514	-0.003	6609	7752				
C18	6.095	-0.004	14359	14551				
C20	6.674	-0.002	43807	51688				
C22	7.246	0.011	125129	119189				
C24	7.763	0.000	215495	140413	MSPIRIT	(Tol-C12)	210938	10.89
C25	8.000	-0.014	250430	148364				
C26	8.271	0.002	305347	251487				
C28	8.719	0.012	473986	807263				
C32	9.500	-0.015	300691	424334				
C34	9.887	-0.004	168066	76465				
Filter Peak	11.533	0.002	4871	10220	CREOSOT	(C12-C22)	4062321	1861.83 M
C36	10.276	0.017	44349	57464				
C38	10.591	-0.026	11843	63024				
C40	10.994	0.025	5468	5765				
o-terph	6.262	0.001	1026120	784819				
Triacon Surr	9.150	0.017	782759	687096				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	784819	40.7	90.4 M
Triacontane	687096	35.5	79.0 M

M Indicates the peak was manually integrated

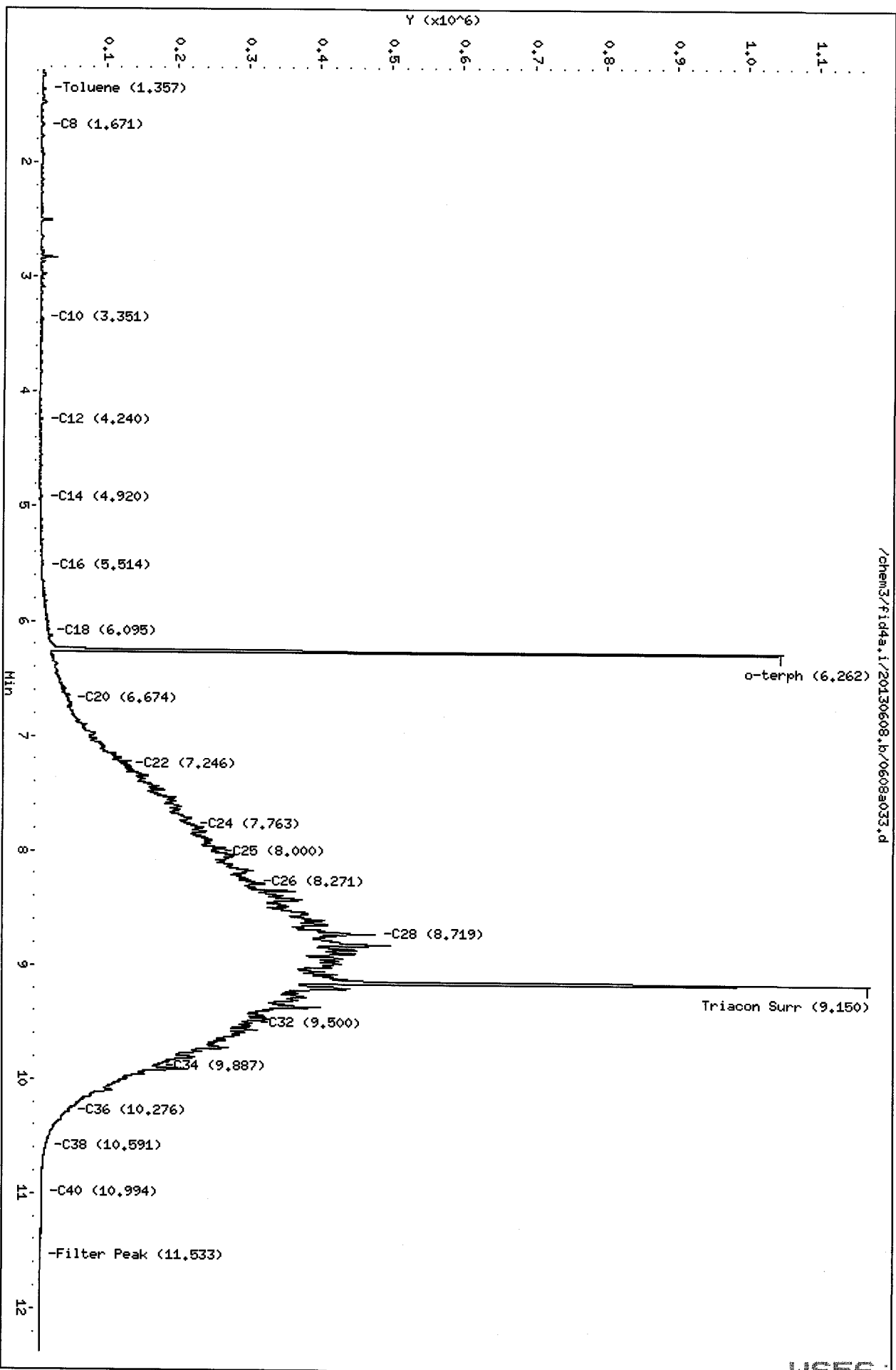
JW
6/10/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

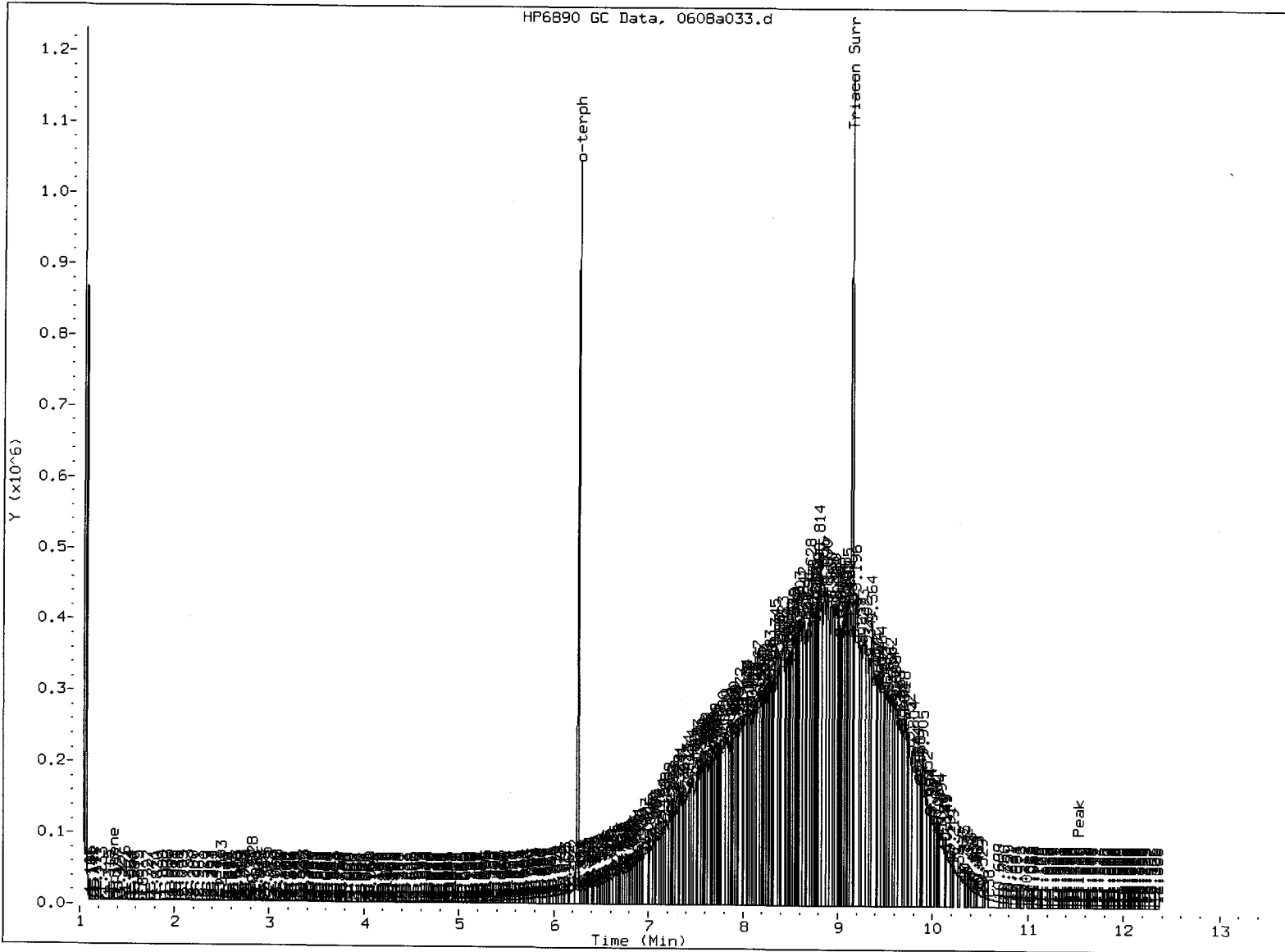
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Date: 08-JUN-2013 22:34
Client ID: 42-F58-S-6
Sample Info: MS56D
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

562
6/10



/chem3/fid4a.i/20130608.b/0608a033.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JK Date: 6/10/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a034.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56E
Client ID: A2-F59-S-6
Injection: 08-JUN-2013 23:00
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.366	0.010	3356	6299	WATPHG	(Tol-C12)	107003	6.89
C8	1.677	-0.006	930	2597	WATPHD	(C12-C24)	5205895	358.67
C10	3.343	0.000	601	337	WATPHM	(C24-C38)	22753876	1763.17
C12	4.239	-0.002	3172	2012	AK102	(C10-C25)	6283433	365.00
C14	4.919	-0.003	3619	3151	AK103	(C25-C36)	21037573	2286.18
C16	5.513	-0.003	4566	5760				
C18	6.095	-0.004	7725	7113				
C20	6.672	-0.004	21141	20422				
C22	7.241	0.007	68011	66715				
C24	7.771	0.008	122535	153320	MSPIRIT	(Tol-C12)	107003	5.53
C25	8.028	0.013	158893	490337				
C26	8.274	0.005	180267	335161				
C28	8.708	0.001	236449	307122				
C32	9.522	0.007	154757	259822				
C34	9.897	0.007	146314	413810				
Filter Peak	11.533	0.002	4730	6788	CREOSOT	(C12-C22)	2099347	962.16 M
C36	10.266	0.008	62473	31011				
C38	10.636	0.020	21578	36339				
C40	10.967	-0.001	8160	14216				
o-terph	6.261	0.001	1031538	785730				
Triacon Surr	9.140	0.008	847239	715287				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	785730	40.7	90.5 M
Triacontane	715287	37.0	82.2 M

M Indicates the peak was manually integrated

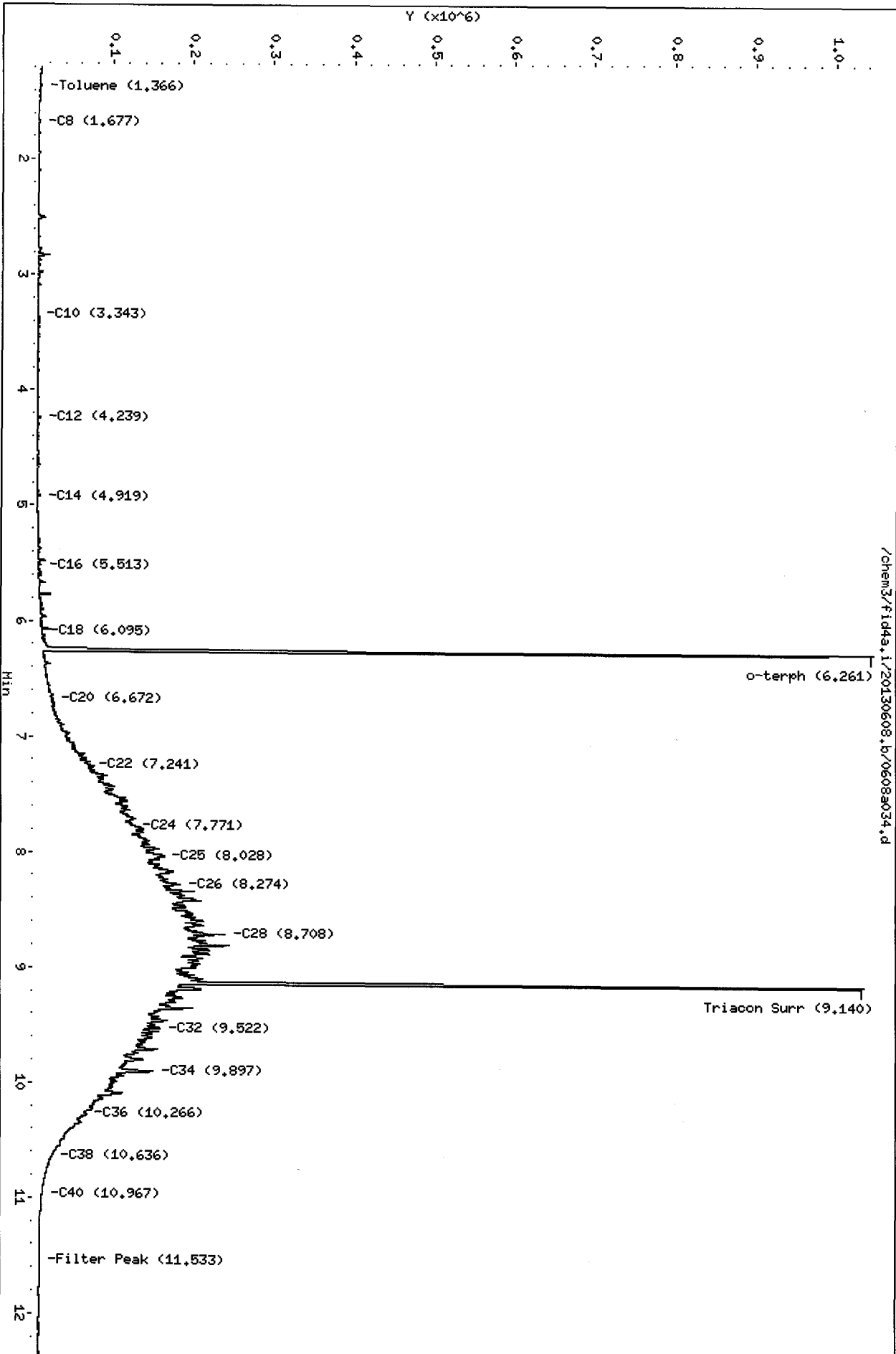
JW
6/10/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

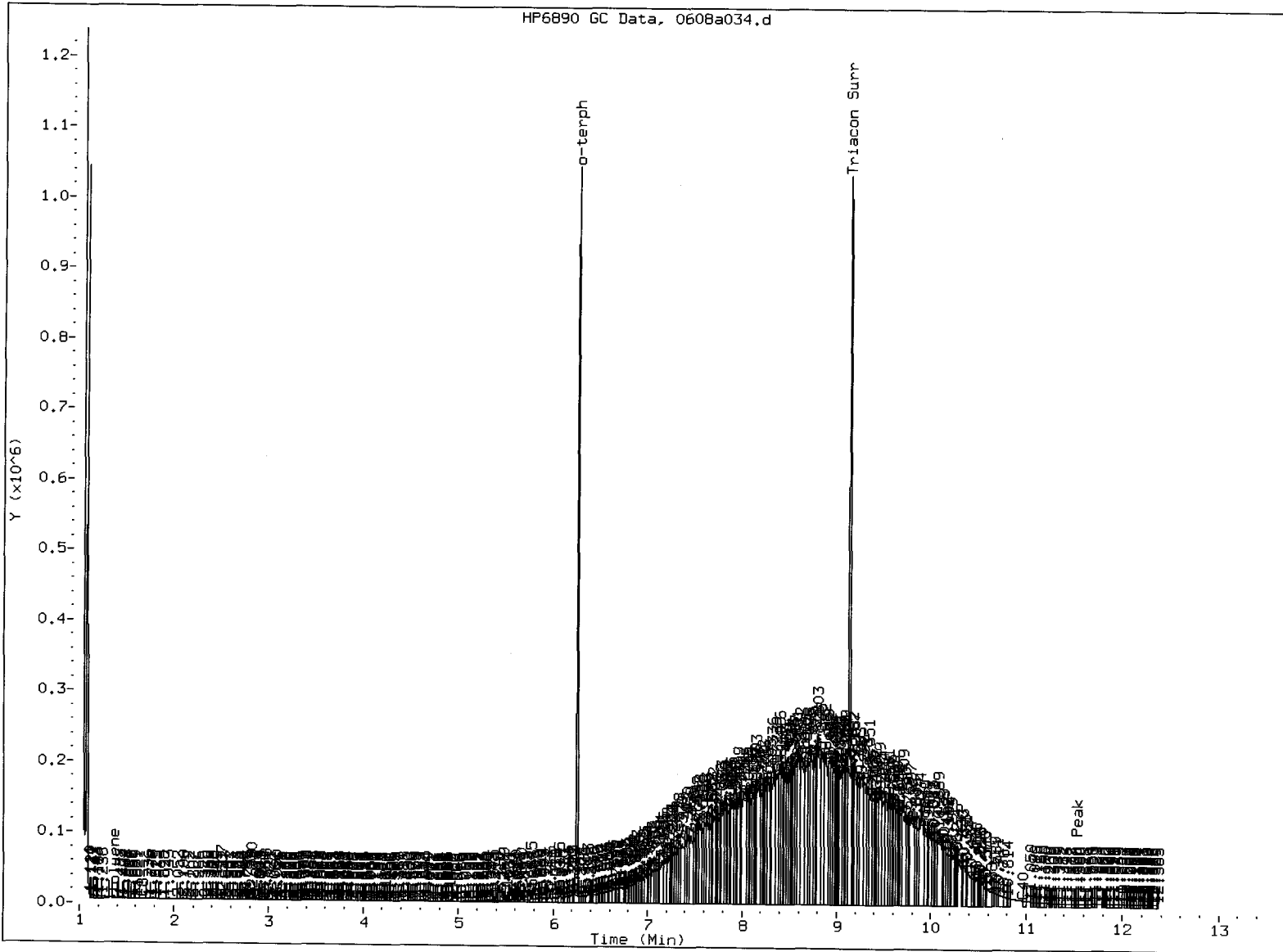
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Date: 08-JUN-2013 23:00
Client ID: A2-F59-S-6
Sample Info: MS56E
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
6/10/13



/chem3/fid4a.i/20130608.b/0608a034.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/10/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a035.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56F
Client ID: A2-F60-S-6
Injection: 08-JUN-2013 23:25
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.358	0.002	3202	2430	WATPHG	(Tol-C12)	92059	5.92
C8	1.671	-0.011	785	2340	WATPHD	(C12-C24)	3040137	209.45
C10	3.341	-0.002	614	410	WATPHM	(C24-C38)	13668507	1059.16
C12	4.238	-0.003	3213	2183	AK102	(C10-C25)	3838530	222.98
C14	4.918	-0.004	3498	2987	AK103	(C25-C36)	12146635	1319.99
C16	5.513	-0.003	4271	4623				
C18	6.094	-0.004	6047	5318				
C20	6.670	-0.006	14436	16087				
C22	7.244	0.010	37226	28946				
C24	7.766	0.003	64756	55767	MSPIRIT	(Tol-C12)	92059	4.75
C25	8.022	0.008	84400	210636				
C26	8.269	0.001	95818	198817				
C28	8.701	-0.006	130167	147961				
C32	9.518	0.003	101324	132688				
C34	9.896	0.005	96579	272755				
Filter Peak	11.534	0.003	5283	9829	CREOSOT	(C12-C22)	1370851	628.28 M
C36	10.274	0.016	52951	55909				
C38	10.623	0.007	27845	12139				
C40	10.987	0.018	12328	12565				
o-terph	6.261	0.001	1028141	820091				
Triacon Surr	9.136	0.004	825899	681913				

Range Times: NW Diesel (4.242 - 7.763) AK102 (3.34 - 8.01) Jet A (3.34 - 6.10)
NW M.Oil (7.76 - 10.62) AK103 (8.01 - 10.26) OR Diesel (3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	820091	42.5	94.5 M
Triacotane	681913	35.3	78.4 M

JW
6/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a035.d

Date: 08-JUN-2013 23:25

Client ID: A2-F60-S-6

Sample Info: MS56F

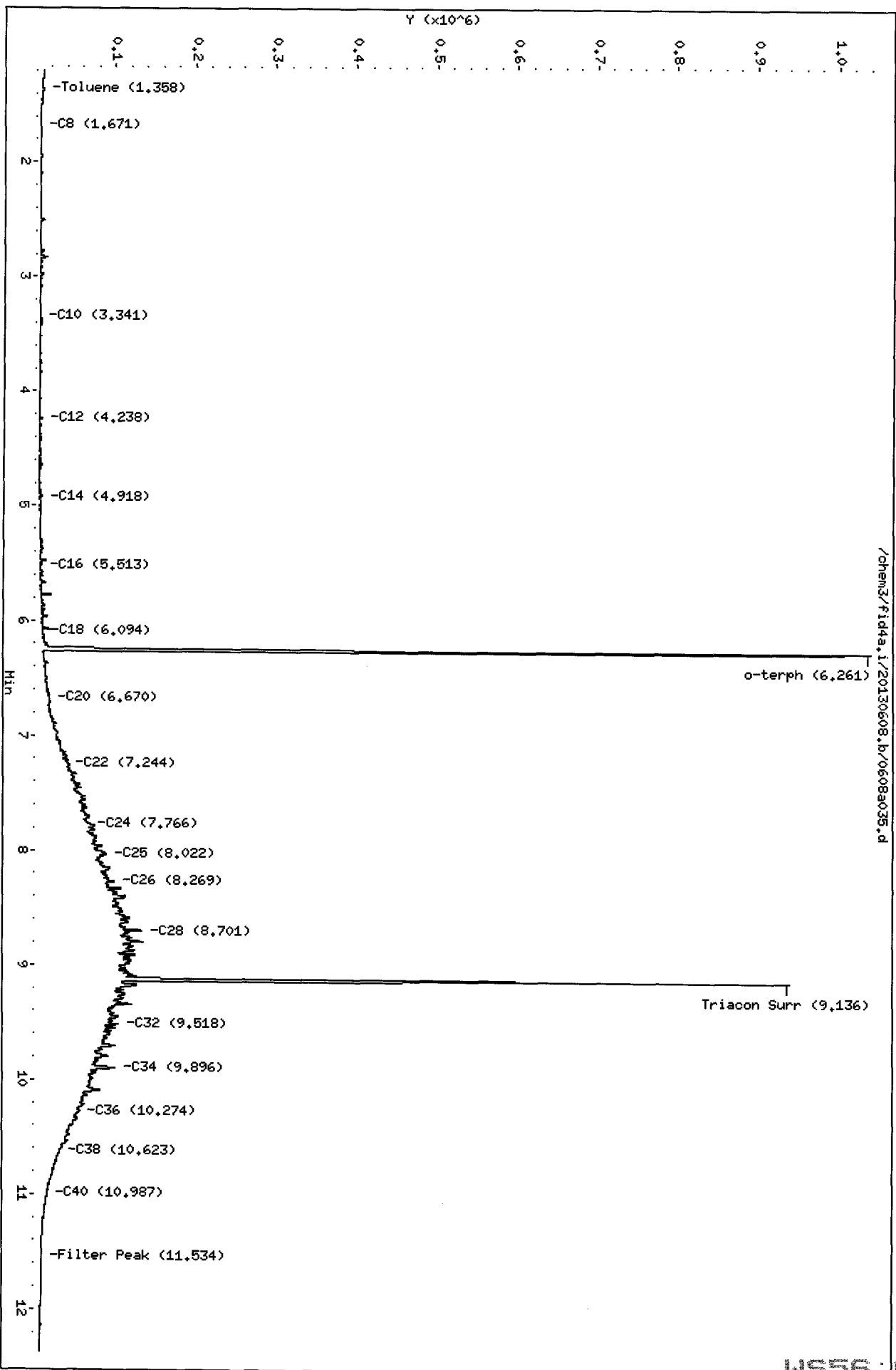
Column phases: RTX-1

Instrument: fid4a.i

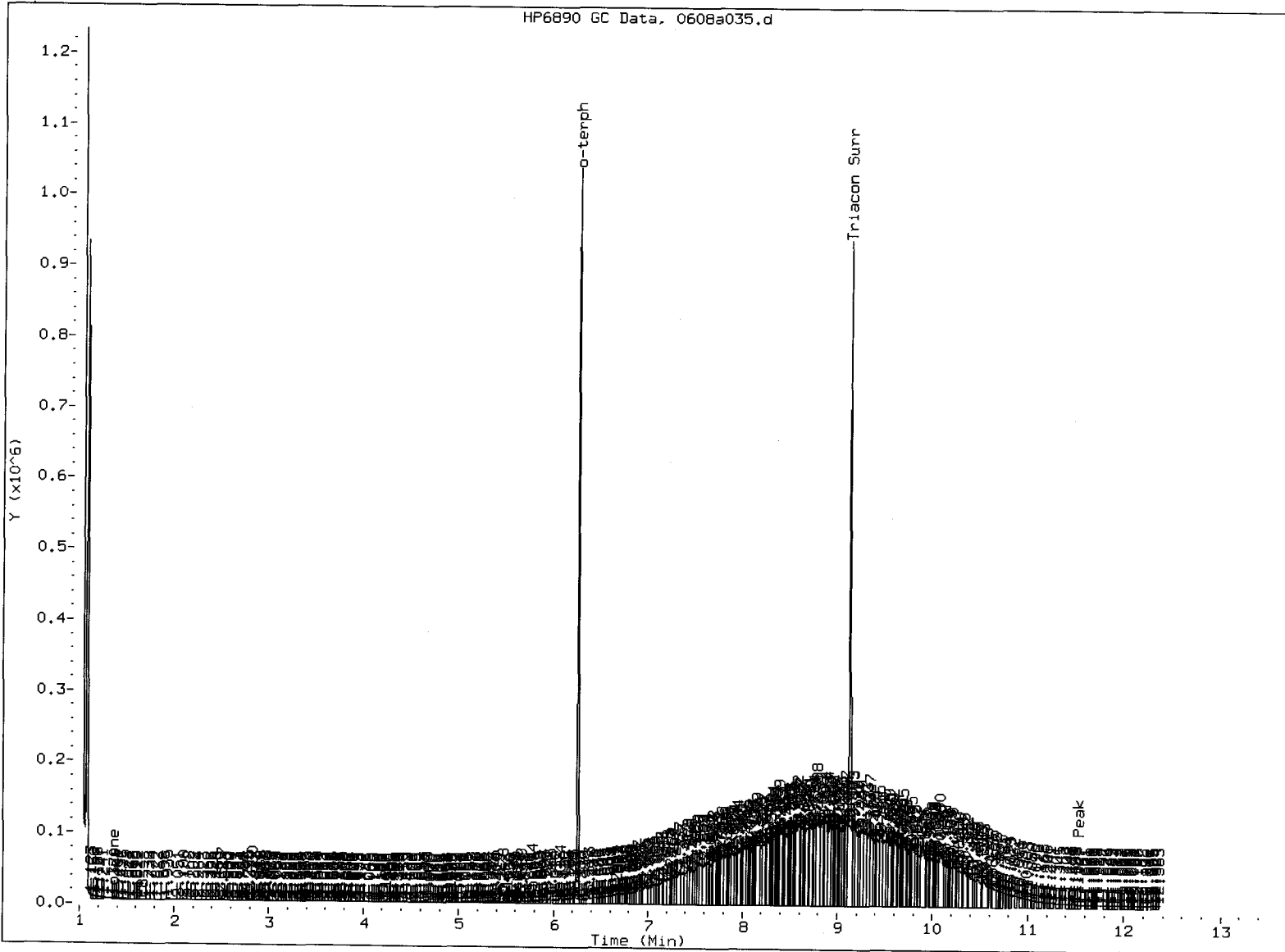
Operator: JR/VTS/JM

Column diameter: 0.25

50
6/10/13



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 6/10/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a036.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56G
Client ID: A2-F61-S-6
Injection: 08-JUN-2013 23:51
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.361	0.005	3205	4194	WATPHG	(Tol-C12)	120605	7.76
C8	1.668	-0.014	2118	3845	WATPHD	(C12-C24)	11332346	780.76
C10	3.340	-0.003	653	420	WATPHM	(C24-C38)	43915055	3402.92
C12	4.239	-0.002	5229	3550	AK102	(C10-C25)	13528795	785.88
C14	4.919	-0.003	4133	3938	AK103	(C25-C36)	41595785	4520.26
C16	5.514	-0.002	5917	6801				
C18	6.094	-0.004	14047	13195				
C20	6.671	-0.005	50372	65120				
C22	7.221	-0.013	149452	214081				
C24	7.761	-0.001	255758	277682	MSPIRIT	(Tol-C12)	120605	6.23
C25	8.003	-0.012	301298	178801				
C26	8.262	-0.006	356002	335076				
C28	8.716	0.009	514828	955512				
C32	9.513	-0.002	326142	460133				
C34	9.887	-0.004	169505	327707				
Filter Peak	11.544	0.013	4334	1641	CREOSOT	(C12-C22)	4679473	2144.68 M
C36	10.252	-0.006	26395	39429				
C38	10.603	-0.014	6964	20936				
C40	10.968	0.000	4938	2554				
o-terph	6.261	0.001	1001601	735283				
Triacon Surr	9.143	0.011	765752	677613				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	735283	38.1	84.7 M
Triacontane	677613	35.1	77.9 M

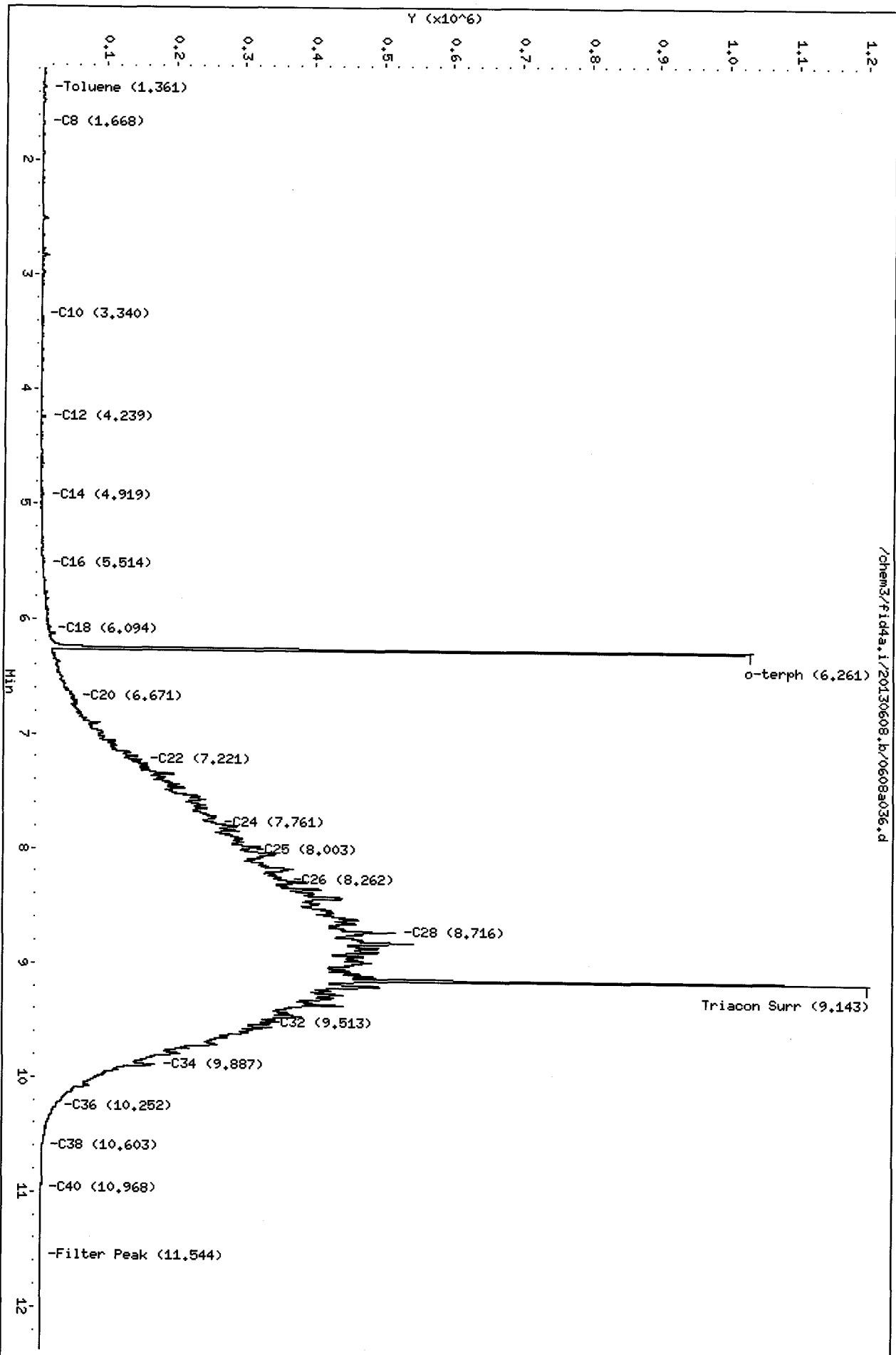
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a036.d
Date : 08-JUN-2013 23:51
Client ID: A2-F64-S-6
Sample Info: MS56G
Column phase: RTX-1

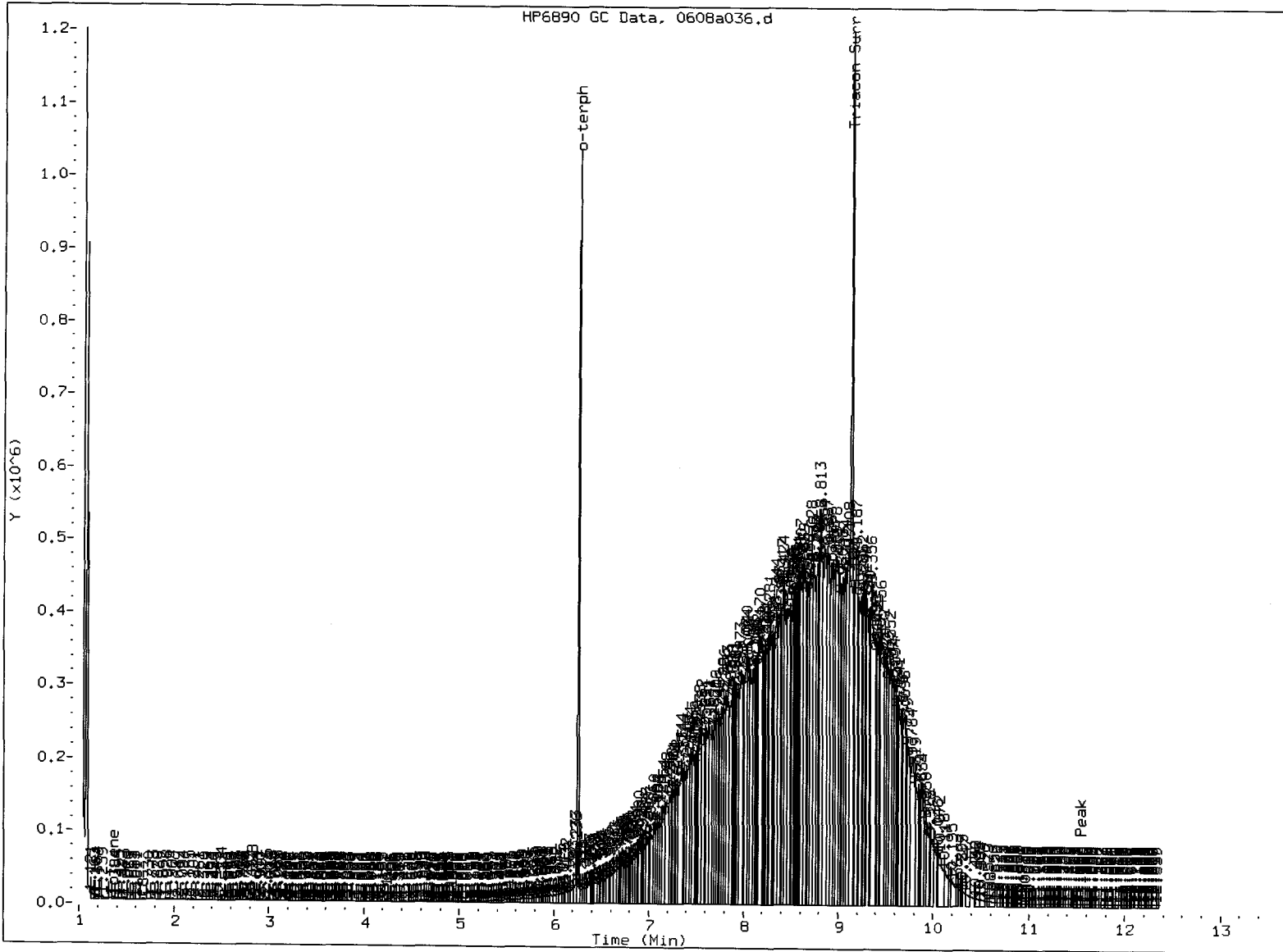
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
6/14/0



/chem3/fid4a.i/20130608.b/0608a036.d

MS56: 00033



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW Date: 6/10/70

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a037.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56H
Client ID: A2-F62-S-6
Injection: 09-JUN-2013 00:16
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.367	0.010	3265	4438	WATPHG	(Tol-C12)	220479	14.19
C8	1.671	-0.012	2053	4230	WATPHD	(C12-C24)	5743396	395.70
C10	3.337	-0.006	2064	1739	WATPHM	(C24-C38)	25631289	1986.14
C12	4.239	-0.002	4305	3127	AK102	(C10-C25)	6921633	402.08
C14	4.919	-0.003	6212	5747	AK103	(C25-C36)	24005053	2608.66
C16	5.513	-0.003	7933	7001				
C18	6.095	-0.004	10880	9715				
C20	6.672	-0.004	26206	28411				
C22	7.243	0.009	71335	72129				
C24	7.761	-0.002	124771	137390	MSPIRIT	(Tol-C12)	220479	11.38
C25	8.025	0.010	164416	326811				
C26	8.274	0.005	190153	533151				
C28	8.706	-0.001	267156	393052				
C32	9.519	0.004	191354	344319				
C34	9.892	0.001	174875	497897				
Filter Peak	11.529	-0.002	4236	2950	CREOSOT	(C12-C22)	2449737	1122.75 M
C36	10.258	-0.001	69494	93015				
C38	10.638	0.021	17525	23280				
C40	11.016	0.047	6109	6958				
o-terph	6.260	0.000	980794	742328				
Triacon Surr	9.138	0.006	791267	669211				

Range Times: NW Diesel (4.242 - 7.763) AK102 (3.34 - 8.01) Jet A (3.34 - 6.10)
NW M.Oil (7.76 - 10.62) AK103 (8.01 - 10.26) OR Diesel (3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	742328	38.5	85.5 M
Triacontane	669211	34.6	76.9 M

JW
6/10/13

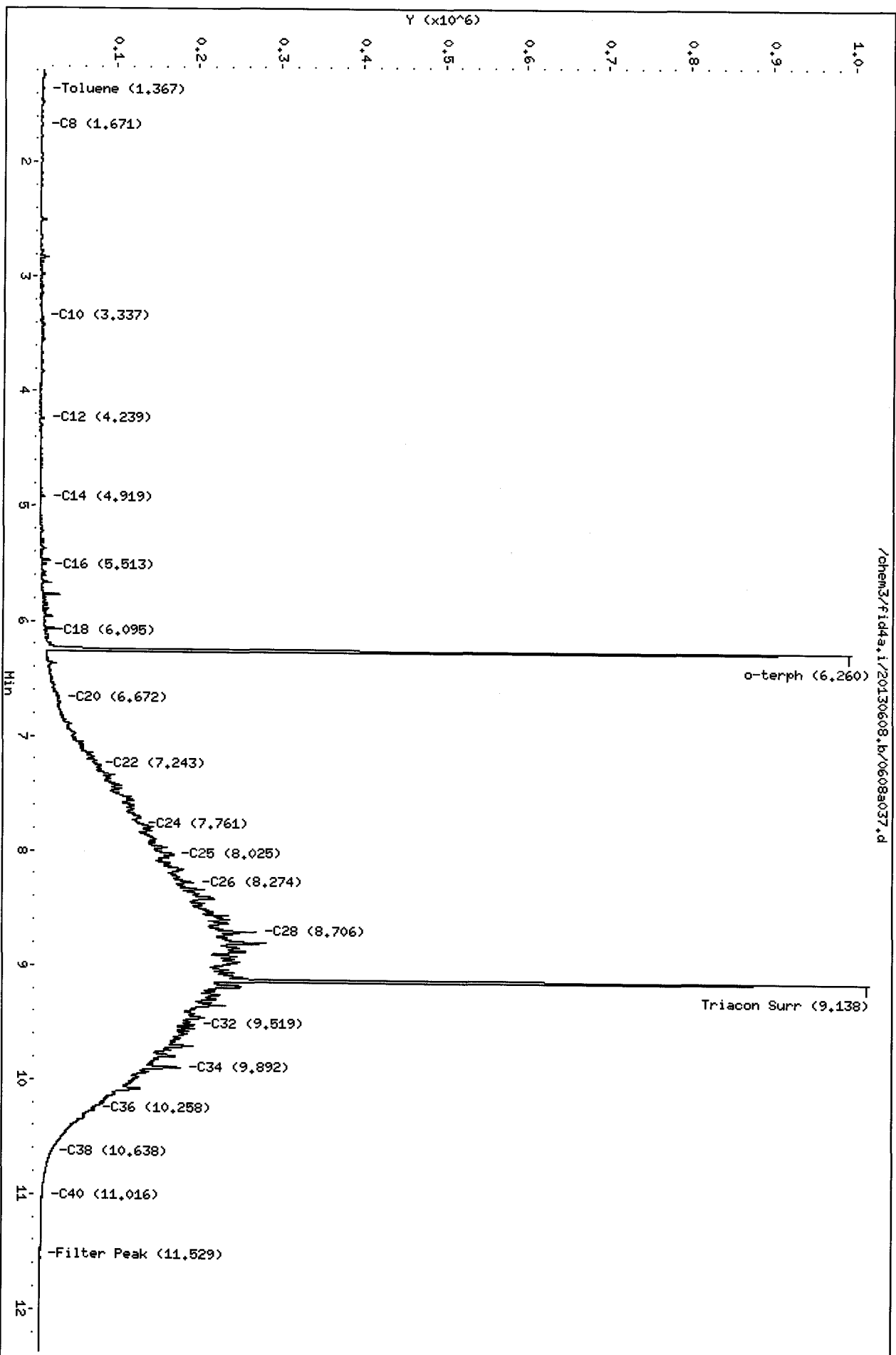
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

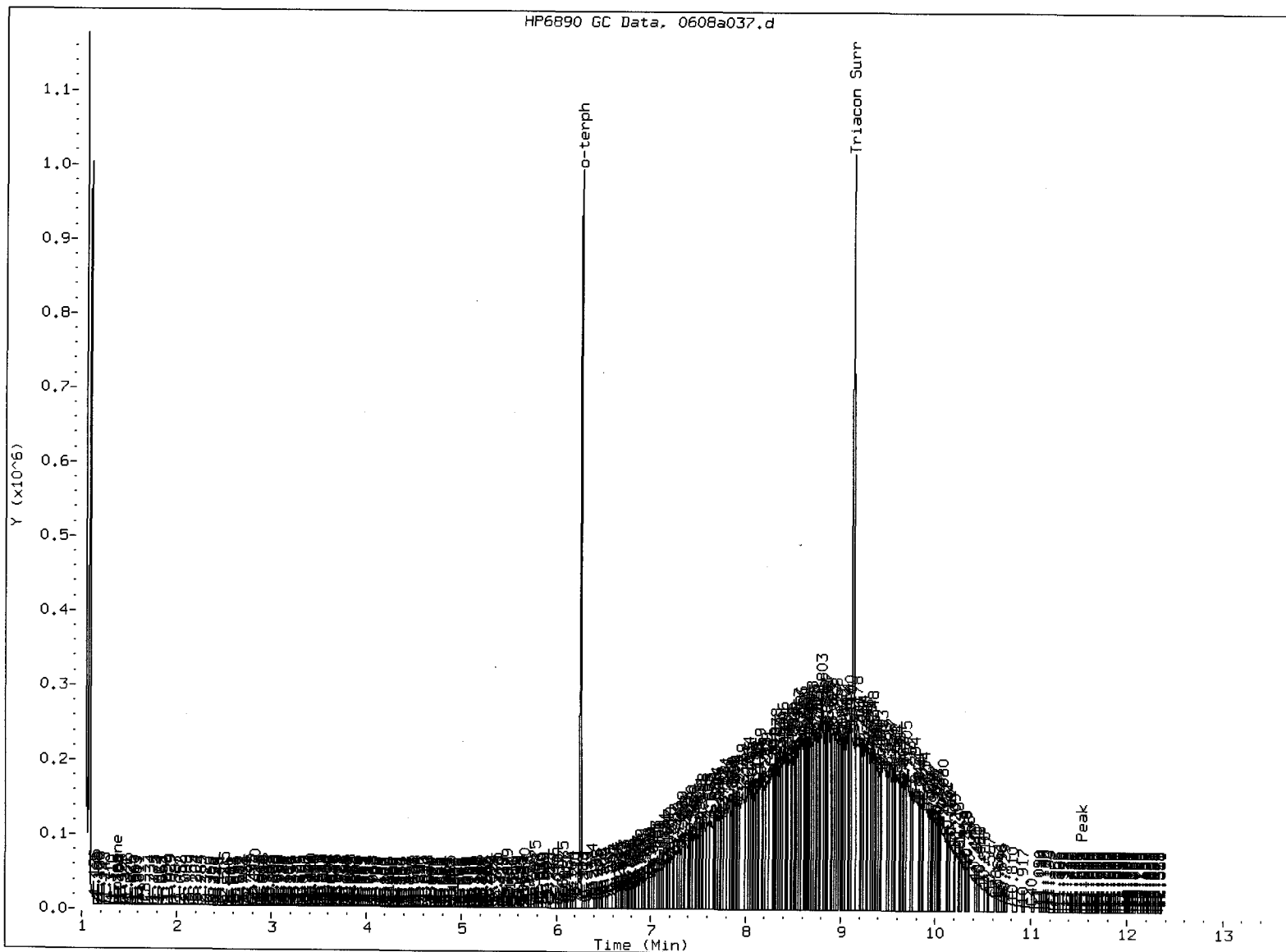
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Date: 09-JUN-2013 00:16
Client ID: A2-F62-S-6
Sample Info: MS56H
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
6/14/13



/chem3/fid4a.i/20130608.b/0608a037.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JG

Date: 6/10/83

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a038.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56I
Client ID: A2-F63-S-6
Injection: 09-JUN-2013 00:41
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.360	0.003	3147	2537	WATPHG	(Tol-C12)	87163	5.61
C8	1.674	-0.009	544	1118	WATPHD	(C12-C24)	1121189	77.25
C10	3.342	-0.001	647	452	WATPHM	(C24-C38)	4518802	350.16
C12	4.239	-0.003	3100	2016	AK102	(C10-C25)	1369955	79.58
C14	4.919	-0.003	3846	3142	AK103	(C25-C36)	3931743	427.27
C16	5.513	-0.003	3931	3772				
C18	6.094	-0.005	4032	3334				
C20	6.669	-0.007	6261	10491				
C22	7.241	0.007	11760	8339				
C24	7.763	0.000	18865	15790	MSPRIT	(Tol-C12)	87163	4.50
C25	8.011	-0.004	24086	44798				
C26	8.266	-0.002	28184	49274				
C28	8.715	0.008	36136	26847				
C32	9.504	-0.011	41569	65813				
C34	9.878	-0.013	32851	94285				
Filter Peak	11.518	-0.013	5045	7893	CREOSOT	(C12-C22)	621357	284.78 M
C36	10.254	-0.005	21502	29603				
C38	10.636	0.020	13888	14503				
C40	10.976	0.007	9077	13871				
o-terph	6.261	0.001	1077942	844312				
Triacon Surr	9.129	-0.003	930255	787977				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	844312	43.8	97.3 M
Triacotane	787977	40.8	90.6 M

JW
6/10/13

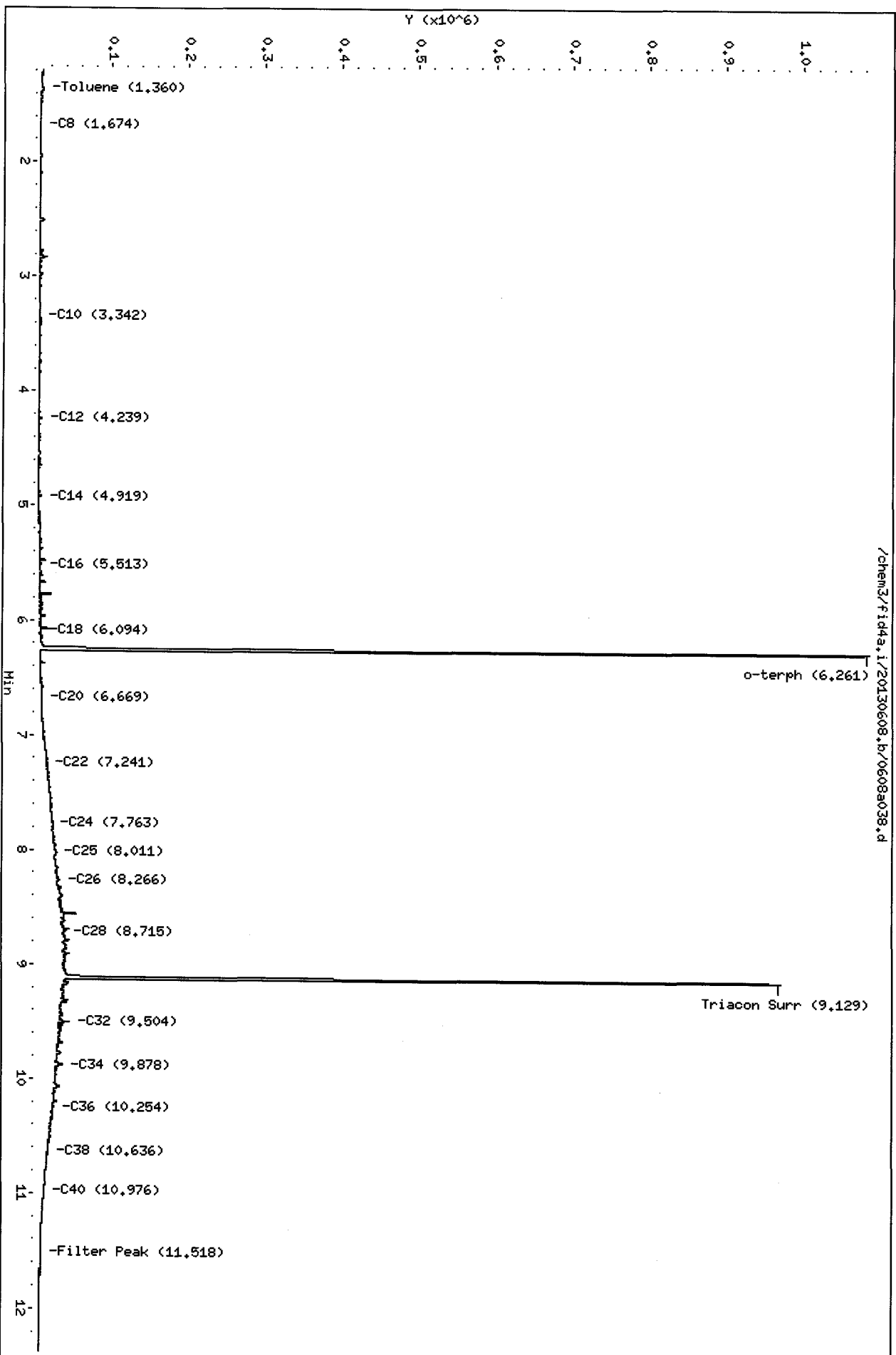
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

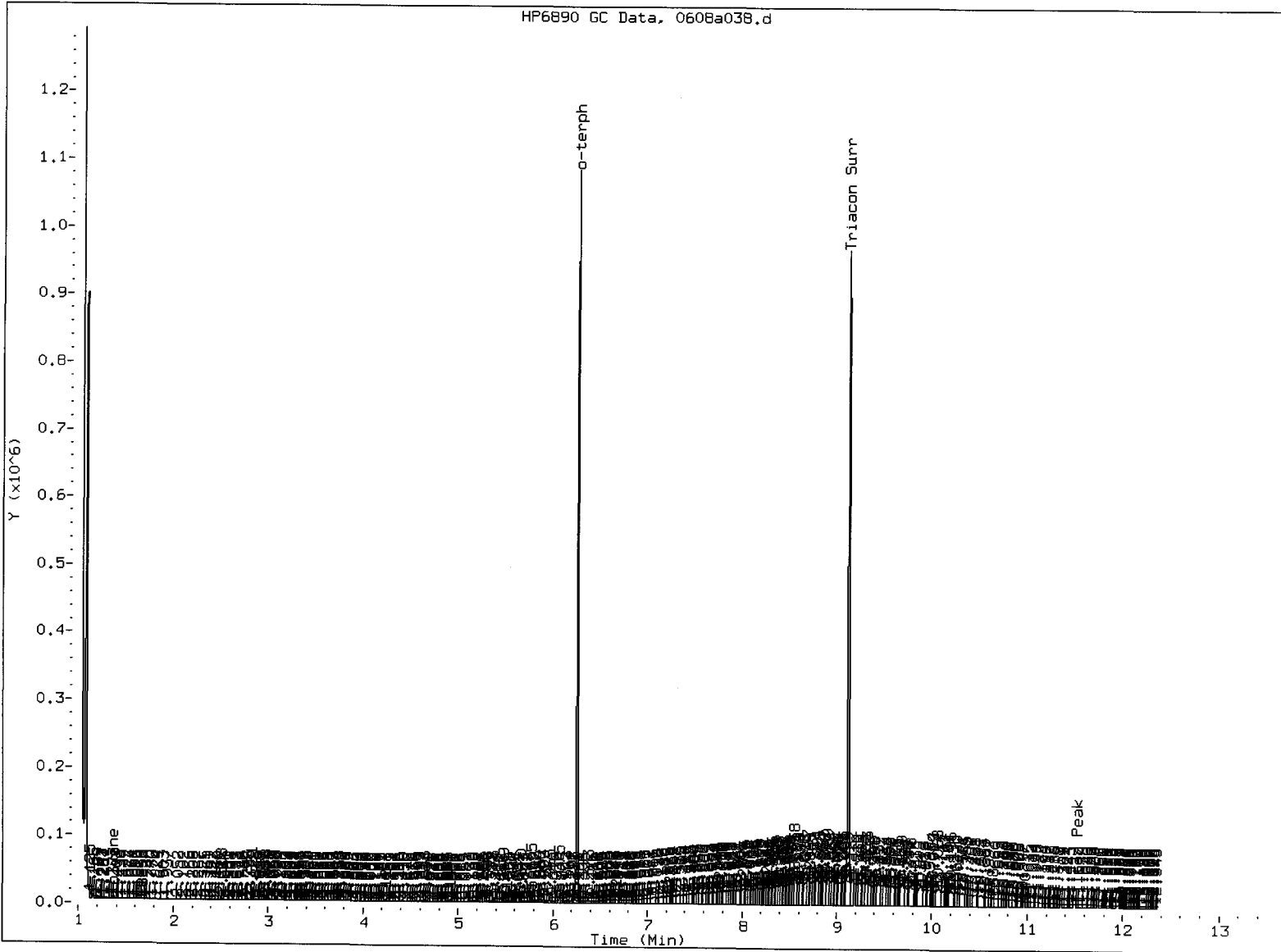
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Date: 09-JUN-2013 00:41
Client ID: A2-F63-S-6
Sample Info: MS561
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

Jac
6/10/13



/chem3/fid4a,i/20130608.b/0608a038.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤. Skimmed surrogate

Analyst: JW

Date: 4/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a041.d ARI ID: WS56J
 Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m Client ID: A2-F64-S-6
 Instrument: fid4a.i Injection: 09-JUN-2013 01:56
 Operator: JR/VTS/JW
 Report Date: 06/08/2013 Dilution Factor: 1
 Macro: 20-MAY-2013
 Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.362	0.005	4539	3380	WATPHG	(Tol-C12)	109859	7.07
C8	1.675	-0.008	861	2391	WATPHD	(C12-C24)	1844899	127.11
C10	3.341	-0.002	741	791	WATPHM	(C24-C38)	4911151	380.56
C12	4.239	-0.003	4065	2720	AK102	(C10-C25)	2100793	122.03
C14	4.919	-0.003	3872	3190	AK103	(C25-C36)	4313754	468.78
C16	5.513	-0.003	4654	4363				
C18	6.094	-0.004	7245	6697				
C20	6.673	-0.003	14004	24098				
C22	7.217	-0.018	23283	62761				
C24	7.770	0.007	23614	9815	MSPIRIT	(Tol-C12)	109859	5.67
C25	8.010	-0.005	27314	29450				
C26	8.266	-0.002	29818	32278				
C28	8.714	0.006	39410	26389				
C32	9.526	0.011	33776	44107				
C34	9.906	0.015	26755	59549				
Filter Peak	11.554	0.023	5028	4979	CREOSOT	(C12-C22)	1150046	527.08 M
C36	10.285	0.026	22047	19270				
C38	10.608	-0.008	16112	20704				
C40	10.964	-0.005	10034	10856				
o-terph	6.260	0.000	992054	767674				
Triacon Surr	9.123	-0.009	884709	729228				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
 NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	767674	39.8	88.5 M
Triacontane	729228	37.7	83.8 M

M Indicates the peak was manually integrated

SW
6/10/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a041.d

Date: 09-JUN-2013 01:56

Client ID: A2-F64-S-6

Sample Info: MS56J

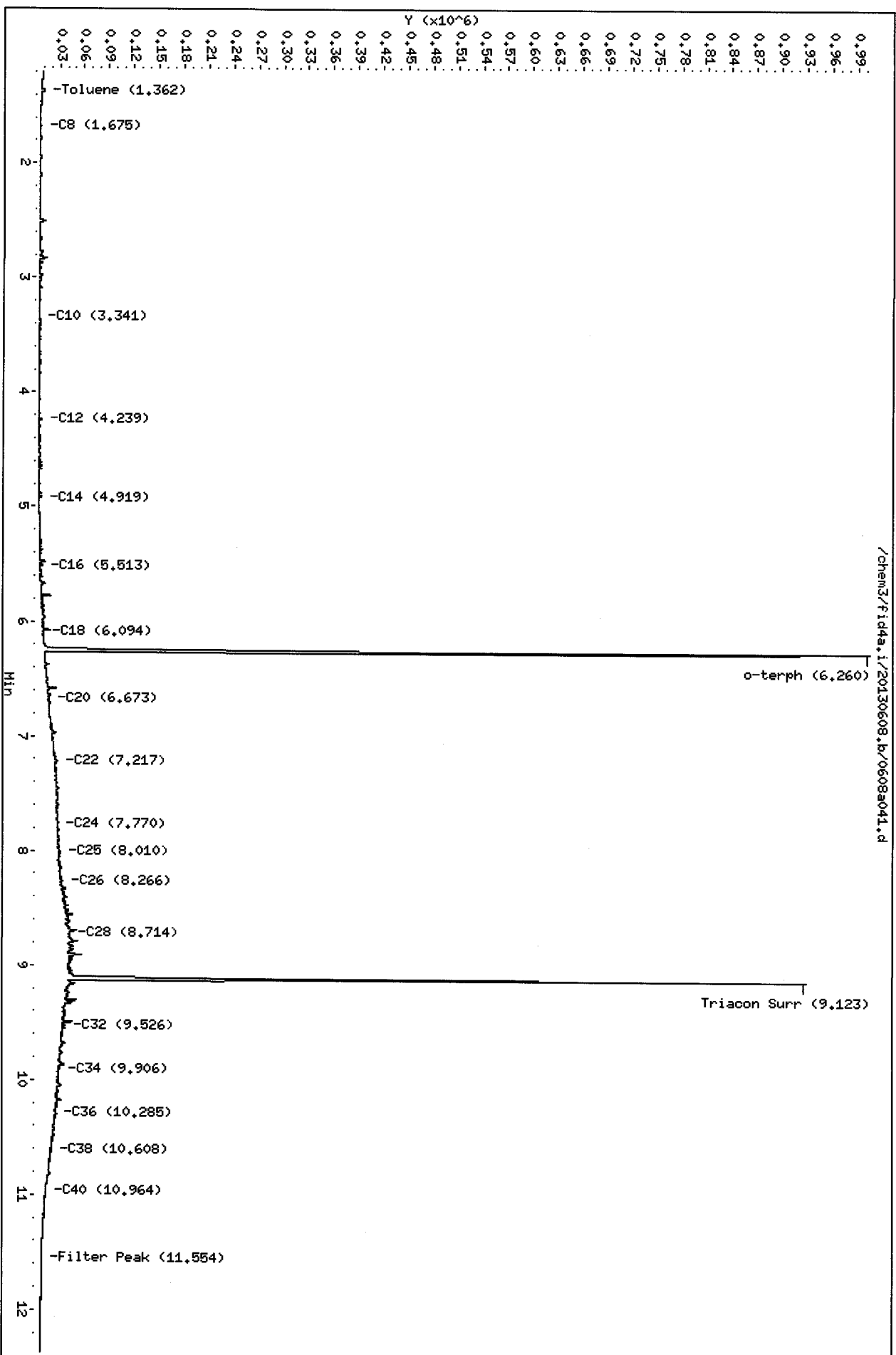
Column phase: RTX-1

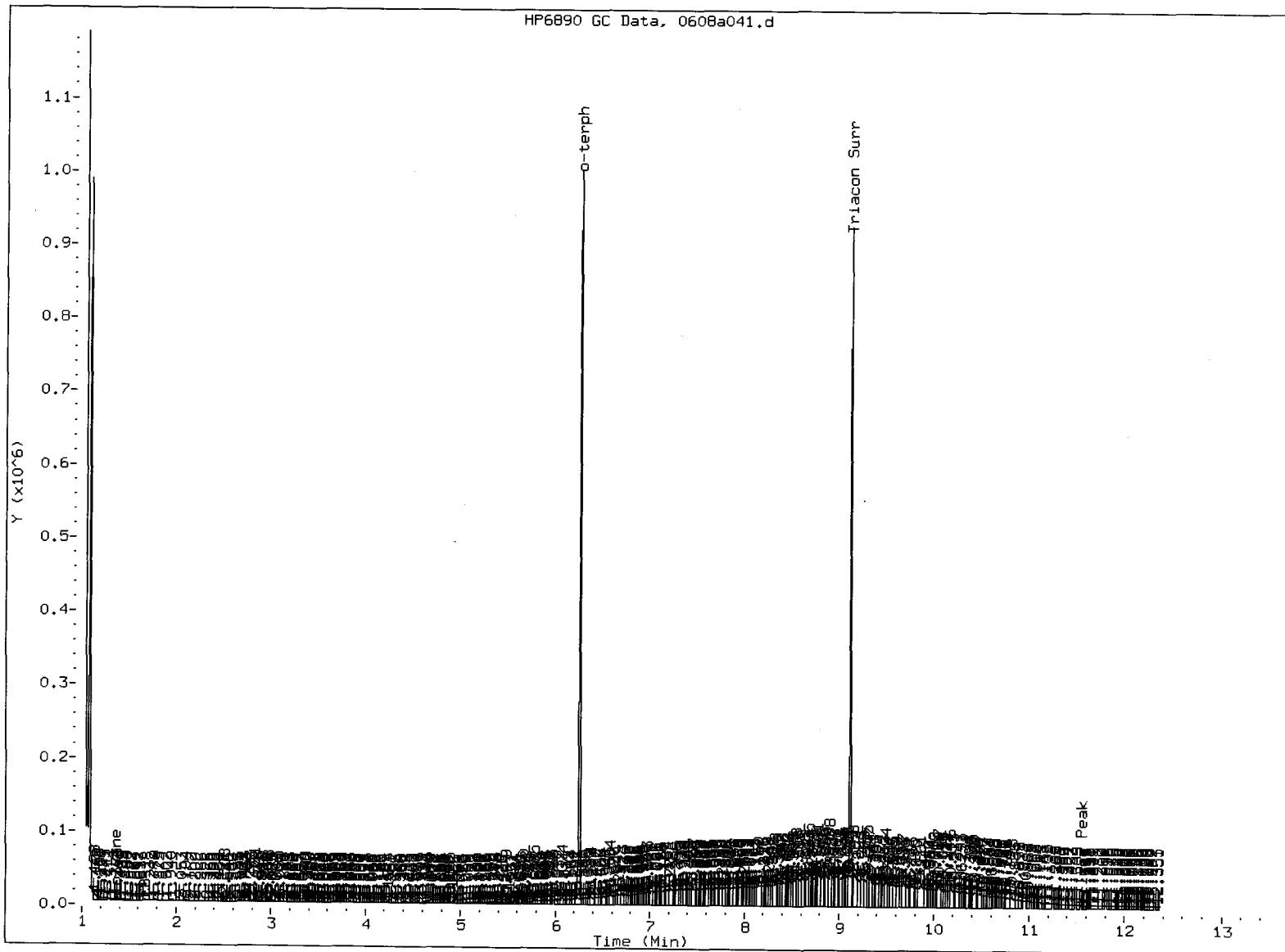
Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25

500
6/14/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: *JW*

Date: *4/10/10*

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS56-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
A2-F55-S-6	85.0%	0
A2-F56-S-6	89.0%	0
A2-F57-S-6	94.2%	0
A2-F58-S-6	90.4%	0
A2-F59-S-6	90.6%	0
A2-F60-S-6	94.5%	0
A2-F61-S-6	84.7%	0
A2-F62-S-6	85.6%	0
MB-060613	88.5%	0
LCS-060613	84.6%	0
LCSD-060613	84.9%	0
A2-F63-S-6	97.3%	0
A2-F63-S-6 MS	89.6%	0
A2-F63-S-6 MSD	87.0%	0
A2-F64-S-6	88.5%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11832 to 13-11841

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: A2-F63-S-6
MS/MSD

Lab Sample ID: WS56I
 LIMS ID: 13-11840
 Matrix: Soil
 Data Release Authorized: *THW*
 Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc
 Project: Former Cashmere Mill Site
 0779.02.01/03
 Date Sampled: 06/03/13
 Date Received: 06/04/13

Date Extracted MS/MSD: 06/06/13
 Date Analyzed MS: 06/09/13 01:06
 MSD: 06/09/13 01:31
 Instrument/Analyst MS: FID/JLW
 MSD: FID/JLW

Sample Amount MS: 8.82 g-dry-wt
 MSD: 8.84 g-dry-wt
 Final Extract Volume MS: 1.0 mL
 MSD: 1.0 mL
 Dilution Factor MS: 1.0
 MSD: 1.0
 Percent Moisture: 12.0%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	8.8	143	170	78.9%	140	170	77.2%	2.1%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	89.6%	87.0%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a039.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56IMS
Client ID: A2-F63-S-6 MS
Injection: 09-JUN-2013 01:06
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.356	-0.001	6335	4702	WATPHG	(Tol-C12)	4014815	258.36
C8	1.677	-0.006	7731	14174	WATPHD	(C12-C24)	18288157	1259.99
C10	3.341	-0.002	100994	86053	WATPHM	(C24-C38)	5150824	399.13
C12	4.243	0.001	187979	180324	AK102	(C10-C25)	21482598	1247.92
C14	4.923	0.001	325146	333789	AK103	(C25-C36)	4458635	484.52
C16	5.519	0.002	497186	536336				
C18	6.101	0.002	460136	424964				
C20	6.675	-0.001	287434	329263				
C22	7.230	-0.004	149115	169442				
C24	7.756	-0.007	69277	103242	MSPIRIT	(Tol-C12)	4014815	207.31
C25	8.008	-0.006	51722	110411				
C26	8.250	-0.019	41657	108001				
C28	8.697	-0.010	47289	92980				
C32	9.528	0.013	35434	54168				
C34	9.900	0.009	26987	14924				
Filter Peak	11.538	0.007	4559	4802	CREOSOT	(C12-C22)	17273840	7916.88 M
C36	10.259	0.001	22473	30168				
C38	10.615	-0.001	15159	14983				
C40	10.980	0.011	8993	9388				
o-terph	6.264	0.003	997731	777709				
Triacon Surr	9.125	-0.007	902041	757716				

Range Times: NW Diesel (4.242 - 7.763) AK102 (3.34 - 8.01) Jet A (3.34 - 6.10)
NW M.Oil (7.76 - 10.62) AK103 (8.01 - 10.26) OR Diesel (3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	777709	40.3	89.6 M
Triacontane	757716	39.2	87.1 M

JW
6/10/13

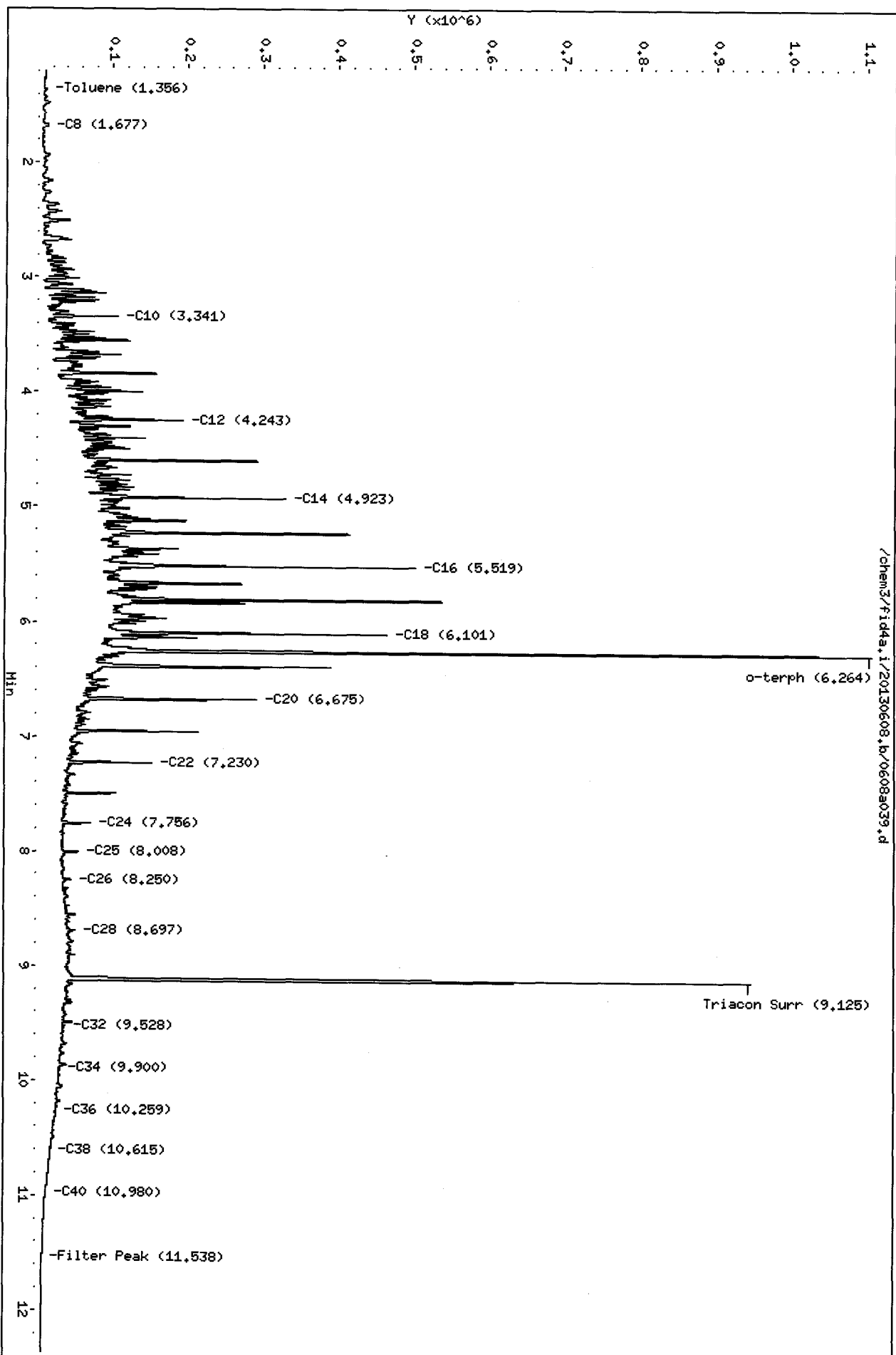
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

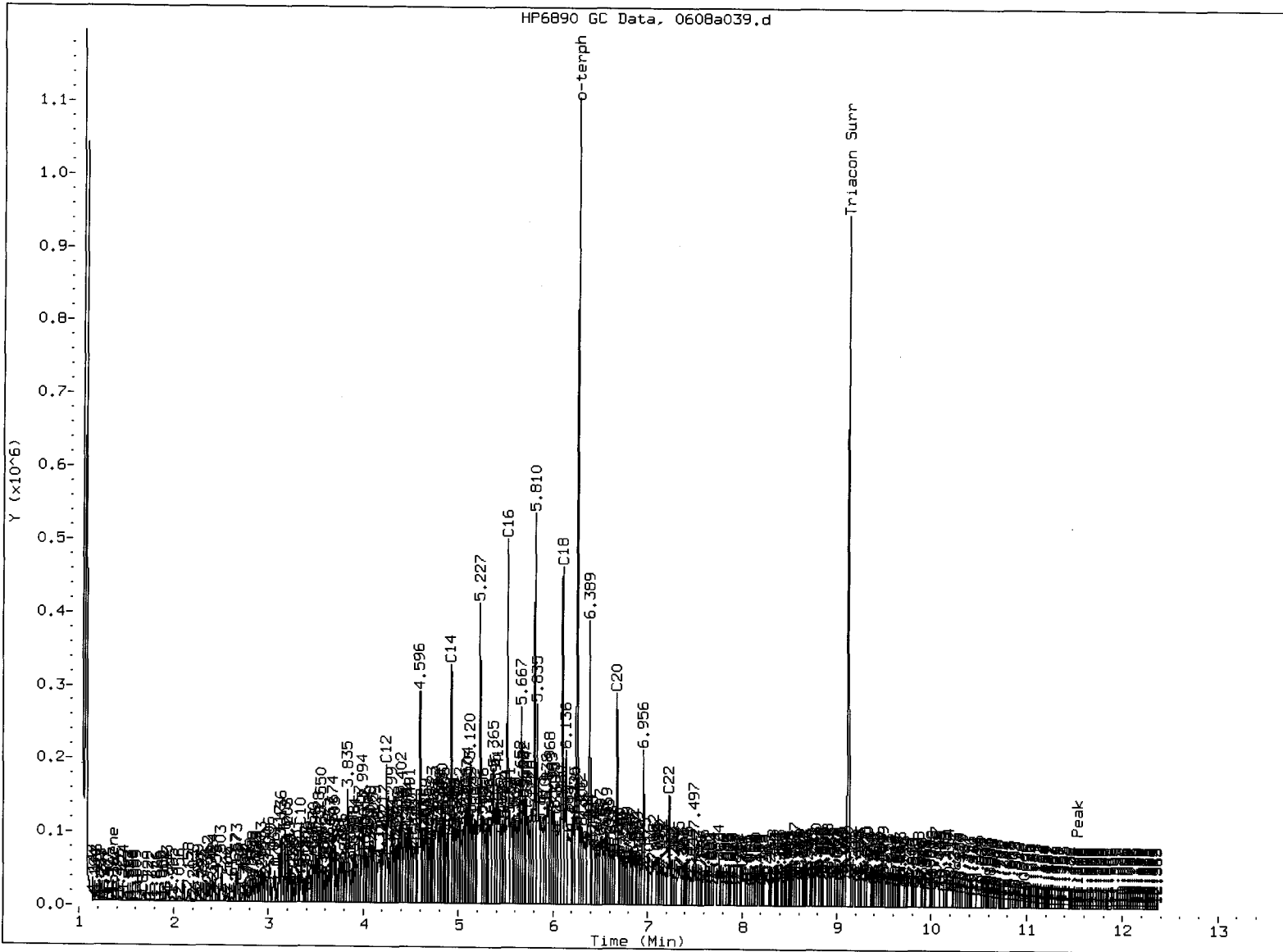
Data File: /chem3/fid4a.i/20130608.b/0608a039.d
Date: 09-JUN-2013 01:06
Client ID: A2-F63-S-6 MS
Sample Info: MS56IMS
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
6/10/13



/chem3/fid4a.i/20130608.b/0608a039.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JU

Date: 6/14/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a040.d
Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/08/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS56IMSD
Client ID: A2-F63-S-6 MSD
Injection: 09-JUN-2013 01:31
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.364	0.007	7737	9319	WATPHG	(Tol-C12)	3950961	254.25
C8	1.677	-0.006	7166	13320	WATPHD	(C12-C24)	17946521	1236.45
C10	3.340	-0.003	100291	84075	WATPHM	(C24-C38)	4261748	330.24
C12	4.242	0.001	188780	170756	AK102	(C10-C25)	21022881	1221.21
C14	4.923	0.001	334548	326497	AK103	(C25-C36)	3697431	401.80
C16	5.519	0.002	501549	397443				
C18	6.101	0.002	472961	420587				
C20	6.675	-0.001	294435	316053				
C22	7.230	-0.004	146045	165878				
C24	7.757	-0.006	65437	91910	MSPIRIT	(Tol-C12)	3950961	204.01
C25	8.008	-0.007	47075	59868				
C26	8.265	-0.003	28572	40335				
C28	8.714	0.007	33566	23080				
C32	9.527	0.012	29446	37078				
C34	9.912	0.021	23775	48675				
Filter Peak	11.523	-0.008	4491	6141	CREOSOT	(C12-C22)	16914500	7752.19 M
C36	10.266	0.007	18653	27716				
C38	10.633	0.016	12765	9624				
C40	10.974	0.005	8303	8179				
o-terph	6.264	0.003	1025775	755155				
Triacon Surr	9.125	-0.007	890619	766599				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	755155	39.2	87.0 M
Triacontane	766599	39.7	88.1 M

JWC
6/10/13

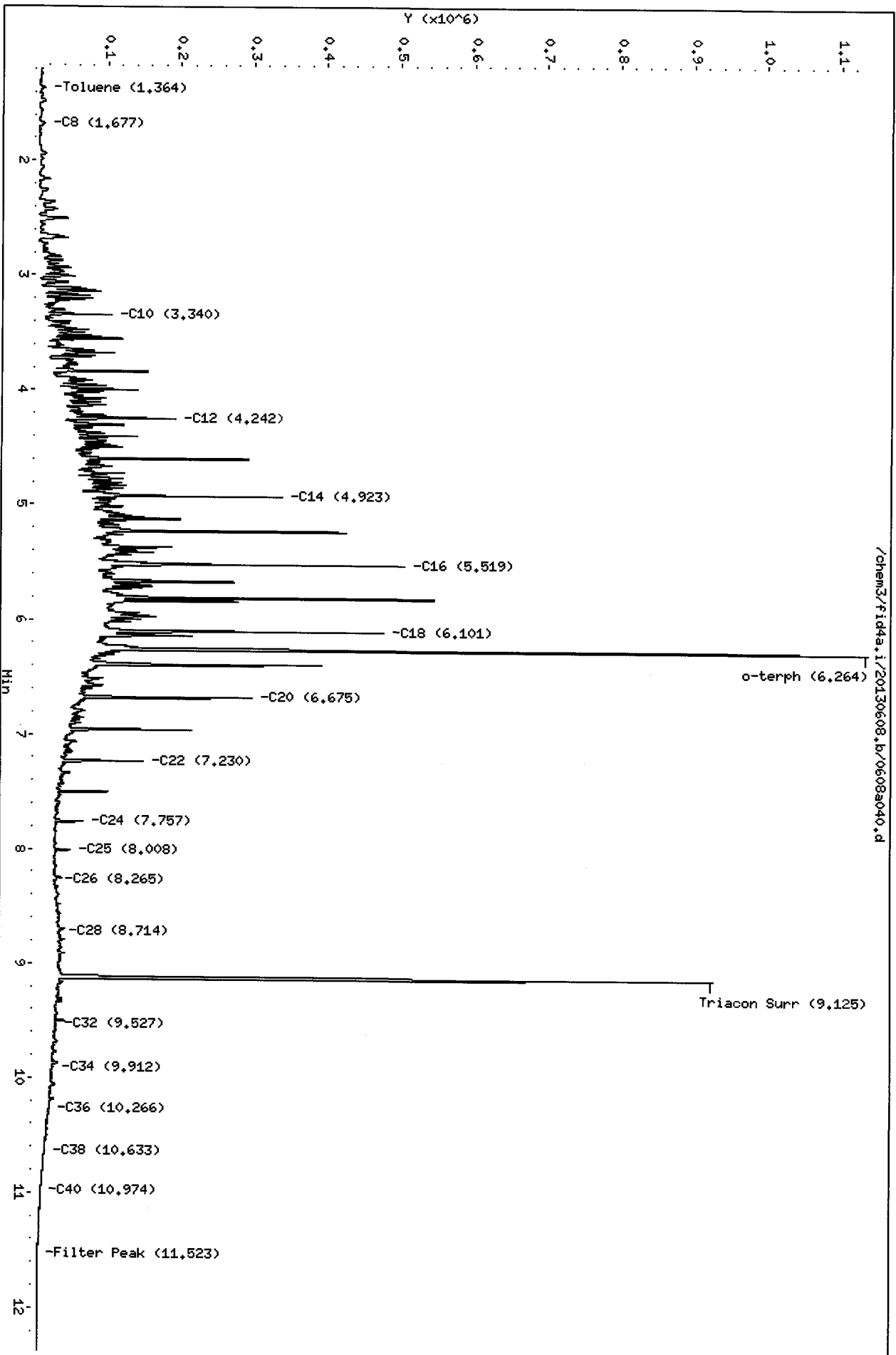
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a040.d
Date: 09-JUN-2013 01:31
Client ID: A2-F63-S-6-HSD
Sample Info: MS56IHSD
Column phase: RTX-1

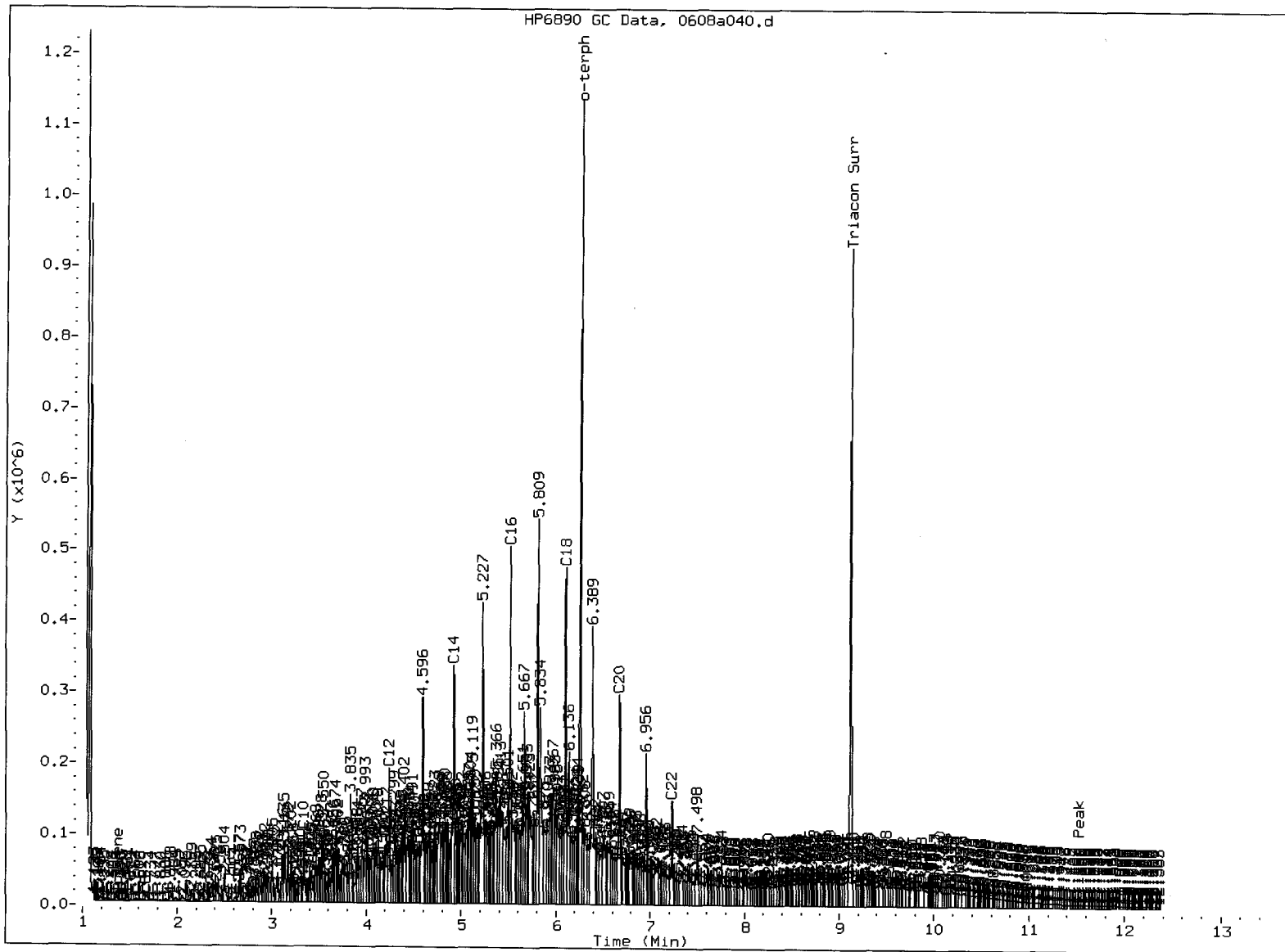
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JRC
6/19/13



/chem3/fid4a.i/20130608.b/0608a040.d

MS56-00050



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: su

Date: 6/10/13

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-060613

LCS/LCSD

Lab Sample ID: LCS-060613

LIMS ID: 13-11840

Matrix: Soil

Data Release Authorized: *MM*

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Extracted LCS/LCSD: 06/06/13

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 06/08/13 17:45

Final Extract Volume LCS: 1.0 mL

LCSD: 06/08/13 18:12

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW

Dilution Factor LCS: 1.0

LCSD: FID/JLW

LCSD: 1.0

Range	Spike			LCSD			RPD
	LCS	Added-LCS	Recovery	LCS	Added-LCSD	Recovery	
Diesel	118	150	78.7%	114	150	76.0%	3.4%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	84.6%	84.9%

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a022.d

ARI ID: WS49LCSS1

Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m

Client ID: WS49LCSS1

Instrument: fid4a.i

Injection: 08-JUN-2013 17:45

Operator: JR/VTS/JW

Dilution Factor: 1

Report Date: 06/08/2013

Macro: 20-MAY-2013

Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.367	0.010	1433	1208	WATPHG	(Tol-C12)	4136341	266.18
C8	1.709	0.026	1610	2139	WATPHD	(C12-C24)	17188966	1184.26
C10	3.337	-0.006	100419	87903	WATPHM	(C24-C38)	423093	32.78
C12	4.241	-0.001	186642	173382	AK102	(C10-C25)	20205147	1173.71
C14	4.922	0.000	333368	325706	AK103	(C25-C36)	310537	33.75
C16	5.518	0.002	487897	394012				
C18	6.101	0.002	452254	394235				
C20	6.675	-0.001	279441	296766				
C22	7.229	-0.005	132114	137217				
C24	7.756	-0.007	47038	41593	MSPiRIT	(Tol-C12)	4136341	213.58
C25	8.007	-0.008	24971	26183				
C26	8.249	-0.020	12688	18371				
C28	8.701	-0.007	3772	5708				
C32	9.520	0.005	11922	10829				
C34	9.902	0.011	1451	3837				
Filter Peak	11.527	-0.004	3266	2667	CREOSOT	(C12-C22)	16614707	7614.79 M
C36	10.254	-0.004	2034	4637				
C38	10.606	-0.011	2289	1775				
C40	10.983	0.014	3259	4585				
o-terph	6.263	0.003	1015869	734074				
Triacon Surr	9.136	0.004	861019	754351				

Range Times: NW Diesel(4.242 - 7.763) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.62) AK103(8.01 - 10.26) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	734074	38.1	84.6 M
Triacontane	754351	39.0	86.7

JW
6/10/13

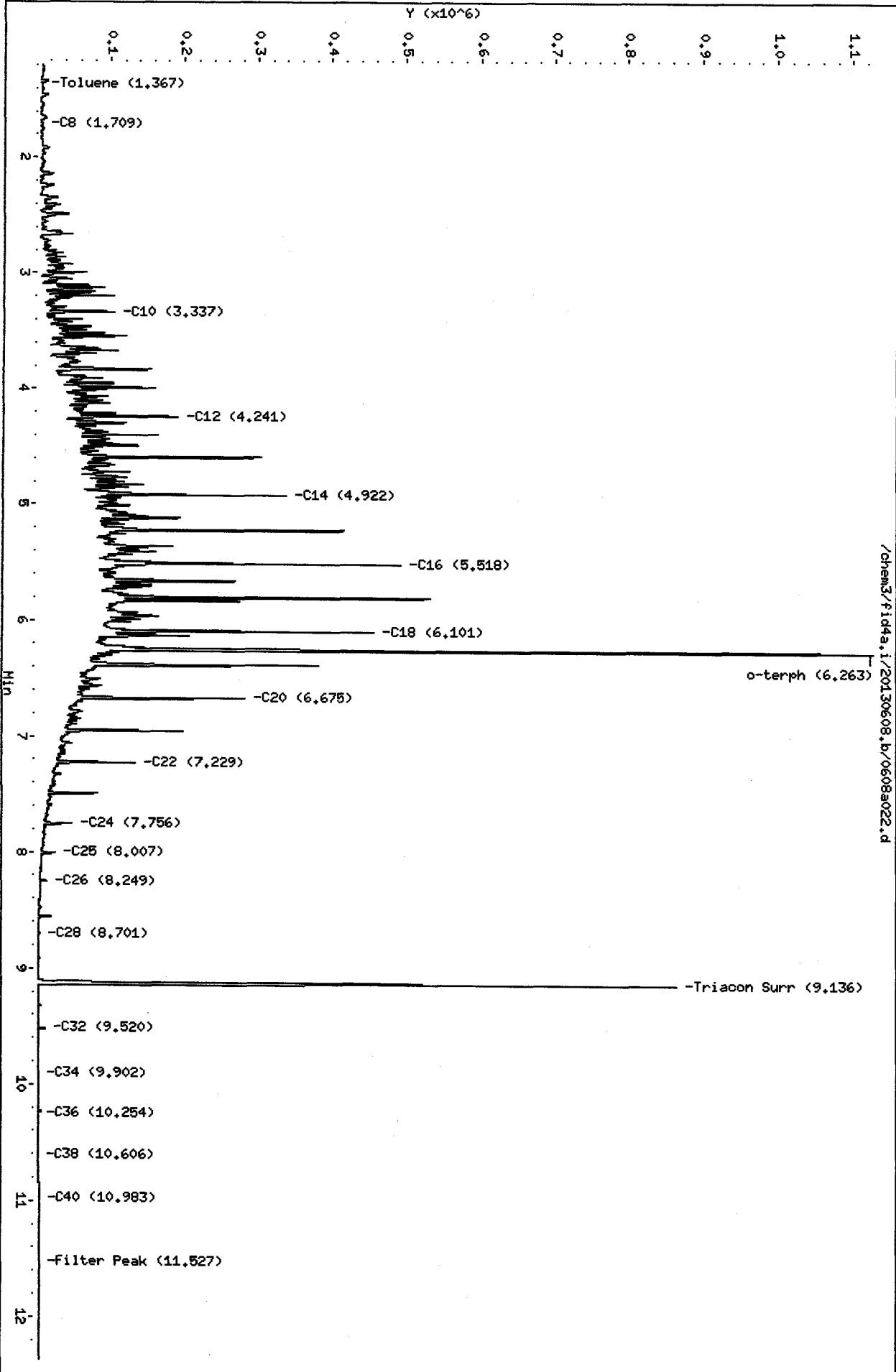
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130608.b/0608a022.d
Date: 08-JUN-2013 17:45
Client ID: MS49LCSS1
Sample Info: MS49LCSS1

Column phase: RTX-1

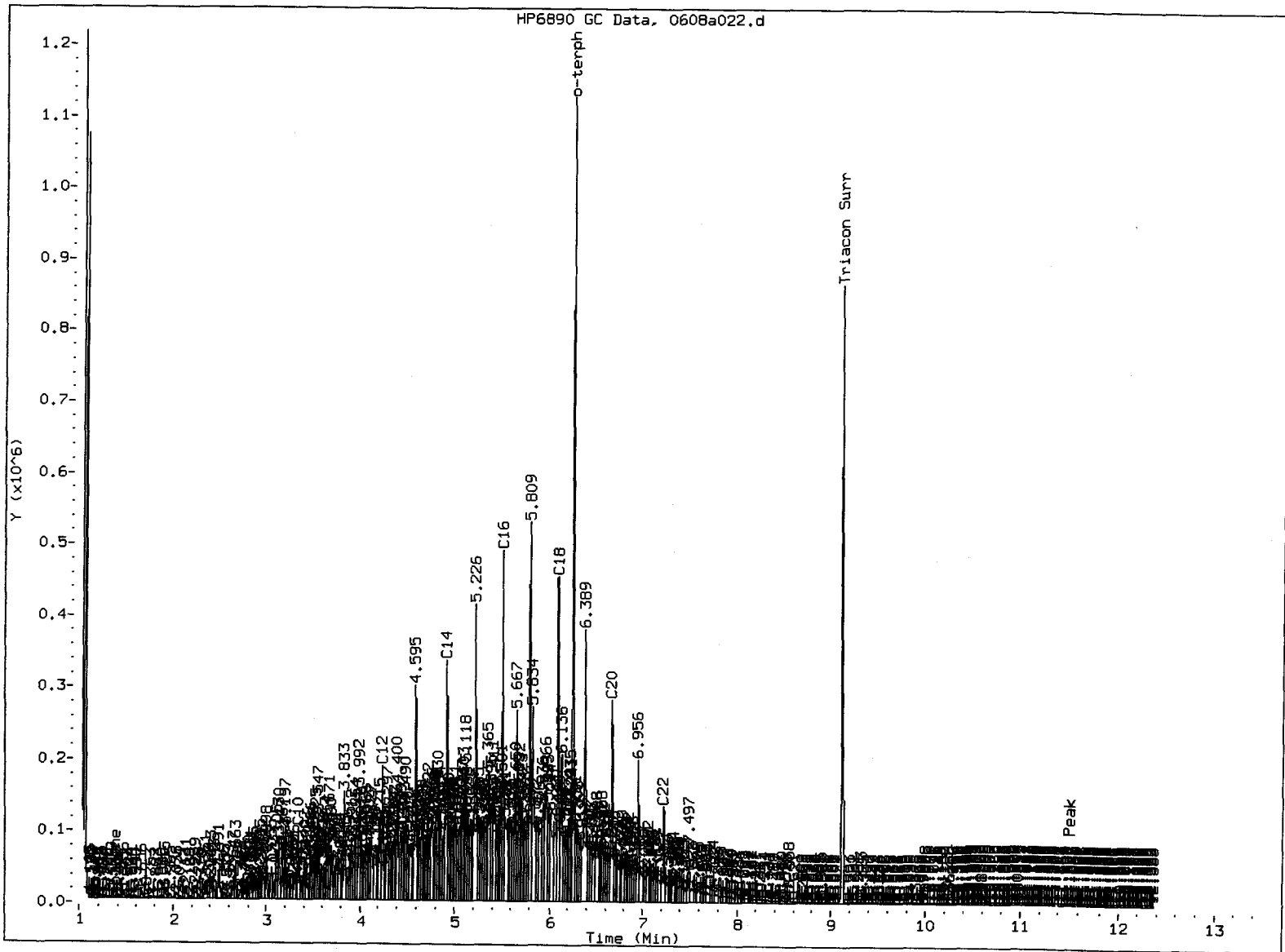
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



/chem3/fid4a.i/20130608.b/0608a022.d

30
6/10/13

1555 : 0001



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: SL Date: 6/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130608.b/0608a023.d

Method: /chem3/fid4a.i/20130608.b/ftphfid4a.m

Instrument: fid4a.i

Operator: JR/VTS/JW

Report Date: 06/08/2013

Macro: 20-MAY-2013

Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WS49LCSDS1

Client ID: WS49LCSDS1

Injection: 08-JUN-2013 18:12

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.361	0.004	1417	1980	WATPHG (Tol-C12)		4014319	258.33
C8	1.704	0.021	1484	1971	WATPHD (C12-C24)		16571051	1141.69
C10	3.338	-0.005	96381	85810	WATPHM (C24-C38)		406020	31.46
C12	4.240	-0.001	178620	188912	AK102 (C10-C25)		19500375	1132.77
C14	4.922	0.000	311286	319864	AK103 (C25-C36)		293836	31.93
C16	5.517	0.001	472734	495457				
C18	6.100	0.002	434032	505383				
C20	6.674	-0.002	272088	285187				
C22	7.230	-0.004	128208	125536				
C24	7.756	-0.007	45883	41956	MSPIRIT (Tol-C12)		4014319	207.28
C25	8.007	-0.008	23851	26741				
C26	8.249	-0.020	12263	16925				
C28	8.702	-0.006	3973	4400				
C32	9.521	0.006	11347	10543				
C34	9.904	0.013	1484	3946				
Filter Peak	11.538	0.007	3304	3814	CREOSOT (C12-C22)		15982212	7324.91 M
C36	10.254	-0.004	1907	2286				
C38	10.611	-0.006	2315	1606				
C40	10.971	0.002	3238	1807				
o-terph	6.262	0.002	965102	736929				
Triacon Surr	9.137	0.005	842276	728097				

Range Times: NW Diesel (4.242 - 7.763) AK102 (3.34 - 8.01) Jet A (3.34 - 6.10)
NW M.Oil (7.76 - 10.62) AK103 (8.01 - 10.26) OR Diesel (3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	736929	38.2	84.9 M
Triacantane	728097	37.7	83.7

JW
6/10/13

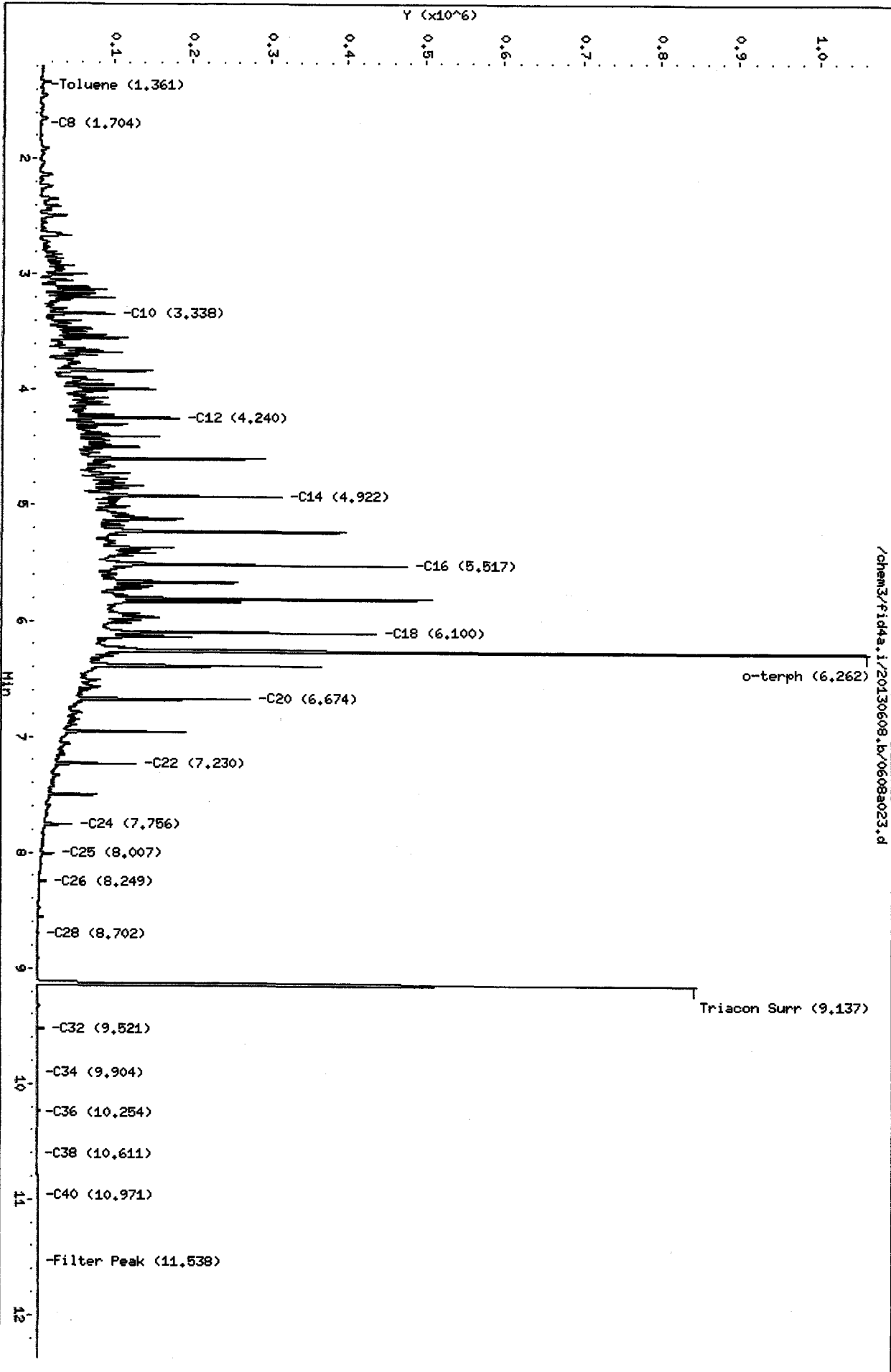
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

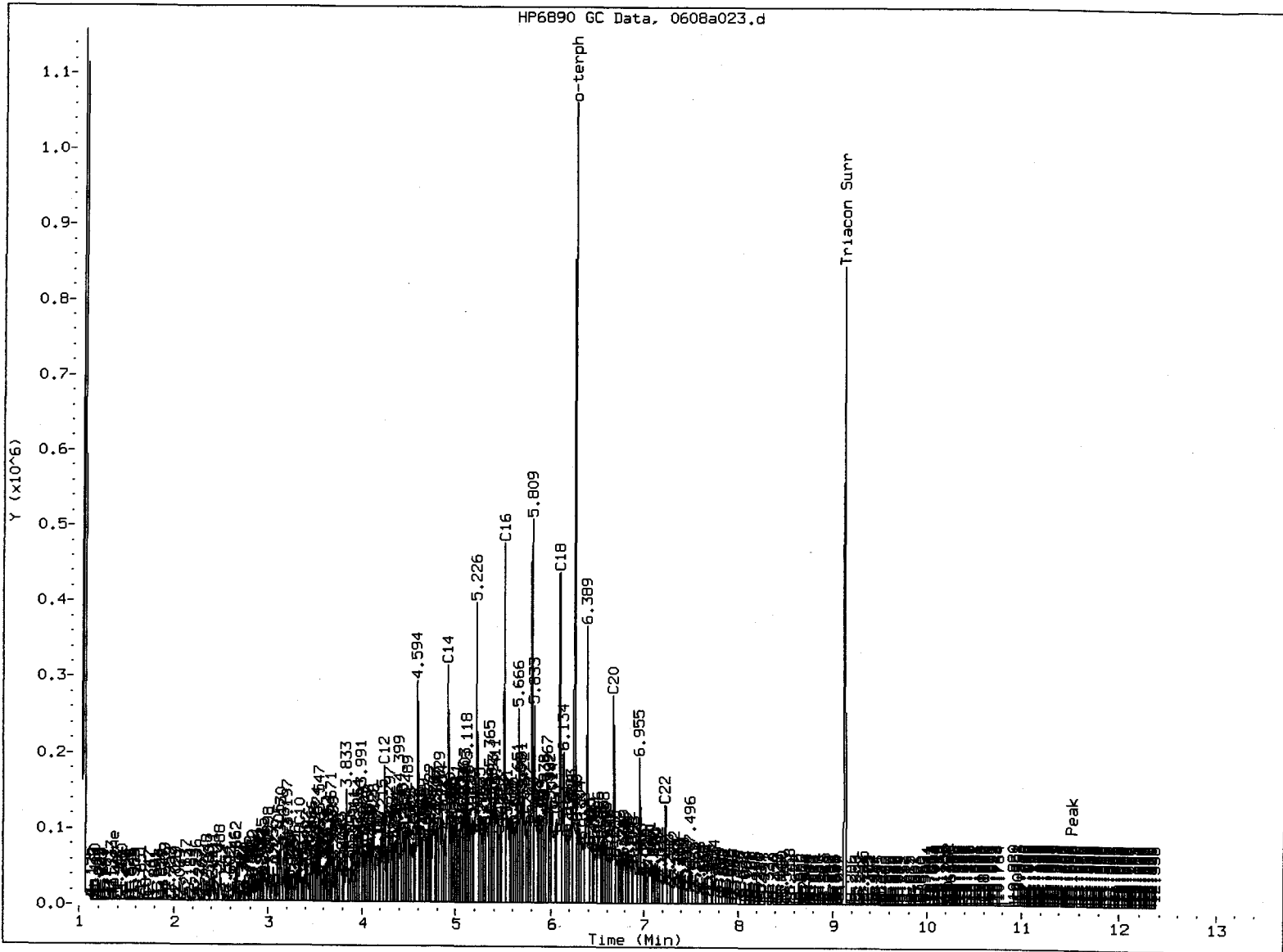
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Date: 08-JUN-2013 18:12
Client ID: MS49LCSDS1
Sample Info: MS49LCSDS1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
6/10/13



/chem3/fid4a.i/20130608.b/0608a023.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- 5. Skipped surrogate

Analyst: JW Date: 6/10/03

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 06/04/13

ARI Job: WS56
Project: Former Cashmere Mill Site
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11832-WS56A	A2-F55-S-6	8.62 g	1.00 mL	D	06/06/13
13-11833-WS56B	A2-F56-S-6	8.98 g	1.00 mL	D	06/06/13
13-11834-WS56C	A2-F57-S-6	8.66 g	1.00 mL	D	06/06/13
13-11835-WS56D	A2-F58-S-6	8.39 g	1.00 mL	D	06/06/13
13-11836-WS56E	A2-F59-S-6	8.70 g	1.00 mL	D	06/06/13
13-11837-WS56F	A2-F60-S-6	8.84 g	1.00 mL	D	06/06/13
13-11838-WS56G	A2-F61-S-6	8.91 g	1.00 mL	D	06/06/13
13-11839-WS56H	A2-F62-S-6	8.60 g	1.00 mL	D	06/06/13
13-11840-060613MB1	Method Blank	10.0 g	1.00 mL	-	06/06/13
13-11840-060613LCS1	Lab Control	10.0 g	1.00 mL	-	06/06/13
13-11840-060613LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	06/06/13
13-11840-WS56I	A2-F63-S-6	8.82 g	1.00 mL	D	06/06/13
13-11840-WS56IMS	A2-F63-S-6	8.82 g	1.00 mL	D	06/06/13
13-11840-WS56IMSD	A2-F63-S-6	8.84 g	1.00 mL	D	06/06/13
13-11841-WS56J	A2-F64-S-6	8.80 g	1.00 mL	D	06/06/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

**Sample ID: A2-F55-S-6
SAMPLE**

Lab Sample ID: WS56A

LIMS ID: 13-11832

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 16:58

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 14.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	21
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	30	< 30 U
95-47-6	o-Xylene	15	< 15 U

BETX Surrogate Recovery

Trifluorotoluene	99.8%
Bromobenzene	97.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130605-1.b/0605a007.d ARI ID: WS56A
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a007.d Client ID: A2-F55-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 16:58
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.000	2915	37593	98.5	TFT(Surr)
15.380	0.000	1918	16133	96.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1875	0.005
8015C 2MP-TMB (4.19 to 16.20)	723723	1316	0.002
AK101 nC6-nC10 (4.69 to 15.10)	582885	621	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	1875	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.001	3216	99.8	TFT(Surr)
15.389	0.000	7018	97.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.001	68	0.34N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a007.d
Lab Smp Id: WS56A Client Smp ID: A2-F55-S-6
Inj Date : 05-JUN-2013 16:58
Operator : LH Inst ID: pid1.i
Smp Info : WS56A
Misc Info : 13-11832
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

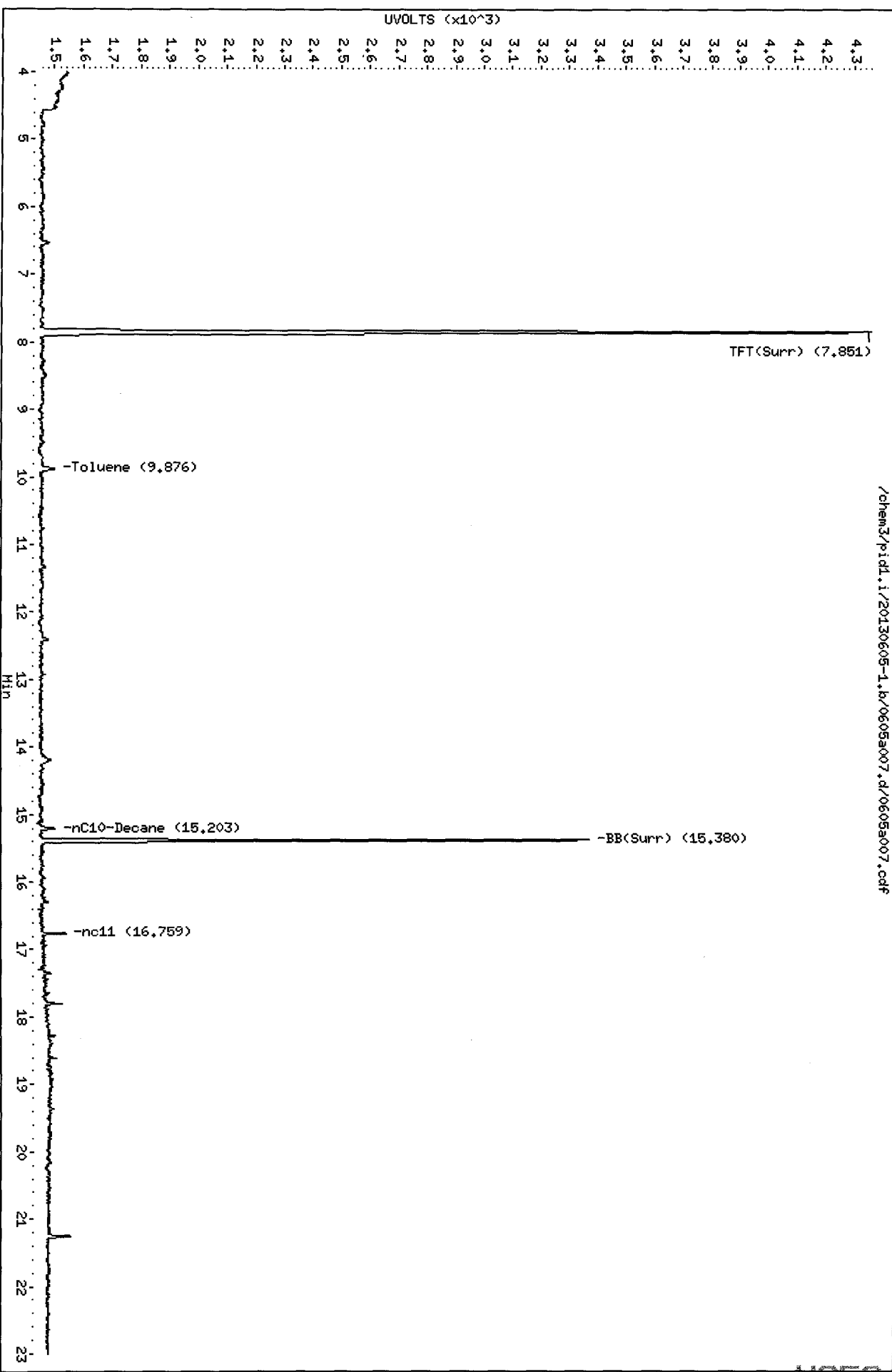
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.851	7.851	0.000	2915	98.5112	98.51
12 Toluene	9.876	9.874	0.002	620	0.42774	0.428
17 nC10-Decane	15.203	15.202	0.001	56		
\$ 18 BB(Surr)	15.380	15.381	-0.001	1918	96.5248	96.52
21 nc11	16.759	16.700	0.059	85		

Data File: /chem3/pid1.i/20130605-1.b/0605a007.d
 Date : 05-JUN-2013 16:58
 Client ID: A2-F55-S-6
 Sample Info: MS56A
 Column Phase: RTX 502-2 FID

Instrument: pid1.i
 Operator: LH
 Column diameter: 0.18

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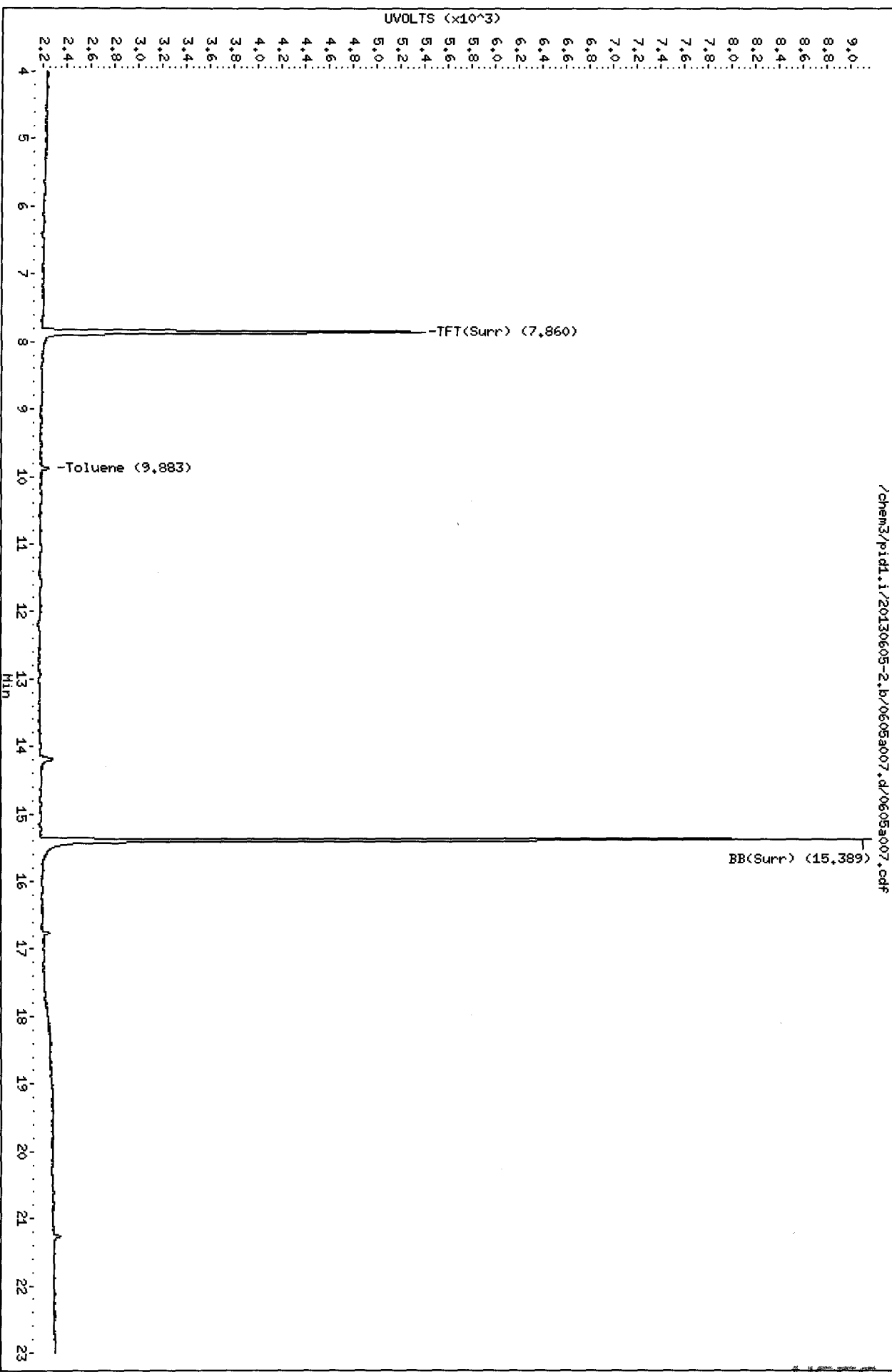


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Data File: /chem3/pid1.i/20130605-2.b/0605a007.d
Date: 05-JUN-2013 16:58
Client ID: A2-F55-S-6
Sample Info: MSS6A
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

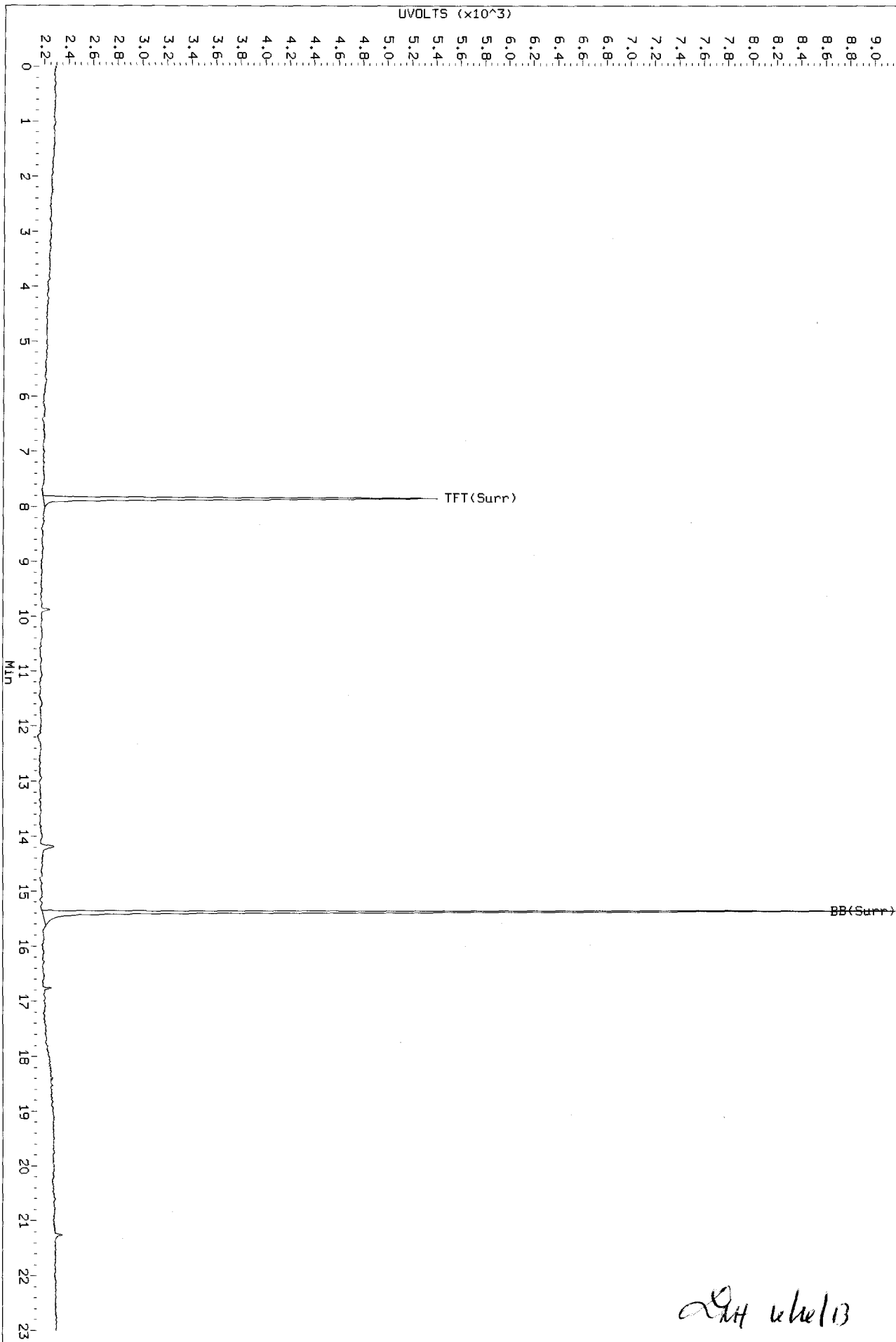
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19000 . 9557

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Injection Date: 05-JUN-2013 16:58
Instrument: pid1.1
Client Sample ID: A2-F55-S-6

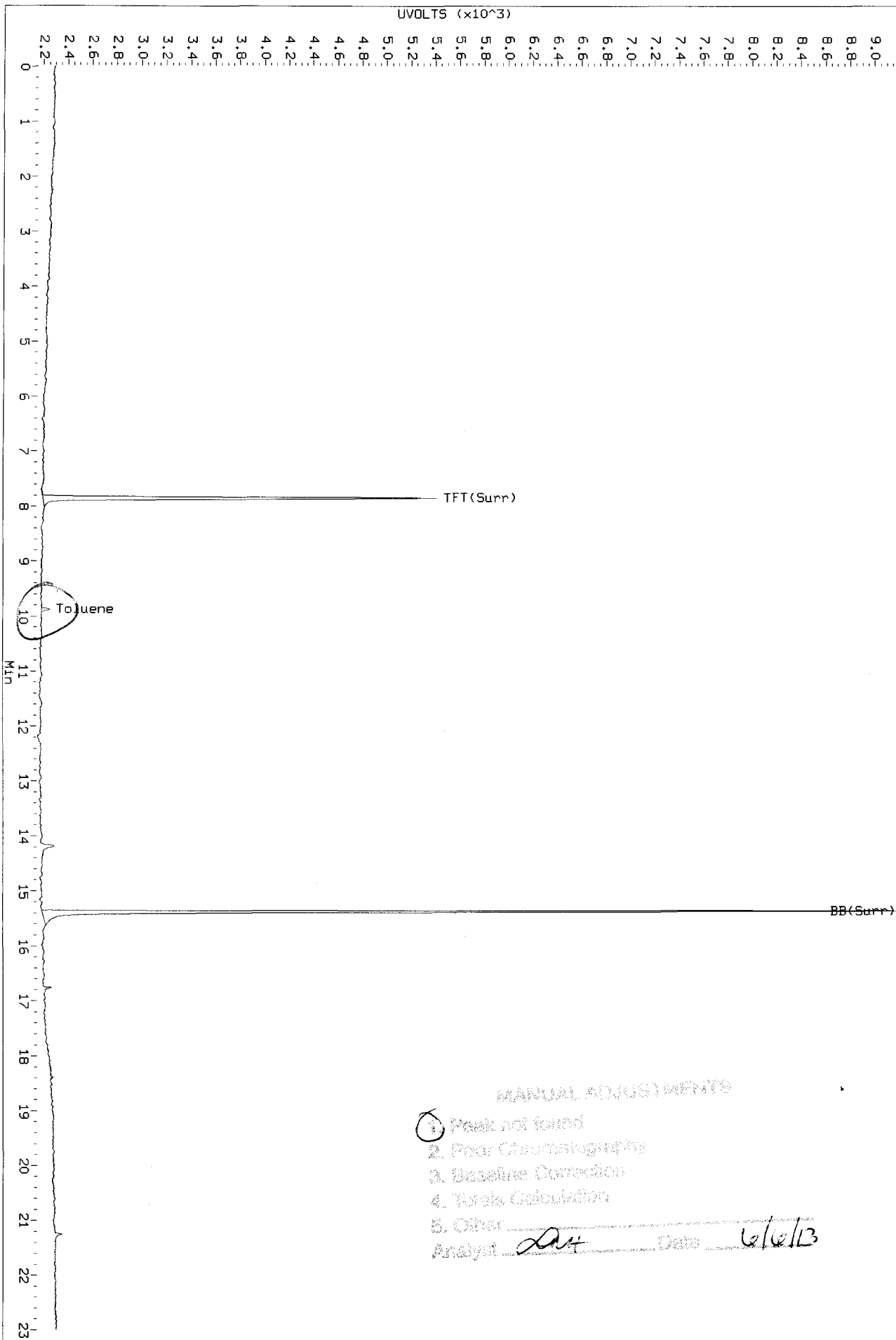
AIA 0605a007.cdf: 0.000 to 23.000 MIN



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Data File: /chem3/pid1.1/20130605-2.b/0605a007.d/0605a007.cdf
Injection Date: 05-JUN-2013 16:58
Instrument: pid1.1
Client Sample ID: A2-F55-S-6

AIR 0605a007.cdf: 0.000 to 23.000 MIN



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Toxic Calculation
- 5. Other

Analyst AM Date 6/6/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

**Sample ID: A2-F56-S-6
SAMPLE**

Lab Sample ID: WS56B

LIMS ID: 13-11833

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 17:26

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 86 mg-dry-wt

Percent Moisture: 10.6%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	16
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	99.2%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Am 10/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a008.d ARI ID: WS56B
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a008.d Client ID: A2-F56-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 17:26
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.001	2955	37940	99.9	TFT(Surr)
15.381	0.000	1961	16632	98.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	14232	0.040
8015C 2MP-TMB (4.19 to 16.20)	723723	10062	0.014
AK101 nC6-nC10 (4.69 to 15.10)	582885	9643	0.017
NWTPHG Tol-Nap (9.77 to 18.91)	375093	14232	0.038

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.001	3261	101.2	TFT(Surr) ✓
15.389	0.000	7172	99.2	BB(Surr) ✓

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.001	55	0.28N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a008.d
Lab Smp Id: WS56B Client Smp ID: A2-F56-S-6
Inj Date : 05-JUN-2013 17:26
Operator : LH Inst ID: pid1.i
Smp Info : WS56B
Misc Info : 13-11833
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

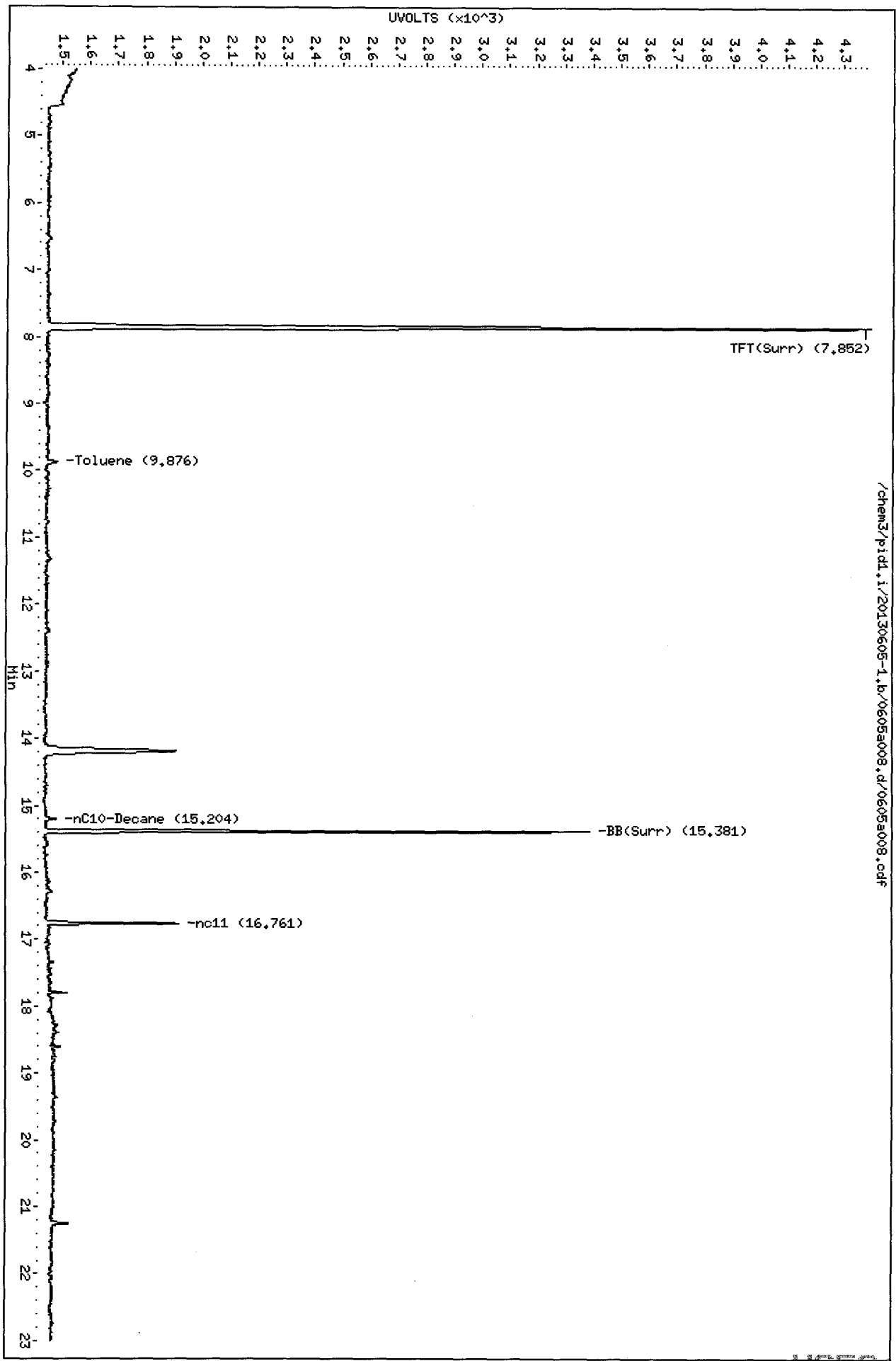
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.852	7.851	0.001	2955	99.8630	99.86
12 Toluene	9.876	9.874	0.002	449	0.31010	0.310
17 nC10-Decane	15.204	15.202	0.002	41		
\$ 18 BB(Surr)	15.381	15.381	0.000	1961	98.6888	98.69
21 nc11	16.761	16.700	0.061	471		

Data File: /chem3/pid1.i/20130605-1.b/0605a008.d
Date: 05-JUN-2013 17:26
Client ID: A2-F56-S-6
Sample Info: MS56B
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

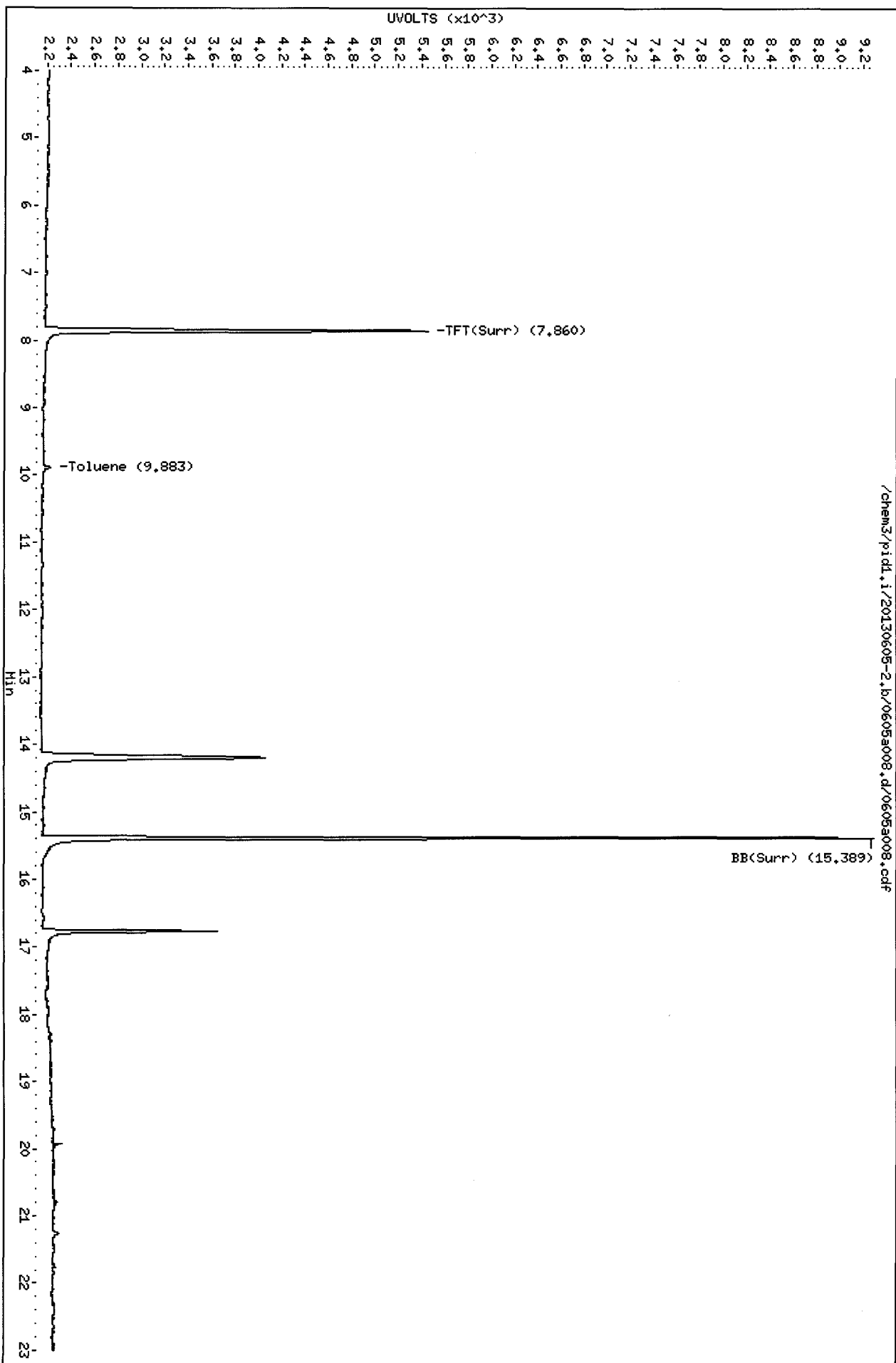


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MS56 00070

Data File: /chem3/pid1.i/20130605-2.b/0605a008.d
Date: 05-JUN-2013 17:26
Client ID: A2-F56-S-6
Sample Info: MS56B
Column phase: RTX 502-2 PID

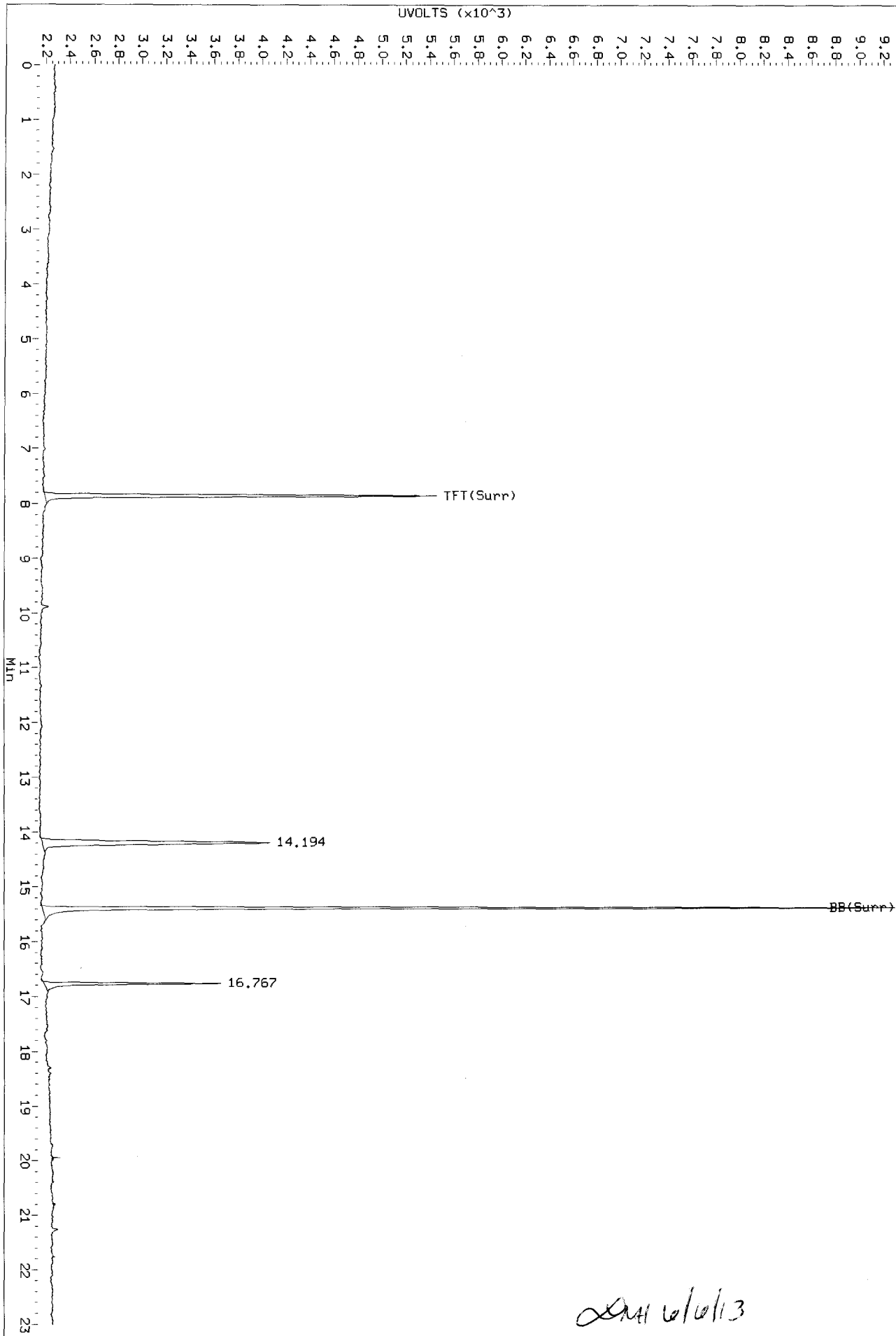
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



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Data File: /chem3/pid1.1/20130605-2.b/06053008.d/06053008.cdf
Injection Date: 05-JUN-2013 17:26
Instrument: pid1.1
Client Sample ID: A2-F56-S-6

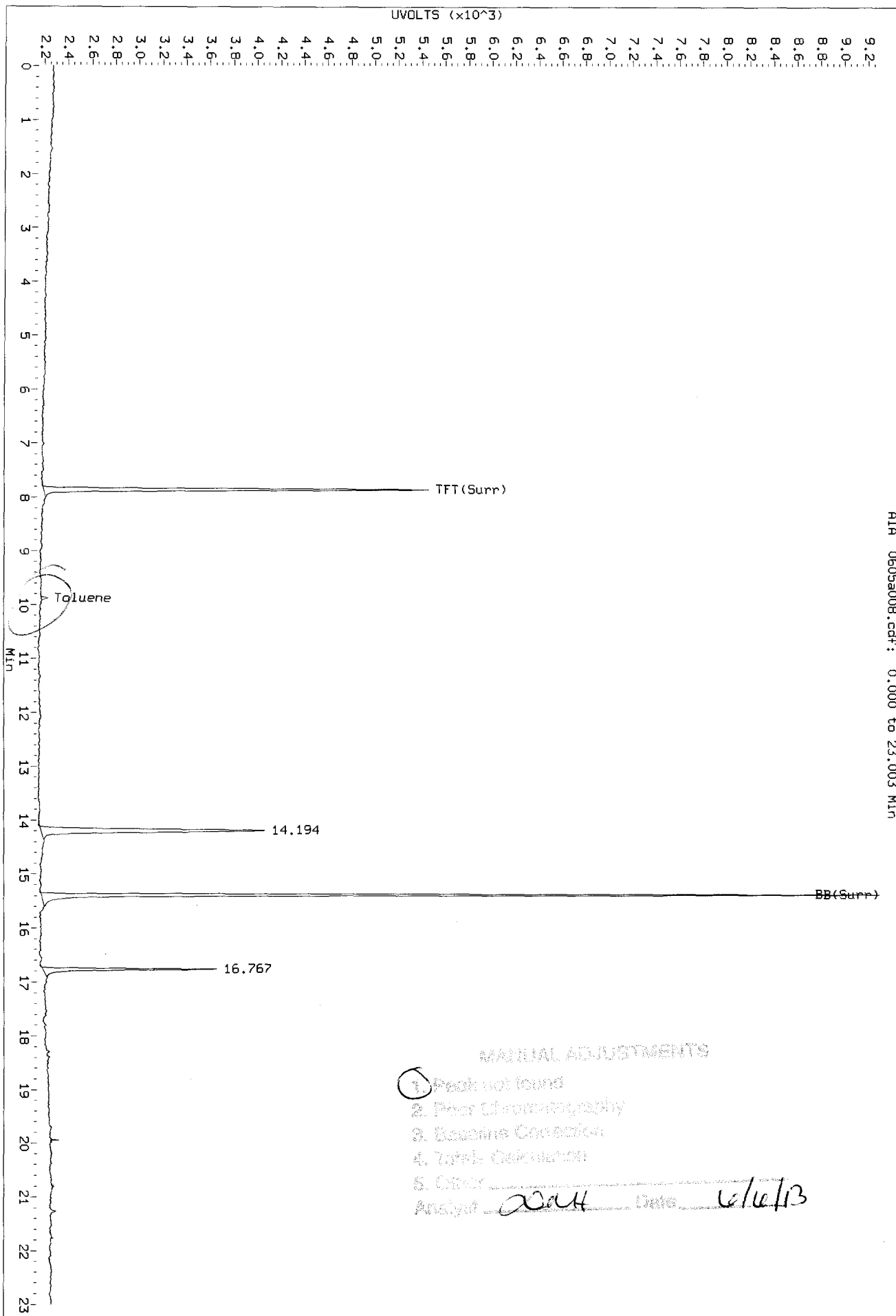
AIA 06053008.cdf: 0.000 to 23.003 Min



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Data File: /chem3/pid1.1/20130605-2.b/06053008.d/06053008.cdf
Injection Date: 05-JUN-2013 17:26
Instrument: pid1.1
Client Sample ID: A2-F56-S-6

AIA 06053008.cdf: 0.000 to 23.003 MIN



MANUAL ADJUSTMENTS

1. Peak not found
2. Peak Chromatography
3. Baseline Correction
4. Label Correction
5. Other

Analyst Walt Date 6/6/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F57-S-6

SAMPLE

Lab Sample ID: WS56C

LIMS ID: 13-11834

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 17:54

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 13.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	16
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	97.9%
Bromobenzene	97.4%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

2014 6/6/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a009.d ARI ID: WS56C
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a009.d Client ID: A2-F57-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 17:54
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.001	2875	36901	97.2	TFT(Surr)
15.382	0.001	1918	16226	96.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1016	0.003
8015C 2MP-TMB (4.19 to 16.20)	723723	447	0.001
AK101 nC6-nC10 (4.69 to 15.10)	582885	447	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	1016	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.860	0.001	3156	97.9	TFT(Surr)
15.389	0.001	7039	97.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.001	49	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a009.d
Lab Smp Id: WS56C Client Smp ID: A2-F57-S-6
Inj Date : 05-JUN-2013 17:54
Operator : LH Inst ID: pid1.i
Smp Info : WS56C
Misc Info : 13-11834
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

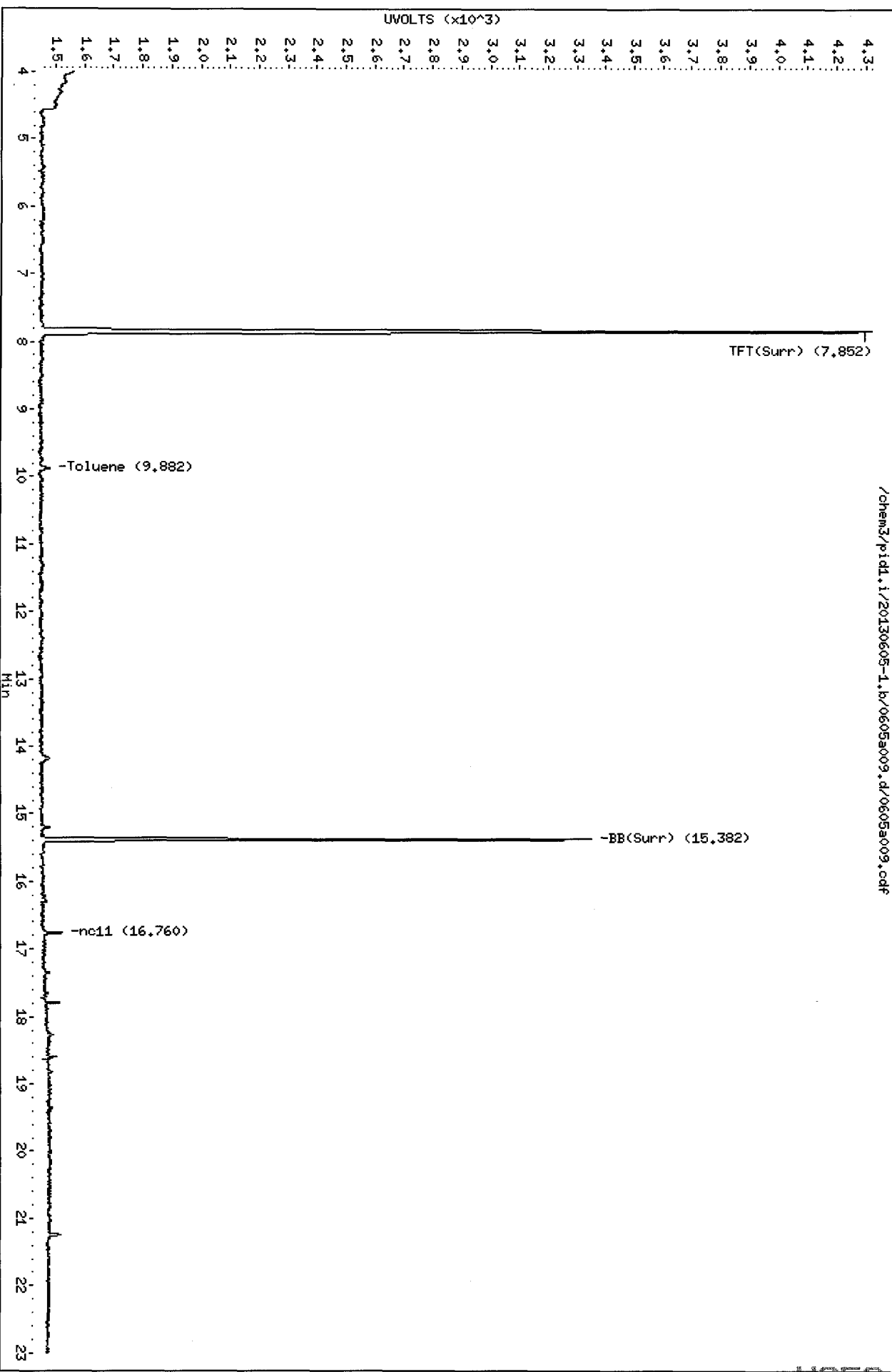
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
-----	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.852	7.851	0.001	2875	97.1595	97.16
12 Toluene	9.882	9.874	0.008	446	0.30773	0.308
\$ 18 BB(Surr)	15.382	15.381	0.001	1918	96.5248	96.52
21 nc11	16.760	16.700	0.060	65		

Data File: /chem3/pidd,1/20130605-1,b/0605a009.d
Date: 05-JUN-2013 17:54
Client ID: A2-F57-S-6
Sample Info: MS56C
Column phase: RTX 502-2 FID

Instrument: pidd,1
Operator: LH
Column diameter: 0.18

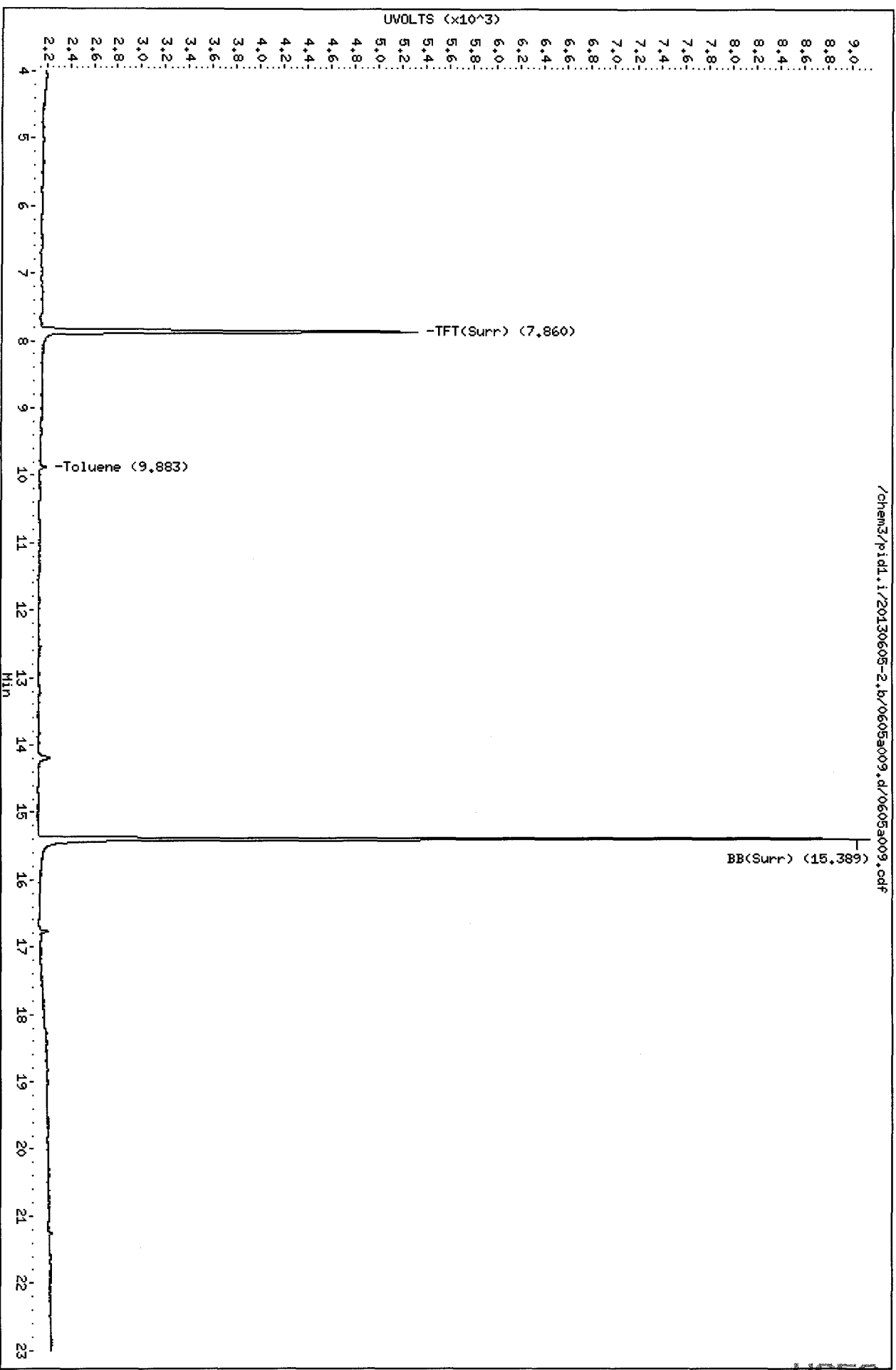
/chem3/pidd,1/20130605-1,b/0605a009.d/0605a009.cdf



00077 0556

Data File: /chem3/pid1.i/20130605-2.b/0605a009.d
Date : 05-JUN-2013 17:54
Client ID: A2-F57-S-6
Sample Info: MSS6C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

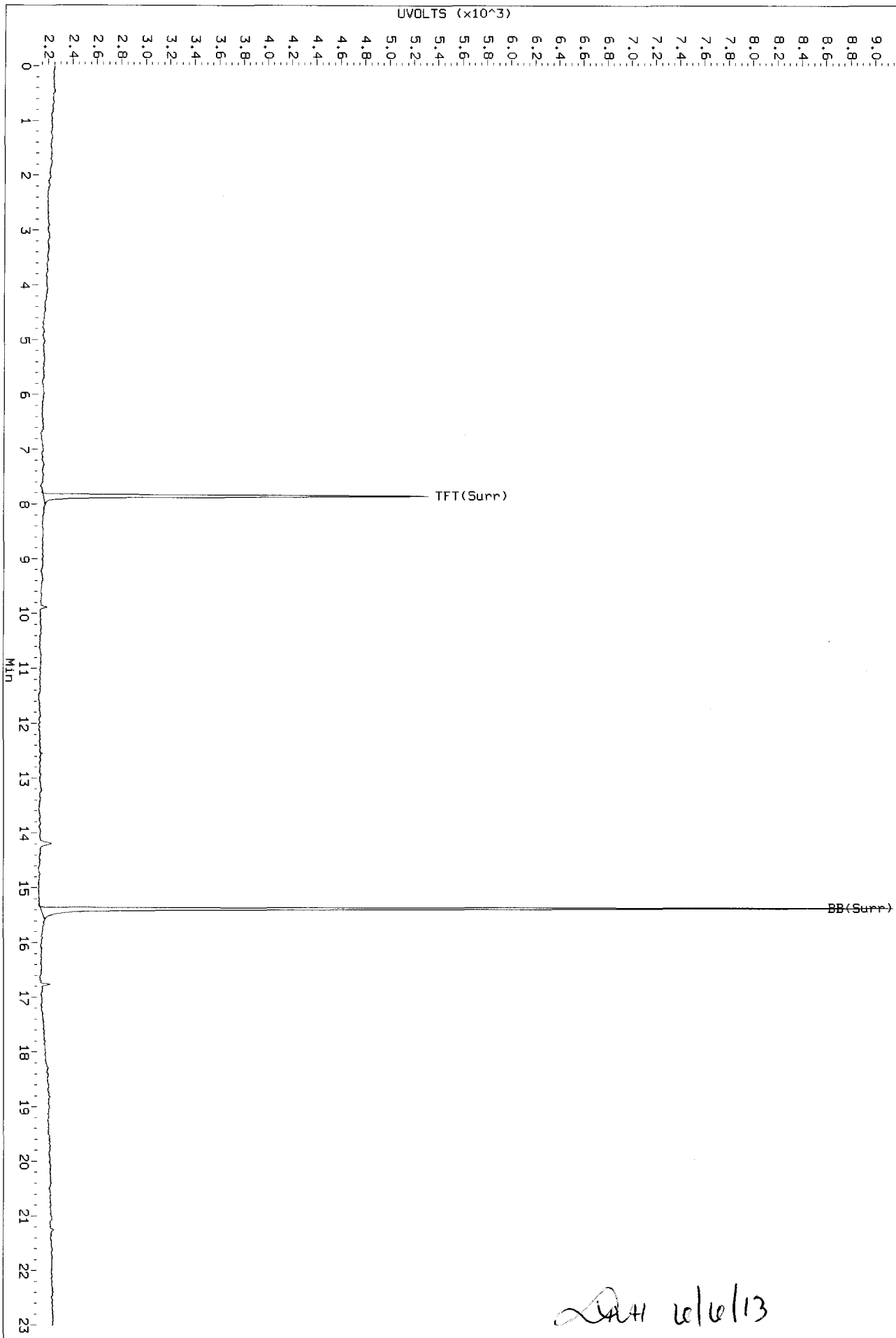


/chem3/pid1.i/20130605-2.b/0605a009.d/0605a009.cdf

4556 00078

Data File: /chem3/pid1.1/20130605-2.1b/0605a009.d/0605a009.cdf
Injection Date: 05-JUN-2013 17:54
Instrument: pid1.1
Client Sample ID: A2-F57-S-6

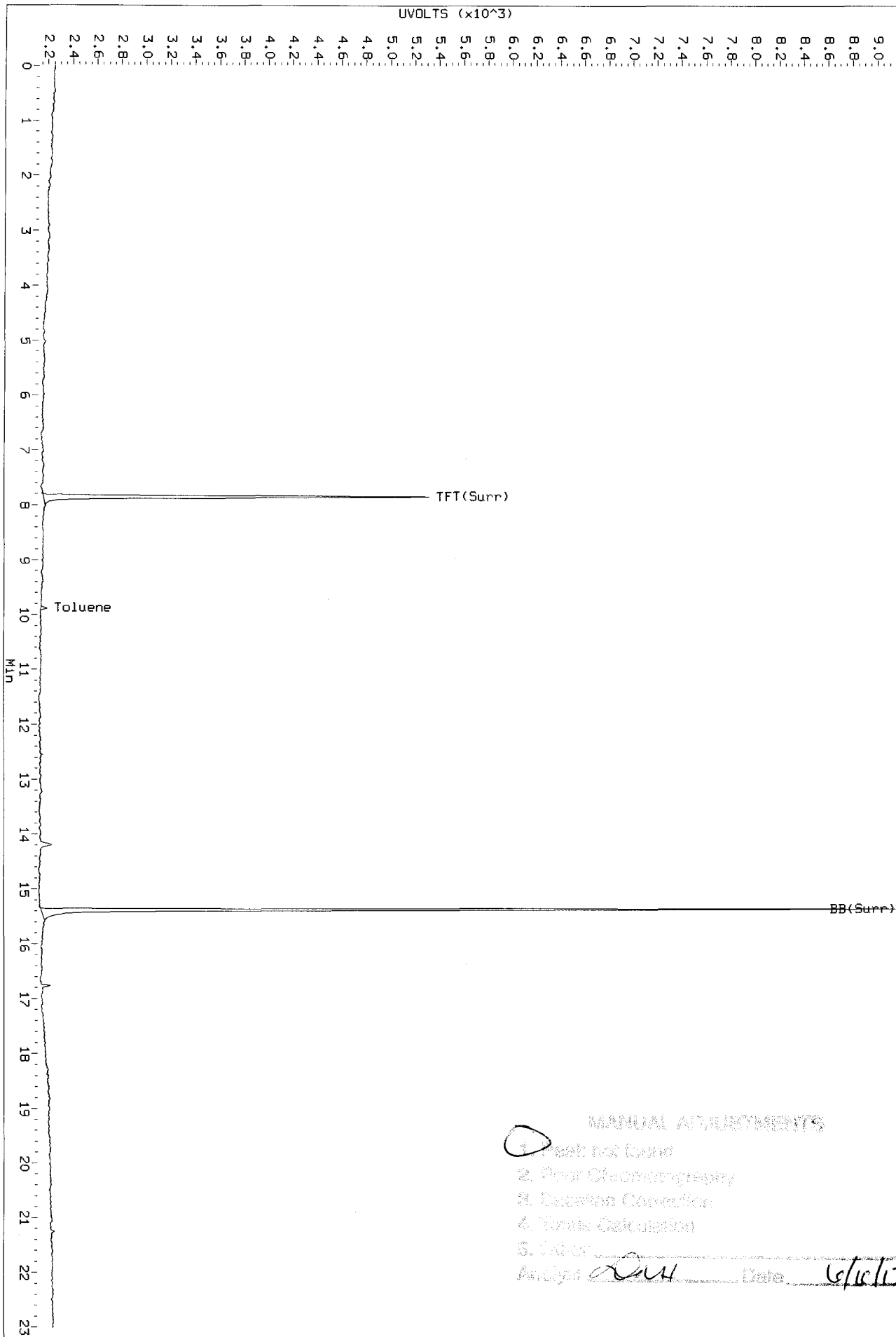
AIA 0605a009.cdf: 0.000 to 23.007 Min



DATA 6/6/13

Data File: /chem3/pid1.1/20130605-2.1.b/0605a009.d/0605a009.cdf
Injection Date: 05-JUN-2013 17:54
Instrument: pid1.1
Client Sample ID: A2-F57-S-6

ALH 0605a009.cdf: 0.000 to 23.007 MIN



MANUAL ADJUSTMENTS:

- 1. Peak not found
- 2. Poor Chromatography
- 3. Detection Condition
- 4. Time Calibration
- 5. Other

Analyst DMH Date 6/16/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F58-S-6

SAMPLE

Lab Sample ID: WS56D

LIMS ID: 13-11835

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 18:22

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 16.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	19
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	99.2%
Bromobenzene	98.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

22H 10/10/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a010.d ARI ID: WS56D
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a010.d Client ID: A2-F58-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 18:22
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.001	2925	37420	98.8	TFT(Surr)
15.381	0.000	1957	16333	98.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	550	0.002
8015C 2MP-TMB (4.19 to 16.20)	723723	550	0.001
AK101 nC6-nC10 (4.69 to 15.10)	582885	550	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	550	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.860	0.001	3197	99.2	TFT(Surr) ✓
15.389	0.000	7136	98.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.004	61	0.31N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a010.d
Lab Smp Id: WS56D Client Smp ID: A2-F58-S-6
Inj Date : 05-JUN-2013 18:22
Operator : LH Inst ID: pid1.i
Smp Info : WS56D
Misc Info : 13-11835
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

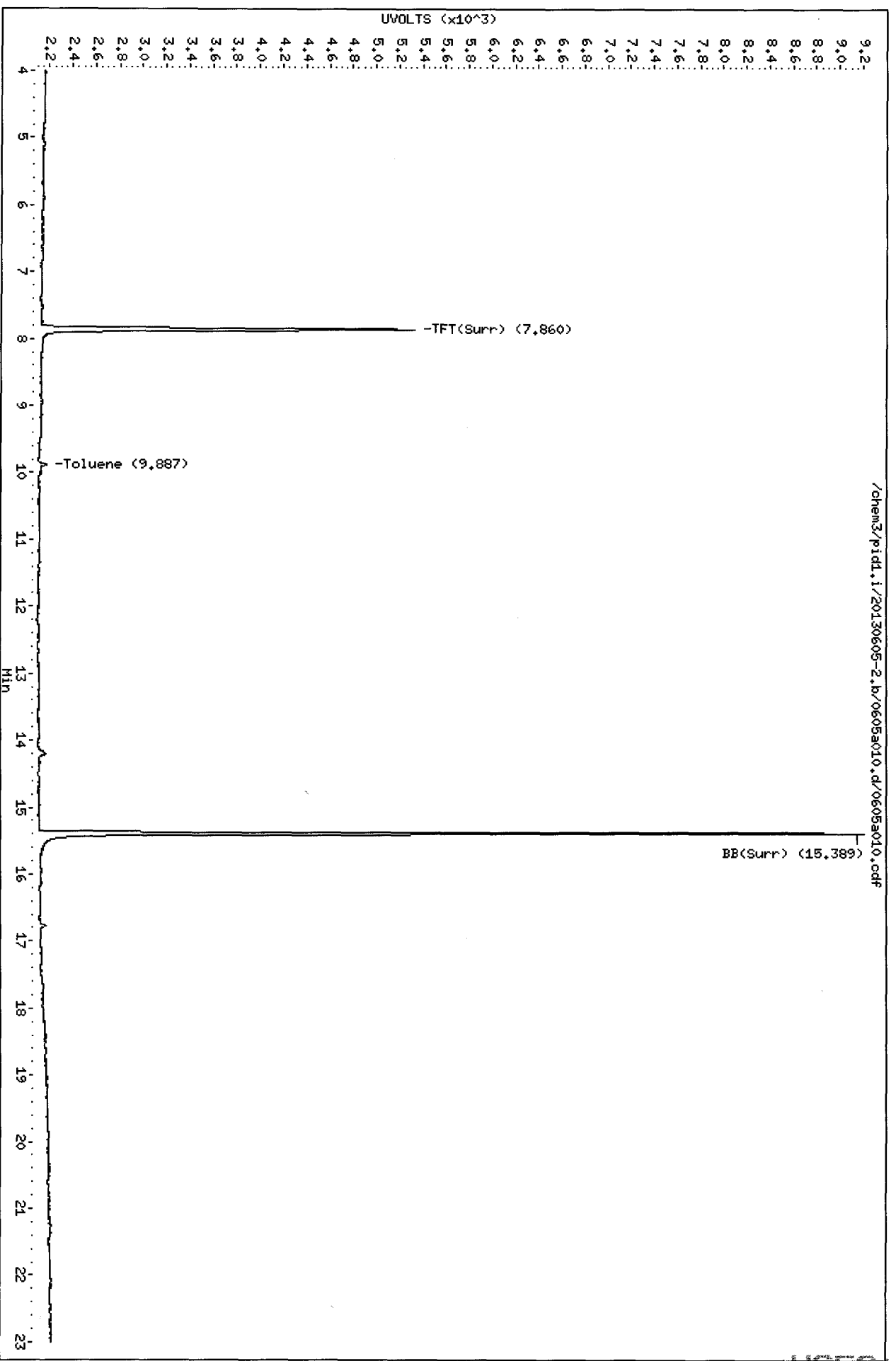
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.852	7.851	0.001	2925	98.8492	98.85
12 Toluene	9.877	9.874	0.003	549	0.37892	0.379
\$ 18 BB(Surr)	15.381	15.381	0.000	1957	98.4875	98.49

Data File: /chem3/pid1.i/20130605-2.b/0605a010.d
Date : 05-JUN-2013 18:22
Client ID: A2-F58-S-6
Sample Info: MS56D
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

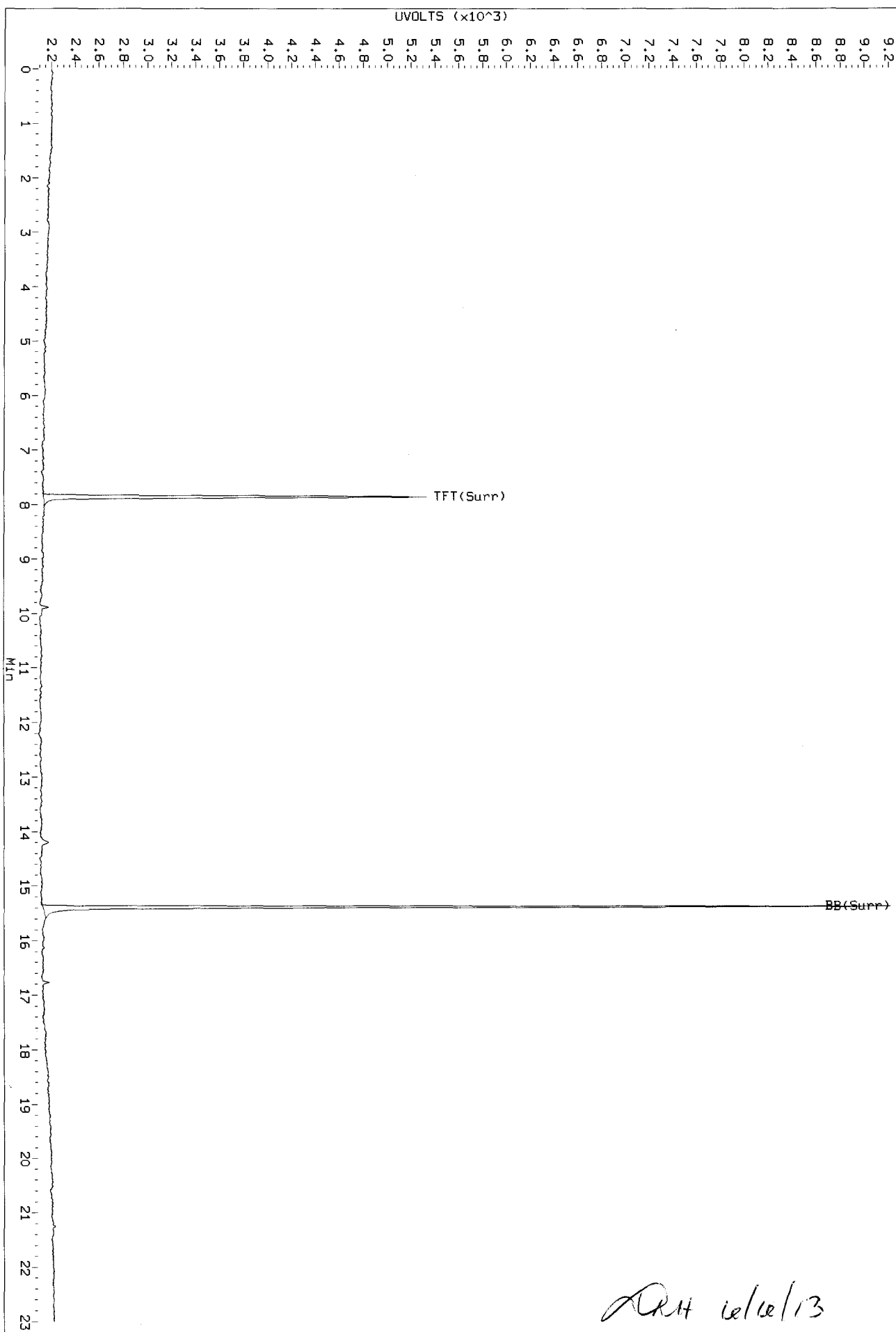


/chem3/pid1.i/20130605-2.b/0605a010.d/0605a010.cdf

0000 0000 0000

Data File: /chem3/pid1.1/20130605-2.b/0605a010.d/0605a010.cdf
Injection Date: 05-JUN-2013 18:22
Instrument: pid1.1
Client Sample ID: A2-F58-S-6

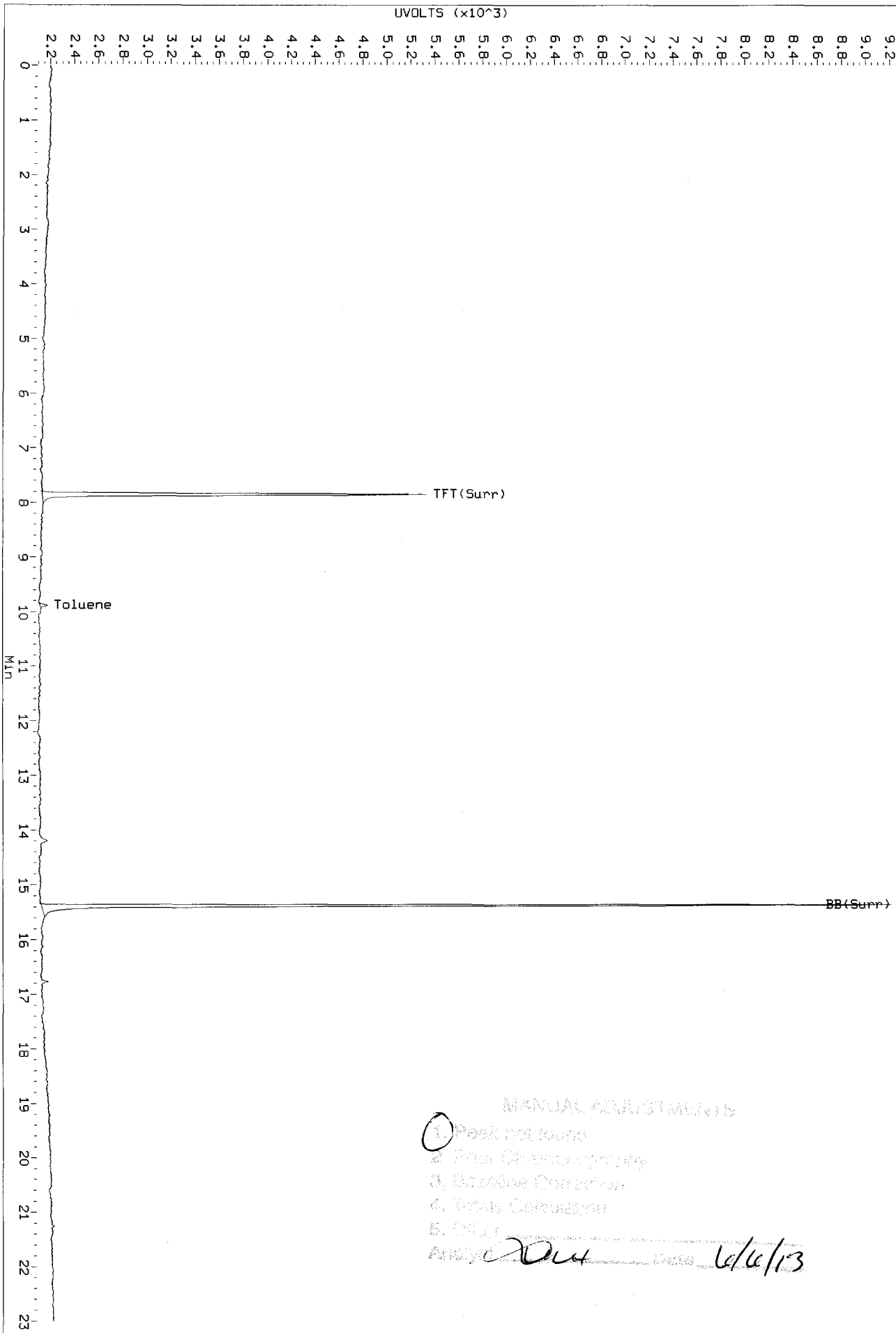
AIA 0605a010.cdf: 0.000 to 23.003 MIN



Handwritten signature and date: RMT 12/12/13

Data File: /chem3/pid1.1/20130605-2.b/0605a010.d/0605a010.cdf
Injection Date: 05-JUN-2013 18:22
Instrument: pid1.1
Client Sample ID: A2-F58-S-6

AIA 0605a010.cdf: 0.000 to 23.003 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F59-S-6

SAMPLE

Lab Sample ID: WS56E

LIMS ID: 13-11836

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 18:51

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 77 mg-dry-wt

Percent Moisture: 13.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	16
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	97.4%
Bromobenzene	96.3%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Jan 6/16/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a011.d ARI ID: WS56E
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a011.d Client ID: A2-F59-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 18:51
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.000	2871	36468	97.0	TFT(Surr)
15.381	0.000	1909	16210	96.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	410	0.001
8015C 2MP-TMB (4.19 to 16.20)	723723	411	0.001
AK101 nC6-nC10 (4.69 to 15.10)	582885	411	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	410	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.000	3141	97.4	TFT(Surr) ✓
15.389	0.000	6960	96.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.877	-0.006	49	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a011.d
Lab Smp Id: WS56E Client Smp ID: A2-F59-S-6
Inj Date : 05-JUN-2013 18:51
Operator : LH Inst ID: pid1.i
Smp Info : WS56E
Misc Info : 13-11836
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

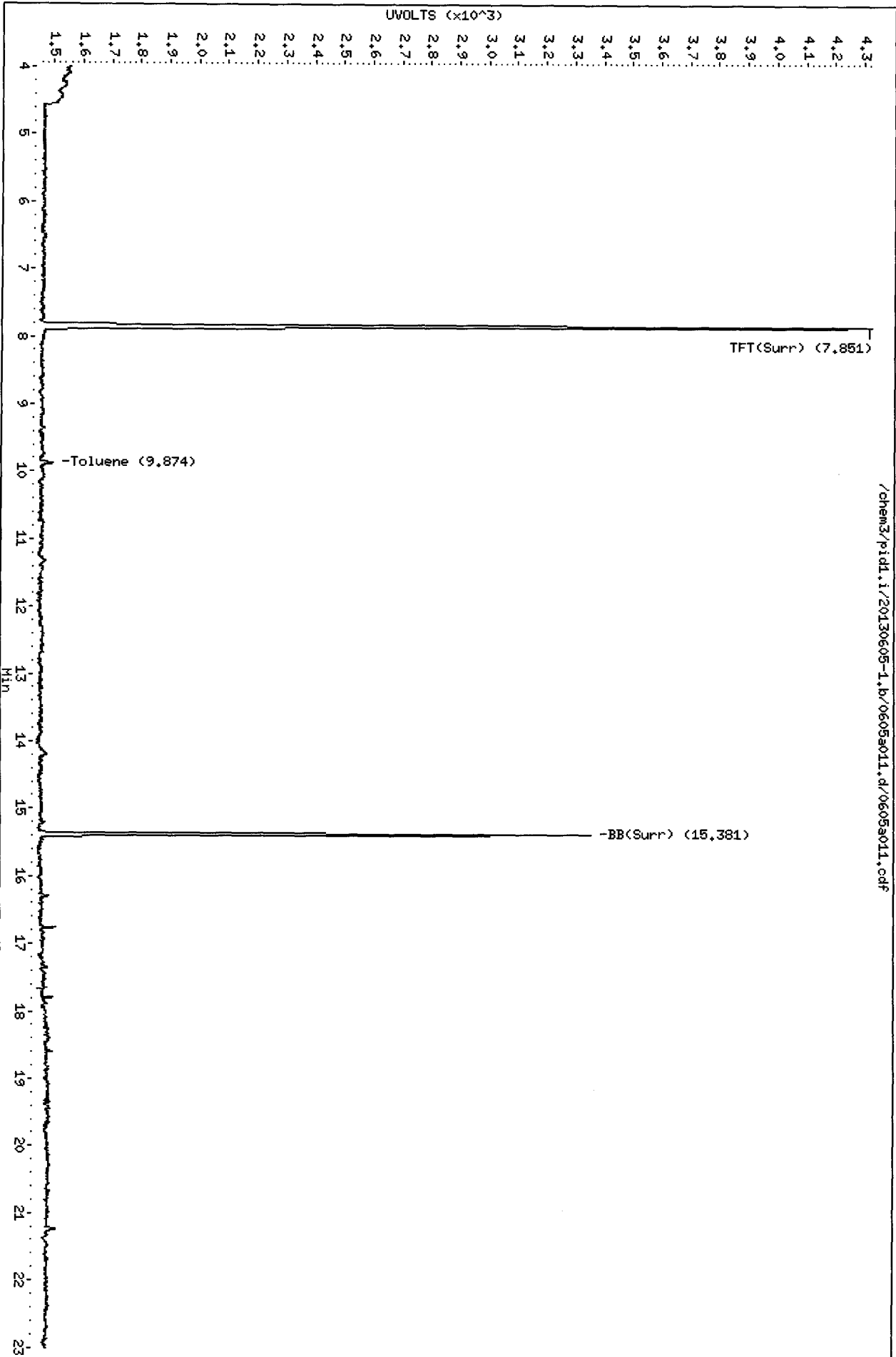
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds					CONCENTRATIONS	
	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.851	7.851	0.000	2871	97.0243	97.02
12 Toluene	9.874	9.874	0.000	410	0.28284	0.283
\$ 18 BB(Surr)	15.381	15.381	0.000	1909	96.0718	96.07

Data File: /chem3/pid1.i/20130605-1.b/0605a011.d
Date: 05-JUN-2013 18:51
Client ID: A2-F59-S-6
Sample Info: MS66E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

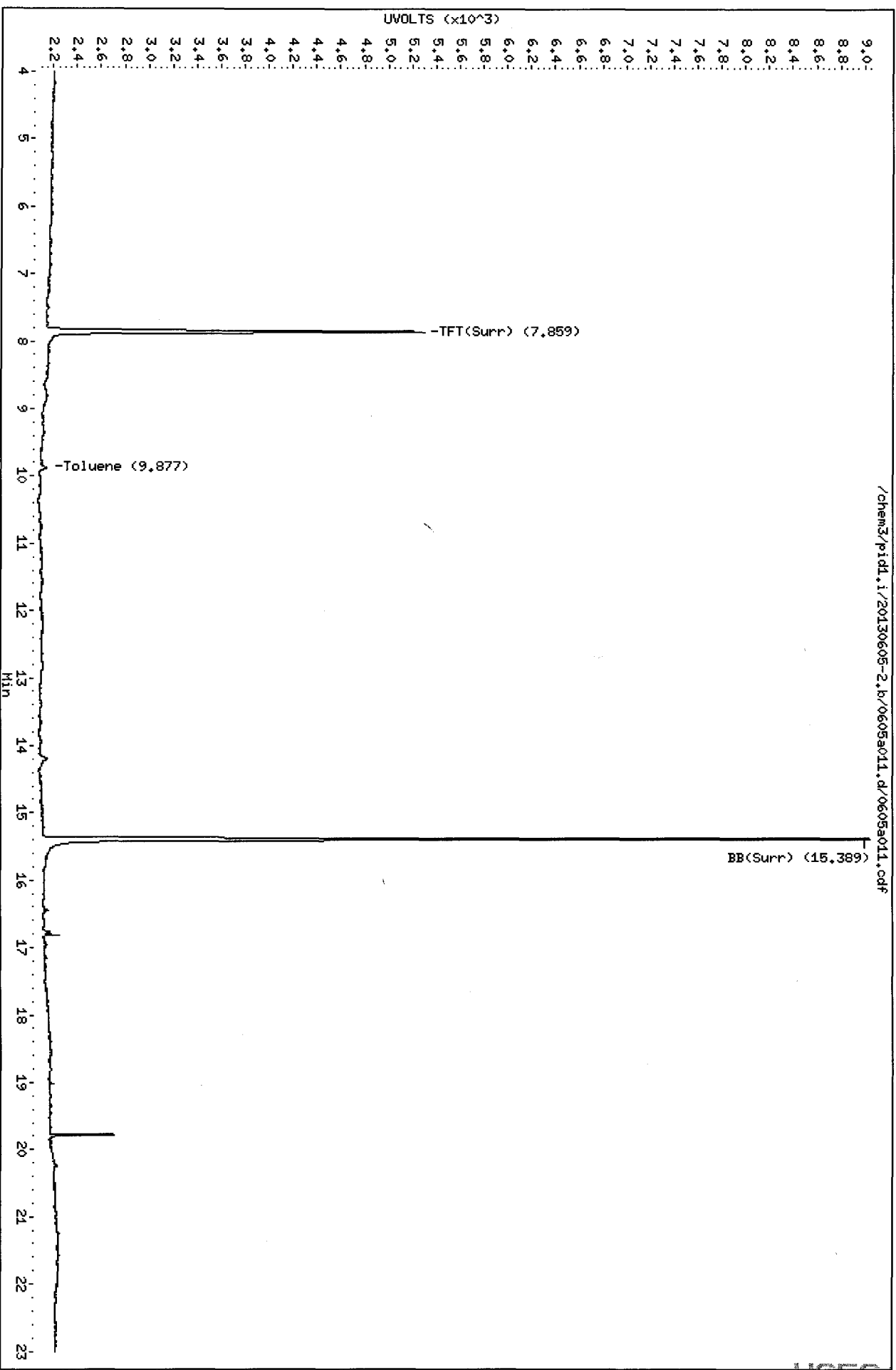


/chem3/pid1.i/20130605-1.b/0605a011.d/0605a011.cdf

1555 00001

Data File: /chem3/pid1.i/20130605-2.b/0605a011.d
Date: 05-JUN-2013 18:51
Client ID: A2-F59-S-6
Sample Info: MS56E
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

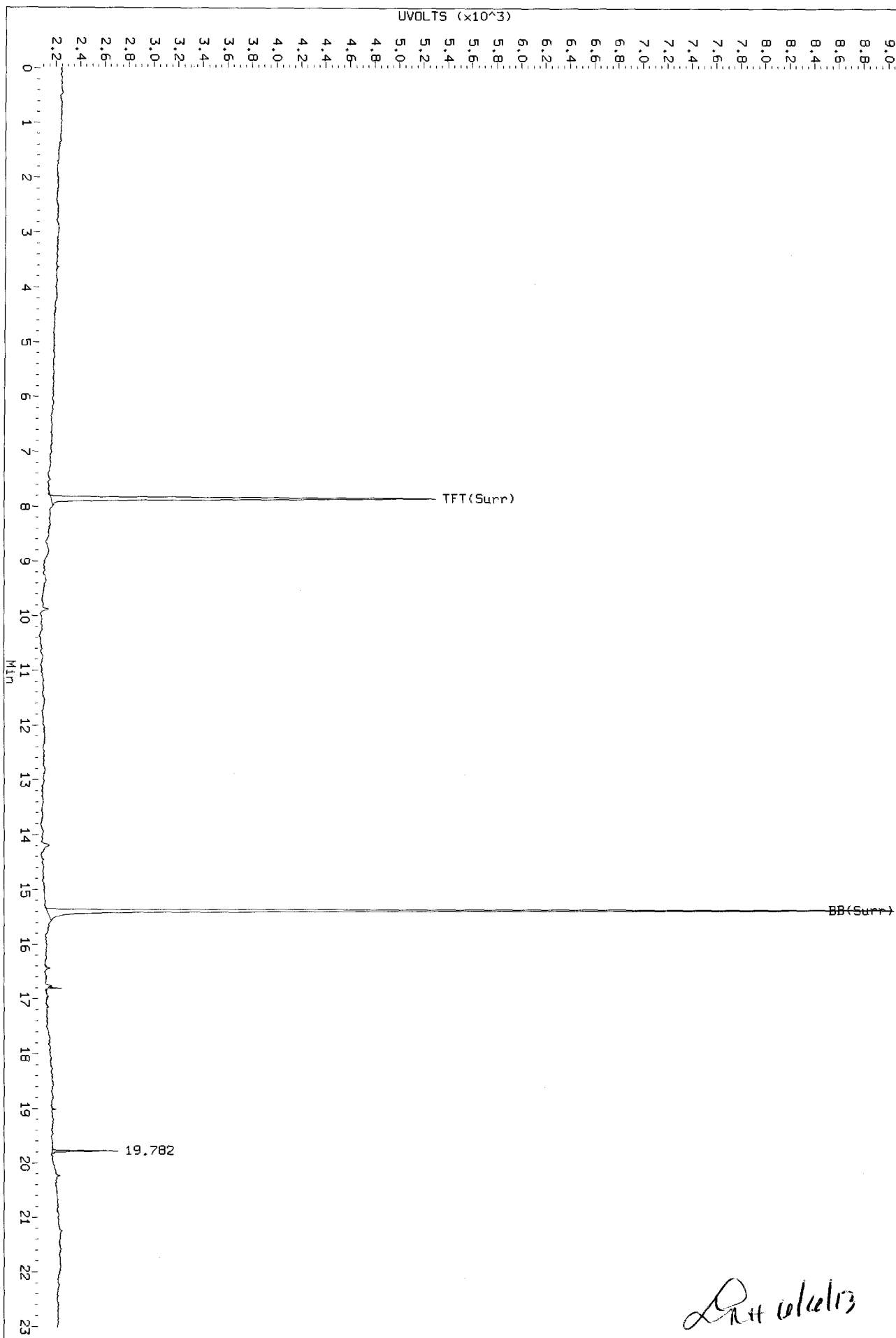


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00000 9558

Data File: /chem3/pid1.1/20130605-2.1.b/0605a011.d/0605a011.cdf
Injection Date: 05-JUN-2013 18:51
Instrument: pid1.1
Client Sample ID: A2-F59-S-6

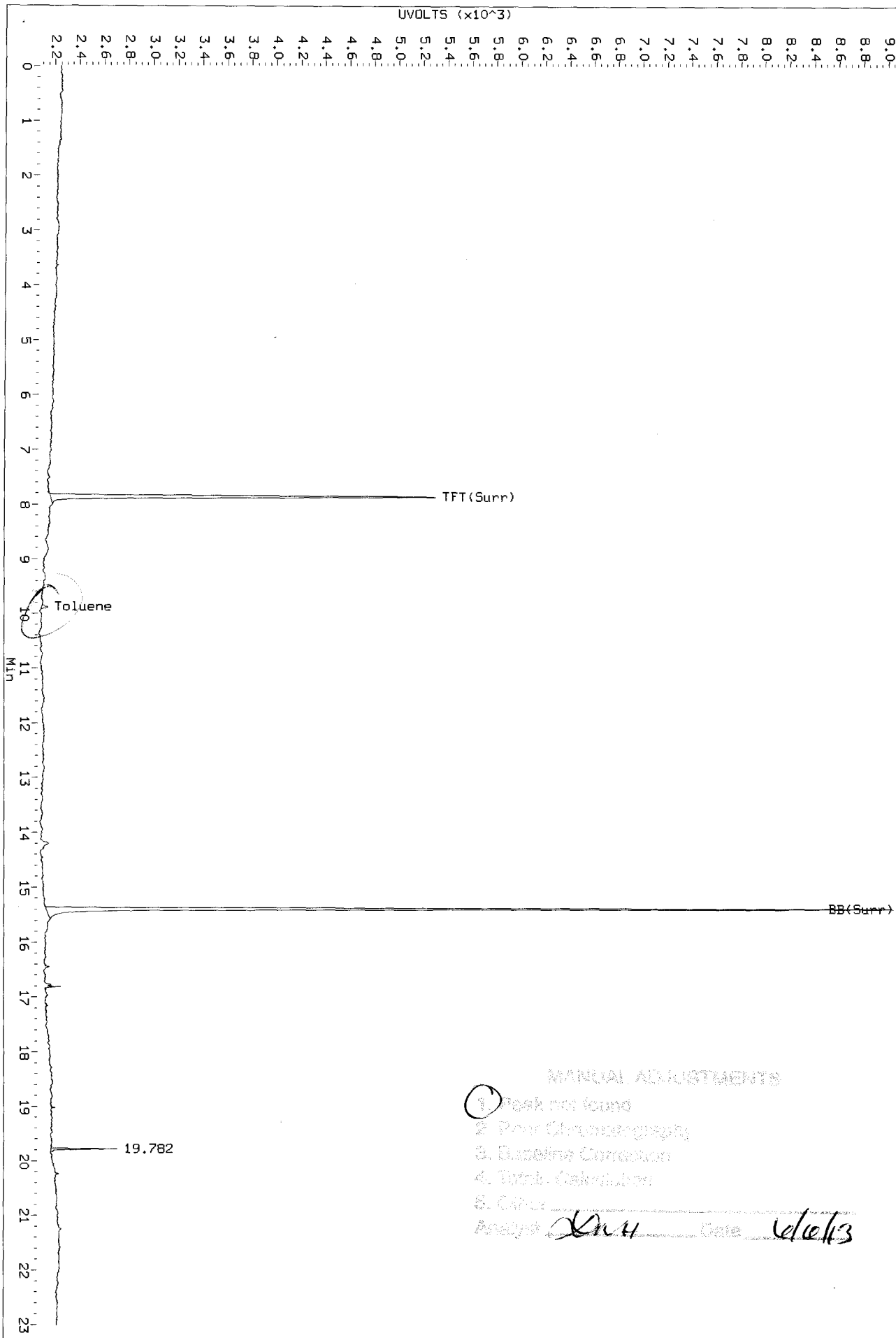
AIR 0605a011.cdf: 0.000 to 23.010 Min



Pat 6/6/13

Data File: /chem3/pid1.1/20130605-2.b/0605s011.d/0605s011.cdf
Injection Date: 05-JUN-2013 18:51
Instrument: pid1.1
Client Sample ID: A2-F59-S-6

AIA 0605s011.cdf: 0.000 to 23.010 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F60-S-6

SAMPLE

Lab Sample ID: WS56F

LIMS ID: 13-11837

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 19:19

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 12.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	17
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	96.4%
Bromobenzene	95.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

data collected

Data file 1: /chem3/pid1.i/20130605-1.b/0605a012.d ARI ID: WS56F
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a012.d Client ID: A2-F60-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 19:19
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.001	2860	36786	96.7	TFT(Surr)
15.381	0.000	1916	16329	96.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	636	0.002
8015C 2MP-TMB (4.19 to 16.20)	723723	637	0.001
AK101 nC6-nC10 (4.69 to 15.10)	582885	637	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	636	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.860	0.001	3109	96.4	TFT(Surr)
15.389	0.000	6920	95.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.001	60	0.30N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a012.d
Lab Smp Id: WS56F Client Smp ID: A2-F60-S-6
Inj Date : 05-JUN-2013 19:19
Operator : LH Inst ID: pid1.i
Smp Info : WS56F
Misc Info : 13-11837
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.852	7.851	0.001	2860	96.6525	96.65
12 Toluene	9.879	9.874	0.005	636	0.43857	0.438
\$ 18 BB(Surr)	15.381	15.381	0.000	1916	96.4241	96.42

Data File: /chem3/pid1.i/20130605-1.b/0605a012.d

Date: 05-JUN-2013 19:19

Client ID: A2-F60-S-6

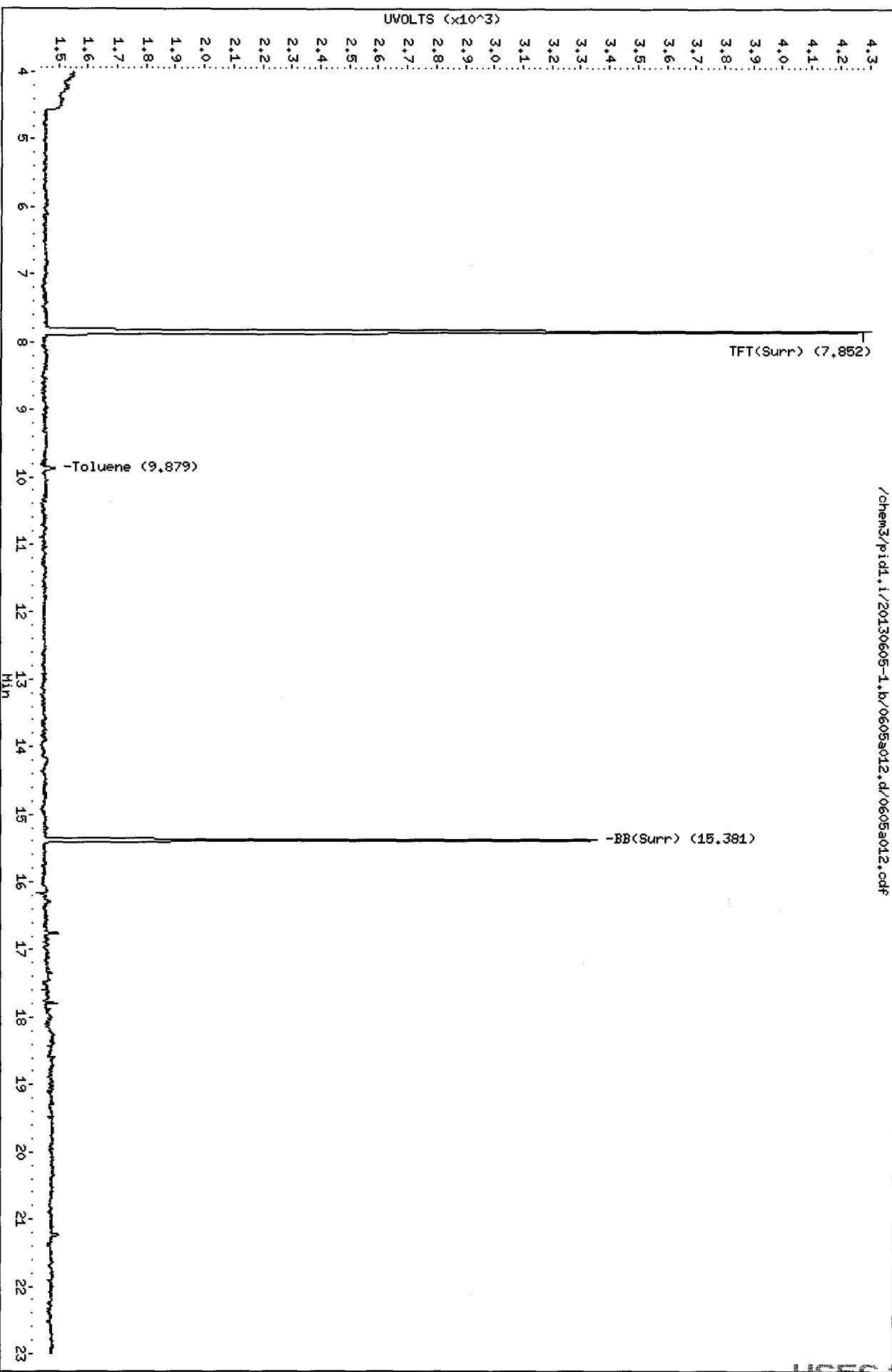
Sample Info: MS56F

Column Phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

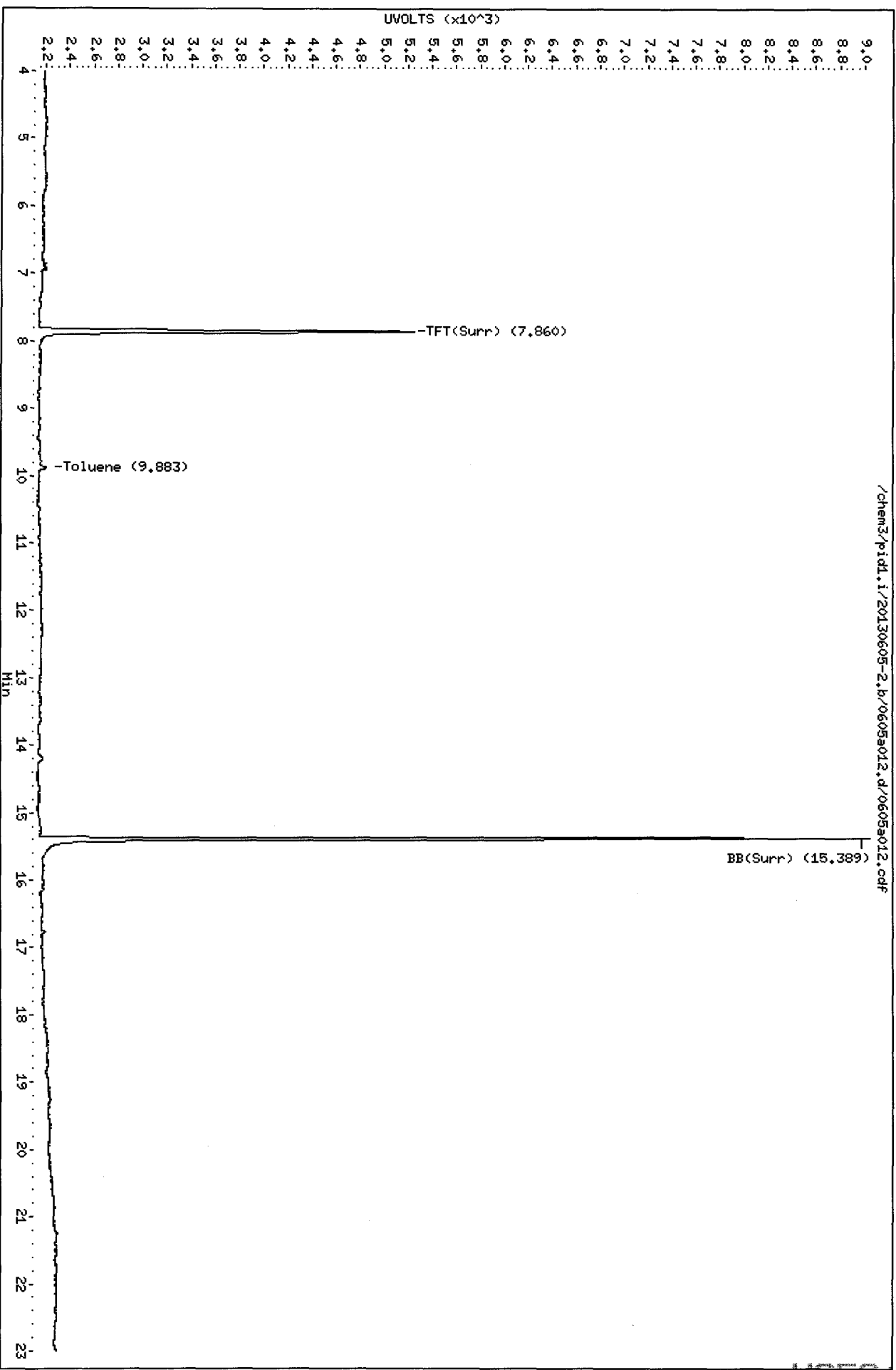


/chem3/pid1.i/20130605-1.b/0605a012.d/0605a012.cdf

00000 0550

Data File: /chem3/pid1.i/20130605-2.b/0605a012.d
Date : 05-JUN-2013 19:19
Client ID: A2-F60-S-6
Sample Info: MSS6F
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

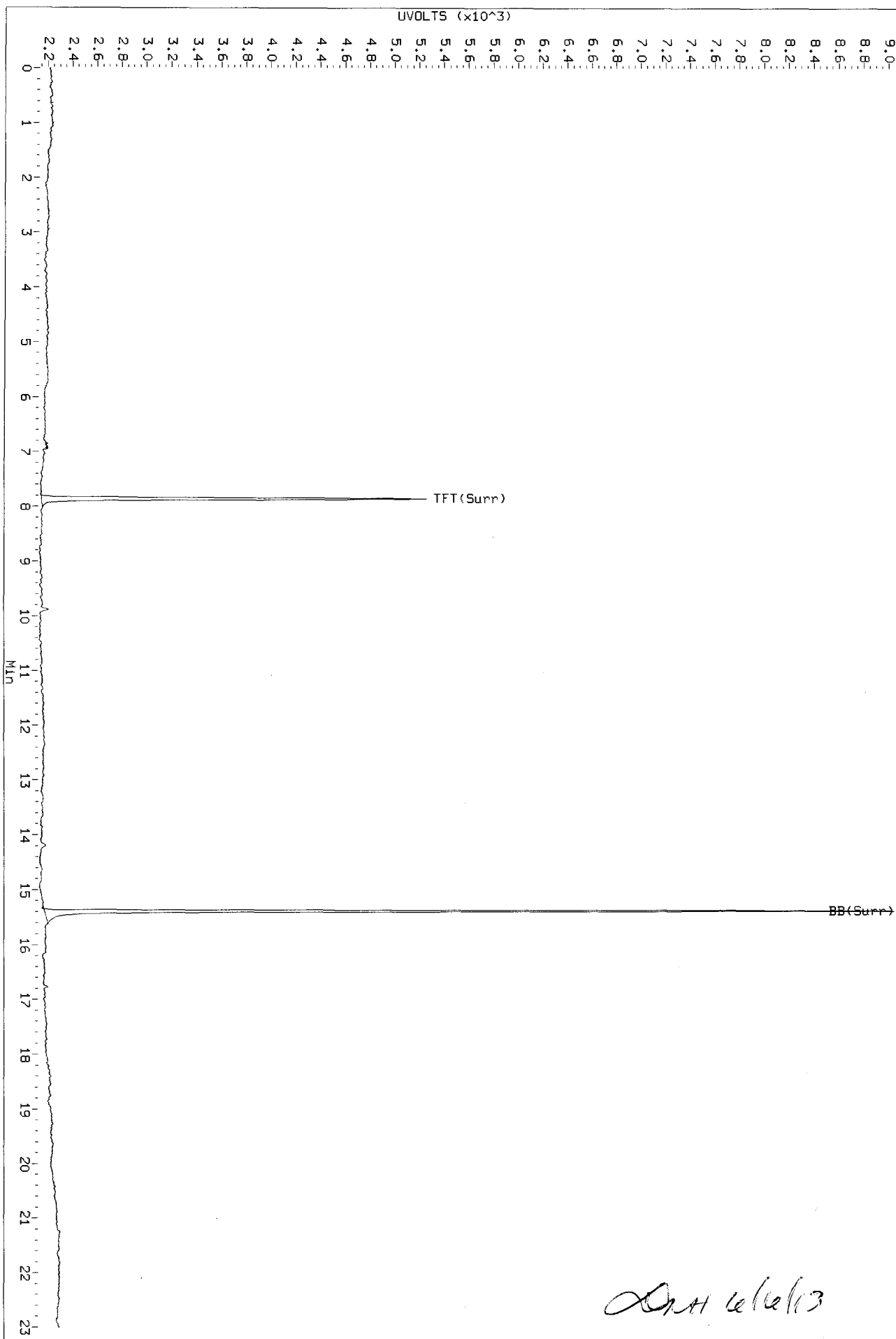


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Data File: /chem3/pid1.1/20130605-2.1.b/0605a012.d/0605a012.cdf
Injection Date: 05-JUN-2013 19:19
Instrument: pid1.1
Client Sample ID: A2-F60-S-6

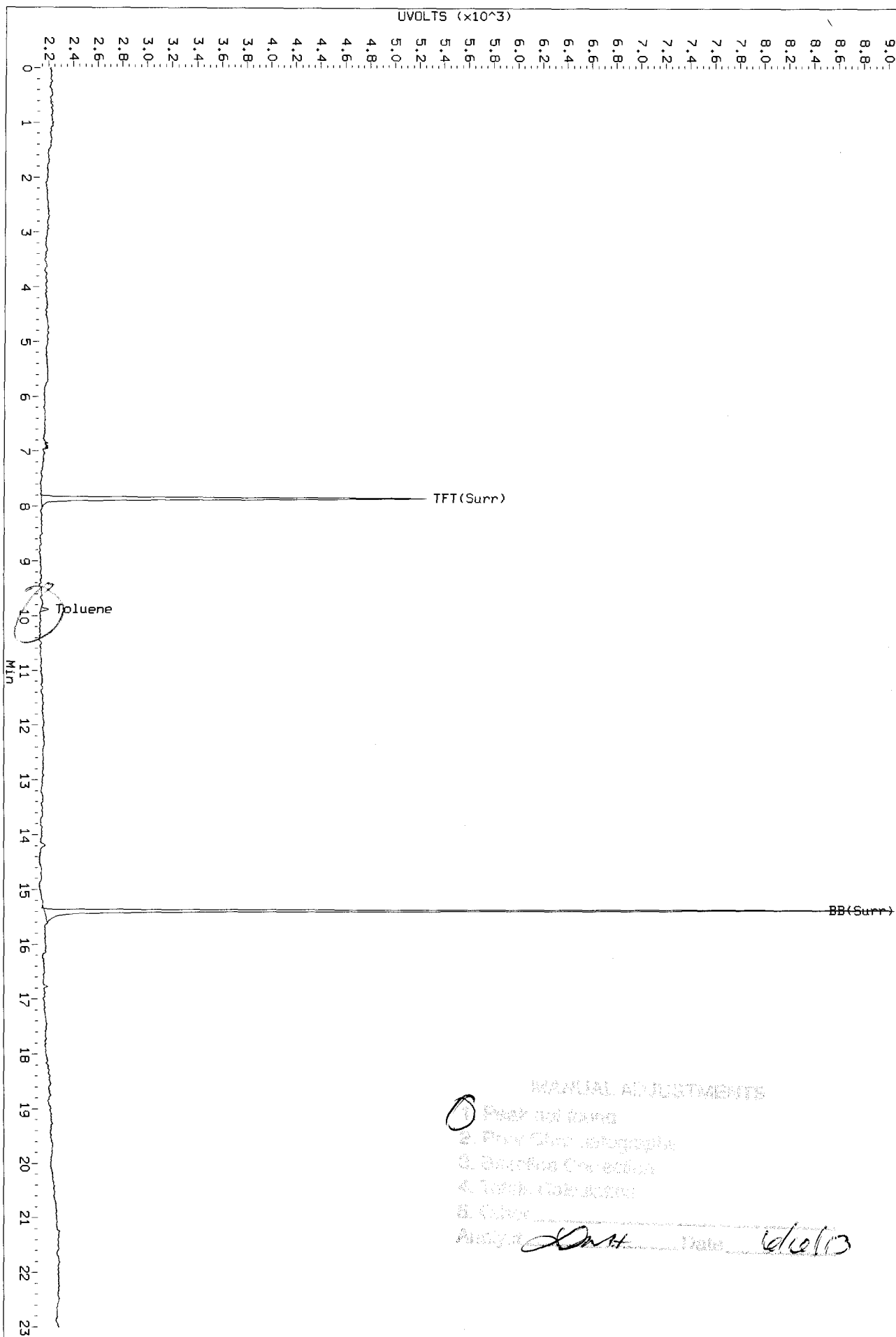
AIR 0605a012.cdf: 0.000 to 23.000 MIN



Handwritten signature: DAN 6/6/13

Data File: /chem3/gid1.1/20130605-2.1.b/0605a012.d/0605a012.cdf
Injection Date: 05-JUN-2013 19:19
Instrument: pid1.1
Client Sample ID: A2-F60-S-6

AIR 0605a012.cdf: 0.000 to 23.000 MIN



MANUAL ADJUSTMENTS

- 0 Peak list band
- 1 Peak Chromatography
- 2 Baseline Correction
- 3 Total Ion Chromatogram
- 4 Filter

Analyst *DMH* Date *6/10/13*

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F61-S-6

SAMPLE

Lab Sample ID: WS56G

LIMS ID: 13-11838

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 19:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 11.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	94.5%
Bromobenzene	95.4%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

SAH 10/16/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a013.d ARI ID: WS56G
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a013.d Client ID: A2-F61-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 19:48
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.853	0.002	2841	36107	96.0	TFT(Surr)
15.381	0.000	1907	16080	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	377	0.001 M
8015C 2MP-TMB (4.19 to 16.20)	723723	377	0.001 M
AK101 nC6-nC10 (4.69 to 15.10)	582885	376	0.001 M
NWTPHG Tol-Nap (9.77 to 18.91)	375093	377	0.001 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.861	0.002	3045	94.5	TFT(Surr) ✓
15.389	0.000	6897	95.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.887	0.004	44	0.22N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a013.d
Lab Smp Id: WS56G Client Smp ID: A2-F61-S-6
Inj Date : 05-JUN-2013 19:48
Operator : LH Inst ID: pid1.i
Smp Info : WS56G
Misc Info : 13-11838
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds					CONCENTRATIONS	
	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.853	7.851	0.002	2841	96.0104	96.01
12 Toluene	9.873	9.874	-0.001	376	0.25928	0.259(M)
\$ 18 BB(Surr)	15.381	15.381	0.000	1907	95.9712	95.97

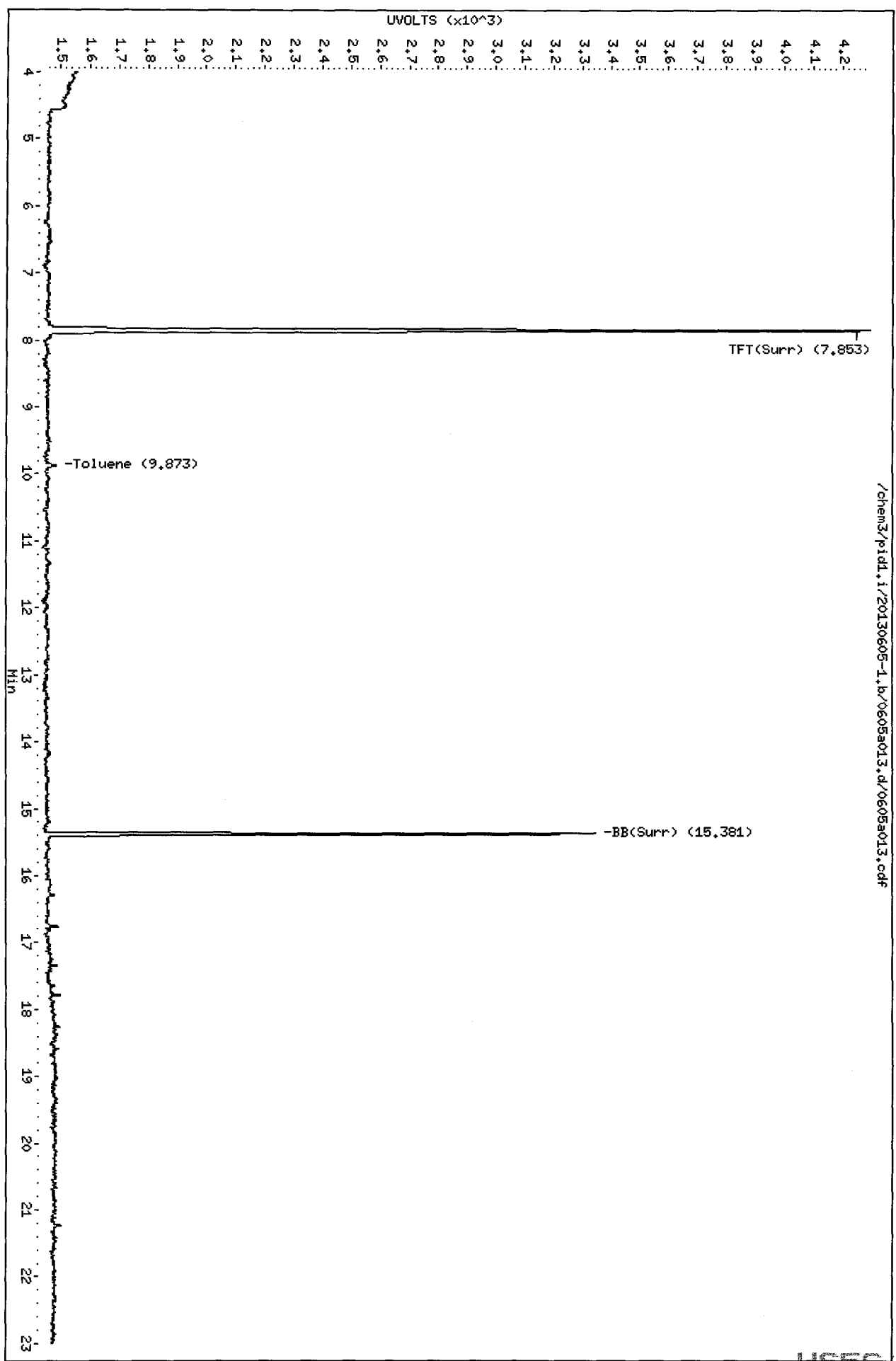
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pidd1.i/20130605-1.b/0605a013.d
Date : 05-JUN-2013 19:48
Client ID: A2-Fel-S-6
Sample Info: MS56C

Column phase: RTX 502-2 FID

Instrument: pidd1.i
Operator: LH
Column diameter: 0.18



MS56 00105

Data File: /chem3/pid1.i/20130605-2.b/0605a013.d

Page 1

Date : 05-JUN-2013 19:48

Client ID: A2-F61-S-6

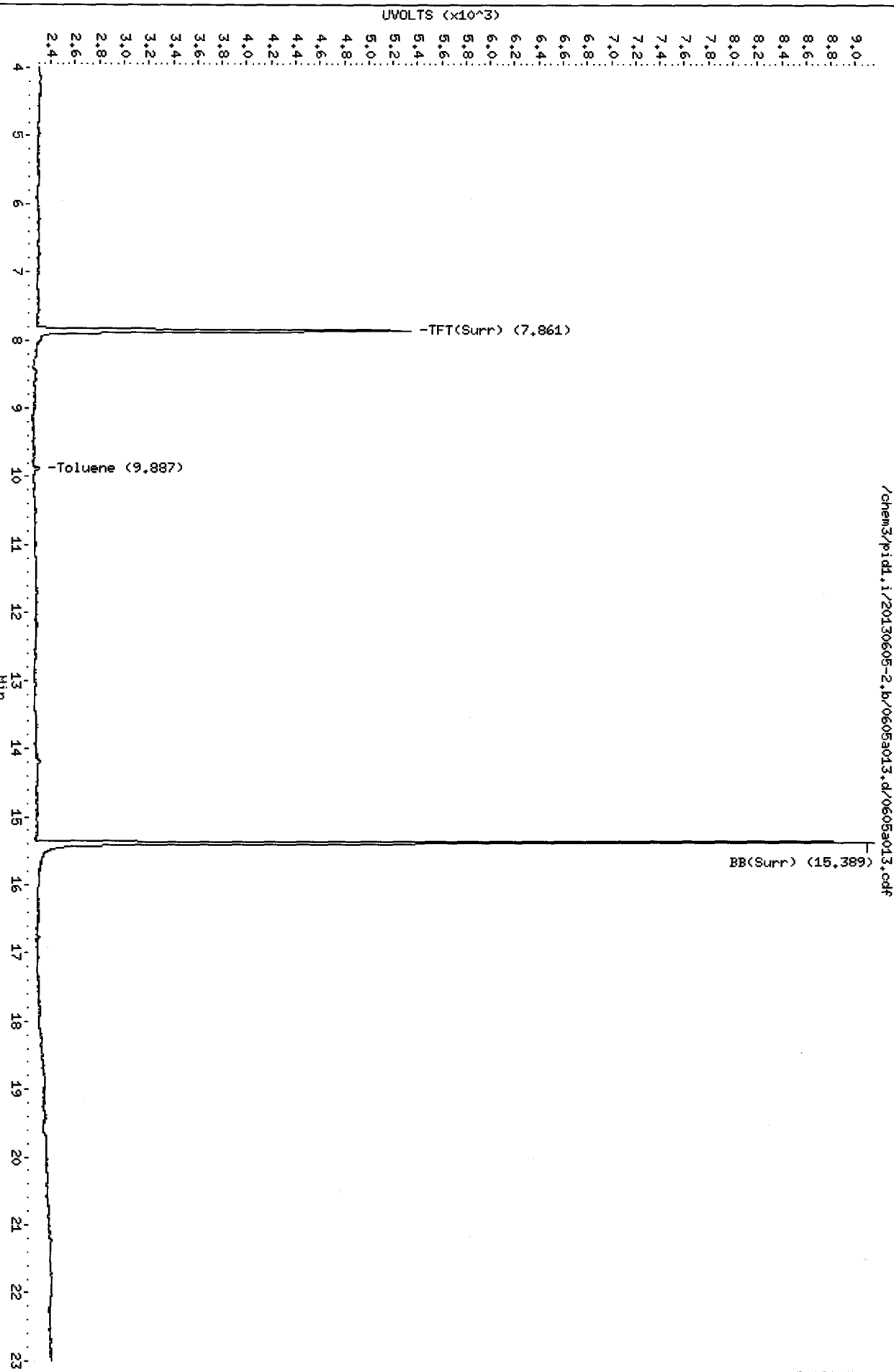
Sample Info: MS56G

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

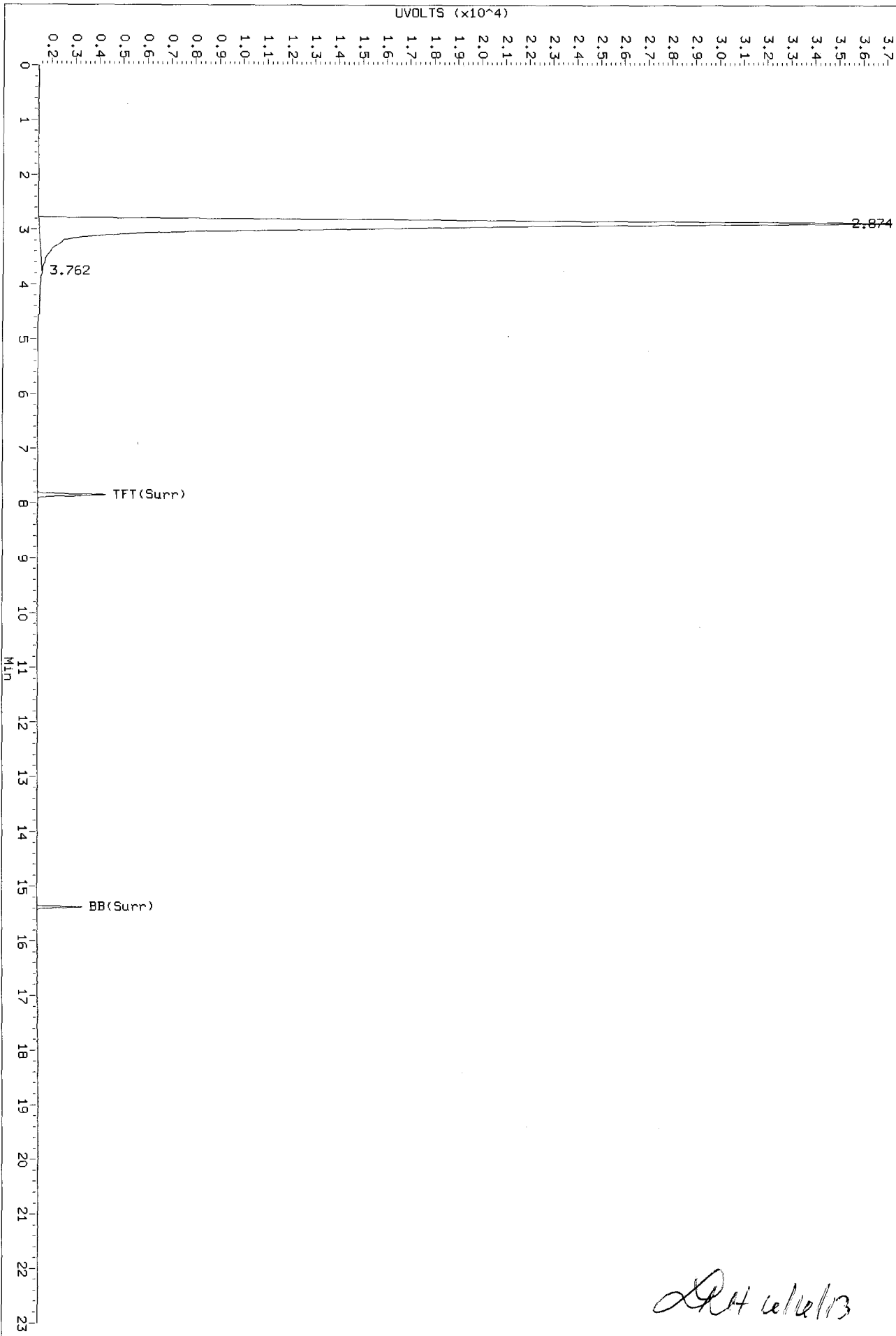
Column phase: RTX 502-2 PID

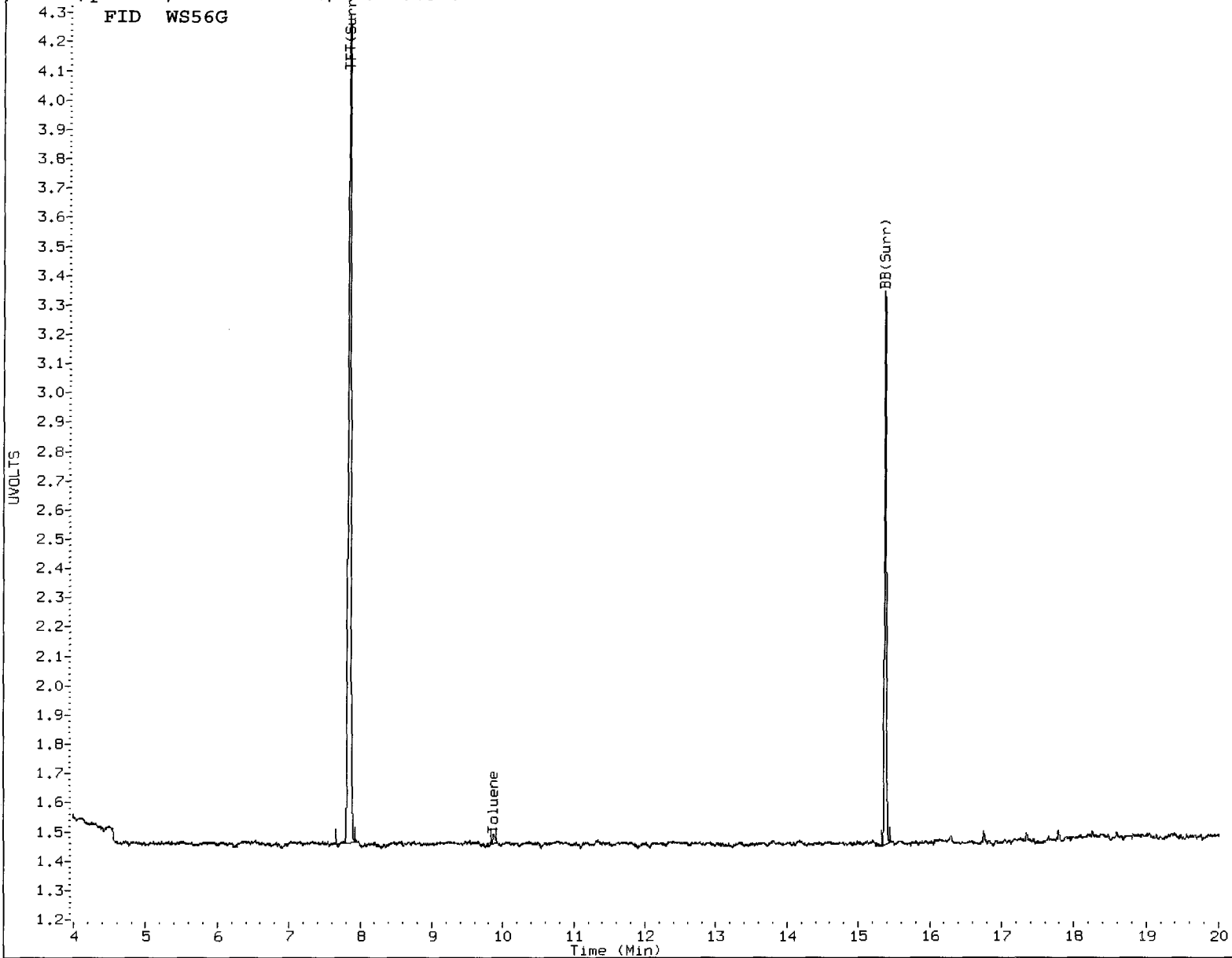


00105 0556

Data File: /chem3/pid1.1/20130605-1.b/0605a013.d/0605a013.cdf
Injection Date: 05-JUN-2013 19:48
Instrument: pid1.1
Client Sample ID: A2-F61-S-6

AIA 0605a013.cdf: 0.000 to 23.003 MIN





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

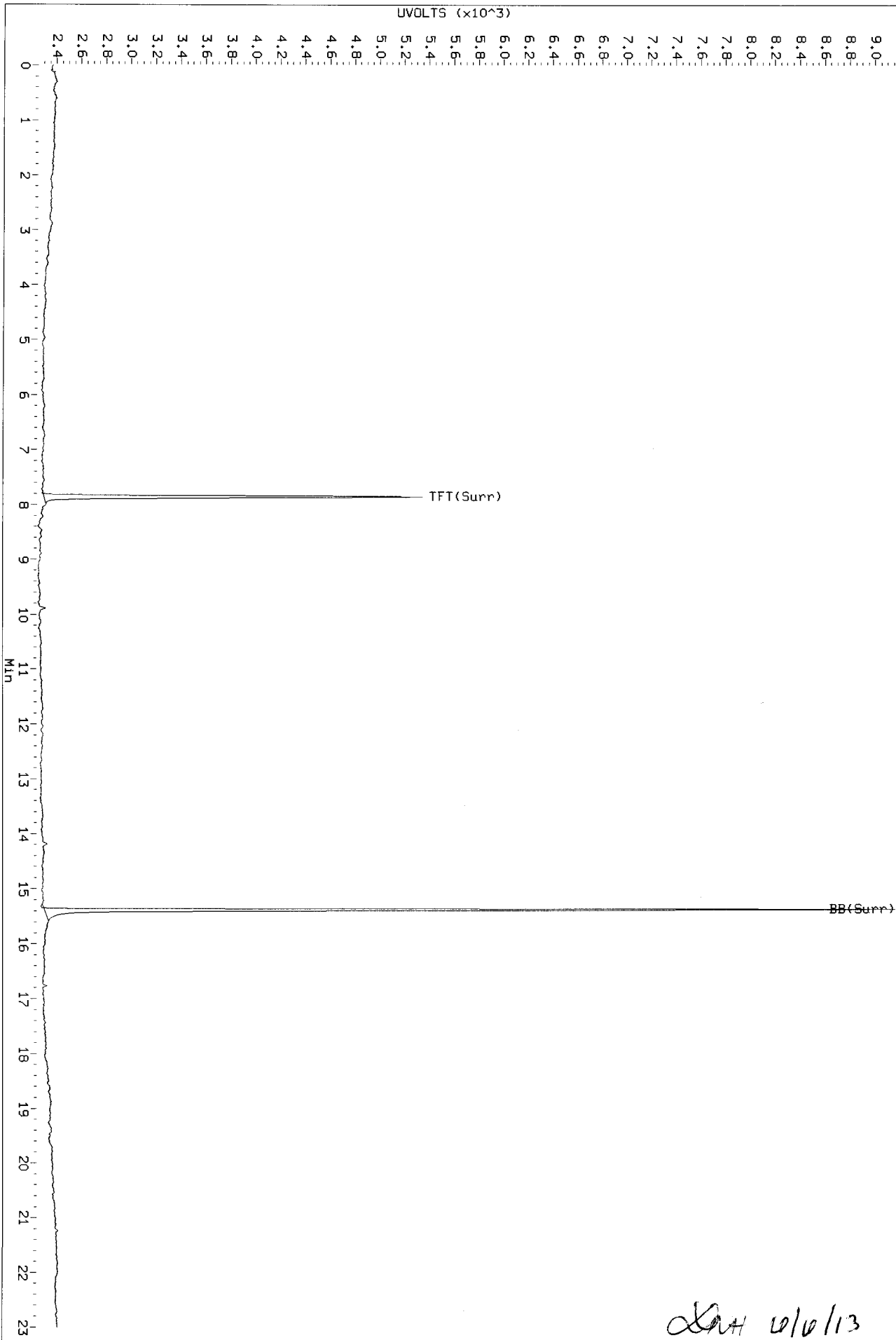
5. Other _____

Analyst: DNH

Date: 6/6/13

Data File: /chem3/pid1.1/20130605-2.b/0605a013.d/0605a013.cdf
Injection Date: 05-JUN-2013 19:48
Instrument: pid1.1
Client Sample ID: A2-F61-S-6

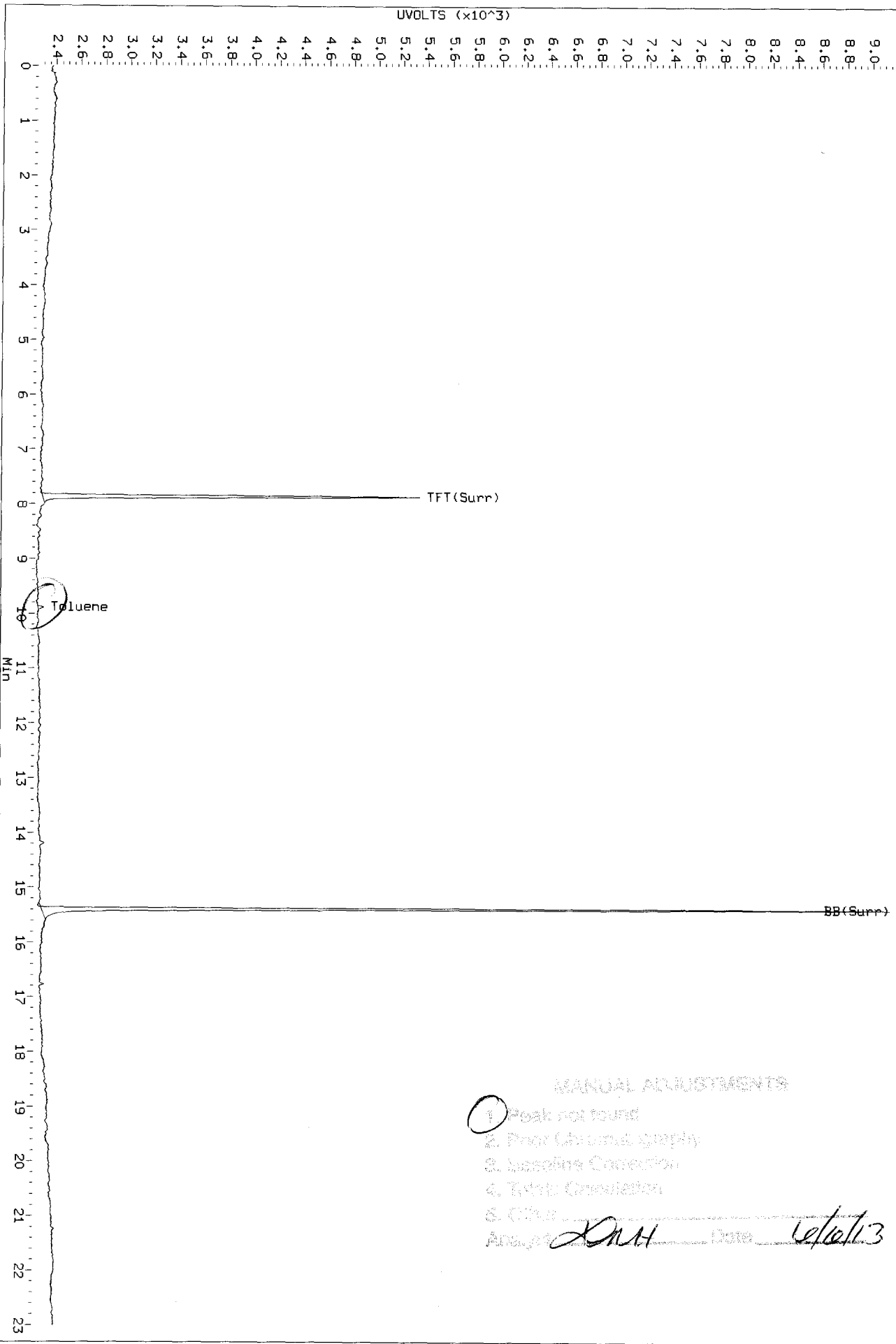
RI# 0605a013.cdf: 0.000 to 23.003 MIN



DATA 10/10/13

Data File: /chem3/pid1.1/20130605-2.b/0605a013.d/0605a013.cdf
 Injection Date: 05-JUN-2013 19:48
 Instrument: pid1.1
 Client Sample ID: A2-F61-S-6

AIR 0605a013.cdf: 0.000 to 23.003 Min



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Plot Chromatogram
- 3. Baseline Correction
- 4. Toluene Correction
- 5. C13

Analyst: DMH Date: 6/11/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F62-S-6

SAMPLE

Lab Sample ID: WS56H

LIMS ID: 13-11839

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 20:45

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 81 mg-dry-wt

Percent Moisture: 14.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	16
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	94.8%
Bromobenzene	96.8%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

ASMT *6/10/13*

Data file 1: /chem3/pid1.i/20130605-1.b/0605a015.d ARI ID: WS56H
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a015.d Client ID: A2-F62-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 20:45
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.854	0.003	2829	36165	95.6	TFT(Surr)
15.382	0.002	1911	16085	96.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	496	0.001
8015C 2MP-TMB (4.19 to 16.20)	723723	497	0.001
AK101 nC6-nC10 (4.69 to 15.10)	582885	496	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	496	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.862	0.003	3057	94.8	TFT(Surr) ✓
15.390	0.001	6998	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.002	50	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a015.d
Lab Smp Id: WS56H Client Smp ID: A2-F62-S-6
Inj Date : 05-JUN-2013 20:45
Operator : LH Inst ID: pid1.i
Smp Info : WS56H
Misc Info : 13-11839
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

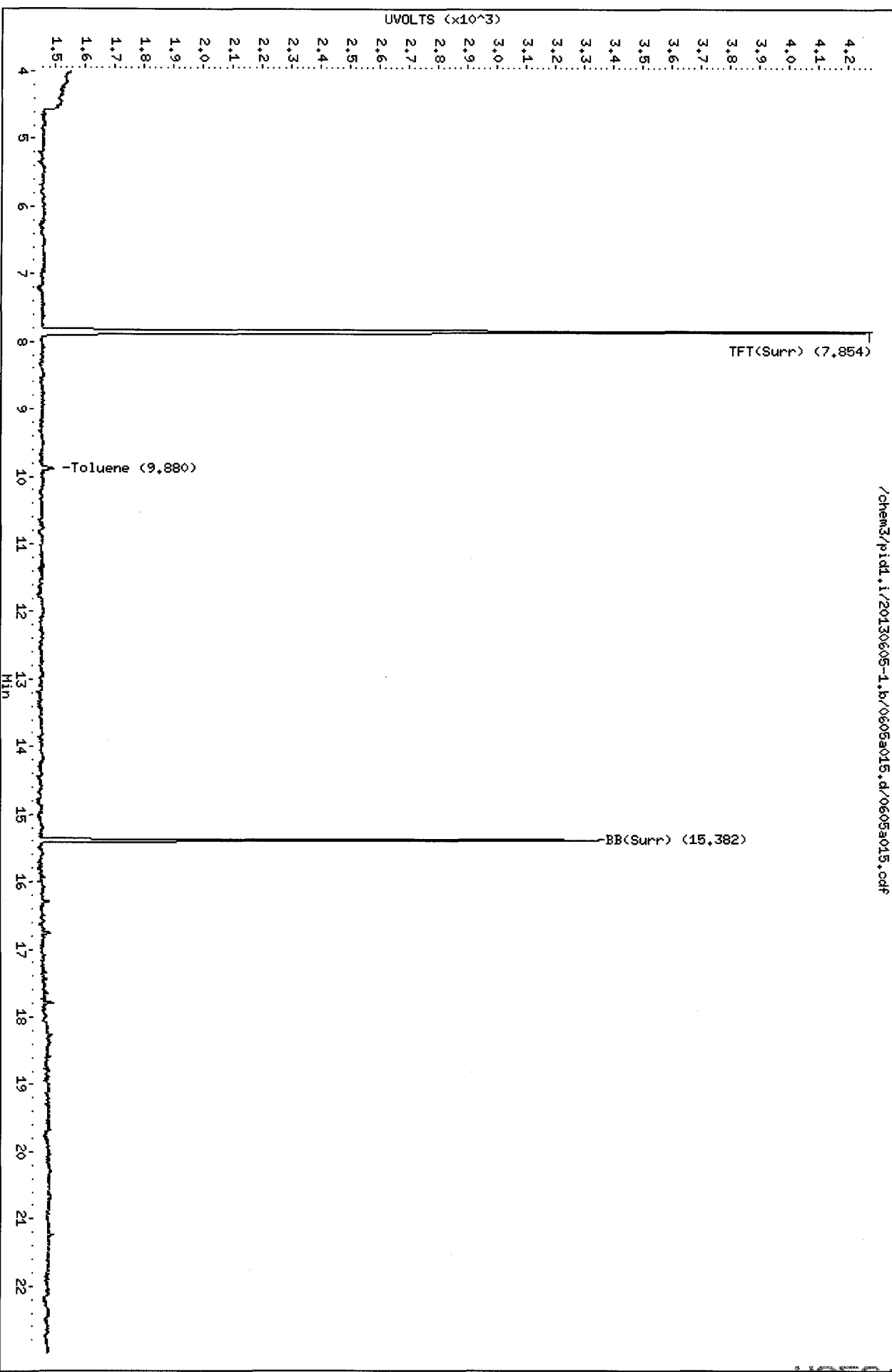
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.854	7.851	0.003	2829	95.6049	95.60
12 Toluene	9.880	9.874	0.006	495	0.34174	0.342
\$ 18 BB(Surr)	15.382	15.381	0.001	1911	96.1725	96.17

Data File: /chem3/pidd,1/20130605-1.b/0605a015.d
Date : 05-JUN-2013 20:45
Client ID: A2-F62-S-6
Sample Info: MS56H
Column phase: RTX 502-2 FID

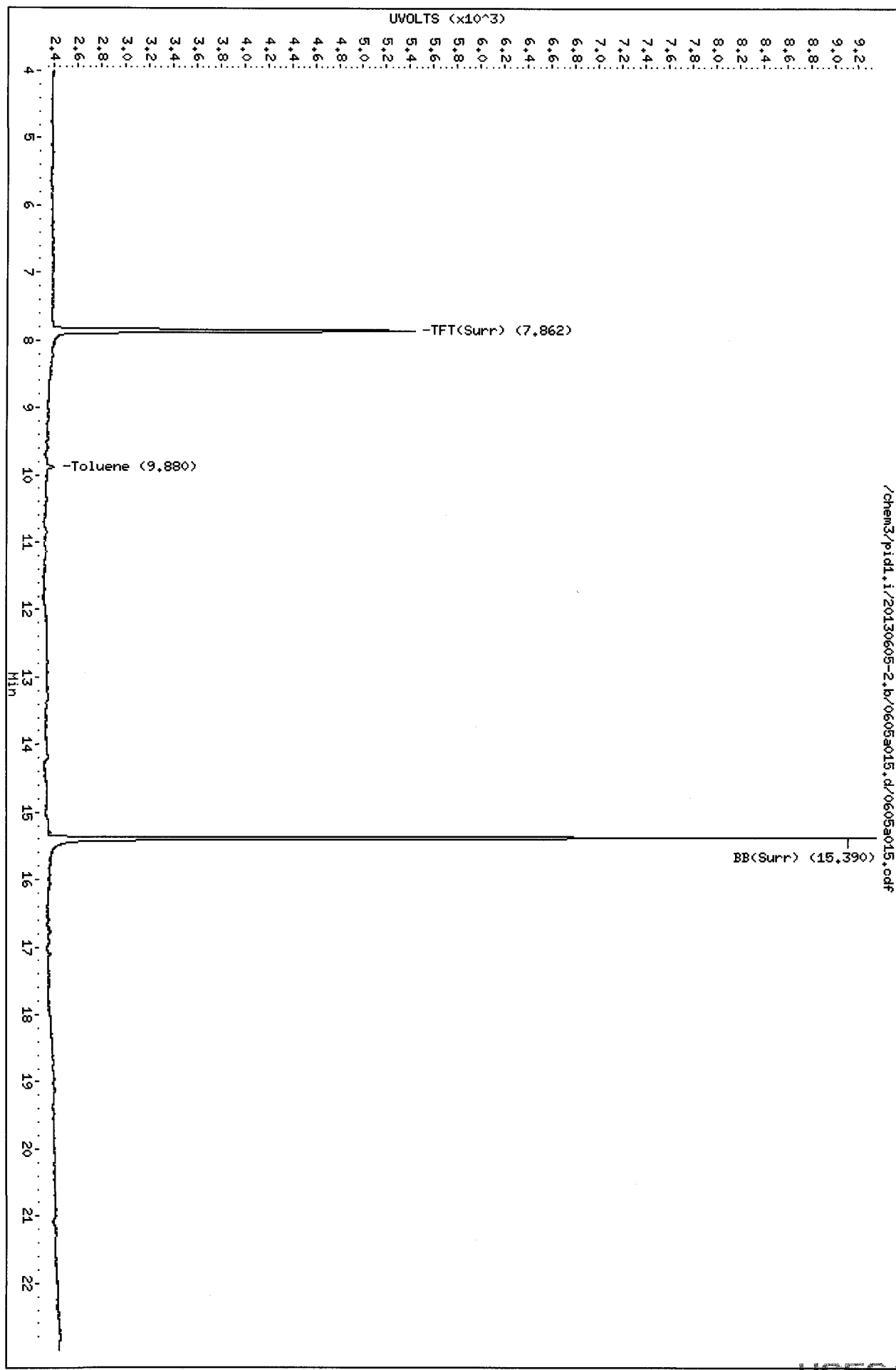
Instrument: pidd,1
Operator: LH
Column diameter: 0.18

/chem3/pidd,1/20130605-1.b/0605a015.d/0605a015.cdf



Data File: /chem3/pid1.i/20130605-2.b/0605a015.d
Date : 05-JUN-2013 20:45
Client ID: A2-F62-S-6
Sample Info: MS56H
Column phase: RTX 502-2 PID

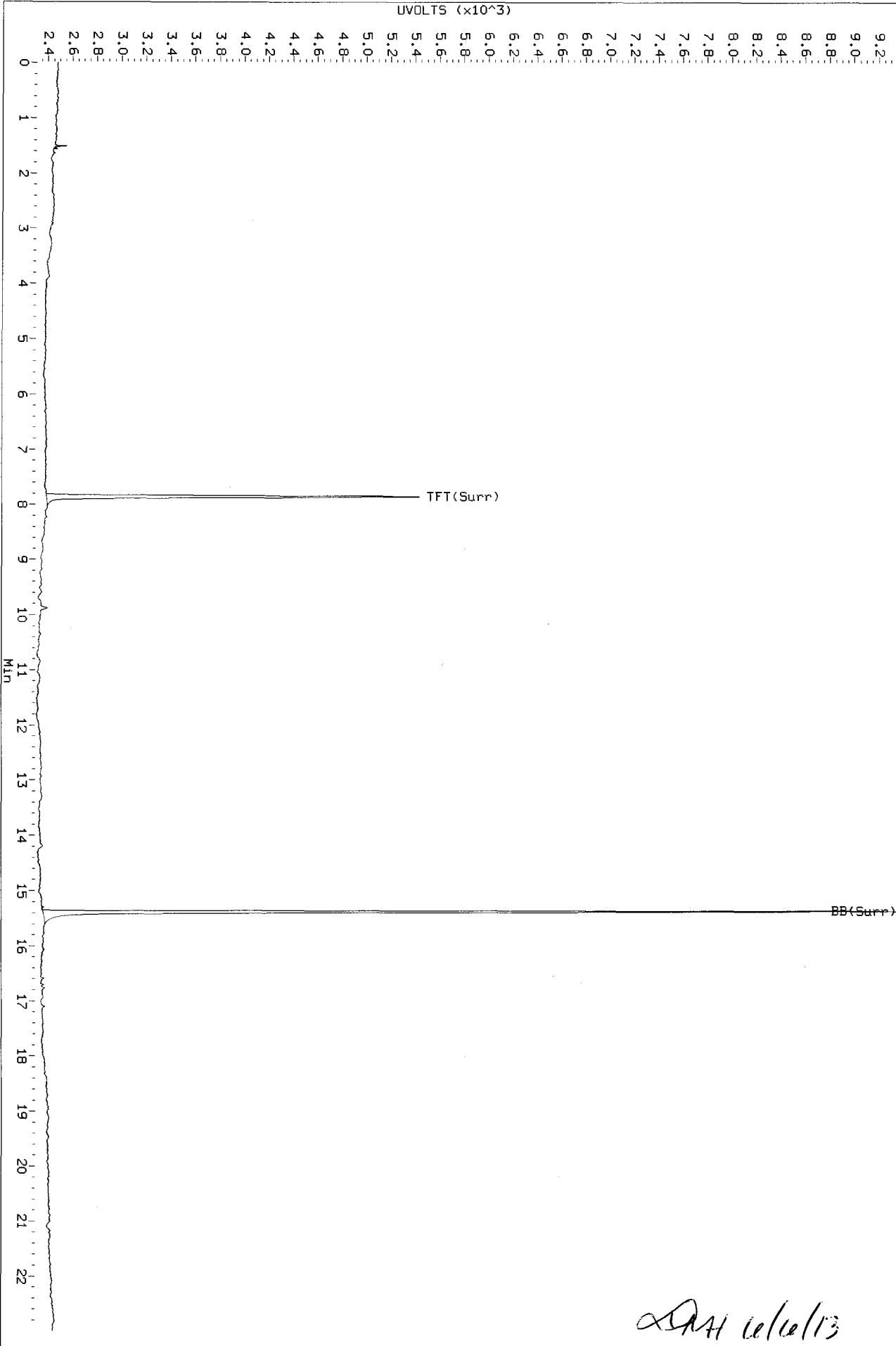
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



00115 . 0350

Data File: /chem3/pid1.i/20130605-2.b/0605a015.d/0605a015.cdf
Injection Date: 05-JUN-2013 20:45
Instrument: pid1.i
Client Sample ID: A2-F62-S-6

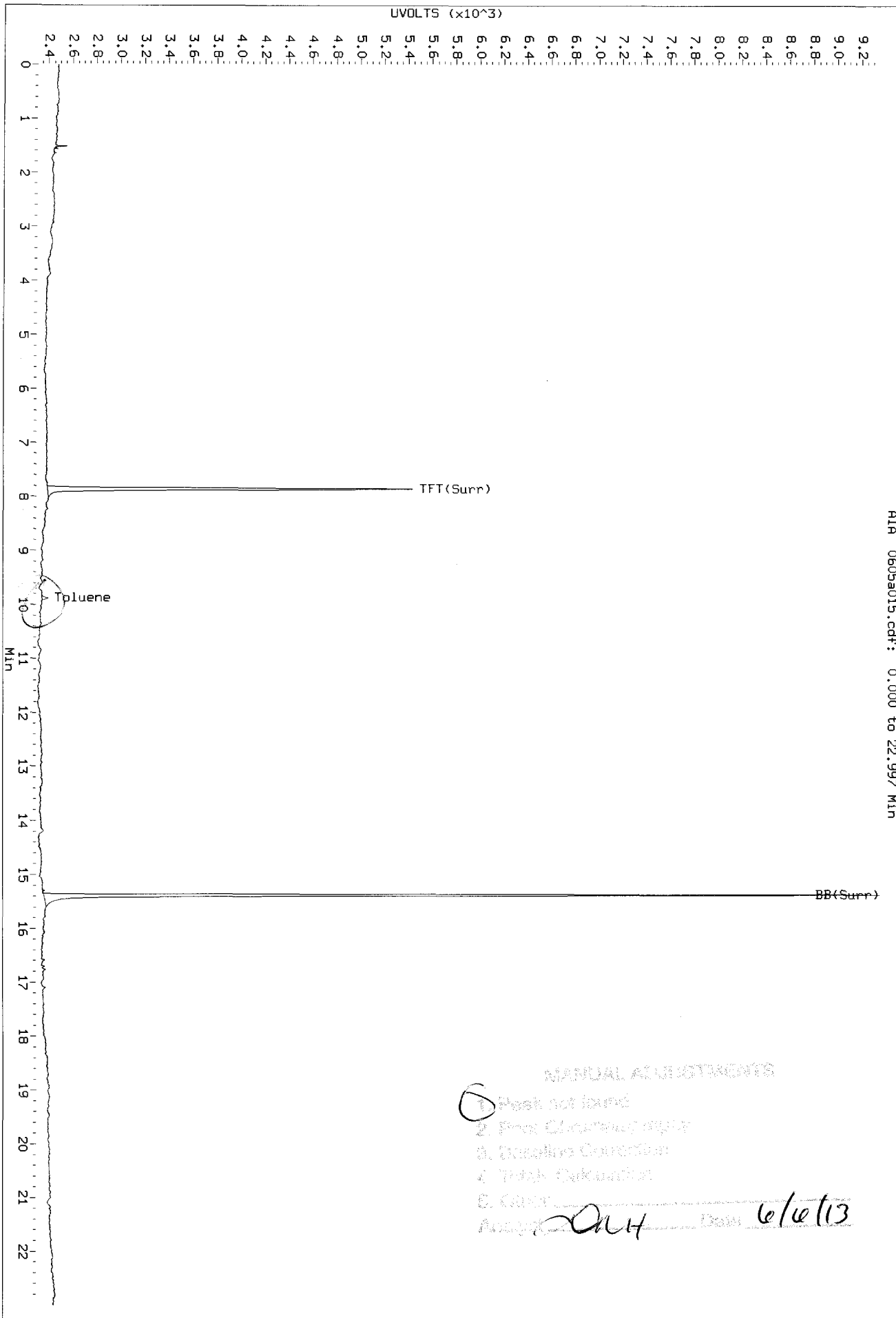
AIR 0605a015.cdf: 0.000 to 22.997 Min



Handwritten signature: ARA 6/6/13

Data File: /chem3/pid1.1/20130605-2.1/0605a015.d/0605a015.cdf
Injection Date: 05-JUN-2013 20:45
Instrument: pid1.1
Client Sample ID: A2-F62-S-6

AIR 0605a015.cdf: 0.000 to 22.997 Min



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Peak Chromatogram split
- 3. Detector Gain/Offset
- 4. Total Integration
- 5. Other

Accepted: AMH Date: 6/6/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F63-S-6

SAMPLE

Lab Sample ID: WS56I

LIMS ID: 13-11840

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 21:13

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 12.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	18
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	95.7%
Bromobenzene	98.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

ASAP to 11/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a016.d ARI ID: WS56I
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a016.d Client ID: A2-F63-S-6
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 21:13
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.002	2823	36074	95.4	TFT(Surr)
15.382	0.002	1945	16430	97.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	322	0.001 M
8015C 2MP-TMB (4.19 to 16.20)	723723	322	0.000 M
AK101 nC6-nC10 (4.69 to 15.10)	582885	322	0.001 M
NWTPHG Tol-Nap (9.77 to 18.91)	375093	322	0.001 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.002	3084	95.7	TFT(Surr)
15.390	0.001	7090	98.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.004	63	0.32N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a016.d
Lab Smp Id: WS56I Client Smp ID: A2-F63-S-6
Inj Date : 05-JUN-2013 21:13
Operator : LH Inst ID: pid1.i
Smp Info : WS56I
Misc Info : 13-11840
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

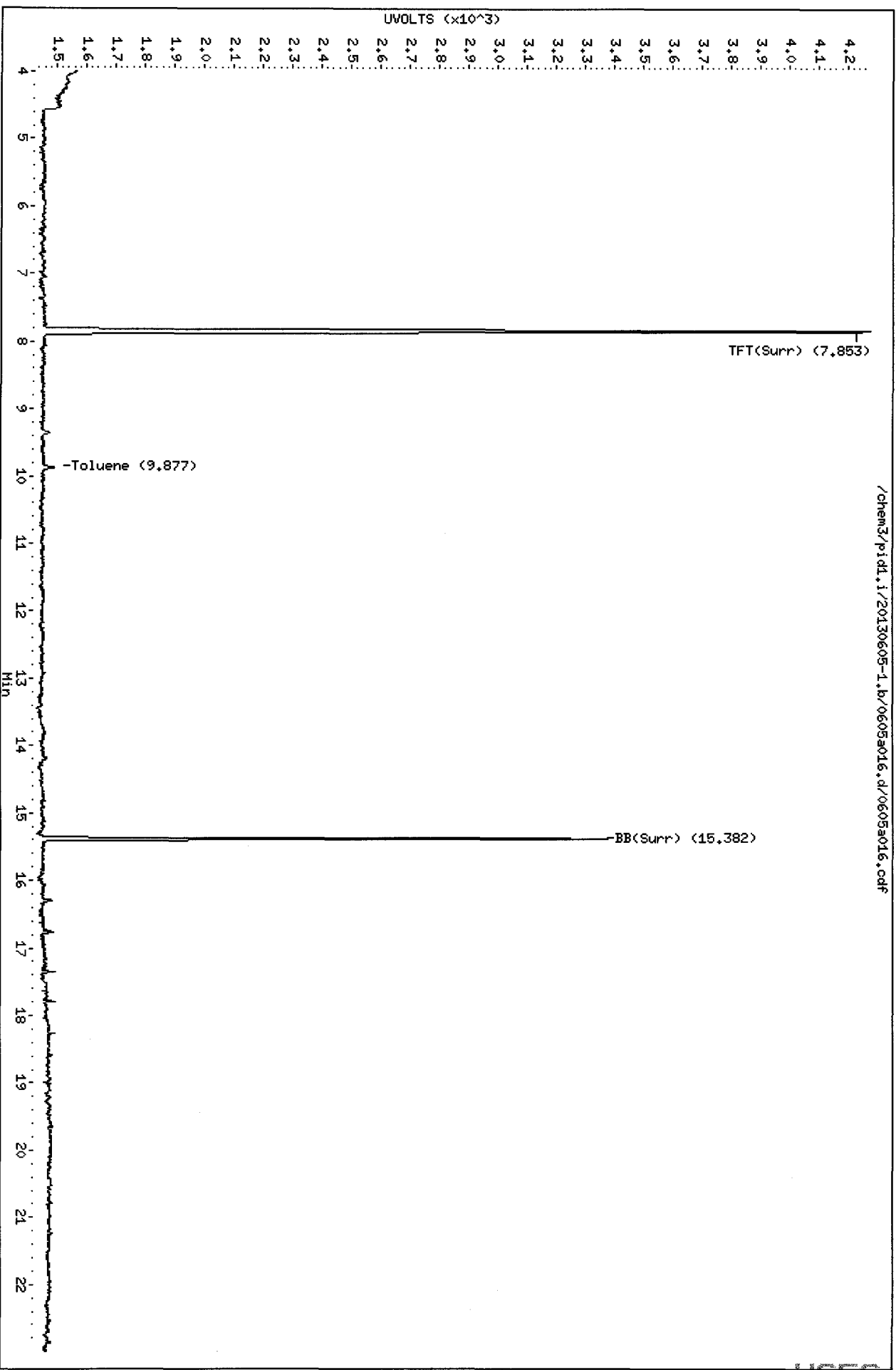
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.853	7.851	0.002	2823	95.4021	95.40
12 Toluene	9.877	9.874	0.003	322	0.22239	0.222 (M)
\$ 18 BB(Surr)	15.382	15.381	0.001	1945	97.8836	97.88

QC Flag Legend

M - Compound response manually integrated.

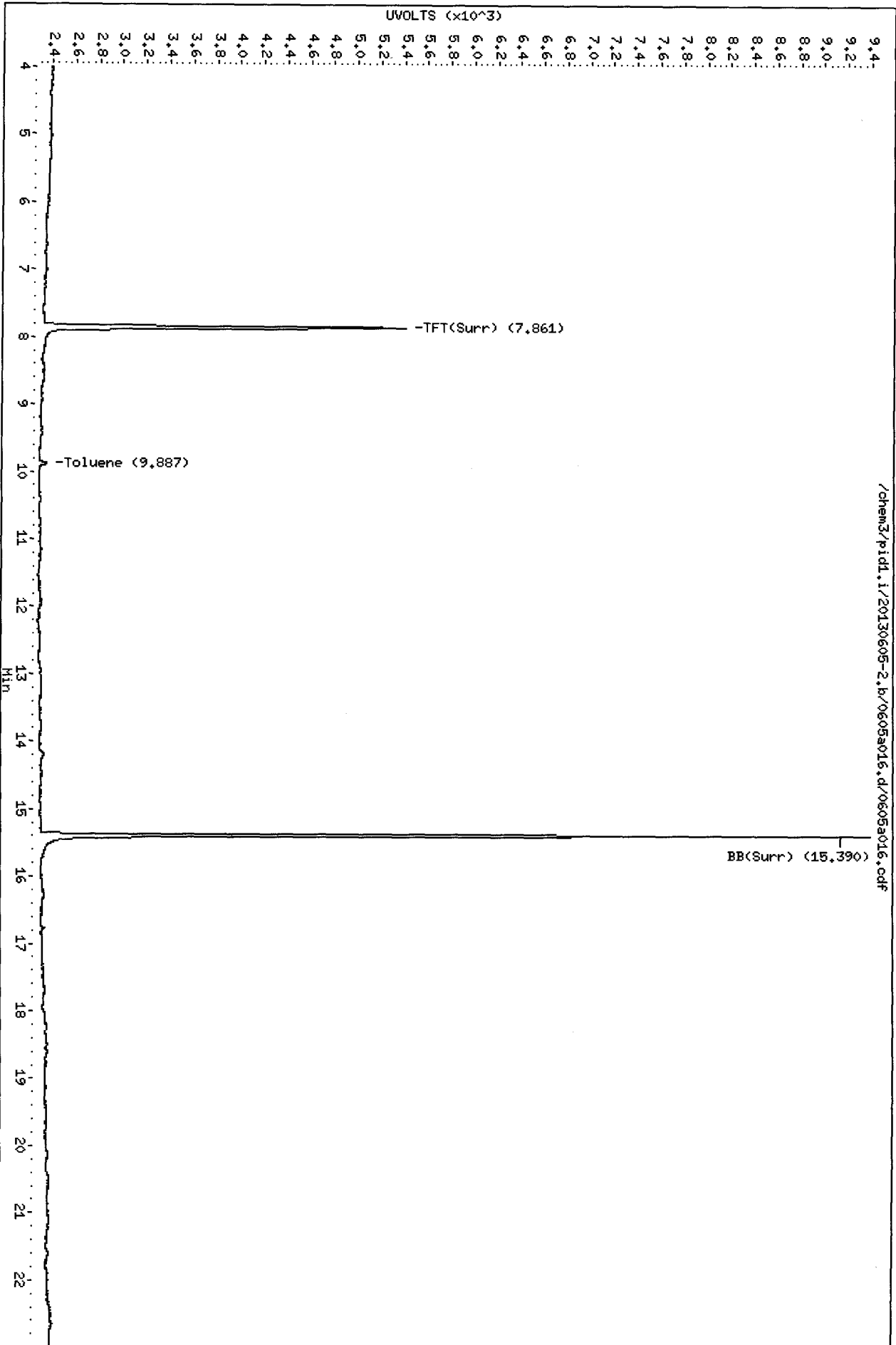
Data File: /chem3/pid1.i/20130605-1.b/0605a016.d
Date : 05-JUN-2013 21:13
Client ID: A2-F63-S-6
Sample Info: MS561
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130605-2.b/0605a016.d
Date: 05-JUN-2013 21:13
Client ID: A2-F63-S-6
Sample Info: MS561
Column phase: RTX 502-2 PID

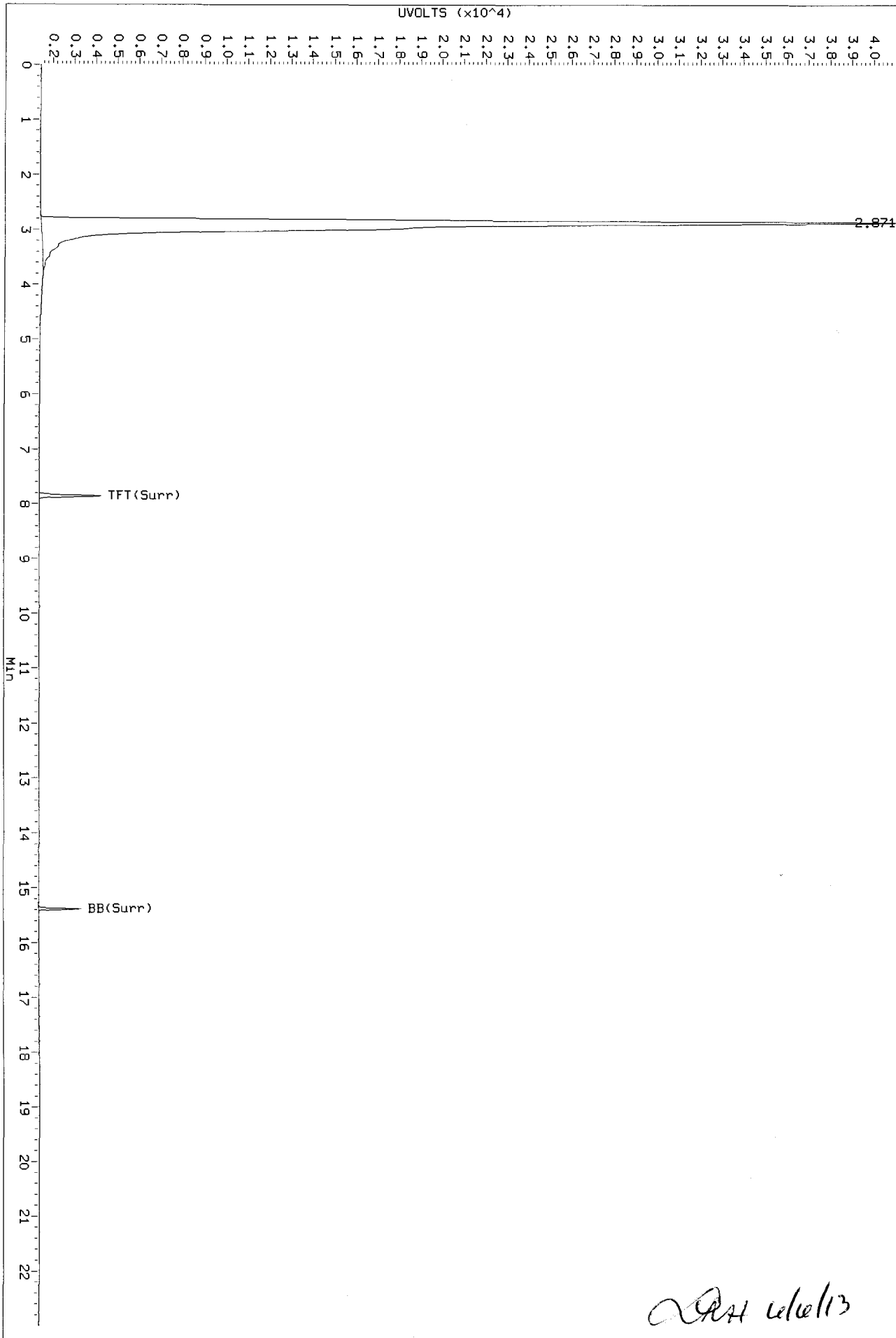
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

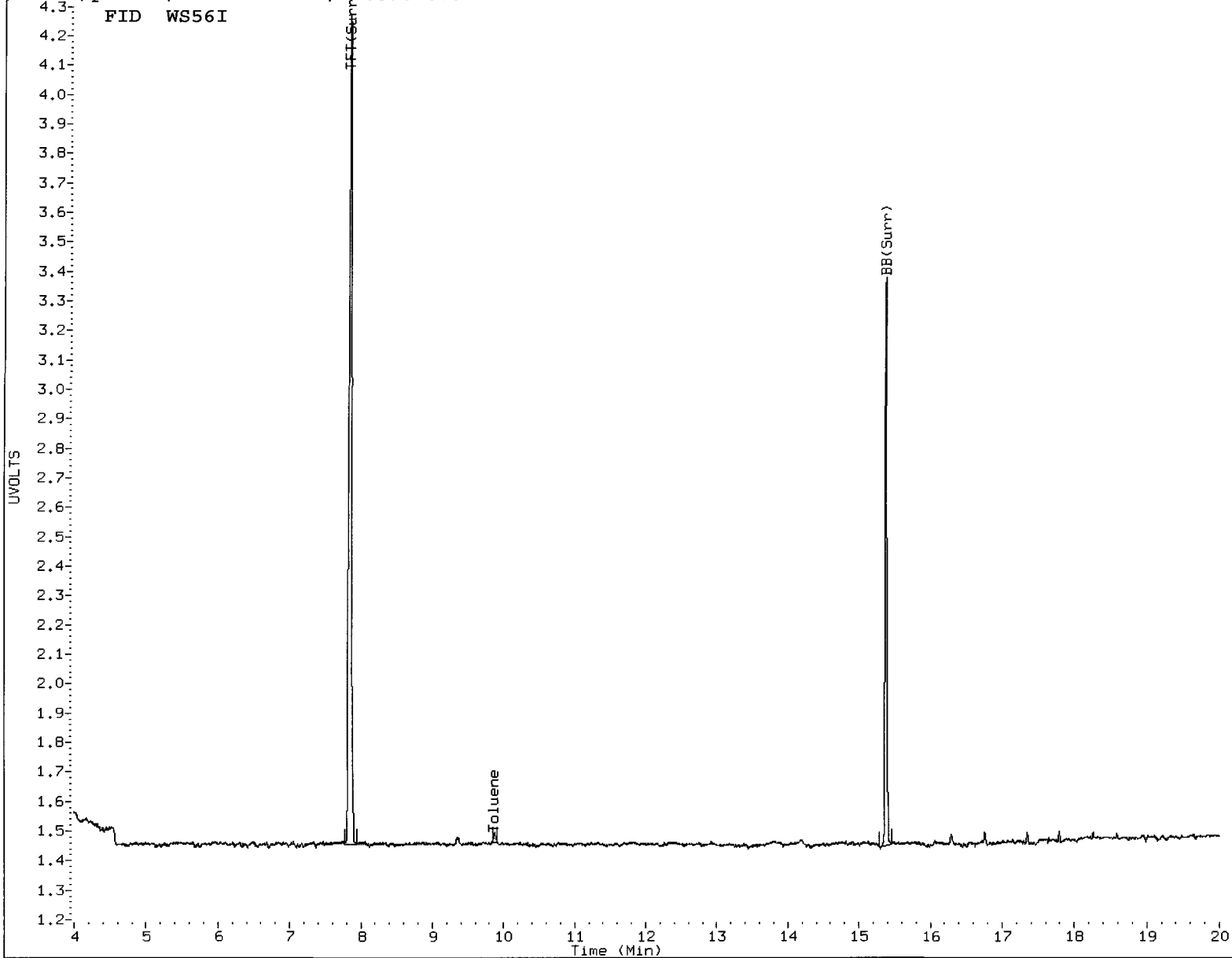


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Data File: /chem3/pid1.1/20130605-1.b/0605a016.d/0605a016.cdf
Injection Date: 05-JUN-2013 21:13
Instrument: pid1.1
Client Sample ID: A2-F63-S-6

AIR 0605a016.cdf: 0.000 to 22.997 MIN





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

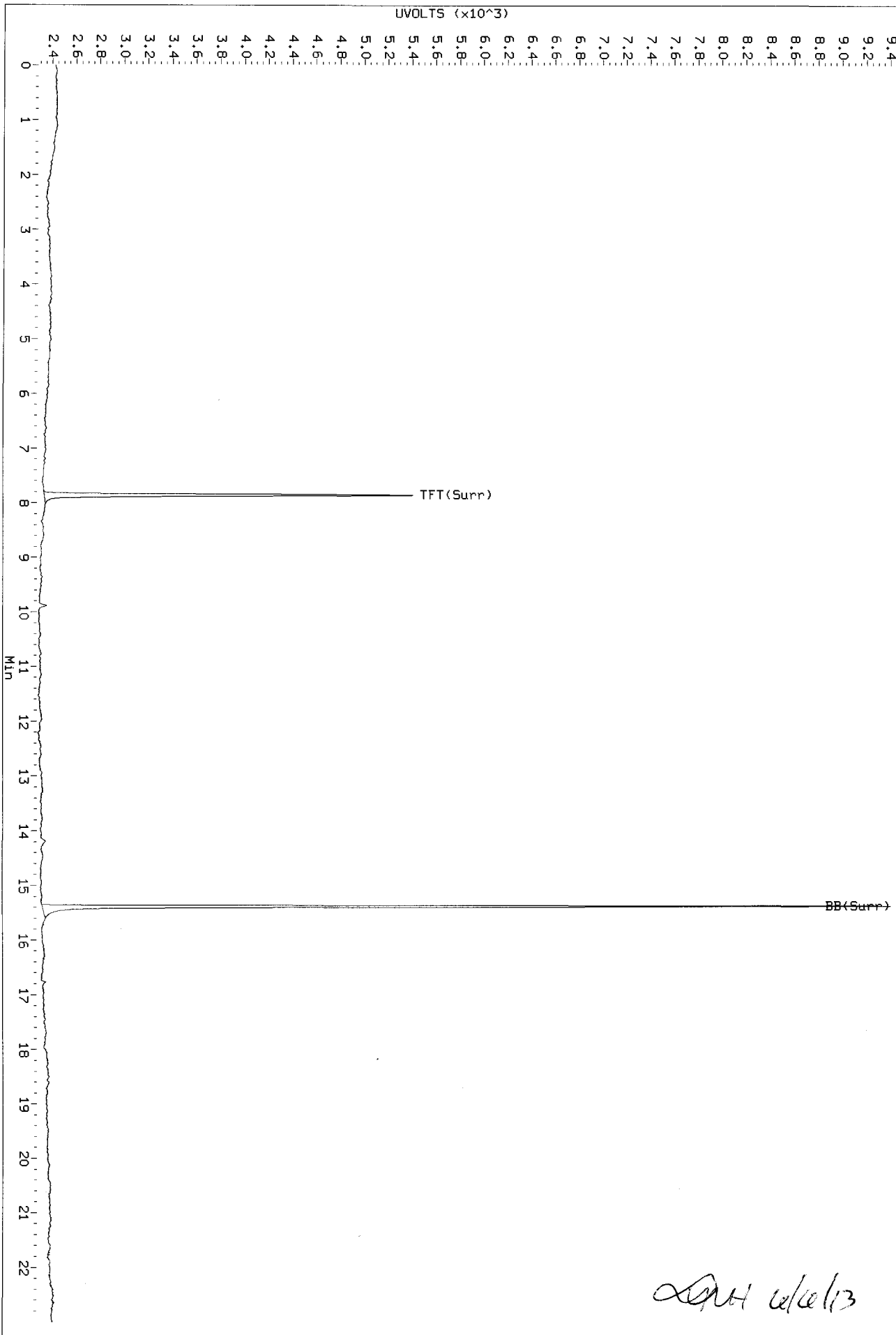
5. Other _____

Analyst: AM

Date: 6/11/13

Data File: /chem3/pid1.1/20130605-2.1.b/0605a016.d/0605a016.cdf
Injection Date: 05-JUN-2013 21:13
Instrument: pid1.1
Client Sample ID: A2-F63-S-6

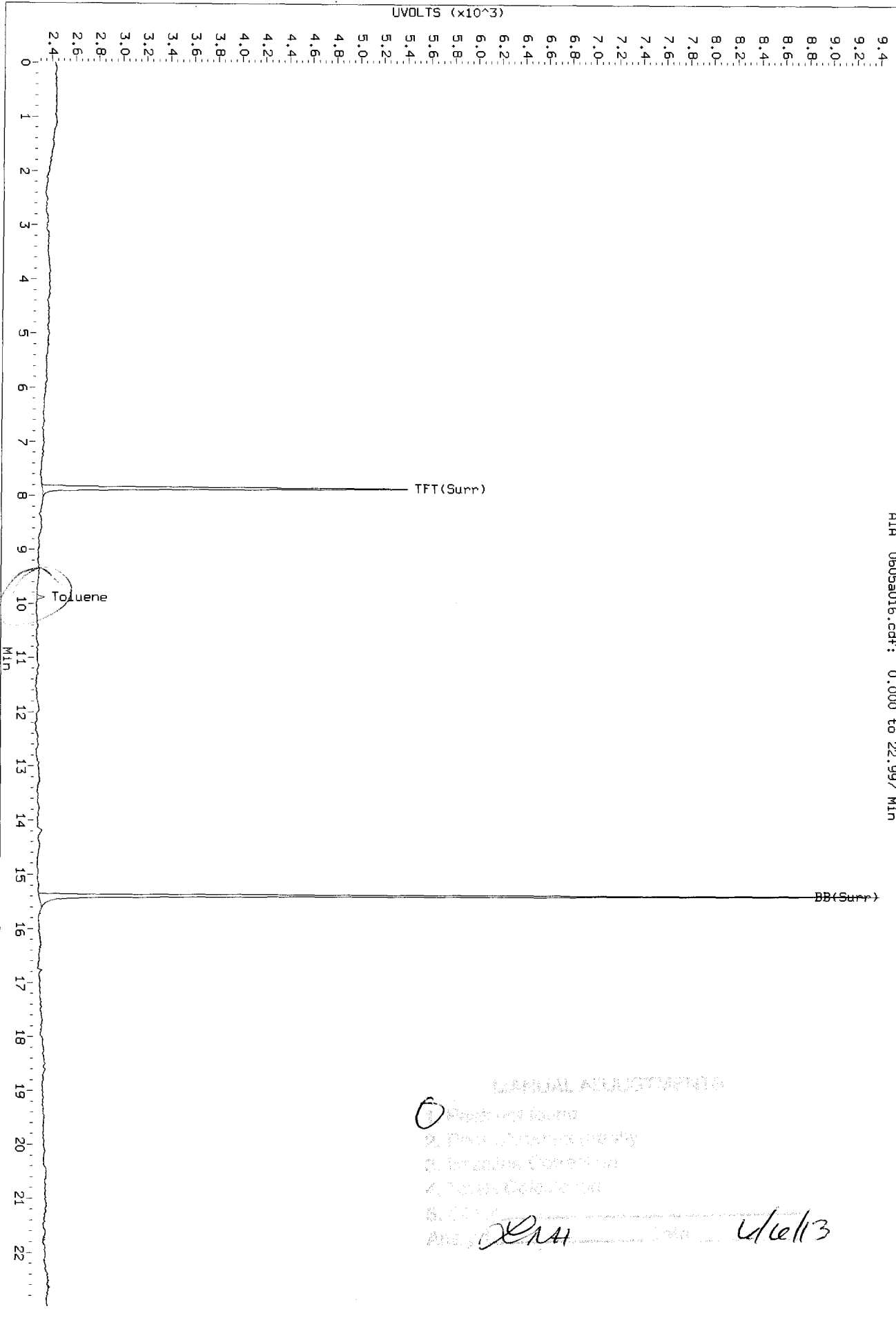
AIA 0605a016.cdf: 0.000 to 22.997 Min



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Data File: /chem3/pid1.1/20130605-2.b/0605a016.d/0605a016.cdf
Injection Date: 05-JUN-2013 21:13
Instrument: pid1.1
Client Sample ID: A2-F63-S-6

AIR 0605a016.cdf: 0.000 to 22.997 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F64-S-6

SAMPLE

Lab Sample ID: WS56J

LIMS ID: 13-11841

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: 06/03/13

Date Received: 06/04/13

Date Analyzed: 06/05/13 21:42

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 12.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	14
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	96.9%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Out 10/6/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130605-1.b/0605a017.d ARI ID: WS56J
Data file 2: /chem3/pid1.i/20130605-2.b/0605a017.d Client ID: A2-F64-S-6
Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 21:42
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.854	0.003	2791	35757	94.3	TFT(Surr)
15.383	0.002	1899	16249	95.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	487	0.001
8015C 2MP-TMB (4.19 to 16.20)	723723	488	0.001
AK101 nC6-nC10 (4.69 to 15.10)	582885	488	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	487	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.862	0.003	3024	93.8	TFT(Surr)
15.390	0.002	7003	96.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.004	49	0.25N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130605-1.b/0605a017.d
Lab Smp Id: WS56J Client Smp ID: A2-F64-S-6
Inj Date : 05-JUN-2013 21:42
Operator : LH Inst ID: pid1.i
Smp Info : WS56J
Misc Info : 13-11841
Comment :
Method : /chem3/pid1.i/20130605-1.b/FID.m
Meth Date : 05-Jun-2013 15:10 lanih Quant Type: ESTD
Cal Date : 05-JUN-2013 14:37 Cal File: 0605a002.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

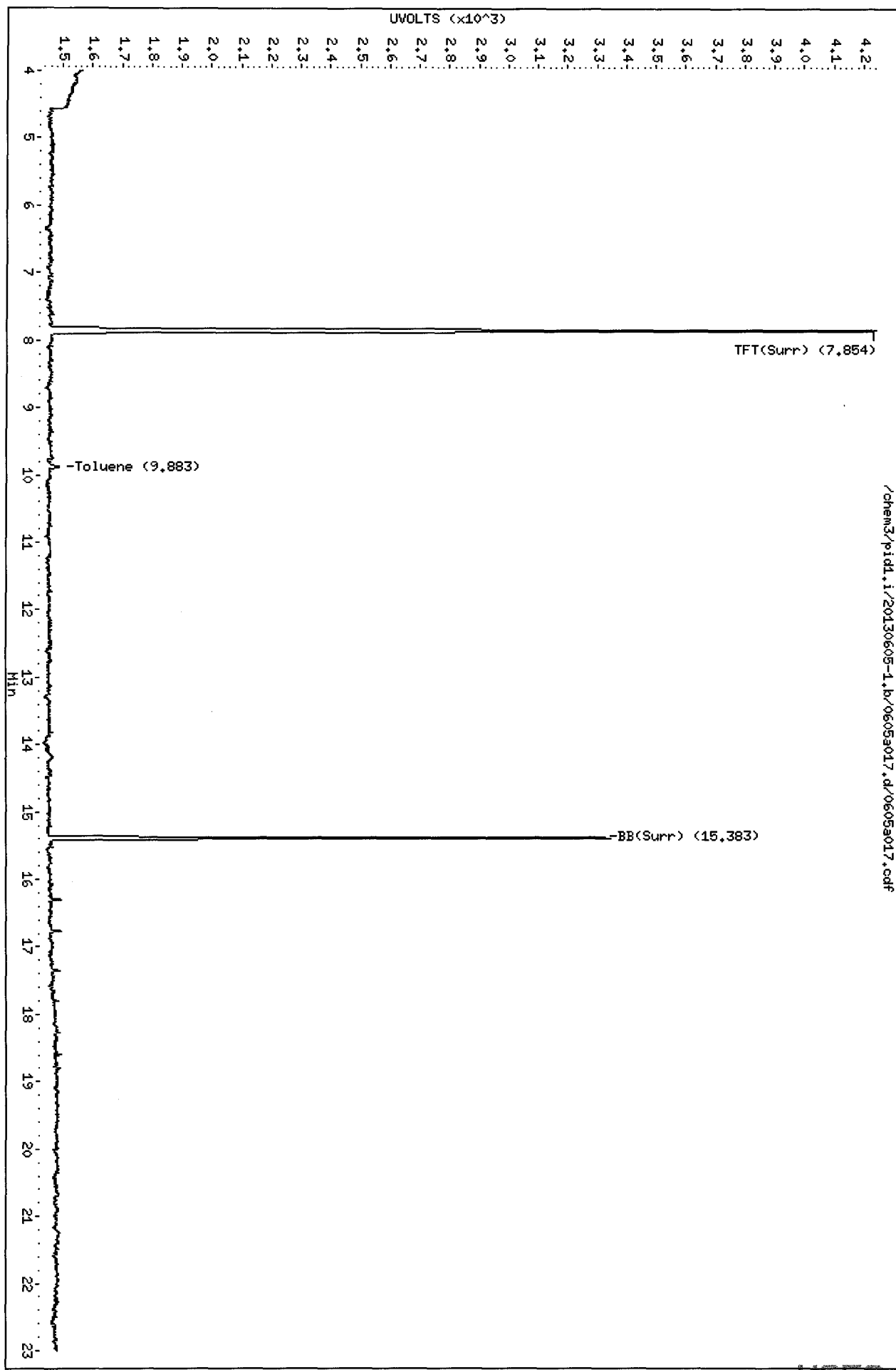
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	CONCENTRATIONS						
	RT	EXP RT	DLT RT	RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL (ug/Kg)
=====	==	=====	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.854	7.851	0.003		2791	94.3207	94.32
12 Toluene	9.883	9.874	0.009		487	0.33583	0.336
\$ 18 BB(Surr)	15.383	15.381	0.002		1899	95.5686	95.57

Data File: /chem3/pid1.i/20130605-1.b/0605a017.d
Date: 05-JUN-2013 21:42
Client ID: A2-F64-S-6
Sample Info: MS56J
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

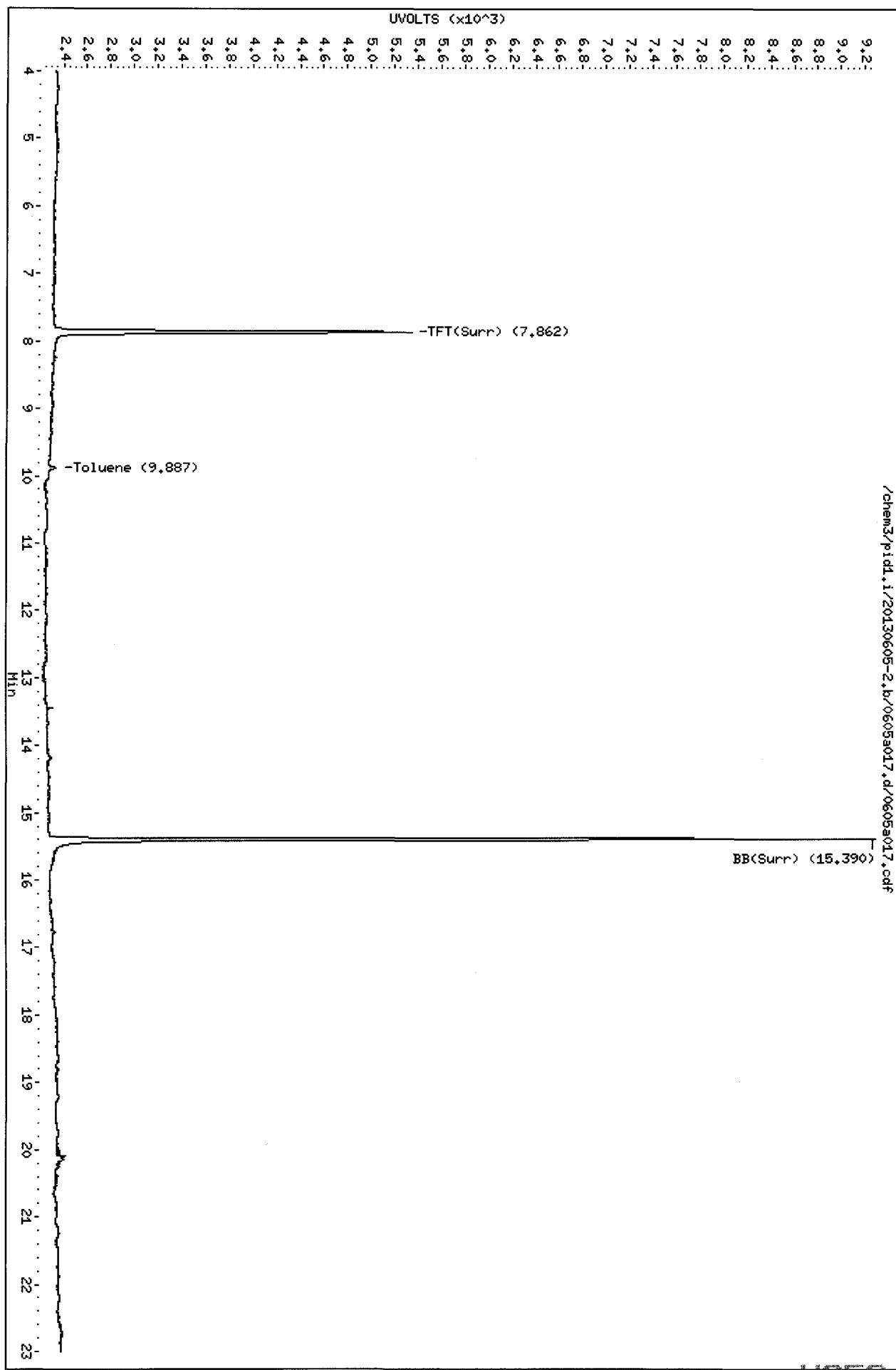


/chem3/pid1.i/20130605-1.b/0605a017.d/0605a017.cdf

MS56 00130

Data File: /chem3/pidd1.i/20130605-2.b/0605a017.d
Date: 05-JUN-2013 21:42
Client ID: A2-F64-S-6
Sample Info: MS56J
Column phase: RTX 502-2 PID

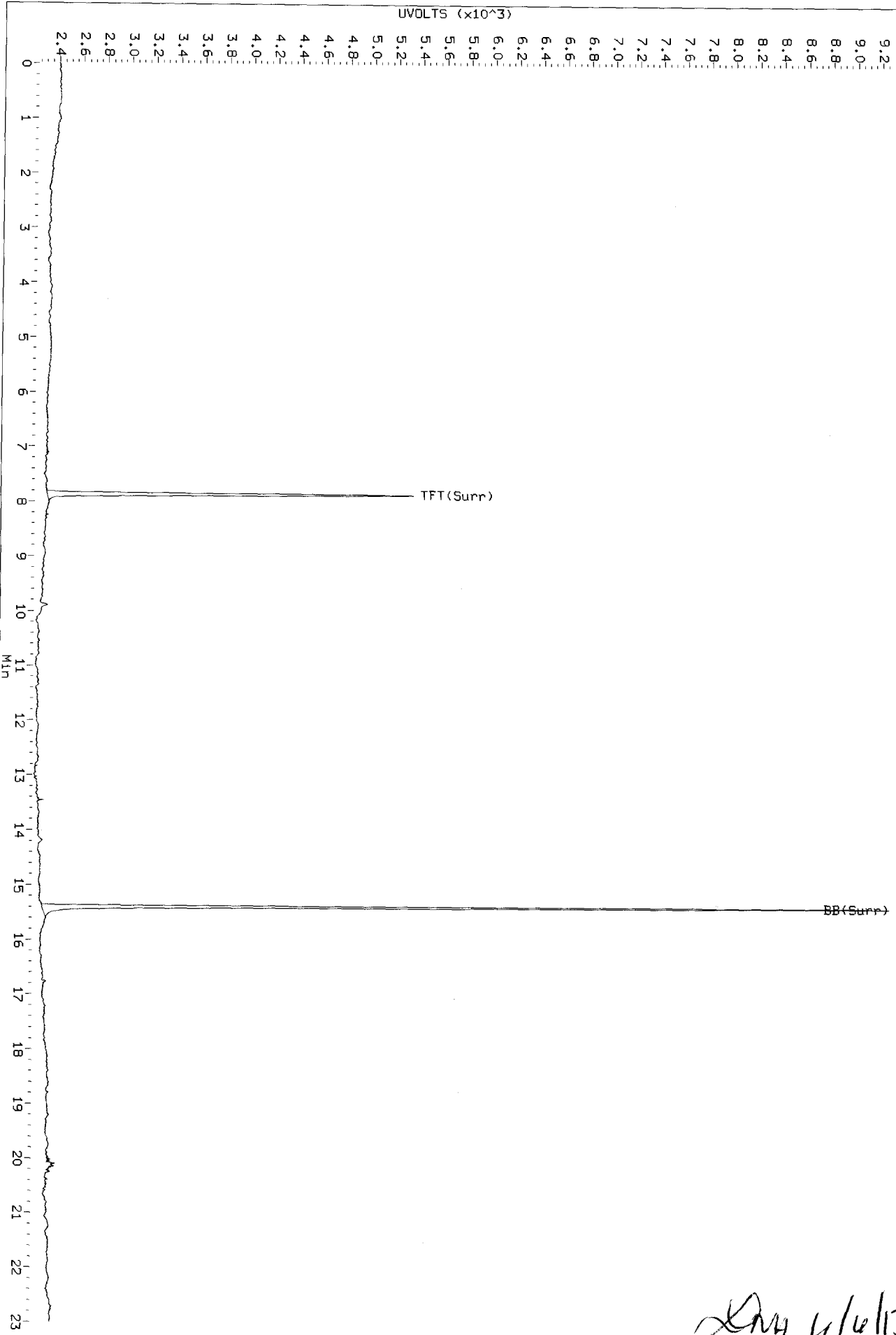
Instrument: pidd.i
Operator: LH
Column diameter: 0.18



00101 0050

Data File: /chem3/pid1.i/20130605-2.b/06053017.d/06053017.cdf
Injection Date: 05-JUN-2013 21:42
Instrument: pid1.1
Client Sample ID: A2-F64-S-6

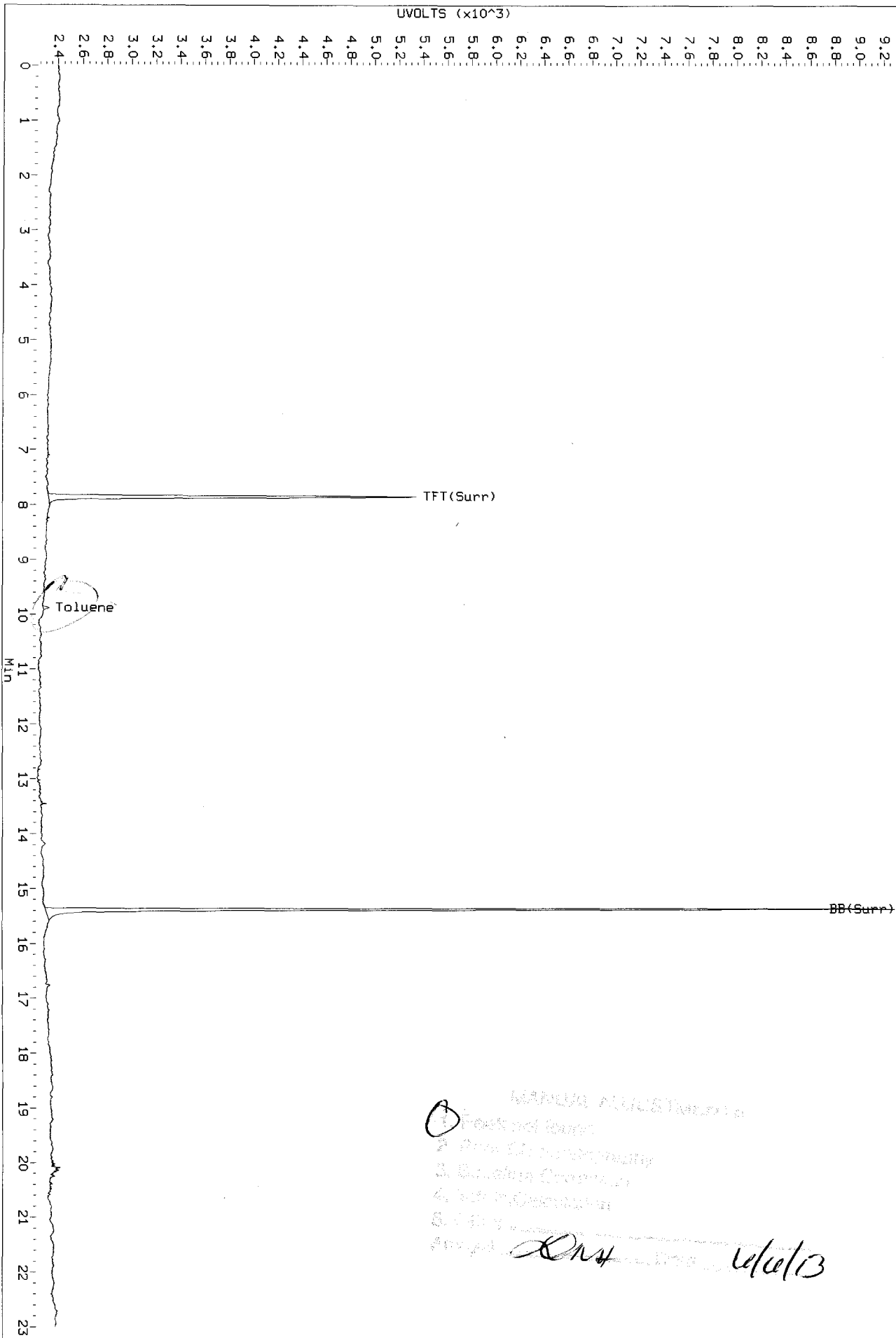
AIA 06053017.cdf: 0.000 to 23.000 Min



Handwritten signature
6/6/13

Data File: /chem3/pid1.1/20130605-2.b/0605a017.d/0605a017.cdf
Injection Date: 05-JUN-2013 21:42
Instrument: pid1.1
Client Sample ID: A2-F64-S-6

AIR 0605a017.cdf: 0.000 to 23.000 MIN



MANUVA ALICESTER
1. Peak not found
2. Peak not identified
3. Benzene
4. Toluene
5. Ethylbenzene
6. Xylene
7. Styrene
8. Propylbenzene
9. n-Propylbenzene
10. Isopropylbenzene
11. p-Toluenesulfonic acid
12. m-Toluenesulfonic acid
13. p-Toluenesulfonamide
14. m-Toluenesulfonamide
15. p-Toluenesulfonamide
16. m-Toluenesulfonamide
17. p-Toluenesulfonamide
18. m-Toluenesulfonamide
19. p-Toluenesulfonamide
20. m-Toluenesulfonamide
21. p-Toluenesulfonamide
22. m-Toluenesulfonamide
23. p-Toluenesulfonamide

Signature: *[Handwritten]* Date: *[Handwritten]*

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS56
Matrix: Soil

QC Report No: WS56-Maul Foster & Alongi, Inc
Project: Former Cashmere Mill Site
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-060513	101%	100%	0
LCS-060513	101%	98.4%	0
LCSD-060513	103%	100%	0
A2-F55-S-6	99.8%	97.1%	0
A2-F56-S-6	101%	99.2%	0
A2-F57-S-6	97.9%	97.4%	0
A2-F58-S-6	99.2%	98.7%	0
A2-F59-S-6	97.4%	96.3%	0
A2-F60-S-6	96.4%	95.7%	0
A2-F61-S-6	94.5%	95.4%	0
A2-F62-S-6	94.8%	96.8%	0
A2-F63-S-6	95.7%	98.1%	0
A2-F64-S-6	93.8%	96.9%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11832 to 13-11841

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-060513

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060513

LIMS ID: 13-11832

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/05/13 15:33

LCSD: 06/05/13 16:01

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS			LCSD			RPD
	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	
Benzene	180	185	97.3%	182	185	98.4%	1.1%
Toluene	1990	1980	101%	1990	1980	101%	0.0%
Ethylbenzene	586	580	101%	578	580	99.7%	1.4%
m,p-Xylene	2120	2120	100%	2080	2120	98.1%	1.9%
o-Xylene	971	960	101%	968	960	101%	0.3%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	101%	103%
Bromobenzene	98.4%	100%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AGM-1 6/16/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a004.d ARI ID: LCS0605
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a004.d Client ID:
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 15:33
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	-0.001	3014	42984	101.9	TFT(Surr)
15.380	-0.001	1939	17198	97.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	349030	0.975 M
8015C 2MP-TMB (4.19 to 16.20)	723723	708936	0.980 M
AK101 nC6-nC10 (4.69 to 15.10)	582885	572805	0.983 M
NWTPHG Tol-Nap (9.77 to 18.91)	375093	368110	0.981 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.859	0.000	3265	101.3	TFT(Surr)
15.388	-0.001	7112	98.4	BB(Surr)

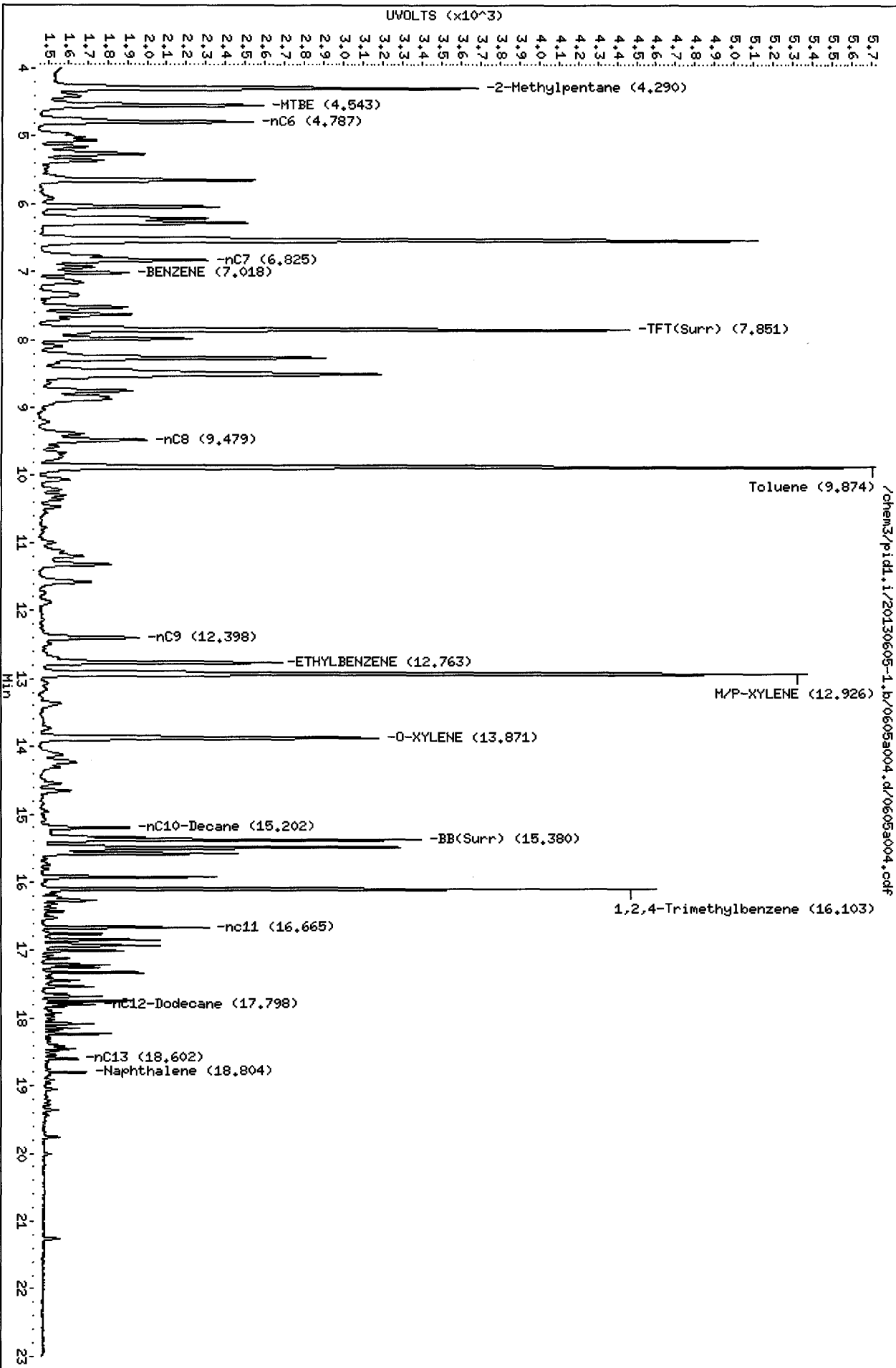
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.025	0.000	807	3.59	Benzene
9.882	0.000	7879	39.77	Toluene
12.772	0.000	1912	11.71	Ethylbenzene
12.935	0.002	7641	42.47	M/P-Xylene
13.880	0.000	2757	19.42	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130605-1.b/0605a004.d
Date: 05-JUN-2013 15:33
Client ID:
Sample Info: LCS0605
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

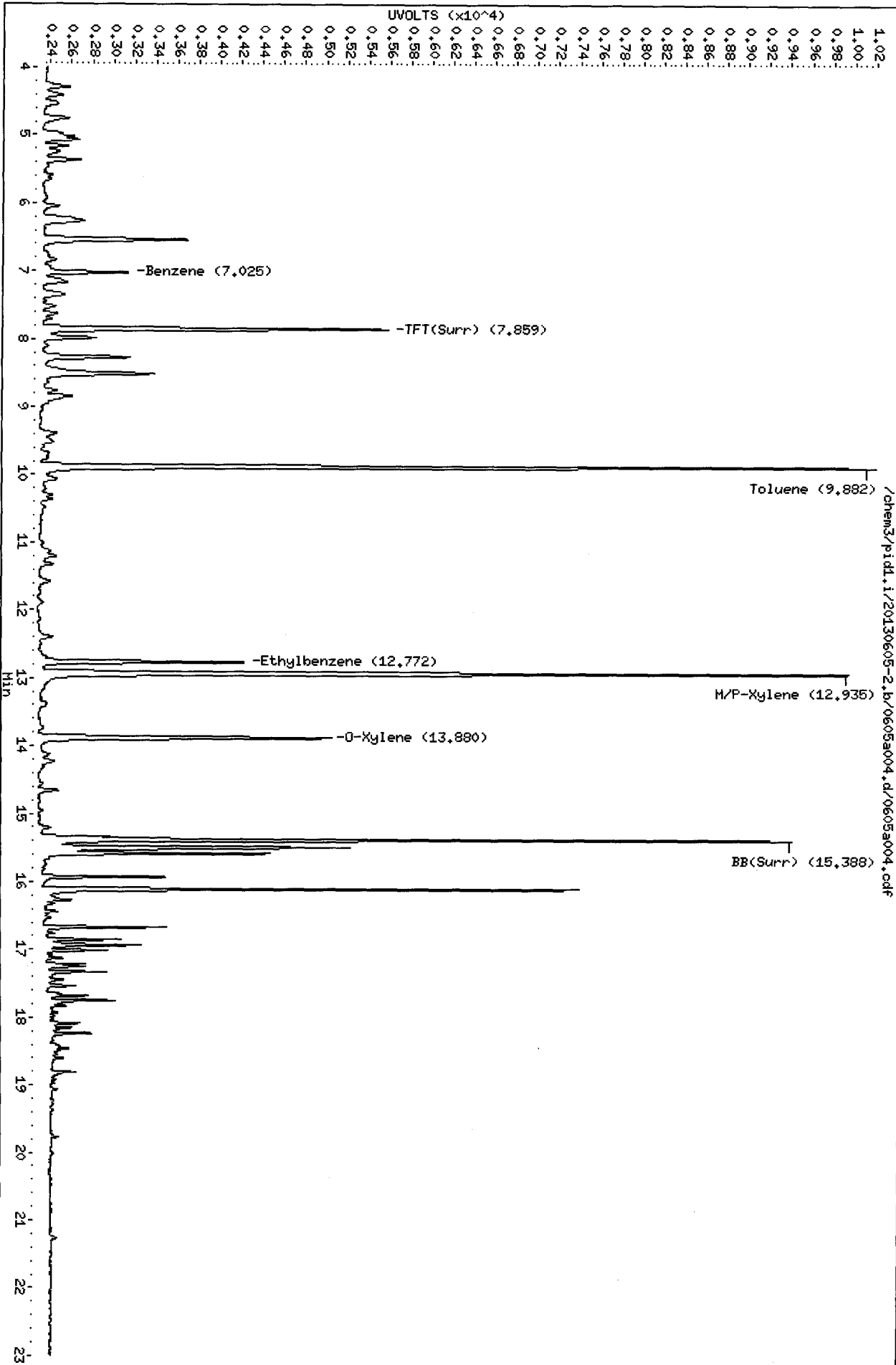


Data File: /chem3/pid1.i/20130605-2.b/0605a004.d
Date: 05-JUN-2013 15:33

Client ID:
Sample Info: LCS0605

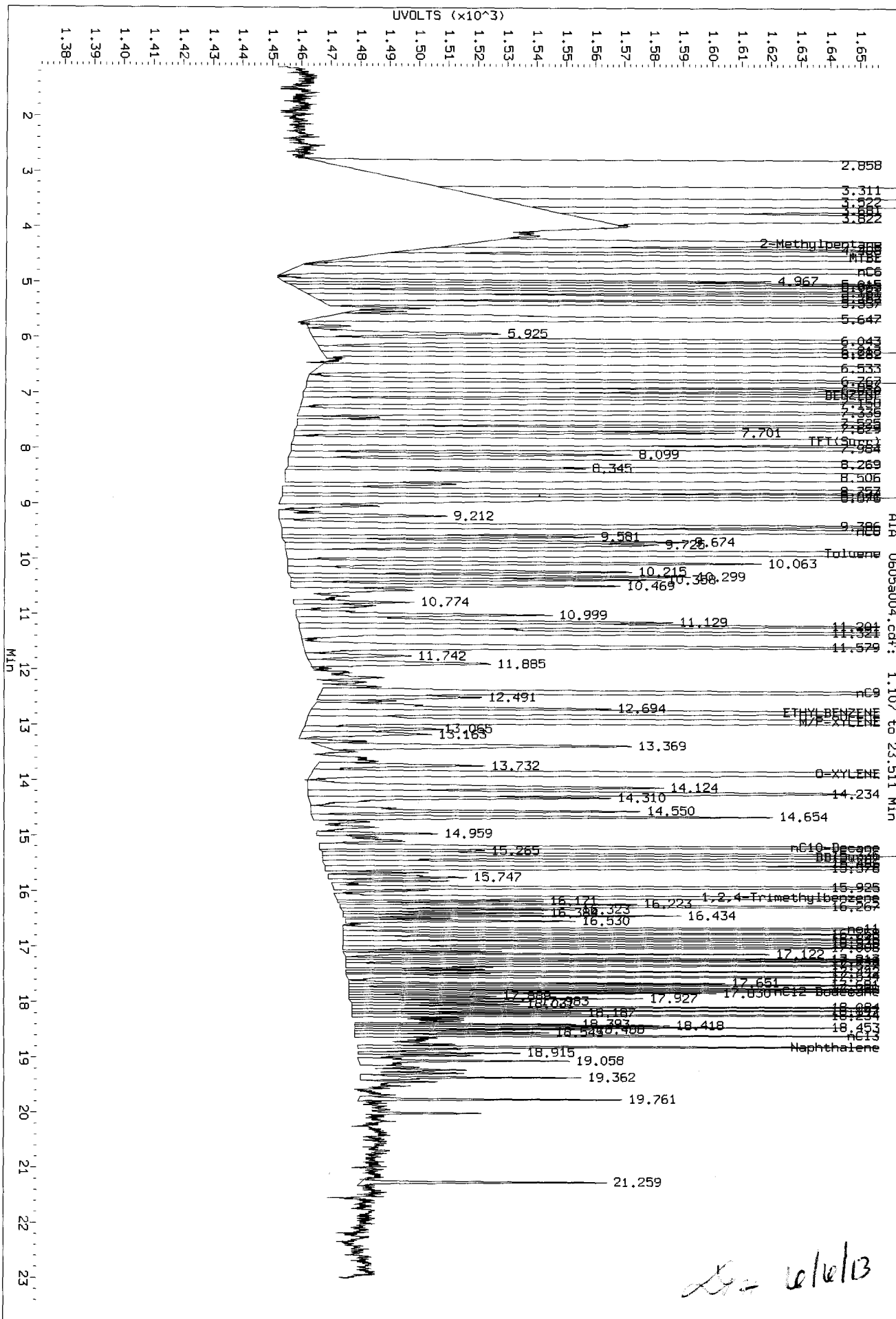
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



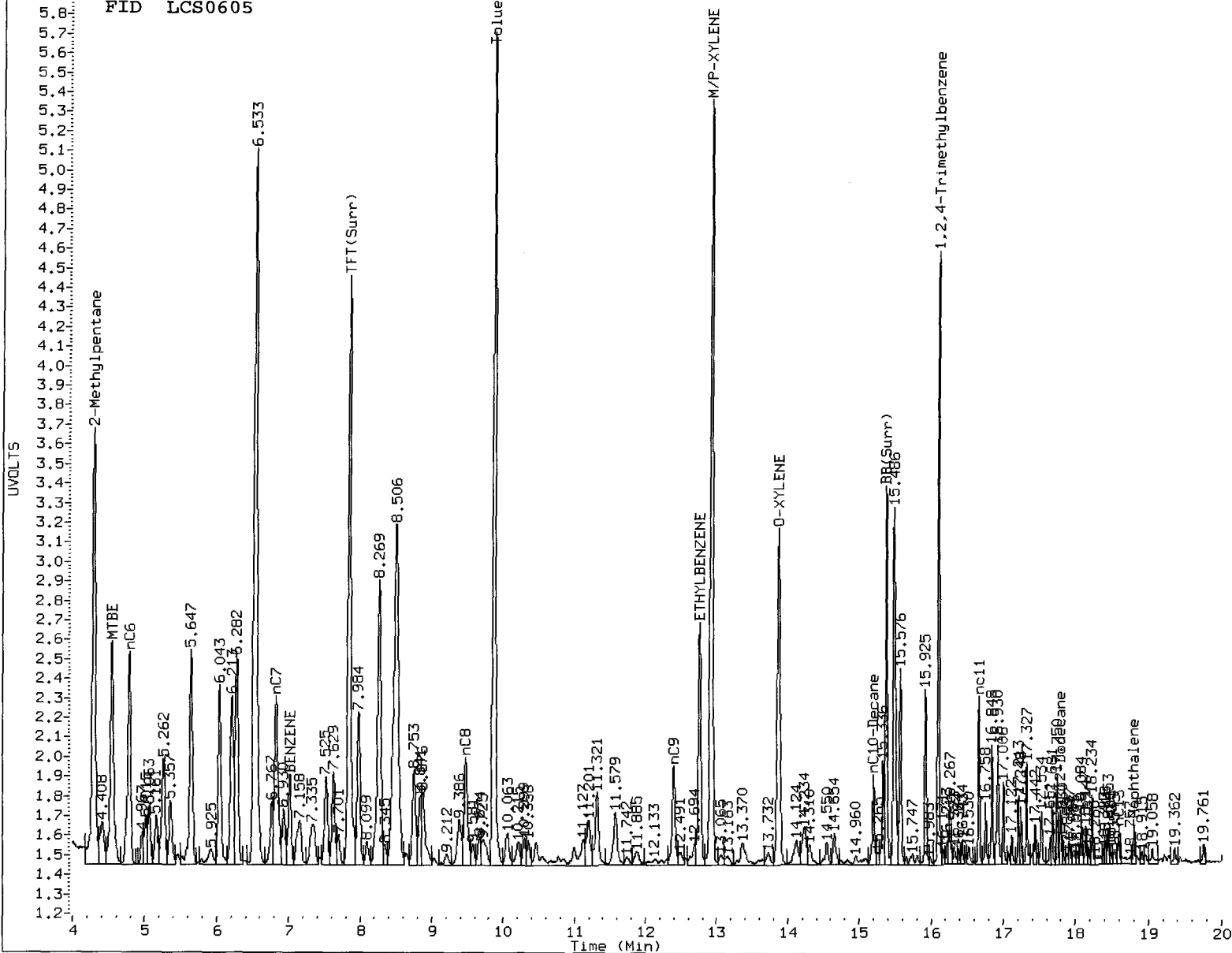
00138 4956

Data File: /chem3/pid1.1/20130605-1.b/06055a004.d/06055a004.cdf
 Injection Date: 05-JUN-2013 15:33
 Instrument: pid1.1
 Client Sample ID:



Handwritten signature and date: 25-6/16/13

FID LCS0605



MANUAL INTEGRATION

- ① Baseline correction
- ② Poor chromatography
- ③ Peak not found
- ④ Totals calculation

5. Other _____

Analyst JMH

Date: 10/21/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Lawrence

Data file 1: /chem3/pid1.i/20130605-1.b/0605a005.d ARI ID: LCSD0605
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a005.d Client ID:
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 16:01
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	-0.001	3030	42335	102.4	TFT(Surr)
15.380	-0.001	1976	17382	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	304449	0.850 M
8015C 2MP-TMB (4.19 to 16.20)	723723	572114	0.791 M
AK101 nC6-nC10 (4.69 to 15.10)	582885	452078	0.776 M
NWTPHG Tol-Nap (9.77 to 18.91)	375093	320383	0.854 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.000	3332	103.4	TFT(Surr)
15.388	0.000	7260	100.4	BB(Surr)

SW8021 (PID)

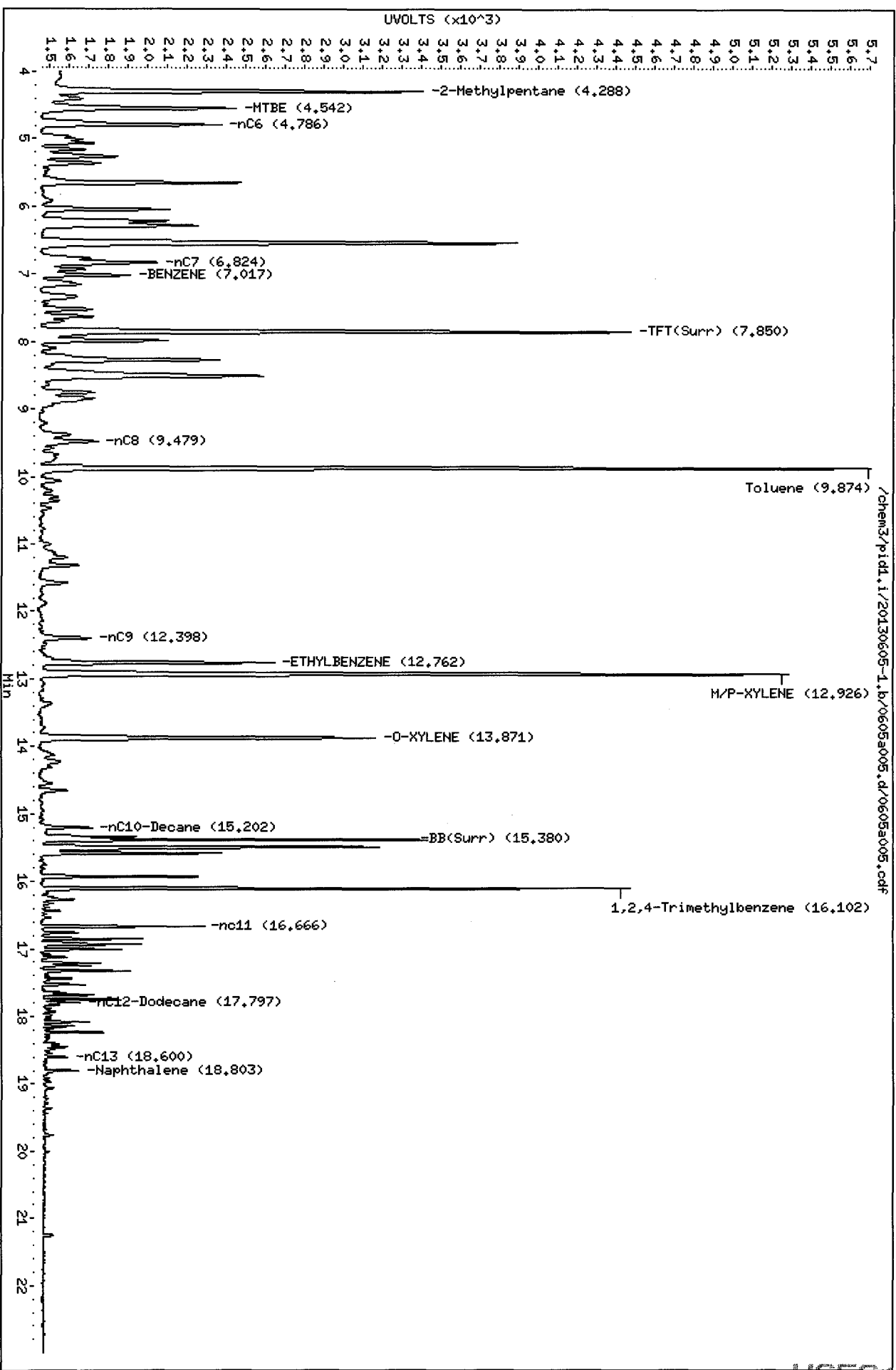
RT	Shift	Response	Amount	Compound
7.025	0.000	816	3.63	Benzene
9.883	0.000	7891	39.83	Toluene
12.772	0.000	1888	11.56	Ethylbenzene
12.935	0.002	7483	41.59	M/P-Xylene
13.881	0.001	2750	19.37	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidl.1/20130605-1.b/0605a005.d
Date: 05-JUN-2013 16:01
Client ID:
Sample Info: LCS00605
Column phase: RTX 502-2 FID

Instrument: pidl.1
Operator: LH
Column diameter: 0.18

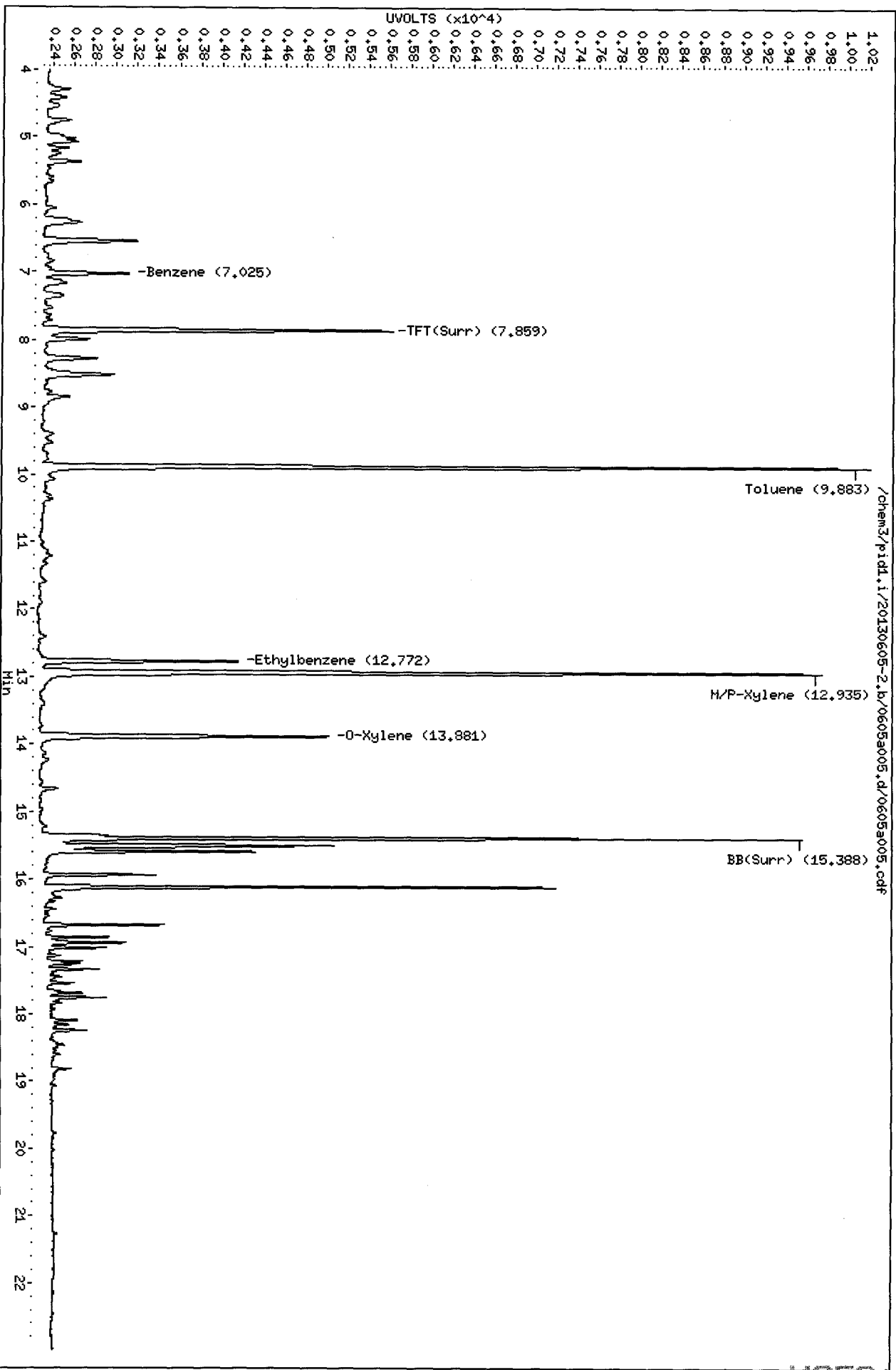


W556.00142

Data File: /chem3/pid1.i/20130605-2.lb/0605a005.d
Date: 05-JUN-2013 16:01
Client ID:
Sample Info: LCSJ0605

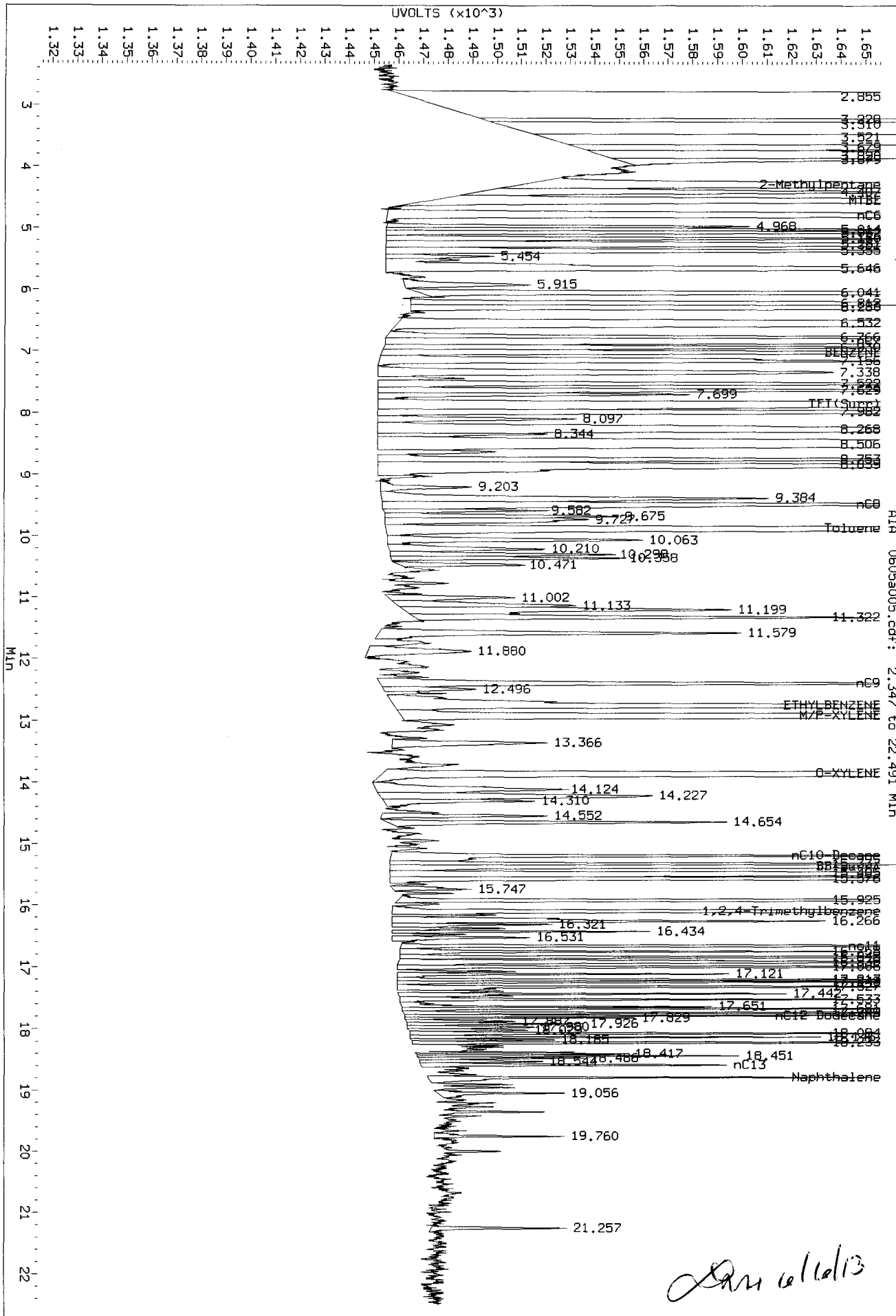
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



07100 00140

Data File: /chem3/gtd1_1/20130605-1_b/0605a005.d/0605a005.cdf
 Injection Date: 05-JUN-2013 16:01
 Instrument: pid1.1
 Client Sample ID:



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: MB-060513

METHOD BLANK

Lab Sample ID: MB-060513

LIMS ID: 13-11832

Matrix: Soil

Data Release Authorized: 

Reported: 06/12/13

QC Report No: WS56-Maul Foster & Alongi, Inc

Project: Former Cashmere Mill Site

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 06/05/13 16:30

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	100%

BETX values reported in µg/kg (ppb)

Analytical Resources Inc.
 BETX/Gas Quantitation Report

attn 6/6/13

Data file 1: /chem3/pid1.i/20130605-1.b/0605a006.d ARI ID: MB0605
 Data file 2: /chem3/pid1.i/20130605-2.b/0605a006.d Client ID:
 Method: /chem3/pid1.i/20130605-2.b/PIDB.m Injection Date: 05-JUN-2013 16:30
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.001	2938	37579	99.3	TFT(Surr) ✓
15.381	0.000	1972	16510	99.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1958	0.005
8015C 2MP-TMB (4.19 to 16.20)	723723	2374	0.003
AK101 nC6-nC10 (4.69 to 15.10)	582885	1781	0.003
NWTPHG Tol-Nap (9.77 to 18.91)	375093	1958	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.000	3245	100.7	TFT(Surr) ✓
15.389	0.000	7258	100.4	BB(Surr)

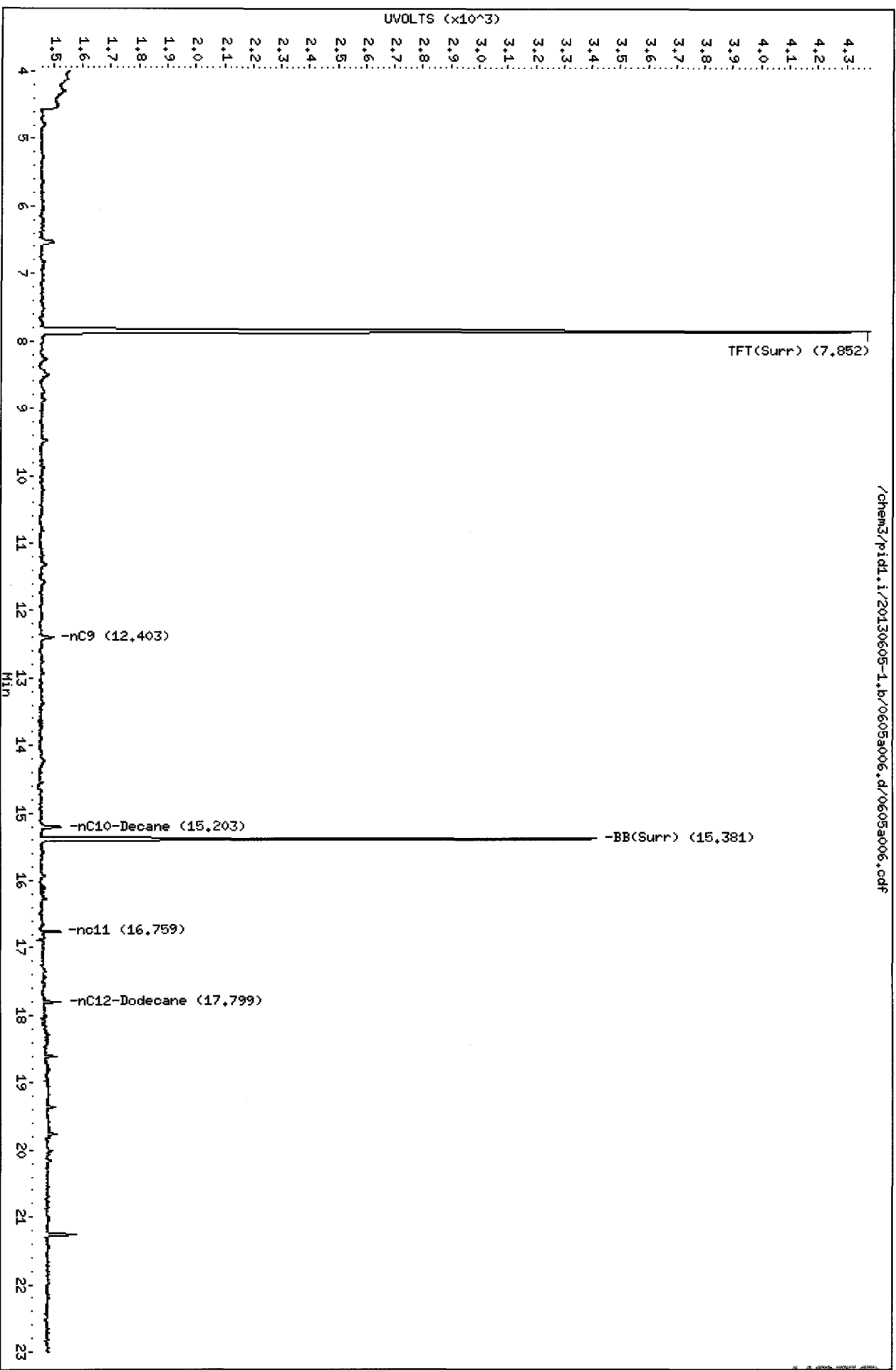
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130605-1.b/0605a006.d
Date : 05-JUN-2013 16:30
Client ID:
Sample Info: HB0605
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



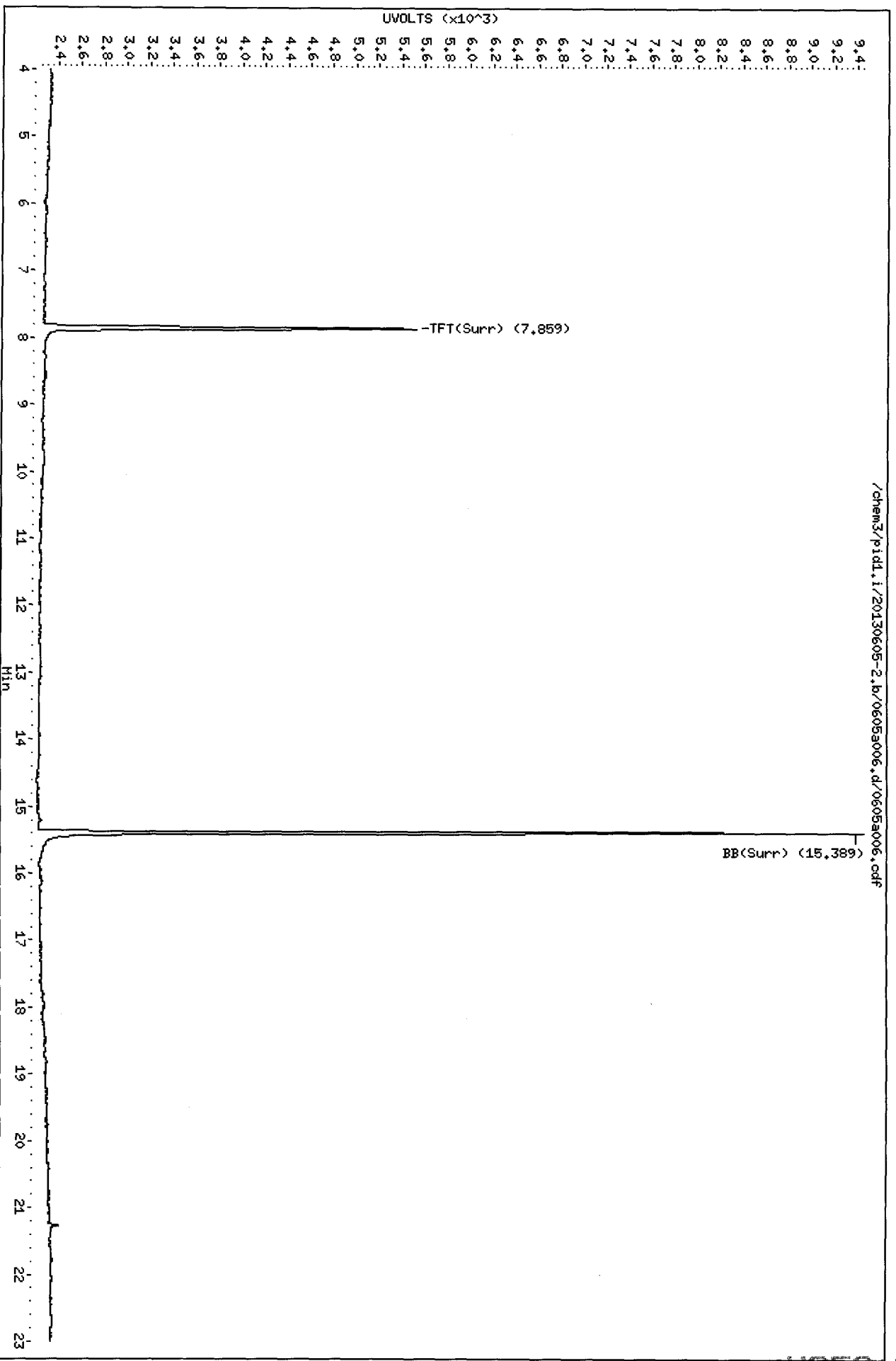
/chem3/pid1.i/20130605-1.b/0605a006.d/0605a006.cdf

07100 . 00556

Data File: /chem3/pid1.i/20130605-2.b/0605a006.d
Date: 05-JUN-2013 16:30
Client ID:
Sample Info: MB0605

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



07100 00140



Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 10, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01/03
ARI Job No.: WP19 - Revised

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), email instructions, sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted ten water samples and ten soil samples on May 8, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for SVOCs, SIM PAHs, Pentachlorophenol, NWTPH-Dx, and NWTPH-Gx/BTEX, as requested.

One-liter amber glass jars were submitted for water samples **TP-28-050713**, **TP-29-050713**, and **TP-30-050713**. Five-hundred milliliters is required per analysis for organic extraction. Two organic extractions were assigned per one-liter amber glass jar. Method required bottle rinses were assigned to the SVOC extractions, except for the SVOC extraction of sample **TP-30-050713**. Due to high particulates, all organic extraction volume for sample **TP-30-050713** was pipetted from the top of the one-liter amber glass jars and therefore method required bottle rinses were not performed. Method required bottle rinses were performed on extraction volumes for Pentachlorophenol. Method required bottle rinses were not performed on extraction volumes for NWTPH-Dx and SIM PAHs.

The water SVOC continuing calibration fell outside the control limits low for Benzyl Alcohol, 2,2'-Oxybis(1-Chloropropane), and Di-n-Butylphthalate. All detected results associated with this calibration have been flagged with a "Q" qualifier. No further corrective action was taken.

The water SVOC surrogate percent recovery of d14-p-Terphenyl fell outside the control limits low for sample **TP-28-050713**. All other percent recoveries were within control limits. No corrective action was taken.

The soil SVOC continuing calibration fell outside the control limits low for Benzoic Acid. All detected results associated with this calibration have been flagged with a "Q" qualifier. No further corrective action was taken.

Diethylphthalate was present in the soil SVOC method blank at a level that was greater than ½ the reporting limit. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

Naphthalene was present in the SIM PAH method blank at a level that was greater than the reporting limit. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

The water BTEX surrogate percent recoveries of Trifluorotoluene and Bromobenzene, and the NWTPH-Gx surrogate percent recovery of Bromobenzene fell outside the control limits low for sample **TP-37-050713**. The sample was re-analyzed with comparable surrogate percent recoveries. Only the initial analysis data have been reported for this sample. No further corrective action was taken.

The soil NWTPH-GX/BTEX LCSD percent recovery of o-Xylene fell outside the control limits low. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a white rectangular area.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WP04 19
RSC

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WP19	Turn-around Requested: RUSH - 24-HOUR	Page: 1 of 2
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAULFOSTER.COM	No. of Coolers:	Cooler Temps:

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested				Notes/Comments
					TPH-DX BY NWTPH	SVOC BY 8870	PAHs BY 8870-SM	TPH-TA CHLOROPHENOLS BY 8041	
TP-28-050713	05/07/13	0900	W		X	X	X	X	
TP-29-050713		1130	W		X	X	X	X	
TP-30-050713		1000	W		X	X	X	X	
TP-28-3A-050713		0830	S		X	X			
TP-28-6A-050713		0845	S		X	X			
TP-28-9A-050713		0850	S		X	X			
TP-29-3A-050713		1100	S		X	X			
TP-29-6A-050713		1110	S		X	X			
TP-29-9A-050713		1120	S		X	X			
TP-30-3A-050713		0930	S		X	X			

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindsey Crosby</i>	Received by: (Signature) <i>A. Volgardsen</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/7/13 1730	Date & Time: 5/8/13 1030	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested: 24-Hour - RUSH	Page: 2 of 2
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAULFOSTER.COM	No. of Coolers:	Cooler Temps:
Client Project Name: CASHMEER	Analysis Requested	
Client Project #: 0779-02-01/03	Notes/Comments	
Samplers: LINDSEY CROSBY		

Sample ID	Date	Time	Matrix	No Containers	TPH-DX NUPH	SVOC SATO	PAHs SATO-SIM	TPH-GX NUPH	BTEX SOTI									
TP-30-6R-050713	5/07/13	0940	S		X	X												
TP-30-9R-050713		0950	S		X	X												

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: A Volgardsen	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/7/13 1730	Date & Time: 5/8/13 1030	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by Fed-Ex (UPS) Courier Hand Delivered Other _____

Assigned ARI Job No. WP19

Tracking No. K0466846708, K0466846717
K0466846717

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.)? YES NO

Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry) 7.1 6.7 10.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by AV Date: 5/8/13 Time: 1030

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI (NA)

Was Sample Split by ARI (NA) YES Date/Time _____ Equipment _____ Split by: _____

Samples Logged by: AV Date: 5/8/13 Time: 1207

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:
TP-30 - 050713 one 1-Lamber received broken, all volume lost for broken bottle.
Samples 31-37 for both soils and waters not on the C.O.C
TP-32 = 1Lg
TP-34 = 1pb

By: AV Date: 5/8/13

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

WP19 00005

Sample ID Cross Reference Report



ARI Job No: WP19
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01/03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. TP-28-050713	WP19A	13-9940	Water	05/07/13 09:00	05/08/13 10:30
2. TP-29-050713	WP19B	13-9941	Water	05/07/13 11:30	05/08/13 10:30
3. TP-30-050713	WP19C	13-9942	Water	05/07/13 10:00	05/08/13 10:30
4. TP-31-050713	WP19D	13-9943	Water	05/07/13 14:40	05/08/13 10:30
5. TP-32-050713	WP19E	13-9944	Water	05/07/13 14:40	05/08/13 10:30
6. TP-33-050713	WP19F	13-9945	Water	05/07/13 15:00	05/08/13 10:30
7. TP-34-050713	WP19G	13-9946	Water	05/07/13 15:40	05/08/13 10:30
8. TP-35-050713	WP19H	13-9947	Water	05/07/13 15:50	05/08/13 10:30
9. TP-36-050713	WP19I	13-9948	Water	05/07/13 16:30	05/08/13 10:30
10. TP-37-050713	WP19J	13-9949	Water	05/07/13 17:00	05/08/13 10:30
11. TP-28-050713	WP19K	13-9950	Soil	05/07/13 08:30	05/08/13 10:30
12. TP-29-050713	WP19L	13-9951	Soil	05/07/13 11:00	05/08/13 10:30
13. TP-30-050713	WP19M	13-9952	Soil	05/07/13 09:30	05/08/13 10:30
14. TP-31-050713	WP19N	13-9953	Soil	05/07/13 14:40	05/08/13 10:30
15. TP-32-050713	WP19O	13-9954	Soil	05/07/13 14:40	05/08/13 10:30
16. TP-33-050713	WP19P	13-9955	Soil	05/07/13 15:00	05/08/13 10:30
17. TP-34-050713	WP19Q	13-9956	Soil	05/07/13 15:40	05/08/13 10:30
18. TP-35-050713	WP19R	13-9957	Soil	05/07/13 15:50	05/08/13 10:30
19. TP-36-050713	WP19S	13-9958	Soil	05/07/13 16:30	05/08/13 10:30
20. TP-37-050713	WP19T	13-9959	Soil	05/07/13 17:00	05/08/13 10:30

Subject: Petroleum Contaminated Soils Area 2

From: "Tony Silva" <tsilva@maulfoster.com>

Date: 5/8/2013 10:15 AM

To: "Cheronne Oreiro" <cheronneo@arilabs.com>

CC: "Lindsey Crosby" <lcrosby@maulfoster.com>, "Justin Clary" <jclary@maulfoster.com>

Cheronne,

Recall that Lindsey was not able to submit a complete chain of custody with samples you received today.

Please analyze the samples per the following.

Test Pits:

- TP-31
- TP-32
- TP-33
- TP-34
- TP-35
- TP-36
- TP-37

From: Tony Silva

Sent: Tuesday, May 07, 2013 6:25 AM

To: Lindsey Crosby

Cc: Justin Clary

Subject: PCS Area 2 Bottles

In Petroleum Contaminated Soil (PCS) Area 2

Analysis For Soil and Water Includes:

- Gx = Gasoline by Method NWTPH-Gx
- BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes by Method 8021.
- Dx = Diesel and Heavy Oil by Method NWTPH-Dx with Silica Gel clean up.

Soil Jars:

- Gx and BTEX = 5035, 4 vials (2 methanol, 2 NaSO₄ preservatives).
- Dx = 8-oz soil jar.

Water Bottles:

- Gx and BTEX = 2 VOC vials (HCL acid preservative).
- Dx = 500 mL amber.

TONY SILVA RG, IG | MAUL FOSTER & A LONGI, INC.

d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 | www.maulfoster.com

2001 NW 19th Avenue, Suite 200, Portland, OR 97209

Attachments

Sketch 05.07.2013 Characterization.pdf

113 KB

Subject: Treated Posts Area

From: "Tony Silva" <tsilva@maulfoster.com>

Date: 5/8/2013 10:16 AM

To: "Cheronne Oreiro" <cheronneo@arilabs.com>

CC: "Lindsey Crosby" <lcrosby@maulfoster.com>, "Justin Clary" <jclary@maulfoster.com>

Cheronne,

Recall that Lindsey was not able to submit a complete chain of custody with samples you received today.

Please analyze the samples per the following.

*** The soil samples need to be combined per test pit before sampling.

For example, combine soils at 3, 6, and 9 feet from TP-28 into one soil sample for analysis.

As you suggested, keeping some soils in the jars as a discrete sample is a good thing if we want to do some follow up analysis from an individual depth.

Test Pits:

- TP-28
- TP-29
- TP-30

From: Tony Silva

Sent: Tuesday, May 07, 2013 6:30 AM

To: Lindsey Crosby

Cc: Justin Clary

Subject: Treated Posts Area

Treated Posts Area

It takes three different methods to get the SVOCs for water with the lower method reporting limit.

Analysis Includes:

- Dx = Diesel and Heavy Oil by Method NWTPH-Dx with Silica Gel clean up.
- SVOCs = Semi Volatile Organic Compounds by Method 8270 (and more methods for water).
- Note below that the water samples are done by 3 different methods for SVOCs in order to meet MTCA criteria.

Soil Jars:

- Dx = 8-oz soil jar; Method NWTPH-Dx with Silica Gel clean up.
- SVOCs = 8-oz soil jar; Method 8270.

Water Bottles:

- Dx = 500 mL amber; Method NWTPH-Dx with Silica Gel clean up.
- SVOCs = 500 mL amber; Method 8270 (for all items not already covered by other methods).
- PAHS Low Level = 500 mL amber; Method 8270-SIM.
- Pentachlorophenol Low Level = 500 mL amber; Method 8041.

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Attachments.

Sketch 05.07.2013 Characterization.pdf

113 KB

Subject: Broken Bottle - Water Analysis
From: "Tony Silva" <tsilva@maulfoster.com>
Date: 5/8/2013 12:44 PM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>

Cheronne,

It is my understanding that we had a 1 liter amber glass bottle break for Test Pit TP-30 (near the post area) for samples you received today.

You indicated we have enough sample volume remaining to perform 2 of the 4 methods listed below for this one water sample from Test Pit TP-30 and that we need to pick which two methods we want to run for this water sample.

Will you please run the water sample analysis for:

- The full list of SVOCs via 8270.
- NWTPH-Dx.

Thank you.

Water Analysis:

- Dx
- SVOCs
- PAHS Low Level
- Pentachlorophenol Low Level

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Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**




Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 1 of 2

Sample ID: TP-28-050713
SAMPLE

Lab Sample ID: WP19A
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: 
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 13:42
 Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	1.4
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	Acenaphthene	1.0	1.2
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 2 of 2

Sample ID: TP-28-050713
SAMPLE

Lab Sample ID: WP19A
 LIMS ID: 13-9940
 Matrix: Water
 Date Analyzed: 05/09/13 13:42

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	1.4
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	55.6%
d14-p-Terphenyl	24.3%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	67.2%	2-Fluorophenol	63.2%
2,4,6-Tribromophenol	65.9%	d4-2-Chlorophenol	66.7%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 1 of 2

Sample ID: TP-29-050713
SAMPLE

Lab Sample ID: WP19B
 LIMS ID: 13-9941
 Matrix: Water
 Data Release Authorized: *B*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 14:16
 Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	1.0
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	Acenaphthene	1.0	3.1
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	Dibenzofuran	1.0	1.7
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
Page 2 of 2

Sample ID: TP-29-050713
SAMPLE

Lab Sample ID: WP19B
LIMS ID: 13-9941
Matrix: Water
Date Analyzed: 05/09/13 14:16

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	4.2
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	14
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	2.0
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	4.0
129-00-0	Pyrene	1.0	3.0
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	2.9
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.0%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	39.5%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	66.9%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	67.2%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 1 of 2

Sample ID: TP-30-050713
SAMPLE

Lab Sample ID: WP19C
 LIMS ID: 13-9942
 Matrix: Water
 Data Release Authorized: *AS*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 14:50
 Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 2 of 2

Sample ID: TP-30-050713
SAMPLE

Lab Sample ID: WP19C
 LIMS ID: 13-9942
 Matrix: Water
 Date Analyzed: 05/09/13 14:50

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	57.6%
d14-p-Terphenyl	38.2%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	59.5%	2-Fluorophenol	55.7%
d4-2-Chlorophenol	61.1%		

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-050813	64.0%	61.2%	85.6%	57.2%	62.7%	57.9%	58.9%	64.0%	0	
LCS-050813	65.2%	70.8%	80.8%	54.8%	65.1%	53.6%	81.9%	62.9%	0	
TP-28-050713	66.4%	55.6%	24.3%*	59.6%	67.2%	63.2%	65.9%	66.7%	1	
TP-29-050713	68.0%	63.6%	39.5%	60.8%	66.9%	57.9%	78.4%	67.2%	0	
TP-30-050713	60.0%	57.6%	38.2%	55.6%	59.5%	55.7%	NA	61.1%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(50-100)	(34-101)
(FBP) = 2-Fluorobiphenyl	(51-100)	(38-100)
(TPH) = d14-p-Terphenyl	(54-117)	(27-122)
(DCB) = d4-1,2-Dichlorobenzene	(40-100)	(27-100)
(PHL) = d5-Phenol	(15-121)	(16-106)
(2FP) = 2-Fluorophenol	(33-100)	(23-100)
(TBP) = 2,4,6-Tribromophenol	(46-125)	(31-128)
(2CP) = d4-2-Chlorophenol	(46-102)	(33-100)

Prep Method: SW3520C
Log Number Range: 13-9940 to 13-9942

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 2



Sample ID: LCS-050813
LAB CONTROL

Lab Sample ID: LCS-050813
LIMS ID: 13-9940
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03
Date Sampled: 05/07/13
Date Received: 05/08/13

Date Extracted: 05/08/13
Date Analyzed: 05/09/13 13:07
Instrument/Analyst: NT6/JZ
GPC Cleanup: NO

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Phenol	16.5	25.0	66.0%
Bis-(2-Chloroethyl) Ether	14.6	25.0	58.4%
2-Chlorophenol	16.2	25.0	64.8%
1,3-Dichlorobenzene	11.8	25.0	47.2%
1,4-Dichlorobenzene	12.5	25.0	50.0%
Benzyl Alcohol	16.1 Q	25.0	64.4%
1,2-Dichlorobenzene	12.5	25.0	50.0%
2-Methylphenol	15.8	25.0	63.2%
2,2'-Oxybis(1-Chloropropane)	13.0 Q	25.0	52.0%
4-Methylphenol	33.6	50.0	67.2%
N-Nitroso-Di-N-Propylamine	14.8	25.0	59.2%
Hexachloroethane	10.7	25.0	42.8%
Nitrobenzene	16.8	25.0	67.2%
Isophorone	16.8	25.0	67.2%
2-Nitrophenol	18.1	25.0	72.4%
2,4-Dimethylphenol	50.8	75.0	67.7%
Benzoic Acid	42.9	138	31.1%
bis(2-Chloroethoxy) Methane	15.2	25.0	60.8%
2,4-Dichlorophenol	54.6	75.0	72.8%
1,2,4-Trichlorobenzene	13.4	25.0	53.6%
Naphthalene	15.6	25.0	62.4%
4-Chloroaniline	104	75.0	139%
Hexachlorobutadiene	11.8	25.0	47.2%
4-Chloro-3-methylphenol	55.5	75.0	74.0%
2-Methylnaphthalene	16.6	25.0	66.4%
Hexachlorocyclopentadiene	32.7	75.0	43.6%
2,4,6-Trichlorophenol	57.2	75.0	76.3%
2,4,5-Trichlorophenol	59.0	75.0	78.7%
2-Chloronaphthalene	20.5	25.0	82.0%
2-Nitroaniline	63.9	75.0	85.2%
Dimethylphthalate	18.2	25.0	72.8%
Acenaphthylene	19.4	25.0	77.6%
3-Nitroaniline	134	75.0	179%
Acenaphthene	18.6	25.0	74.4%
2,4-Dinitrophenol	95.0	138	68.8%
4-Nitrophenol	64.1	75.0	85.5%
Dibenzofuran	20.8	25.0	83.2%
2,6-Dinitrotoluene	59.0	75.0	78.7%
2,4-Dinitrotoluene	57.4	75.0	76.5%
Diethylphthalate	19.6	25.0	78.4%
4-Chlorophenyl-phenylether	18.7	25.0	74.8%
Fluorene	22.1	25.0	88.4%
4-Nitroaniline	71.3	75.0	95.1%

ORGANICS ANALYSIS DATA SHEET
 Semivolatiles by SW8270D GC/MS
 Page 2 of 2



Sample ID: LCS-050813
 LAB CONTROL

Lab Sample ID: LCS-050813
 LIMS ID: 13-9940
 Matrix: Water
 Date Analyzed: 05/09/13 13:07

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

Analyte	Lab Control	Spike Added	Recovery
4,6-Dinitro-2-Methylphenol	100	138	72.5%
N-Nitrosodiphenylamine	17.5	25.0	70.0%
4-Bromophenyl-phenylether	18.0	25.0	72.0%
Hexachlorobenzene	17.1	25.0	68.4%
Pentachlorophenol	56.3	75.0	75.1%
Phenanthrene	19.0	25.0	76.0%
Carbazole	24.0	25.0	96.0%
Anthracene	18.7	25.0	74.8%
Di-n-Butylphthalate	17.2 Q	25.0	68.8%
Fluoranthene	19.1	25.0	76.4%
Pyrene	22.3	25.0	89.2%
Butylbenzylphthalate	19.5	25.0	78.0%
3,3'-Dichlorobenzidine	47.0	75.0	62.7%
Benzo(a)anthracene	20.7	25.0	82.8%
bis(2-Ethylhexyl)phthalate	19.6	25.0	78.4%
Chrysene	19.5	25.0	78.0%
Di-n-Octyl phthalate	19.2	25.0	76.8%
Benzo(a)pyrene	19.0	25.0	76.0%
Indeno(1,2,3-cd)pyrene	20.0	25.0	80.0%
Dibenz(a,h)anthracene	19.4	25.0	77.6%
Benzo(g,h,i)perylene	19.9	25.0	79.6%
1-Methylnaphthalene	16.8	25.0	67.2%
Total Benzofluoranthenes	39.6	50.0	79.2%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	65.1%	2-Fluorophenol	53.6%
2,4,6-Tribromophenol	81.9%	d4-2-Chlorophenol	62.9%

Results reported in µg/L

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
 Page 1 of 2

Sample ID: MB-050813
METHOD BLANK

Lab Sample ID: MB-050813
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized:
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 12:33
 Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ORGANICS ANALYSIS DATA SHEET
 Semivolatiles by SW8270D GC/MS
 Extraction Method: SW3520C
 Page 2 of 2



Sample ID: MB-050813
 METHOD BLANK

Lab Sample ID: MB-050813
 LIMS ID: 13-9940
 Matrix: Water
 Date Analyzed: 05/09/13 12:33

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	85.6%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	62.7%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	58.9%	d4-2-Chlorophenol	64.0%

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130509.b

Instrument: nt6.i Date: 09-MAY-2013 Method: SW846030613.m

INITIAL CAL: 05-MAR-2013

Compound	%RSD or R ²

NO Q-FLAGS	

CONTINUING CAL: 09-MAY-2013


Compound	%D

Benzyl alcohol	-23.0
2,2'-oxybis(1-Chloropropane)	-21.2
Di-n-butylphthalate	-20.5

05/09/13

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: TP-28-050713
SAMPLE

Lab Sample ID: WP19K
 LIMS ID: 13-9950
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 12:59
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.49 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 3.00
 Percent Moisture: 20.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	57	< 57 U
111-44-4	Bis-(2-Chloroethyl) Ether	57	< 57 U
95-57-8	2-Chlorophenol	57	< 57 U
541-73-1	1,3-Dichlorobenzene	57	< 57 U
106-46-7	1,4-Dichlorobenzene	57	< 57 U
100-51-6	Benzyl Alcohol	57	< 57 U
95-50-1	1,2-Dichlorobenzene	57	< 57 U
95-48-7	2-Methylphenol	57	< 57 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	57	< 57 U
106-44-5	4-Methylphenol	57	190
621-64-7	N-Nitroso-Di-N-Propylamine	57	< 57 U
67-72-1	Hexachloroethane	57	< 57 U
98-95-3	Nitrobenzene	57	< 57 U
78-59-1	Isophorone	57	< 57 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	110	< 110 U
65-85-0	Benzoic Acid	1,100	< 1,100 U
111-91-1	bis(2-Chloroethoxy) Methane	57	< 57 U
120-83-2	2,4-Dichlorophenol	570	< 570 U
120-82-1	1,2,4-Trichlorobenzene	57	< 57 U
91-20-3	Naphthalene	57	120
106-47-8	4-Chloroaniline	770	< 770 U
87-68-3	Hexachlorobutadiene	57	< 57 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	57	290
77-47-4	Hexachlorocyclopentadiene	1,100	< 1,100 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	57	< 57 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	57	< 57 U
208-96-8	Acenaphthylene	57	< 57 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	57	150
51-28-5	2,4-Dinitrophenol	2,400	< 2,400 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	57	< 57 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: TP-28-050713
SAMPLE

Lab Sample ID: WP19K
 LIMS ID: 13-9950
 Matrix: Soil
 Date Analyzed: 05/09/13 12:59

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	140	< 140 U
7005-72-3	4-Chlorophenyl-phenylether	57	< 57 U
86-73-7	Fluorene	57	160
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	570	< 570 U
86-30-6	N-Nitrosodiphenylamine	57	< 57 U
101-55-3	4-Bromophenyl-phenylether	57	< 57 U
118-74-1	Hexachlorobenzene	57	< 57 U
87-86-5	Pentachlorophenol	570	< 570 U
85-01-8	Phenanthrene	57	620
86-74-8	Carbazole	57	80
120-12-7	Anthracene	57	77
84-74-2	Di-n-Butylphthalate	57	43 J
206-44-0	Fluoranthene	57	180
129-00-0	Pyrene	57	450
85-68-7	Butylbenzylphthalate	57	< 57 U
91-94-1	3,3'-Dichlorobenzidine	430	< 430 U
56-55-3	Benzo (a) anthracene	57	150
117-81-7	bis (2-Ethylhexyl) phthalate	72	46 J
218-01-9	Chrysene	57	260
117-84-0	Di-n-Octyl phthalate	57	< 57 U
50-32-8	Benzo (a) pyrene	57	57
193-39-5	Indeno (1,2,3-cd) pyrene	57	37 J
53-70-3	Dibenz (a,h) anthracene	57	< 57 U
191-24-2	Benzo (g,h,i) perylene	57	43 J
90-12-0	1-Methylnaphthalene	57	210
TOTBFA	Total Benzofluoranthenes	110	52 J


Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.2%	2-Fluorobiphenyl	69.0%
d14-p-Terphenyl	72.0%	d4-1,2-Dichlorobenzene	65.4%
d5-Phenol	61.2%	2-Fluorophenol	62.8%
2,4,6-Tribromophenol	66.0%	d4-2-Chlorophenol	65.2%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: TP-29-050713
SAMPLE

Lab Sample ID: WP19L
 LIMS ID: 13-9951
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 13:36
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.32 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	33
621-64-7	N-Nitroso-Di-N-Propylamine	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	39	< 39 U
65-85-0	Benzoic Acid	390	< 390 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	260	< 260 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	820	< 820 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: TP-29-050713
SAMPLE

Lab Sample ID: WP19L
 LIMS ID: 13-9951
 Matrix: Soil
 Date Analyzed: 05/09/13 13:36

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	48	< 48 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	190	< 190 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	< 19 U
129-00-0	Pyrene	19	21
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	bis(2-Ethylhexyl)phthalate	24	< 24 U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U
TOTBFA	Total Benzofluoranthenes	39	< 39 U


Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	57.8%
d14-p-Terphenyl	75.0%	d4-1,2-Dichlorobenzene	57.8%
d5-Phenol	59.1%	2-Fluorophenol	58.7%
2,4,6-Tribromophenol	69.3%	d4-2-Chlorophenol	60.8%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: TP-30-050713
SAMPLE

Lab Sample ID: WP19M
 LIMS ID: 13-9952
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 14:20
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.15 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 3.00
 Percent Moisture: 22.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	41 J
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	59	< 59 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	120	< 120 U
65-85-0	Benzoic Acid	1,200	< 1,200 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	590	< 590 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	98
106-47-8	4-Chloroaniline	800	< 800 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	38 J
77-47-4	Hexachlorocyclopentadiene	1,200	< 1,200 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	44 J
51-28-5	2,4-Dinitrophenol	2,500	< 2,500 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	50 J

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 2 of 2

Sample ID: TP-30-050713
SAMPLE

Lab Sample ID: WP19M
 LIMS ID: 13-9952
 Matrix: Soil
 Date Analyzed: 05/09/13 14:20

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	150	< 150 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	36 J
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	590	< 590 U
85-01-8	Phenanthrene	59	160
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	110
129-00-0	Pyrene	59	120
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	440	< 440 U
56-55-3	Benzo (a) anthracene	59	44 J
117-81-7	bis(2-Ethylhexyl)phthalate	74	< 74 U
218-01-9	Chrysene	59	100
117-84-0	Di-n-Octyl phthalate	59	< 59 U
50-32-8	Benzo (a) pyrene	59	44 J
193-39-5	Indeno (1,2,3-cd) pyrene	59	59
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo (g,h,i) perylene	59	68
90-12-0	1-Methylnaphthalene	59	< 59 U
TOTBFA	Total Benzofluoranthenes	120	140

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.6%	2-Fluorobiphenyl	63.0%
d14-p-Terphenyl	68.4%	d4-1,2-Dichlorobenzene	57.0%
d5-Phenol	59.6%	2-Fluorophenol	56.8%
2,4,6-Tribromophenol	64.0%	d4-2-Chlorophenol	60.4%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-050813	56.8%	57.2%	76.8%	59.8%	57.5%	58.8%	63.2%	60.3%	0	
LCS-050813	57.6%	57.4%	68.4%	58.6%	60.5%	59.7%	67.5%	60.4%	0	
TP-28-050713	64.2%	69.0%	72.0%	65.4%	61.2%	62.8%	66.0%	65.2%	0	
TP-29-050713	58.4%	57.8%	75.0%	57.8%	59.1%	58.7%	69.3%	60.8%	0	
TP-30-050713	57.6%	63.0%	68.4%	57.0%	59.6%	56.8%	64.0%	60.4%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(37-100)	(31-100)

Prep Method: SW3546
Log Number Range: 13-9950 to 13-9952

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 1 of 2

Sample ID: LCS-050813
 LAB CONTROL

Lab Sample ID: LCS-050813
 LIMS ID: 13-9950
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 12:22
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.00 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	309	500	61.8%
Bis-(2-Chloroethyl) Ether	295	500	59.0%
2-Chlorophenol	260	500	52.0%
1,3-Dichlorobenzene	281	500	56.2%
1,4-Dichlorobenzene	289	500	57.8%
Benzyl Alcohol	315	500	63.0%
1,2-Dichlorobenzene	291	500	58.2%
2-Methylphenol	260	500	52.0%
2,2'-Oxybis(1-Chloropropane)	304	500	60.8%
4-Methylphenol	530	1000	53.0%
N-Nitroso-Di-N-Propylamine	307	500	61.4%
Hexachloroethane	291	500	58.2%
Nitrobenzene	293	500	58.6%
Isophorone	279	500	55.8%
2-Nitrophenol	308	500	61.6%
2,4-Dimethylphenol	853	1500	56.9%
Benzoic Acid	1040 Q	2750	37.8%
bis(2-Chloroethoxy) Methane	314	500	62.8%
2,4-Dichlorophenol	871	1500	58.1%
1,2,4-Trichlorobenzene	292	500	58.4%
Naphthalene	272	500	54.4%
4-Chloroaniline	697	1500	46.5%
Hexachlorobutadiene	295	500	59.0%
4-Chloro-3-methylphenol	1020	1500	68.0%
2-Methylnaphthalene	292	500	58.4%
Hexachlorocyclopentadiene	723	1500	48.2%
2,4,6-Trichlorophenol	889	1500	59.3%
2,4,5-Trichlorophenol	944	1500	62.9%
2-Chloronaphthalene	297	500	59.4%
2-Nitroaniline	1110	1500	74.0%
Dimethylphthalate	338	500	67.6%
Acenaphthylene	274	500	54.8%
3-Nitroaniline	1030	1500	68.7%
Acenaphthene	282	500	56.4%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
 Page 2 of 2

Sample ID: LCS-050813
 LAB CONTROL

Lab Sample ID: LCS-050813
 LIMS ID: 13-9950
 Matrix: Soil
 Date Analyzed: 05/09/13 12:22

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1140	2750	41.5%
4-Nitrophenol	893	1500	59.5%
Dibenzofuran	303	500	60.6%
2,6-Dinitrotoluene	1070	1500	71.3%
2,4-Dinitrotoluene	1120	1500	74.7%
Diethylphthalate	345 B	500	69.0%
4-Chlorophenyl-phenylether	354	500	70.8%
Fluorene	287	500	57.4%
4-Nitroaniline	1130	1500	75.3%
4,6-Dinitro-2-Methylphenol	1390	2750	50.5%
N-Nitrosodiphenylamine	359	500	71.8%
4-Bromophenyl-phenylether	331	500	66.2%
Hexachlorobenzene	288	500	57.6%
Pentachlorophenol	722	1500	48.1%
Phenanthrene	305	500	61.0%
Carbazole	460	500	92.0%
Anthracene	299	500	59.8%
Di-n-Butylphthalate	364	500	72.8%
Fluoranthene	319	500	63.8%
Pyrene	319	500	63.8%
Butylbenzylphthalate	404	500	80.8%
3,3'-Dichlorobenzidine	580	1500	38.7%
Benzo(a)anthracene	311	500	62.2%
bis(2-Ethylhexyl)phthalate	354	500	70.8%
Chrysene	297	500	59.4%
Di-n-Octyl phthalate	345	500	69.0%
Benzo(a)pyrene	308	500	61.6%
Indeno(1,2,3-cd)pyrene	249	500	49.8%
Dibenz(a,h)anthracene	304	500	60.8%
Benzo(g,h,i)perylene	288	500	57.6%
1-Methylnaphthalene	312	500	62.4%
Total Benzofluoranthenes	621	1000	62.1%


Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.6%
2-Fluorobiphenyl	57.4%
d14-p-Terphenyl	68.4%
d4-1,2-Dichlorobenzene	58.6%
d5-Phenol	60.5%
2-Fluorophenol	59.7%
2,4,6-Tribromophenol	67.5%
d4-2-Chlorophenol	60.4%

Reported in µg/kg (ppb)

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
 Page 1 of 2

Sample ID: MB-050813
METHOD BLANK

Lab Sample ID: MB-050813
 LIMS ID: 13-9950
 Matrix: Soil
 Data Release Authorized: 
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 11:45
 Instrument/Analyst: NT10/YZ
 GPC Cleanup: Yes

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	40	< 40 U
65-85-0	Benzoic Acid	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	270	< 270 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	850	< 850 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U

Lab Sample ID: MB-050813
 LIMS ID: 13-9950
 Matrix: Soil
 Date Analyzed: 05/09/13 11:45

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	50	47 J
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	200	< 200 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	150	< 150 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	25	< 25 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	57.2%
d14-p-Terphenyl	76.8%	d4-1,2-Dichlorobenzene	59.8%
d5-Phenol	57.5%	2-Fluorophenol	58.8%
2,4,6-Tribromophenol	63.2%	d4-2-Chlorophenol	60.3%

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130509.b

Instrument: nt10.i Date: 09-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R ²

NO Q-FLAGS	

CONTINUING CAL: 09-MAY-2013

Compound	%D

Benzoic acid	-24.0
Benzidine	-29.7

qv 5/10/13

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: TP-28-050713
SAMPLE

Lab Sample ID: WP19A
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 12:43
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.010	3.9 BE
91-57-6	2-Methylnaphthalene	0.010	1.5 E
90-12-0	1-Methylnaphthalene	0.010	1.1 E
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	Acenaphthene	0.010	2.7 E
86-73-7	Fluorene	0.010	1.5 E
85-01-8	Phenanthrene	0.010	2.4 E
120-12-7	Anthracene	0.010	0.25
206-44-0	Fluoranthene	0.010	0.42
129-00-0	Pyrene	0.010	0.35
56-55-3	Benzo (a) anthracene	0.010	0.046
218-01-9	Chrysene	0.010	0.066
50-32-8	Benzo (a) pyrene	0.010	0.016
193-39-5	Indeno (1,2,3-cd) pyrene	0.010	< 0.010 U
53-70-3	Dibenz (a,h) anthracene	0.010	< 0.010 U
191-24-2	Benzo (g,h,i) perylene	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.010	1.2 E
TOTBFA	Total Benzofluoranthenes	0.020	0.027

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	83.0%
d10-2-Methylnaphthalene	75.7%
d14-Dibenzo (a,h) anthracene	68.0%

ORGANICS ANALYSIS DATA SHEET
PNA's by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: TP-28-050713
DILUTION

Lab Sample ID: WP19A
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 11:37
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 10.0

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	4.0 B
91-57-6	2-Methylnaphthalene	0.10	1.5
90-12-0	1-Methylnaphthalene	0.10	1.1
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	2.9
86-73-7	Fluorene	0.10	1.6
85-01-8	Phenanthrene	0.10	2.5
120-12-7	Anthracene	0.10	0.26
206-44-0	Fluoranthene	0.10	0.44
129-00-0	Pyrene	0.10	0.35
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
132-64-9	Dibenzofuran	0.10	1.4
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	89.7%
d10-2-Methylnaphthalene	75.7%
d14-Dibenzo(a,h)anthracene	60.0%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: TP-29-050713
SAMPLE

Lab Sample ID: WP19B
 LIMS ID: 13-9941
 Matrix: Water
 Data Release Authorized: *B*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 13:12
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 2.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.020	0.33 B
91-57-6	2-Methylnaphthalene	0.020	0.91
90-12-0	1-Methylnaphthalene	0.020	2.5 E
208-96-8	Acenaphthylene	0.020	< 0.020 U
83-32-9	Acenaphthene	0.020	2.1 E
86-73-7	Fluorene	0.020	2.2 E
85-01-8	Phenanthrene	0.020	9.2 E
120-12-7	Anthracene	0.020	1.4
206-44-0	Fluoranthene	0.020	4.2 E
129-00-0	Pyrene	0.020	3.0 E
56-55-3	Benzo (a) anthracene	0.020	0.86
218-01-9	Chrysene	0.020	0.90
50-32-8	Benzo (a) pyrene	0.020	0.42
193-39-5	Indeno (1,2,3-cd) pyrene	0.020	0.11
53-70-3	Dibenz (a,h) anthracene	0.020	0.042
191-24-2	Benzo (g,h,i) perylene	0.020	0.11
132-64-9	Dibenzofuran	0.020	0.69
TOTBFA	Total Benzofluoranthenes	0.040	0.73

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	99.3%
d10-2-Methylnaphthalene	78.0%
d14-Dibenzo (a,h) anthracene	68.7%

ORGANICS ANALYSIS DATA SHEET
PNA's by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: TP-29-050713
DILUTION

Lab Sample ID: WP19B
 LIMS ID: 13-9941
 Matrix: Water
 Data Release Authorized: *RB*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 12:09
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 10.0

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	0.32 B
91-57-6	2-Methylnaphthalene	0.10	0.86
90-12-0	1-Methylnaphthalene	0.10	2.4
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	2.3
86-73-7	Fluorene	0.10	2.6
85-01-8	Phenanthrene	0.10	8.9
120-12-7	Anthracene	0.10	1.3
206-44-0	Fluoranthene	0.10	4.0
129-00-0	Pyrene	0.10	3.0
56-55-3	Benzo (a) anthracene	0.10	0.82
218-01-9	Chrysene	0.10	0.88
50-32-8	Benzo (a) pyrene	0.10	0.38
193-39-5	Indeno (1,2,3-cd) pyrene	0.10	< 0.10 U
53-70-3	Dibenz (a,h) anthracene	0.10	< 0.10 U
191-24-2	Benzo (g,h,i) perylene	0.10	< 0.10 U
132-64-9	Dibenzofuran	0.10	0.79
TOTBFA	Total Benzofluoranthenes	0.20	0.72

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	92.7%
d10-2-Methylnaphthalene	74.3%
d14-Dibenzo (a,h) anthracene	53.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>FLN</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-050813	87.3%	75.7%	74.0%	0
LCS-050813	91.7%	83.0%	77.3%	0
TP-28-050713	83.0%	75.7%	68.0%	0
TP-28-050713 DL	89.7%	75.7%	60.0%	0
TP-29-050713	99.3%	78.0%	68.7%	0
TP-29-050713 DL	92.7%	74.3%	53.7%	0

LCS/MB LIMITS

QC LIMITS

(FLN) = d10-Fluoranthene	(30-160)	(30-150)
(MNP) = d10-2-Methylnaphthalene	(40-93)	(35-94)
(DBA) = d14-Dibenzo(a,h)anthracene	(31-115)	(26-115)

Prep Method: SW3510C
Log Number Range: 13-9940 to 13-9941

ORGANICS ANALYSIS DATA SHEET
 PNAs by Low Level SW8270D-SIM GC/MS
 Page 1 of 1



Sample ID: LCS-050813
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050813
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: *RB*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted LCS/LCSD: 05/08/13
 Date Analyzed LCS: 05/09/13 11:08
 Instrument/Analyst LCS: NT11/VTS

Sample Amount LCS: 500 mL
 Final Extract Volume LCS: 0.50 mL
 Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	0.256 B	0.300	85.3%
2-Methylnaphthalene	0.241	0.300	80.3%
1-Methylnaphthalene	0.237	0.300	79.0%
Acenaphthylene	0.242	0.300	80.7%
Acenaphthene	0.247	0.300	82.3%
Fluorene	0.253	0.300	84.3%
Phenanthrene	0.255	0.300	85.0%
Anthracene	0.228	0.300	76.0%
Fluoranthene	0.262	0.300	87.3%
Pyrene	0.255	0.300	85.0%
Benzo(a)anthracene	0.259	0.300	86.3%
Chrysene	0.268	0.300	89.3%
Benzo(a)pyrene	0.221	0.300	73.7%
Indeno(1,2,3-cd)pyrene	0.236	0.300	78.7%
Dibenz(a,h)anthracene	0.214	0.300	71.3%
Benzo(g,h,i)perylene	0.224	0.300	74.7%
Dibenzofuran	0.245	0.300	81.7%
Total Benzofluoranthenes	0.759	0.900	84.3%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	91.7%
d10-2-Methylnaphthalene	83.0%
d14-Dibenzo(a,h)anthracene	77.3%

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: SW3510C
Page 1 of 1



Sample ID: MB-050813
METHOD BLANK

Lab Sample ID: MB-050813
LIMS ID: 13-9940
Matrix: Water
Data Release Authorized: *AS*
Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03
Date Sampled: NA
Date Received: NA

Date Extracted: 05/08/13
Date Analyzed: 05/09/13 10:39
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.010	0.018
91-57-6	2-Methylnaphthalene	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	Acenaphthene	0.010	< 0.010 U
86-73-7	Fluorene	0.010	< 0.010 U
85-01-8	Phenanthrene	0.010	< 0.010 U
120-12-7	Anthracene	0.010	< 0.010 U
206-44-0	Fluoranthene	0.010	< 0.010 U
129-00-0	Pyrene	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	87.3%
d10-2-Methylnaphthalene	75.7%
d14-Dibenzo(a,h)anthracene	74.0%

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1



Sample ID: TP-28-050713
SAMPLE

Lab Sample ID: WP19A
LIMS ID: 13-9940
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03
Date Sampled: 05/07/13
Date Received: 05/08/13

Date Extracted: 05/08/13
Date Analyzed: 05/09/13 12:12
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.025	0.050

Reported in $\mu\text{g/L}$ (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	113%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: TP-29-050713
SAMPLE

Lab Sample ID: WP19B
 LIMS ID: 13-9941
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 12:48
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.025	0.044

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	73.6%
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SW8041 LOW LEVEL CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-050813	126%	0
LCS-050813	112%	0
TP-28-050713	113%	0
TP-29-050713	73.6%	0

	LCS/MB LIMITS	QC LIMITS
(TBP) = 2,4,6-Tribromophenol	(33-151)	(10-181)

Prep Method: SW3510C
Log Number Range: 13-9940 to 13-9941

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
 Page 1 of 1

Sample ID: LCS-050813
LAB CONTROL

Lab Sample ID: LCS-050813
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: *RB*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 11:36
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 5.0 mL
 Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	0.249	0.250	99.6%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol 112%

Results reported in µg/L

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: MB-050813
METHOD BLANK

Lab Sample ID: MB-050813
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 05/08/13
 Date Analyzed: 05/09/13 10:59
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.025	< 0.025 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	126%
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ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Extraction Method:

Page 1 of 2

QC Report No: WP19-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Matrix: Water

Data Release Authorized: *mw*

Reported: 05/10/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050813 13-9940	Method Blank HC ID: ---	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 101%
WP19A 13-9940	TP-28-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.14 1.2 97.5%
WP19B 13-9941	TP-29-050713 HC ID: DRO/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.12 0.24	0.86 1.3 89.5%
WP19C 13-9942	TP-30-050713 HC ID: MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	< 0.10 U 0.20 105%
WP19D 13-9943	TP-31-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.15 0.76 86.5%
WP19E 13-9944	TP-32-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.36 2.9 64.7%
WP19F 13-9945	TP-33-050713 HC ID: MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	< 0.10 U 0.43 85.6%
WP19G 13-9946	TP-34-050713 HC ID: DRO/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.15 0.49 89.1%
WP19H 13-9947	TP-35-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	2.0 3.1 62.6%
WP19I 13-9948	TP-36-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	2.6 2.8 80.1%
WP19J 13-9949	TP-37-050713 HC ID: DRO/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	1.0 2.0	25 42 87.8%

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Extraction Method:

Page 2 of 2

QC Report No: WP19-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01/03

Matrix: Water

Data Release Authorized: *mm*

Reported: 05/10/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
--------	-----------	-----------------	---------------	--------	-----------------	----	--------

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.

Motor Oil range quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a024.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19MBW1
Client ID: WP19MBW1
Injection: 09-MAY-2013 16:34
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		105840	6.81
C8	----				WATPHD (C12-C24)		305521	21.05 ✓
C10	2.849	-0.004	256	350	WATPHM (C24-C38)		339129	24.93 ✓
C12	3.818	-0.002	363	729	AK102 (C10-C25)		368781	21.42
C14	4.502	-0.003	759	1271	AK103 (C25-C36)		282119	30.66
C16	5.086	-0.001	1284	2337				
C18	5.625	0.000	1550	2282				
C20	6.169	-0.001	1717	2969				
C22	6.703	-0.006	1333	1812	MIN.OIL (C24-C38)		339129	19.88
C24	7.218	-0.007	1549	2829				
C25	7.480	0.009	4368	7897				
C26	7.704	-0.017	1958	3447				
C28	8.172	0.006	4201	4267				
C32	8.970	0.006	11349	16278				
C34	9.325	-0.004	2052	2194				
Filter Peak	11.431	-0.008	2640	3145	CREOSOT (C12-C22)		276986	126.95 M
C36	9.704	0.023	3170	9855				
C38	10.024	-0.002	2061	2692				
C40	10.361	0.000	2099	1455				
o-terph	5.763	0.002	1057950	872484				
Triacon Surr	8.592	0.002	803447	851186				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	872484	45.2	100.5 ✓
Triacotane	851186	46.8	104.0

JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a012.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19A
Client ID: TP-28-050713
Injection: 09-MAY-2013 12:26
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		77864	5.01
C8	----				WATPHD (C12-C24)		1030161	70.97
C10	2.847	-0.006	601	630	WATPHM (C24-C38)		8037592	590.83
C12	3.806	-0.014	1005	1455	AK102 (C10-C25)		1202974	69.88
C14	4.509	0.004	2877	2792	AK103 (C25-C36)		7337039	797.32
C16	5.083	-0.004	3951	6706				
C18	5.626	0.001	6168	8223				
C20	6.161	-0.009	6631	11554				
C22	6.705	-0.004	7868	13481	MIN.OIL (C24-C38)		8037592	471.17
C24	7.225	0.000	11024	8666				
C25	7.474	0.003	16881	10959				
C26	7.722	0.001	23947	24701				
C28	8.154	-0.013	46613	54827				
C32	8.959	-0.005	87610	110359				
C34	9.331	0.003	66441	44431				
Filter Peak	11.439	0.000	1813	3232	CREOSOT (C12-C22)		749636	343.57 M
C36	9.674	-0.007	46394	34158				
C38	10.032	0.007	20912	14368				
C40	10.365	0.004	7564	10367				
o-terph	5.764	0.003	924872	845973				
Triacon Surr	8.599	0.008	830651	839321				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	845973	43.9	97.5 M
Triacotane	839321	46.1	102.5 M

JW
5/9/13

M Indicates the peak was manually integrated

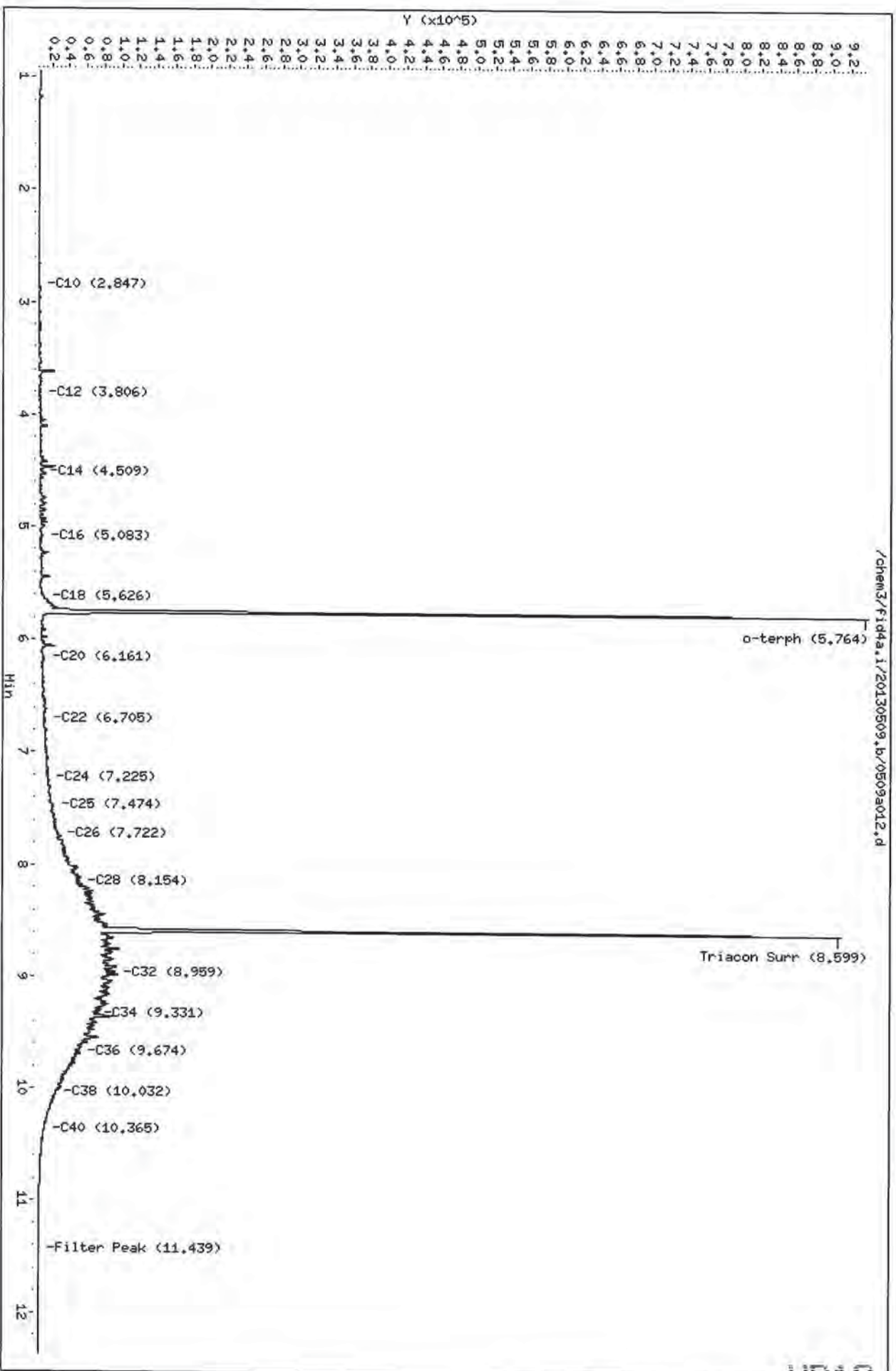
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a,1/20130509,b/0509a012.d
Date: 09-MAY-2013 12:26
Client ID: TP-28-050713
Sample Info: WP19A

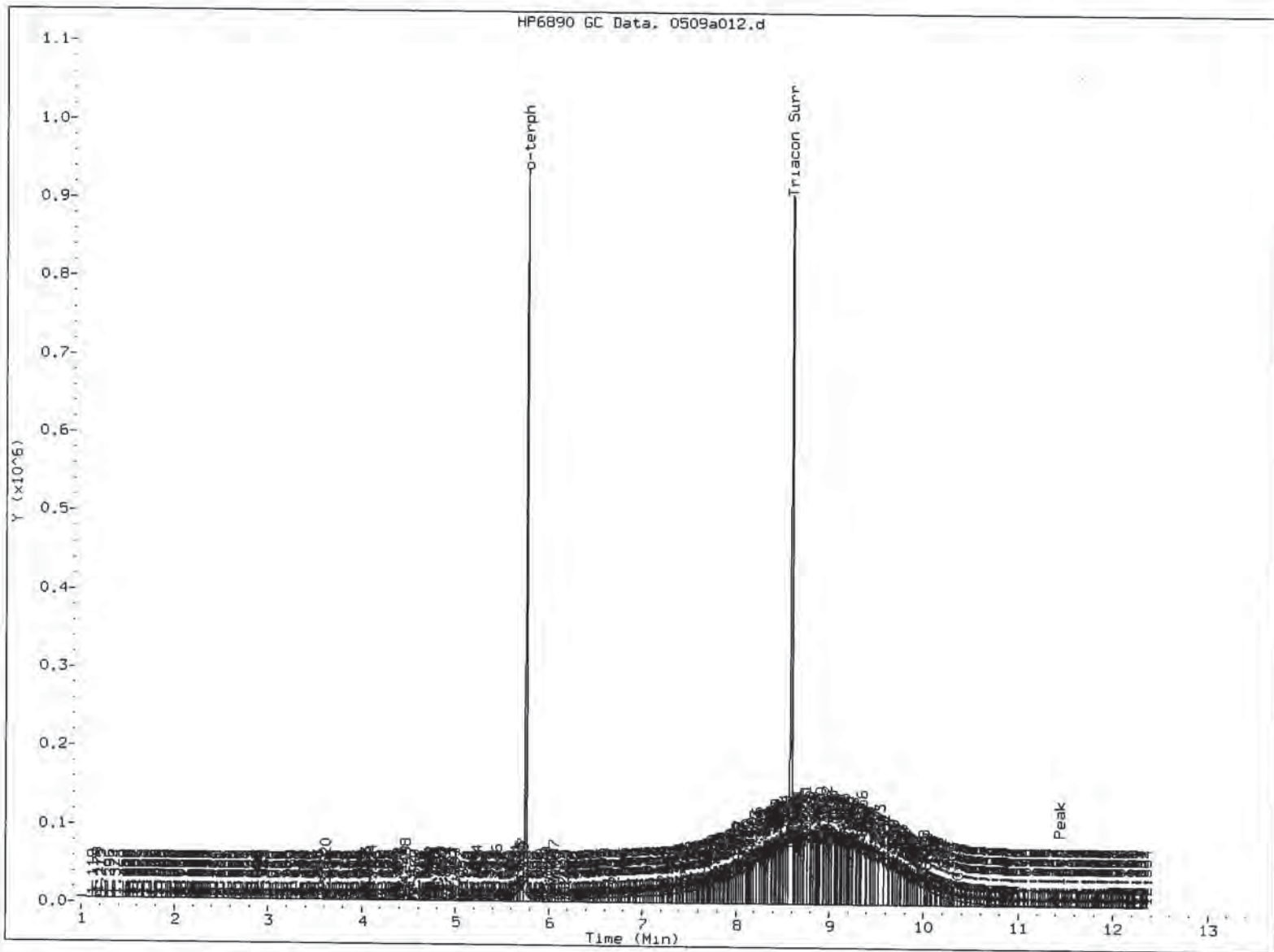
Column phase: RTX-1

Instrument: fid4a,1
Operator: JR/VTS/JM
Column diameter: 0.25

500
5/9/13



01000000



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JLJ

Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a013.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19B
Client ID: TP-29-050713
Injection: 09-MAY-2013 12:47
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		126905	8.17
C8	----				WATPHD (C12-C24)		5152974	355.02
C10	2.847	-0.006	1607	1430	WATPHM (C24-C38)		7474417	549.43
C12	3.807	-0.012	2135	3178	AK102 (C10-C25)		5459231	317.12
C14	4.527	0.022	43890	64941	AK103 (C25-C36)		6554495	712.28
C16	5.085	-0.002	34859	42243				
C18	5.621	-0.003	32727	44389				
C20	6.183	0.013	90507	107276				
C22	6.704	-0.005	24933	25311	MIN.OIL (C24-C38)		7474417	438.15
C24	7.219	-0.005	26390	13916				
C25	7.468	-0.003	34690	25191				
C26	7.717	-0.004	36006	39748				
C28	8.178	0.012	48762	71531				
C32	8.967	0.003	65503	100177				
C34	9.332	0.004	65422	179528				
Filter Peak	11.436	-0.003	2561	4465	CREOSOT (C12-C22)		4323353	1981.46 M
C36	9.694	0.014	47658	88316				
C38	10.025	0.000	32478	21773				
C40	10.359	-0.002	19264	10634				
o-terph	5.763	0.002	887183	776321				
Triacon Surr	8.592	0.002	780989	770051				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	776321	40.3	89.5 M
Triacotane	770051	42.3	94.0 M

JW
5/9/13

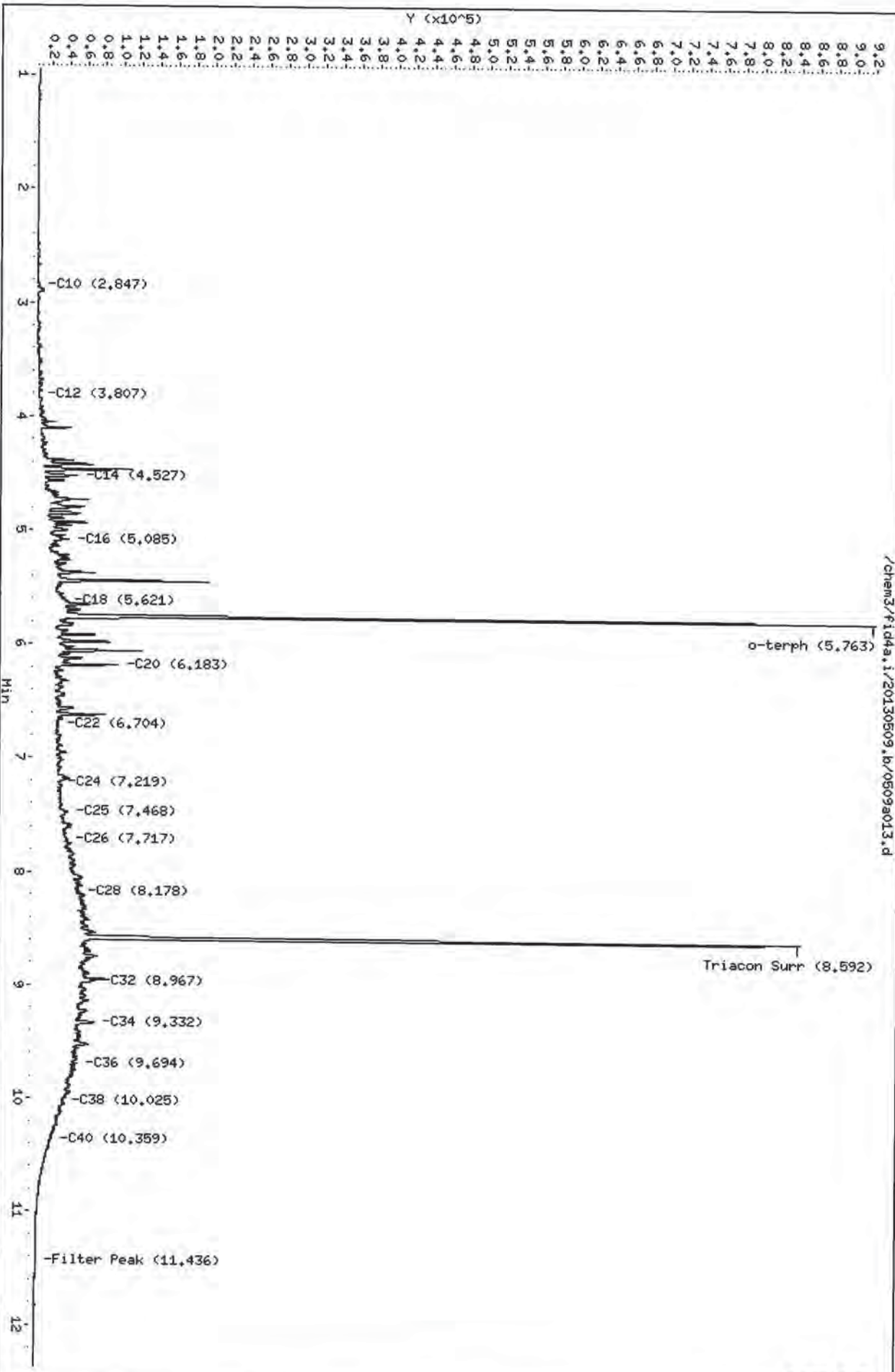
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

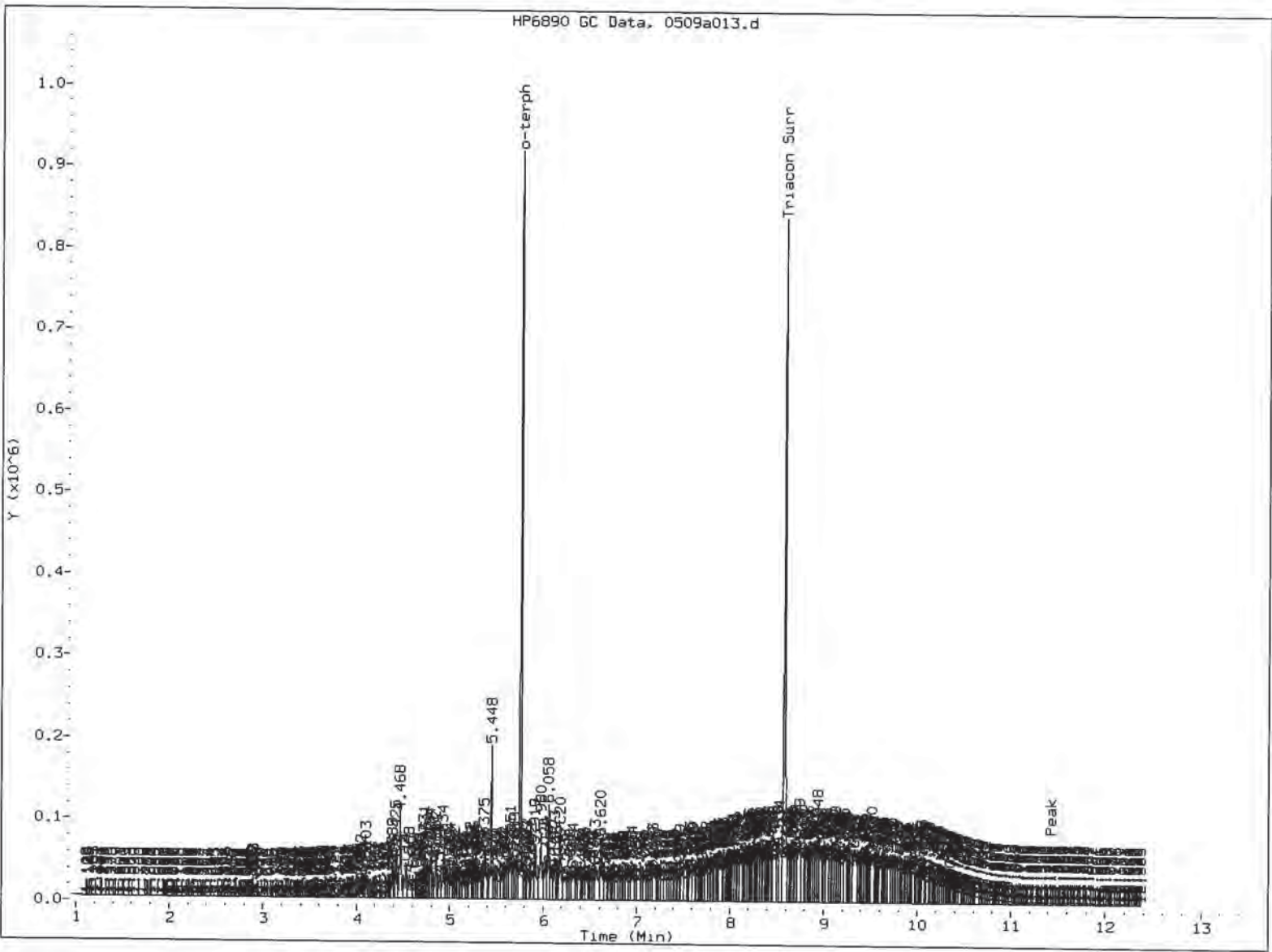
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Date: 09-MAY-2013 12:47
Client ID: TP-29-050713
Sample Info: MP19B

Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



TP
5/9/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/9/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a014.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19C
Client ID: TP-30-050713
Injection: 09-MAY-2013 13:08

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		29673	1.91
C8	----				WATPHD (C12-C24)		455759	31.40 ✓
C10	2.851	-0.002	229	284	WATPHM (C24-C38)		1383327	101.69 ✓
C12	3.817	-0.002	281	369	AK102 (C10-C25)		509746	29.61
C14	4.502	-0.002	643	673	AK103 (C25-C36)		1176912	127.90
C16	5.084	-0.003	1215	2145				
C18	5.623	-0.002	3001	4463				
C20	6.159	-0.011	3286	5588				
C22	6.703	-0.006	4081	5474	MIN.OIL (C24-C38)		1383327	81.09
C24	7.218	-0.006	5408	7239				
C25	7.464	-0.007	6544	8766				
C26	7.705	-0.015	7302	13635				
C28	8.157	-0.009	10385	14175				
C32	8.968	0.004	18317	32288				
C34	9.339	0.011	10131	24343				
Filter Peak	11.440	0.001	2986	5021	CREOSOT (C12-C22)		327331	150.02 M
C36	9.676	-0.004	9478	11339				
C38	10.035	0.010	8220	11445				
C40	10.357	-0.004	7190	4826				
o-terph	5.763	0.002	971352	913578				
Triacon Surr	8.591	0.001	818773	860788				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	913578	47.4	105.3
Triacotane	860788	47.3	105.1 M ✓

M Indicates the peak was manually integrated

JW
5/9/13

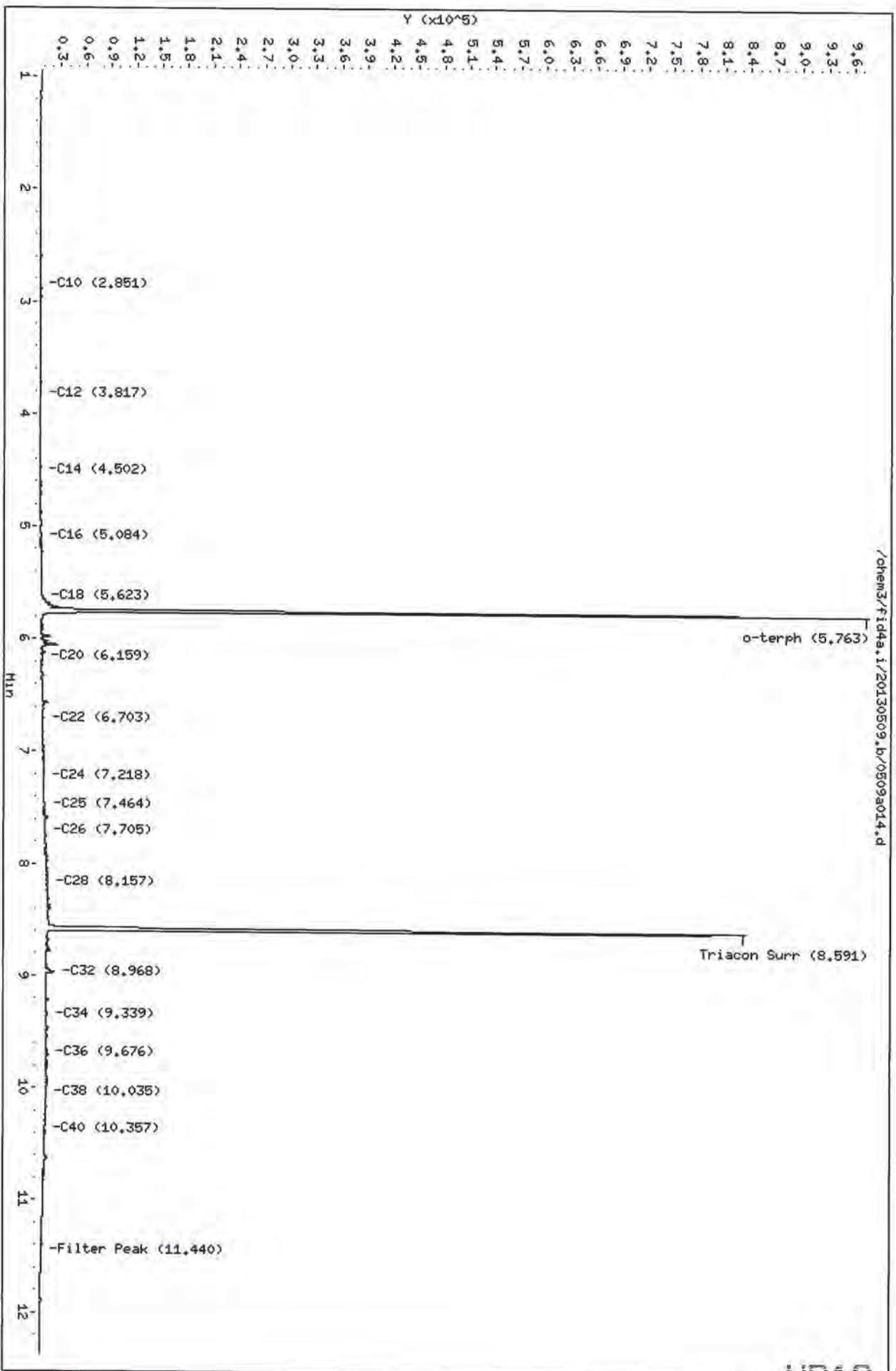
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

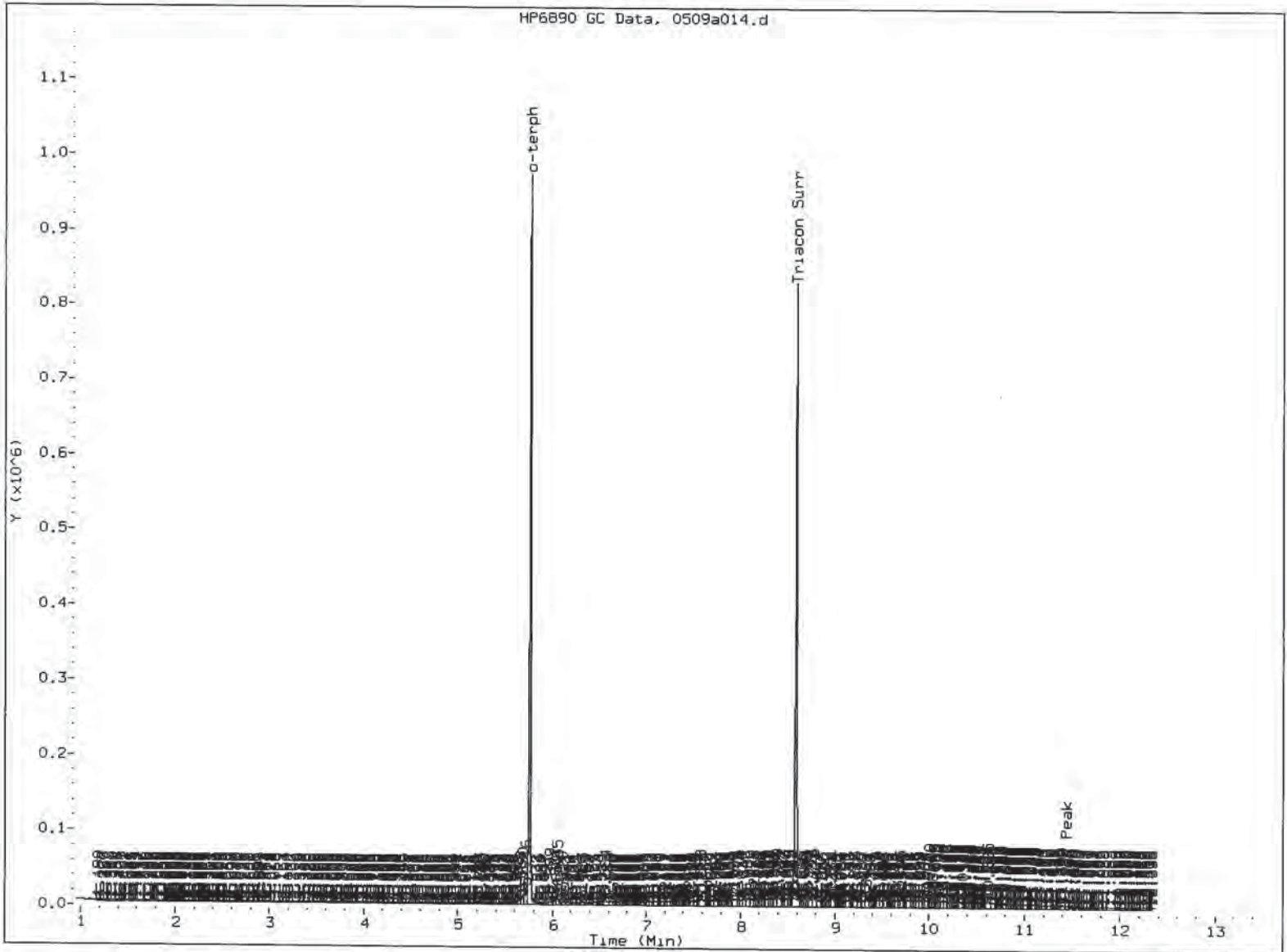
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Date: 09-MAY-2013 13:08
Client ID: TP-30-050713
Sample Info: MP19C

Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

sw
5/9/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/1/85

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a015.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19D
Client ID: TP-31-050713
Injection: 09-MAY-2013 13:29
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		37718	2.43
C8	----				WATPHD (C12-C24)		1095312	75.46
C10	2.850	-0.003	306	334	WATPHM (C24-C38)		5201776	382.37
C12	3.819	-0.001	245	297	AK102 (C10-C25)		1287724	74.80
C14	4.502	-0.003	447	438	AK103 (C25-C36)		4512469	490.38
C16	5.084	-0.003	1141	1950				
C18	5.620	-0.005	5298	11890				
C20	6.159	-0.010	5852	3892				
C22	6.704	-0.005	11121	7436	MIN.OIL (C24-C38)		5201776	304.93
C24	7.232	0.008	18622	6638				
C25	7.465	-0.006	25122	40605				
C26	7.714	-0.007	29199	20024				
C28	8.161	-0.005	48884	69465				
C32	8.972	0.008	42492	83324				
C34	9.341	0.013	36678	97057				
Filter Peak	11.453	0.014	2726	2961	CREOSOT (C12-C22)		616790	282.68 M
C36	9.678	-0.003	30554	46566				
C38	10.020	-0.005	24499	26501				
C40	10.355	-0.006	18193	11361				
o-terph	5.760	0.000	839937	750317				
Triacon Surr	8.592	0.002	820265	780561				

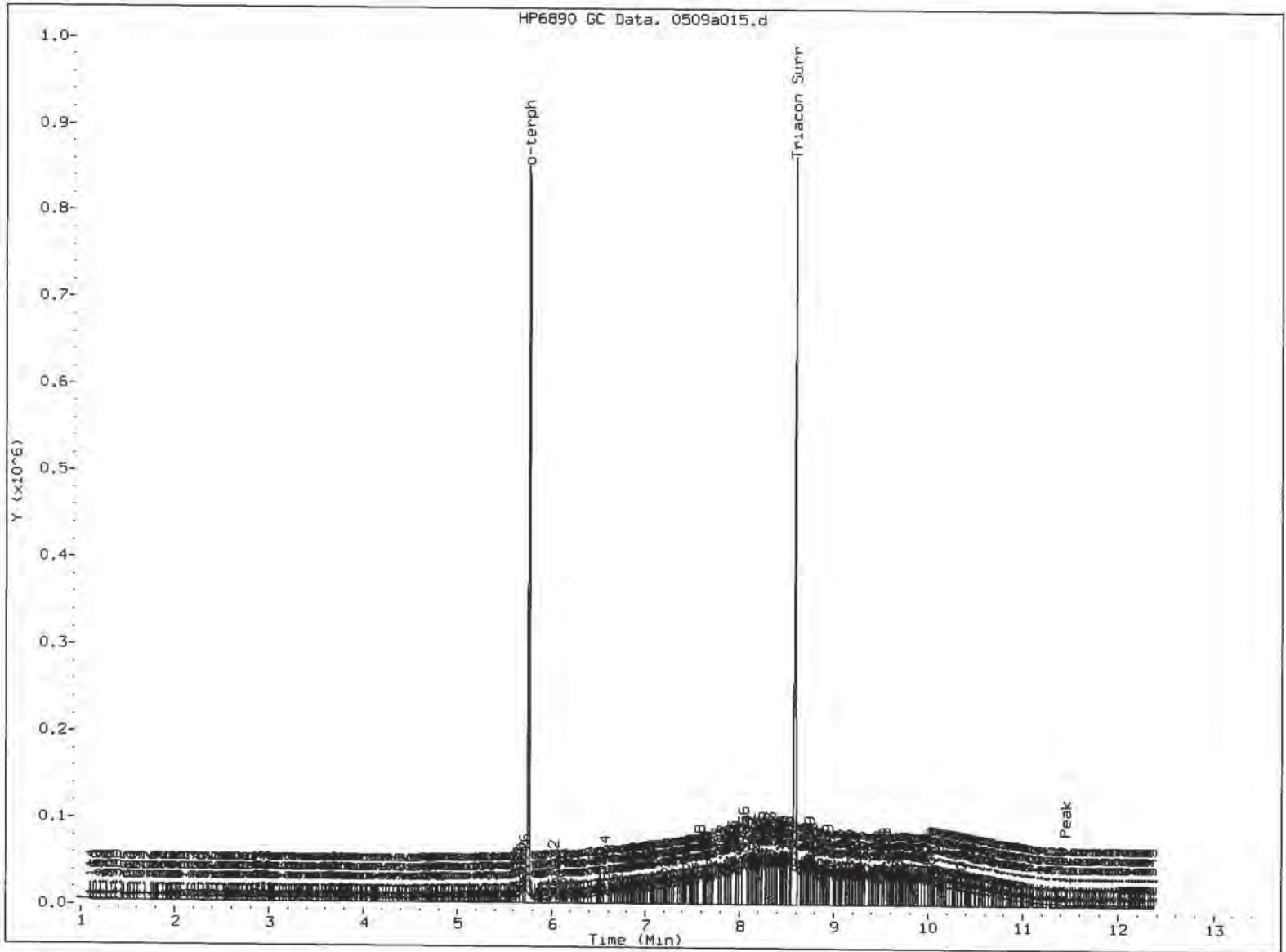
Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	750317	38.9	86.5 M
Triacotane	780561	42.9	95.3 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW
5/9/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: ju

Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a016.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19E
Client ID: TP-32-050713
Injection: 09-MAY-2013 13:49
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		96534	6.21
C8	----				WATPHD (C12-C24)		2607282	179.63
C10	2.849	-0.004	585	616	WATPHM (C24-C38)		19520748	1434.93
C12	3.810	-0.010	1186	2635	AK102 (C10-C25)		3119336	181.20
C14	4.503	-0.002	1978	1833	AK103 (C25-C36)		17605811	1913.24
C16	5.084	-0.003	2479	2706				
C18	5.626	0.001	10348	17479				
C20	6.177	0.008	15208	19118				
C22	6.711	0.002	26684	8431	MIN.OIL (C24-C38)		19520748	1144.31
C24	7.223	-0.001	47578	57814				
C25	7.473	0.002	63013	127445				
C26	7.722	0.001	74895	55092				
C28	8.165	-0.001	125966	89838				
C32	8.955	-0.009	179921	206954				
C34	9.325	-0.003	152380	96187				
Filter Peak	11.439	0.001	5364	7521	CREOSOT (C12-C22)		1406040	644.41 M
C36	9.689	0.008	132472	203043				
C38	10.015	-0.010	50789	76571				
C40	10.353	-0.008	16861	22100				
o-terph	5.760	-0.001	721916	561682				
Triacon Surr	8.596	0.006	605937	617174				

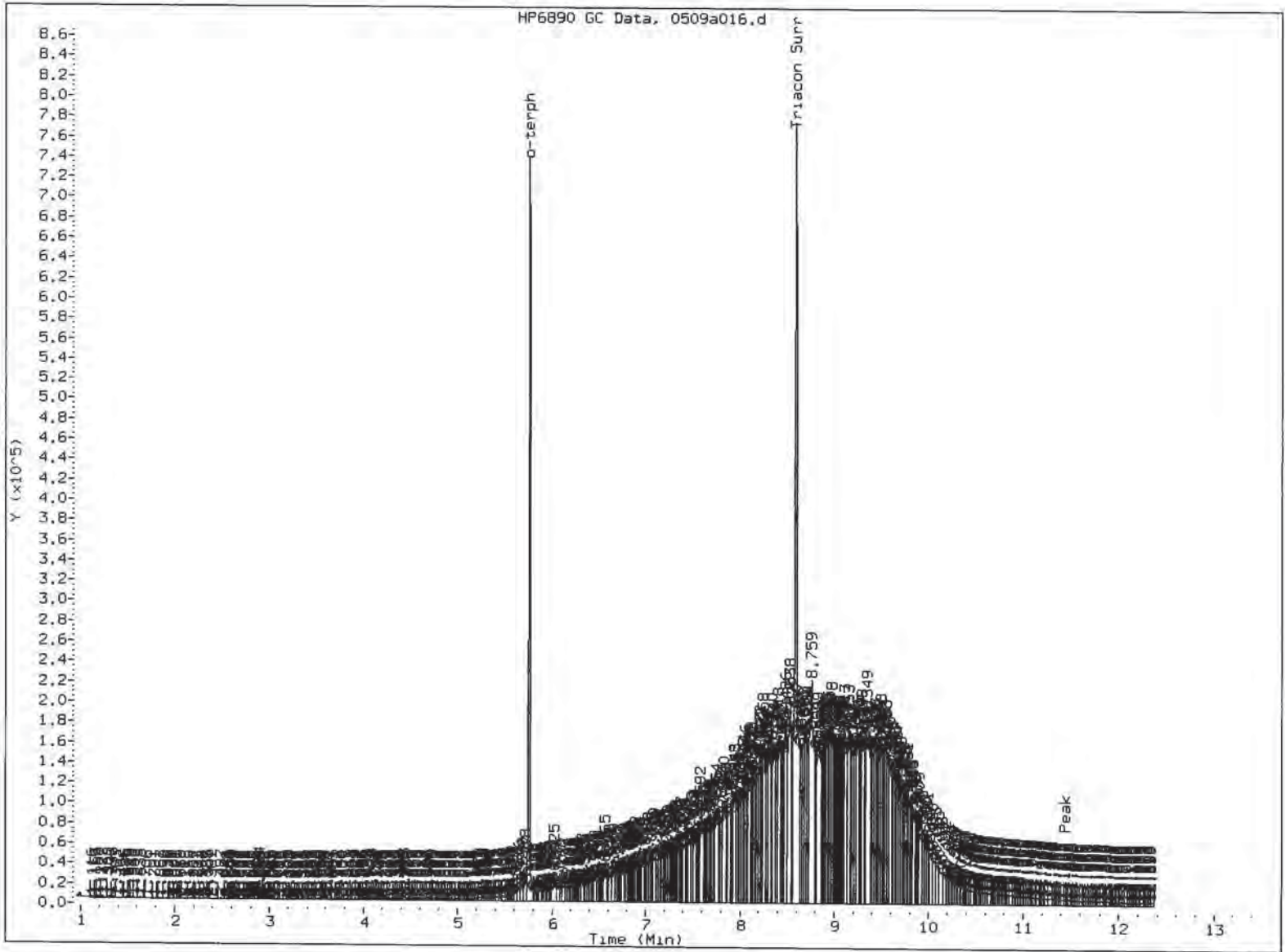
Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	561682	29.1	64.7 M
Triacotane	617174	33.9	75.4 M

JW
5/9/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ④. Skipped surrogate

Analyst: JW

Date: 5/4/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a017.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19F
Client ID: TP-33-050713
Injection: 09-MAY-2013 14:10
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	28547	1.84
C8	----				WATPHD	(C12-C24)	522131	35.97
C10	2.850	-0.004	188	223	WATPHM	(C24-C38)	2916273	214.37
C12	3.806	-0.014	149	260	AK102	(C10-C25)	608680	35.36
C14	4.503	-0.002	269	469	AK103	(C25-C36)	2379815	258.62
C16	5.083	-0.004	625	737				
C18	5.621	-0.004	1892	2231				
C20	6.168	-0.002	3087	3359				
C22	6.694	-0.015	8816	18382	MIN.OIL	(C24-C38)	2916273	170.95
C24	7.216	-0.008	9157	16925				
C25	7.466	-0.006	11291	31205				
C26	7.732	0.012	11555	8720				
C28	8.175	0.008	17538	17413				
C32	8.965	0.001	27878	57058				
C34	9.331	0.003	25363	34323				
Filter Peak	11.430	-0.008	3359	2328	CREOSOT	(C12-C22)	332813	152.53 M
C36	9.669	-0.012	24284	26960				
C38	10.019	-0.007	22398	16205				
C40	10.354	-0.007	18480	20853				
o-terph	5.762	0.001	918588	742900				
Triacon Surr	8.590	-0.001	825290	754895				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	742900	38.5	85.6 M
Triacotane	754895	41.5	92.2 M

JW
5/9/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a,i/20130509,b/0509a017.d

Date: 09-MAY-2013 14:10

Client ID: TP-33-050713

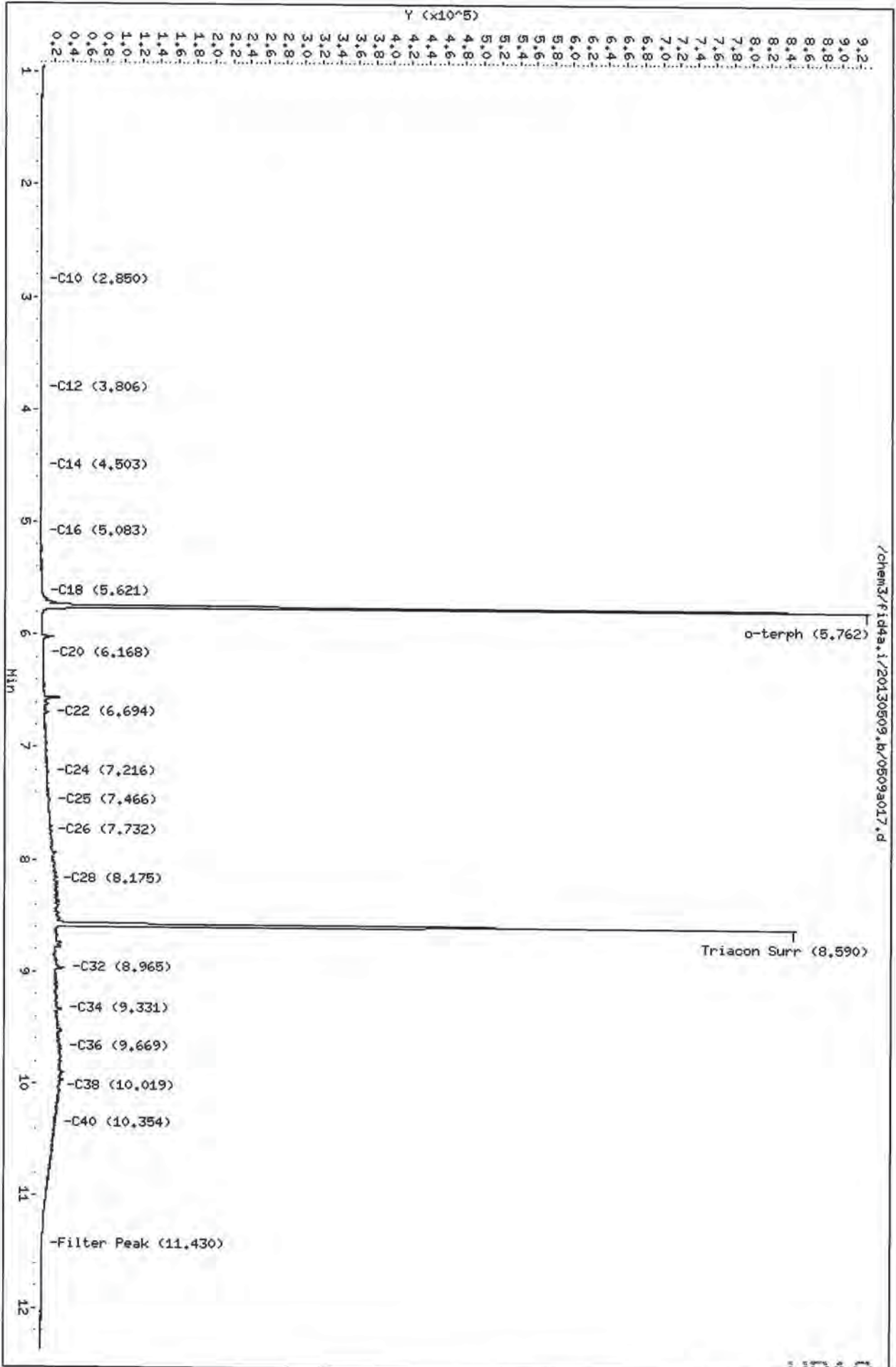
Sample Info: WP19F

Column phase: RTX-1

Instrument: fid4a,i

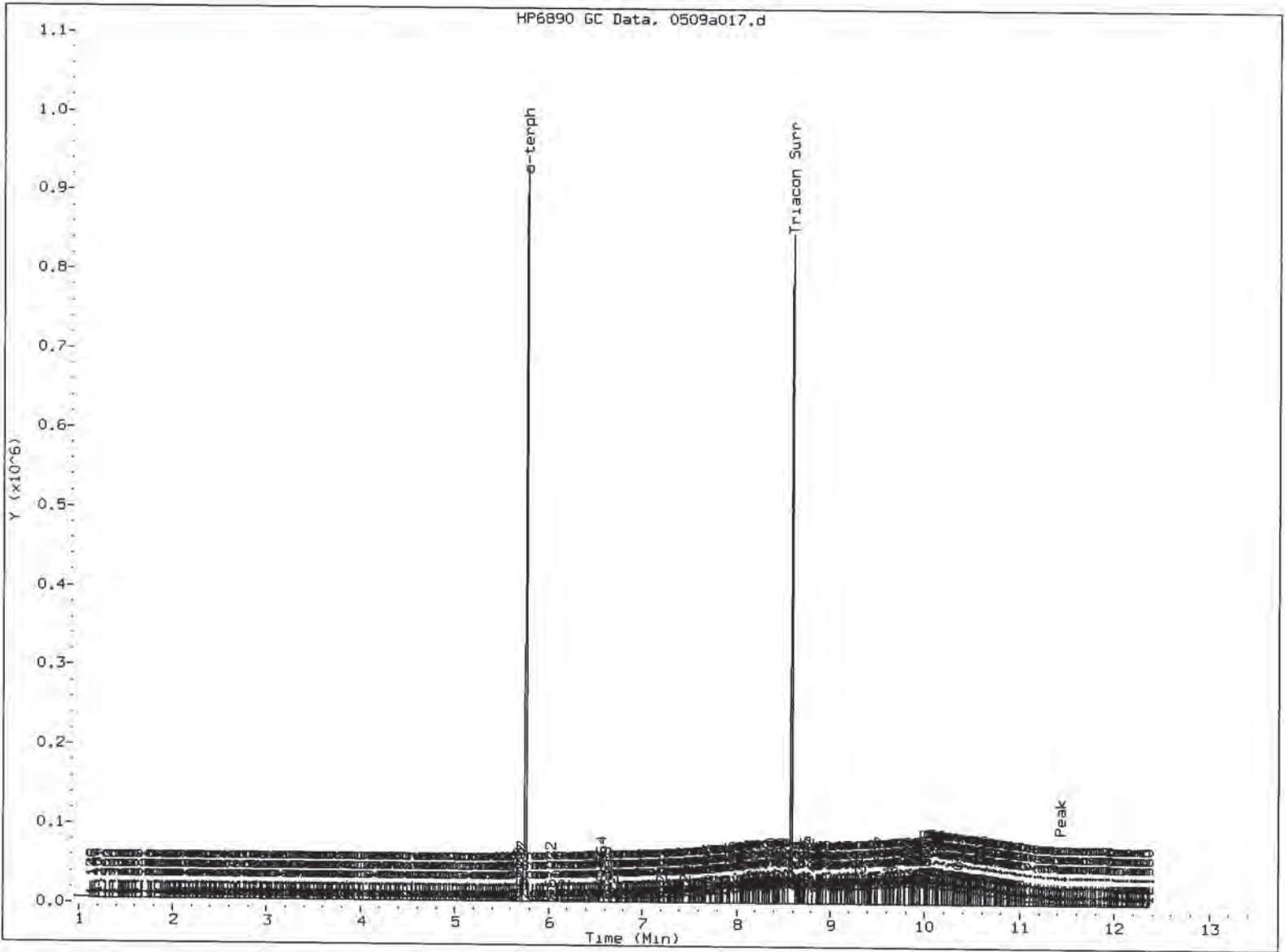
Operator: JR/VTS/JM

Column diameter: 0.25



JW
5/14/13

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skimmed surrogate

Analyst: EW

Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a018.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19G
Client ID: TP-34-050713
Injection: 09-MAY-2013 14:31
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		35696	2.30
C8	----				WATPHD (C12-C24)		1099789	75.77
C10	2.849	-0.004	265	290	WATPHM (C24-C38)		3330774	244.84
C12	3.817	-0.003	261	326	AK102 (C10-C25)		1209986	70.29
C14	4.501	-0.004	514	527	AK103 (C25-C36)		2821703	306.64
C16	5.084	-0.003	1481	1759				
C18	5.626	0.001	6098	13414				
C20	6.170	0.000	8302	12382				
C22	6.704	-0.005	11739	8924	MIN.OIL (C24-C38)		3330774	195.25
C24	7.217	-0.007	12552	17334				
C25	7.464	-0.007	14397	43384				
C26	7.719	-0.002	14590	16044				
C28	8.159	-0.008	23852	29113				
C32	8.973	0.009	32192	64347				
C34	9.322	-0.006	19901	12776				
Filter Peak	11.437	-0.002	3807	4353	CREOSOT (C12-C22)		734440	336.61 M
C36	9.673	-0.008	20838	33621				
C38	10.036	0.011	17837	13009				
C40	10.367	0.006	14586	19958				
o-terph	5.762	0.001	893926	773018				
Triacon Surr	8.593	0.003	745679	787384				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	773018	40.1	89.1 M
Triacantane	787384	43.3	96.2 M

M Indicates the peak was manually integrated

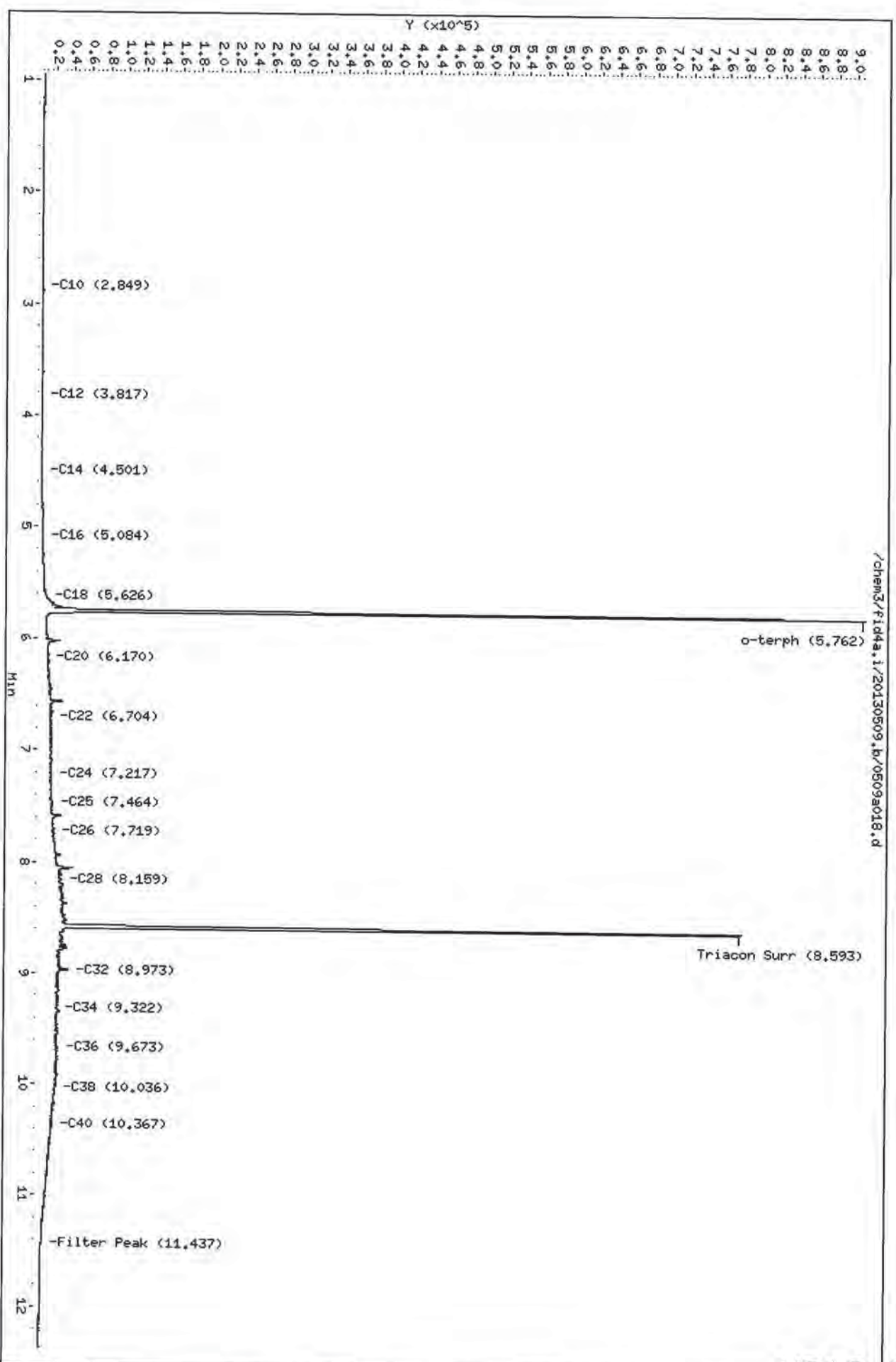
JW
5/9/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

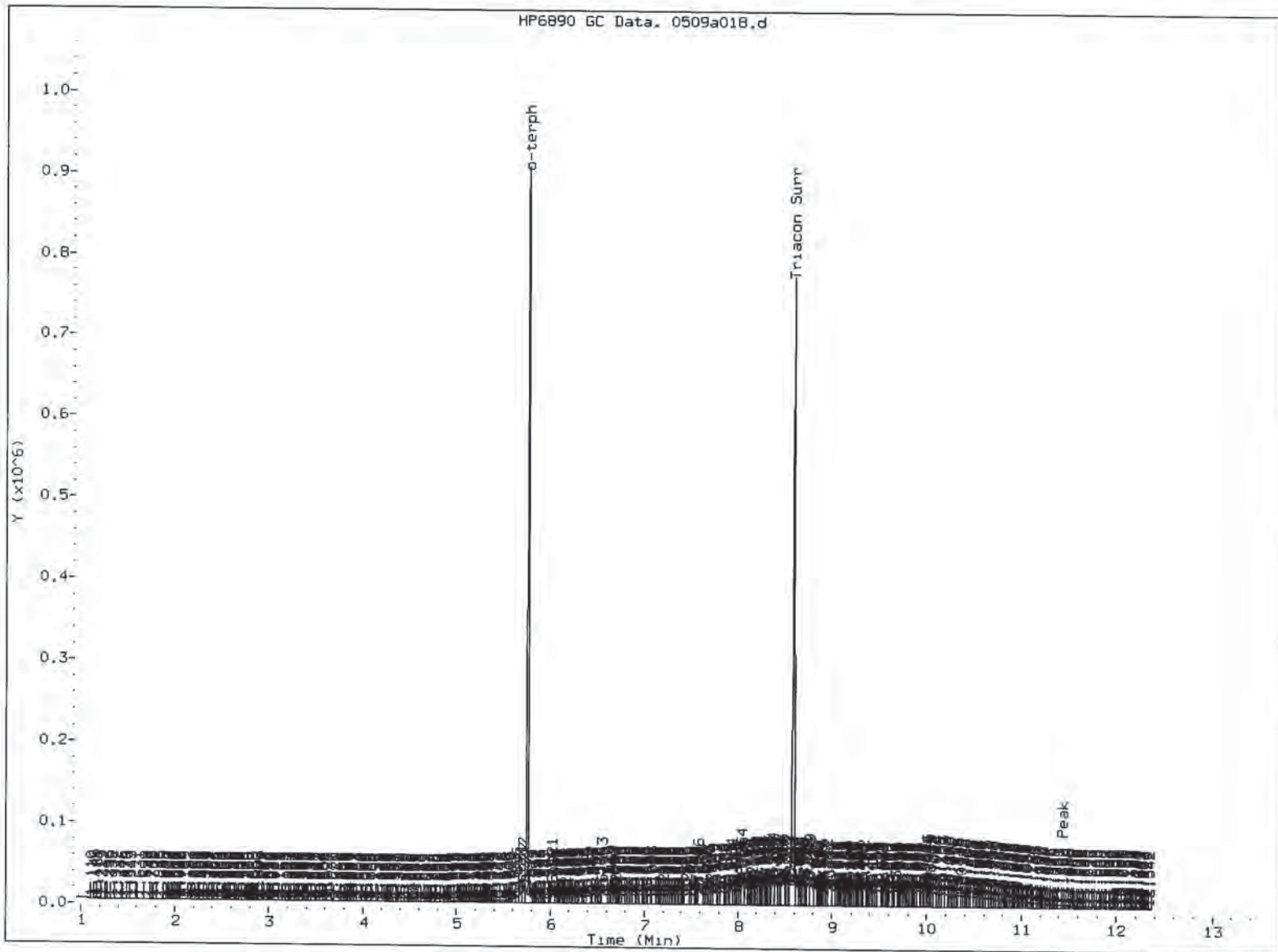
Data File: /chem3/fid4a,i/20130509,b/0509a018.d
Date: 09-MAY-2013 14:31
Client ID: TP-34-050713
Sample Info: MP19C

Column phase: RTX-1

Instrument: fid4a,i
Operator: JR/VTS/JM
Column diameter: 0.25



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a019.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19H
Client ID: TP-35-050713
Injection: 09-MAY-2013 14:51
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		59606	3.84
C8	----				WATPHD (C12-C24)		14327139	987.09
C10	2.850	-0.003	331	409	WATPHM (C24-C38)		21268466	1563.40
C12	3.818	-0.001	414	530	AK102 (C10-C25)		16468604	956.65
C14	4.501	-0.003	996	969	AK103 (C25-C36)		18671562	2029.06
C16	5.084	-0.002	4045	7223				
C18	5.623	-0.001	26018	38974				
C20	6.171	0.001	98848	189303				
C22	6.711	0.002	204348	178026	MIN.OIL (C24-C38)		21268466	1246.76
C24	7.218	-0.006	238104	178838				
C25	7.472	0.001	260571	175371				
C26	7.727	0.007	255176	476965				
C28	8.172	0.006	200735	179164				
C32	8.965	0.001	85718	130611				
C34	9.329	0.001	50504	26849				
Filter Peak	11.443	0.004	3001	4355	CREOSOT (C12-C22)		7149523	3276.74 M
C36	9.678	-0.003	30751	46412				
C38	10.013	-0.013	20387	30448				
C40	10.366	0.005	12579	5459				
o-terph	5.759	-0.001	673089	542821				
Triacon Surr	8.597	0.007	597042	556786				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	542821	28.2	62.6 M
Triacontane	556786	30.6	68.0 M

M Indicates the peak was manually integrated

JLW
5/9/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a,i/20130509,b/0509a019,d

Date: 09-MAY-2013 14:54

Client ID: TP-35-050713

Sample Info: WP19H

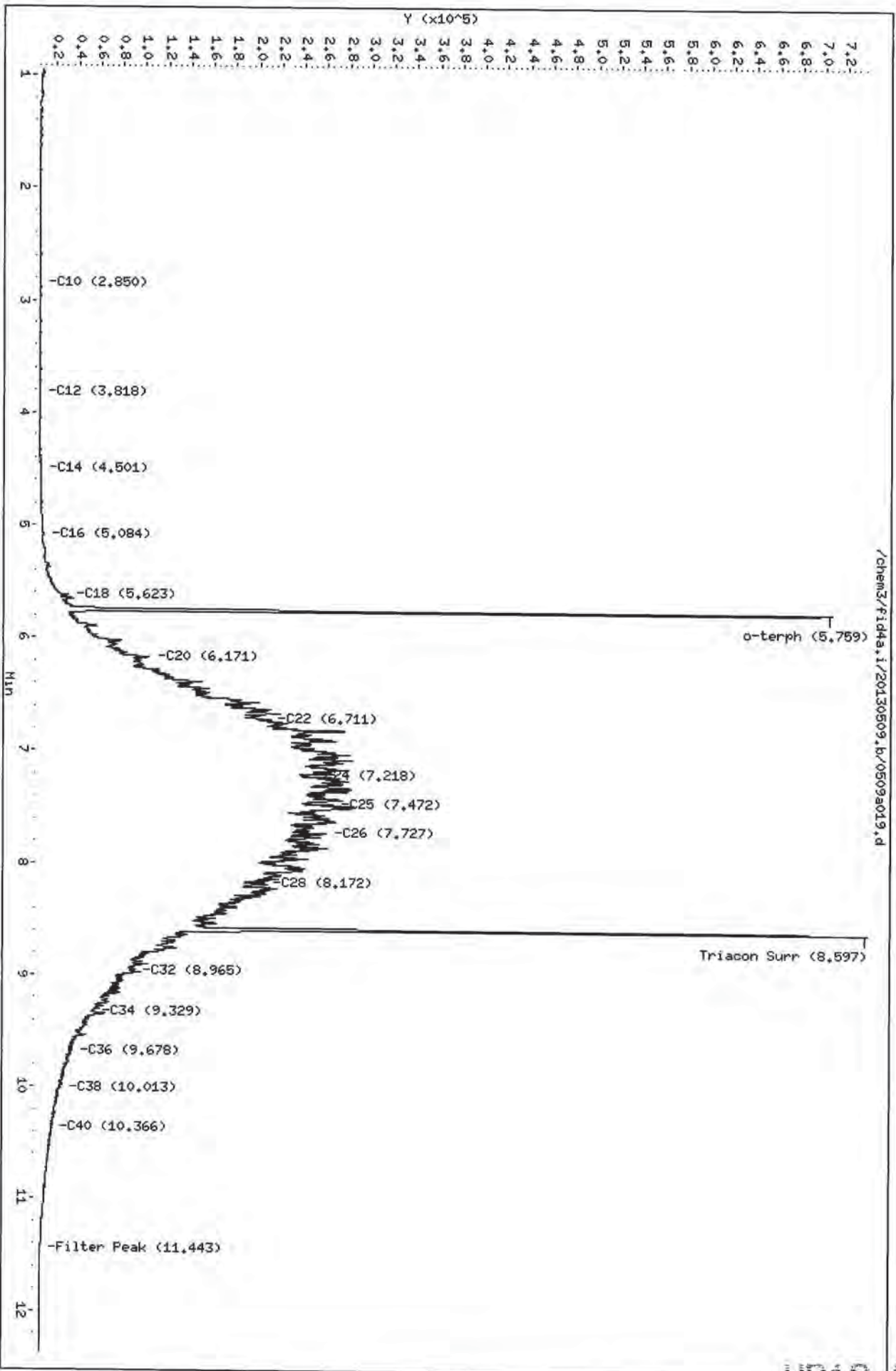
Column phase: RTX-1

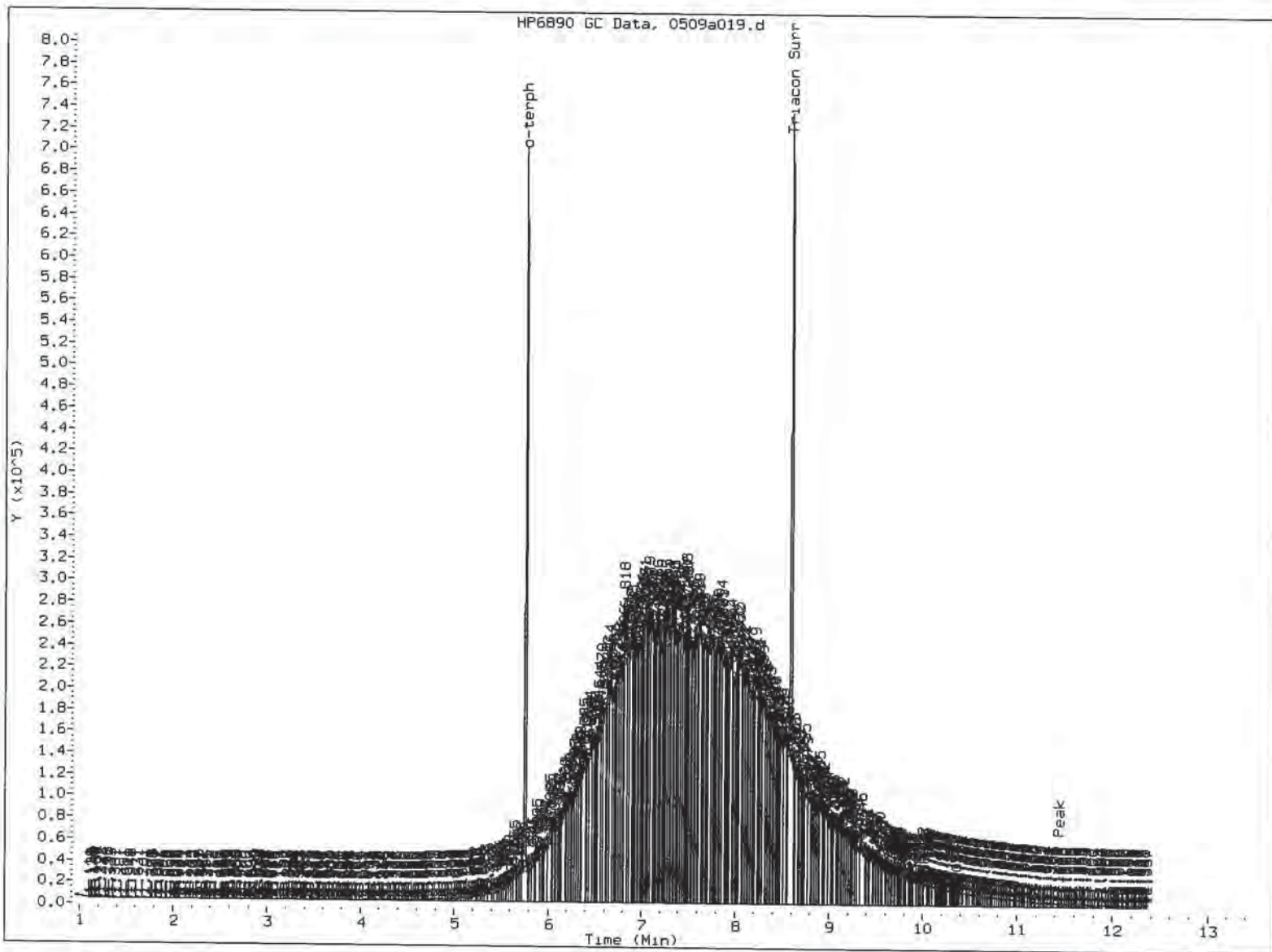
Instrument: fid4a,i

Operator: JR/VTS/JM

Column diameter: 0.25

TW
5/9/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/4/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a020.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/09/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19I
Client ID: TP-36-050713
Injection: 09-MAY-2013 15:12
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		69456	4.47
C8	----				WATPHD (C12-C24)		19083510	1314.79
C10	2.846	-0.007	441	747	WATPHM (C24-C38)		19217700	1412.65
C12	3.819	-0.001	417	282	AK102 (C10-C25)		21648134	1257.53
C14	4.495	-0.010	1074	1438	AK103 (C25-C36)		16349404	1776.71
C16	5.086	-0.001	3783	4833				
C18	5.625	0.000	28590	43639				
C20	6.164	-0.006	108931	122643				
C22	6.711	0.002	277147	81927	MIN.OIL (C24-C38)		19217700	1126.55
C24	7.231	0.006	334660	131278				
C25	7.484	0.013	320502	678277				
C26	7.713	-0.007	245787	159357				
C28	8.169	0.003	169385	82980				
C32	8.954	-0.009	66254	106770				
C34	9.328	0.000	41923	92551				
Filter Peak	11.436	-0.003	2781	1424	CREOSOT (C12-C22)		9058491	4151.65 M
C36	9.680	-0.001	22902	42627				
C38	10.031	0.006	13669	5101				
C40	10.355	-0.006	9785	12787				
o-terph	5.762	0.002	853748	695360				
Triacon Surr	8.593	0.003	712406	710605				

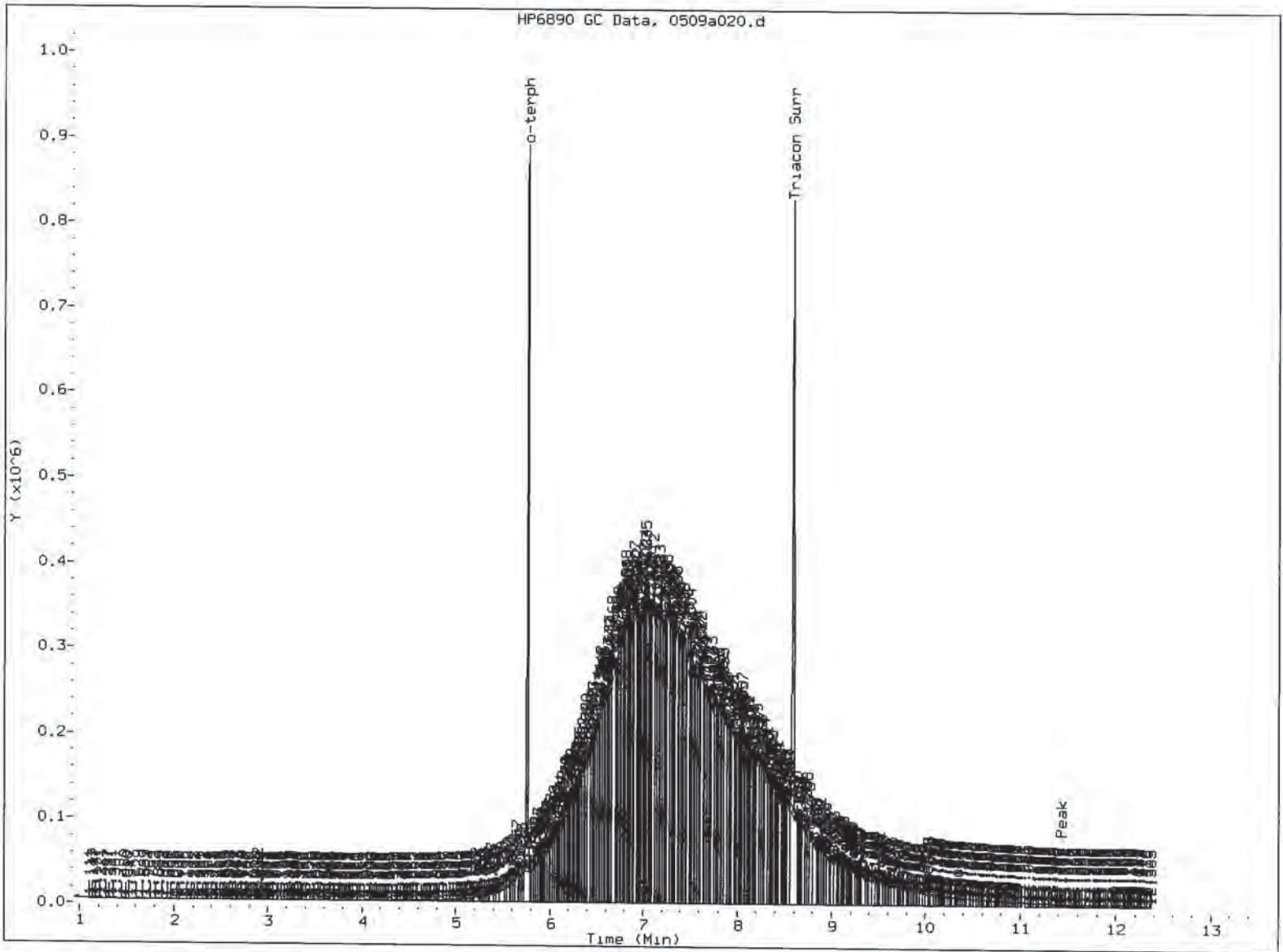
Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	695360	36.1	80.1 M
Triacotane	710605	39.1	86.8 M

JW
5/9/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- ⑤ Skipped surrogate

Analyst: ju

Date: 5/9/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a025.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19J
Client ID: TP-37-050713
Injection: 09-MAY-2013 16:55
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	67686	4.36
C8	----				WATPHD	(C12-C24)	18233165	1256.20 ✓
C10	2.848	-0.005	192	338	WATPHM	(C24-C38)	28398341	2087.50 ✓
C12	3.812	-0.008	1096	855	AK102	(C10-C25)	20390075	1184.45
C14	4.507	0.002	12480	11343	AK103	(C25-C36)	25096559	2727.27
C16	5.081	-0.006	38487	18321				
C18	5.625	0.000	73556	73573				
C20	6.177	0.007	122119	86094				
C22	6.718	0.009	199642	140775	MIN.OIL	(C24-C38)	28398341	1664.72
C24	7.225	0.001	246876	216821				
C25	7.472	0.001	255415	183493				
C26	7.708	-0.012	259372	336177				
C28	8.158	-0.008	256471	207265				
C32	8.961	-0.002	152667	227958				
C34	9.325	-0.003	104855	40513				
Filter Peak	11.428	-0.011	3159	5128	CREOSOT	(C12-C22)	11708379	5366.14 M
C36	9.685	0.004	81944	95971				
C38	10.026	0.001	46460	73691				
C40	10.353	-0.008	15995	26262				
o-terph	5.755	-0.006	99996	76214				
Triacon Surr	8.592	0.002	105256	81758				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	76214	4.0	87.8 M ✓
Triacontane	81758	4.5	99.8 M

JW
5/10/13

M Indicates the peak was manually integrated

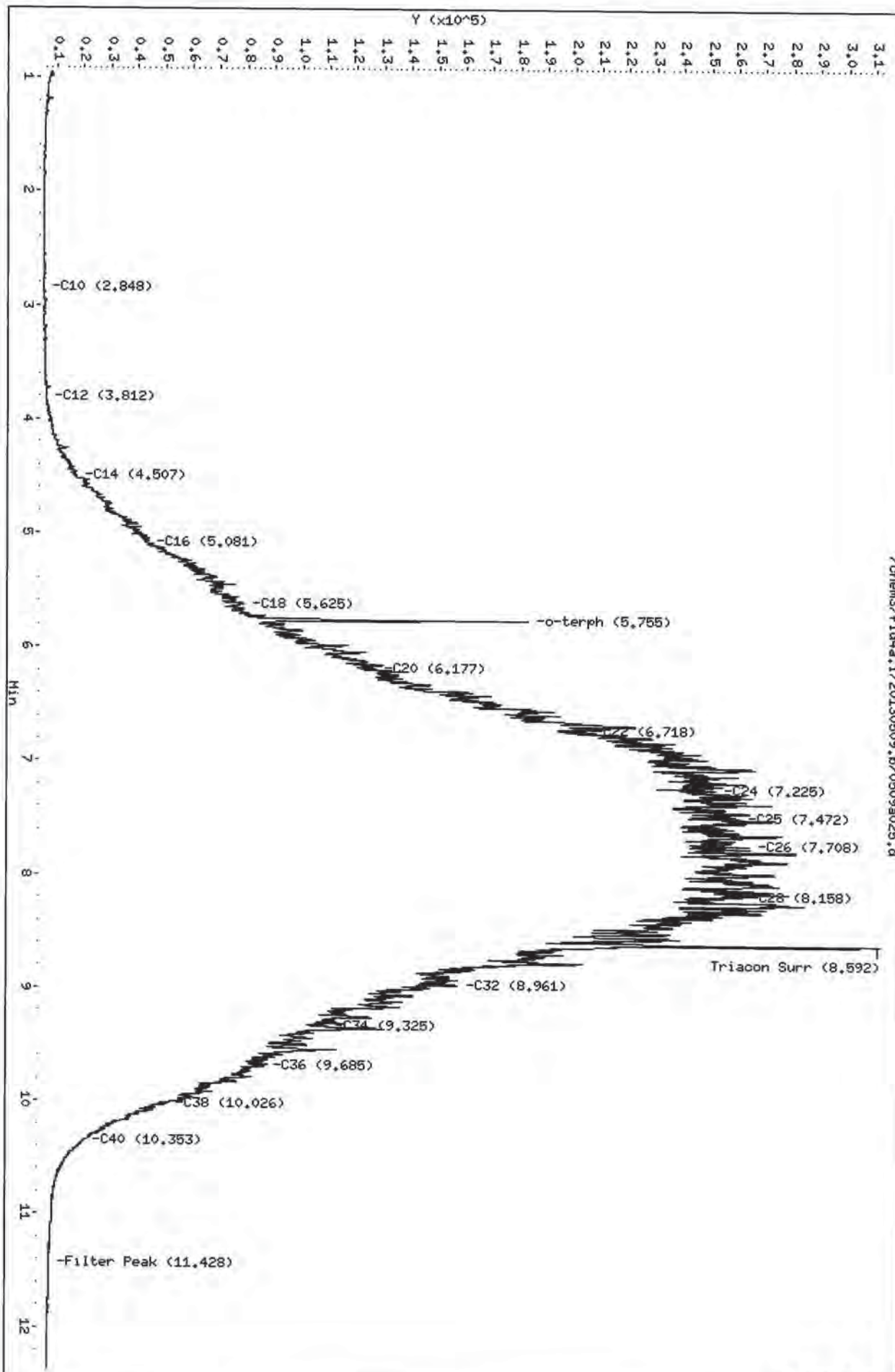
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a025.d
Date: 09-MAY-2013 16:56
Client ID: TP-37-050713
Sample Info: WP19J,10

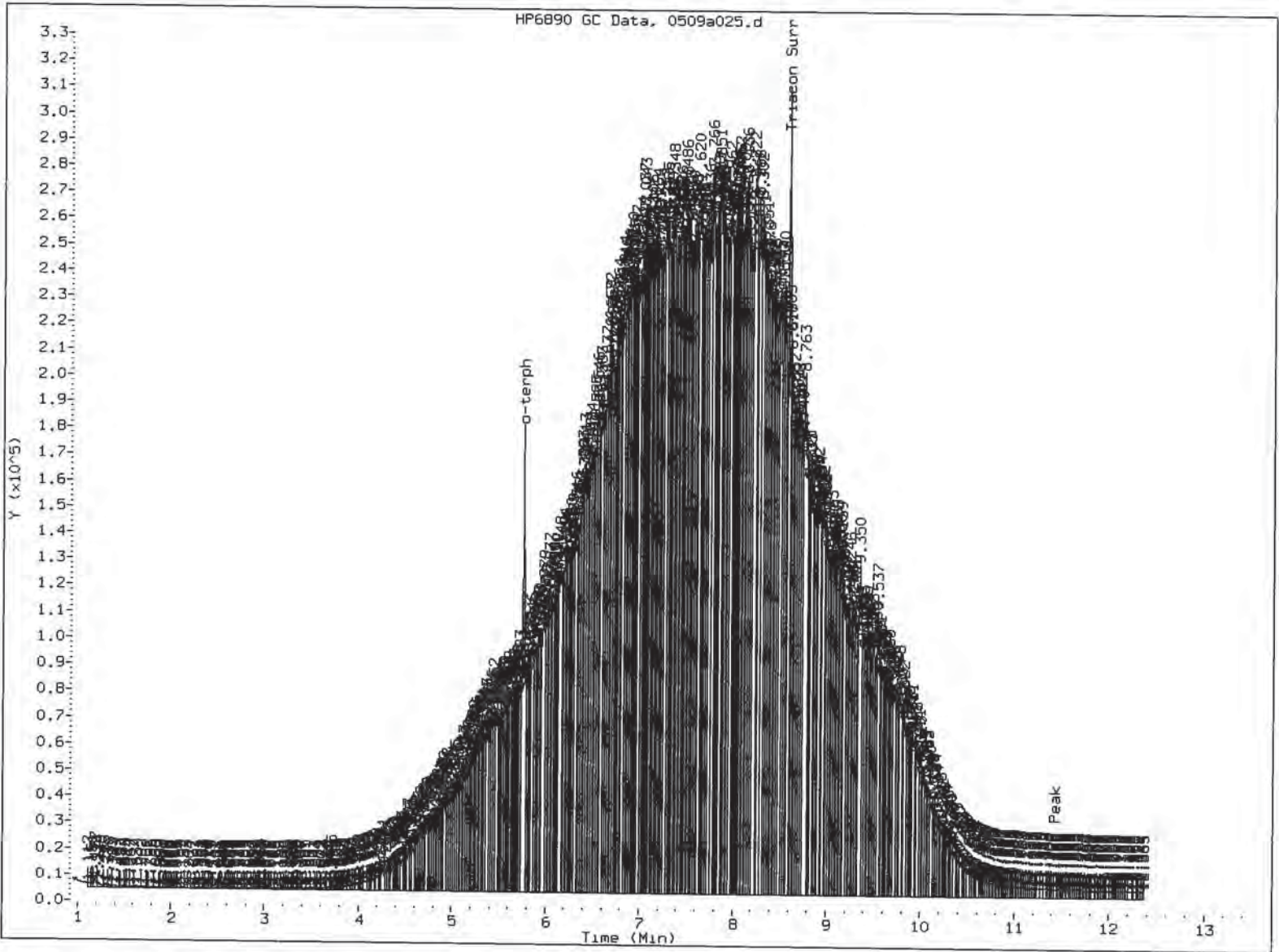
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

/chem3/fid4a.i/20130509.b/0509a025.d



0 1 2 3 4 5 6 7 8 9 10 11 12



CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050813	101%	0
LCS-050813	96.0%	0
LCSD-050813	86.7%	0
TP-28-050713	97.5%	0
TP-29-050713	89.5%	0
TP-30-050713	105%	0
TP-31-050713	86.5%	0
TP-32-050713	64.7%	0
TP-33-050713	85.6%	0
TP-34-050713	89.1%	0
TP-35-050713	62.6%	0
TP-36-050713	80.1%	0
TP-37-050713	87.8%	0

LCS/MB LIMITS	QC LIMITS
(50-150)	(50-150)

(OTER) = o-Terphenyl

Prep Method: SW3510C
Log Number Range: 13-9940 to 13-9949

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-050813
 LCS/LCSD

Lab Sample ID: LCS-050813
 LIMS ID: 13-9940
 Matrix: Water
 Data Release Authorized: *mw*
 Reported: 05/10/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Extracted LCS/LCSD: 05/08/13

Sample Amount LCS: 500 mL
 LCSD: 500 mL

Date Analyzed LCS: 05/09/13 15:53
 LCSD: 05/09/13 16:14

Final Extract Volume LCS: 1.0 mL
 LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW
 LCSD: FID/JLW

Dilution Factor LCS: 1.00
 LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.95	3.00	98.3%	3.01	3.00	100%	2.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	96.0%	86.7%

Results reported in mg/L
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a022.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19LCSW1
Client ID: WP19LCSW1
Injection: 09-MAY-2013 15:53
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		4326659	278.43
C8	----				WATPHD (C12-C24)		21421850	1475.89
C10	2.852	-0.001	91073	91047	WATPHM (C24-C38)		474192	34.86
C12	3.822	0.002	177283	213155	AK102 (C10-C25)		24633773	1430.97
C14	4.506	0.002	359288	401183	AK103 (C25-C36)		365865	39.76
C16	5.091	0.004	560877	683462				
C18	5.629	0.004	495928	604957				
C20	6.172	0.003	316521	515107				
C22	6.707	-0.002	166760	197932	MIN.OIL (C24-C38)		474192	27.80
C24	7.219	-0.005	50012	55357				
C25	7.465	-0.006	22270	40378				
C26	7.704	-0.017	9752	15470				
C28	8.160	-0.006	4960	8269				
C32	8.965	0.001	11215	16529				
C34	9.340	0.012	2332	4248				
Filter Peak	11.441	0.002	3355	6472	CREOSOT (C12-C22)		20701473	9487.82 M
C36	9.693	0.012	3436	9433				
C38	10.017	-0.008	2402	1886				
C40	10.354	-0.006	3297	4863				
o-terph	5.766	0.005	907260	833223				
Triacon Surr	8.592	0.002	894256	859034				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	833223	43.2	96.0 M
Triacotane	859034	47.2	104.9

JW
5/10/13

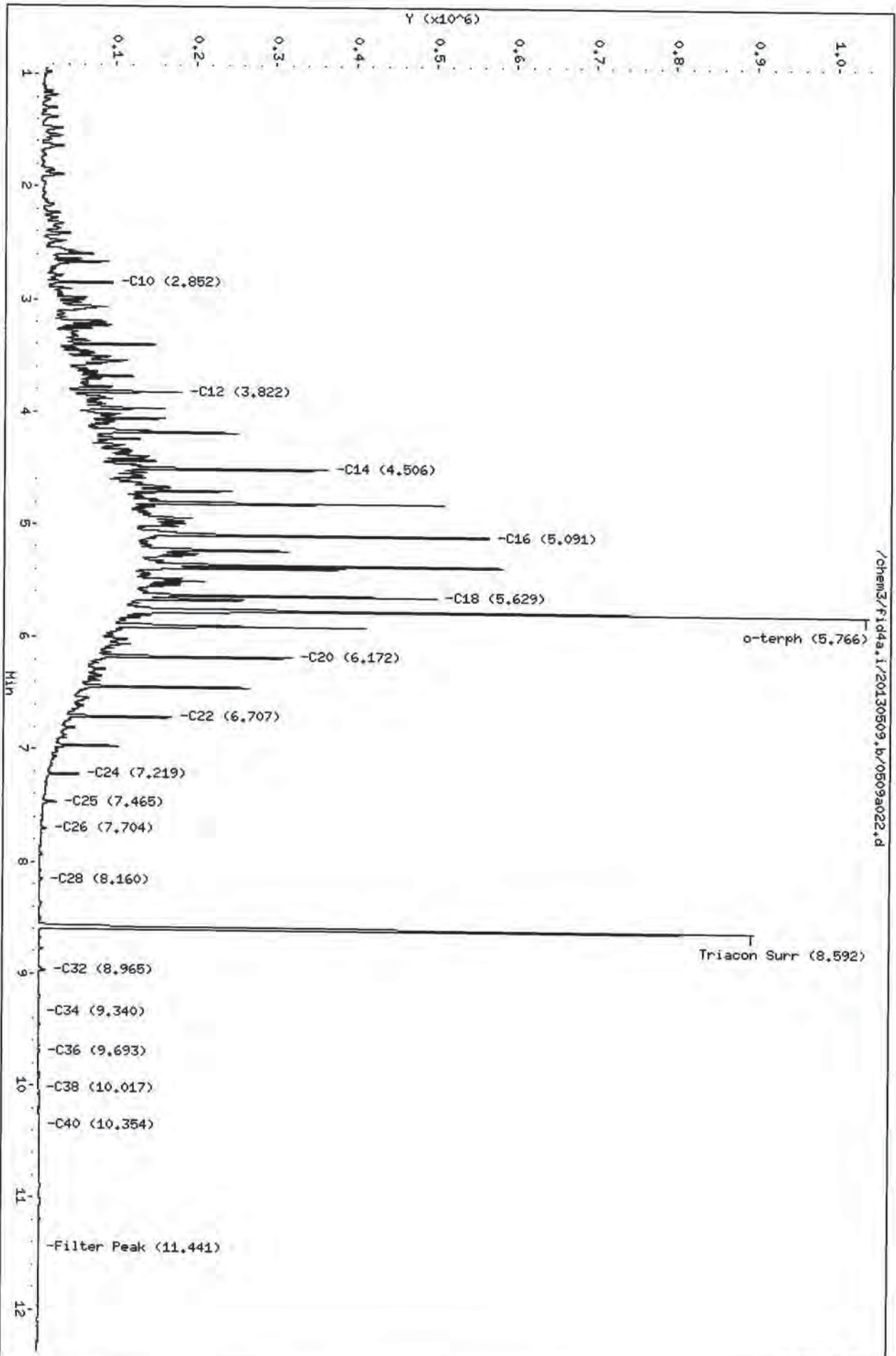
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a022.d
Date: 09-MAY-2013 15:53
Client ID: MP19LCSM1
Sample Info: MP19LCSM1

Column phase: RTX-1

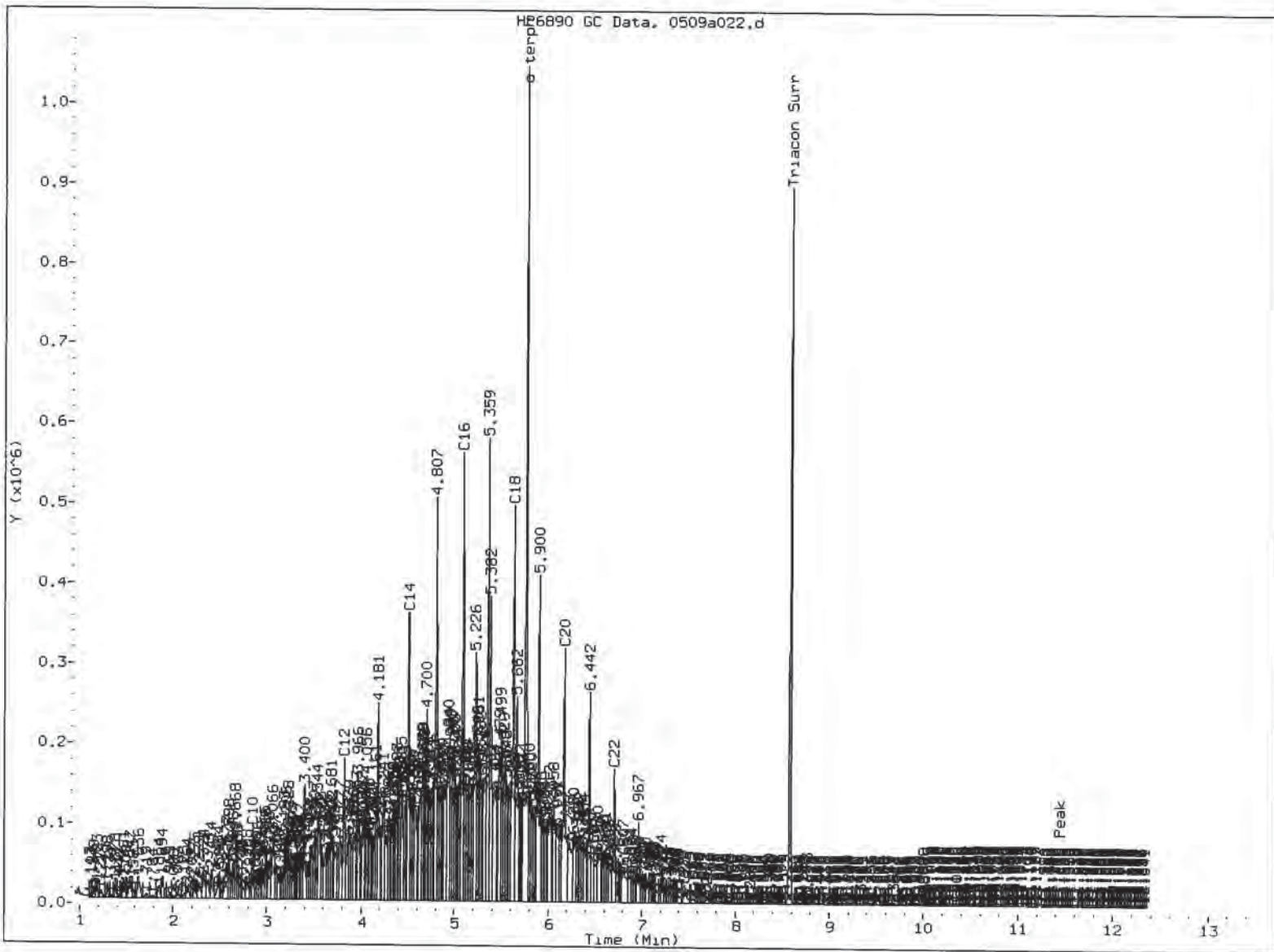
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



/chem3/fid4a.i/20130509.b/0509a022.d

JW
5/10/13

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: Jw

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a023.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19LCSDW1
Client ID: WP19LCSDW1
Injection: 09-MAY-2013 16:14
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		4328867	278.57
C8	----				WATPHD (C12-C24)		21819835	1503.31
C10	2.851	-0.002	92935	93483	WATPHM (C24-C38)		323454	23.78
C12	3.821	0.001	177838	218605	AK102 (C10-C25)		24960469	1449.94
C14	4.506	0.002	353522	394417	AK103 (C25-C36)		234160	25.45
C16	5.092	0.005	562794	677009				
C18	5.630	0.006	467503	584412				
C20	6.172	0.002	332502	402476				
C22	6.707	-0.002	178120	225907	MIN.OIL (C24-C38)		323454	18.96
C24	7.220	-0.004	49703	55545				
C25	7.465	-0.006	22277	39591				
C26	7.703	-0.017	9905	13395				
C28	8.159	-0.007	3247	5350				
C32	8.968	0.005	9729	11490				
C34	9.328	0.000	713	740				
Filter Peak	11.439	0.001	1885	1775	CREOSOT (C12-C22)		21075446	9659.22 M
C36	9.670	-0.011	775	460				
C38	10.023	-0.002	819	688				
C40	10.346	-0.014	1062	669				
o-terph	5.764	0.004	789518	752545				
Triacon Surr	8.590	0.000	782499	764526				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	752545	39.0	86.7 M
Triacontane	764526	42.0	93.4

JW
5/10/13

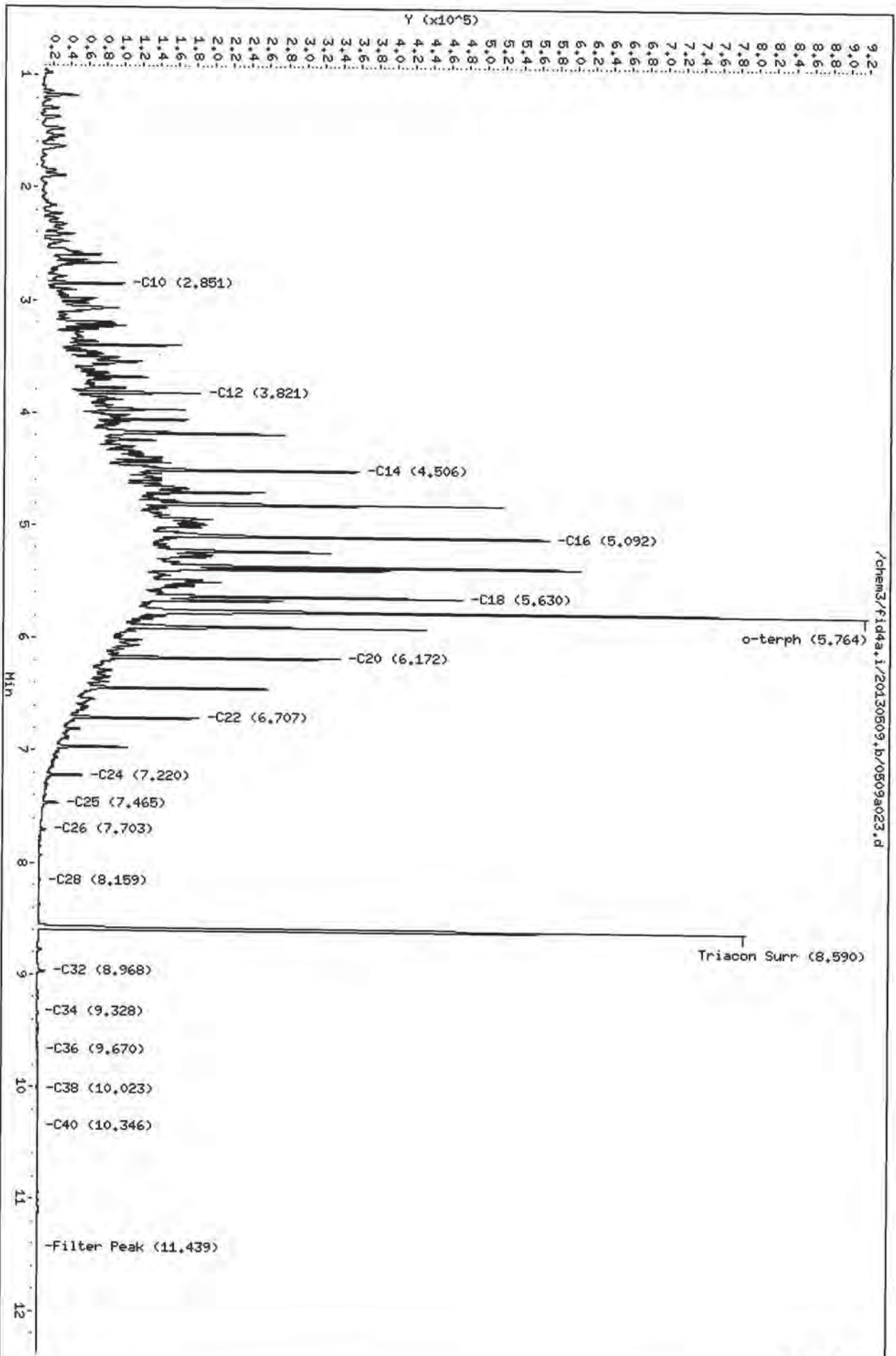
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a023.d
Date: 09-MAY-2013 16:14
Client ID: MP19LCSDM4
Sample Info: MP19LCSDM4

Column phase: RTX-1

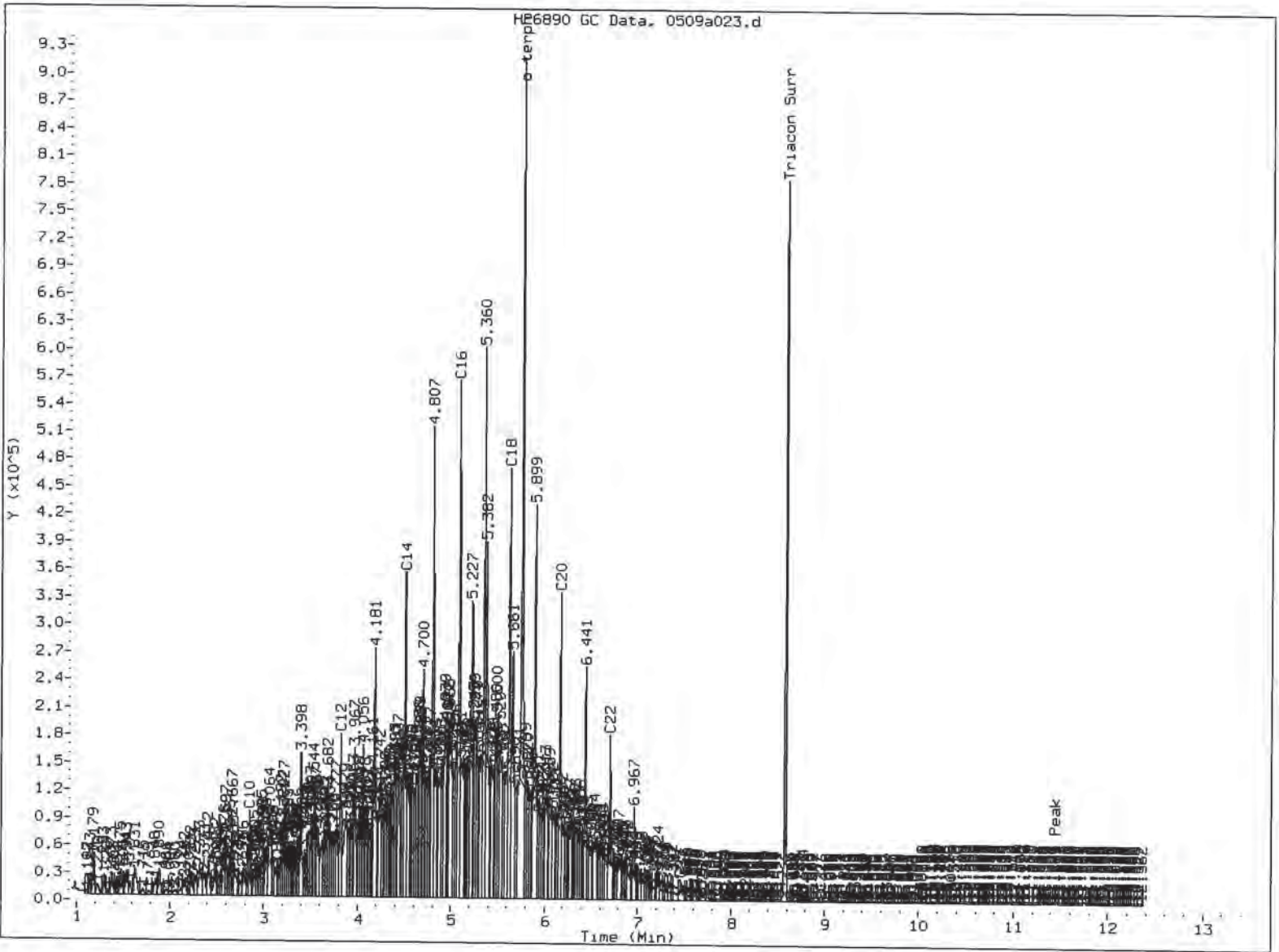
Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



/chem3/fid4a.i/20130509.b/0509a023.d

Handwritten: 5/10/13

01 02 03 04 05 06 07 08 09 10 11 12



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SL

Date: 5/10/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WP19
Project: Cashmere
0779.02.01/03

Matrix: Water
Date Received: 05/08/13

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
13-9940-050813MB1	Method Blank	500 mL	1.00 mL	05/08/13
13-9940-050813LCS1	Lab Control	500 mL	1.00 mL	05/08/13
13-9940-050813LCSD1	Lab Control Dup	500 mL	1.00 mL	05/08/13
13-9940-WP19A	TP-28-050713	500 mL	1.00 mL	05/08/13
13-9941-WP19B	TP-29-050713	415 mL	1.00 mL	05/08/13
13-9942-WP19C	TP-30-050713	500 mL	1.00 mL	05/08/13
13-9943-WP19D	TP-31-050713	500 mL	1.00 mL	05/08/13
13-9944-WP19E	TP-32-050713	500 mL	1.00 mL	05/08/13
13-9945-WP19F	TP-33-050713	500 mL	1.00 mL	05/08/13
13-9946-WP19G	TP-34-050713	500 mL	1.00 mL	05/08/13
13-9947-WP19H	TP-35-050713	500 mL	1.00 mL	05/08/13
13-9948-WP19I	TP-36-050713	500 mL	1.00 mL	05/08/13
13-9949-WP19J	TP-37-050713	500 mL	1.00 mL	05/08/13

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 2

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

Matrix: Soil
Data Release Authorized: *mmw*
Reported: 05/10/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050813 13-9950	Method Blank HC ID: ---	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 94.6%
WP19K 13-9950	TP-28-050713 HC ID: DRO/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	30 60	280 370 90.3%
WP19L 13-9951	TP-29-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.5 11	9.5 16 77.3%
WP19M 13-9952	TP-30-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.2 12	24 98 86.1%
WP19N 13-9953	TP-31-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	29 57	41 200 89.1%
WP19O 13-9954	TP-32-050713 HC ID: DRO/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	890 1800	1900 17000 D
WP19P 13-9955	TP-33-050713 HC ID: DRO/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.9 14	9.6 68 91.2%
WP19Q 13-9956	TP-34-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.2 12	51 25 87.2%
WP19R 13-9957	TP-35-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	31 62	610 1200 75.0%
WP19S 13-9958	TP-36-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/09/13 FID4A	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	31 63	100 340 78.7%
WP19T 13-9959	TP-37-050713 HC ID: DIESEL/MOTOR OIL	05/08/13	05/10/13 FID4A	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	580 1200	23000 6500 D



ORGANICS ANALYSIS DATA SHEET
 TOTAL DIESEL RANGE HYDROCARBONS
 NWTPHD by GC/FID-Silica and Acid Cleaned
 Extraction Method: SW3546
 Page 2 of 2

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01/03

Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/10/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
--------	-----------	-----------------	---------------	--------	-----------------	----	--------

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
 DL-Dilution of extract prior to analysis.
 RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
 Motor Oil range quantitation on total peaks in the range from C24 to C38.
 HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a028.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19MBS1
Client ID: WP19MBS1
Injection: 09-MAY-2013 17:56
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		101706	6.54
C8	----				WATPHD (C12-C24)		249686	17.20 ✓
C10	2.854	0.001	788	785	WATPHM (C24-C38)		132184	9.72 ✓
C12	3.817	-0.003	2277	1983	AK102 (C10-C25)		286237	16.63
C14	4.500	-0.004	3882	3770	AK103 (C25-C36)		109621	11.91
C16	5.084	-0.002	2186	2393				
C18	5.633	0.008	2172	2902				
C20	6.165	-0.005	1283	1145				
C22	6.707	-0.002	1165	1233	MIN.OIL (C24-C38)		132184	7.75
C24	7.221	-0.003	923	1959				
C25	7.466	-0.005	810	933				
C26	7.731	0.010	656	518				
C28	8.159	-0.007	1424	3166				
C32	8.964	0.000	9783	11470				
C34	9.337	0.009	872	1983				
Filter Peak	11.448	0.010	1794	1070	CREOSOT (C12-C22)		228790	104.86 M
C36	9.691	0.010	2232	4666				
C38	10.025	0.000	893	478				
C40	10.365	0.004	1600	4110				
o-terph	5.762	0.002	1035215	820413				
Triacon Surr	8.588	-0.002	822487	786267				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	820413	42.5	94.5 ✓
Triacotane	786267	43.2	96.0

JW
5/10/13

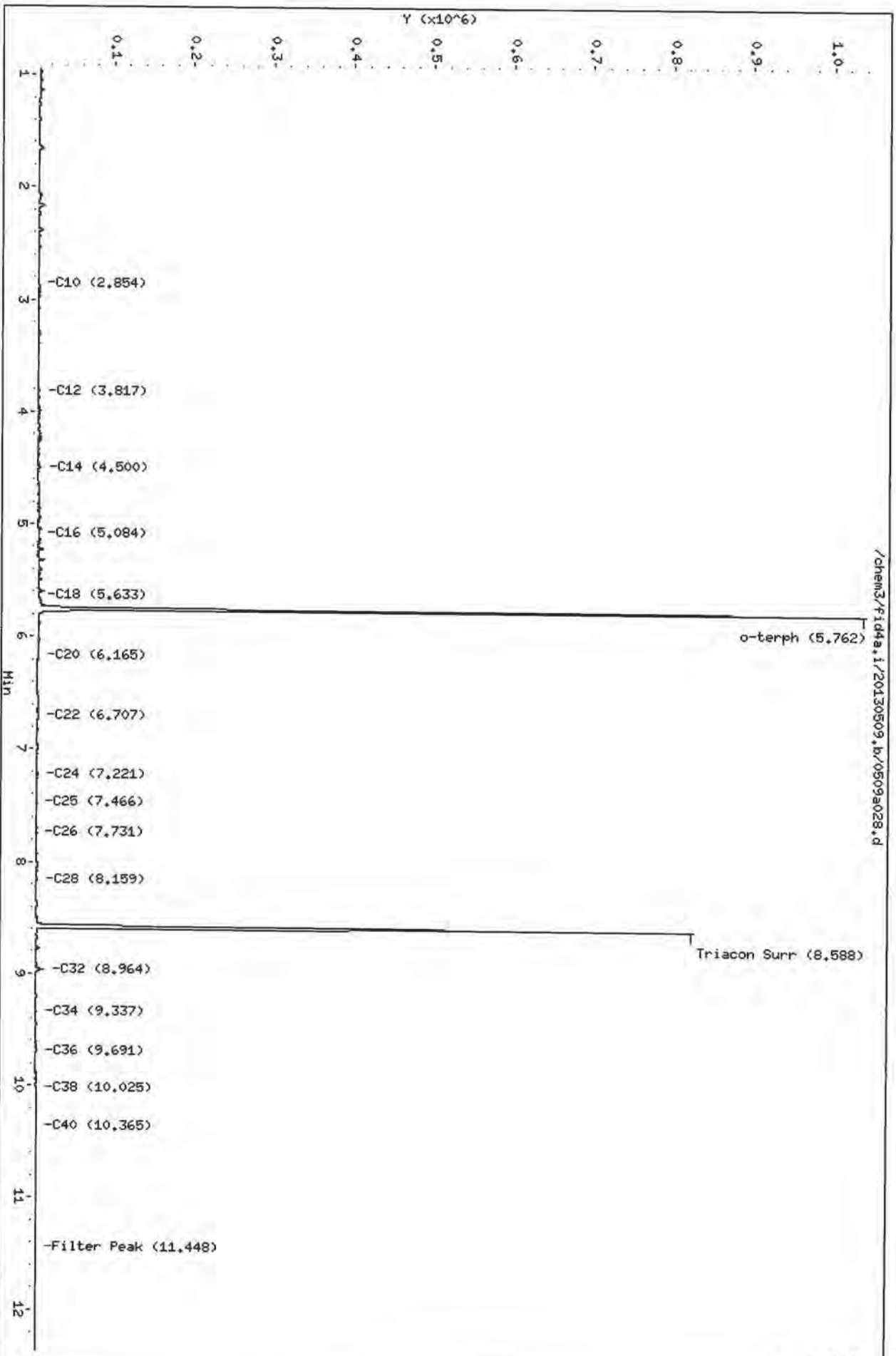
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.1/20130509.b/0509a028.d
Date: 09-MAY-2013 17:56
Client ID: MP19MBS1
Sample Info: MP19MBS1

Column phase: RTX-1

Instrument: fid4a.1
Operator: JR/VTS/JM
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a031.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19K
Client ID: TP-28-050713
Injection: 09-MAY-2013 18:58
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		137278	8.83
C8	----				WATPHD (C12-C24)		6640966	457.54
C10	2.851	-0.003	939	922	WATPHM (C24-C38)		8388660	616.63
C12	3.819	-0.001	3330	5708	AK102 (C10-C25)		7170097	416.51
C14	4.504	-0.001	12674	9951	AK103 (C25-C36)		7257779	788.71
C16	5.083	-0.004	27472	53108				
C18	5.621	-0.004	37819	45928				
C20	6.160	-0.010	50151	47922				
C22	6.706	-0.003	46876	29862	MIN.OIL (C24-C38)		8388660	491.75
C24	7.221	-0.003	49219	44522				
C25	7.479	0.008	65757	125742				
C26	7.723	0.002	58151	80603				
C28	8.163	-0.004	64102	69326				
C32	8.967	0.003	54651	110548				
C34	9.338	0.010	58969	130202				
Filter Peak	11.434	-0.005	2403	2230	CREOSOT (C12-C22)		5090121	2332.88 M
C36	9.688	0.007	41893	19639				
C38	10.029	0.003	32691	9660				
C40	10.363	0.002	21566	32467				
o-terph	5.756	-0.005	213685	156768				
Triacon Surr	8.582	-0.008	182202	151215				

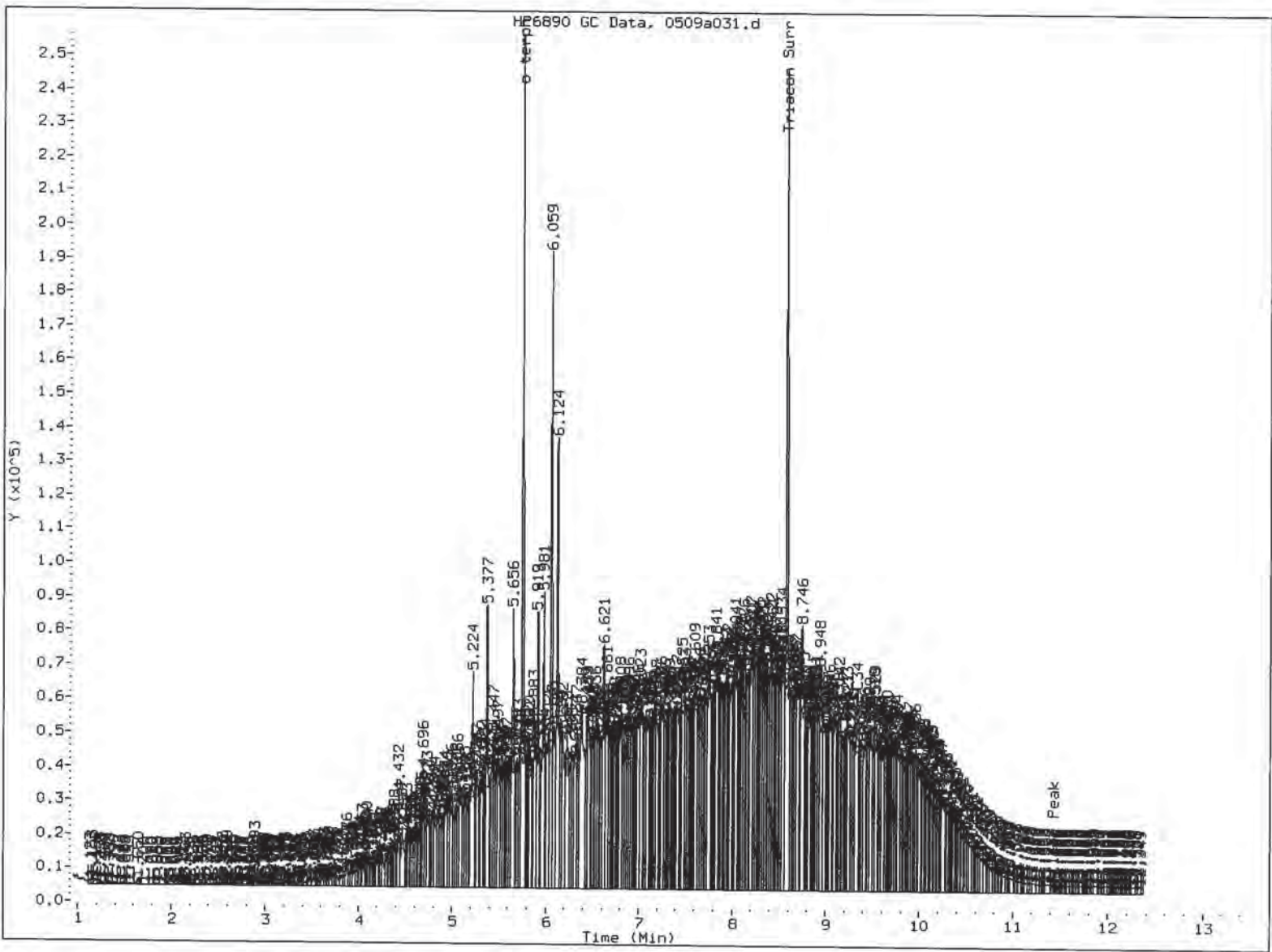
Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	156768	8.1	90.3 M
Triacotane	151215	8.3	92.3 M

JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5) Skipped surrogate

Analyst: SW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a032.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19L
Client ID: TP-29-050713
Injection: 09-MAY-2013 19:18
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		107389	6.91
C8	----				WATPHD (C12-C24)		1253948	86.39
C10	2.854	0.001	10343	7395	WATPHM (C24-C38)		2004434	147.34
C12	3.818	-0.002	3146	2626	AK102 (C10-C25)		1410906	81.96
C14	4.501	-0.004	5684	7867	AK103 (C25-C36)		1768776	192.21
C16	5.085	-0.001	8513	8908				
C18	5.624	-0.001	5704	9079				
C20	6.165	-0.004	7456	15441				
C22	6.704	-0.005	11553	19318	MIN.OIL (C24-C38)		2004434	117.50
C24	7.219	-0.005	12603	19261				
C25	7.464	-0.007	15341	21824				
C26	7.740	0.020	17679	46264				
C28	8.157	-0.009	19132	30790				
C32	8.965	0.002	18359	36342				
C34	9.331	0.003	10984	13315				
Filter Peak	11.438	0.000	2180	2164	CREOSOT (C12-C22)		989716	453.60 M
C36	9.690	0.010	11164	22661				
C38	10.016	-0.010	6340	1748				
C40	10.355	-0.006	5662	7820				
o-terph	5.761	0.001	818065	670889				
Triacon Surr	8.588	-0.002	684010	634410				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	670889	34.8	77.3 M
Triacotane	634410	34.9	77.5 M

M Indicates the peak was manually integrated

JW
5/10/13

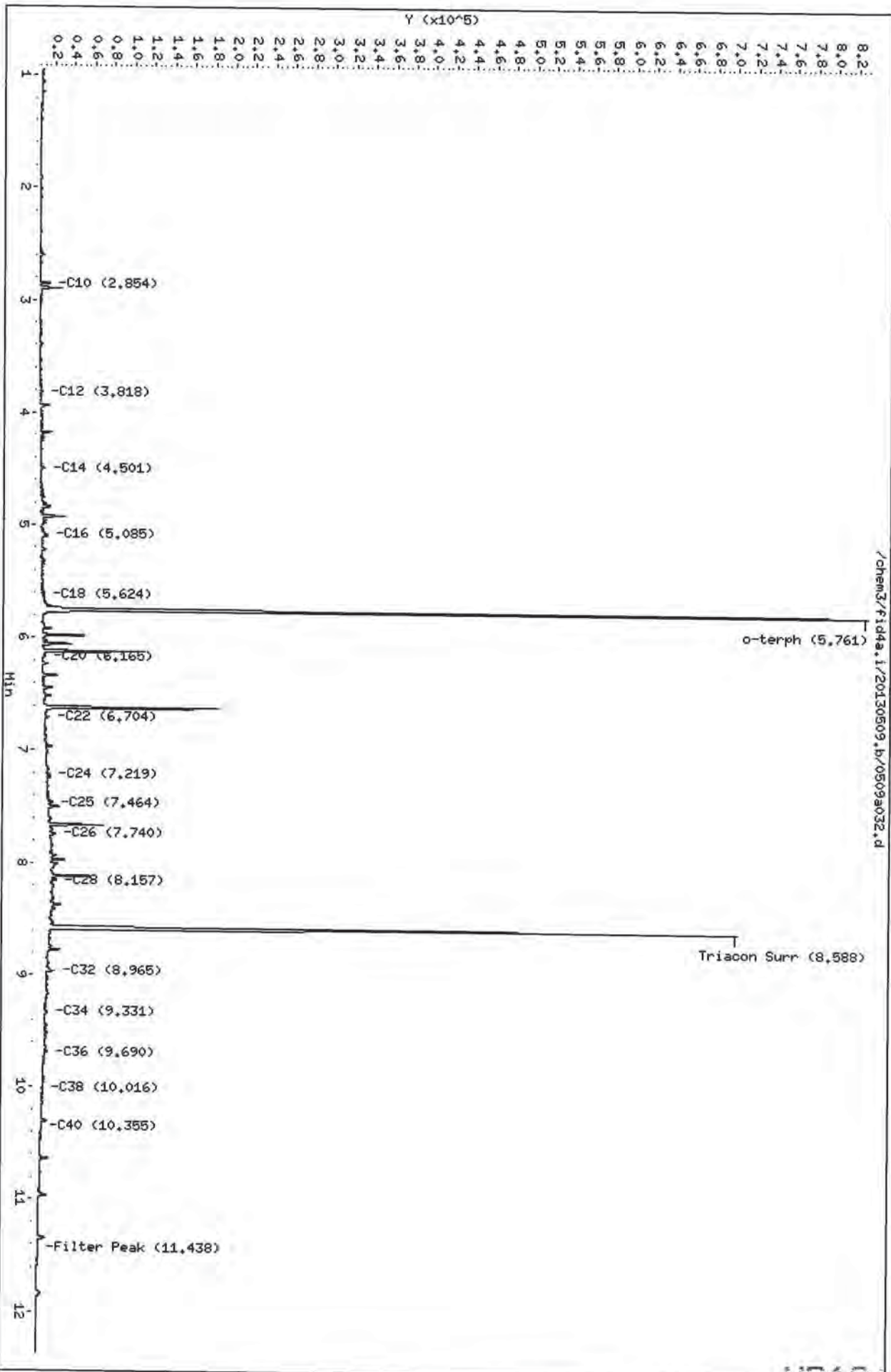
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a032.d
Date: 09-MAY-2013 19:18
Client ID: TP-29-050713
Sample Info: MP19L

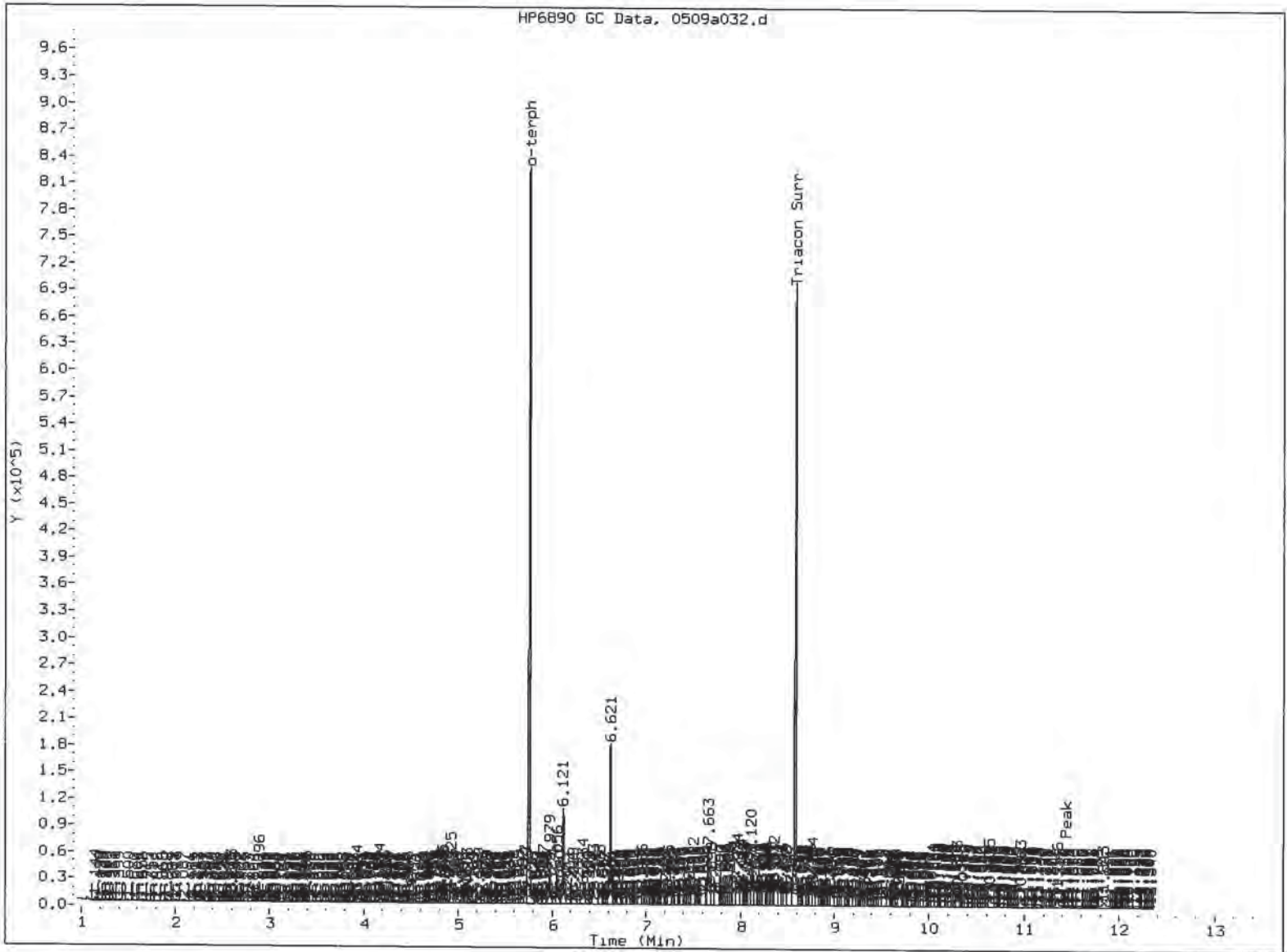
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

Page 1



rw
5/10/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a033.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19M
Client ID: TP-30-050713
Injection: 09-MAY-2013 19:39
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		187294	12.05
C8	----				WATPHD (C12-C24)		2750499	189.50
C10	2.853	0.000	1617	1481	WATPHM (C24-C38)		10711265	787.36
C12	3.818	-0.002	3773	3129	AK102 (C10-C25)		3178535	184.64
C14	4.500	-0.004	6556	5824	AK103 (C25-C36)		9414075	1023.04
C16	5.084	-0.002	6281	7534				
C18	5.624	-0.001	10254	9913				
C20	6.158	-0.012	16773	8235				
C22	6.707	-0.002	23967	24681	MIN.OIL (C24-C38)		10711265	627.90
C24	7.236	0.011	38993	10693				
C25	7.484	0.013	69420	202264				
C26	7.708	-0.012	57045	90531				
C28	8.161	-0.005	92647	55803				
C32	8.960	-0.004	75324	114920				
C34	9.334	0.006	56634	50043				
Filter Peak	11.427	-0.011	2348	5783	CREOSOT (C12-C22)		1531749	702.03 M
C36	9.684	0.004	55112	67137				
C38	10.029	0.004	42941	12798				
C40	10.359	-0.002	22660	17401				
o-terph	5.762	0.002	819376	747034				
Triacon Surr	8.590	0.000	739945	737078				

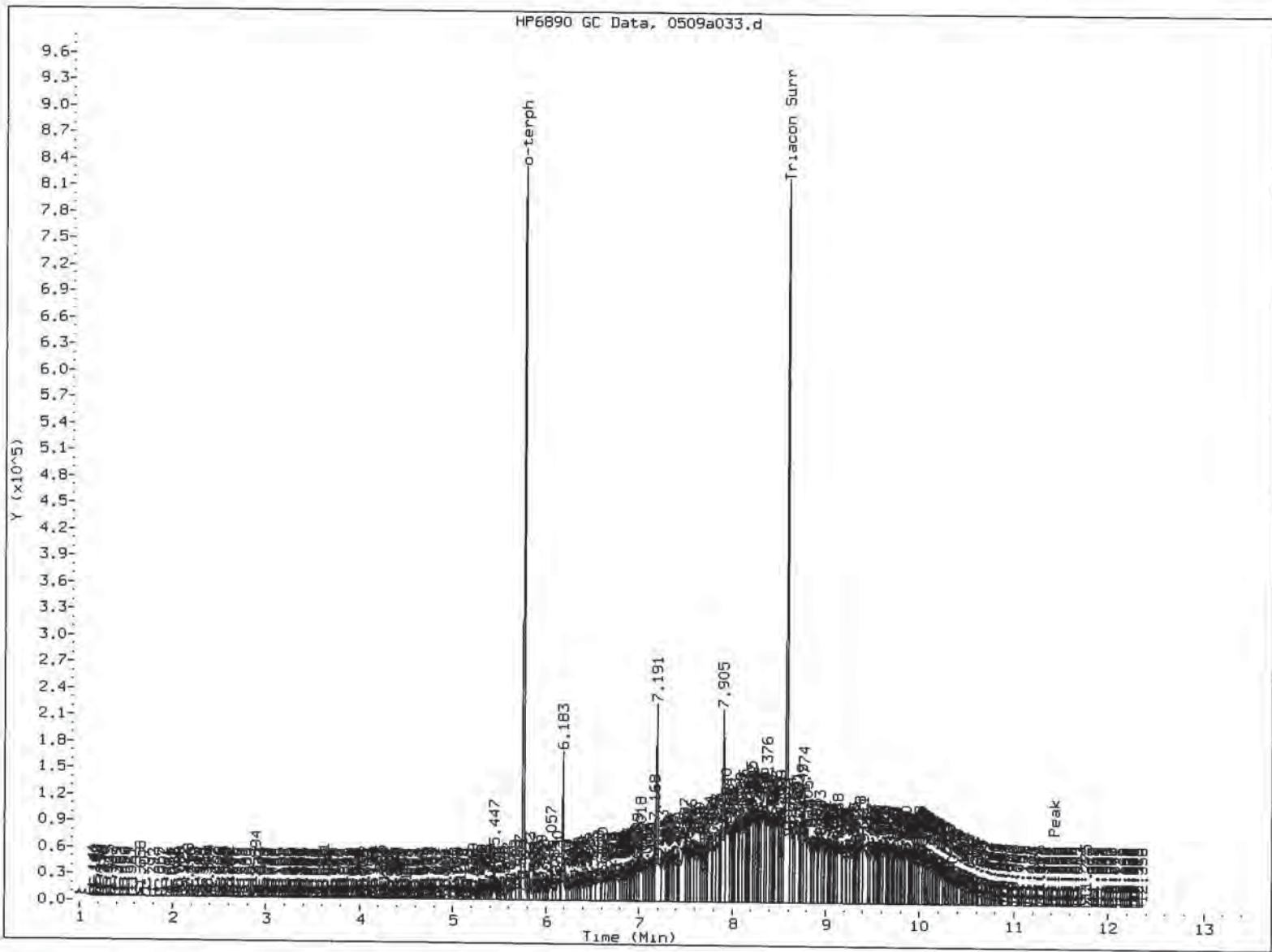
Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	747034	38.7	86.1 M
Triacontane	737078	40.5	90.0 M

JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a034.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19N
Client ID: TP-31-050713
Injection: 09-MAY-2013 19:59
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		65261	4.20
C8	----				WATPHD (C12-C24)		1030788	71.02
C10	2.851	-0.003	683	585	WATPHM (C24-C38)		4798541	352.73
C12	3.818	-0.002	1061	1093	AK102 (C10-C25)		1197878	69.58
C14	4.502	-0.003	1927	1869	AK103 (C25-C36)		4147241	450.69
C16	5.085	-0.002	2138	2433				
C18	5.622	-0.003	4137	5993				
C20	6.166	-0.004	7089	9380				
C22	6.705	-0.004	11794	12448	MIN.OIL (C24-C38)		4798541	281.29
C24	7.216	-0.009	16757	23342				
C25	7.466	-0.005	20179	29166				
C26	7.721	0.000	21696	11987				
C28	8.154	-0.012	38842	58417				
C32	8.958	-0.006	35692	71076				
C34	9.338	0.009	26758	34428				
Filter Peak	11.446	0.007	2490	3619	CREOSOT (C12-C22)		594767	272.59 M
C36	9.686	0.005	27231	20702				
C38	10.024	-0.002	25262	25317				
C40	10.354	-0.007	17843	34551				
o-terph	5.754	-0.007	219754	154626				
Triacon Surr	8.577	-0.014	202461	157281				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	154626	8.0	89.1 M
Triacotane	157281	8.6	96.0 M

SW
5/6/13

M Indicates the peak was manually integrated

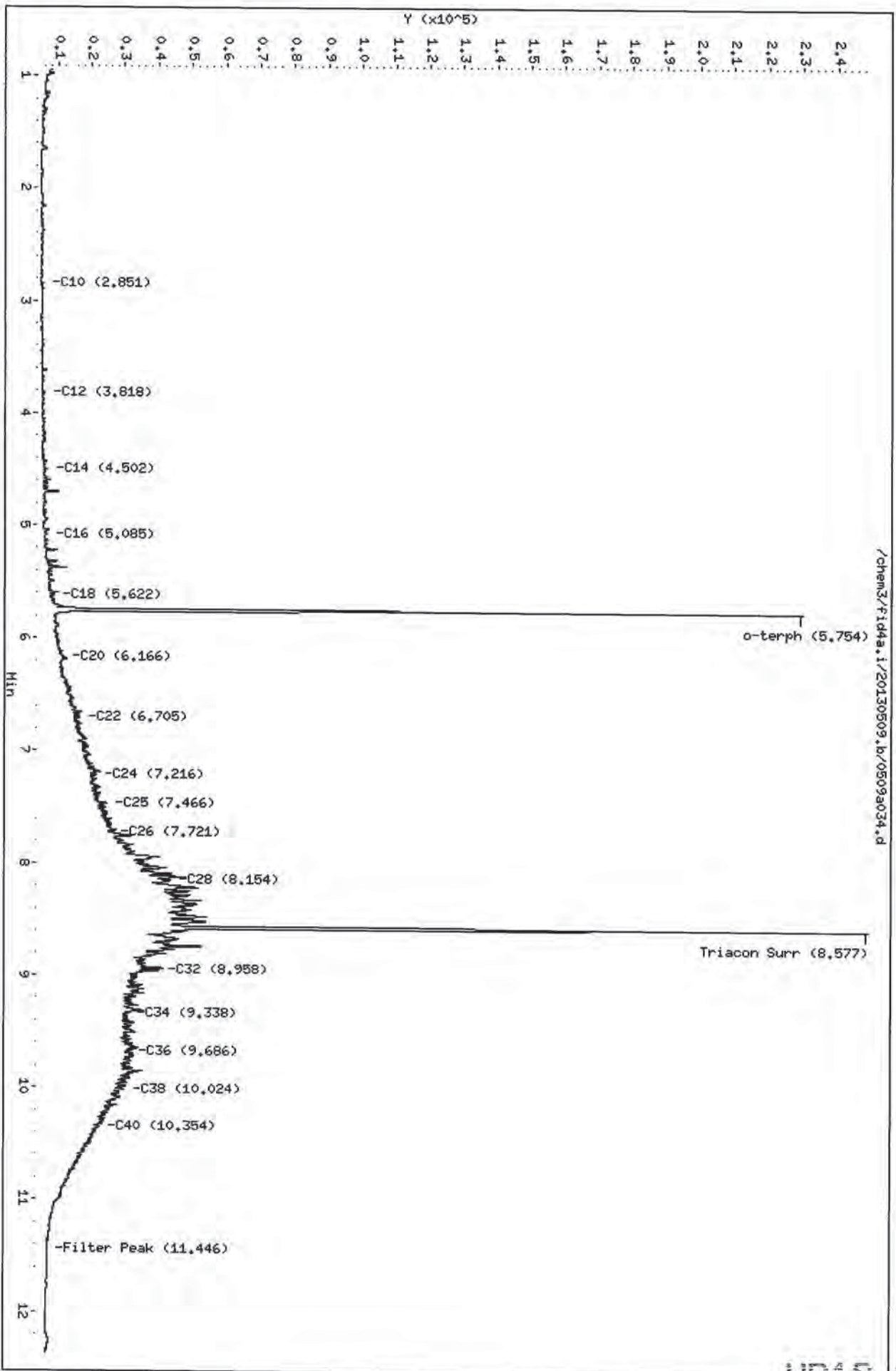
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a034.d
Date: 09-MAY-2013 19:59
Client ID: TP-31-050713
Sample Info: MP19N,5

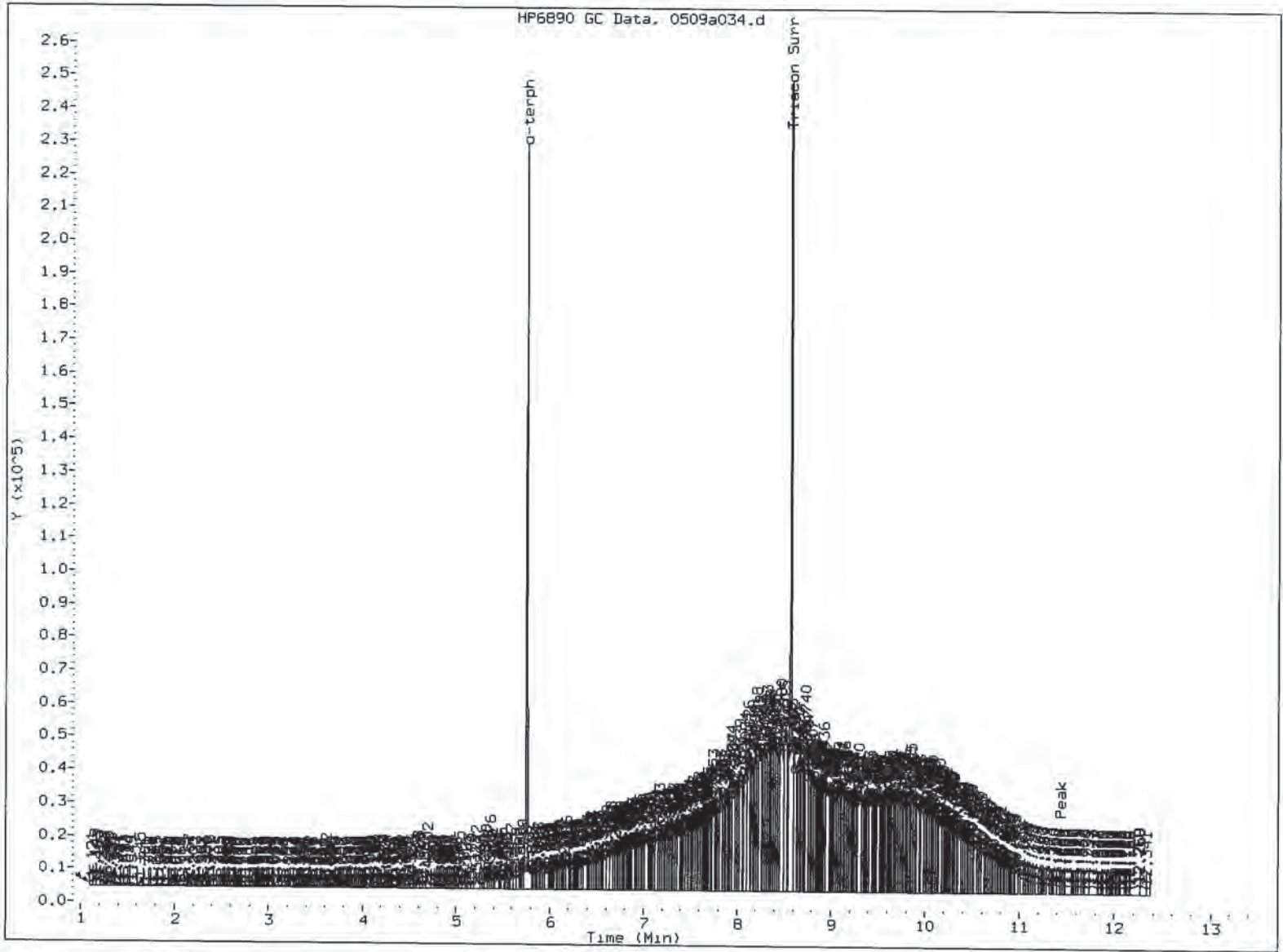
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/14/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a035.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP190
Client ID: TP-32-050713
Injection: 09-MAY-2013 20:20
Dilution Factor: 100

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG	(Tol-C12)	99485	6.40
C8	-----				WATPHD	(C12-C24)	1526867	105.20 ✓
C10	2.848	-0.005	537	568	WATPHM	(C24-C38)	12849120	944.51 ✓
C12	3.828	0.008	2417	1815	AK102	(C10-C25)	1790867	104.03
C14	4.501	-0.003	3595	5606	AK103	(C25-C36)	10850510	1179.14
C16	5.088	0.001	2408	1982				
C18	5.619	-0.006	4682	5925				
C20	6.172	0.002	9183	13555				
C22	6.712	0.002	13204	8286	MIN.OIL	(C24-C38)	12849120	753.22
C24	7.230	0.005	20468	23924				
C25	7.469	-0.002	25435	30361				
C26	7.727	0.006	33133	21916				
C28	8.172	0.006	63262	33749				
C32	8.969	0.005	103409	172276				
C34	9.330	0.001	150924	352878				
Filter Peak	11.434	-0.005	4438	7456	CREOSOT	(C12-C22)	973833	446.32 M
C36	9.692	0.011	117424	41323				
C38	10.024	-0.002	61407	105466				
C40	10.350	-0.011	16962	31362				
o-terph	-----							
Triacon Surr	-----							

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0 ✓
Triacontane	0	0.0	0.0

M Indicates the peak was manually integrated

JW
5/14/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a035.d
Date: 09-MAY-2013 20:20
Client ID: TP-32-050713
Sample Info: WP190,100

Column phase: RTX-1

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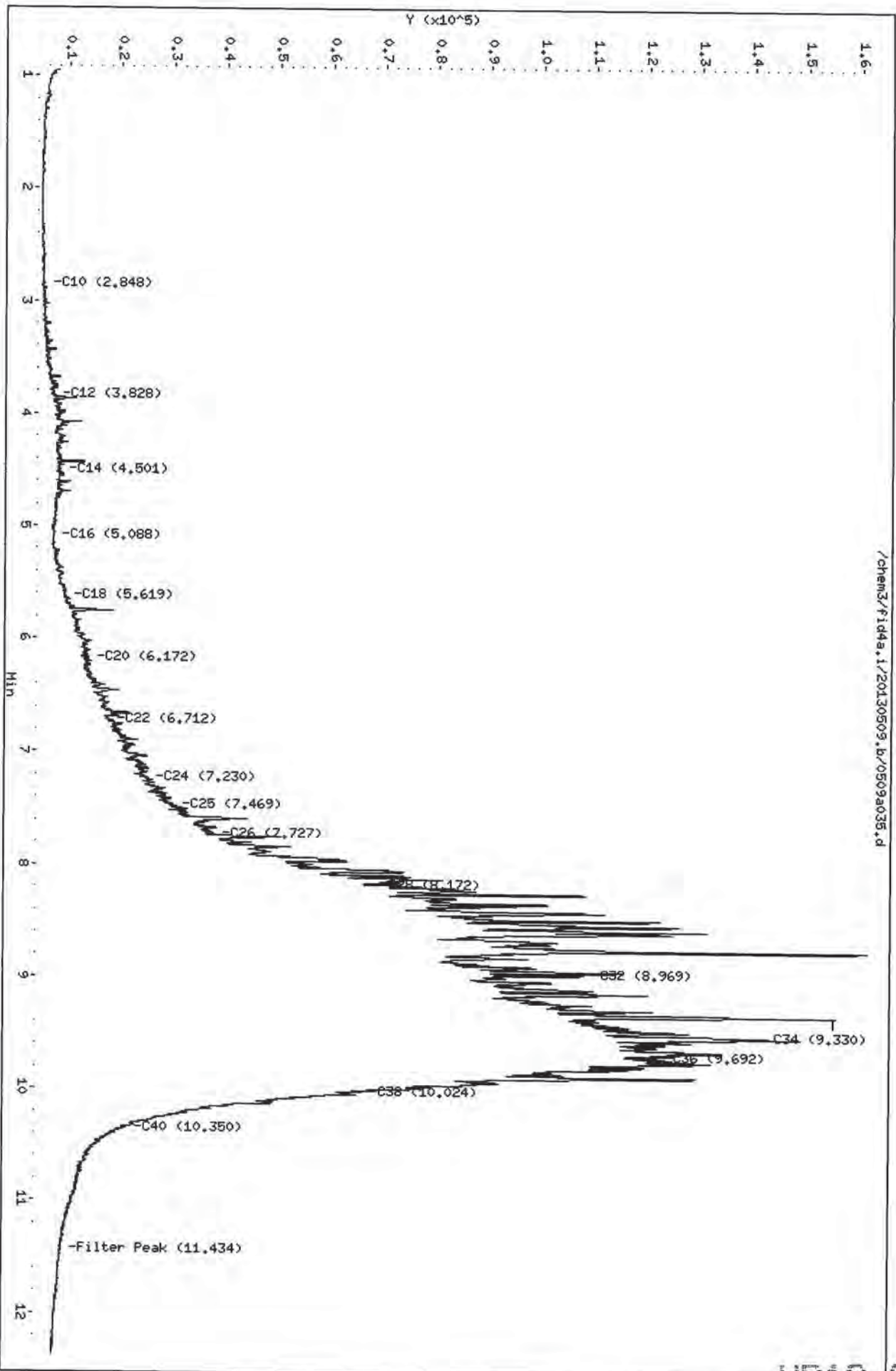
Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25

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JW
5/10/13



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a036.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19P
Client ID: TP-33-050713
Injection: 09-MAY-2013 20:40
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		138874	8.94
C8	----				WATPHD (C12-C24)		999394	68.85
C10	2.851	-0.002	1140	1134	WATPHM (C24-C38)		6706602	492.99
C12	3.817	-0.003	2790	2335	AK102 (C10-C25)		1107529	64.34
C14	4.501	-0.004	5923	6082	AK103 (C25-C36)		5365914	583.12
C16	5.085	-0.002	5752	10454				
C18	5.626	0.001	8127	6526				
C20	6.164	-0.006	6097	12694				
C22	6.692	-0.017	12648	25512	MIN.OIL (C24-C38)		6706602	393.14
C24	7.214	-0.011	8970	14813				
C25	7.465	-0.006	12370	18972				
C26	7.734	0.013	10954	3670				
C28	8.159	-0.007	25689	26227				
C32	8.962	-0.002	60815	88068				
C34	9.325	-0.003	76334	170749				
Filter Peak	11.438	-0.001	3086	3528	CREOSOT (C12-C22)		832156	381.39 M
C36	9.683	0.002	73272	113116				
C38	10.042	0.017	60798	98566				
C40	10.369	0.008	23126	35885				
o-terph	5.761	0.000	897318	791663				
Triacon Surr	8.590	0.000	803537	798362				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	791663	41.1	91.2 M
Triacontane	798362	43.9	97.5 M

M Indicates the peak was manually integrated

JW
5/10/13

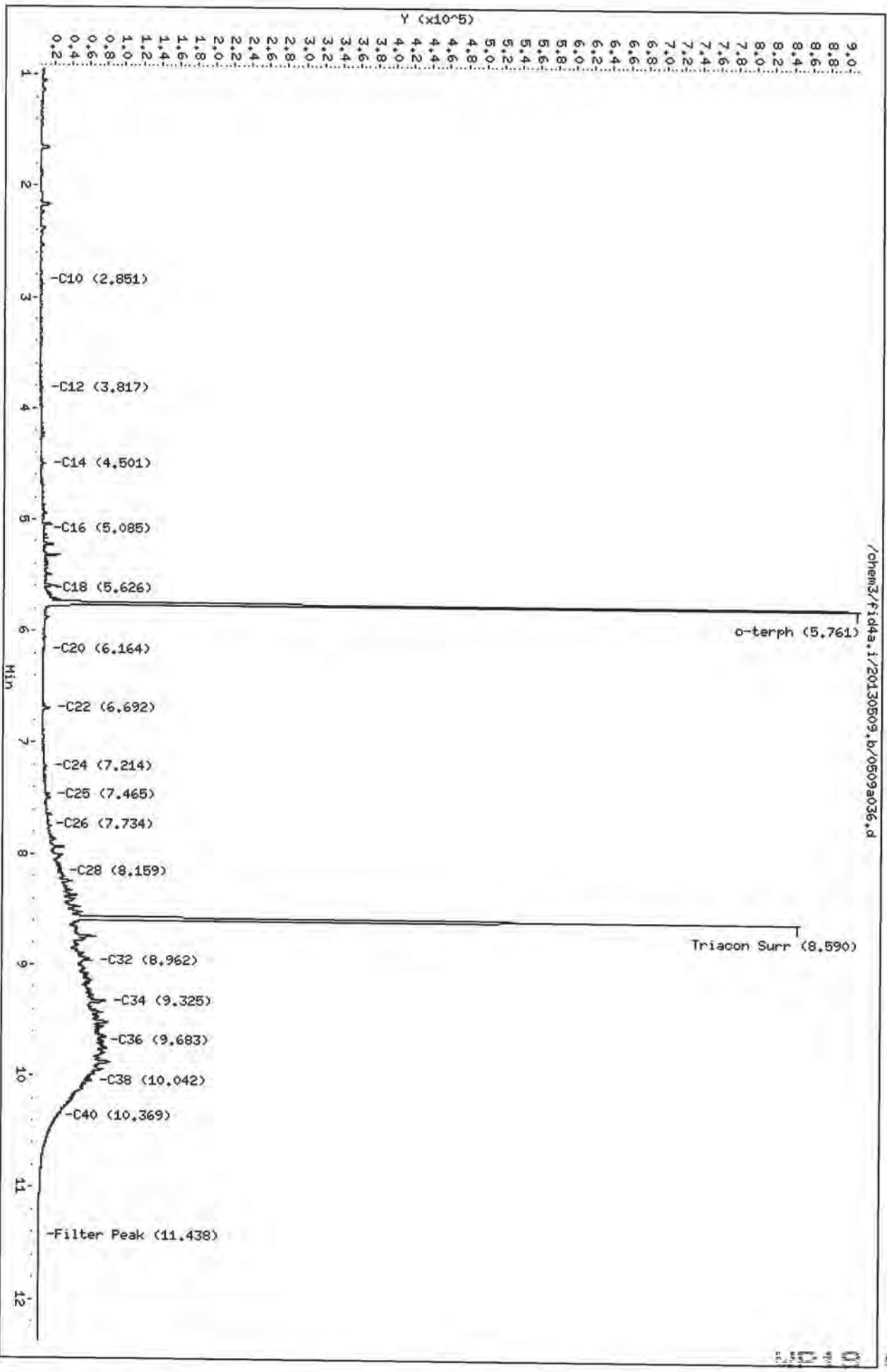
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a036.d
Date: 09-MAY-2013 20:40
Client ID: TP-33-050713
Sample Info: MP19P

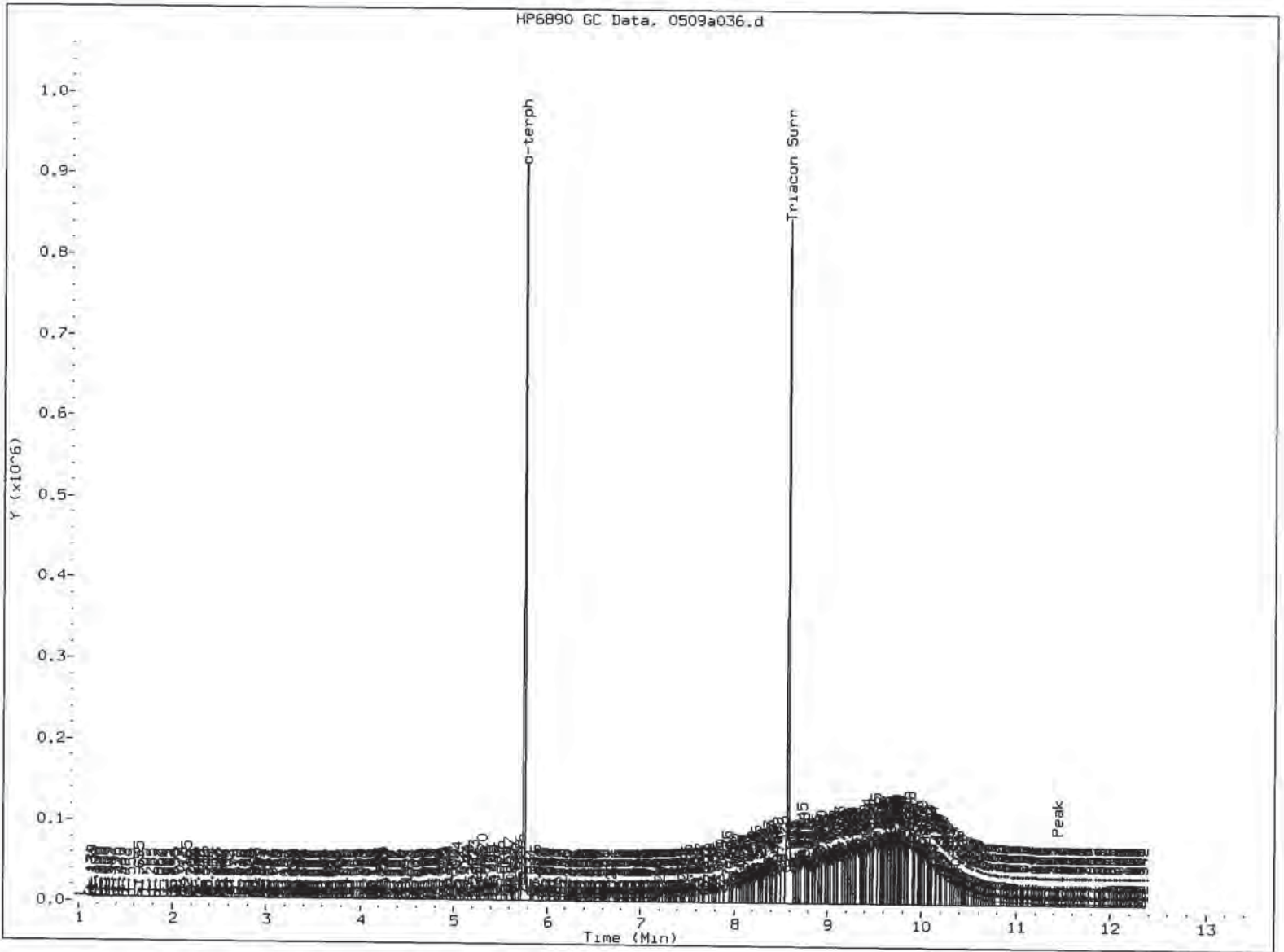
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

TPC
5/12/13



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a037.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19Q
Client ID: TP-34-050713
Injection: 09-MAY-2013 21:00
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		143419	9.23
C8	----				WATPHD (C12-C24)		5977995	411.86
C10	2.853	0.000	2018	1743	WATPHM (C24-C38)		2793272	205.33
C12	3.819	-0.001	5041	4180	AK102 (C10-C25)		6250239	363.07
C14	4.501	-0.003	12767	14385	AK103 (C25-C36)		2273792	247.10
C16	5.084	-0.003	27024	26016				
C18	5.625	0.000	45615	64495				
C20	6.168	-0.002	58088	96023				
C22	6.709	0.000	57734	70182	MIN.OIL (C24-C38)		2793272	163.74
C24	7.232	0.008	29724	12163				
C25	7.464	-0.007	26243	52125				
C26	7.705	-0.015	19273	29874				
C28	8.158	-0.009	21951	58547				
C32	8.960	-0.004	23178	35101				
C34	9.322	-0.006	14392	17344				
Filter Peak	11.438	-0.001	2591	1231	CREOSOT (C12-C22)		4685379	2147.39 M
C36	9.673	-0.008	16344	20142				
C38	10.027	0.002	15636	26165				
C40	10.369	0.008	11874	10320				
o-terph	5.762	0.001	906166	756456				
Triacon Surr	8.588	-0.002	771780	739149				

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	756456	39.2	87.2 M
Triacontane	739149	40.6	90.3 M

(W)
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a037.d

Date: 09-MAY-2013 21:00

Client ID: TP-34-050713

Sample Info: WP19Q

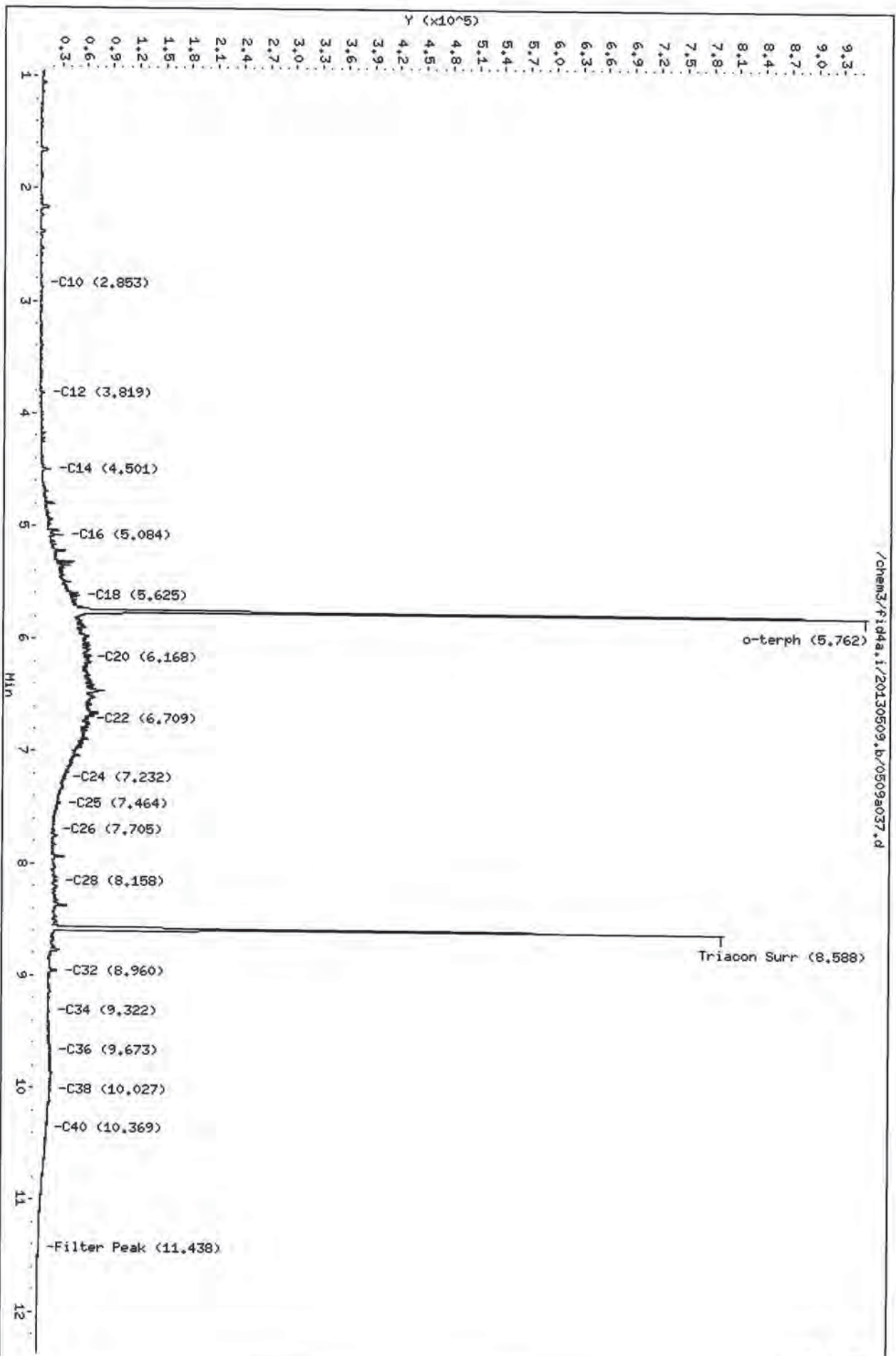
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JM

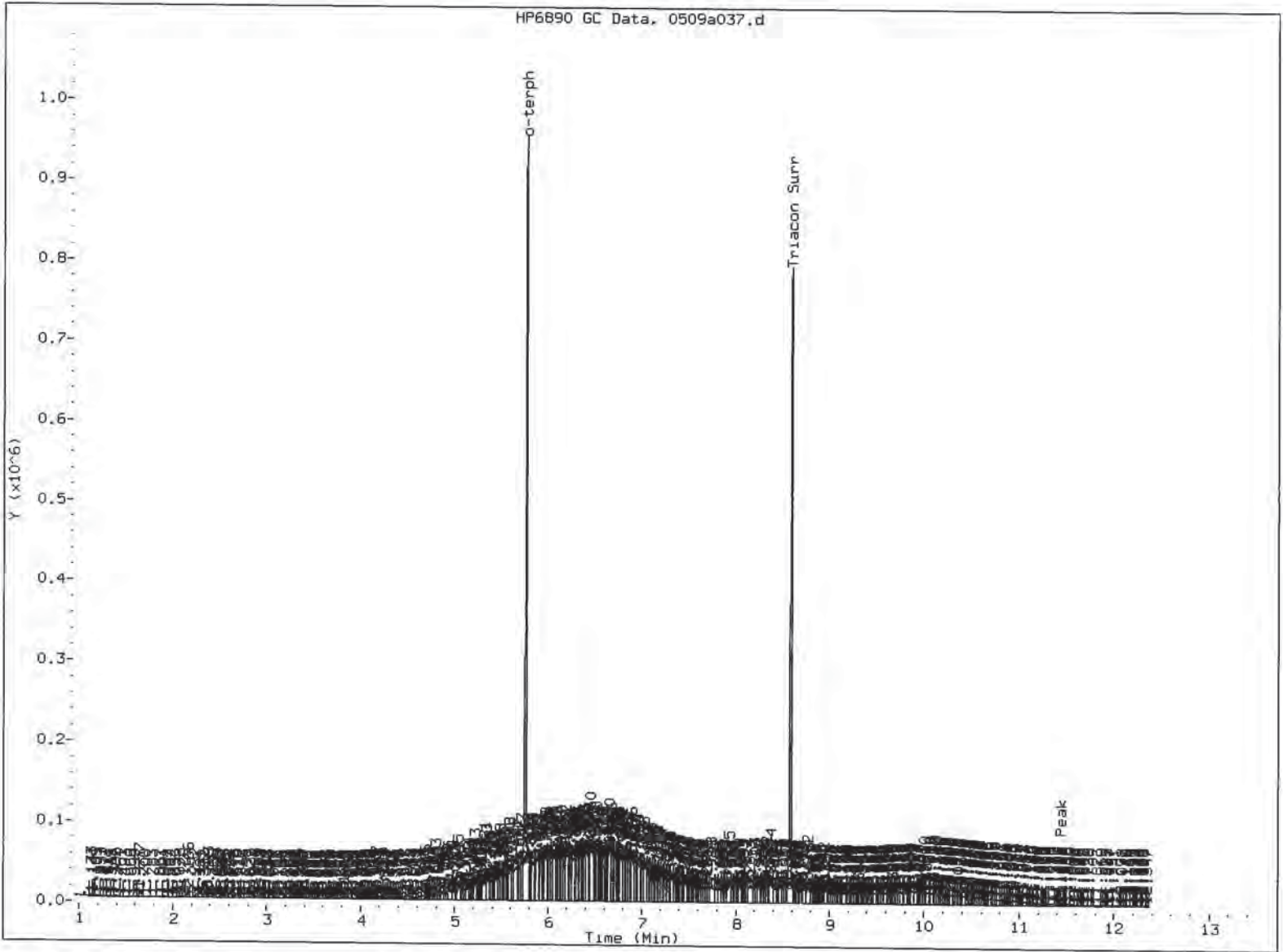
Column diameter: 0.25

Page 1



JC
5/10/13

1000 900 800 700 600 500 400 300 200 100 0



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a038.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19R
Client ID: TP-35-050713
Injection: 09-MAY-2013 21:21
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG (Tol-C12)		103683	6.67
C8	-----				WATPHD (C12-C24)		14307281	985.72
C10	2.850	-0.003	536	650	WATPHM (C24-C38)		25471203	1872.33
C12	3.818	-0.001	1349	1472	AK102 (C10-C25)		16516920	959.46
C14	4.503	-0.002	2508	3507	AK103 (C25-C36)		22335396	2427.21
C16	5.084	-0.002	5178	6797				
C18	5.623	-0.002	22634	34612				
C20	6.172	0.002	101588	193516				
C22	6.701	-0.008	185454	145655	MIN.OIL (C24-C38)		25471203	1493.13
C24	7.219	-0.006	256509	236354				
C25	7.461	-0.010	253949	158877				
C26	7.724	0.003	264320	485942				
C28	8.162	-0.004	236495	232505				
C32	8.967	0.003	119851	175080				
C34	9.318	-0.010	104206	203642				
Filter Peak	11.441	0.003	2821	1118	CREOSOT (C12-C22)		6753083	3095.05 M
C36	9.673	-0.007	62760	66452				
C38	10.019	-0.006	43175	38615				
C40	10.363	0.003	17560	7974				
o-terph	5.756	-0.005	193015	130174				
Triacon Surr	8.586	-0.004	176909	139930				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	130174	6.8	75.0 M
Triacontane	139930	7.7	85.4 M

JW
5/10/13

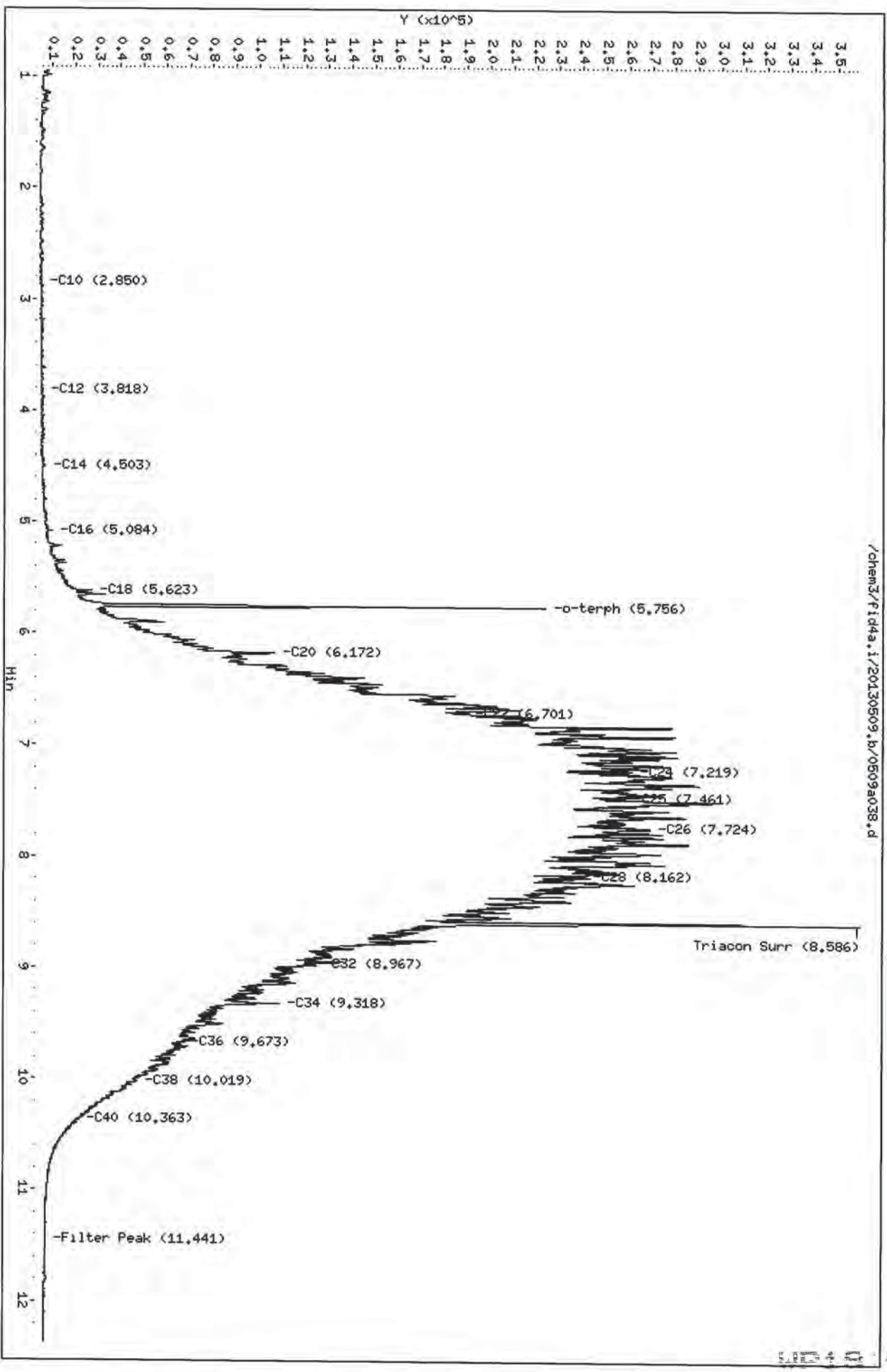
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a,i/20130509,b/0509a038.d
Date: 09-MAY-2013 21:21
Client ID: TP-35-050713
Sample Info: WP19R,5

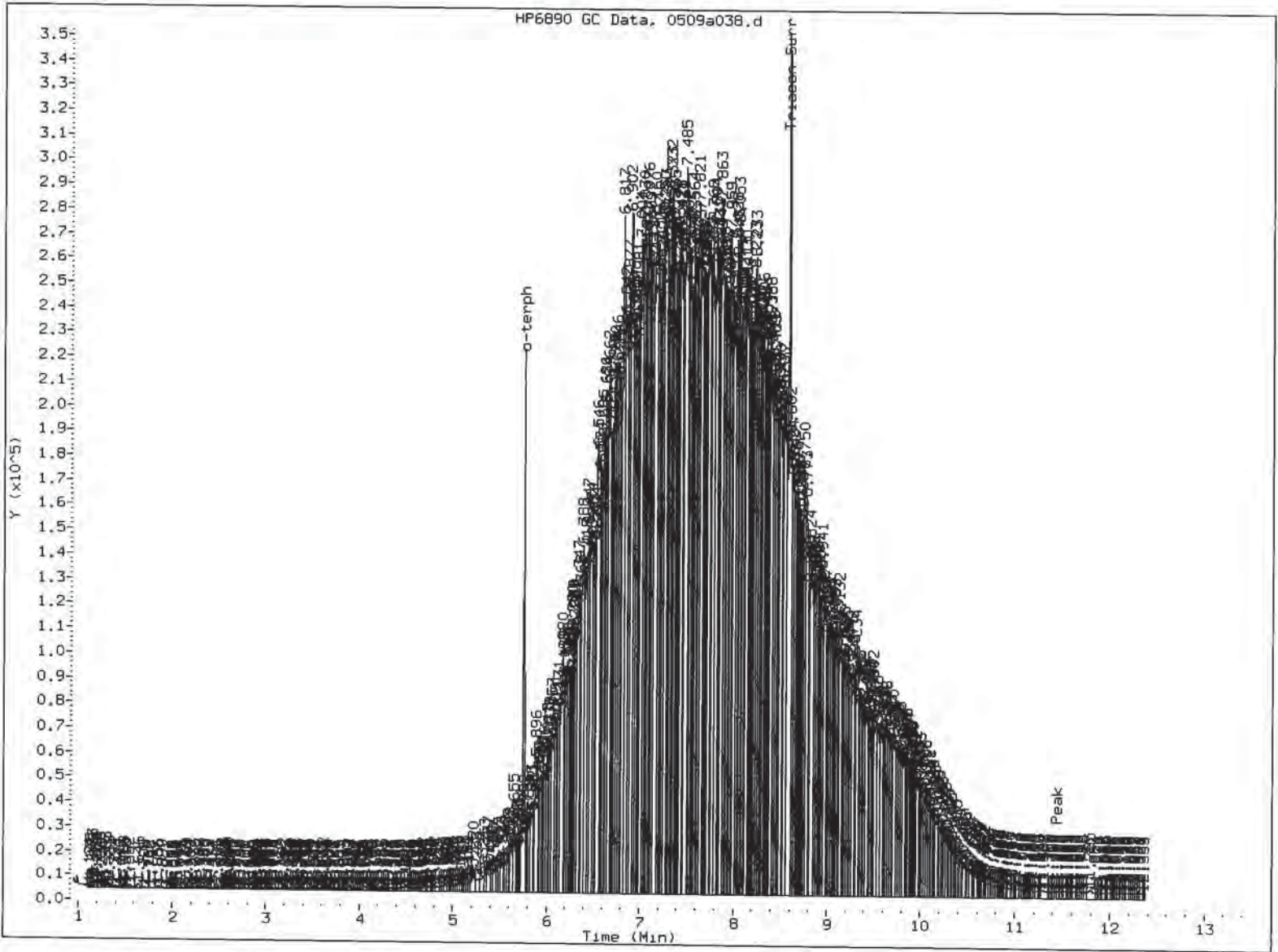
Column phase: RTX-1

Instrument: fid4a,i
Operator: JR/VTS/JM
Column diameter: 0.25



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JR
5/10/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a039.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19S
Client ID: TP-36-050713
Injection: 09-MAY-2013 21:41
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		78231	5.03
C8	----				WATPHD (C12-C24)		2433328	167.65
C10	2.850	-0.003	392	434	WATPHM (C24-C38)		7327040	538.60
C12	3.818	-0.002	878	1112	AK102 (C10-C25)		2820965	163.87
C14	4.501	-0.004	2057	3460	AK103 (C25-C36)		6288594	683.39
C16	5.086	-0.001	2383	4401				
C18	5.625	0.000	4292	6810				
C20	6.164	-0.006	13714	21517				
C22	6.712	0.003	31452	38499	MIN.OIL (C24-C38)		7327040	429.51
C24	7.223	-0.001	42075	29728				
C25	7.471	0.000	50172	66843				
C26	7.724	0.003	48333	64221				
C28	8.160	-0.006	60470	64383				
C32	8.957	-0.007	44298	62146				
C34	9.320	-0.008	37920	69539				
Filter Peak	11.438	-0.001	3046	1817	CREOSOT (C12-C22)		1195476	547.91 M
C36	9.684	0.003	33814	15899				
C38	10.023	-0.002	29644	13389				
C40	10.359	-0.002	21532	11372				
o-terph	5.754	-0.007	198629	136578				
Triacon Surr	8.578	-0.012	176457	134653				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	136578	7.1	78.7 M
Triacotane	134653	7.4	82.2 M

JW
5/10/13

M Indicates the peak was manually integrated

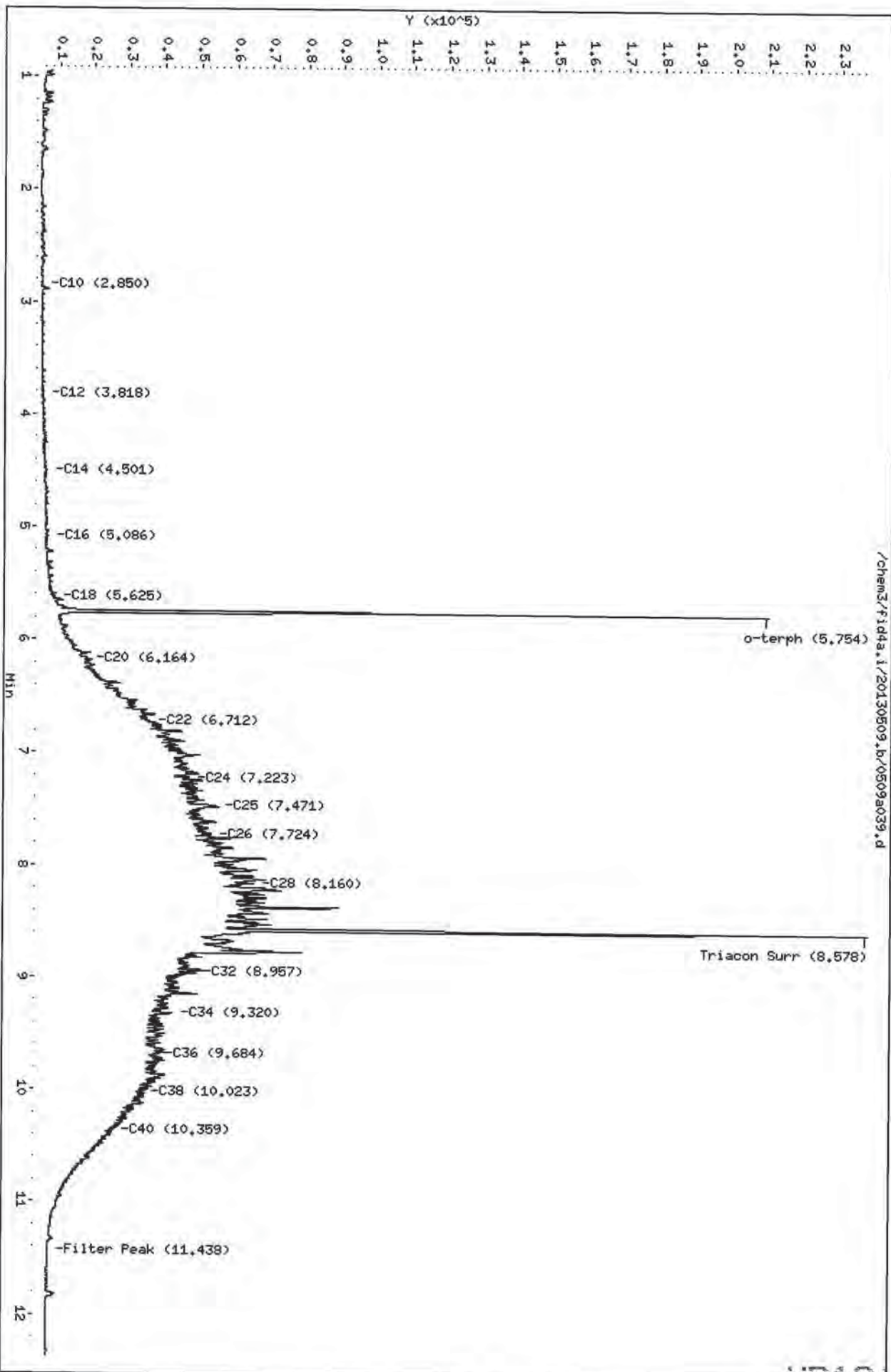
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a039.d
Date: 09-MAY-2013 21:44
Client ID: TP-36-050713
Sample Info: MP19S,5

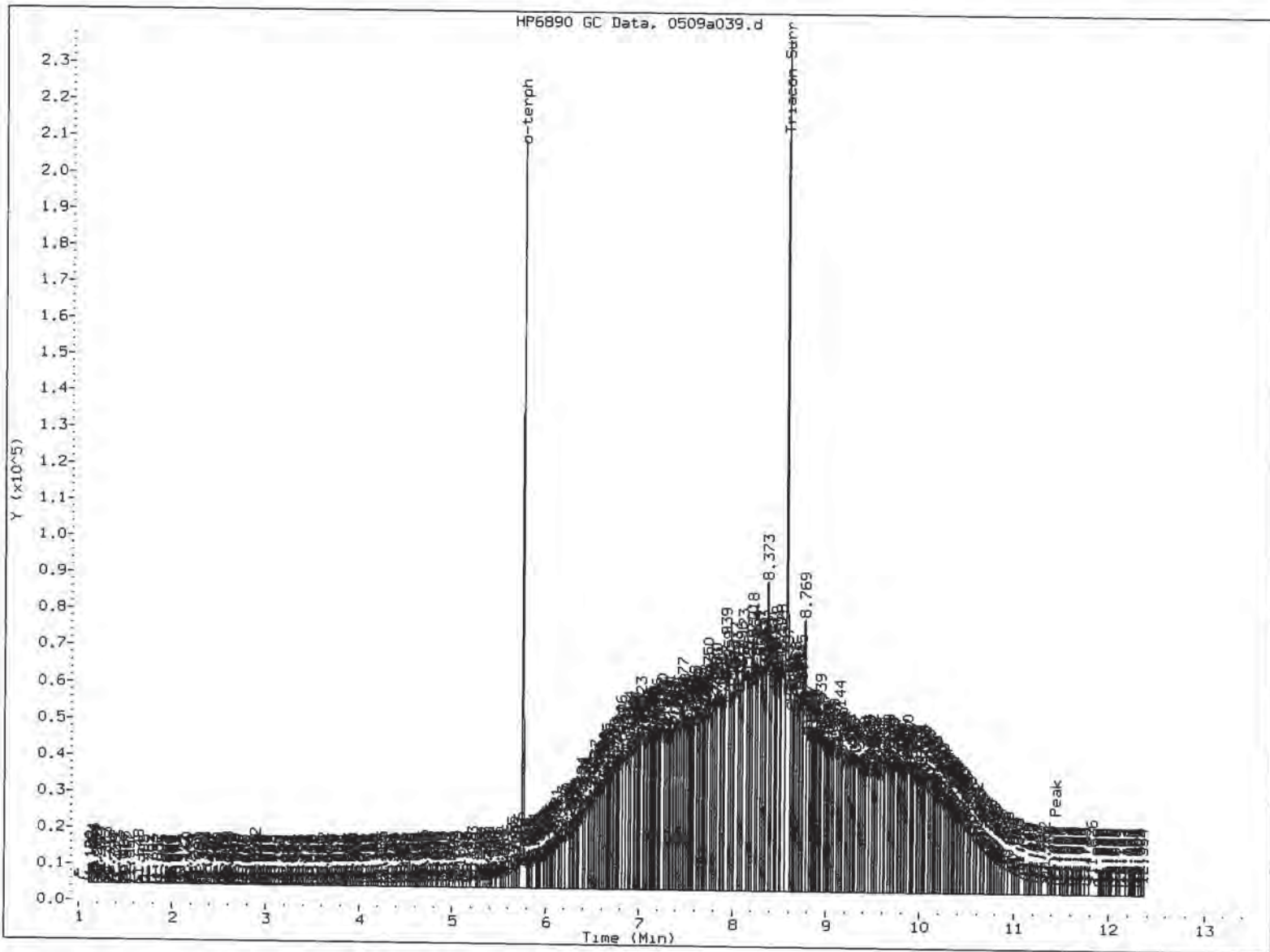
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

Page 1



01 02 03 04 05 06 07 08 09 10 11 12



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/14/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a012.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19T
Client ID: TP-37-050713
Injection: 10-MAY-2013 10:58
Dilution Factor: 100

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	233990	15.06
C8	----				WATPHD	(C12-C24)	28709993	1978.02 ✓
C10	2.842	-0.012	246	377	WATPHM	(C24-C38)	7681055	564.62 ✓
C12	3.814	-0.006	13717	18940	AK102	(C10-C25)	29563323	1717.32
C14	4.508	0.004	104189	150989	AK103	(C25-C36)	6483996	704.62
C16	5.081	-0.006	196762	149086				
C18	5.630	0.002	230873	198787				
C20	6.180	0.008	170509	162912				
C22	6.715	0.004	114647	99063	MIN.OIL	(C24-C38)	7681055	450.27
C24	7.214	-0.013	78229	135317				
C25	7.465	-0.009	67132	119957				
C26	7.725	0.002	59579	39162				
C28	8.173	0.005	54914	30056				
C32	8.976	0.002	44107	80829				
C34	9.351	0.002	46462	67147				
Filter Peak	11.432	0.000	2206	3434	CREOSOT	(C12-C22)	25733763	11794.20 M
C36	9.707	-0.002	33394	40193				
C38	10.058	-0.002	22729	20263				
C40	10.400	0.000	14545	29111				
o-terph	----							
Triacon Surr	----							

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

D

JW
5/10/13

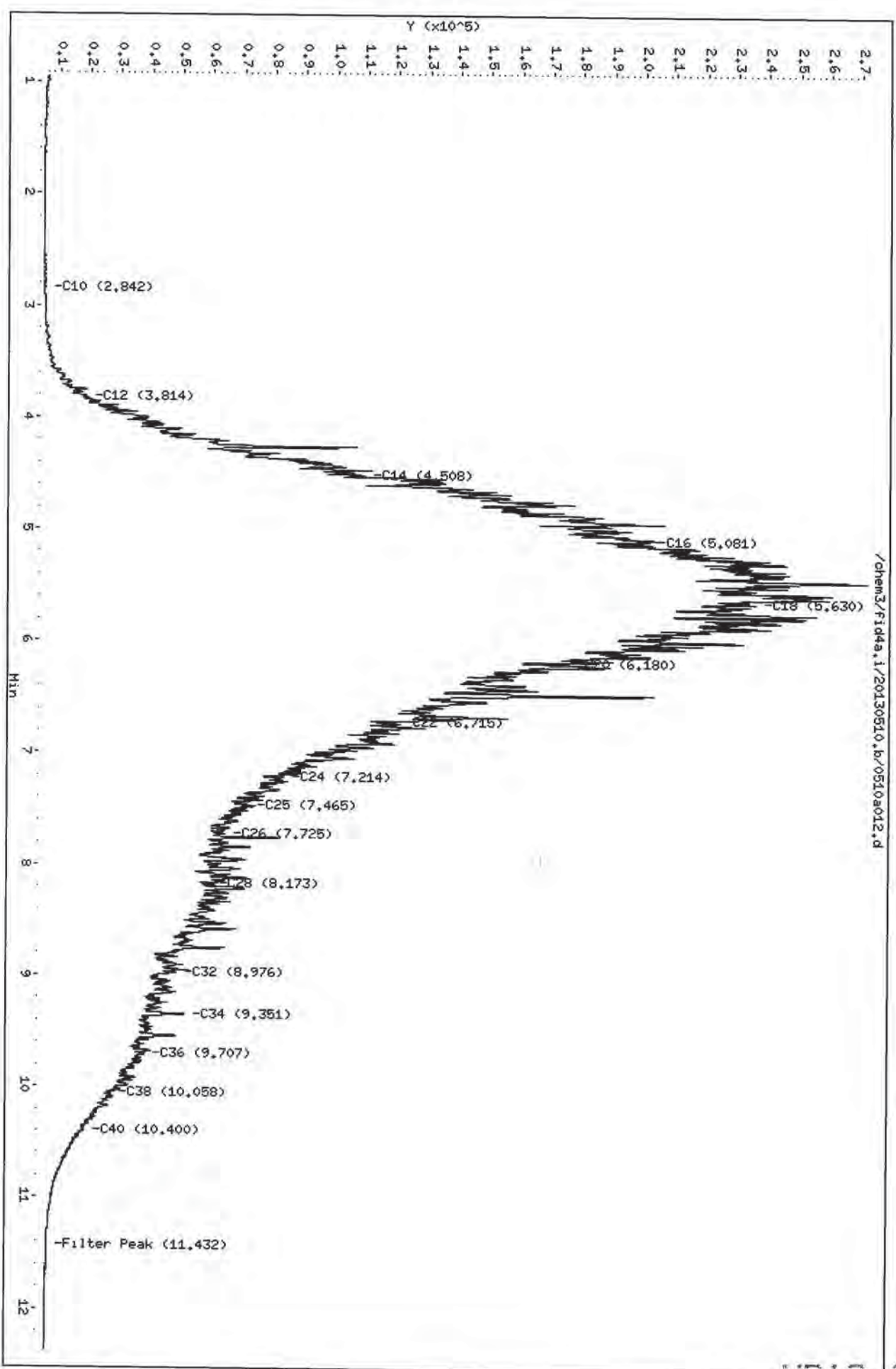
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a012.d
Date: 10-MAY-2013 10:58
Client ID: TP-37-050713
Sample Info: WP19T,100

Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



00 01 02 03 04 05 06 07 08 09 10 11 12

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01/03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050813	94.6%	0
LCS-050813	84.0%	0
LCSD-050813	88.8%	0
TP-28-050713	90.3%	0
TP-29-050713	77.3%	0
TP-30-050713	86.1%	0
TP-31-050713	89.1%	0
TP-32-050713	D	0
TP-33-050713	91.2%	0
TP-34-050713	87.2%	0
TP-35-050713	75.0%	0
TP-36-050713	78.7%	0
TP-37-050713	D	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-9950 to 13-9959

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a029.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19LCSS1
Client ID: WP19LCSS1
Injection: 09-MAY-2013 18:17
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		4028952	259.27
C8	----				WATPHD (C12-C24)		17135633	1180.58
C10	2.854	0.001	96938	83768	WATPHM (C24-C38)		206156	15.15
C12	3.820	0.001	181385	199969	AK102 (C10-C25)		20075705	1166.19
C14	4.505	0.000	325029	326030	AK103 (C25-C36)		138697	15.07
C16	5.089	0.002	485256	760552				
C18	5.629	0.005	393285	442947				
C20	6.171	0.001	289398	400953				
C22	6.707	-0.002	149390	154326	MIN.OIL (C24-C38)		206156	12.08
C24	7.218	-0.007	39667	50099				
C25	7.464	-0.007	17315	27146				
C26	7.702	-0.018	6872	11656				
C28	8.158	-0.008	1886	2933				
C32	8.967	0.003	6954	8024				
C34	9.327	-0.001	97	57				
Filter Peak	11.437	-0.002	1132	718	CREOSOT (C12-C22)		16530912	7576.38 M
C36	9.692	0.011	1568	2039				
C38	10.024	-0.001	221	127				
C40	10.372	0.012	927	2022				
o-terph	5.764	0.004	785501	728598				
Triacon Surr	8.589	-0.001	750901	666374				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	728598	37.8	84.0 M
Triacotane	666374	36.6	81.4

JW
5/10/13

M Indicates the peak was manually integrated

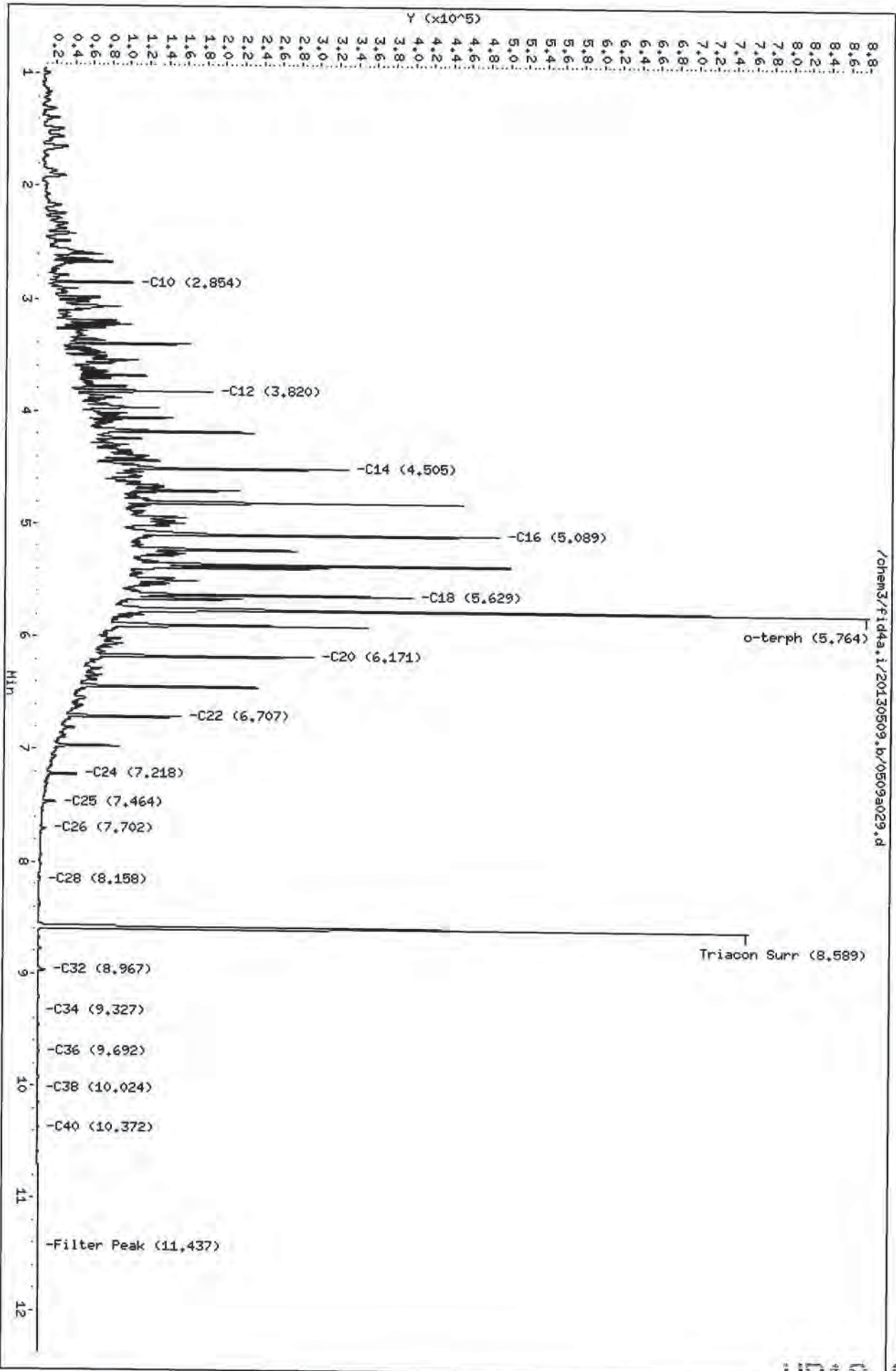
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a029.d
Date: 09-MAY-2013 18:17
Client ID: MP19LCSS1
Sample Info: MP19LCSS1

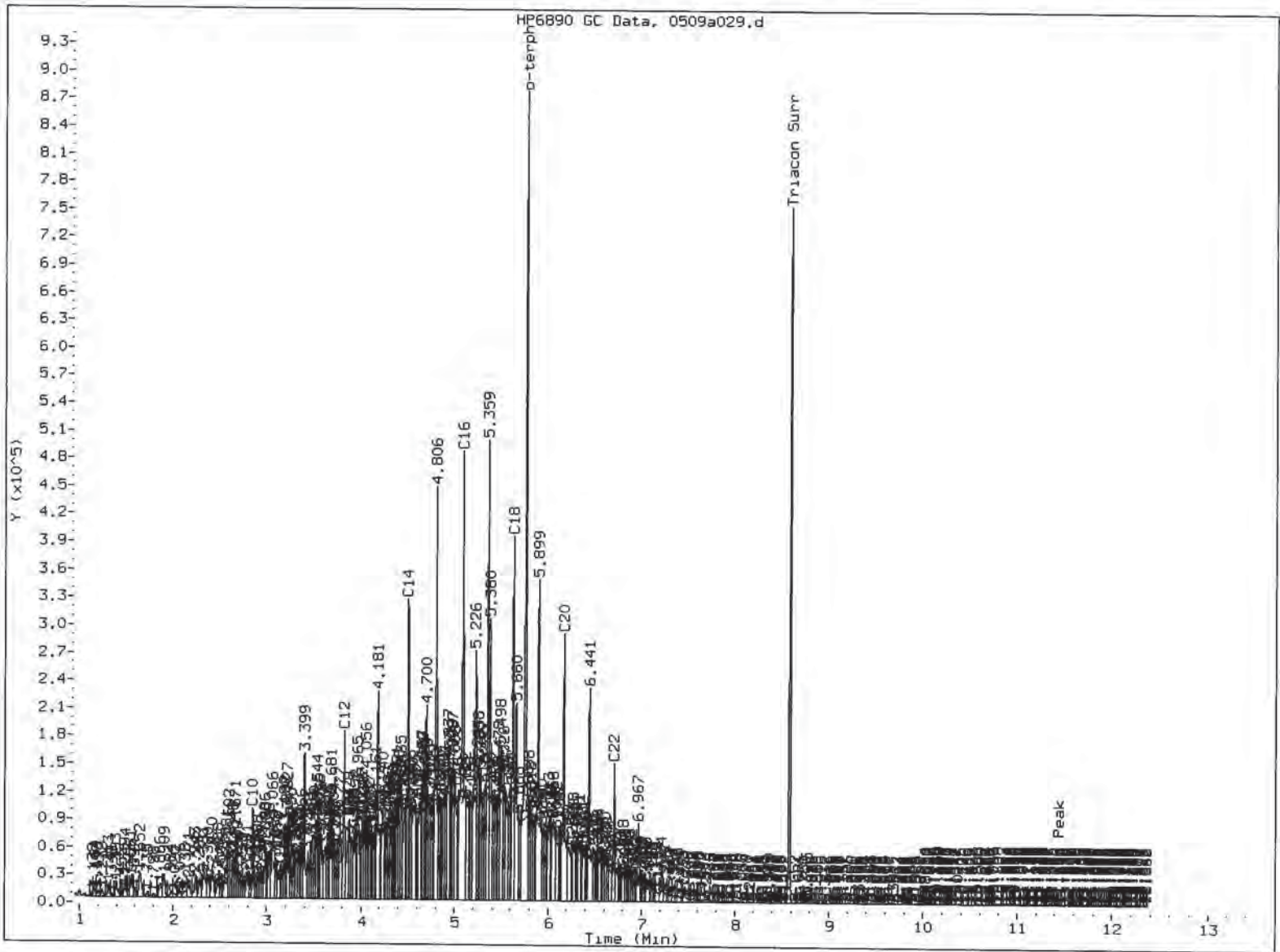
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
5/10/13



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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a030.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP19LCSDS1
Client ID: WP19LCSDS1
Injection: 09-MAY-2013 18:37
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	4123374	265.35
C8	----				WATPHD	(C12-C24)	17302629	1192.09
C10	2.853	0.000	99787	85209	WATPHM	(C24-C38)	230208	16.92
C12	3.820	0.000	182744	201651	AK102	(C10-C25)	20287577	1178.50
C14	4.506	0.001	316632	306916	AK103	(C25-C36)	175130	19.03
C16	5.090	0.003	457919	568177				
C18	5.627	0.002	439734	457480				
C20	6.172	0.002	289594	427369				
C22	6.707	-0.002	155250	161018	MIN.OIL	(C24-C38)	230208	13.49
C24	7.219	-0.006	42877	49555				
C25	7.466	-0.005	17256	19358				
C26	7.702	-0.018	7011	11585				
C28	8.157	-0.009	2113	3924				
C32	8.968	0.004	8009	8766				
C34	9.342	0.014	261	403				
Filter Peak	11.434	-0.005	1027	1072	CREOSOT	(C12-C22)	16716914	7661.63 M
C36	9.697	0.016	1869	2418				
C38	10.023	-0.003	228	276				
C40	10.381	0.020	905	2305				
o-terph	5.765	0.004	810151	770351				
Triacon Surr	8.590	0.000	736263	708820				

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	770351	39.9	88.8 M
Triacotane	708820	39.0	86.6

M Indicates the peak was manually integrated

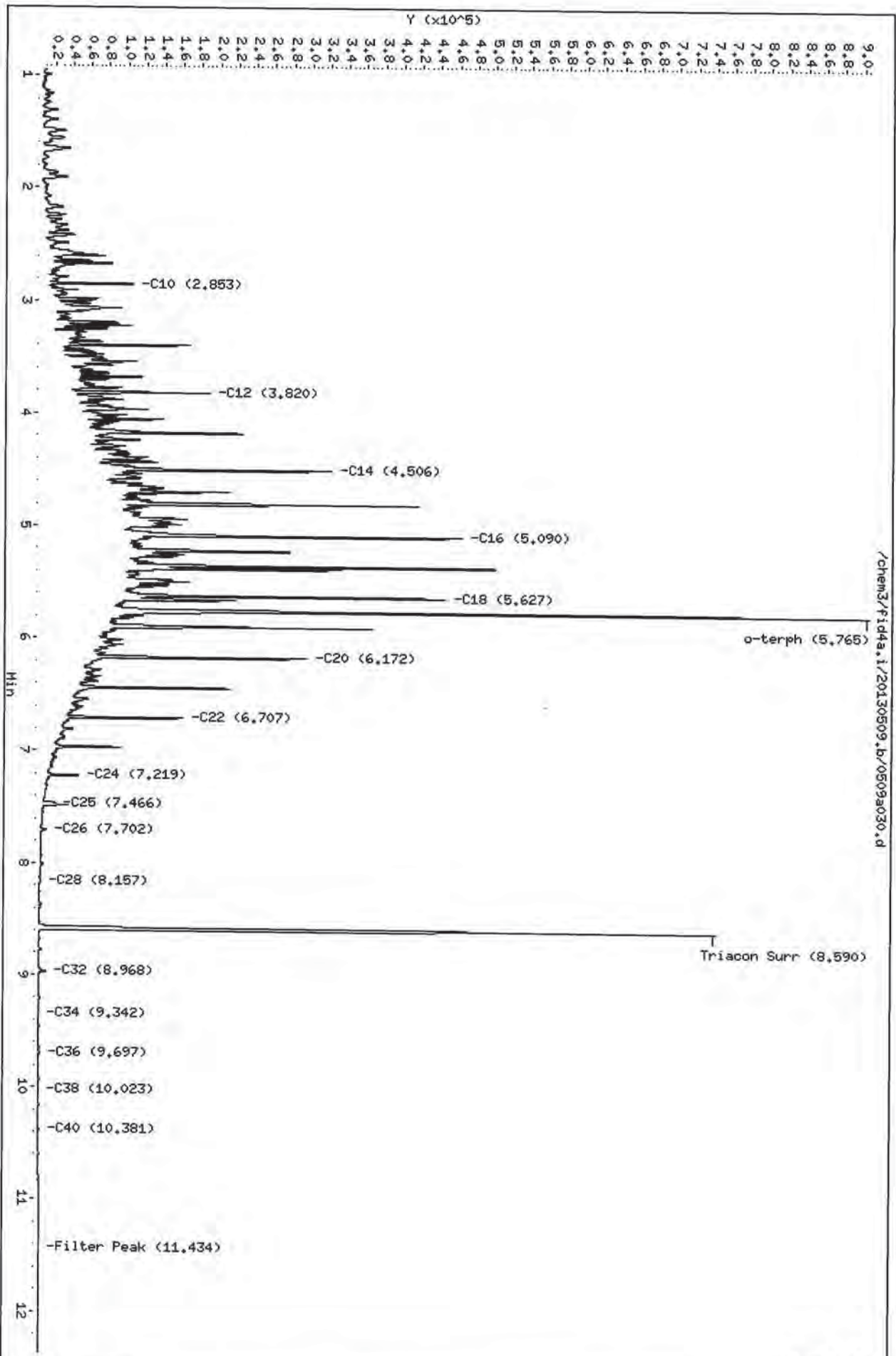
Handwritten: NW 5/10/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a030.d
Date: 09-MAY-2013 18:37
Client ID: MP19LCSDS1
Sample Info: MP19LCSDS1

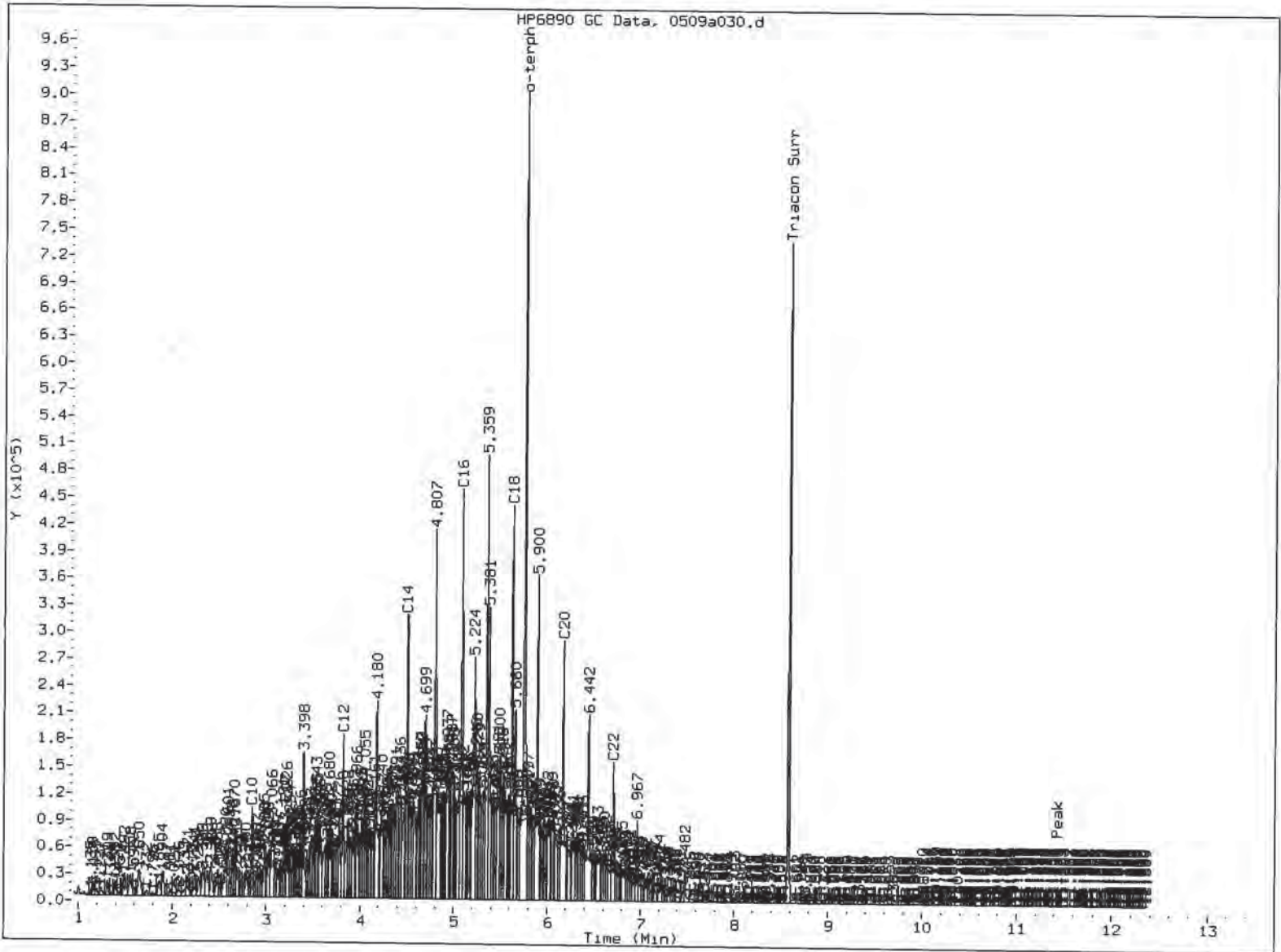
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



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5/10/13

0 1 2 3 4 5 6 7 8 9 10 11 12



TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/08/13

ARI Job: WP19
Project: Cashmere
0779.02.01/03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-9950-050813MB1	Method Blank	10.0 g	1.00 mL	-	05/08/13
13-9950-050813LCS1	Lab Control	10.0 g	1.00 mL	-	05/08/13
13-9950-050813LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	05/08/13
13-9950-WP19K	TP-28-050713	8.31 g	1.00 mL	D	05/08/13
13-9951-WP19L	TP-29-050713	9.13 g	1.00 mL	D	05/08/13
13-9952-WP19M	TP-30-050713	8.06 g	1.00 mL	D	05/08/13
13-9953-WP19N	TP-31-050713	8.72 g	1.00 mL	D	05/08/13
13-9954-WP19O	TP-32-050713	5.63 g	1.00 mL	D	05/08/13
13-9955-WP19P	TP-33-050713	7.21 g	1.00 mL	D	05/08/13
13-9956-WP19Q	TP-34-050713	8.07 g	1.00 mL	D	05/08/13
13-9957-WP19R	TP-35-050713	8.03 g	1.00 mL	D	05/08/13
13-9958-WP19S	TP-36-050713	7.97 g	1.00 mL	D	05/08/13
13-9959-WP19T	TP-37-050713	8.69 g	1.00 mL	D	05/08/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-31-050713
SAMPLE

Lab Sample ID: WP19D
 LIMS ID: 13-9943
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 13:32
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	92.1%
Bromobenzene	83.7%

Gasoline Surrogate Recovery

Trifluorotoluene	91.0%
Bromobenzene	85.6%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

244 5/19/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a007.d ARI ID: WP19D
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a007.d Client ID: TP-31-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 13:32
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	3157	38432	91.0	TFT(Surr)
15.380	0.002	1953	16168	85.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	592	0.002
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	1087	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.004	3655	92.1	TFT(Surr)
15.388	0.003	7355	83.7	BB(Surr)

SW8021 (PID)

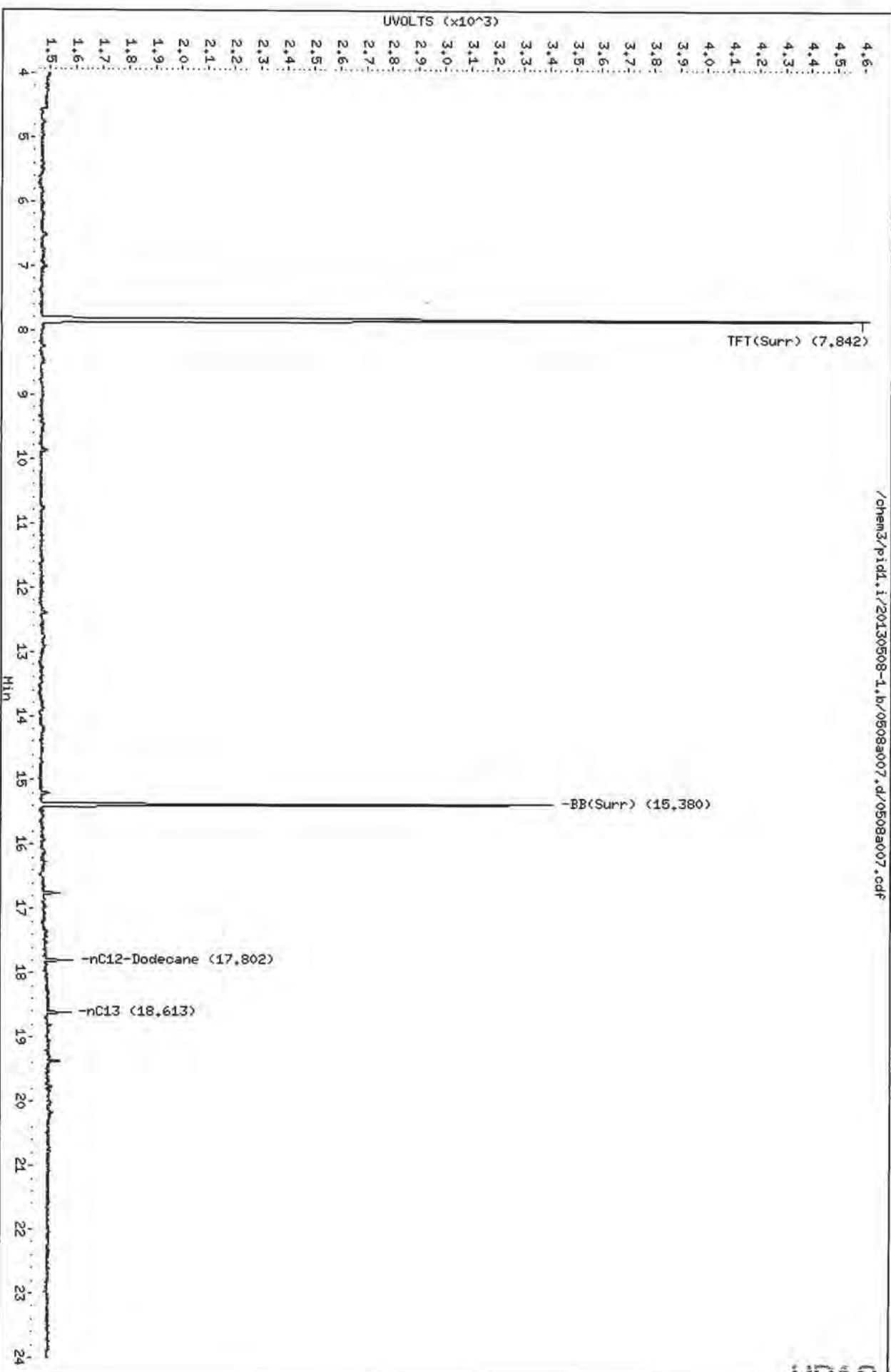
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/piddl.i/20130508-1.b/0508a007.d
Date: 08-MAY-2013 13:32
Client ID: TP-31-050713
Sample Info: MP19D

Column phase: RTX 502-2 FID

Instrument: piddl.i
Operator: LH
Column diameter: 0.18



/chem3/piddl.i/20130508-1.b/0508a007.d/0508a007.cdf

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Data File: /chem3/pid1.i/20130508-2.b/0508a007.d

Date: 08-MAY-2013 13:32

Client ID: TP-31-050713

Sample Info: MP19D

Page 1

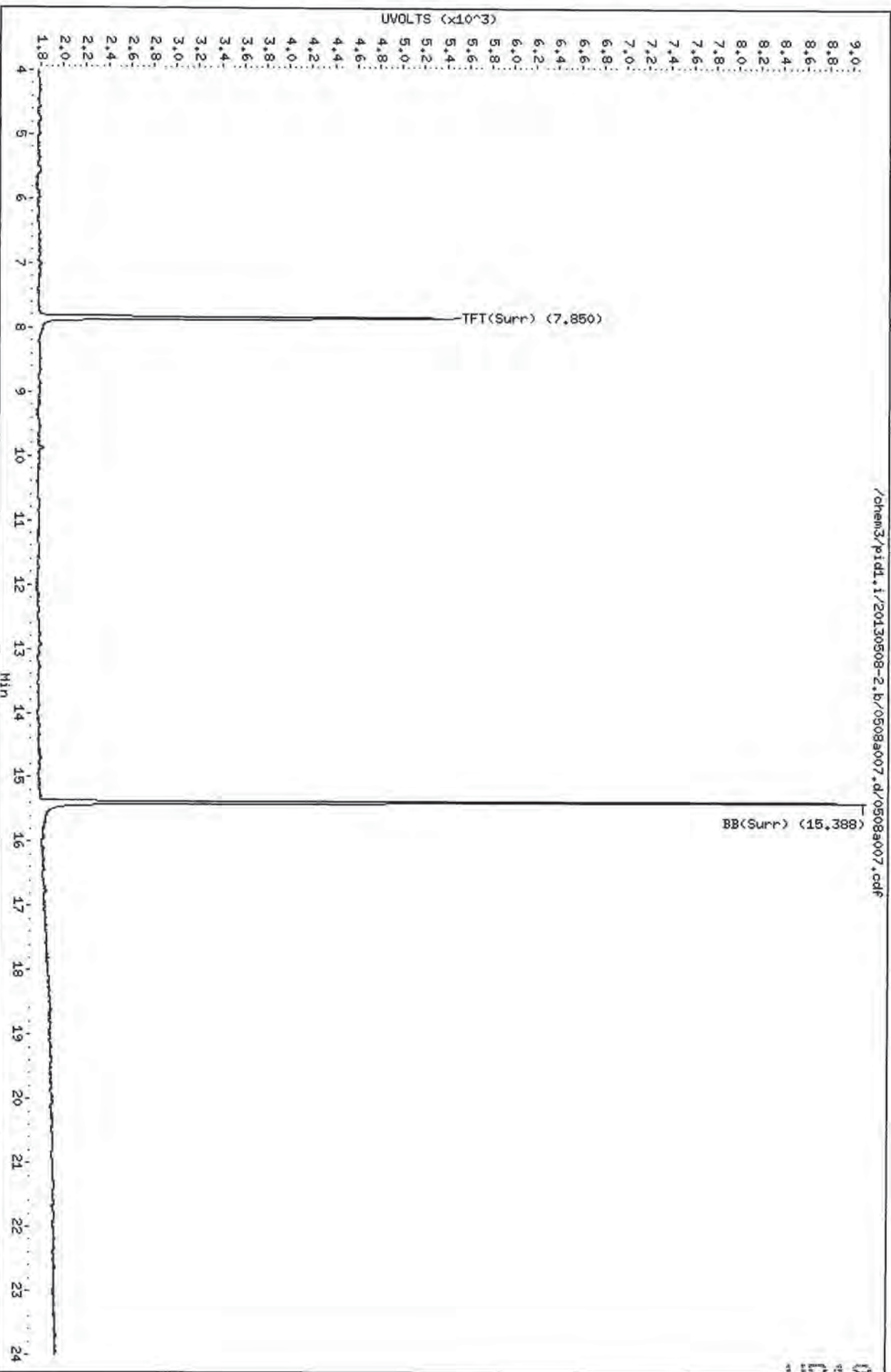
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130508-2.b/0508a007.d/0508a007.cdf



ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1



Sample ID: TP-32-050713
 SAMPLE

Lab Sample ID: WP19E
 LIMS ID: 13-9944
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 14:02
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	90.6%
Bromobenzene	84.7%

Gasoline Surrogate Recovery

Trifluorotoluene	91.8%
Bromobenzene	86.5%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

DRH 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a008.d ARI ID: WP19E
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a008.d Client ID: TP-32-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 14:02
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.001	3183	39062	91.8	TFT(Surr)
15.378	0.000	1974	16503	86.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	0	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.001	3597	90.6	TFT(Surr)
15.386	0.001	7447	84.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

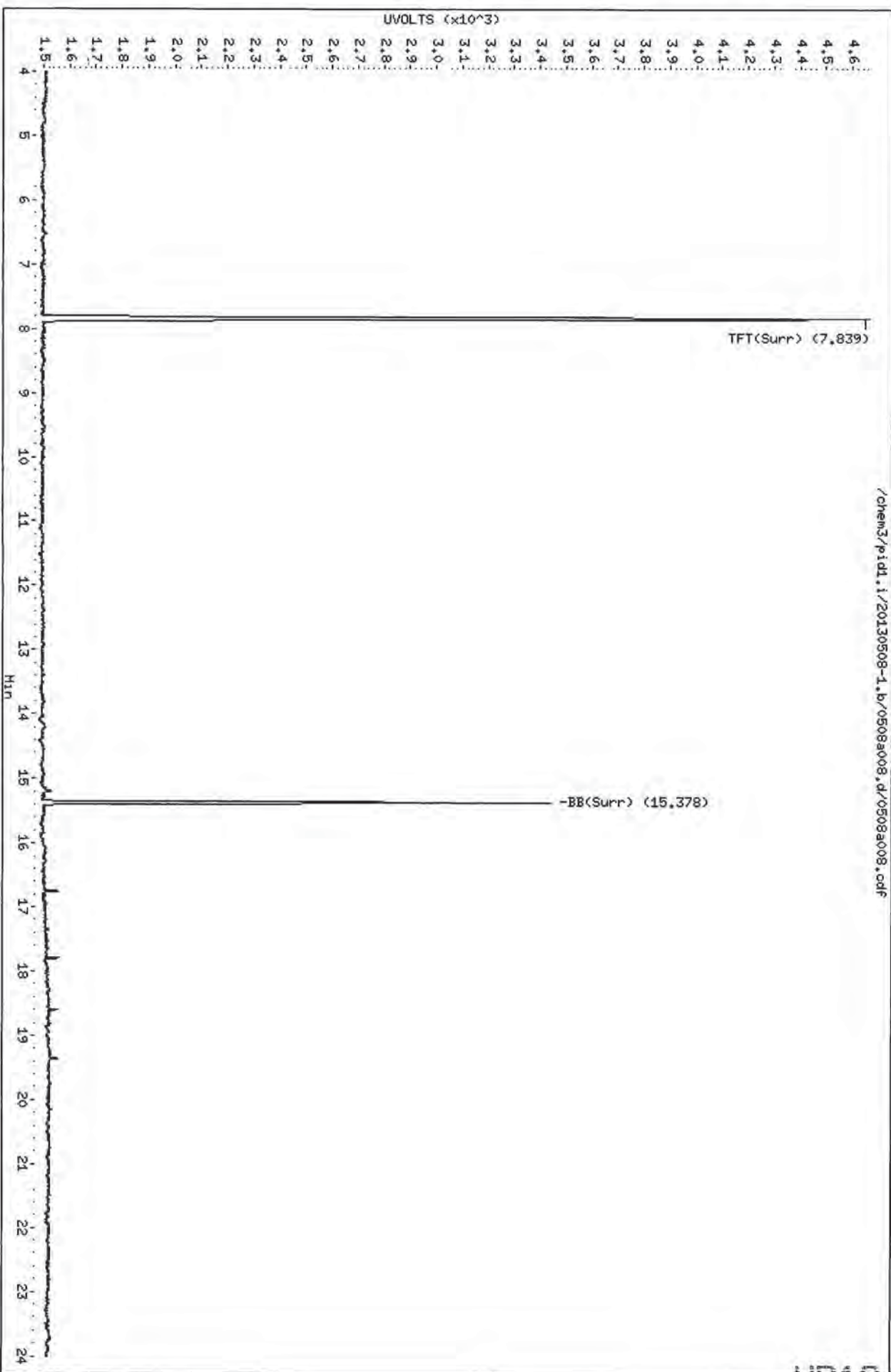
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a008.d
Date: 08-MAY-2013 14:02
Client ID: TP-32-050713
Sample Info: MP19E

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-1.b/0508a008.d/0508a008.cdf



Data File: /chem3/pid1.i/20130508-2.b/0508a008.d

Date: 08-May-2013 14:02

Client ID: TP-32-050713

Sample Info: MP19E

Page 1

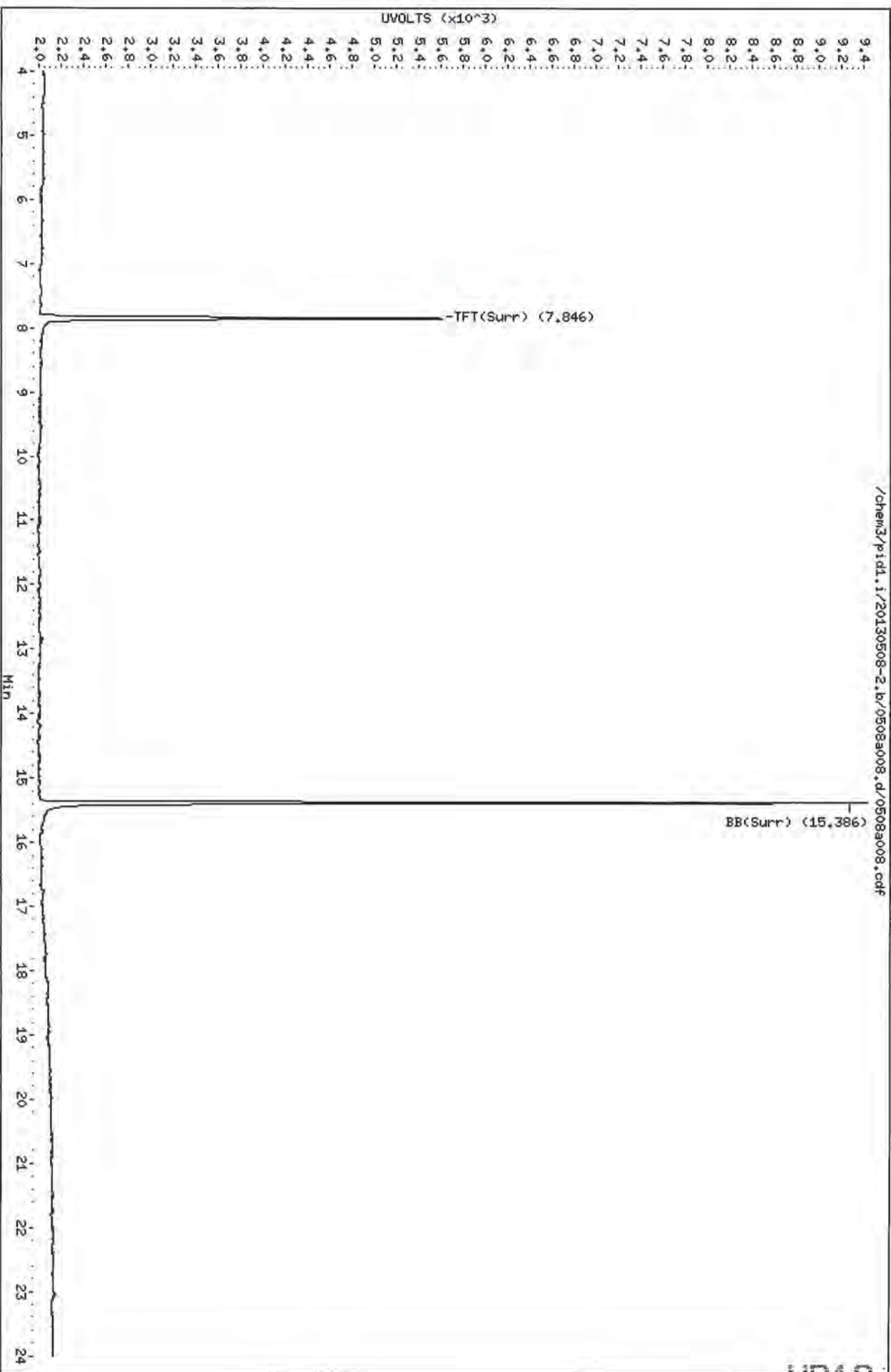
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130508-2.b/0508a008.d/0508a008.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-33-050713

SAMPLE

Lab Sample ID: WP19F

LIMS ID: 13-9945

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: 05/07/13

Date Received: 05/08/13

Date Analyzed: 05/08/13 14:31

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	91.5%
Bromobenzene	86.5%

Gasoline Surrogate Recovery

Trifluorotoluene	92.8%
Bromobenzene	88.5%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Anal 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a009.d ARI ID: WP19F
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a009.d Client ID: TP-33-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 14:31
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.838	0.000	3218	39460	92.8	TFT(Surr) /
15.378	0.000	2020	16731	88.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1133	0.003
8015C 2MP-TMB (4.18 to 16.20)	723723	731	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	1133	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.001	3634	91.5	TFT(Surr) /
15.386	0.000	7602	86.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

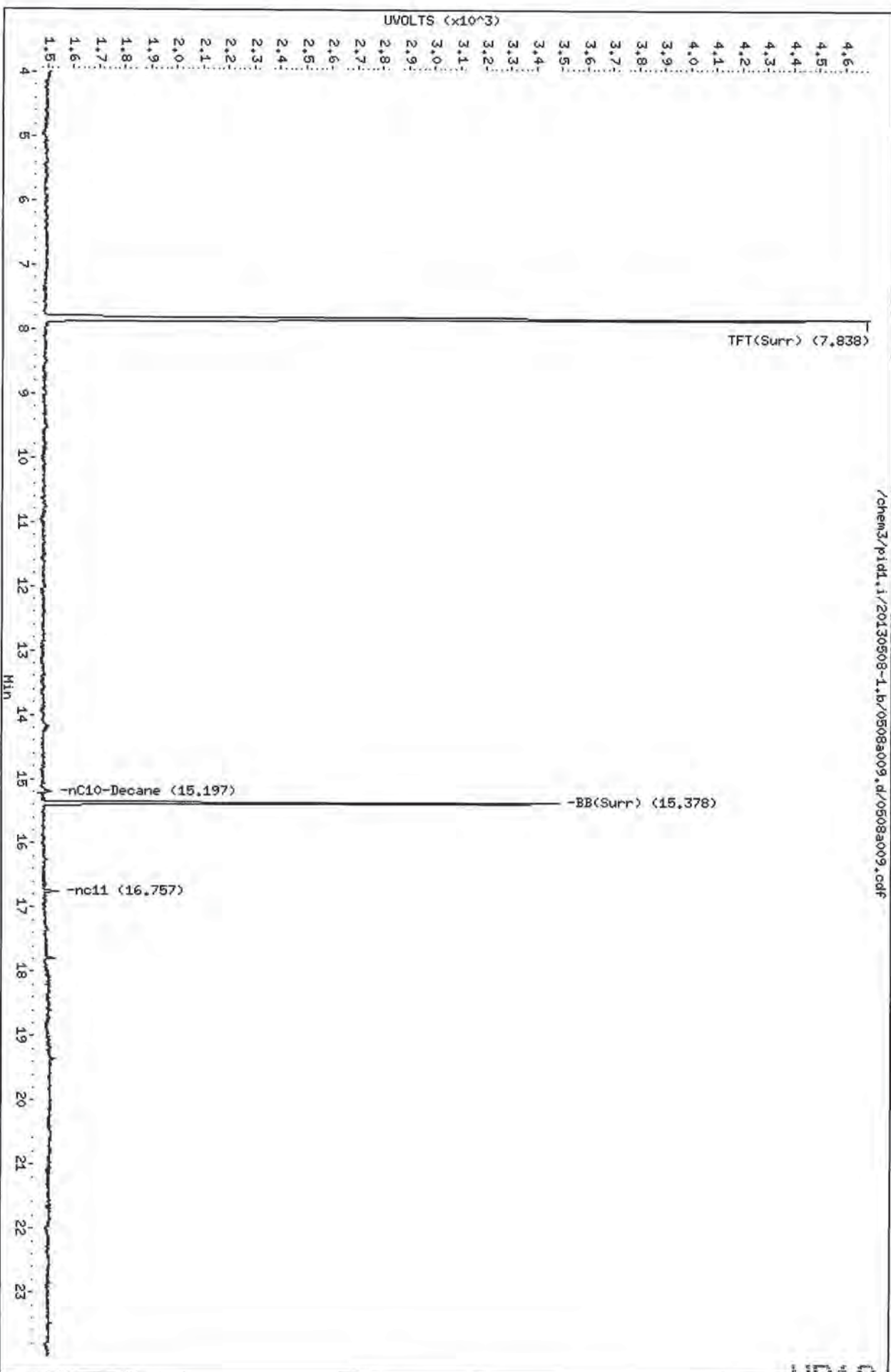
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Date: 08-MAY-2013 14:31
Client ID: TP-33-050713
Sample Info: WP19F

Instrument: pid1.i

Column phase: RTX 502-2 FID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-1.b/0508a009.d/0508a009.cdf



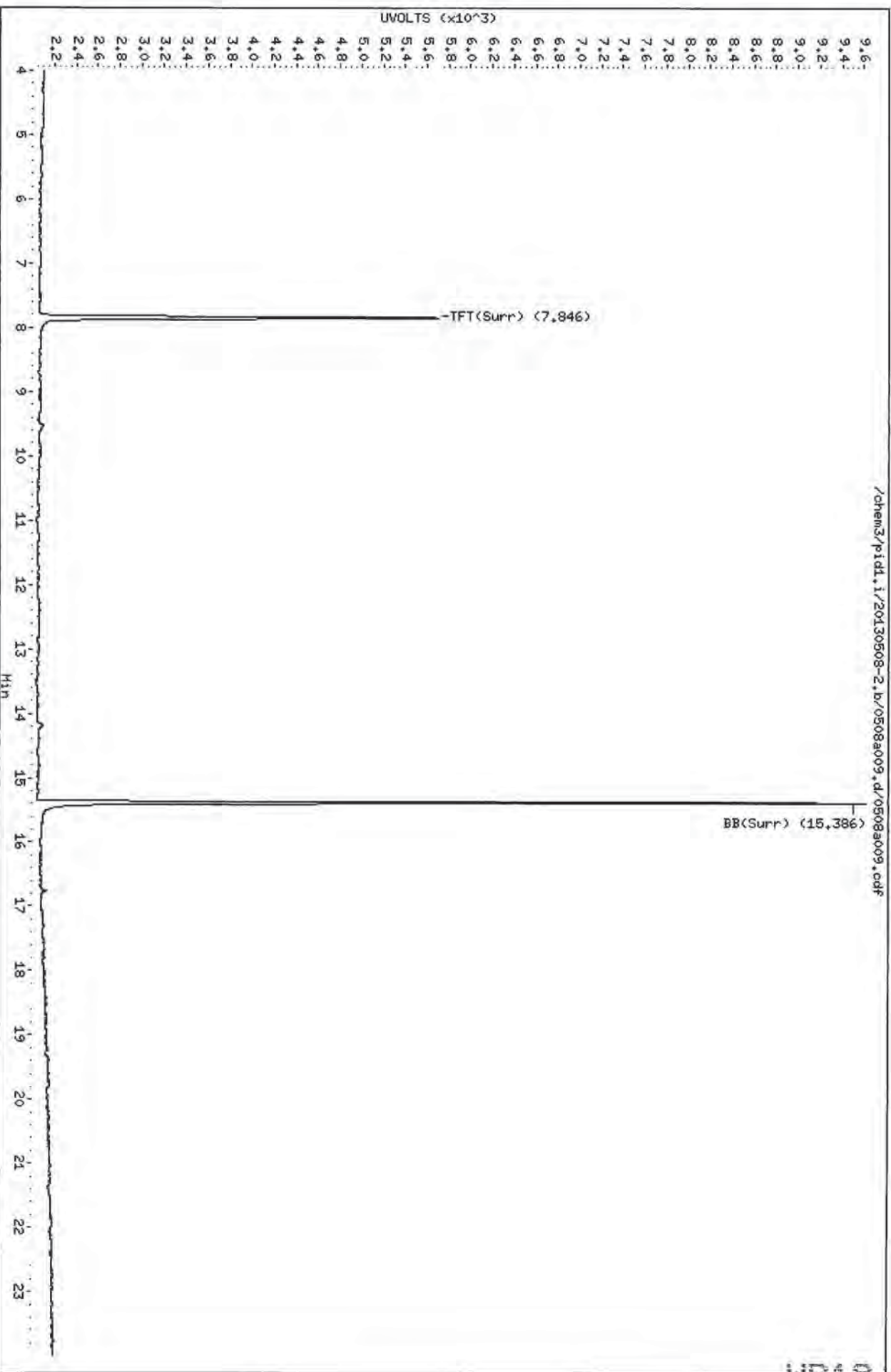
Data File: /chem3/pid1.i/20130508-2.b/0508a009.d
Date : 08-MAY-2013 14:31
Client ID: TP-33-050713
Sample Info: MP19F

Instrument: pid1.i


Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-2.b/0508a009.d/0508a009.cdf



Sample ID: TP-34-050713
SAMPLE

Lab Sample ID: WP19G
LIMS ID: 13-9946
Matrix: Water
Data Release Authorized: 
Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03
Date Sampled: 05/07/13
Date Received: 05/08/13

Date Analyzed: 05/08/13 15:00
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	88.2%
Bromobenzene	83.4%

Gasoline Surrogate Recovery

Trifluorotoluene	90.1%
Bromobenzene	84.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

2013 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a010.d ARI ID: WP19G
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a010.d Client ID: TP-34-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 15:00
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.002	3124	38194	90.1	TFT(Surr) /
15.379	0.001	1936	16239	84.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	439	0.001
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	439	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.002	3503	88.2	TFT(Surr) /
15.387	0.001	7333	83.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

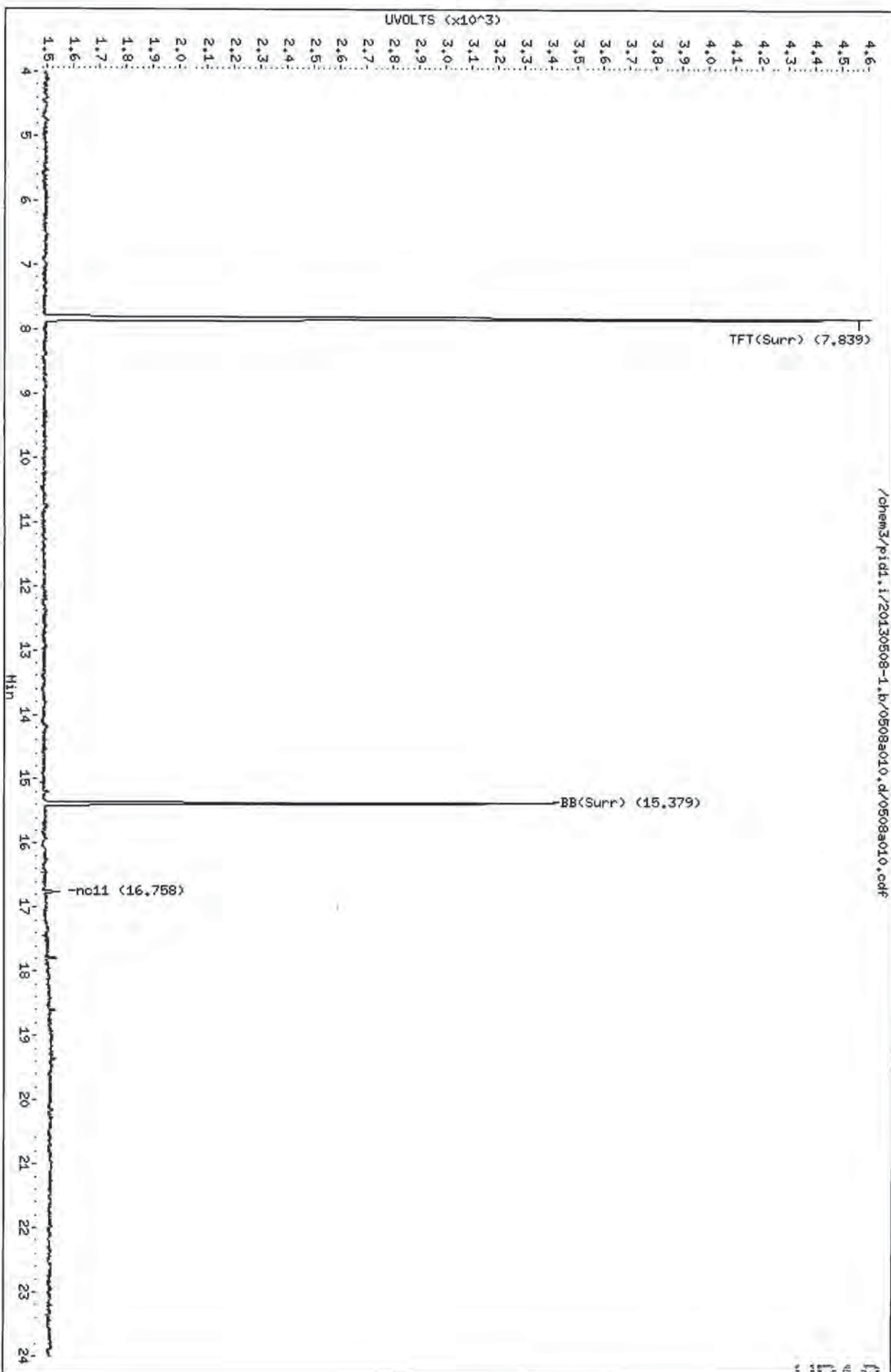
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.1/20130508-1.b/0508a010.d
Date: 08-MAY-2013 15:00
Client ID: TP-34-050713
Sample Info: MP19G

Column phase: RTX 502-2 F10

/chem3/pid1.1/20130508-1.b/0508a010.d/0508a010.cdf

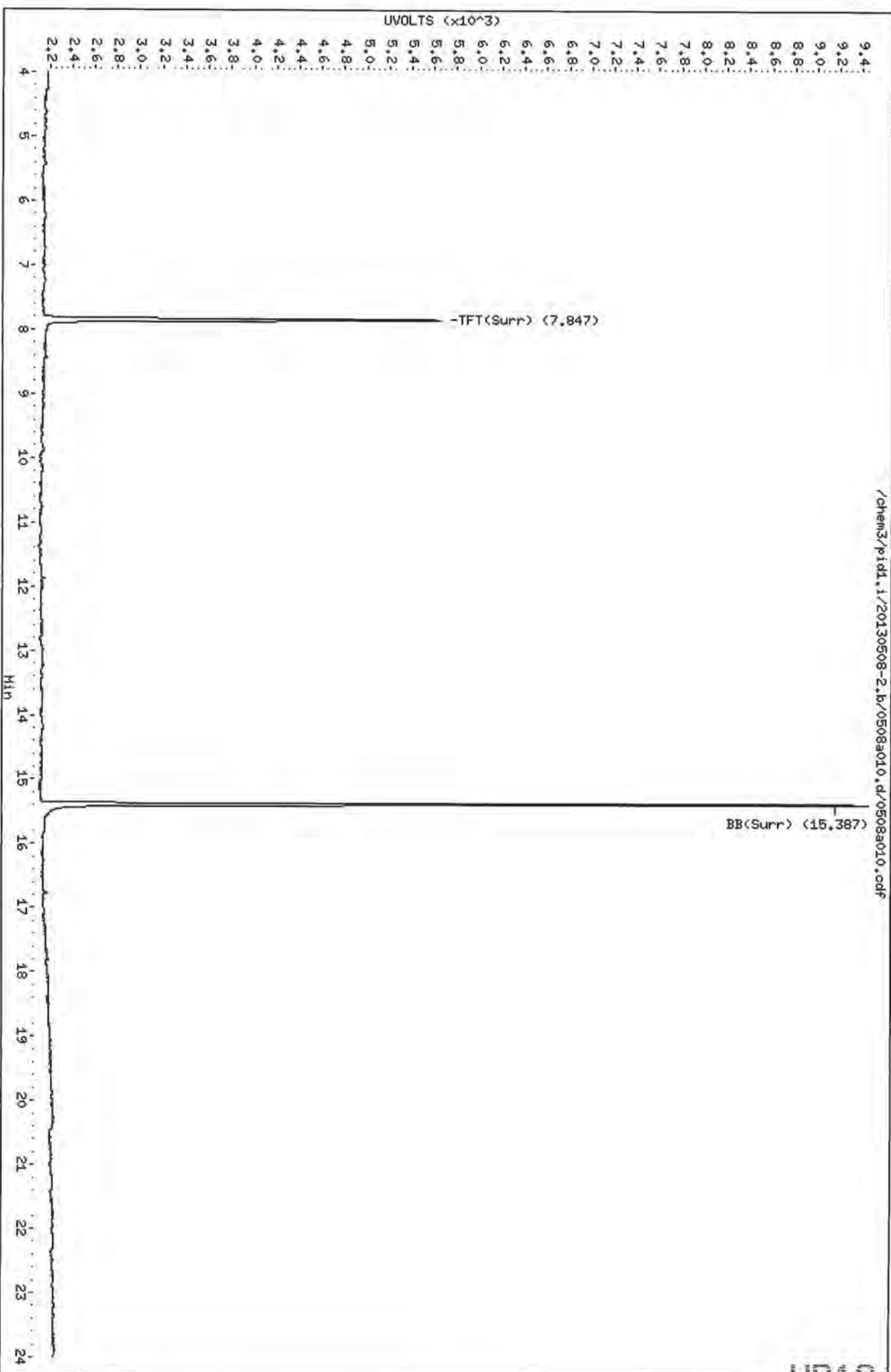
Instrument: pid1.1
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130508-2.b/0508a010.d
Date: 08-MAY-2013 15:00
Client ID: TP-34-050713
Sample Info: MP19G

Column Phase: RTX 502-2 PID


Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130508-2.b/0508a010.d/0508a010.cdf

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Sample ID: TP-35-050713
SAMPLE

Lab Sample ID: WP19H
LIMS ID: 13-9947
Matrix: Water
Data Release Authorized: 
Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03
Date Sampled: 05/07/13
Date Received: 05/08/13

Date Analyzed: 05/08/13 15:30
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	88.2%
Bromobenzene	83.4%

Gasoline Surrogate Recovery

Trifluorotoluene	89.7%
Bromobenzene	85.5%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Ann 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a011.d ARI ID: WP19H
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a011.d Client ID: TP-35-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 15:30
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3111	38464	89.7	TFT(Surr)
15.379	0.001	1952	16224	85.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3502	88.2	TFT(Surr)
15.386	0.001	7333	83.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

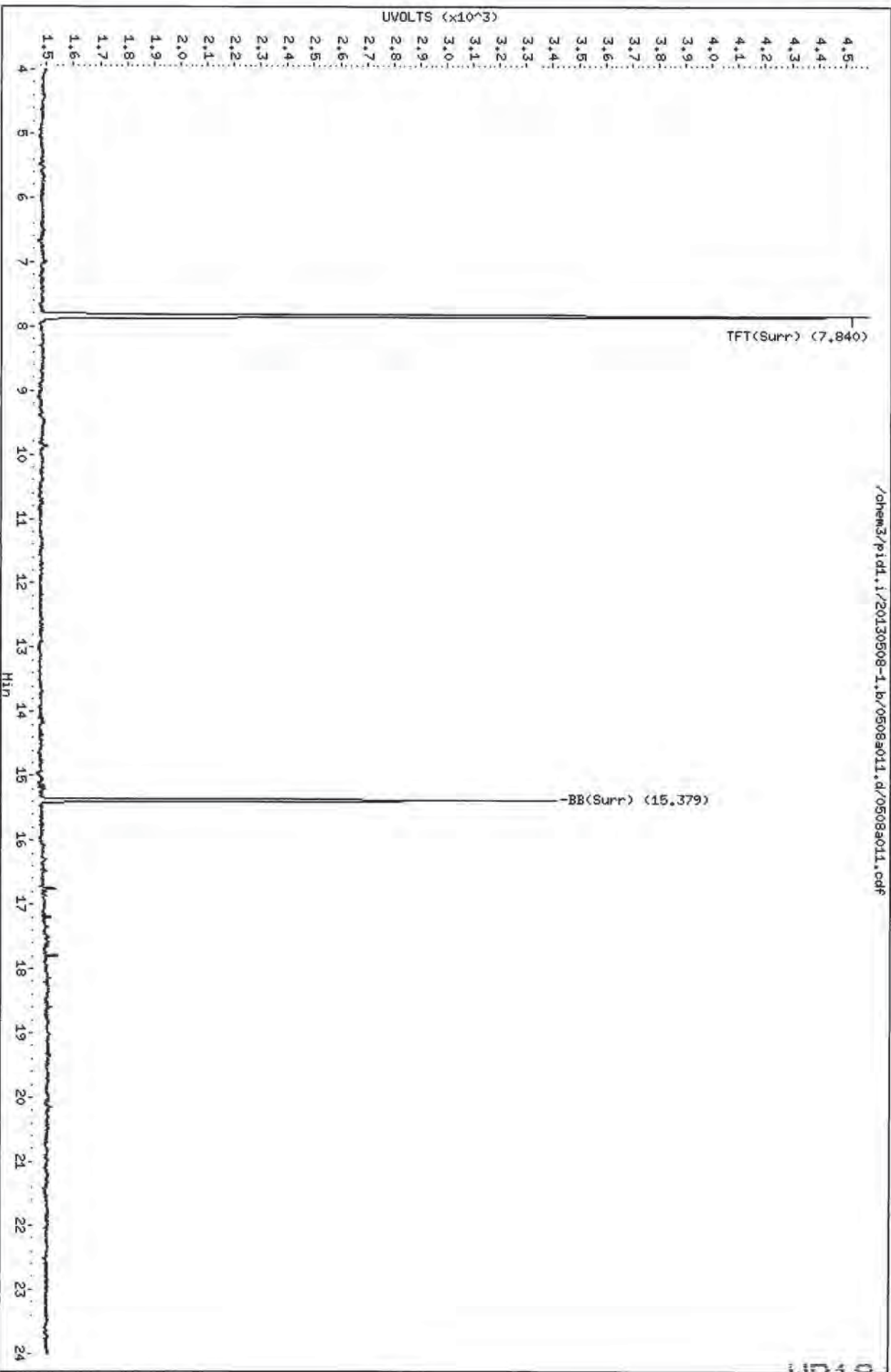
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a011.d
Date : 08-MAY-2013 15:30
Client ID: TP-35-050713
Sample Info: WP19H

Column Phase: RTX 502-2 FID

/chem3/pid1.i/20130508-1.b/0508a011.d/0508a011.cdf

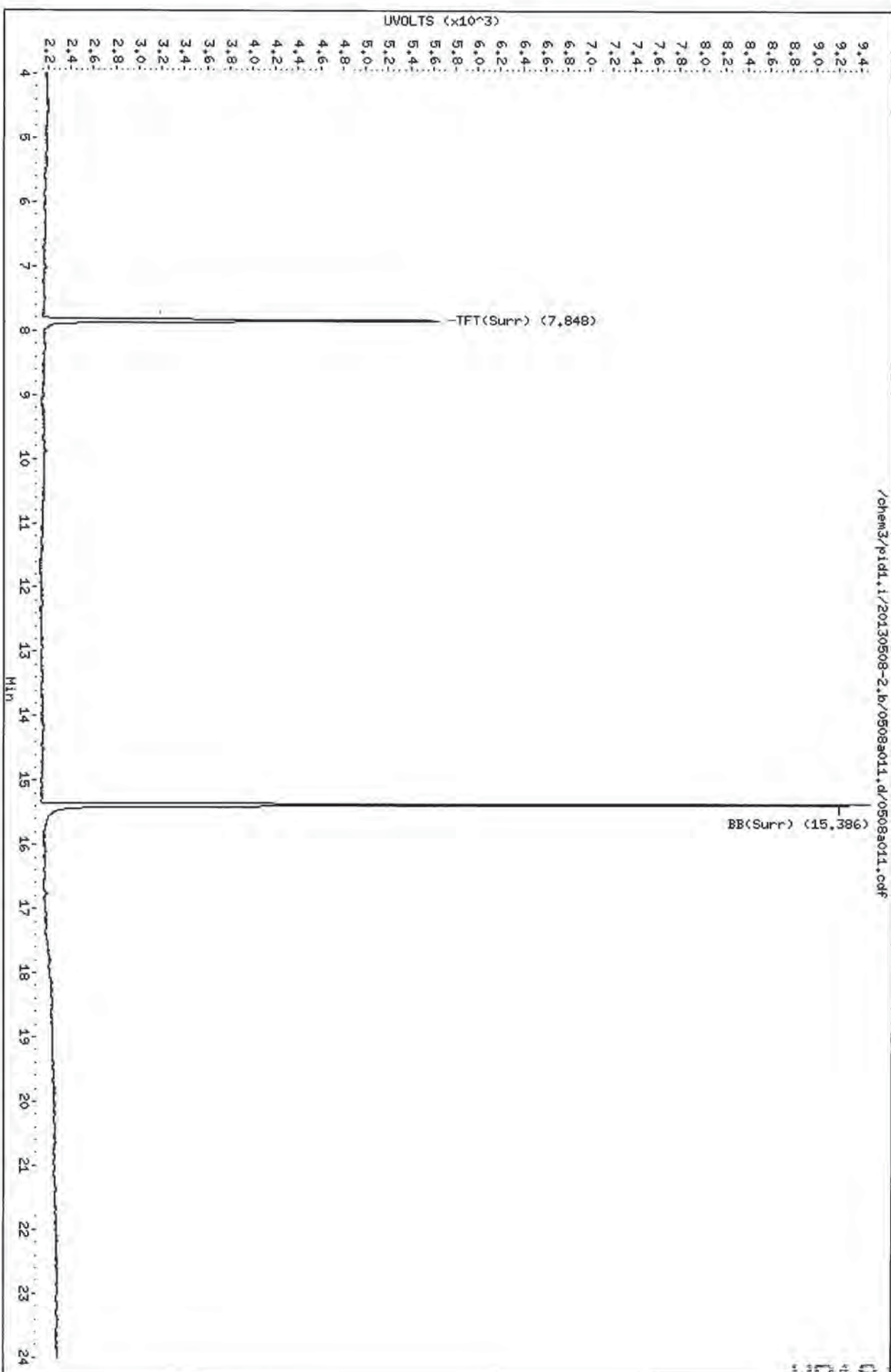
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130508-2.b/0508a011.d
Date : 08-MAY-2013 15:30
Client ID: TP-35-050743
Sample Info: MP19H

Column Phase: RTX 502-2 PID


Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130508-2.b/0508a011.d/0508a011.cdf

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Sample ID: TP-36-050713
SAMPLE

Lab Sample ID: WP19I
LIMS ID: 13-9948
Matrix: Water
Data Release Authorized: 
Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03
Date Sampled: 05/07/13
Date Received: 05/08/13

Date Analyzed: 05/08/13 15:59
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene 89.3%
Bromobenzene 83.5%

Gasoline Surrogate Recovery

Trifluorotoluene 90.9%
Bromobenzene 85.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

John 5/19/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a012.d ARI ID: WP19I
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a012.d Client ID: TP-36-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 15:59
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.003	3152	38443	90.9	TFT(Surr)
15.380	0.002	1956	16346	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	0	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.003	3546	89.3	TFT(Surr)
15.388	0.002	7337	83.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

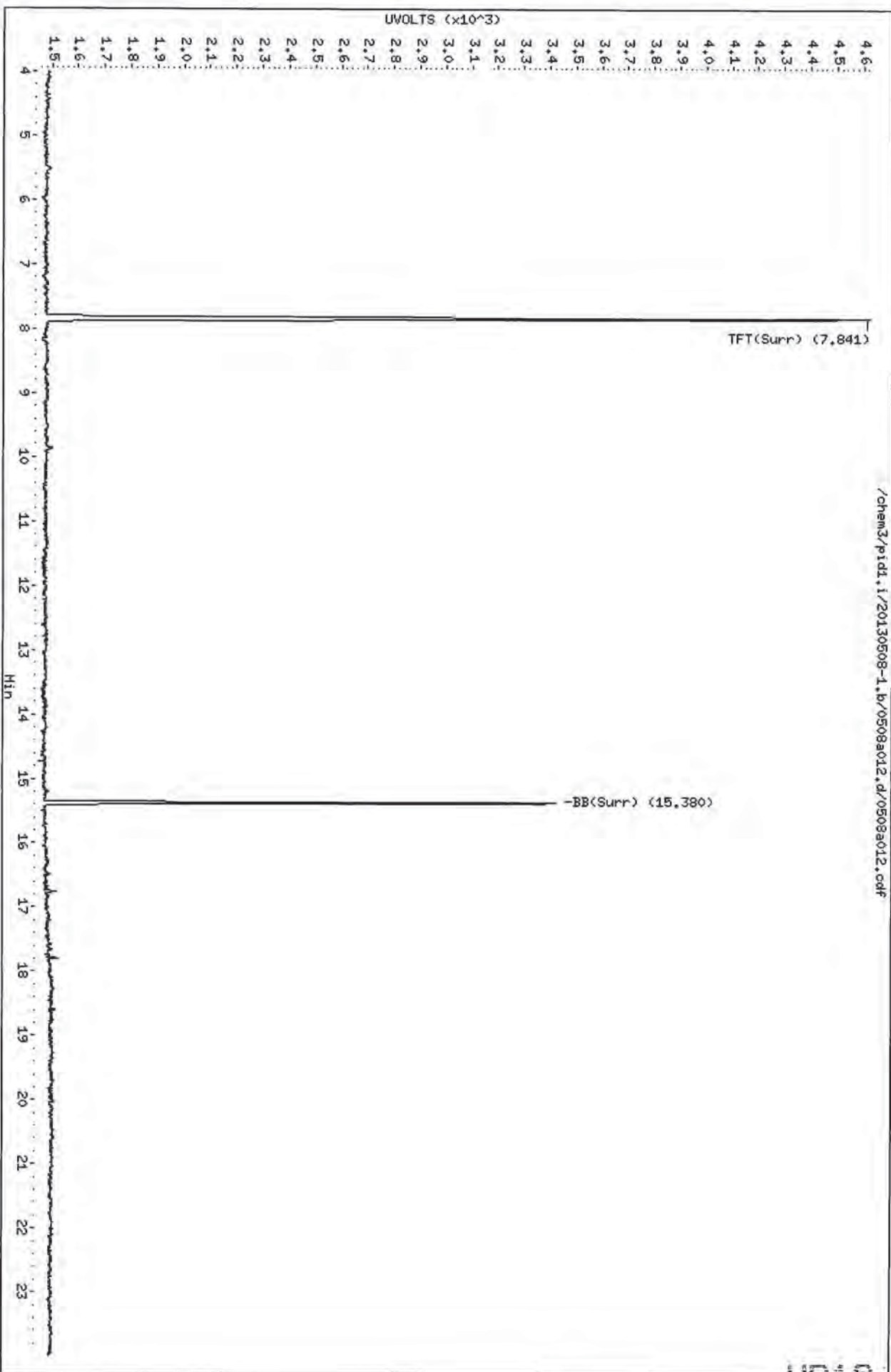
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a012.d
Date : 08-MAY-2013 15:59
Client ID: TP-36-050713
Sample Info: MP191

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

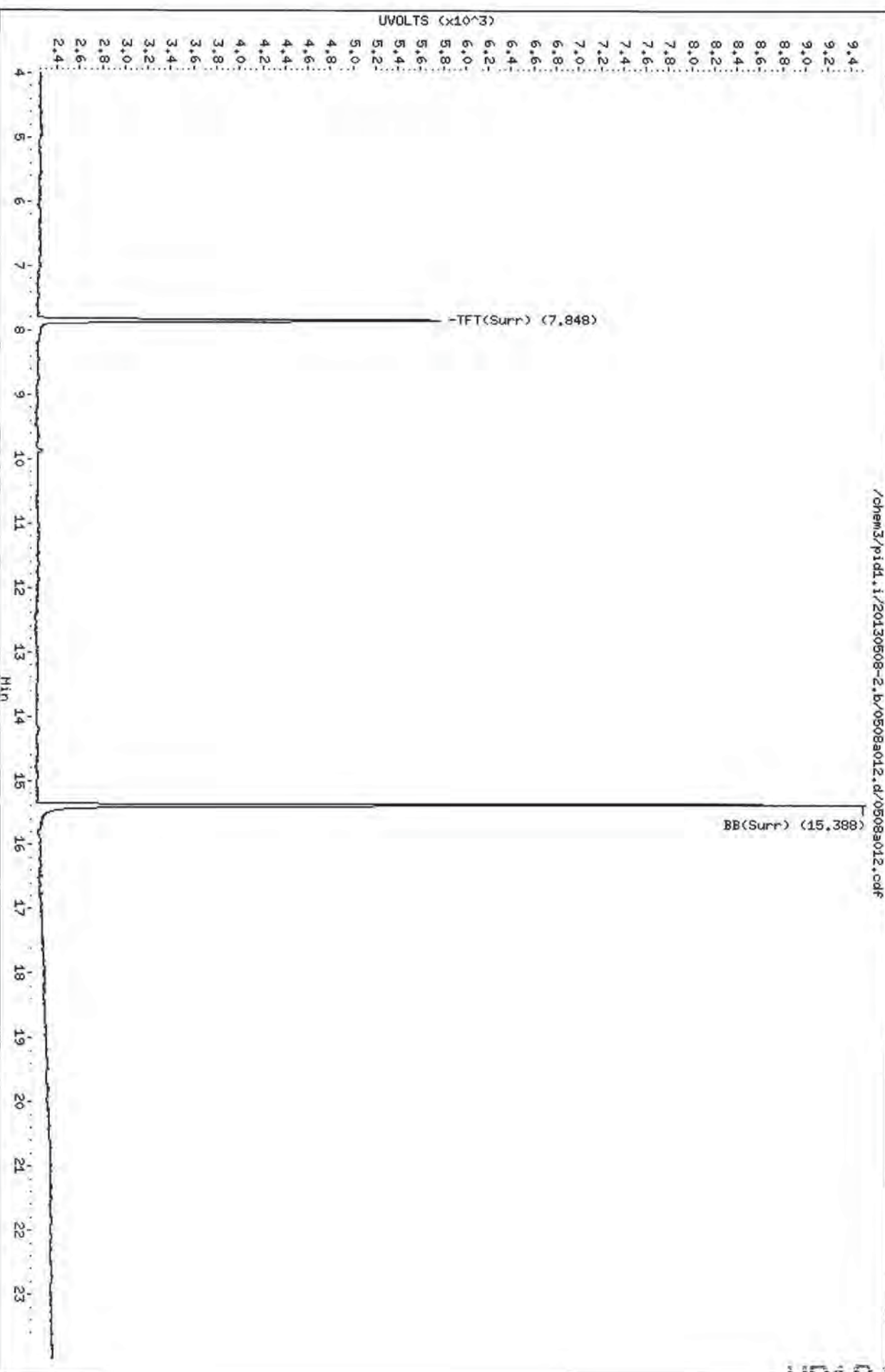
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Data File: /chem3/pid1.i/20130508-2.b/0508a012.d
Date: 08-MAY-2013 15:59
Client ID: TP-36-050713
Sample Info: MP191

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130508-2.b/0508a012.d/0508a012.cdf

Sample ID: TP-37-050713
 SAMPLE

Lab Sample ID: WP19J
 LIMS ID: 13-9949
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 16:28
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	79.1%
Bromobenzene	73.9%

Gasoline Surrogate Recovery

Trifluorotoluene	80.9%
Bromobenzene	76.0%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130508-1.b/0508a013.d ARI ID: WP19J
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a013.d Client ID: TP-37-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 16:28
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.003	2805	34565	80.9	TFT(Surr)
15.380	0.002	1735	14387	76.0	BB(Surr)

*due to matrix
(confirmed by second
analysis)
cut at 5/9/13*

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.90)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.004	3139	79.1	TFT(Surr)
15.387	0.002	6495	73.9	BB(Surr)

due to matrix effects

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

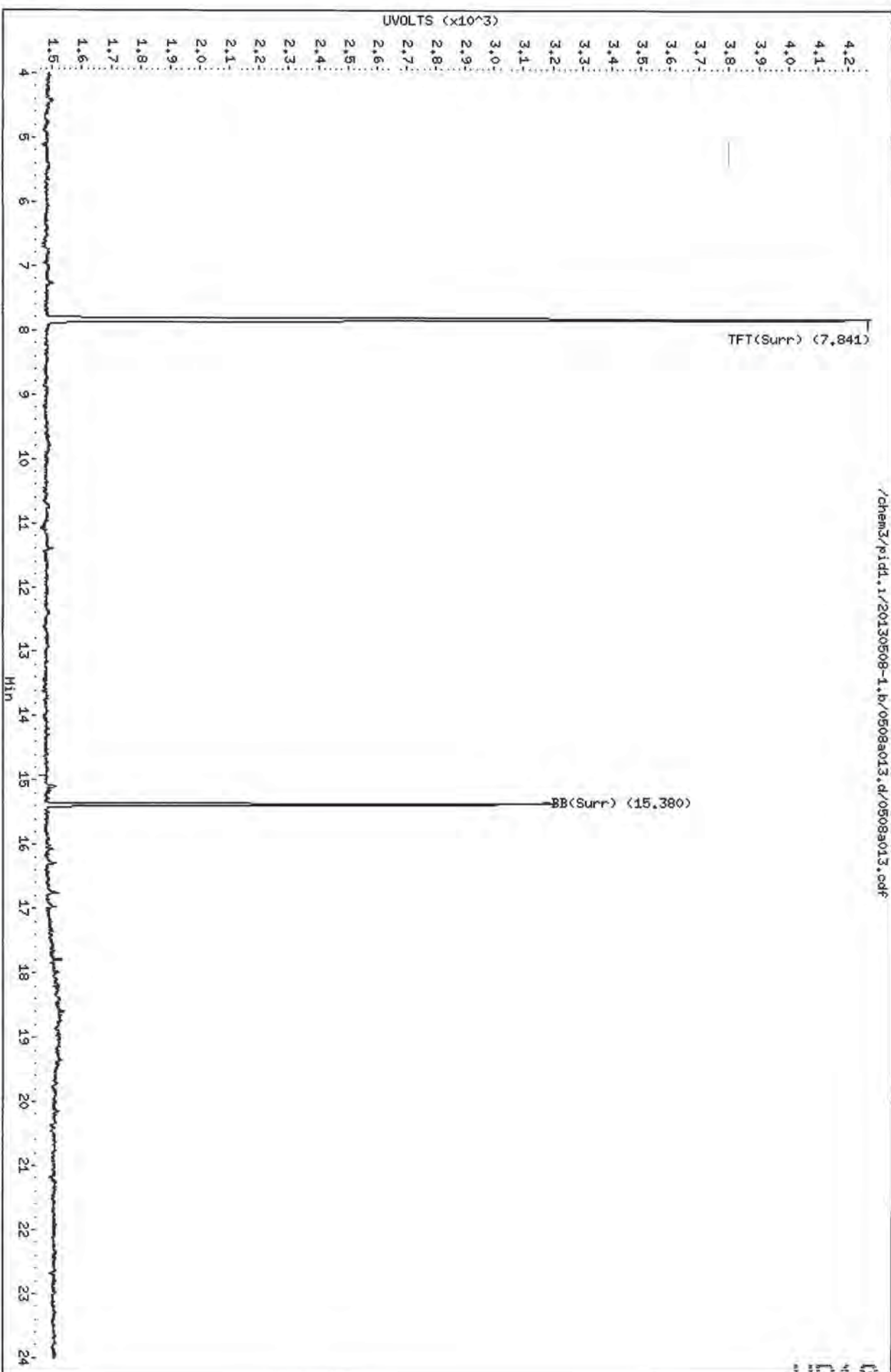
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130508-1.b/0508a013.d
Date: 08-MAY-2013 16:28
Client ID: TP-37-050713
Sample Info: MP19J

Column phase: RTX 502-2 FID

/chem3/pidd.i/20130508-1.b/0508a013.d/0508a013.pdf

Instrument: pidd.i
Operator: LH
Column diameter: 0.18

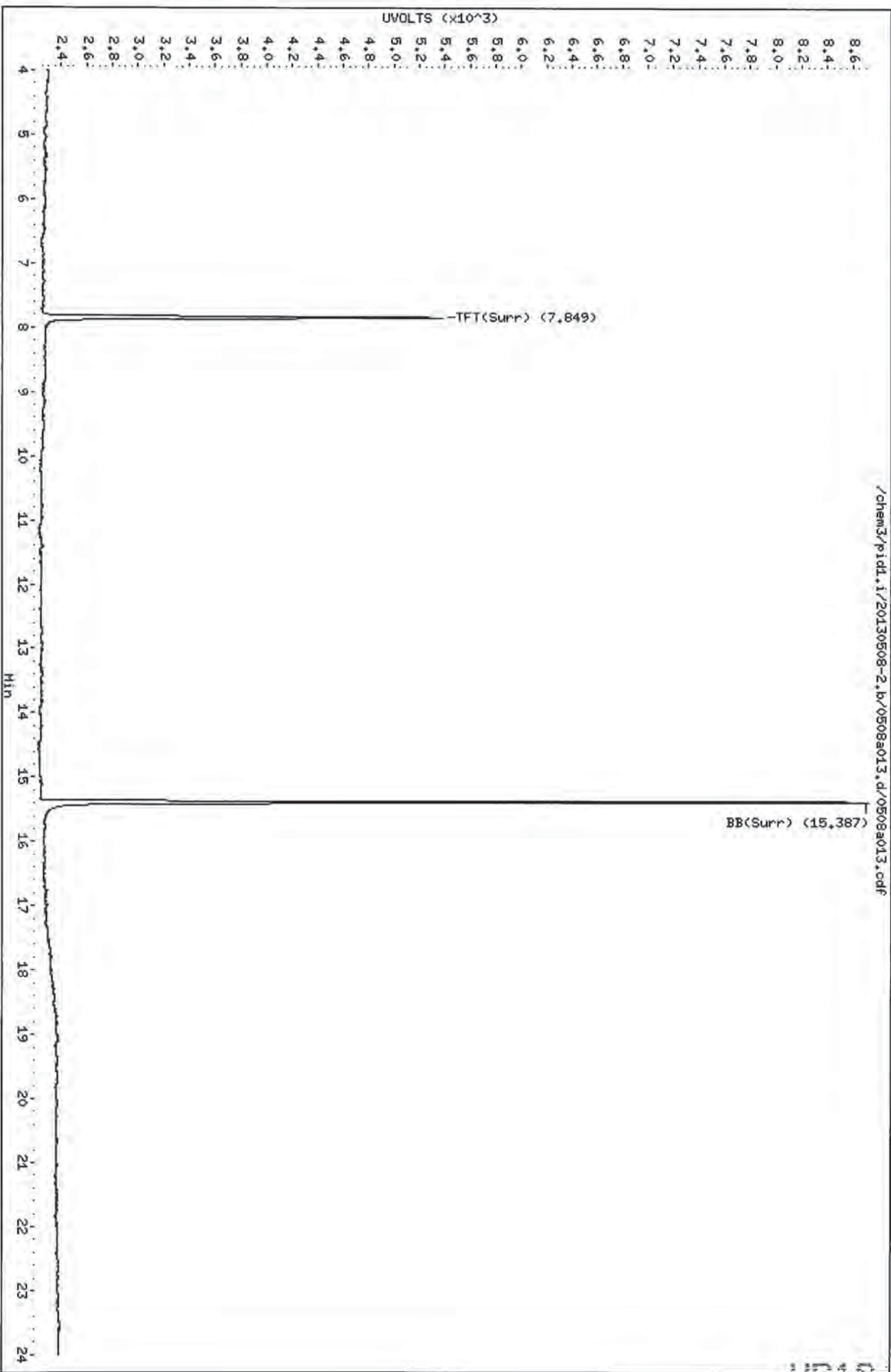


Data File: /chem3/pid1.i/20130508-2.b/0508a013.d
Date: 08-MAY-2013 16:28
Client ID: TP-37-050713
Sample Info: MP19J

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-2.b/0508a013.d/0508a013.cdf



TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WP19
Matrix: Water

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-050813	88.9%	88.4%	0
LCS-050813	98.0%	91.8%	0
LCSD-050813	94.1%	89.6%	0
TP-31-050713	91.0%	85.6%	0
TP-32-050713	91.8%	86.5%	0
TP-33-050713	92.8%	88.5%	0
TP-34-050713	90.1%	84.8%	0
TP-35-050713	89.7%	85.5%	0
TP-36-050713	90.9%	85.7%	0
TP-37-050713	80.9%	76.0%*	1

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-9943 to 13-9949

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: WP19
Matrix: Water

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-050813	90.5%	87.7%	0
LCS-050813	95.1%	90.9%	0
LCSD-050813	92.0%	88.5%	0
TP-31-050713	92.1%	83.7%	0
TP-32-050713	90.6%	84.7%	0
TP-33-050713	91.5%	86.5%	0
TP-34-050713	88.2%	83.4%	0
TP-35-050713	88.2%	83.4%	0
TP-36-050713	89.3%	83.5%	0
TP-37-050713	79.1%*	73.9%*	2

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 13-9943 to 13-9949

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050813

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050813

LIMS ID: 13-9943

Matrix: Water

Data Release Authorized: *AS*

Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/08/13 09:54

LCS D: 05/08/13 10:24

Instrument/Analyst LCS: PID1/LH

LCS D: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCS D: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Gasoline Range Hydrocarbons	0.99	1.00	99.0%	0.91	1.00	91.0%	8.4%


Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCS D
Trifluorotoluene	98.0%	94.1%
Bromobenzene	91.8%	89.6%

Sample ID: LCS-050813
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050813
 LIMS ID: 13-9943
 Matrix: Water
 Data Release Authorized: 
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/08/13 09:54
 LCSD: 05/08/13 10:24
 Instrument/Analyst LCS: PID1/LH
 LCSD: PID1/LH

Purge Volume: 5.0 mL
 Dilution Factor LCS: 1.0
 LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	3.29	3.70	88.9%	3.01	3.70	81.4%	8.9%
Toluene	35.4	39.6	89.4%	33.0	39.6	83.3%	7.0%
Ethylbenzene	9.87	11.6	85.1%	9.15	11.6	78.9%	7.6%
m,p-Xylene	35.9	42.5	84.5%	33.6	42.5	79.1%	6.6%
o-Xylene	16.2	19.2	84.4%	15.1	19.2	78.6%	7.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.1%	92.0%
Bromobenzene	90.9%	88.5%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AMT 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a004.d ARI ID: LCS0508
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a004.d Client ID:
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 09:54
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3401	46310	98.0	TFT(Surr)
15.380	0.002	2095	18532	91.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	349024	0.975 M
8015C 2MP-TMB (4.18 to 16.20)	723723	675374	0.933 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	552138	0.947 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	370372	0.987 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.002	3775	95.1	TFT(Surr)
15.386	0.001	7987	90.9	BB(Surr)

SW8021 (PID)

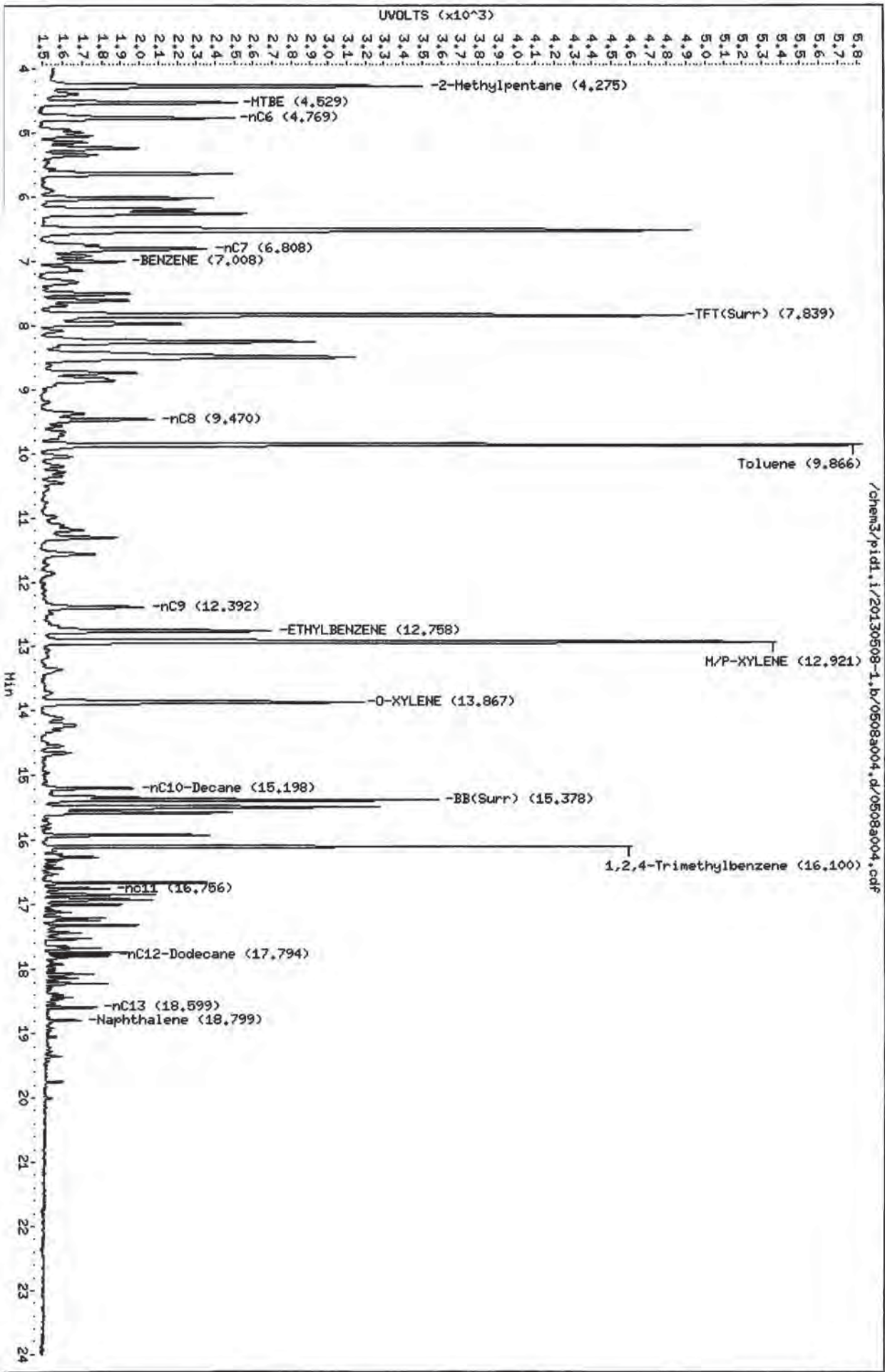
RT	Shift	Response	Amount	Compound
7.016	0.001	789	3.29	Benzene
9.874	0.002	8101	35.37	Toluene
12.767	0.001	1910	9.87	Ethylbenzene
12.930	0.003	7675	35.94	M/P-Xylene
13.876	0.001	2767	16.22	O-Xylene
ND	---	---	---	MTBE

Indicates Peak Area was used for quantitation instead of Height
 Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a004.d
Date: 08-MAY-2013 09:54
Client ID: LCS0508
Sample Info: LCS0508

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



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Data File: /chem3/pid1.i/20130508-2.b/0508a004.d
Date: 08-MAY-2013 09:54
Client ID:
Sample Info: LCS0508

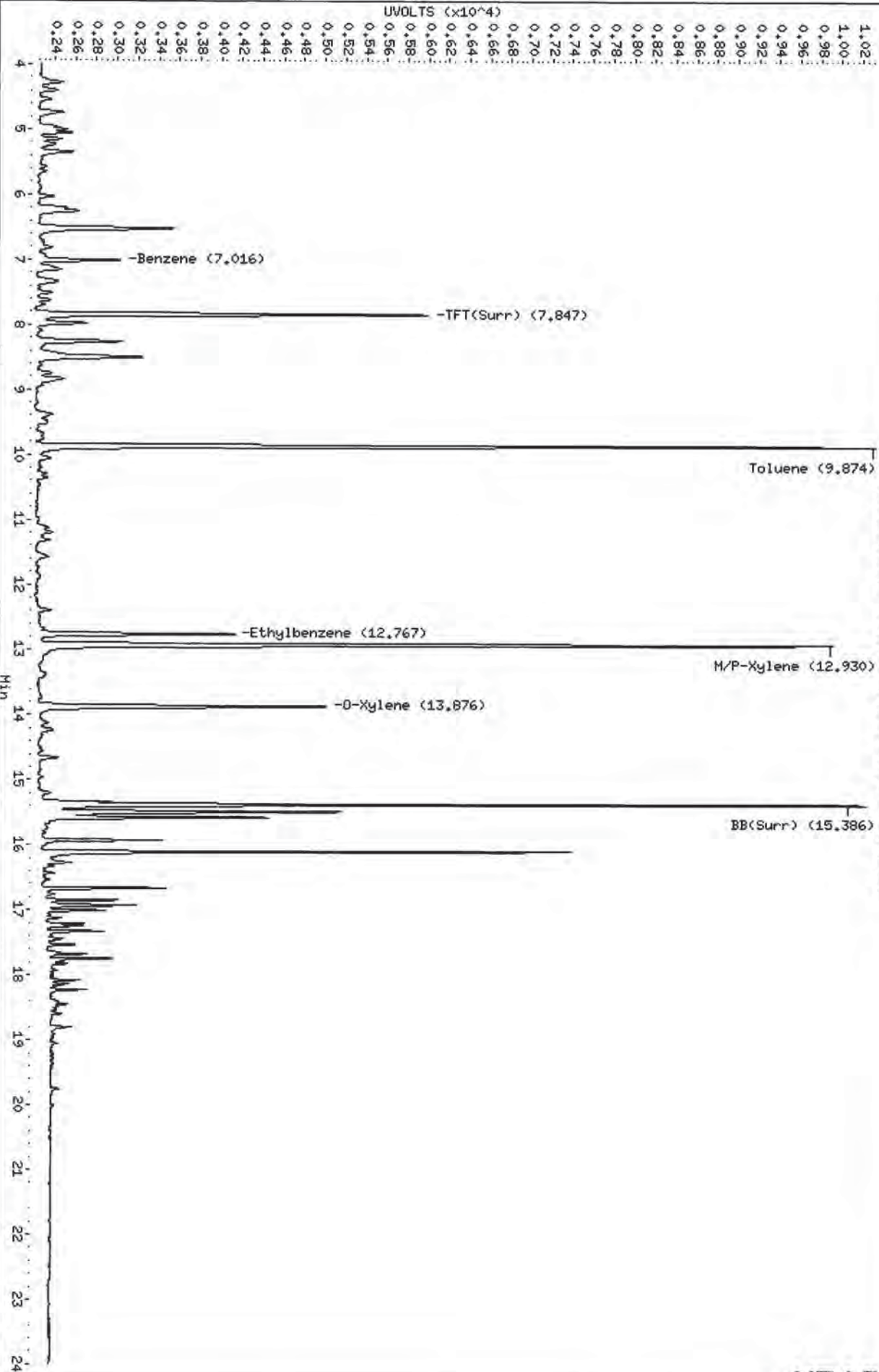
Instrument: pid1.i

Page 1

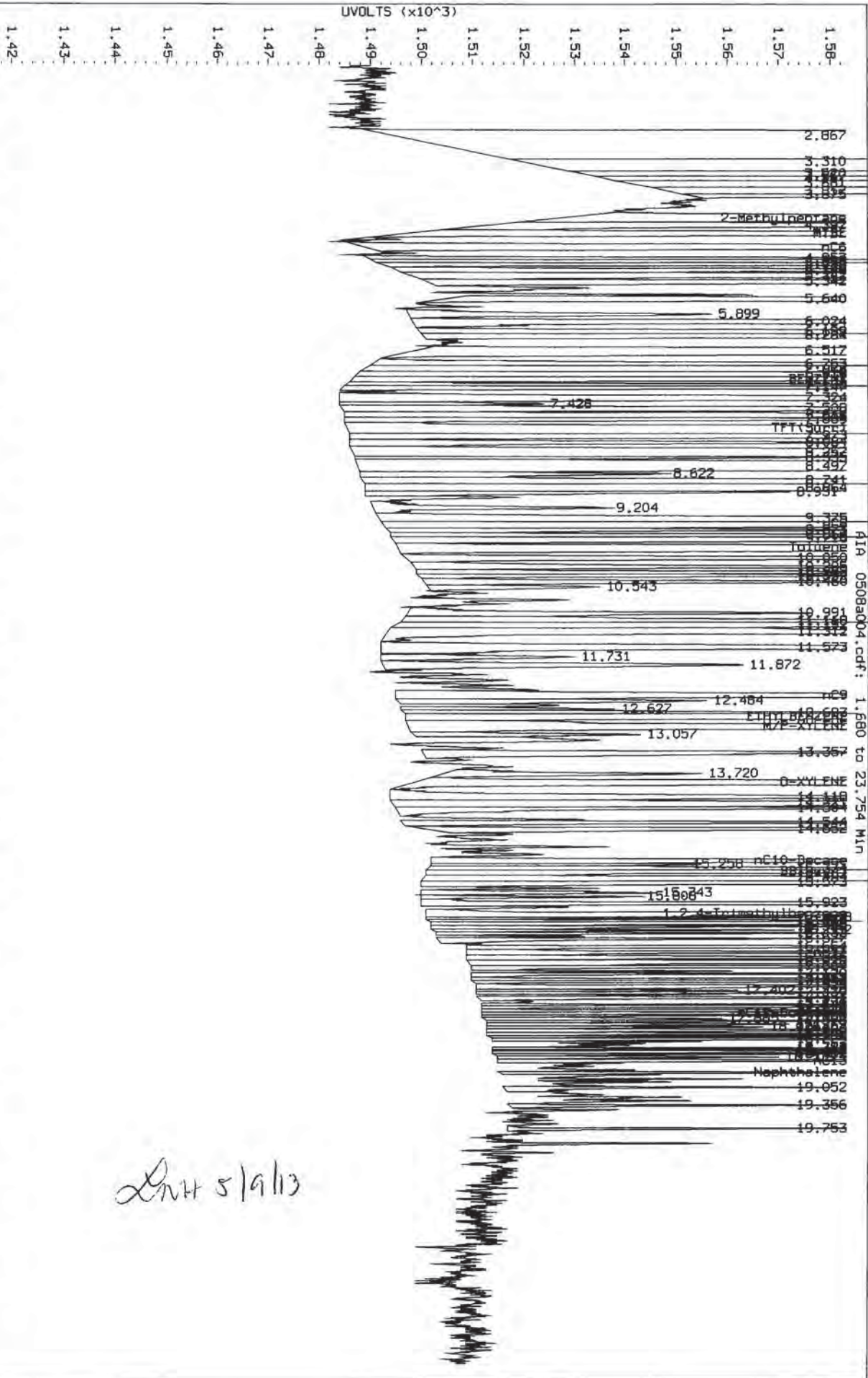
Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

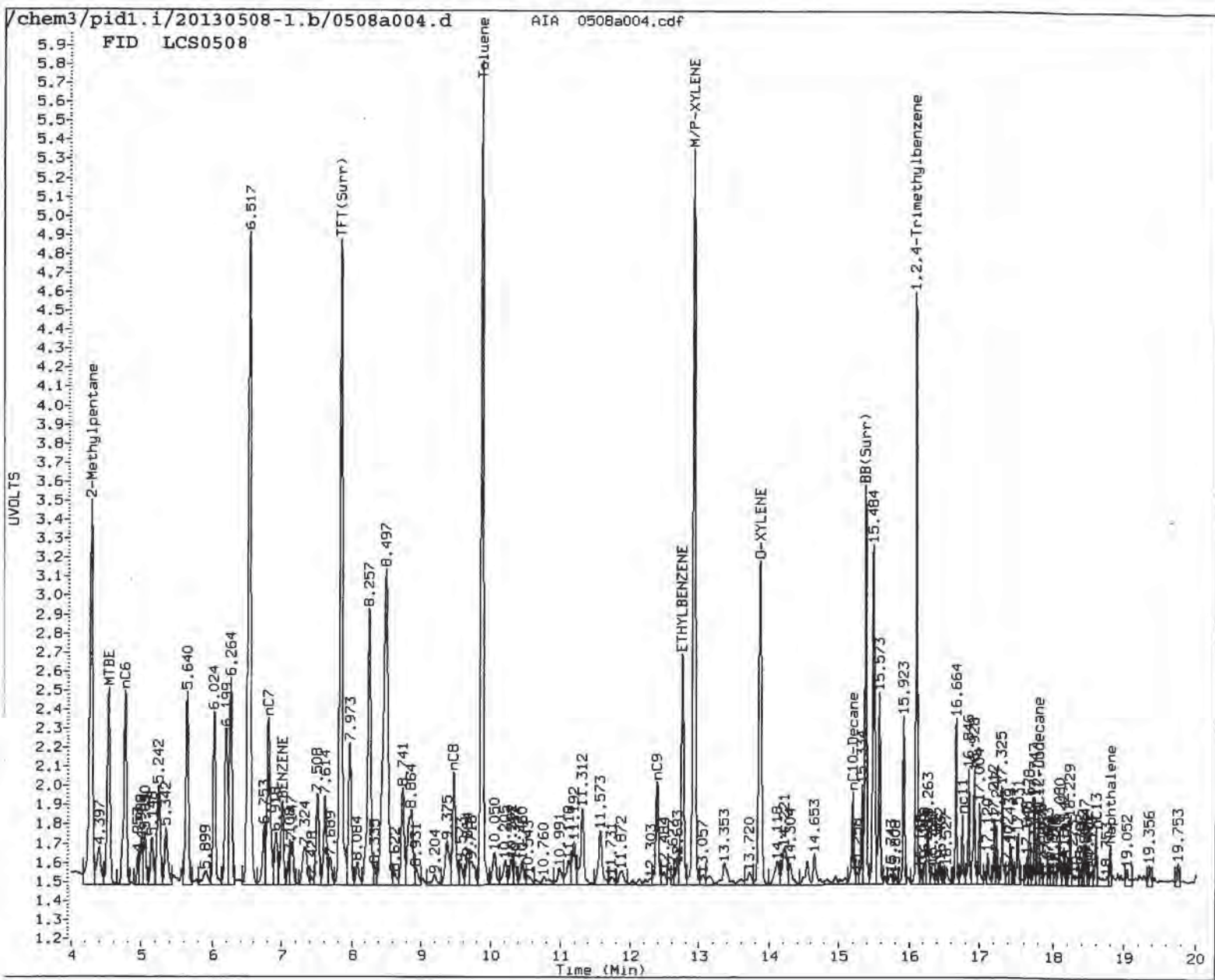
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Data File: /chem3/pid1.1/20130508-1.b/0508a004.d/0508a004.cdf
 Injection Date: 08-MAY-2013 09:54
 Instrument: pid1.1
 Client Sample ID: LCS0508



Handwritten signature: LNH 5/9/13



MANUAL INTEGRATION

- ① Baseline correction
- ② Poor chromatography
- ③ Peak not found
4. Totals calculation
5. Other _____

Analyst: SM

Date: 5/9/13

55 50 45 40 35 30 25 20 15 10 5

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Ant 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a005.d ARI ID: LCSD0508
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a005.d Client ID:
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 10:24
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3265	44128	94.1	TFT(Surr)
15.380	0.002	2045	18414	89.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	323041	0.902 M
8015C 2MP-TMB (4.18 to 16.20)	723723	615899	0.851 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	499546	0.857 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	342282	0.913 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.001	3652	92.0	TFT(Surr)
15.386	0.001	7779	88.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	0.001	722	3.01	Benzene
9.873	0.001	7552	32.98	Toluene
12.766	0.001	1771	9.15	Ethylbenzene
12.930	0.003	7170	33.58	M/P-Xylene
13.875	0.001	2576	15.10	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

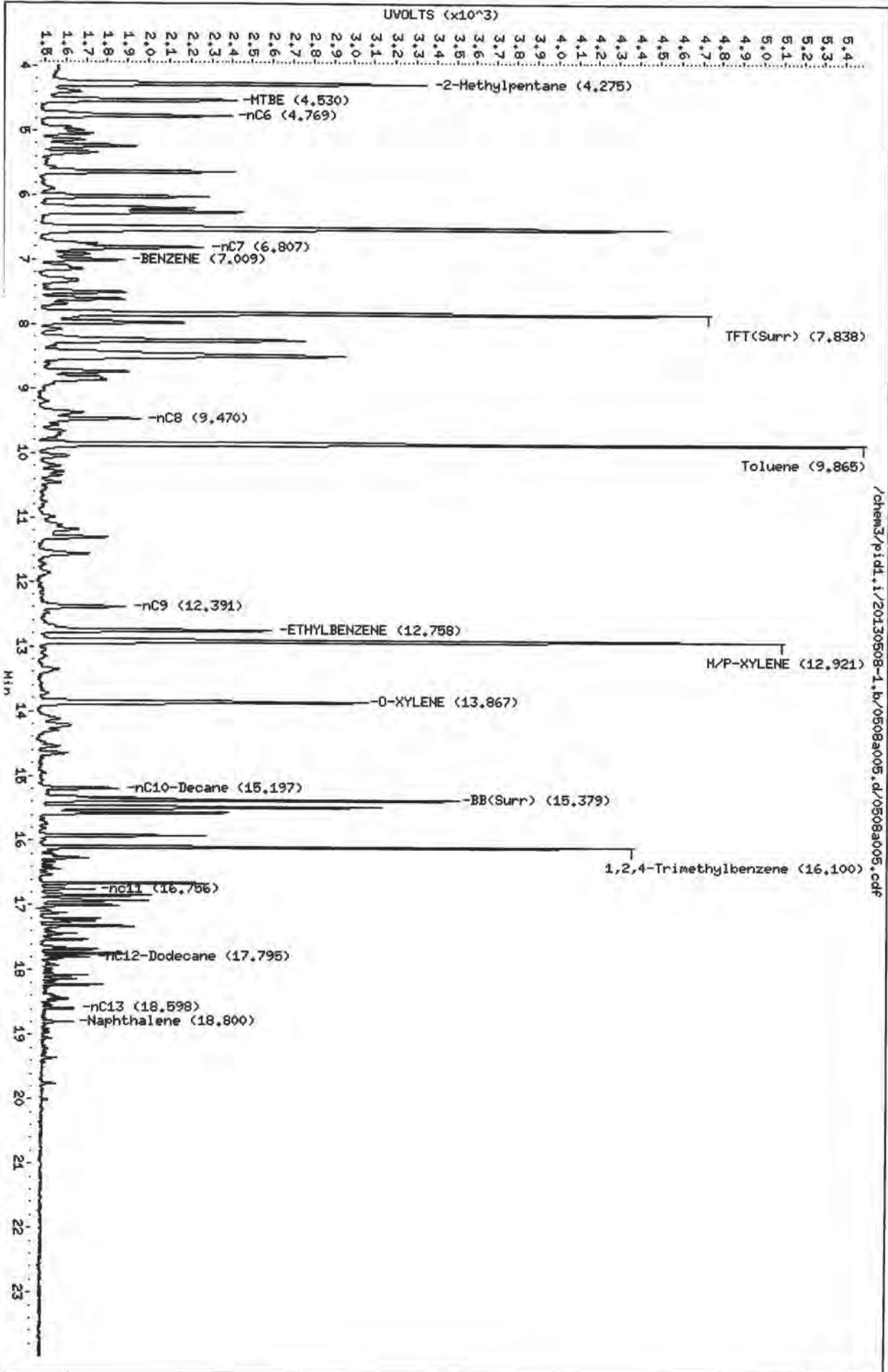
Data File: /chem3/pid1.i/20130508-1.b/0508a005.d
Date: 08-May-2013 10:24
Client ID: LCS0508
Sample Info: LCS0508

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-1.b/0508a005.d/0508a005.cdf

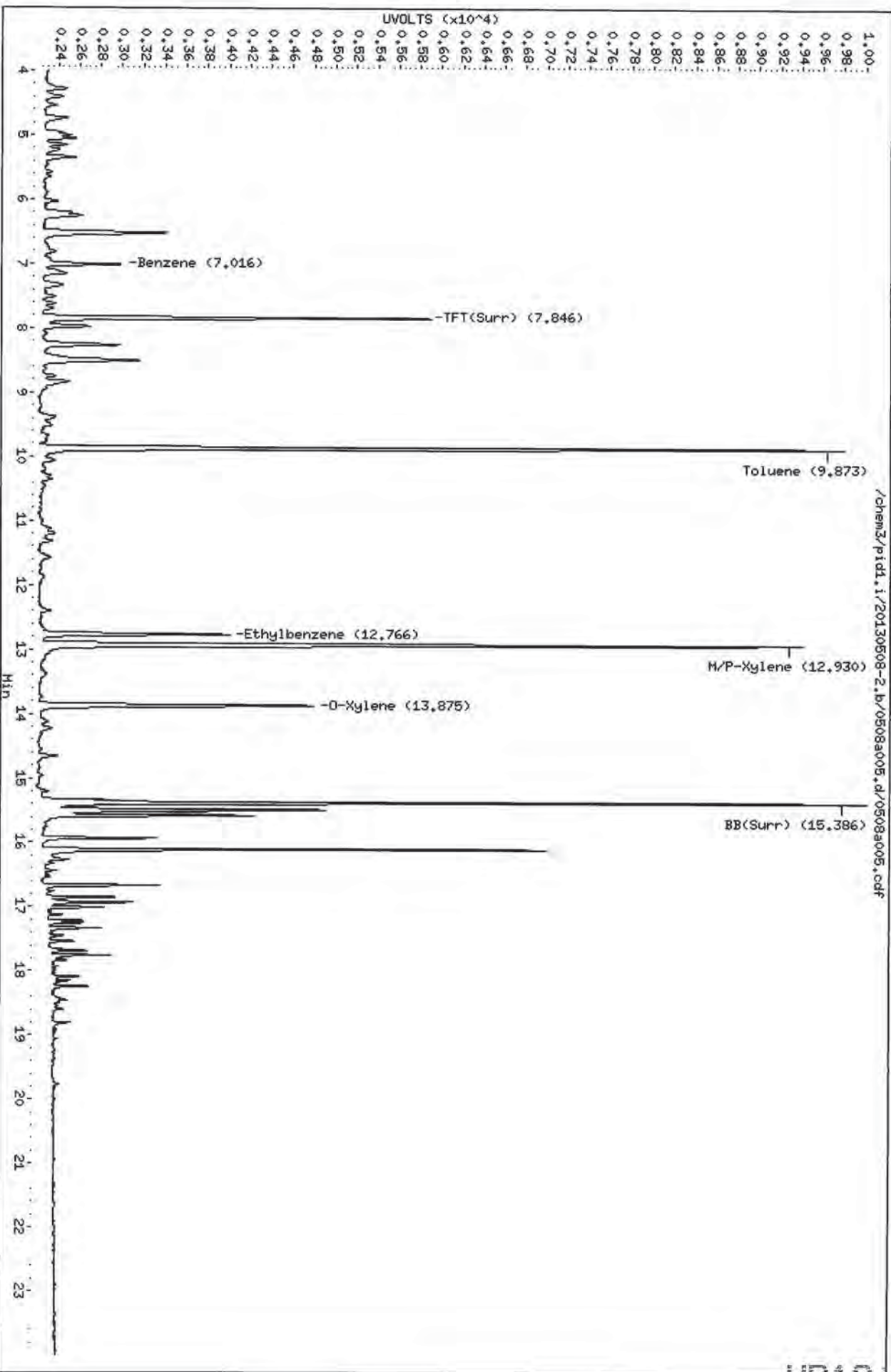


Data File: /chem3/pid1.i/20130508-2.b/0508a005.d
Date: 08-MAY-2013 10:24
Client ID:
Sample Info: LCSD0508

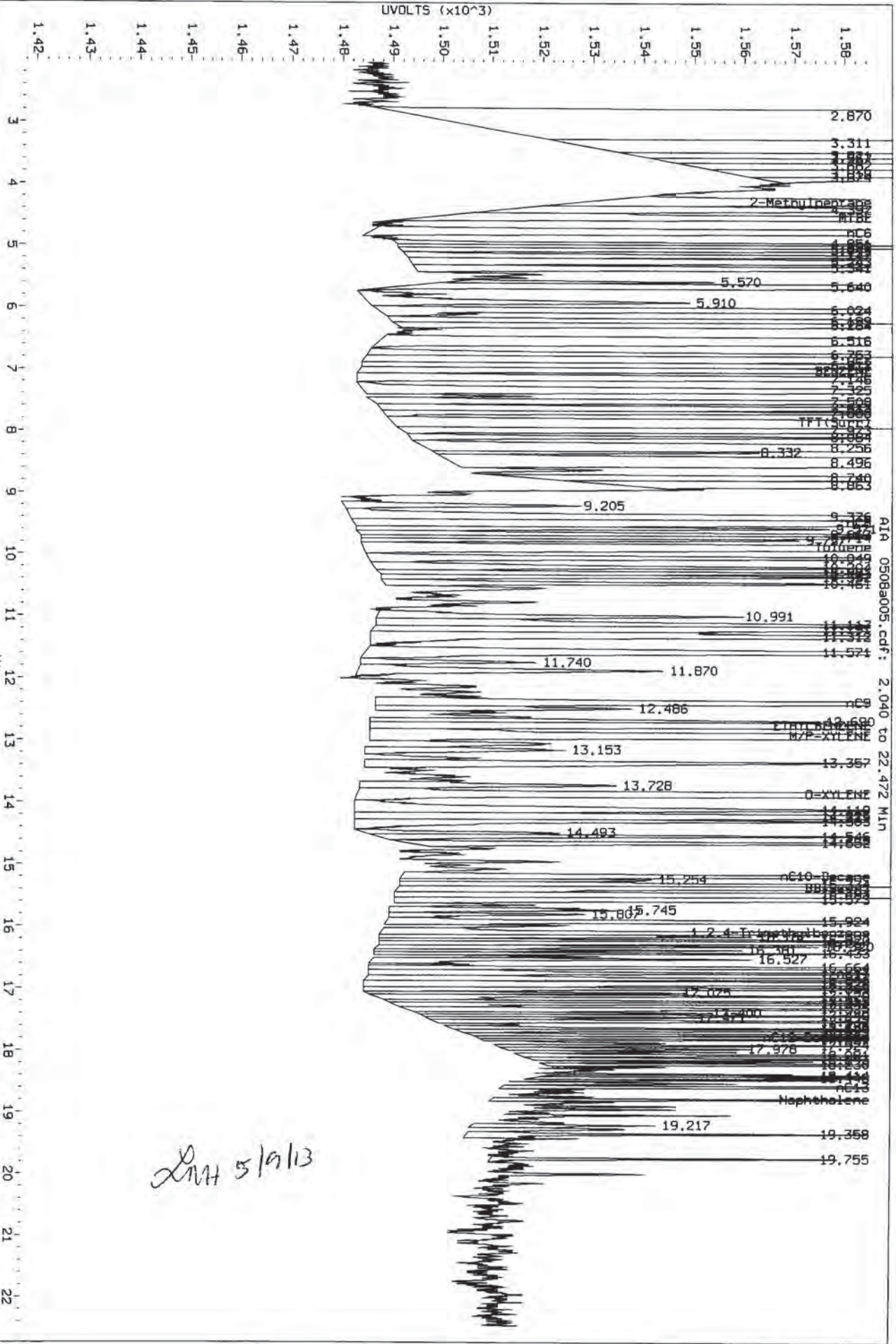
Instrument: pid1.i

Column phase: RTX 502-2 PID

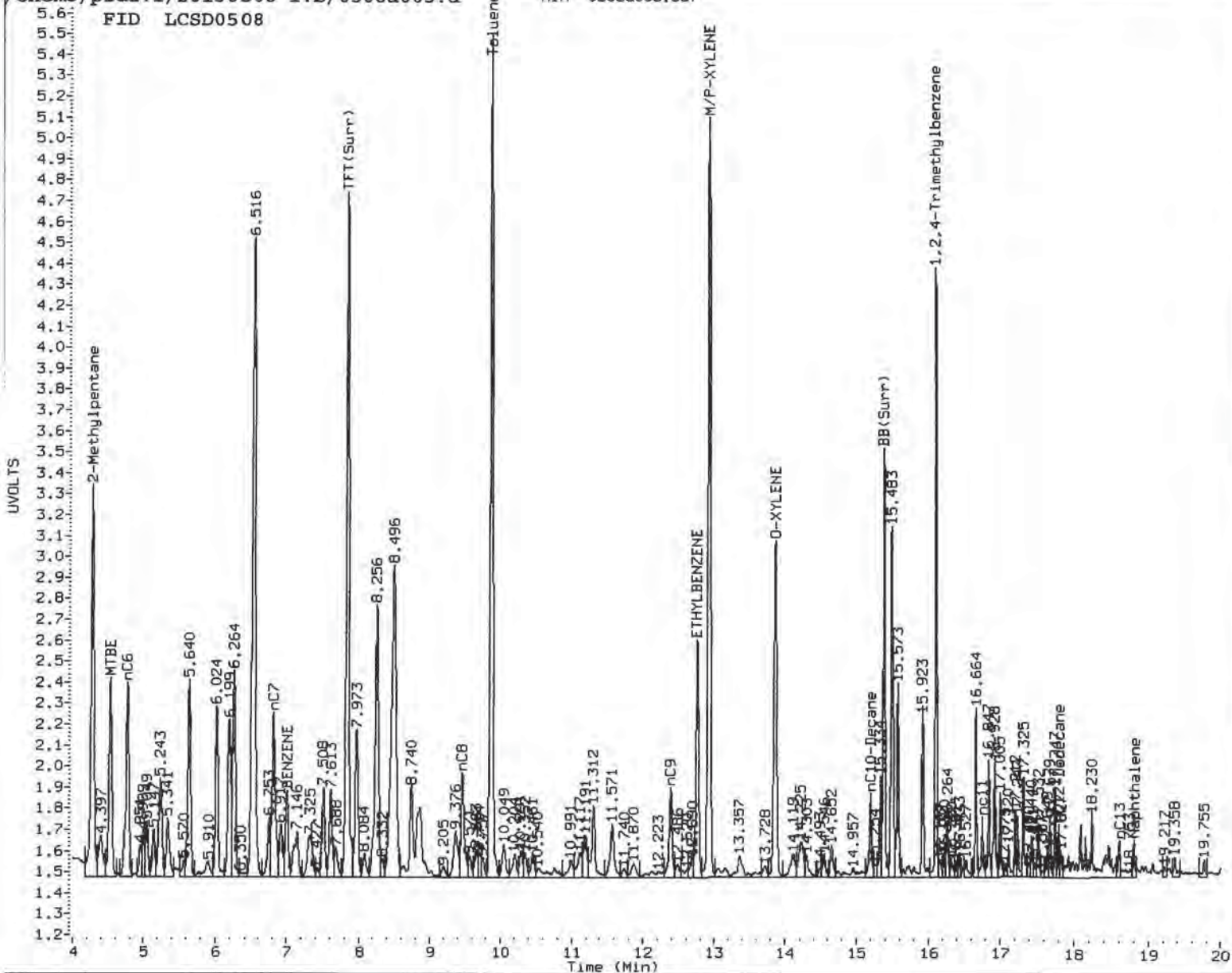
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.1/20130508-1.b/0508a005.d/0508a005.cdf
 Injection Date: 08-MAY-2013 10:24
 Instrument: pid1.1
 Client Sample ID: LCS00508



LNH 5/9/13



MANUAL INTEGRATION

- ① Baseline correction
- ② Poor chromatography
- ③ Peak not found
4. Totals calculation
5. Other _____

Analyst: SMHDate: 5/9/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050813

METHOD BLANK

Lab Sample ID: MB-050813

LIMS ID: 13-9943

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/08/13 11:48

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	90.5%
Bromobenzene	87.7%

Gasoline Surrogate Recovery

Trifluorotoluene	88.9%
Bromobenzene	88.4%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

DAH 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a006.d ARI ID: MB0508
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a006.d Client ID:
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 11:48
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.006	3082	38619	88.9	TFT(Surr) /
15.382	0.004	2017	16835	88.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	4697	0.013 /
8015C 2MP-TMB (4.18 to 16.20)	723723	4782	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	3741	0.006
NWTPHG Tol-Nap (9.76 to 18.90)	375093	4697	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.006	3594	90.5	TFT(Surr) /
15.390	0.005	7712	87.7	BB(Surr)

SW8021 (PID)

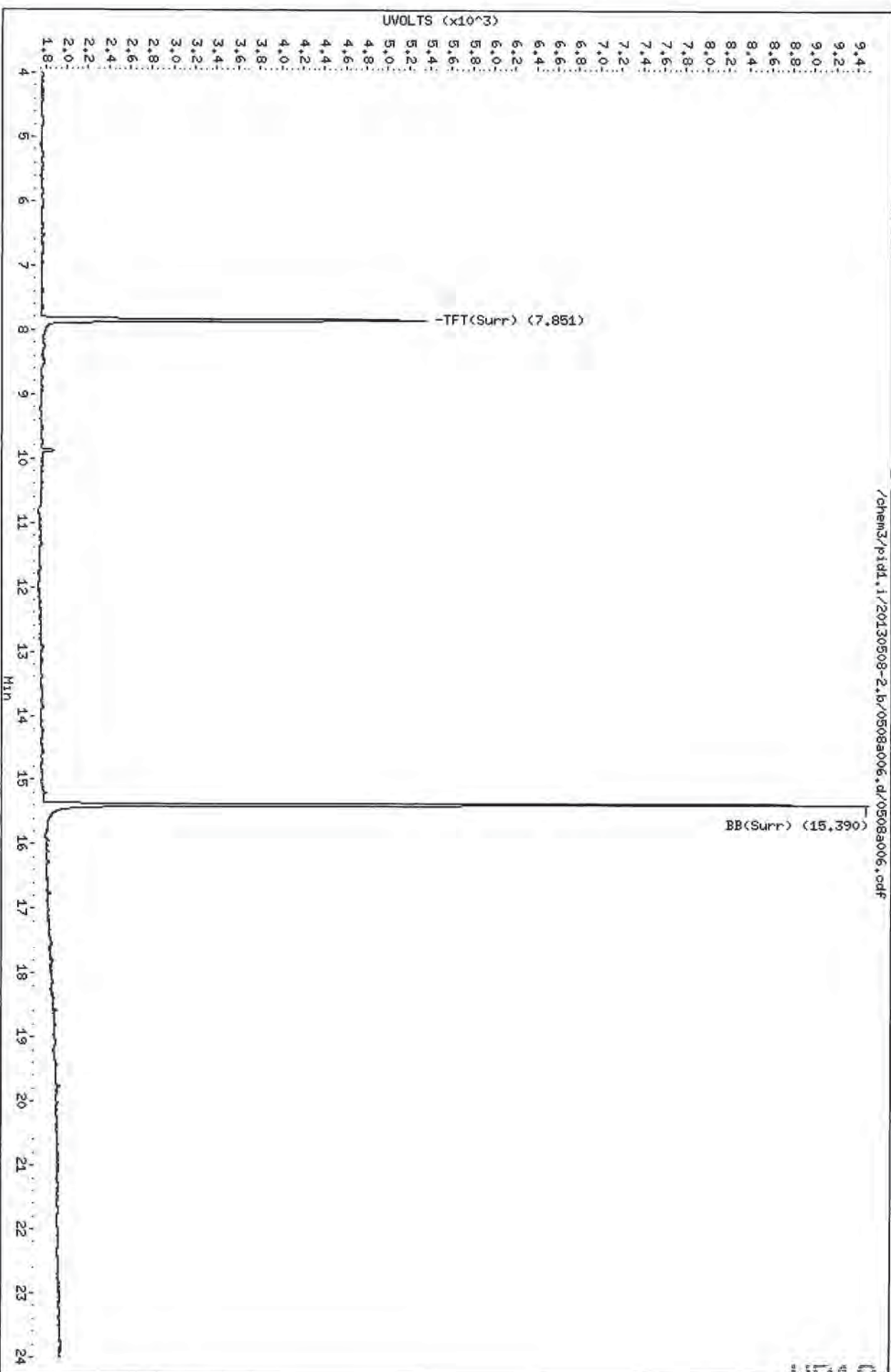
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene /
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

1 Indicates Peak Area was used for quantitation instead of Height
 7 Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-2.b/0508a006.d
Date: 08-MAY-2013 11:48
Client ID:
Sample Info: HB0508

Column Phaset: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130508-2.b/0508a006.d/0508a006.cdf

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-31-050713
SAMPLE

Lab Sample ID: WP19N
 LIMS ID: 13-9953
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 17:57
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 74 mg-dry-wt
 Percent Moisture: 17.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	43
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons **6.8** **27** GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	80.9%
Bromobenzene	80.4%

Gasoline Surrogate Recovery

Trifluorotoluene	83.2%
Bromobenzene	82.2%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

LPH 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a016.d ARI ID: WP19N
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a016.d Client ID: TP-31-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 17:57
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	2886	36235	83.2	TFT(Surr) /
15.380	0.002	1877	16171	82.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	58785	0.164 M
8015C 2MP-TMB (4.18 to 16.20)	723723	76628	0.106 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	53345	0.092 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	150788	0.402 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.003	3212	80.9	TFT(Surr) /
15.387	0.002	7068	80.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.876	0.004	147	0.64	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

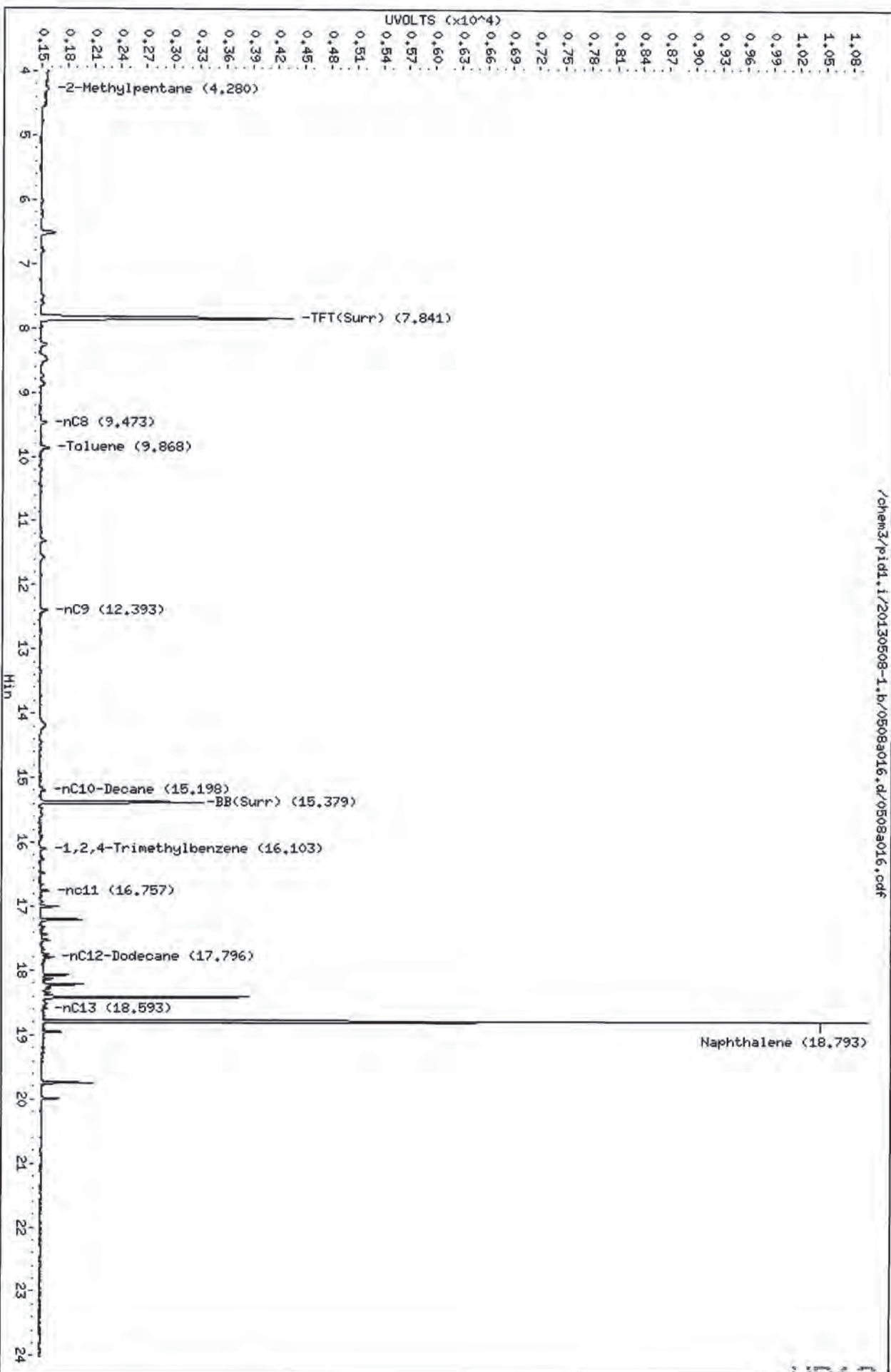
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a016.d
Date: 08-HAY-2013 17:57
Client ID: TP-31-060713
Sample Info: MP19N

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130508-1.b/0508a016.d/0508a016.caf

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130508-2.b/0508a016.d
Date : 08-May-2013 17:57
Client ID: TP-31-050713
Sample Info: MP19N

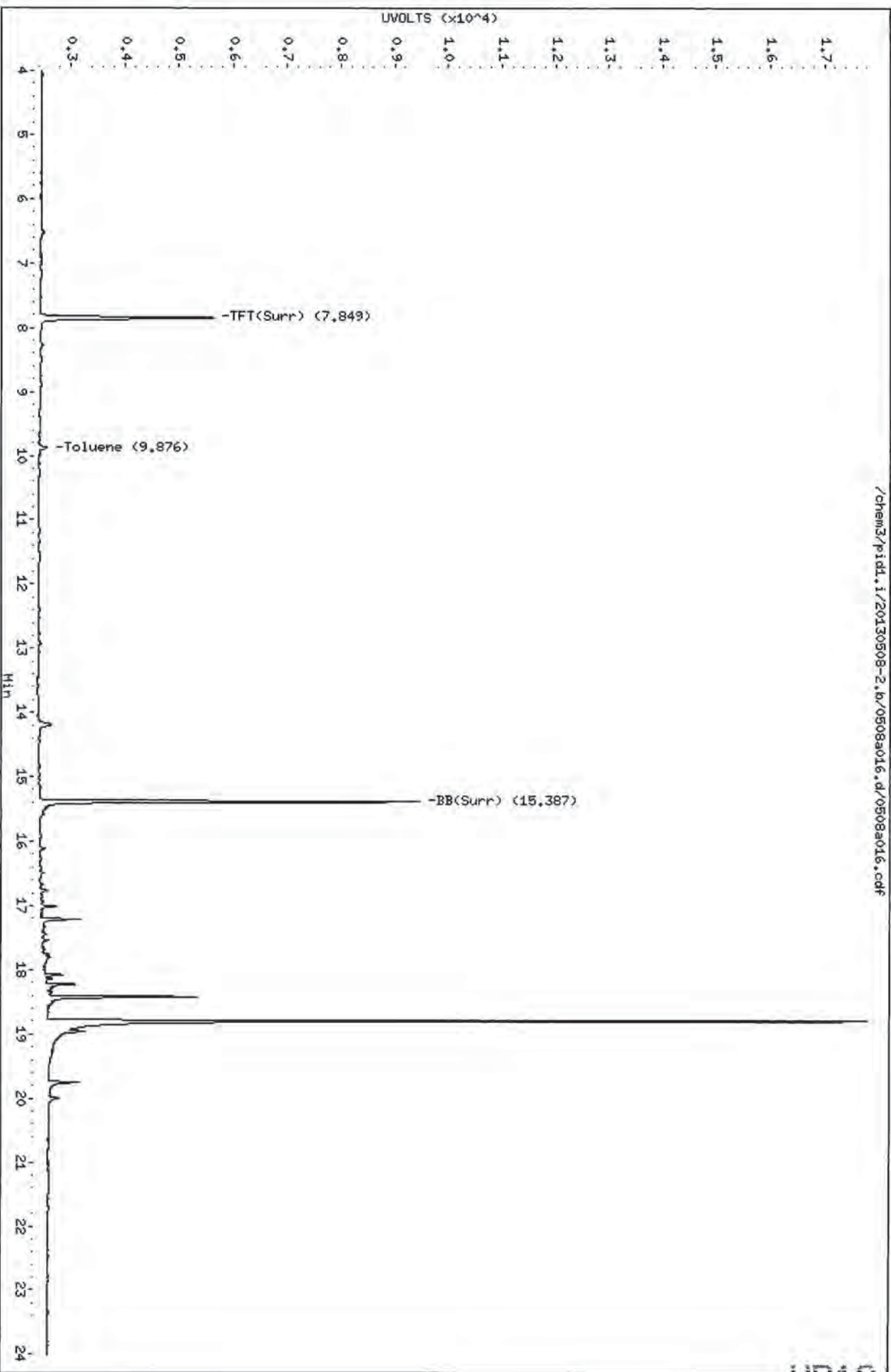
Column phase: RTX 502-2 PID

/chem3/pid1.i/20130508-2.b/0508a016.d/0508a016.cdf

Instrument: pid1.i

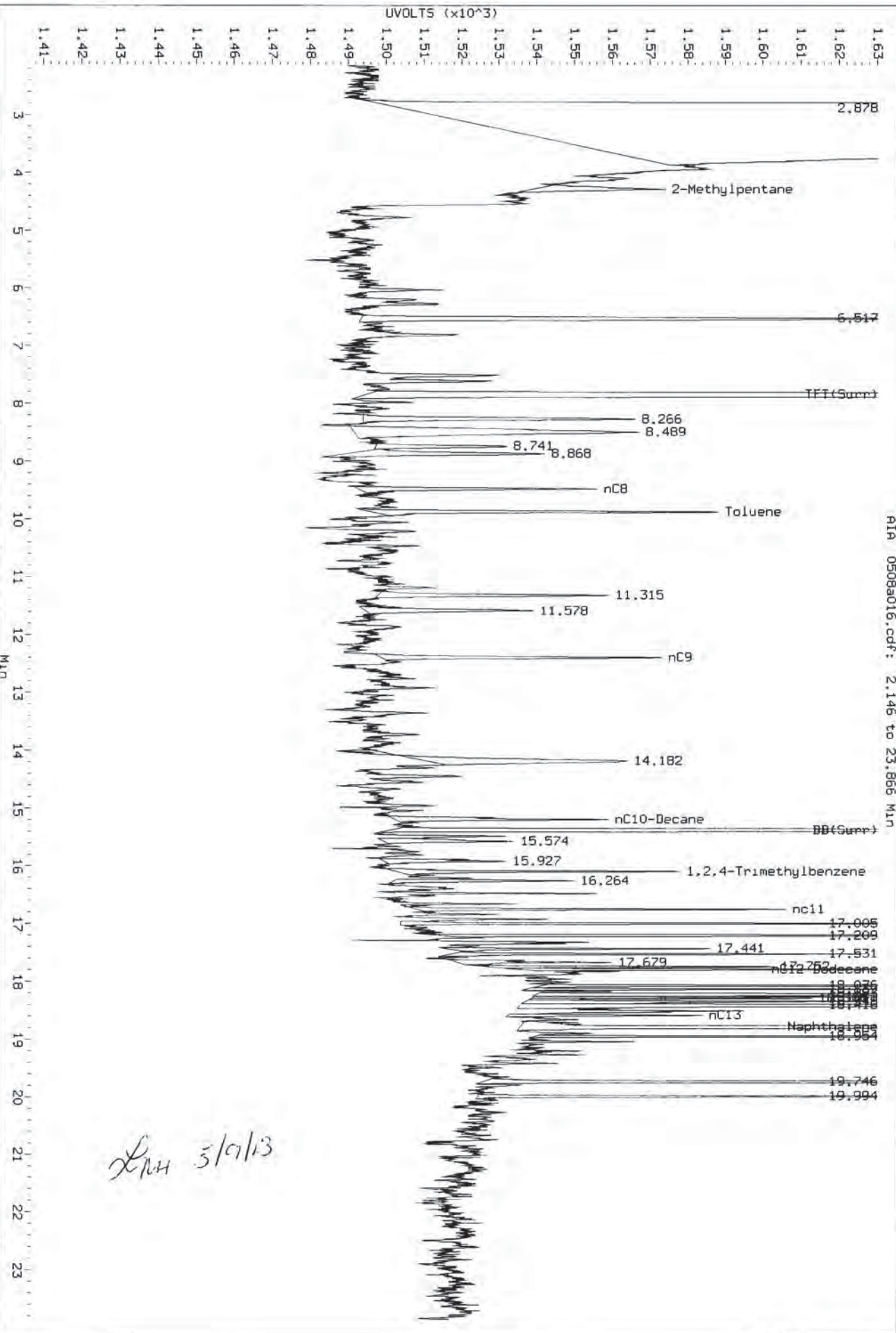
Operator: LH

Column diameter: 0.18

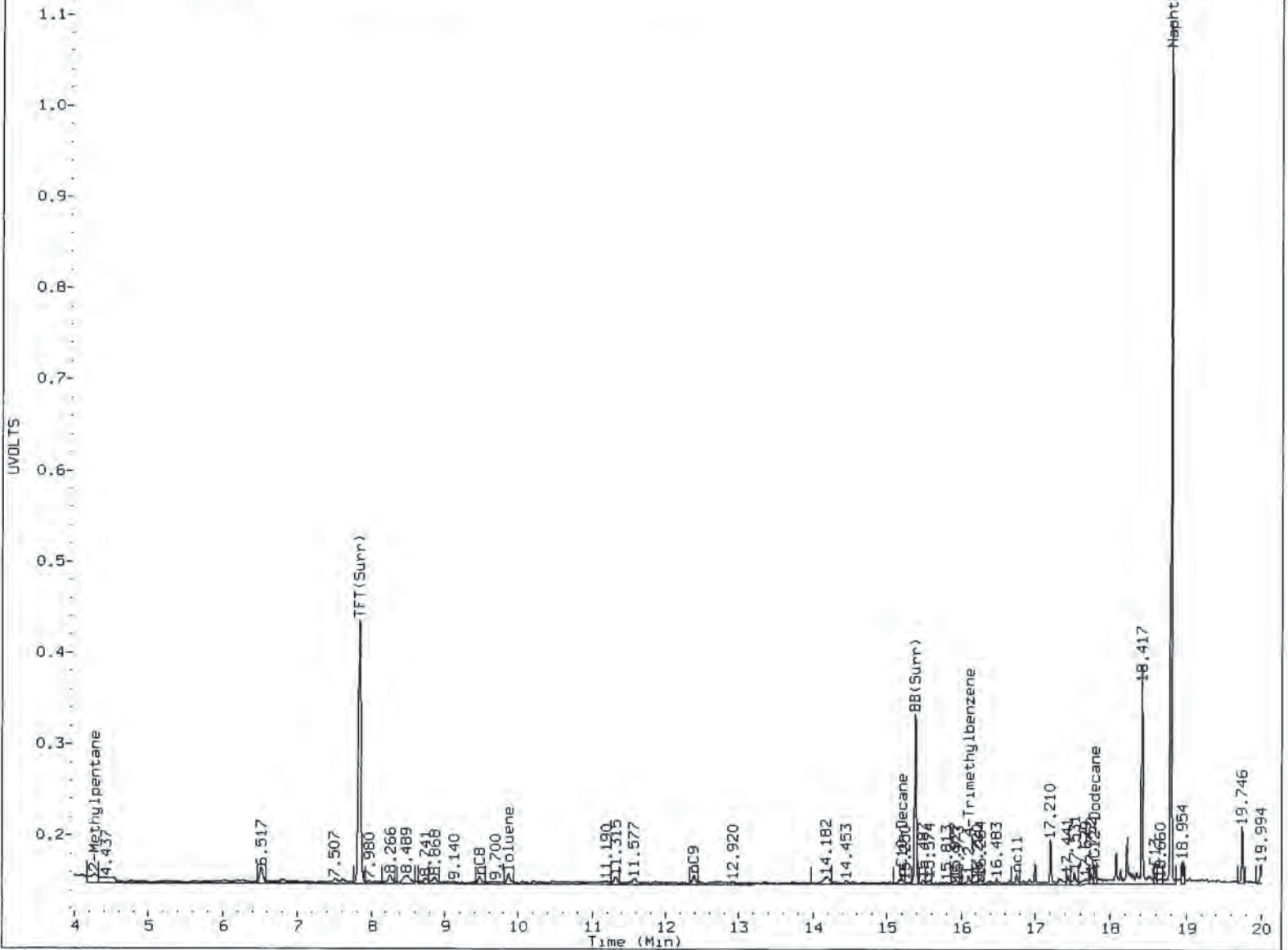


Data File: /chem3/pid1.1/20130508-1.b/0508a016.d/0508a016.cdf
Injection Date: 08-MAY-2013 17:57
Instrument: pid1.1
Client Sample ID: TP-31-050713

AIA 0508a016.cdf: 2.146 to 23.866 MIN



Handwritten: LNH 5/9/13



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: WPH

Date: 5/9/13

Sample ID: TP-32-050713
 SAMPLE

Lab Sample ID: WP190
 LIMS ID: 13-9954
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 18:26
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 28 mg-dry-wt
 Percent Moisture: 48.0%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	45	< 45 U	
108-88-3	Toluene	45	< 45 U	
100-41-4	Ethylbenzene	45	< 45 U	
179601-23-1	m,p-Xylene	91	< 91 U	
95-47-6	o-Xylene	45	< 45 U	
	Gasoline Range Hydrocarbons	18	< 18 U	---

BETX Surrogate Recovery

Trifluorotoluene	81.7%
Bromobenzene	82.2%

Gasoline Surrogate Recovery

Trifluorotoluene	84.6%
Bromobenzene	84.4%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Ann 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a017.d ARI ID: WP190
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a017.d Client ID: TP-32-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 18:26
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.004	2935	36122	84.6	TFT(Surr) /
15.380	0.001	1926	16564	84.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1464	0.004
8015C 2MP-TMB (4.18 to 16.20)	723723	829	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	828	0.001
NWTPHG Tol-Nap (9.76 to 18.90)	375093	5837	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.004	3244	81.7	TFT(Surr) /
15.387	0.002	7223	82.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

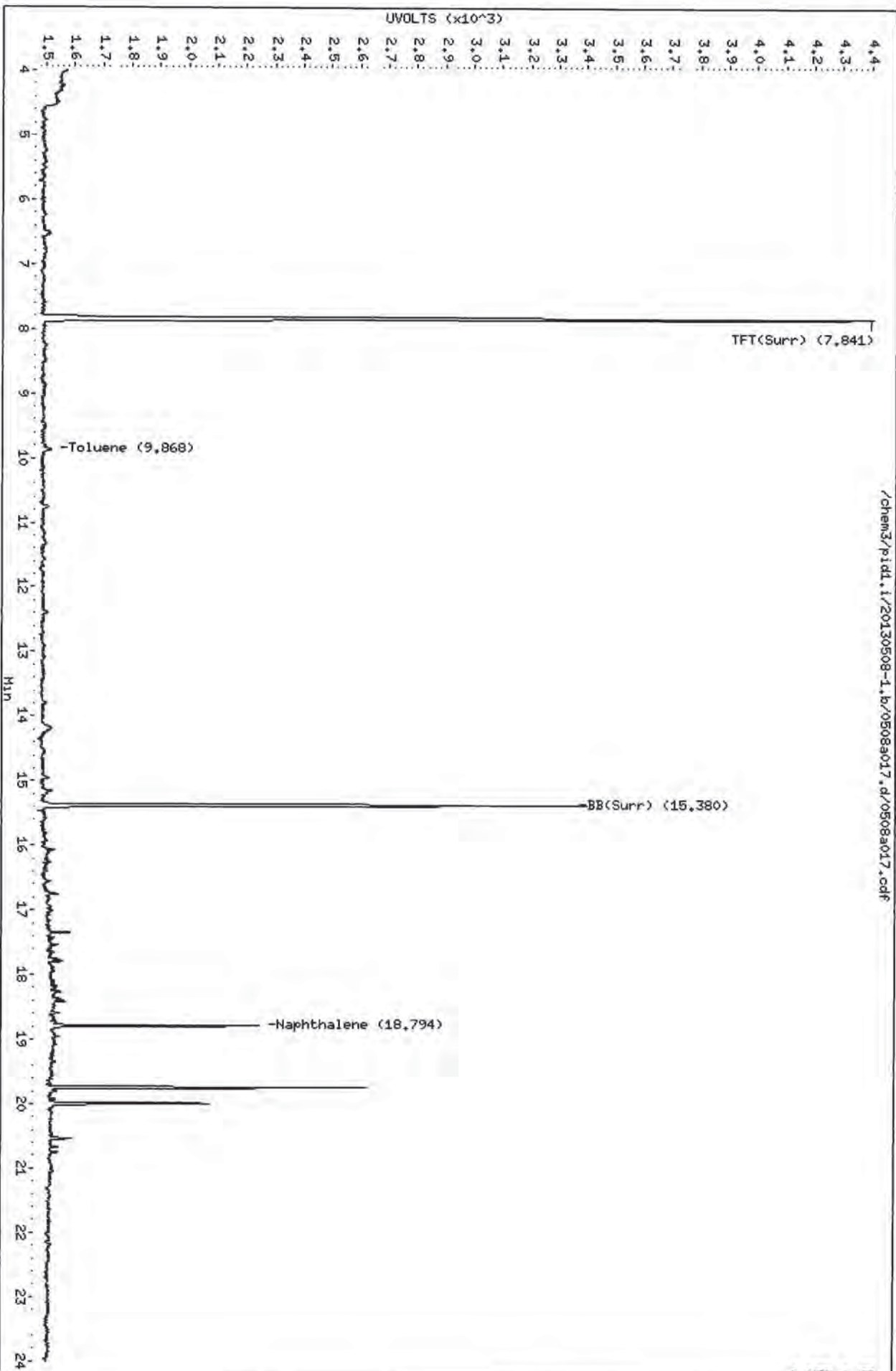
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a017.d
Date : 08-MAY-2013 18:26
Client ID: TP-32-050713
Sample Info: MP190

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130508-1.b/0508a017.d/0508a017.cdf

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

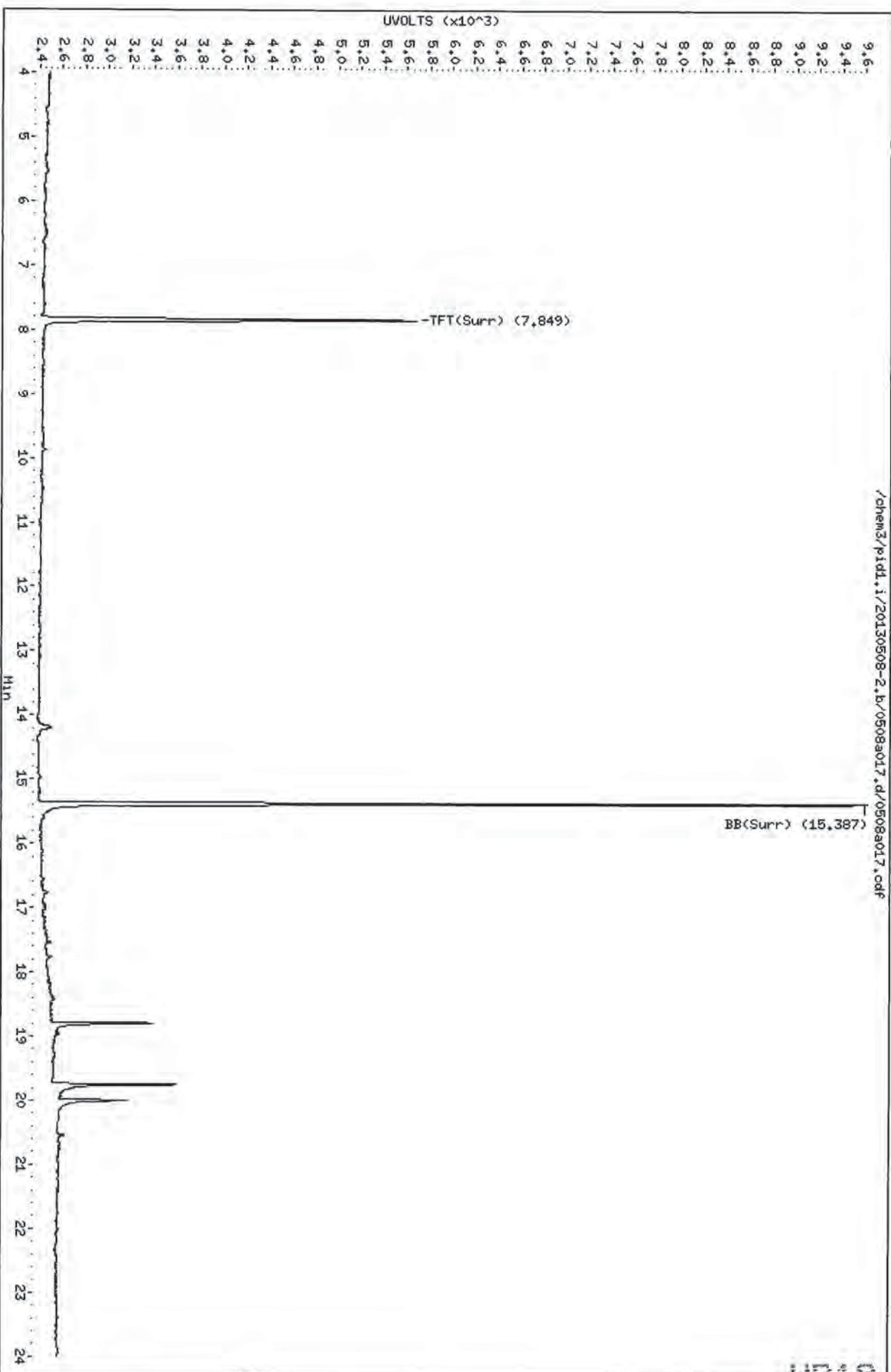


Data File: /chem3/pidd.i/20130508-2.b/0508a017.d
Date: 08-MAY-2013 18:26
Client ID: TP-32-050713
Sample Info: MP190

Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: LH
Column diameter: 0.18

/chem3/pidd.i/20130508-2.b/0508a017.d/0508a017.cdf



Sample ID: TP-33-050713
 SAMPLE

Lab Sample ID: WP19P
 LIMS ID: 13-9955
 Matrix: Soil
 Data Release Authorized:
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 18:55
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 51 mg-dry-wt
 Percent Moisture: 29.2%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	25	< 25 U	
108-88-3	Toluene	25	< 25 U	
100-41-4	Ethylbenzene	25	< 25 U	
179601-23-1	m,p-Xylene	49	< 49 U	
95-47-6	o-Xylene	25	< 25 U	
	Gasoline Range Hydrocarbons	9.9	< 9.9 U	---
BETX Surrogate Recovery				
	Trifluorotoluene	86.6%		
	Bromobenzene	87.1%		
Gasoline Surrogate Recovery				
	Trifluorotoluene	88.9%		
	Bromobenzene	88.5%		

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Handwritten: 5/17/13

Data file 1: /chem3/pidl.i/20130508-1.b/0508a018.d ARI ID: WP19P
 Data file 2: /chem3/pidl.i/20130508-2.b/0508a018.d Client ID: TP-33-050713
 Method: /chem3/pidl.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 18:55
 Instrument: pidl.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.003	3084	37973	88.9	TFT(Surr) /
15.380	0.002	2020	16952	88.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	2770	0.008
8015C 2MP-TMB (4.18 to 16.20)	723723	2319	0.003
AK101 nC6-nC10 (4.67 to 15.10)	582885	2319	0.004
NWTPHG Tol-Nap (9.76 to 18.90)	375093	3333	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.004	3436	86.6	TFT(Surr) /
15.387	0.002	7659	87.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

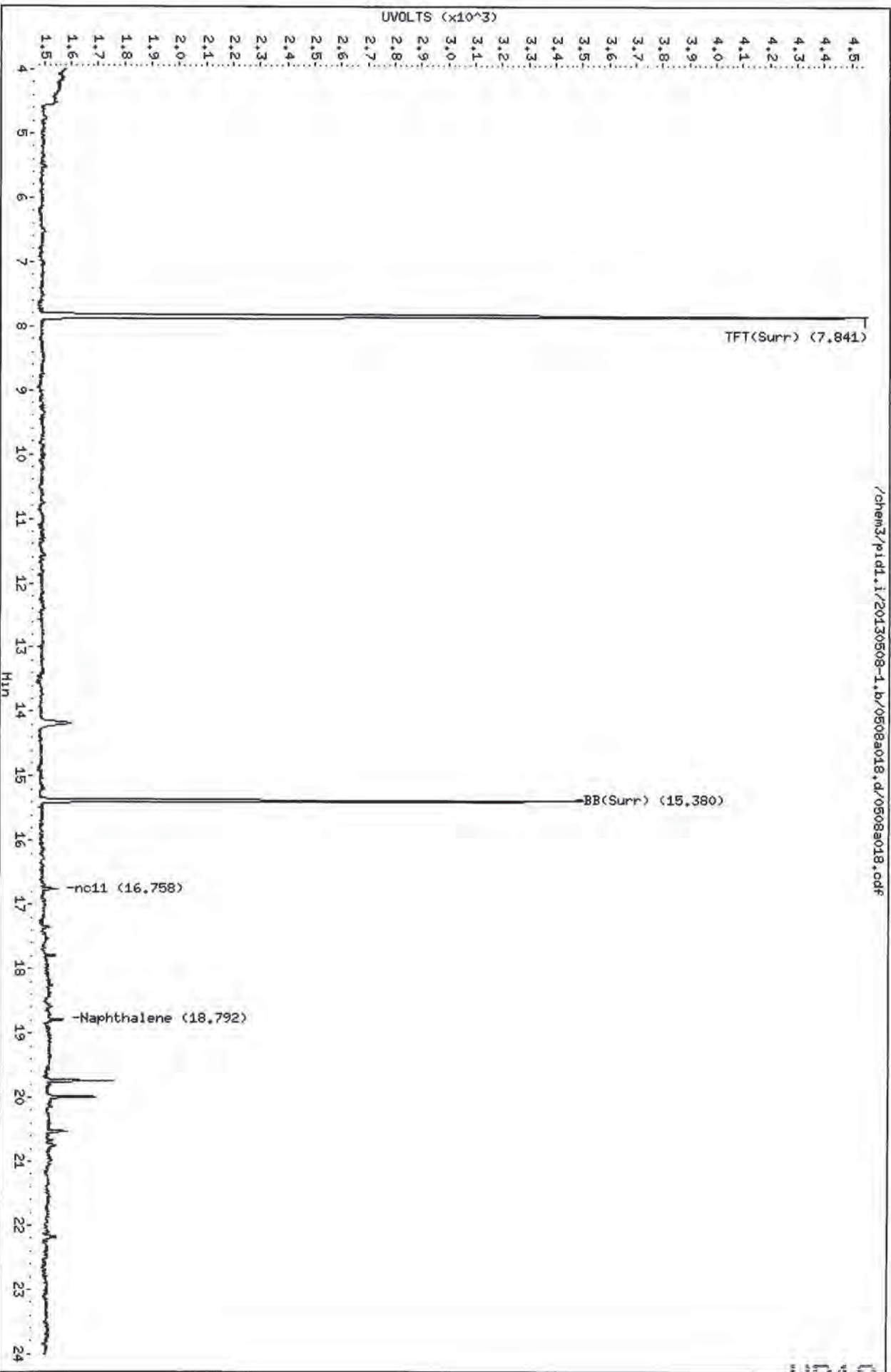
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a018.d
Date : 08-MAY-2013 18:55
Client ID: TP-33-050713
Sample Info: MP19P

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130508-1.b/0508a018.d/0508a018.cdf

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

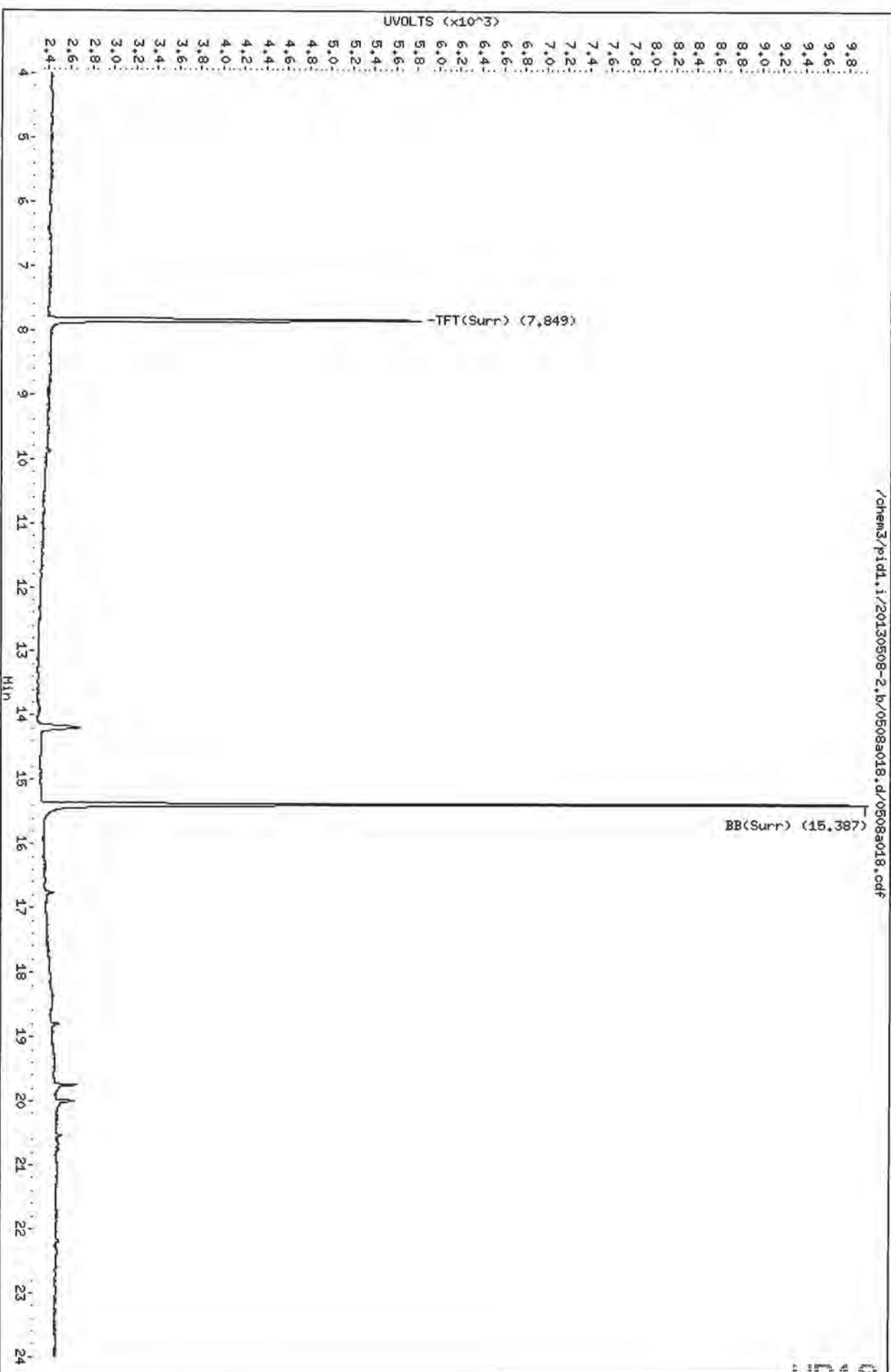


Data File: /chem3/pid1.i/20130508-2.b/0508a018.d
Date: 08-May-2013 18:55
Client ID: TP-33-050713
Sample Info: MP19P

Column Phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-2.b/0508a018.d/0508a018.cdf



Sample ID: TP-34-050713
 SAMPLE

Lab Sample ID: WP19Q
 LIMS ID: 13-9956
 Matrix: Soil
 Data Release Authorized: *B*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 19:25
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 61 mg-dry-wt
 Percent Moisture: 24.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	20	< 20 U	
108-88-3	Toluene	20	< 20 U	
100-41-4	Ethylbenzene	20	< 20 U	
179601-23-1	m,p-Xylene	41	< 41 U	
95-47-6	o-Xylene	20	< 20 U	
	Gasoline Range Hydrocarbons	8.2	< 8.2 U	---

BETX Surrogate Recovery

Trifluorotoluene	82.8%
Bromobenzene	84.1%

Gasoline Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	86.4%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content, per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Ann 5/19/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a019.d ARI ID: WP19Q
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a019.d Client ID: TP-34-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 19:25
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	2980	36234	85.9	TFT(Surr)
15.380	0.002	1973	16263	86.4	BB(Surr) /

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	16361	0.046
8015C 2MP-TMB (4.18 to 16.20)	723723	13448	0.019
AK101 nC6-nC10 (4.67 to 15.10)	582885	13448	0.023
NWTPHG Tol-Nap (9.76 to 18.90)	375093	16361	0.044

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.004	3288	82.8	TFT(Surr) /
15.387	0.002	7392	84.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a019.d
Date : 08-MAY-2013 19:25
Client ID: TP-34-050713
Sample Info: MP19Q

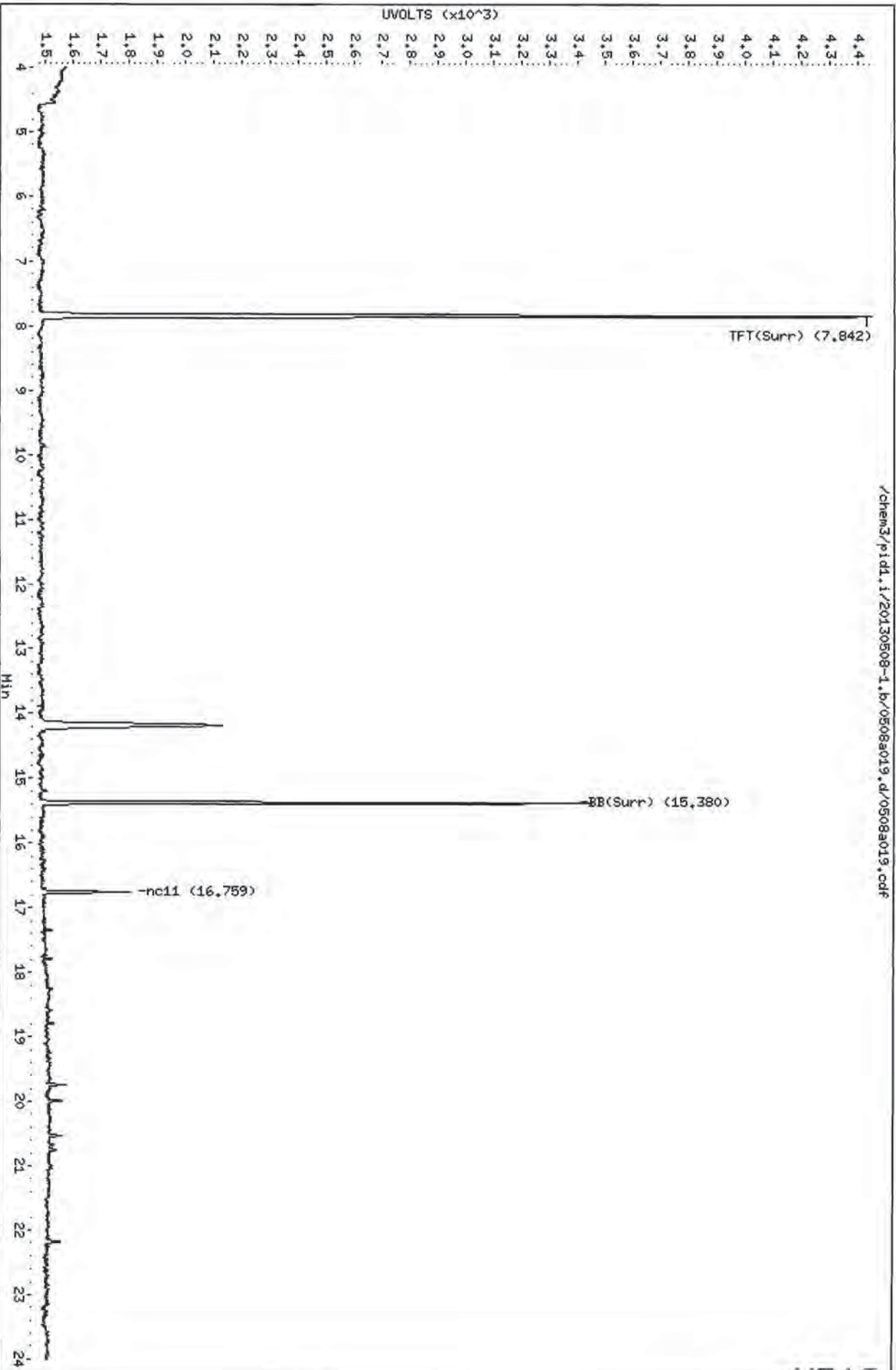
Column phase: RTX 502-2 FID

/chem3/pid1.i/20130508-1.b/0508a019.d/0508a019.cdf

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



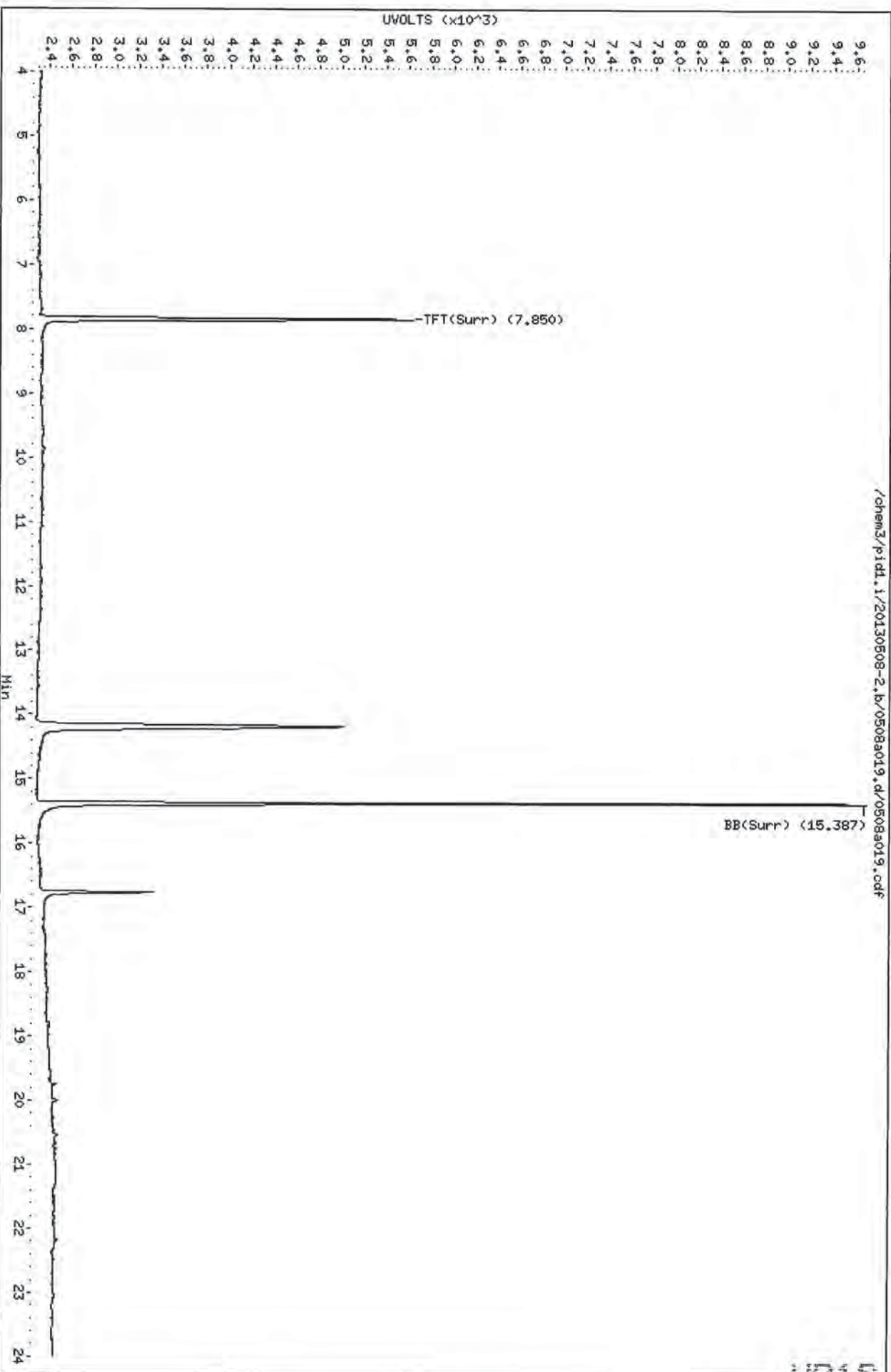
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Date: 08-MAY-2013 19:25
Client ID: TP-34-050713
Sample Info: WP19Q

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130508-2.h/0508a019.d/0508a019.cdf



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-35-050713
SAMPLE

Lab Sample ID: WP19R
 LIMS ID: 13-9957
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 19:54
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 56 mg-dry-wt
 Percent Moisture: 22.4%

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	22	< 22 U	
108-88-3	Toluene	22	83	
100-41-4	Ethylbenzene	22	< 22 U	
179601-23-1	m,p-Xylene	44	< 44 U	
95-47-6	o-Xylene	22	< 22 U	
	Gasoline Range Hydrocarbons	8.9	< 8.9 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	82.6%
Bromobenzene	84.9%

Gasoline Surrogate Recovery

Trifluorotoluene	85.8%
Bromobenzene	86.8%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

WP19 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a020.d ARI ID: WP19R
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a020.d Client ID: TP-35-050713
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 19:54
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	2975	36977	85.8	TFT(Surr) /
15.380	0.002	1982	16650	86.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	8320	0.023
8015C 2MP-TMB (4.18 to 16.20)	723723	6450	0.009
AK101 nC6-nC10 (4.67 to 15.10)	582885	6450	0.011
NWTPHG Tol-Nap (9.76 to 18.90)	375093	8748	0.023

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.004	3277	82.6	TFT(Surr) /
15.387	0.002	7463	84.9	BB(Surr)

SW8021 (PID)

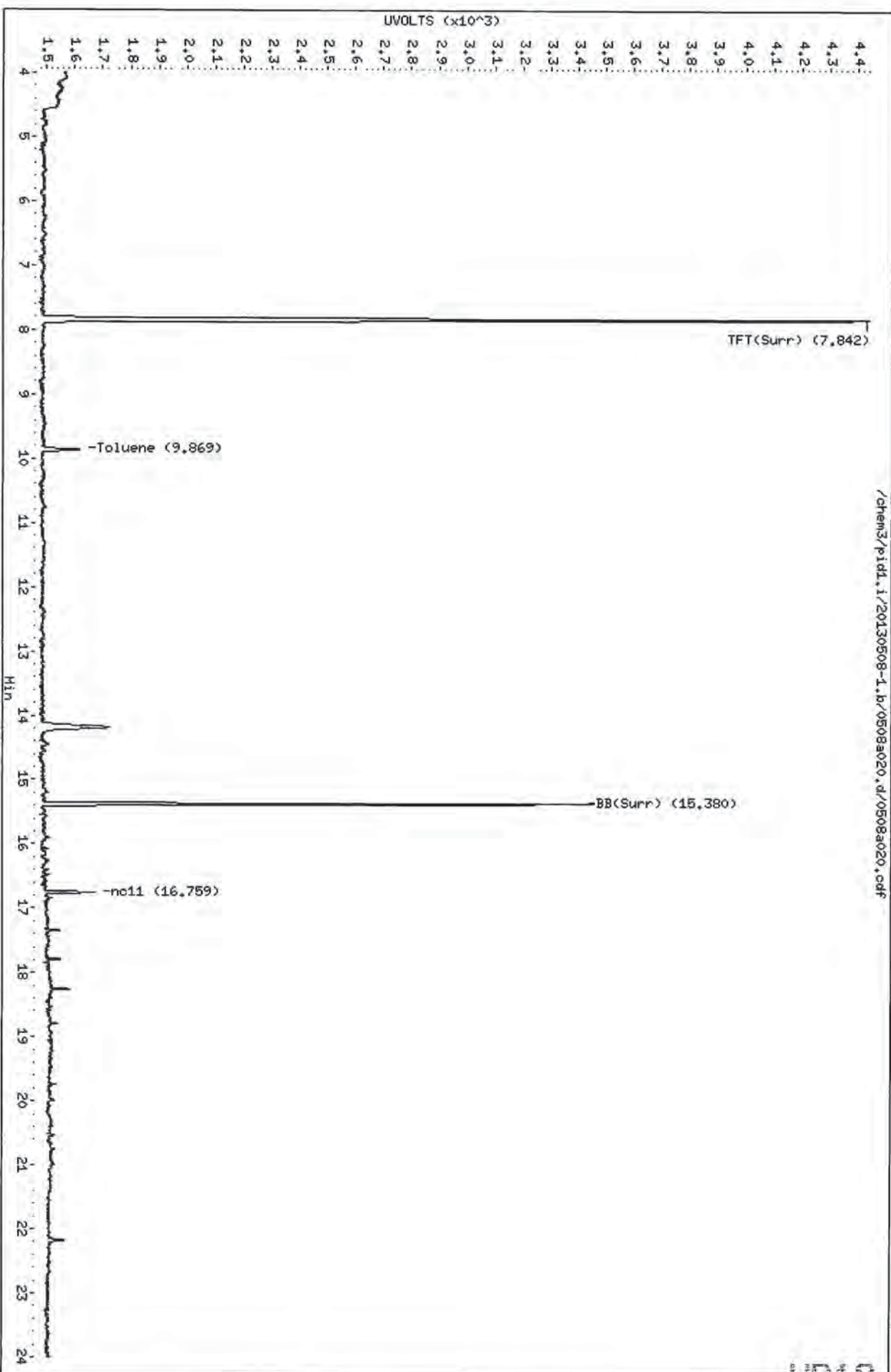
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.877	0.005	215	0.94	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a020.d
Date: 08-MAY-2013 19:54
Client ID: TP-35-060713
Sample Info: MP19R

Column Phase: RTX 502-2 F1D

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130508-1.b/0508a020.d/0508a020.caf

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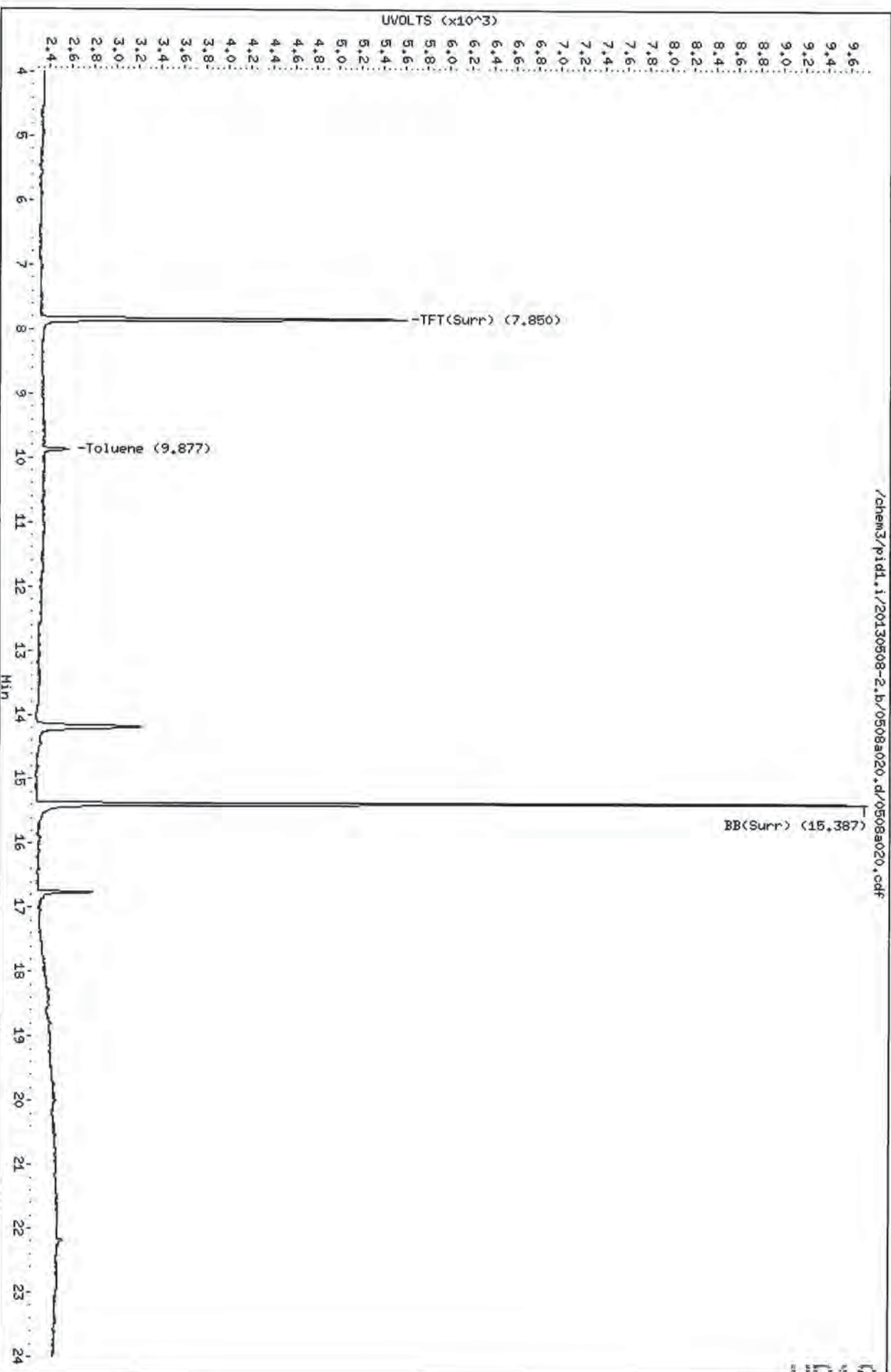
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Date: 08-MAY-2013 19:54
Client ID: TP-35-050713
Sample Info: MP19R

Instrument: pid1.1

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pid1.1/20130508-2.b/0508a020.d/0508a020.cdf



(1)
(2)
(3)
(4)
(5)

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-36-050713
SAMPLE

Lab Sample ID: WP19S
 LIMS ID: 13-9958
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 20:24
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 53 mg-dry-wt
 Percent Moisture: 22.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	23	< 23 U
108-88-3	Toluene	23	58
100-41-4	Ethylbenzene	23	< 23 U
179601-23-1	m,p-Xylene	47	< 47 U
95-47-6	o-Xylene	23	< 23 U

Gasoline Range Hydrocarbons **9.4** **11** GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	83.5%
Bromobenzene	85.0%

Gasoline Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	86.8%

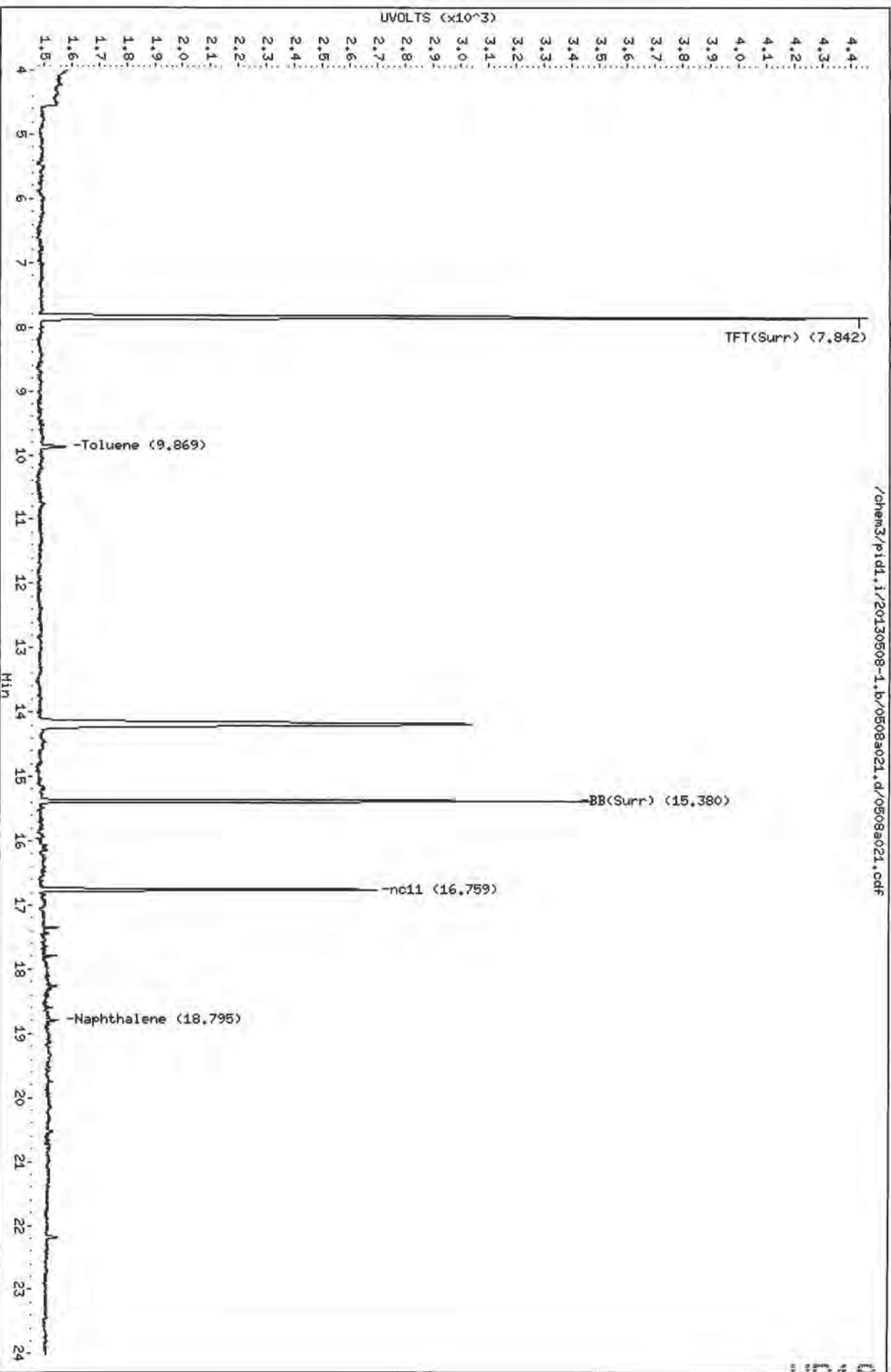
BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Data File: /chem3/pid1.i/20130508-1.b/0508a021.d
Date : 08-MAY-2013 20:24
Client ID: TP-36-050713
Sample Info: MP19S

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

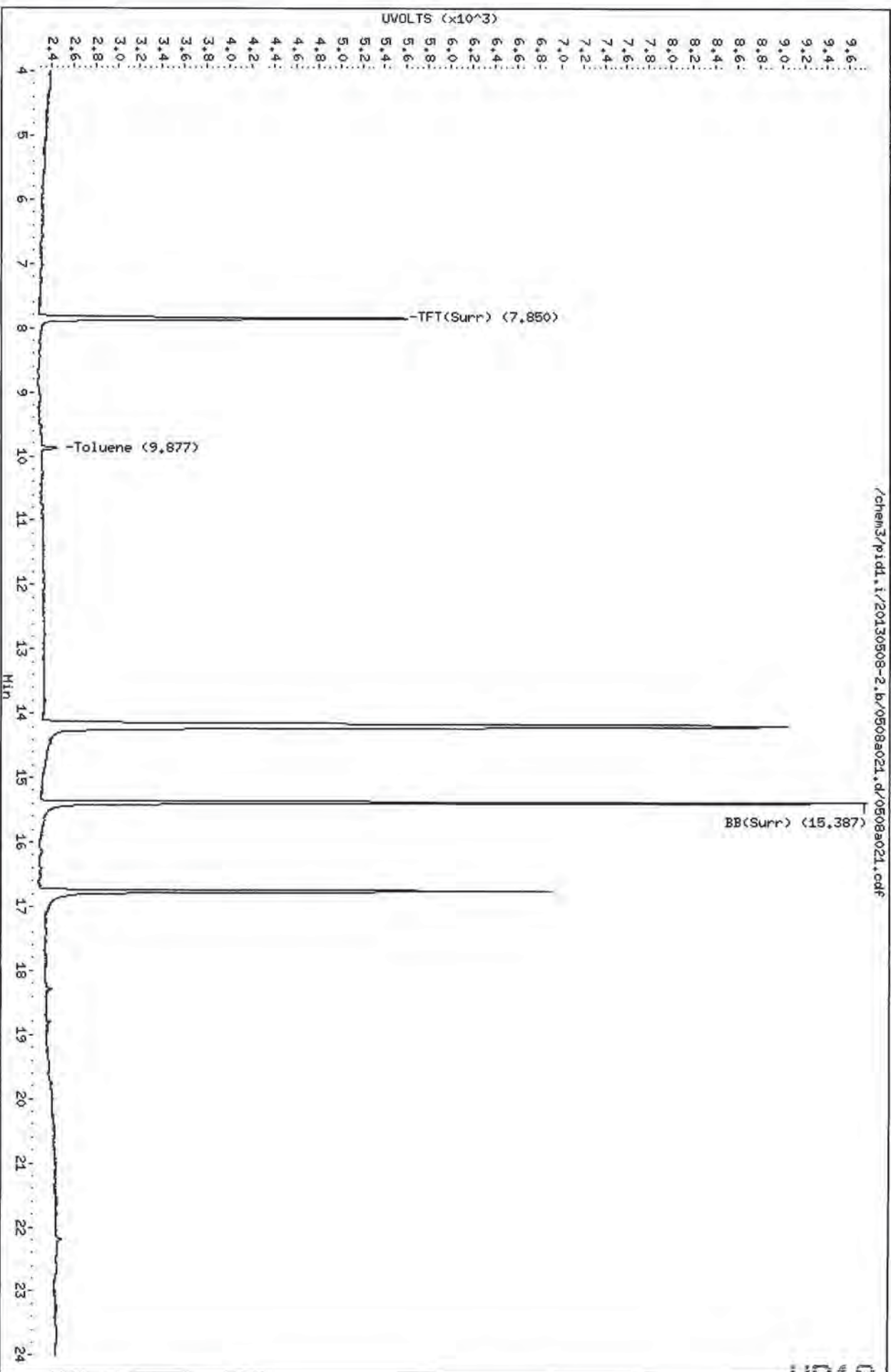


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Data File: /chem3/pid1.i/20130508-2.b/0508a021.d
Date : 08-MAY-2013 20:24
Client ID: TP-36-050713
Sample Info: MP19S

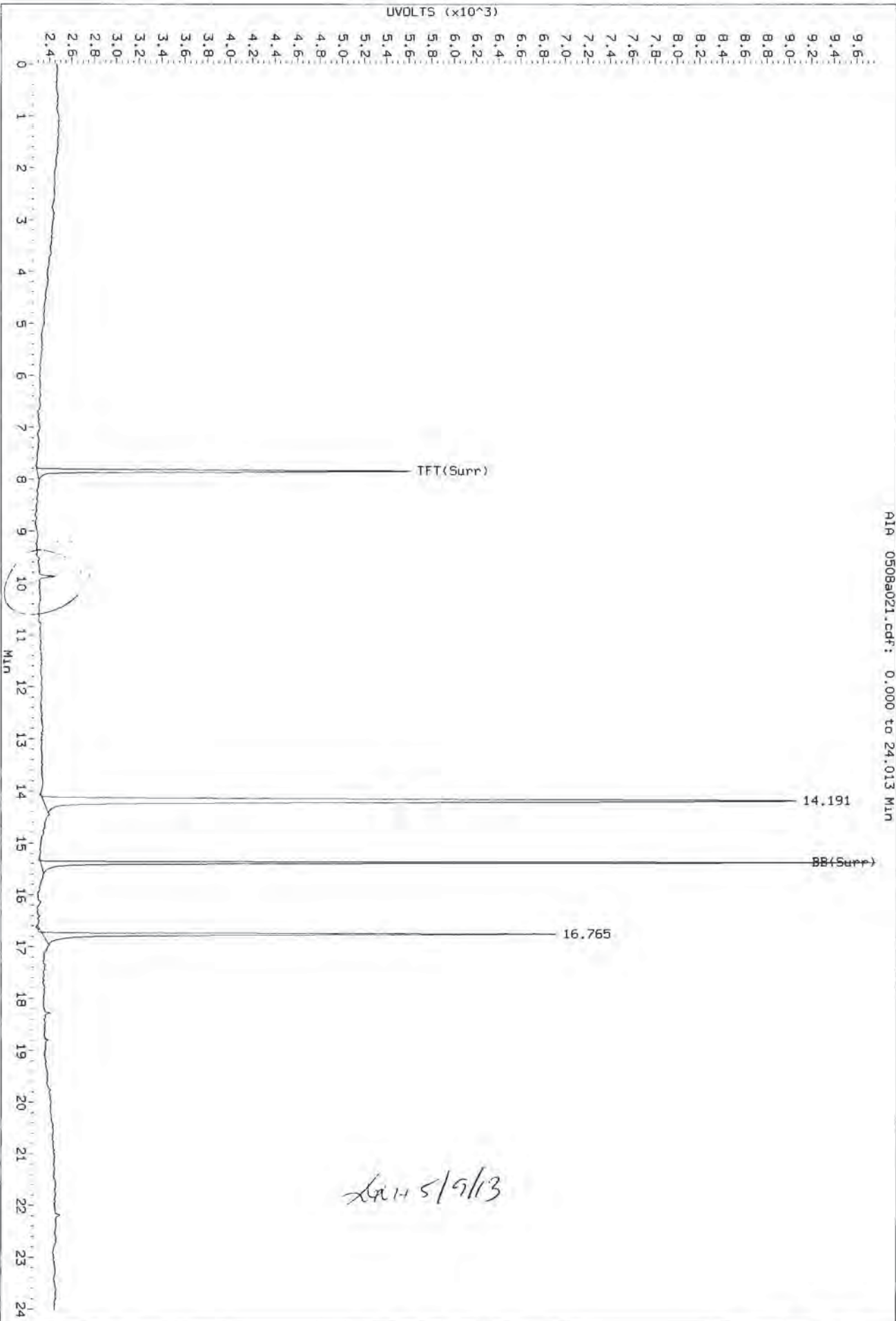
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.1/20130508-2.b/0508a021.d/0508a021.cdf
Injection Date: 08-May-2013 20:24
Instrument: pid1.1
Client Sample ID: TP-36-050713

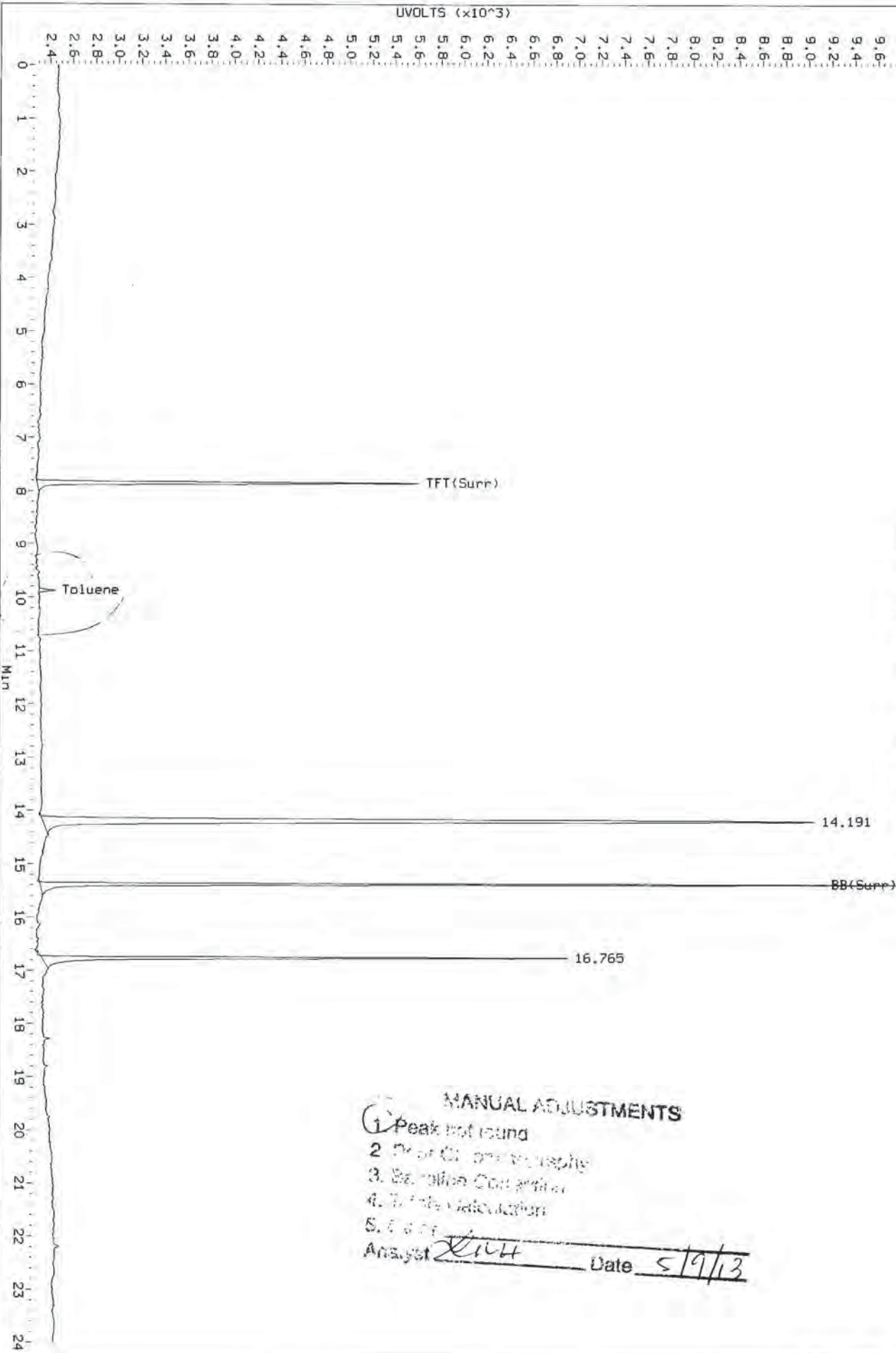
ALP 0508a021.cdf: 0.000 to 24.013 Min



03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Data File: /chem3/p101.1/20130508-2.b/0508a021.d/0508a021.cdf
 Injection Date: 08-MAY-2013 20:24
 Instrument: p101.1
 Client Sample ID: TP-36-050713

AI# 0508a021.cdf: 0.000 to 24.013 Min



MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Peak Cl. not complete
- 3. Baseline Compensation
- 4. Initial Integration
- 5. End of

Analyst KLH Date 5/9/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-37-050713
SAMPLE

Lab Sample ID: WP19T
 LIMS ID: 13-9959
 Matrix: Soil
 Data Release Authorized:
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: 05/07/13
 Date Received: 05/08/13

Date Analyzed: 05/08/13 20:53
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 59 mg-dry-wt
 Percent Moisture: 19.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	21	< 21 U
108-88-3	Toluene	21	< 21 U
100-41-4	Ethylbenzene	21	< 21 U
179601-23-1	m,p-Xylene	42	< 42 U
95-47-6	o-Xylene	21	< 21 U

Gasoline Range Hydrocarbons **8.5** **140** GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	82.4%
Bromobenzene	82.5%

Gasoline Surrogate Recovery

Trifluorotoluene	85.0%
Bromobenzene	85.1%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

2/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130508-1.b/0508a022.d ARI ID: WP19T
Data file 2: /chem3/pid1.i/20130508-2.b/0508a022.d Client ID: TP-37-050713
Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 20:53
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.006	2948	37153	85.0	TFT (Surr) /
15.380	0.002	1942	16835	85.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	175765	0.491 M
8015C 2MP-TMB (4.18 to 16.20)	723723	34122	0.047 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	23201	0.040 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	596712	1.591 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.005	3269	82.4	TFT (Surr) /
15.388	0.002	7250	82.5	BB (Surr)

SW8021 (PID)

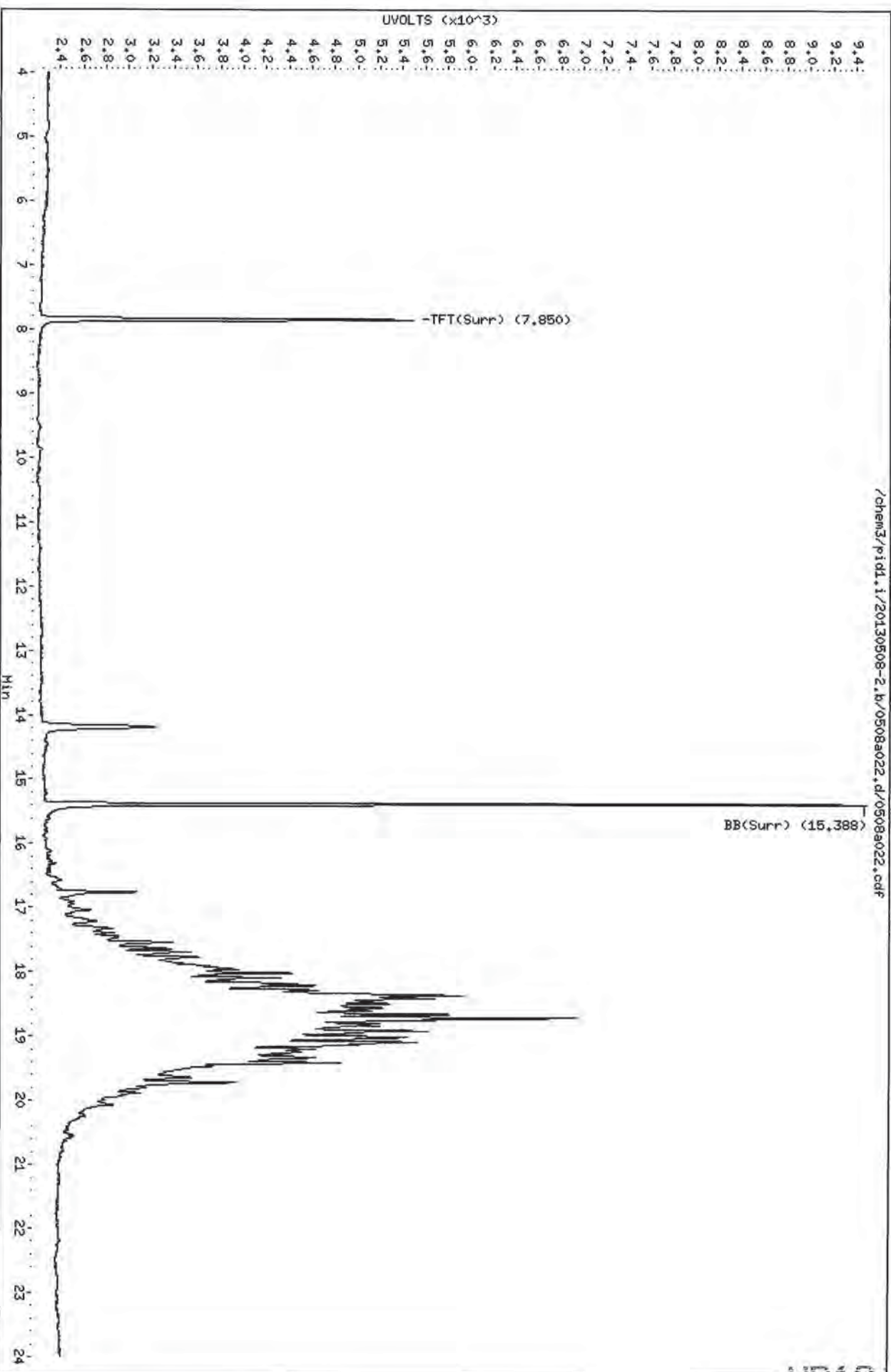
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

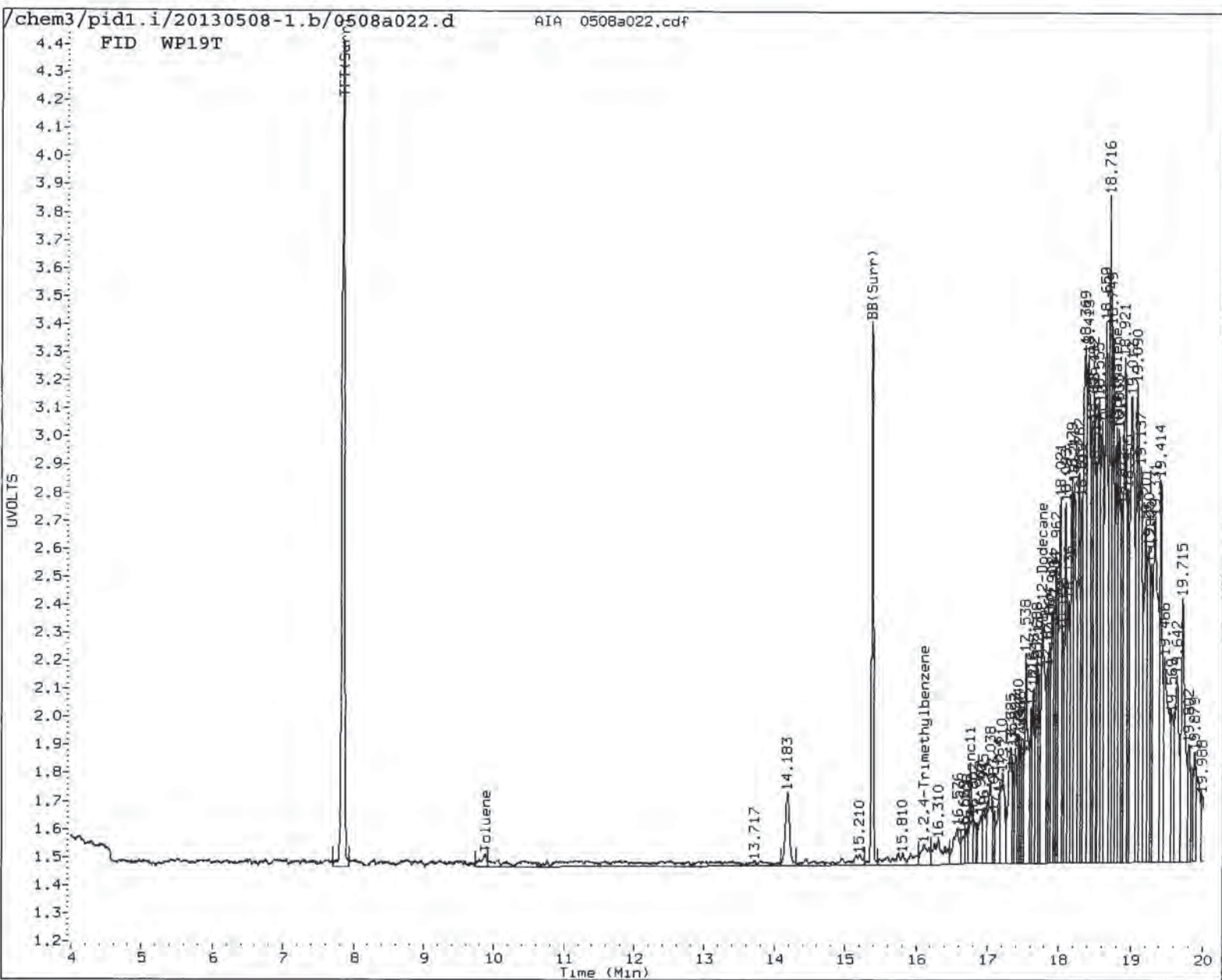
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-2.b/0508a022.d
Date: 08-MAY-2013 20:53
Client ID: TP-37-050713
Sample Info: WP19T

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: WUH

Date: 5/9/13

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP19
Matrix: Soil

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	BFB	TFT	BBZ	TOT OUT
MB-050813	NA	88.9%	88.4%	0
LCS-050813	NA	98.0%	91.8%	0
LCSD-050813	NA	94.1%	89.6%	0
TP-31-050713	NA	83.2%	82.2%	0
TP-32-050713	NA	84.6%	84.4%	0
TP-33-050713	NA	88.9%	88.5%	0
TP-34-050713	NA	85.9%	86.4%	0
TP-35-050713	NA	85.8%	86.8%	0
TP-36-050713	NA	85.9%	86.8%	0
TP-37-050713	NA	85.0%	85.1%	0

LCS/MB LIMITS QC LIMITS

(TFT) = Trifluorotoluene (80-120) (65-128)
(BBZ) = Bromobenzene (80-120) (52-149)

Log Number Range: 13-9953 to 13-9959

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP19
Matrix: Soil

QC Report No: WP19-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01/03

Client ID	TFT	BBZ	TOT OUT
MB-050813	90.5%	87.7%	0
LCS-050813	95.1%	90.9%	0
LCSD-050813	92.0%	88.5%	0
TP-31-050713	80.9%	80.4%	0
TP-32-050713	81.7%	82.2%	0
TP-33-050713	86.6%	87.1%	0
TP-34-050713	82.8%	84.1%	0
TP-35-050713	82.6%	84.9%	0
TP-36-050713	83.5%	85.0%	0
TP-37-050713	82.4%	82.5%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-9953 to 13-9959

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050813

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050813

LIMS ID: 13-9953

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01/03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/08/13 09:54

LCSD: 05/08/13 10:24

Instrument/Analyst LCS: PID1/LH

LCSD: PID1/LH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	49.4	50.0	98.8%	45.6	50.0	91.2%	8.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.0%	94.1%
Bromobenzene	91.8%	89.6%

Sample ID: LCS-050813
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050813
 LIMS ID: 13-9953
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/08/13 09:54
 LCSD: 05/08/13 10:24
 Instrument/Analyst LCS: PID1/LH
 LCSD: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	164	185	88.6%	150	185	81.1%	8.9%
Toluene	1770	1980	89.4%	1650	1980	83.3%	7.0%
Ethylbenzene	494	580	85.2%	458	580	79.0%	7.6%
m,p-Xylene	1800	2120	84.9%	1680	2120	79.2%	6.9%
o-Xylene	811	960	84.5%	755	960	78.6%	7.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.1%	92.0%
Bromobenzene	90.9%	88.5%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

SMH 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a004.d ARI ID: LCS0508
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a004.d Client ID:
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 09:54
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3401	46310	98.0	TFT(Surr) ✓
15.380	0.002	2095	18532	91.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	349024	0.975 M
8015C 2MP-TMB (4.18 to 16.20)	723723	675374	0.933 M ✓
AK101 nC6-nC10 (4.67 to 15.10)	582885	552138	0.947 M ✓
NWTPHG Tol-Nap (9.76 to 18.90)	375093	370372	0.987 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.002	3775	95.1	TFT(Surr) ✓
15.386	0.001	7987	90.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	0.001	789	3.29	Benzene
9.874	0.002	8101	35.37	Toluene
12.767	0.001	1910	9.87	Ethylbenzene ✓
12.930	0.003	7675	35.94	M/P-Xylene
13.876	0.001	2767	16.22	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

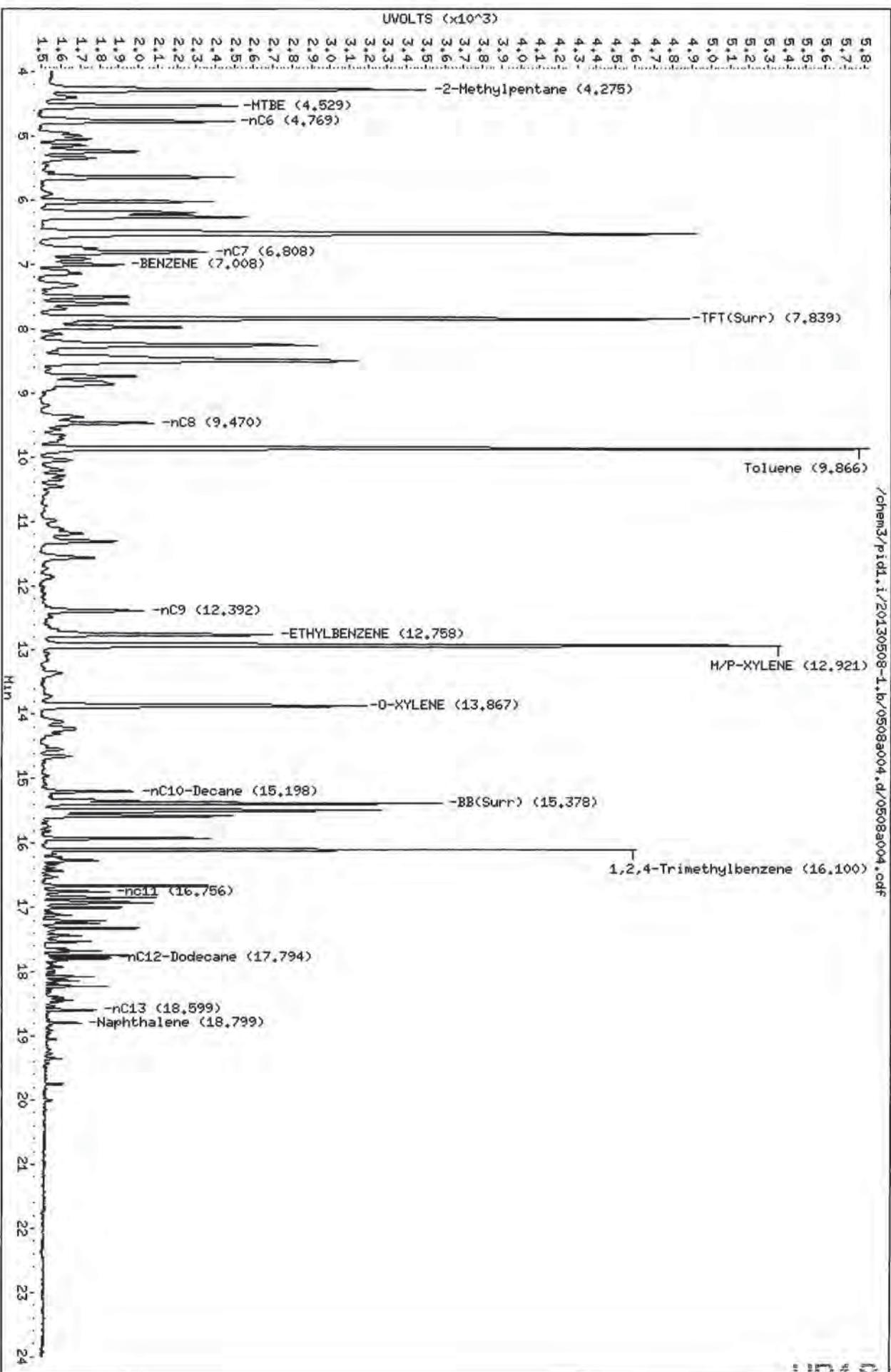
Data File: /chem3/pid1.i/20130508-1.k/0508a004.d
Date: 08-MAY-2013 09:54

Client ID: LCS0508
Sample Info: LCS0508

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130508-2.b/0508a004.d

Date: 08-May-2013 09:54

Client ID:

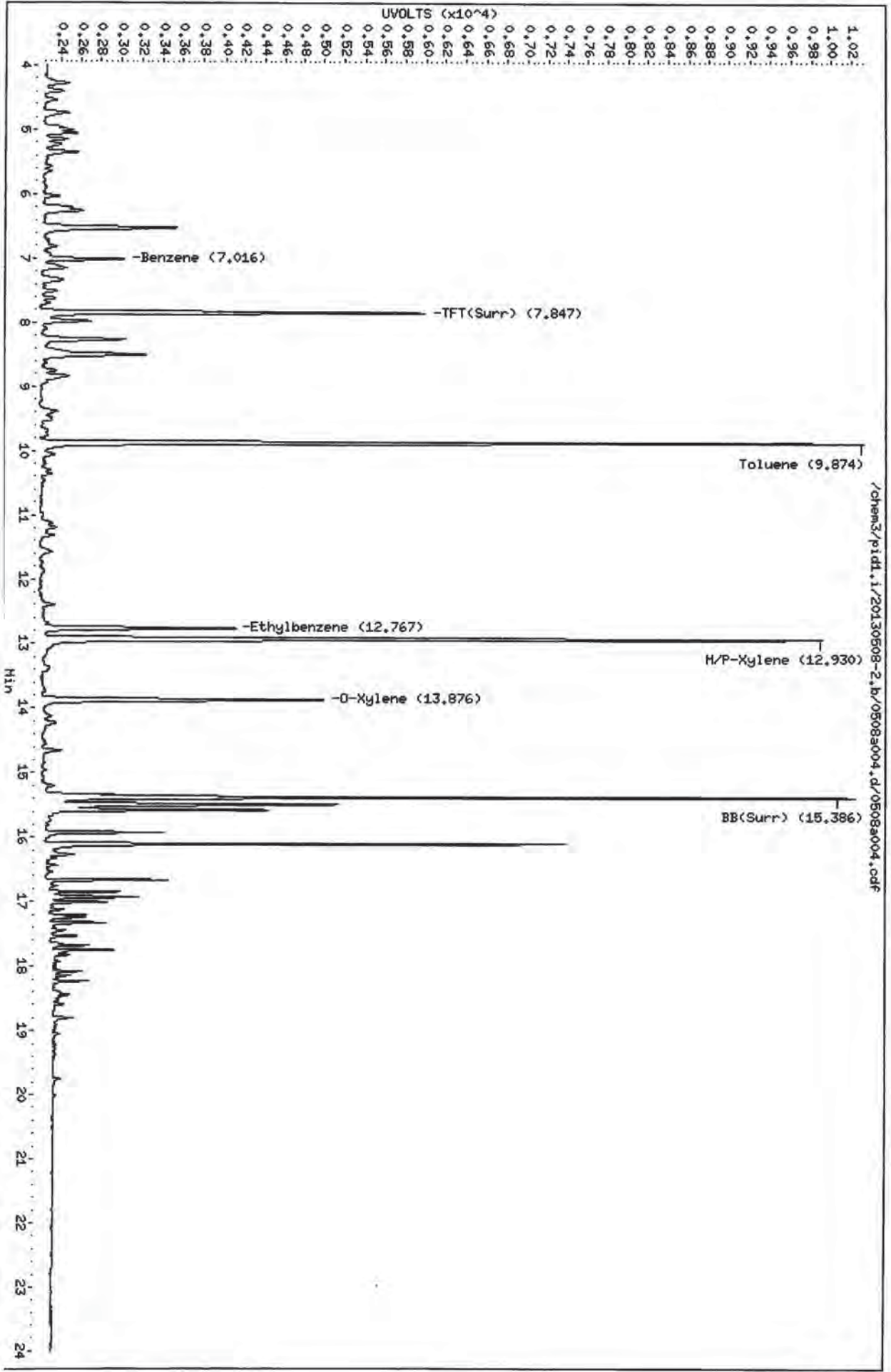
Sample Info: LCS0508

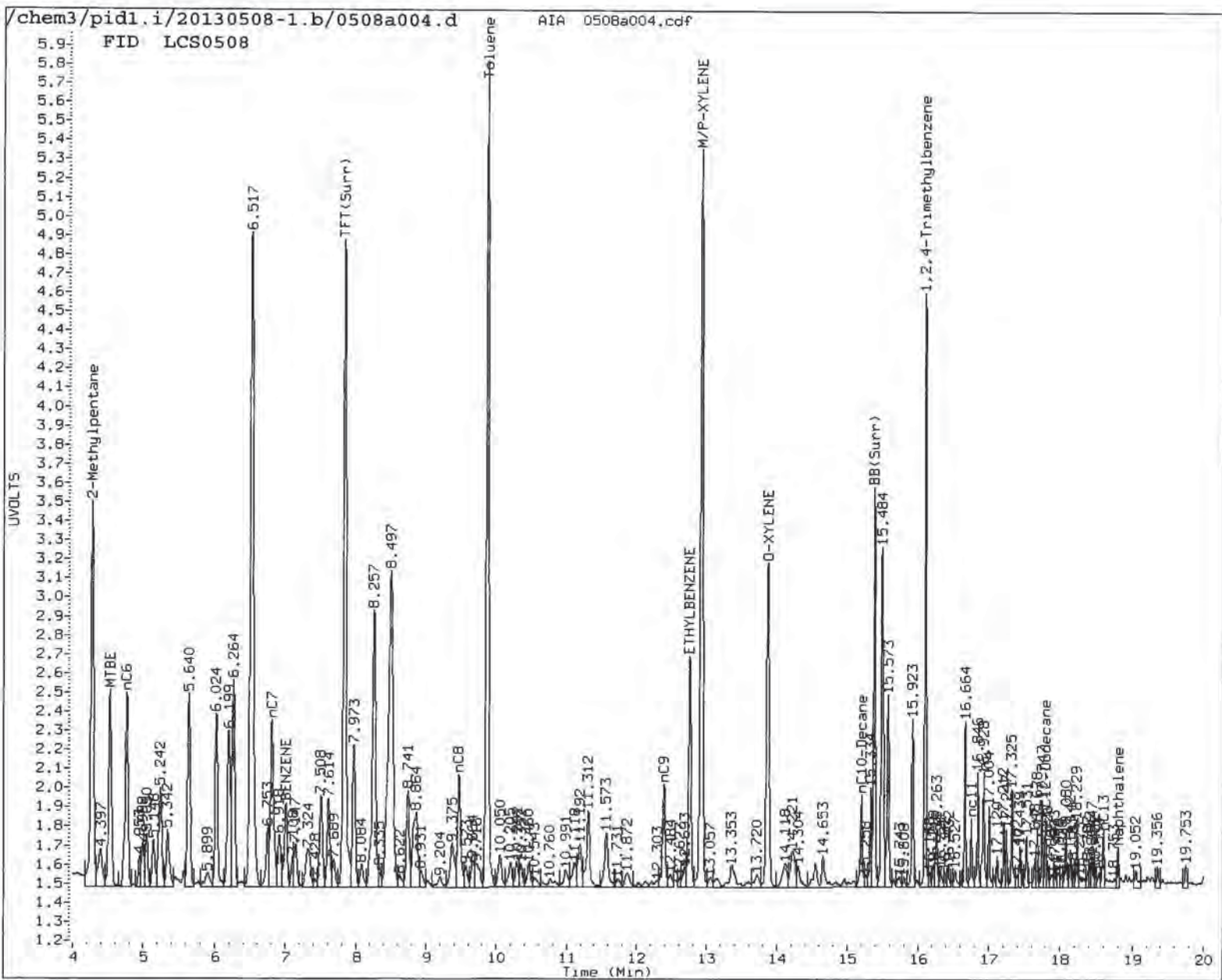
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: SM Date: 5/9/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Ant 5/19/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a005.d ARI ID: LCSD0508
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a005.d Client ID:
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 10:24
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3265	44128	94.1	TFT (Surr)
15.380	0.002	2045	18414	89.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	323041	0.902 M
8015C 2MP-TMB (4.18 to 16.20)	723723	615899	0.851 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	499546	0.857 M
NWTPHG Tol-Nap (9.76 to 18.90)	375093	342282	0.913 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.001	3652	92.0	TFT(Surr)
15.386	0.001	7779	88.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	0.001	722	3.01	Benzene
9.873	0.001	7552	32.98	Toluene
12.766	0.001	1771	9.15	Ethylbenzene
12.930	0.003	7170	33.58	M/P-Xylene
13.875	0.001	2576	15.10	O-Xylene
ND	---	---	---	MTBE

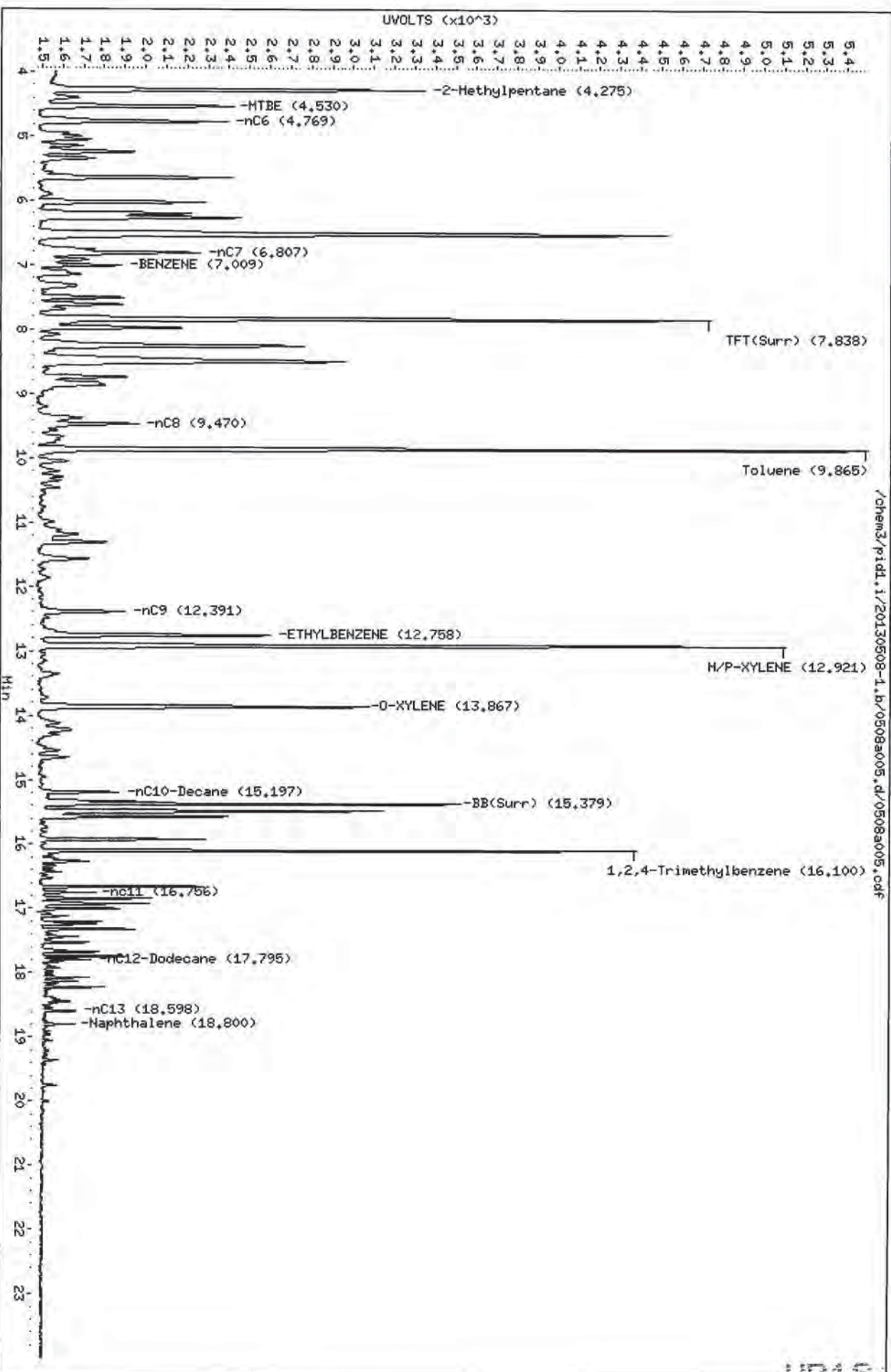
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a005.d
Date: 08-MAY-2013 10:24
Client ID: LCSD0508
Sample Info: LCSD0508

Column Phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130508-2.b/0508a005.d
Date: 08-MAY-2013 10:24
Client ID:

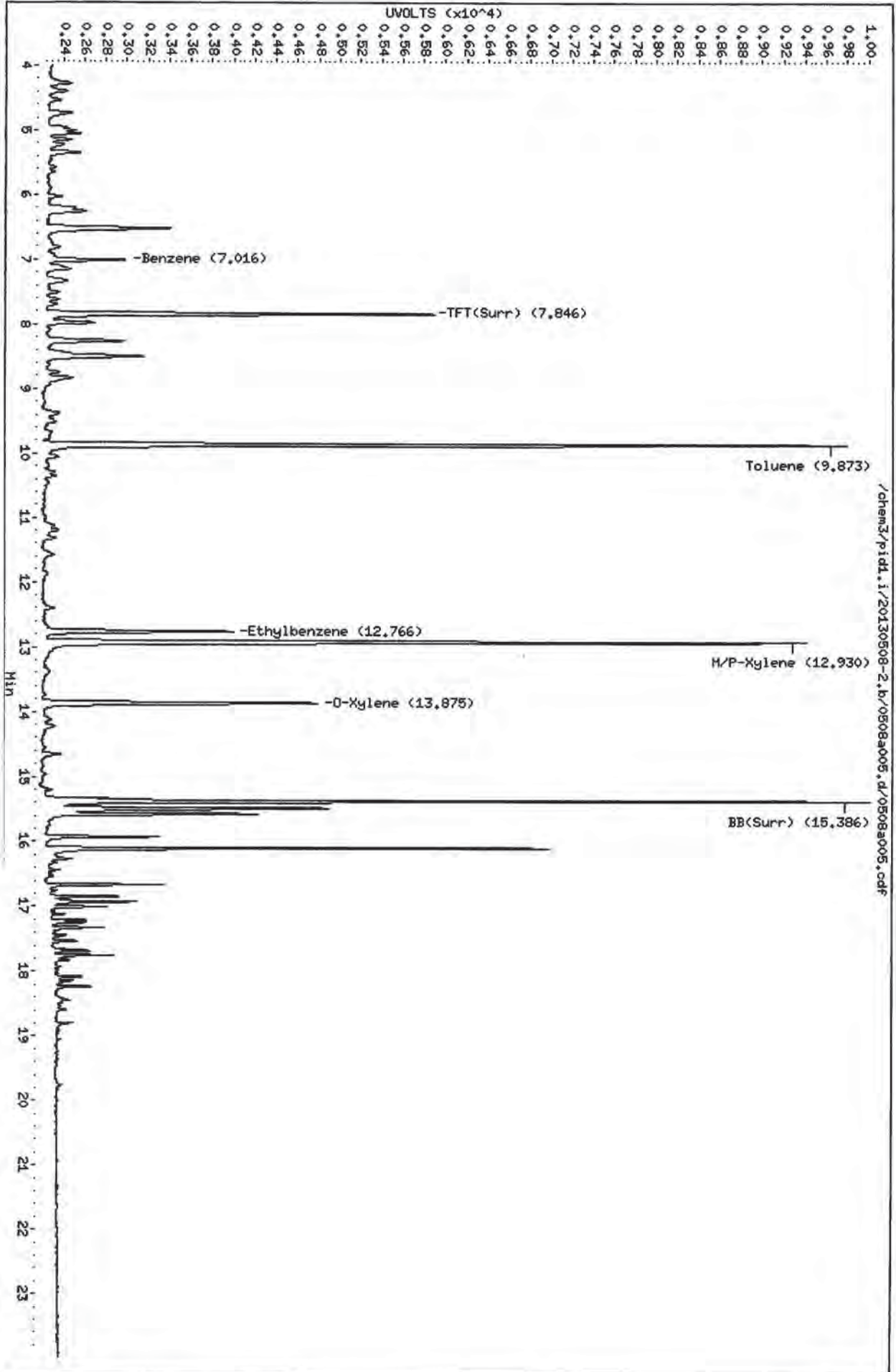
Sample Info: LCSD0508

Column phase: RTX 502-2 PID

Instrument: pid1.i

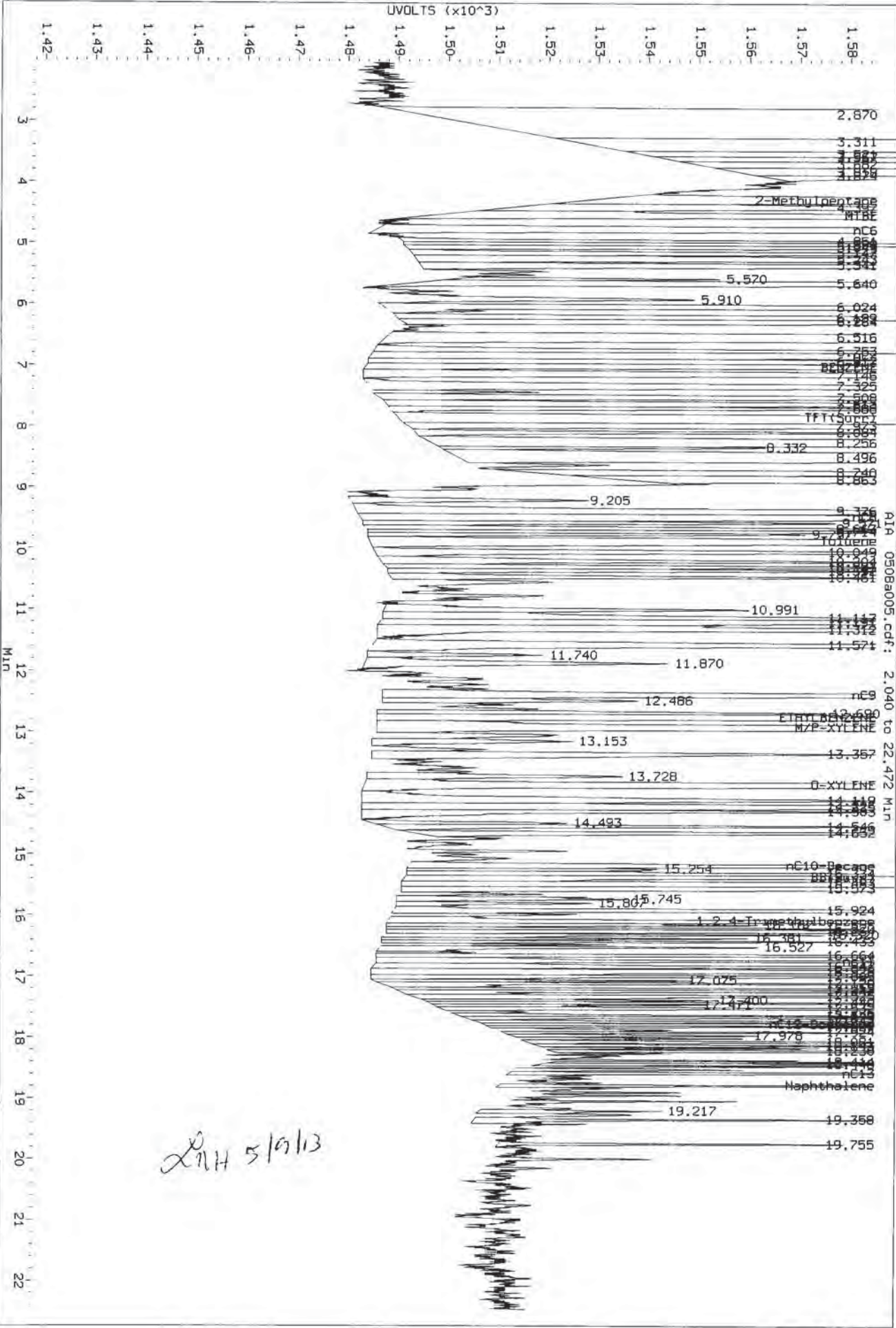
Operator: LH

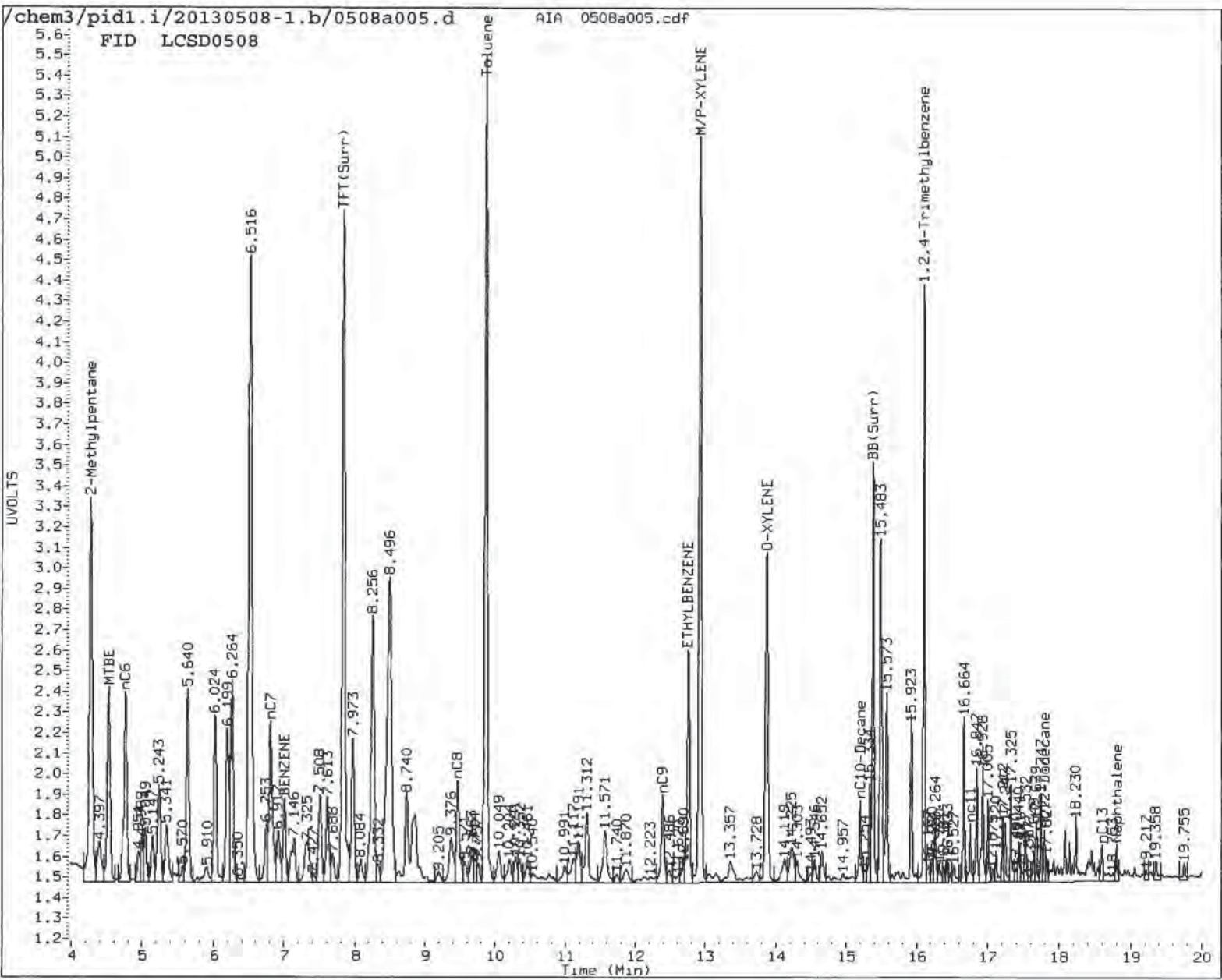
Column diameter: 0.18



01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Data File: /chem3/pd1.1/20130508-1.b/0508a005.d/0508a005.cdf
 Injection Date: 08-MAY-2013 10:24
 Instrument: pd1.1
 Client Sample ID: LC5D0508





MANUAL INTEGRATION

- ① Baseline correction
- ② Poor chromatography
- ③ Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: SMY Date: 5/9/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: MB-050813
METHOD BLANK

Lab Sample ID: MB-050813
 LIMS ID: 13-9953
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/09/13

QC Report No: WP19-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01/03
 Date Sampled: NA
 Date Received: NA

Date Analyzed: 05/08/13 11:48
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	90.5%
Bromobenzene	87.7%

Gasoline Surrogate Recovery

Trifluorotoluene	88.9%
Bromobenzene	88.4%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

LAH 5/9/13

Data file 1: /chem3/pid1.i/20130508-1.b/0508a006.d ARI ID: MB0508
 Data file 2: /chem3/pid1.i/20130508-2.b/0508a006.d Client ID:
 Method: /chem3/pid1.i/20130508-2.b/PIDB.m Injection Date: 08-MAY-2013 11:48
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.006	3082	38619	88.9	TFT(Surr) ✓
15.382	0.004	2017	16835	88.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	4697	0.013 ✓
8015C 2MP-TMB (4.18 to 16.20)	723723	4782	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	3741	0.006
NWTPHG Tol-Nap (9.76 to 18.90)	375093	4697	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.006	3594	90.5	TFT(Surr) ✓
15.390	0.005	7712	87.7	BB(Surr)

SW8021 (PID)

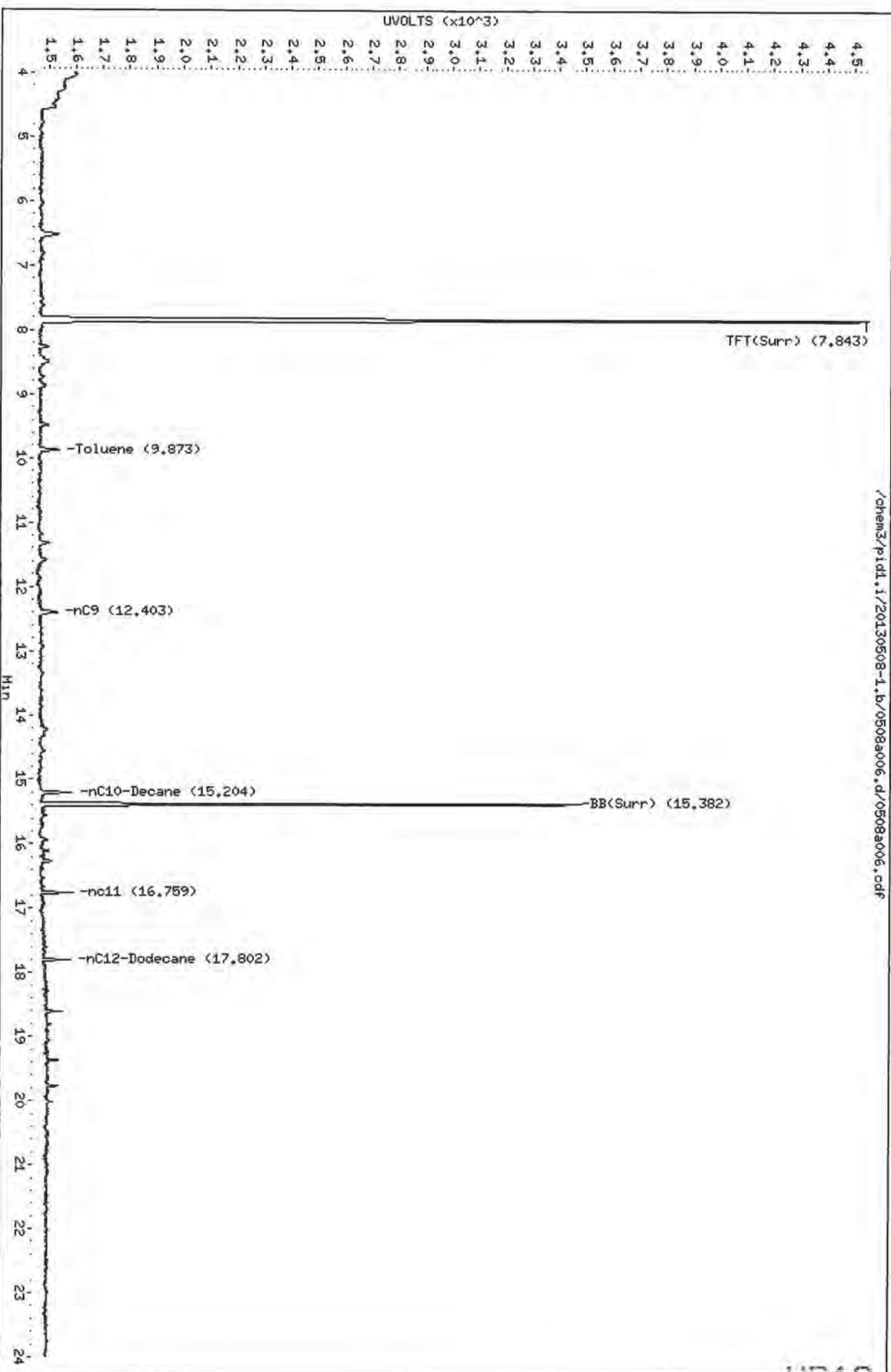
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene ✓
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130508-1.b/0508a006.d
Date: 08-MAY-2013 11:48
Client ID:
Sample Info: HB0508

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130508-1.b/0508a006.d/0508a006.cdf

Data File: /chem3/pidl,i/20130508-2.b/0508a006.d
Date: 08-MAY-2013 11:48

Client ID:

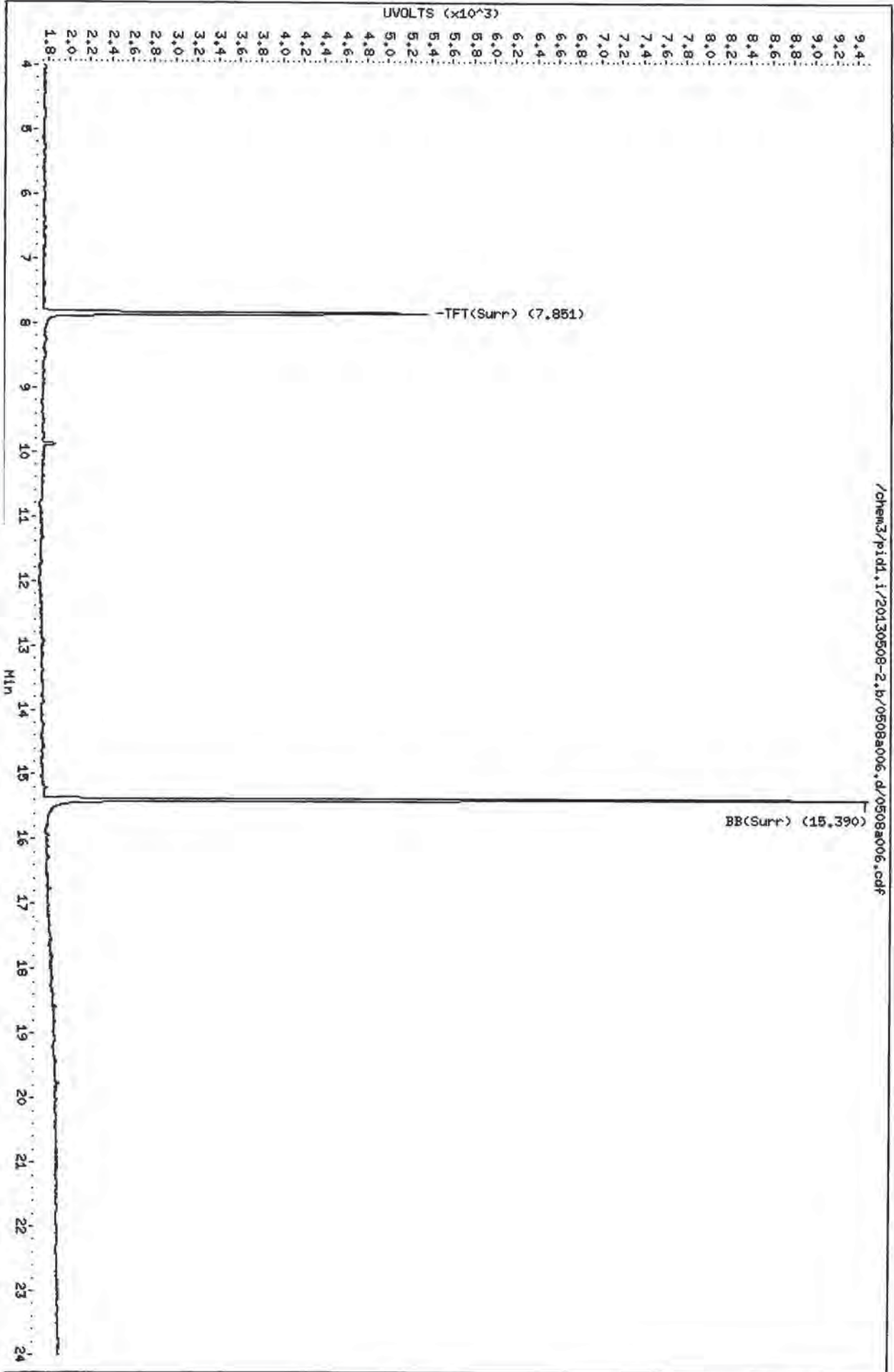
Sample Info: HB0508

Column phase: RTX 502-2 PID

Instrument: pidl,i

Operator: LH

Column diameter: 0.18



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Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 28, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WQ46 - Revised

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted forty-seven soil samples on May 17, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

Eighteen of forty-seven samples required an expedited turn-around-time and were logged under a separate cover. Twenty samples were logged under the ARI job number referenced above. The remaining samples were logged under a separate cover (ARI job WQ47).

The samples were analyzed for NWTPH-HCID, NWTPH-Dx, and BTEX, as requested on the COC.

The BTEX LCSD percent recoveries of Toluene, m,p-Xylene, and o-Xylene fell outside the control limits low for **LCS-052113**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WQ46_rev

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:		Turn-around Requested:		
ARI Client Company: MFA, INC.		Phone:		
Client Contact: TONY SILVA TSILVA@MAULFESTEL.COM		No. of Coolers:		
Client Project Name: CASHMERE		Cooler Temps:		
Client Project #: 0779-02.01-03		Samplers: TONY SILVA		
Sample ID	Date	Time	Matrix	No. Containers
A2-W1-S-4	5-16	9:05 am	S	5
A2-W2-S-4	5-16	9:10 am		5
A2-F1-S-6	5-16	9:20 am		5
A2-W3-S-4	5-16	10:00 am		5
A2-F2-S-6	5-16	10:10 am		5
A2-F3-S-6	5-16	10:15 am		5
A2-F4-S-6	5-16	10:15 am		5
A2-F5-S-6	5-16	10:30 am		5
A2-F6-S-6	5-16	10:35 am		5
A2-W4-S-4	5-16	11:00 am		5
Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>	
	Printed Name: LINDSEY CROSBY		Printed Name: Jennifer Millsap	
	Company: MFA		Company: ARI	
	Date & Time: 5/17/13 Crosby		Date & Time: 5/17/13 1600	

Page: 1	of 5
Date:	Ice Present?
No. of Coolers:	Cooler Temps:

Analysis Requested							Notes/Comments
DX Silica Gel Cleanup	BTEX 8081	Gx	LEAD	HCID			
		X	X				
		X	X	X			
X	X						
		X	X				
X	X						
X	X						
X	X						
		X	X				

1016:0000

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 5
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MFAFACILITY.COM		Ice Present?
		No. of Coolers:
		Cooler Temps:

Client Project Name: 6 CASHMERE	Analysis Requested	Notes/Comments
Client Project #: 0779.02.01-03		
Samplers: TONY SILVA		

Sample ID	Date	Time	Matrix	No. Containers	Ax	SILICA GEL	BTEX	SOB1	Gx	LEAD								
A2-F7-S-6	5-16	11:15am	S	5	X		X											
A2-F8-S-6	5-16	11:30am		5	X		X											
A2-WS-S-4	5-16	11:30am		5					X	X								
A2-F9-S-6	5-16	12:00		5	X		X											
A2-F10-S-6	5-16	12:10		5	X		X											
A2-W6-S-4	5-16	12:15		5					X	X								
A2-F11-S-6	5-16	12:20		4	X		X											
A2-F12-S-6	5-16	12:20		4	X		X											
A2-F13-S-6	5-16	12:25		4	X		X											
A2-F14-S-6	5-16	12:25		4	X		X											

Comments/Special Instructions	Relinquished by: (Signature) <i>Lindset Cross</i>	Received by: (Signature) <i>Jennifer Millsap</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSET CROSS	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

1015:0001

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 3 of 5
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MFAPOSTER.COM	No. of Coolers:	Cooler Temps:

Client Project Name: CASHMERE	Analysis Requested	Notes/Comments							
Client Project #: 0779-02-01-03	<table border="1"> <tr> <td>DX</td> <td>SILVA GEL Cleanup</td> <td>BTEX</td> <td>SOB1</td> <td>Gx</td> <td>LEAD</td> <td>HCID</td> </tr> </table>	DX	SILVA GEL Cleanup	BTEX	SOB1	Gx	LEAD	HCID	
DX	SILVA GEL Cleanup	BTEX	SOB1	Gx	LEAD	HCID			
Samplers: TONY SILVA									

Sample ID	Date	Time	Matrix	No. Containers	DX	SILVA GEL Cleanup	BTEX	SOB1	Gx	LEAD	HCID	Notes/Comments
A2-W7-S-4	5-16	12:30	S	5					X	X		
A2-W8-S-4	5-16	12:35		5					X	X		
A2-W9-S-4	5-16	1330		5					X	X		
A2-W10-S-4	5-16	1330		5					X	X		
A2-F15-S-6	5-16	1345		4	X	X						
A2-F16-S-6	5-16	1400		4	X	X						
A2-F17-S-6	5-16	1405		4	X	X						
A2-F18-S-6	5-16	1410		4	X	X						
A2-F19-S-6	5-16	1415		4	X	X					X	
A2-F20-S-6	5-16	1425		4	X	X						

Comments/Special Instructions	Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Relinquished by (Signature):	Received by (Signature):
	Printed Name: LIMSEY CROSBY	Printed Name: Jennifer Millsop	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 16:00	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

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10000 5101



Cooler Receipt Form

ARI Client: MFA
 COC No(s) _____ (NA)
 Assigned ARI Job No _____

Project Name: Cashmere
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other _____
 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)
 Were custody papers included with the cooler? (YES) NO
 Were custody papers properly filled out (ink, signed, etc.) (YES) NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.7 0.6 4.1 5.3
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952
 Cooler Accepted by JM Date: 5/17/13 Time: 1600

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)
 What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA (YES) NO
 Were all bottles sealed in individual plastic bags? YES (NO)
 Did all bottles arrive in good condition (unbroken)? (YES) NO
 Were all bottle labels complete and legible? (YES) NO
 Did the number of containers listed on COC match with the number of containers received? (YES) NO
 Did all bottle labels and tags agree with custody papers? (YES) NO
 Were all bottles used correct for the requested analyses? (YES) NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES NO
 Were all VOC vials free of air bubbles? (NA) (YES) NO
 Was sufficient amount of sample sent in each bottle? (YES) NO
 Date VOC Trip Blank was made at ARI: _____ (NA)
 Was Sample Split by ARI: (NA) YES Date/Time _____ Equipment _____ Split by: _____

Samples Logged by: JM Date: 5/17/13 Time: 1400 (pre log)
 ** Notify Project Manager of discrepancies or concerns **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WQ46
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-F1-S-6	WQ46A	13-10662	Soil	05/16/13 09:20	05/17/13 09:20
2. A2-F2-S-6	WQ46B	13-10663	Soil	05/16/13 10:10	05/17/13 09:20
3. A2-F3-S-6	WQ46C	13-10664	Soil	05/16/13 10:15	05/17/13 09:20
4. A2-F4-S-6	WQ46D	13-10665	Soil	05/16/13 10:15	05/17/13 09:20
5. A2-F5-S-6	WQ46E	13-10666	Soil	05/16/13 10:30	05/17/13 09:20
6. A2-F6-S-6	WQ46F	13-10667	Soil	05/16/13 10:35	05/17/13 09:20
7. A2-F7-S-6	WQ46G	13-10668	Soil	05/16/13 11:15	05/17/13 09:20
8. A2-F8-S-6	WQ46H	13-10669	Soil	05/16/13 11:30	05/17/13 09:20
9. A2-F9-S-6	WQ46I	13-10670	Soil	05/16/13 12:00	05/17/13 09:20
10. A2-F10-S-6	WQ46J	13-10671	Soil	05/16/13 12:10	05/17/13 09:20
11. A2-F11-S-6	WQ46K	13-10672	Soil	05/16/13 12:20	05/17/13 09:20
12. A2-F12-S-6	WQ46L	13-10673	Soil	05/16/13 12:20	05/17/13 09:20
13. A2-F13-S-6	WQ46M	13-10674	Soil	05/16/13 12:25	05/17/13 09:20
14. A2-F14-S-6	WQ46N	13-10675	Soil	05/16/13 12:25	05/17/13 09:20
15. A2-F15-S-6	WQ46O	13-10676	Soil	05/16/13 13:45	05/17/13 09:20
16. A2-F16-S-6	WQ46P	13-10677	Soil	05/16/13 14:00	05/17/13 09:20
17. A2-F17-S-6	WQ46Q	13-10678	Soil	05/16/13 14:05	05/17/13 09:20
18. A2-F18-S-6	WQ46R	13-10679	Soil	05/16/13 14:10	05/17/13 09:20
19. A2-F19-S-6	WQ46S	13-10680	Soil	05/16/13 14:15	05/17/13 09:20
20. A2-F20-S-6	WQ46T	13-10681	Soil	05/16/13 14:25	05/17/13 09:20



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

NWTPH-HCID Method by GC/FID
Extraction Method: SW3580A
Page 1 of 1

QC Report No: WQ46-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil

Data Release Authorized: *AB*
Reported: 05/22/13

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-052013 13-10680	Method Blank	05/20/13	05/21/13	1.0	Gas Diesel Oil o-Terphenyl	< 20 U < 50 U < 100 U 102%
WQ46S 13-10680	A2-F19-S-6 HC ID: DIESEL/MOTOR OIL	05/20/13	05/21/13	1.0	Gas Diesel Oil o-Terphenyl	< 20 U > 50 > 100 89.6%

Reported in mg/kg (ppm)

Gas value based on total peaks in the range from Toluene to C12.
Diesel value based on the total peaks in the range from C12 to C24.
Oil value based on the total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130521.b/0521a017.d
Method: /chem3/fid4a.i/20130521.b/hcidfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/22/2013
Macro: 21-MAR-2013
Calibration Dates: Gas:21-MAY-2013 Diesel:21-MAY-2013 M.Oil:21-MAY-2013

ARI ID: WQ46MBS1
Client ID: WQ46MBS1
Injection: 21-MAY-2013 14:32
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	14179	0.93
C8	----				WATPHD	(C12-C24)	40407	2.80
C10	2.749	-0.001	172	196	WATPHM	(C24-C38)	71981	5.64
C12	3.752	0.001	102	150	AK102	(C10-C25)	46791	2.36
C14	4.444	0.003	90	126	AK103	(C25-C36)	58529	6.36
C16	5.027	0.002	103	164				
C18	5.532	-0.030	95	49				
C20	6.105	0.002	113	51				
C22	6.641	0.002	121	112				
C24	7.134	-0.021	885	1622	MSPIRIT	(Tol-C12)	14179	0.73
C25	7.406	0.004	203	626				
C26	7.648	-0.003	177	99				
C28	8.089	-0.007	211	89				
C32	8.942	0.034	582	342				
C34	9.289	0.006	477	505				
Filter Peak	11.544	0.004	1783	461				
C36	9.644	0.002	535	443				
C38	10.000	0.003	657	450				
C40	10.341	-0.002	817	1149				
o-terph	5.715	0.025	979119	926635				
Triacon Surr	8.660	0.131	339866	850365				

Range Times: NW Diesel (3.752 - 7.154) AK102 (2.75 - 7.40) Jet A (2.75 - 5.56)
NW M.Oil (7.15 - 10.00) AK103 (7.40 - 9.64) OR Diesel (2.75 - 8.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	926635	45.7	101.6
Triacotane	850365	44.7	99.3 M

JW
5/22/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	19032.6	06-MAR-2013
Gas	15258.6	21-MAY-2013
Diesel	14452.1	21-MAY-2013
Motor Oil	12767.6	21-MAY-2013
AK102	19795.4	24-JAN-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013

Data File: /chem3/fid4a.i/20130521.b/0521a017.d

Date: 21-May-2013 14:32

Client ID: M046HBS1

Sample Info: M046HBS1

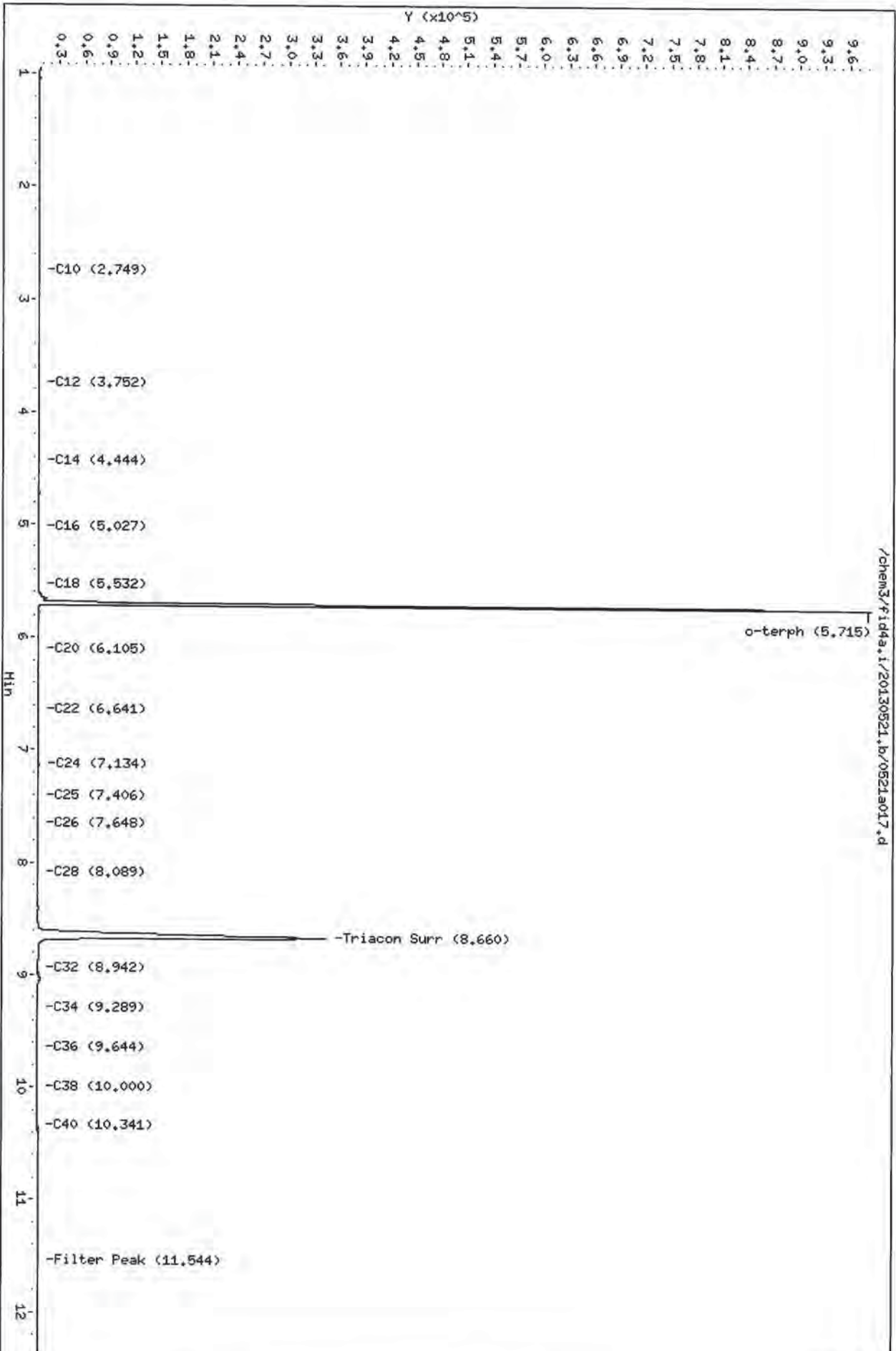
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25

Page 1



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130521.b/0521a018.d
Method: /chem3/fid4a.i/20130521.b/hcidfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/22/2013
Macro: 21-MAR-2013
Calibration Dates: Gas:21-MAY-2013 Diesel:21-MAY-2013 M.Oil:21-MAY-2013

ARI ID: WQ46S
Client ID: A2-F19-S-6
Injection: 21-MAY-2013 14:53
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	433628	28.42
C8	----				WATPHD	(C12-C24)	51459038	3560.67
C10	2.749	0.000	474	584	WATPHM	(C24-C38)	11420390	894.48
C12	3.750	-0.002	24176	7029	AK102	(C10-C25)	52861335	2670.39
C14	4.437	-0.004	161783	122542	AK103	(C25-C36)	9351760	1016.27
C16	5.018	-0.007	372162	334091				
C18	5.560	-0.003	490909	317296				
C20	6.100	-0.003	348361	127407				
C22	6.629	-0.009	260044	397361				
C24	7.164	0.010	138662	47111	MSPiRIT	(Tol-C12)	433628	22.39
C25	7.406	0.003	107943	76308				
C26	7.655	0.005	85009	118693				
C28	8.096	0.000	73557	33646				
C32	8.909	0.001	56088	53704				
C34	9.292	0.009	57276	48258				
Filter Peak	11.533	-0.007	3021	3355				
C36	9.647	0.006	58095	38407				
C38	9.989	-0.008	56582	71130				
C40	10.352	0.009	36719	46827				
o-terph	5.731	0.041	820883	817549				
Triacon Surr	8.700	0.172	339122	908529				

Range Times: NW Diesel(3.752 - 7.154) AK102(2.75 - 7.40) Jet A(2.75 - 5.56)
NW M.Oil(7.15 - 10.00) AK103(7.40 - 9.64) OR Diesel(2.75 - 8.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	817549	40.3	89.6 M
Triacontane	908529	47.7	106.1 M

Jw
5/22/13

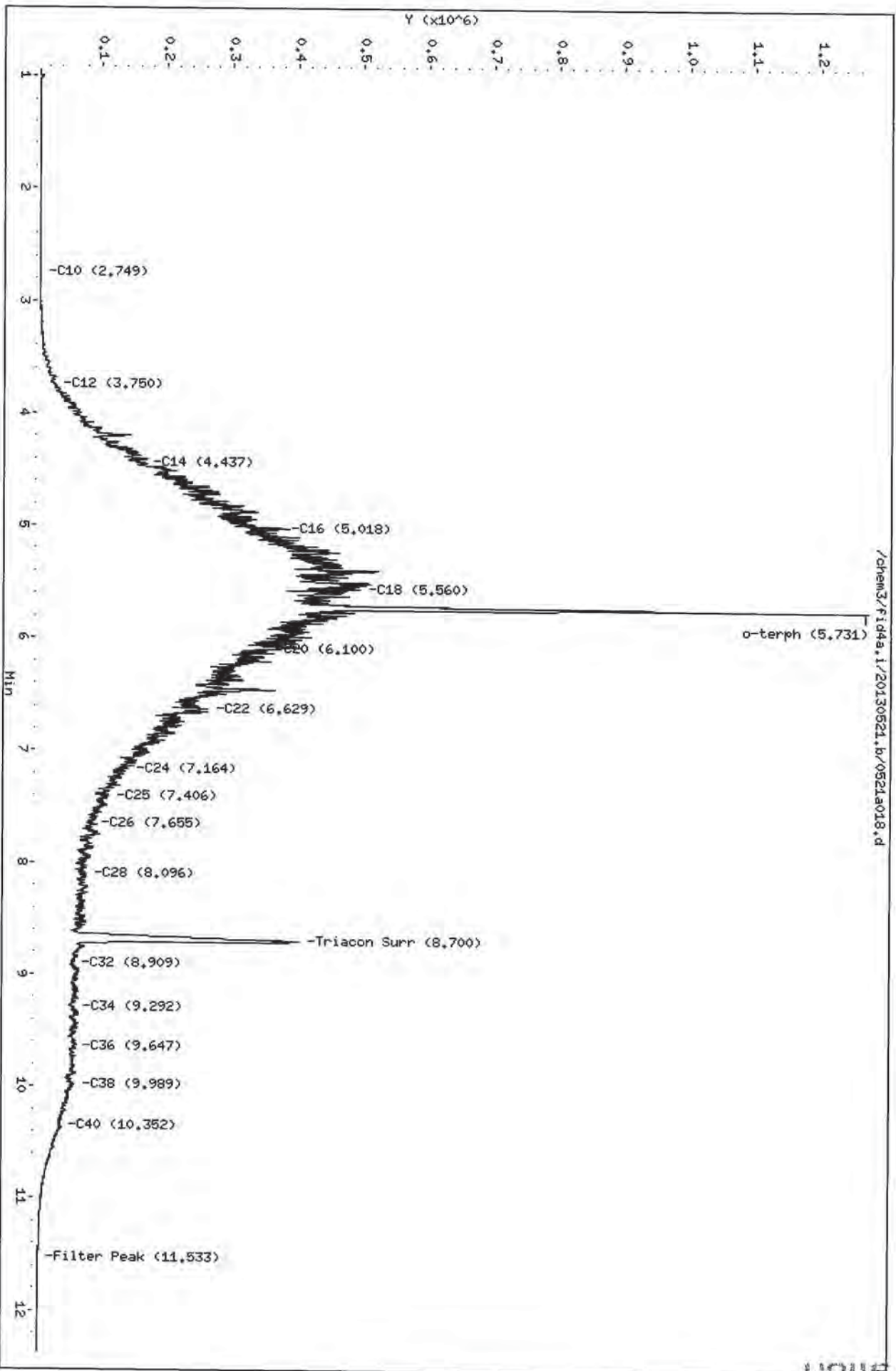
M Indicates the peak was manually integrated

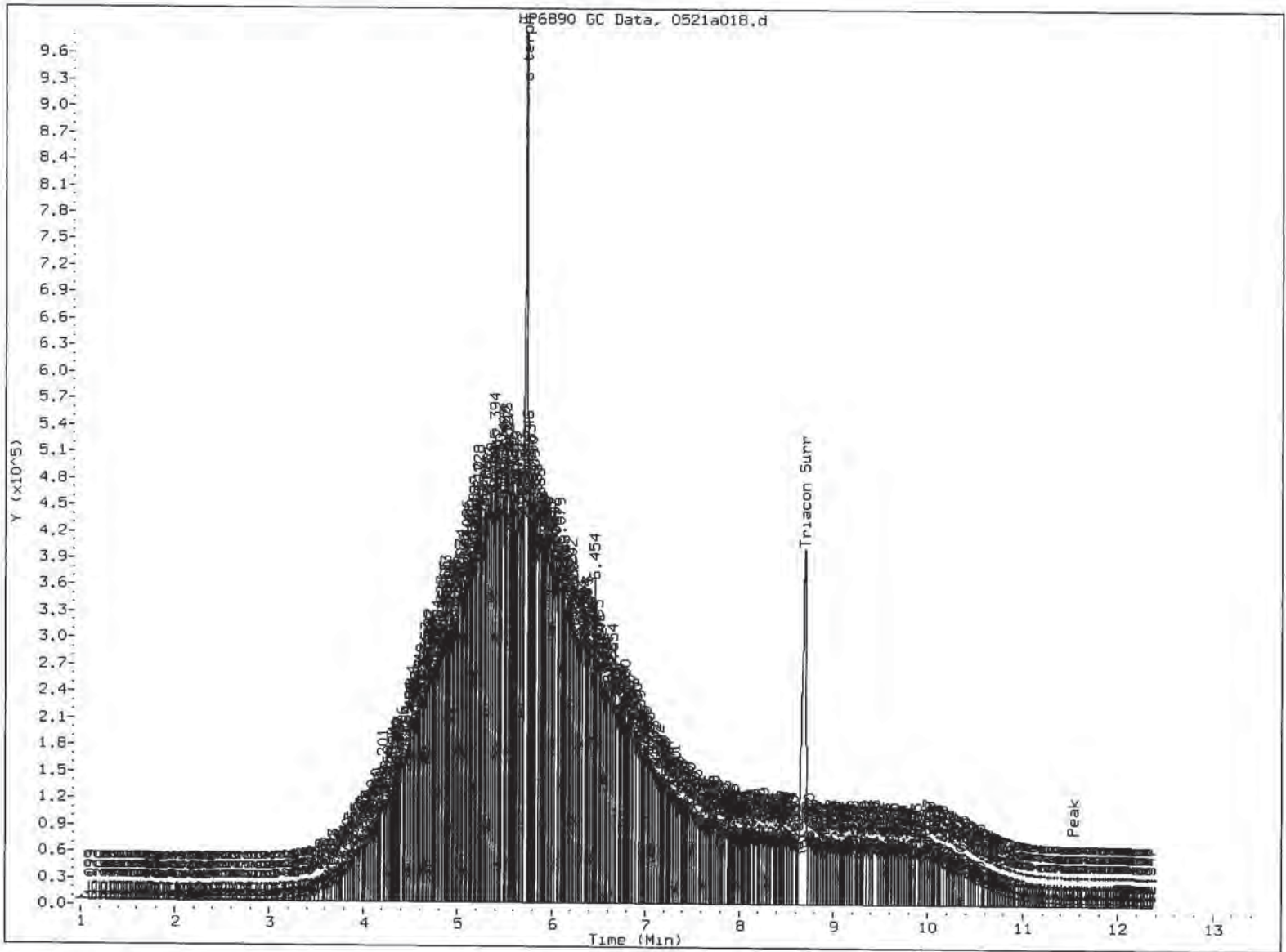
Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	19032.6	06-MAR-2013
Gas	15258.6	21-MAY-2013
Diesel	14452.1	21-MAY-2013
Motor Oil	12767.6	21-MAY-2013
AK102	19795.4	24-JAN-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013

Data File: /chem3/fid4a.i/20130521.b/0521a018.d
Date: 21-MAY-2013 14:53
Client ID: A2-F19-S-6
Sample Info: M046S
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

5/22/10





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5) Skipped surrogate

Analyst: TW

Date: 5/22/12

HCID SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ46-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>O-TER TOT OUT</u>	
052013MB	102%	0
A2-F19-S-6	89.6%	0

LCS/MB LIMITS QC LIMITS

(O-TER) = o-Terphenyl

(50-150) (50-150)

Prep Method: SW3580A
Log Number Range: 13-10680 to 13-10680

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ46
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Sample Amt	Final Vol	Basis	Prep Date
13-10680-052013MB	Method Blank	10.0 g	5.00 mL	-	05/20/13
13-10680-WQ46S	A2-F19-S-6	8.42 g	5.00 mL	D	05/20/13

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Extraction Method: SW3546


Page 1 of 2

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Matrix: Soil

Data Release Authorized: 

Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ46A 13-10662	A2-F1-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	16 28 74.9%
WQ46B 13-10663	A2-F2-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	30 61	450 860 59.7%
WQ46C 13-10664	A2-F3-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	24 47 71.6%
WQ46D 13-10665	A2-F4-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	35 65 70.4%
WQ46E 13-10666	A2-F5-S-6 HC ID: DIESEL/MOTOR OIL	05/21/13	05/23/13	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	61 120	560 800 73.1%
WQ46F 13-10667	A2-F6-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	59 140 53.3%
WQ46G 13-10668	A2-F7-S-6 HC ID: DIESEL/MOTOR OIL	05/21/13	05/23/13	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	61 120	520 750 64.7%
WQ46H 13-10669	A2-F8-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	23 50 64.0%
WQ46I 13-10670	A2-F9-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	28 79 70.6%
MB-052113 13-10671	Method Blank HC ID: ---	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 81.9%
WQ46J 13-10671	A2-F10-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.8 12	23 63 71.2%
WQ46K 13-10672	A2-F11-S-6 HC ID: DIESEL/MOTOR OIL	05/21/13	05/23/13	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	30 60	330 800 67.7%
WQ46L 13-10673	A2-F12-S-6 HC ID: ---	05/21/13	05/23/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	< 5.7 U < 11 U 77.2%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 2 of 2

QC Report No: WQ46-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *AB*
Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ46M 13-10674	A2-F13-S-6 HC ID: ---	05/21/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	< 6.0 U < 12 U 77.7%
WQ46N 13-10675	A2-F14-S-6 HC ID: MOTOR OIL	05/21/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.9 12	< 5.9 U 18 73.8%
WQ46O 13-10676	A2-F15-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	97 320 54.8%
WQ46P 13-10677	A2-F16-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/24/13 FID3B	1.00 50	Diesel Range Motor Oil Range o-Terphenyl	340 680	1300 7200 D
WQ46Q 13-10678	A2-F17-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.7 11	130 260 70.0%
WQ46R 13-10679	A2-F18-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/23/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	59 120	120 920 63.6%
WQ46S 13-10680	A2-F19-S-6 HC ID: DIESEL/MOTOR OIL	05/21/13	05/24/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	60 120	970 190 56.4%
WQ46T 13-10681	A2-F20-S-6 HC ID: DRO/MOTOR OIL	05/21/13	05/24/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	59 120	380 990 60.7%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b006.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46MBS1
Client ID:
Injection: 23-MAY-2013 09:45
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		77935	6
C8	0.814	-0.005	4179	3439	WATPHD (C12-C24)		176378	17.03 ✓
C10	2.244	0.005	272	322	WATPHM (C24-C38)		71314	7.22 ✓
C12	3.039	-0.004	371	183	AK102 (C10-C25)		193404	15.65
C14	3.626	0.002	1753	1740	AK103 (C25-C36)		60455	8.50
C16	4.121	0.002	2720	2617				
C18	4.565	-0.001	1887	1012				
C20	4.983	-0.002	822	220				
C22	5.380	0.000	537	291	MSPIRIT (Tol-C12)		77935	5.67
C24	5.744	-0.004	381	294				
C25	5.927	0.005	157	44				
C26	6.098	-0.001	253	123				
C28	6.411	0.000	1044	457				
C32	6.957	0.004	2690	1103				
C34	7.184	-0.003	515	119				
Filter Peak	----							
C36	7.405	0.002	855	432				
o-terph	4.675	0.003	887512	495959	JET-A (C10-C18)		139087	12.85
Triacon Surr	6.703	-0.003	869786	537601				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	495959	36.9	81.9 ✓
Triacontane	537601	41.2	91.6

JW
5/21/13

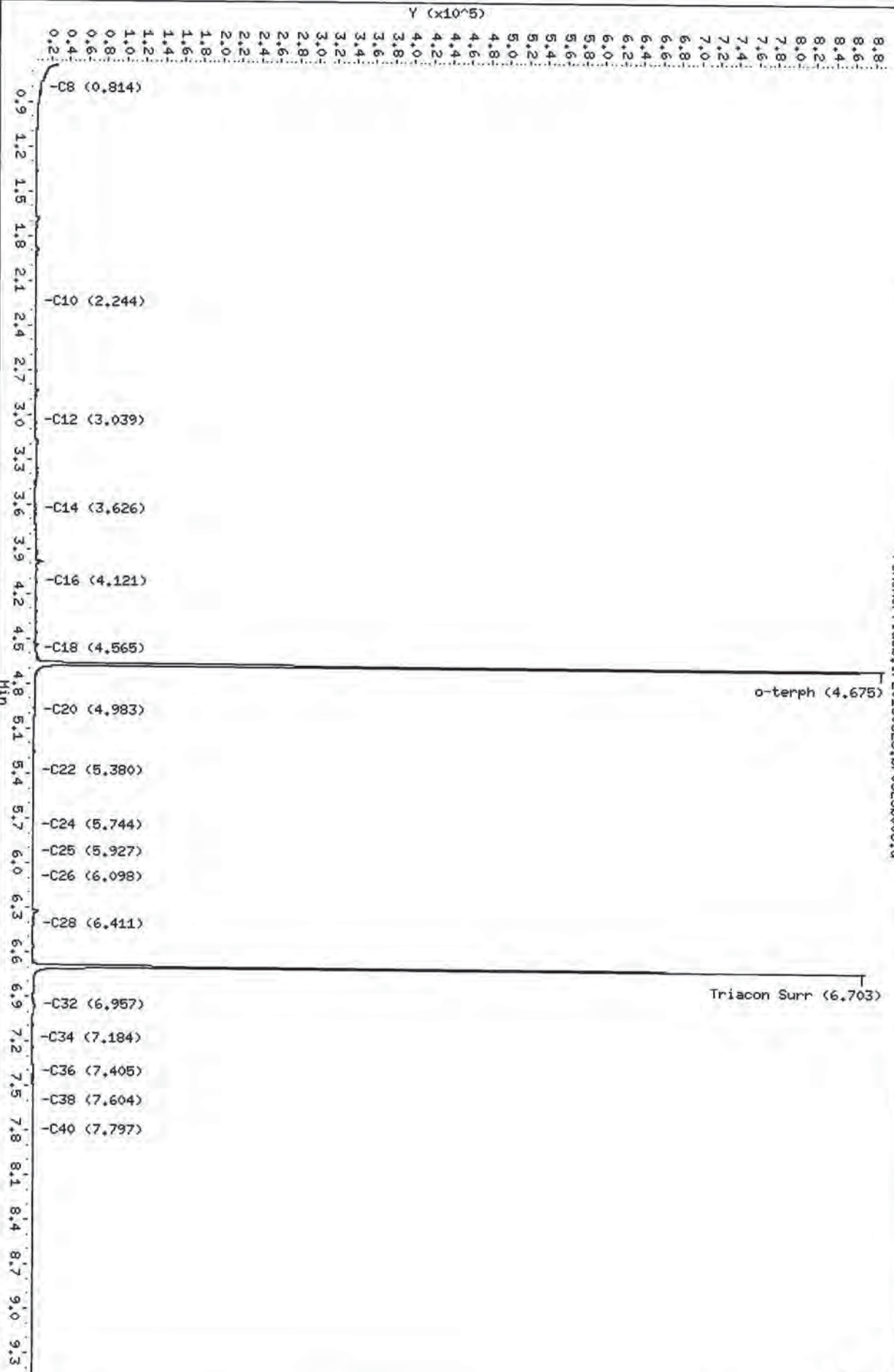
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b006.d
Date: 23-MAY-2013 09:45
Client ID:
Sample Info: MQ46HBS1

Column phase: RTX-1

/chem3/fid3b.i/20130523.b/0523b006.d

Instrument: fid3b.1
Operator: JM
Column diameter: 0.25



W049 : 0523

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b008.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46A
Client ID:
Injection: 23-MAY-2013 10:24
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG (Tol-C12)		82623	6
C8	0.825	0.006	3087	980	WATPHD (C12-C24)		1427224	137.80 ✓
C10	2.238	-0.002	481	130	WATPHM (C24-C38)		2386271	241.70 ✓
C12	3.043	-0.001	559	229	AK102 (C10-C25)		1587212	128.45 M
C14	3.624	0.000	1527	1206	AK103 (C25-C36)		2154476	303.09 M
C16	4.120	0.001	1836	426				
C18	4.566	-0.001	5746	1140				
C20	4.983	-0.003	11247	8965				
C22	5.379	-0.001	23484	12845	MSPIRIT (Tol-C12)		82623	6.01
C24	5.750	0.001	33521	13958				
C25	5.916	-0.006	32116	18235				
C26	6.101	0.002	33754	24346				
C28	6.416	0.004	33046	26975				
C32	6.952	-0.002	24454	27525				
C34	7.191	0.004	12361	1719				
Filter Peak	-----							
C36	7.402	-0.001	9307	6256				
o-terph	4.676	0.004	719163	453102	JET-A (C10-C18)		178995	16.54
Triacon Surr	6.703	-0.003	751569	507583				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	453102	33.7	74.9 ✓
Triacontane	507583	38.9	86.4

JW
5/24/13

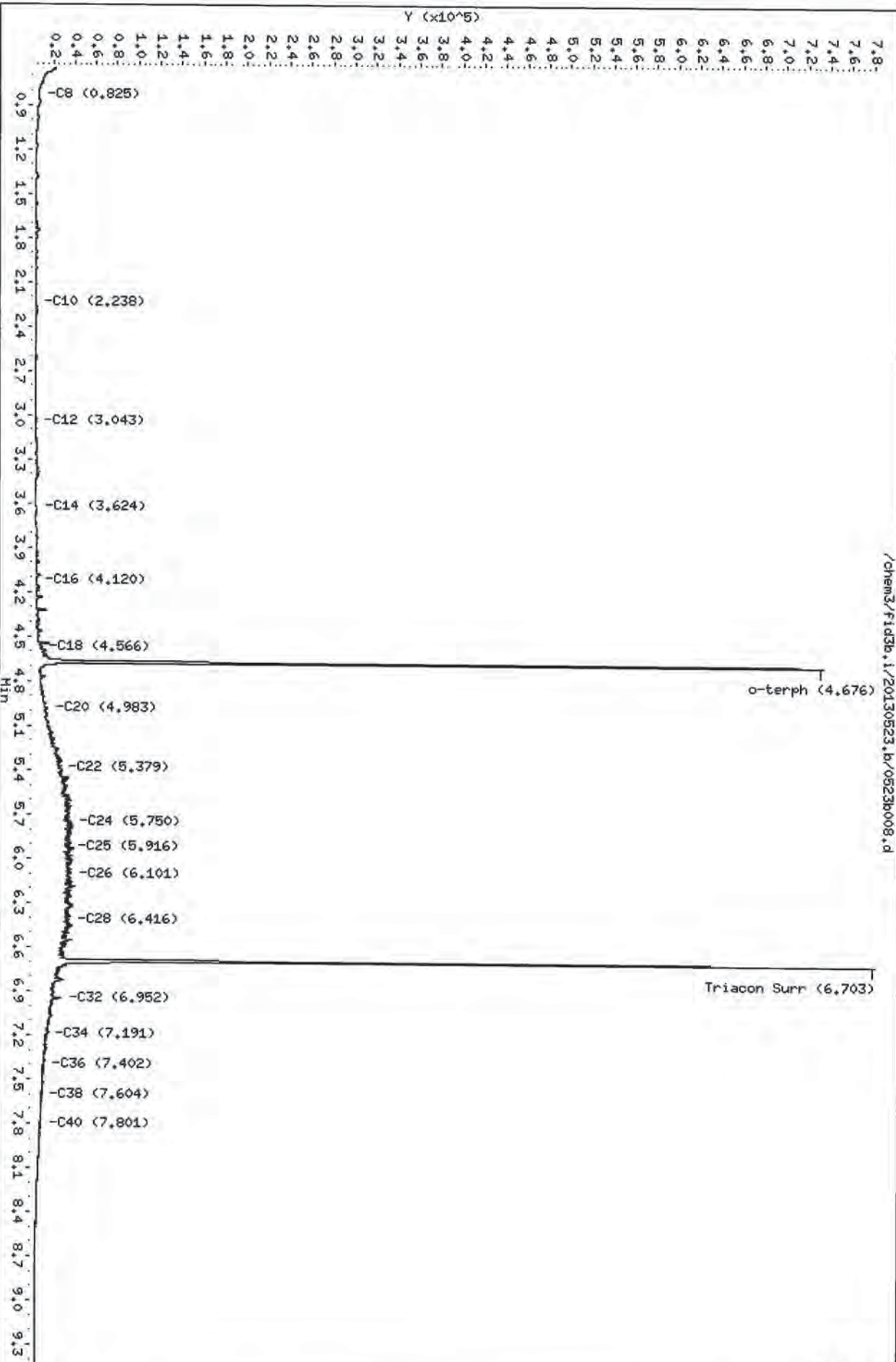
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b008.d
Date: 23-MAY-2013 10:24
Client ID:
Sample Info: MQ46A

Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JM
5/24/13

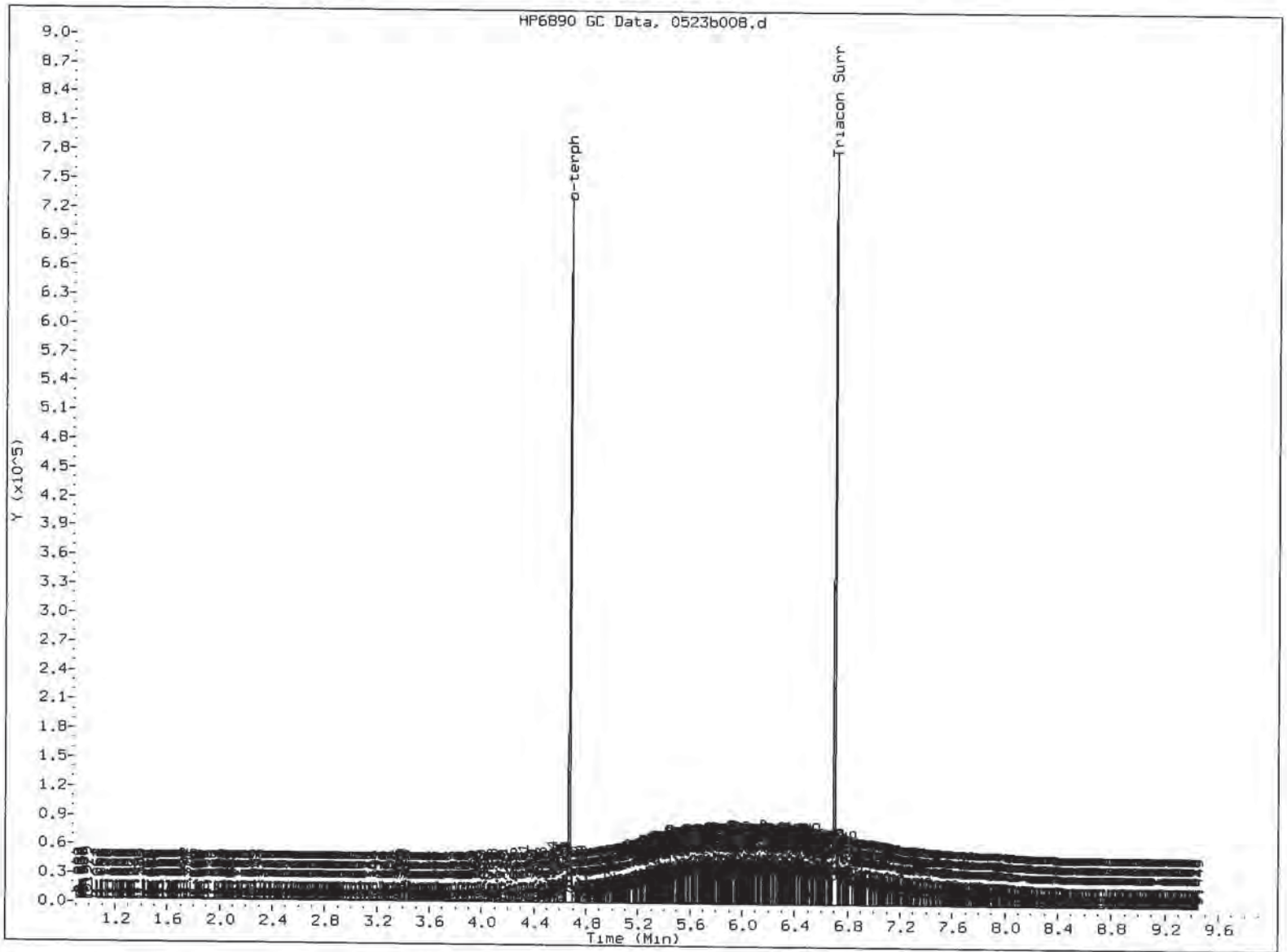


0709660

FID:3B-2C/RTX-1 WQ46A

FID:3B SIGNAL

HP6890 GC Data, 0523b008.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b009.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46B
Client ID:
Injection: 23-MAY-2013 10:43
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		52010	4
C8	0.813	-0.005	3502	5301	WATPHD (C12-C24)		7623105	736.00 ✓
C10	2.241	0.002	408	223	WATPHM (C24-C38)		13848738	1402.70 ✓
C12	3.047	0.003	307	120	AK102 (C10-C25)		8509999	688.69 M
C14	3.628	0.004	717	622	AK103 (C25-C36)		12687585	1784.85 M
C16	4.118	-0.001	1921	877				
C18	4.567	0.001	12759	3656				
C20	4.982	-0.003	66534	30574				
C22	5.380	0.000	146878	86730	MSPIRIT (Tol-C12)		52010	3.79
C24	5.747	-0.001	199226	119849				
C25	5.925	0.003	201690	54886				
C26	6.095	-0.004	217721	130484				
C28	6.413	0.002	189910	55635				
C32	6.957	0.003	94030	55672				
C34	7.184	-0.003	72320	37726				
Filter Peak	----							
C36	7.401	-0.001	36025	17983				
o-terph	4.672	0.000	126798	72274	JET-A (C10-C18)		223591	20.66
Triacon Surr	6.700	-0.006	132927	75834				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	72274	5.4	59.7 ✓
Triacontane	75834	5.8	64.6

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.1/20130523.b/0523b009.d
Date: 23-MAY-2013 10:43
Client ID:
Sample Info: M046B,5

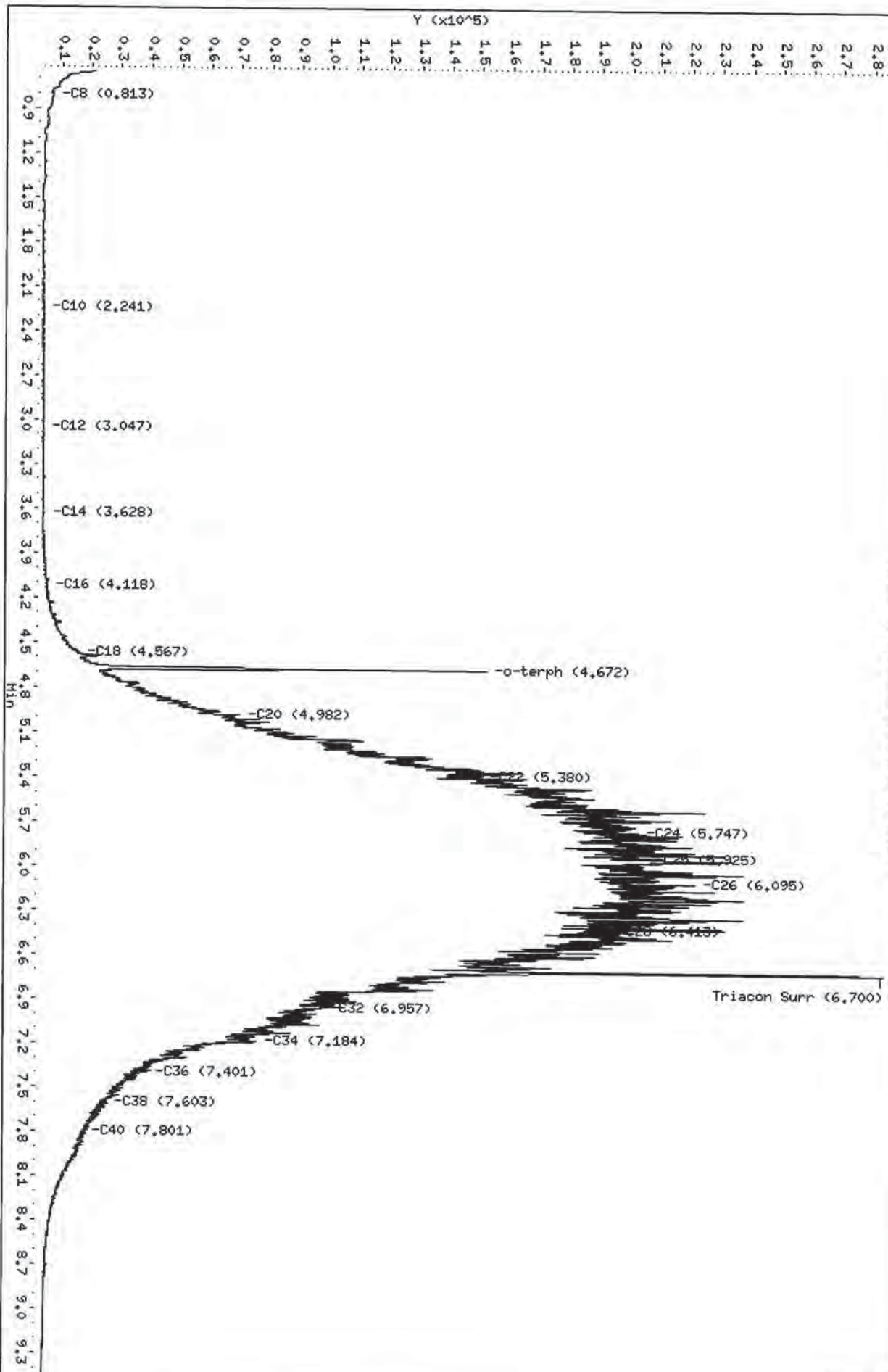
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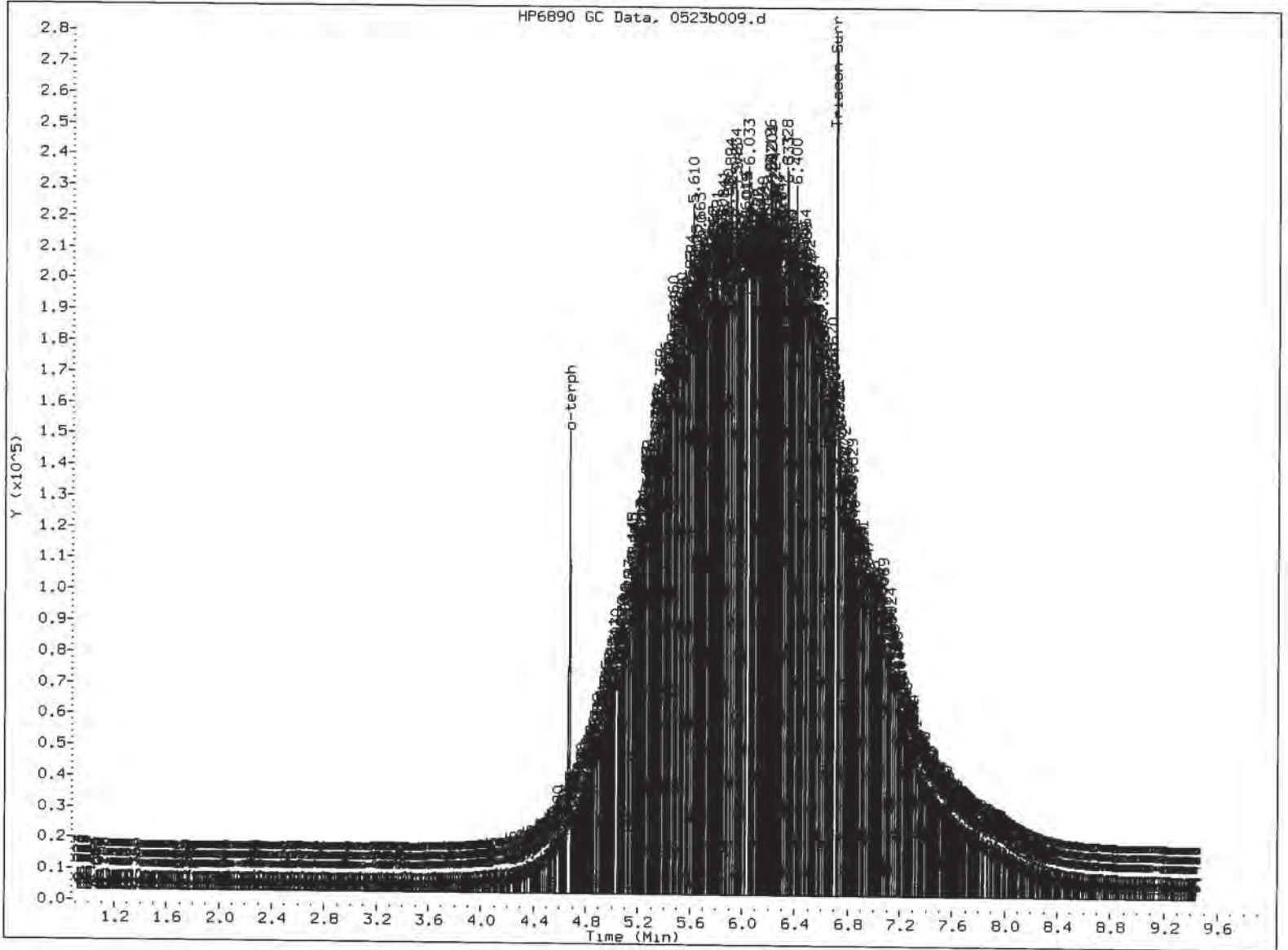
Instrument: fid3b.1
Operator: JM
Column diameter: 0.25

JW
5/24/13

Page 1



0523b009.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/24/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b010.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46C
Client ID:
Injection: 23-MAY-2013 11:03
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		63323	5
C8	0.822	0.003	3222	2943	WATPHD (C12-C24)		2034580	196.44 ✓
C10	2.233	-0.007	490	291	WATPHM (C24-C38)		3836013	388.54 ✓
C12	3.046	0.002	592	700	AK102 (C10-C25)		2263587	183.19 M
C14	3.624	0.000	1367	1116	AK103 (C25-C36)		3505521	493.15 M
C16	4.121	0.002	1760	1498				
C18	4.568	0.002	9174	7780				
C20	4.988	0.002	16213	8646				
C22	5.382	0.002	35904	14430	MSPIRIT (Tol-C12)		63323	4.61
C24	5.751	0.002	44648	7839				
C25	5.923	0.001	53593	21794				
C26	6.098	-0.001	53677	38914				
C28	6.410	-0.001	52072	17910				
C32	6.958	0.004	32706	24359				
C34	7.183	-0.004	23631	14872				
Filter Peak	----							
C36	7.402	-0.001	13753	6718				
o-terph	4.675	0.003	738132	433112	JET-A (C10-C18)		181424	16.76
Triacon Surr	6.702	-0.004	661949	473435				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	433112	32.2	71.6 ✓
Triacotane	473435	36.3	80.6

TC
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

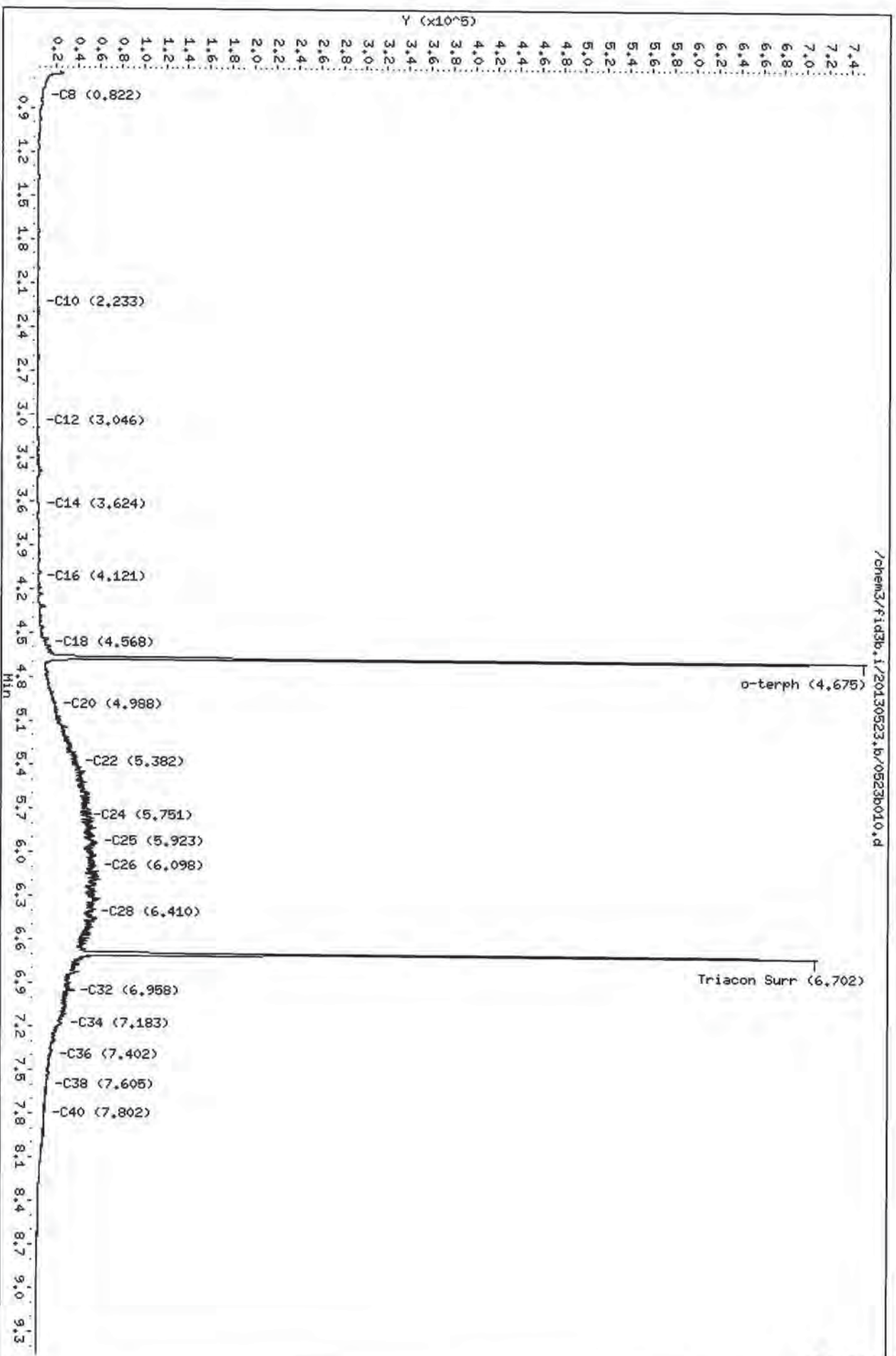
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Date: 23-MAY-2013 11:03

Client ID:
Sample Info: M046C

Column phase: RTX-1

Instrument: fid3b.1

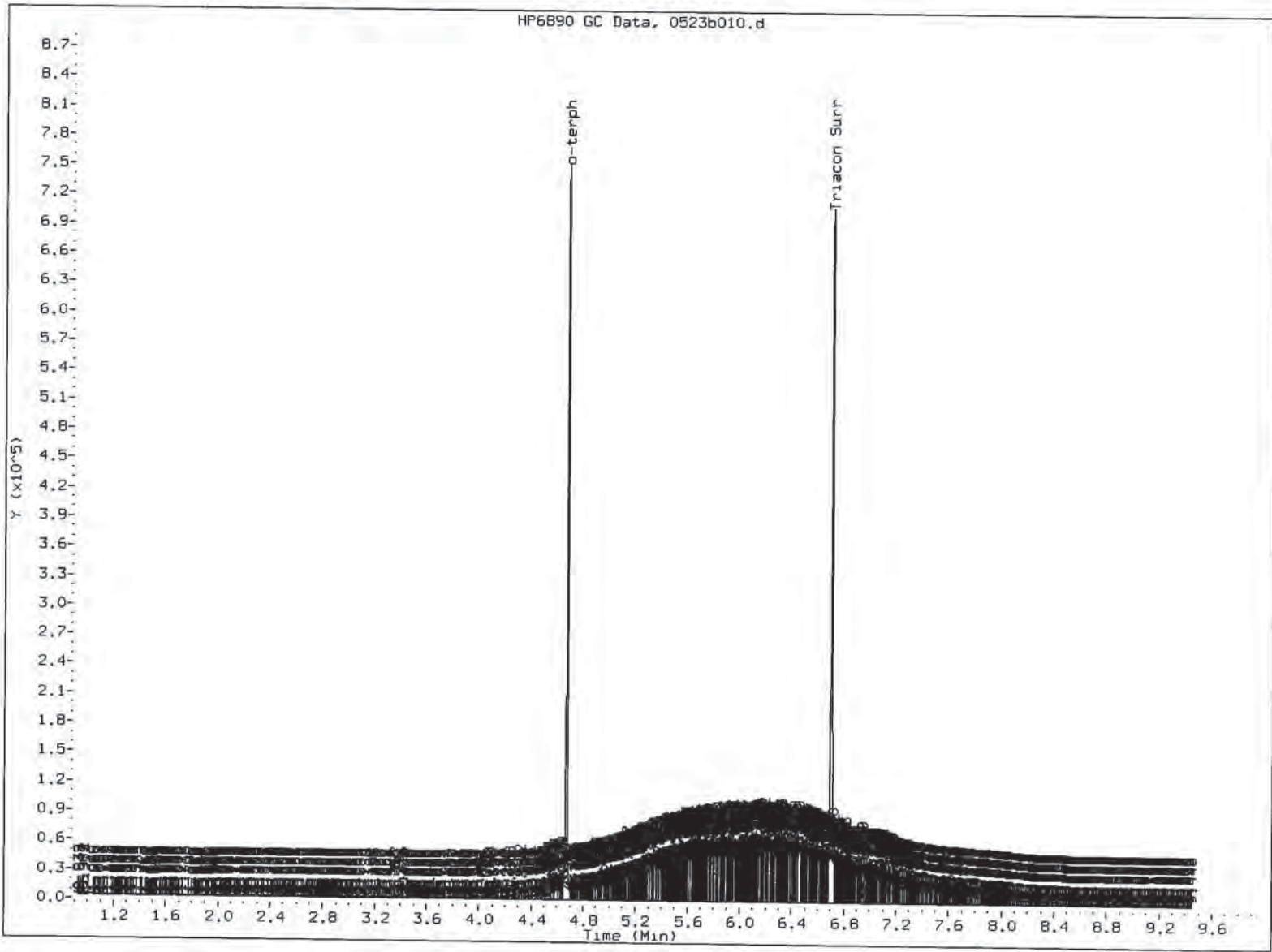
Operator: JM
Column diameter: 0.25



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020020 : 0523

JW
5/24/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b011.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46D
Client ID:
Injection: 23-MAY-2013 11:23
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		103383	8
C8	0.822	0.004	3217	2912	WATPHD (C12-C24)		2985474	288.24
C10	2.245	0.006	681	579	WATPHM (C24-C38)		5285452	535.35
C12	3.047	0.003	1261	1049	AK102 (C10-C25)		3323752	268.98 M
C14	3.624	0.000	2572	2554	AK103 (C25-C36)		4797065	674.84 M
C16	4.123	0.004	3540	2268				
C18	4.568	0.001	10346	1631				
C20	4.987	0.002	24204	8420				
C22	5.378	-0.002	47249	16869	MSPIRIT (Tol-C12)		103383	7.53
C24	5.749	0.000	69489	11921				
C25	5.917	-0.005	72737	35236				
C26	6.101	0.002	78547	34829				
C28	6.409	-0.002	72370	30798				
C32	6.953	-0.001	45542	14851				
C34	7.191	0.004	32084	20010				
Filter Peak	----							
C36	7.398	-0.005	17647	8167				
o-terph	4.676	0.004	743128	425996	JET-A (C10-C18)		283164	26.16
Triacon Surr	6.706	-0.001	732076	479464				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	425996	31.7	70.4
Triacontane	479464	36.7	81.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b011.d
Date: 23-MAY-2013 11:23

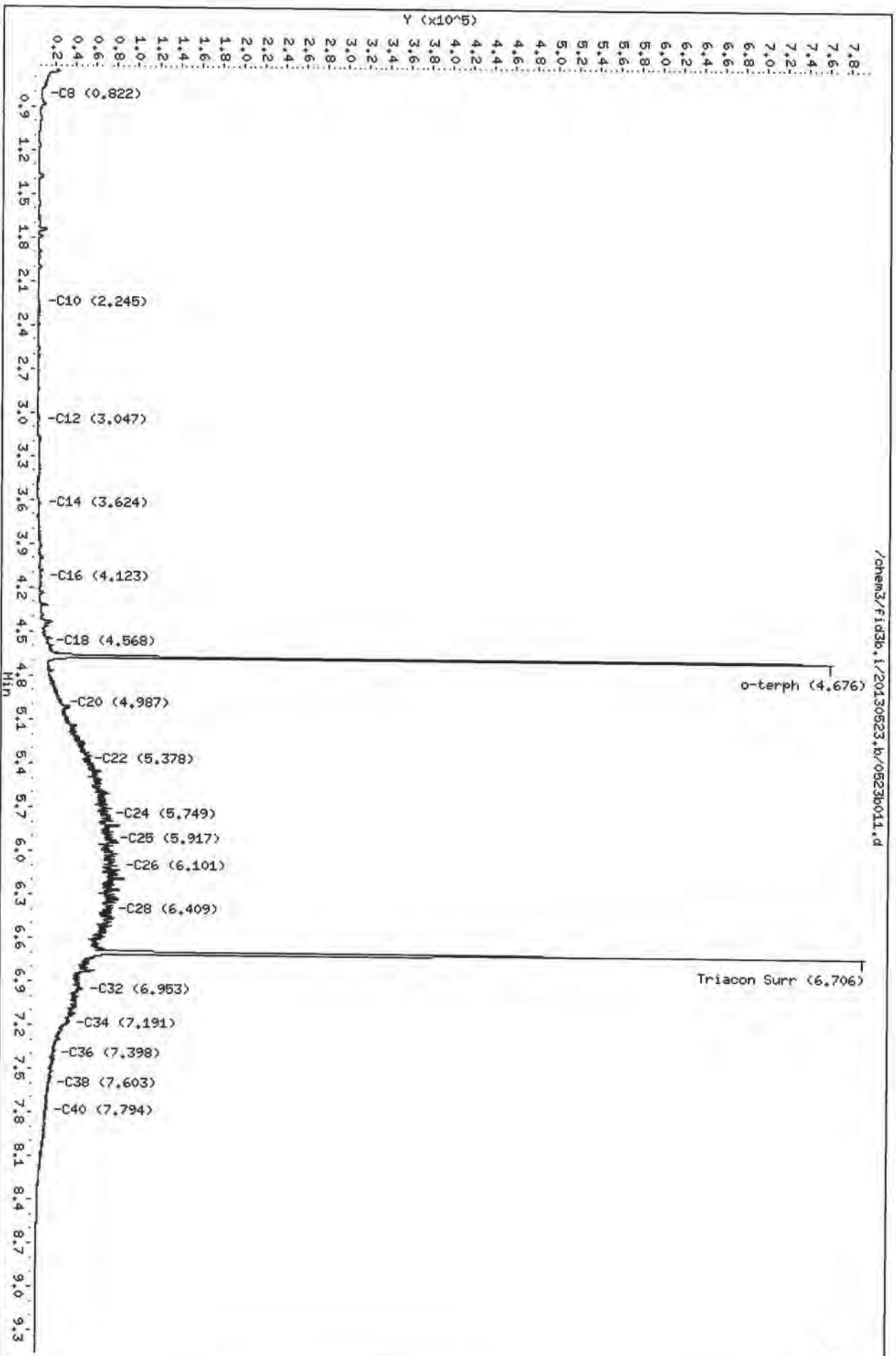
Client ID:
Sample Info: M046D

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

5/24/13

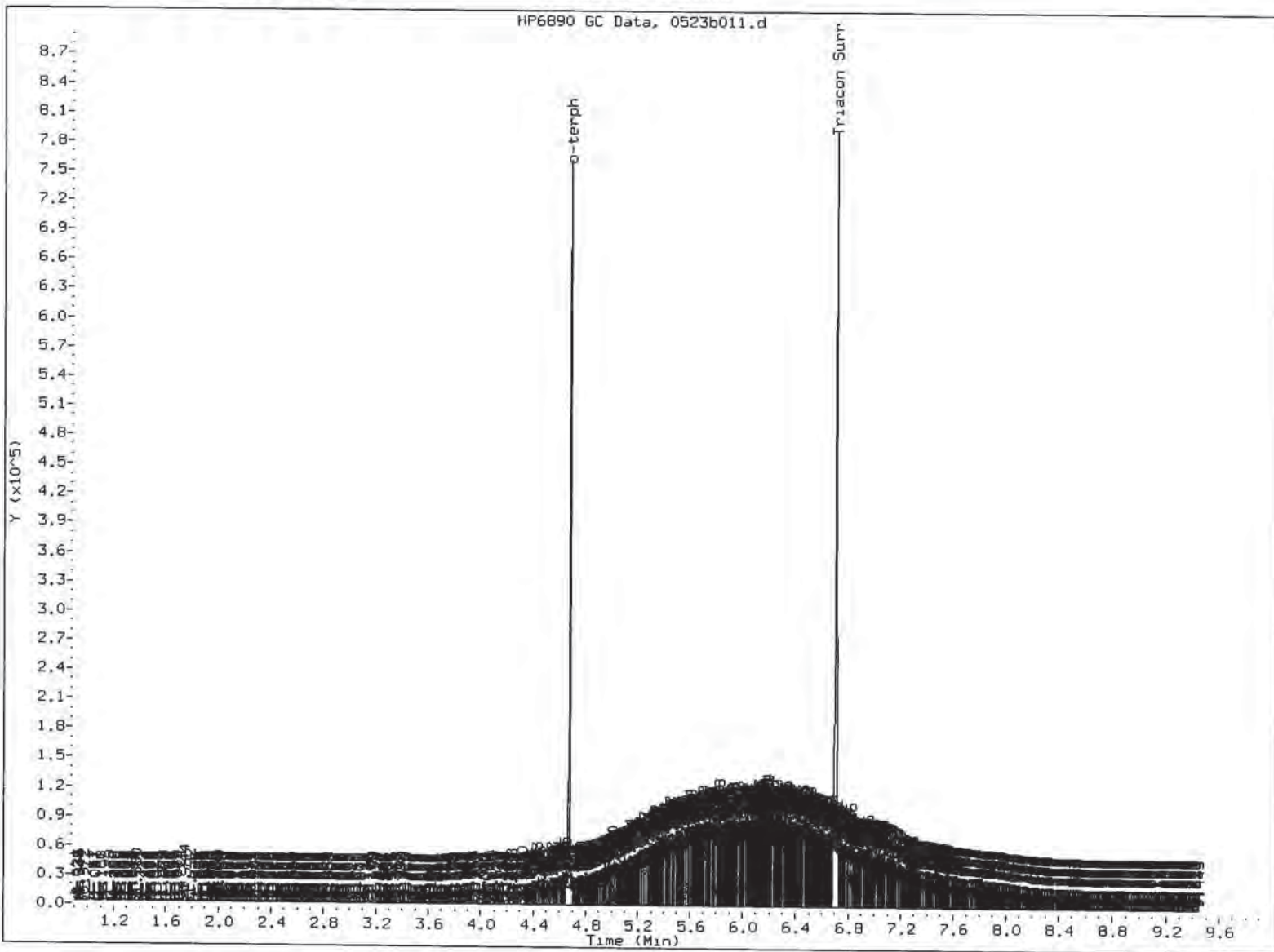


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FID:3B-2C/RTX-1 WQ46D

FID:3B SIGNAL

HP6890 GC Data, 0523b011.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5) Skimmed surrogate

Analyst: TW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b034.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46E
Client ID:
Injection: 23-MAY-2013 18:53
Dilution Factor: 10

FID:3B RESULTS

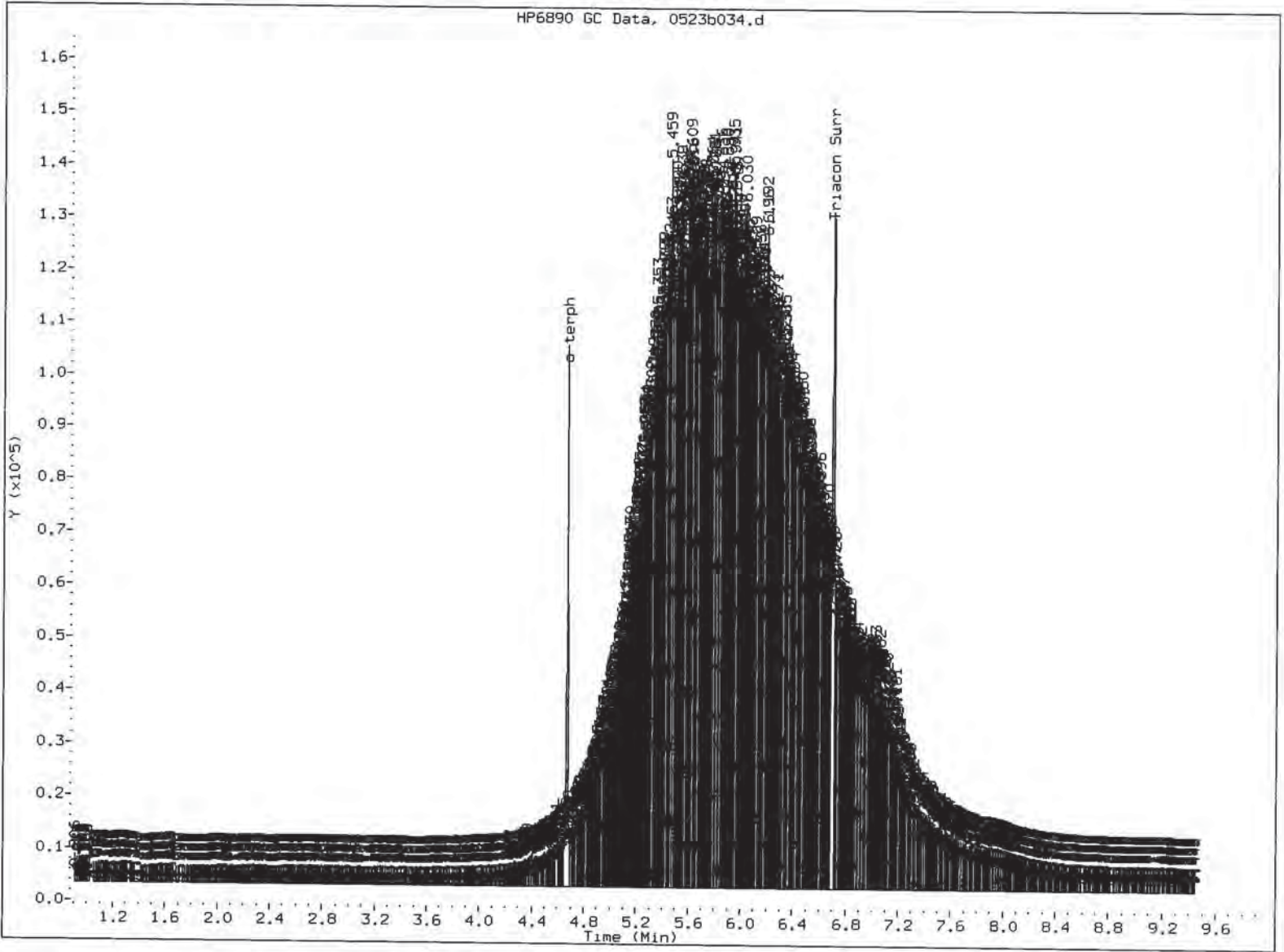
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		48642	4
C8	0.822	0.003	3327	928	WATPHD (C12-C24)		4759317	459.51 ✓
C10	2.243	0.004	322	193	WATPHM (C24-C38)		6507547	659.13 ✓
C12	3.039	-0.005	198	68	AK102 (C10-C25)		5268096	426.33 M
C14	3.624	0.000	188	43	AK103 (C25-C36)		5911716	831.64 M
C16	4.122	0.003	774	264				
C18	4.564	-0.002	4442	1821				
C20	4.986	0.000	29372	5816				
C22	5.380	-0.001	95605	17028	MSPIRIT (Tol-C12)		48642	3.54
C24	5.749	0.000	118360	32287				
C25	5.925	0.003	117541	36539				
C26	6.101	0.001	117465	64835				
C28	6.410	-0.002	90095	18707				
C32	6.954	0.000	39454	23749				
C34	7.189	0.002	29757	9014				
Filter Peak	----							
C36	7.401	-0.002	12962	9240				
o-terph	4.670	-0.002	93125	44266	JET-A (C10-C18)		91960	8.50
Triacon Surr	6.697	-0.010	70763	47222				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	44266	3.3	73.1
Triacontane	47222	3.6	80.4

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JCW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b013.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46F
Client ID:
Injection: 23-MAY-2013 12:02
Dilution Factor: 1

FID:3B RESULTS

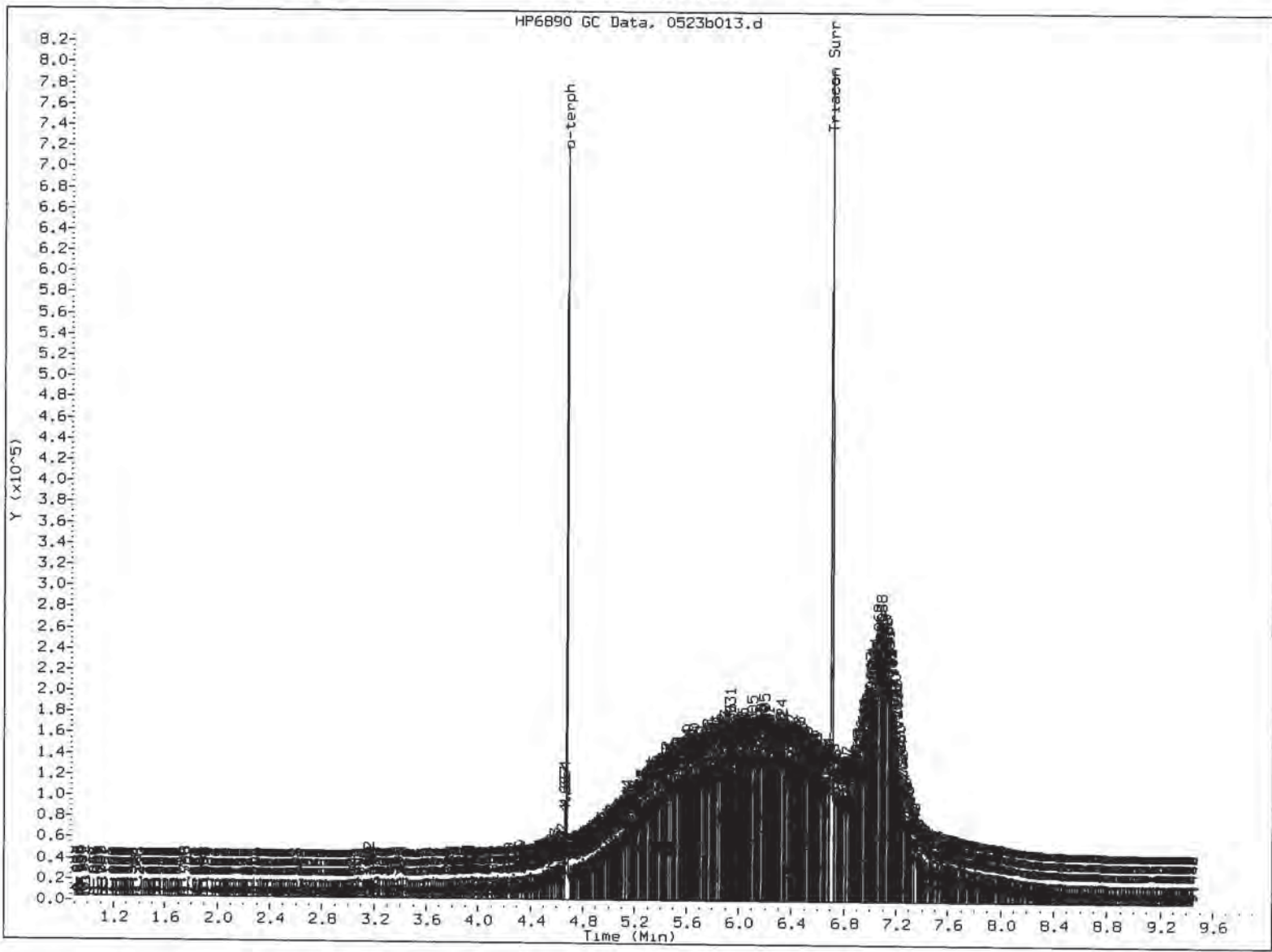
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		88316	7
C8	0.820	0.001	3502	3739	WATPHD (C12-C24)		5105054	492.89
C10	2.245	0.006	763	831	WATPHM (C24-C38)		11724257	1187.52
C12	3.046	0.002	2321	1740	AK102 (C10-C25)		5638719	456.33 M
C14	3.624	0.000	3820	4299	AK103 (C25-C36)		10977203	1544.24 M
C16	4.120	0.001	5589	6454				
C18	4.566	-0.001	16026	7970				
C20	4.982	-0.003	44512	41059				
C22	5.383	0.002	86801	33620	MSPIRIT (Tol-C12)		88316	6.43
C24	5.747	-0.001	113658	26445				
C25	5.920	-0.002	129781	39589				
C26	6.100	0.001	140054	45300				
C28	6.412	0.001	120749	42237				
C32	6.955	0.001	147083	45450				
C34	7.189	0.002	163510	25554				
Filter Peak	----							
C36	7.399	-0.004	30417	14530				
o-terph	4.676	0.004	665589	322679	JET-A (C10-C18)		437754	40.44
Triacon Surr	6.705	-0.002	690084	450447				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	322679	24.0	53.3
Triacotane	450447	34.5	76.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b035.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46G
Client ID:
Injection: 23-MAY-2013 19:13
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		50731	4
C8	0.820	0.002	3373	4498	WATPHD (C12-C24)		4422179	426.96 ✓
C10	2.245	0.006	330	229	WATPHM (C24-C38)		6093978	617.24 ✓
C12	3.044	0.000	192	54	AK102 (C10-C25)		4911605	397.48 M
C14	3.622	-0.002	142	39	AK103 (C25-C36)		5511872	775.39 M
C16	4.121	0.002	634	147				
C18	4.564	-0.003	3792	1718				
C20	4.983	-0.002	28427	27818				
C22	5.381	0.001	89213	17706	MSPiRIT (Tol-C12)		50731	3.69
C24	5.748	0.000	111375	68162				
C25	5.924	0.002	118595	33832				
C26	6.099	0.000	106125	67398				
C28	6.411	0.000	73658	35915				
C32	6.954	0.000	41246	27011				
C34	7.188	0.001	30801	19304				
Filter Peak	----							
C36	7.402	0.000	13362	9164				
o-terph	4.672	-0.001	68638	39112	JET-A (C10-C18)		82005	7.58
Triacon Surr	6.698	-0.009	82360	43718				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	39112	2.9	64.6 ✓
Triacotane	43718	3.4	74.5

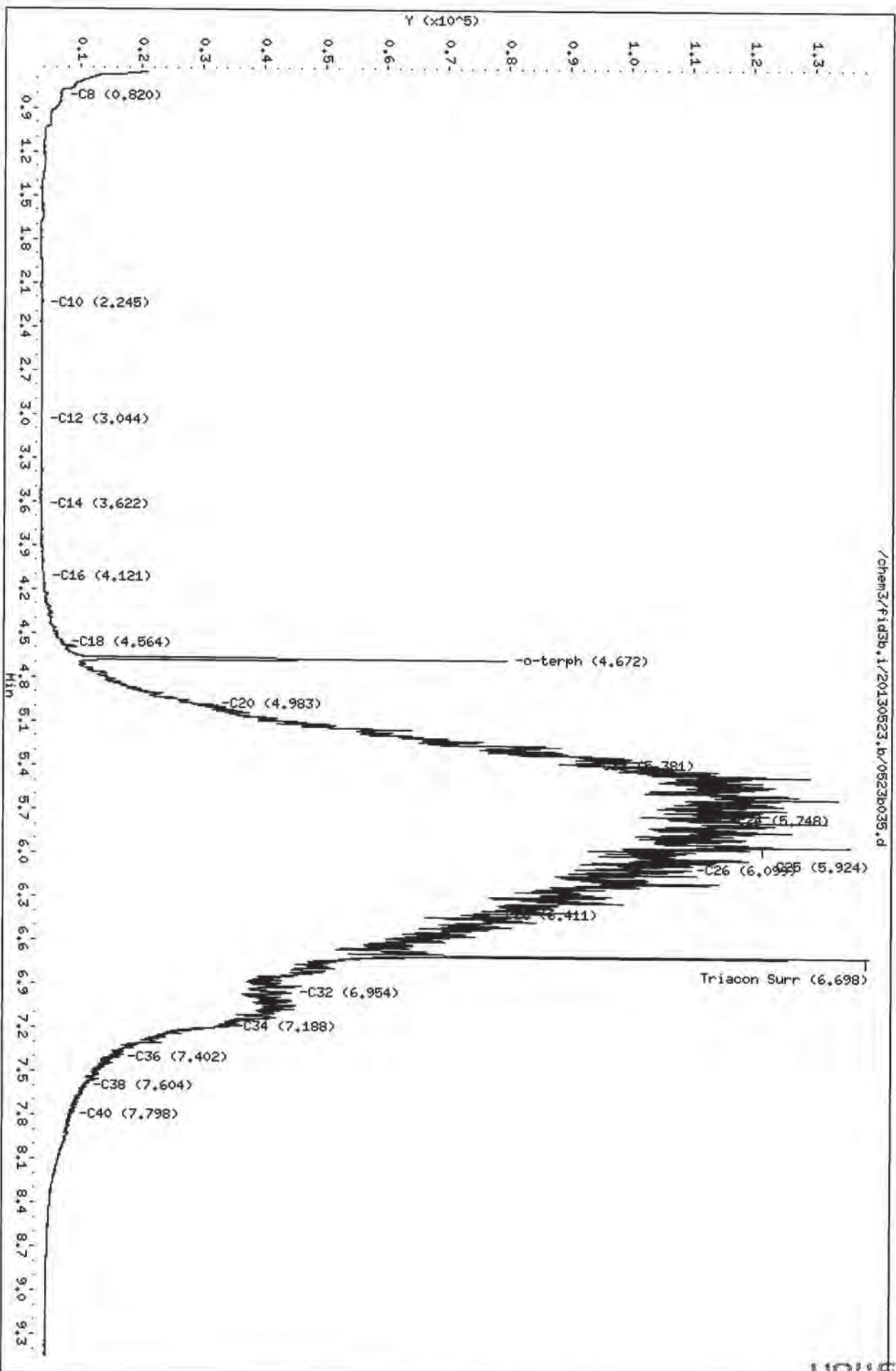
JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.1/20130523.b/0523b035.d
Date: 23-MAY-2013 19:13
Client ID:
Sample Info: M0466.10

Column phase: RTX-1

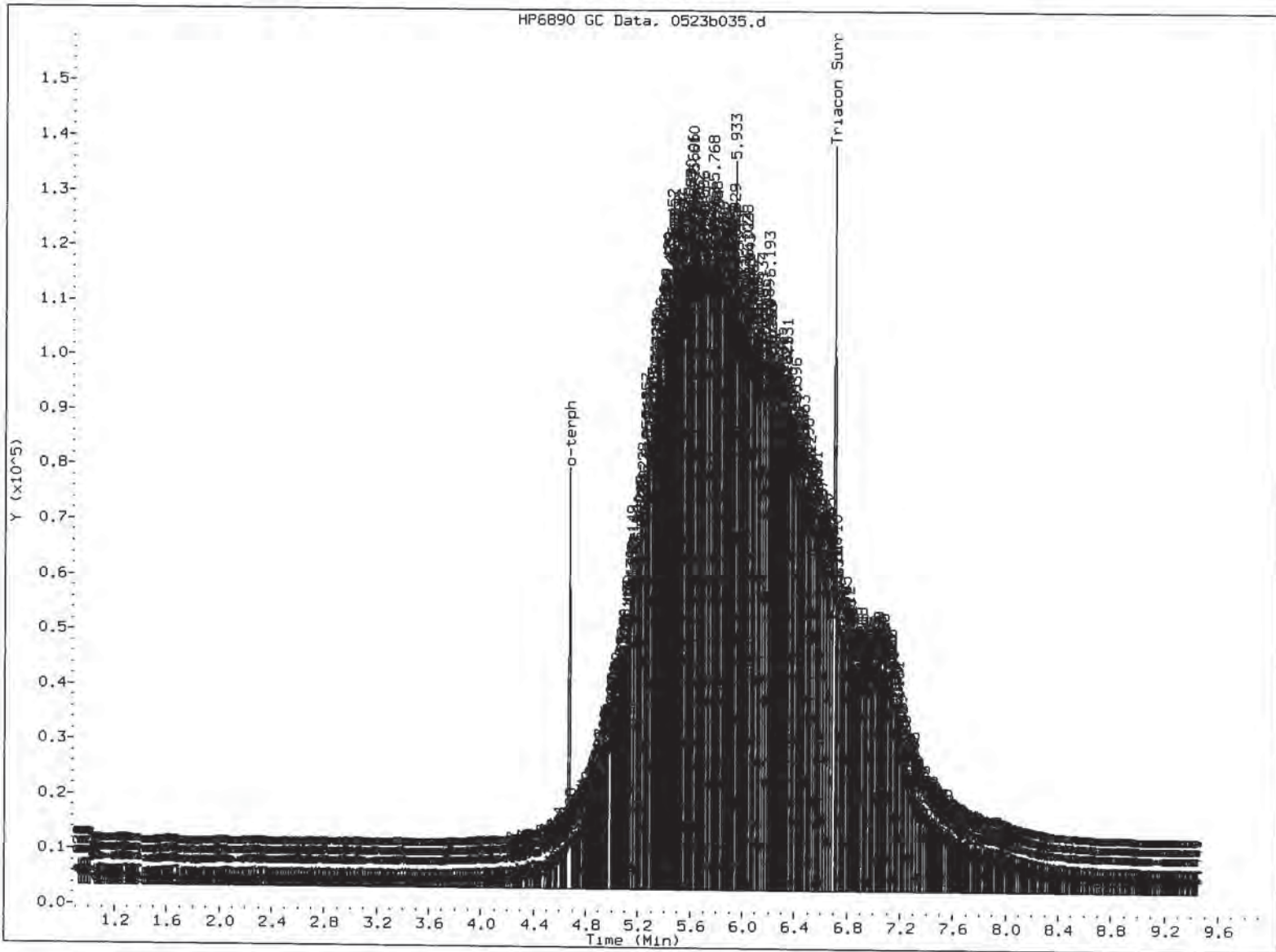
Instrument: fid3b.1
Operator: JM
Column diameter: 0.25



/chem3/fid3b.1/20130523.b/0523b035.d

JW
S/bill

11/10/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b015.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46H
Client ID:
Injection: 23-MAY-2013 12:42
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		72799	5
C8	0.821	0.002	3312	2694	WATPHD (C12-C24)		1948180	188.09 ✓
C10	2.243	0.003	513	383	WATPHM (C24-C38)		4067942	412.03 ✓
C12	3.043	-0.001	783	306	AK102 (C10-C25)		2127382	172.16 M
C14	3.625	0.001	2716	3674	AK103 (C25-C36)		3780257	531.79 M
C16	4.117	-0.002	4147	1638				
C18	4.565	-0.001	9851	4005				
C20	4.987	0.002	14405	4813				
C22	5.383	0.003	28697	17385	MSPIRIT (Tol-C12)		72799	5.30
C24	5.749	0.000	37379	12880				
C25	5.923	0.001	42585	14101				
C26	6.096	-0.004	43133	19296				
C28	6.415	0.004	44040	18203				
C32	6.949	-0.004	54371	27809				
C34	7.185	-0.002	56962	32776				
Filter Peak	----							
C36	7.404	0.002	14830	4529				
o-terph	4.677	0.005	729851	387507	JET-A (C10-C18)		334645	30.92
Triacon Surr	6.704	-0.003	745956	491626				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	387507	28.8	64.0 ✓
Triacontane	491626	37.7	83.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b,1/20130523,b/0523b015.d
Date: 23-MAY-2013 12:42

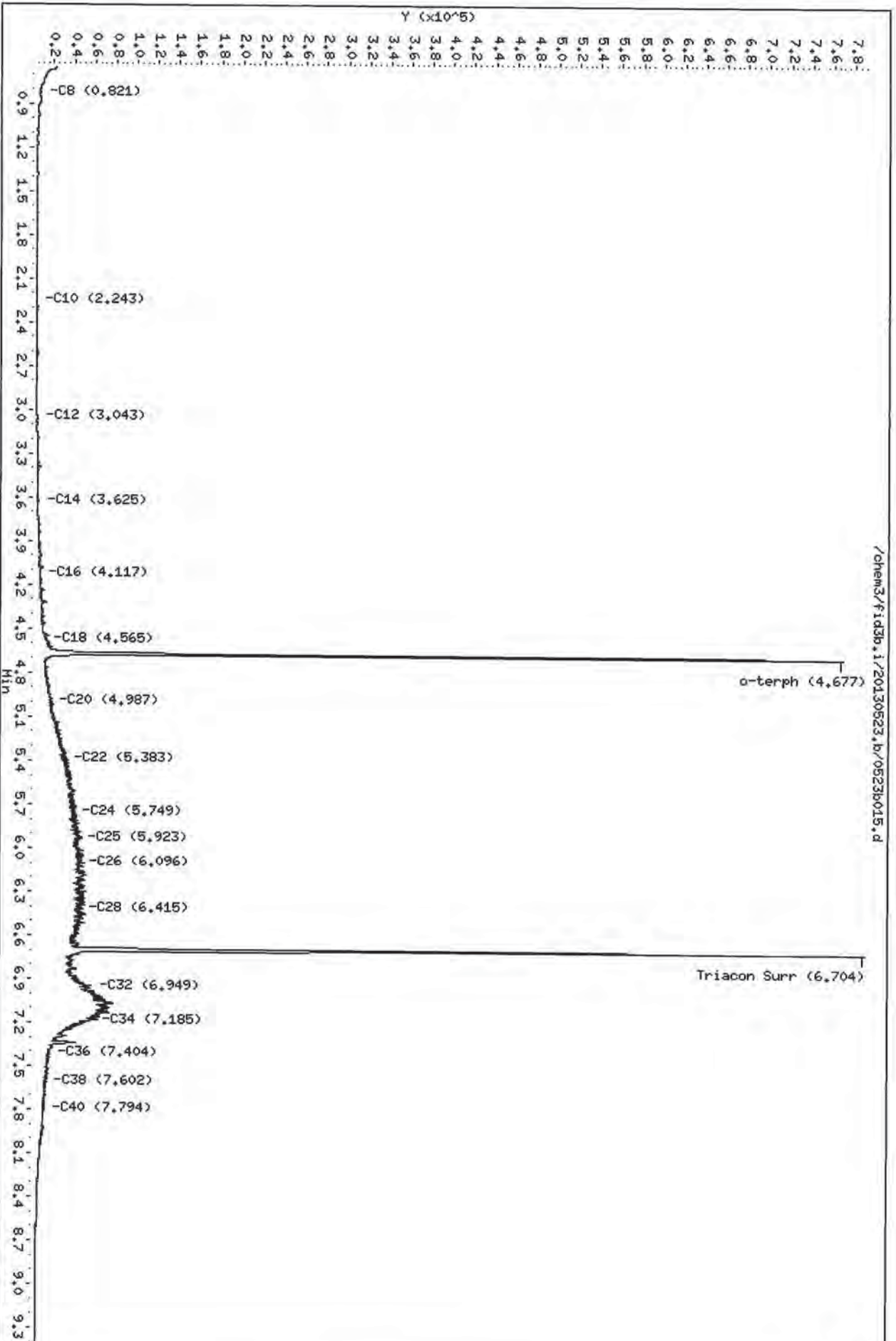
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Sample Info: MQ46H

Column phase: RTX-1

Instrument: fid3b,1

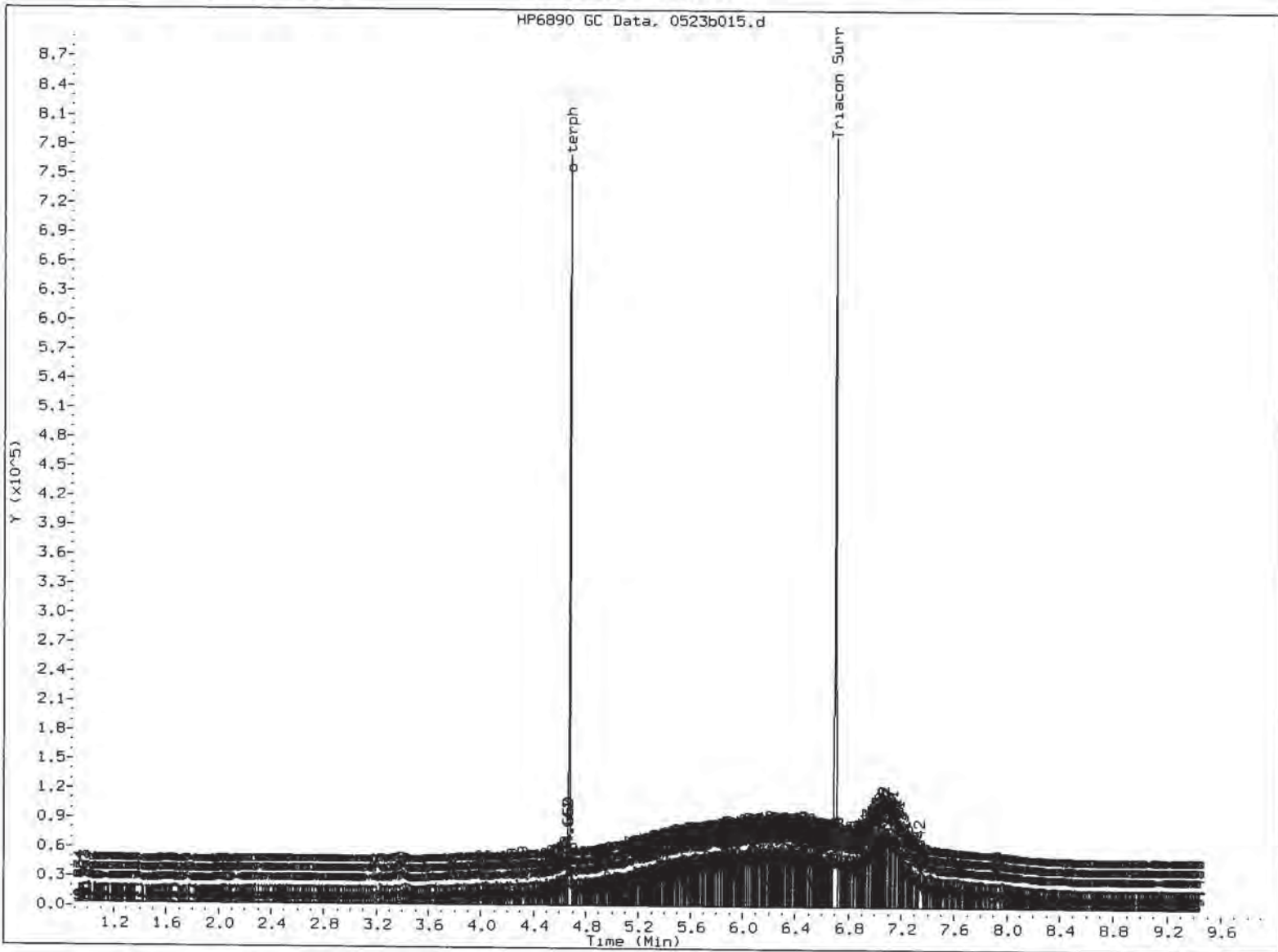
Operator: JM
Column diameter: 0.25

Page 1



/chem3/fid3b,1/20130523,b/0523b015.d

JM
5/24/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b016.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46I
Client ID:
Injection: 23-MAY-2013 13:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		89562	7
C8	0.821	0.002	3434	3545	WATPHD (C12-C24)		2574643	248.58 ✓
C10	2.234	-0.005	582	192	WATPHM (C24-C38)		6801667	688.92 ✓
C12	3.046	0.003	933	358	AK102 (C10-C25)		2843855	230.15 M
C14	3.625	0.001	2035	3396	AK103 (C25-C36)		6097406	857.76 M
C16	4.120	0.001	2550	2287				
C18	4.567	0.001	10022	2285				
C20	4.986	0.000	20631	7341				
C22	5.383	0.003	41136	13662	MSPIRIT (Tol-C12)		89562	6.52
C24	5.744	-0.005	61322	34926				
C25	5.922	0.000	63779	14779				
C26	6.103	0.004	69565	19154				
C28	6.410	-0.002	79735	44527				
C32	6.955	0.001	76365	59288				
C34	7.189	0.003	68523	30929				
Filter Peak	----							
C36	7.401	-0.002	45156	21739				
o-terph	4.676	0.004	720741	426967	JET-A (C10-C18)		252844	23.36
Triacon Surr	6.705	-0.002	649973	478730				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	426967	31.7	70.5 ✓
Triacontane	478730	36.7	81.5

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.1/20130523.b/0523b016.d
Date: 23-MAY-2013 13:02

Client ID:

Sample Info: MQ461

Column phase: RTX-1

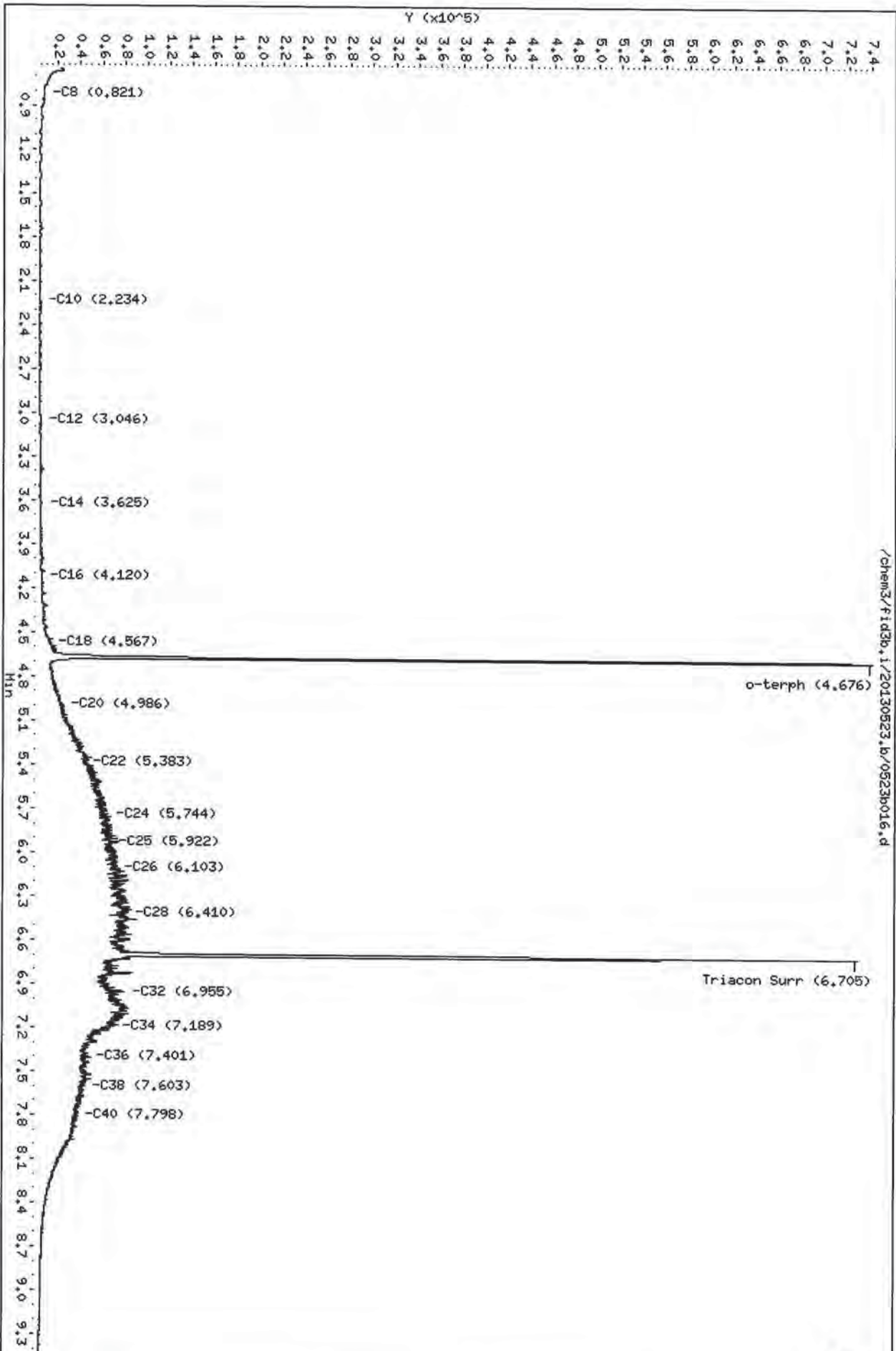
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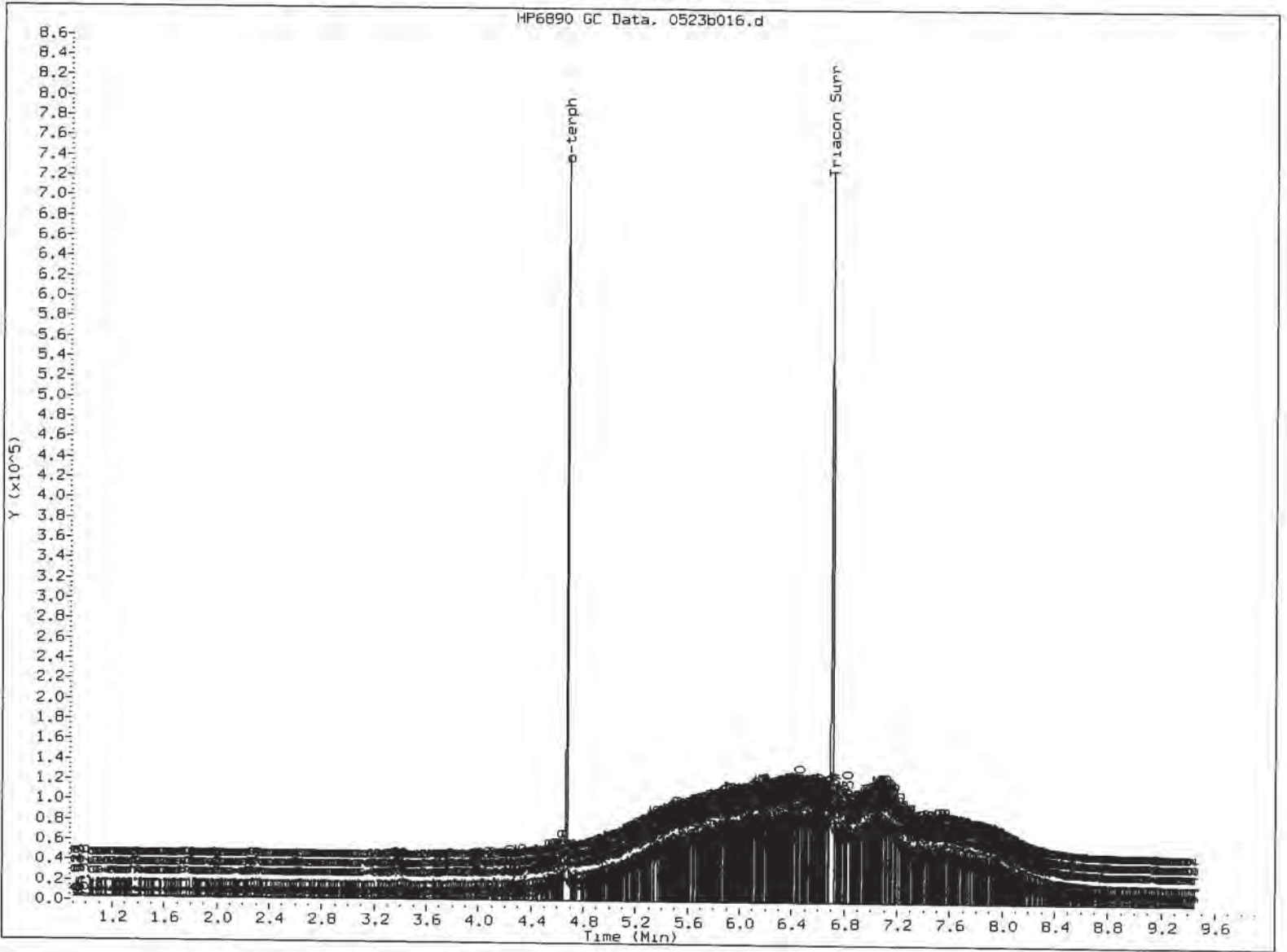
Operator: JM

Column diameter: 0.25

JW
5/24/13

Page 1





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b017.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46J
Client ID:
Injection: 23-MAY-2013 13:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		130004	10
C8	0.824	0.005	3639	4866	WATPHD (C12-C24)		2055753	198.48
C10	2.246	0.007	1211	1181	WATPHM (C24-C38)		5337012	540.57
C12	3.047	0.003	1718	1030	AK102 (C10-C25)		2283234	184.78 M
C14	3.627	0.004	2751	3601	AK103 (C25-C36)		4731228	665.57 M
C16	4.121	0.002	3888	3237				
C18	4.568	0.001	12127	5843				
C20	4.988	0.003	16372	2877				
C22	5.377	-0.003	32304	21647	MSPIRIT (Tol-C12)		130004	9.46
C24	5.750	0.002	42644	10046				
C25	5.921	0.000	47946	14967				
C26	6.096	-0.003	55831	30169				
C28	6.412	0.001	63367	41506				
C32	6.950	-0.004	58772	30553				
C34	7.186	-0.001	49271	15205				
Filter Peak	----							
C36	7.400	-0.002	40315	31335				
o-terph	4.677	0.005	799716	431130	JET-A (C10-C18)		324932	30.02
Triacon Surr	6.705	-0.002	813357	481930				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	431130	32.1	71.2
Triacontane	481930	36.9	82.1

JW
5/21/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b017.d
Date: 23-MAY-2013 13:21

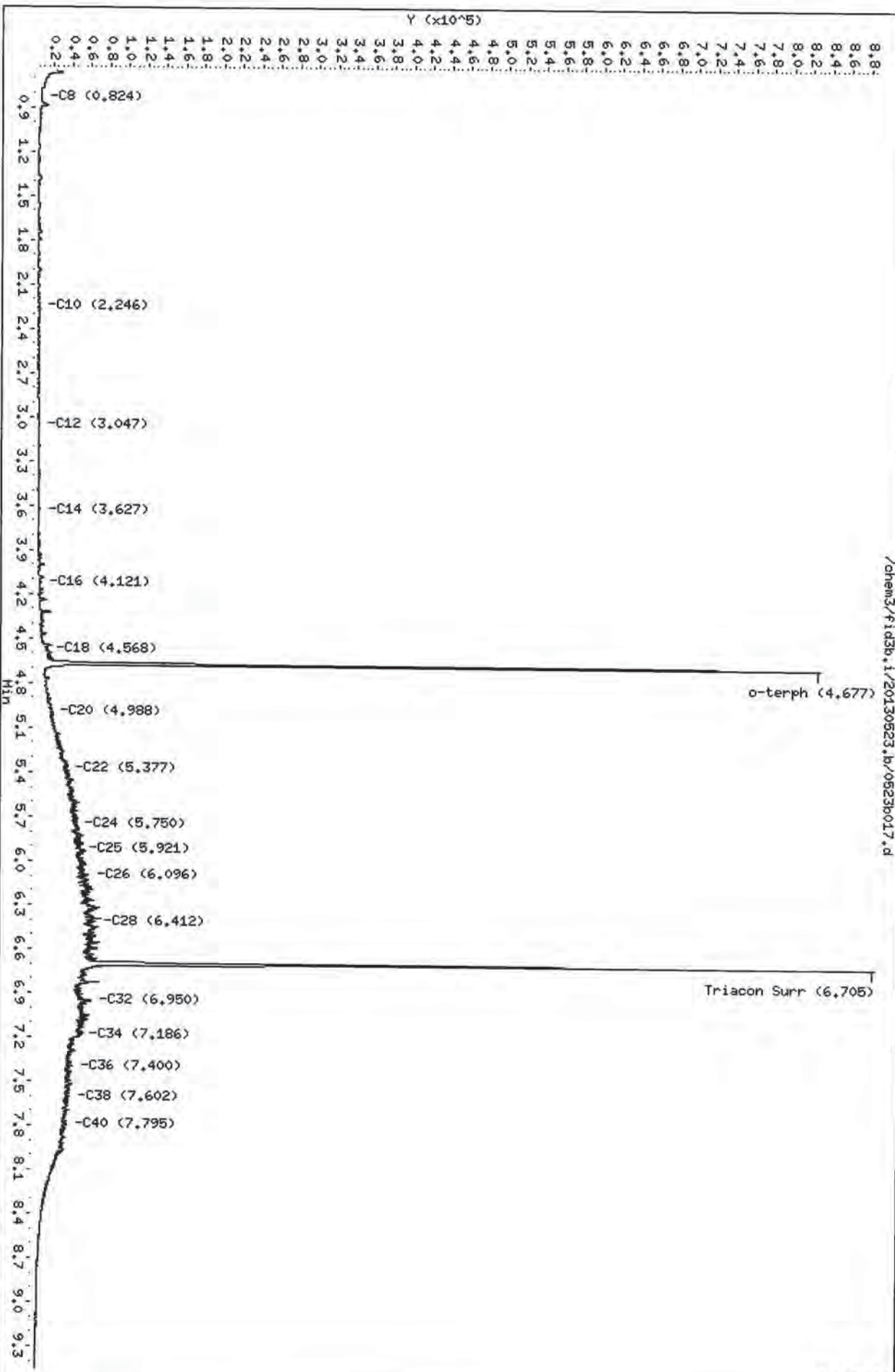
Client ID:
Sample Info: MQ46J

Column phase: RTX-1

Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

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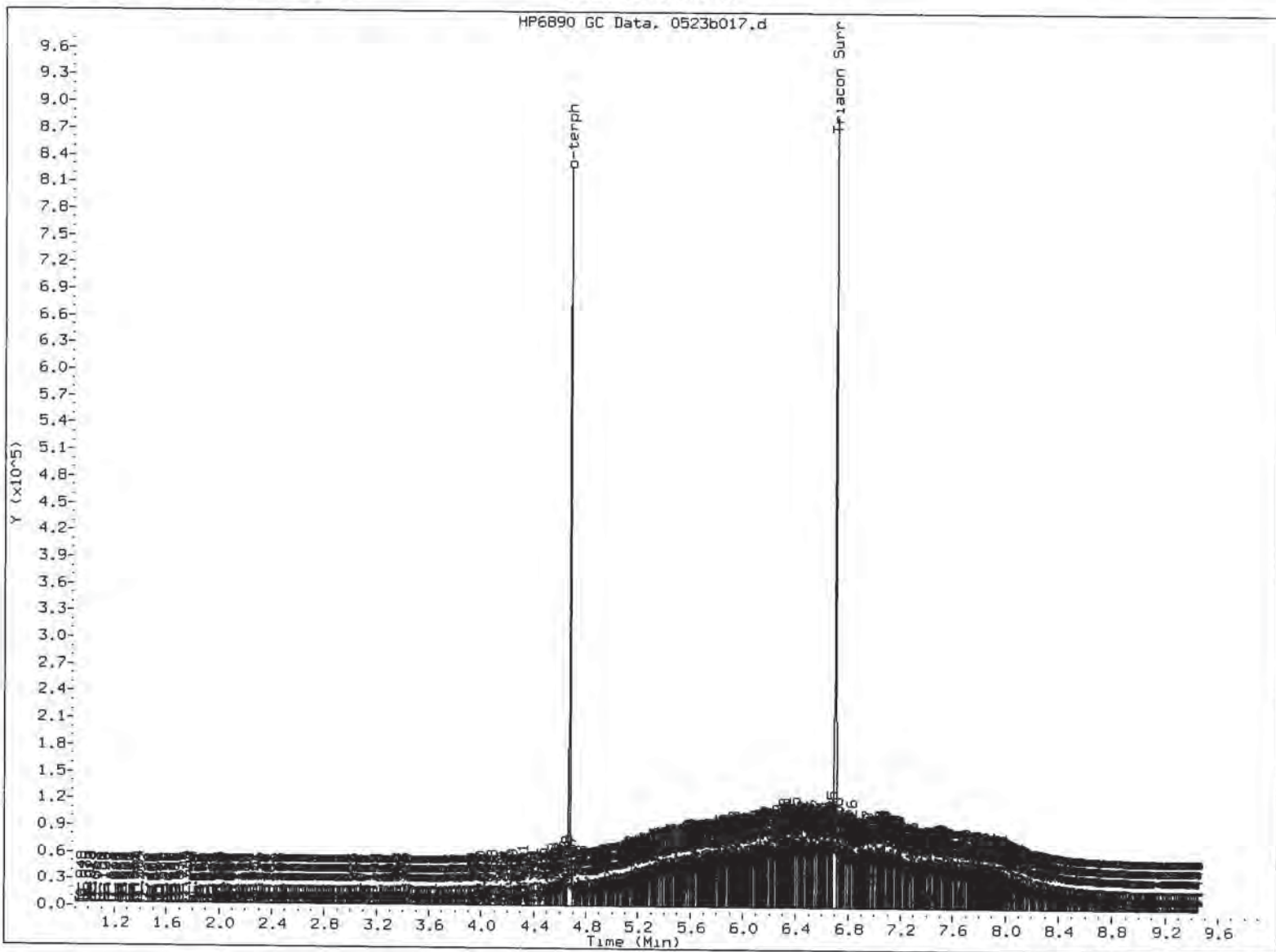


JW
5/29/13

FID:3B-2C/RTX-1 WQ46J

FID:3B SIGNAL

HP6890 GC Data, 0523b017.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b022.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46K
Client ID:
Injection: 23-MAY-2013 15:00
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		66955	5
C8	0.826	0.007	3921	9832	WATPHD (C12-C24)		5716075	551.88 ✓
C10	2.242	0.003	458	122	WATPHM (C24-C38)		13349183	1352.11 ✓
C12	3.044	0.001	374	239	AK102 (C10-C25)		6327174	512.04 M
C14	3.620	-0.004	610	83	AK103 (C25-C36)		12281357	1727.70 M
C16	4.117	-0.001	1788	550				
C18	4.565	-0.002	10938	4003				
C20	4.983	-0.002	56212	20935				
C22	5.383	0.003	94785	14947	MSPIRIT (Tol-C12)		66955	4.87
C24	5.748	0.000	133965	42048				
C25	5.921	0.000	151936	50188				
C26	6.101	0.002	185423	76854				
C28	6.410	-0.001	190587	33758				
C32	6.954	0.000	104086	22358				
C34	7.187	0.000	83013	23613				
Filter Peak	----							
C36	7.402	-0.001	51263	22489				
o-terph	4.673	0.001	150430	81864	JET-A (C10-C18)		229088	21.16
Triacon Surr	6.702	-0.004	167509	79913				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	81864	6.1	67.6 ✓
Triacotane	79913	6.1	68.1

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/05230022.d
Date: 23-MAY-2013 15:00

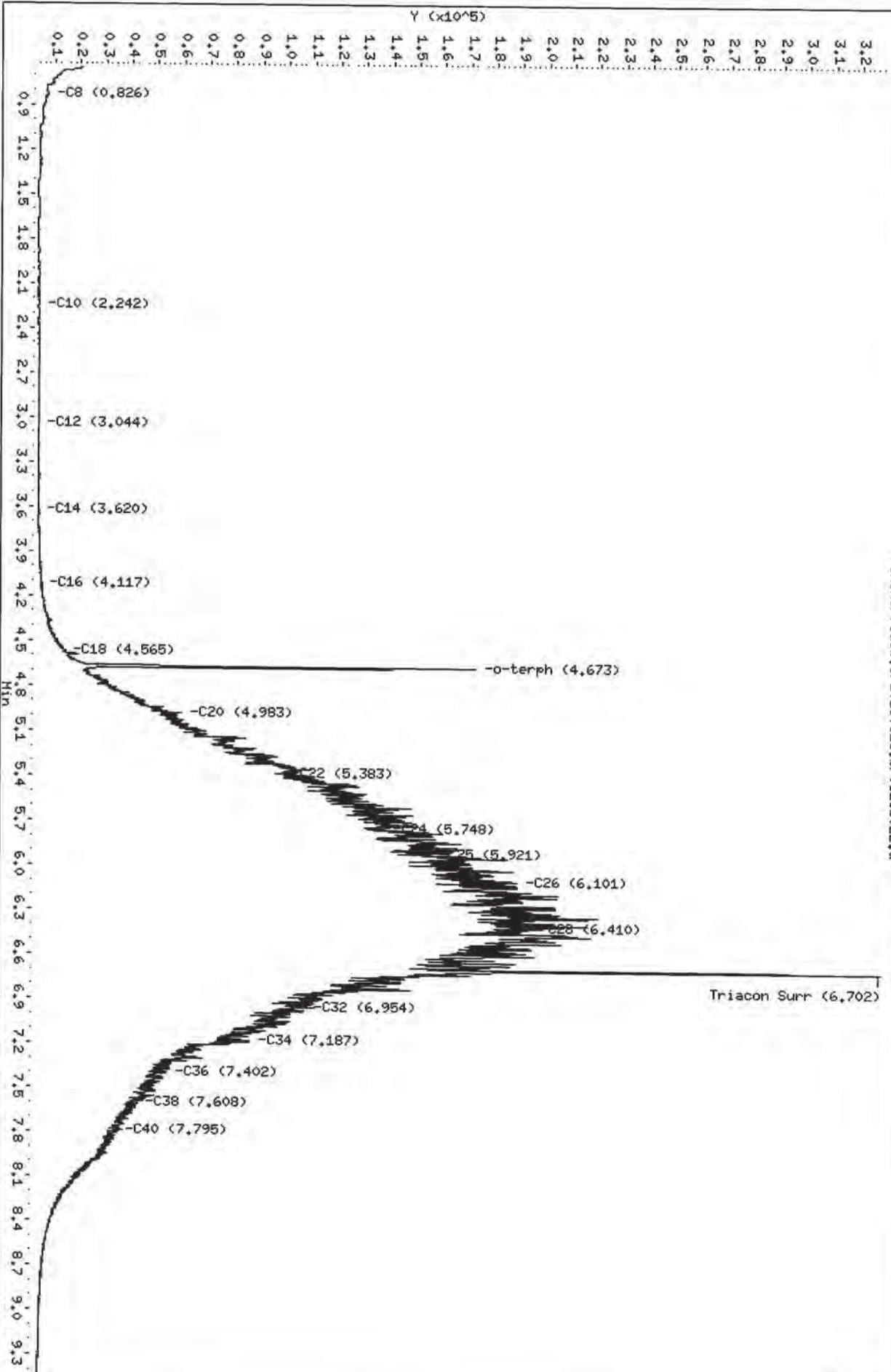
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Column phase: RTX-1

Instrument: fid3b.i

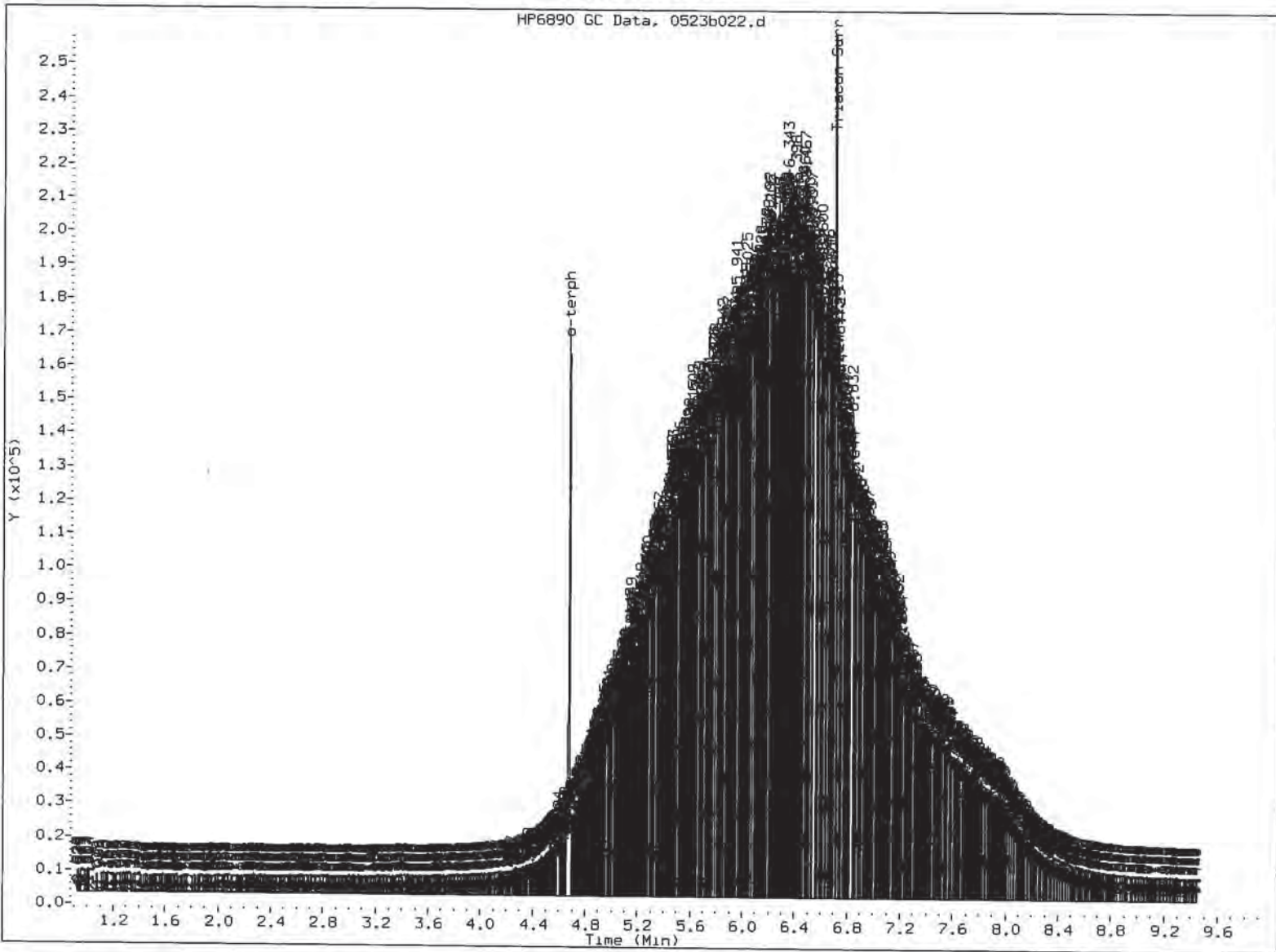
Operator: JM
Column diameter: 0.25

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05230022.d

JW
5/24/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b023.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46L
Client ID:
Injection: 23-MAY-2013 15:19
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		86809	6
C8	0.822	0.003	4494	3393	WATPHD (C12-C24)		185154	17.88
C10	2.230	-0.010	512	397	WATPHM (C24-C38)		356600	36.12
C12	3.039	-0.005	351	270	AK102 (C10-C25)		213613	17.29
C14	3.627	0.003	596	208	AK103 (C25-C36)		309791	43.58
C16	4.119	0.000	694	405				
C18	4.572	0.005	1663	1588				
C20	4.984	-0.001	1227	389				
C22	5.375	-0.006	2473	1437	MSPiRIT (Tol-C12)		86809	6.32
C24	5.749	0.000	2633	1860				
C25	5.921	-0.001	2497	998				
C26	6.103	0.003	2812	661				
C28	6.414	0.002	4659	1596				
C32	6.955	0.001	7132	4495				
C34	7.189	0.002	3388	1263				
Filter Peak	----							
C36	7.402	-0.001	3139	558				
o-terph	4.678	0.005	762808	467286	JET-A (C10-C18)		83275	7.69
Triacon Surr	6.702	-0.005	828093	503414				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	467286	34.7	77.2
Triacontane	503414	38.6	85.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

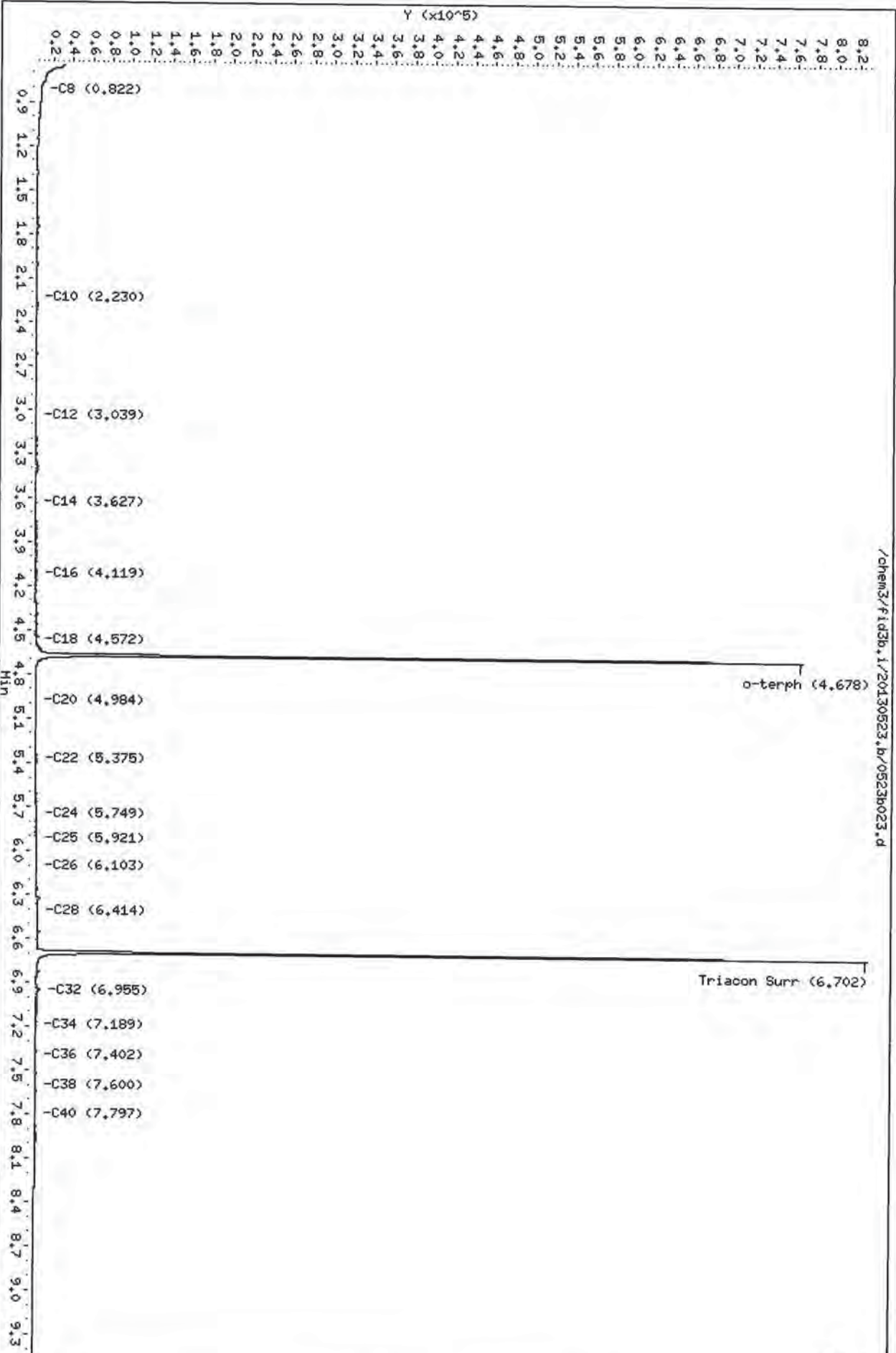
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Date: 23-MAY-2013 15:19

Client ID:
Sample Info: WQ46L

Column phase: RTX-1

Instrument: fid3b,1

Operator: JM
Column diameter: 0.25



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Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b024.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46M
Client ID:
Injection: 23-MAY-2013 15:39
Dilution Factor: 1

FID:3B RESULTS

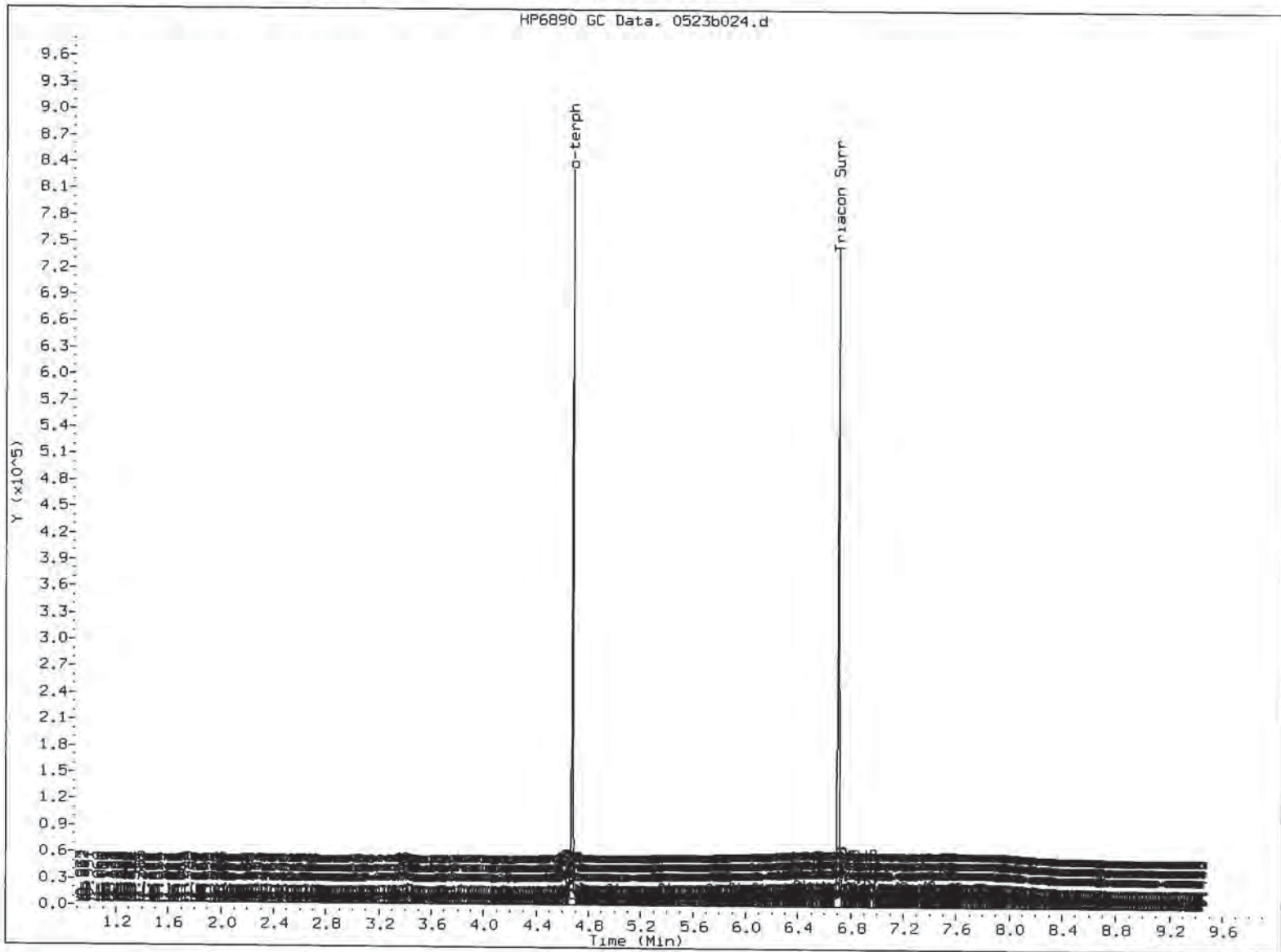
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		79097	6
C8	0.812	-0.007	4632	4227	WATPHD (C12-C24)		276787	26.72 ✓
C10	2.244	0.005	644	562	WATPHM (C24-C38)		709653	71.88 ✓
C12	3.048	0.005	281	100	AK102 (C10-C25)		313713	25.39 M
C14	3.620	-0.004	369	70	AK103 (C25-C36)		607544	85.47 M
C16	4.118	-0.001	608	164				
C18	4.568	0.002	1899	751				
C20	4.983	-0.002	2092	1324				
C22	5.382	0.002	2864	453	MSPIRIT (Tol-C12)		79097	5.76
C24	5.748	0.000	3831	1053				
C25	5.921	-0.001	4444	1090				
C26	6.098	-0.001	5079	3329				
C28	6.411	0.000	7626	3584				
C32	6.952	-0.002	9962	5387				
C34	7.191	0.004	6892	4201				
Filter Peak	----							
C36	7.404	0.002	7647	3830				
o-terph	4.677	0.005	823093	470117	JET-A (C10-C18)		87919	8.12
Triacon Surr	6.704	-0.002	731534	500103				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	470117	35.0	77.7 ✓
Triacontane	500103	38.3	85.2

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 6/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b025.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46N
Client ID:
Injection: 23-MAY-2013 15:58
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		88699	7
C8	0.817	-0.002	4585	3808	WATPHD (C12-C24)		487823	47.10 ✓
C10	2.237	-0.002	471	183	WATPHM (C24-C38)		1525843	154.55 ✓
C12	3.044	0.000	591	307	AK102 (C10-C25)		531826	43.04 M
C14	3.627	0.003	1622	1384	AK103 (C25-C36)		1298441	182.66 M
C16	4.122	0.003	2565	2707				
C18	4.567	0.001	4219	1603				
C20	4.983	-0.002	3234	1318				
C22	5.382	0.001	4484	787	MSPiRIT (Tol-C12)		88699	6.46
C24	5.749	0.001	5912	2551				
C25	5.924	0.002	7339	1722				
C26	6.102	0.003	8514	2307				
C28	6.412	0.001	15954	12668				
C32	6.952	-0.002	23407	21485				
C34	7.191	0.004	15542	5466				
Filter Peak	----							
C36	7.402	-0.001	18214	5886				
o-terph	4.677	0.005	914503	446541	JET-A (C10-C18)		187865	17.36
Triacon Surr	6.703	-0.004	749013	486093				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	446541	33.2	73.8 ✓
Triacantane	486093	37.3	82.8

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b025.d

Date: 23-May-2013 15:58

Client ID:

Sample Info: M045N

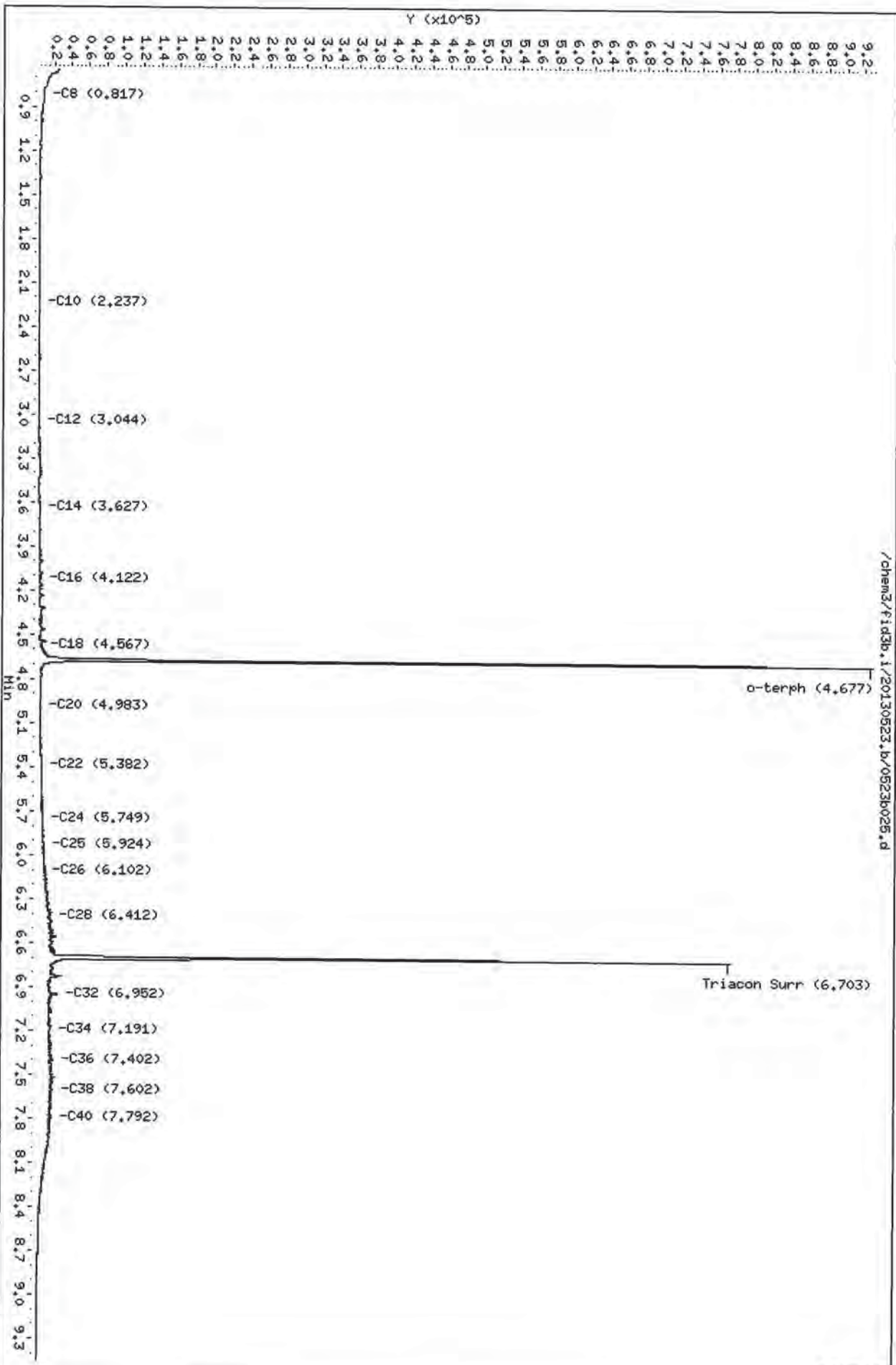
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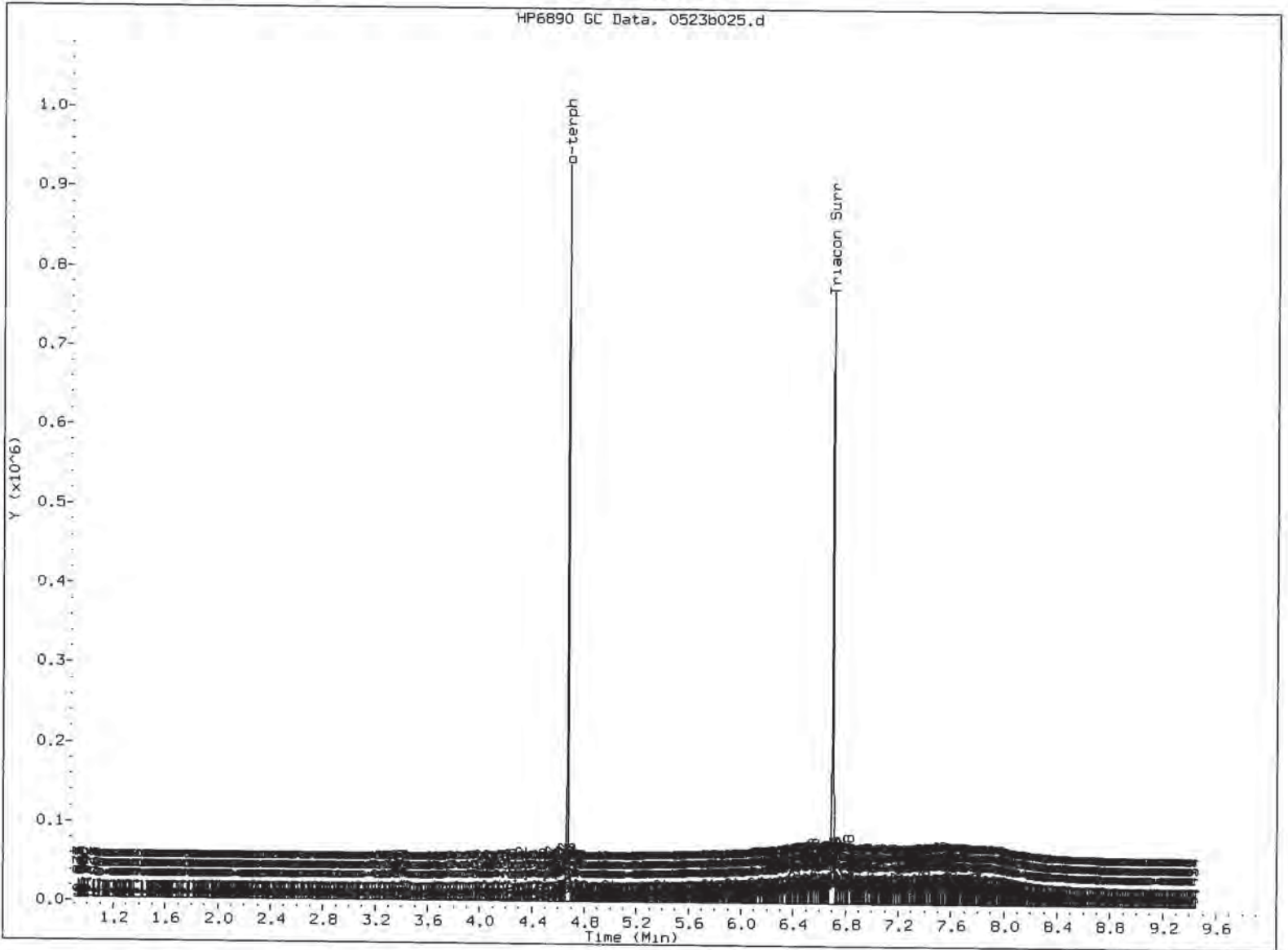
Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JD

Date: 5/24/15

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b036.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ460
Client ID:
Injection: 23-MAY-2013 19:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		109107	8
C8	0.828	0.009	4632	4796	WATPHD (C12-C24)		8217704	793.41 ✓
C10	2.239	0.000	886	187	WATPHM (C24-C38)		25675603	2600.62 ✓
C12	3.048	0.004	2282	3025	AK102 (C10-C25)		9054068	732.72 M
C14	3.625	0.001	5433	6089	AK103 (C25-C36)		22384147	3148.93 M
C16	4.121	0.002	7216	3635				
C18	4.564	-0.002	25096	24056				
C20	4.983	-0.002	64901	30038				
C22	5.377	-0.003	147377	77198	MSPIRIT (Tol-C12)		109107	7.94
C24	5.747	-0.002	191324	78897				
C25	5.919	-0.003	209342	117006				
C26	6.098	-0.001	222882	111059				
C28	6.411	0.000	287003	179796				
C32	6.955	0.002	242814	75439				
C34	7.187	0.000	242253	69822				
Filter Peak	----							
C36	7.402	0.000	216555	65944				
o-terph	4.677	0.005	617501	331663	JET-A (C10-C18)		670599	61.95
Triacon Surr	6.714	0.007	662810	420458				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	331663	24.7	54.8 ✓
Triacontane	420458	32.2	71.6

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

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Date: 23-MAY-2013 19:32

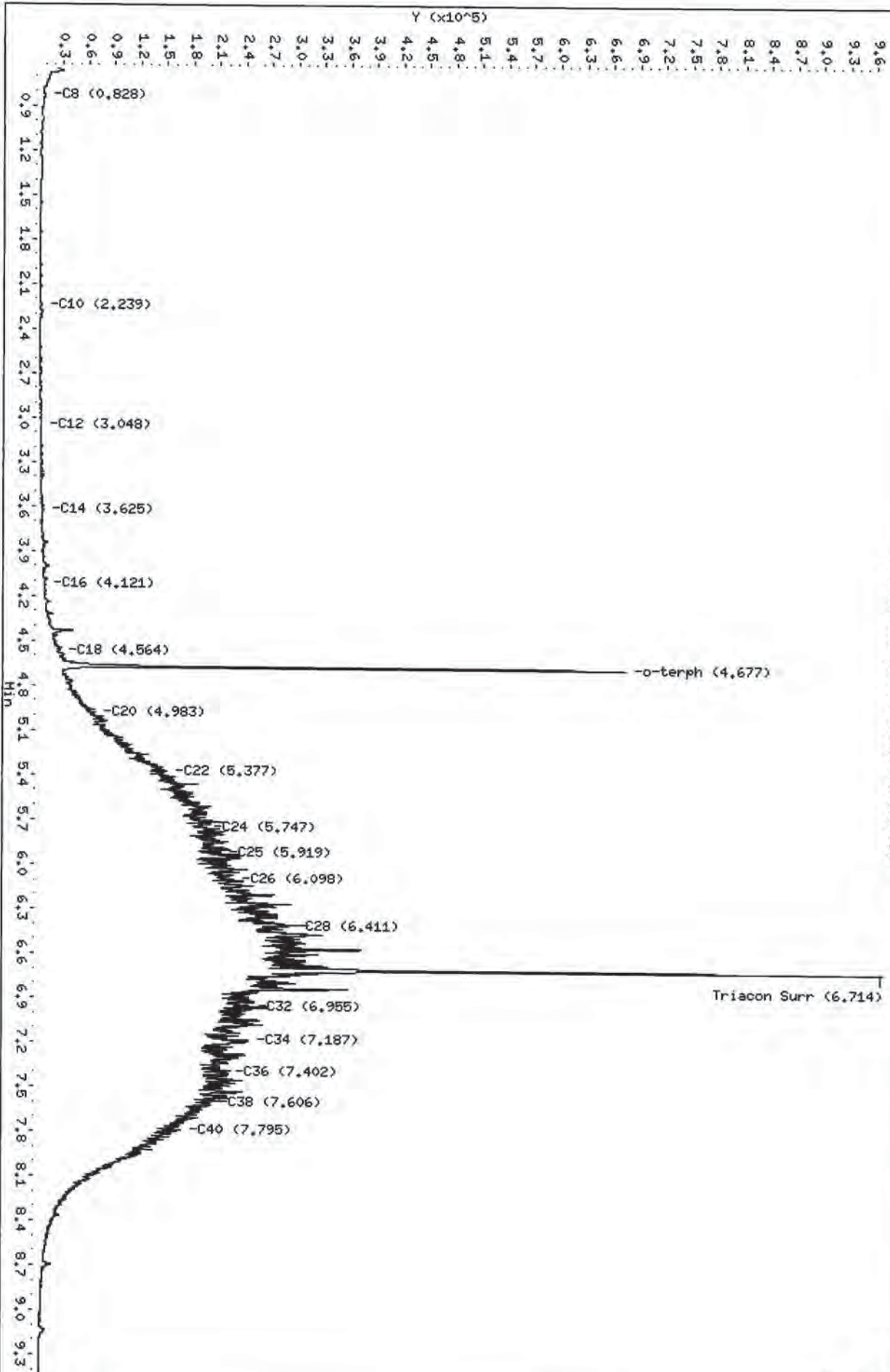
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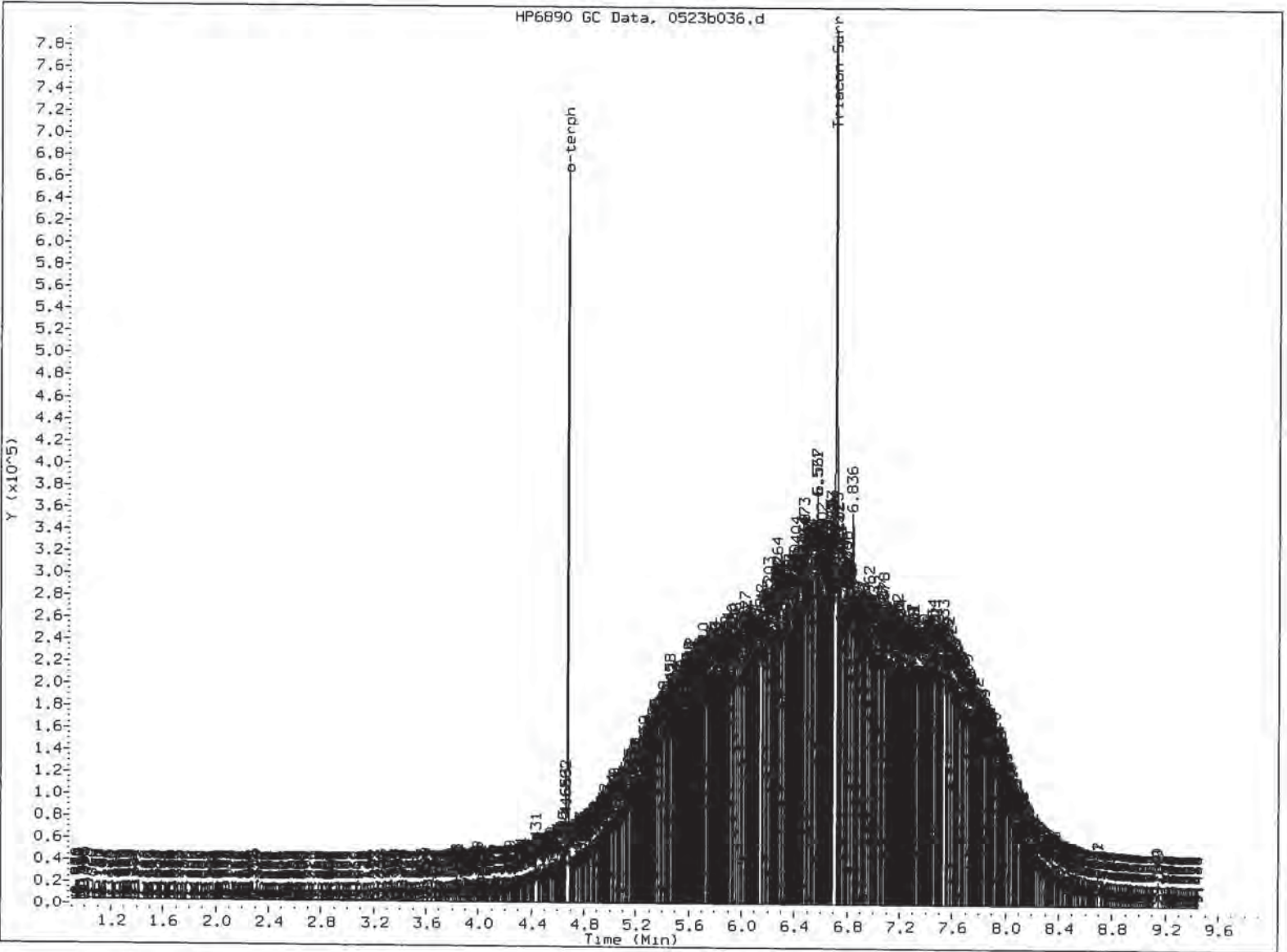
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Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: TD

Date: 5/24/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130524.b/0524b007.d
Method: /chem3/fid3b.i/20130524.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46P
Client ID: A2-F16-S-6
Injection: 24-MAY-2013 12:51
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		30177	2
C8	0.817	0.000	2315	369	WATPHD (C12-C24)		1974904	190.68
C10	2.245	0.002	140	97	WATPHM (C24-C38)		10583961	1072.02
C12	3.047	0.001	161	36	AK102 (C10-C25)		2355084	190.59 M
C14	3.626	0.003	246	81	AK103 (C25-C36)		9516445	1338.74 M
C16	4.115	-0.004	1213	624				
C18	4.568	0.002	4543	1593				
C20	4.985	-0.002	11806	1853				
C22	5.378	-0.003	27938	15665	MSPIRIT (Tol-C12)		30177	2.20
C24	5.746	-0.003	72522	22350				
C25	5.928	0.004	125814	98908				
C26	6.099	0.001	129301	39365				
C28	6.409	-0.002	129899	62762				
C32	6.952	-0.002	90140	52783				
C34	7.187	0.001	110883	71540				
Filter Peak	----							
C36	7.405	0.001	72804	45319				
o-terph	----				JET-A (C10-C18)		111863	10.33
Triacon Surr	----							

Range Times: NW Diesel(3.096 - 5.798) NW Gas(0.594 - 3.096) NW M.Oil(5.798 - 7.656)
AK102(2.193 - 5.873) AK103(5.873 - 7.454) Jet A(2.193 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacotane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

JW
5/24/13

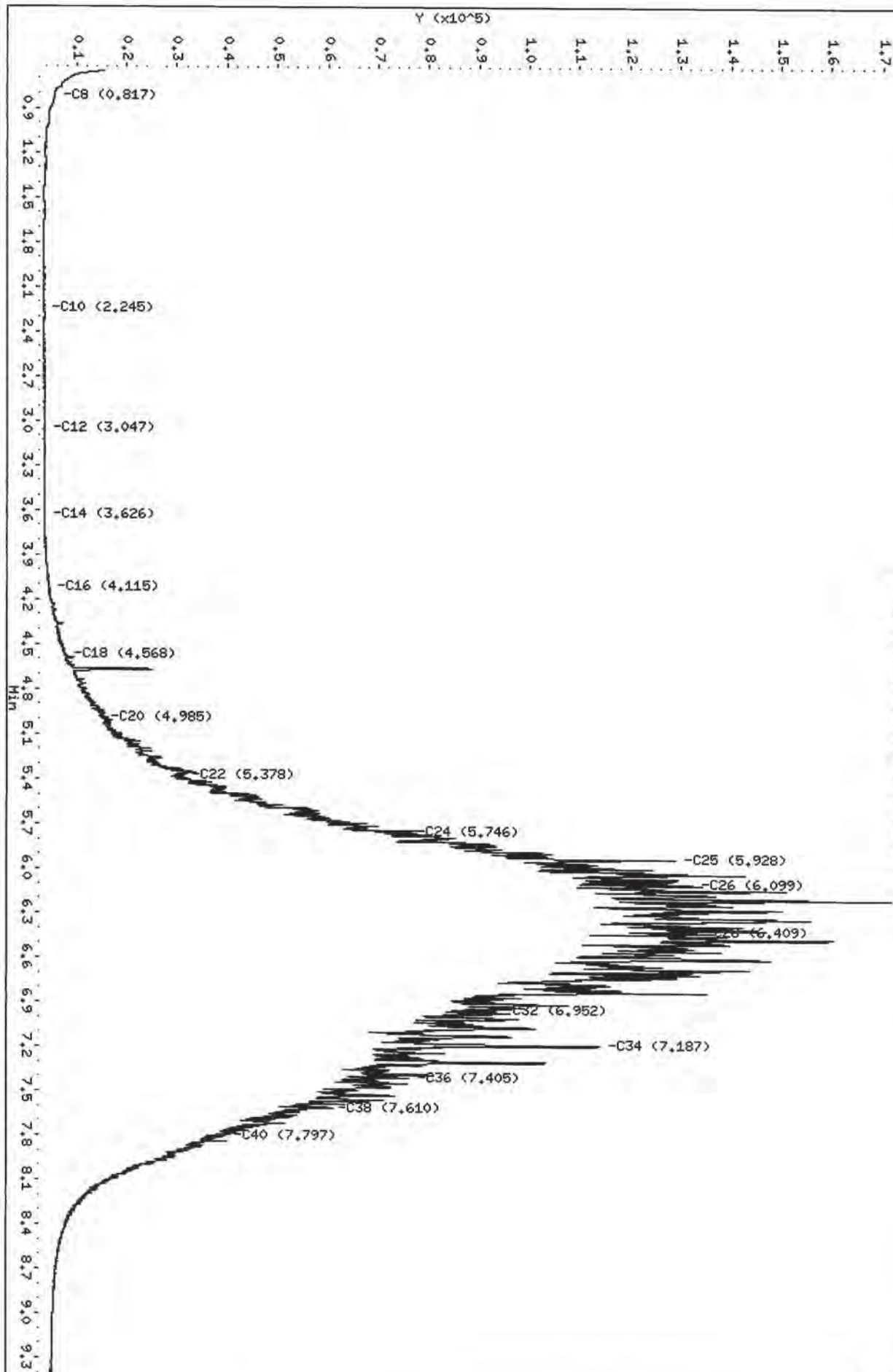
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Sample Info: MQ46P.50

Column phase: RTX-1

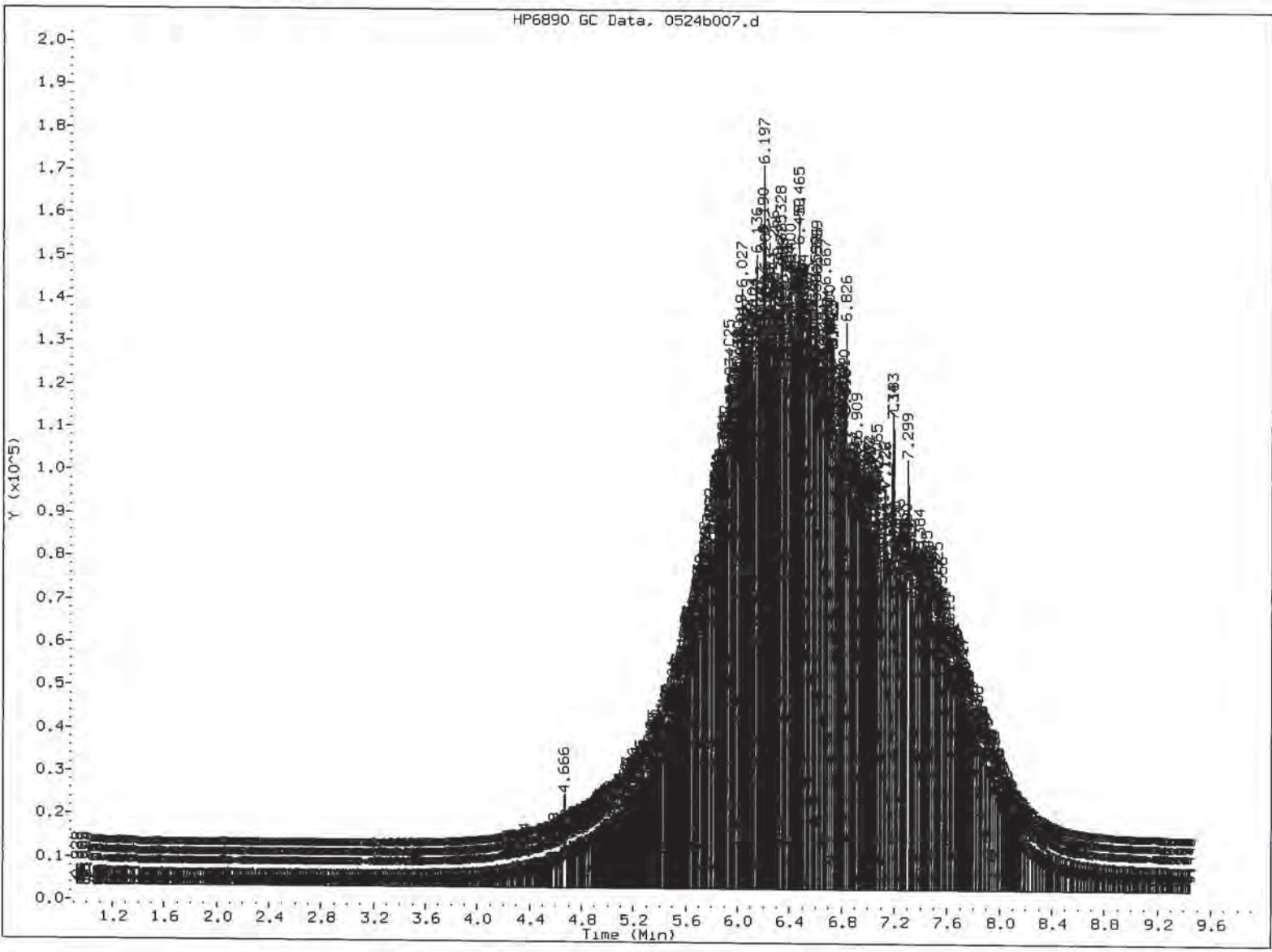
Instrument: fid3b.1
Operator: JM
Column diameter: 0.25

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JM
5/24/13



130524



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate - removed due to dilution factor

Analyst: jd Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b028.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46Q
Client ID:
Injection: 23-MAY-2013 16:56
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		95391	7
C8	0.838	0.019	4467	9464	WATPHD (C12-C24)		11478830	1108.27 ✓
C10	2.234	-0.006	795	375	WATPHM (C24-C38)		22121000	2240.58 ✓
C12	3.048	0.004	1697	2444	AK102 (C10-C25)		12663976	1024.86 M
C14	3.625	0.002	5818	6130	AK103 (C25-C36)		19902660	2799.85 M
C16	4.121	0.002	13017	3540				
C18	4.567	0.001	38957	7715				
C20	4.984	-0.001	94385	36787				
C22	5.377	-0.003	201768	105786	MSPIRIT (Tol-C12)		95391	6.94
C24	5.749	0.000	278238	117775				
C25	5.921	-0.001	277913	126207				
C26	6.101	0.002	268231	72606				
C28	6.414	0.003	276977	53615				
C32	6.957	0.003	180402	142906				
C34	7.190	0.003	153416	41314				
Filter Peak	----							
C36	7.407	0.004	103443	41648				
o-terph	4.680	0.008	677084	423900	JET-A (C10-C18)		1063218	98.23
Triacon Surr	6.711	0.005	749647	484363				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	423900	31.5	70.0 ✓
Triacontane	484363	37.1	82.5

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b028.d
Date: 23-MAY-2013 16:56

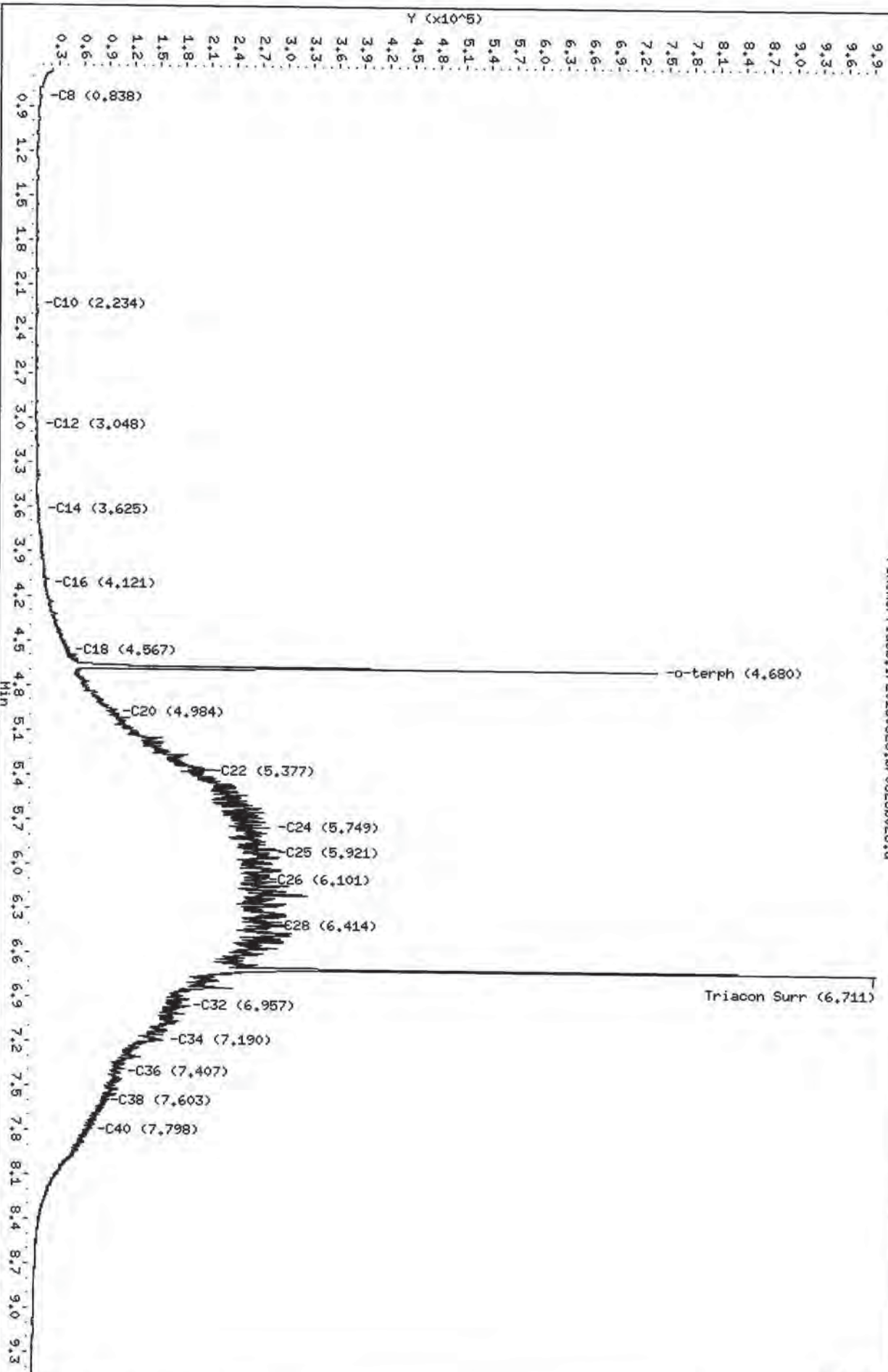
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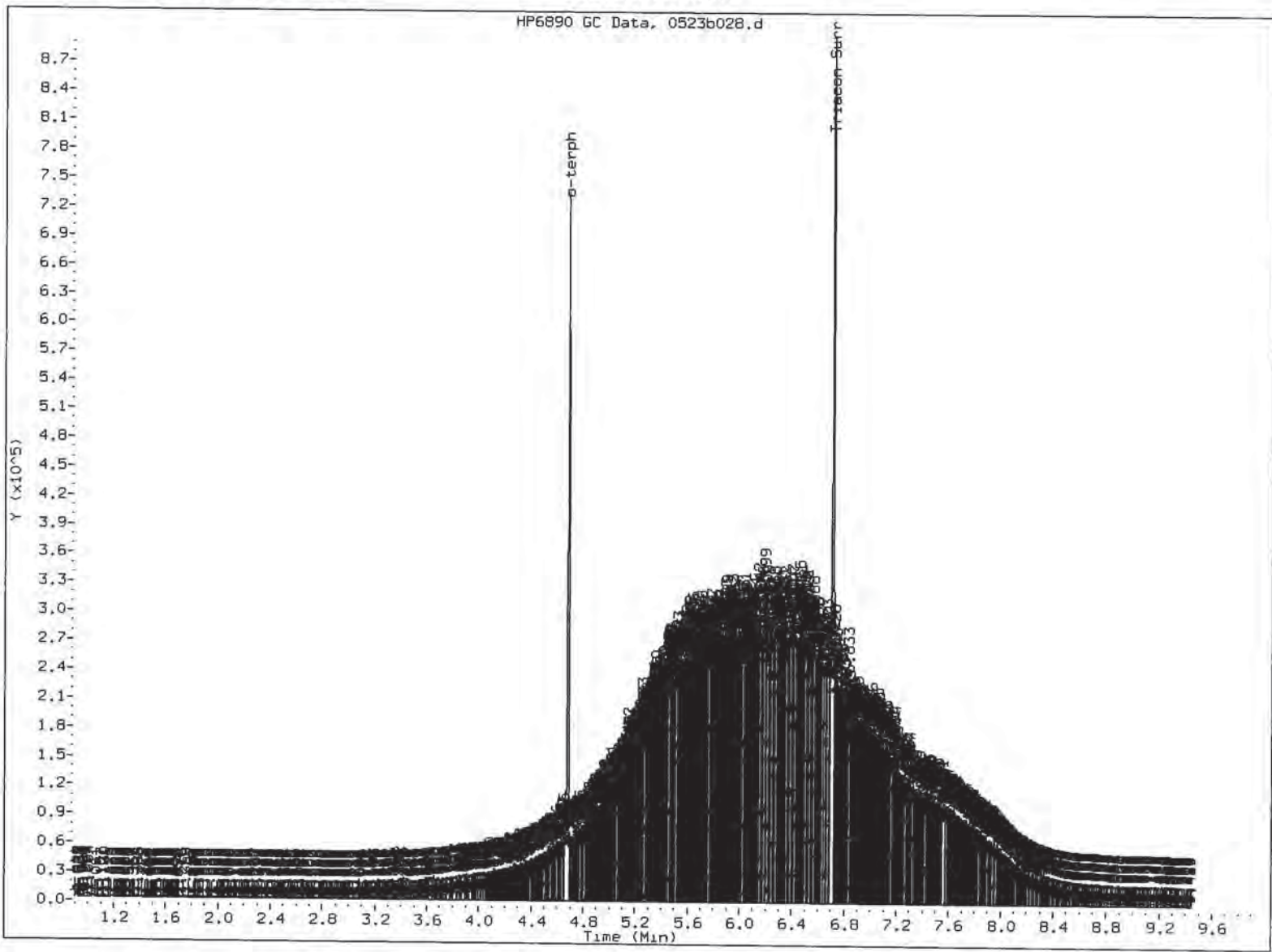
Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

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05/24/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b029.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46R
Client ID:
Injection: 23-MAY-2013 17:16
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		57516	4
C8	0.816	-0.002	3681	5580	WATPHD (C12-C24)		1072004	103.50
C10	2.233	-0.006	319	322	WATPHM (C24-C38)		7756782	785.67
C12	3.034	-0.009	250	181	AK102 (C10-C25)		1205913	97.59 M
C14	3.622	-0.002	340	126	AK103 (C25-C36)		6481446	911.79 M
C16	4.120	0.001	1177	542				
C18	4.566	0.000	3749	1102				
C20	4.988	0.003	9115	4877				
C22	5.379	-0.001	18032	5768	MSPIRIT (Tol-C12)		57516	4.19
C24	5.749	0.001	24588	3837				
C25	5.919	-0.002	27833	3829				
C26	6.106	0.007	37563	22123				
C28	6.408	-0.003	66870	23049				
C32	6.952	-0.002	81999	44825				
C34	7.189	0.002	92294	64543				
Filter Peak	----							
C36	7.399	-0.004	101165	74868				
o-terph	4.671	-0.001	85307	38499	JET-A (C10-C18)		112695	10.41
Triacon Surr	6.700	-0.006	74766	34518				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	38499	2.9	63.6
Triacontane	34518	2.6	58.8

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

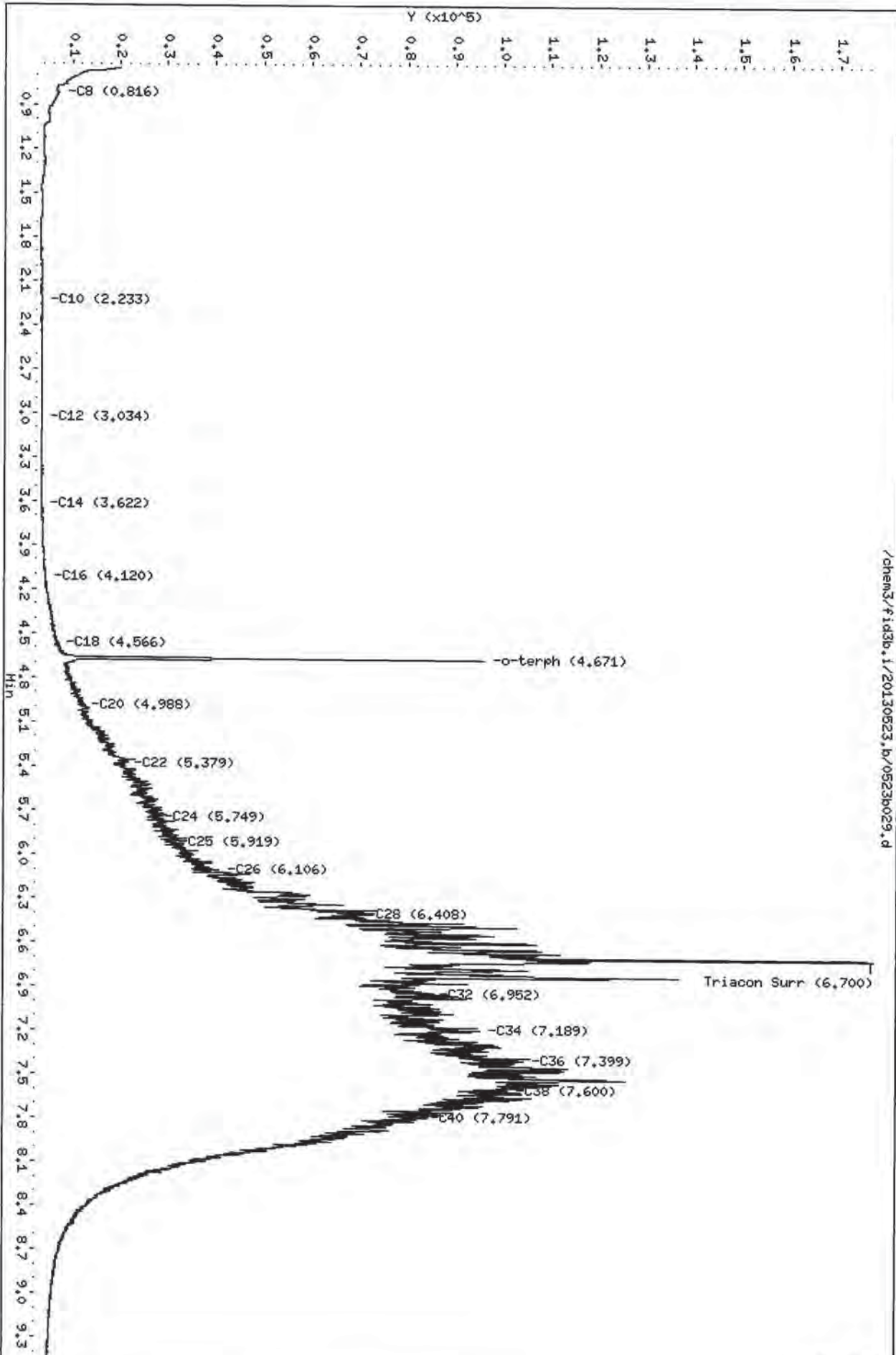
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Sample Info: WQ46R,10

Column phase: RTX-1

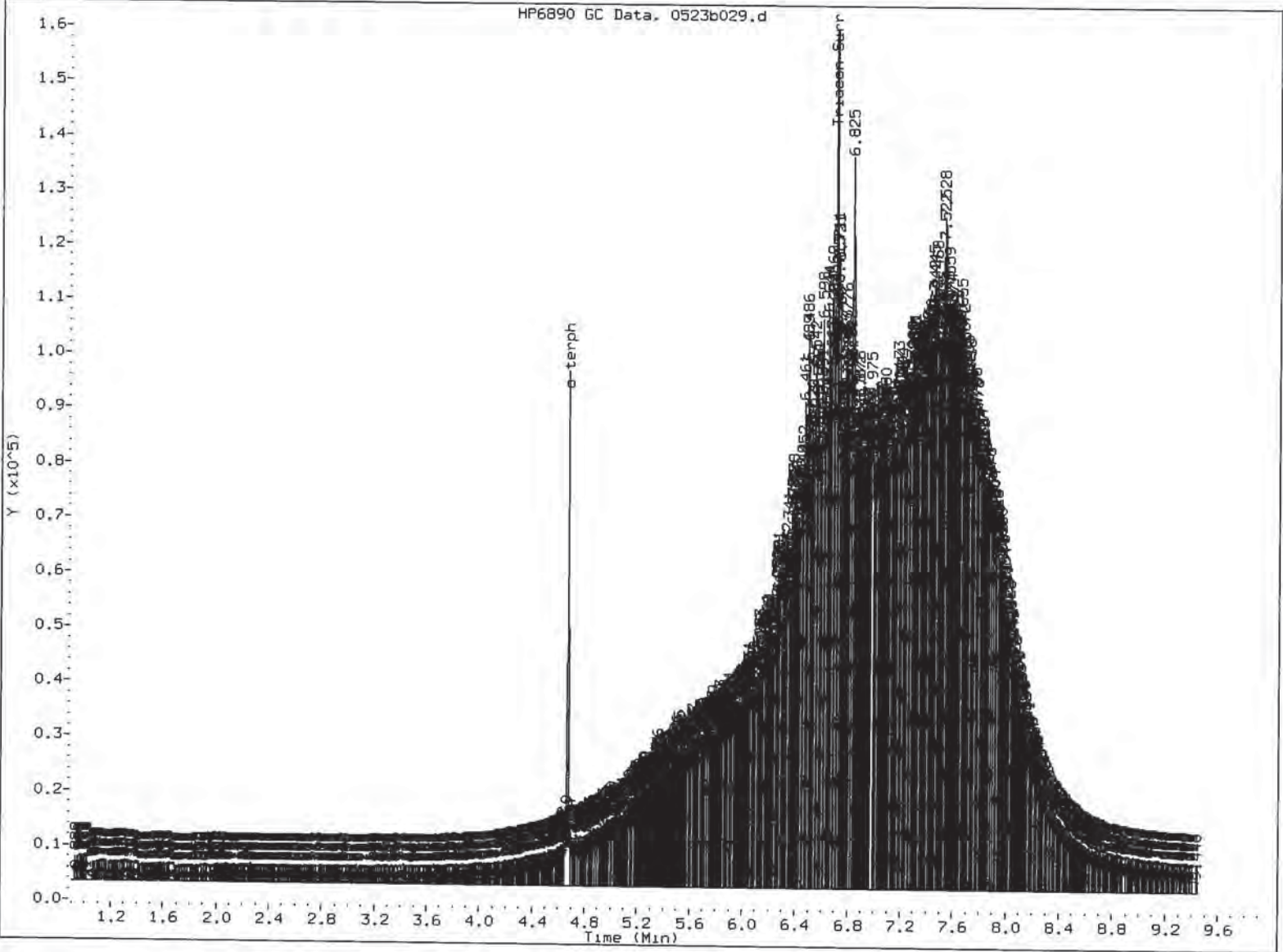
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Instrument: fid3b,1
Operator: JM
Column diameter: 0.25

JW
5/24/13



110116 : 00070



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/83

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130524.b/0524b008.d
Method: /chem3/fid3b.i/20130524.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46S
Client ID: A2-F19-S-6
Injection: 24-MAY-2013 13:10
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		58556	4
C8	0.813	-0.005	2403	3177	WATPHD (C12-C24)		8322670	803.55
C10	2.242	-0.002	315	291	WATPHM (C24-C38)		1560505	158.06
C12	3.050	0.004	2165	1443	AK102 (C10-C25)		8447814	683.66 M
C14	3.625	0.002	25403	17881	AK103 (C25-C36)		1309496	184.22 M
C16	4.118	-0.002	62551	19705				
C18	4.569	0.002	91614	28645				
C20	4.987	0.000	71637	16740				
C22	5.382	0.001	46898	7277	MSPiRIT (Tol-C12)		58556	4.26
C24	5.749	0.001	27312	20023				
C25	5.927	0.004	20252	6223				
C26	6.097	-0.002	16641	8540				
C28	6.411	-0.001	14256	3317				
C32	6.954	0.000	12805	4397				
C34	7.188	0.002	13906	11434				
Filter Peak	----							
C36	7.403	-0.001	13962	5397				
o-terph	4.672	-0.003	75301	34207	JET-A (C10-C18)		4169264	385.18
Triacon Surr	6.695	-0.009	72064	40922				

Range Times: NW Diesel(3.096 - 5.798) NW Gas(0.594 - 3.096) NW M.Oil(5.798 - 7.656)
AK102(2.193 - 5.873) AK103(5.873 - 7.454) Jet A(2.193 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	34207	2.5	56.5
Triacotane	40922	3.1	69.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.1/20130524.b/0524b008.d

Date: 24-MAY-2013 13:10

Client ID: A2-FI9-S-6

Sample Info: MQ46S.10

Column phase: RTX-1

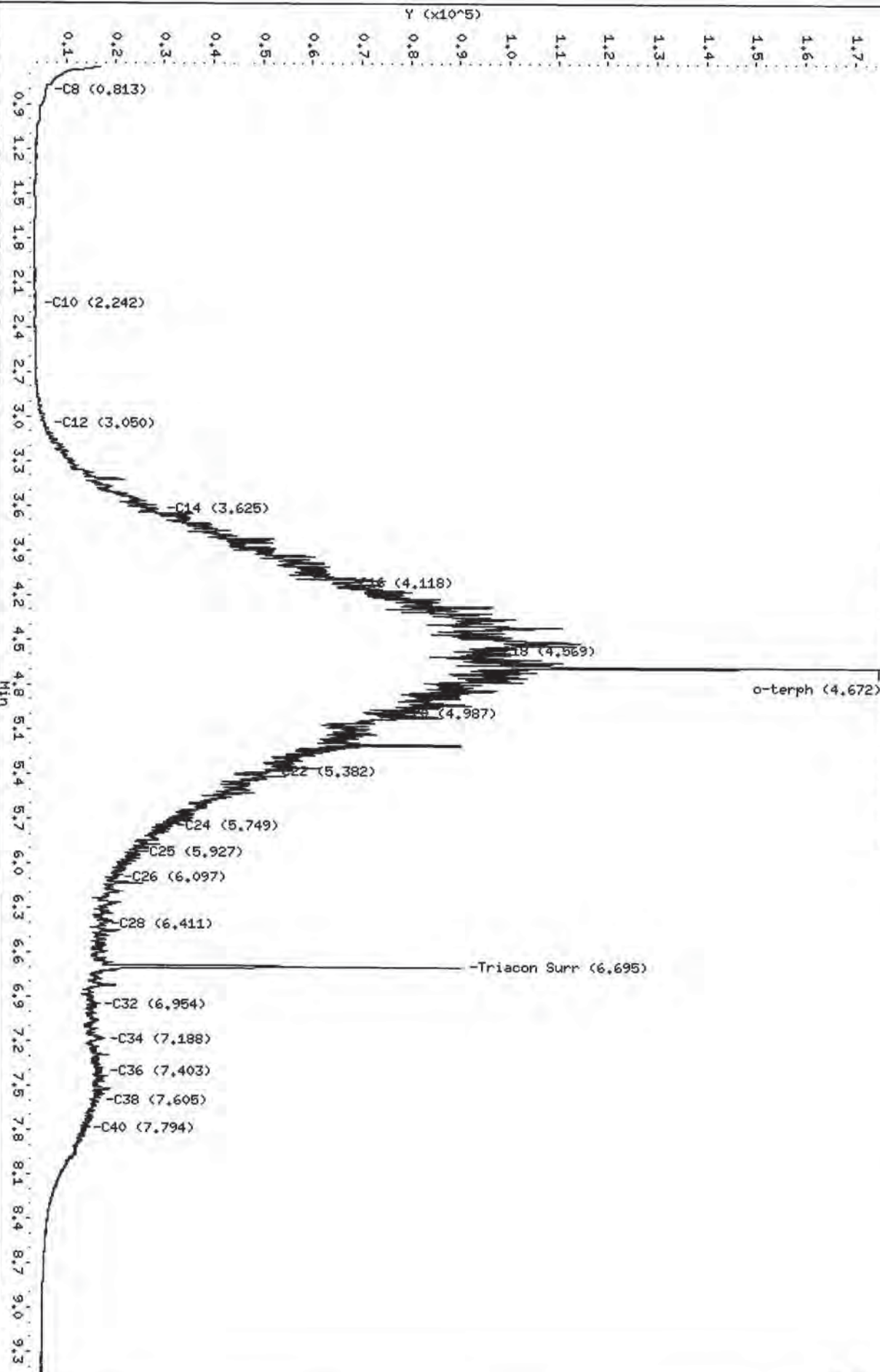
Instrument: fid3b.1

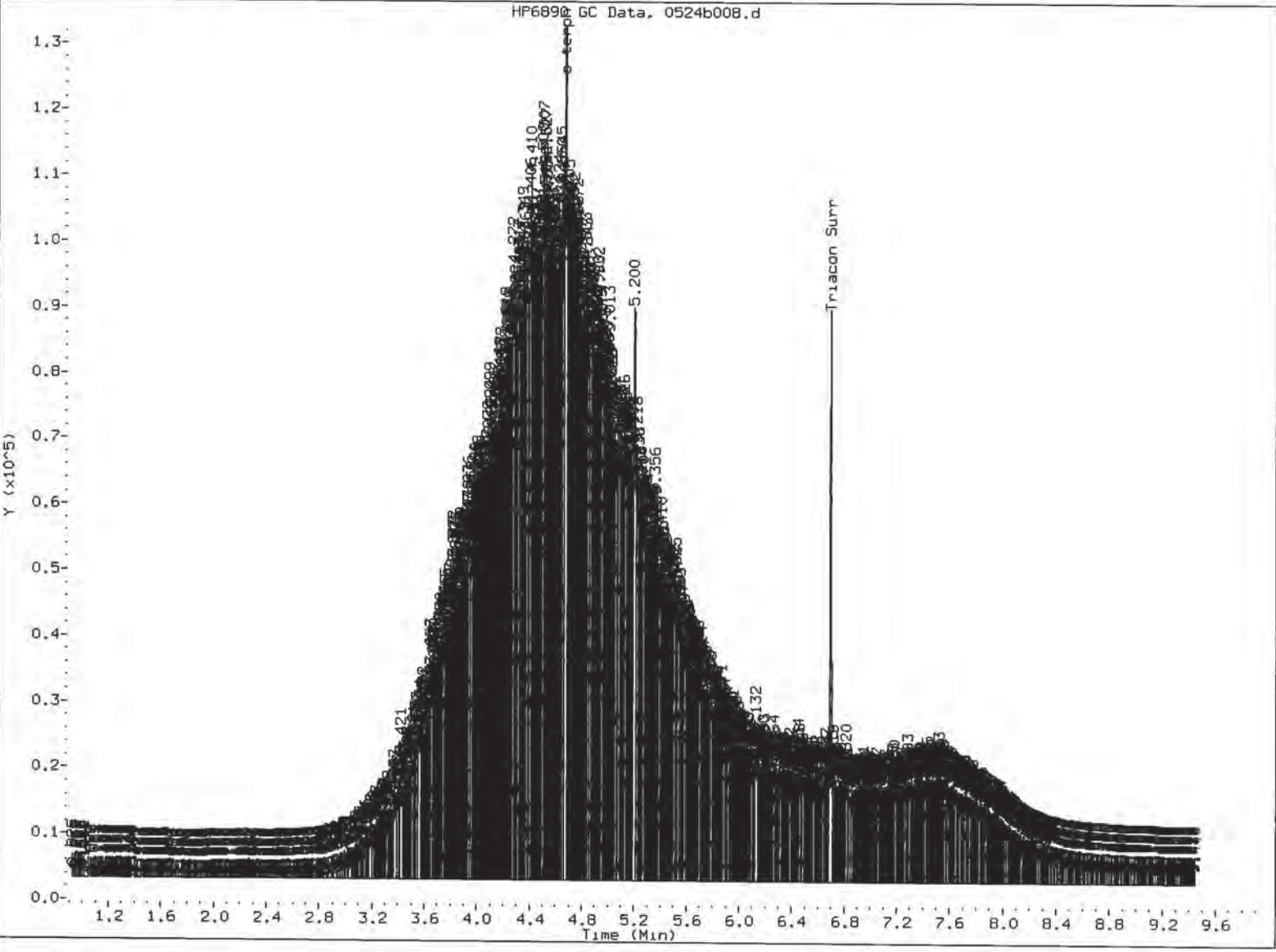
Operator: JM

Column diameter: 0.25

/chem3/fid3b.1/20130524.b/0524b008.d

JW
5/24/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/24/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130524.b/0524b009.d
Method: /chem3/fid3b.i/20130524.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46T
Client ID: A2-F20-S-6
Injection: 24-MAY-2013 13:30
Dilution Factor: 10

FID:3B RESULTS

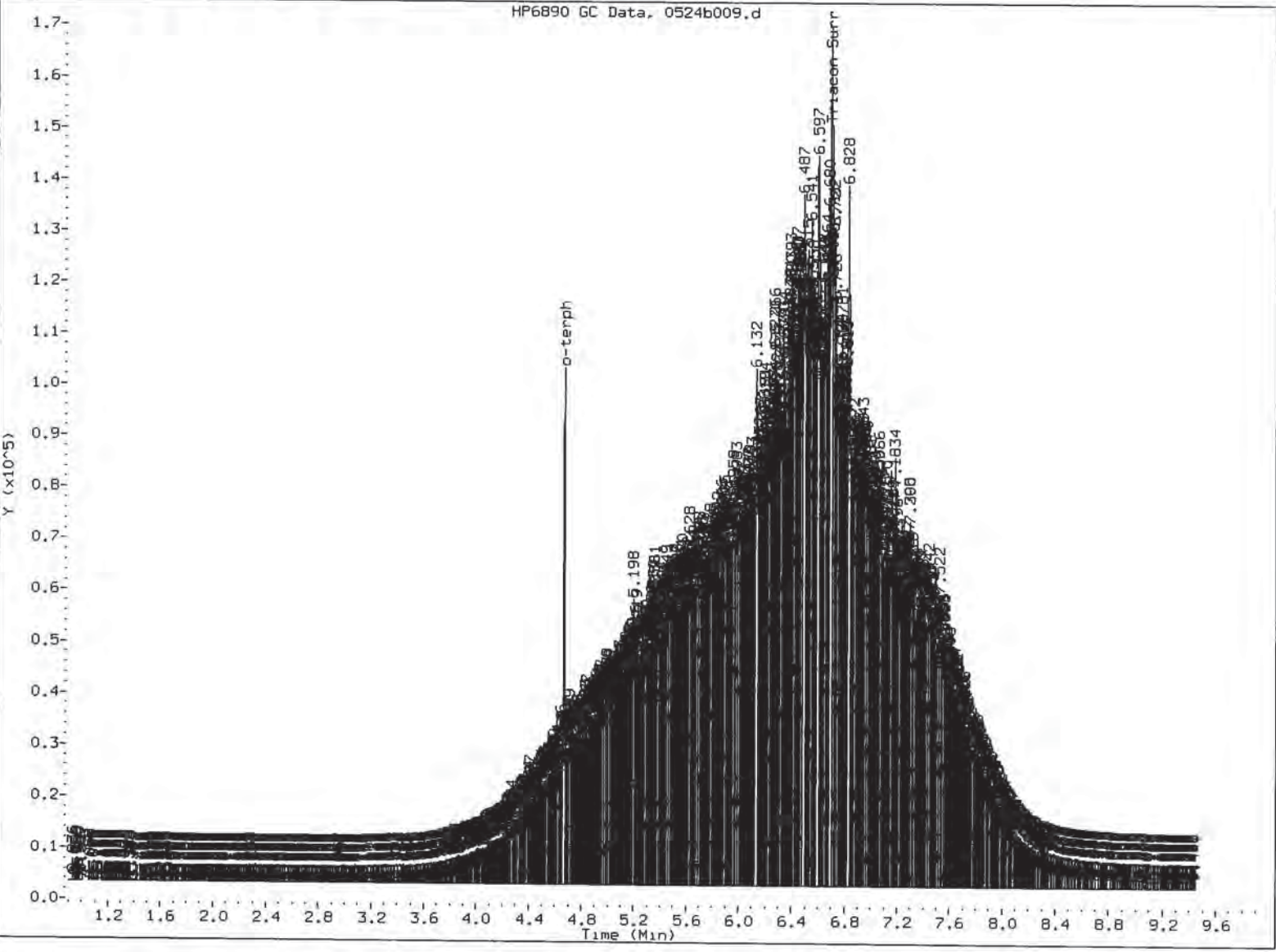
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		39157	3
C8	0.821	0.003	2519	1605	WATPHD (C12-C24)		3303414	318.94
C10	2.243	0.000	161	95	WATPHM (C24-C38)		8286544	839.32
C12	3.052	0.005	146	41	AK102 (C10-C25)		3565531	288.55 M
C14	3.628	0.006	792	523	AK103 (C25-C36)		7510564	1056.56 M
C16	4.122	0.002	5153	1488				
C18	4.564	-0.003	18224	8264				
C20	4.989	0.002	34452	12672				
C22	5.386	0.005	49509	28893	MSPiRIT (Tol-C12)		39157	2.85
C24	5.750	0.001	61082	39581				
C25	5.920	-0.004	65699	29028				
C26	6.103	0.005	71647	16541				
C28	6.411	-0.001	106319	54804				
C32	6.955	0.001	84065	46638				
C34	7.185	-0.002	83289	41517				
Filter Peak	----							
C36	7.404	0.000	55376	22293				
o-terph	4.668	-0.007	76563	36740	JET-A (C10-C18)		423714	39.15
Triacon Surr	6.696	-0.008	59643	36774				

Range Times: NW Diesel(3.096 - 5.798) NW Gas(0.594 - 3.096) NW M.Oil(5.798 - 7.656)
AK102(2.193 - 5.873) AK103(5.873 - 7.454) Jet A(2.193 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	36740	2.7	60.7
Triacantane	36774	2.8	62.6

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/24/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ46-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
A2-F1-S-6	74.9%	0
A2-F2-S-6	59.7%	0
A2-F3-S-6	71.6%	0
A2-F4-S-6	70.4%	0
A2-F5-S-6	73.1%	0
A2-F6-S-6	53.3%	0
A2-F7-S-6	64.7%	0
A2-F8-S-6	64.0%	0
A2-F9-S-6	70.6%	0
MB-052113	81.9%	0
LCS-052113	78.3%	0
A2-F10-S-6	71.2%	0
A2-F10-S-6 MS	59.3%	0
A2-F10-S-6 MSD	74.8%	0
A2-F11-S-6	67.7%	0
A2-F12-S-6	77.2%	0
A2-F13-S-6	77.7%	0
A2-F14-S-6	73.8%	0
A2-F15-S-6	54.8%	0
A2-F16-S-6	D	0
A2-F17-S-6	70.0%	0
A2-F18-S-6	63.6%	0
A2-F19-S-6	56.4%	0
A2-F20-S-6	60.7%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-10662 to 13-10681

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: A2-F10-S-6
MS/MSD

Lab Sample ID: WQ46J
 LIMS ID: 13-10671
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/28/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Extracted MS/MSD: 05/21/13

Sample Amount MS: 8.59 g-dry-wt
 MSD: 8.59 g-dry-wt

Date Analyzed MS: 05/23/13 14:20
 MSD: 05/23/13 14:40

Final Extract Volume MS: 1.0 mL
 MSD: 1.0 mL

Instrument/Analyst MS: FID/JLW
 MSD: FID/JLW

Dilution Factor MS: 1.0
 MSD: 1.0

Percent Moisture: 14.1%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	23	141	175	67.4%	147	175	70.9%	4.2%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	59.3%	74.8%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b020.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46JMS
Client ID:
Injection: 23-MAY-2013 14:20
Dilution Factor: 1

FID:3B RESULTS

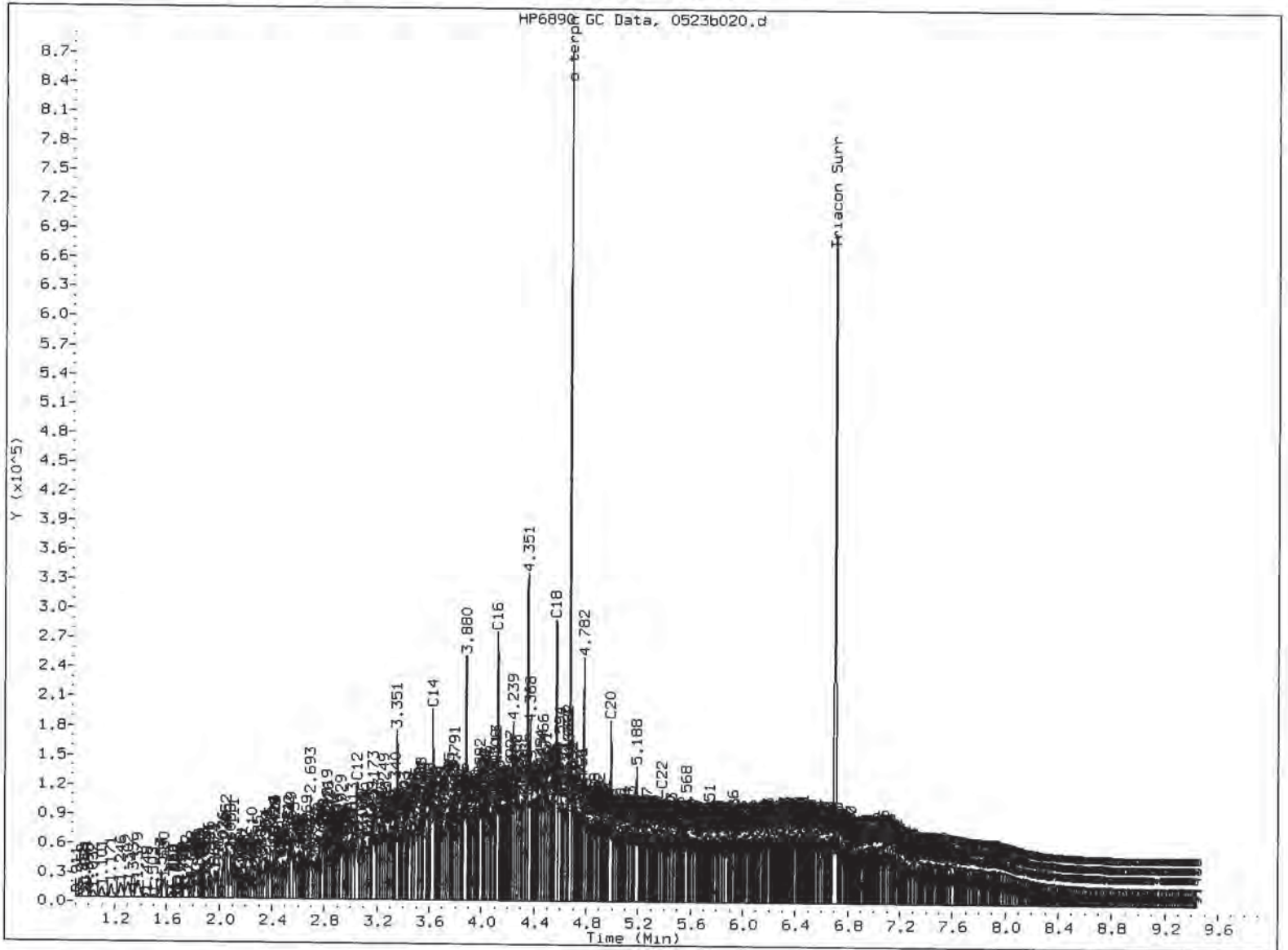
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2629528	195
C8	0.829	0.010	9214	15893	WATPHD (C12-C24)		12578376	1214.43
C10	2.245	0.006	62464	47876	WATPHM (C24-C38)		4605398	466.47
C12	3.046	0.002	119390	130078	AK102 (C10-C25)		14695570	1189.28 M
C14	3.627	0.003	195259	205653	AK103 (C25-C36)		4146153	583.27 M
C16	4.122	0.003	273952	211808				
C18	4.568	0.002	287457	242060				
C20	4.988	0.003	183935	185273				
C22	5.381	0.001	113582	90202	MSPIRIT (Tol-C12)		2629528	191.40
C24	5.747	-0.001	68580	35517				
C25	5.920	-0.002	59269	15585				
C26	6.098	-0.002	55685	21435				
C28	6.413	0.001	59110	32409				
C32	6.952	-0.002	49217	26275				
C34	7.182	-0.005	36952	19270				
Filter Peak	----							
C36	7.403	0.000	24086	10425				
o-terph	4.678	0.006	744361	358892	JET-A (C10-C18)		9878844	912.67
Triacon Surr	6.701	-0.005	632892	487855				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	358892	26.7	59.3
Triacontane	487855	37.4	83.1

TW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b021.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46JMSD
Client ID:
Injection: 23-MAY-2013 14:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG (Tol-C12)		2733282	202
C8	0.831	0.012	8330	17964	WATPHD (C12-C24)		13064350	1261.35 ✓
C10	2.246	0.007	59945	49054	WATPHM (C24-C38)		4746876	480.80 ✓
C12	3.047	0.003	134578	134755	AK102 (C10-C25)		15271556	1235.89 M
C14	3.627	0.003	198359	197549	AK103 (C25-C36)		4281569	602.32 M
C16	4.116	-0.003	144044	40855				
C18	4.569	0.003	333482	315467				
C20	4.987	0.002	209193	174430				
C22	5.382	0.002	111630	107277	MSPIRIT (Tol-C12)		2733282	198.95
C24	5.746	-0.002	66956	61782				
C25	5.923	0.001	63207	15551				
C26	6.100	0.000	55326	15923				
C28	6.408	-0.003	59274	31835				
C32	6.953	-0.001	51871	25054				
C34	7.182	-0.005	39861	23459				
Filter Peak	-----							
C36	7.402	-0.001	26754	15751				
o-terph	4.679	0.007	762942	452698	JET-A (C10-C18)		10399674	960.78
Triacon Surr	6.702	-0.005	769240	489657				

Range Times: NW Diesel (3.094 - 5.798) NW Gas (0.596 - 3.094) NW M.Oil (5.798 - 7.652)
AK102 (2.189 - 5.872) AK103 (5.872 - 7.453) Jet A (2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	452698	33.7	74.8 ✓
Triacontane	489657	37.5	83.4

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b021.d
Date: 23-MAY-2013 14:40

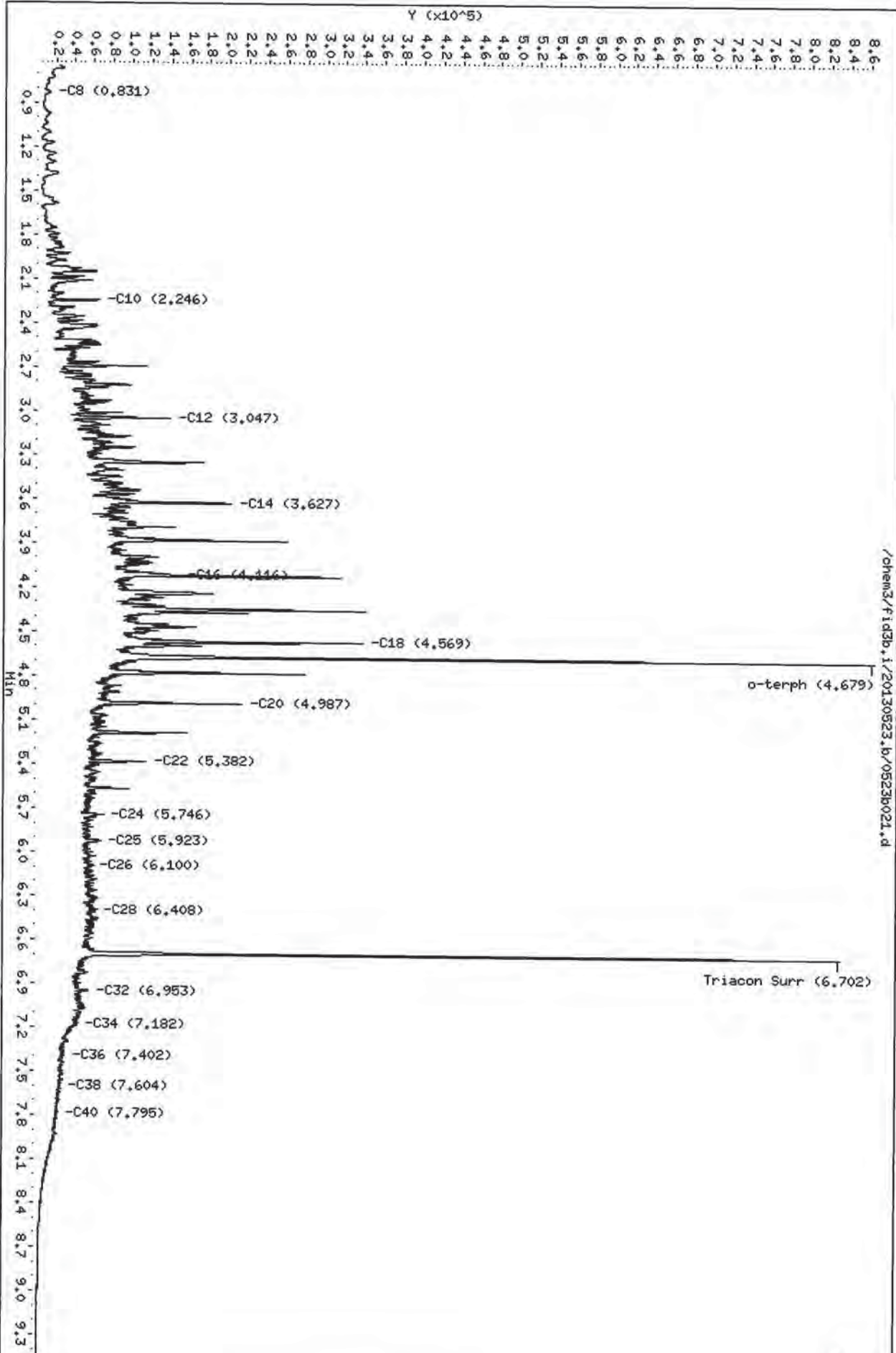
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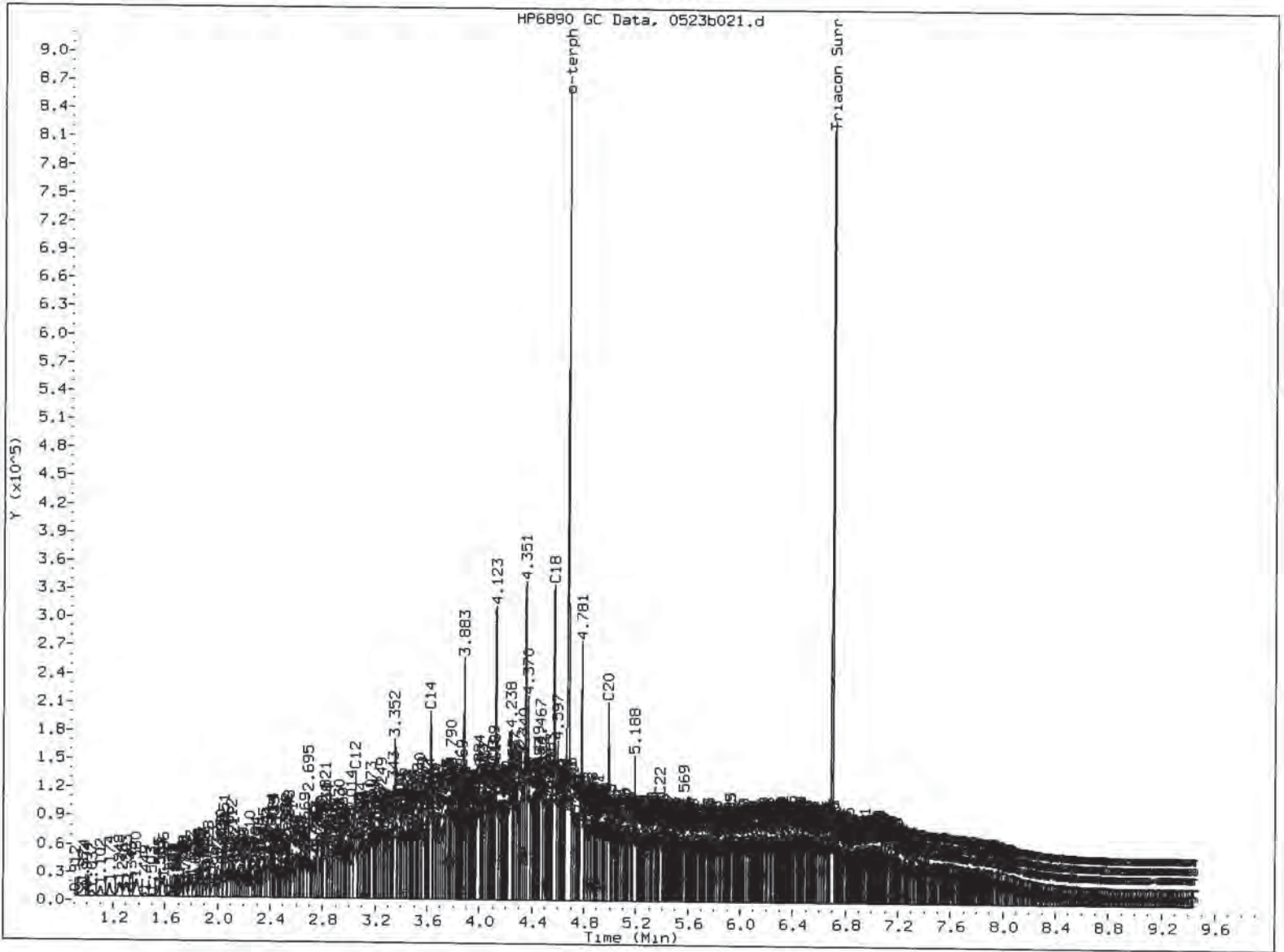
Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

Page 1



Not for release



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-052113
LAB CONTROL

Lab Sample ID: LCS-052113
 LIMS ID: 13-10671
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/28/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Extracted: 05/21/13
 Date Analyzed: 05/23/13 10:05
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	121	150	80.7%

TPHD Surrogate Recovery

o-Terphenyl	78.3%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b007.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ46LCSS1
Client ID:
Injection: 23-MAY-2013 10:05
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		3060398	227
C8	0.829	0.010	8772	15277	WATPHD (C12-C24)		12491835	1206.07
C10	2.245	0.005	69521	54056	WATPHM (C24-C38)		193601	19.61
C12	3.045	0.001	122893	115830	AK102 (C10-C25)		14773352	1195.57 M
C14	3.626	0.002	245087	166579	AK103 (C25-C36)		153931	21.65
C16	4.122	0.003	347758	327541				
C18	4.570	0.004	344730	333586				
C20	4.987	0.001	203451	179478				
C22	5.378	-0.002	84778	64749	MSPIRIT (Tol-C12)		3060398	222.76
C24	5.749	0.000	30953	32582				
C25	5.923	0.001	13160	7464				
C26	6.100	0.001	5135	2667				
C28	6.413	0.001	2019	1136				
C32	6.958	0.004	2431	1889				
C34	7.182	-0.005	67	30				
Filter Peak	----							
C36	7.410	0.007	217	101				
o-terph	4.679	0.007	900339	474067	JET-A (C10-C18)		11294510	1043.45
Triacon Surr	6.703	-0.004	674374	515221				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	474067	35.2	78.3
Triacantane	515221	39.5	87.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

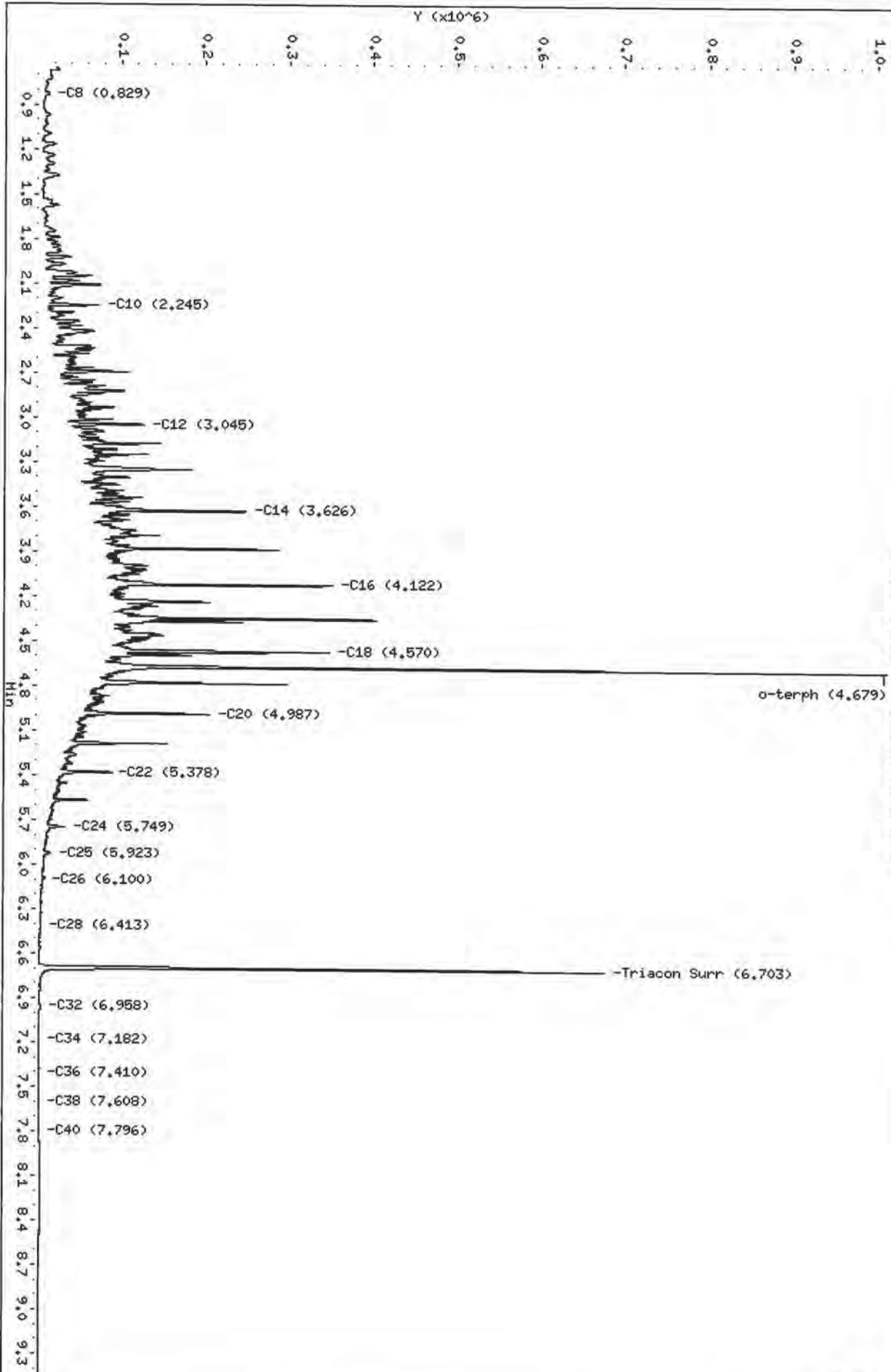
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Date: 23-MAY-2013 10:05
Client ID:
Sample Info: M046LCSS1

Column phase: RTX-1

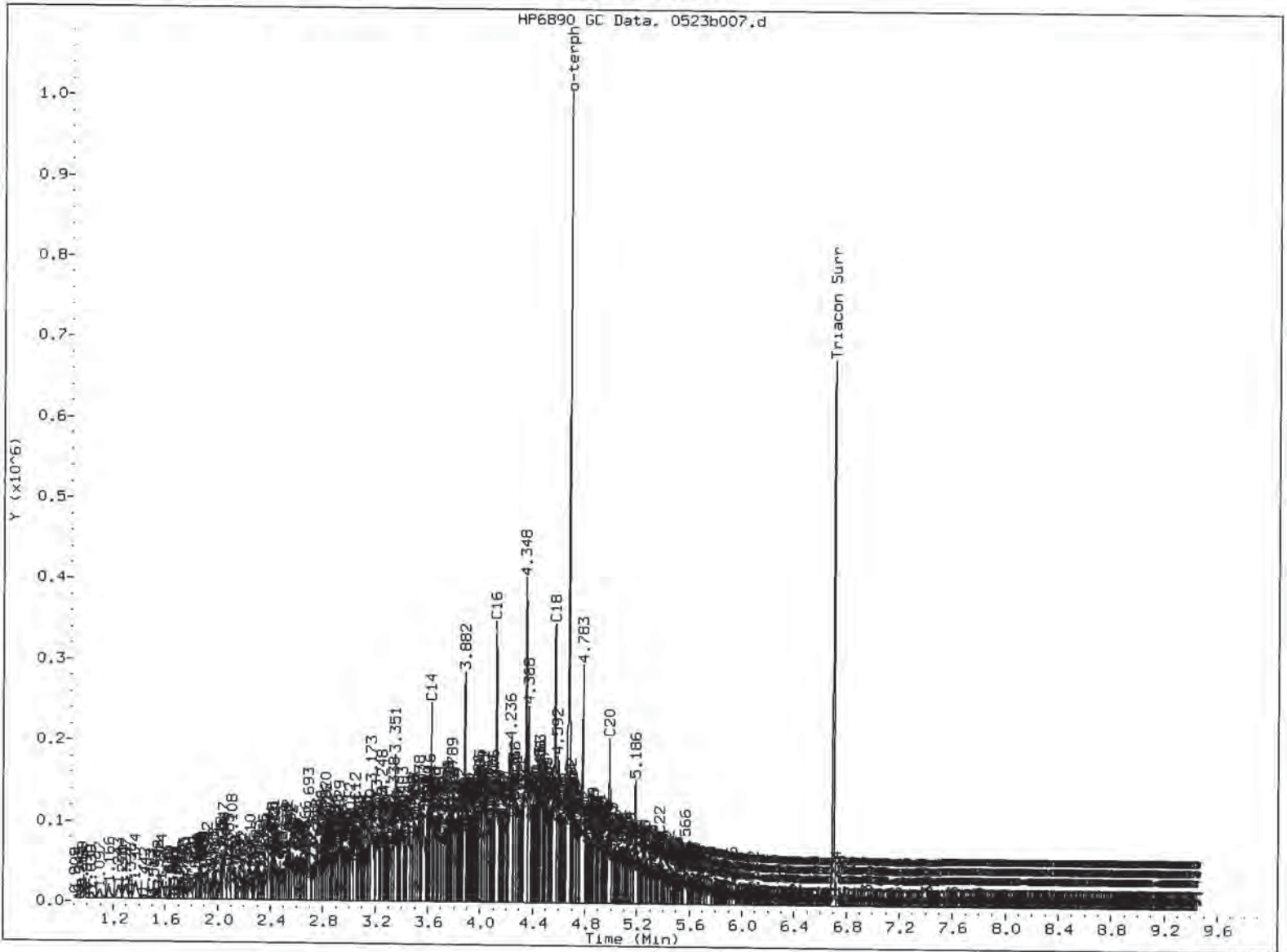
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Instrument: fid3b.1
Operator: JM
Column diameter: 0.25

JW
5/24/13



HP6890 GC Data, 0523b007.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/10

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13

ARI Job: WQ46
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10662-WQ46A	A2-F1-S-6	8.66 g	1.00 mL	D	05/21/13
13-10663-WQ46B	A2-F2-S-6	8.20 g	1.00 mL	D	05/21/13
13-10664-WQ46C	A2-F3-S-6	8.26 g	1.00 mL	D	05/21/13
13-10665-WQ46D	A2-F4-S-6	8.20 g	1.00 mL	D	05/21/13
13-10666-WQ46E	A2-F5-S-6	8.23 g	1.00 mL	D	05/21/13
13-10667-WQ46F	A2-F6-S-6	8.38 g	1.00 mL	D	05/21/13
13-10668-WQ46G	A2-F7-S-6	8.22 g	1.00 mL	D	05/21/13
13-10669-WQ46H	A2-F8-S-6	8.20 g	1.00 mL	D	05/21/13
13-10670-WQ46I	A2-F9-S-6	8.74 g	1.00 mL	D	05/21/13
13-10671-052113MB1	Method Blank	10.0 g	1.00 mL	-	05/21/13
13-10671-052113LCS1	Lab Control	10.0 g	1.00 mL	-	05/21/13
13-10671-WQ46J	A2-F10-S-6	8.60 g	1.00 mL	D	05/21/13
13-10671-WQ46JMS	A2-F10-S-6	8.59 g	1.00 mL	D	05/21/13
13-10671-WQ46JMSD	A2-F10-S-6	8.59 g	1.00 mL	D	05/21/13
13-10672-WQ46K	A2-F11-S-6	8.41 g	1.00 mL	D	05/21/13
13-10673-WQ46L	A2-F12-S-6	8.80 g	1.00 mL	D	05/21/13
13-10674-WQ46M	A2-F13-S-6	8.27 g	1.00 mL	D	05/21/13
13-10675-WQ46N	A2-F14-S-6	8.44 g	1.00 mL	D	05/21/13
13-10676-WQ46O	A2-F15-S-6	8.17 g	1.00 mL	D	05/21/13
13-10677-WQ46P	A2-F16-S-6	7.39 g	1.00 mL	D	05/21/13
13-10678-WQ46Q	A2-F17-S-6	8.79 g	1.00 mL	D	05/21/13
13-10679-WQ46R	A2-F18-S-6	8.50 g	1.00 mL	D	05/21/13
13-10680-WQ46S	A2-F19-S-6	8.27 g	1.00 mL	D	05/21/13
13-10681-WQ46T	A2-F20-S-6	8.45 g	1.00 mL	D	05/21/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

**Sample ID: A2-F1-S-6
SAMPLE**

Lab Sample ID: WQ46A

LIMS ID: 13-10662

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/21/13 15:18

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 95 mg-dry-wt

Percent Moisture: 13.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	13	< 13 U
108-88-3	Toluene	13	< 13 U
100-41-4	Ethylbenzene	13	< 13 U
179601-23-1	m,p-Xylene	26	< 26 U
95-47-6	o-Xylene	13	< 13 U

BETX Surrogate Recovery

Trifluorotoluene	83.3%
Bromobenzene	83.6%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 5/23/15

Data file 1: /chem3/pid1.i/20130521-1.b/0520a009.d ARI ID: WQ46A
 Data file 2: /chem3/pid1.i/20130521-2.b/0520a009.d Client ID: A2-F1-S-6
 Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 15:18
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	3013	38363	86.9	TFT(Surr)
15.383	0.002	1990	16783	87.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	6906	0.019
8015C 2MP-TMB (4.18 to 16.20)	723723	4668	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	4668	0.008
NWTPHG Tol-Nap (9.77 to 18.90)	375093	6906	0.018

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3306	83.3	TFT(Surr)
15.391	0.000	7348	83.6	BB(Surr)

SW8021 (PID)

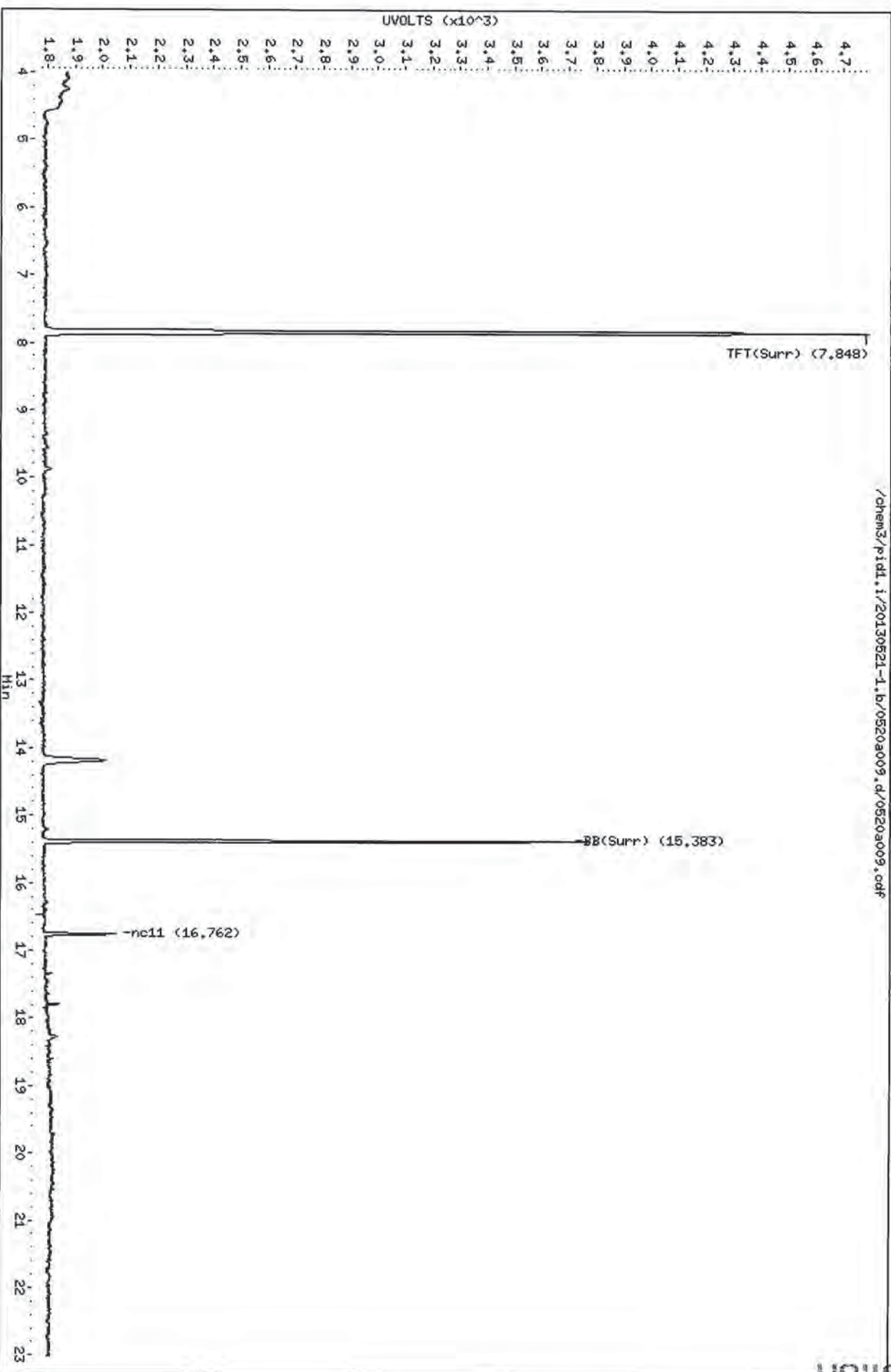
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a009.d
Date: 21-MAY-2013 15:18
Client ID: A2-F1-S-6
Sample Info: MQ46A

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



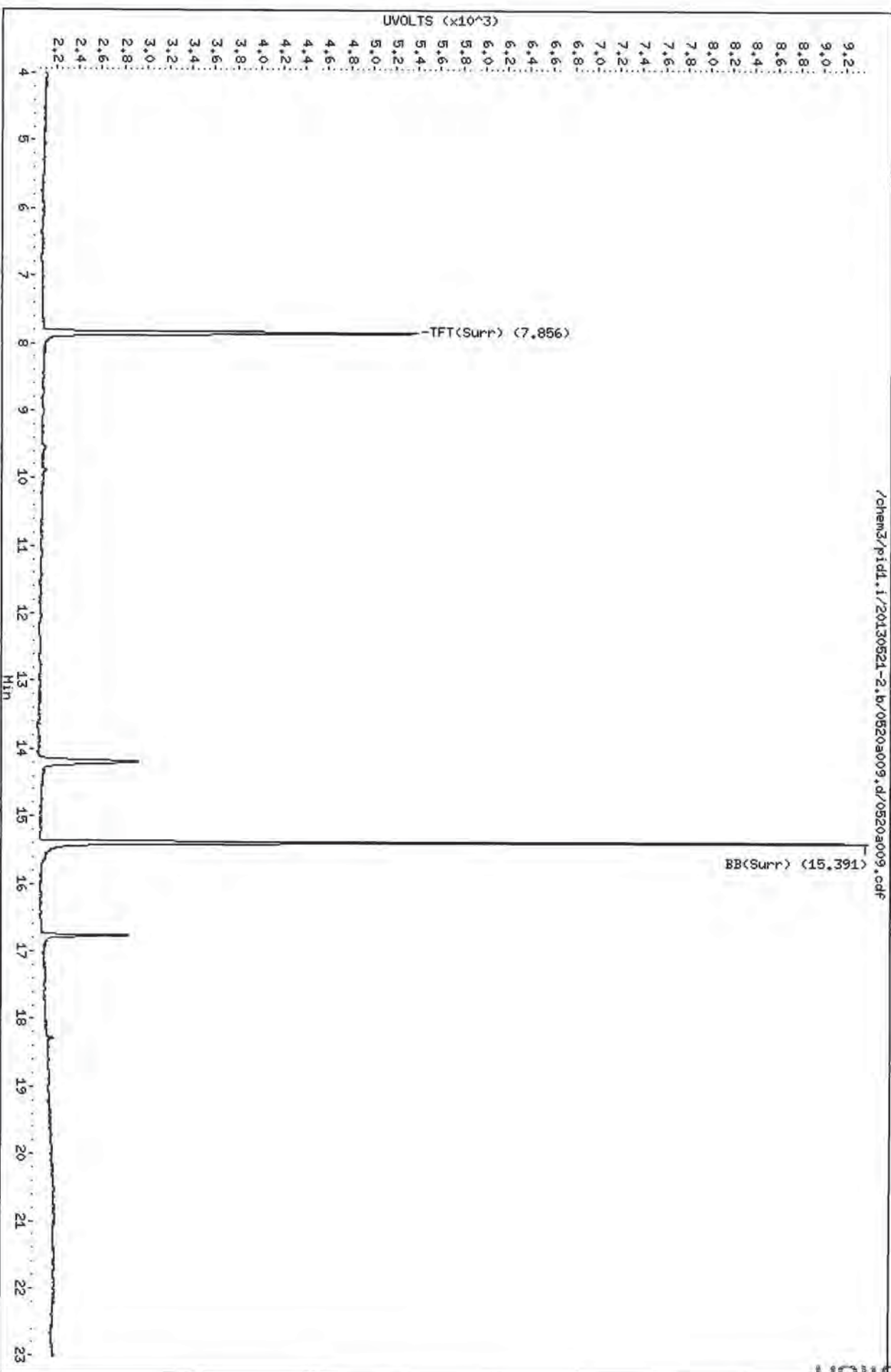
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Data File: /chem3/pid1.i/20130521-2.b/05203009.d
Date: 21-MAY-2013 15:18
Client ID: A2-F1-S-6
Sample Info: HQ46A

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-2.b/05203009.d/05203009.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod


Page 1 of 1

**Sample ID: A2-F2-S-6
SAMPLE**

Lab Sample ID: WQ46B

LIMS ID: 13-10663

Matrix: Soil

Data Release Authorized: 

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/21/13 15:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 18.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	53
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	80.9%
Bromobenzene	82.3%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

ML
 5/23/13

Data file 1: /chem3/pid1.i/20130521-1.b/0520a010.d ARI ID: WQ46B
 Data file 2: /chem3/pid1.i/20130521-2.b/0520a010.d Client ID: A2-F2-S-6
 Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 15:48
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	2936	37362	84.6	TFT(Surr)
15.384	0.002	1951	16365	85.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	7159	0.020
8015C 2MP-TMB (4.18 to 16.20)	723723	6655	0.009
AK101 nC6-nC10 (4.67 to 15.10)	582885	5968	0.010
NWTPHG Tol-Nap (9.77 to 18.90)	375093	7159	0.019

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3213	80.9	TFT(Surr)
15.391	0.001	7235	82.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.001	186	0.81	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

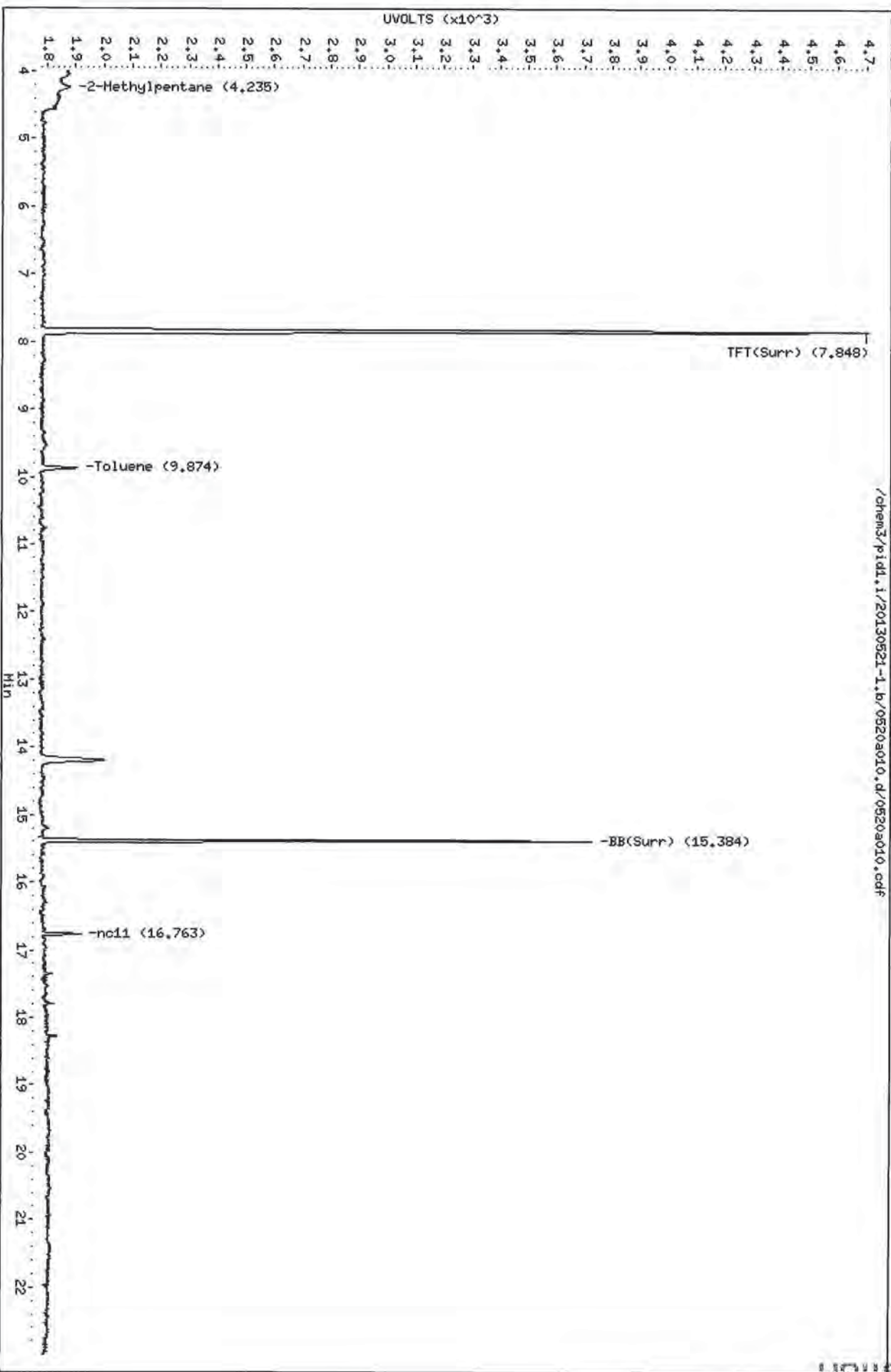
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a010.d
Date: 21-MAY-2013 15:48
Client ID: A2-F2-S-6
Sample Info: MQ46B

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-1.b/0520a010.d/0520a010.cdf



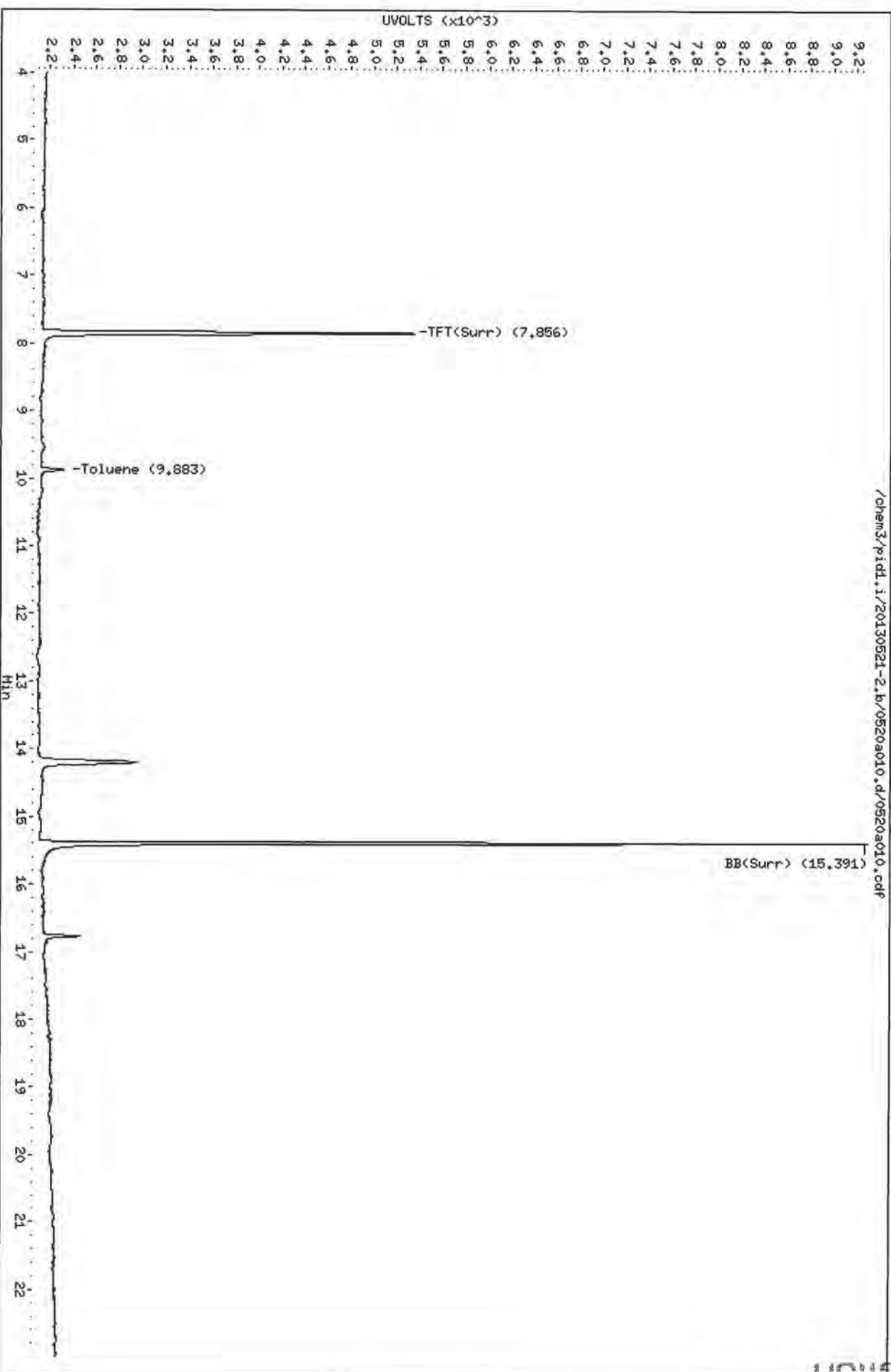
Data File: /chem3/pid1.i/20130521-2.b/0520a010.d
Date: 21-May-2013 15:48
Client ID: A2-F2-S-6
Sample Info: MQ46B

Instrument: pid1.i

Column Phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-2.b/0520a010.d/0520a010.cdf



21 05 2013 15:48:48

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1


Sample ID: A2-F3-S-6

SAMPLE

Lab Sample ID: WQ46C

LIMS ID: 13-10664

Matrix: Soil

Data Release Authorized: 

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/21/13 16:17

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 18.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	79.0%
Bromobenzene	80.2%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a011.d ARI ID: WQ46C
Data file 2: /chem3/pid1.i/20130521-2.b/0520a011.d Client ID: A2-F3-S-6
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 16:17
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.002	2877	36405	82.9	TFT(Surr)
15.384	0.002	1942	16232	85.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	988	0.003
8015C 2MP-TMB (4.18 to 16.20)	723723	508	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	508	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	988	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3134	79.0	TFT(Surr)
15.391	0.001	7045	80.2	BB(Surr)

SW8021 (PID)

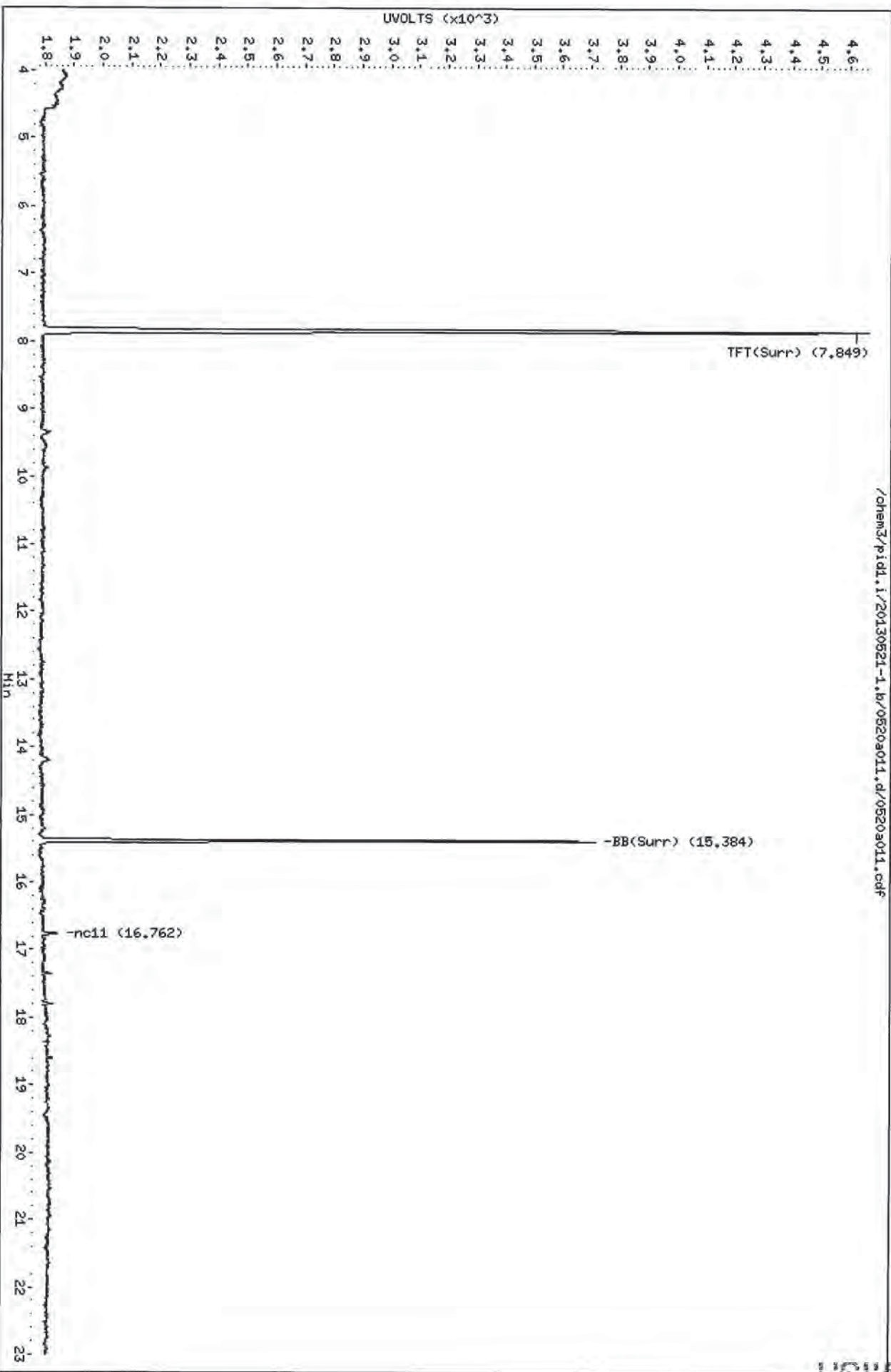
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a011.d
Date : 21-MAY-2013 16:17
Client ID: A2-F3-S-6
Sample Info: MQ46C

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

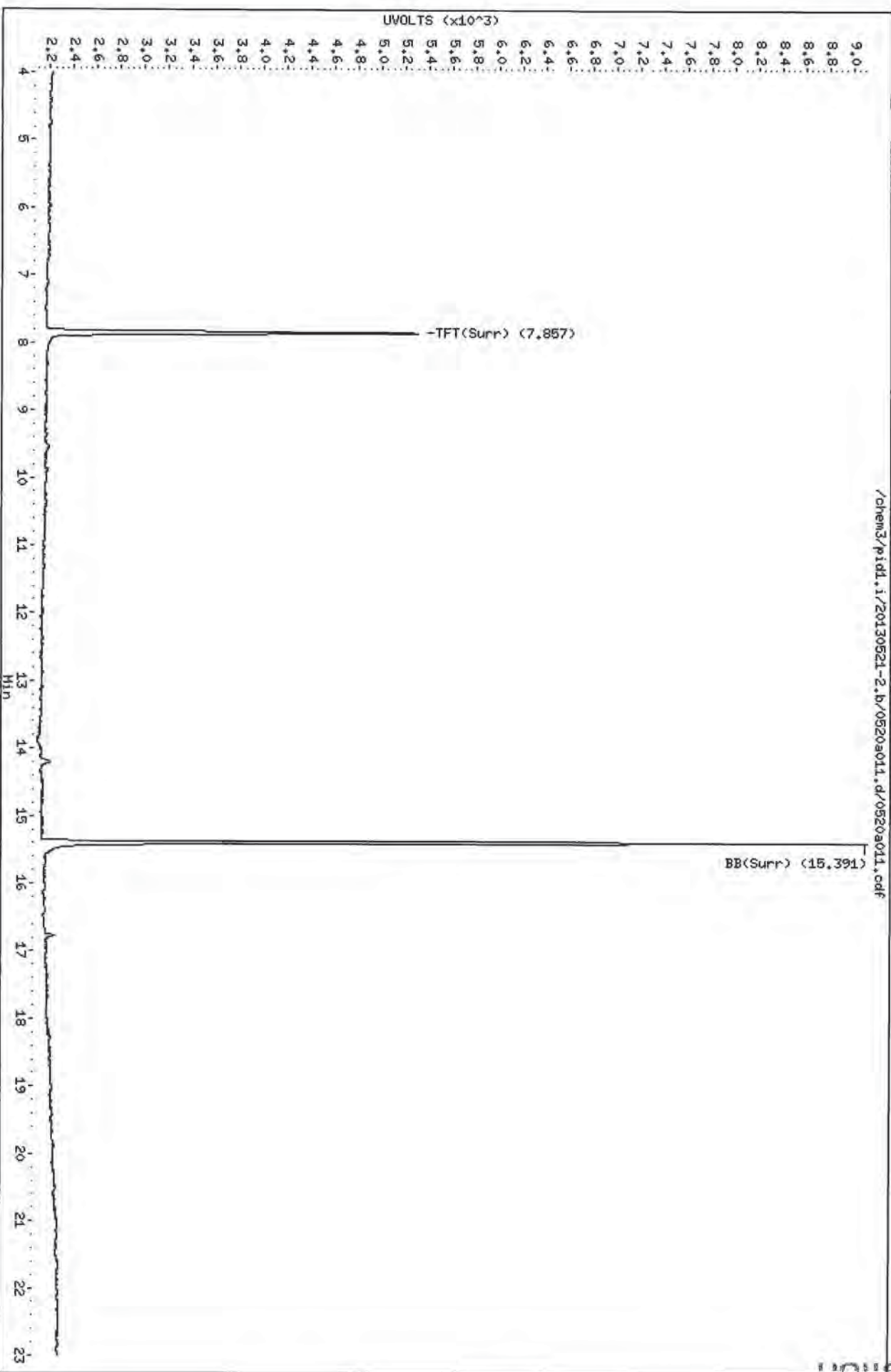


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Data File: /chem3/pid1.i/20130521-2.b/0520a011.d
Date: 21-MAY-2013 16:17
Client ID: A2-F3-S-6
Sample Info: M046C

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18





ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021EMod
 Page 1 of 1

Sample ID: **A2-F4-S-6**
SAMPLE

Lab Sample ID: WQ46D
 LIMS ID: 13-10665
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Analyzed: 05/21/13 16:46
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 74 mg-dry-wt
 Percent Moisture: 18.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	79.5%
Bromobenzene	81.3%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PK
5/23/13

Data file 1: /chem3/pid1.i/20130521-1.b/0520a012.d ARI ID: WQ46D
 Data file 2: /chem3/pid1.i/20130521-2.b/0520a012.d Client ID: A2-F4-S-6
 Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 16:46
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.003	2895	36864	83.5	TFT(Surr)
15.384	0.002	1950	16364	85.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3647	0.010
8015C 2MP-TMB (4.18 to 16.20)	723723	3552	0.005
AK101 nC6-nC10 (4.67 to 15.10)	582885	2698	0.005
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3647	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3154	79.5	TFT(Surr)
15.391	0.001	7145	81.3	BB(Surr)

SW8021 (PID)

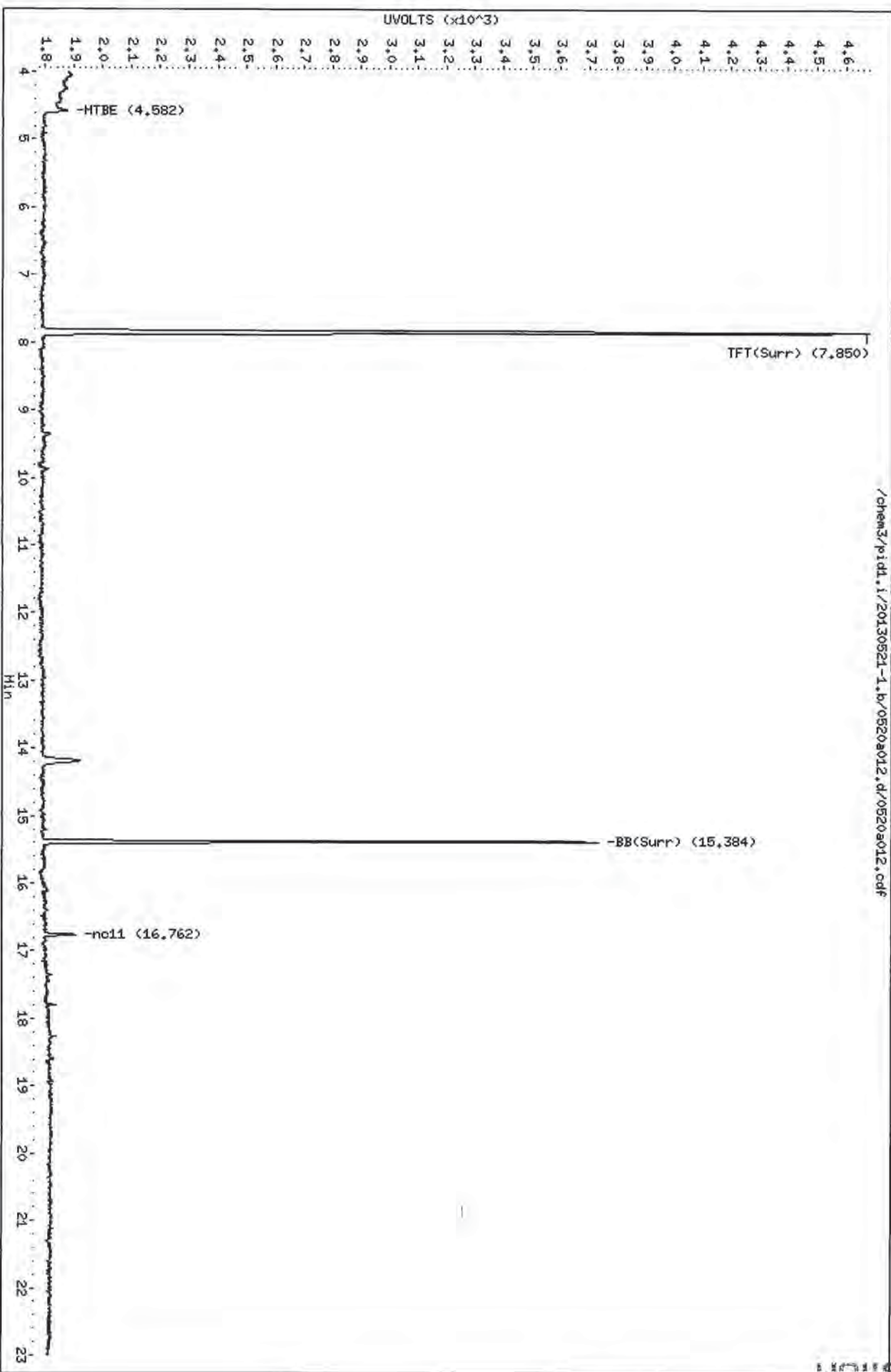
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a012.d
Date: 21-May-2013 16:46
Client ID: A2-F4-S-6
Sample Info: MQ46D

Column phase: RTX 502-2 FID

Instrument: pid1.1
Operator: PC
Column diameter: 0.18



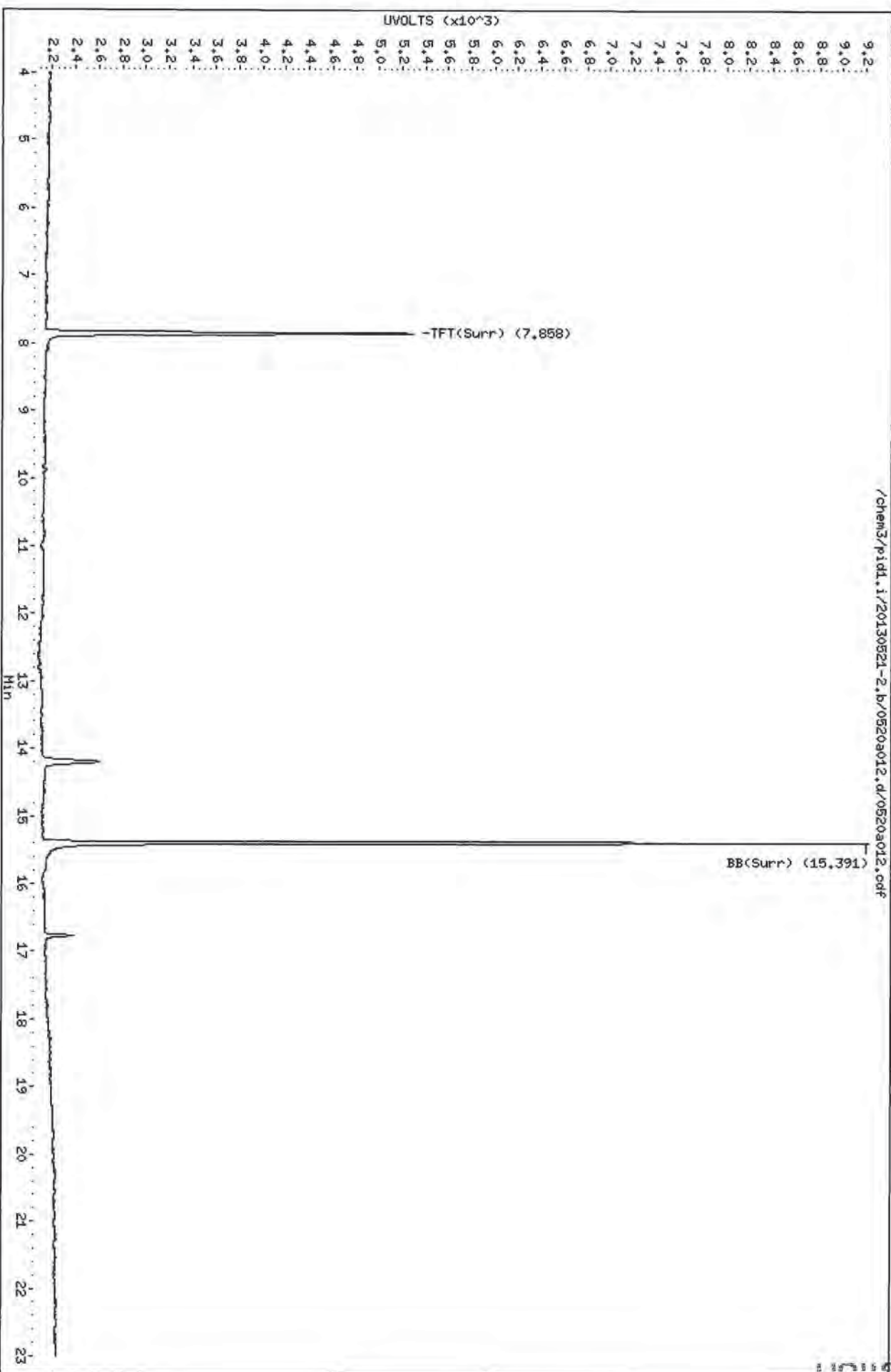
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Data File: /chem3/pid1.i/20130521-2.b/0520a012.d
Date: 21-MAY-2013 16:46
Client ID: A2-F4-S-6
Sample Info: HQ46D

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-2.b/0520a012.d/0520a012.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F5-S-6

SAMPLE

Lab Sample ID: WQ46E

LIMS ID: 13-10666

Matrix: Soil

Data Release Authorized: *RB*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/21/13 17:15

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 74 mg-dry-wt

Percent Moisture: 18.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	79.8%
Bromobenzene	82.3%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/13/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a013.d ARI ID: WQ46E
Data file 2: /chem3/pid1.i/20130521-2.b/0520a013.d Client ID: A2-F5-S-6
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 17:15
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.002	2901	37046	83.6	TFT(Surr)
15.383	0.002	1981	16455	86.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3753	0.010
8015C 2MP-TMB (4.18 to 16.20)	723723	3923	0.005
AK101 nC6-nC10 (4.67 to 15.10)	582885	3922	0.007
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3753	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3167	79.8	TFT(Surr)
15.391	0.001	7235	82.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

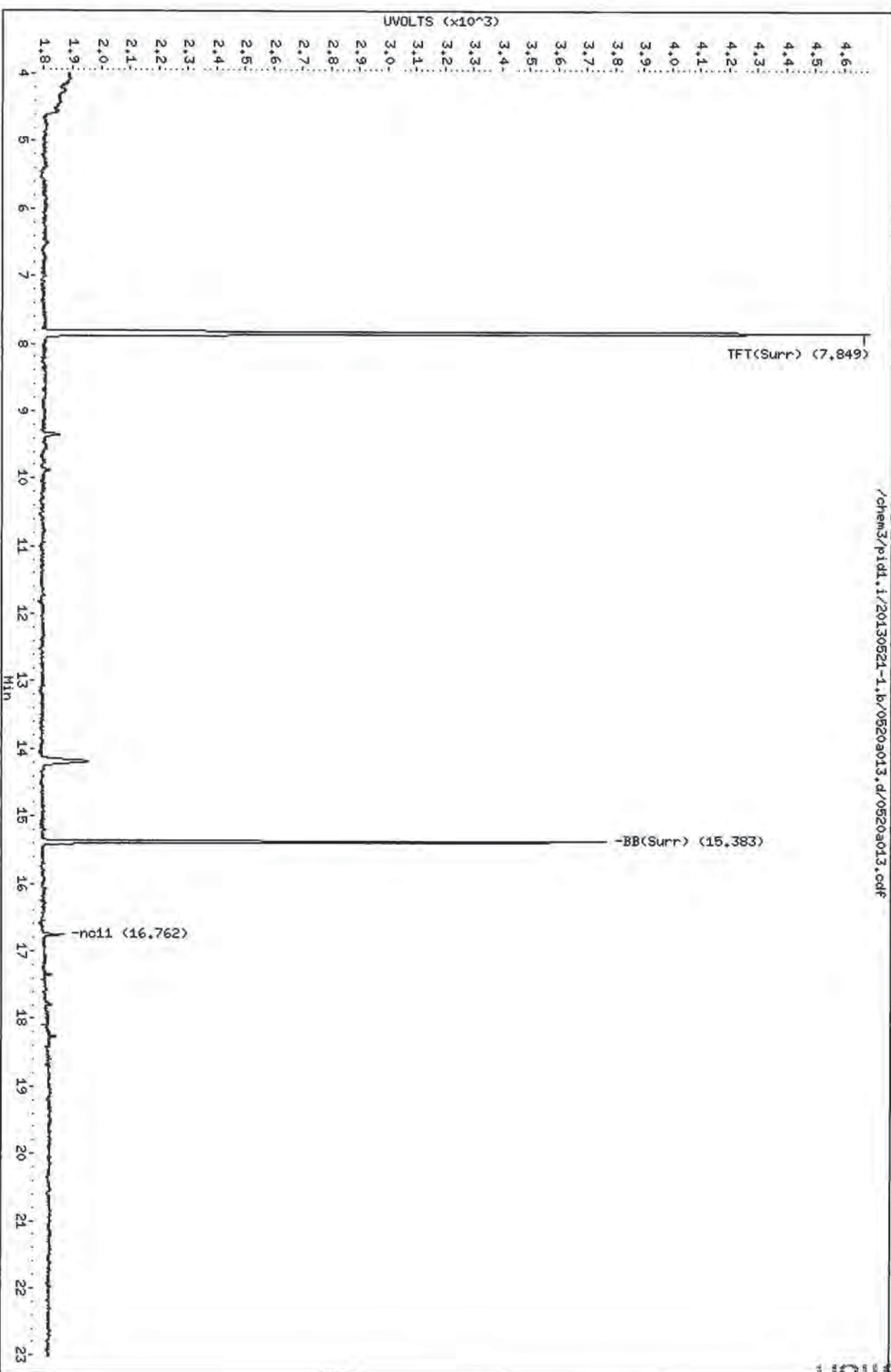
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a013.d
Date: 21-MAY-2013 17:15
Client ID: A2-F5-S-6
Sample Info: MQ46E

Column phase: RTX 502-2 FID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-1.b/0520a013.d/0520a013.cdf

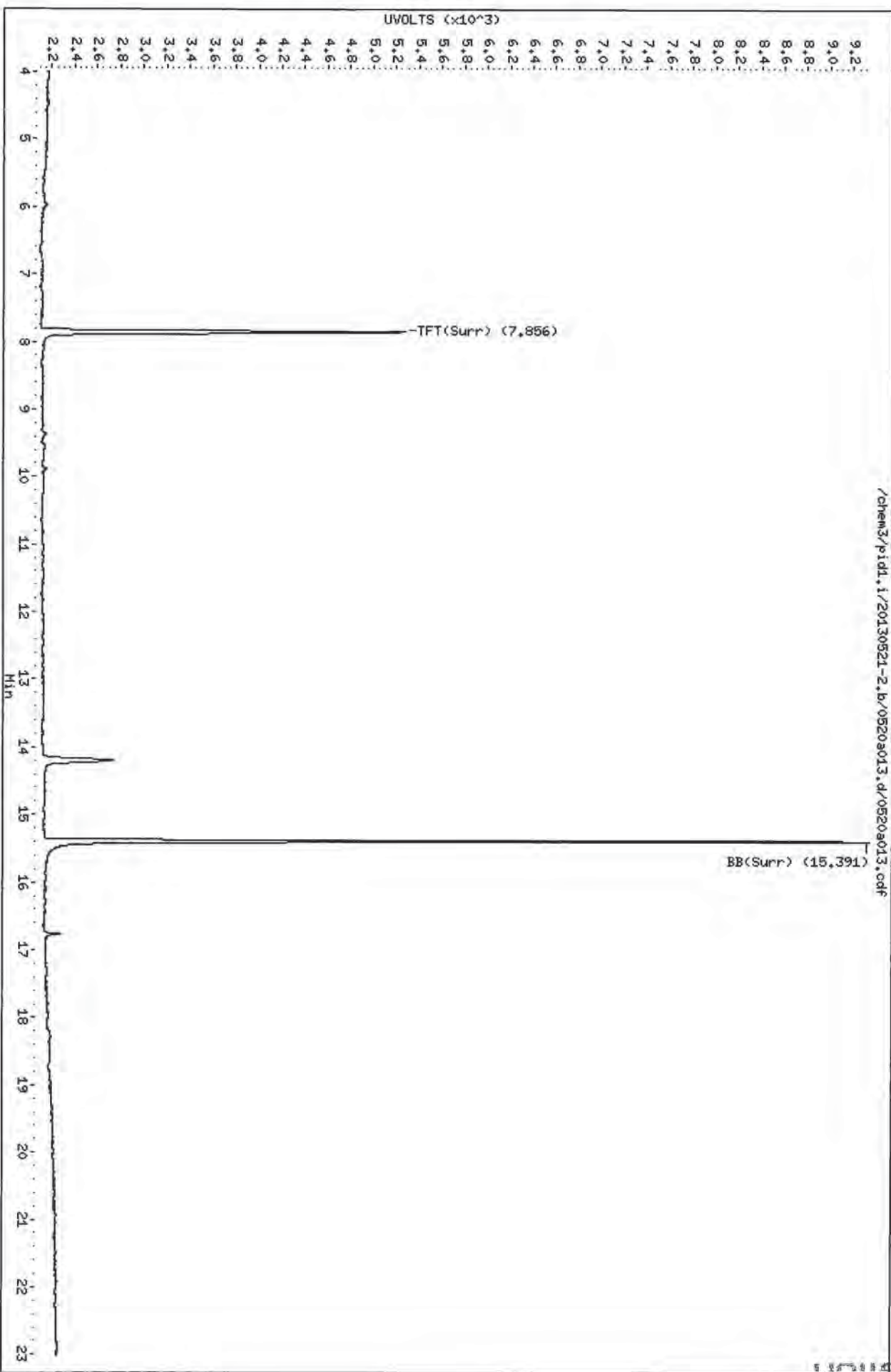


Data File: /chem3/pid1.i/20130521-2.b/0520a013.d
Date: 21-MAY-2013 17:15
Client ID: A2-F5-S-6
Sample Info: MQ46E

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-2.b/0520a013.d/0520a013.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

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Sample ID: A2-F6-S-6

SAMPLE

Lab Sample ID: WQ46F

LIMS ID: 13-10667

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 16:12

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 74 mg-dry-wt

Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	99.9%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

2nd 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a016.d ARI ID: WQ46F
Data file 2: /chem3/pid1.i/20130522-2.b/0522a016.d Client ID: A2-F6-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 16:12
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.004	2934	37392	99.2	TFT(Surr)
15.382	-0.002	1977	16340	99.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	3856	0.011
8015C 2MP-TMB (4.18 to 16.21)	723723	2178	0.003
AK101 nC6-nC10 (4.68 to 15.11)	582885	2177	0.004
NWTPHG Tol-Nap (9.78 to 18.90)	375093	4282	0.011

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	-0.001	3219	99.9	TFT(Surr)
15.390	-0.001	7310	101.1	BB(Surr)

SW8021 (PID)

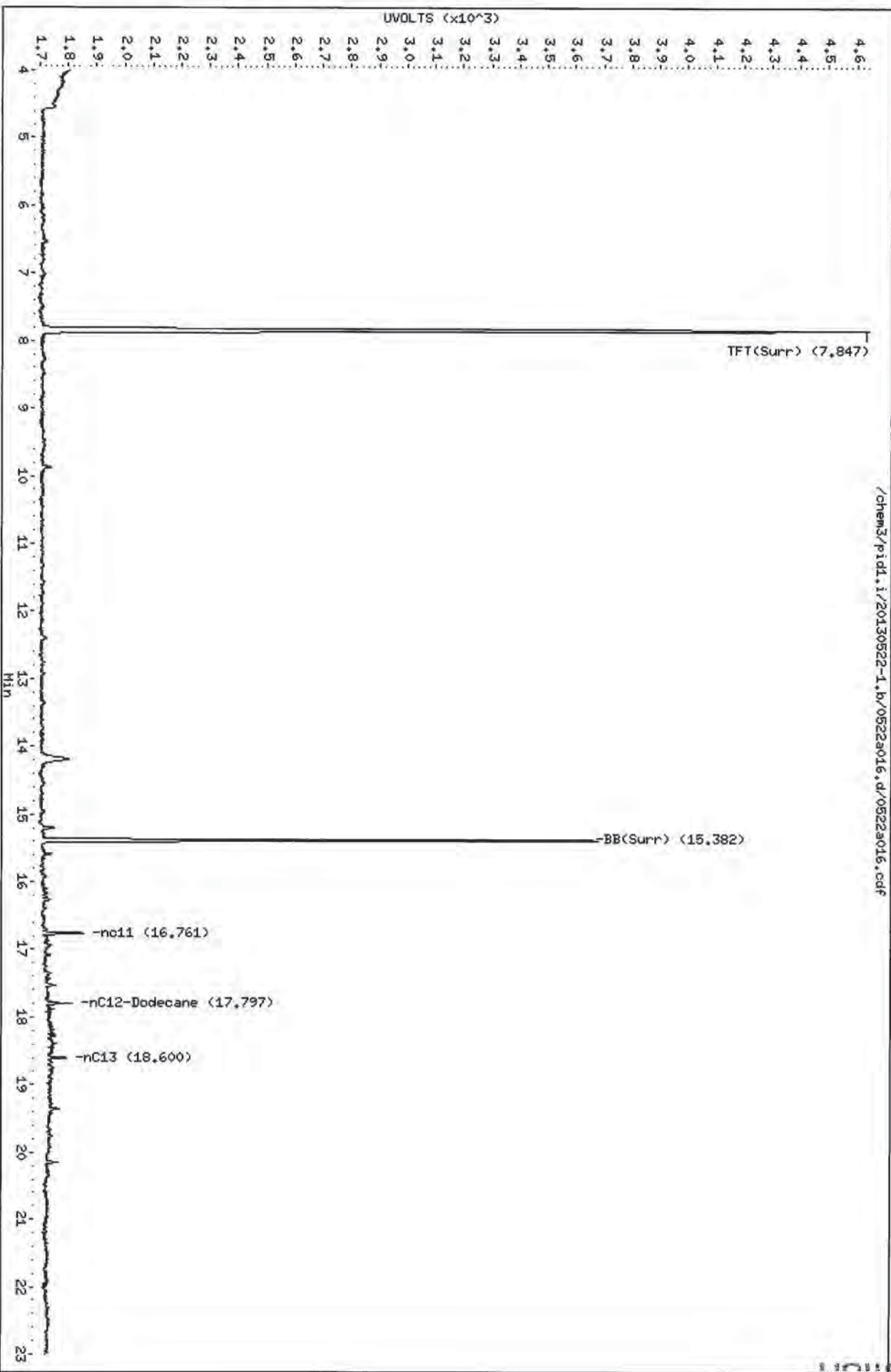
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.005	42	0.21N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a016.d
Date: 22-MAY-2013 16:12
Client ID: A2-F6-S-6
Sample Info: MQ46F

Column Phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

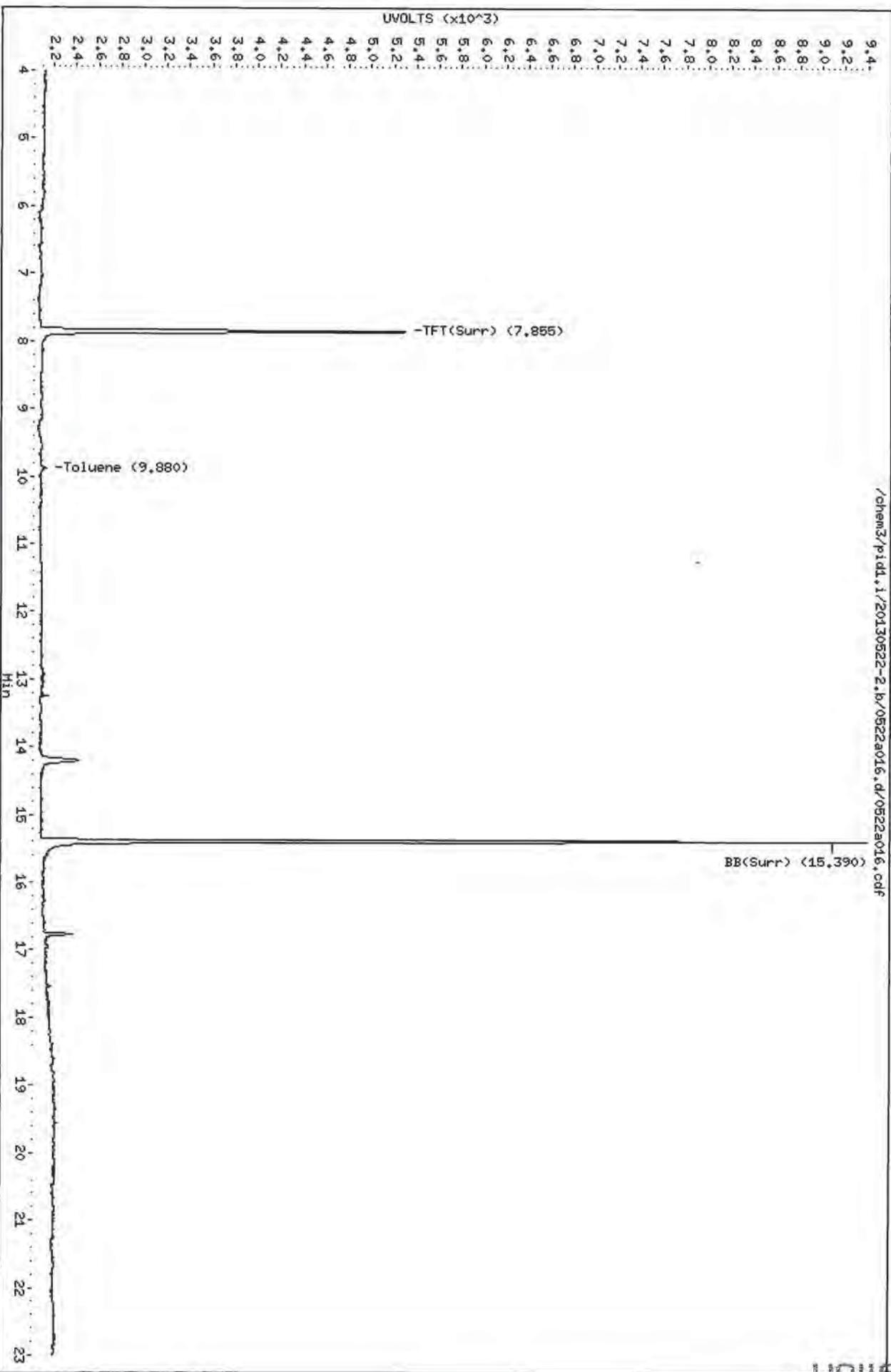


/chem3/pid1.i/20130522-1.b/0522a016.d/0522a016.cdf

Data File: /chem3/pid1.i/20130522-2.b/0522a016.d
Date : 22-MAY-2013 16:12
Client ID: A2-F6-S-6
Sample Info: M046F

Column phase: RTX 502-2 PID

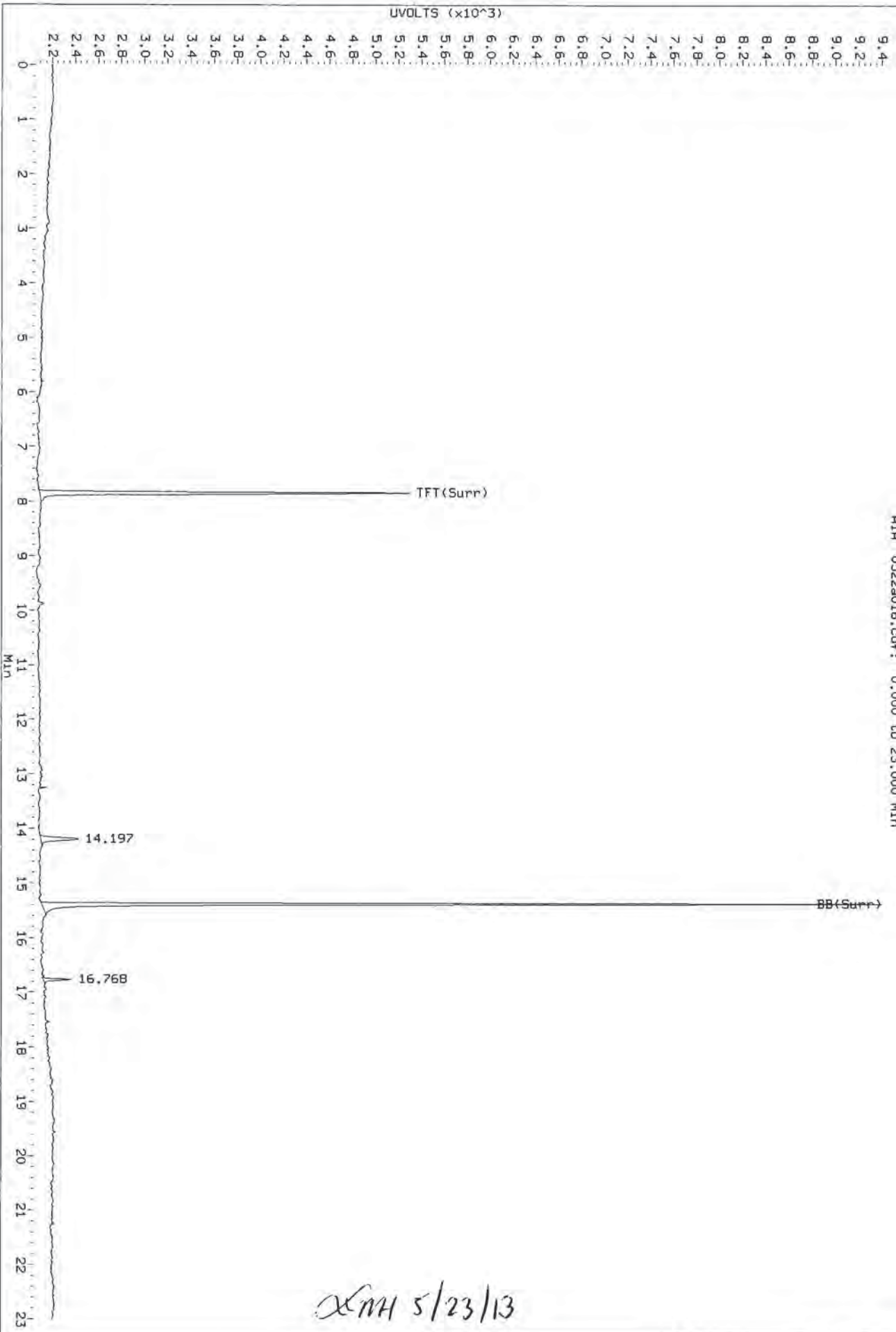
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130522-2.b/0522a016.d/0522a016.cdf

Data File: /chem3/p1d1_1/20130522-2_b/0522a016.d/0522a016.cdf
Injection Date: 22-MAY-2013 16:12
Instrument: p1d1_1
Client Sample ID: A2-F6-5-6

A1A 0522a016.cdf: 0.000 to 23.000 Min

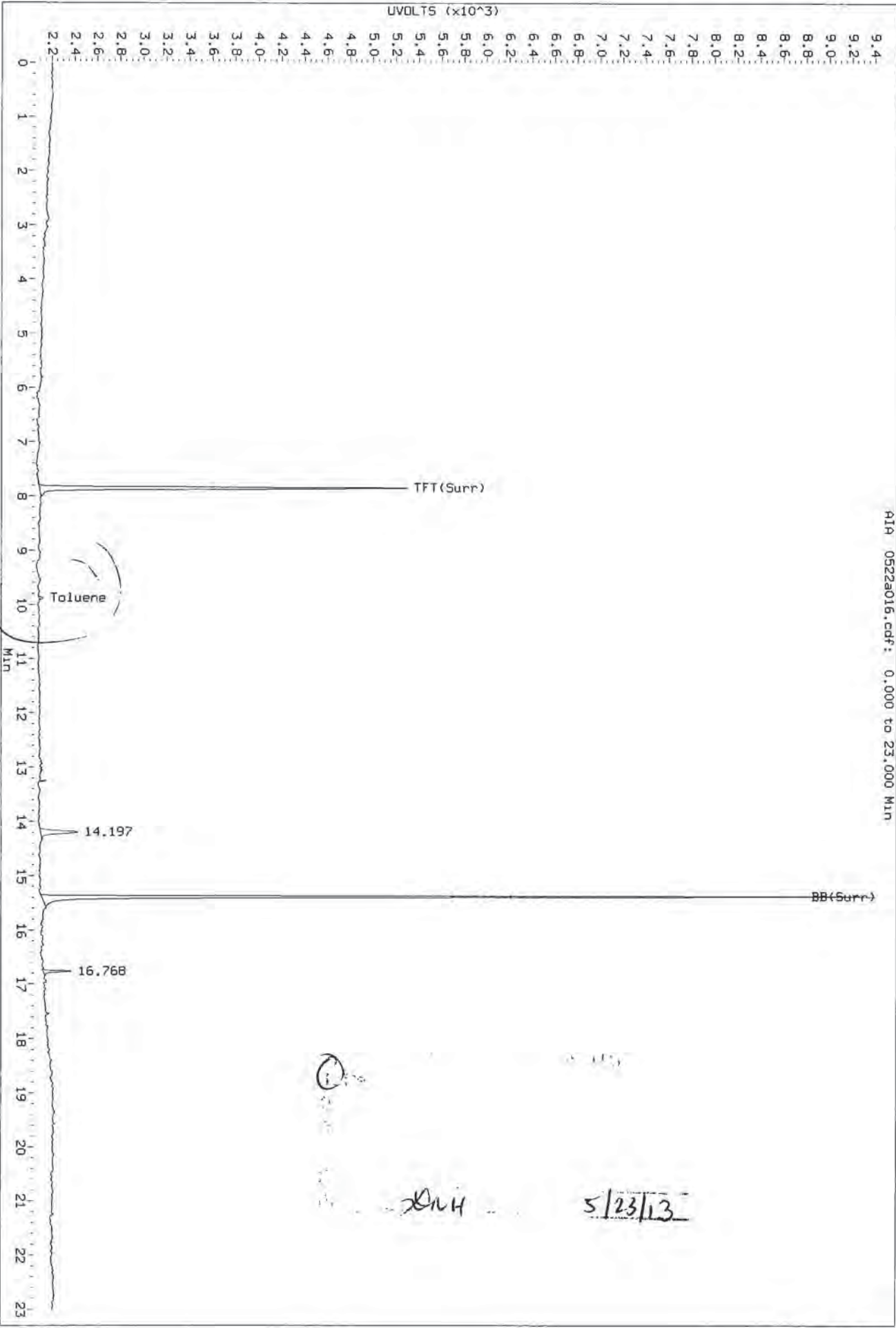


XMH 5/23/13

011000 : 01001

Data File: /chem3/pid1_1/20130522-2_b/0522a016_d/0522a016.cdf
Injection Date: 22-May-2013 16:12
Instrument: pid1.1
Client Sample ID: A2-F6-5-6

AIA 0522a016.cdf: 0.000 to 23.000 Min



Handwritten notes:
①
XNH
5/23/13

0522a016.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F7-S-6

SAMPLE

Lab Sample ID: WQ46G

LIMS ID: 13-10668

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 16:41

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 75 mg-dry-wt

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	24
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	99.8%
Bromobenzene	100%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

DATA 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a017.d ARI ID: WQ46G
Data file 2: /chem3/pid1.i/20130522-2.b/0522a017.d Client ID: A2-F7-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 16:41
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	-0.002	2934	37331	99.2	TFT(Surr)
15.382	-0.002	1950	16456	98.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	9946	0.028
8015C 2MP-TMB (4.18 to 16.21)	723723	8739	0.012
AK101 nC6-nC10 (4.68 to 15.11)	582885	7637	0.013
NWTPHG Tol-Nap (9.78 to 18.90)	375093	10425	0.028

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3216	99.8	TFT(Surr) /
15.390	-0.001	7244	100.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.005	71	0.36N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a017.d
Lab Smp Id: WQ46G Client Smp ID: A2-F7-S-6
Inj Date : 22-MAY-2013 16:41
Operator : LH Inst ID: pid1.i
Smp Info : WQ46G
Misc Info : 13-10668
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 23-May-2013 08:43 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 13:39 Cal File: 0522a011.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

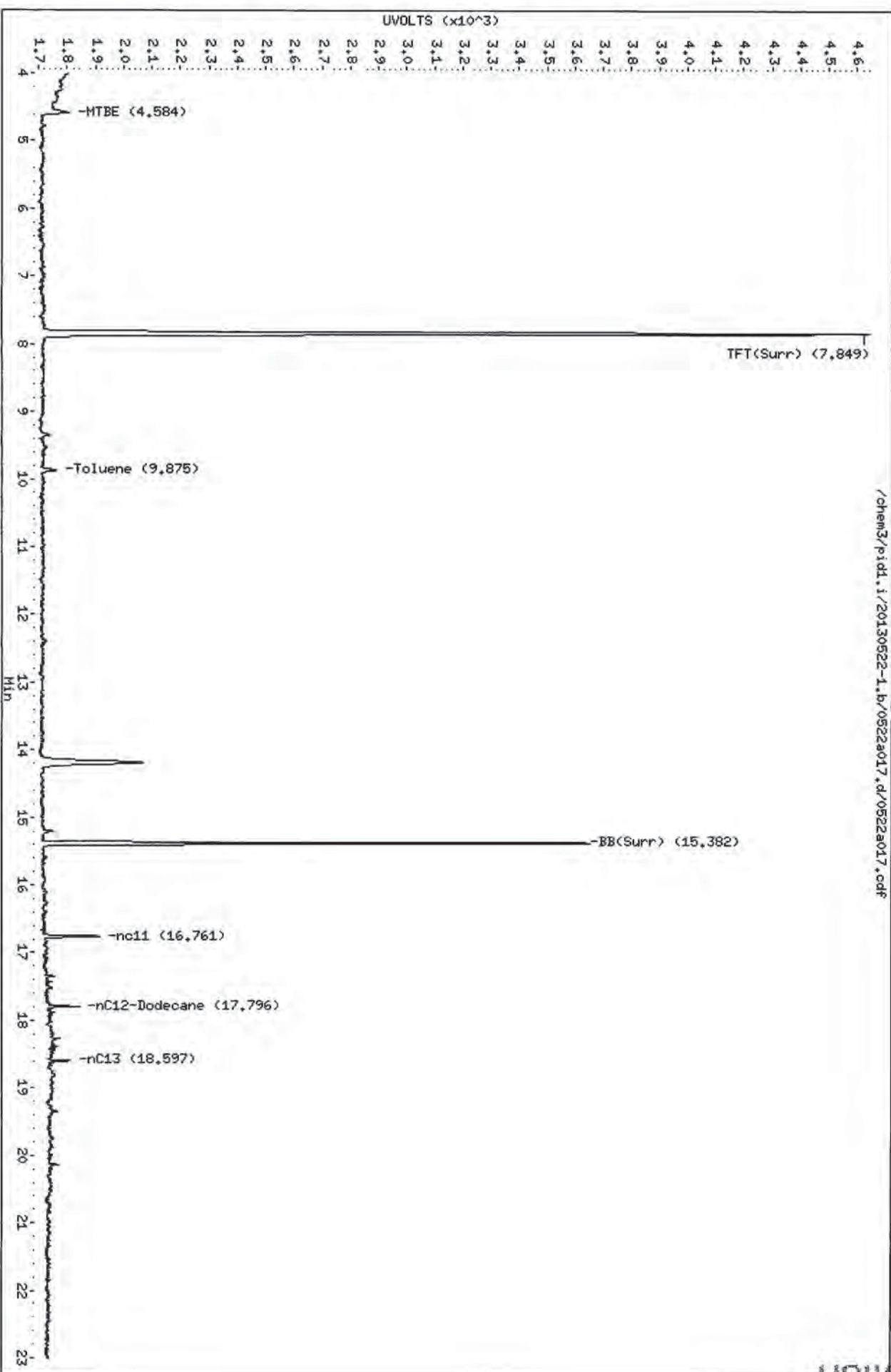
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
6 MTBE	4.584	4.540	0.044	1102	1.30495	1.30
\$ 10 TFT(Surr)	7.849	7.851	-0.002	2934	99.1533	99.15
12 Toluene	9.875	9.877	-0.002	602	0.41559	0.416
\$ 18 BB(Surr)	15.382	15.385	-0.003	1950	98.1352	98.14
21 nc11	16.761	16.702	0.059	194		
22 nc12-Dodecane	17.796	17.798	-0.002	114		
23 nc13	18.597	18.602	-0.005	74		

Data File: /chem3/pid1.i/20130522-1.b/0522a017.d
Date: 22-MAY-2013 16:44
Client ID: A2-F7-S-6
Sample Info: M046G

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-1.b/0522a017.d/0522a017.cdf

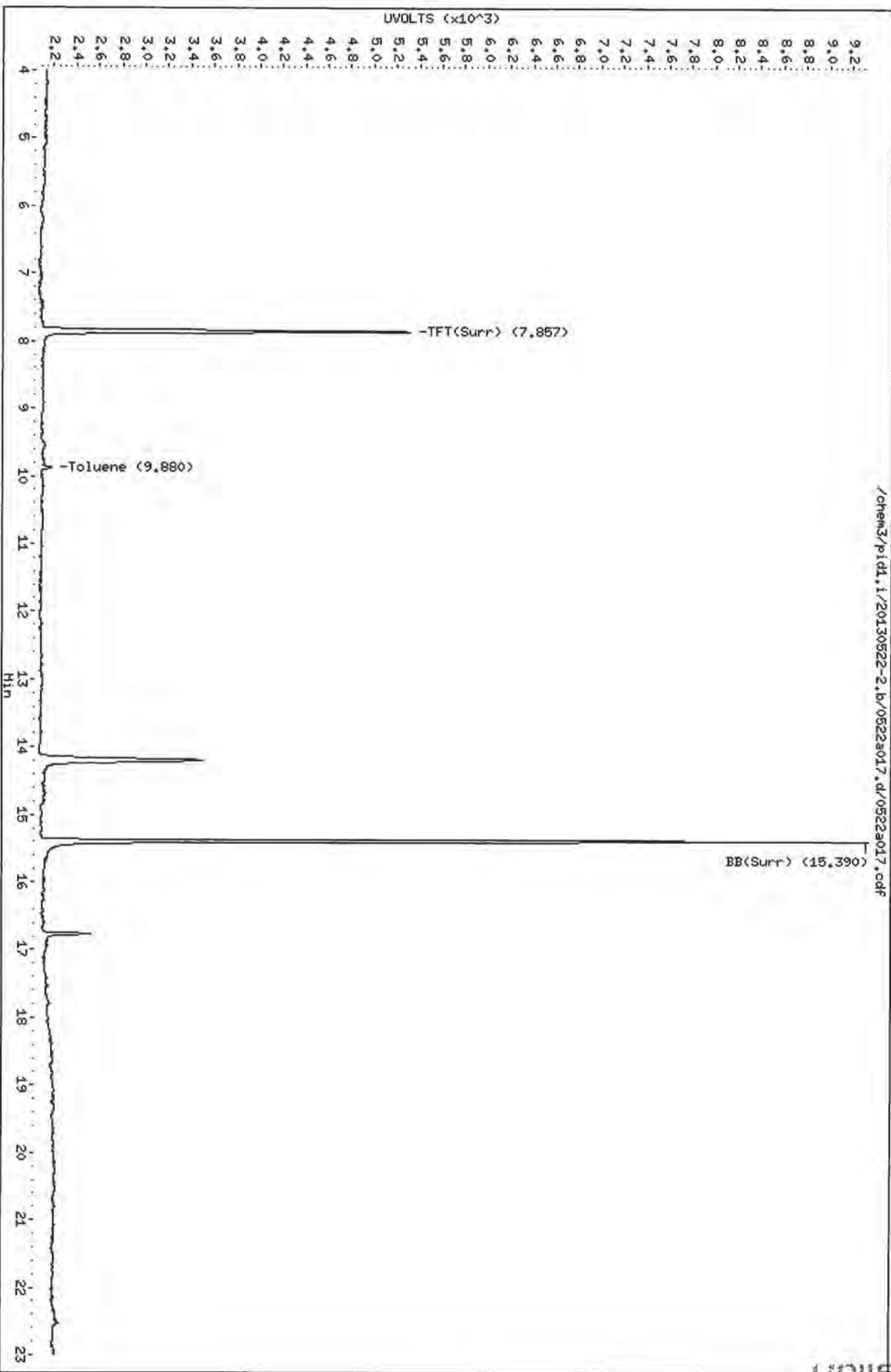


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Data File: /chem3/pid1.i/20130522-2.b/0522a017.d
Date: 22-MAY-2013 16:41
Client ID: A2-F7-S-6
Sample Info: M046C

Column phase: RTX 502-2 PID

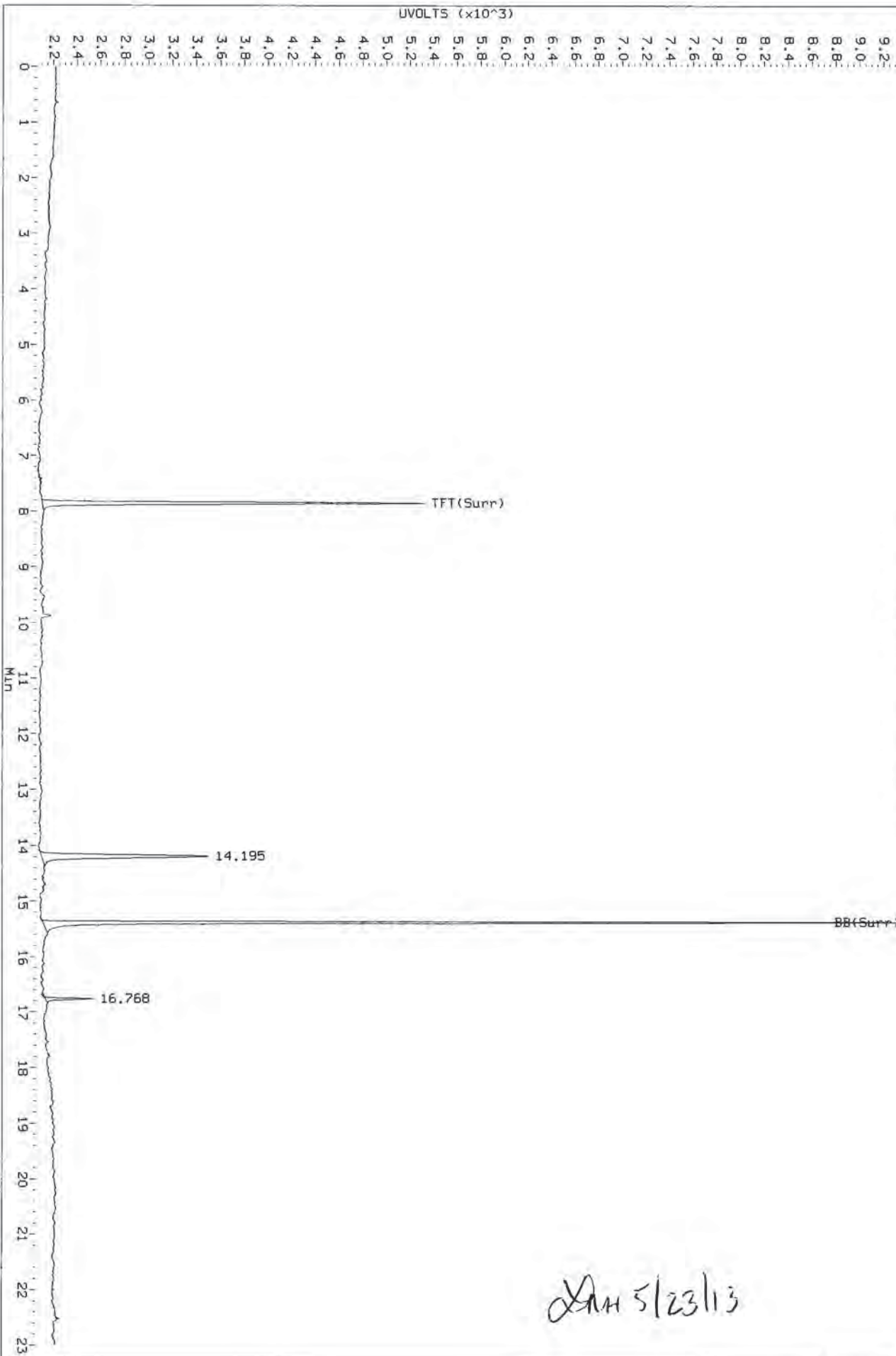
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130522-2.b/0522a017.d

Data File: /chem3/prd1.1/20130522-2.b/0522a017.d/0522a017.cdf
Injection Date: 22-MAY-2013 16:41
Instrument: prd1.1
Client Sample ID: A2-F7-9-6

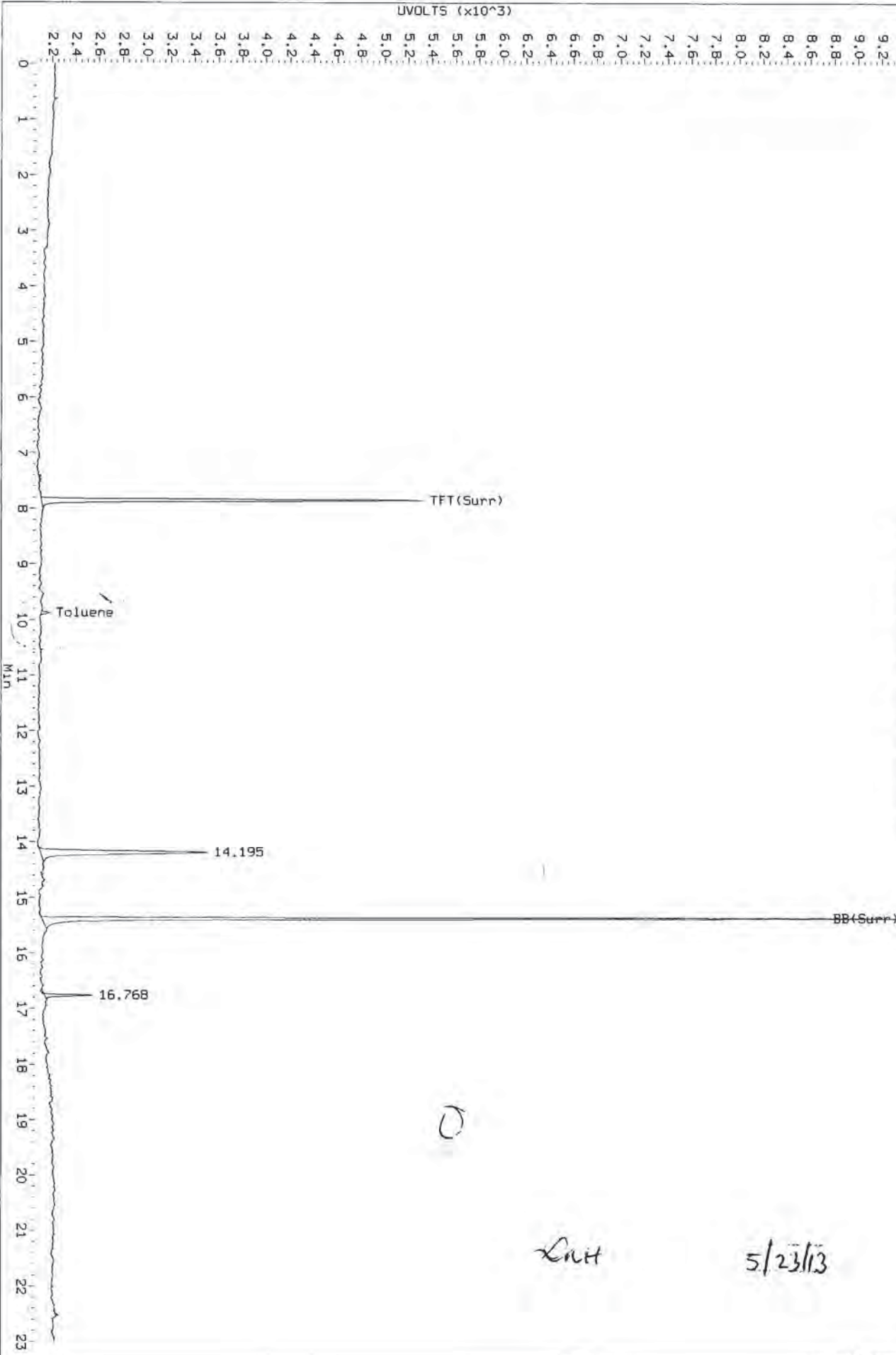
AIR 0522a017.cdf: 0.000 to 23.000 Min



AM 5/23/13

Data File: /chem3/p1d1.1/20130522-2.b/0522a017.d/0522a017.cdf
Injection Date: 22-MAY-2013 16:41
Instrument: p1d1.1
Client Sample ID: A2-F7-5-6

AIA 0522a017.cdf: 0.000 to 23.000 Min



0522a017.cdf

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: **A2-F8-S-6**
SAMPLE

Lab Sample ID: WQ46H
 LIMS ID: 13-10669
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Analyzed: 05/22/13 17:11
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 72 mg-dry-wt
 Percent Moisture: 18.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	35	< 35 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	96.7%
Bromobenzene	98.4%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Ann 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a018.d ARI ID: WQ46H
Data file 2: /chem3/pid1.i/20130522-2.b/0522a018.d Client ID: A2-F8-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 17:11
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
7.847	-0.004	2880	36489	97.3	TFT(Surr)
15.382	-0.003	1926	16259	96.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	10985	0.031
8015C 2MP-TMB (4.18 to 16.21)	723723	8441	0.012
AK101 nC6-nC10 (4.68 to 15.11)	582885	8440	0.014
NWTPHG Tol-Nap (9.78 to 18.90)	375093	10985	0.029

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
7.855	-0.001	3118	96.7	TFT(Surr)
15.390	-0.001	7114	98.4	BB(Surr)

SW8021 (PID)

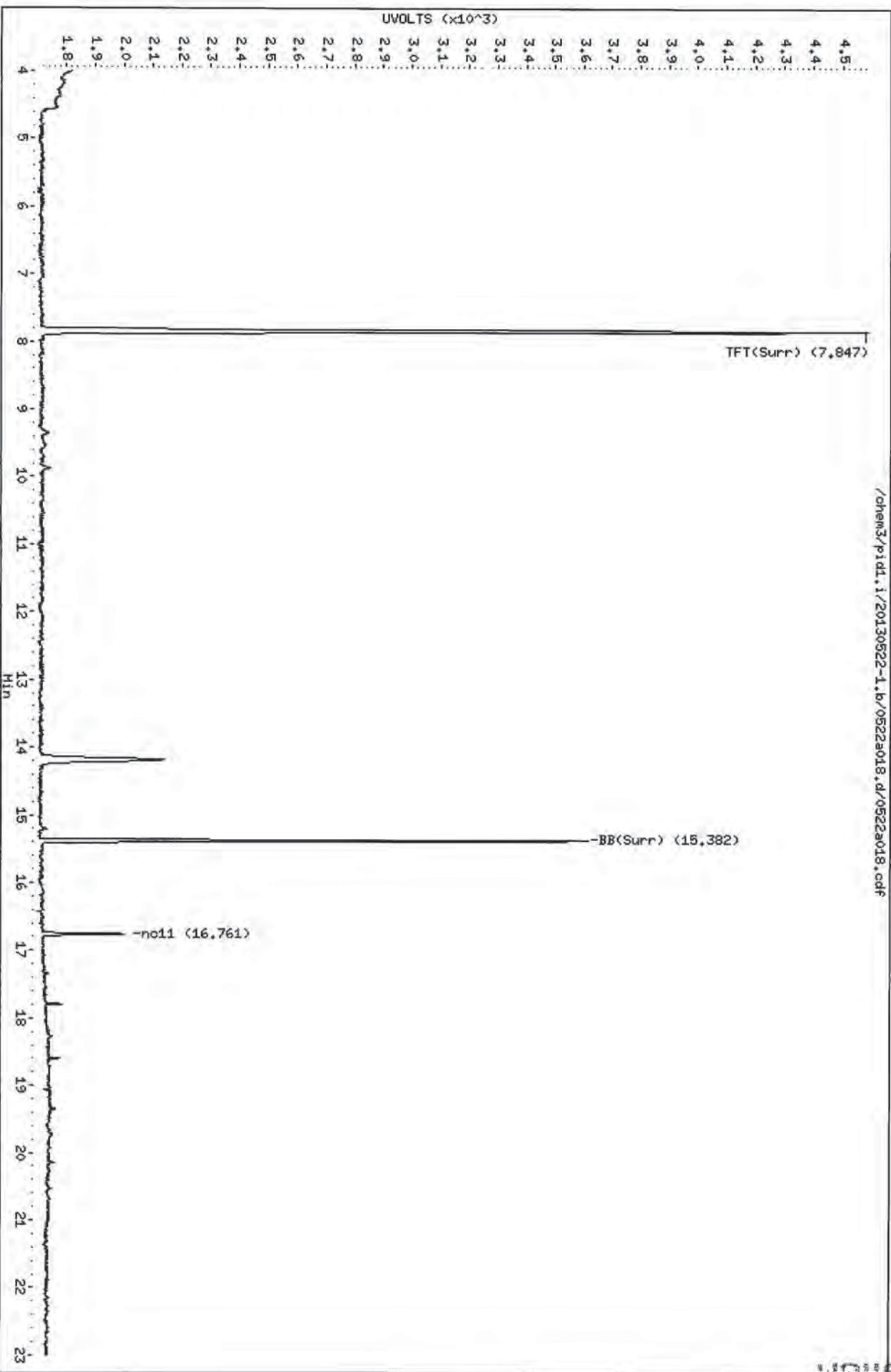
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	-0.001	35	0.18N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a018.d
Date: 22-MAY-2013 17:11
Client ID: A2-F8-S-6
Sample Info: M046H

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

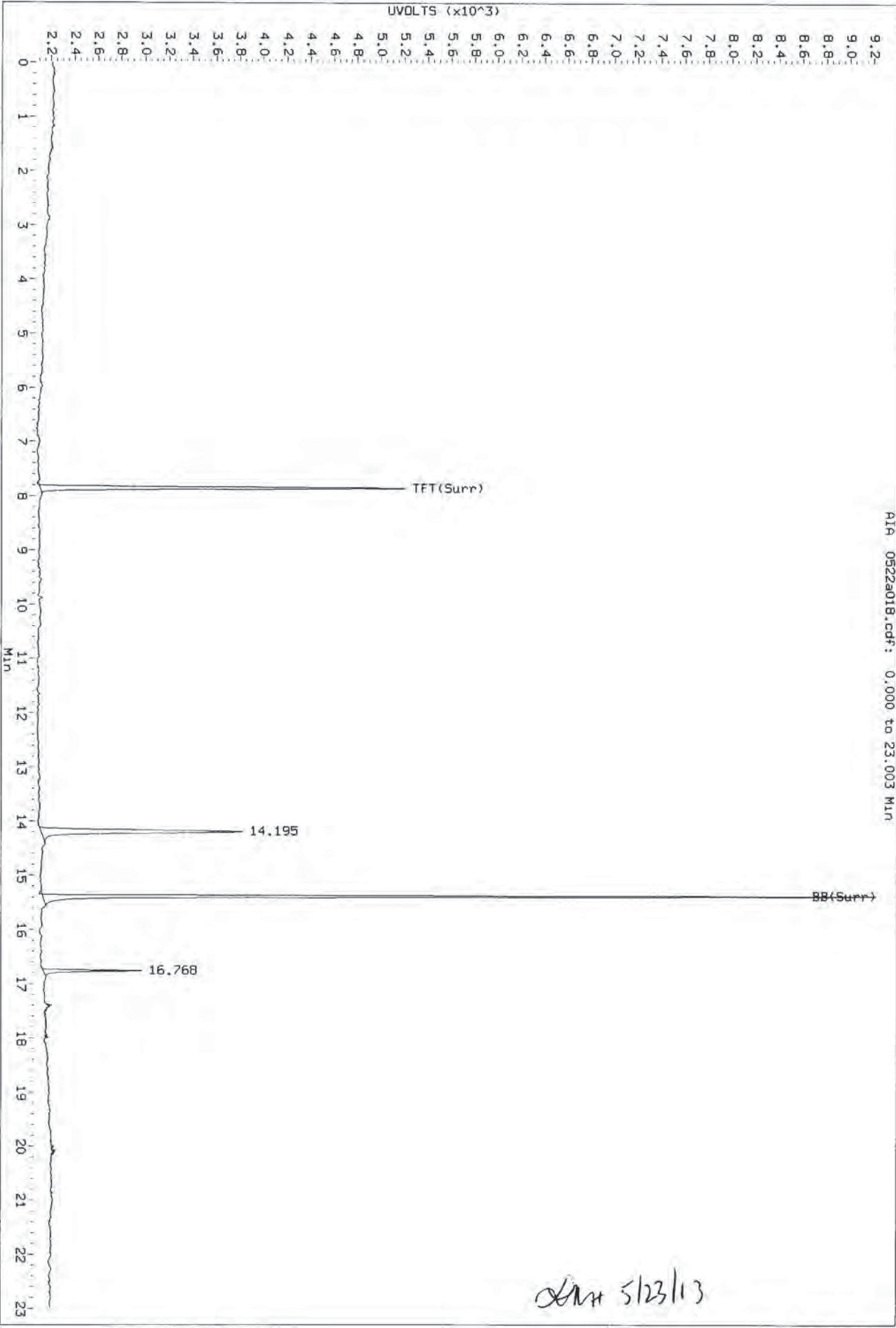


/chem3/pid1.i/20130522-1.b/0522a018.d

07 06 05 04 03 02 01

Data File: /chem3/P1d1_1/20130522-2_b/0522a018.d/0522a018.cdf
Injection Date: 22-MAY-2013 17:11
Instrument: P1d1.1
Client Sample ID: A2-F8-5-6

A1A 0522a018.cdf: 0.000 to 23.003 Min

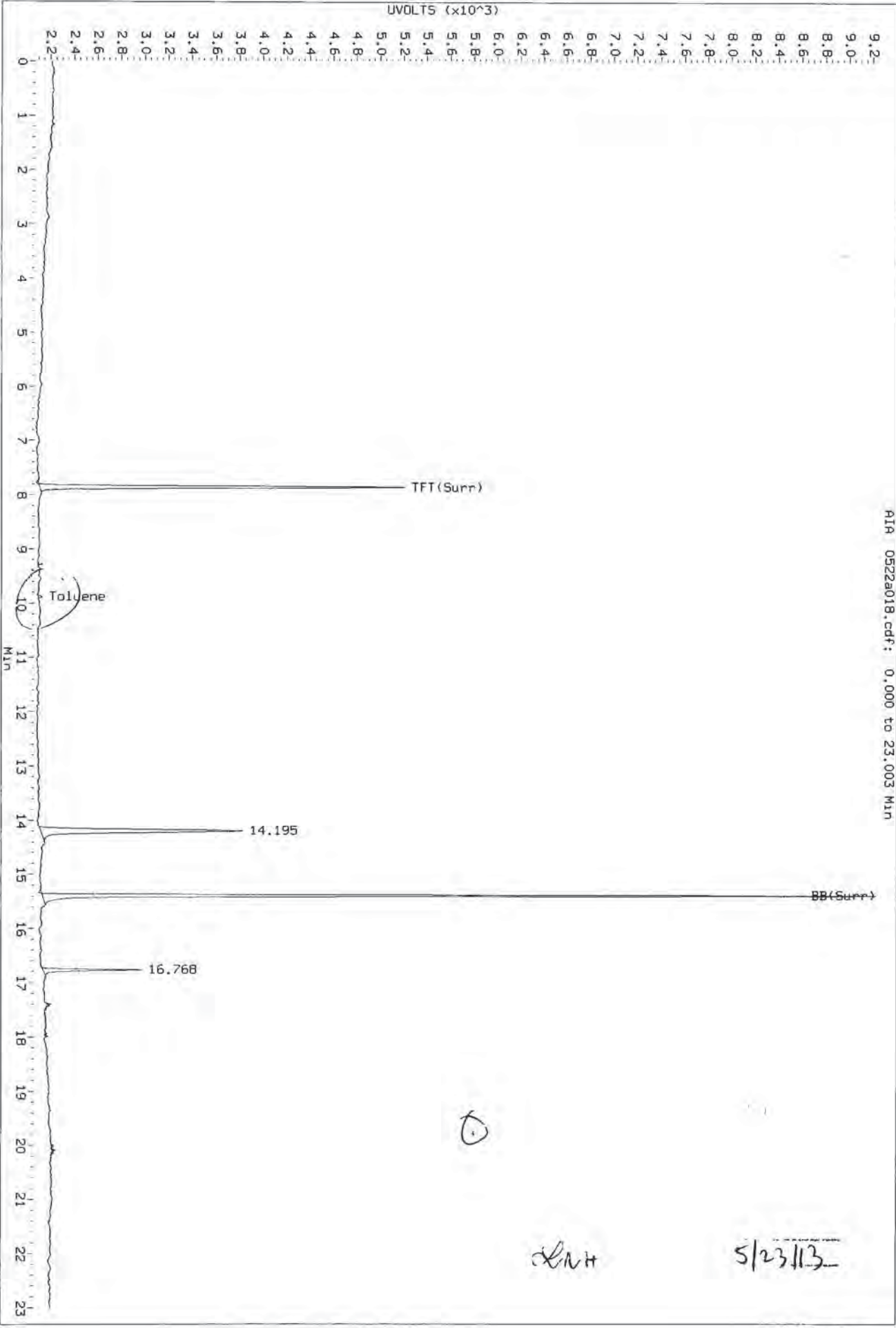


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09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Data File: /chem3/pid1.1/20130522-2.b/0522a018.d/0522a018.cdf
Injection Date: 22-MAY-2013 17:11
Instrument: pid1.1
Client Sample ID: A2-F8-5-6

AIR 0522a018.cdf: 0.000 to 23.003 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F9-S-6

SAMPLE

Lab Sample ID: WQ46I

LIMS ID: 13-10670

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 17:40

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 76 mg-dry-wt

Percent Moisture: 12.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	98.9%
Bromobenzene	100%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

XNH 5/23/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a019.d ARI ID: WQ46I
 Data file 2: /chem3/pid1.i/20130522-2.b/0522a019.d Client ID: A2-F9-S-6
 Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 17:40
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	-0.003	2920	36685	98.7	TFT(Surr)
15.382	-0.002	1977	16546	99.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	4105	0.011
8015C 2MP-TMB (4.18 to 16.21)	723723	2577	0.004
AK101 nC6-nC10 (4.68 to 15.11)	582885	2576	0.004
NWTPHG Tol-Nap (9.78 to 18.90)	375093	4105	0.011

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3188	98.9	TFT(Surr)
15.390	-0.001	7235	100.1	BB(Surr)

SW8021 (PID)

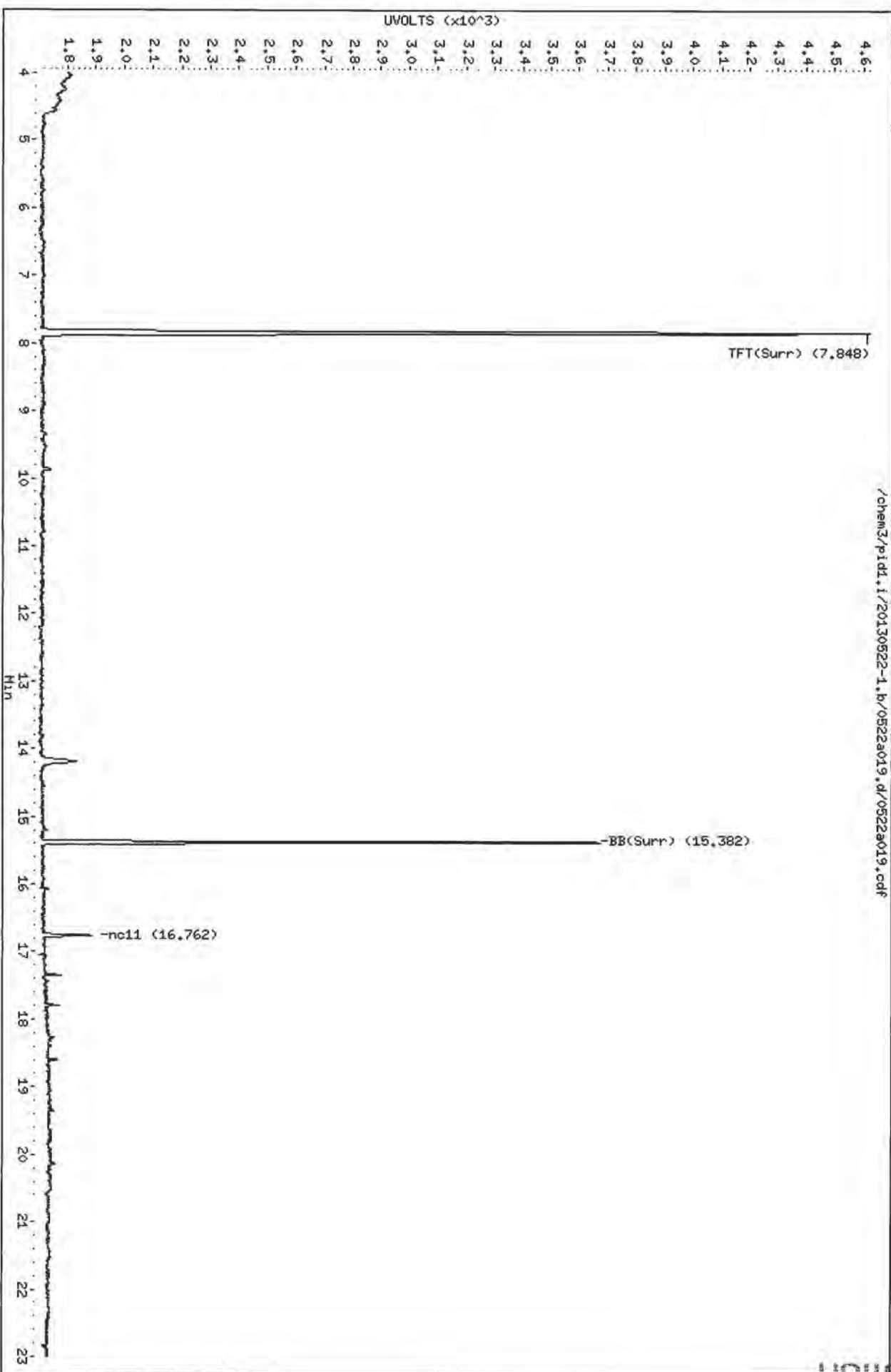
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.005	42	0.21N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/p/idd.i/20130522-1.b/0522a019.d
Date: 22-MAY-2013 17:40
Client ID: A2-F9-S-6
Sample Info: MQ461

Column phase: RTX 502-2 FID

Instrument: p/idd.i
Operator: LH
Column diameter: 0.18



/chem3/p/idd.i/20130522-1.b/0522a019.d

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Data File: /chem3/pid1.i/20130522-2.b/0522a019.d
Date : 22-May-2013 17:40
Client ID: A2-F9-S-6
Sample Info: MQ461

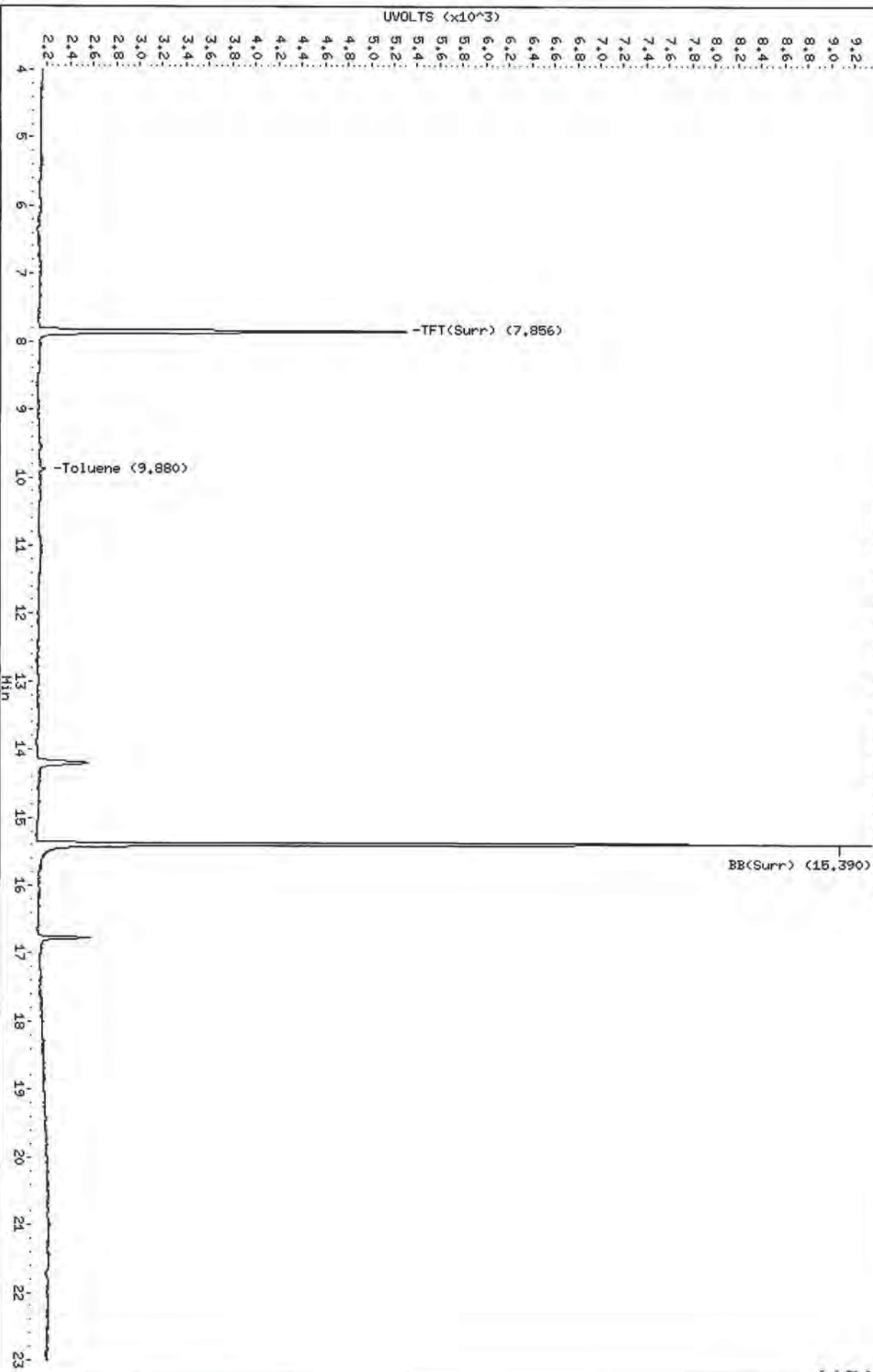
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 PID

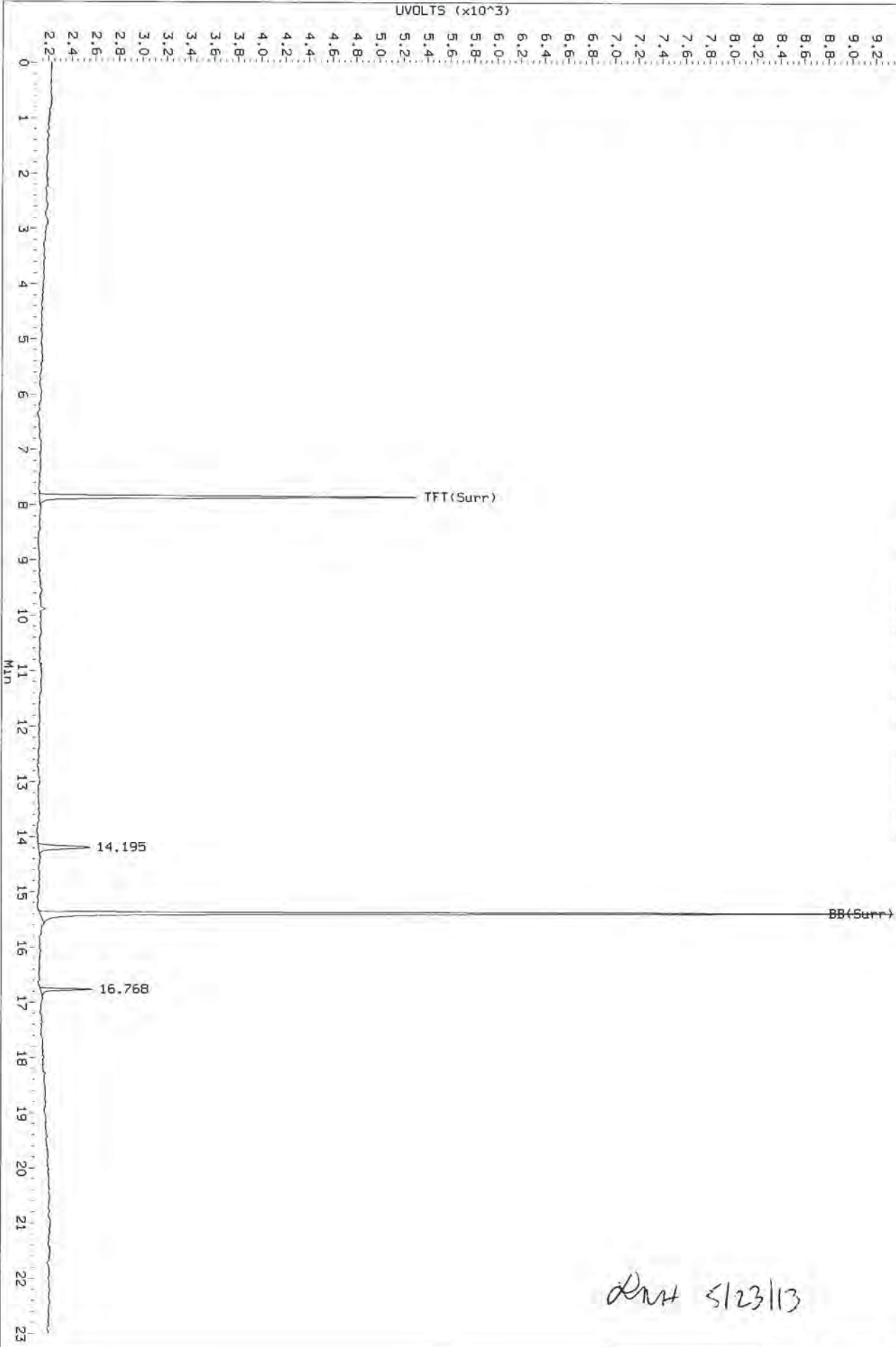
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-2.b/0522a019.d/0522a019.cdf



Data File: /chem3/pid1.1/20130522-2.b/0522a019.d/0522a019.cdf
Injection Date: 22-MAY-2013 17:40
Instrument: pid1.1
Client Sample ID: A2-F9-5-6

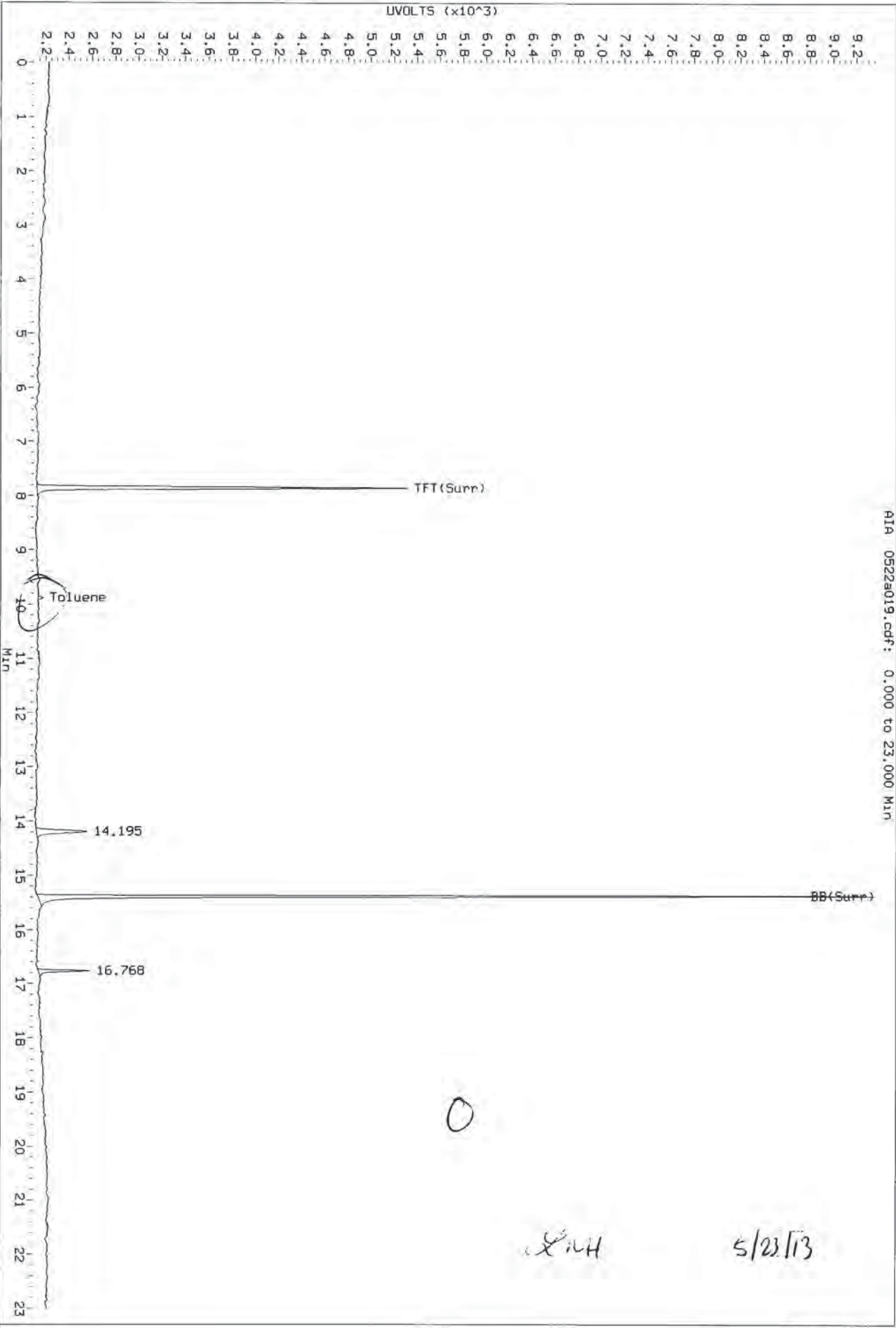
AIA 0522a019.cdf: 0.000 to 23.000 Min



dmh 5/23/13

Data File: /chem3/pid1.1/20130522-2.b/0522a019.d/0522a019.cdf
Injection Date: 22-MAY-2013 17:40
Instrument: pid1.1
Client Sample ID: A2-F9-S-6

AIA 0522a019.cdf: 0.000 to 23.000 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F10-S-6

SAMPLE

Lab Sample ID: WQ46J

LIMS ID: 13-10671

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 18:09

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 90 mg-dry-wt

Percent Moisture: 14.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	28	< 28 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	102%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

2/24 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a020.d ARI ID: WQ46J
Data file 2: /chem3/pid1.i/20130522-2.b/0522a020.d Client ID: A2-F10-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 18:09
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.847	-0.003	2972	37367	100.4	TFT(Surr)
15.381	-0.003	2009	16695	101.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	6142	0.017
8015C 2MP-TMB (4.18 to 16.21)	723723	5090	0.007
AK101 nC6-nC10 (4.68 to 15.11)	582885	4602	0.008
NWTPHG Tol-Nap (9.78 to 18.90)	375093	6142	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.000	3262	101.2	TFT(Surr)
15.390	-0.001	7339	101.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

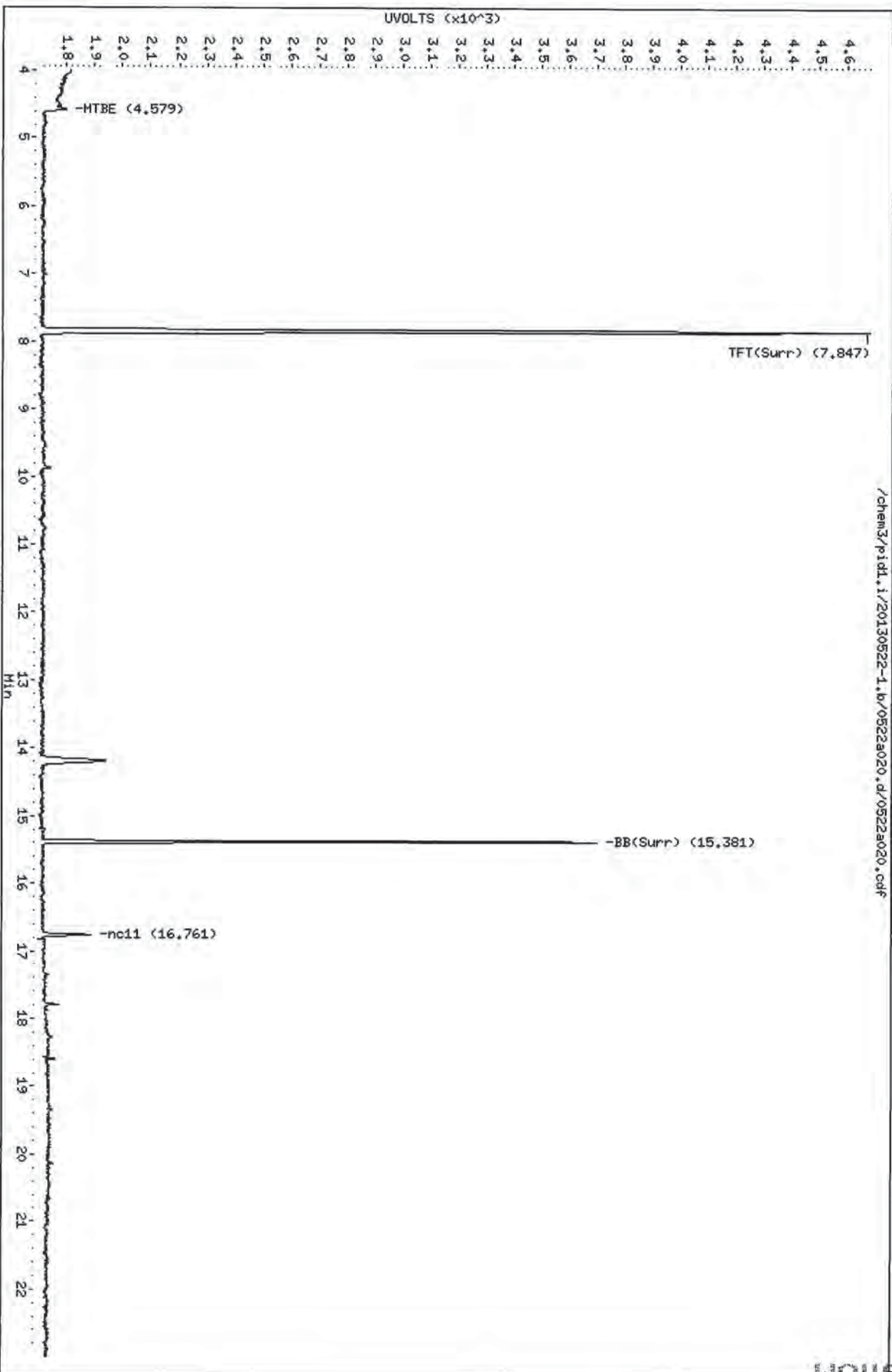
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a020.d
Date: 22-MAY-2013 18:09
Client ID: A2-F10-S-6
Sample Info: M046J

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130522-1.b/0522a020.d/0522a020.cdf

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

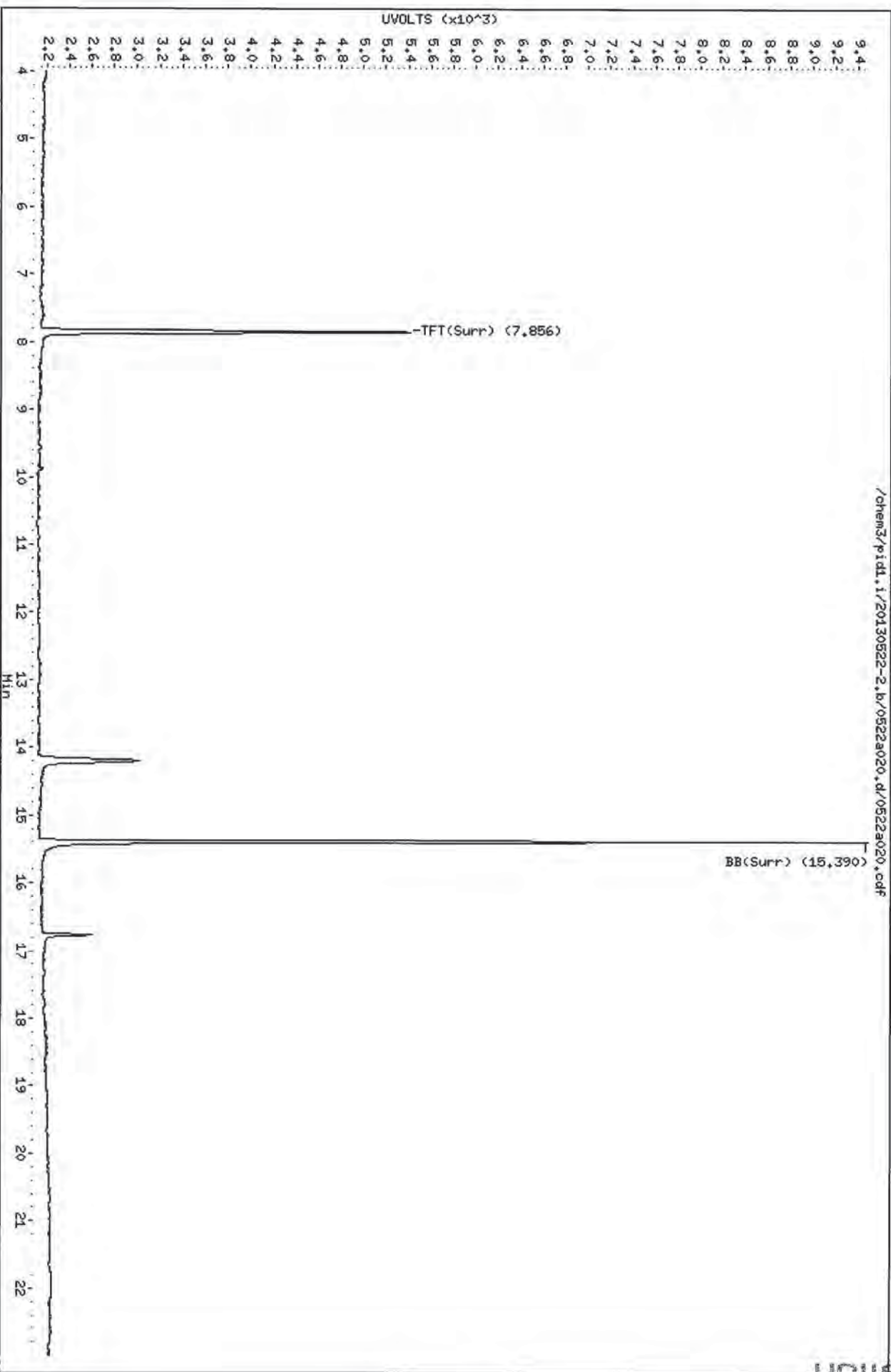


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Data File: /chem3/pid1.i/20130522-2.k/0522a020.d
Date: 22-May-2013 18:09
Client ID: A2-F10-S-6
Sample Info: MQ46J

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130522-2.k/0522a020.d

NT 11 00 : 01 01

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F11-S-6

SAMPLE

Lab Sample ID: WQ46K

LIMS ID: 13-10672

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 18:38

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 79 mg-dry-wt

Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	98.1%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Est 5/23/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a021.d ARI ID: WQ46K
 Data file 2: /chem3/pid1.i/20130522-2.b/0522a021.d Client ID: A2-F11-S-6
 Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 18:38
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	-0.003	2909	36843	98.3	TFT(Surr)
15.382	-0.002	1986	16382	99.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	9431	0.026
8015C 2MP-TMB (4.18 to 16.21)	723723	8007	0.011
AK101 nC6-nC10 (4.68 to 15.11)	582885	8007	0.014
NWTPHG Tol-Nap (9.78 to 18.90)	375093	9431	0.025

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3161	98.1	TFT(Surr)
15.390	-0.001	7302	101.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	-0.005	40	0.20N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

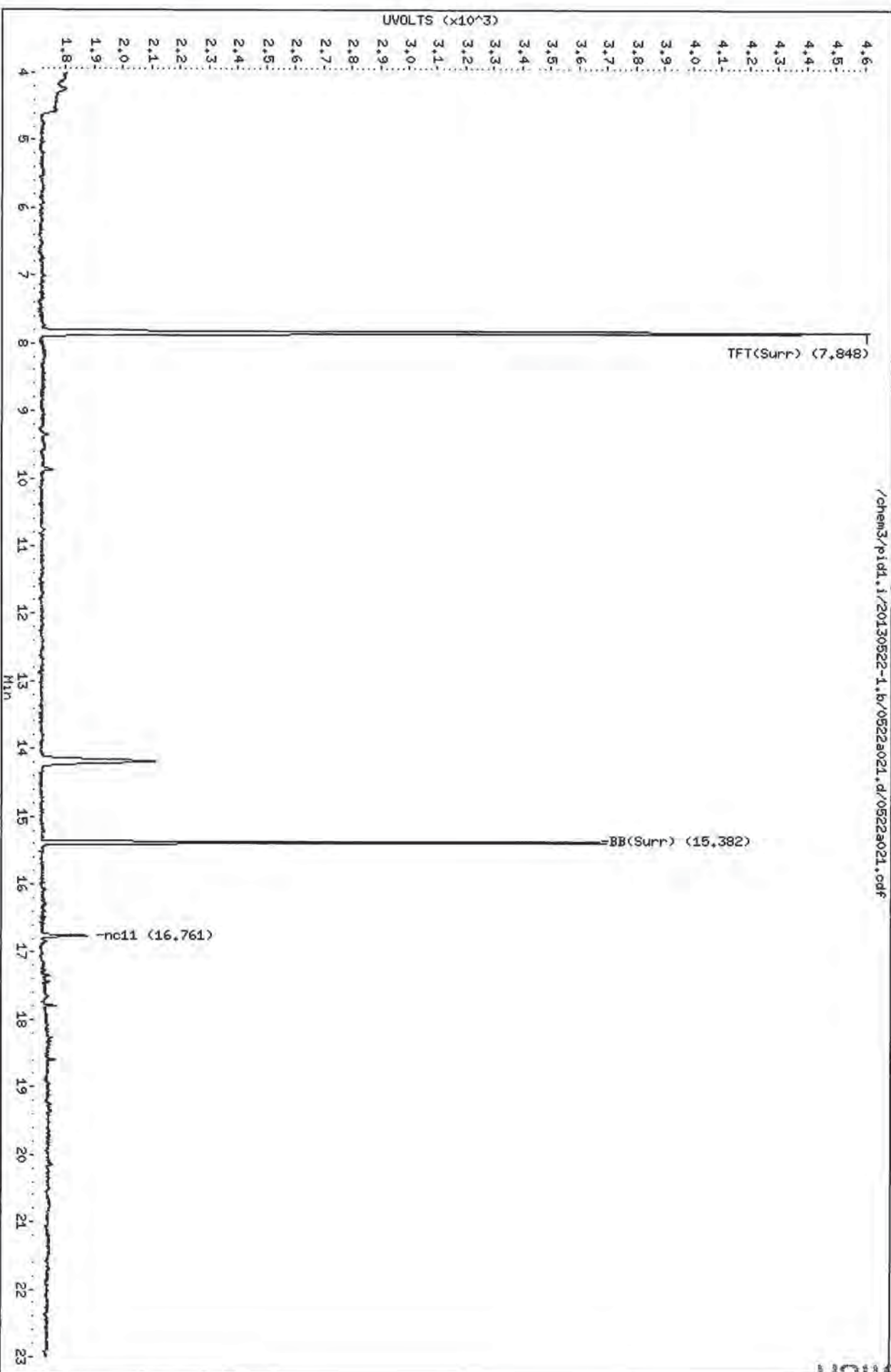
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a021.d
Date: 22-MAY-2013 18:38
Client ID: A2-F11-S-6
Sample Info: MQ46K

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-1.b/0522a021.d/0522a021.pdf



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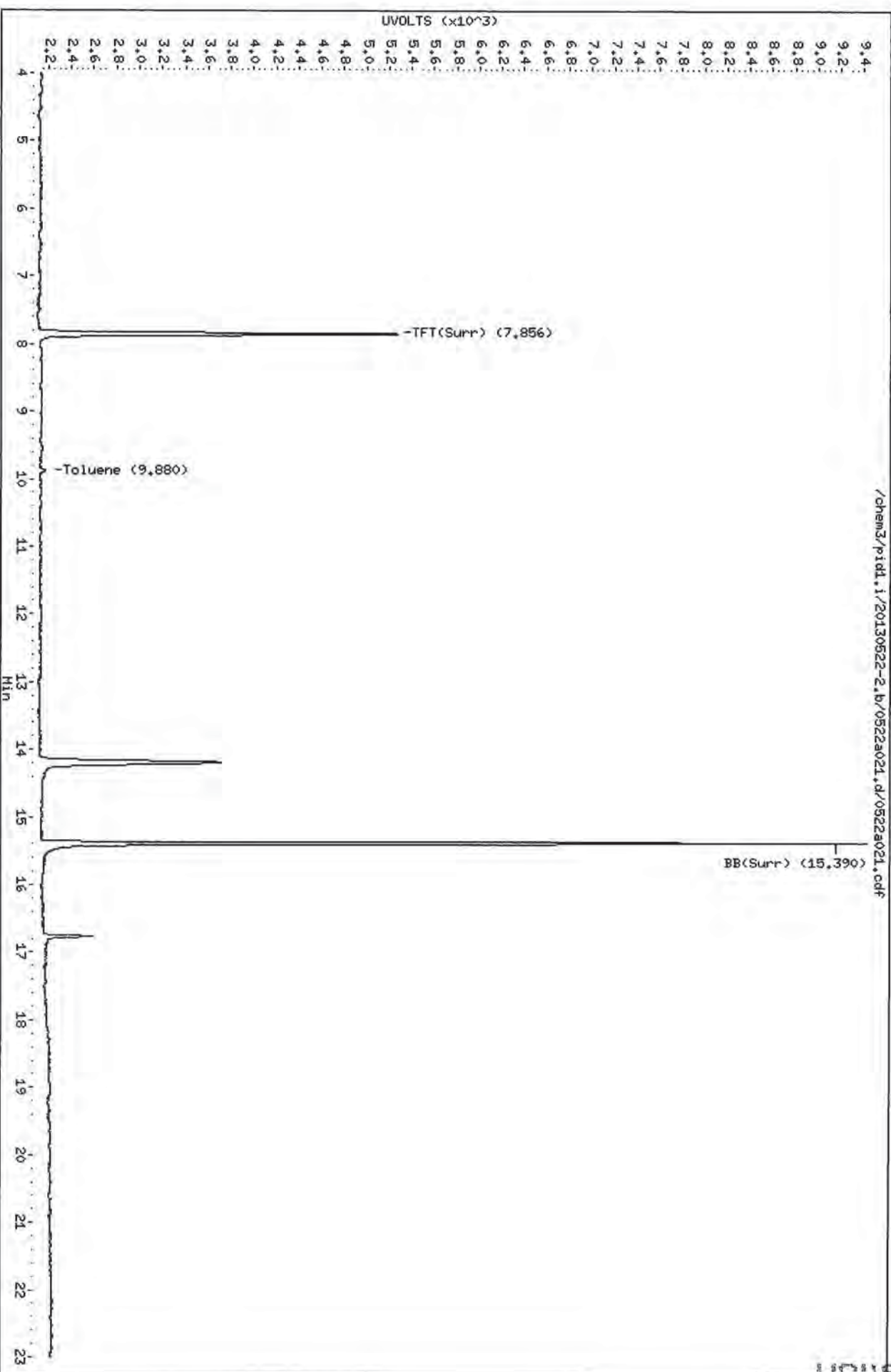
Data File: /chem3/pid1.i/20130522-2.b/0522a021.d
Date: 22-MAY-2013 18:38
Client ID: A2-F11-6-6
Sample Info: MQ46K

Instrument: pid1.i

Column phase: RTX 502-2 PID

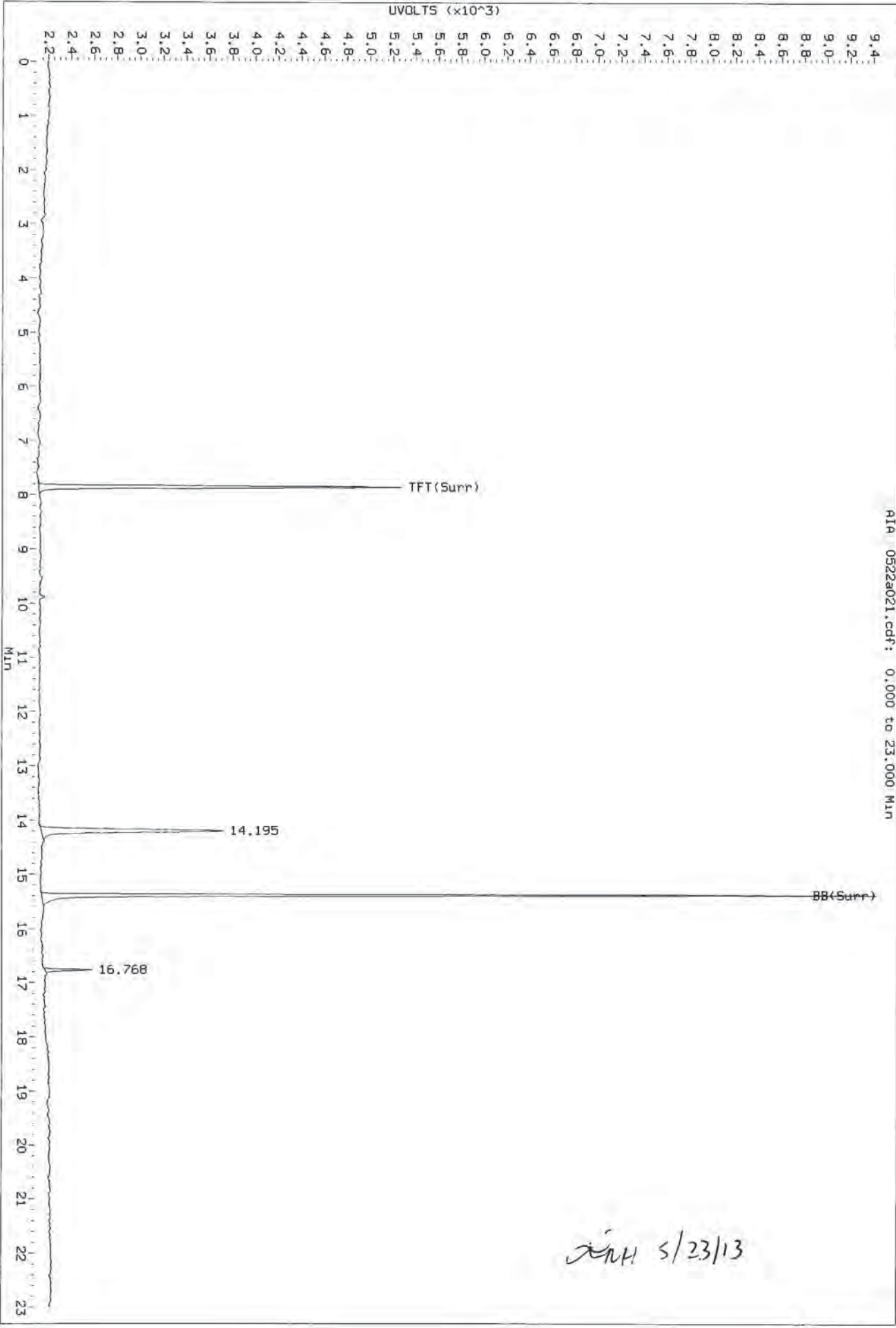
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-2.b/0522a021.d/0522a021.cdf



Data File: /chem3/p1d1_1/20130522-2.b/0522a021.d/0522a021.cdf
Injection Date: 22-MAY-2013 18:38
Instrument: p1d1.1
Client Sample ID: A2-F11-5-6

AIA 0522a021.cdf: 0.000 to 23.000 Min

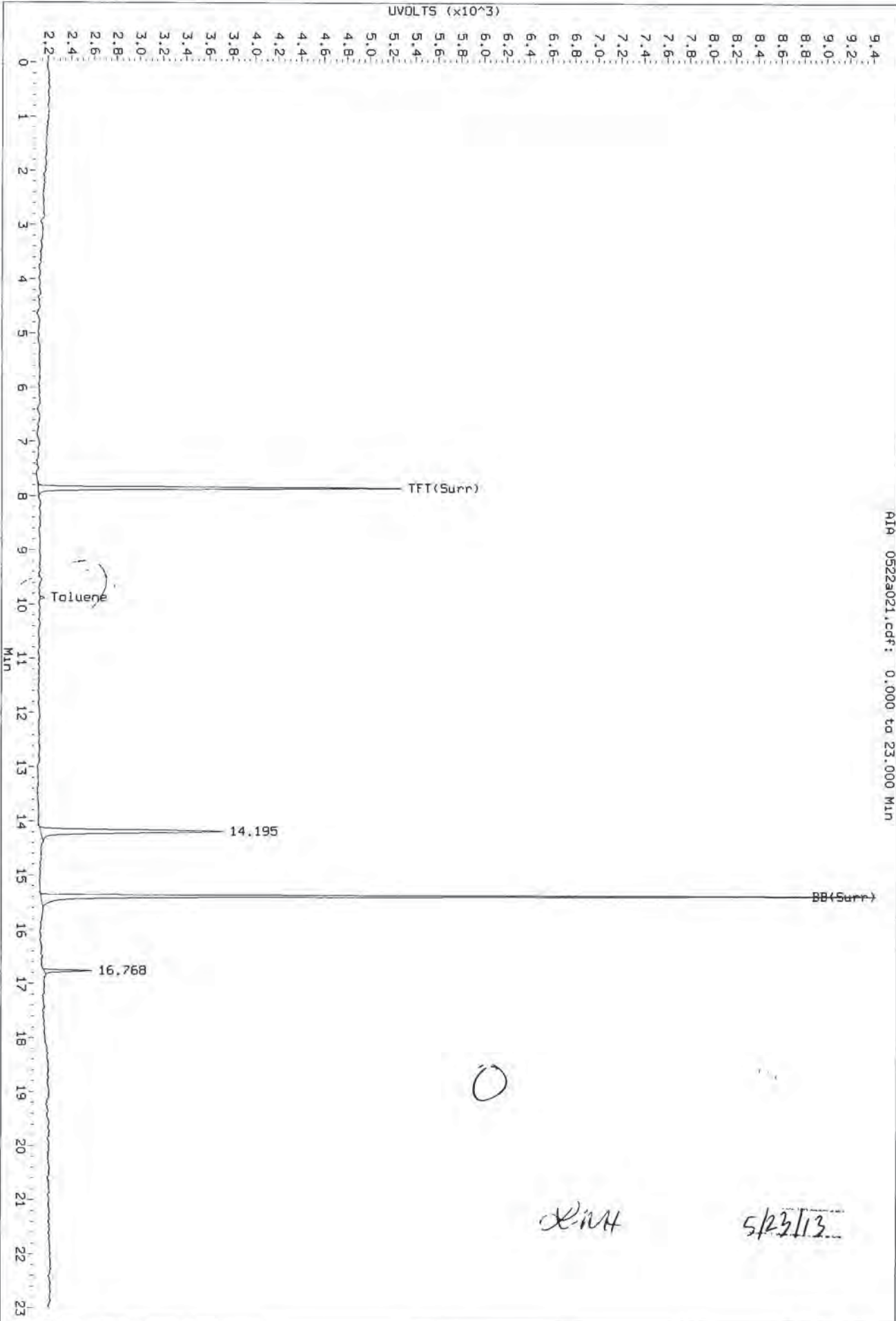


JNH 5/23/13

41100: 91001

Data File: /chem3/p1d1.1/20130522-2.b/0522a021.d/0522a021.cdf
Injection Date: 22-May-2013 18:38
Instrument: p1d1.1
Client Sample ID: A2-F11-9-6

AIA 0522a021.cdf: 0.000 to 23.000 Min



5/23/13

KMH

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

**Sample ID: A2-F12-S-6
SAMPLE**

Lab Sample ID: WQ46L

LIMS ID: 13-10673

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 19:07

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 87 mg-dry-wt

Percent Moisture: 12.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	14	< 14 U

BETX Surrogate Recovery

Trifluorotoluene	96.0%
Bromobenzene	99.8%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Sum 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a022.d ARI ID: WQ46L
Data file 2: /chem3/pid1.i/20130522-2.b/0522a022.d Client ID: A2-F12-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 19:07
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	-0.002	2851	35897	96.3	TFT(Surr)
15.382	-0.002	1960	16217	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	3826	0.011
8015C 2MP-TMB (4.18 to 16.21)	723723	2985	0.004
AK101 nC6-nC10 (4.68 to 15.11)	582885	2985	0.005
NWTPHG Tol-Nap (9.78 to 18.90)	375093	3826	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3094	96.0	TFT(Surr)
15.390	-0.001	7216	99.8	BB(Surr)

SW8021 (PID)

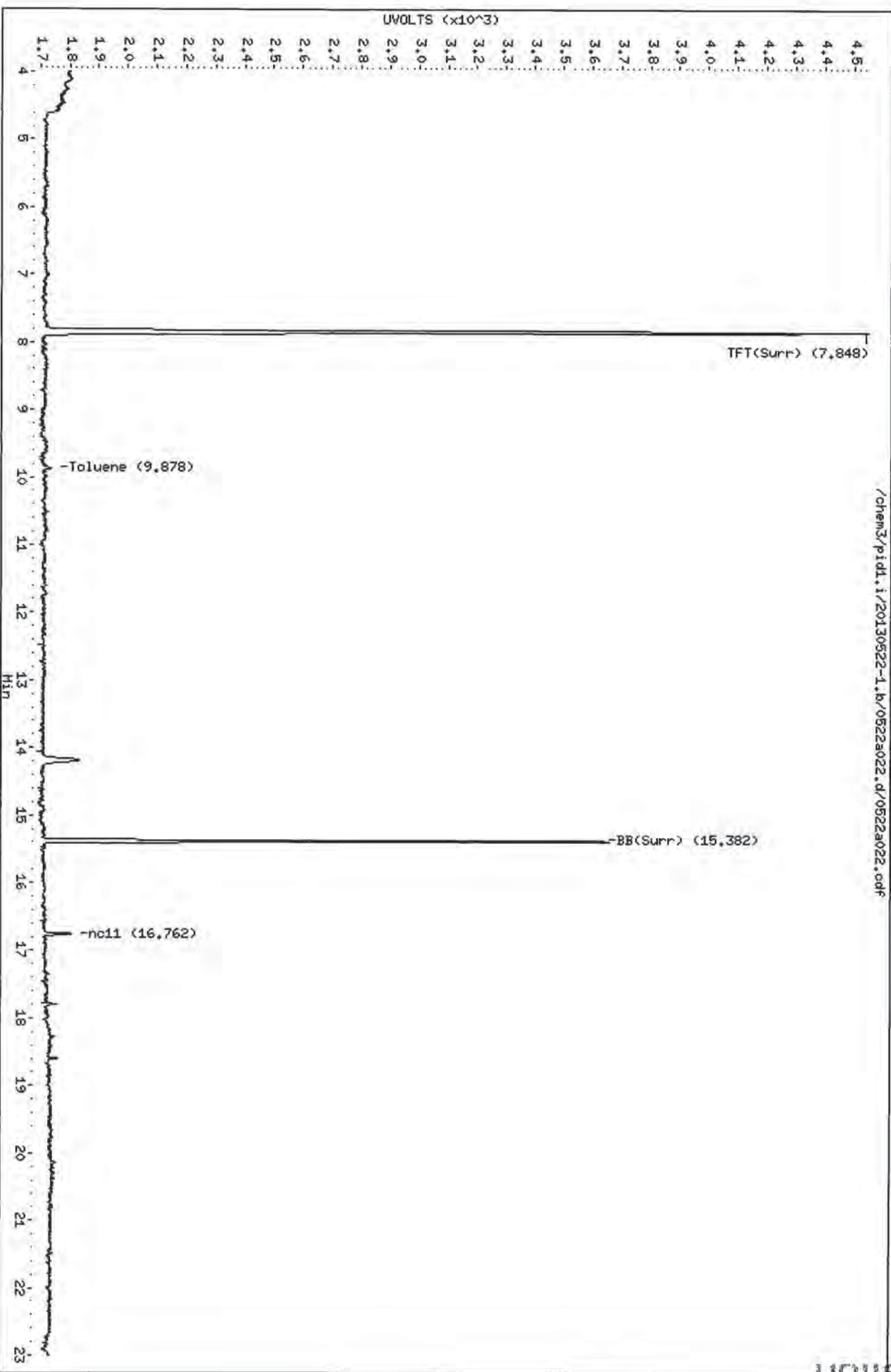
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a022.d
Date: 22-MAY-2013 19:07
Client ID: A2-F12-S-6
Sample Info: M046L

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



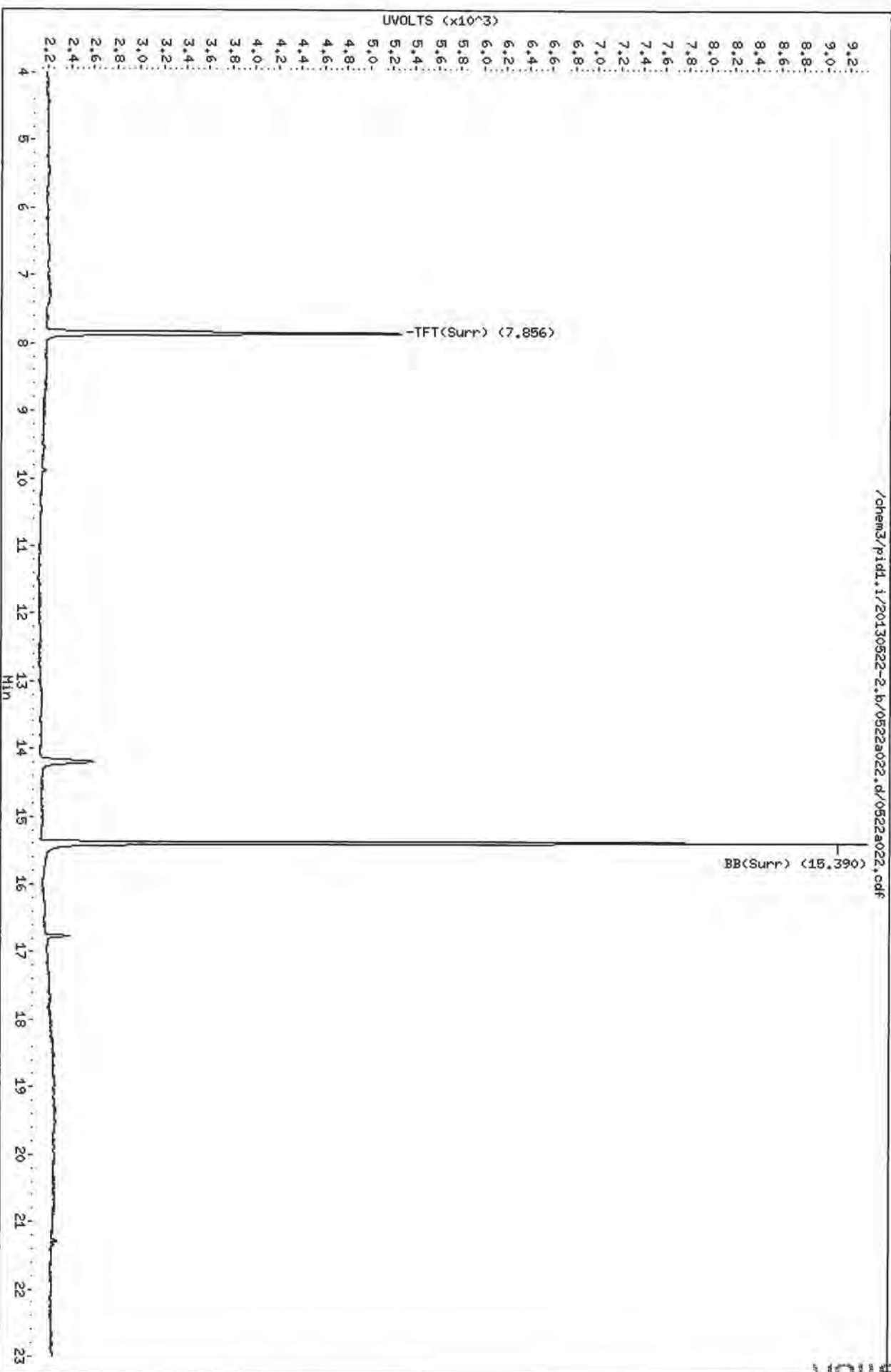
/chem3/pid1.i/20130522-1.b/0522a022.d/0522a022.odr

Data File: /chem3/pid1.i/20130522-2.b/0522a022.d
Date: 22-MAY-2013 19:07
Client ID: A2-F12-S-6
Sample Info: MQ46L

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130522-2.b/0522a022.d/0522a022.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F13-S-6

SAMPLE

Lab Sample ID: WQ46M

LIMS ID: 13-10674

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 20:35

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 79 mg-dry-wt

Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	96.0%
Bromobenzene	101%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Scan 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a025.d ARI ID: WQ46M
Data file 2: /chem3/pid1.i/20130522-2.b/0522a025.d Client ID: A2-F13-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 20:35
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	-0.001	2855	36229	96.5	TFT(Surr)
15.382	-0.002	1979	16581	99.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	6861	0.019
8015C 2MP-TMB (4.18 to 16.21)	723723	14566	0.020
AK101 nC6-nC10 (4.68 to 15.11)	582885	13911	0.024
NWTPHG Tol-Nap (9.78 to 18.90)	375093	6861	0.018

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3094	96.0	TFT(Surr) ✓
15.390	-0.001	7300	101.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

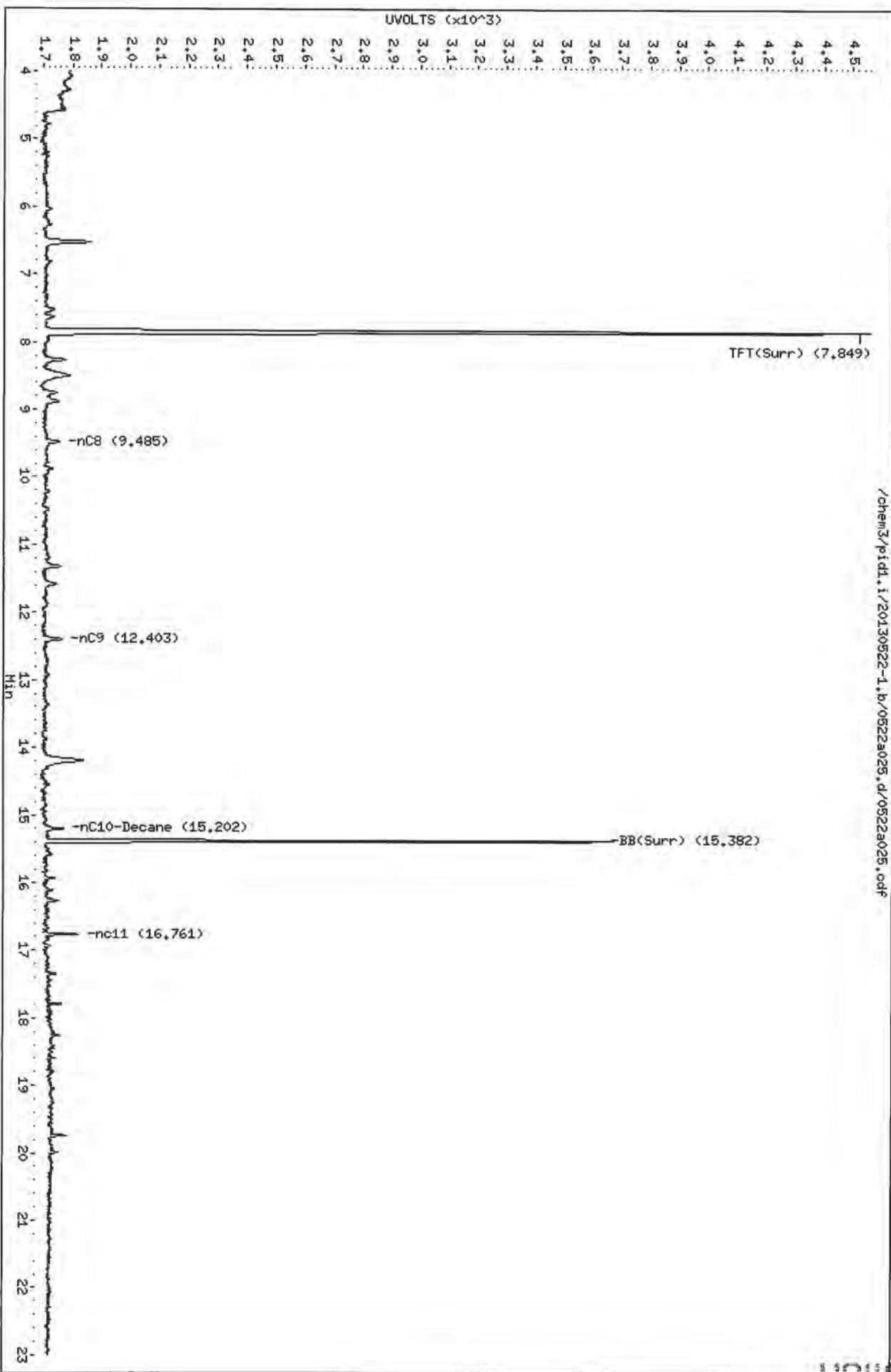
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a025.d
Date: 22-MAY-2013 20:35
Client ID: A2-F13-S-6
Sample Info: MQ46H

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-1.b/0522a025.d/0522a025.cdf



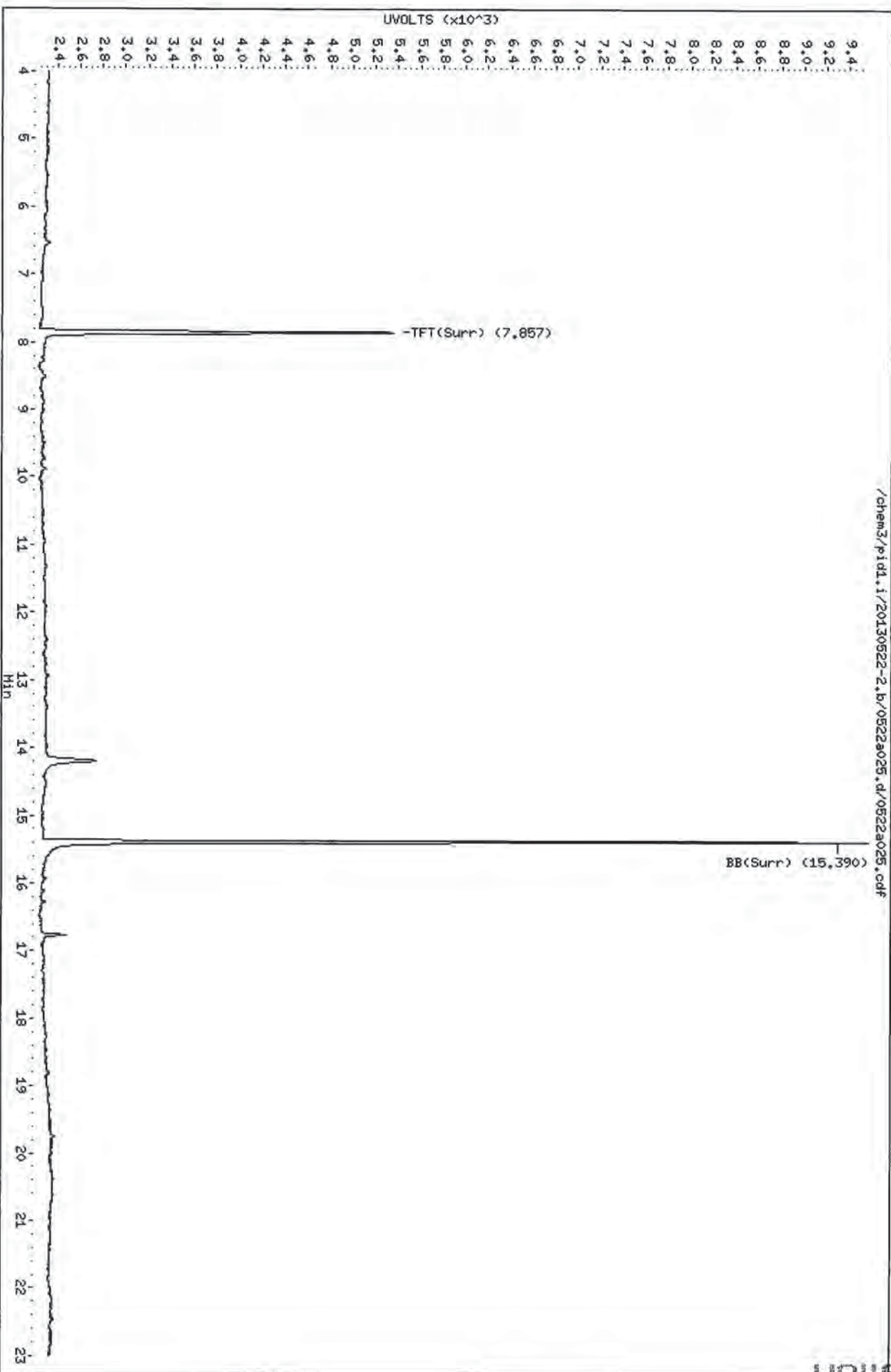
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Data File: /chem3/pid1.i/20130522-2.b/0522a025.d
Date: 22-MAY-2013 20:35
Client ID: A2-F13-S-6
Sample Info: MQ46M

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-2.b/0522a025.d/0522a025.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F14-S-6

SAMPLE

Lab Sample ID: WQ46N

LIMS ID: 13-10675

Matrix: Soil

Data Release Authorized: *JB*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 21:04

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	94.4%
Bromobenzene	98.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

DATA 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a026.d ARI ID: WQ46N
Data file 2: /chem3/pid1.i/20130522-2.b/0522a026.d Client ID: A2-F14-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 21:04
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	-0.001	2785	35490	94.1	TFT(Surr)
15.382	-0.002	1921	16068	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	983	0.003
8015C 2MP-TMB (4.18 to 16.21)	723723	449	0.001
AK101 nC6-nC10 (4.68 to 15.11)	582885	448	0.001
NWTPHG Tol-Nap (9.78 to 18.90)	375093	983	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.002	3044	94.4	TFT(Surr)
15.390	-0.001	7090	98.1	BB(Surr)

SW8021 (PID)

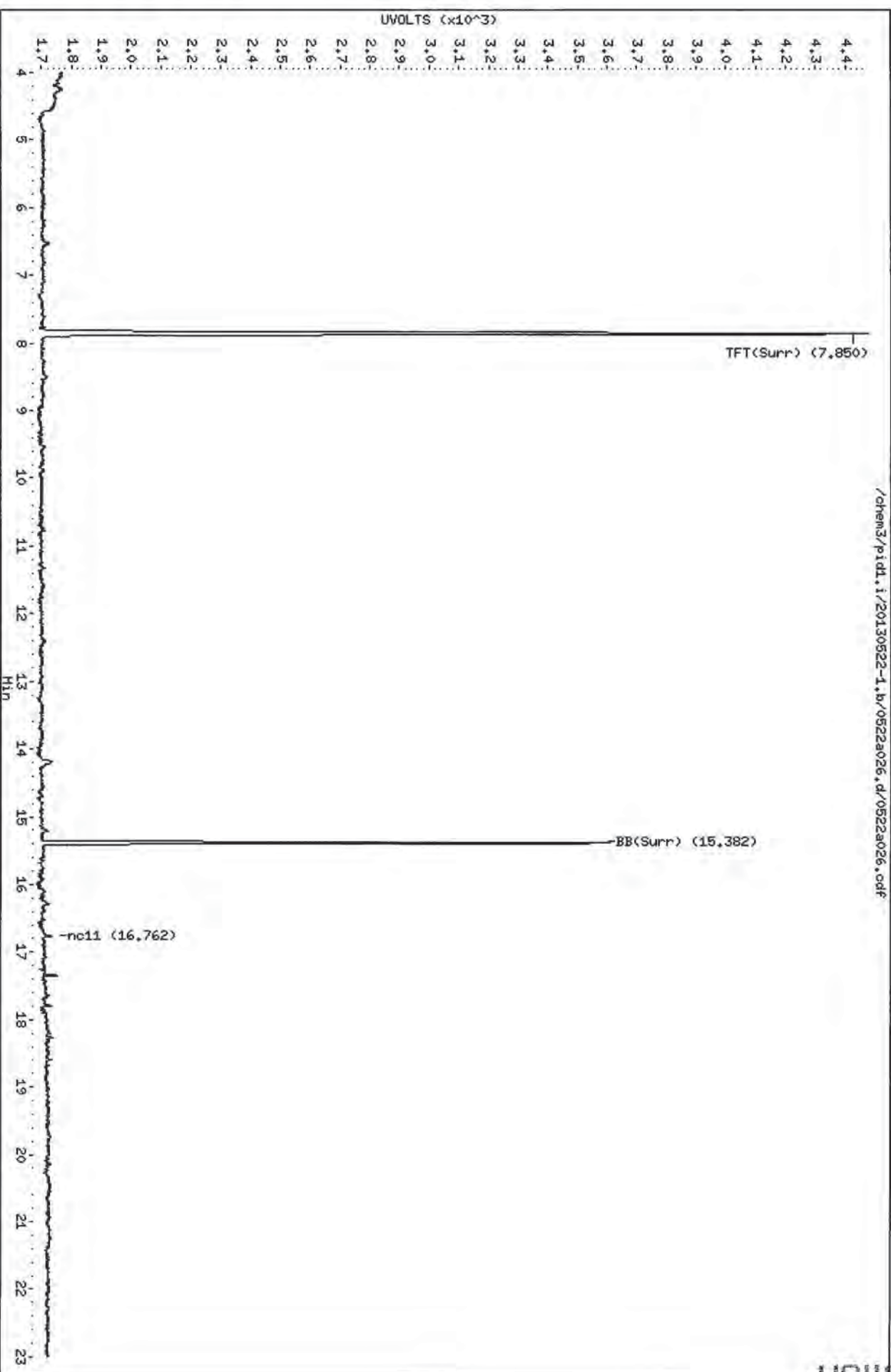
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a026.d
Date : 22-MAY-2013 21:04
Client ID: A2-F14-S-6
Sample Info: MQ46N

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

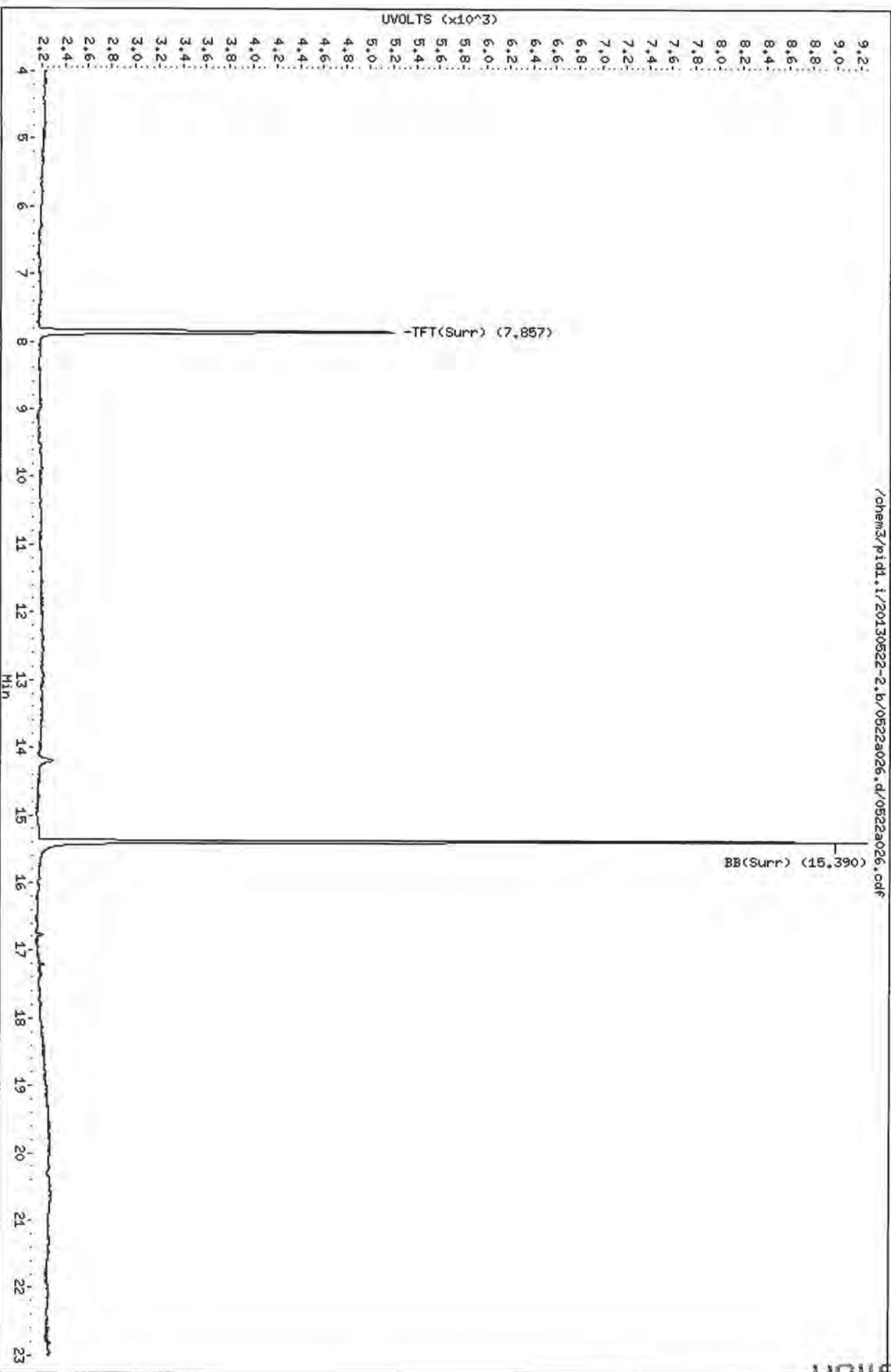


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Data File: /chem3/pid1.i/20130522-2.b/0522a026.d
Date: 22-MAY-2013 21:04
Client ID: A2-F14-S-6
Sample Info: M046N

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130522-2.b/0522a026.d/0522a026.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F15-S-6

SAMPLE

Lab Sample ID: WQ460

LIMS ID: 13-10676

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 21:33

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 75 mg-dry-wt

Percent Moisture: 18.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	80
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	33	< 33 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	97.7%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Ann 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a027.d ARI ID: WQ460
Data file 2: /chem3/pid1.i/20130522-2.b/0522a027.d Client ID: A2-F15-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 21:33
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	-0.001	2771	35428	93.6	TFT(Surr)
15.383	-0.002	1903	16068	95.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	5338	0.015
8015C 2MP-TMB (4.18 to 16.21)	723723	5430	0.008
AK101 nC6-nC10 (4.68 to 15.11)	582885	4037	0.007
NWTPHG Tol-Nap (9.78 to 18.90)	375093	5338	0.014

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3023	93.8	TFT(Surr)
15.391	0.000	7060	97.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.885	0.000	238	1.20	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a027.d
Lab Smp Id: WQ460 Client Smp ID: A2-F15-S-6
Inj Date : 22-MAY-2013 21:33
Operator : LH Inst ID: pid1.i
Smp Info : WQ460
Misc Info : 13-10676
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 23-May-2013 08:43 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 13:39 Cal File: 0522a011.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

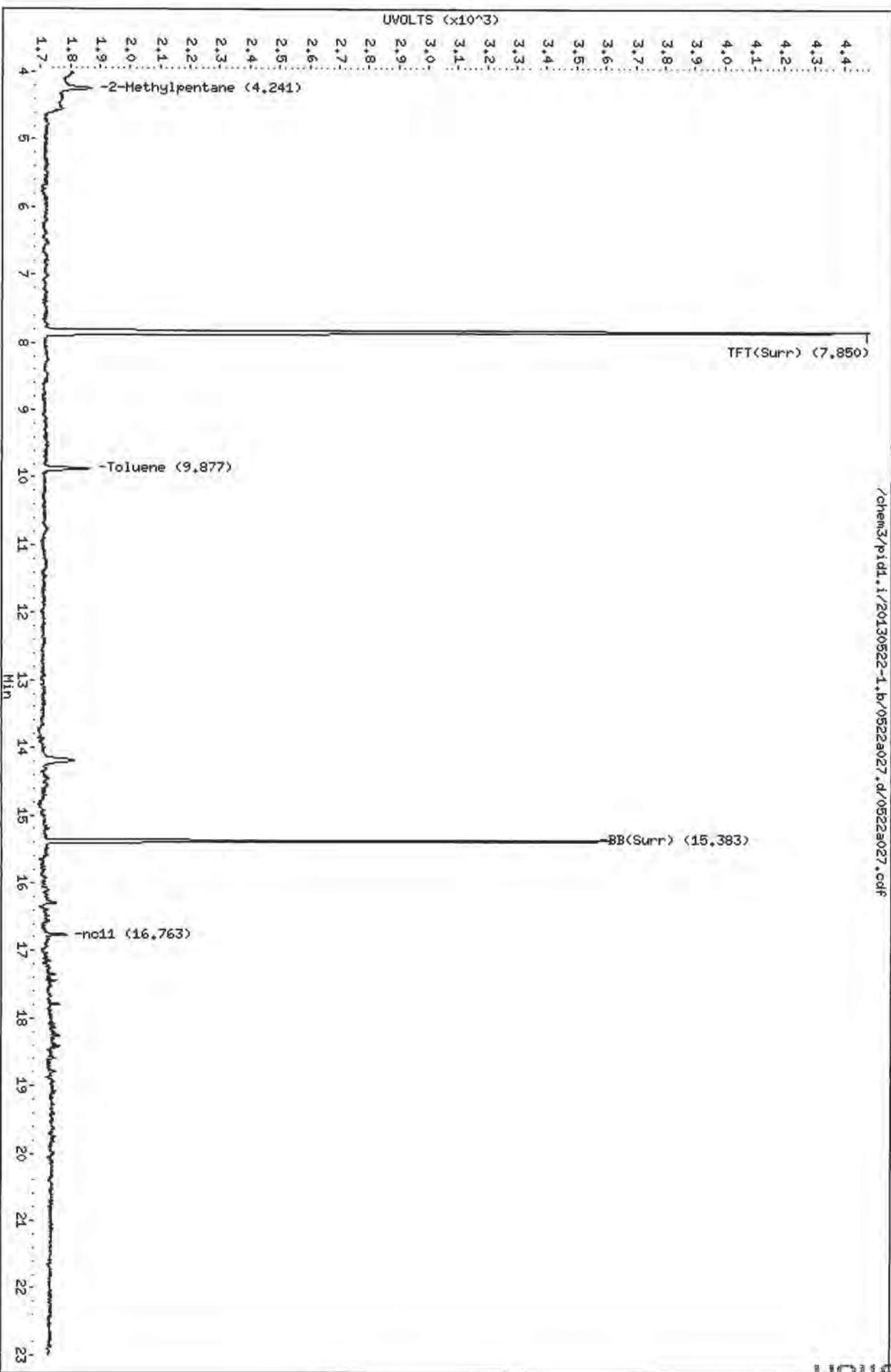
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
-----	--	-----	-----	-----	-----	-----
5 2-Methylpentane	4.241	4.278	-0.037	93		
\$ 10 TFT(Surr)	7.850	7.851	-0.001	2771	93.6448	93.64
12 Toluene	9.877	9.877	0.000	1946	1.34215	1.34
\$ 18 BB(Surr)	15.383	15.385	-0.002	1903	95.7699	95.77
21 nc11	16.763	16.702	0.061	69		

Data File: /chem3/pid1.i/20130522-1.b/0522a027.d
Date: 22-MAY-2013 21:33
Client ID: A2-F15-S-6
Sample Info: MQ460

Column phase: RTX 502-2 FID

Instrument: pid1.1
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-1.b/0522a027.d/0522a027.cdf



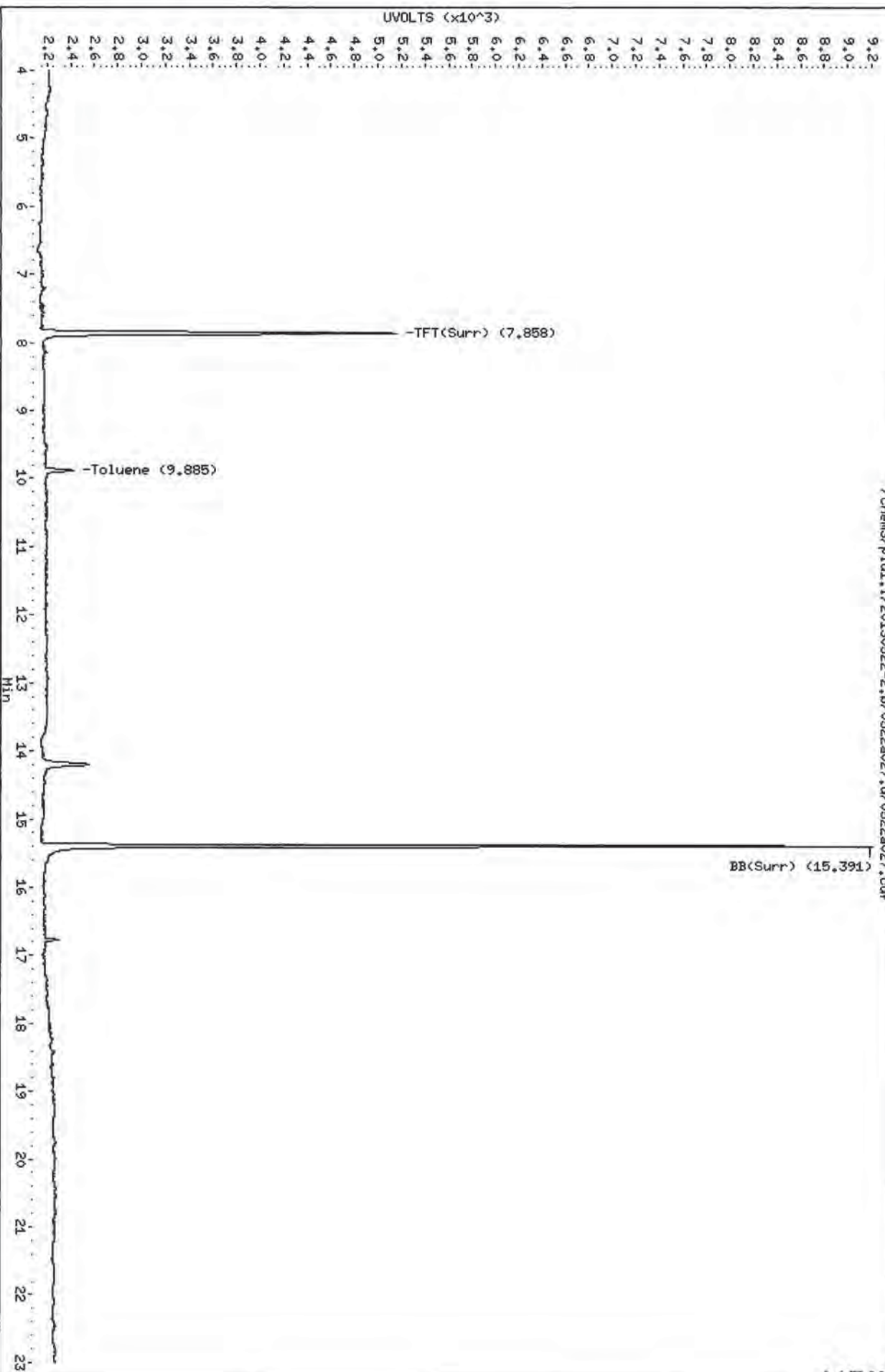
10:03:03

Data File: /chem3/pid1.i/20130522-2.b/0522a027.d
Date: 22-May-2013 21:33
Client ID: A2-F15-S-6
Sample Info: MQ460

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-2.b/0522a027.d/0522a027.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F16-S-6

SAMPLE

Lab Sample ID: WQ46P

LIMS ID: 13-10677

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 22:03

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 72 mg-dry-wt

Percent Moisture: 26.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	35	< 35 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	97.8%
Bromobenzene	100%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

APR 15/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a028.d ARI ID: WQ46P
Data file 2: /chem3/pid1.i/20130522-2.b/0522a028.d Client ID: A2-F16-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 22:03
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	-0.003	2896	36412	97.9	TFT(Surr)
15.382	-0.002	1965	16451	98.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	2909	0.008
8015C 2MP-TMB (4.18 to 16.21)	723723	1924	0.003
AK101 nC6-nC10 (4.68 to 15.11)	582885	1924	0.003
NWTPHG Tol-Nap (9.78 to 18.90)	375093	2909	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3151	97.8	TFT(Surr)
15.390	-0.001	7260	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

**Sample ID: A2-F17-S-6
SAMPLE**

Lab Sample ID: WQ46Q

LIMS ID: 13-10678

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 22:32

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 86 mg-dry-wt

Percent Moisture: 12.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	16
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	29	< 29 U
95-47-6	o-Xylene	15	< 15 U

BETX Surrogate Recovery

Trifluorotoluene	95.9%
Bromobenzene	98.5%

BETX values reported in ug/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

2M 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a029.d ARI ID: WQ46Q
Data file 2: /chem3/pid1.i/20130522-2.b/0522a029.d Client ID: A2-F17-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 22:32
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	-0.003	2841	36151	96.0	TFT(Surr)
15.382	-0.003	1930	16250	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	2643	0.007
8015C 2MP-TMB (4.18 to 16.21)	723723	2059	0.003
AK101 nC6-nC10 (4.68 to 15.11)	582885	2058	0.004
NWTPHG Tol-Nap (9.78 to 18.90)	375093	2643	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3091	95.9	TFT(Surr)
15.390	-0.001	7118	98.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	-0.001	55	0.28N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a029.d
Lab Smp Id: WQ46Q Client Smp ID: A2-F17-S-6
Inj Date : 22-MAY-2013 22:32
Operator : LH Inst ID: pid1.i
Smp Info : WQ46Q
Misc Info : 13-10678
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 23-May-2013 08:43 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 13:39 Cal File: 0522a011.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

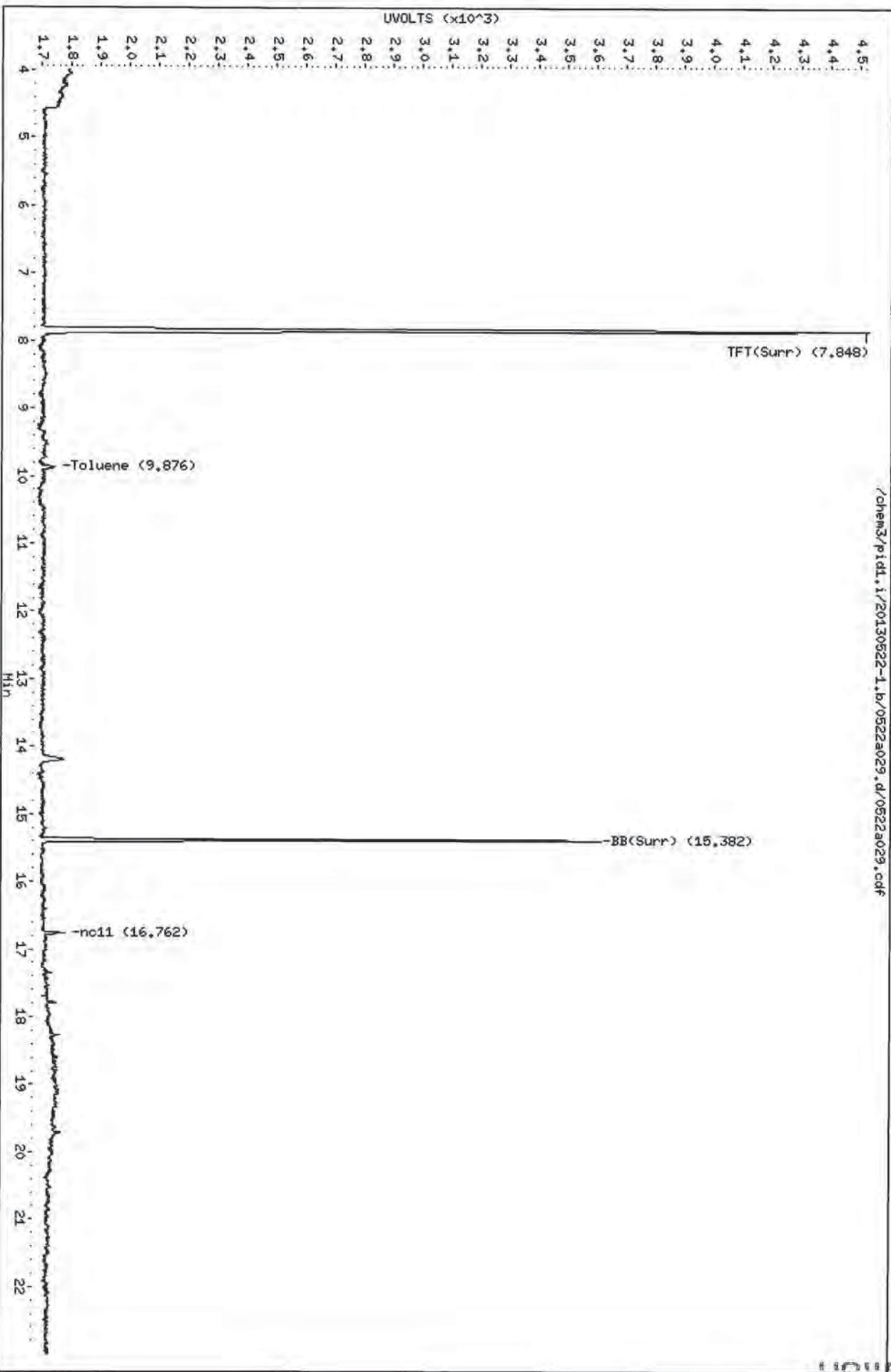
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
-----	==	-----	-----	-----	-----	-----
\$ 10 TFT(Surr)	7.848	7.851	-0.003	2841	96.0104	96.01
12 Toluene	9.876	9.877	-0.001	566	0.39064	0.391
\$ 18 BB(Surr)	15.382	15.385	-0.003	1930	97.1287	97.13
21 nc11	16.762	16.702	0.060	69		

Data File: /chem3/pid1.i/20130522-1.b/0522a029.d
Date: 22-MAY-2013 22:32
Client ID: A2-F17-S-6
Sample Info: MQ96Q

Column Phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

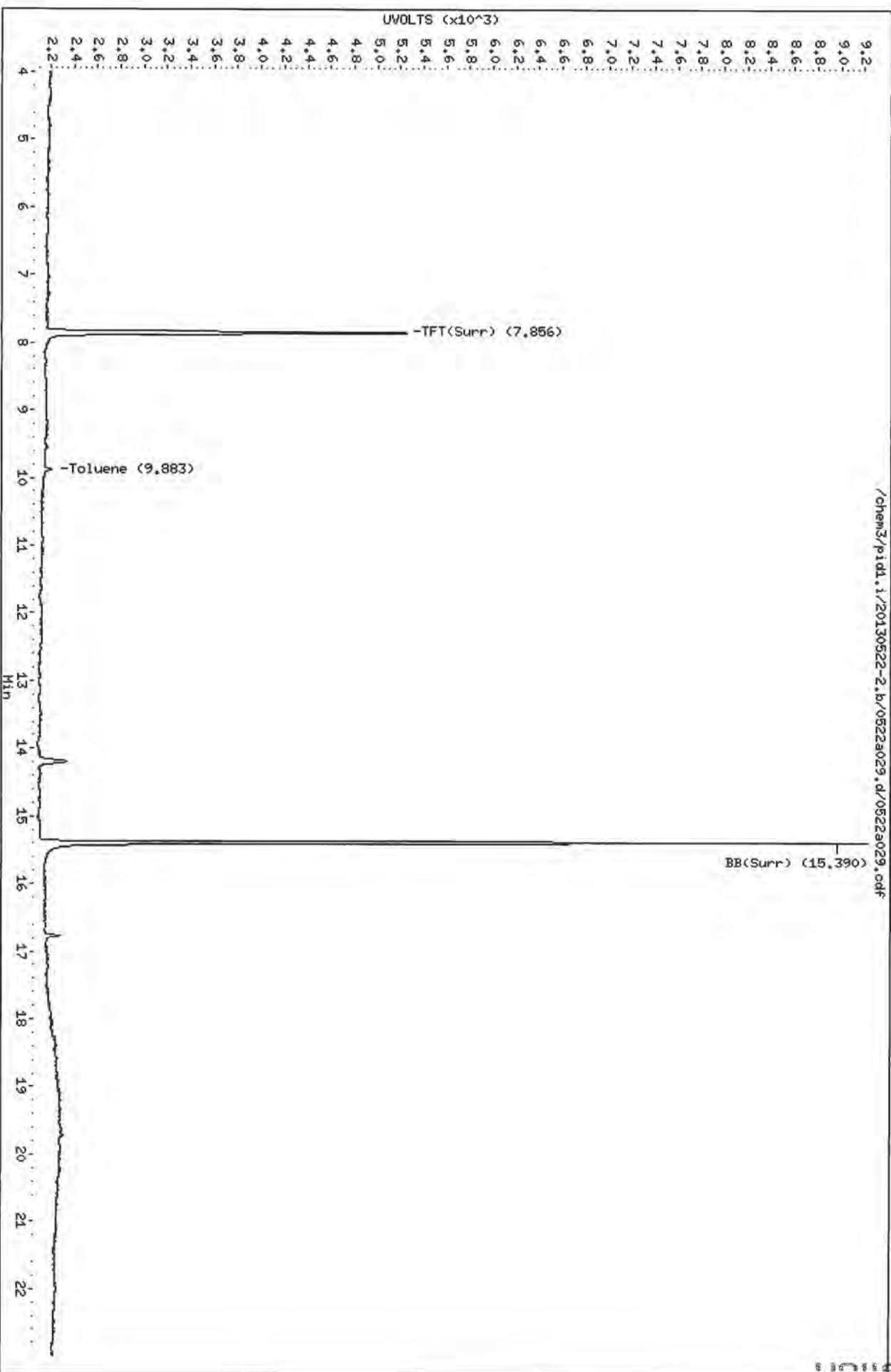


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Data File: /chem3/pid1.i/20130522-2.b/0522a029.d
Date: 22-MAY-2013 22:32
Client ID: A2-F17-S-6
Sample Info: MQ46Q

Column phase: RTX 502-2 PID

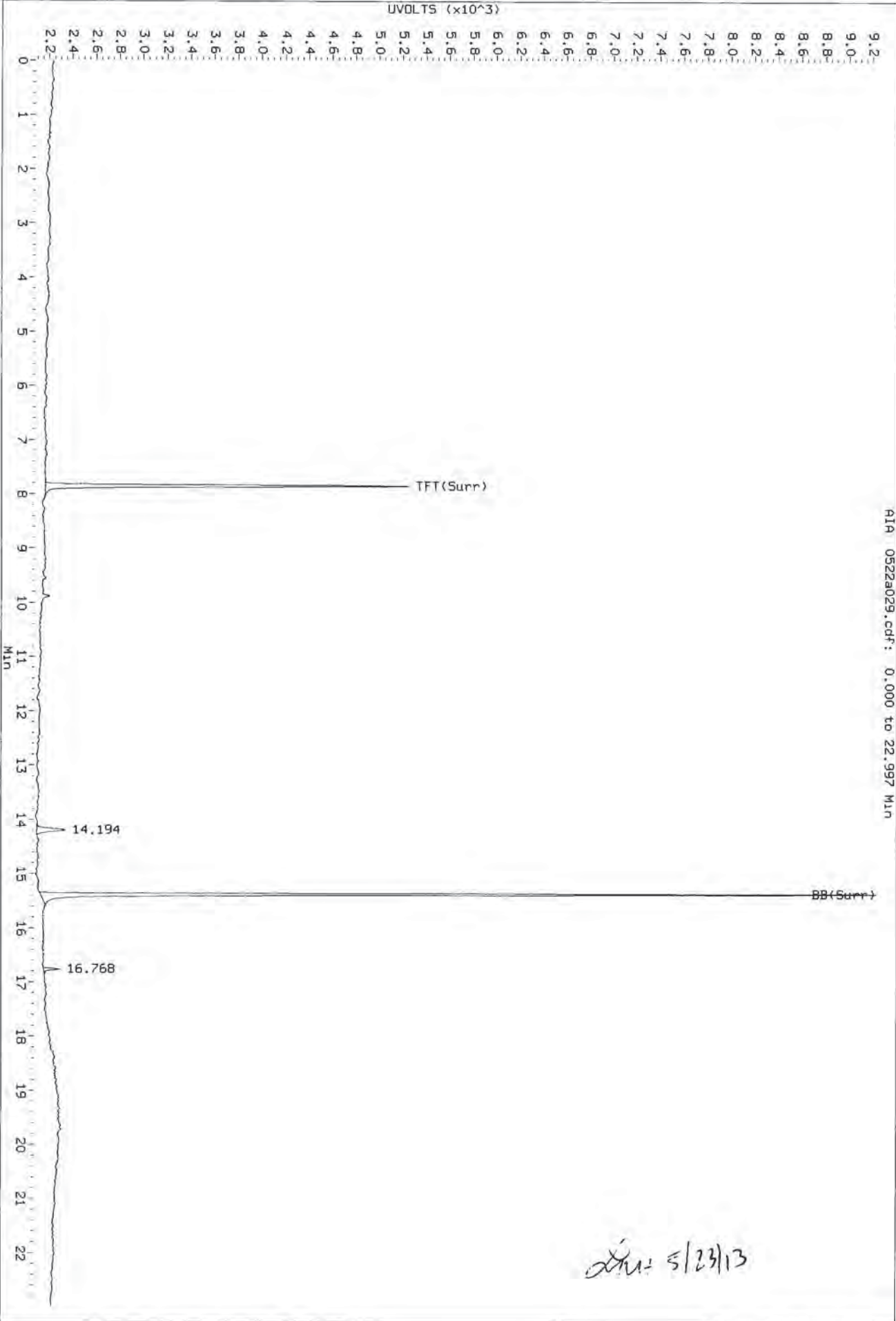
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



17:00:11

Data File: /chem3/p1d1.1/20130522-2.b/0522a029.d/0522a029.cdf
Injection Date: 22-MAY-2013 22:32
Instrument: p1d1.1
Client Sample ID: A2-F17-5-6

AIA 0522a029.cdf: 0.000 to 22.997 Min

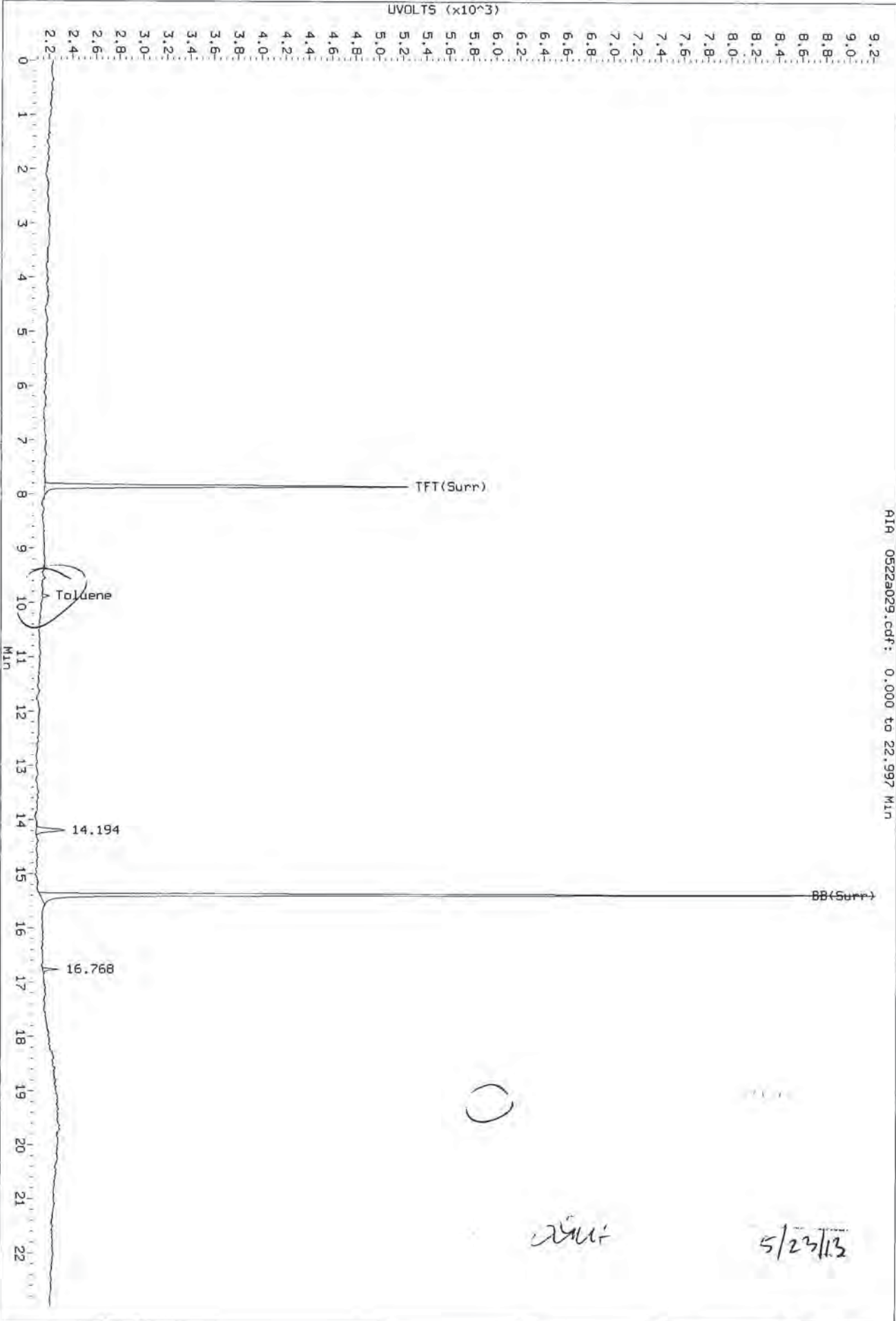


Handwritten: 5/23/13

2013 05 23 13:58:58

Data File: /chem3/p1d1.v/20130522-2.b/0522a029.d/0522a029.cdf
Injection Date: 22-MAY-2013 22:32
Instrument: p1d1.1
Client Sample ID: A2-F17-5-6

AIR 0522a029.cdf: 0.000 to 22.997 MIN



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F18-S-6

SAMPLE

Lab Sample ID: WQ46R

LIMS ID: 13-10679

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/22/13 23:01

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 15.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	20
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	96.3%
Bromobenzene	100%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

SMH 5/23/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a030.d ARI ID: WQ46R
 Data file 2: /chem3/pid1.i/20130522-2.b/0522a030.d Client ID: A2-F18-S-6
 Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 23:01
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	-0.002	2861	36594	96.7	TFT(Surr)
15.383	-0.002	1957	16339	98.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	5874	0.016 M
8015C 2MP-TMB (4.18 to 16.21)	723723	4722	0.007 M
AK101 nC6-nC10 (4.68 to 15.11)	582885	4721	0.008 M
NWTPHG Tol-Nap (9.78 to 18.90)	375093	5874	0.016 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3105	96.3	TFT(Surr) /
15.390	-0.001	7232	100.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	-0.001	53	0.27N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a030.d
Lab Smp Id: WQ46R Client Smp ID: A2-F18-S-6
Inj Date : 22-MAY-2013 23:01
Operator : LH Inst ID: pid1.i
Smp Info : WQ46R
Misc Info : 13-10679
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 23-May-2013 08:43 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 13:39 Cal File: 0522a011.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL (ug/Kg)
-----	==	=====	=====	=====	=====	=====
\$ 10 TFT(Surr)	7.849	7.851	-0.002	2861	96.6863	96.69
12 Toluene	9.873	9.877	-0.004	351	0.24204	0.242 (M)
\$ 18 BB(Surr)	15.383	15.385	-0.002	1957	98.4875	98.49
21 nc11	16.761	16.702	0.059	127		

QC Flag Legend

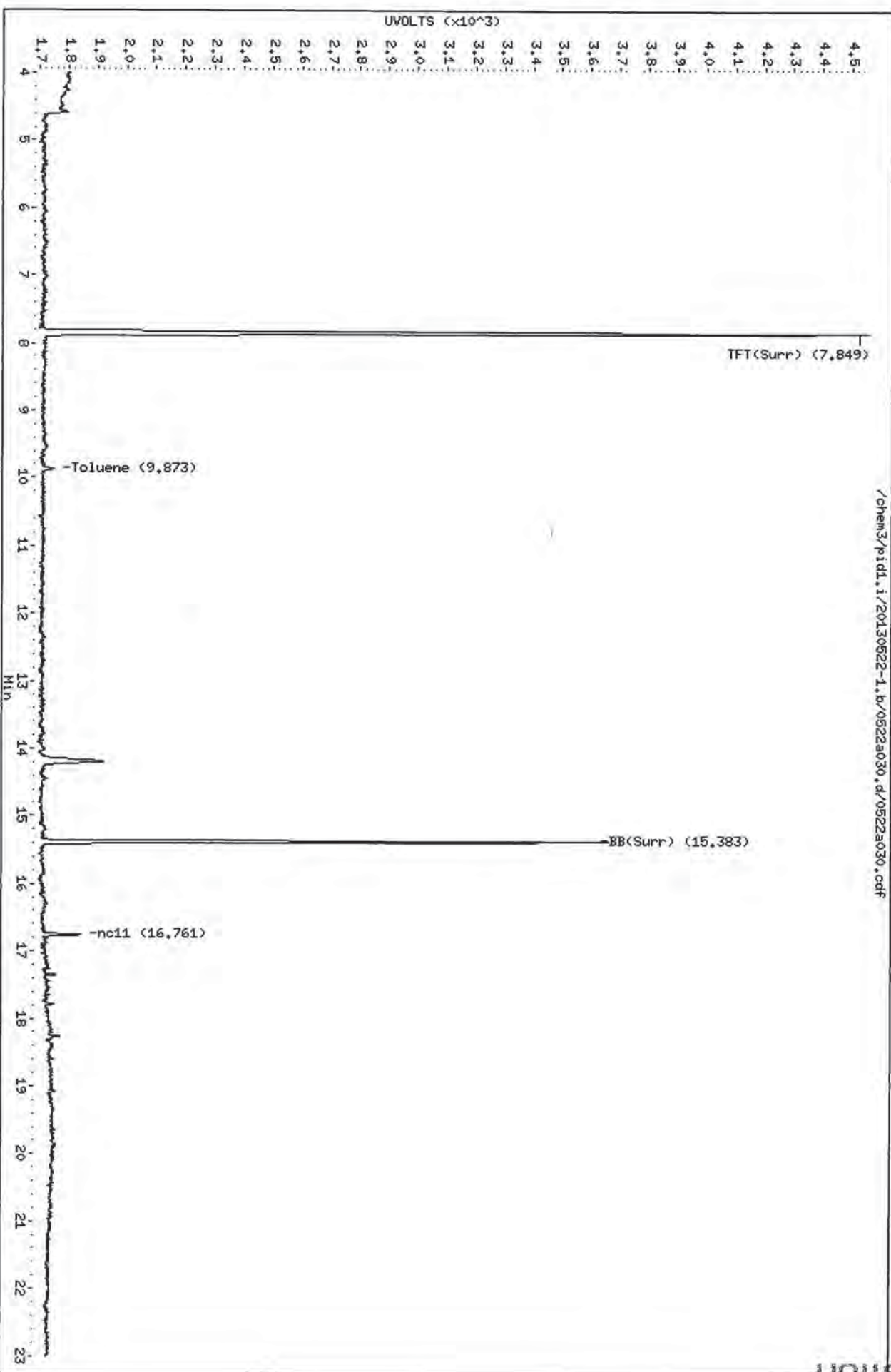
M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a030.d
Date : 22-MAY-2013 23:01
Client ID: A2-F18-S-6
Sample Info: HQ46R

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-1.b/0522a030.d/0522a030.cdf

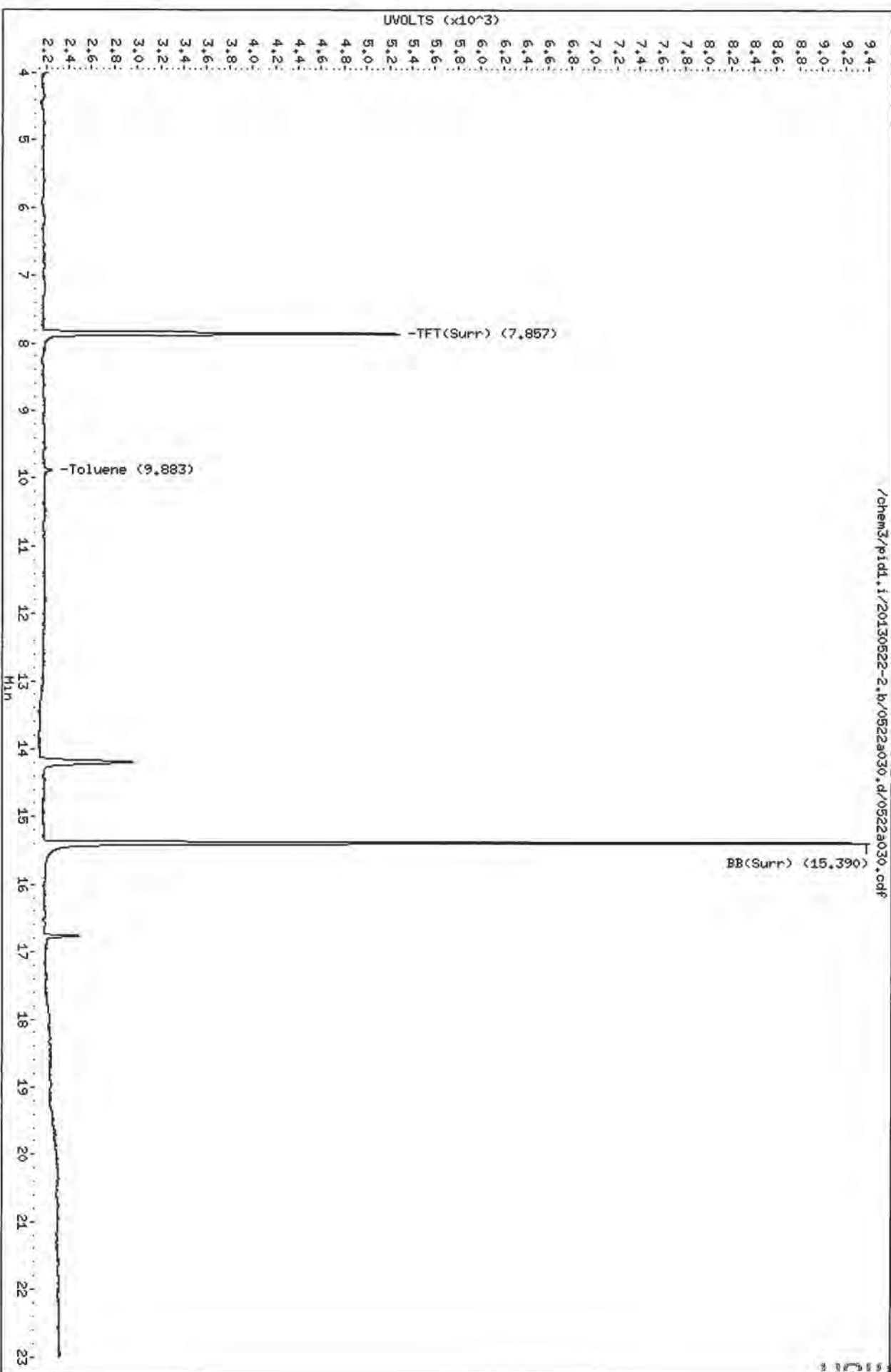


05 21 00

Data File: /chem3/pidd.i/20130522-2.b/0522a030.d
Date: 22-MAY-2013 23:01
Client ID: A2-F18-S-6
Sample Info: MQ46R

Column phase: RTX 502-2 PID

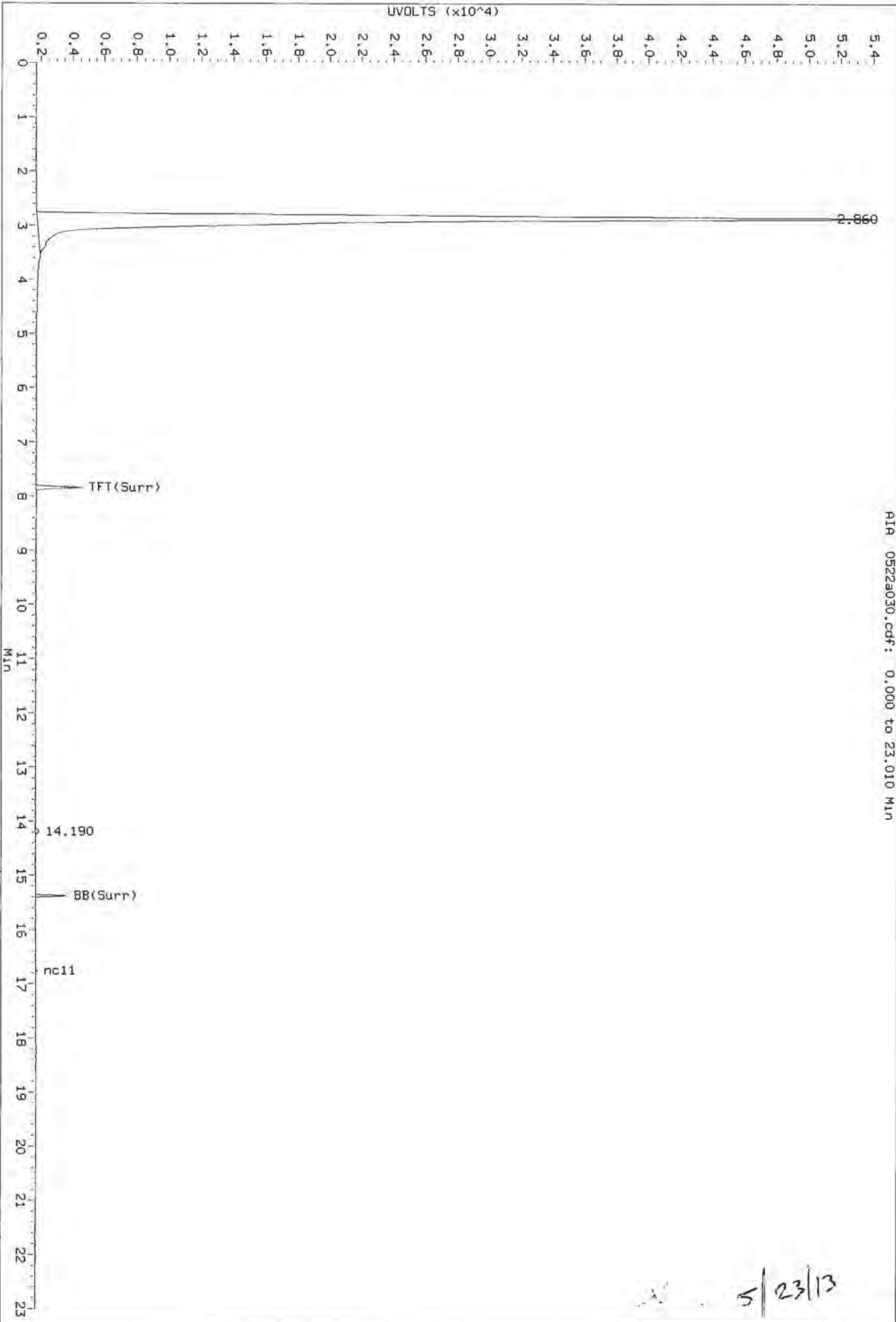
Instrument: pidd.i
Operator: LH
Column diameter: 0.18

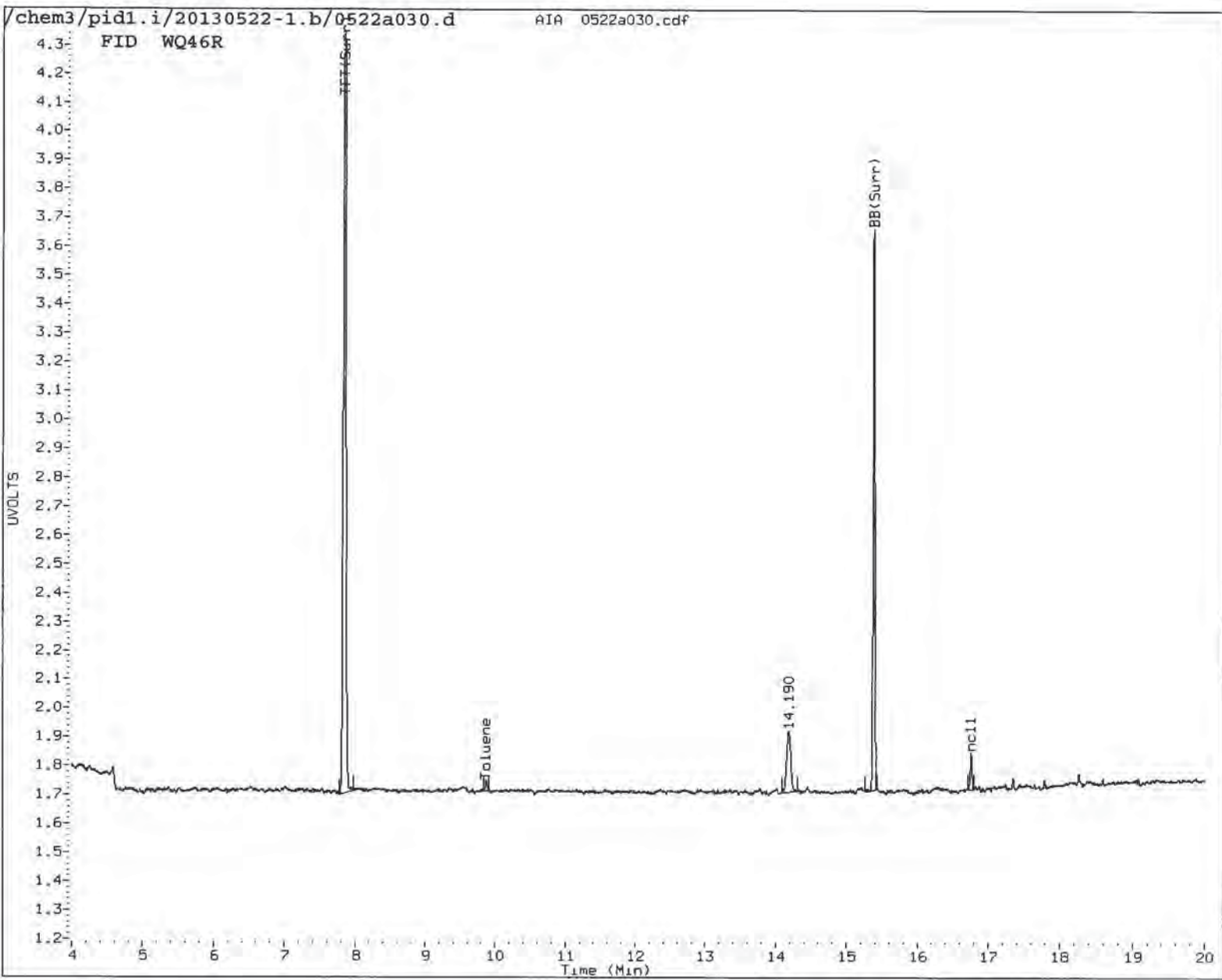


/chem3/pidd.i/20130522-2.b/0522a030.d/0522a030.cdf

Data File: /chem3/pid1.1/20130522-1.b/0522a030.d/0522a030.cdf
Injection Date: 22-MAY-2013 23:01
Instrument: pid1.1
Client Sample ID: A2-F18-5-6

AIA 0522a030.cdf: 0.000 to 23.010 Min





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

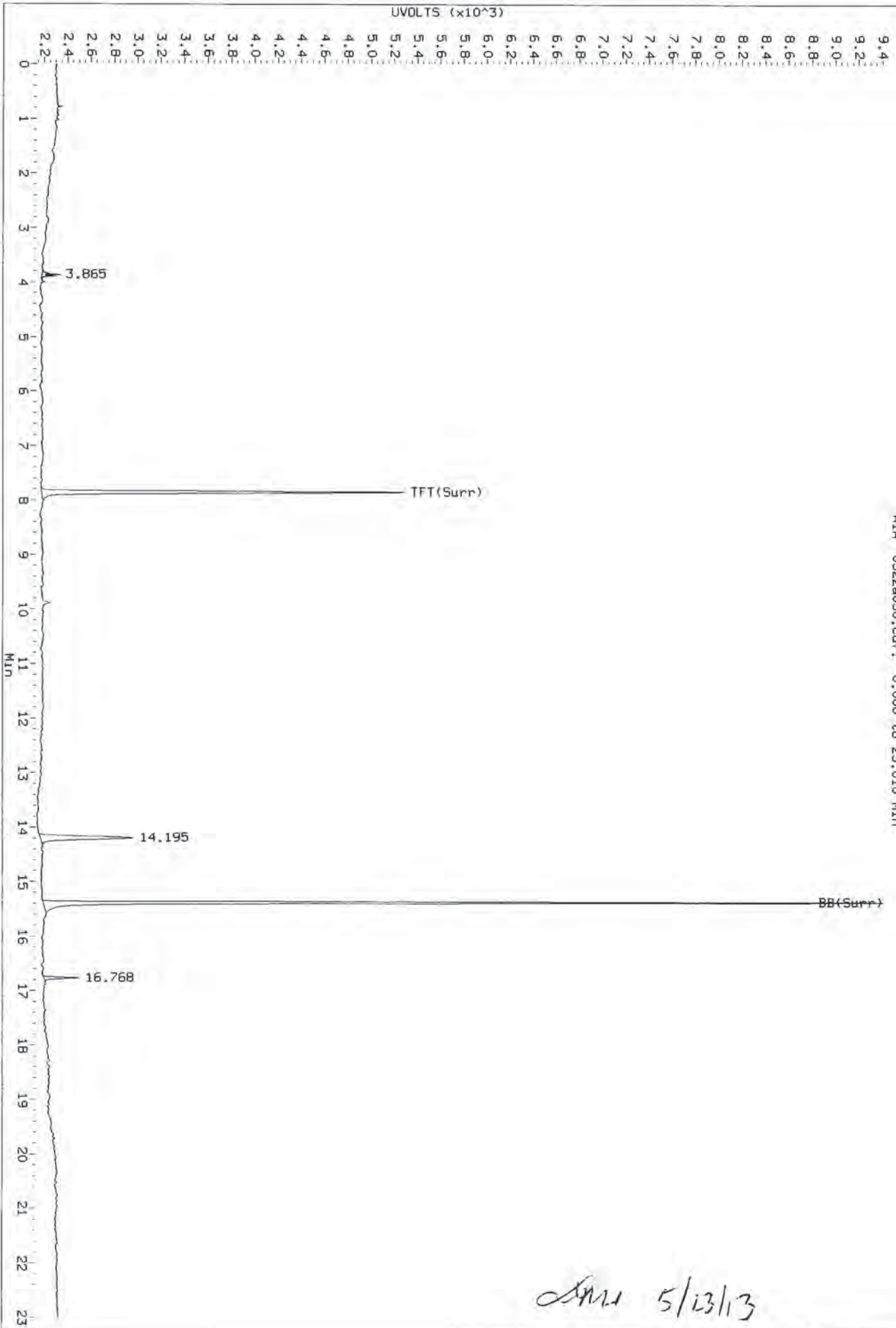
5. Other _____

Analyst: JWH

Date: 5/23/13

Data File: /chem3/p1d1_1/20130522-2_b/0522a030.d/0522a030.cdf
Injection Date: 22-MAY-2013 23:01
Instrument: p1d1.1
Client Sample ID: A2-F18-S-6

A1A 0522a030.cdf: 0.000 to 23.010 Min

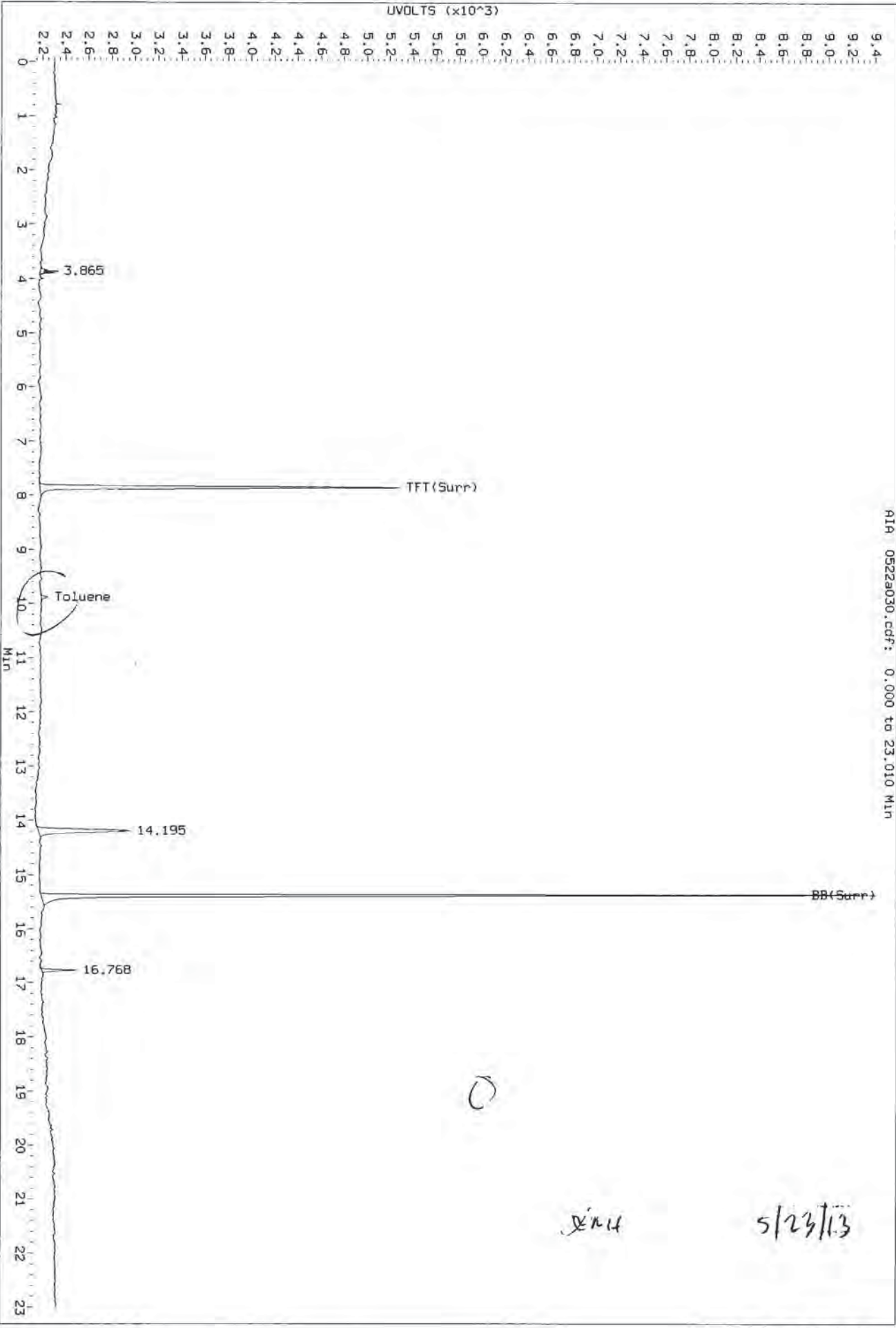


SAN 5/13/13

110200 : 000000

Data File: /chem3/pid1.1/20130522-2_b/0522a030.d/0522a030.cdf
Injection Date: 22-MAY-2013 23:01
Instrument: pid1.1
Client Sample ID: A2-F18-S-6

AIA 0522a030.cdf: 0.000 to 23.010 Min



5/23/13
X'N4

00:00:00

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: A2-F19-S-6
SAMPLE

Lab Sample ID: WQ46S
LIMS ID: 13-10680
Matrix: Soil
Data Release Authorized: *AS*
Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03
Date Sampled: 05/16/13
Date Received: 05/17/13

Date Analyzed: 05/22/13 23:30
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Sample Amount: 81 mg-dry-wt
Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	93.4%
Bromobenzene	98.6%

BETX values reported in $\mu\text{g}/\text{kg}$ (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AM 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a031.d ARI ID: WQ46S
Data file 2: /chem3/pid1.i/20130522-2.b/0522a031.d Client ID: A2-F19-S-6
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 23:30
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	-0.001	2765	35281	93.4	TFT(Surr)
15.383	-0.002	1945	16331	97.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	67339	0.188
8015C 2MP-TMB (4.18 to 16.21)	723723	1856	0.003
AK101 nC6-nC10 (4.68 to 15.11)	582885	755	0.001
NWTPHG Tol-Nap (9.78 to 18.90)	375093	258191	0.688

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.002	3010	93.4	TFT(Surr)
15.390	-0.001	7126	98.6	BB(Surr)

SW8021 (PID)

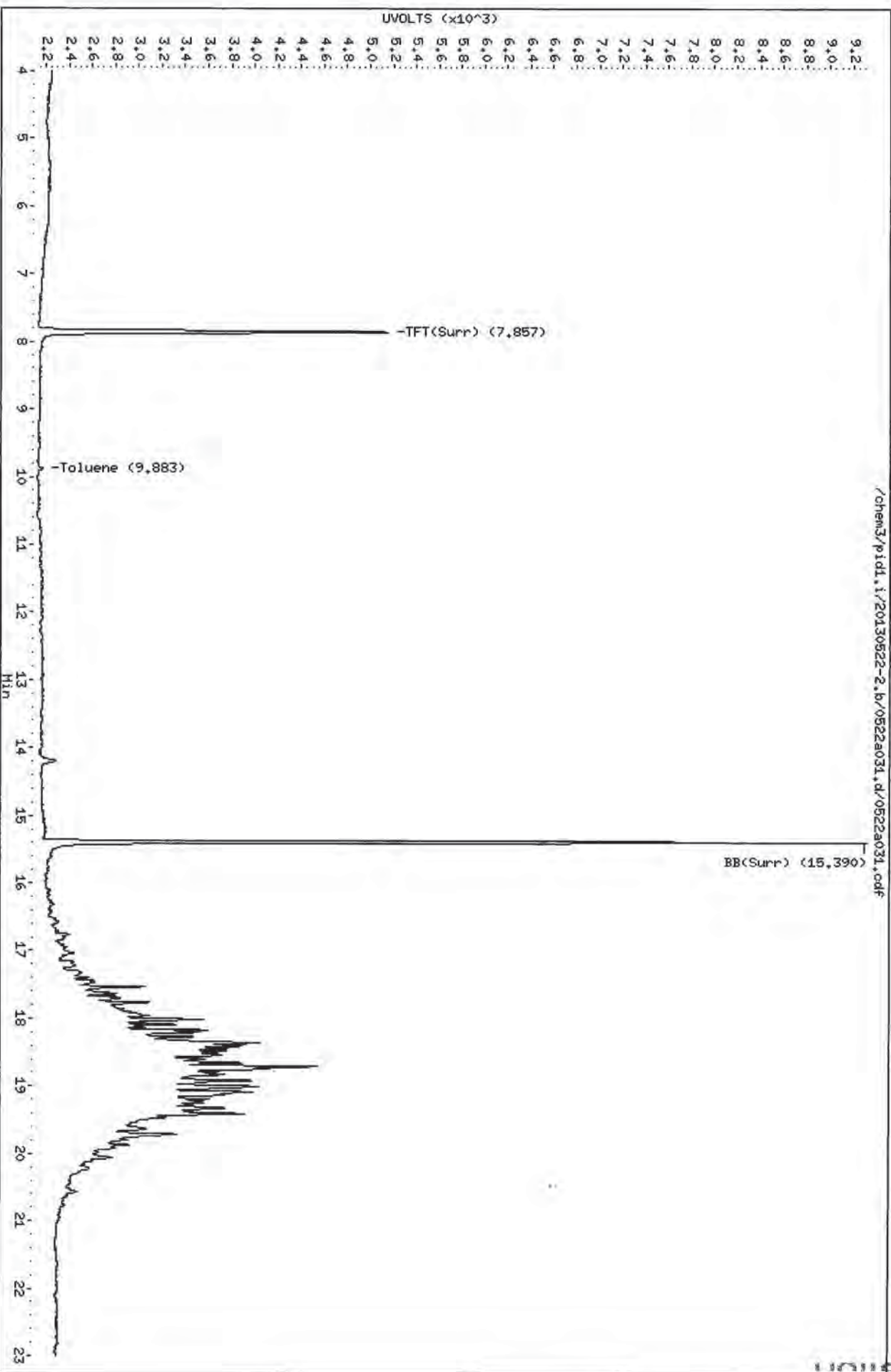
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	-0.001	38	0.19N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-2.b/0522a031.d
Date: 22-MAY-2013 23:30
Client ID: A2-F19-S-6
Sample Info: MQ46S

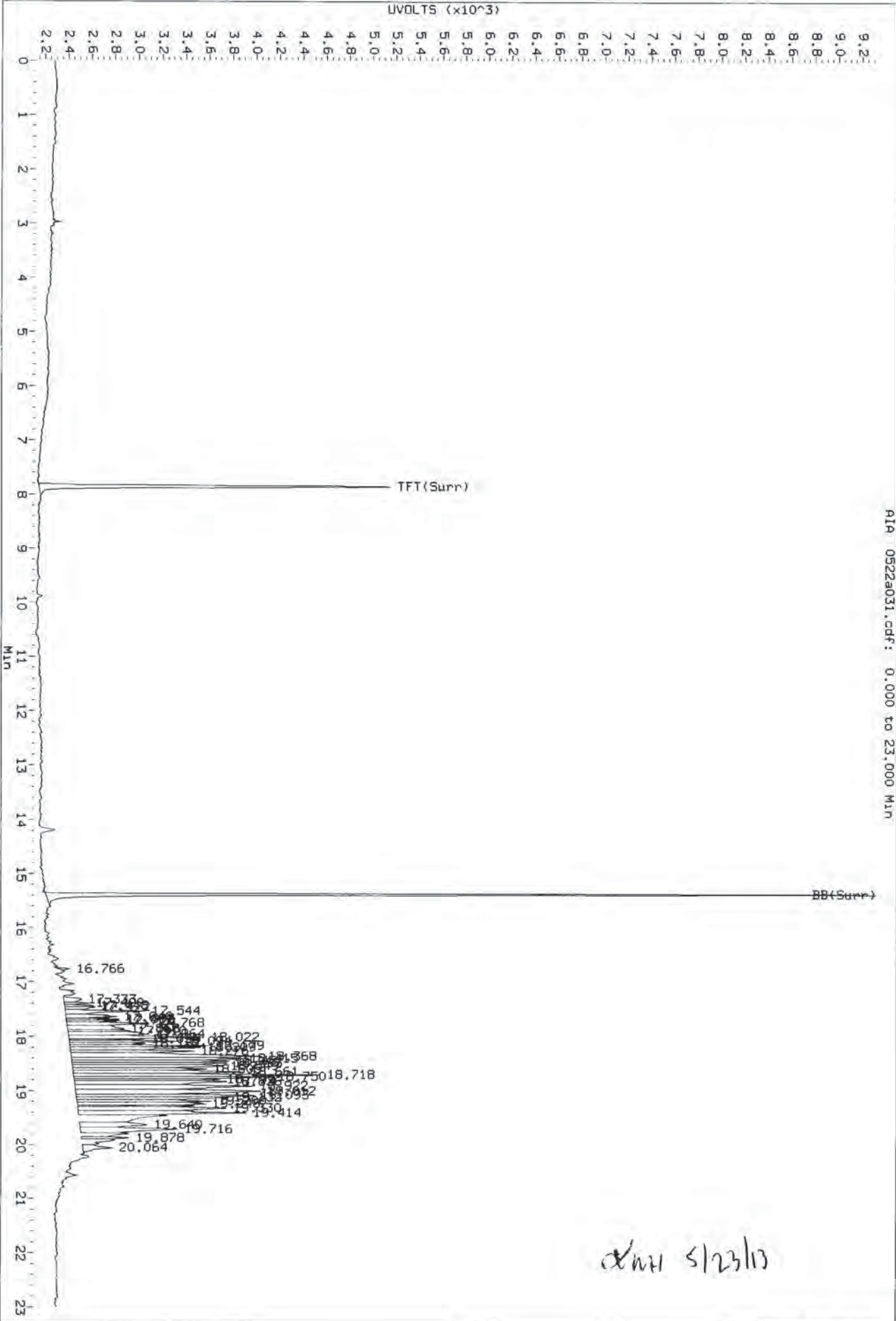
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.1/20130522-2.b/0522a031.d/0522a031.cdf
 Injection Date: 22-MAY-2013 23:30
 Instrument: pid1.1
 Client Sample ID: A2-F19-S-6

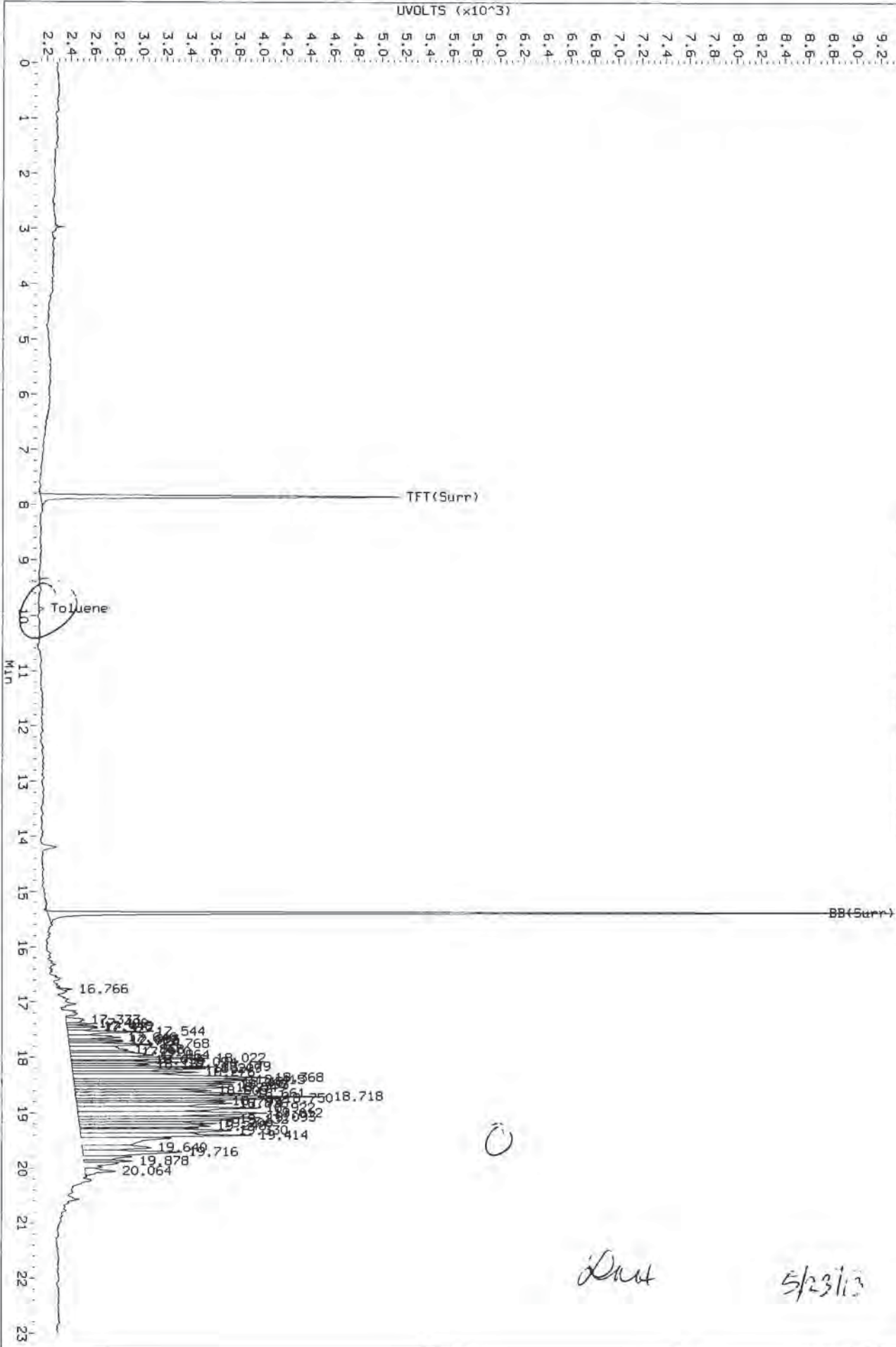
AIA 0522a031.cdf: 0.000 to 23.000 Min



AMH 5/23/13

Data File: /chem3/p1d1.1/20130522-2.b/0522a031.d/0522a031.cdf
Injection Date: 22-May-2013 23:30
Instrument: p1d1.1
Client Sample ID: A2-F19-S-6

AIR 0522a031.cdf: 0.000 to 23.000 Min



Surr

5/23/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: A2-F20-S-6
SAMPLE

Lab Sample ID: WQ46T
 LIMS ID: 13-10681
 Matrix: Soil
 Data Release Authorized: *R*
 Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Analyzed: 05/22/13 23:59
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount: 78 mg-dry-wt
 Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	91.9%
Bromobenzene	97.9%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Ann 5/23/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a032.d ARI ID: WQ46T
 Data file 2: /chem3/pid1.i/20130522-2.b/0522a032.d Client ID: A2-F20-S-6
 Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 23:59
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	-0.001	2723	34518	92.0	TFT(Surr)
15.383	-0.002	1915	15998	96.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	4337	0.012
8015C 2MP-TMB (4.18 to 16.21)	723723	3410	0.005
AK101 nC6-nC10 (4.68 to 15.11)	582885	3409	0.006
NWTPHG Tol-Nap (9.78 to 18.90)	375093	8831	0.024

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	2961	91.9	TFT(Surr) /
15.390	-0.001	7080	97.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

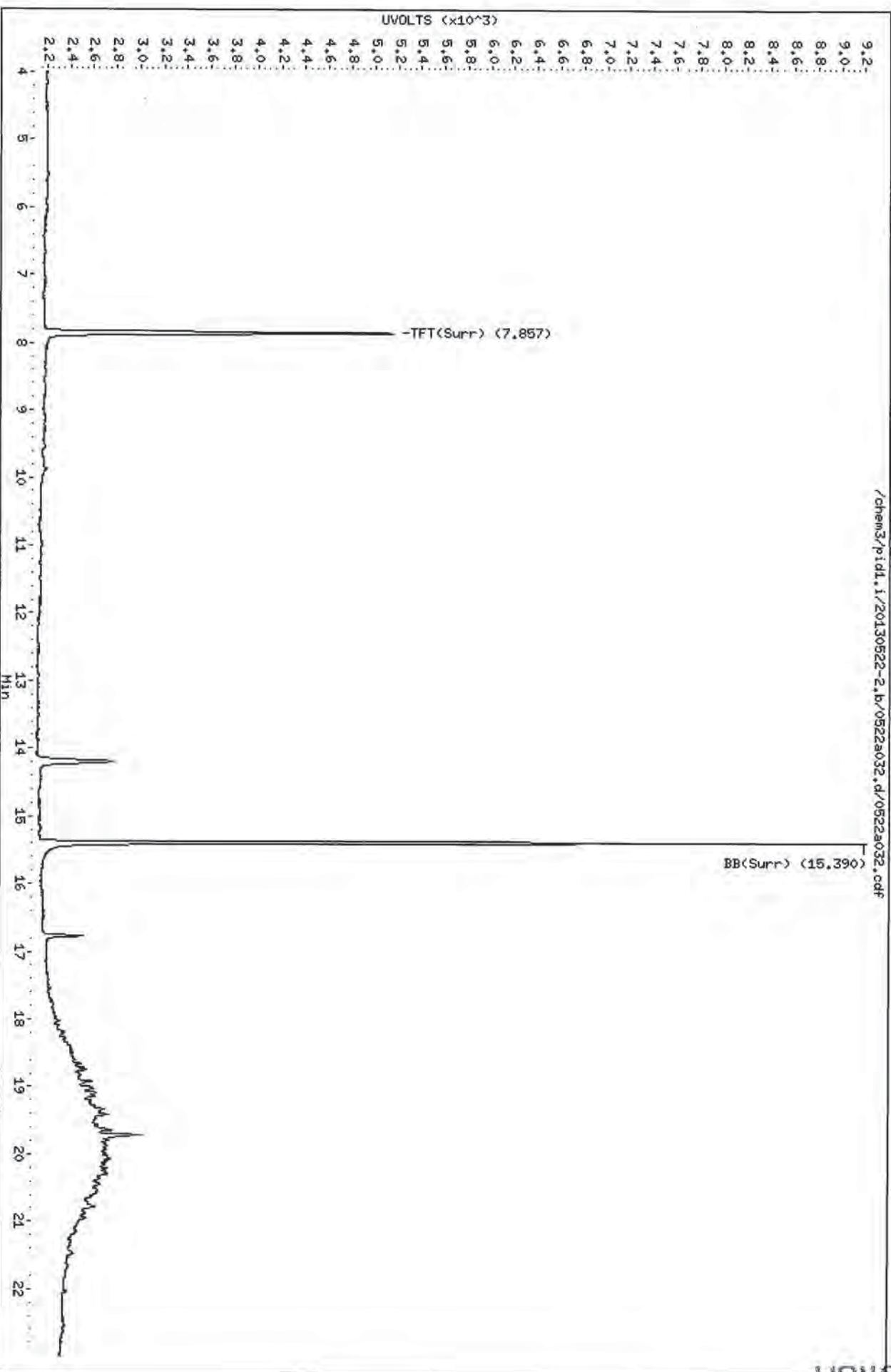
Data File: /chem3/pid1.i/20130522-2.b/0522a032.d
Date: 22-MAY-2013 23:59
Client ID: A2-F20-S-6
Sample Info: MQ46T

Instrument: pid1.1

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-2.b/0522a032.d/0522a032.cdf



BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ46
Matrix: Soil

QC Report No: WQ46-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
A2-F1-S-6	83.3%	83.6%	0
A2-F2-S-6	80.9%	82.3%	0
A2-F3-S-6	79.0%	80.2%	0
A2-F4-S-6	79.5%	81.3%	0
MB-052113	80.4%	80.9%	0
LCS-052113	86.9%	85.0%	0
LCSD-052113	84.9%	84.5%	0
A2-F5-S-6	79.8%	82.3%	0
MB-052213	101%	102%	0
LCS-052213	103%	104%	0
LCSD-052213	103%	104%	0
A2-F6-S-6	99.9%	101%	0
A2-F7-S-6	99.8%	100%	0
A2-F8-S-6	96.7%	98.4%	0
A2-F9-S-6	98.9%	100%	0
A2-F10-S-6	101%	102%	0
A2-F11-S-6	98.1%	101%	0
A2-F12-S-6	96.0%	99.8%	0
A2-F13-S-6	96.0%	101%	0
A2-F14-S-6	94.4%	98.1%	0
A2-F15-S-6	93.8%	97.7%	0
A2-F16-S-6	97.8%	100%	0
A2-F17-S-6	95.9%	98.5%	0
A2-F18-S-6	96.3%	100%	0
A2-F19-S-6	93.4%	98.6%	0
A2-F20-S-6	91.9%	97.9%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10662 to 13-10681



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-052113
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-052113
 LIMS ID: 13-10666
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/21/13 11:40
 LCSD: 05/21/13 12:09
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS			LCSD			RPD
	LCS	Spike Added-LCS	Recovery	LCSD	Spike Added-LCSD	Recovery	
Benzene	175	185	94.6%	154	185	83.2%	12.8%
Toluene	1770	1980	89.4%	1550	1980	78.3%	13.3%
Ethylbenzene	510	580	87.9%	440	580	75.9%	14.7%
m,p-Xylene	1850	2120	87.3%	1590	2120	75.0%	15.1%
o-Xylene	836	960	87.1%	718	960	74.8%	15.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	86.9%	84.9%
Bromobenzene	85.0%	84.5%

W
2/2/12

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a004.d ARI ID: LCS0521
 Data file 2: /chem3/pid1.i/20130521-2.b/0520a004.d Client ID:
 Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 11:40
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.002	3203	45288	92.3	TFT(Surr)
15.383	0.002	2020	17811	88.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	355983	0.994 M
8015C 2MP-TMB (4.18 to 16.20)	723723	728583	1.007 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	587767	1.008 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	376084	1.003 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3448	86.9	TFT(Surr)
15.391	0.000	7467	85.0	BB(Surr)

SW8021 (PID)

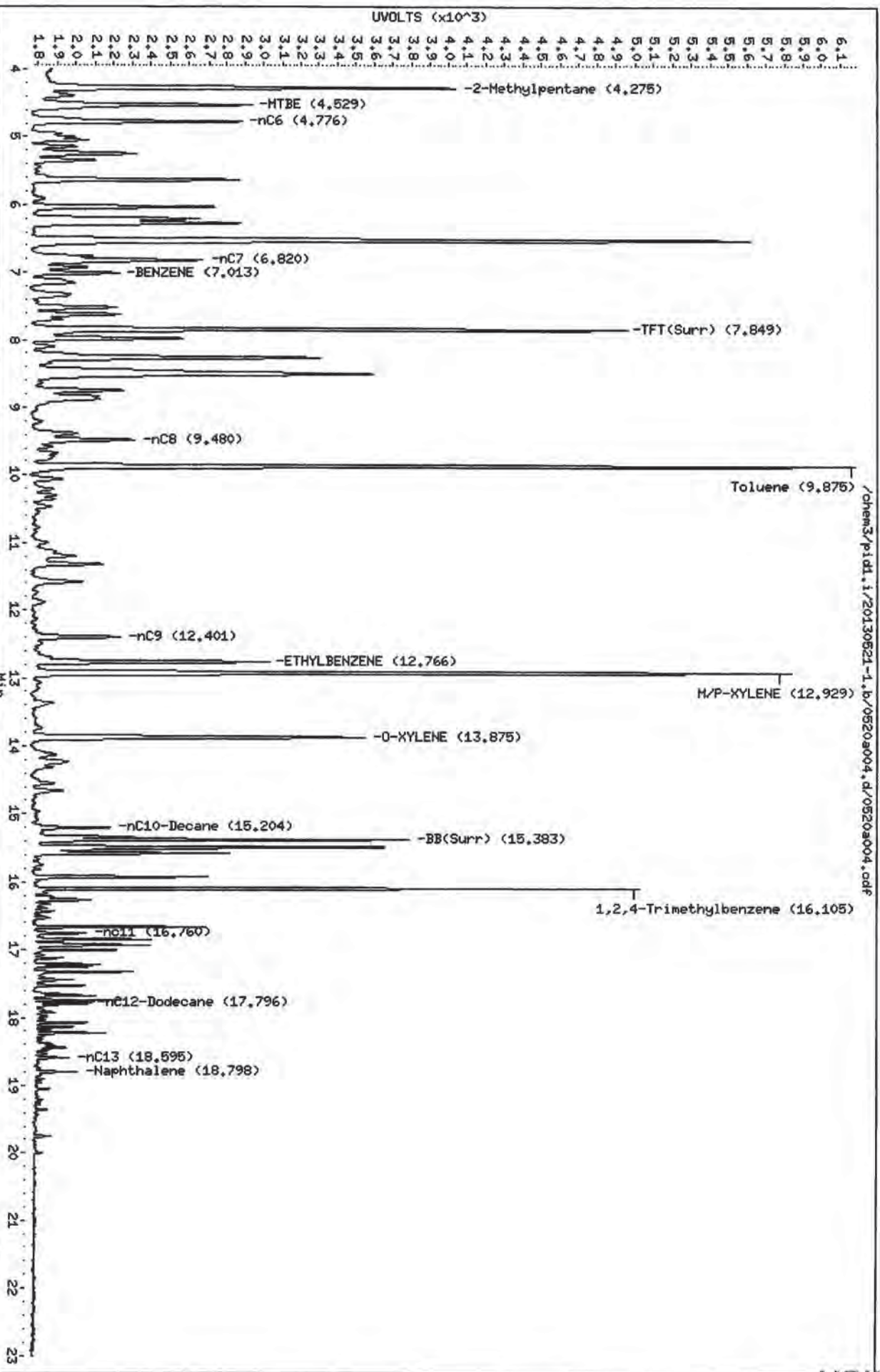
RT	Shift	Response	Amount	Compound
7.021	0.001	839	3.50	Benzene
9.883	0.002	8111	35.42	Toluene
12.775	0.001	1972	10.19	Ethylbenzene
12.938	0.003	7909	37.04	M/P-Xylene
13.884	0.001	2852	16.72	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a004.d
Date: 21-MAY-2013 11:40
Client ID:
Sample Info: LCS0521

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130521-2.b/0520a004.d
Date: 21-MAY-2013 11:40

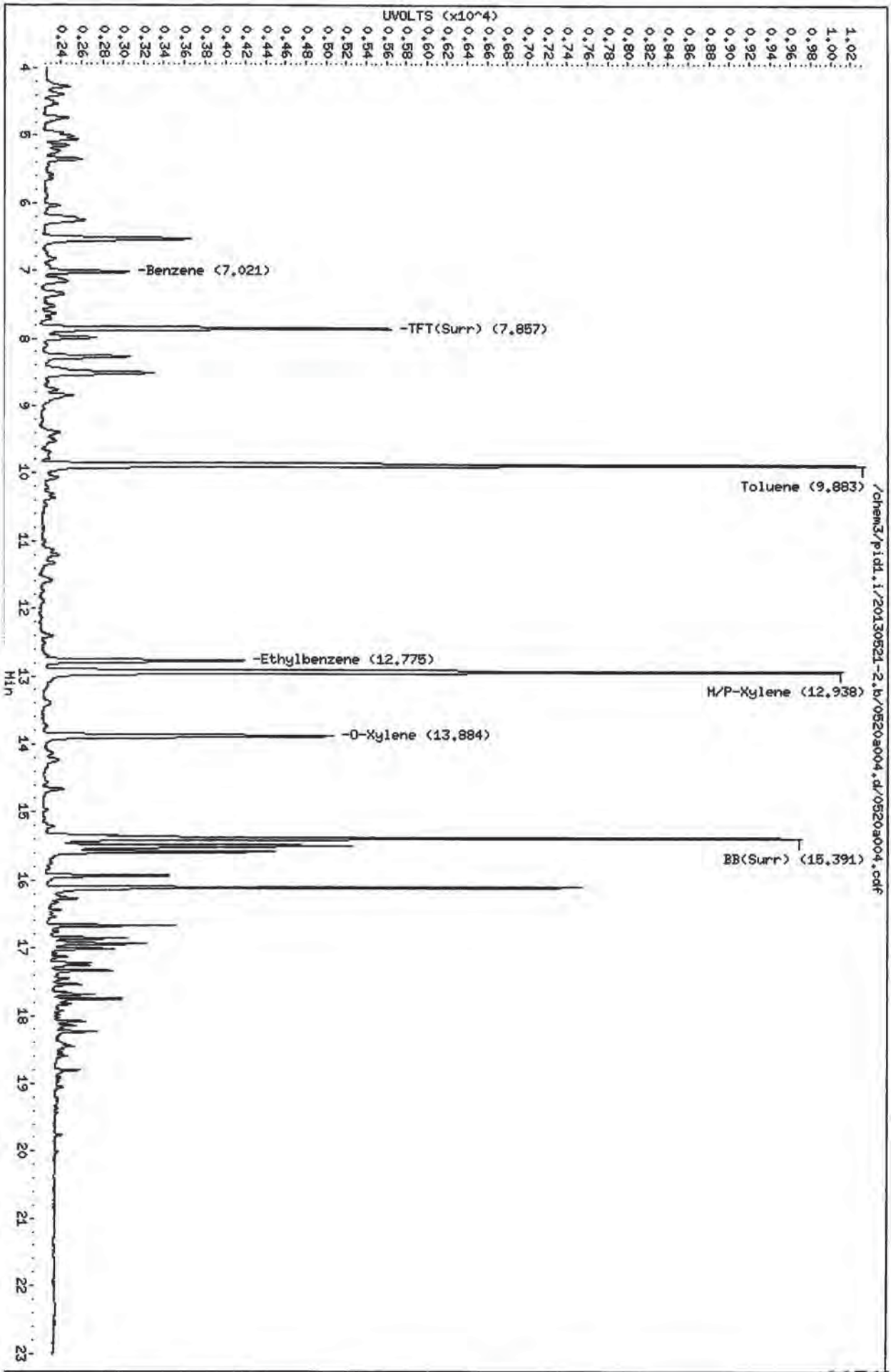
Client ID:
Sample Info: LCS0521

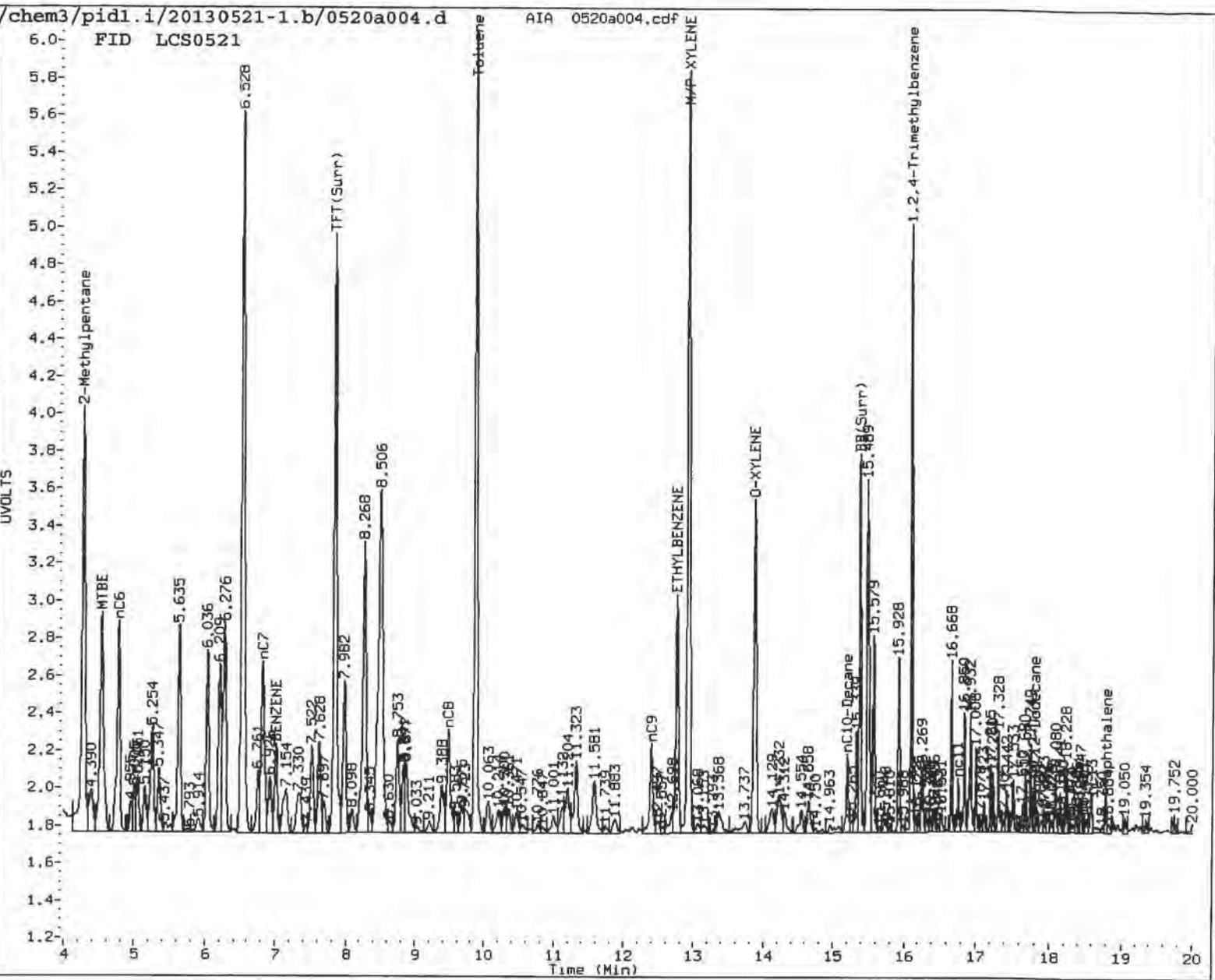
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18





MANUAL INTEGRATION

- 1) Baseline correction
2. Poor chromatography
- 3) Peak not found
4. Totals calculation
5. Other _____

Analyst: KL

Date: 5/22/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
5/22/13

Data file 1: /chem3/pid1.i/20130521-1.b/0520a005.d ARI ID: LCSD0521
 Data file 2: /chem3/pid1.i/20130521-2.b/0520a005.d Client ID:
 Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 12:09
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	3117	43689	89.9	TFT(Surr)
15.383	0.002	2027	17381	88.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	301538	0.842 M
8015C 2MP-TMB (4.18 to 16.20)	723723	619239	0.856 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	497864	0.854 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	317708	0.847 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3369	84.9	TFT(Surr)
15.391	0.000	7431	84.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.019	0.000	738	3.07	Benzene
9.883	0.001	7084	30.93	Toluene
12.774	0.000	1701	8.79	Ethylbenzene
12.938	0.003	6788	31.79	M/P-Xylene
13.883	0.001	2451	14.37	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 V Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a005.d
Date: 21-MAY-2013 12:09

Client ID:

Sample Info: LCS0521

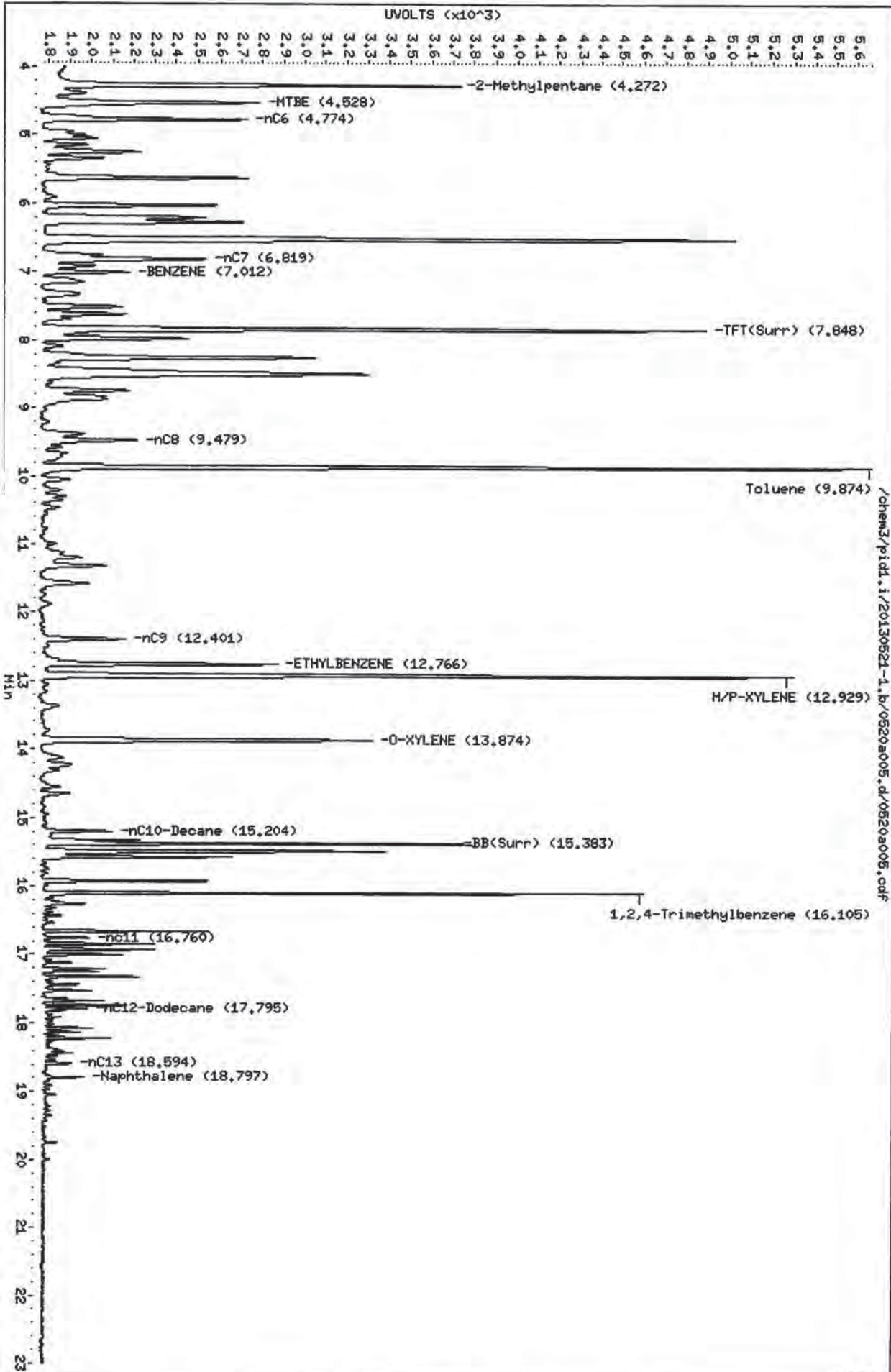
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1



Data File: /chem3/pid1.i/20130521-2.b/0520a005.d
Date: 21-MAY-2013 12:09

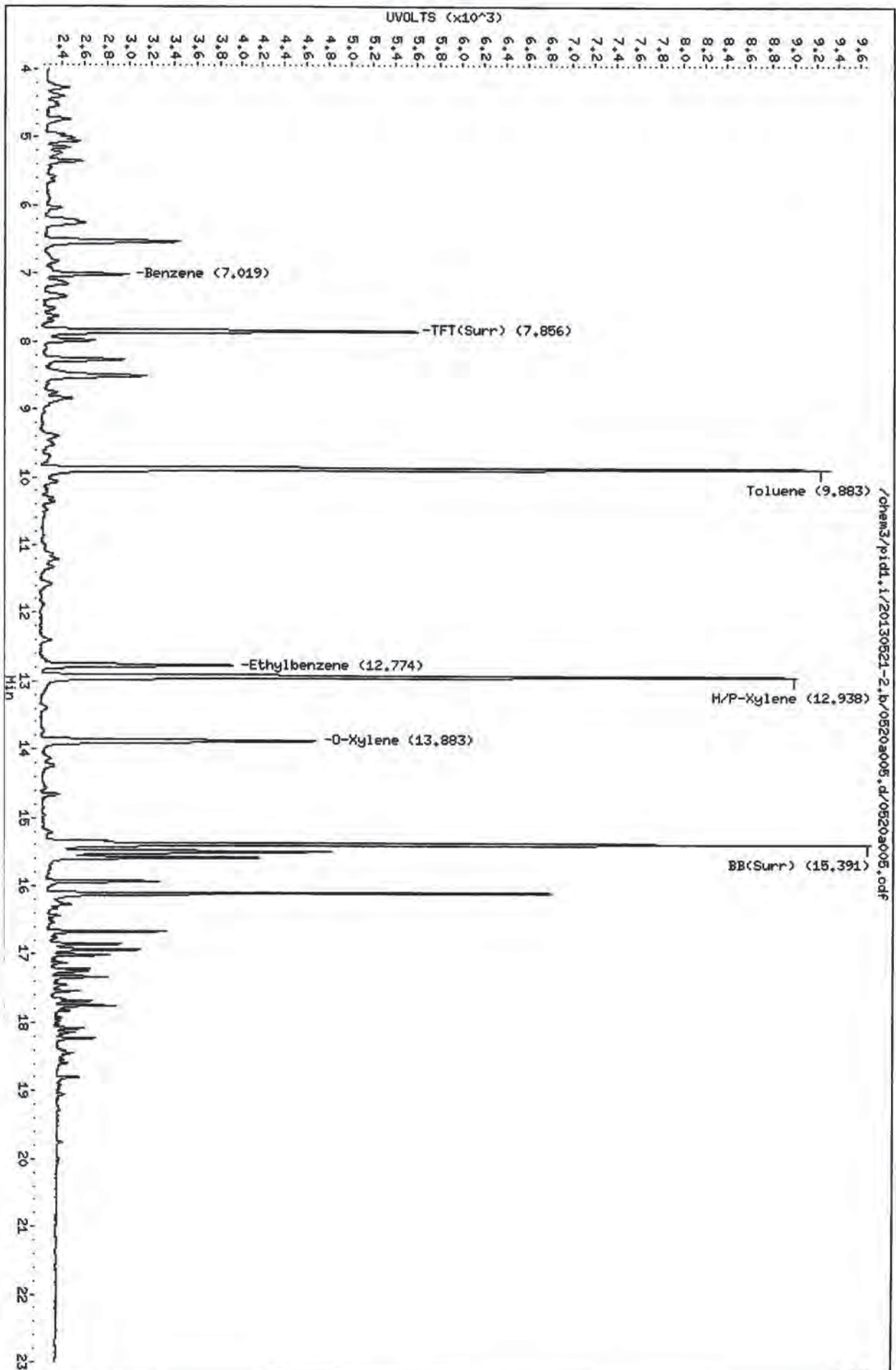
Client ID:
Sample Info: LCS0521

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Page 1

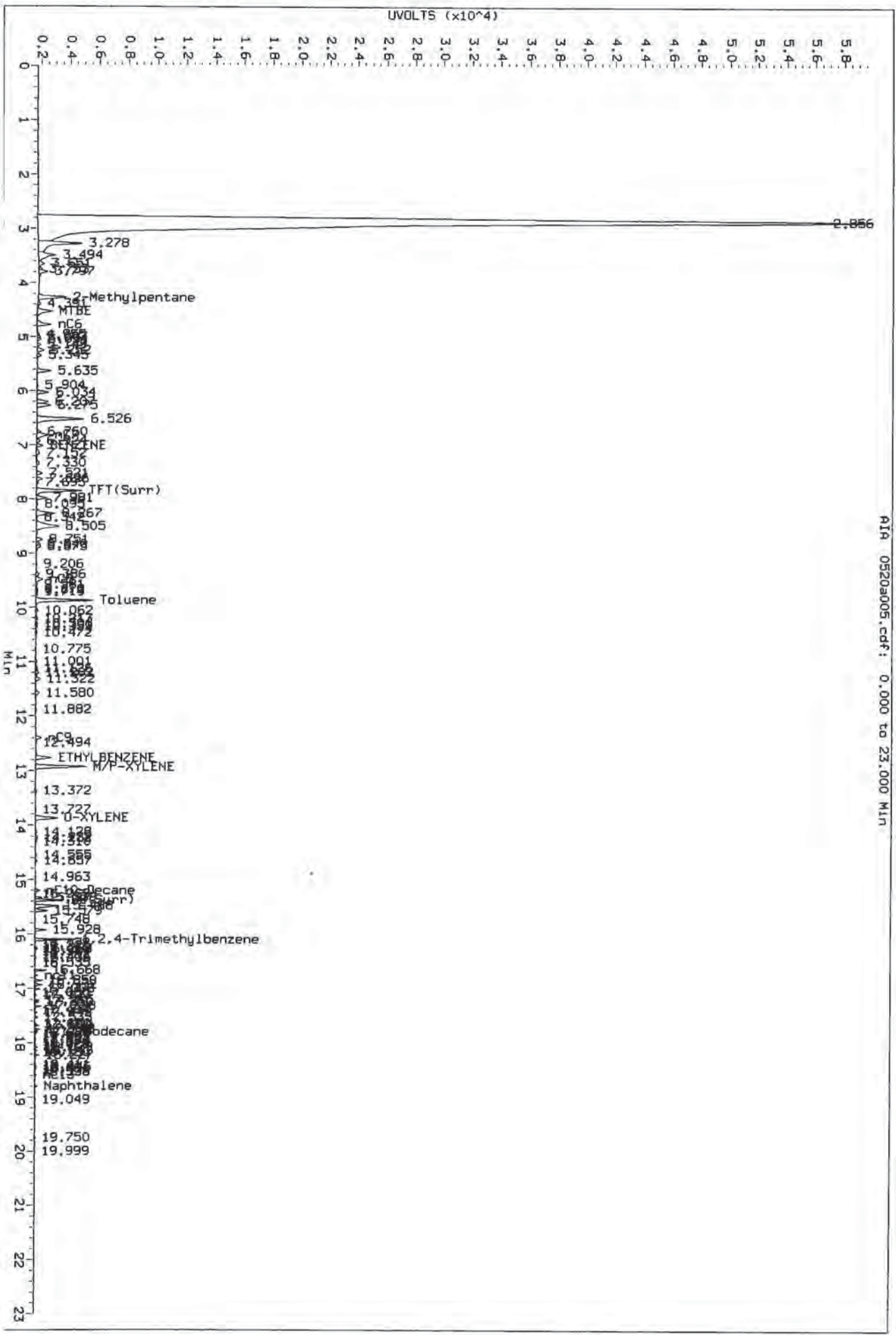


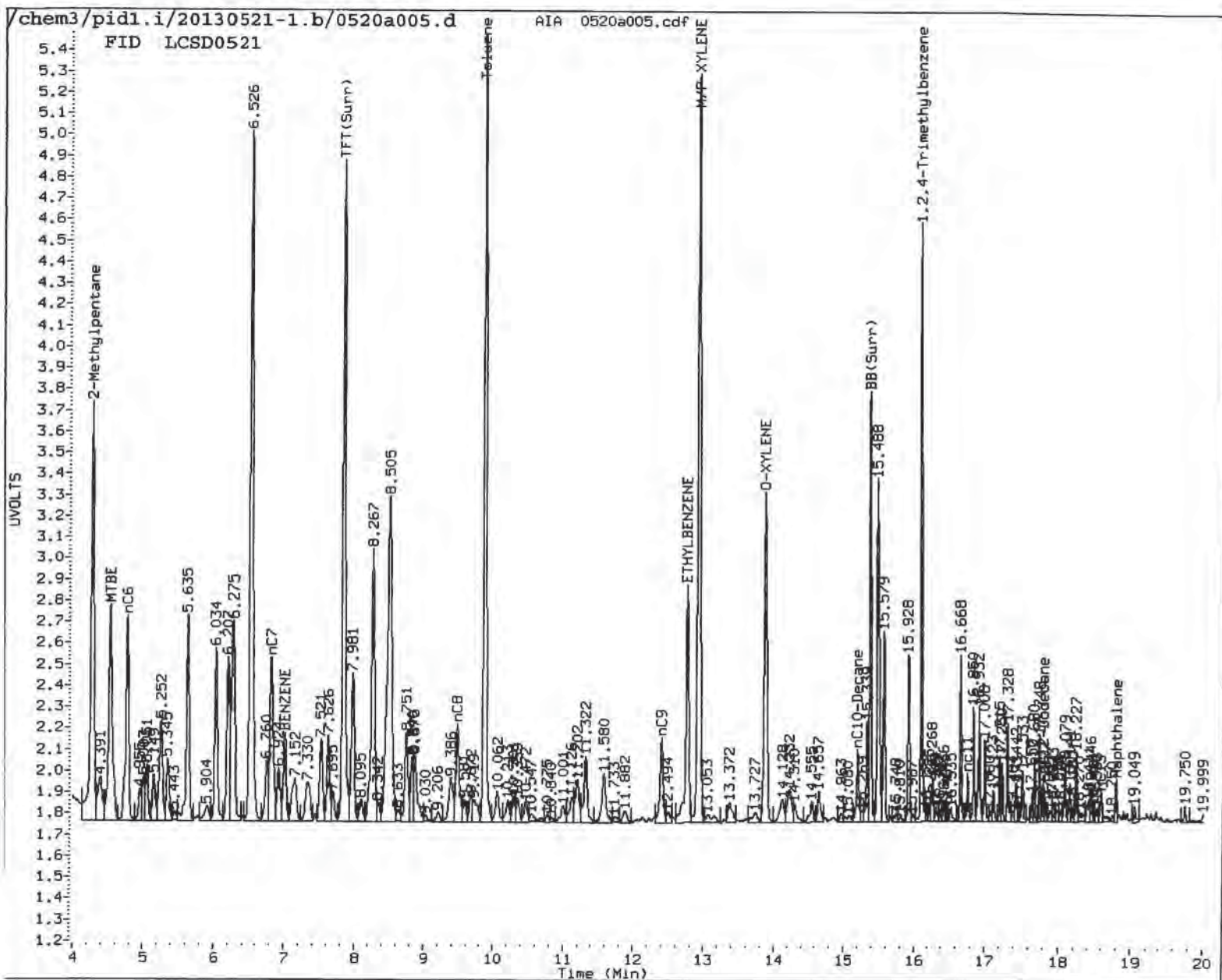
/chem3/pid1.i/20130521-2.b/0520a005.d/0520a005.cdf

PK
5/22/13

Data File: /chem3/pid1.1/20130521-1.b/0520a005.d/0520a005.cdf
Injection Date: 21-MAY-2013 12:09
Instrument: pid1.1
Client Sample ID:

AIA_0520a005.cdf: 0.000 to 23.000 MIN





MANUAL INTEGRATION

- ① Baseline correction
- 2. Poor chromatography
- ③ Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: KL Date: 5/22/15



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-052213
LAB CONTROL SAMPLE

Lab Sample ID: LCS-052213
 LIMS ID: 13-10667
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/22/13 14:37
 LCSD: 05/22/13 15:06
 Instrument/Analyst LCS: PID1/LH
 LCSD: PID1/LH

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	179	185	96.8%	180	185	97.3%	0.6%
Toluene	1970	1980	99.5%	1940	1980	98.0%	1.5%
Ethylbenzene	580	580	100%	572	580	98.6%	1.4%
m,p-Xylene	2080	2120	98.1%	2050	2120	96.7%	1.5%
o-Xylene	960	960	100%	953	960	99.3%	0.7%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	103%	103%
Bromobenzene	104%	104%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

APR 5/23/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a013.d ARI ID: LCS0522
 Data file 2: /chem3/pid1.i/20130522-2.b/0522a013.d Client ID: LCS0522
 Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 14:37
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	-0.001	3064	43493	103.5	TFT(Surr) /
15.383	-0.001	2027	17711	102.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	332926	0.930 M
8015C 2MP-TMB (4.18 to 16.21)	723723	670320	0.926 M /
AK101 nC6-nC10 (4.68 to 15.11)	582885	542454	0.931 M
NWTPHG Tol-Nap (9.78 to 18.90)	375093	353299	0.942 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3325	103.1	TFT(Surr) /
15.390	0.000	7485	103.5	BB(Surr)

SW8021 (PID)

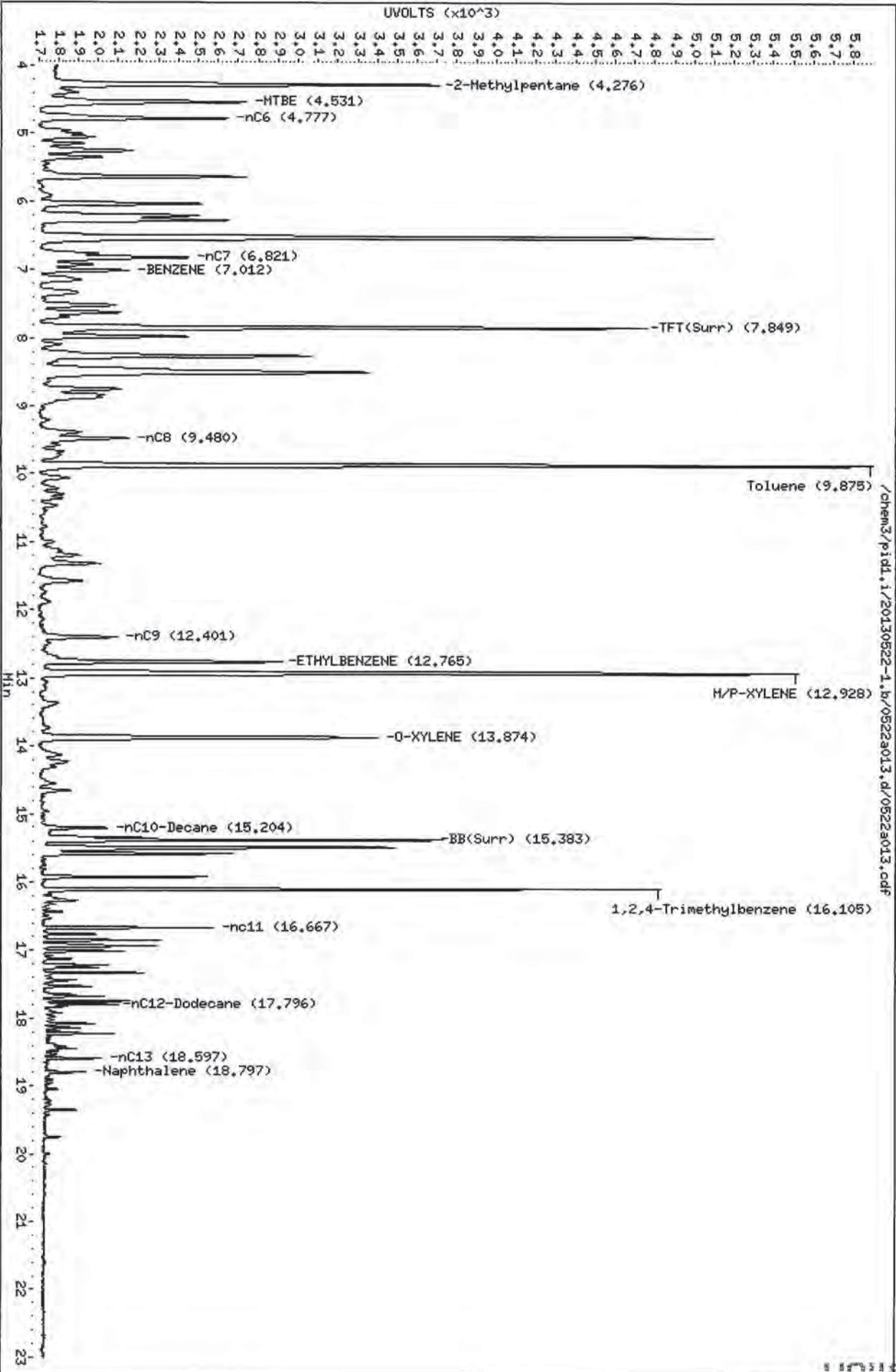
RT	Shift	Response	Amount	Compound
7.021	-0.001	805	3.58	Benzene
9.883	-0.002	7792	39.33	Toluene
12.774	-0.004	1894	11.60	Ethylbenzene /
12.937	-0.006	7478	41.56	M/P-Xylene
13.884	-0.004	2727	19.20	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a013.d
Date: 22-MAY-2013 14:37
Client ID: LCS0522
Sample Info: LCS0522

Column phase: RTX 502-2 FID

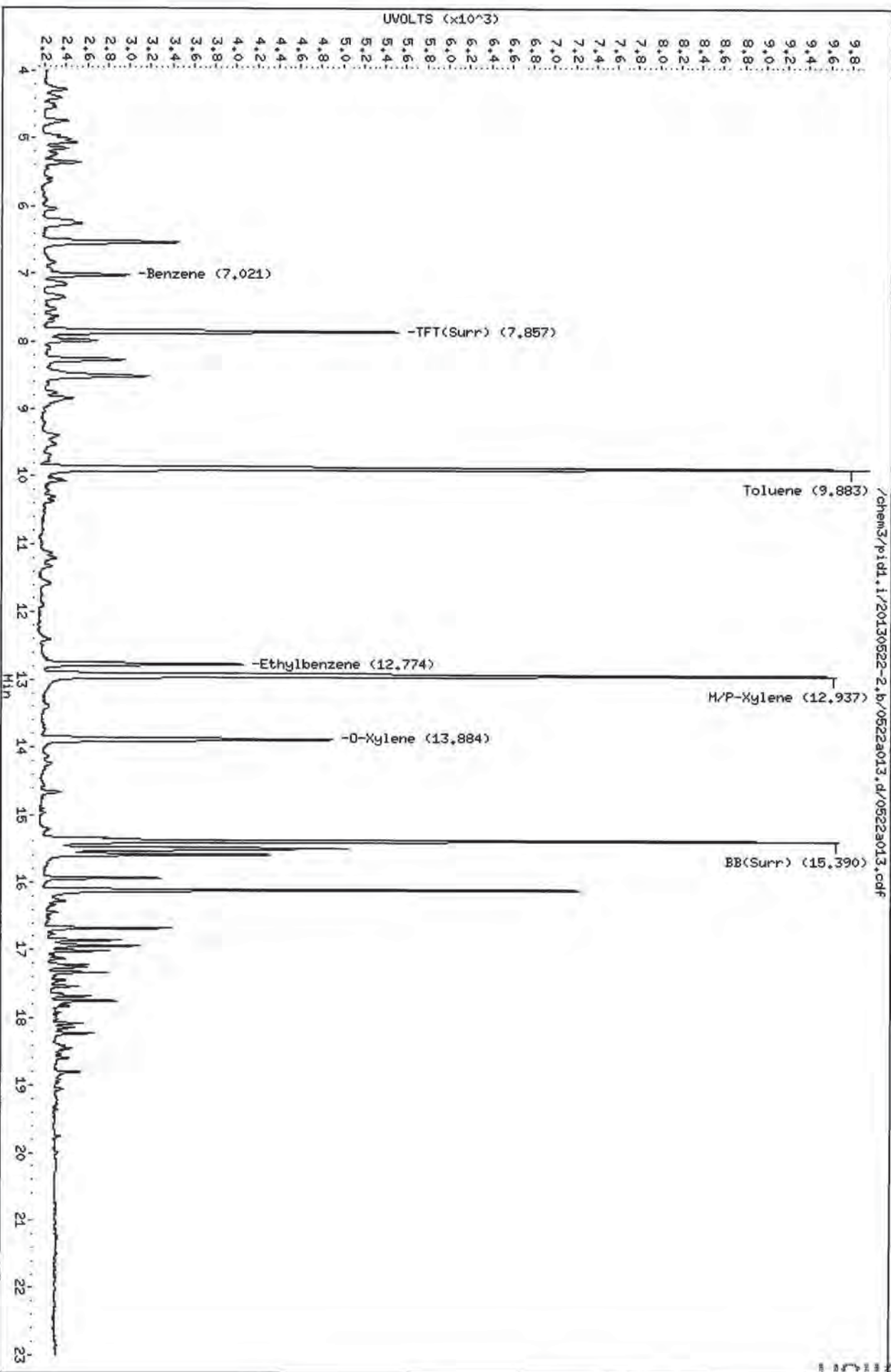
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



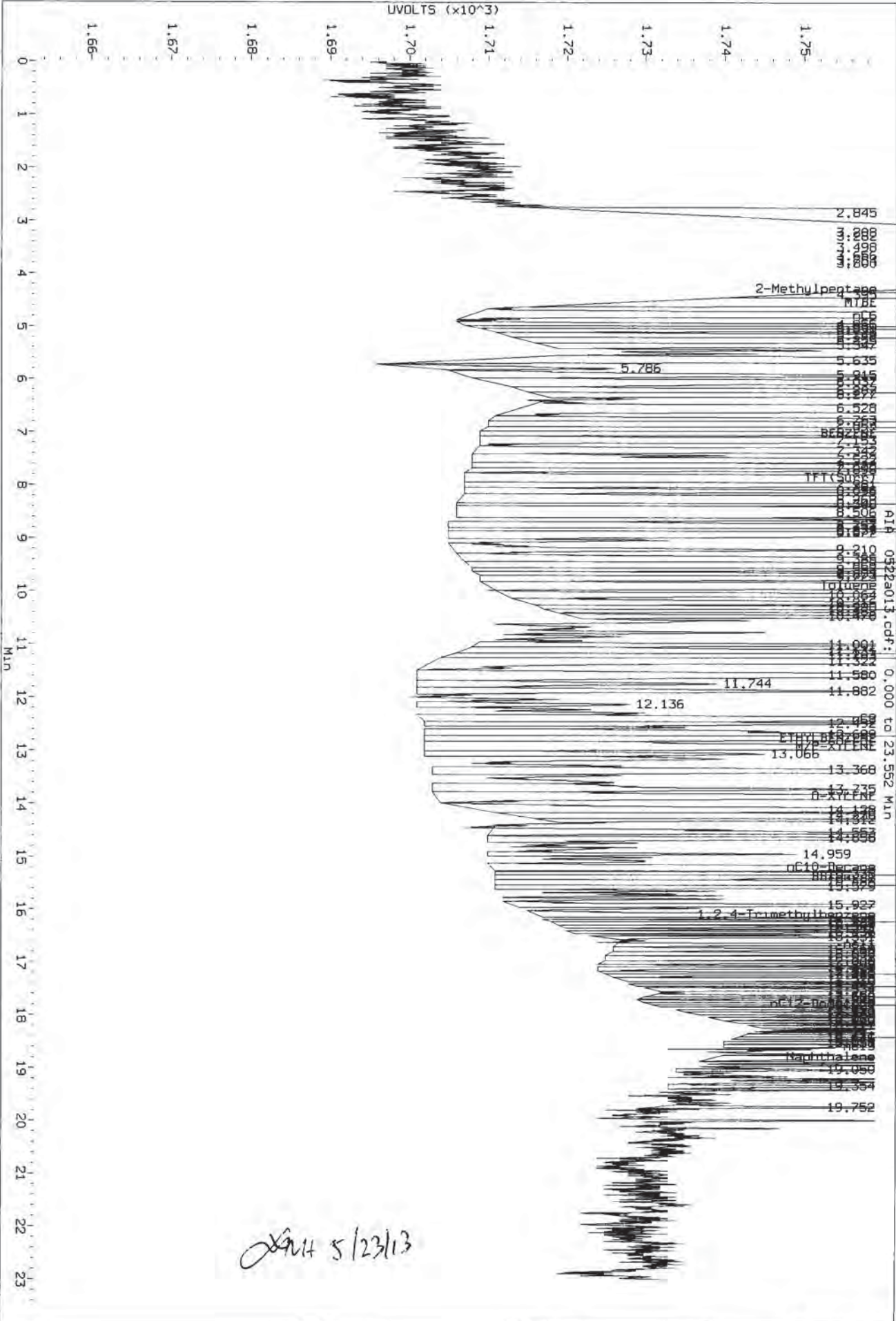
Data File: /chem3/pidd.i/20130522-2.b/0522a013.d
Date : 22-MAY-2013 14:37
Client ID: LCS0522
Sample Info: LCS0522

Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.1/20130522-1.b/0522a013.d/0522a013.cdf
 Injection Date: 22-MAY-2013 14:37
 Instrument: pid1.1
 Client Sample ID: LCS0522



AM 5/23/13

LC# 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a014.d ARI ID: LCSD0522
Data file 2: /chem3/pid1.i/20130522-2.b/0522a014.d Client ID: LCSD0522
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 15:06
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	-0.004	3066	42991	103.6	TFT(Surr)
15.383	-0.001	2027	17787	102.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	.358114	333934	0.932 M
8015C 2MP-TMB (4.18 to 16.21)	723723	647304	0.894 M
AK101 nC6-nC10 (4.68 to 15.11)	582885	519406	0.891 M
NWTPHG Tol-Nap (9.78 to 18.90)	375093	354380	0.945 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3330	103.3	TFT(Surr)
15.390	-0.001	7521	104.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.019	-0.002	807	3.59	Benzene
9.882	-0.003	7693	38.83	Toluene
12.774	-0.005	1866	11.43	Ethylbenzene
12.937	-0.006	7391	41.08	M/P-Xylene
13.883	-0.005	2707	19.06	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a014.d
Date: 22-MAY-2013 15:06
Client ID: LCSD0522
Sample Info: LCSD0522

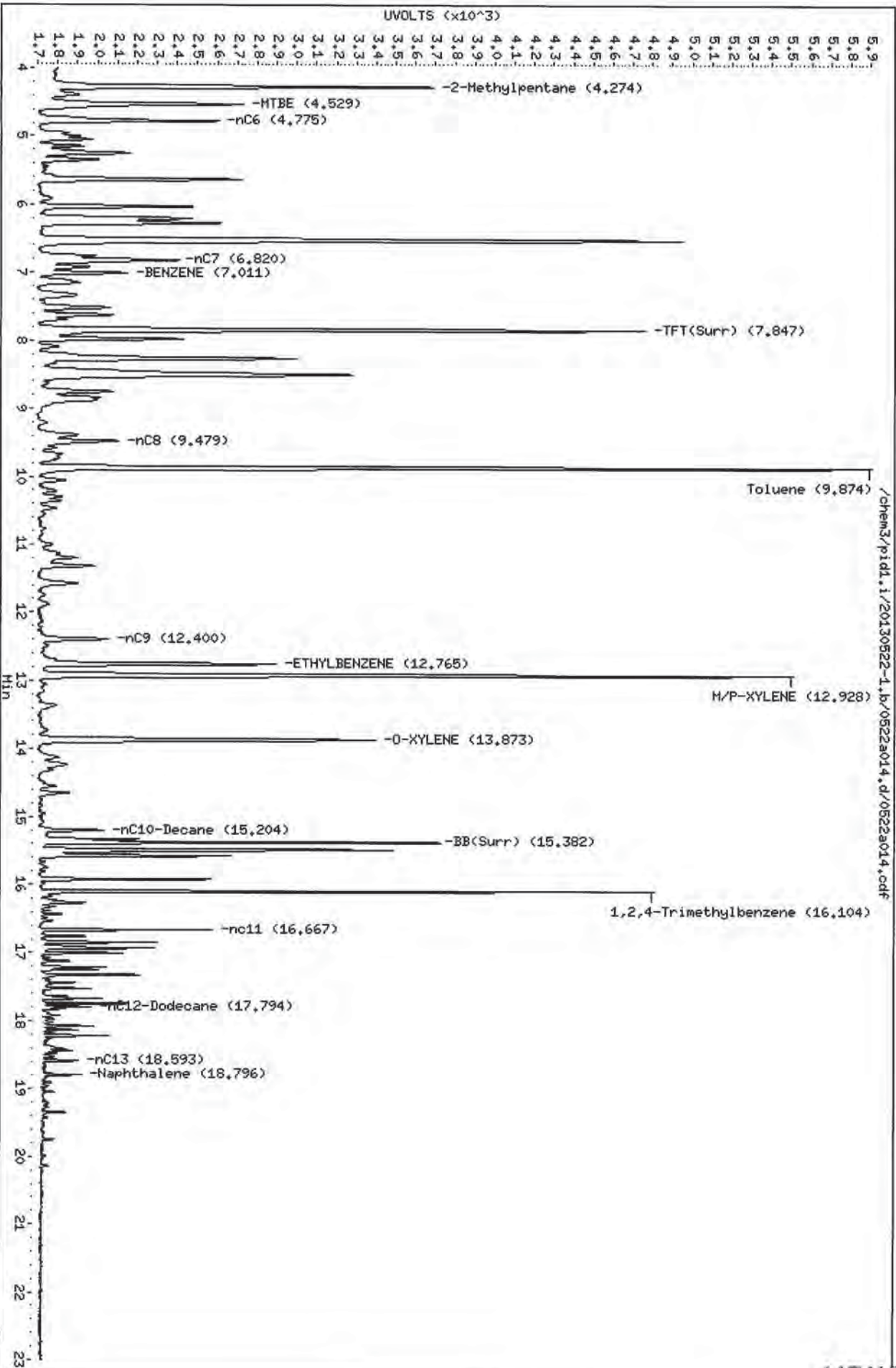
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

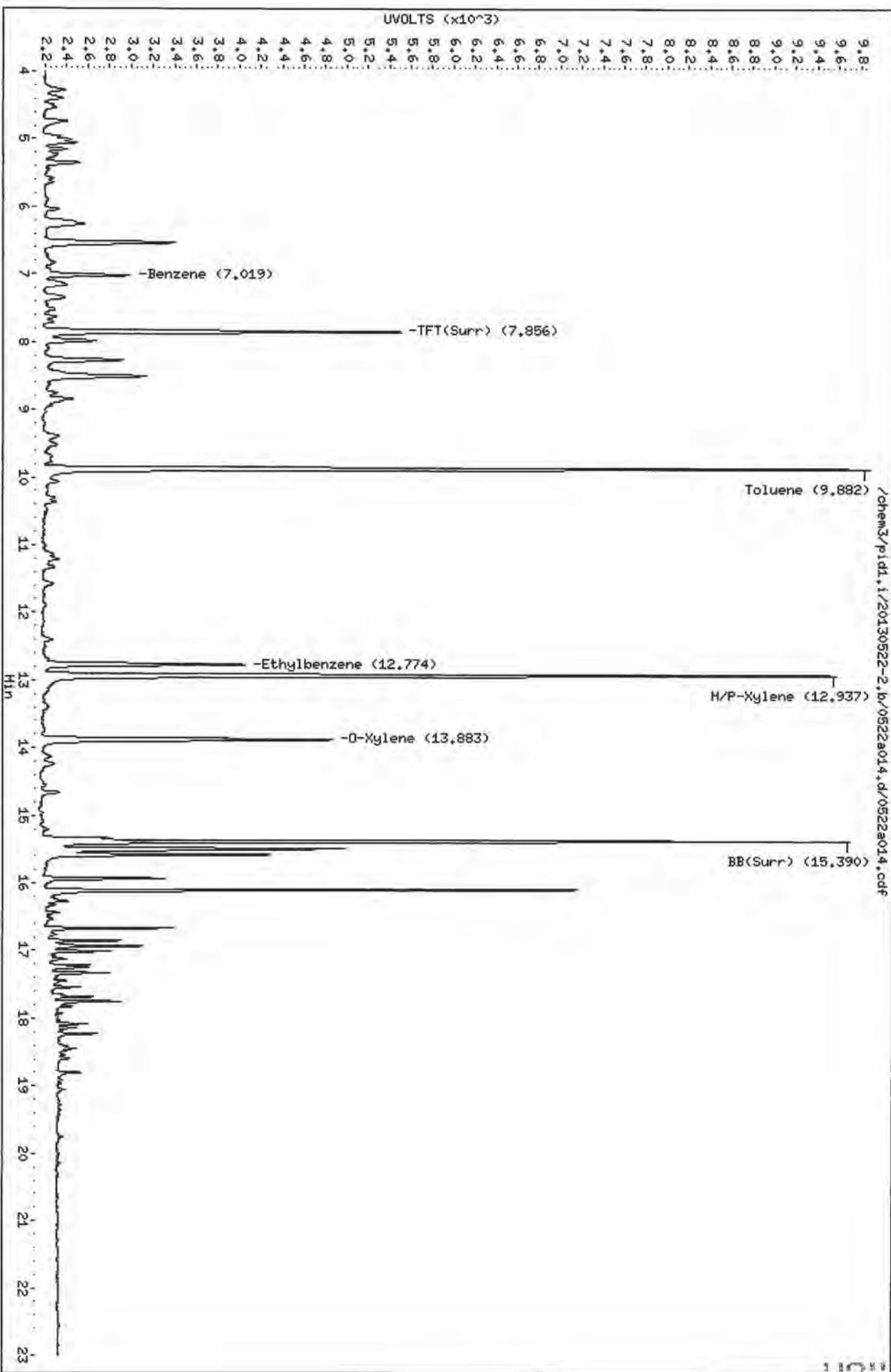
Page 1



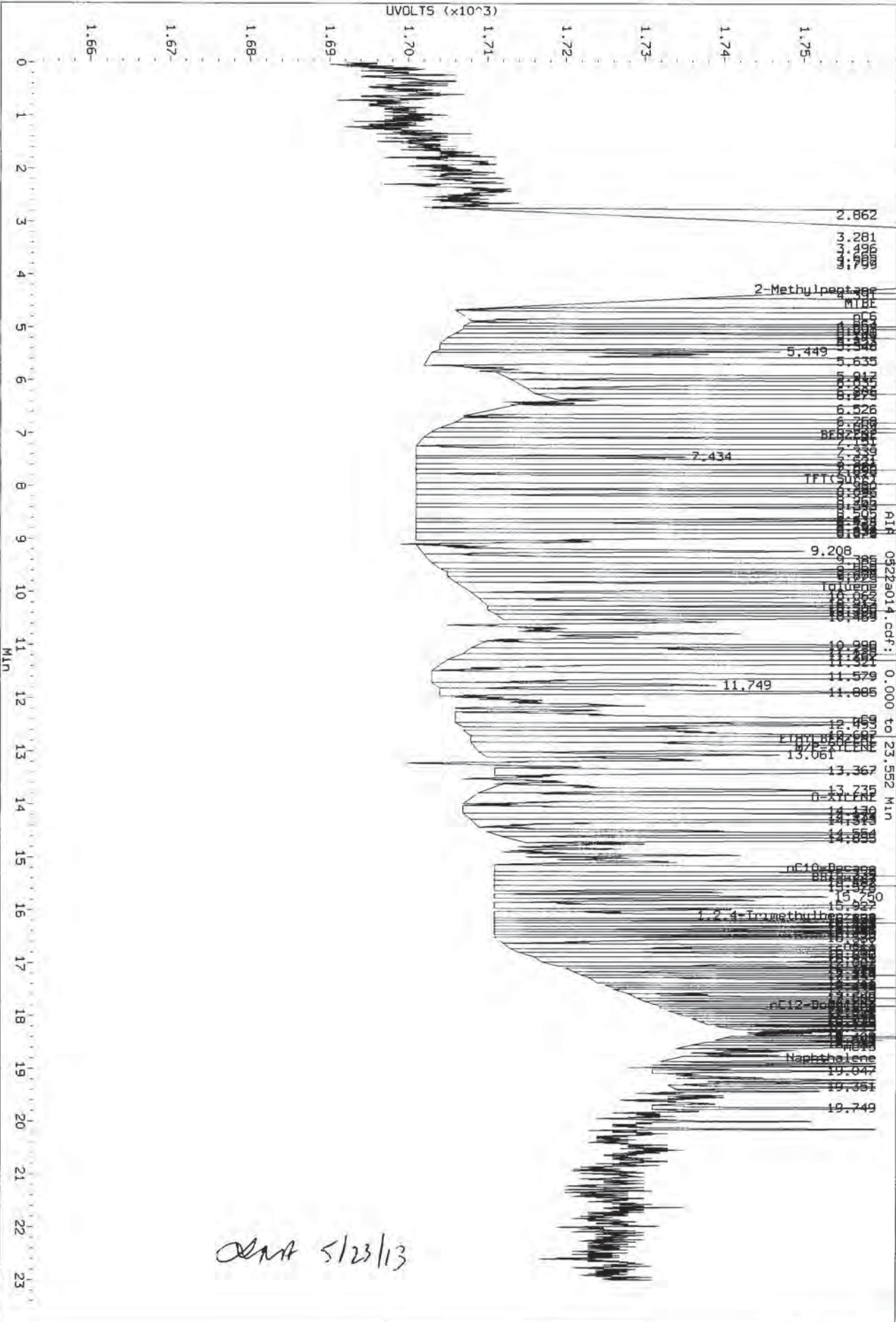
Data File: /chem3/pidd,i/20130522-2,b/0522a014.d
Date: 22-May-2013 15:06
Client ID: LCS00522
Sample Info: LCS00522

Column phase: RTX 502-2 PID

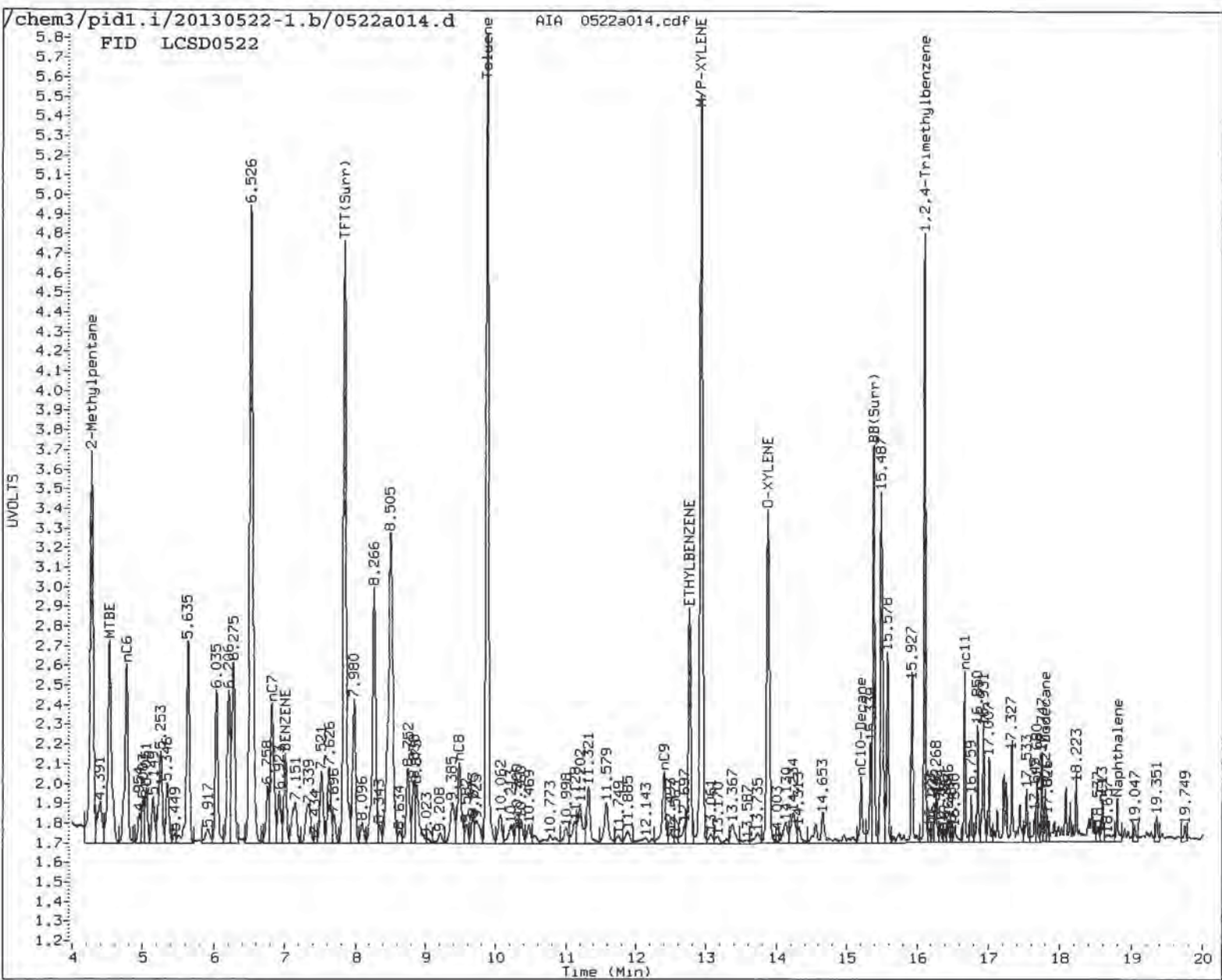
Instrument: pidd.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.1/20130522-1.6/0522a014.d/0522a014.cdf
 Injection Date: 22-MAY-2013 15:06
 Instrument: pid1.1
 Client Sample ID: LCS00522



AMA 5/23/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: JMA Date: 5/29/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: MB-052113

METHOD BLANK

Lab Sample ID: MB-052113

LIMS ID: 13-10666

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/21/13 12:38

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	80.4%
Bromobenzene	80.9%

BETX values reported in µg/kg (ppb)

PC
5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a006.d ARI ID: MB0521
Data file 2: /chem3/pid1.i/20130521-2.b/0520a006.d Client ID:
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 12:38
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	2926	37180	84.4	TFT(Surr)
15.383	0.002	1938	16318	84.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3298	0.009
8015C 2MP-TMB (4.18 to 16.20)	723723	4708	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	3702	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3298	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3191	80.4	TFT(Surr)
15.391	0.001	7111	80.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

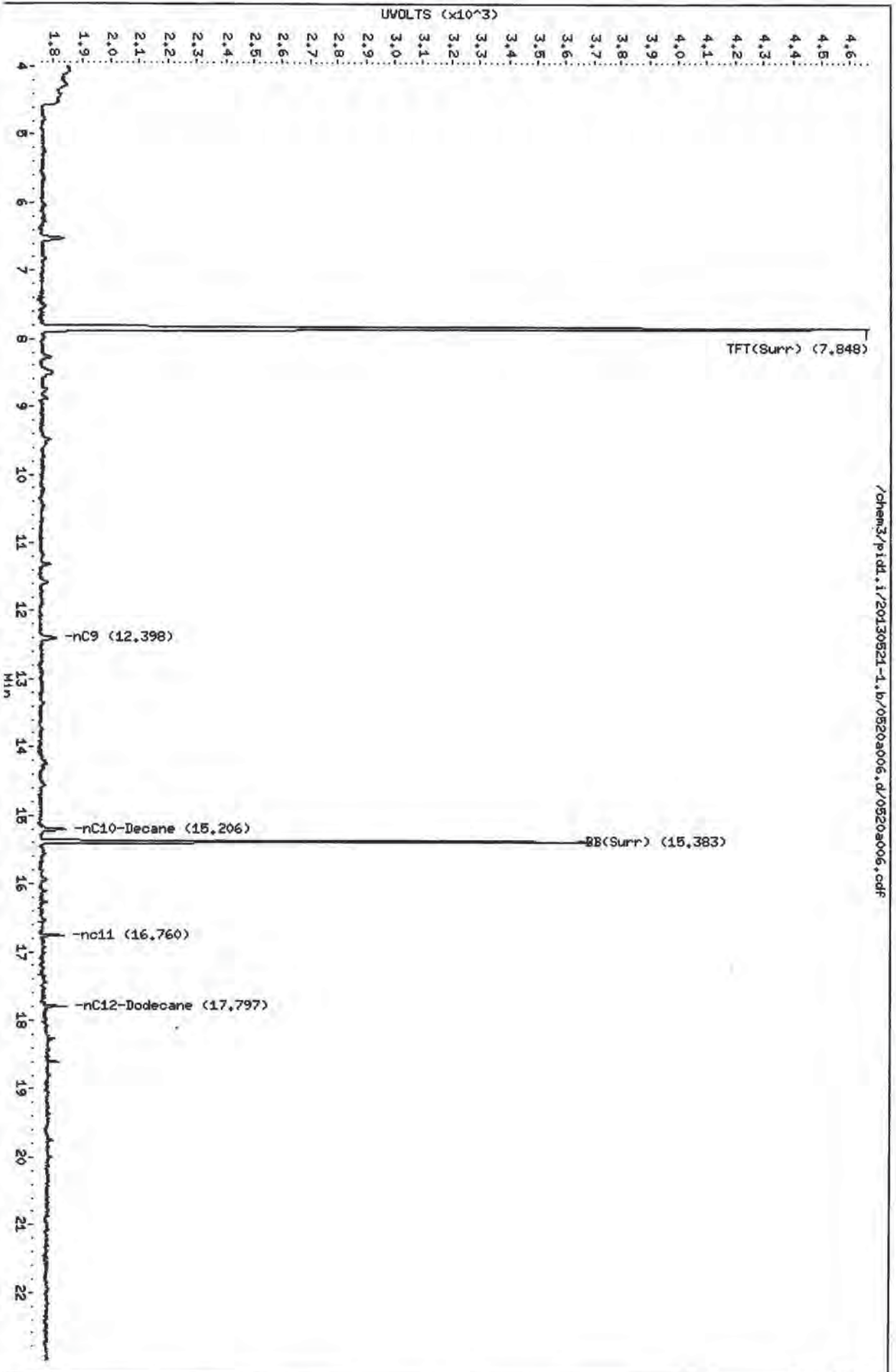
A Indicates Peak Area was used for quantitation instead of Height
V Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a006.d
Date: 21-May-2013 12:38
Client ID:
Sample Info: HB0521

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-1.b/0520a006.d/0520a006.cdf



Data File: /chem3/pid1.i/20130521-2.b/0520a006.d

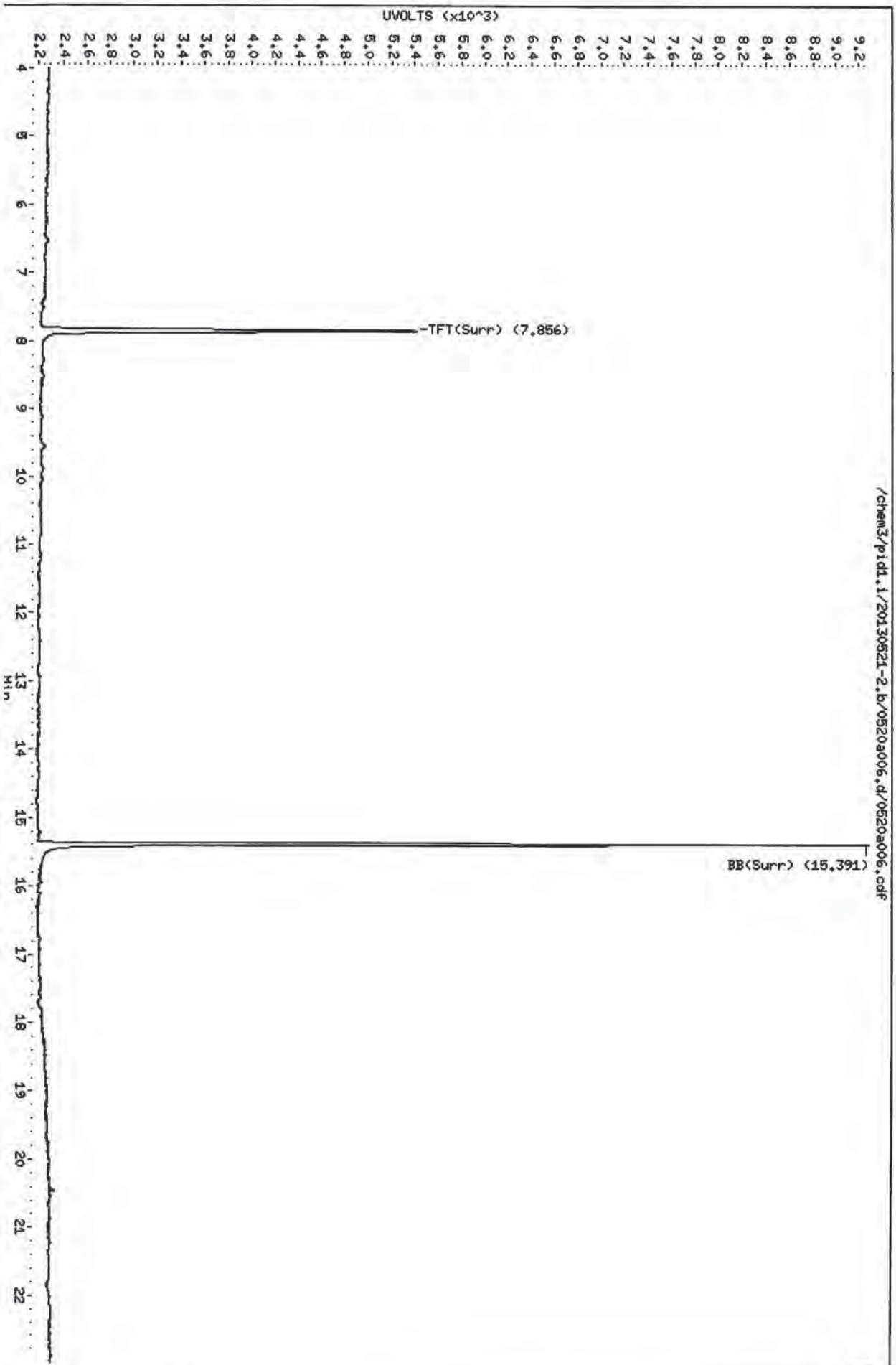
Date: 21-May-2013 12:38

Client ID:

Sample Info: MB0521

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: MB-052213

METHOD BLANK

Lab Sample ID: MB-052213

LIMS ID: 13-10667

Matrix: Soil

Data Release Authorized: *AB*

Reported: 05/23/13

QC Report No: WQ46-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/22/13 15:43

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	102%

BETX values reported in µg/kg (ppb)

QEAH 5/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a015.d ARI ID: MB0522
Data file 2: /chem3/pid1.i/20130522-2.b/0522a015.d Client ID: MB0522
Method: /chem3/pid1.i/20130522-2.b/PIDB.m Injection Date: 22-MAY-2013 15:43
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	-0.002	2970	37655	100.4	TFT(Surr) /
15.383	-0.002	1994	16841	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.78 to 17.90)	358114	0	0.000
8015C 2MP-TMB (4.18 to 16.21)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.11)	582885	0	0.000
NWTPHG Tol-Nap (9.78 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3254	100.9	TFT(Surr) /
15.392	0.001	7397	102.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene /
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

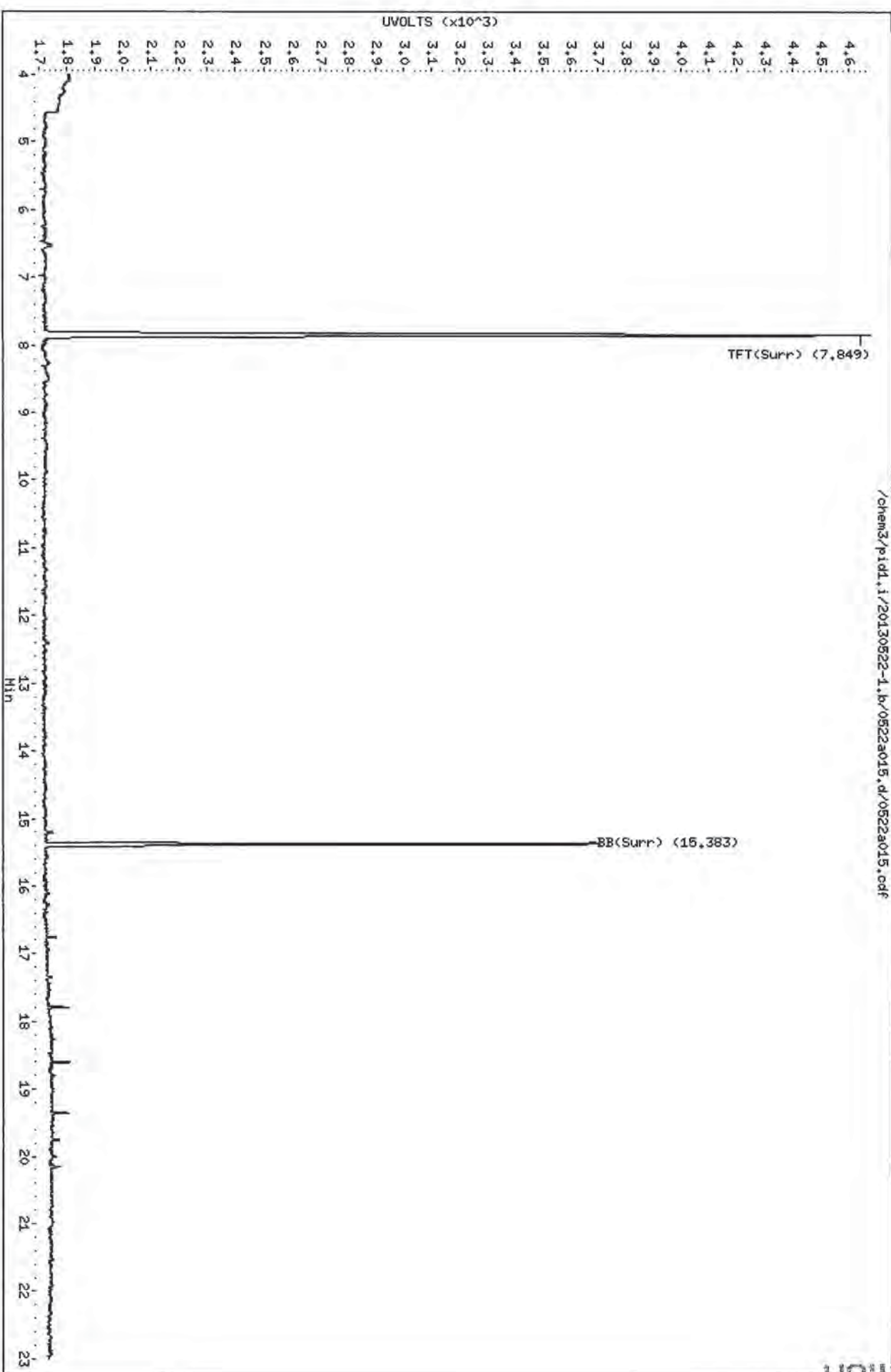
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130522-1.b/0522a015.d
Date: 22-MAY-2013 15:43
Client ID:
Sample Info: HB0522

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-1.b/0522a015.d/0522a015.cdf



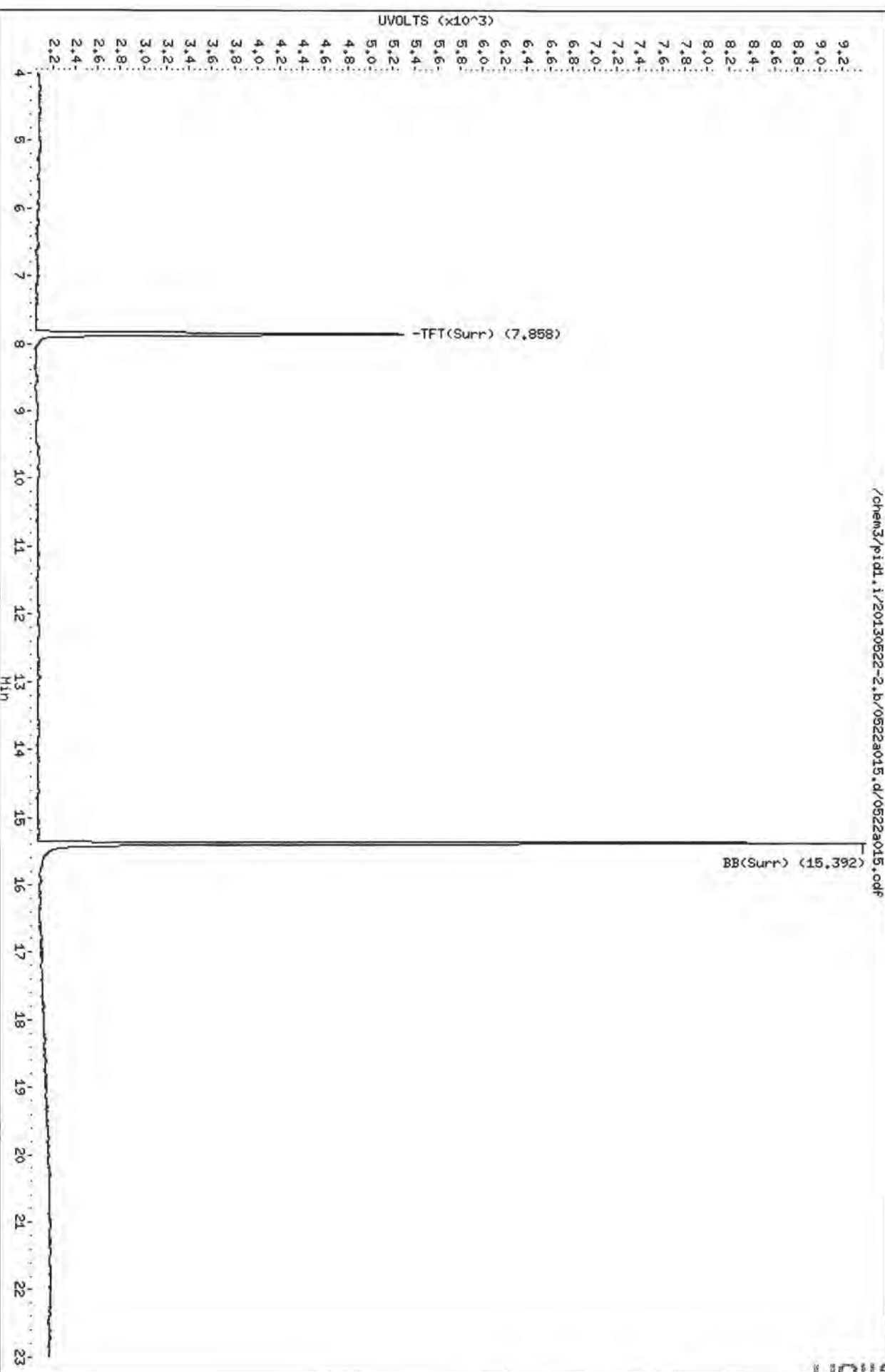
Data File: /chem3/pid1.i/20130522-2.b/0522a015.d
Date: 22-MAY-2013 15:43
Client ID: HB0522
Sample Info: HB0522

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130522-2.b/0522a015.d/0522a015.odf





Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 28, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WQ47 - Revised

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted forty-seven soil samples on May 17, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

Eighteen of forty-seven samples required an expedited turn-around-time and were logged under a separate cover. Nine samples were logged under the ARI job number referenced above. The remaining samples were logged under a separate cover (ARI job WQ46).

The samples were analyzed for NWTPH-Dx and BTEX, as requested on the COC.

The BETX LCSD percent recoveries of Toluene, m,p-Xylene, and o-Xylene fell outside the control limits low for **LCS-052113**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", with a long, sweeping flourish extending to the right.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WQ47_rev

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested:	Page: 4 of 5
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAMFOSTERZ.COM	No. of Coolers:	Cooler Temps:

Client Project Name: CASHMERE	Analysis Requested	Notes/Comments
Client Project #: 0779.02.01-03	Samplers: TONY SILVA	

Sample ID	Date	Time	Matrix	No. Containers	Dx SILVA Gel CLEAN-UP	BTEX SOA1	GKX	HCID	LEAD					
A2-F21-S-6	5-16	1430		4	X	X								
A2-F22-S-6	5-16	1440		4	X	X								
A2-F23-S-6	5-16	1445		4	X	X								
A2-F24-S-6	5-16	1450		4	X	X								
A2-F25-S-6	5-16	1510		4	X	X								
A2-F26-S-6	5-16	1515		4	X	X								
A2-W11-S-4	5-16	1530		5			X		X					
A2-W12-S-4	5-16	1535		5			X		X					
A2-W13-S-4	5-16	1540		5			X		X					
A2-W14-S-4	5-16	1550		5			X		X					

Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/17/13 1600	Date & Time: 5/17/13 1600	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

200600 : 21007

Cooler Receipt Form

ARI Client MFA
 COC No(s) _____ (NA)
 Assigned ARI Job No _____

Project Name Cashmere
 Delivered by Fed-Ex UPS Courier Hand Delivered Other _____
 Tracking No _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (*C) (recommended 2.0-6.0 *C for chemistry): 2.7 0.6 4.1 5.3
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by JM Date: 5/17/13 Time: 1600
 Complete custody forms and attach all shipping documents

Log-In Phase:



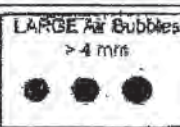
Was a temperature blank included in the cooler? YES (NO)
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES (NO)
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs). (NA) YES NO
 Were all VOC vials free of air bubbles? (NA) YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI: _____ (NA)
 Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/17/13 Time: 1400 (pre log)
 ** Notify Project Manager of discrepancies or concerns **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

1017: 20004

Sample ID Cross Reference Report



ARI Job No: WQ47
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-F21-S-6	WQ47A	13-10682	Soil	05/16/13 14:30	05/17/13 15:15
2. A2-F22-S-6	WQ47B	13-10683	Soil	05/16/13 14:40	05/17/13 15:15
3. A2-F23-S-6	WQ47C	13-10684	Soil	05/16/13 14:45	05/17/13 15:15
4. A2-F24-S-6	WQ47D	13-10685	Soil	05/16/13 14:50	05/17/13 15:15
5. A2-F25-S-6	WQ47E	13-10686	Soil	05/16/13 15:10	05/17/13 15:15
6. A2-F26-S-6	WQ47F	13-10687	Soil	05/16/13 15:15	05/17/13 15:15
7. A2-F27-S-6	WQ47G	13-10688	Soil	05/16/13 16:35	05/17/13 15:15
8. A2-F28-S-6	WQ47H	13-10689	Soil	05/16/13 16:40	05/17/13 15:15
9. A2-F29-S-6	WQ47I	13-10690	Soil	05/16/13 16:50	05/17/13 15:15



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned

Extraction Method: SW3546

Page 1 of 1

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
WQ47A 13-10682	A2-F21-S-6 HC ID: DRO/MOTOR OIL	05/22/13	05/23/13 FID3B	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	31 63	660 1400 62.2%
WQ47B 13-10683	A2-F22-S-6 HC ID: MOTOR OIL	05/22/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	< 5.6 U 19 83.5%
WQ47C 13-10684	A2-F23-S-6 HC ID: DRO/MOTOR OIL	05/22/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	64 230 59.3%
MB-052213 13-10685	Method Blank HC ID: ---	05/22/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 80.4%
WQ47D 13-10685	A2-F24-S-6 HC ID: DIESEL/MOTOR OIL	05/22/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	15 75 72.6%
WQ47E 13-10686	A2-F25-S-6 HC ID: DIESEL/MOTOR OIL	05/22/13	05/23/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.3 13	9.7 37 77.1%
WQ47F 13-10687	A2-F26-S-6 HC ID: DIESEL/MOTOR OIL	05/22/13	05/24/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	17 77 76.9%
WQ47G 13-10688	A2-F27-S-6 HC ID: DRO/MOTOR OIL	05/22/13	05/24/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.4 13	62 360 68.1%
WQ47H 13-10689	A2-F28-S-6 HC ID: DRO/MOTOR OIL	05/22/13	05/24/13 FID3B	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	32 64	220 1500 60.3%
WQ47I 13-10690	A2-F29-S-6 HC ID: DRO/MOTOR OIL	05/22/13	05/24/13 FID3B	1.00 50	Diesel Range Motor Oil Range o-Terphenyl	290 580	1800 4600 D

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.

Motor Oil range quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RR0 indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b040.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47MBS1
Client ID:
Injection: 23-MAY-2013 20:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		110182	8
C8	0.819	0.000	4149	6701	WATPHD (C12-C24)		158121	15.27 ✓
C10	2.236	-0.003	529	198	WATPHM (C24-C38)		115206	11.67 ✓
C12	3.041	-0.002	396	230	AK102 (C10-C25)		180885	14.64
C14	3.630	0.006	1290	1718	AK103 (C25-C36)		83255	11.71
C16	4.119	0.001	1120	260				
C18	4.564	-0.003	1348	204				
C20	4.983	-0.002	714	291				
C22	5.375	-0.005	442	390	MSPiRIT (Tol-C12)		110182	8.02
C24	5.746	-0.002	319	136				
C25	5.921	-0.001	148	98				
C26	6.098	-0.001	244	61				
C28	6.419	0.008	1221	1323				
C32	6.963	0.010	3560	4337				
C34	7.186	-0.001	1072	396				
Filter Peak	----							
C36	7.412	0.009	1761	454				
o-terph	4.677	0.005	754639	486934	JET-A (C10-C18)		131647	12.16
Triacon Surr	6.703	-0.003	676318	499883				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	486934	36.2	80.5 ✓
Triacontane	499883	38.3	85.1

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

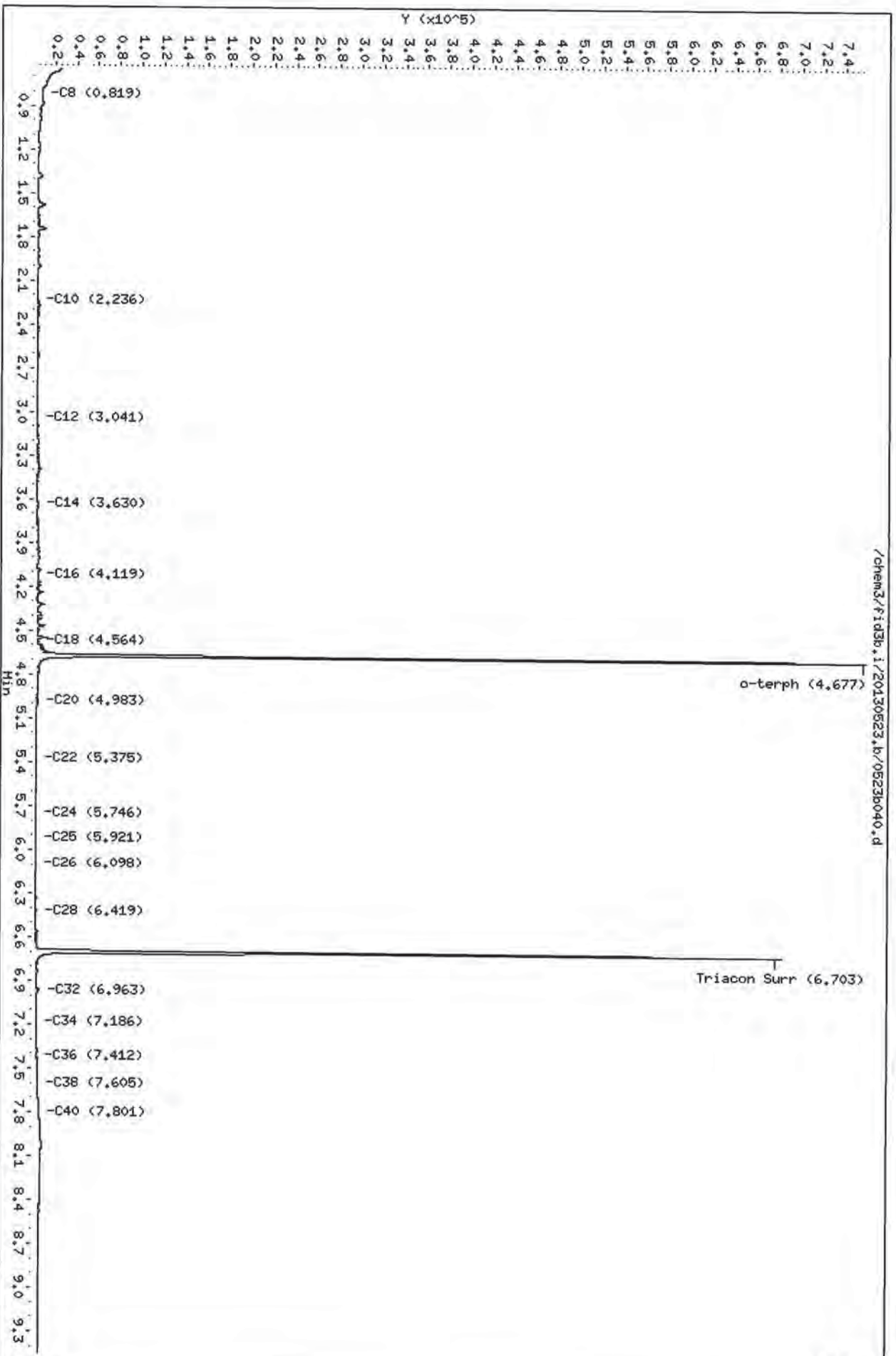
Data File: /chem3/fid3b,1/20130523,b/0523b040,d
Date: 23-MAY-2013 20:49

Client ID:
Sample Info: M047HBS1

Column phase: RTX-1

Instrument: fid3b,1

Operator: JM
Column diameter: 0.25



TRIACON

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b042.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47A
Client ID:
Injection: 23-MAY-2013 21:27
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		112740	8
C8	0.827	0.008	4363	11161	WATPHD (C12-C24)		10862237	1048.74
C10	2.241	0.002	923	614	WATPHM (C24-C38)		22079790	2236.41
C12	3.046	0.002	2135	1189	AK102 (C10-C25)		11579545	937.10 M
C14	3.628	0.004	17749	9285	AK103 (C25-C36)		19621993	2760.36 M
C16	4.124	0.005	44469	14602				
C18	4.564	-0.003	75532	26710				
C20	4.982	-0.003	96169	35241				
C22	5.378	-0.002	139058	74630	MSPIRIT (Tol-C12)		112740	8.21
C24	5.746	-0.002	143159	69983				
C25	5.925	0.003	163696	34557				
C26	6.103	0.004	178204	34800				
C28	6.413	0.002	254151	64044				
C32	6.952	-0.002	204420	64801				
C34	7.190	0.003	214460	102718				
Filter Peak	----							
C36	7.403	0.000	161196	35061				
o-terph	4.672	0.000	152221	75261	JET-A (C10-C18)		3111229	287.43
Triacon Surr	6.709	0.002	132483	86111				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	75261	5.6	62.2
Triacontane	86111	6.6	73.3

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b042.d
Date: 23-MAY-2013 21:27

Client ID:

Sample Info: M047A,5

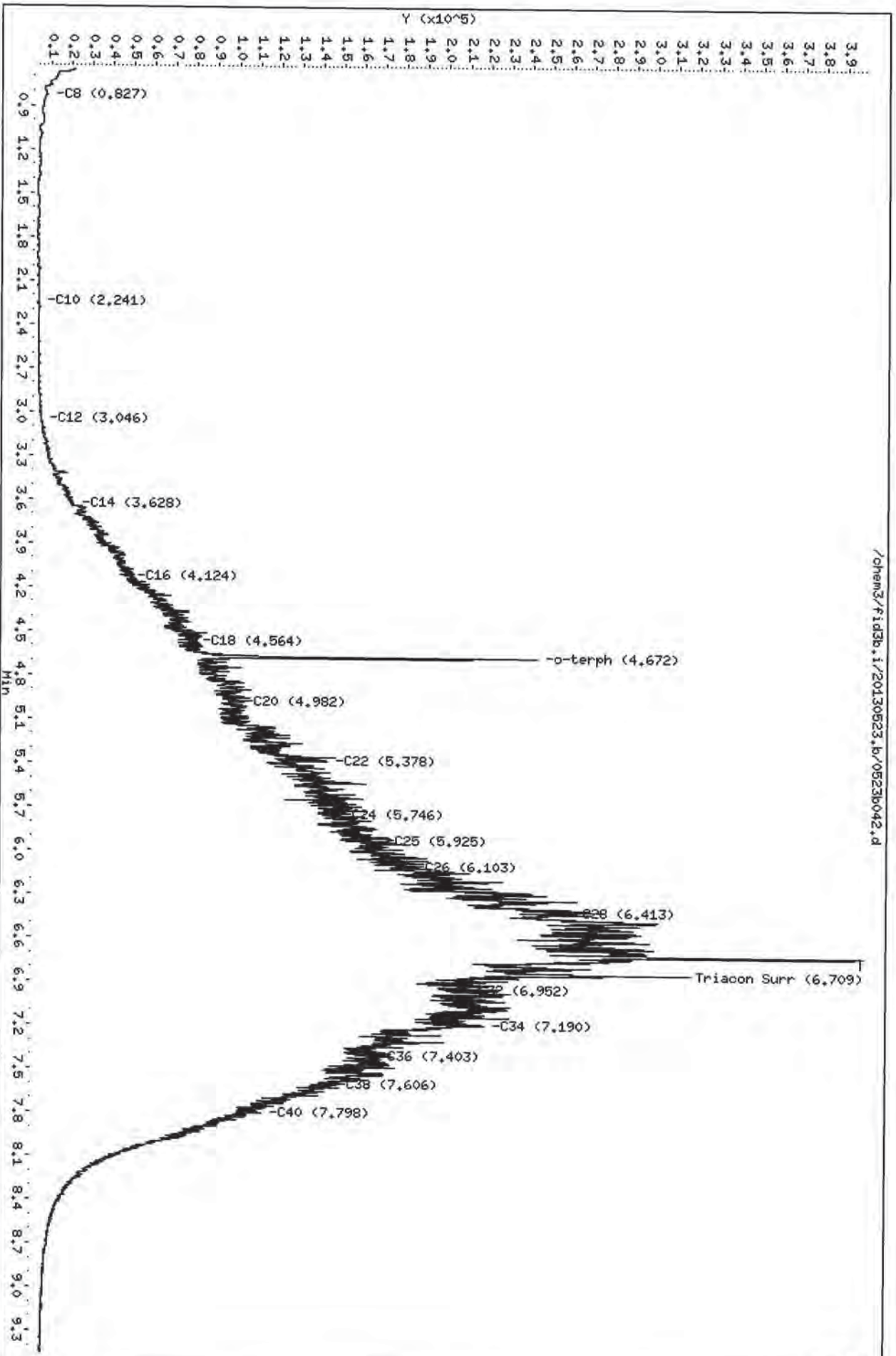
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Instrument: fid3b.i

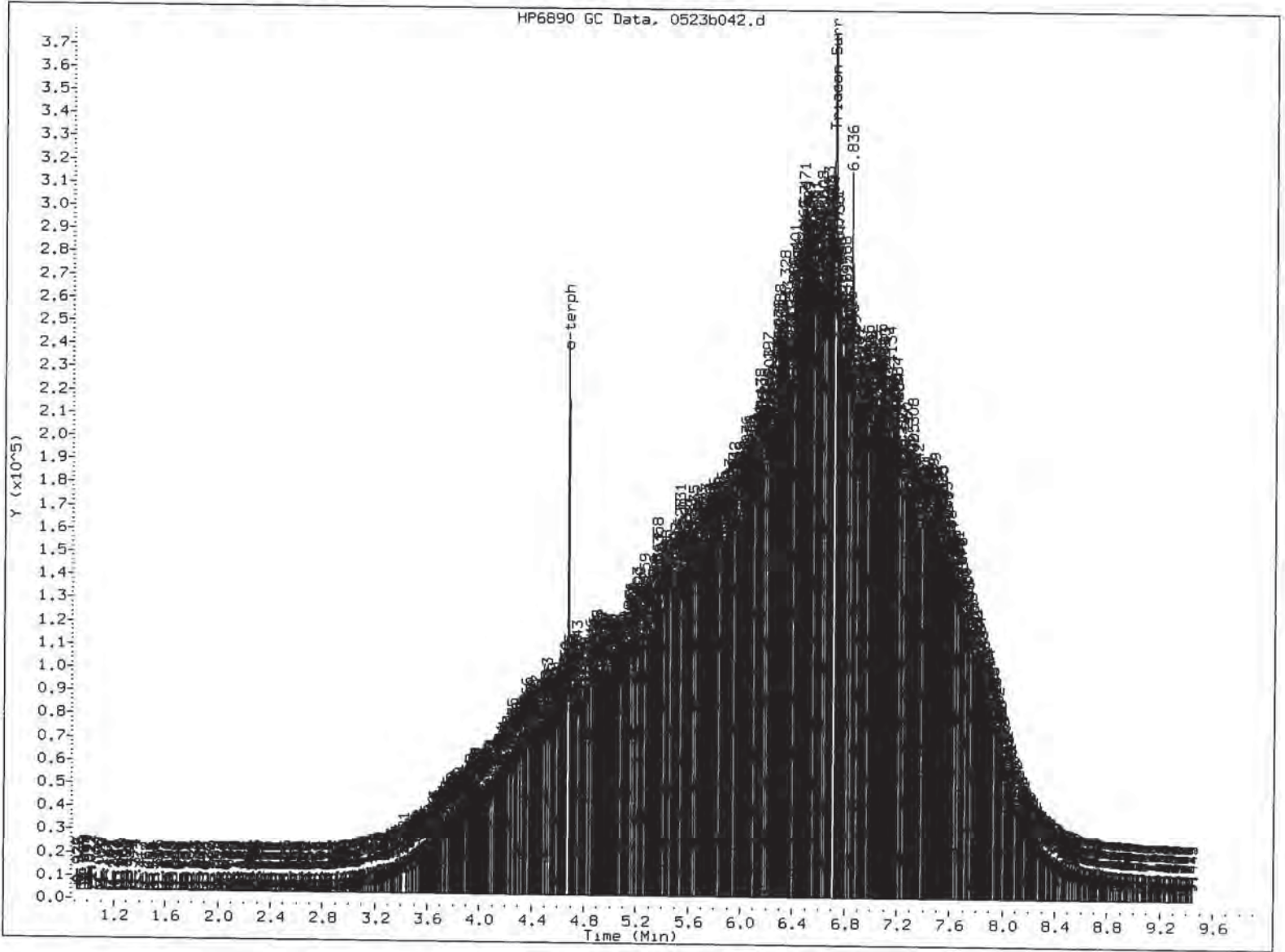
Operator: JM

Column diameter: 0.25

Page 1



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MANUAL INTEGRATION

- 1. Baseline correction
- ~~3.~~ Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b043.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47B
Client ID:
Injection: 23-MAY-2013 21:46
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		70783	5
C8	0.816	-0.002	3379	1146	WATPHD (C12-C24)		457882	44.21
C10	2.241	0.002	516	325	WATPHM (C24-C38)		1671454	169.30
C12	3.045	0.001	558	374	AK102 (C10-C25)		515145	41.69 M
C14	3.625	0.001	1309	1640	AK103 (C25-C36)		1455898	204.81 M
C16	4.113	-0.005	1284	442				
C18	4.569	0.002	2710	1403				
C20	4.985	0.000	2845	451				
C22	5.383	0.003	4936	2840	MSPIRIT (Tol-C12)		70783	5.15
C24	5.751	0.003	7286	2433				
C25	5.923	0.001	9697	2440				
C26	6.106	0.007	11619	7256				
C28	6.415	0.004	17624	8386				
C32	6.956	0.003	23531	25738				
C34	7.187	0.001	16553	9284				
Filter Peak	----							
C36	7.404	0.001	16775	3854				
o-terph	4.678	0.006	871126	505445	JET-A (C10-C18)		137985	12.75
Triacon Surr	6.705	-0.001	870364	548563				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	505445	37.6	83.5
Triacontane	548563	42.0	93.4

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

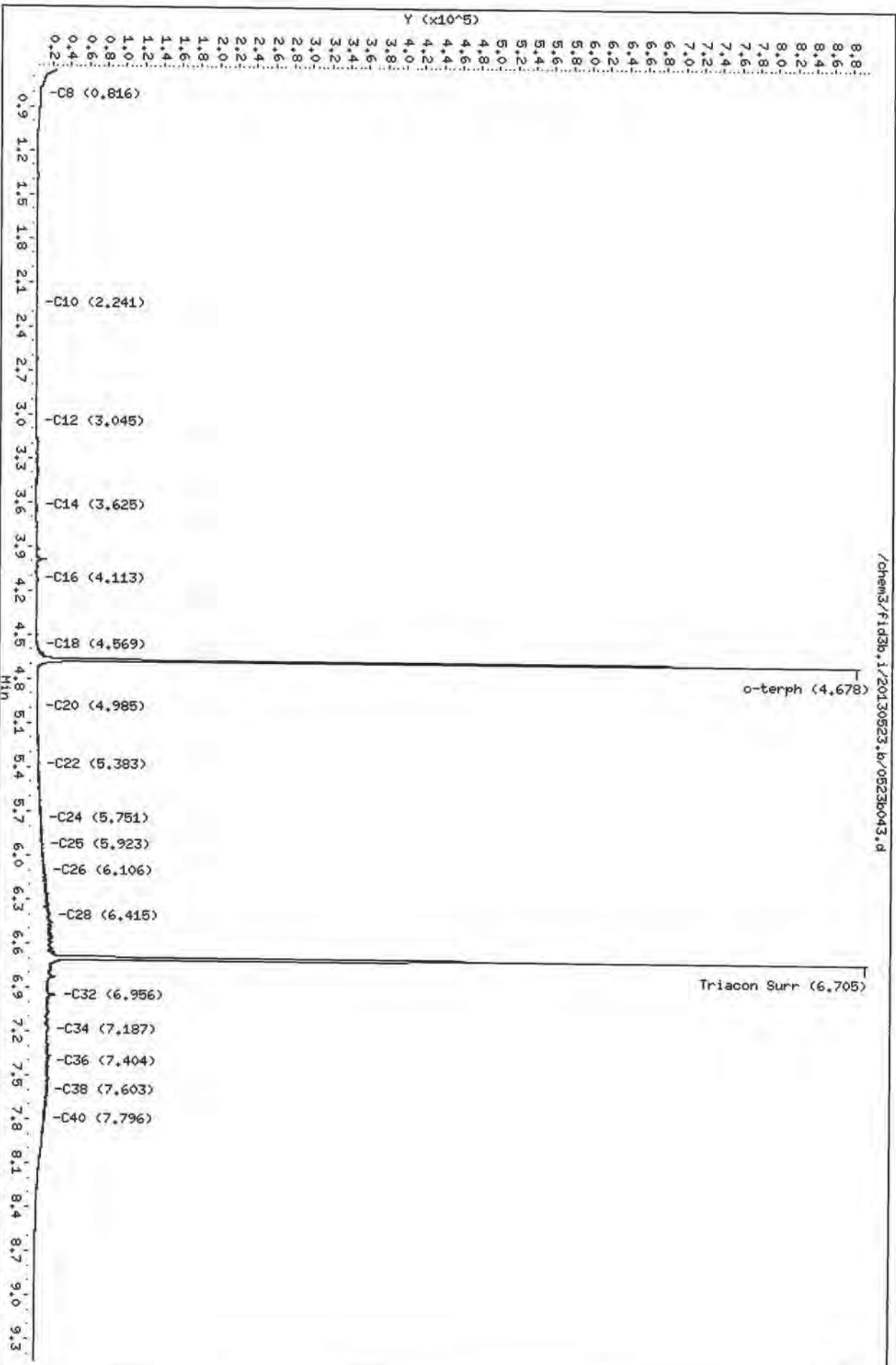
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Date: 23-MAY-2013 21:46
Client ID:
Sample Info: M047B

Column phase: RTX-1

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Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
5/24/13

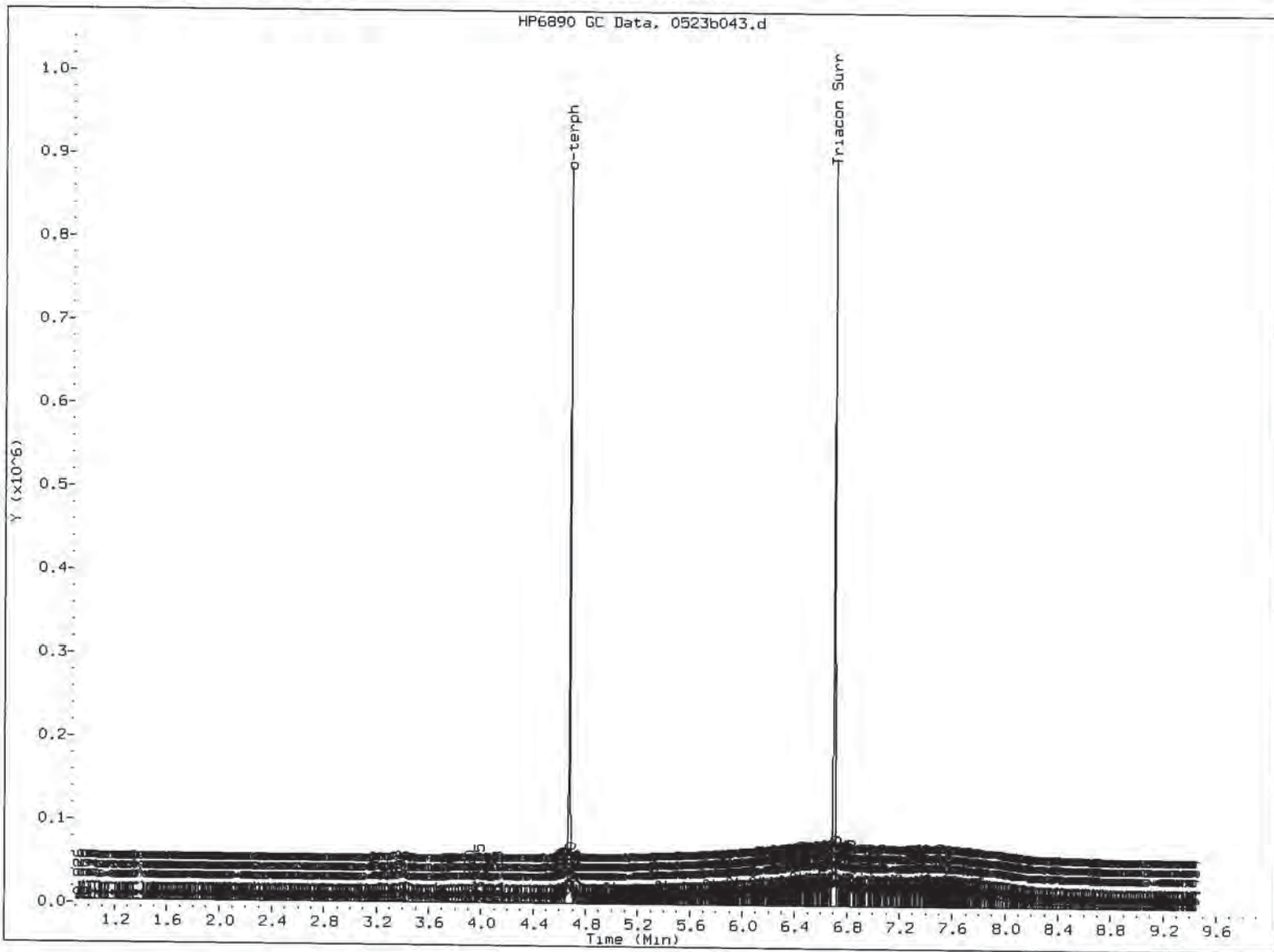


05 600 05

FID:3B-2C/RTX-1 WQ47B

FID:3B SIGNAL

HP6890 GC Data, 0523b043.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b044.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47C
Client ID:
Injection: 23-MAY-2013 22:05
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		196775	15
C8	0.832	0.013	5727	15119	WATPHD (C12-C24)		5401851	521.54
C10	2.235	-0.004	874	295	WATPHM (C24-C38)		18859215	1910.20
C12	3.046	0.002	2866	2254	AK102 (C10-C25)		6035900	488.47 M
C14	3.625	0.001	4244	4368	AK103 (C25-C36)		16622929	2338.46 M
C16	4.119	0.000	5639	4466				
C18	4.568	0.001	20379	7381				
C20	4.986	0.001	36872	12789				
C22	5.385	0.005	95517	53006	MSPIRIT (Tol-C12)		196775	14.32
C24	5.749	0.001	131145	37743				
C25	5.922	0.001	142259	42357				
C26	6.097	-0.002	173206	86197				
C28	6.410	-0.001	226920	137841				
C32	6.951	-0.003	180600	129755				
C34	7.186	-0.001	161289	72585				
Filter Peak	----							
C36	7.405	0.003	152009	35719				
o-terph	4.677	0.005	720580	359052	JET-A (C10-C18)		561665	51.89
Triacon Surr	6.709	0.003	675777	450213				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	359052	26.7	59.3
Triacontane	450213	34.5	76.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b047.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47D
Client ID:
Injection: 23-MAY-2013 23:02
Dilution Factor: 1

FID:3B RESULTS

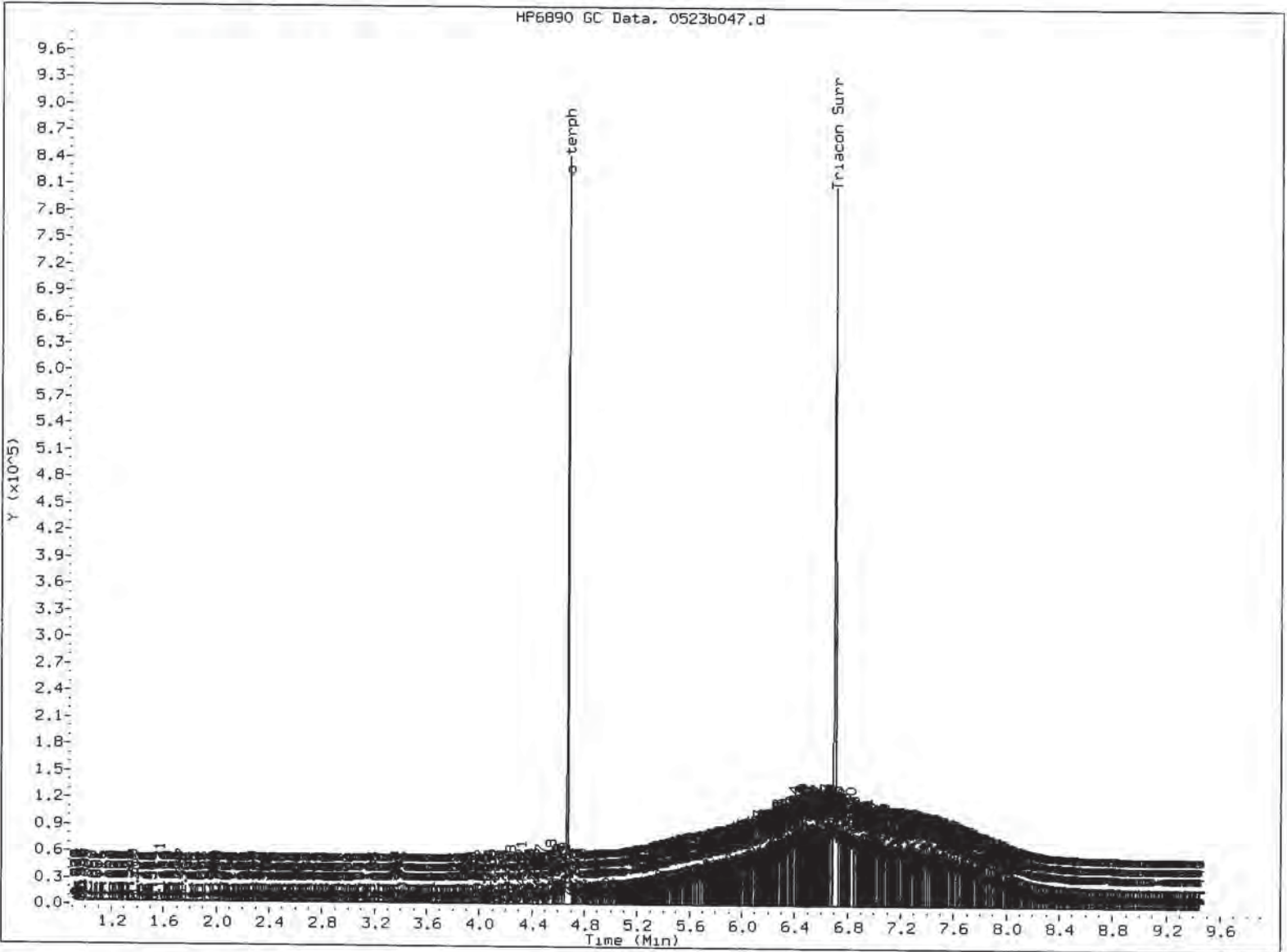
Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		109876	8
C8	0.814	-0.005	3863	6056	WATPHD (C12-C24)		1273955	123.00
C10	2.242	0.003	868	656	WATPHM (C24-C38)		6000934	607.82
C12	3.049	0.005	924	765	AK102 (C10-C25)		1443209	116.80 M
C14	3.626	0.002	1687	1634	AK103 (C25-C36)		5346752	752.16 M
C16	4.118	-0.001	2363	793				
C18	4.567	0.001	8273	4343				
C20	4.984	-0.002	7544	3337				
C22	5.381	0.001	17287	8047	MSPIRIT (Tol-C12)		109876	8.00
C24	5.747	-0.002	30283	12186				
C25	5.922	0.000	36130	9014				
C26	6.100	0.001	44275	21626				
C28	6.413	0.002	70424	24347				
C32	6.957	0.003	71500	49499				
C34	7.187	0.000	57991	29440				
Filter Peak	----							
C36	7.402	-0.001	51862	25766				
o-terph	4.677	0.005	820363	439623	JET-A (C10-C18)		242194	22.38
Triacon Surr	6.705	-0.002	729009	476568				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	439623	32.7	72.6
Triacontane	476568	36.5	81.2

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b050.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47E
Client ID:
Injection: 23-MAY-2013 23:59
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		121846	9
C8	0.823	0.004	3744	5282	WATPHD (C12-C24)		798973	77.14 ✓
C10	2.245	0.005	766	702	WATPHM (C24-C38)		2907272	294.47 ✓
C12	3.045	0.001	887	764	AK102 (C10-C25)		882917	71.45 M
C14	3.627	0.003	2079	2327	AK103 (C25-C36)		2542354	357.65 M
C16	4.122	0.003	3307	3728				
C18	4.569	0.003	7668	5113				
C20	4.982	-0.003	5172	1224				
C22	5.380	-0.001	9064	3269	MSPIRIT (Tol-C12)		121846	8.87
C24	5.753	0.005	13832	9856				
C25	5.923	0.001	16097	2849				
C26	6.102	0.003	20125	8548				
C28	6.408	-0.003	33348	16700				
C32	6.953	-0.001	37659	19239				
C34	7.187	0.000	27904	6037				
Filter Peak	----							
C36	7.403	0.000	28633	7315				
o-terph	4.677	0.005	765662	466571	JET-A (C10-C18)		265708	24.55
Triacon Surr	6.705	-0.002	718986	508749				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466571	34.7	77.1 ✓
Triacotane	508749	39.0	86.6

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

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Date: 23-MAY-2013 23:59

Client ID:

Sample Info: M047E

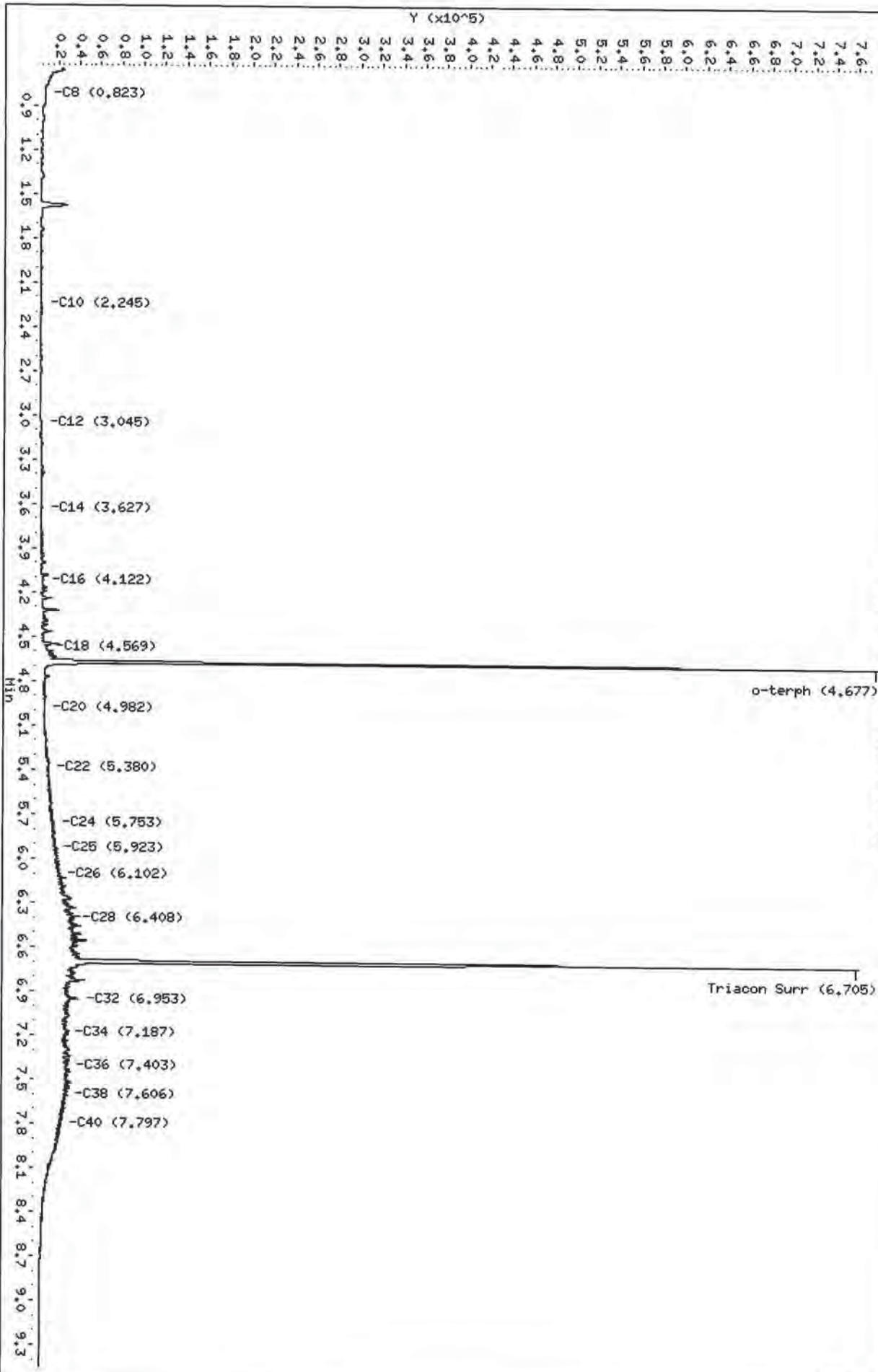
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

Column diameter: 0.25

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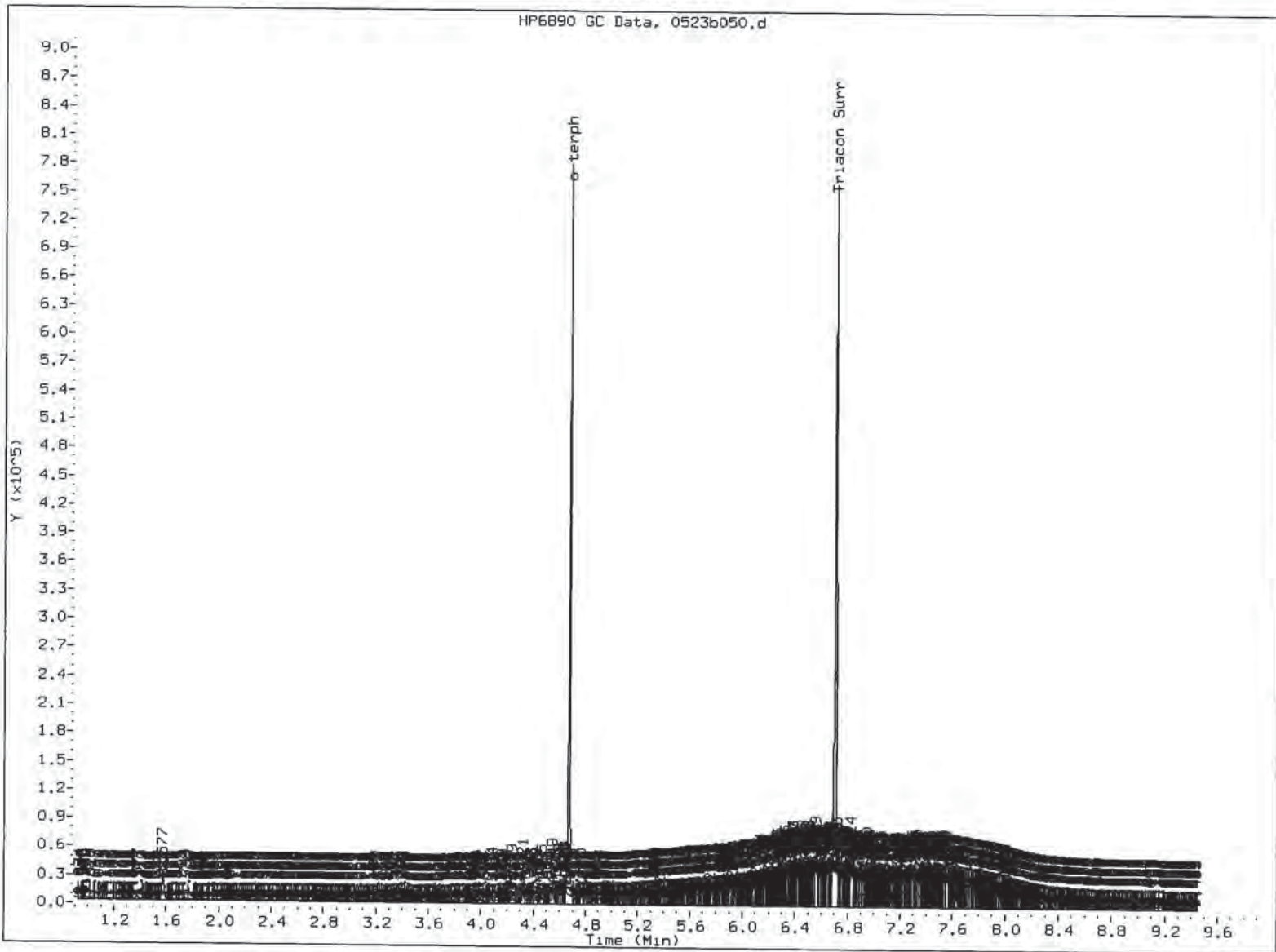


TW
5/24/13

FID:3B-2C/RTX-1 WQ47E

FID:3B SIGNAL

HP6890 GC Data, 0523b050.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b051.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47F
Client ID:
Injection: 24-MAY-2013 00:17
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		136625	10
C8	0.816	-0.002	4027	7400	WATPHD (C12-C24)		1487686	143.63 ✓
C10	2.244	0.005	1010	936	WATPHM (C24-C38)		6318602	640.00 ✓
C12	3.043	-0.001	1230	1043	AK102 (C10-C25)		1674111	135.48 M
C14	3.625	0.001	3021	2555	AK103 (C25-C36)		5577086	784.57 M
C16	4.120	0.002	4436	4907				
C18	4.566	0.000	10877	10824				
C20	4.987	0.002	9940	5091				
C22	5.379	-0.001	22073	10303	MSPiRIT (Tol-C12)		136625	9.94
C24	5.747	-0.002	33235	18590				
C25	5.921	-0.001	40685	11019				
C26	6.101	0.002	48425	9412				
C28	6.410	-0.001	76626	45041				
C32	6.955	0.001	70235	64173				
C34	7.183	-0.004	58944	24995				
Filter Peak	----							
C36	7.399	-0.004	55929	32124				
o-terph	4.677	0.005	747520	465239	JET-A (C10-C18)		313843	28.99
Triacon Surr	6.706	-0.001	782348	481660				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	465239	34.6	76.9
Triacontane	481660	36.9	82.0

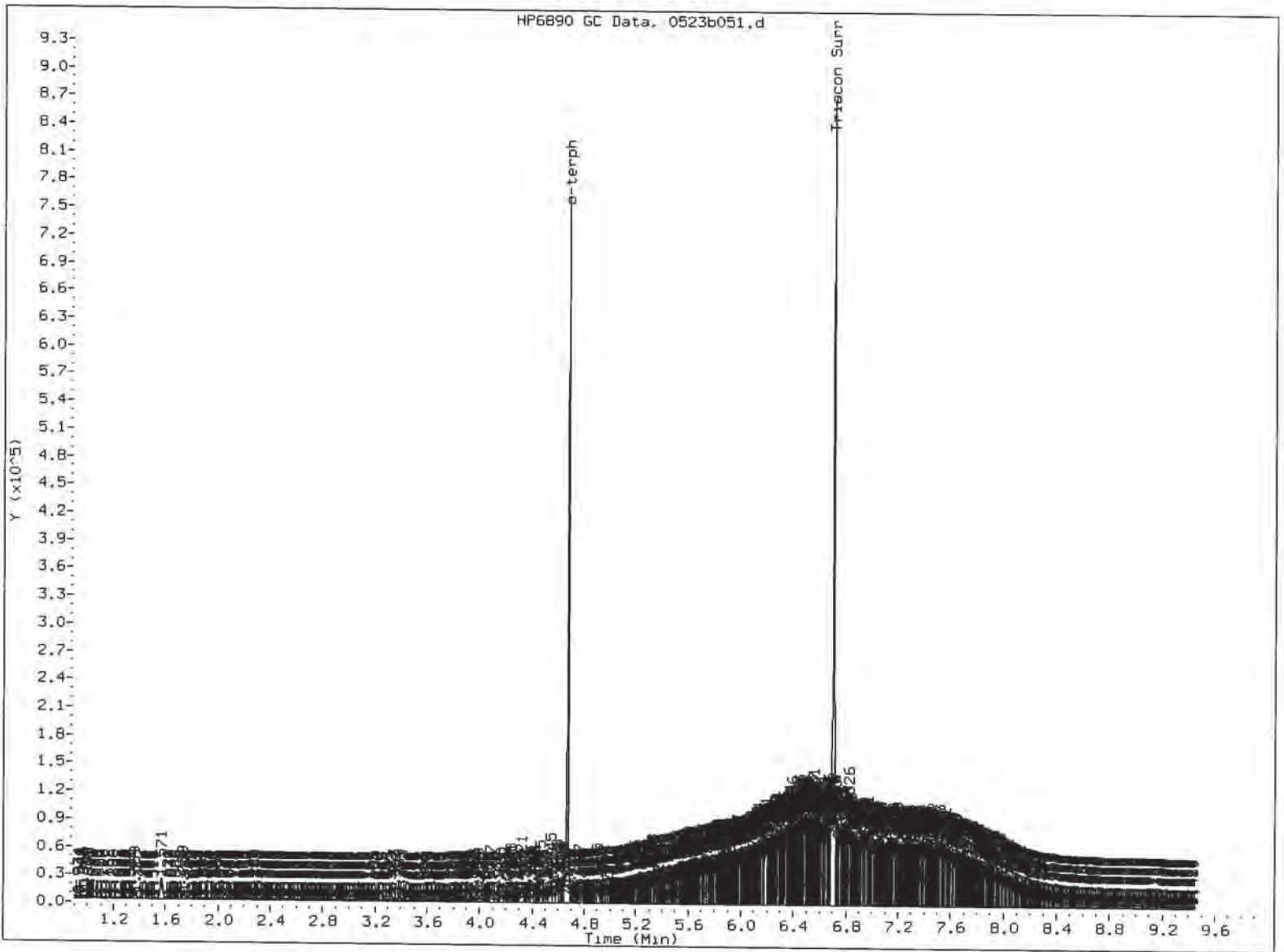
JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

FID:3B-2C/RTX-1 WQ47F

FID:3B SIGNAL

HP6890 GC Data, 0523b051.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- ⑤ Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b052.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47G
Client ID:
Injection: 24-MAY-2013 00:36
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		145751	11
C8	0.831	0.012	4894	10376	WATPHD (C12-C24)		5096672	492.08
C10	2.243	0.004	1039	1015	WATPHM (C24-C38)		28070356	2843.18
C12	3.045	0.002	4132	5025	AK102 (C10-C25)		5737950	464.36 M
C14	3.623	0.000	4433	4818	AK103 (C25-C36)		23725397	3337.62 M
C16	4.114	-0.005	6794	1346				
C18	4.568	0.001	23722	13597				
C20	4.985	0.000	38127	16197				
C22	5.381	0.001	75811	27375	MSPIRIT (Tol-C12)		145751	10.61
C24	5.744	-0.005	124059	57722				
C25	5.923	0.001	162912	40983				
C26	6.101	0.002	189371	62335				
C28	6.416	0.005	289906	126701				
C32	6.950	-0.003	273588	104693				
C34	7.186	0.000	291034	113139				
Filter Peak	----							
C36	7.400	-0.002	317838	227805				
o-terph	4.676	0.004	642662	412075	JET-A (C10-C18)		664175	61.36
Triacon Surr	6.712	0.006	732563	464974				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	412075	30.6	68.1
Triacantane	464974	35.6	79.2

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523052.d
Date: 24-MAY-2013 00:36

Client ID:

Sample Info: M047G

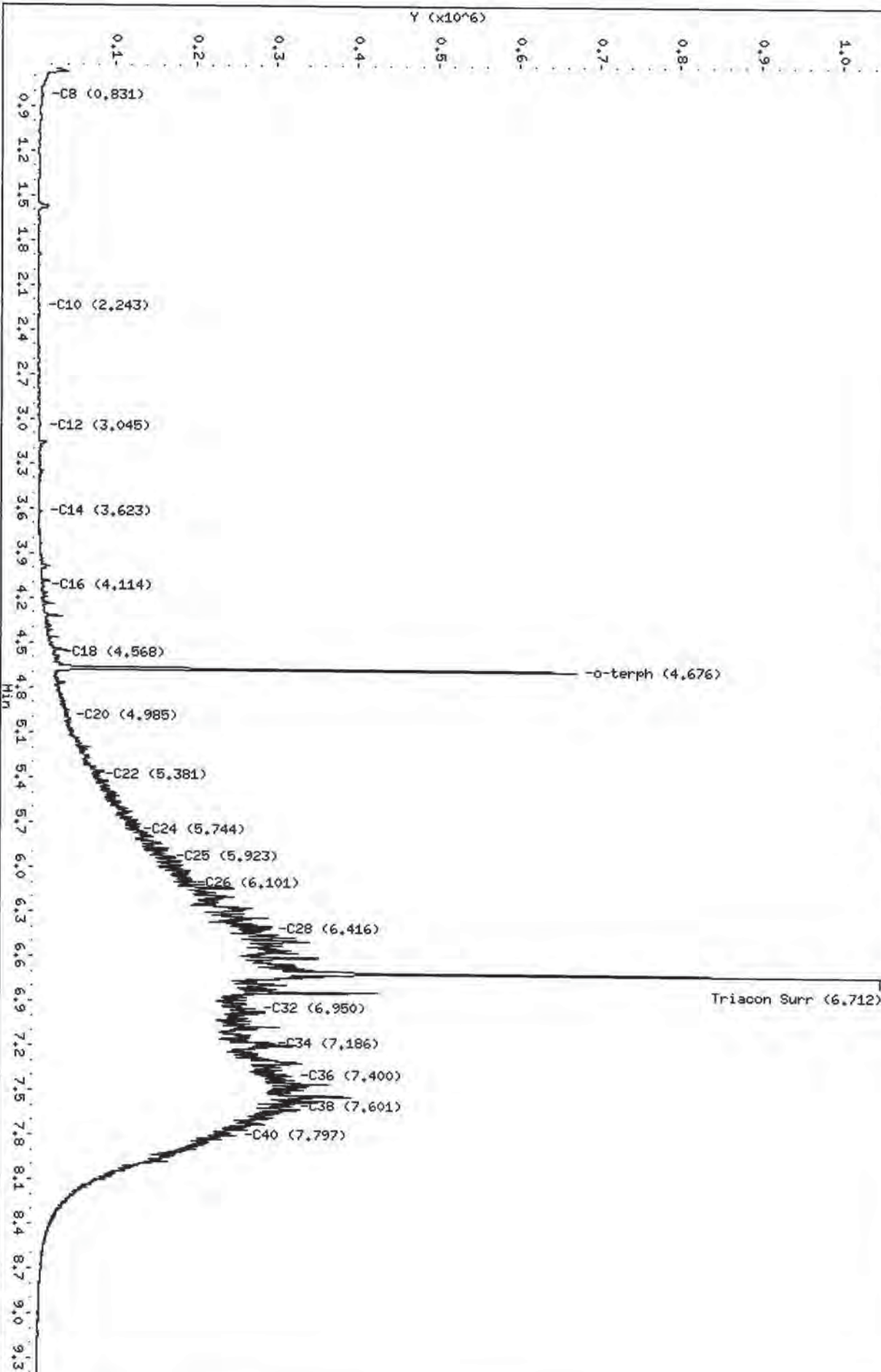
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Instrument: fid3b.i

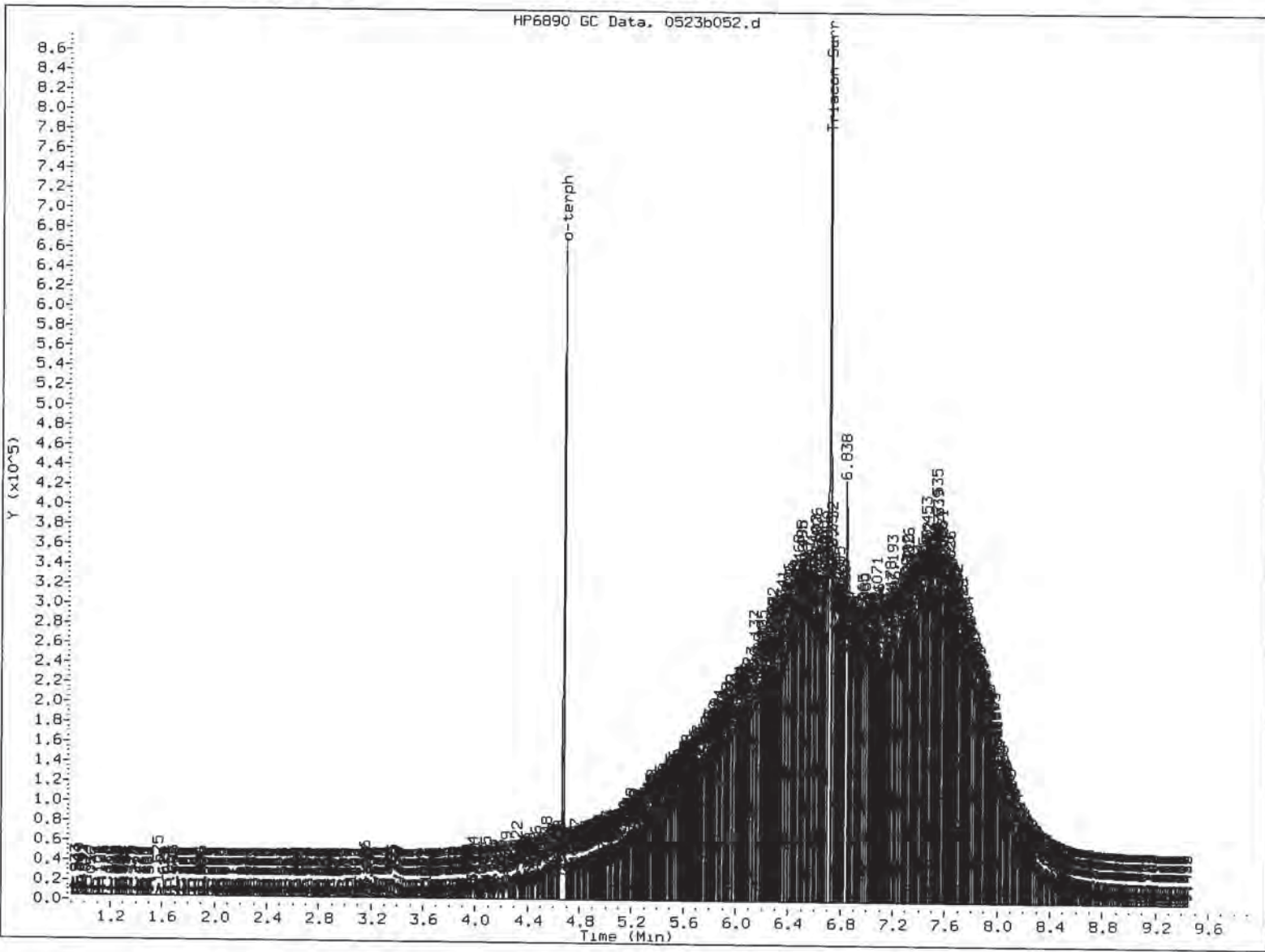
Operator: JM

Column diameter: 0.25

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SW
5/24/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: SW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b053.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47H
Client ID:
Injection: 24-MAY-2013 00:55
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		80387	6
C8	0.818	0.000	4465	3358	WATPHD (C12-C24)		3574693	345.13
C10	2.240	0.001	537	261	WATPHM (C24-C38)		22915836	2321.09
C12	3.046	0.002	531	137	AK102 (C10-C25)		4069046	329.30
C14	3.627	0.003	1166	1431	AK103 (C25-C36)		19518544	2745.81
C16	4.120	0.001	3173	789				
C18	4.569	0.003	11840	7100				
C20	4.986	0.001	27377	10116				
C22	5.382	0.002	55341	18128	MSPIRIT (Tol-C12)		80387	5.85
C24	5.747	-0.002	87574	31467				
C25	5.922	0.000	118476	52544				
C26	6.096	-0.003	143626	96737				
C28	6.411	0.000	237046	90076				
C32	6.953	-0.001	228768	35812				
C34	7.186	0.000	256757	84318				
Filter Peak	----							
C36	7.401	-0.002	244999	114177				
o-terph	4.671	-0.001	170656	72968	JET-A (C10-C18)		310081	28.65
Triacon Surr	6.704	-0.002	142702	80955				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	72968	5.4	60.3
Triacontane	80955	6.2	68.9

JW
5/24/13

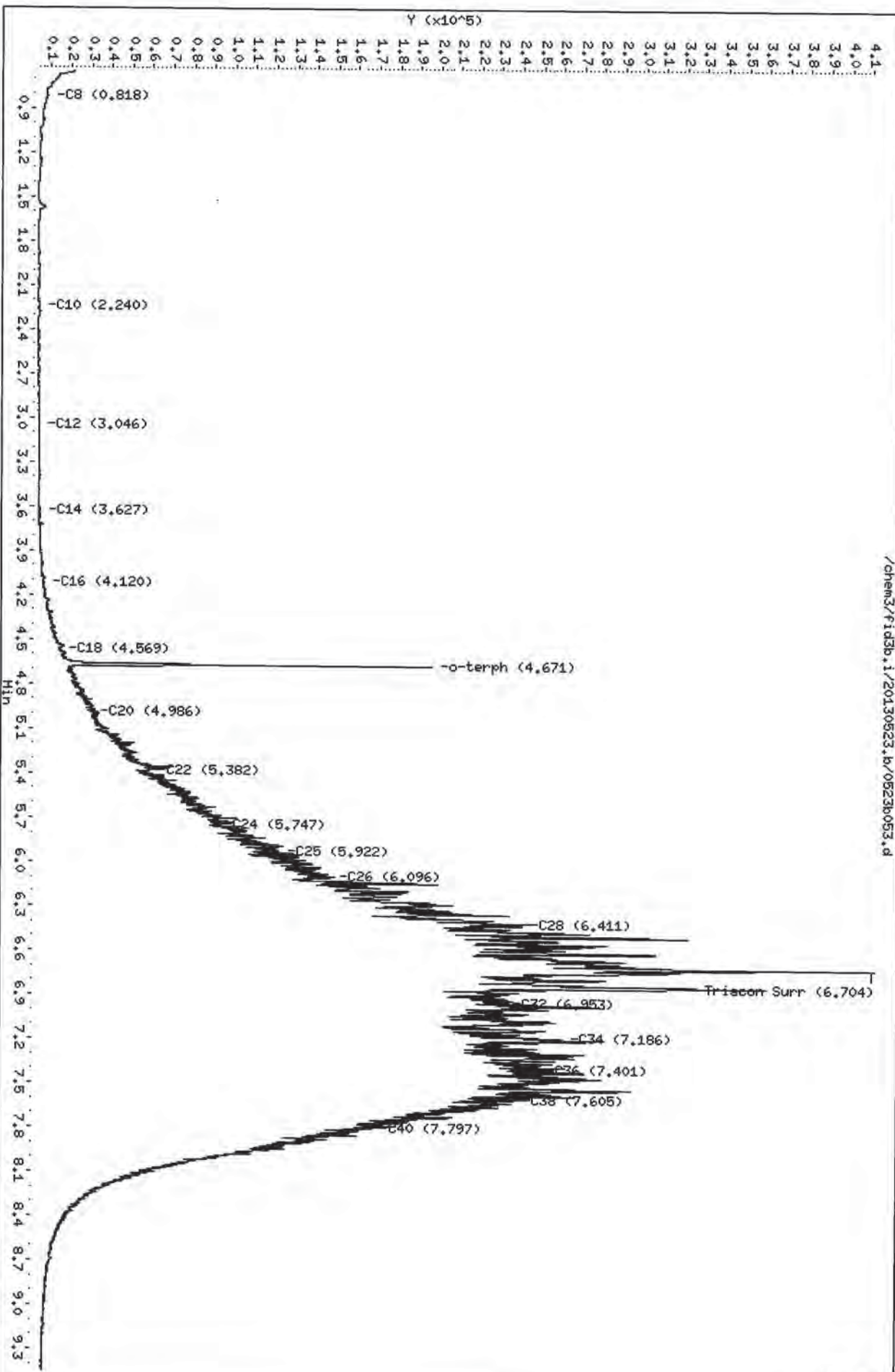
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

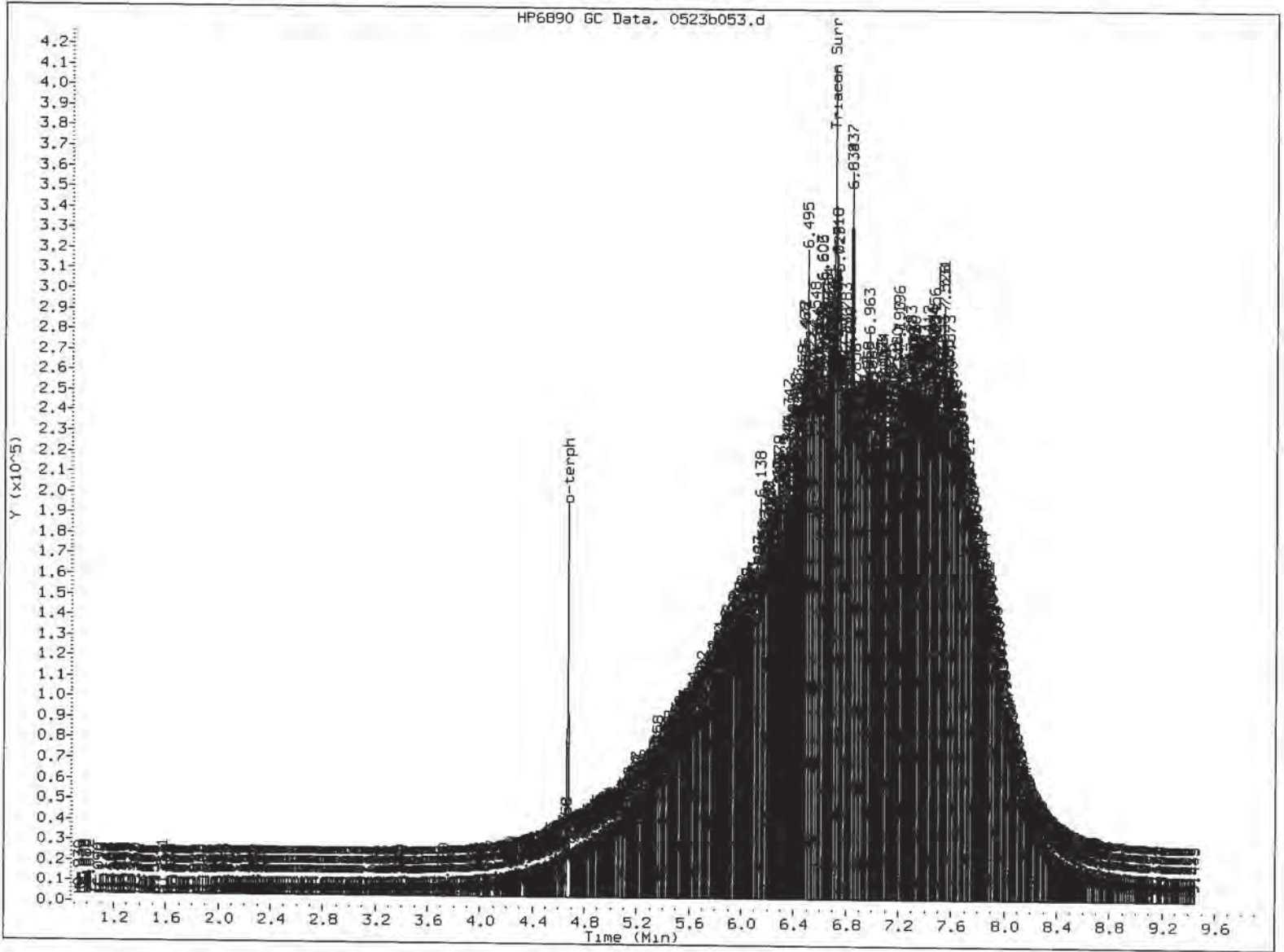
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Date: 24-MAY-2013 00:55
Client ID:
Sample Info: M047H,5

Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

10000 : 2000





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130524.b/0524b010.d
Method: /chem3/fid3b.i/20130524.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47I
Client ID: A2-F29-S-6
Injection: 24-MAY-2013 13:50
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		31885	2
C8	0.823	0.005	2484	3057	WATPHD (C12-C24)		3145758	303.72
C10	2.247	0.004	154	91	WATPHM (C24-C38)		7894427	799.61
C12	3.044	-0.002	149	50	AK102 (C10-C25)		3403310	275.42 M
C14	3.621	-0.001	789	228	AK103 (C25-C36)		7192340	1011.80
C16	4.117	-0.003	4801	1009				
C18	4.568	0.001	16741	5440				
C20	4.985	-0.002	29884	10457				
C22	5.377	-0.004	43661	17924	MSPiRIT (Tol-C12)		31885	2.32
C24	5.750	0.002	62388	39911				
C25	5.922	-0.001	63434	19438				
C26	6.100	0.002	68328	21540				
C28	6.416	0.004	98392	13491				
C32	6.957	0.003	80702	62766				
C34	7.185	-0.001	77618	69374				
Filter Peak	----							
C36	7.404	0.000	52416	16072				
o-terph	----				JET-A (C10-C18)		404298	37.35
Triacon Surr	----							

Range Times: NW Diesel(3.096 - 5.798) NW Gas(0.594 - 3.096) NW M.Oil(5.798 - 7.656)
AK102(2.193 - 5.873) AK103(5.873 - 7.454) Jet A(2.193 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

JW
5/24/13

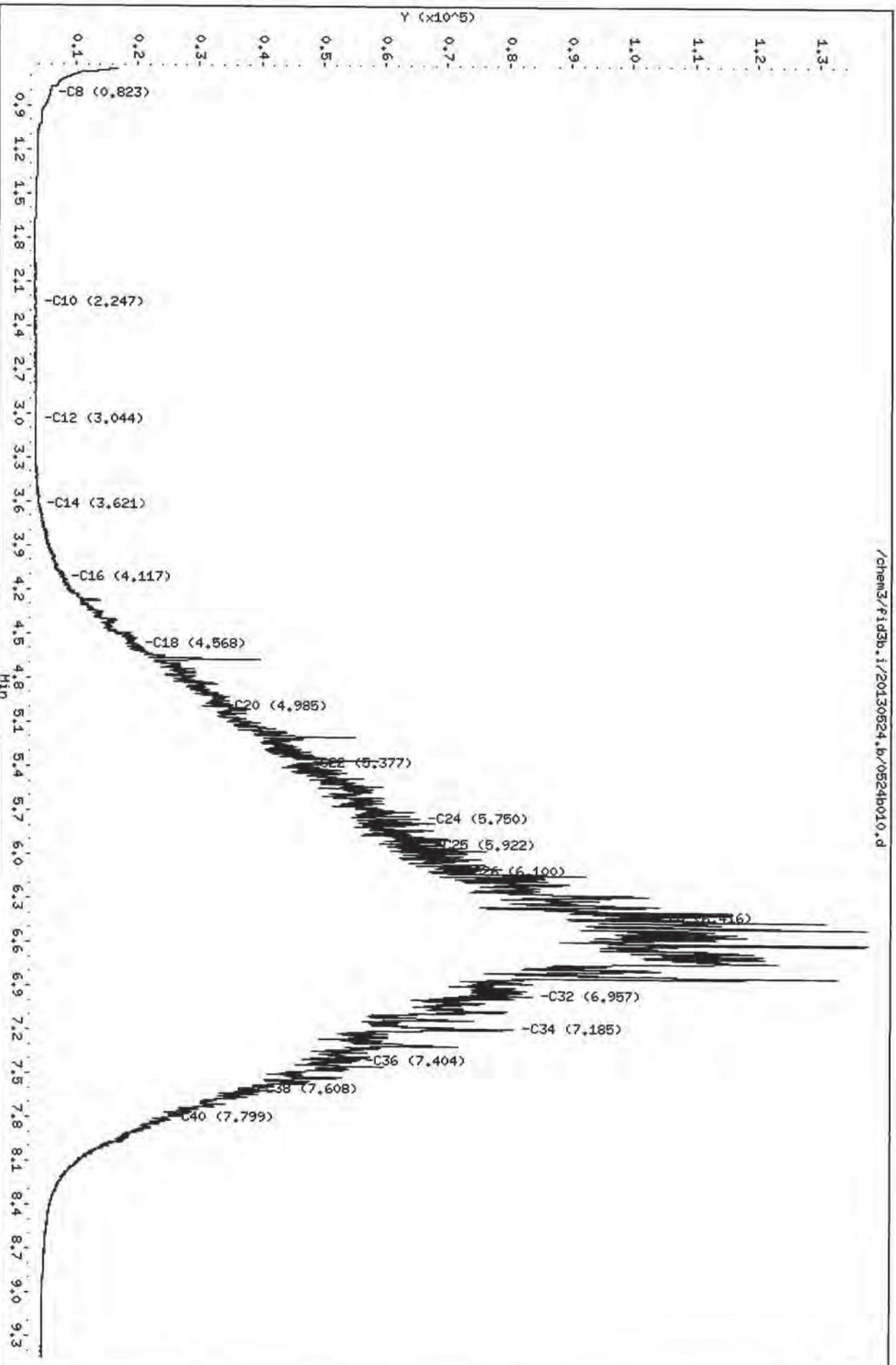
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130524.b/0524b010.d
Date: 24-MAY-2013 13:50
Client ID: A2-F29-S-6
Sample Info: M0471.50

Column phase: RTX-1

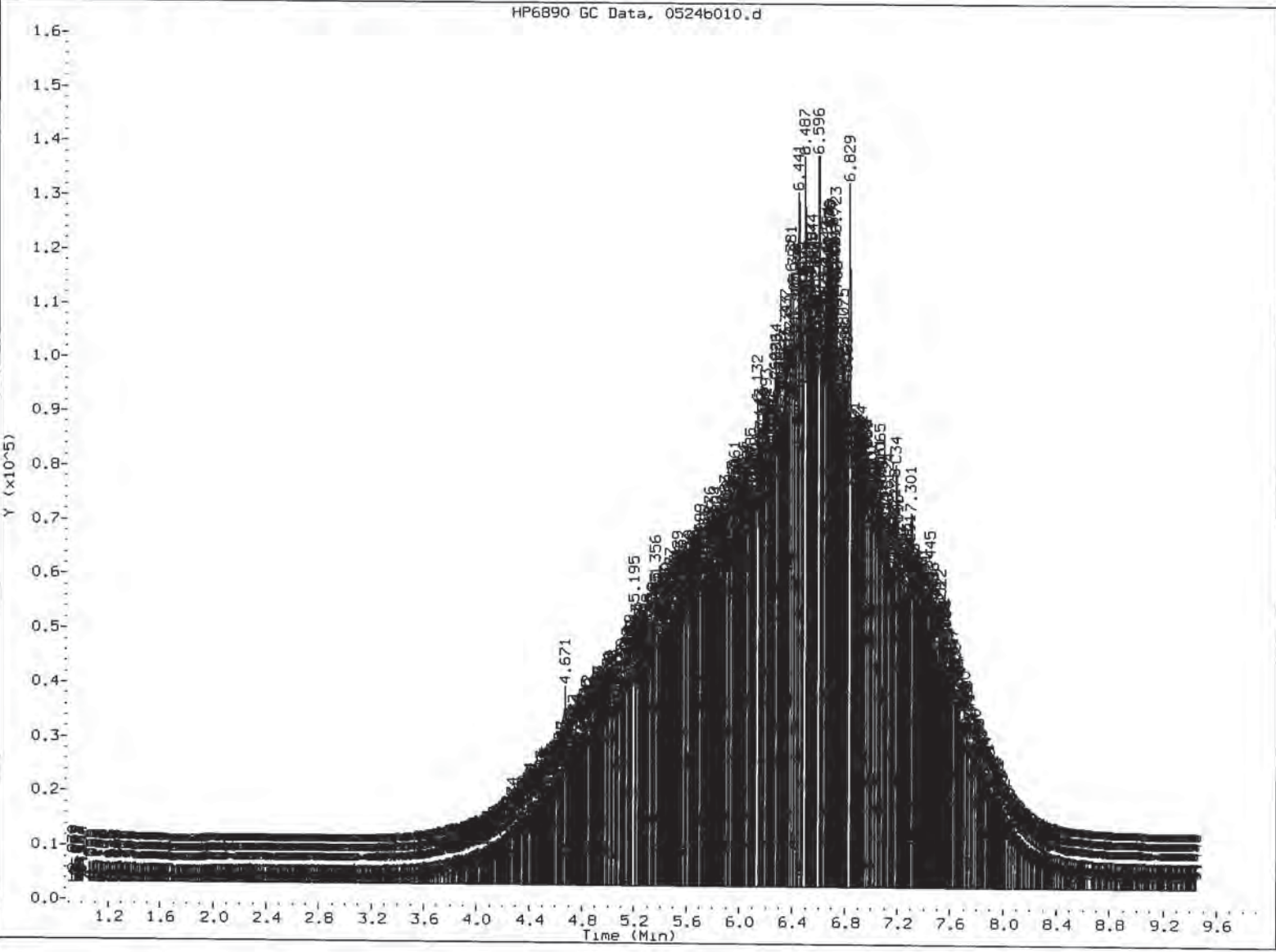
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
5/24/13



/chem3/fid3b.i/20130524.b/0524b010.d

130524 : 0000



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate removed due to dilution factor

Analyst: SV

Date: 5/2/83

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WQ47-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
A2-F21-S-6	62.2%	0
A2-F22-S-6	83.5%	0
A2-F23-S-6	59.3%	0
MB-052213	80.4%	0
LCS-052213	67.6%	0
A2-F24-S-6	72.6%	0
A2-F24-S-6 MS	61.6%	0
A2-F24-S-6 MSD	62.2%	0
A2-F25-S-6	77.1%	0
A2-F26-S-6	76.9%	0
A2-F27-S-6	68.1%	0
A2-F28-S-6	60.3%	0
A2-F29-S-6	D	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-10682 to 13-10690

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: A2-F24-S-6
MS/MSD

Lab Sample ID: WQ47D
 LIMS ID: 13-10685
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/28/13

QC Report No: WQ47-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Extracted MS/MSD: 05/22/13
 Date Analyzed MS: 05/23/13 23:21
 MSD: 05/23/13 23:40
 Instrument/Analyst MS: FID/JLW
 MSD: FID/JLW

Sample Amount MS: 8.14 g-dry-wt
 MSD: 8.15 g-dry-wt
 Final Extract Volume MS: 1.0 mL
 MSD: 1.0 mL
 Dilution Factor MS: 1.0
 MSD: 1.0
 Percent Moisture: 18.7%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	15	157	184	77.2%	158	184	77.7%	0.6%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	61.6%	62.2%

Results reported in mg/kg
 RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b048.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47DMS
Client ID:
Injection: 23-MAY-2013 23:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2740998	203
C8	0.804	-0.014	4121	3242	WATPHD (C12-C24)		13248687	1279.15
C10	2.245	0.006	64626	48375	WATPHM (C24-C38)		8528391	863.82
C12	3.045	0.001	126584	68015	AK102 (C10-C25)		15443378	1249.79 M
C14	3.624	0.001	185315	155933	AK103 (C25-C36)		7618434	1071.74 M
C16	4.124	0.005	282908	240355				
C18	4.570	0.004	318790	277180				
C20	4.990	0.005	193465	180681				
C22	5.378	-0.002	87213	51655	MSPIRIT (Tol-C12)		2740998	199.51
C24	5.752	0.004	75207	78568				
C25	5.921	-0.001	65291	14960				
C26	6.098	-0.001	67933	16932				
C28	6.411	0.000	94573	48072				
C32	6.952	-0.002	95038	39570				
C34	7.191	0.004	79705	52657				
Filter Peak	----							
C36	7.404	0.001	71143	28802				
o-terph	4.679	0.007	644731	372538	JET-A (C10-C18)		10618419	980.99
Triacon Surr	6.707	0.001	843354	493362				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	372538	27.7	61.6
Triacontane	493362	37.8	84.0

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b048.d

Date: 23-MAY-2013 23:21

Client ID:

Sample Info: M047DHS

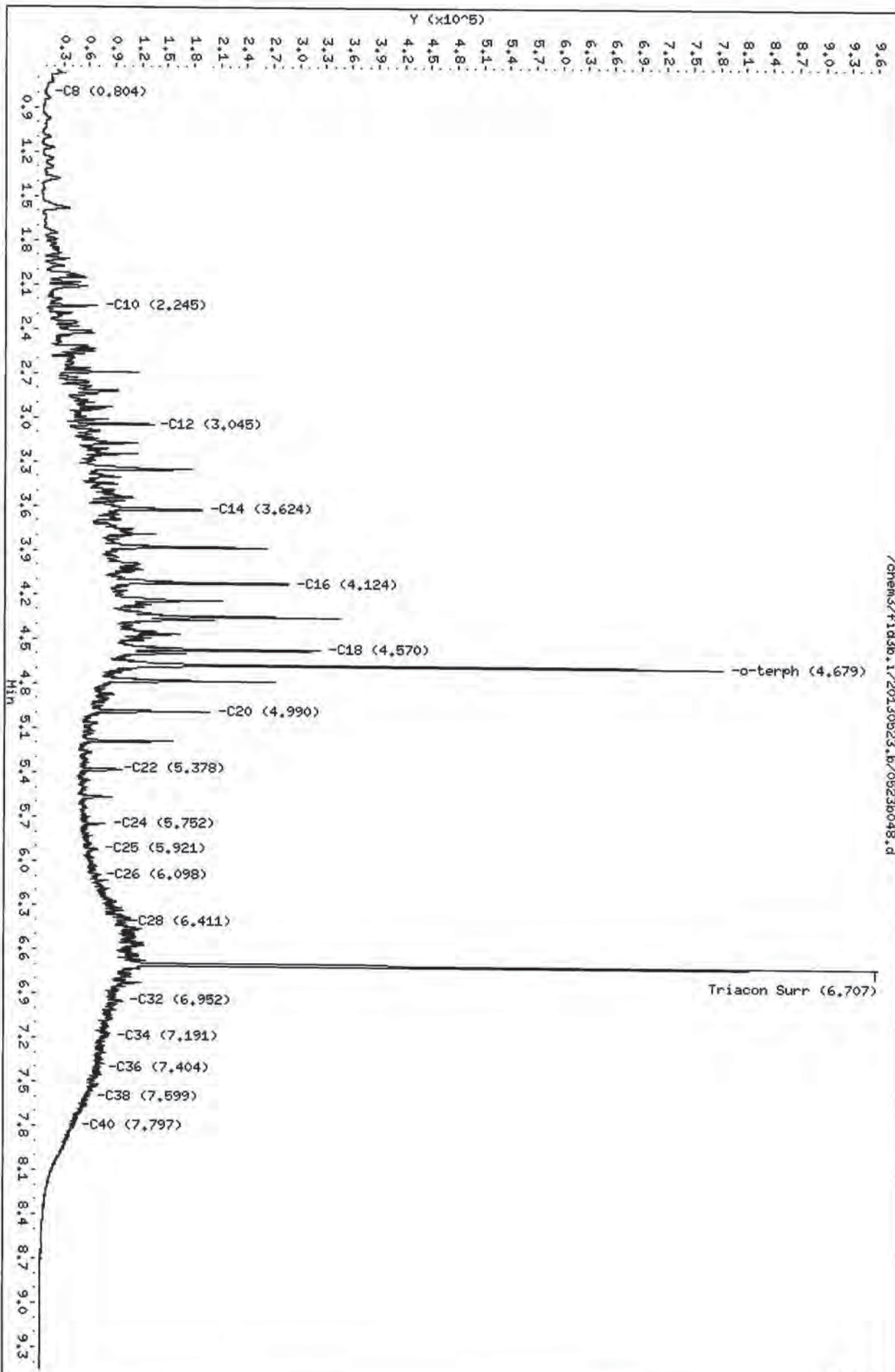
Column phase: RTX-1

Instrument: fid3b.1

Operator: JM

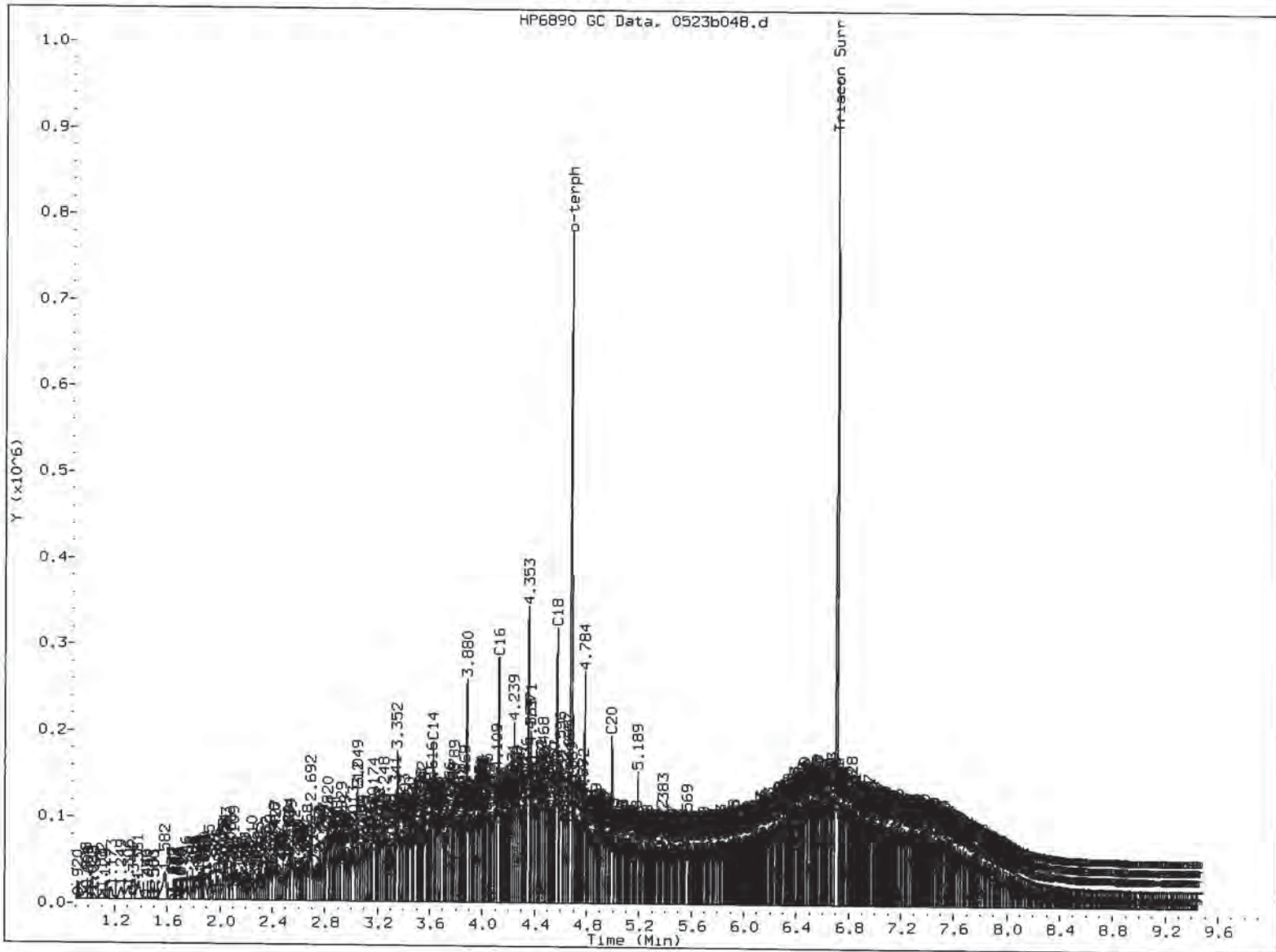
Column diameter: 0.25

/chem3/fid3b.i/20130523.b/0523b048.d



JW
5/24/13

0523b048.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b049.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47DMSD
Client ID:
Injection: 23-MAY-2013 23:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2719125	201
C8	0.822	0.003	9401	16199	WATPHD (C12-C24)		13299980	1284.10 ✓
C10	2.242	0.003	60867	43700	WATPHM (C24-C38)		11570735	1171.97 ✓
C12	3.047	0.003	127800	133622	AK102 (C10-C25)		15520627	1256.05 M
C14	3.625	0.001	221748	147543	AK103 (C25-C36)		10326952	1452.76 M
C16	4.121	0.002	310342	263213				
C18	4.569	0.002	327905	281142				
C20	4.988	0.002	182809	229677				
C22	5.380	0.000	106819	109768	MSPIRIT (Tol-C12)		2719125	197.92
C24	5.751	0.002	88827	66798				
C25	5.921	-0.001	76330	34072				
C26	6.105	0.006	83378	54711				
C28	6.410	-0.001	137426	54315				
C32	6.951	-0.003	119957	30269				
C34	7.190	0.003	107942	31486				
Filter Peak	----							
C36	7.405	0.002	98790	21468				
o-terph	4.679	0.006	695696	376515	JET-A (C10-C18)		10437166	964.25
Triacon Surr	6.705	-0.002	770747	508993				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	376515	28.0	62.2 ✓
Triacontane	508993	39.0	86.7

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130523.b/0523b049.d
Date: 23-MAY-2013 23:40

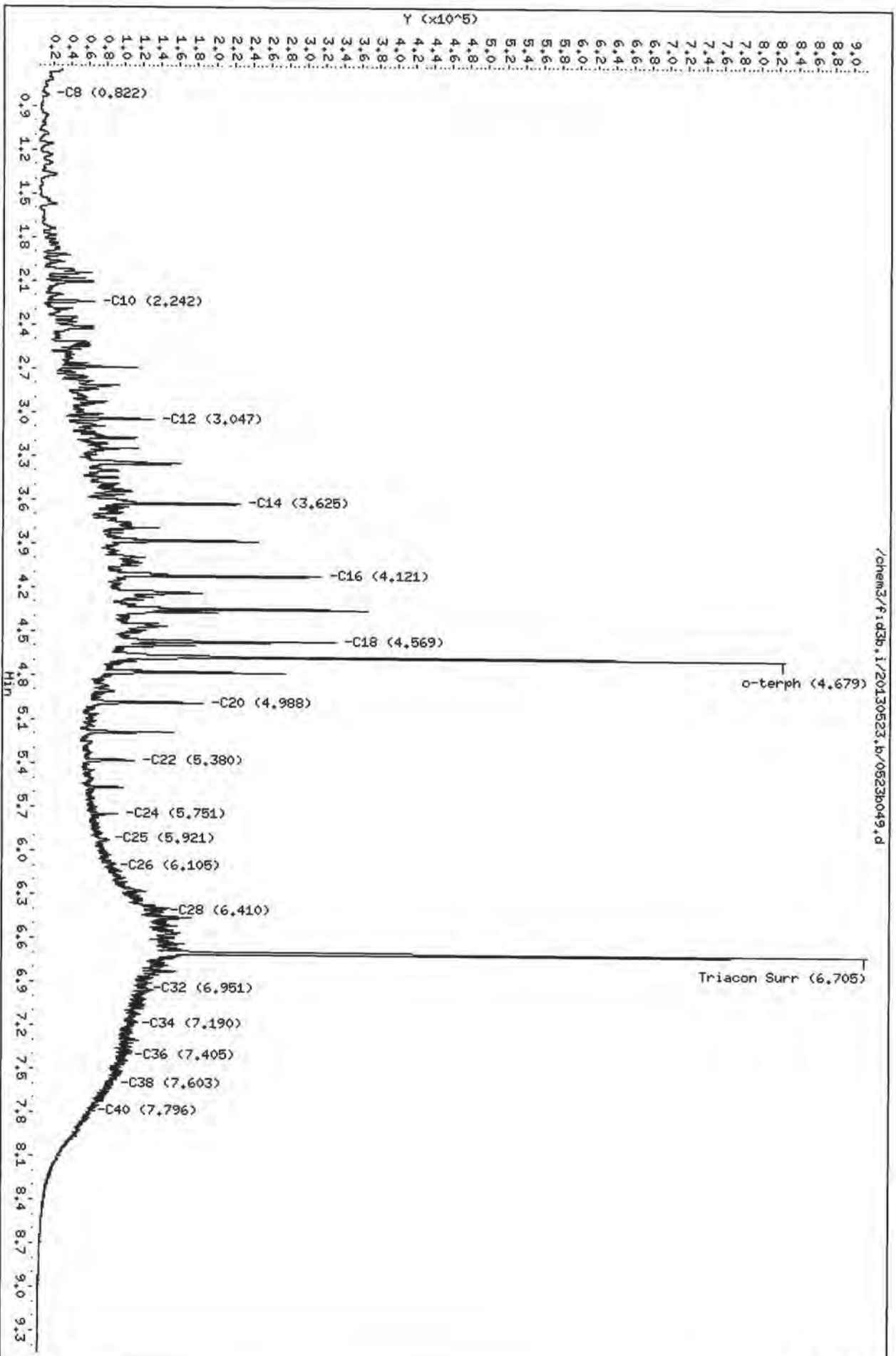
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Sample Info: M047DMSD

Column phase: RTX-1

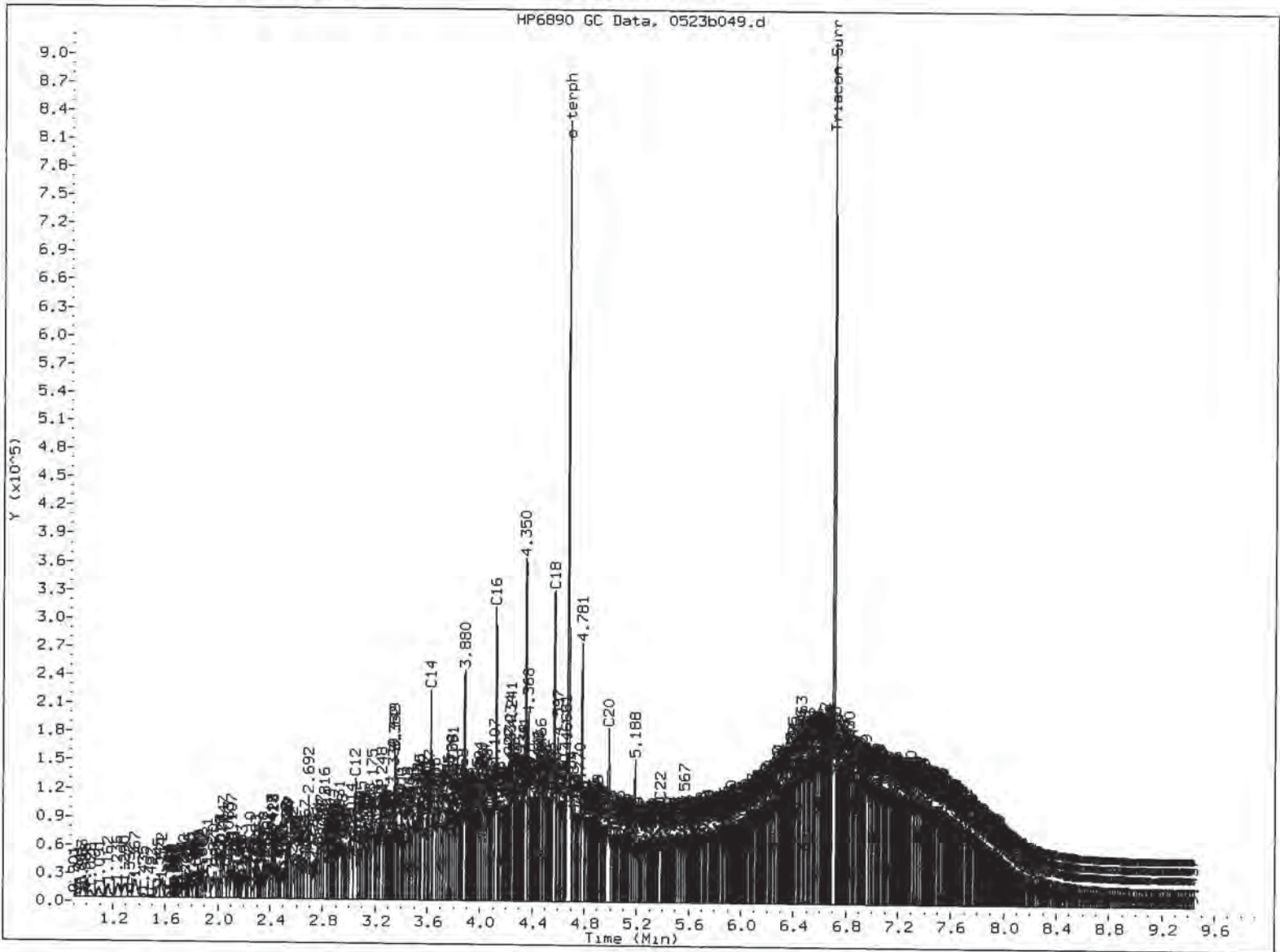
Instrument: fid3b.i

Operator: JM
Column diameter: 0.25

JW
5/24/13



10017 : 000011



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/24/13

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-052213
LAB CONTROL

Lab Sample ID: LCS-052213
 LIMS ID: 13-10685
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 05/28/13

QC Report No: WQ47-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Extracted: 05/22/13
 Date Analyzed: 05/23/13 21:08
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	103	150	68.7%

TPHD Surrogate Recovery

o-Terphenyl	67.6%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130523.b/0523b041.d
Method: /chem3/fid3b.i/20130523.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/24/2013
Macro: FID:3B052113

ARI ID: WQ47LCSS1
Client ID:
Injection: 23-MAY-2013 21:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		2606435	193
C8	0.829	0.010	7972	17148	WATPHD (C12-C24)		10628929	1026.21 ✓
C10	2.244	0.005	69662	46665	WATPHM (C24-C38)		189941	19.24 ✓
C12	3.049	0.005	116767	126867	AK102 (C10-C25)		12564166	1016.79 M
C14	3.626	0.002	204029	142590	AK103 (C25-C36)		147878	20.80
C16	4.123	0.004	280145	248178				
C18	4.571	0.005	303557	257032				
C20	4.986	0.001	165453	84617				
C22	5.381	0.001	89116	73197	MSPIRIT (Tol-C12)		2606435	189.72
C24	5.751	0.003	26416	24231				
C25	5.924	0.002	12723	15950				
C26	6.104	0.005	3567	1940				
C28	6.411	0.000	2291	893				
C32	6.959	0.005	3468	3594				
C34	7.188	0.002	255	113				
Filter Peak	----							
C36	7.401	-0.002	619	96				
o-terph	4.679	0.007	662331	409040	JET-A (C10-C18)		9599449	886.85
Triacon Surr	6.703	-0.003	722936	483373				

Range Times: NW Diesel(3.094 - 5.798) NW Gas(0.596 - 3.094) NW M.Oil(5.798 - 7.652)
AK102(2.189 - 5.872) AK103(5.872 - 7.453) Jet A(2.189 - 4.616)

Surrogate	Area	Amount	%Rec
o-Terphenyl	409040	30.4	67.6 ✓
Triacontane	483373	37.0	82.3

JW
5/24/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

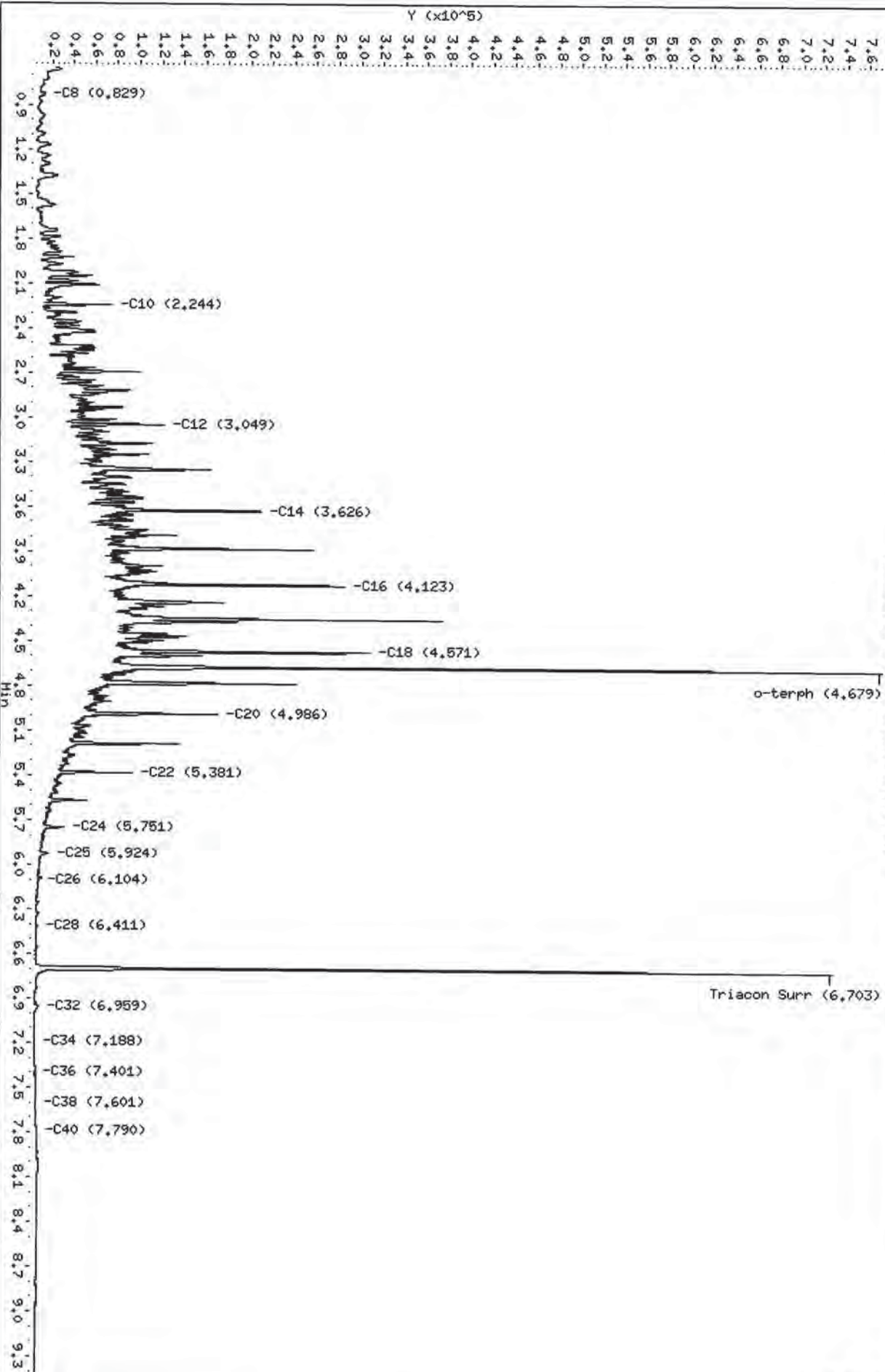
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Client ID:
Sample Info: M047LCSS1

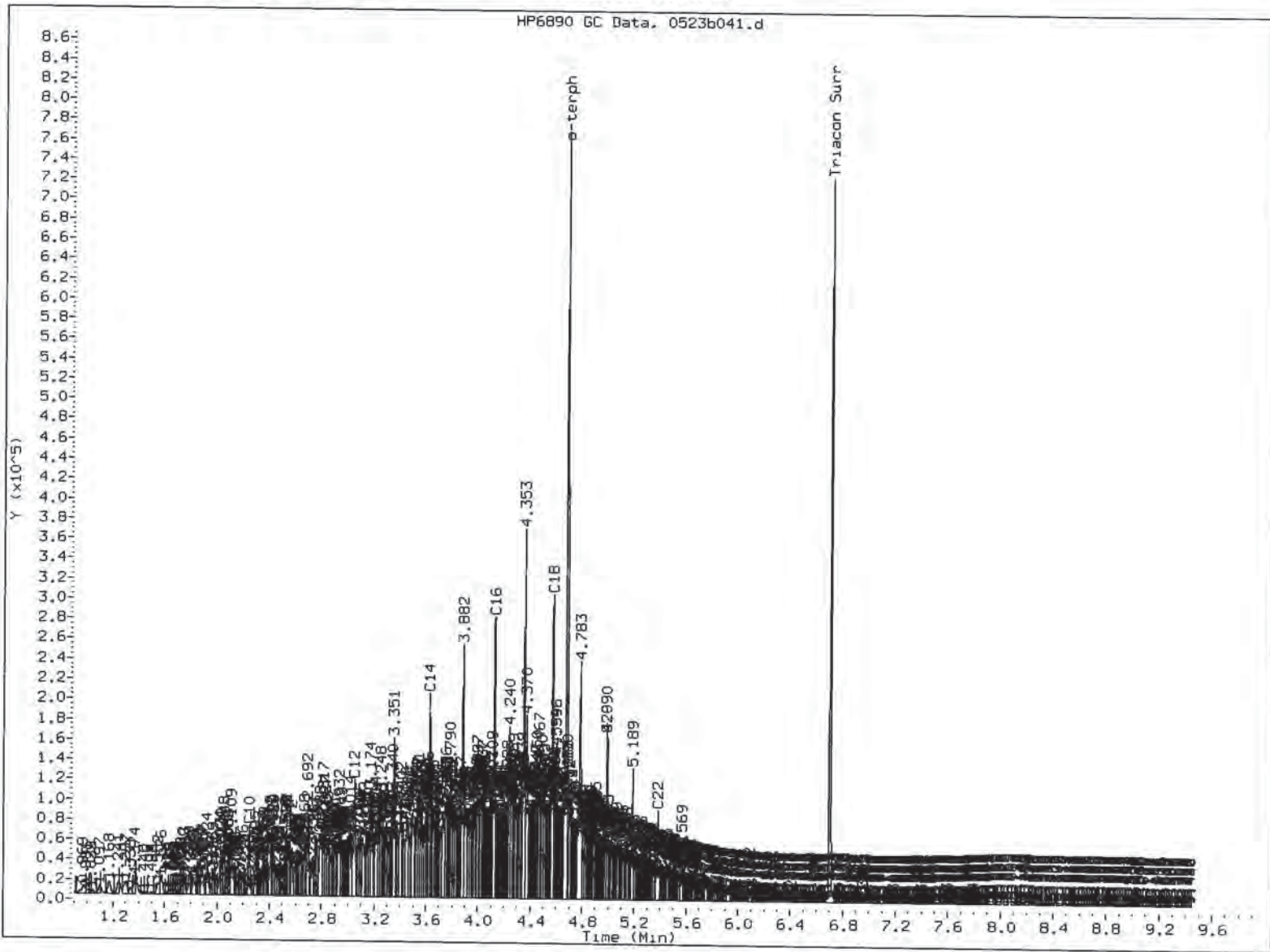
Column phase: RTX-1

/chem3/fid3b.i/20130523.b/0523b041.d

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

JW
5/24/13







TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/17/13
ARI Job: WQ47
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10682-WQ47A	A2-F21-S-6	7.95 g	1.00 mL	D	05/22/13
13-10683-WQ47B	A2-F22-S-6	8.91 g	1.00 mL	D	05/22/13
13-10684-WQ47C	A2-F23-S-6	8.21 g	1.00 mL	D	05/22/13
13-10685-052213MB1	Method Blank	10.0 g	1.00 mL	-	05/22/13
13-10685-052213LCS1	Lab Control	10.0 g	1.00 mL	-	05/22/13
13-10685-WQ47D	A2-F24-S-6	8.15 g	1.00 mL	D	05/22/13
13-10685-WQ47DMS	A2-F24-S-6	8.14 g	1.00 mL	D	05/22/13
13-10685-WQ47DMSD	A2-F24-S-6	8.15 g	1.00 mL	D	05/22/13
13-10686-WQ47E	A2-F25-S-6	7.96 g	1.00 mL	D	05/22/13
13-10687-WQ47F	A2-F26-S-6	8.34 g	1.00 mL	D	05/22/13
13-10688-WQ47G	A2-F27-S-6	7.87 g	1.00 mL	D	05/22/13
13-10689-WQ47H	A2-F28-S-6	7.85 g	1.00 mL	D	05/22/13
13-10690-WQ47I	A2-F29-S-6	8.70 g	1.00 mL	D	05/22/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F21-S-6

SAMPLE

Lab Sample ID: WQ47A

LIMS ID: 13-10682

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 19:15

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 20.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	36	< 36 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	84.4%
Bromobenzene	84.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a022.d ARI ID: WQ47A
Data file 2: /chem3/pid1.i/20130520-2.b/0520a022.d Client ID: A2-F21-S-6
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 19:15
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.005	3041	38301	87.7	TFT(Surr)
15.382	0.005	1972	16785	86.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	6178	0.017
8015C 2MP-TMB (4.17 to 16.20)	723723	5170	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	4054	0.007
NWTPHG Tol-Nap (9.77 to 18.89)	375093	6178	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.005	3352	84.4	TFT(Surr)
15.390	0.005	7389	84.1	BB(Surr)

SW8021 (PID)

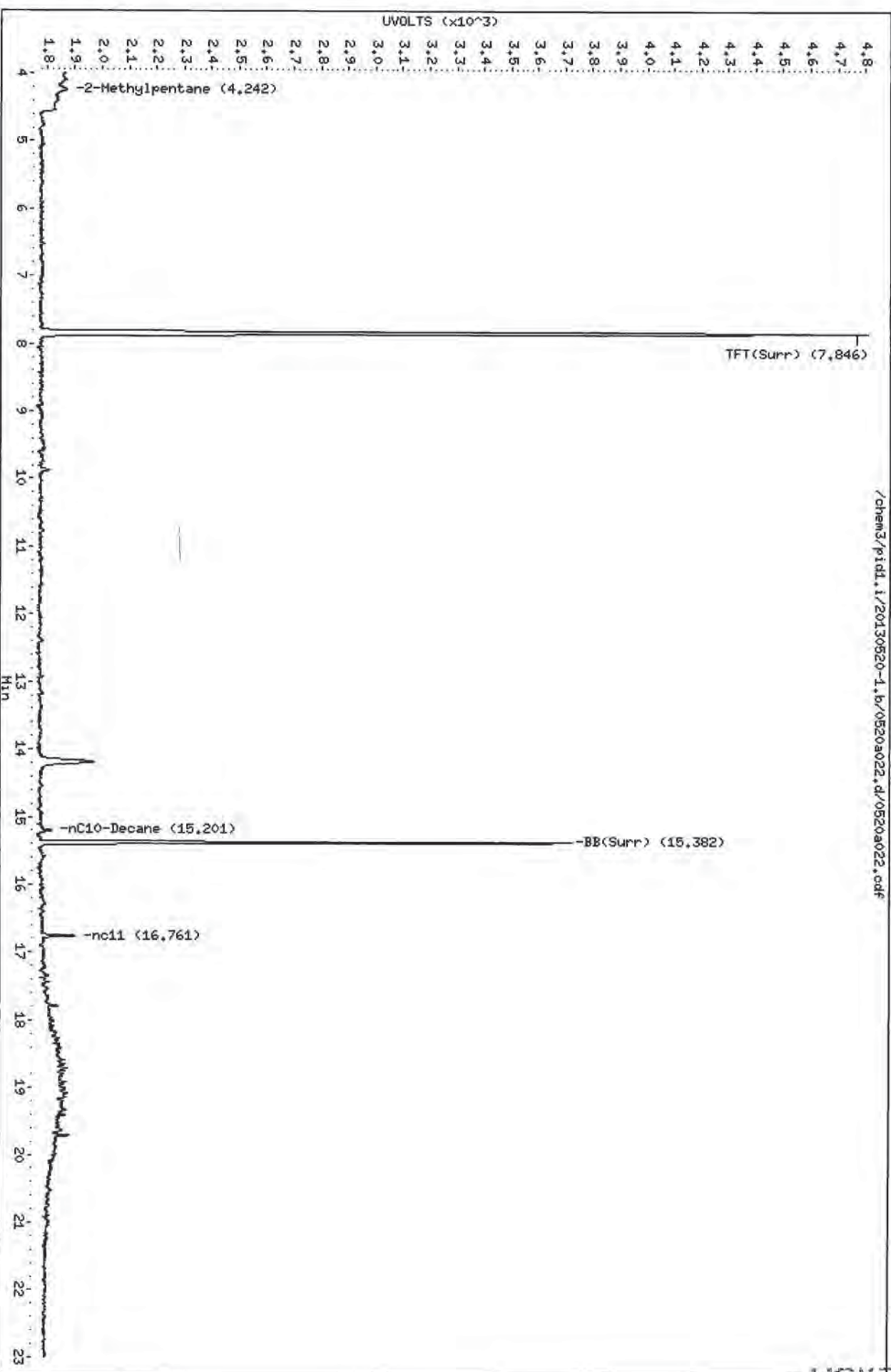
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a022.d
Date: 20-May-2013 19:15
Client ID: A2-F21-S-6
Sample Info: M047A

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



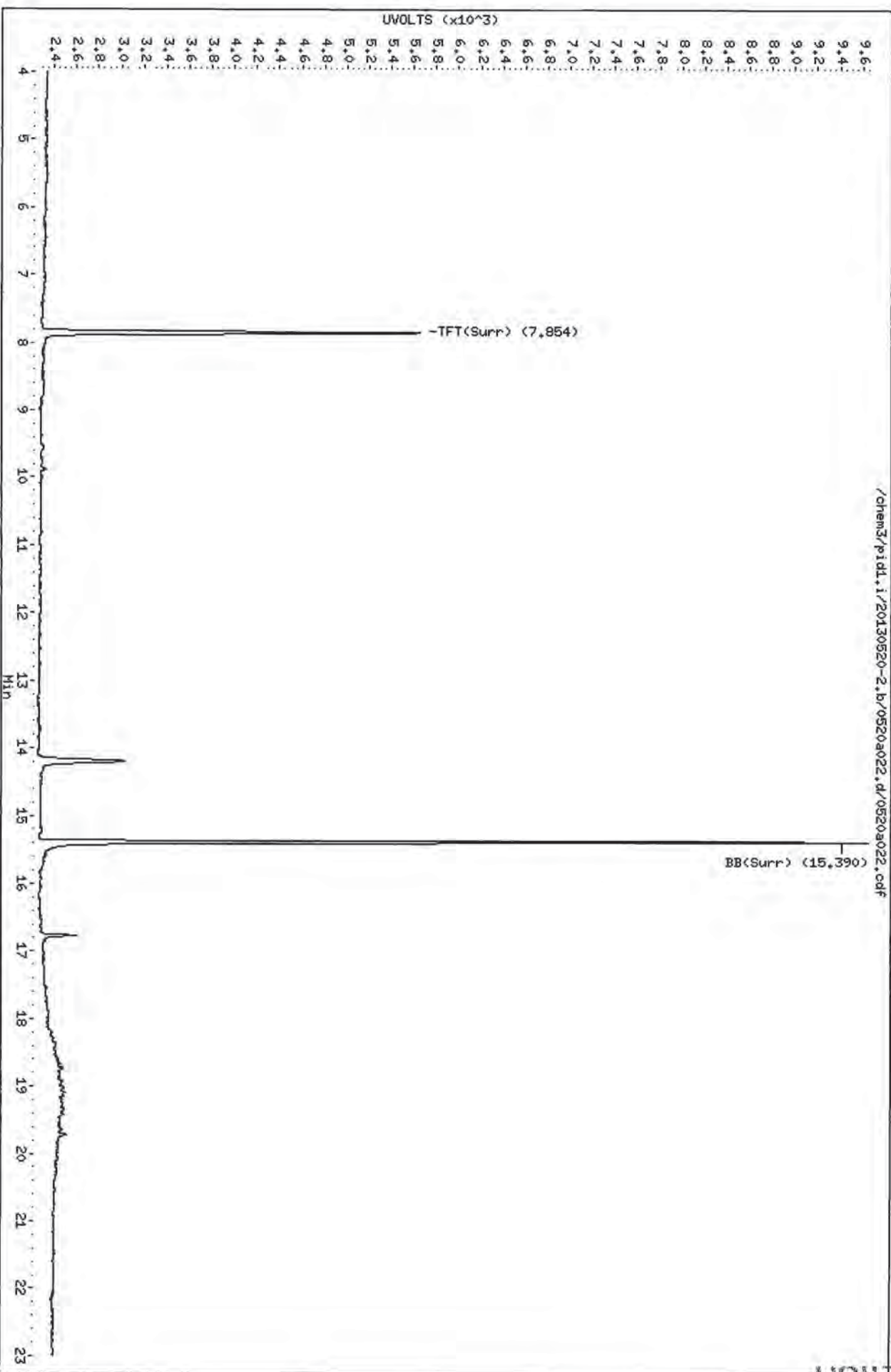
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Data File: /chem3/pid1.i/20130520-2.b/0520a022.d
Date: 20-MAY-2013 19:15
Client ID: A2-F21-S-6
Sample Info: M047A

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-2.b/0520a022.d/0520a022.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F22-S-6

SAMPLE

Lab Sample ID: WQ47B

LIMS ID: 13-10683

Matrix: Soil

Data Release Authorized: *nhw*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 19:44

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 73 mg-dry-wt

Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	87.8%
Bromobenzene	86.8%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a023.d ARI ID: WQ47B
Data file 2: /chem3/pid1.i/20130520-2.b/0520a023.d Client ID: A2-F22-S-6
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 19:44
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.005	3140	39771	90.5	TFT(Surr)
15.381	0.004	2021	17064	88.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2189	0.006
8015C 2MP-TMB (4.17 to 16.20)	723723	991	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	991	0.002
NWTPHG Tol-Nap (9.77 to 18.89)	375093	2189	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.005	3486	87.8	TFT(Surr)
15.389	0.005	7632	86.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

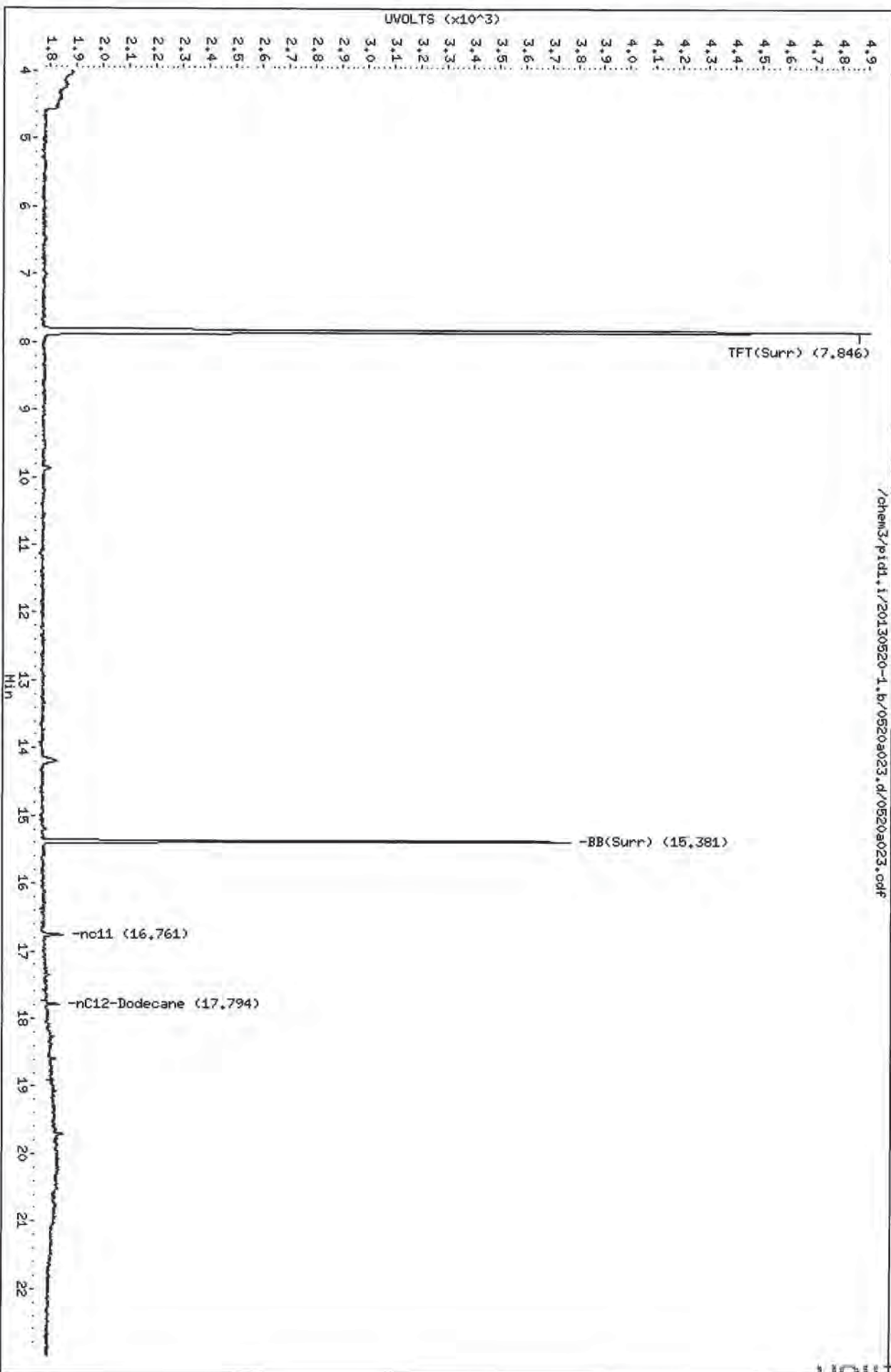
Data File: /chem3/pid1.i/20130520-1.b/0520a023.d
Date: 20-MAY-2013 19:44
Client ID: A2-F22-S-6
Sample Info: MQ47B

Instrument: pid1.i

Column phase: RTX 502-2 FID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-1.b/0520a023.d/0520a023.cdf



Data File: /chem3/pidd.i/20130520-2.b/0520a023.d

Date: 20-MAY-2013 19:44

Client ID: A2-F22-S-6

Sample Info: M047B

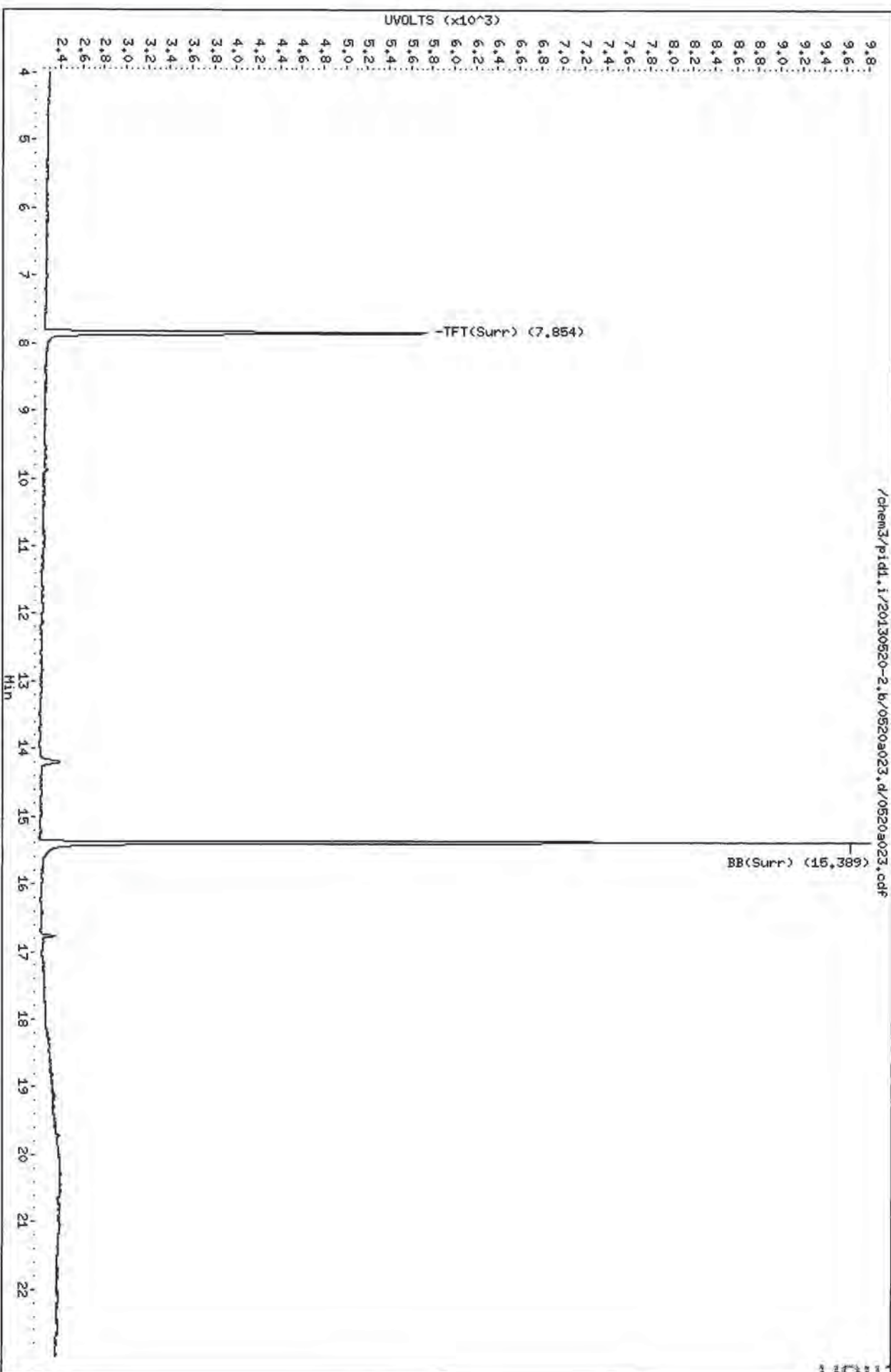
Instrument: pidd.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pidd.i/20130520-2.b/0520a023.d/0520a023.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F23-S-6

SAMPLE

Lab Sample ID: WQ47C

LIMS ID: 13-10684

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 20:14

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 70 mg-dry-wt

Percent Moisture: 18.6%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	37
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	36	< 36 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	87.1%
Bromobenzene	87.4%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Handwritten: PL 5/22/13

Data file 1: /chem3/pid1.i/20130520-1.b/0520a024.d ARI ID: WQ47C
 Data file 2: /chem3/pid1.i/20130520-2.b/0520a024.d Client ID: A2-F23-S-6
 Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 20:14
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.004	3119	39471	89.9	TFT(Surr)
15.381	0.004	2067	17217	90.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	5953	0.017
8015C 2MP-TMB (4.17 to 16.20)	723723	5311	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	4671	0.008
NWTPHG Tol-Nap (9.77 to 18.89)	375093	5953	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.004	3457	87.1	TFT(Surr)
15.389	0.005	7683	87.4	BB(Surr)

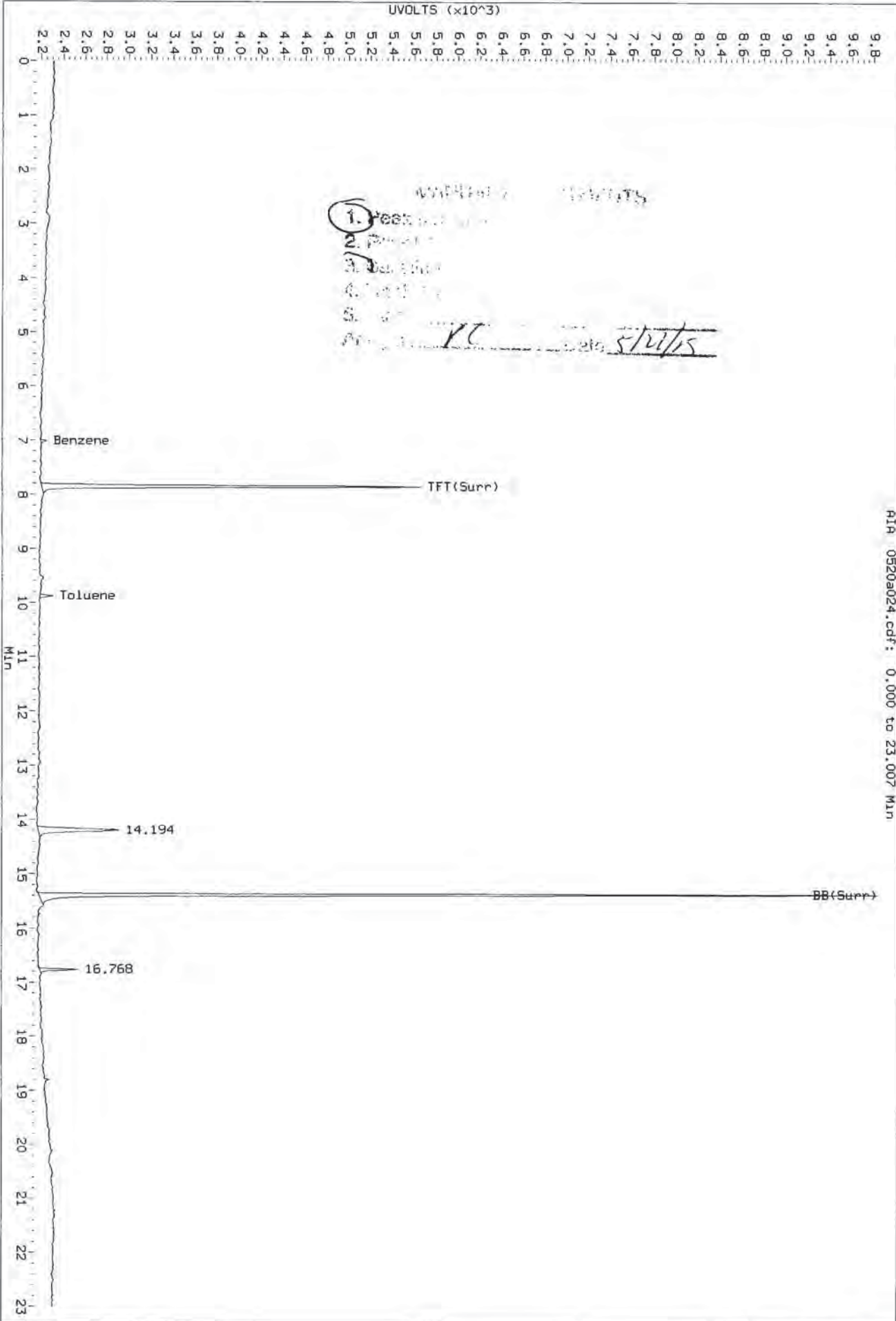
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	0.007	50	0.21N	Benzene
9.880	0.006	118	0.52N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.1/20130520-2.b/0520a024.d/0520a024.cdf
Injection Date: 20-May-2013 20:14
Instrument: pid1.1
Client Sample ID: A2-F23-S-6

RI# 0520a024.cdf: 0.000 to 23.007 Min



0520a024.cdf: 21.007

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: A2-F24-S-6
SAMPLE

Lab Sample ID: WQ47D
 LIMS ID: 13-10685
 Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/16/13
 Date Received: 05/17/13

Date Analyzed: 05/20/13 20:43
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 80 mg-dry-wt
 Percent Moisture: 18.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	87.4%
Bromobenzene	87.6%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a025.d ARI ID: WQ47D
Data file 2: /chem3/pid1.i/20130520-2.b/0520a025.d Client ID: A2-F24-S-6
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 20:43
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.004	3114	39431	89.8	TFT(Surr)
15.381	0.004	2074	17379	90.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3371	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	2562	0.004
AK101 nC6-nC10 (4.67 to 15.10)	582885	2562	0.004
NWTPHG Tol-Nap (9.77 to 18.89)	375093	3371	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.005	3468	87.4	TFT(Surr)
15.389	0.004	7699	87.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

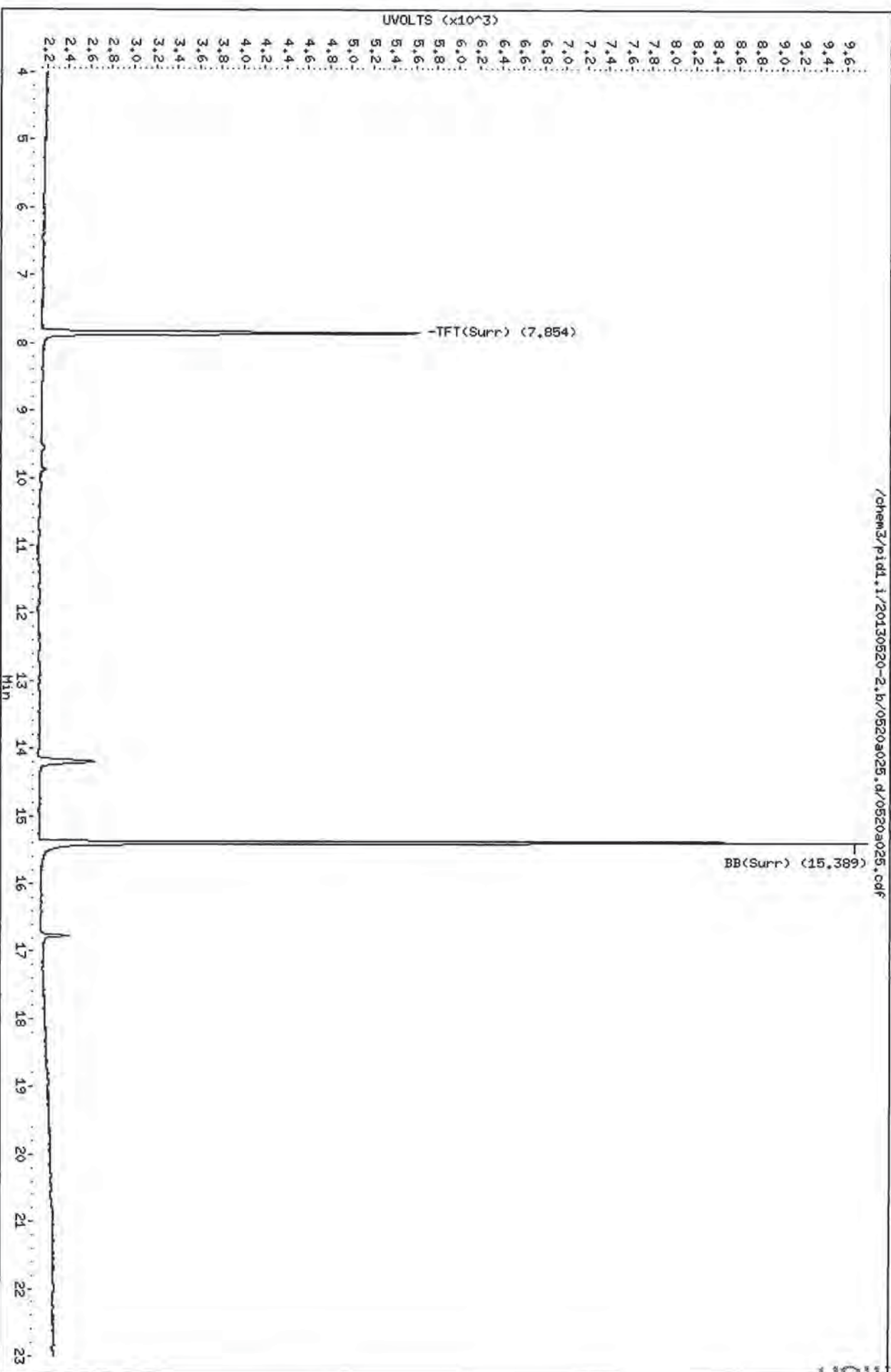
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-2.b/0520a025.d
Date: 20-MAY-2013 20:43
Client ID: A2-F24-S-6
Sample Info: MQ47D

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-2.b/0520a025.d/0520a025.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

**Sample ID: A2-F25-S-6
SAMPLE**

Lab Sample ID: WQ47E

LIMS ID: 13-10686

Matrix: Soil

Data Release Authorized: *MM*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 21:12

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 20.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	85.3%
Bromobenzene	86.1%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PL
5/22/15

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a026.d ARI ID: WQ47E
Data file 2: /chem3/pid1.i/20130520-2.b/0520a026.d Client ID: A2-F25-S-6
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 21:12
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.846	0.005	3056	38692	88.1	TFT(Surr)
15.382	0.005	2020	16999	88.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3948	0.011
8015C 2MP-TMB (4.17 to 16.20)	723723	2707	0.004
AK101 nC6-nC10 (4.67 to 15.10)	582885	2707	0.005
NWTPHG Tol-Nap (9.77 to 18.89)	375093	3948	0.011

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	0.005	3387	85.3	TFT(Surr)
15.390	0.005	7565	86.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

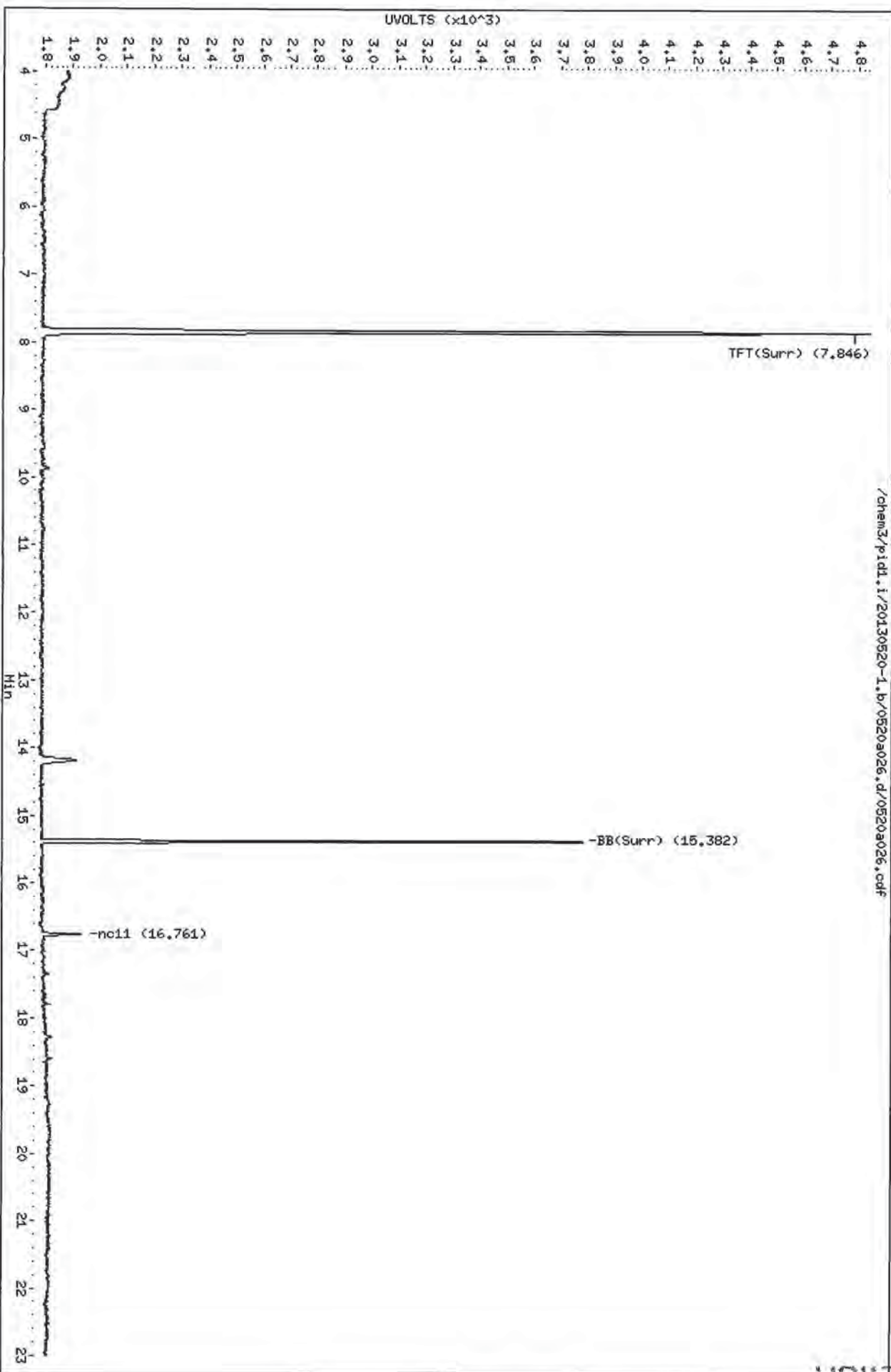
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a026.d
Date: 20-MAY-2013 21:12
Client ID: A2-F25-S-6
Sample Info: M047E

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-1.b/0520a026.d/0520a026.cdf



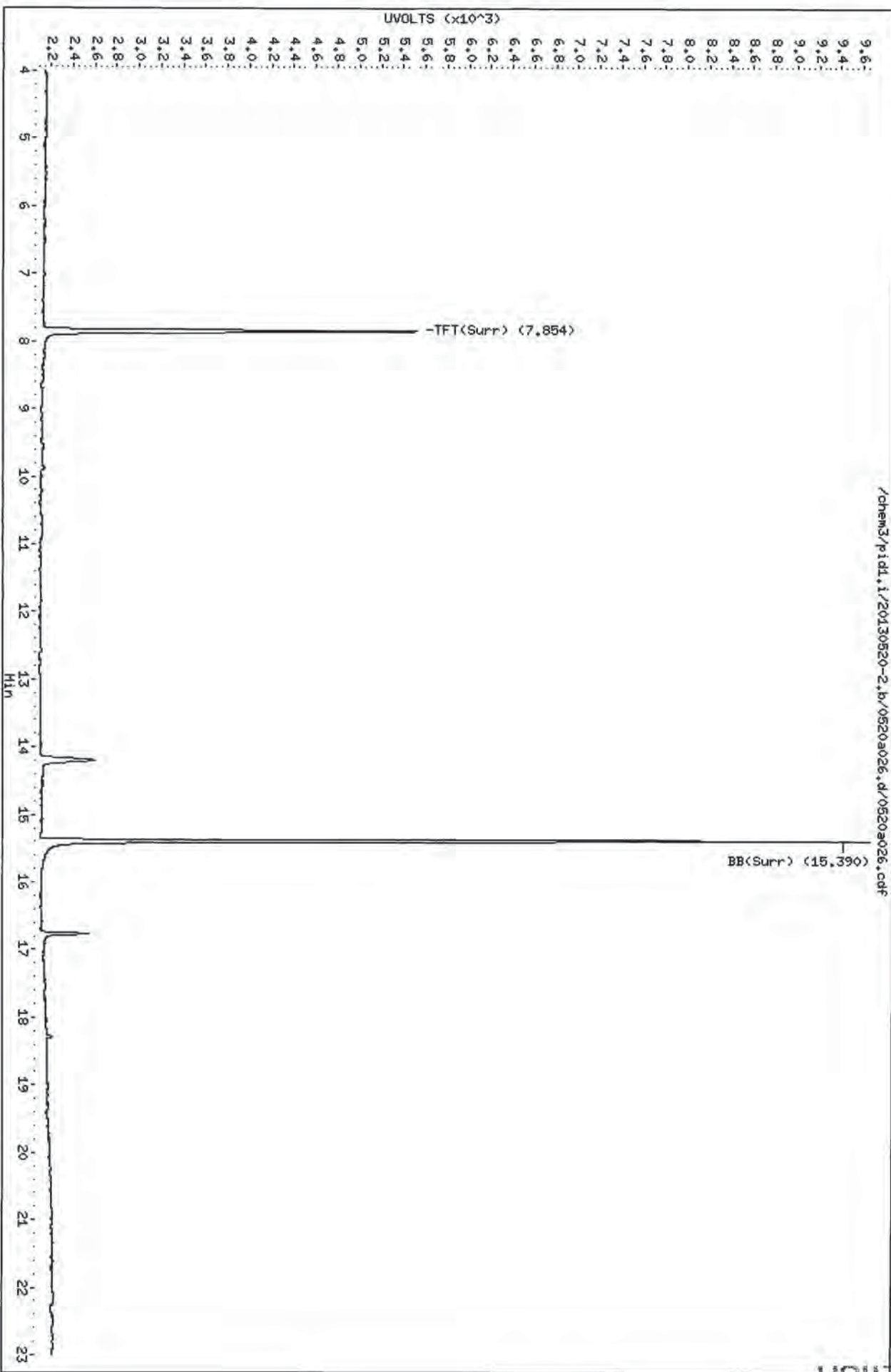
Data File: /chem3/pid1.i/20130520-2.b/0520a026.d
Date: 20-May-2013 21:12
Client ID: A2-F25-S-6
Sample Info: MQ47E

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130520-2.b/0520a026.d/0520a026.cdf





ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F26-S-6

SAMPLE

Lab Sample ID: WQ47F

LIMS ID: 13-10687

Matrix: Soil

Data Release Authorized: *MM*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 22:40

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 79 mg-dry-wt

Percent Moisture: 16.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	< 16 U
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

BETX Surrogate Recovery

Trifluorotoluene	83.3%
Bromobenzene	84.8%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/20/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a029.d ARI ID: WQ47F
Data file 2: /chem3/pid1.i/20130520-2.b/0520a029.d Client ID: A2-F26-S-6
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 22:40
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.006	3030	38549	87.4	TFT(Surr)
15.382	0.005	2018	17188	88.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3442	0.010
8015C 2MP-TMB (4.17 to 16.20)	723723	8460	0.012
AK101 nC6-nC10 (4.67 to 15.10)	582885	7477	0.013
NWTPHG Tol-Nap (9.77 to 18.89)	375093	3442	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	0.006	3307	83.3	TFT(Surr)
15.390	0.005	7456	84.8	BB(Surr)

SW8021 (PID)

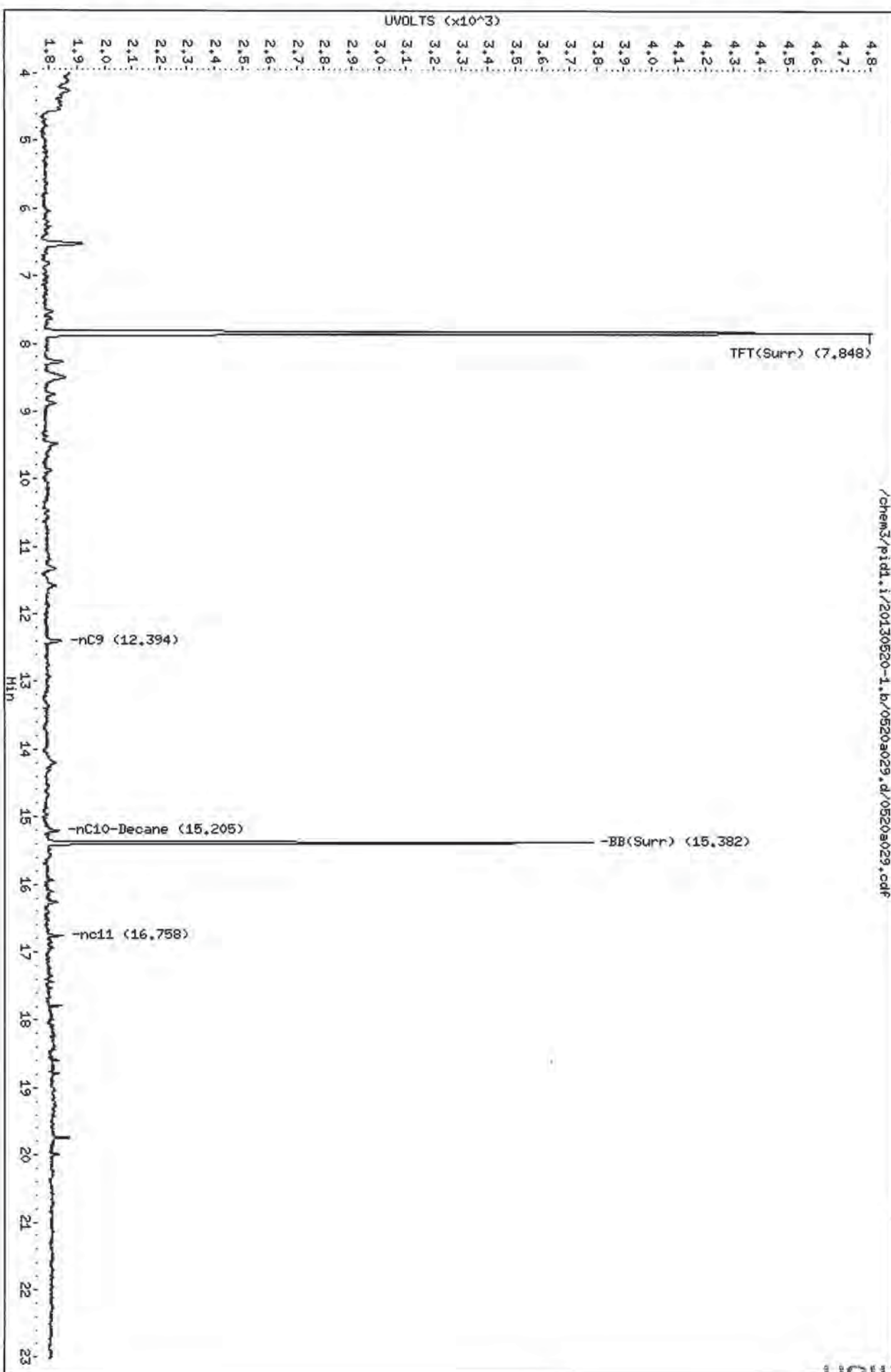
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a029.d
Date: 20-MAY-2013 22:40
Client ID: A2-F26-S-6
Sample Info: MQ47F

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



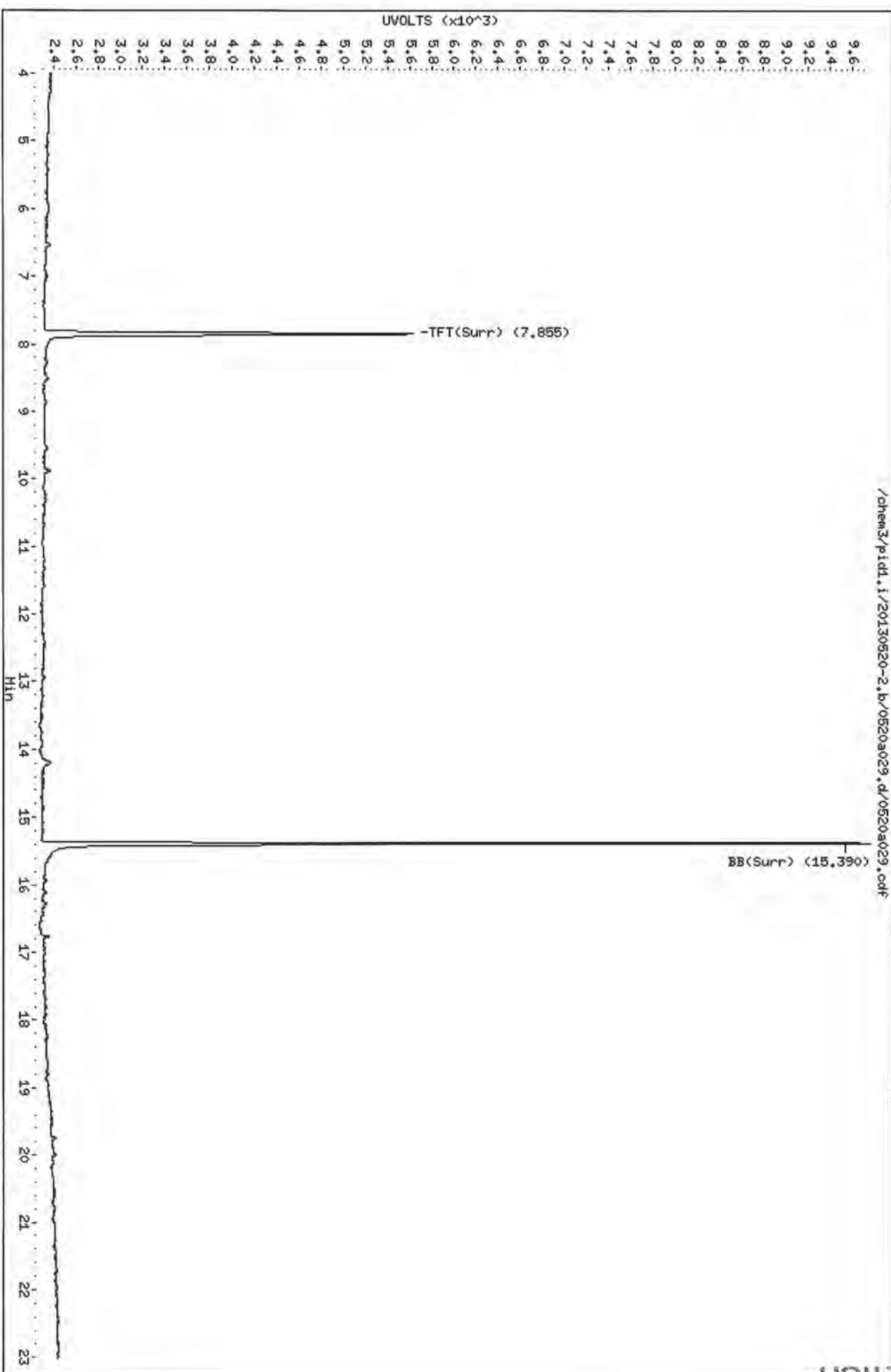
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09:00:00

Data File: /chem3/pidd,i/20130520-2,b/0520a029.d
Date: 20-MAY-2013 22:40
Client ID: A2-F26-S-6
Sample Info: M047F

Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



/chem3/pidd,i/20130520-2,b/0520a029.d/0520a029.cdf

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

Page 1 of 1

Sample ID: A2-F27-S-6

SAMPLE

Lab Sample ID: WQ47G

LIMS ID: 13-10688

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/20/13 23:09

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 68 mg-dry-wt

Percent Moisture: 21.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	37	< 37 U
95-47-6	o-Xylene	18	< 18 U

BETX Surrogate Recovery

Trifluorotoluene	84.7%
Bromobenzene	85.3%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130520-1.b/0520a030.d ARI ID: WQ47G
Data file 2: /chem3/pid1.i/20130520-2.b/0520a030.d Client ID: A2-F27-S-6
Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 23:09
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	0.006	3080	39125	88.8	TFT(Surr)
15.383	0.005	2037	17294	89.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3201	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	2461	0.003
AK101 nC6-nC10 (4.67 to 15.10)	582885	2460	0.004
NWTPHG Tol-Nap (9.77 to 18.89)	375093	3201	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	0.006	3364	84.7	TFT(Surr)
15.390	0.006	7496	85.3	BB(Surr)

SW8021 (PID)

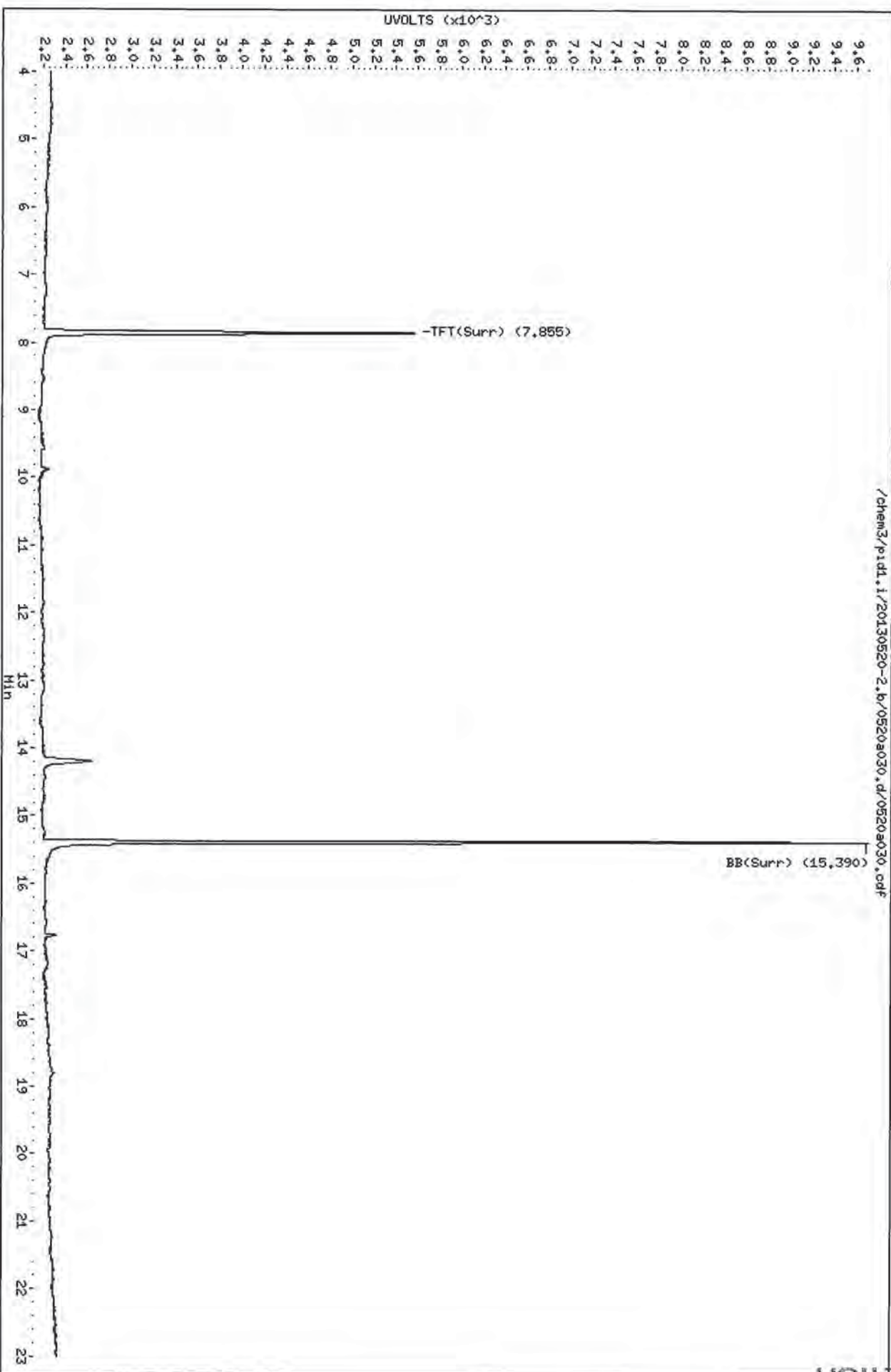
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-2.b/0520a030.d
Date: 20-MAY-2013 23:09
Client ID: A2-F27-S-6
Sample Info: MQ47C

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130520-2.b/0520a030.d/0520a030.cdf

1109 0000

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F28-S-6

SAMPLE

Lab Sample ID: WQ47H

LIMS ID: 13-10689

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/21/13 14:20

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 72 mg-dry-wt

Percent Moisture: 21.8%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	35	< 35 U
95-47-6	o-Xylene	17	< 17 U

BETX Surrogate Recovery

Trifluorotoluene	86.1%
Bromobenzene	83.3%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/24/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a007.d ARI ID: WQ47H
Data file 2: /chem3/pid1.i/20130521-2.b/0520a007.d Client ID: A2-F28-S-6
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 14:20
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.004	3050	38737	87.9	TFT(Surr)
15.384	0.003	1982	16561	86.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3364	0.009
8015C 2MP-TMB (4.18 to 16.20)	723723	1530	0.002
AK101 nC6-nC10 (4.67 to 15.10)	582885	1062	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3930	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3417	86.1	TFT(Surr)
15.392	0.002	7326	83.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.002	39	0.17N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

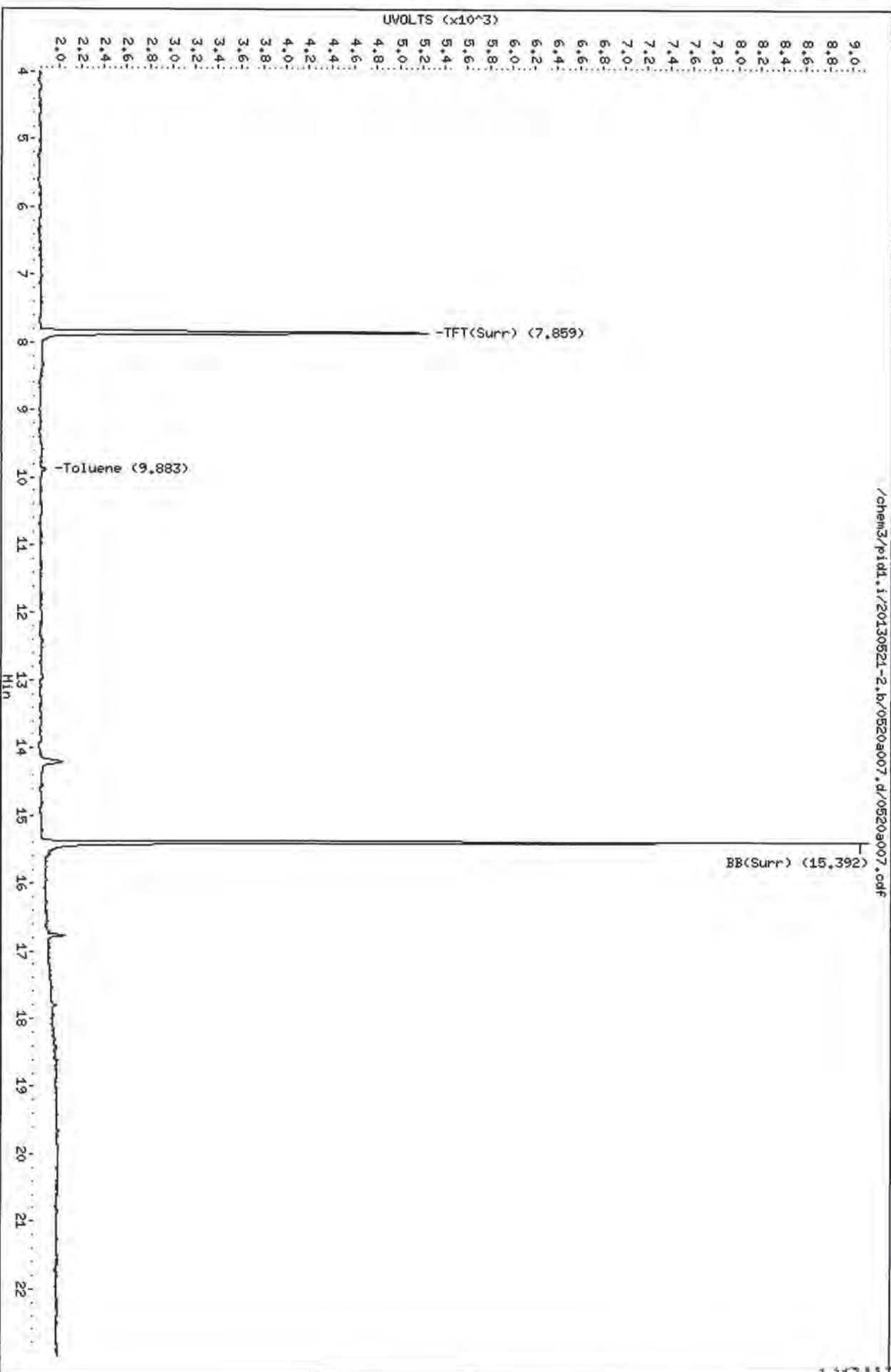
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-2.b/0520a007.d
Date: 21-MAY-2013 14:20
Client ID: A2-F28-S-6
Sample Info: HQ47H

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-2.b/0520a007.d/0520a007.cdf



11:41:03

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: A2-F29-S-6

SAMPLE

Lab Sample ID: WQ47I

LIMS ID: 13-10690

Matrix: Soil

Data Release Authorized: *WWW*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/16/13

Date Received: 05/17/13

Date Analyzed: 05/21/13 14:49

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

Percent Moisture: 13.1%

CAS Number	Analyte	RI	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	24	< 24 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	83.4%
Bromobenzene	84.2%

BETX values reported in µg/kg (ppb)

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PK
5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a008.d ARI ID: WQ47I
Data file 2: /chem3/pid1.i/20130521-2.b/0520a008.d Client ID: A2-F29-S-6
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 14:49
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.002	3015	38395	86.9	TFT(Surr)
15.384	0.002	2006	16732	87.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	486	0.001
8015C 2MP-TMB (4.18 to 16.20)	723723	486	0.001
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	486	0.001

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3311	83.4	TFT(Surr)
15.392	0.001	7399	84.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

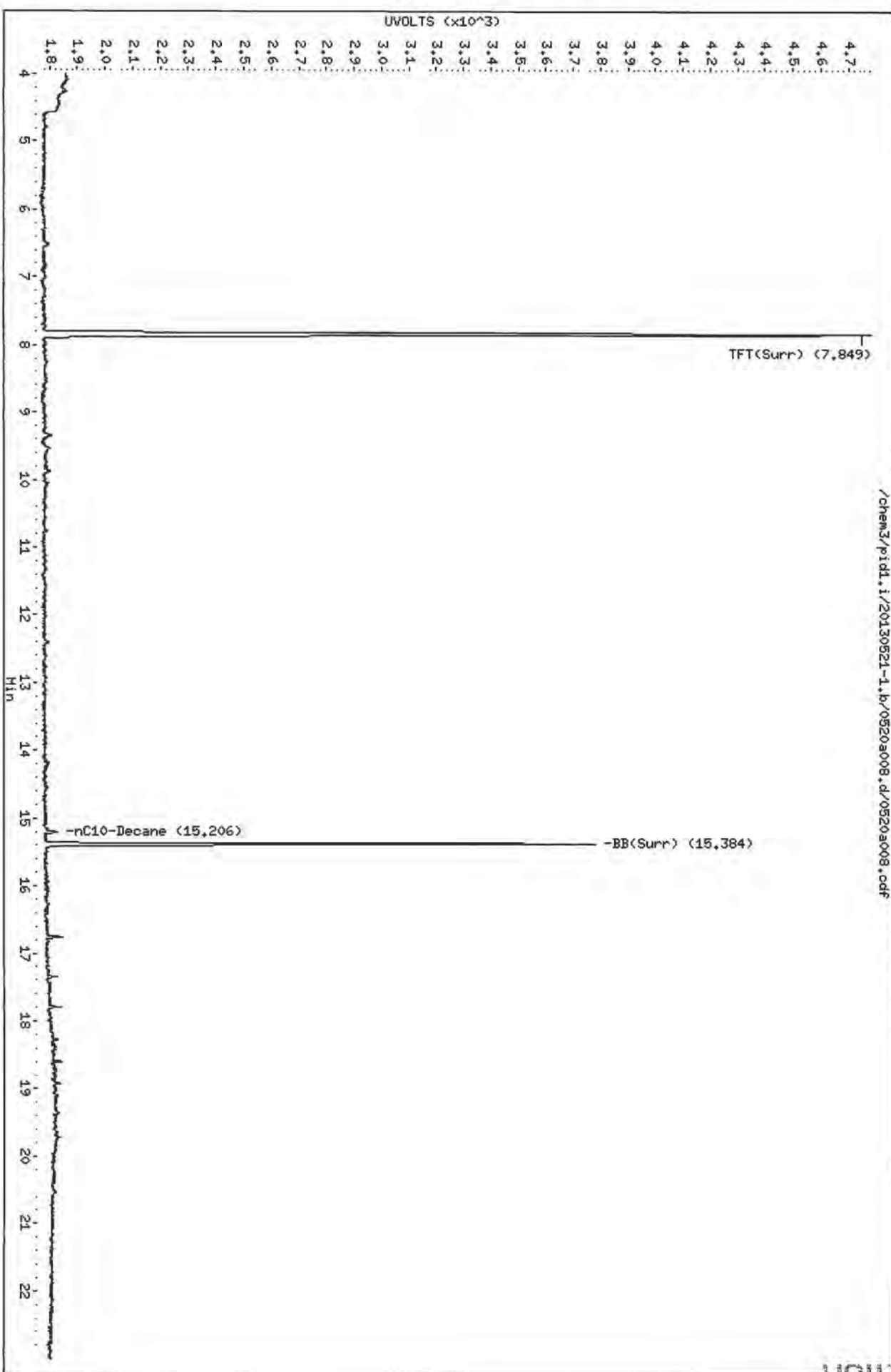
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a008.d
Date: 21-MAY-2013 14:49
Client ID: A2-F29-S-6
Sample Info: M0471

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

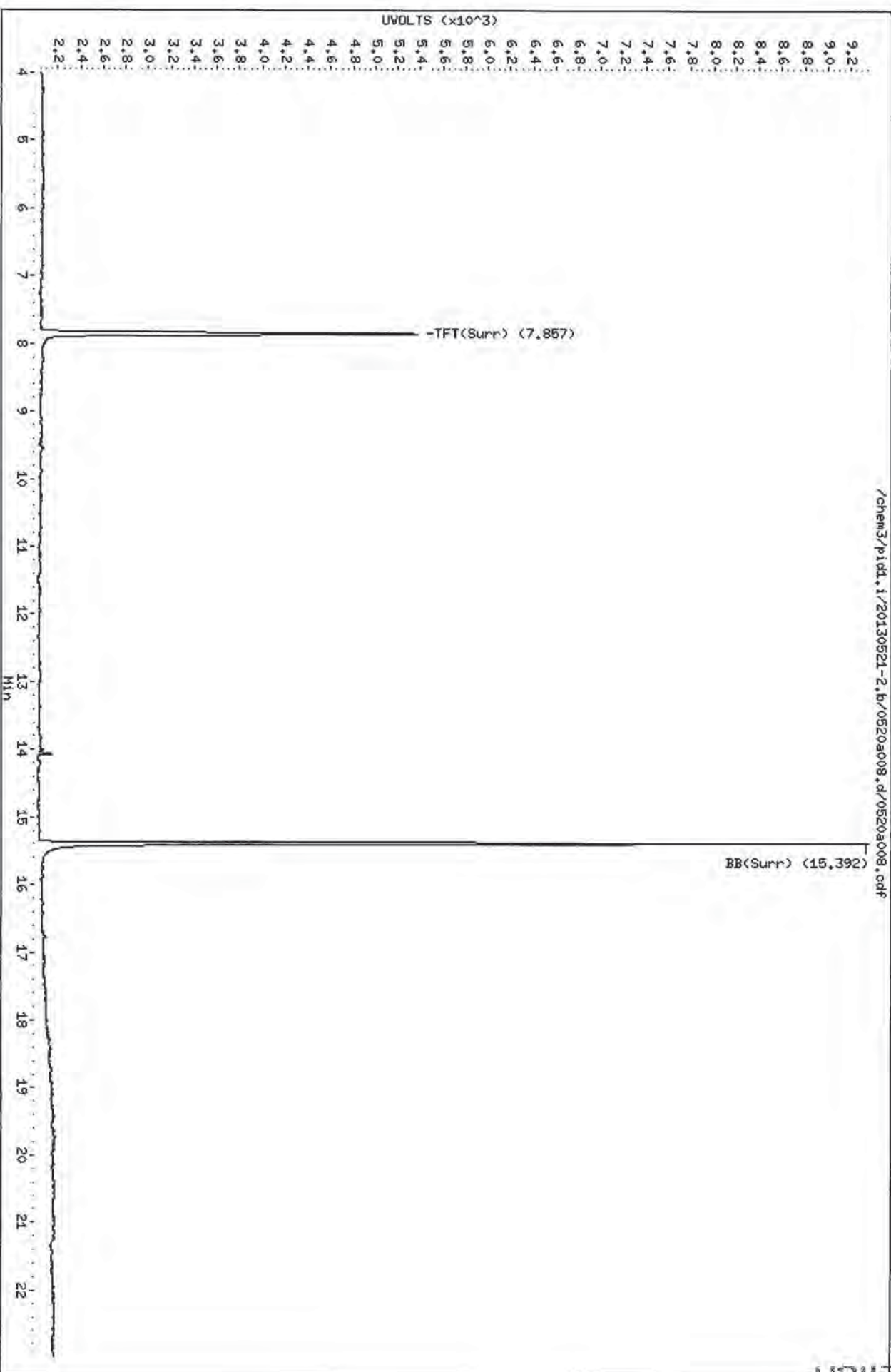
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Data File: /chem3/pidd.i/20130521-2.b/0520a008.d
Date: 21-MAY-2013 14:49
Client ID: A2-F29-S-6
Sample Info: M0471

Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: PC
Column diameter: 0.18



BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WQ47
Matrix: Soil

QC Report No: WQ47-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-052013	86.2%	84.5%	0
LCS-052013	93.8%	90.0%	0
LCSD-052013	91.2%	88.2%	0
A2-F21-S-6	84.4%	84.1%	0
A2-F22-S-6	87.8%	86.8%	0
A2-F23-S-6	87.1%	87.4%	0
A2-F24-S-6	87.4%	87.6%	0
A2-F25-S-6	85.3%	86.1%	0
A2-F26-S-6	83.3%	84.8%	0
A2-F27-S-6	84.7%	85.3%	0
MB-052113	80.4%	80.9%	0
LCS-052113	86.9%	85.0%	0
LCSD-052113	84.9%	84.5%	0
A2-F28-S-6	86.1%	83.3%	0
A2-F29-S-6	83.4%	84.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-10682 to 13-10690

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-052013

LAB CONTROL SAMPLE

Lab Sample ID: LCS-052013

LIMS ID: 13-10682

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/20/13 10:19

LCSD: 05/20/13 10:49

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	186	185	101%	182	185	98.4%	2.2%
Toluene	1900	1980	96.0%	1840	1980	92.9%	3.2%
Ethylbenzene	546	580	94.1%	530	580	91.4%	3.0%
m,p-Xylene	1980	2120	93.4%	1920	2120	90.6%	3.1%
o-Xylene	884	960	92.1%	871	960	90.7%	1.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	93.8%	91.2%
Bromobenzene	90.0%	88.2%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/21/13

Data file 1: /chem3/pid1.i/20130520-1.b/0520a004.d ARI ID: LCS0520
 Data file 2: /chem3/pid1.i/20130520-2.b/0520a004.d Client ID:
 Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 10:19
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.000	3312	46603	95.5	TFT (Surr)
15.379	0.002	2077	18648	91.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	368788	1.030 M
8015C 2MP-TMB (4.17 to 16.20)	723723	750686	1.037 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	604299	1.037 M
NWTRHG Tol-Nap (9.77 to 18.89)	375093	387478	1.033 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.000	3722	93.8	TFT (Surr)
15.387	0.002	7911	90.0	BB (Surr)

SW8021 (PID)

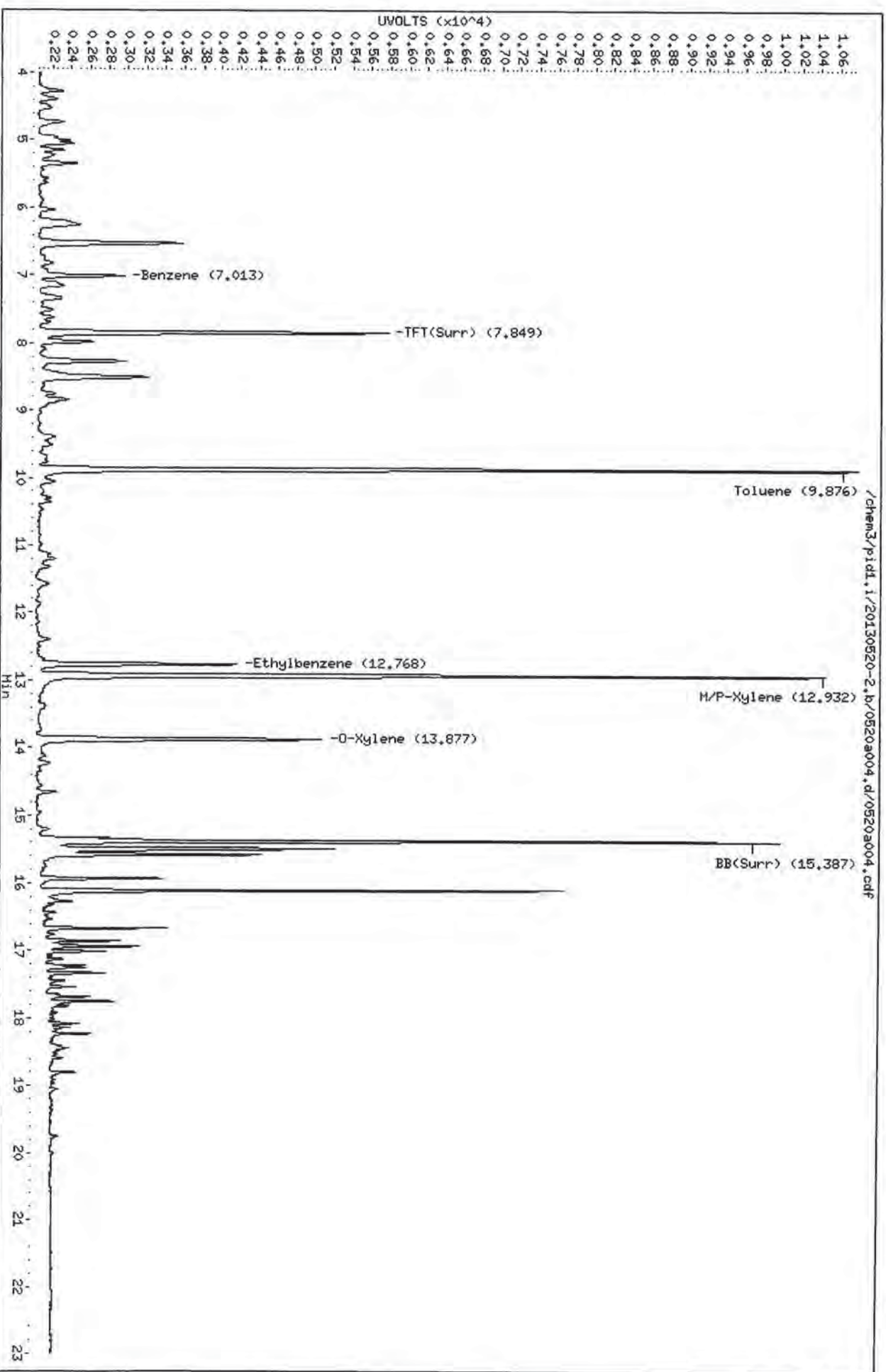
RT	Shift	Response	Amount	Compound
7.013	-0.001	893	3.72	Benzene
9.876	0.002	8709	38.03	Toluene
12.768	0.003	2114	10.92	Ethylbenzene
12.932	0.005	8435	39.50	M/P-Xylene
13.877	0.003	3016	17.68	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

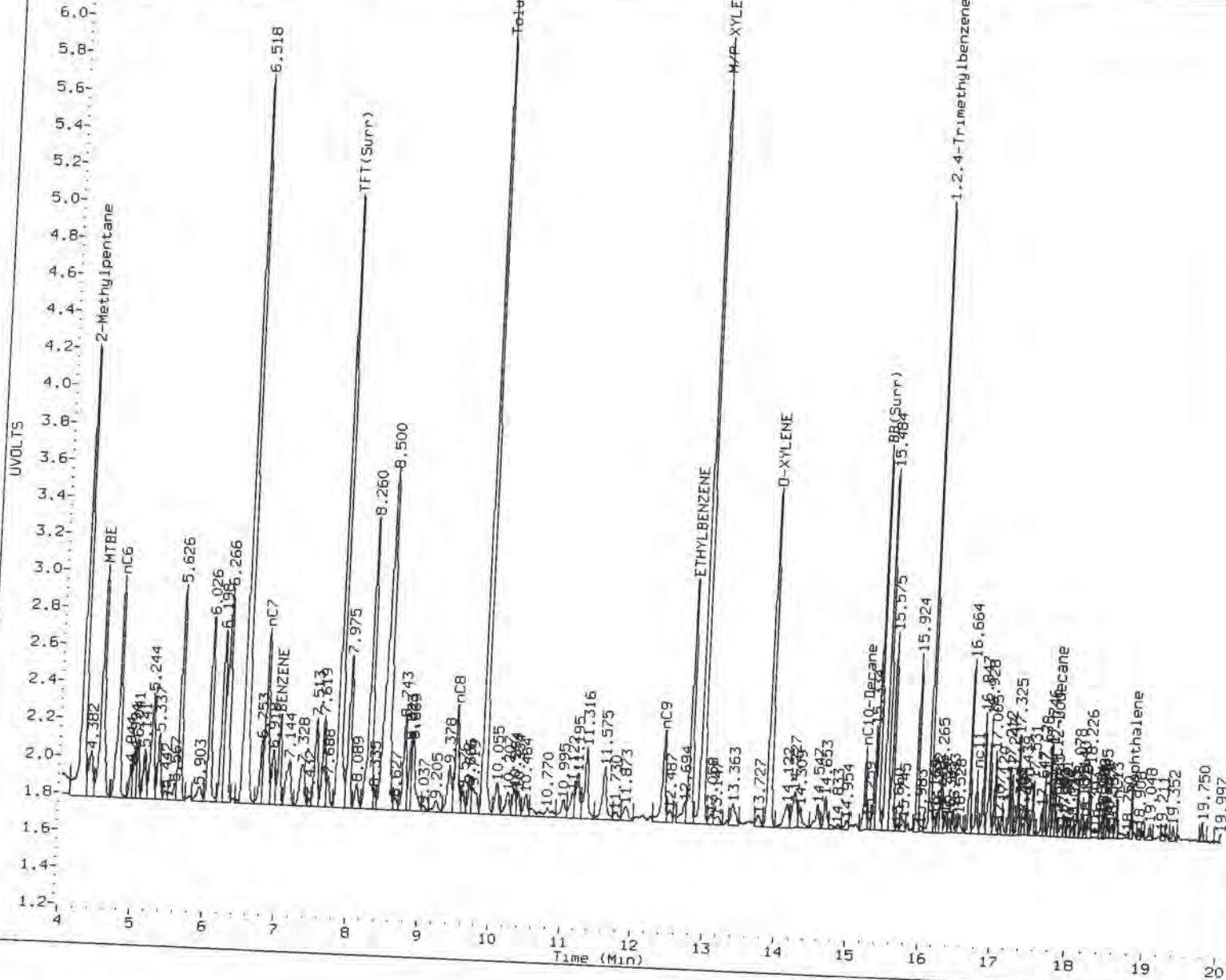
Data File: /chem3/pid1.i/20130520-2.b/0520a004.d
Date: 20-May-2013 10:19
Client ID:
Sample Info: LCS0520

Column phase: RTX 502-2 PID

Instrument: pid1.1
Operator: PC
Column diameter: 0.18



110000 : 21000



MANUAL INTEGRATION

- 1) Baseline correction
- 2) Poor chromatography
- 3) Peak not found
- 4) Totals calculation
- 5. Other _____

Analyst: KL Date: 5/10/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AC
 5/21/13

Data file 1: /chem3/pidl.i/20130520-1.b/0520a005.d ARI ID: LCSD0520
 Data file 2: /chem3/pidl.i/20130520-2.b/0520a005.d Client ID:
 Method: /chem3/pidl.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 10:49
 Instrument: pidl.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.001	3257	45499	93.9	TFT(Surr)
15.377	0.000	2043	17762	89.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	353158	0.986 M
8015C 2MP-TMB (4.17 to 16.20)	723723	722878	0.999 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	580622	0.996 M
NWTPHG Tol-Nap (9.77 to 18.89)	375093	371772	0.991 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	-0.001	3621	91.2	TFT(Surr)
15.385	0.001	7755	88.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.000	877	3.65	Benzene
9.875	0.000	8444	36.87	Toluene
12.766	0.000	2053	10.61	Ethylbenzene
12.930	0.003	8185	38.33	M/P-Xylene
13.875	0.001	2972	17.42	O-Xylene
ND	---	---	---	MTBE

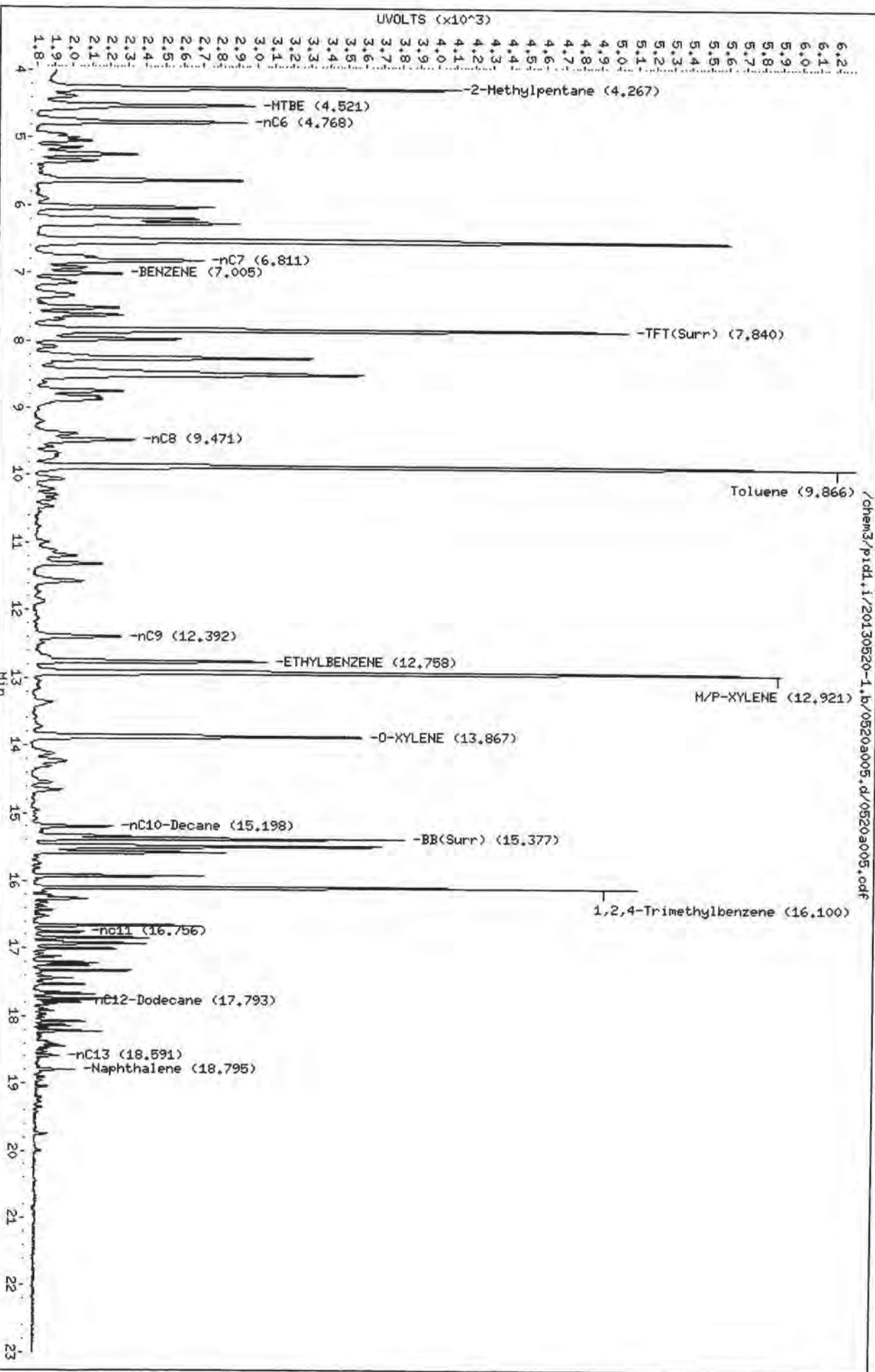
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130520-1.b/0520a005.d
Date: 20-MAY-2013 10:49
Client ID:
Sample Info: LCSD0520

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

Page 1



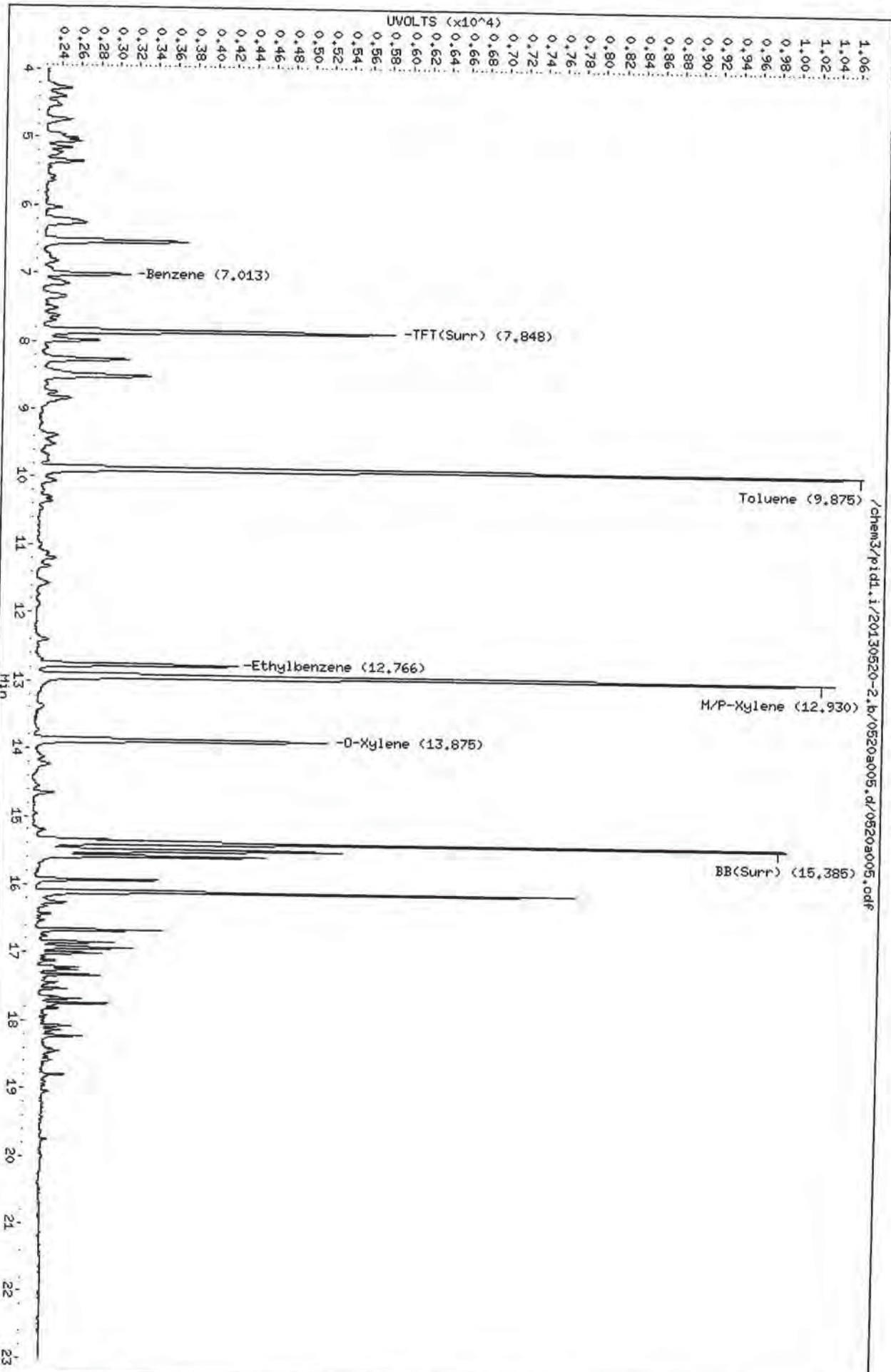
0520a005.d

Data File: /chem3/pidl.i/20130520-2.b/0520a005.d
Date: 20-MAY-2013 10:49
Client ID:
Sample Info: LCS0520

Instrument: pidl.i

Column Phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

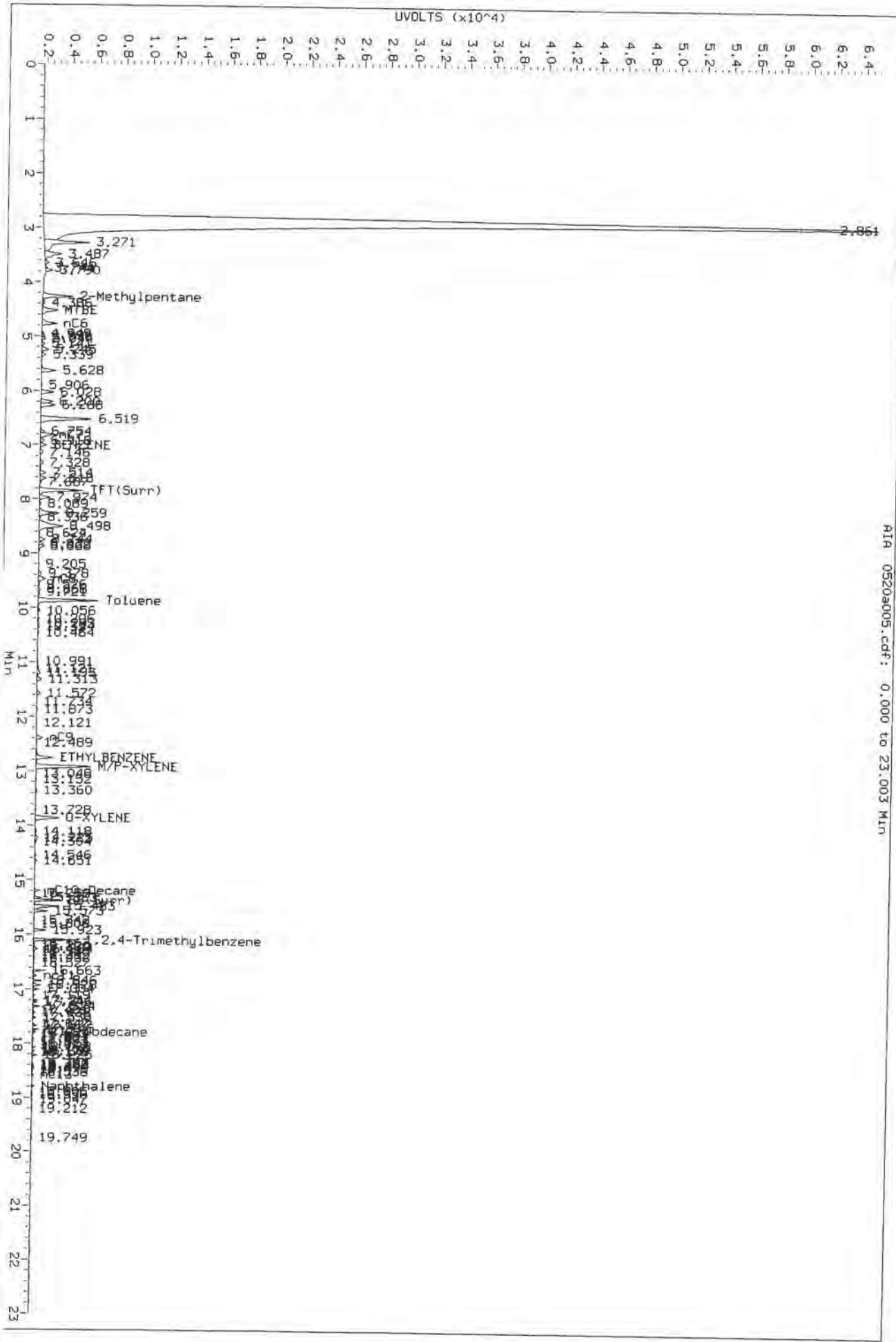


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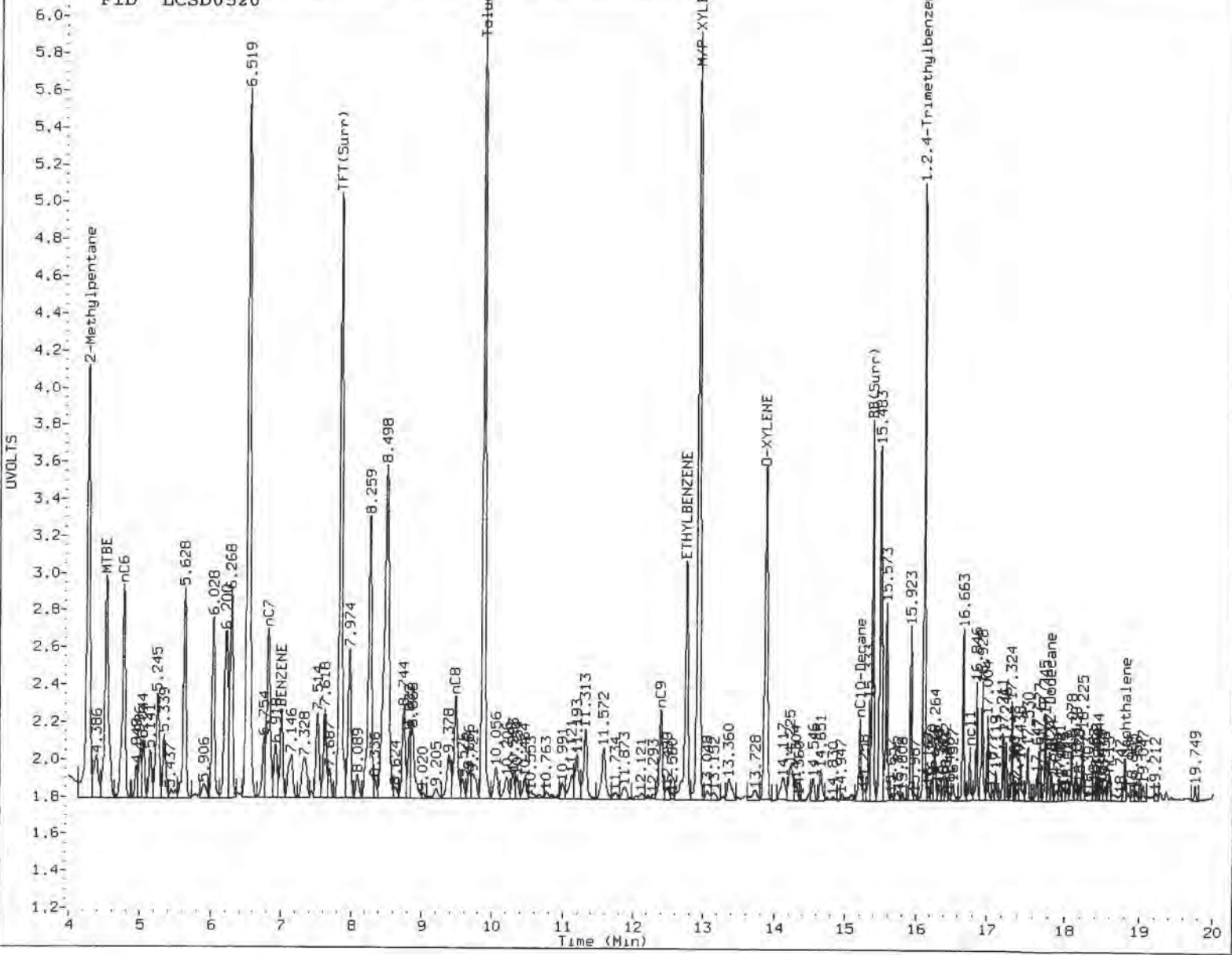
PK
5/11/13

Data File: /chem3/pid1.1/20130520-1.1.b/0520a005.d/0520a005.cdf
Injection Date: 20-MAY-2013 10:49
Instrument: pid1.1
Client Sample ID:

AIA 0520a005.cdf: 0.000 to 23.003 Min



FID LCSD0520



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: PR

Date: 5/21/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-052113
LAB CONTROL SAMPLE

Lab Sample ID: LCS-052113
 LIMS ID: 13-10689
 Matrix: Soil
 Data Release Authorized: *MMW*
 Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/21/13 11:40
 LCSD: 05/21/13 12:09
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	LCS	LCS		LCSD	LCSD		RPD
		Spike Added	Recovery		Spike Added	Recovery	
Benzene	175	185	94.6%	154	185	83.2%	12.8%
Toluene	1770	1980	89.4%	1550	1980	78.3%	13.3%
Ethylbenzene	510	580	87.9%	440	580	75.9%	14.7%
m,p-Xylene	1850	2120	87.3%	1590	2120	75.0%	15.1%
o-Xylene	836	960	87.1%	718	960	74.8%	15.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	86.9%	84.9%
Bromobenzene	85.0%	84.5%

W6
5/2/12

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a004.d ARI ID: LCS0521
Data file 2: /chem3/pid1.i/20130521-2.b/0520a004.d Client ID:
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 11:40
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.002	3203	45288	92.3	TFT(Surr)
15.383	0.002	2020	17811	88.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	355983	0.994 M
8015C 2MP-TMB (4.18 to 16.20)	723723	728583	1.007 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	587767	1.008 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	376084	1.003 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3448	86.9	TFT(Surr)
15.391	0.000	7467	85.0	BB(Surr)

SW8021 (PID)

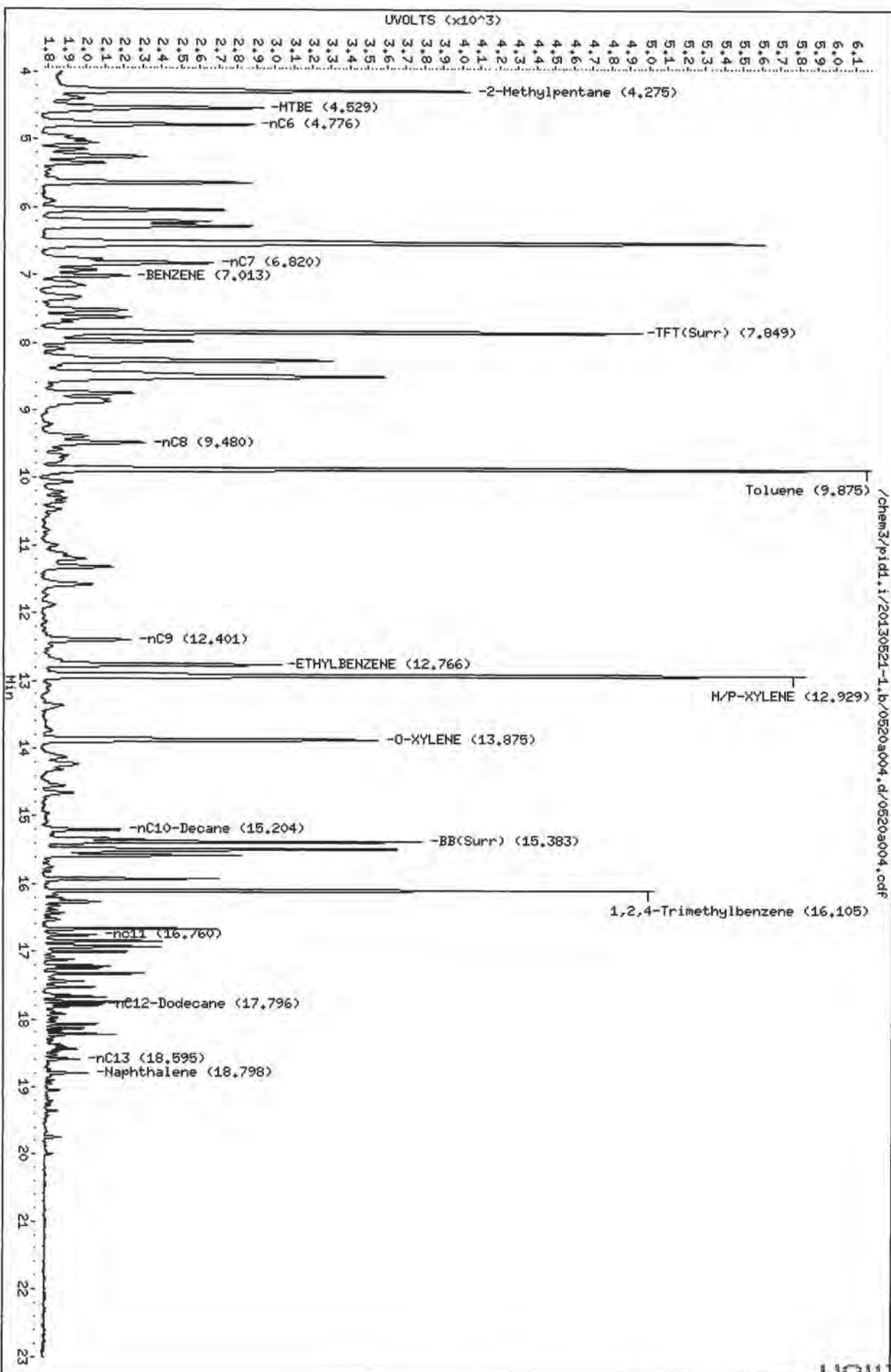
RT	Shift	Response	Amount	Compound
7.021	0.001	839	3.50	Benzene
9.883	0.002	8111	35.42	Toluene
12.775	0.001	1972	10.19	Ethylbenzene
12.938	0.003	7909	37.04	M/P-Xylene
13.884	0.001	2852	16.72	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a004.d
Date: 21-MAY-2013 11:40
Client ID:
Sample Info: LCS0521

Column phase: RTX 502-2 FID

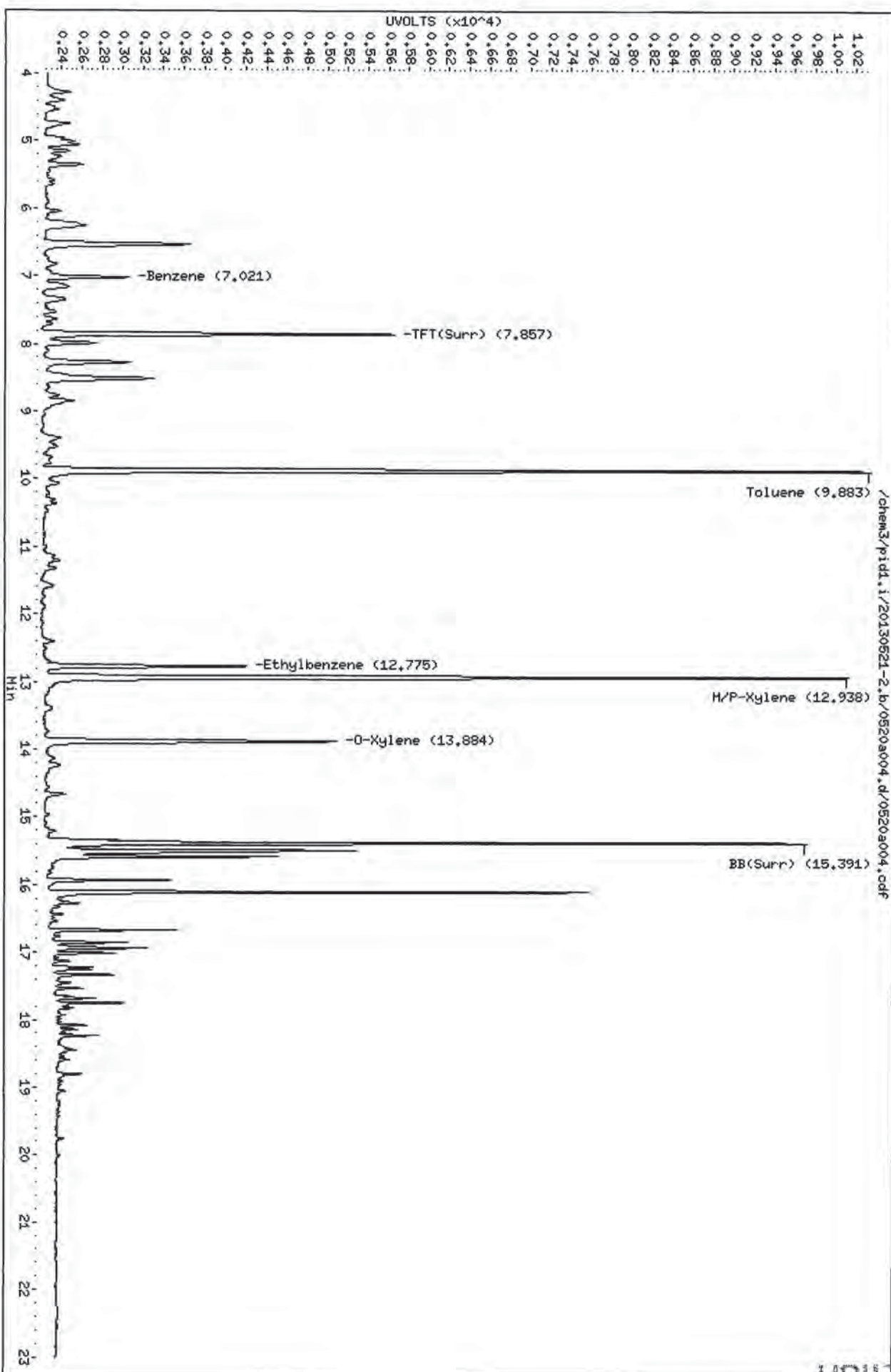
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130521-2.b/0520a004.d
Date: 21-MAY-2013 11:40
Client ID:
Sample Info: LCS0521

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

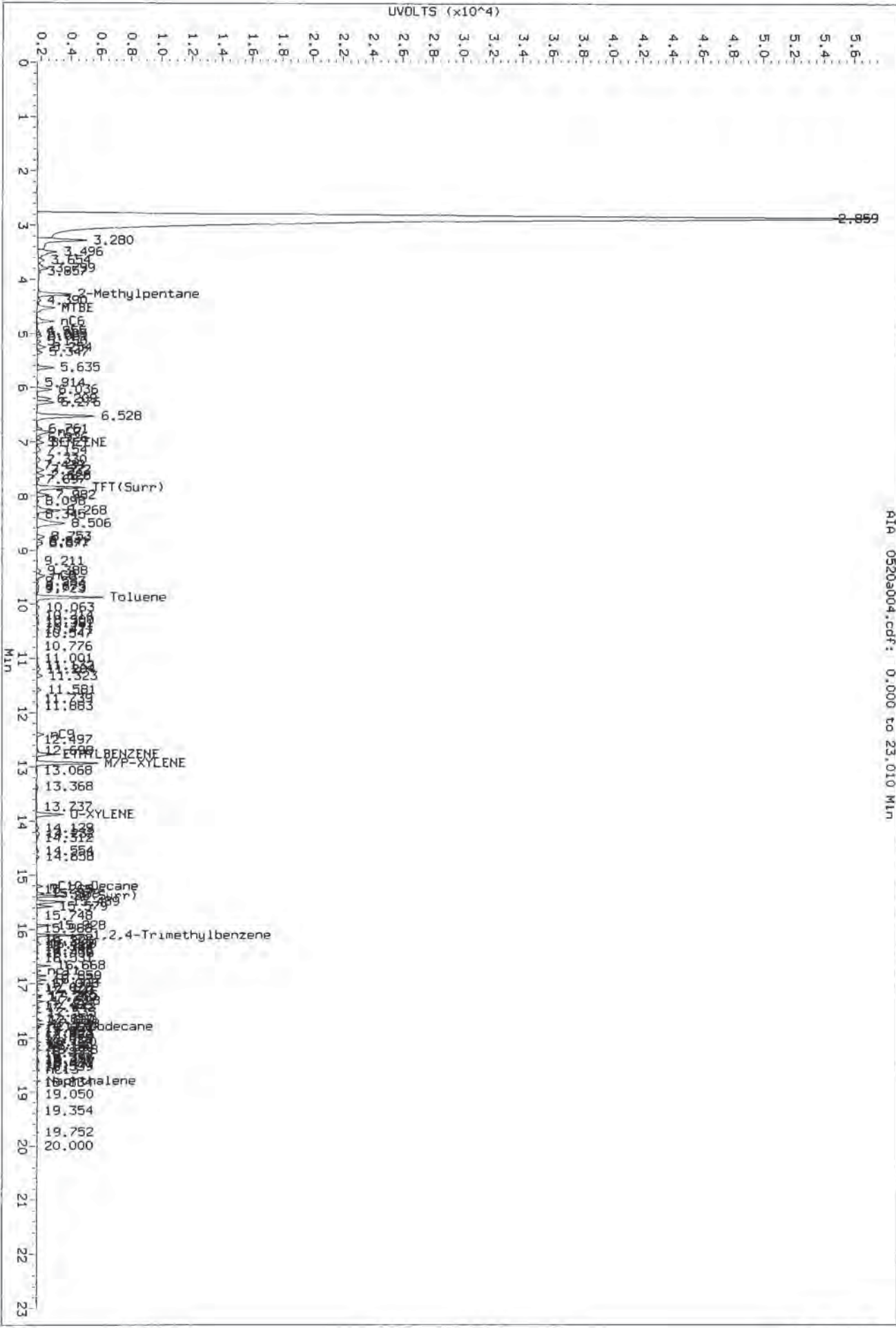


/chem3/pid1.i/20130521-2.b/0520a004.d/0520a004.pdf

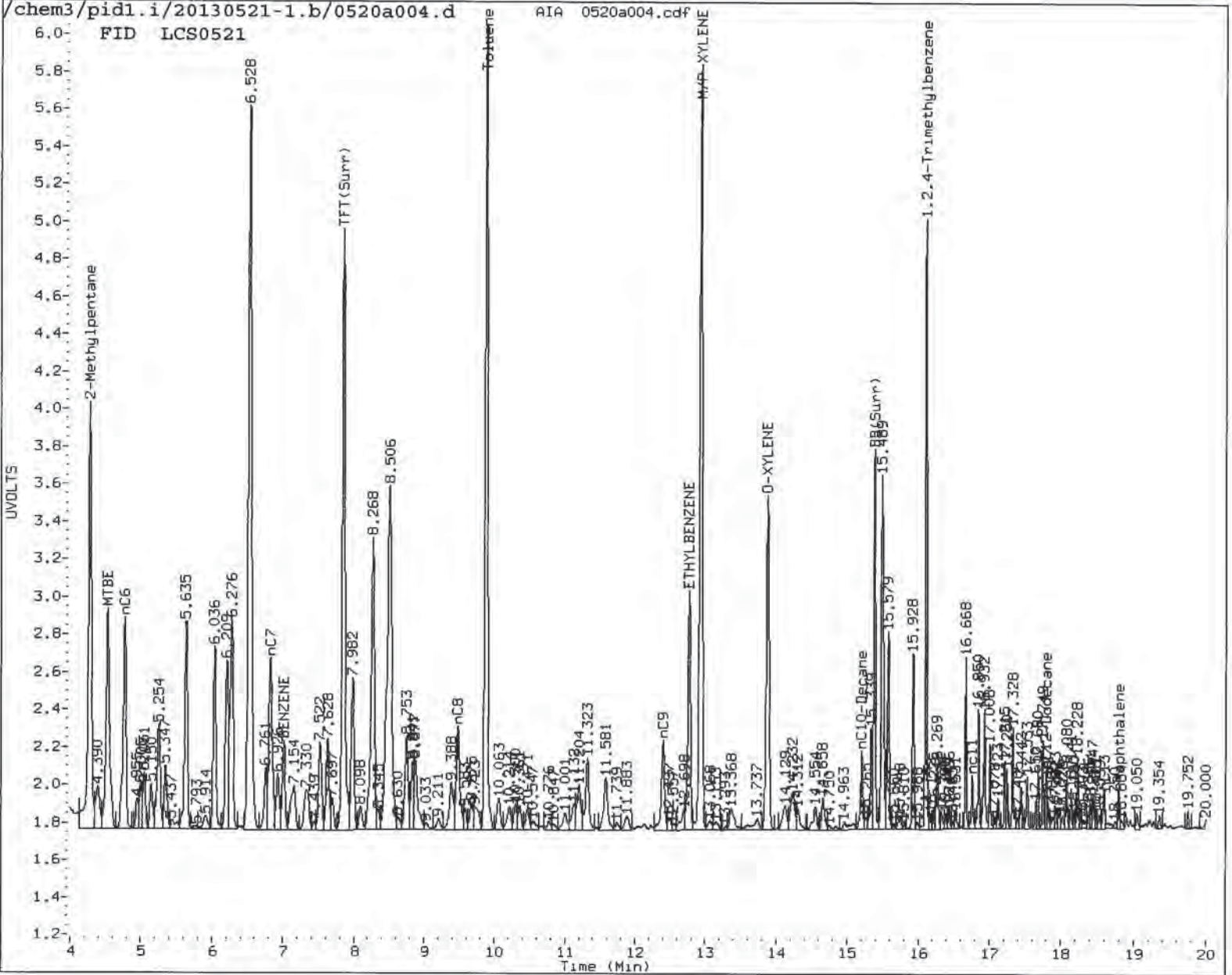
1017 001 05

Data File: /chem3/prd1_1/20130521-1.b/0520a004.d/0520a004.cdf
 Injection Date: 21-MAY-2013 11:40
 Instrument: prd1.1
 Client Sample ID:

PK
 5/22/13



FID LCS0521



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: VC Date: 5/22/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
5/22/13

Data file 1: /chem3/pid1.i/20130521-1.b/0520a005.d ARI ID: LCSD0521
 Data file 2: /chem3/pid1.i/20130521-2.b/0520a005.d Client ID:
 Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 12:09
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	3117	43689	89.9	TFT(Surr)
15.383	0.002	2027	17381	88.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	301538	0.842 M
8015C 2MP-TMB (4.18 to 16.20)	723723	619239	0.856 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	497864	0.854 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	317708	0.847 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3369	84.9	TFT(Surr)
15.391	0.000	7431	84.5	BB(Surr)

SW8021 (PID)

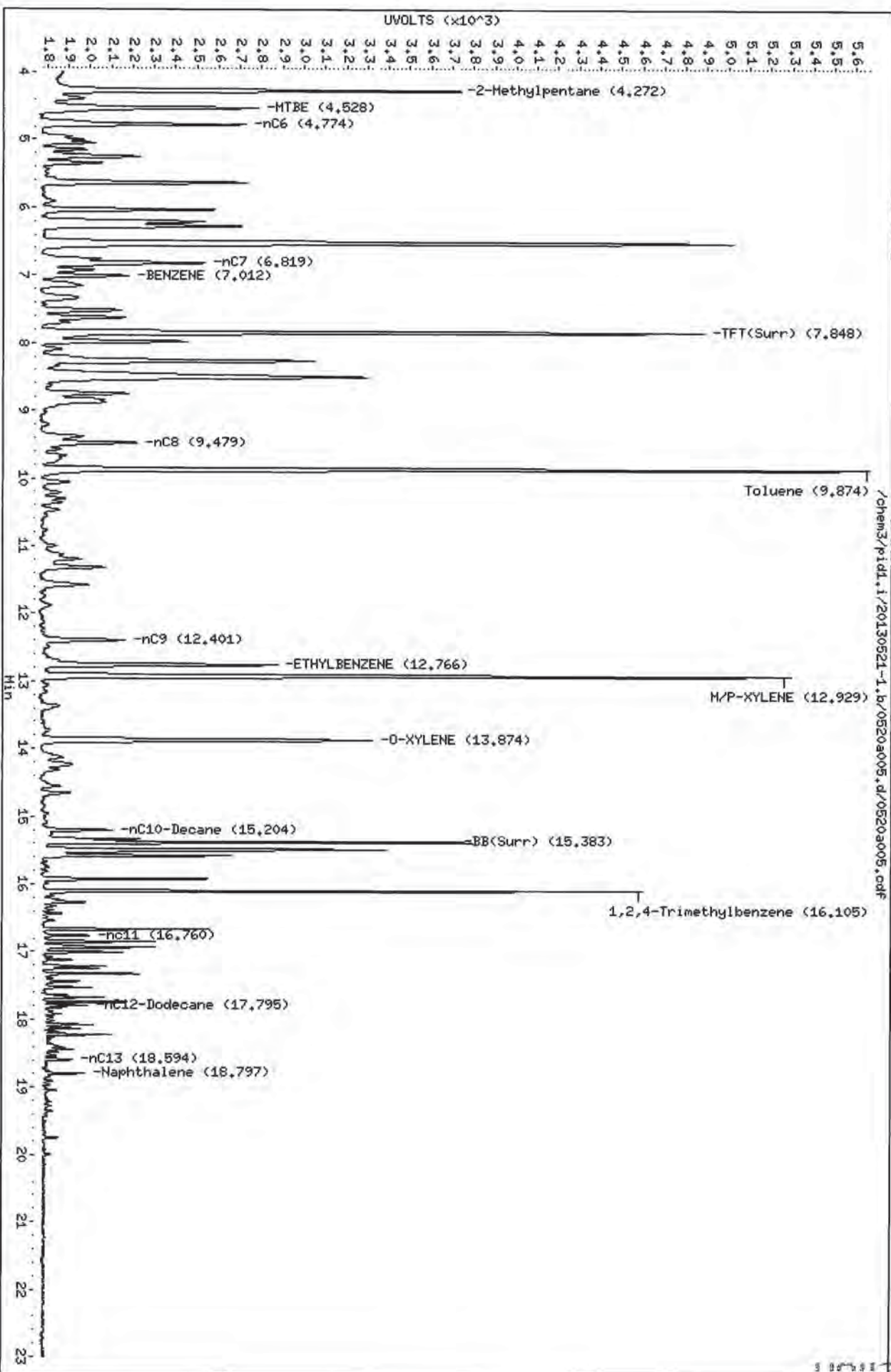
RT	Shift	Response	Amount	Compound
7.019	0.000	738	3.07	Benzene
9.883	0.001	7084	30.93	Toluene
12.774	0.000	1701	8.79	Ethylbenzene
12.938	0.003	6788	31.79	M/P-Xylene
13.883	0.001	2451	14.37	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/05203005.d
Date: 21-MAY-2013 12:09
Client ID:
Sample Info: LCSD0521

Column phase: RTX 502-2 FID

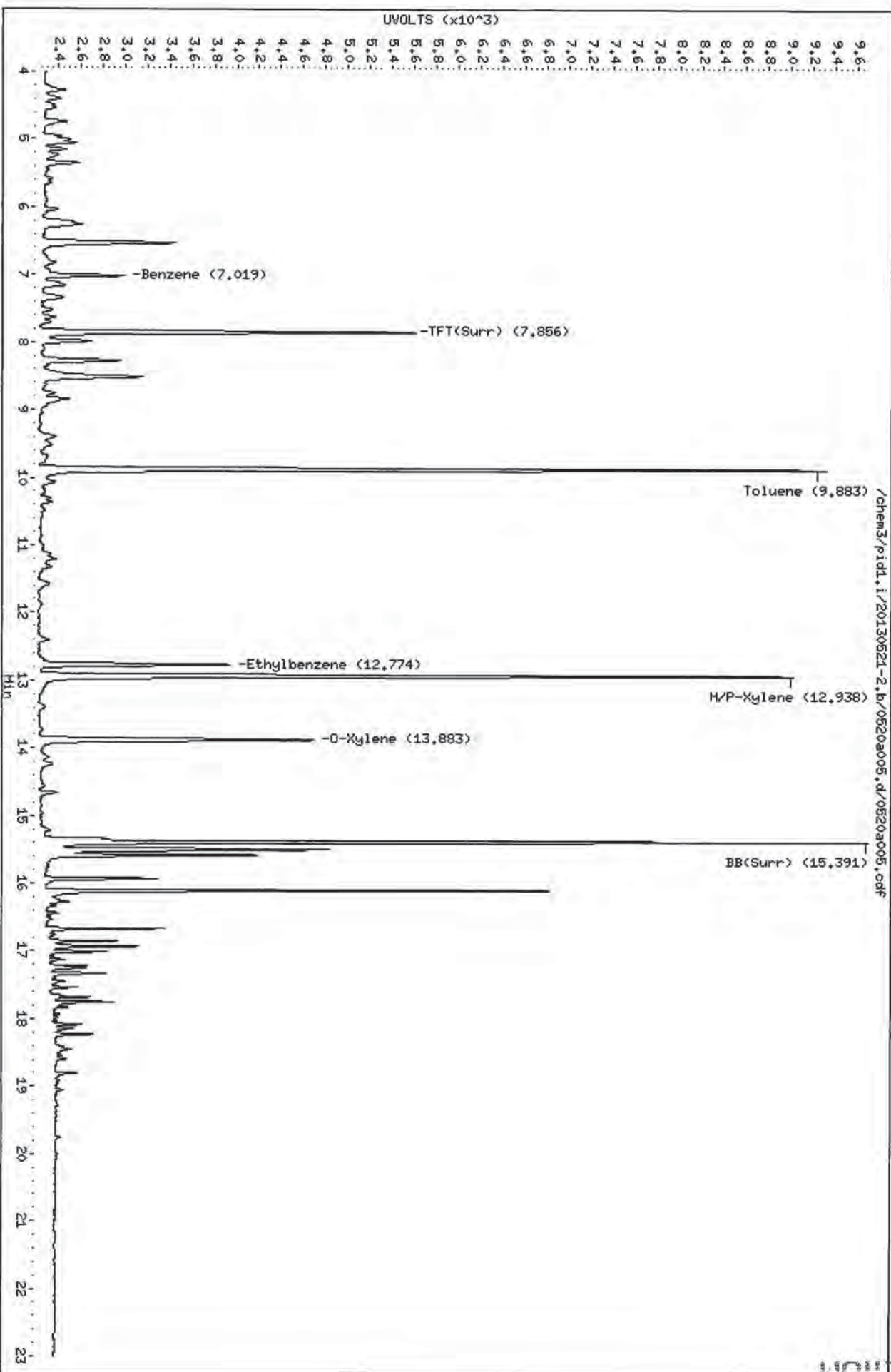
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130521-2.b/0520a005.d
Date: 21-MAY-2013 12:09
Client ID:
Sample Info: LCSD0521

Column phase: RTX 502-2 PID

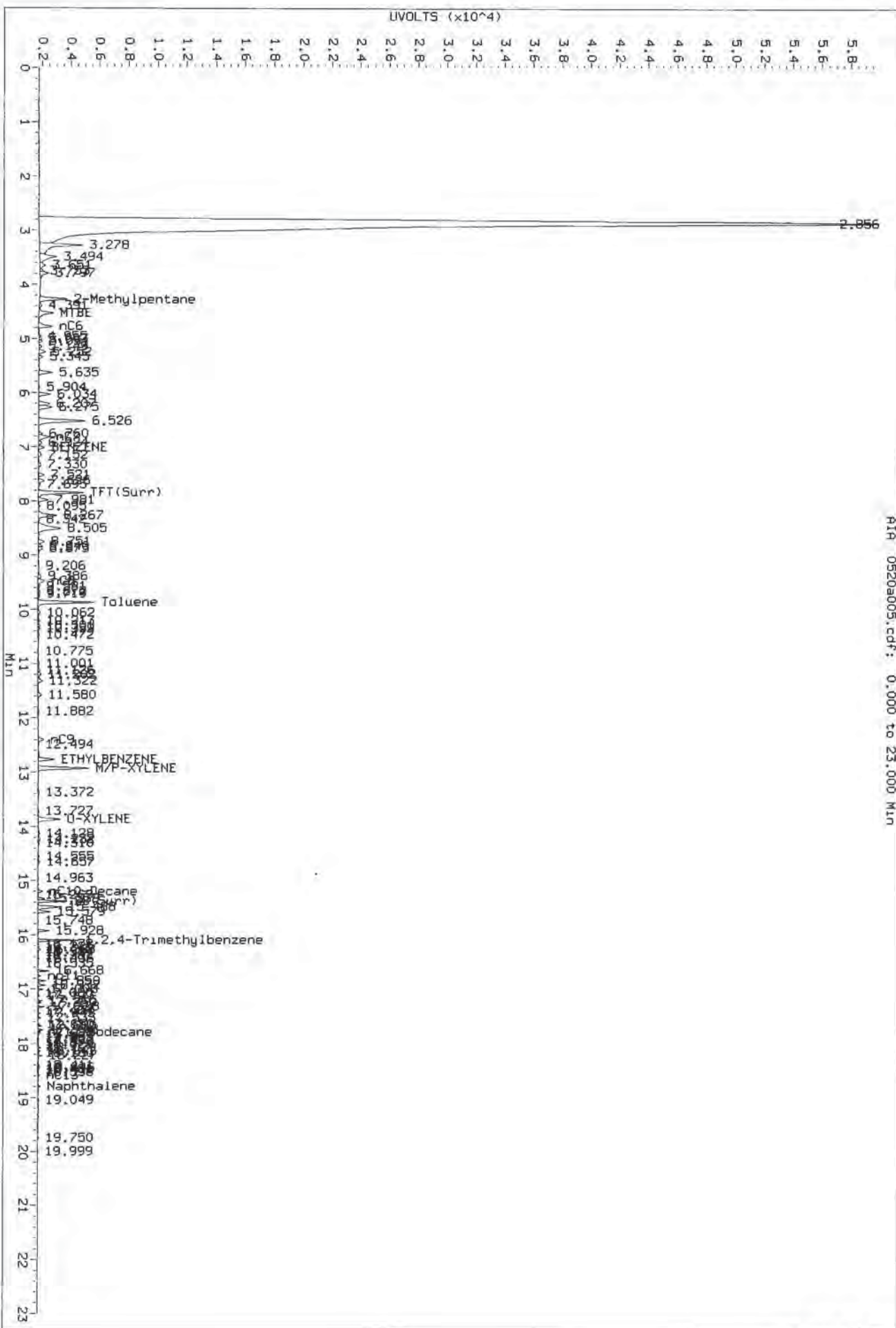
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



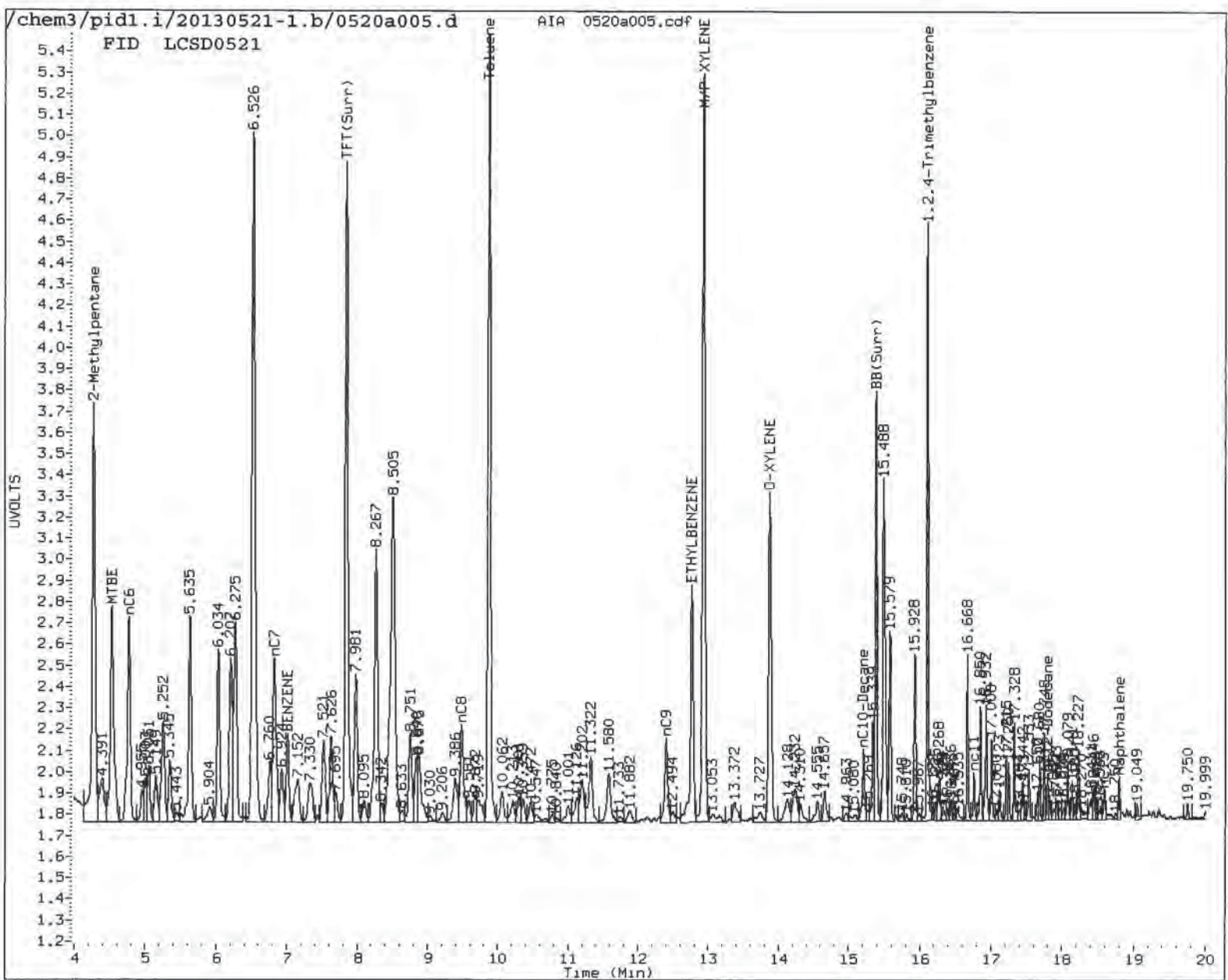
VC
5/12/15

Data File: /chem3/prd1.1/20130521-1.b/0520a005.d/0520a005.cdf
Injection Date: 21-MAY-2013 12:09
Instrument: prd1.1
Client Sample ID:

RI# 0520a005.cdf: 0.000 to 23.000 Min



RI# 0520a005.cdf: 0.000 to 23.000 Min



MANUAL INTEGRATION

- 1 Baseline correction
- 2 Poor chromatography
- 3 Peak not found
- 4 Totals calculation
- 5. Other _____

Analyst: KL Date: 5/22/15

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: MB-052013

METHOD BLANK

Lab Sample ID: MB-052013

LIMS ID: 13-10682

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/20/13 11:18

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	86.2%
Bromobenzene	84.5%

BETX values reported in µg/kg (ppb)

Analytical Resources Inc.
 BETX/Gas Quantitation Report

VC
 5/10/13

Data file 1: /chem3/pid1.i/20130520-1.b/0520a006.d ARI ID: MB0520
 Data file 2: /chem3/pid1.i/20130520-2.b/0520a006.d Client ID:
 Method: /chem3/pid1.i/20130520-2.b/PIDB.m Injection Date: 20-MAY-2013 11:18
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.001	3053	38513	88.0	TFT (Surr)
15.378	0.001	1958	16506	85.8	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	3061	0.009
8015C 2MP-TMB (4.17 to 16.20)	723723	5396	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	4623	0.008
NWTPHG Tol-Nap (9.77 to 18.89)	375093	3061	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	-0.001	3421	86.2	TFT (Surr)
15.386	0.001	7427	84.5	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

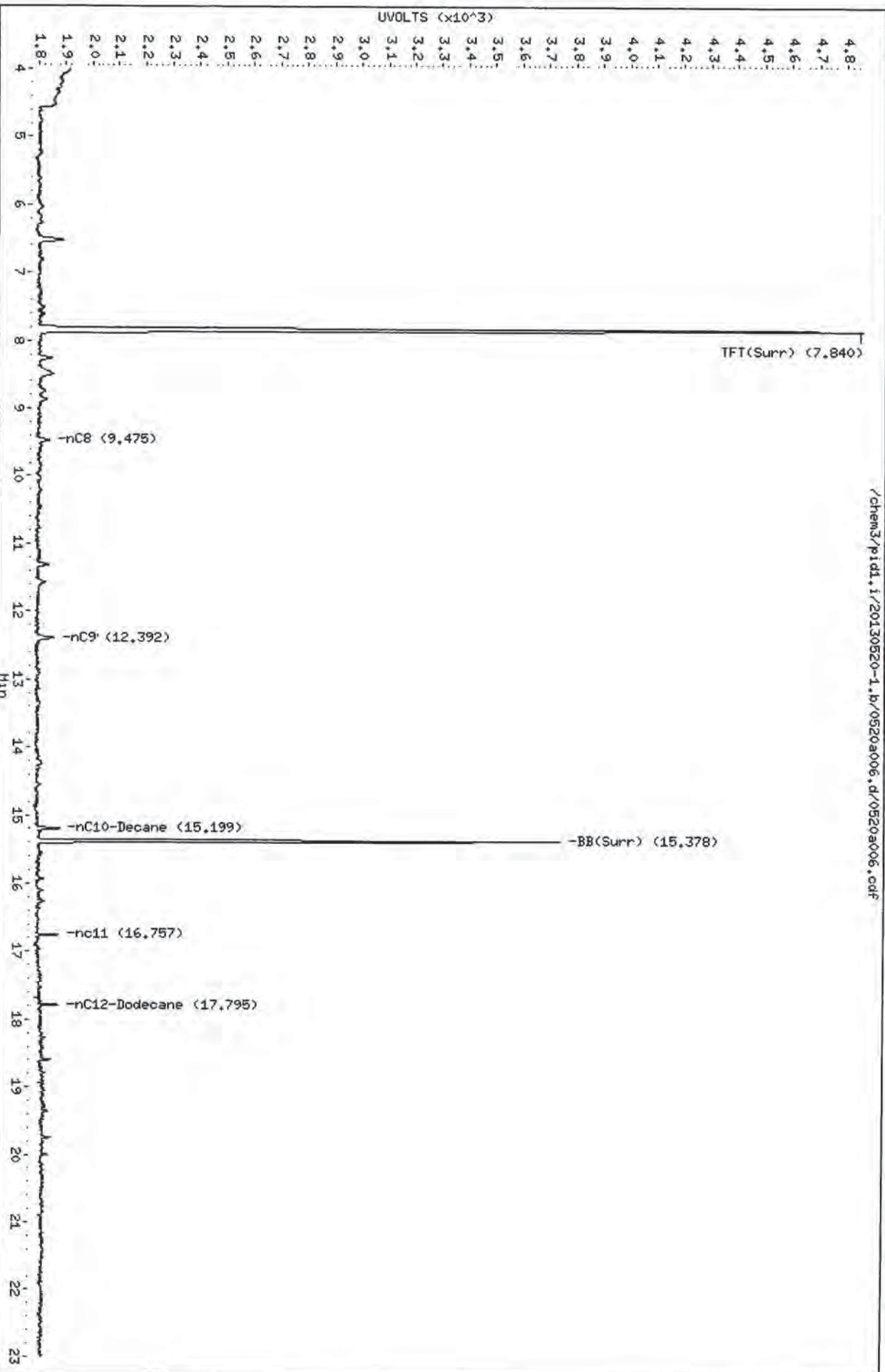
Data File: /chem3/pid1.1/20130520-1.b/0520a006.d
Date: 20-MAY-2013 11:18
Client ID:
Sample Info: HB0520

Instrument: pid1.1

Column phase: RTX 502-2 FID

Operator: PC
Column diameter: 0.18

/chem3/pid1.1/20130520-1.b/0520a006.d/0520a006.cdf



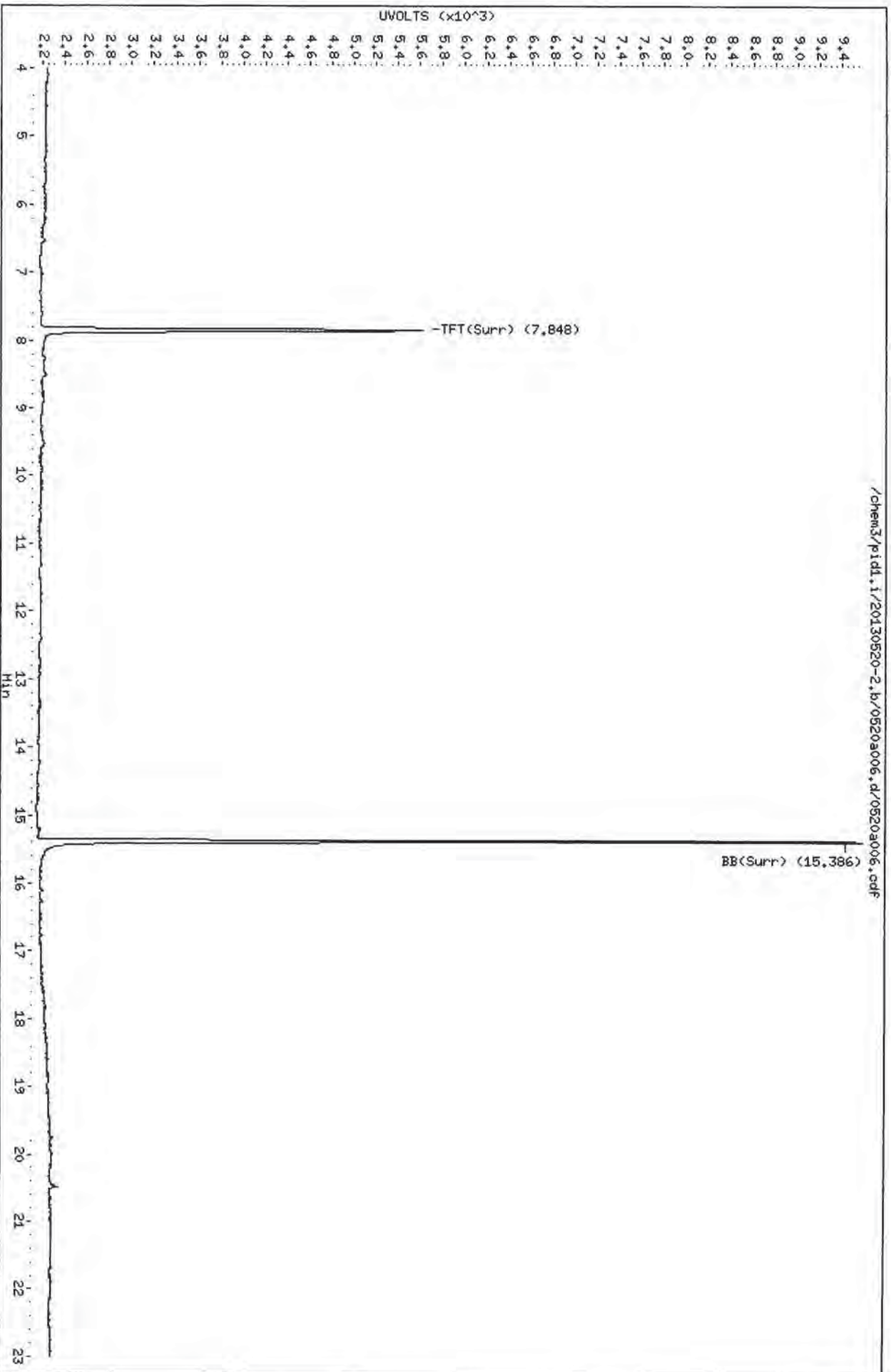
Data File: /chem3/pid1.1/20130520-2.b/0520a006.d
Date : 20-MAY-2013 11:18
Client ID:
Sample Info: HB0520

Instrument: pid1.1

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

/chem3/pid1.1/20130520-2.b/0520a006.d/0520a006.cdf



50 40 30 20 10 0

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021EMod

Page 1 of 1

Sample ID: MB-052113

METHOD BLANK

Lab Sample ID: MB-052113

LIMS ID: 13-10689

Matrix: Soil

Data Release Authorized: *MMW*

Reported: 05/23/13

QC Report No: WQ47-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/21/13 12:38

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

BETX Surrogate Recovery

Trifluorotoluene	80.4%
Bromobenzene	80.9%

BETX values reported in ug/kg (ppb)

PC
5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130521-1.b/0520a006.d ARI ID: MB0521
Data file 2: /chem3/pid1.i/20130521-2.b/0520a006.d Client ID:
Method: /chem3/pid1.i/20130521-2.b/PIDB.m Injection Date: 21-MAY-2013 12:38
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.001	2926	37180	84.4	TFT(Surr)
15.383	0.002	1938	16318	84.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3298	0.009
8015C 2MP-TMB (4.18 to 16.20)	723723	4708	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	3702	0.006
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3298	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3191	80.4	TFT(Surr)
15.391	0.001	7111	80.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

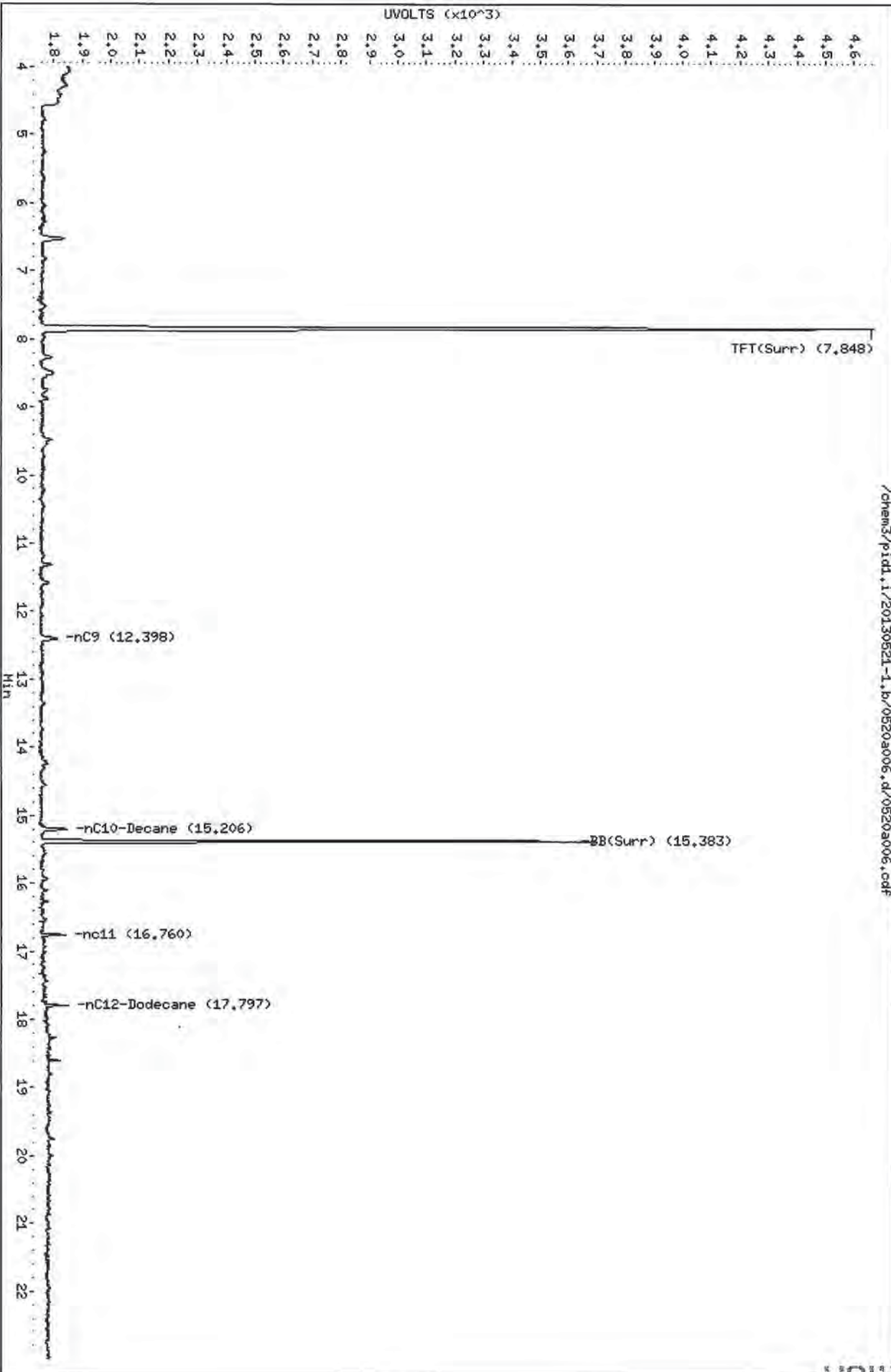
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130521-1.b/0520a006.d
Date: 21-MAY-2013 12:38
Client ID:
Sample Info: MB0521

Column Phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-1.b/0520a006.d/0520a006.cdf



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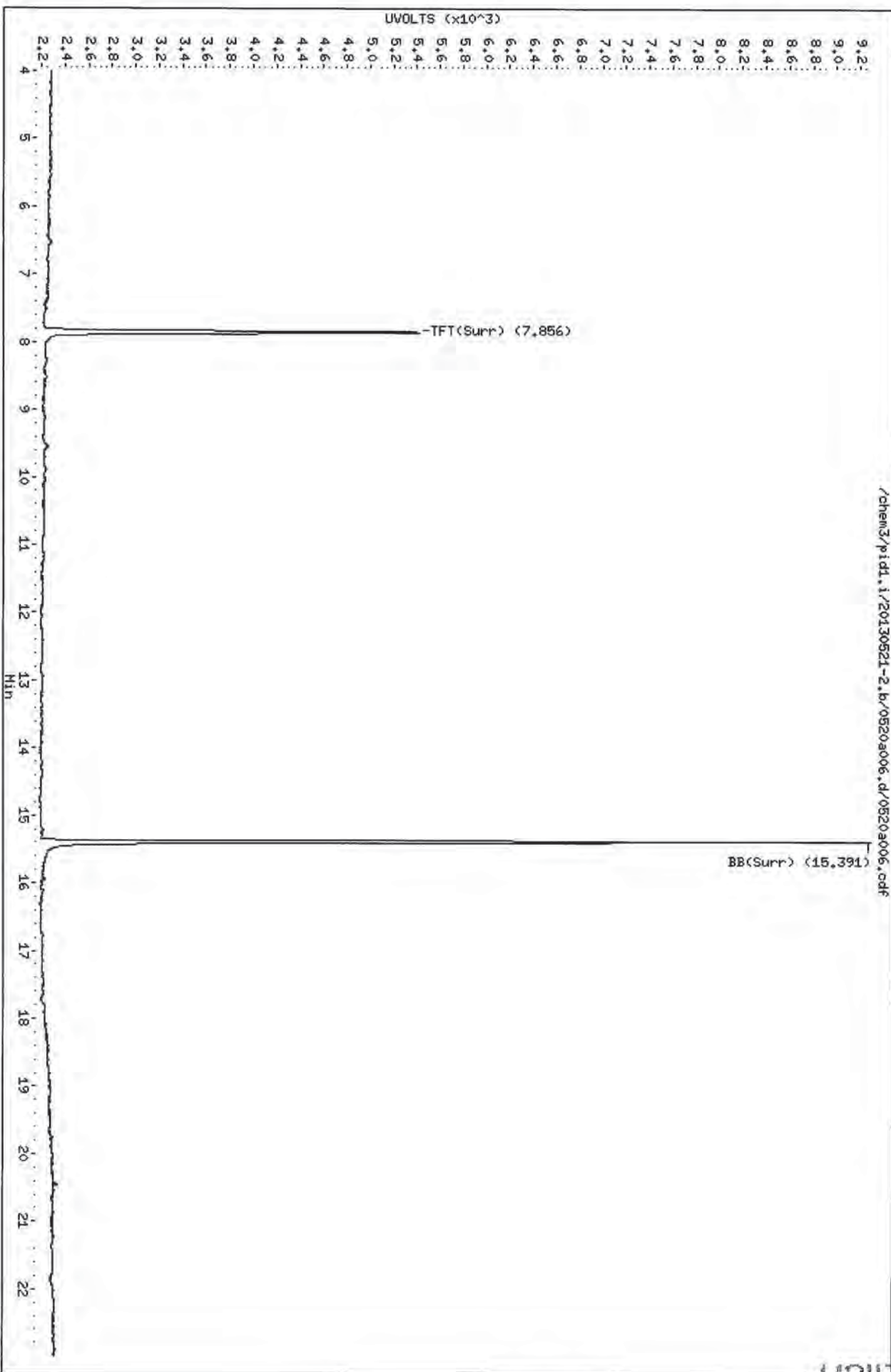
Data File: /chem3/pid1.i/20130521-2.b/0520a006.d
Date: 21-MAY-2013 12:38
Client ID:
Sample Info: MB0521

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130521-2.b/0520a006.d/0520a006.cdf





Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 13, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WP36

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COC), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted six soil samples and six water samples on May 9, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested.

The water NWTPH-Gx surrogate percent recovery of Bromobenzene and the BTEX surrogate percent recoveries of Trifluorotoluene and Bromobenzene fell outside the control limits low for sample **TP-38-050713**. The sample was re-analyzed and all surrogate percent recoveries were within control limits. Both sets of data have been reported. No further corrective action was taken.

The water NWTPH-Gx and BTEX surrogate percent recoveries of Trifluorotoluene and Bromobenzene fell outside the control limits low for sample **TP-42-050813**. The sample was re-analyzed and all surrogate percent recoveries were comparable to the initial analysis. Both sets of data have been reported. No further corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WP36

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WP36	Turn-around Requested: TUSH - 24 HRZ.	Page: 1 of 2
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA	TSILVA@MAINFOSTER.COM	No. of Coolers: 2
Client Project Name: CASHMERE		Cooler Temps: 10.9, 9.9
Client Project #: 0779-02.01-03	Samplers: LINDSEY CROSBY	Ice Present? 4

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested			Notes/Comments
					NWTPH-DX	BTEX BTEX 800	NWTPH-GX	
TP-38-050713	5/8/13	0740	S	5	X	X	X	
TP-39-050713		0800						
TP-40-050813		1145						
TP-41-050813		1830						
TP-42-050813		1200						
TP-43-050813		1300						

Comments/Special Instructions	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Relinquished by:	Received by:
	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
Date & Time: 5/8/13 1400	Date & Time: 5/8/13 945	Date & Time:	Date & Time:	

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WP36	Turn-around Requested: RUSH - 24 HR.	Page: 2 of 2
ARI Client Company: MFA, INC.	Phone:	Date:
Client Contact: TONY SILVA TSILVA@MAULFOSTER.COM	No. of Coolers: 2	Ice Present? <input checked="" type="checkbox"/>
Client Project Name: CASHMERE	Cooler Temps: 10.9, 9.9	

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested			Notes/Comments
					NUTRA-GX	NUTRA-DX	BTEX 8081	
TP-38-050713	5/8/13	0740	W	4	X	X	X	
TP-39-050713		0800						
TP-40-050813		1145						
TP-41-050813		1230						
TP-42-050813		1200						
TP-43-050813		1300						

Comments/Special Instructions	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>
	Printed Name: LINDSEY CROSBY	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: MFA	Company: AKI	Company:	Company:
	Date & Time: 5/8/13 1400	Date & Time: 5/8/13 945	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: Maul Foster

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WP36

Tracking No: K0466846735/K0466846726 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 10.9 9.9

If cooler temperature is out of compliance fill out form 00070F

Cooler Accepted by: JM Date: 5/9/13 Time: 945 Temp Gun ID#: 90877952

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: _____ NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 5/9/13 Time: 1054

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
TP38 050713	TP-38-050713	*	
TP39 050713	TP39 050713	*	

Additional Notes, Discrepancies, & Resolutions:

By: JM Date: 5/9/13

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"



WP36

Cooler Temperature Compliance Form

Cooler#:	Temperature(°C):		
Sample ID	Bottle Count	Bottle Type	
All samples associated with this job were received at a temp greater than 6°C.			

Cooler#:	Temperature(°C):		
Sample ID	Bottle Count	Bottle Type	

Cooler#:	Temperature(°C):		
Sample ID	Bottle Count	Bottle Type	

Cooler#:	Temperature(°C):		
Sample ID	Bottle Count	Bottle Type	

Completed by: JMA Date: 5/9/13 Time: 1130

Sample ID Cross Reference Report



ARI Job No: WP36
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. TP-38-050713	WP36A	13-10051	Soil	05/08/13 07:40	05/09/13 09:45
2. TP-39-050713	WP36B	13-10052	Soil	05/08/13 08:00	05/09/13 09:45
3. TP-40-050713	WP36C	13-10053	Soil	05/08/13 11:45	05/09/13 09:45
4. TP-41-050713	WP36D	13-10054	Soil	05/08/13 12:30	05/09/13 09:45
5. TP-42-050713	WP36E	13-10055	Soil	05/08/13 12:00	05/09/13 09:45
6. TP-43-050713	WP36F	13-10056	Soil	05/08/13 13:00	05/09/13 09:45
7. TP-38-050713	WP36G	13-10057	Water	05/08/13 07:40	05/09/13 09:45
8. TP-39-050713	WP36H	13-10058	Water	05/08/13 08:00	05/09/13 09:45
9. TP-40-050713	WP36I	13-10059	Water	05/08/13 11:45	05/09/13 09:45
10. TP-41-050713	WP36J	13-10060	Water	05/08/13 12:30	05/09/13 09:45
11. TP-42-050713	WP36K	13-10061	Water	05/08/13 12:00	05/09/13 09:45
12. TP-43-050713	WP36L	13-10062	Water	05/08/13 13:00	05/09/13 09:45

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *mw*
Reported: 05/13/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050913 13-10051	Method Blank HC ID: ---	05/09/13	05/10/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 100%
WP36A 13-10051	TP-38-050713 HC ID: DIESEL/MOTOR OIL	05/09/13	05/10/13 FID4A	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	58 120	2500 3600 79.3%
WP36B 13-10052	TP-39-050713 HC ID: DIESEL/MOTOR OIL	05/09/13	05/10/13 FID4A	1.00 5.0	Diesel Range Motor Oil Range o-Terphenyl	33 66	71 580 93.6%
WP36C 13-10053	TP-40-050813 HC ID: DIESEL/MOTOR OIL	05/09/13	05/10/13 FID4A	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	600 1200	6300 10000 D
WP36D 13-10054	TP-41-050813 HC ID: DIESEL/MOTOR OIL	05/09/13	05/10/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.6 13	55 260 87.5%
WP36E 13-10055	TP-42-050813 HC ID: DIESEL/MOTOR OIL	05/09/13	05/10/13 FID4A	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	71 140	1900 4800 86.9%
WP36F 13-10056	TP-43-050813 HC ID: DIESEL/MOTOR OIL	05/09/13	05/10/13 FID4A	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.0 12	57 380 94.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a025.d

ARI ID: WP36MBS1

Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m

Client ID: WP36MBS1

Instrument: fid4a.i

Injection: 10-MAY-2013 15:27

Operator: JR/VTS/JW

Report Date: 05/11/2013

Dilution Factor: 1

Macro: 11-APR-2013

Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG	(Tol-C12)	86507	5.57
C8	-----				WATPHD	(C12-C24)	279288	19.24
C10	2.854	0.000	700	730	WATPHM	(C24-C38)	264448	19.44
C12	3.819	-0.001	2463	2966	AK102	(C10-C25)	319938	18.59
C14	4.502	-0.003	4516	4528	AK103	(C25-C36)	211873	23.02
C16	5.087	0.000	3151	3170				
C18	5.624	-0.003	2819	4344				
C20	6.169	-0.004	2516	4185				
C22	6.707	-0.004	2225	2658	MIN.OIL	(C24-C38)	264448	15.50
C24	7.219	-0.008	1771	2343				
C25	7.482	0.008	2381	5223				
C26	7.730	0.007	1284	473				
C28	8.158	-0.009	2482	4235				
C32	8.981	0.007	9715	14561				
C34	9.347	-0.002	1491	1382				
Filter Peak	11.442	0.010	3484	3042	CREOSOT	(C12-C22)	237754	108.97 M
C36	9.725	0.016	3009	9166				
C38	10.060	0.000	2115	4091				
C40	10.398	-0.002	2620	1993				
o-terph	5.764	0.001	1034535	871122				
Triacon Surr	8.596	0.004	899695	836236				

Range Times: NW Diesel (3.820 - 7.227) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
NW M.Oil (7.23 - 10.06) AK103 (7.47 - 9.71) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871122	45.2	100.4
Triacontane	836236	46.0	102.1

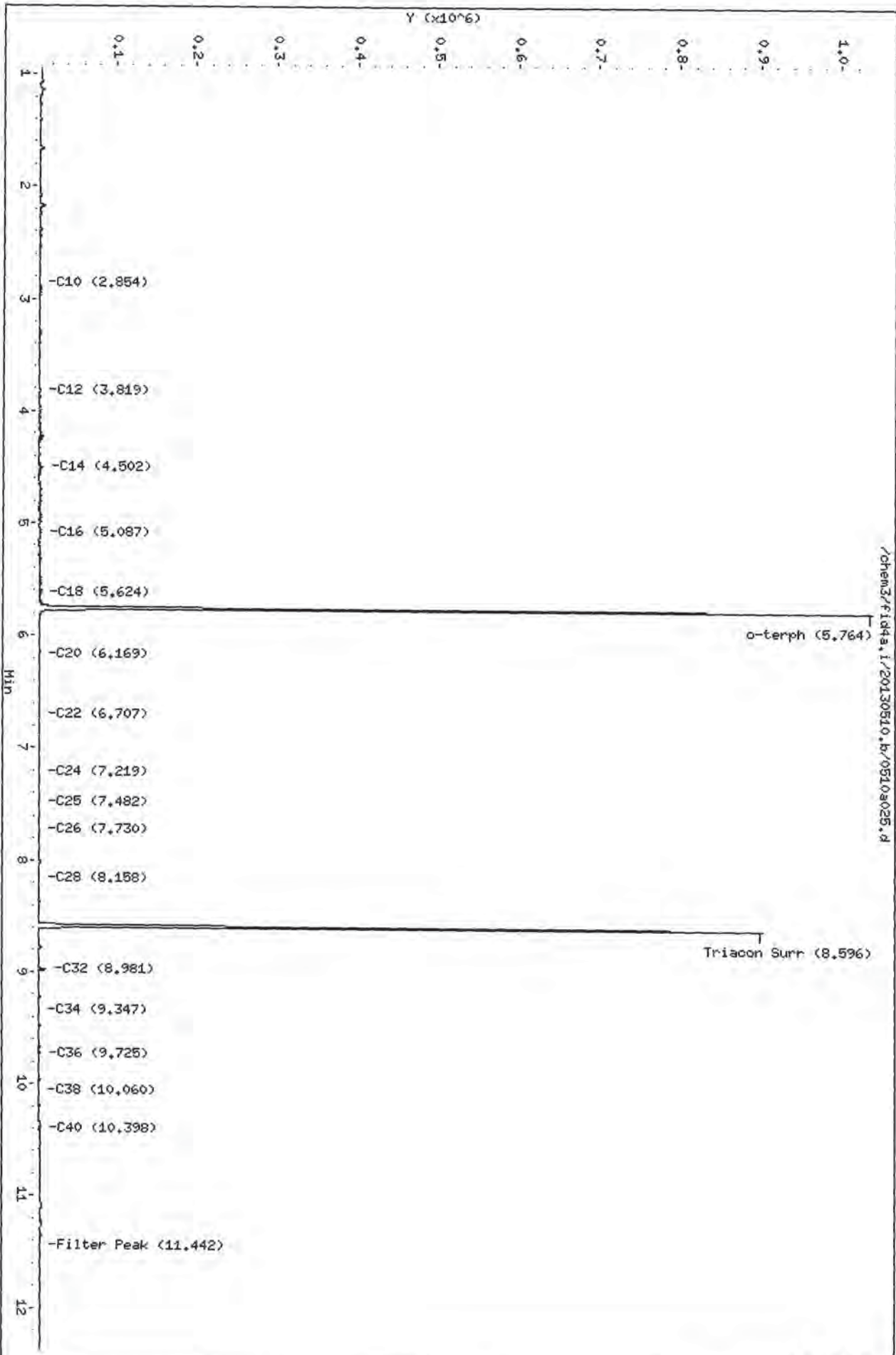
JW
5/11/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a025.d
Date: 10-MAY-2013 15:27
Client ID: MP36HBS1
Sample Info: MP36HBS1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



/chem3/fid4a.i/20130510.b/0510a025.d

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a021.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36A
Client ID: TP-38-050713
Injection: 10-MAY-2013 14:04
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	196963	12.67
C8	----				WATPHD	(C12-C24)	31060489	2139.96 ✓
C10	2.850	-0.004	520	755	WATPHM	(C24-C38)	42308876	3110.04 ✓
C12	3.819	-0.001	7592	12143	AK102	(C10-C25)	34269883	1990.72
C14	4.505	0.000	50809	81218	AK103	(C25-C36)	38805023	4216.99
C16	5.093	0.006	94454	159445				
C18	5.637	0.009	125710	126940				
C20	6.171	-0.001	205838	408540				
C22	6.717	0.006	284196	133078	MIN.OIL	(C24-C38)	42308876	2480.16
C24	7.232	0.005	364935	158173				
C25	7.472	-0.002	388644	161133				
C26	7.714	-0.009	416211	250855				
C28	8.176	0.009	386998	203168				
C32	8.973	-0.001	258365	597845				
C34	9.361	0.011	217768	440783				
Filter Peak	11.449	0.017	4045	3611	CREOSOT	(C12-C22)	20487194	9389.61 M
C36	9.723	0.014	47431	47520				
C38	10.058	-0.002	13671	17432				
C40	10.401	0.001	5299	8758				
o-terph	5.758	-0.005	97413	68783				
Triacon Surr	8.602	0.010	107042	79230				

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	68783	3.6	79.3 M ✓
Triacotane	79230	4.4	96.8 M

JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a021.d

Date: 10-May-2013 14:04

Client ID: TP-38-050713

Sample Info: WP36A.10

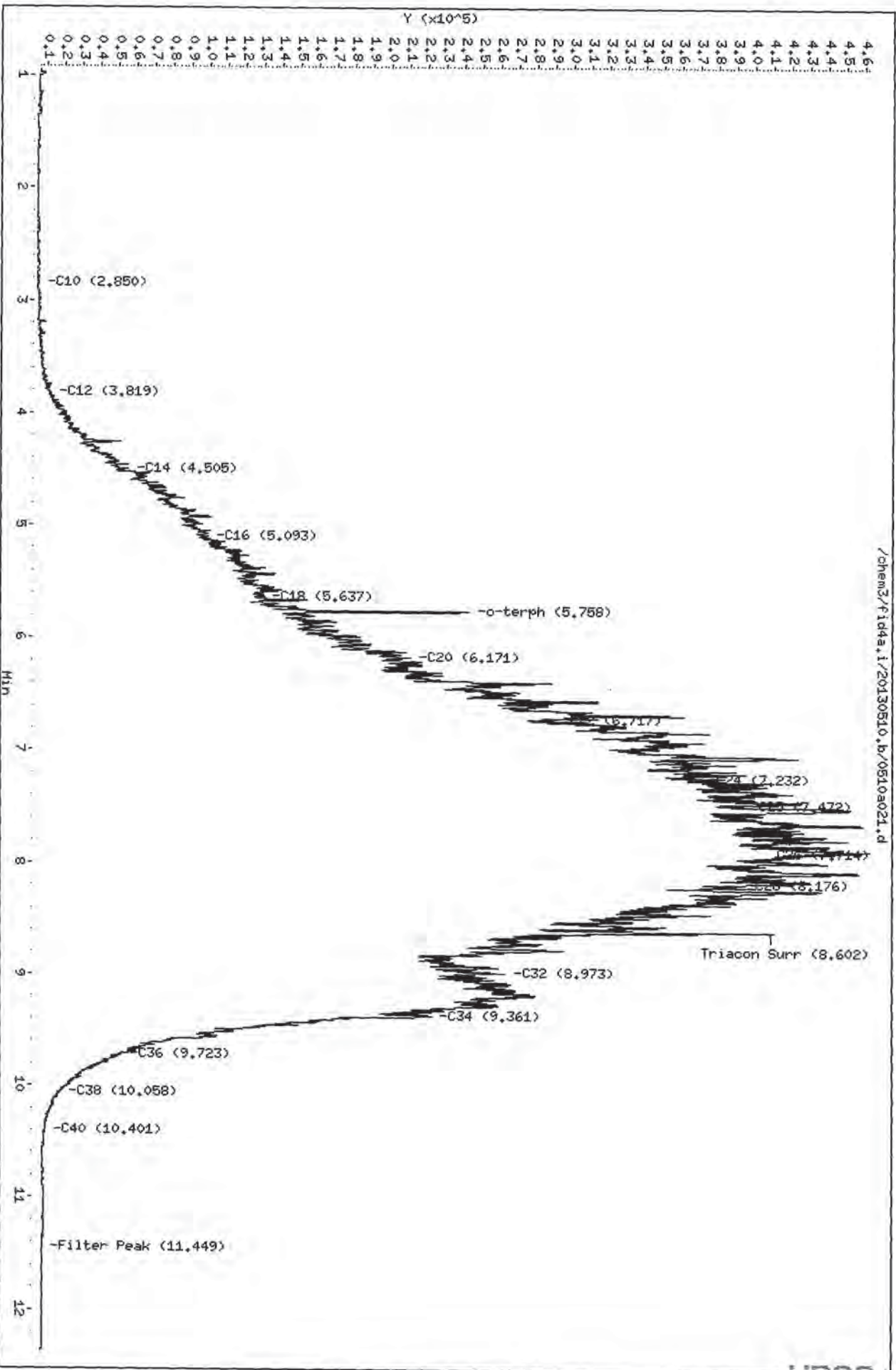
Column phase: RTX-1

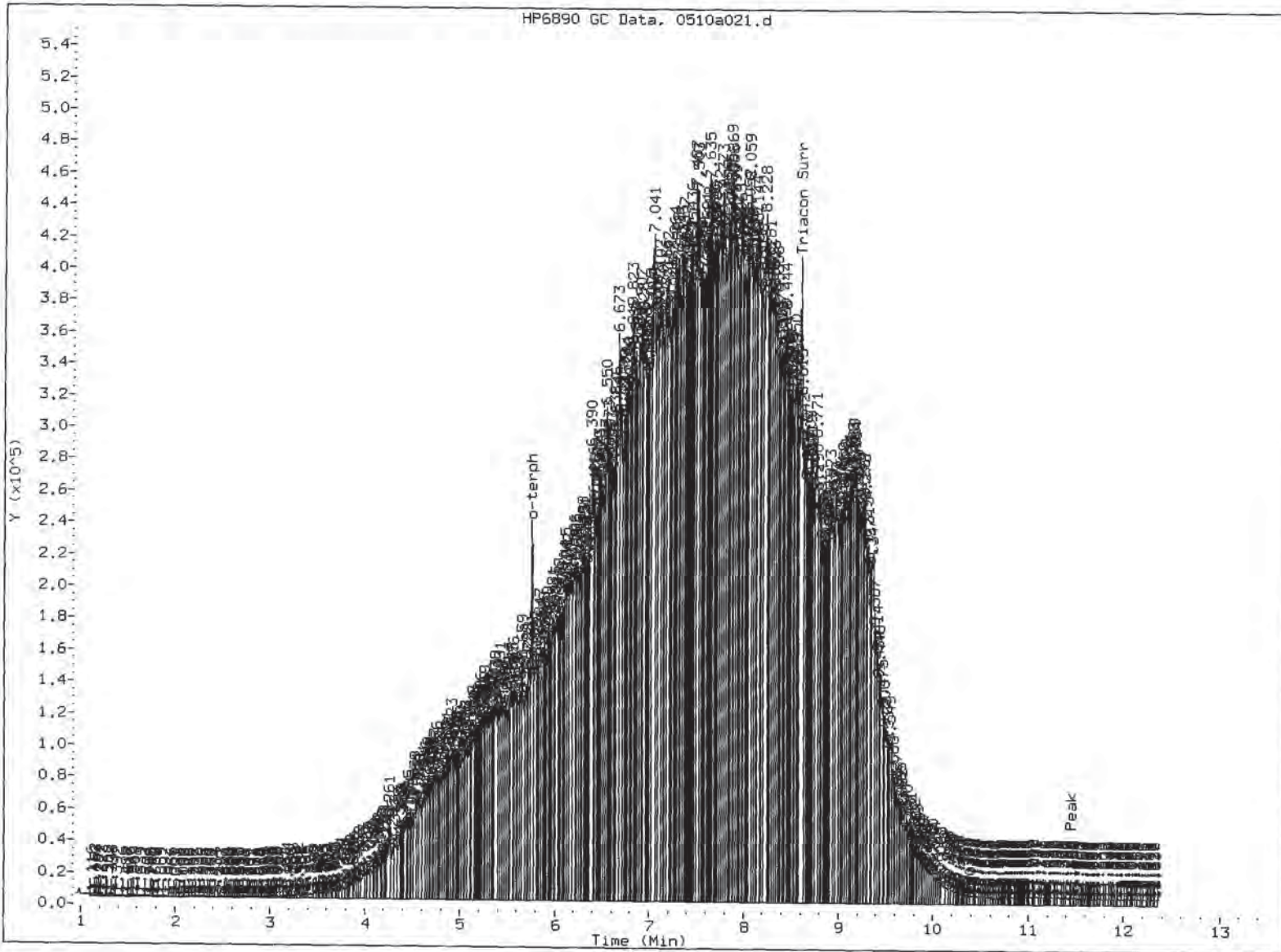
Instrument: fid4a.i

Operator: JR/VTS/JM

Column diameter: 0.25

JW
5/10/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JW

Date: 5/10/03

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a016.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36B
Client ID: TP-39-050713
Injection: 10-MAY-2013 12:21
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		55216	3.55
C8	----				WATPHD (C12-C24)		1576057	108.58
C10	2.851	-0.003	374	342	WATPHM (C24-C38)		12042751	885.24
C12	3.819	-0.001	695	839	AK102 (C10-C25)		1942557	112.84
C14	4.502	-0.002	1398	2002	AK103 (C25-C36)		10557058	1147.25
C16	5.086	-0.001	1941	2732				
C18	5.623	-0.005	3831	6510				
C20	6.183	0.011	10072	28953				
C22	6.705	-0.006	18654	13152	MIN.OIL (C24-C38)		12042751	705.95
C24	7.226	-0.001	34547	24970				
C25	7.466	-0.007	43366	65174				
C26	7.722	-0.001	51639	20190				
C28	8.160	-0.007	92268	115243				
C32	8.984	0.010	91626	183531				
C34	9.345	-0.004	69899	46052				
Filter Peak	11.446	0.013	4758	5254	CREOSOT (C12-C22)		735253	336.98 M
C36	9.704	-0.005	69586	121738				
C38	10.066	0.006	43362	61605				
C40	10.389	-0.011	20736	8553				
o-terph	5.754	-0.008	246447	162285				
Triacon Surr	8.589	-0.003	219255	178949				

Range Times: NW Diesel (3.820 - 7.227) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
NW M.Oil (7.23 - 10.06) AK103 (7.47 - 9.71) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	162285	8.4	93.5 M
Triacotane	178949	9.8	109.3 M

JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a016.d

Date: 10-MAY-2013 12:21

Client ID: TP-39-050713

Sample Info: MP36B/5

Column phase: RTX-1

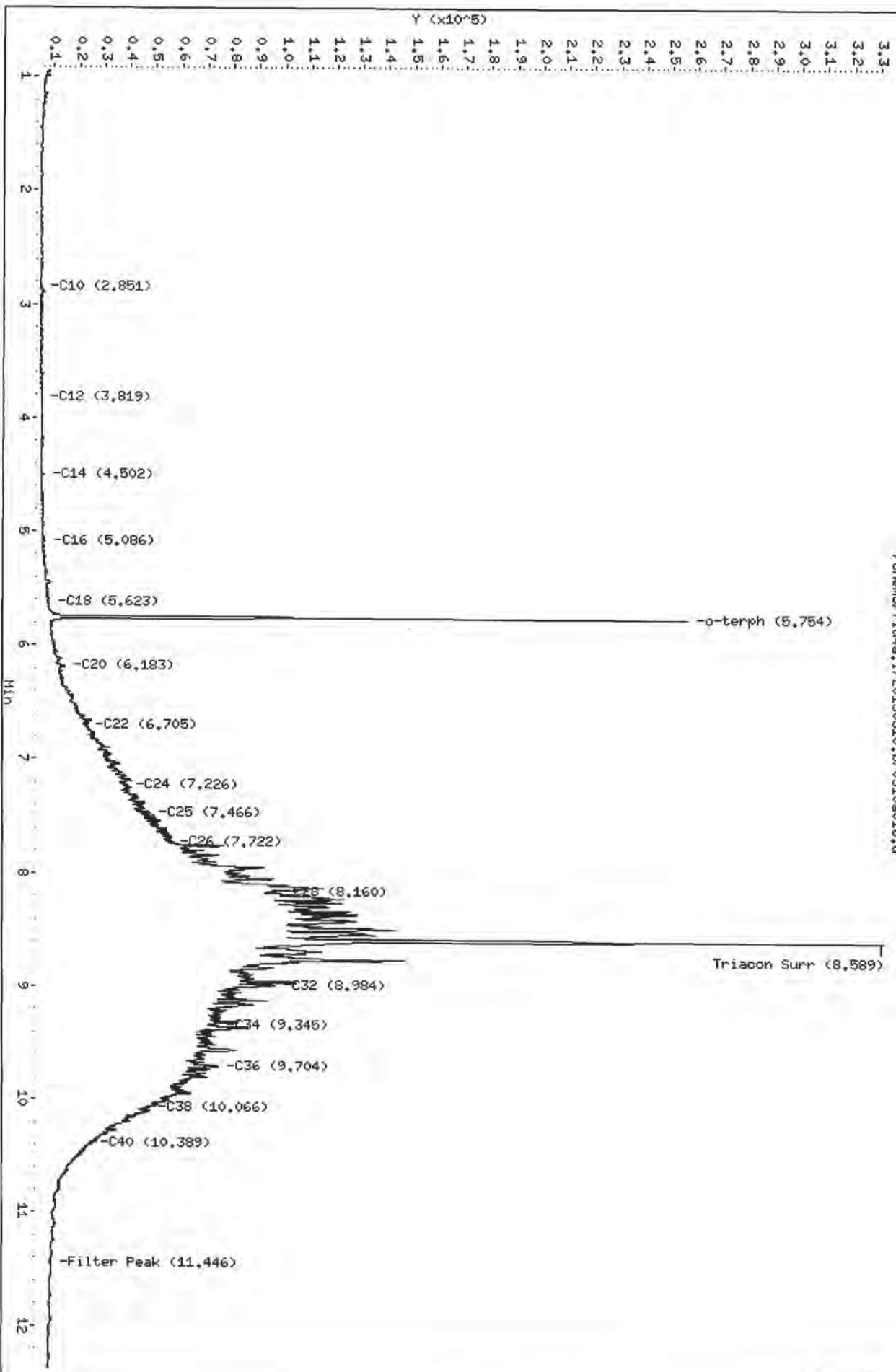
Instrument: fid4a.i

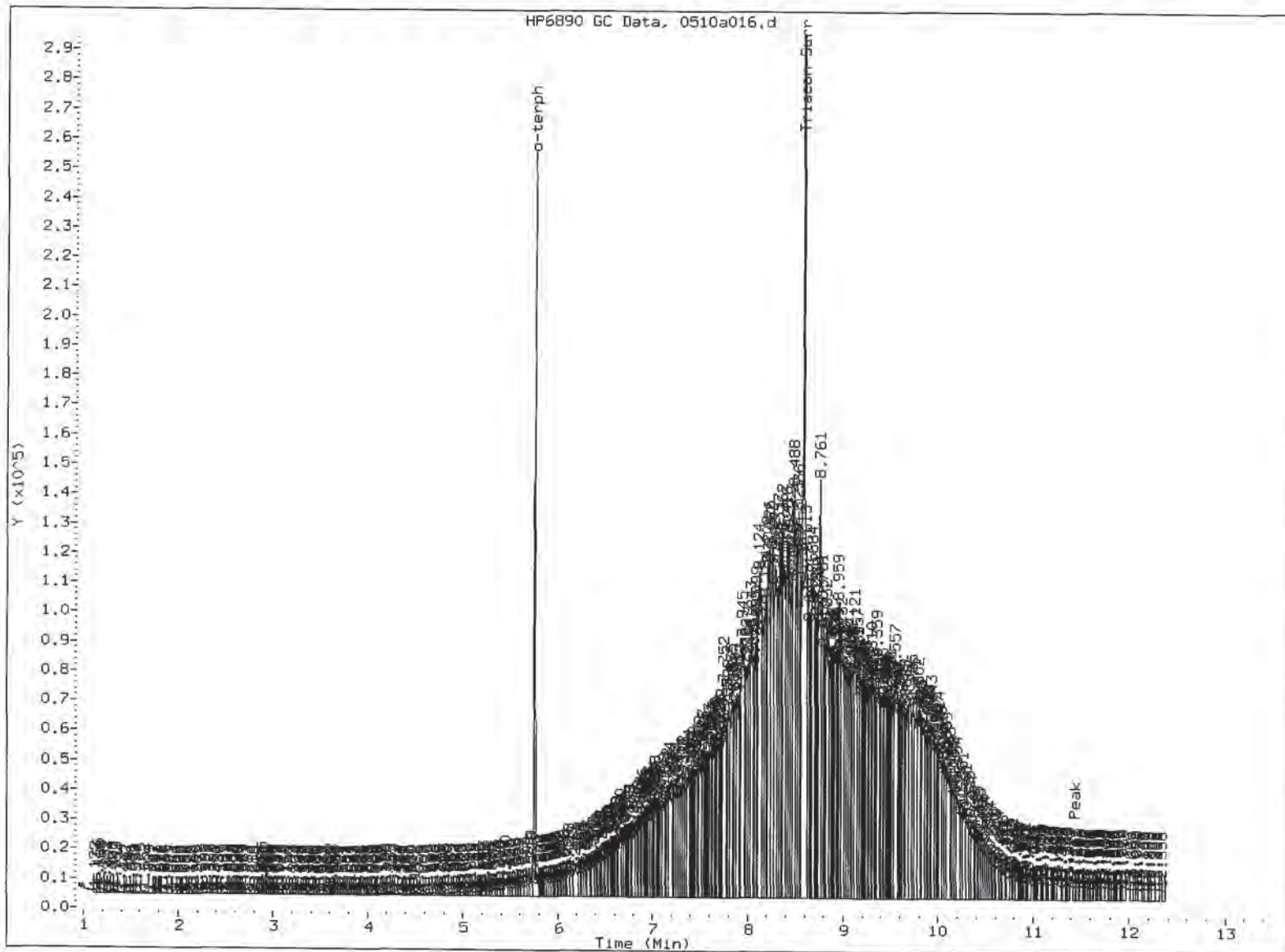
Operator: JR/VTS/JM

Column diameter: 0.25

JW
5/10/13

/chem3/fid4a.i/20130510.b/0510a016.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: TJW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a022.d
 Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
 Instrument: fid4a.i
 Operator: JR/VTS/JW
 Report Date: 05/10/2013
 Macro: 11-APR-2013
 Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36C
 Client ID: TP-40-050813
 Injection: 10-MAY-2013 14:25
 Dilution Factor: 100

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	33809	2.18
C8	----				WATPHD	(C12-C24)	7601043	523.69
C10	2.841	-0.013	179	329	WATPHM	(C24-C38)	11417004	839.24
C12	3.818	-0.002	245	78	AK102	(C10-C25)	8839383	513.48
C14	4.499	-0.005	382	910	AK103	(C25-C36)	10078551	1095.25
C16	5.086	-0.001	1122	1699				
C18	5.633	0.006	5473	5310				
C20	6.178	0.005	41239	23251				
C22	6.713	0.002	113294	76390	MIN.OIL	(C24-C38)	11417004	669.27
C24	7.225	-0.002	135417	119738				
C25	7.477	0.003	152449	137788				
C26	7.720	-0.003	138771	107047				
C28	8.164	-0.004	102852	44095				
C32	8.981	0.007	47270	31435				
C34	9.360	0.010	39302	39723				
Filter Peak	11.431	-0.002	3112	4413	CREOSOT	(C12-C22)	3510145	1608.76 M
C36	9.703	-0.006	11281	14773				
C38	10.070	0.010	5042	6755				
C40	10.400	0.000	2998	1245				
o-terph	----							
Triacon Surr	----							

Range Times: NW Diesel (3.820 - 7.227) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
 NW M.Oil (7.23 - 10.06) AK103 (7.47 - 9.71) OR Diesel (2.85 - 8.17)

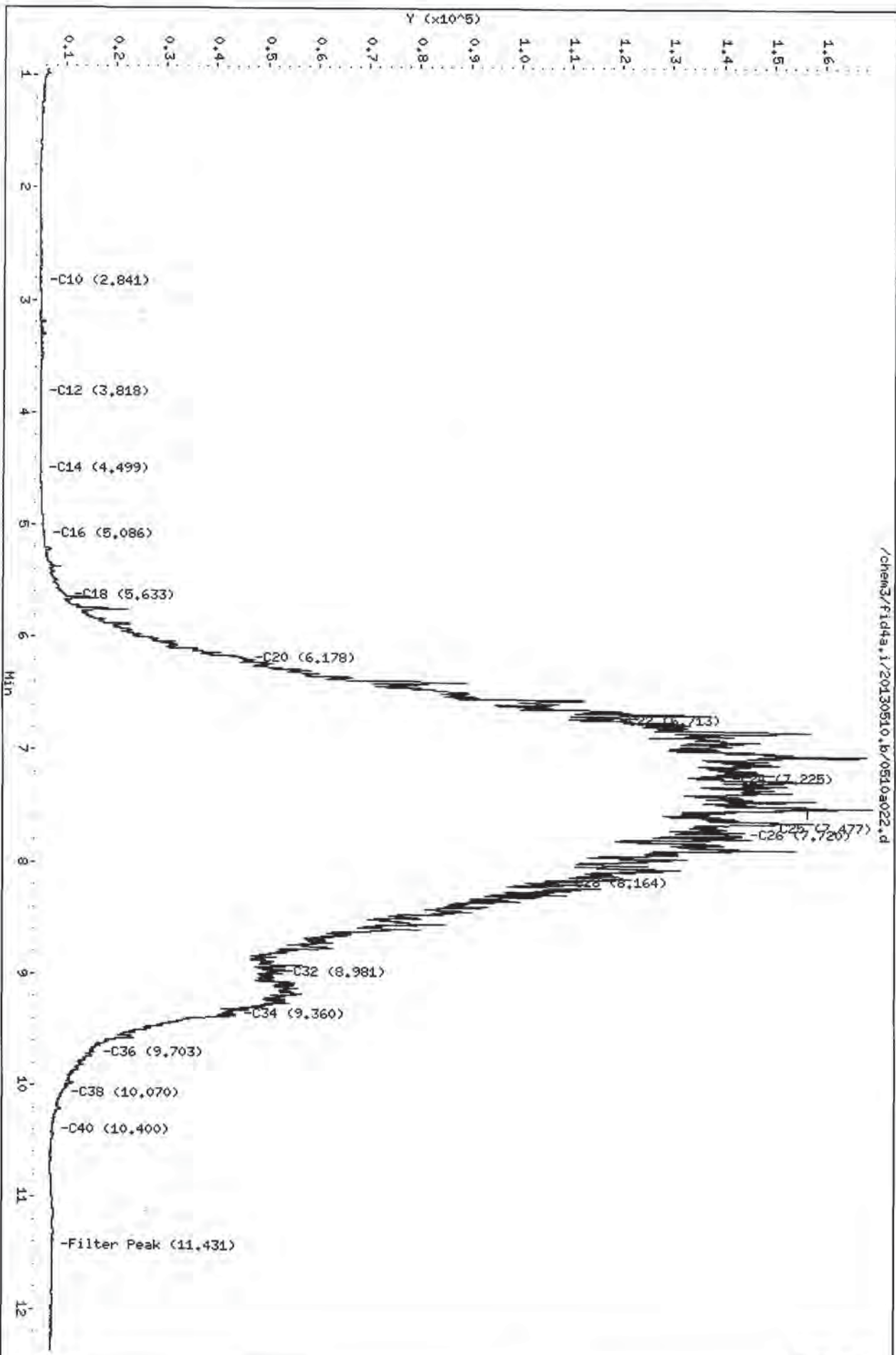
Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacotane	0	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a022.d
Date: 10-MAY-2013 14:25
Client ID: TP-40-050813
Sample Info: MP36C.100
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25



/chem3/fid4a.i/20130510.b/0510a022.d

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a018.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36D
Client ID: TP-41-050813
Injection: 10-MAY-2013 13:02
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	217459	13.99
C8	----				WATPHD	(C12-C24)	6045006	416.48
C10	2.851	-0.003	1389	1411	WATPHM	(C24-C38)	26403759	1940.88
C12	3.818	-0.002	4735	4417	AK102	(C10-C25)	7040391	408.97
C14	4.501	-0.003	8778	11041	AK103	(C25-C36)	24262419	2636.62
C16	5.085	-0.002	10291	12569				
C18	5.624	-0.003	27186	45220				
C20	6.169	-0.003	39576	21580				
C22	6.711	0.000	67321	22393	MIN.OIL	(C24-C38)	26403759	1547.80
C24	7.225	-0.002	97683	149711				
C25	7.472	-0.001	109656	128324				
C26	7.723	0.000	131283	54023				
C28	8.172	0.005	237931	308695				
C32	8.972	-0.002	199439	317374				
C34	9.344	-0.005	142927	114985				
Filter Peak	11.430	-0.003	7407	5088	CREOSOT	(C12-C22)	3667672	1680.95 M
C36	9.697	-0.012	112977	247882				
C38	10.051	-0.009	43536	78058				
C40	10.399	-0.001	11670	8604				
o-terph	5.764	0.002	918473	759494				
Triacon Surr	8.610	0.017	819880	804760				

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	759494	39.4	87.5 M
Triacotane	804760	44.2	98.3 M

JW
5/10/13

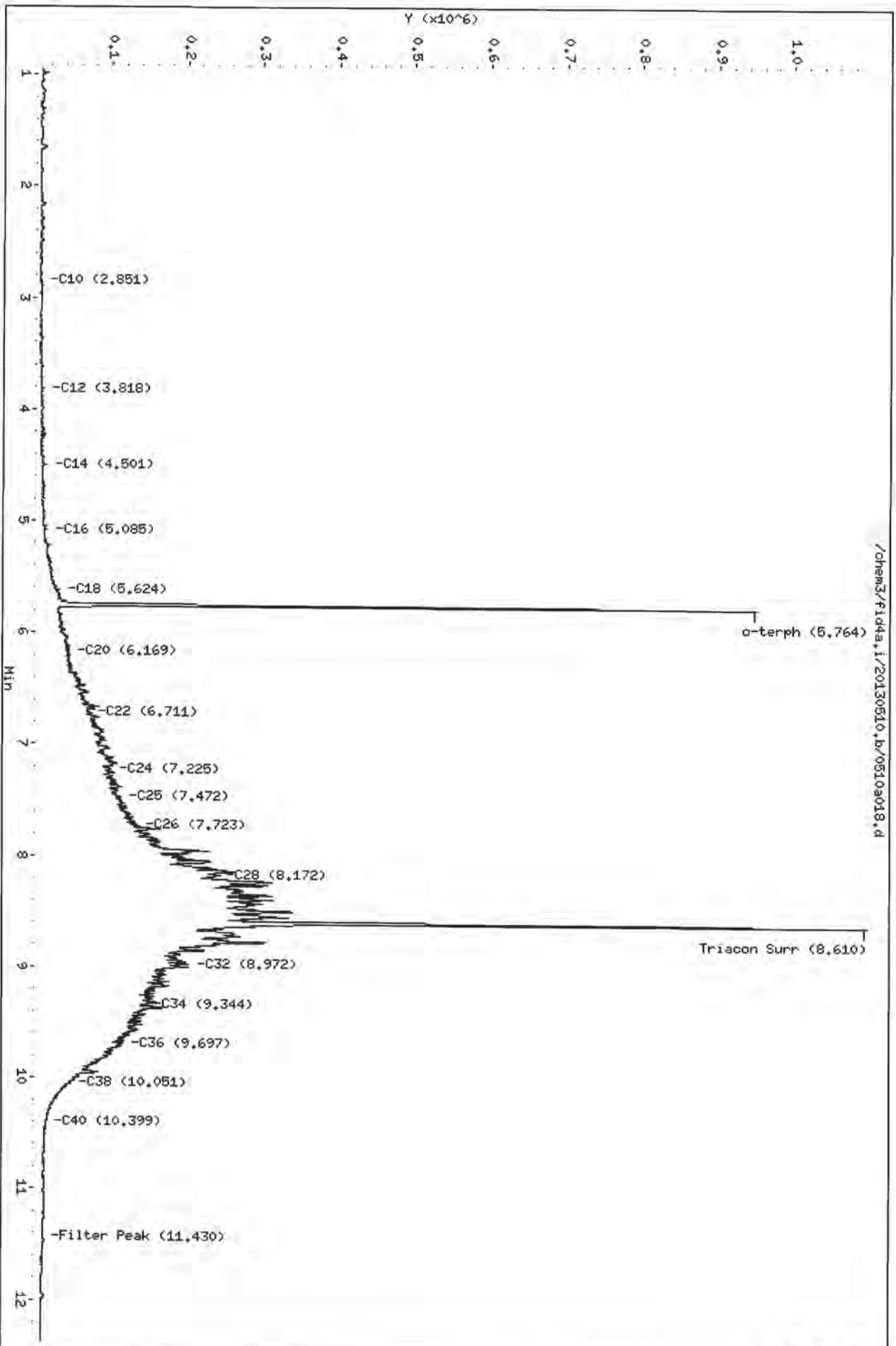
M Indicates the peak was manually integrated

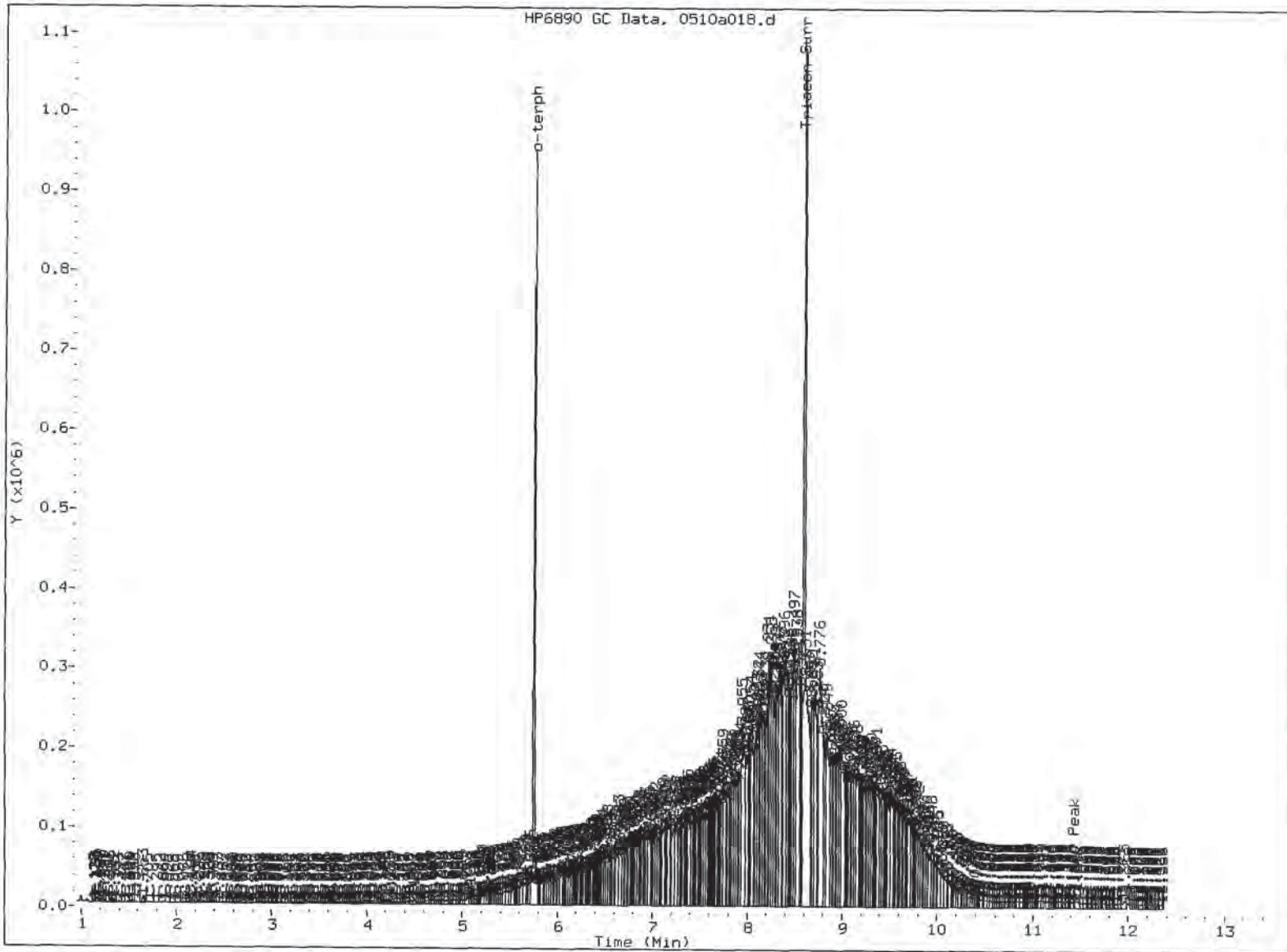
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130510.b/0510a018.d
Date: 10-MAY-2013 13:02
Client ID: TP-41-050813
Sample Info: WP36D
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JW
5/10/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- 5. Skipped surrogate

Analyst: TU

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a023.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36E
Client ID: TP-42-050813
Injection: 10-MAY-2013 14:46
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG (To1-C12)		119633	7.70
C8	-----				WATPHD (C12-C24)		19475828	1341.82
C10	2.838	-0.015	292	446	WATPHM (C24-C38)		45544291	3347.87
C12	3.819	-0.001	1809	1149	AK102 (C10-C25)		22248177	1292.39
C14	4.494	-0.010	1732	3524	AK103 (C25-C36)		42672905	4637.31
C16	5.085	-0.002	3200	4230				
C18	5.628	0.000	26295	48800				
C20	6.168	-0.005	140669	91783				
C22	6.698	-0.013	260803	338949	MIN.OIL (C24-C38)		45544291	2669.82
C24	7.223	-0.003	360449	167748				
C25	7.475	0.002	393675	223449				
C26	7.722	-0.001	420351	335832				
C28	8.176	0.008	400527	166028				
C32	8.972	-0.002	311705	169564				
C34	9.341	-0.008	308784	446341				
Filter Peak	11.423	-0.009	3167	1828	CREOSOT (C12-C22)		9776261	4480.62 M
C36	9.700	-0.009	21704	26181				
C38	10.067	0.006	4798	8570				
C40	10.400	0.000	2767	1697				
o-terph	5.754	-0.008	117158	75460				
Triacon Surr	8.600	0.008	88366	68842				

Range Times: NW Diesel (3.820 - 7.227) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
NW M.Oil (7.23 - 10.06) AK103 (7.47 - 9.71) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	75460	3.9	87.0 M
Triacontane	68842	3.8	84.1 M

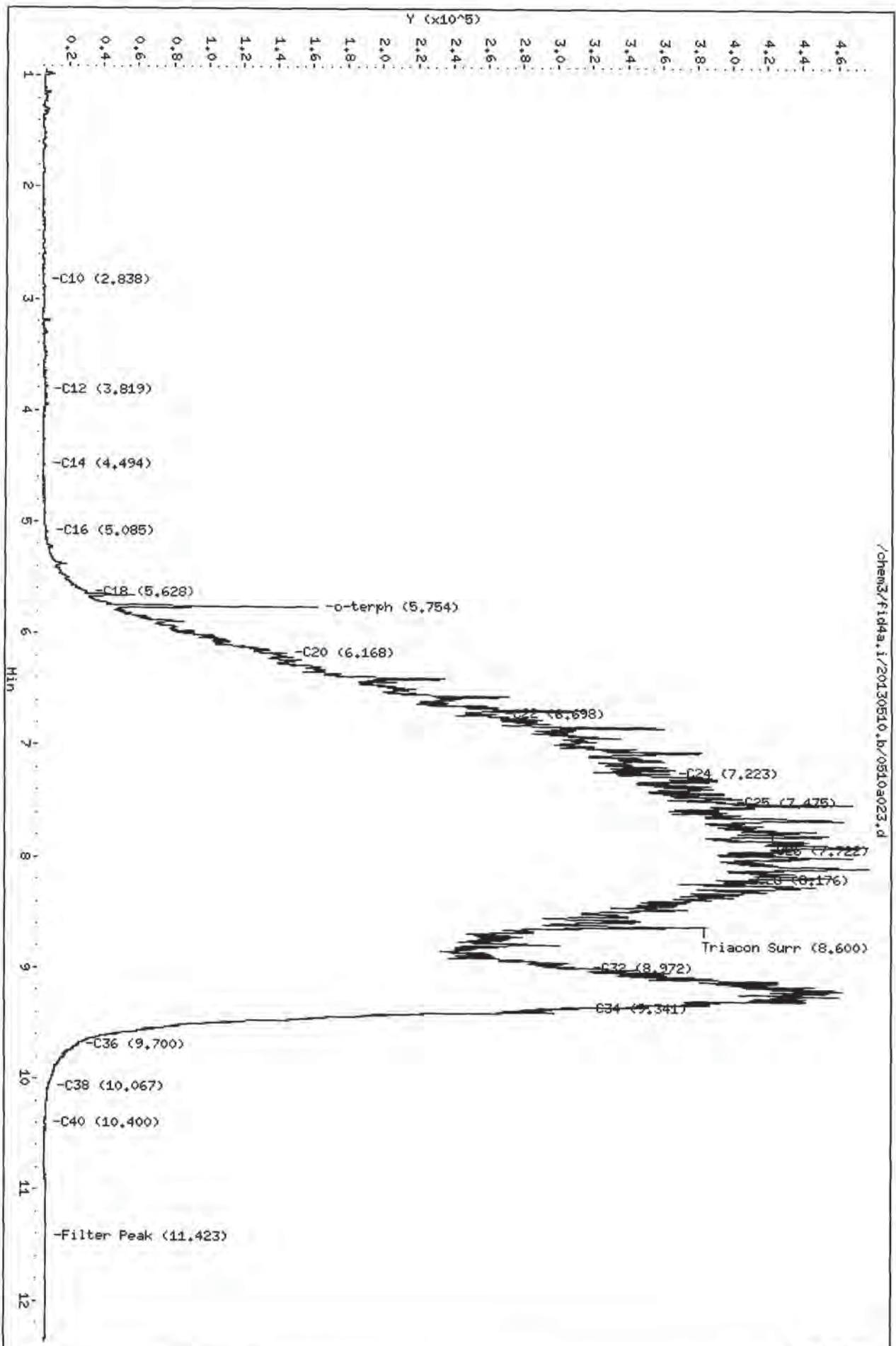
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

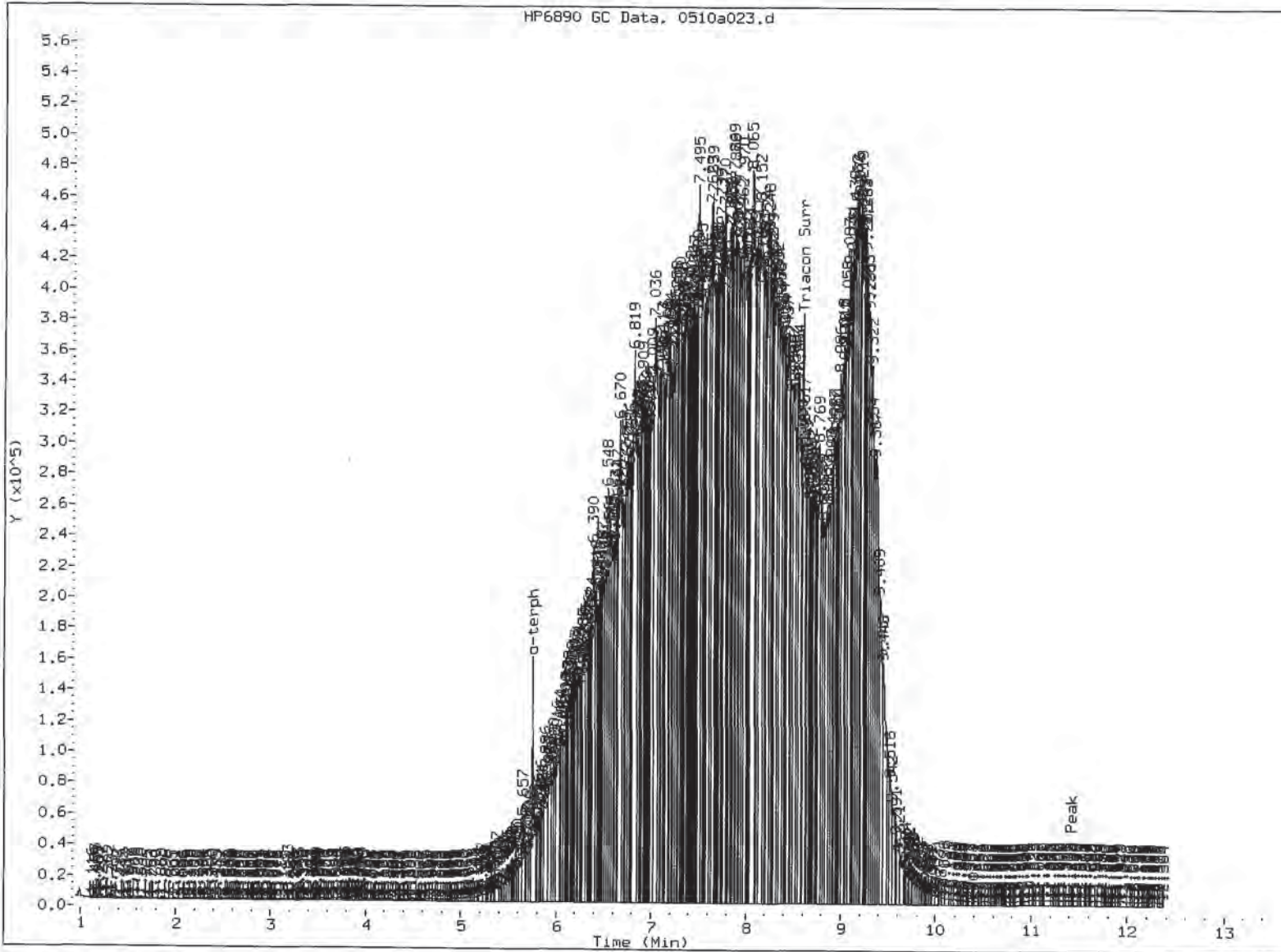
Data File: /chem3/fid4a.i/20130510.b/0510a023.d
Date: 10-MAY-2013 14:46
Client ID: TP-42-050813
Sample Info: MP36E.10
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

/chem3/fid4a.i/20130510.b/0510a023.d



TP
5/10/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: *JW*

Date: 5/10/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a024.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36F
Client ID: TP-43-050813
Injection: 10-MAY-2013 15:06
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	-----				WATPHG	(Tol-C12)	321427	20.68
C8	-----				WATPHD	(C12-C24)	6990228	481.60
C10	2.854	0.000	2337	2071	WATPHM	(C24-C38)	42805376	3146.53
C12	3.818	-0.002	5700	5317	AK102	(C10-C25)	8577993	498.29
C14	4.501	-0.003	9655	11134	AK103	(C25-C36)	40769408	4430.46
C16	5.085	-0.002	11151	14666				
C18	5.625	-0.003	26060	46673				
C20	6.173	0.001	39371	21787				
C22	6.708	-0.004	77864	88863	MIN.OIL	(C24-C38)	42805376	2509.26
C24	7.219	-0.008	127759	85258				
C25	7.470	-0.004	166927	165146				
C26	7.726	0.003	218204	213082				
C28	8.174	0.007	430222	559027				
C32	8.969	-0.005	341221	139112				
C34	9.349	-0.001	206673	100010				
Filter Peak	11.434	0.002	9608	23124	CREOSOT	(C12-C22)	3771972	1728.76 M
C36	9.703	-0.006	75141	74989				
C38	10.071	0.010	16819	16533				
C40	10.403	0.003	10218	9541				
o-terph	5.764	0.001	949774	818161				
Triacon Surr	8.618	0.026	764047	757905				

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	818161	42.4	94.3 M
Triacotane	757905	41.7	92.6 M

JES
5/10/13

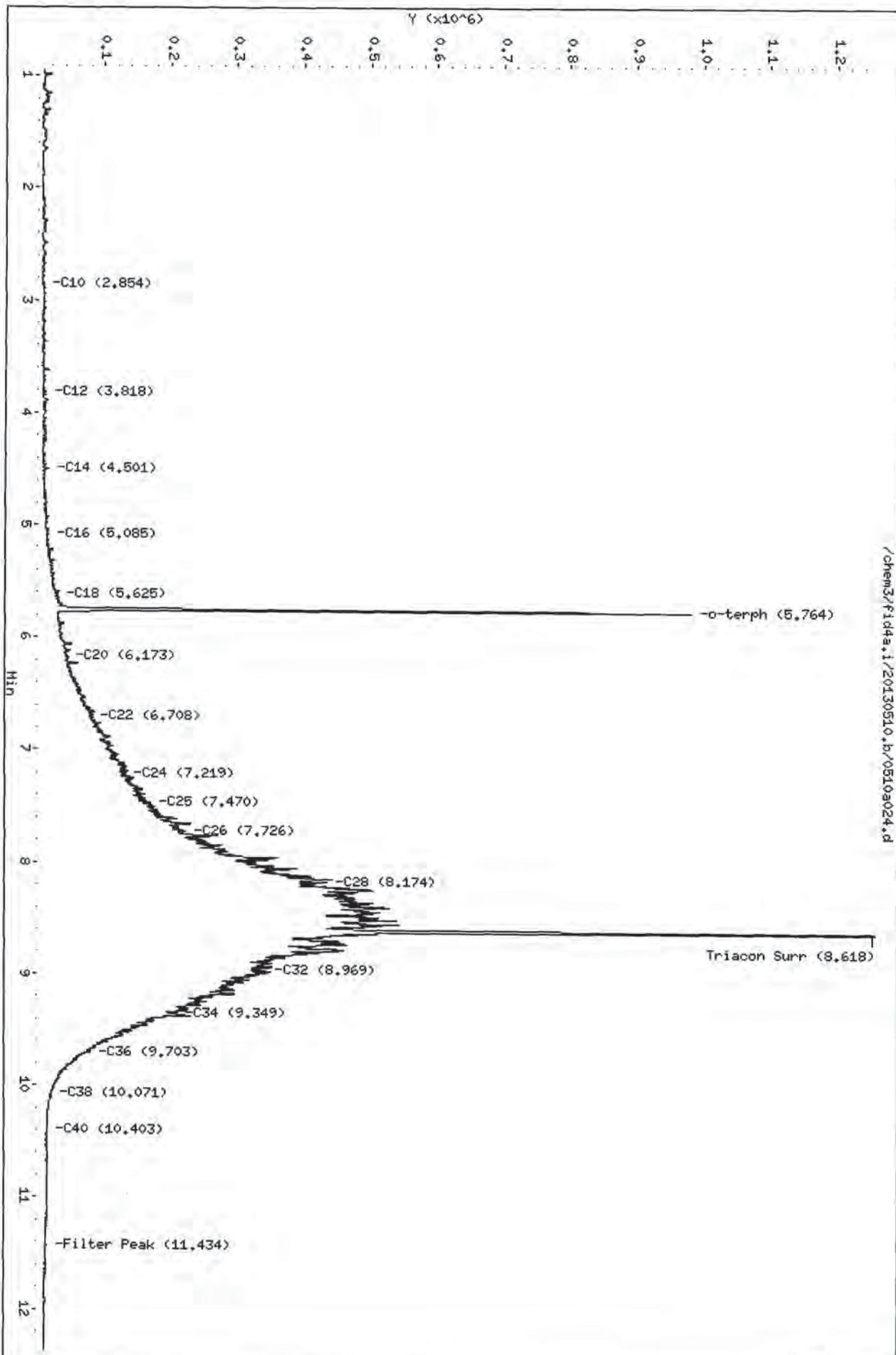
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

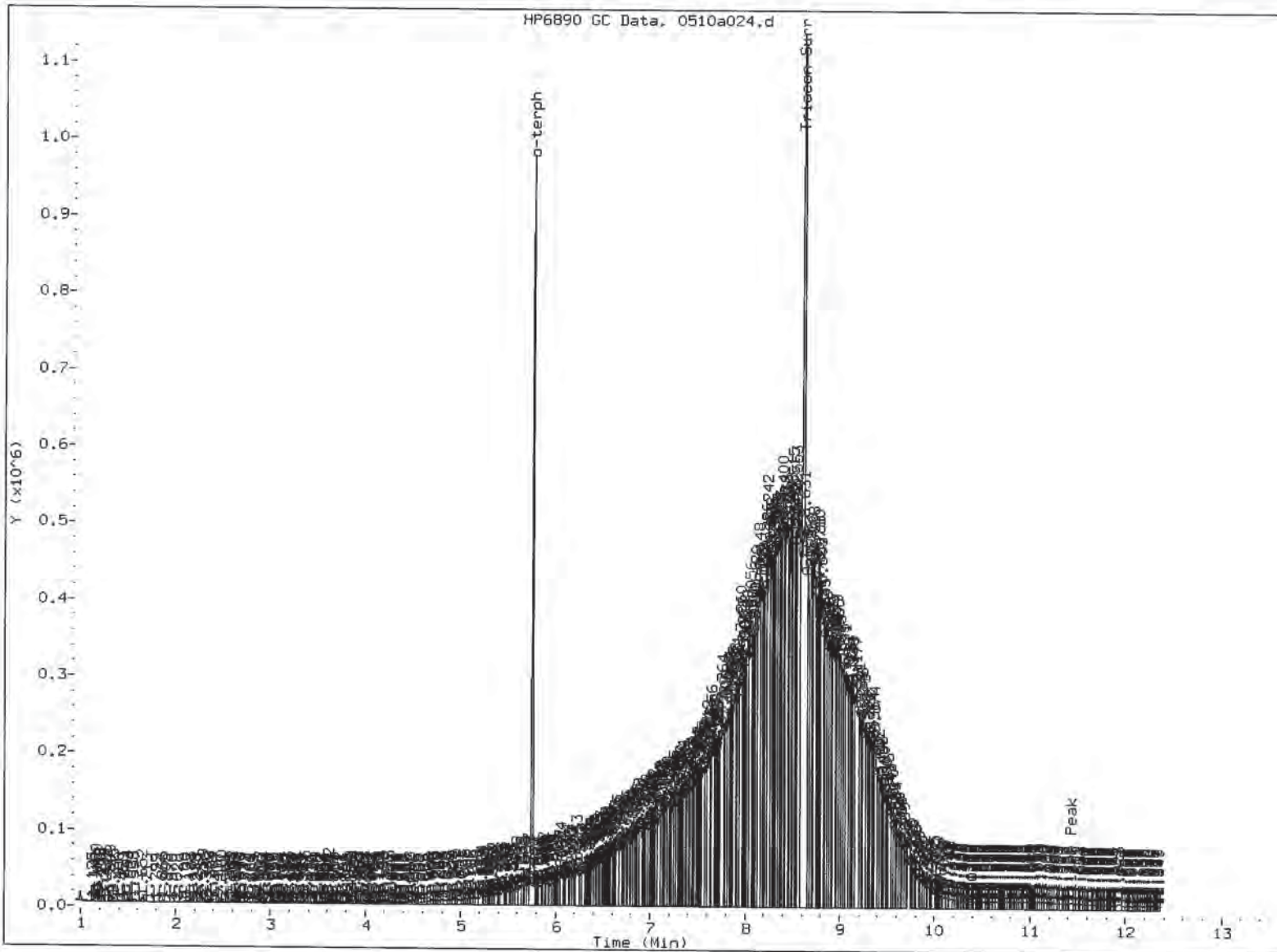
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Date: 10-MAY-2013 15:06
Client ID: TP-43-050813
Sample Info: MP36F
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JR
5/10/13



/chem3/fid4a.i/20130510.b/0510a024.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050913	100%	0
LCS-050913	93.2%	0
TP-38-050713	79.3%	0
TP-39-050713	93.6%	0
TP-40-050813	D	0
TP-41-050813	87.5%	0
TP-42-050813	86.9%	0
TP-43-050813	94.3%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-10051 to 13-10056

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-050913
LAB CONTROL

Lab Sample ID: LCS-050913
 LIMS ID: 13-10051
 Matrix: Soil
 Data Release Authorized: *YMW*
 Reported: 05/13/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Extracted: 05/09/13
 Date Analyzed: 05/10/13 15:47
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	125	150	83.3%

TPHD Surrogate Recovery

o-Terphenyl 93.2%

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a026.d

ARI ID: WP36LCSS1

Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m

Client ID: WP36LCSS1

Instrument: fid4a.i

Injection: 10-MAY-2013 15:47

Operator: JR/VTS/JW

Report Date: 05/11/2013

Dilution Factor: 1

Macro: 11-APR-2013

Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	4176961	268.80
C8	----				WATPHD	(C12-C24)	18149710	1250.45
C10	2.854	0.001	104194	87304	WATPHM	(C24-C38)	222167	16.33
C12	3.821	0.001	195201	208875	AK102	(C10-C25)	21176696	1230.15
C14	4.505	0.001	347619	344709	AK103	(C25-C36)	155226	16.87
C16	5.091	0.004	558712	555362				
C18	5.629	0.001	441840	480420				
C20	6.172	0.000	309648	426840				
C22	6.706	-0.005	165611	183911	MIN.OIL	(C24-C38)	222167	13.02
C24	7.219	-0.008	44111	49870				
C25	7.465	-0.009	19181	29310				
C26	7.704	-0.019	7854	10753				
C28	8.159	-0.009	2206	3158				
C32	8.977	0.003	8604	9063				
C34	9.355	0.005	397	678				
Filter Peak	11.425	-0.008	2000	1863	CREOSOT	(C12-C22)	17517028	8028.34 M
C36	9.714	0.005	1497	2127				
C38	10.052	-0.008	500	472				
C40	10.400	0.000	1118	2419				
o-terph	5.766	0.003	934105	808738				
Triacon Surr	8.593	0.001	791621	763729				

Range Times: NW Diesel (3.820 - 7.227) AK102 (2.85 - 7.47) Jet A (2.85 - 5.63)
NW M.Oil (7.23 - 10.06) AK103 (7.47 - 9.71) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	808738	41.9	93.2 M
Triacontane	763729	42.0	93.3

JW
5/11/13

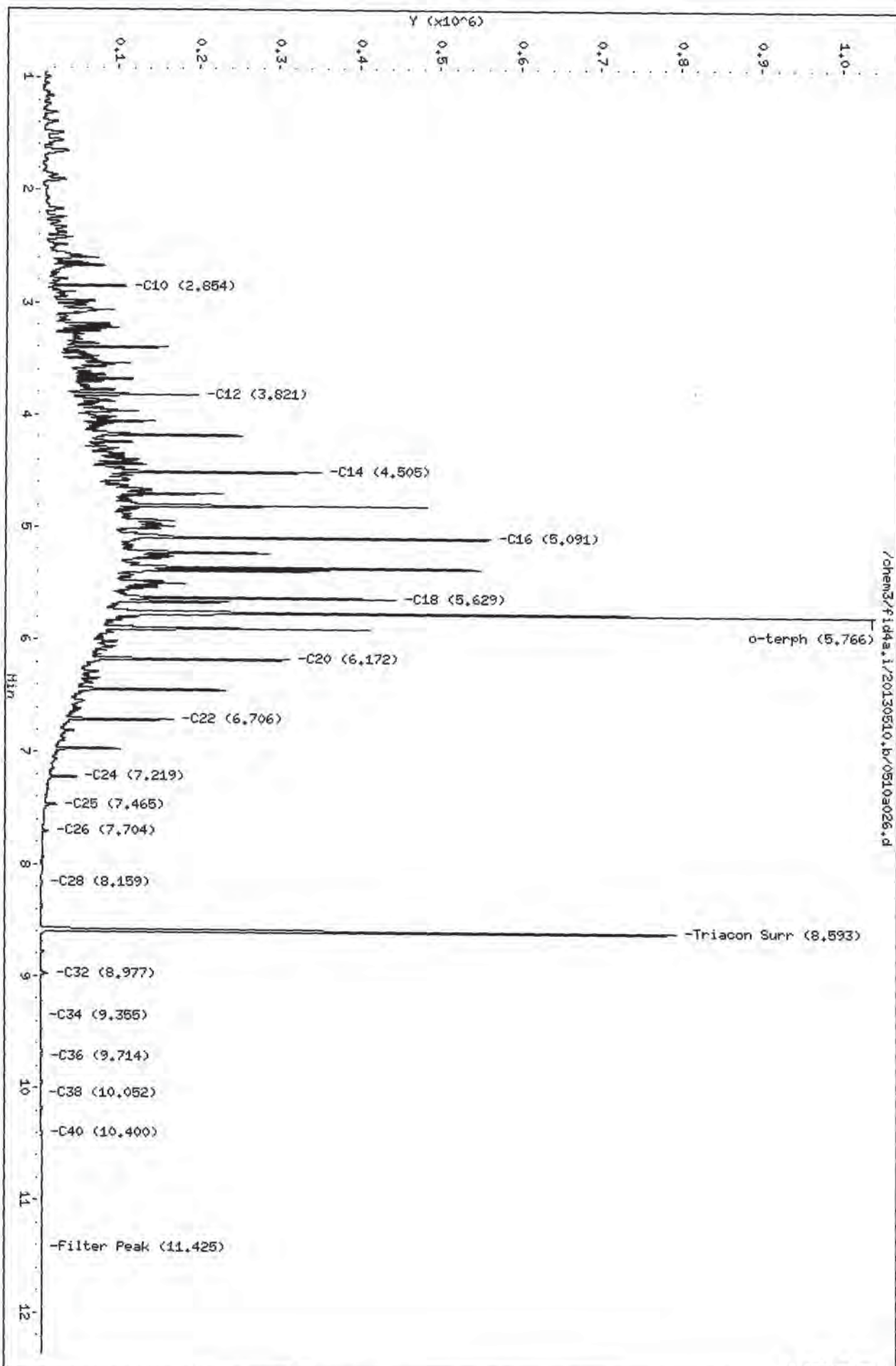
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

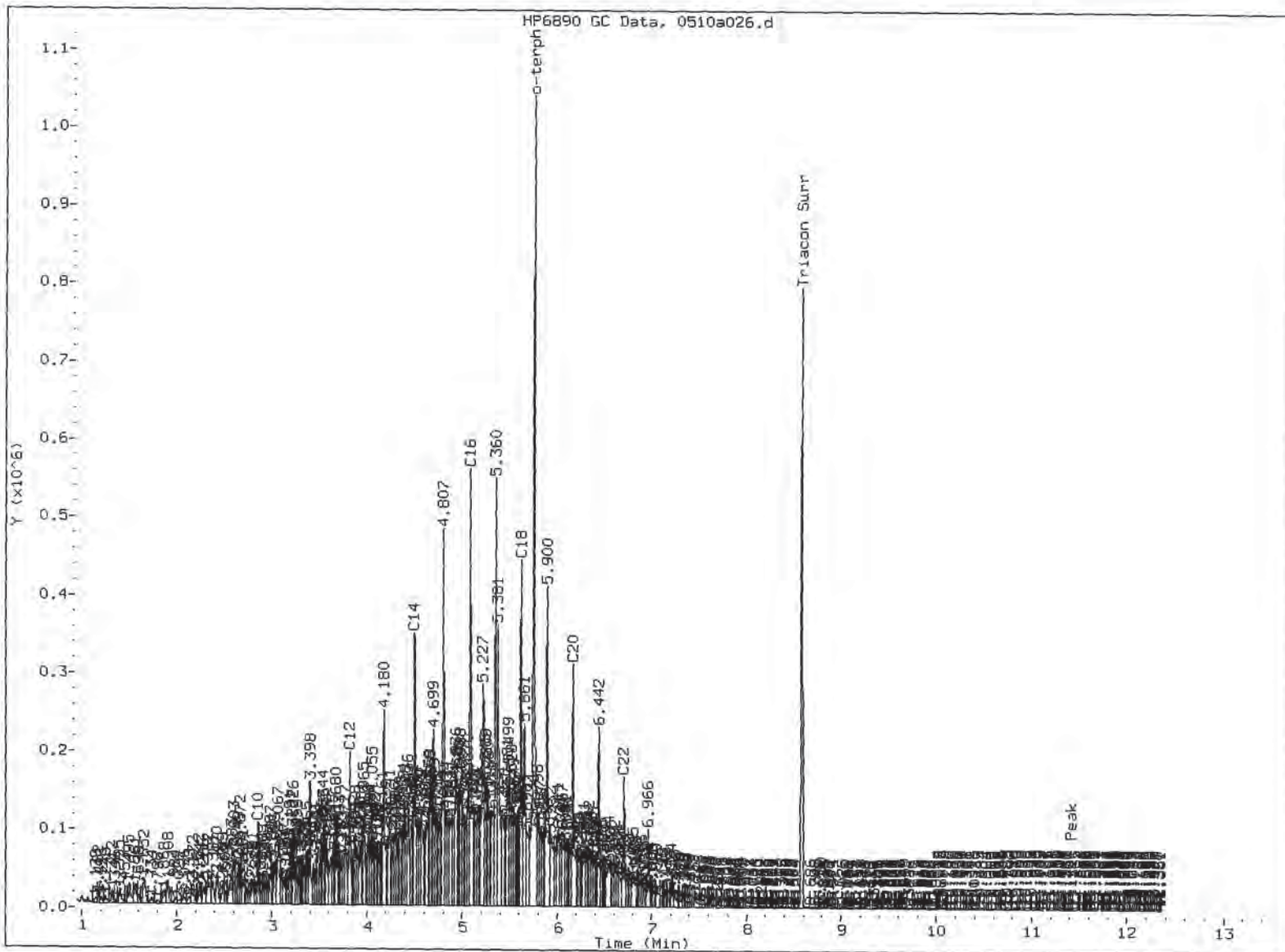
Data File: /chem3/fid4a.1/20130510.b/0510a026.d
Date: 10-MAY-2013 15:47
Client ID: MP36LCSS1
Sample Info: MP36LCSS1
Column Phase: RTX-1

Instrument: fid4a.1
Operator: JR/VTS/JM
Column diameter: 0.25

JP
5/10/13



/chem3/fid4a.1/20130510.b/0510a026.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JL

Date: 5/1/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 05/09/13

ARI Job: WP36
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-10051-050913MB1	Method Blank	10.0 g	1.00 mL	-	05/09/13
13-10051-050913LCS1	Lab Control	10.0 g	1.00 mL	-	05/09/13
13-10051-WP36A	TP-38-050713	8.63 g	1.00 mL	D	05/09/13
13-10052-WP36B	TP-39-050713	7.60 g	1.00 mL	D	05/09/13
13-10053-WP36C	TP-40-050813	8.35 g	1.00 mL	D	05/09/13
13-10054-WP36D	TP-41-050813	7.57 g	1.00 mL	D	05/09/13
13-10055-WP36E	TP-42-050813	7.02 g	1.00 mL	D	05/09/13
13-10056-WP36F	TP-43-050813	8.40 g	1.00 mL	D	05/09/13

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
 NWTPHD by GC/FID-Silica and Acid Cleaned
 Extraction Method:
 Page 1 of 1

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03

Matrix: Water
 Data Release Authorized: **WV**
 Reported: 05/10/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-050913 13-10057	Method Blank HC ID: ---	05/09/13	05/09/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 92.3%
WP36G 13-10057	TP-38-050713 HC ID: DRO/MOTOR OIL	05/09/13	05/10/13	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	1.0 2.0	6.9 9.7 66.4%
WP36H 13-10058	TP-39-050713 HC ID: DRO/MOTOR OIL	05/09/13	05/10/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.33 1.2 68.5%
WP36I 13-10059	TP-40-050813 HC ID: DRO/MOTOR OIL	05/09/13	05/10/13	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	1.0 2.0	17 29 56.0%
WP36J 13-10060	TP-41-050813 HC ID: DRO/MOTOR OIL	05/09/13	05/10/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	1.5 3.4 78.8%
WP36K 13-10061	TP-42-050813 HC ID: DRO/MOTOR OIL	05/09/13	05/10/13	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	1.0 2.0	21 38 69.3%
WP36L 13-10062	TP-43-050813 HC ID: DRO/MOTOR OIL	05/09/13	05/10/13	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	0.10 0.20	0.24 0.72 83.7%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.
 DL-Dilution of extract prior to analysis.
 RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
 Motor Oil range quantitation on total peaks in the range from C24 to C38.
 HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a043.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36MBW1
Client ID: WP36MBW1
Injection: 09-MAY-2013 23:02
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	18508	1.19
C8	----				WATPHD	(C12-C24)	79935	5.51
C10	2.850	-0.003	187	287	WATPHM	(C24-C38)	120269	8.84*
C12	3.798	-0.021	190	214	AK102	(C10-C25)	90085	5.23
C14	4.502	-0.002	243	700	AK103	(C25-C36)	92820	10.09*
C16	5.086	-0.001	694	1313				
C18	5.622	-0.003	420	520				
C20	6.167	-0.002	458	1001				
C22	6.701	-0.008	536	1004	MIN.OIL	(C24-C38)	120269	7.05*
C24	7.217	-0.007	428	1263				
C25	7.470	-0.001	408	487				
C26	7.731	0.010	398	281				
C28	8.158	-0.008	999	1407				
C32	8.952	-0.012	9873	11754				
C34	9.341	0.013	692	755				
Filter Peak	9.619	-1.819	244716	222271	CREOSOT	(C12-C22)	68590	31.44 M
C36	9.700	0.019	1011	785				
C38	10.003	-0.022	1369	3448				
C40	10.357	-0.004	1561	496				
o-terph	5.763	0.002	914951	800581				
Triacon Surr	8.586	-0.004	811191	785304				

* Indicates Filter Peak subtracted

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	800581	41.5	92.3
Triacantane	785304	43.2	95.9

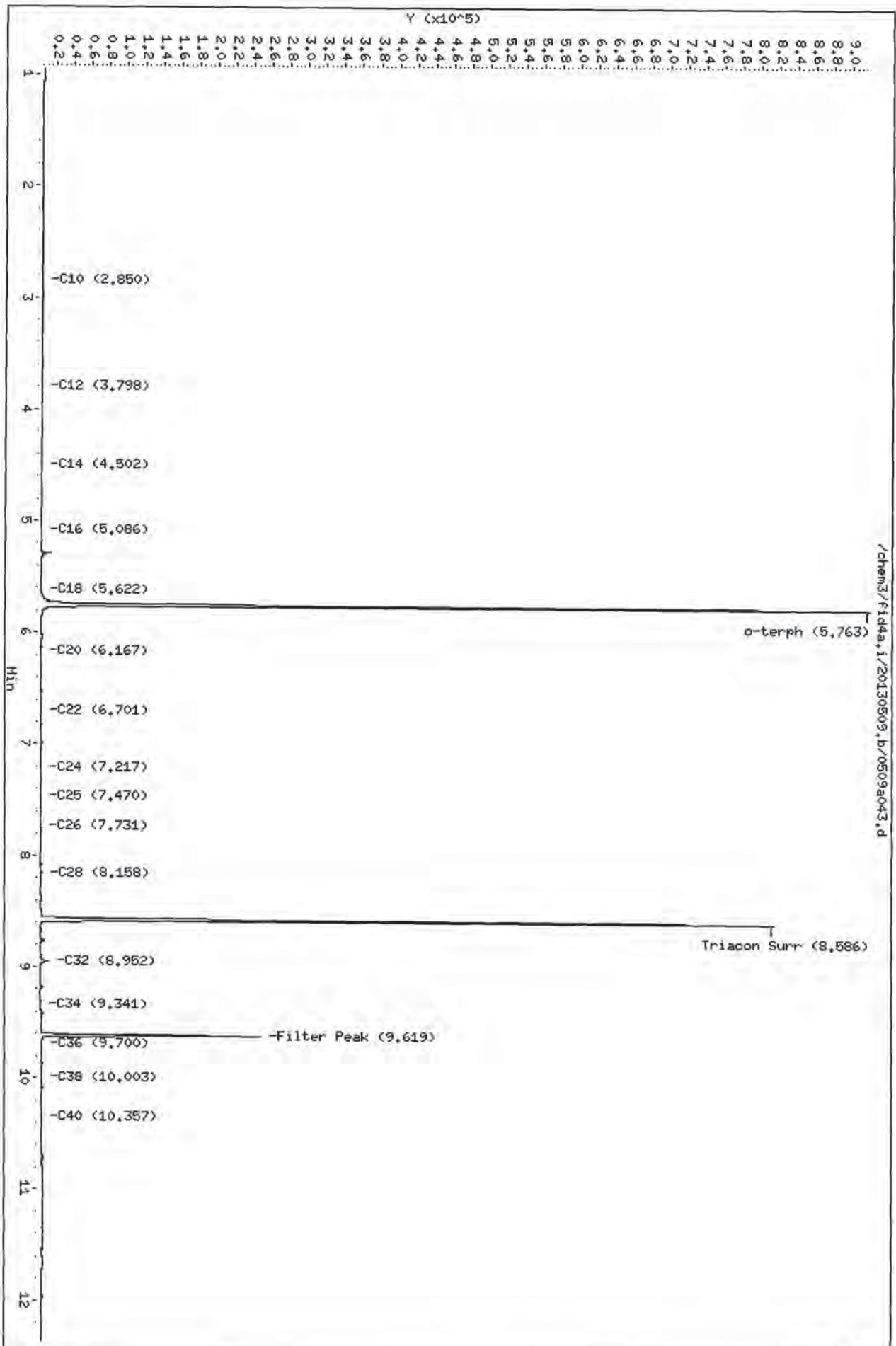
JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a043.d
 Date: 09-MAY-2013 23:02
 Client ID: WP36HBM1
 Sample Info: WP36HBM1
 Column phase: RTX-1

Instrument: fid4a.i
 Operator: JR/VTS/JM
 Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a007.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36G
Client ID: TP-38-050713
Injection: 10-MAY-2013 09:15
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		35165	2.26
C8	----				WATPHD (C12-C24)		5007023	344.97
C10	2.839	-0.014	121	175	WATPHM (C24-C38)		6618738	486.53*
C12	3.829	0.009	1145	994	AK102 (C10-C25)		5450281	316.60
C14	4.503	-0.001	7768	7822	AK103 (C25-C36)		5961489	647.84*
C16	5.080	-0.007	15853	6224				
C18	5.624	-0.003	24017	43208				
C20	6.179	0.006	32810	20156				
C22	6.715	0.004	43479	42519	MIN.OIL (C24-C38)		6618738	387.99*
C24	7.225	-0.002	52634	42837				
C25	7.475	0.002	62737	149250				
C26	7.716	-0.007	61329	77814				
C28	8.170	0.002	56441	27475				
C32	8.967	-0.007	39069	65175				
C34	9.333	-0.016	38754	66982				
Filter Peak	9.646	-1.786	59559	53934	CREOSOT (C12-C22)		3521807	1614.10 M
C36	9.714	0.005	15716	22517				
C38	10.052	-0.008	10551	11972				
C40	10.400	0.000	5939	6642				
o-terph	5.753	-0.009	83983	57669				
Triacon Surr	8.577	-0.015	77752	59052				

* Indicates Filter Peak subtracted

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	57669	3.0	66.5 M
Triacontane	59052	3.2	72.1 M

*JW
5/10/13*

M Indicates the peak was manually integrated

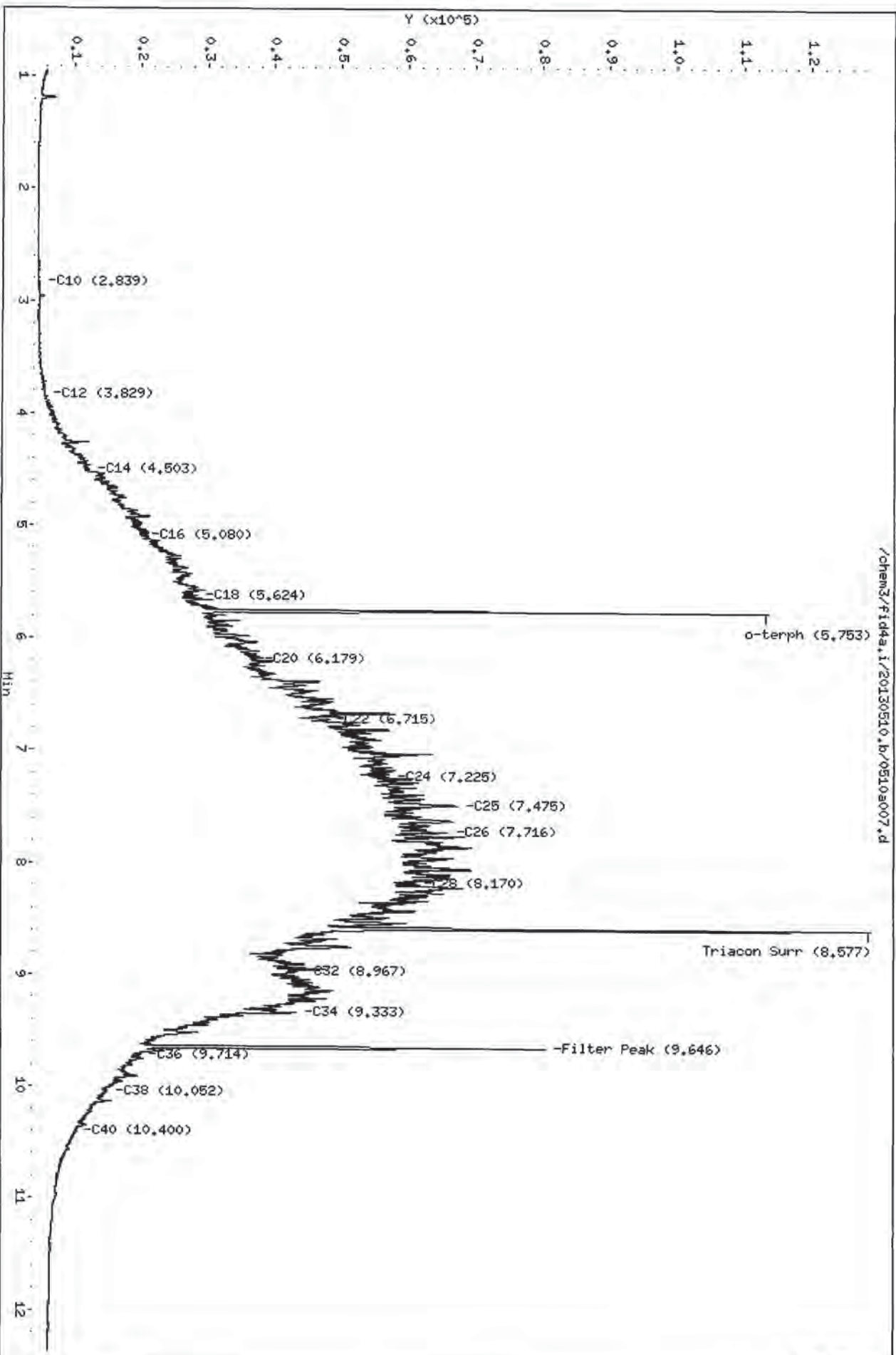
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

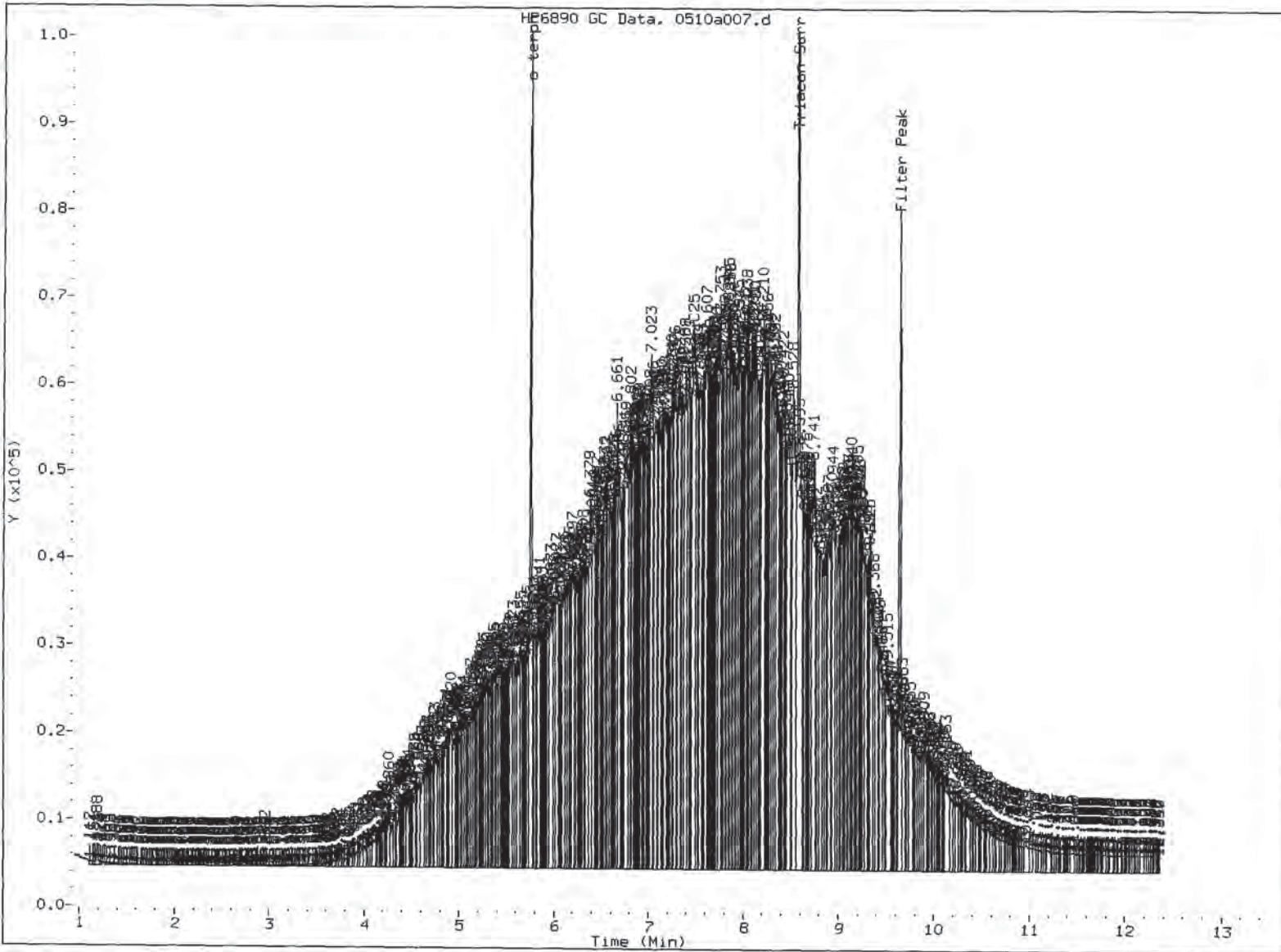
Data File: /chem3/fid4a.i/20130510.b/0510a007.d
Date: 10-MAY-2013 09:15
Client ID: TP-38-050713
Sample Info: MP36G.10

Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

JL
5/10/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Peak not found
- 5. Skipped surrogate

Analyst: JW Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a046.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36H
Client ID: TP-39-050713
Injection: 10-MAY-2013 00:03
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		20787	1.34
C8	----				WATPHD (C12-C24)		2405841	165.75 ✓
C10	2.851	-0.002	197	234	WATPHM (C24-C38)		7836991	576.08*
C12	3.820	0.001	178	270	AK102 (C10-C25)		2718151	157.90
C14	4.502	-0.002	731	799	AK103 (C25-C36)		7011992	762.00*
C16	5.084	-0.003	2675	4482				
C18	5.622	-0.003	8784	10563				
C20	6.177	0.008	15355	13345				
C22	6.701	-0.008	27490	39279	MIN.OIL (C24-C38)		7836991	459.41*
C24	7.227	0.002	38499	29354				
C25	7.461	-0.010	42606	77532				
C26	7.723	0.002	47879	21824				
C28	8.176	0.010	66236	23531				
C32	8.974	0.010	48771	75428				
C34	9.314	-0.014	48888	99240				
Filter Peak	9.624	-1.814	254780	224827	CREOSOT (C12-C22)		1350663	619.03 M
C36	9.681	0.000	32736	20619				
C38	10.018	-0.008	24590	34303				
C40	10.364	0.004	14356	15080				
o-terph	5.760	-0.001	704136	594448				
Triacon Surr	8.586	-0.004	703637	636301				

* Indicates Filter Peak subtracted

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	594448	30.8	68.5 M
Triacontane	636301	35.0	77.7 M

JL
5/10/13

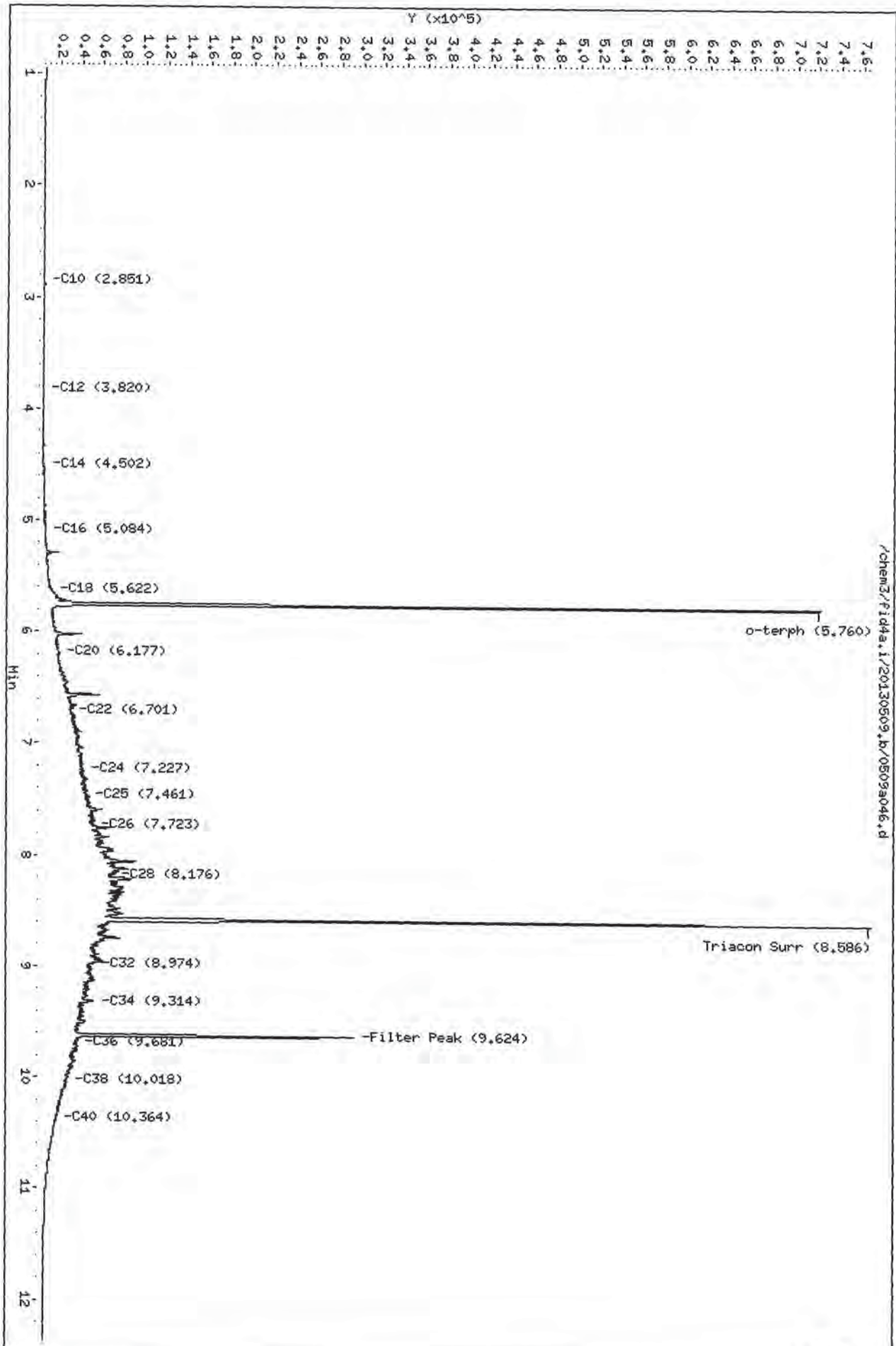
M Indicates the peak was manually integrated

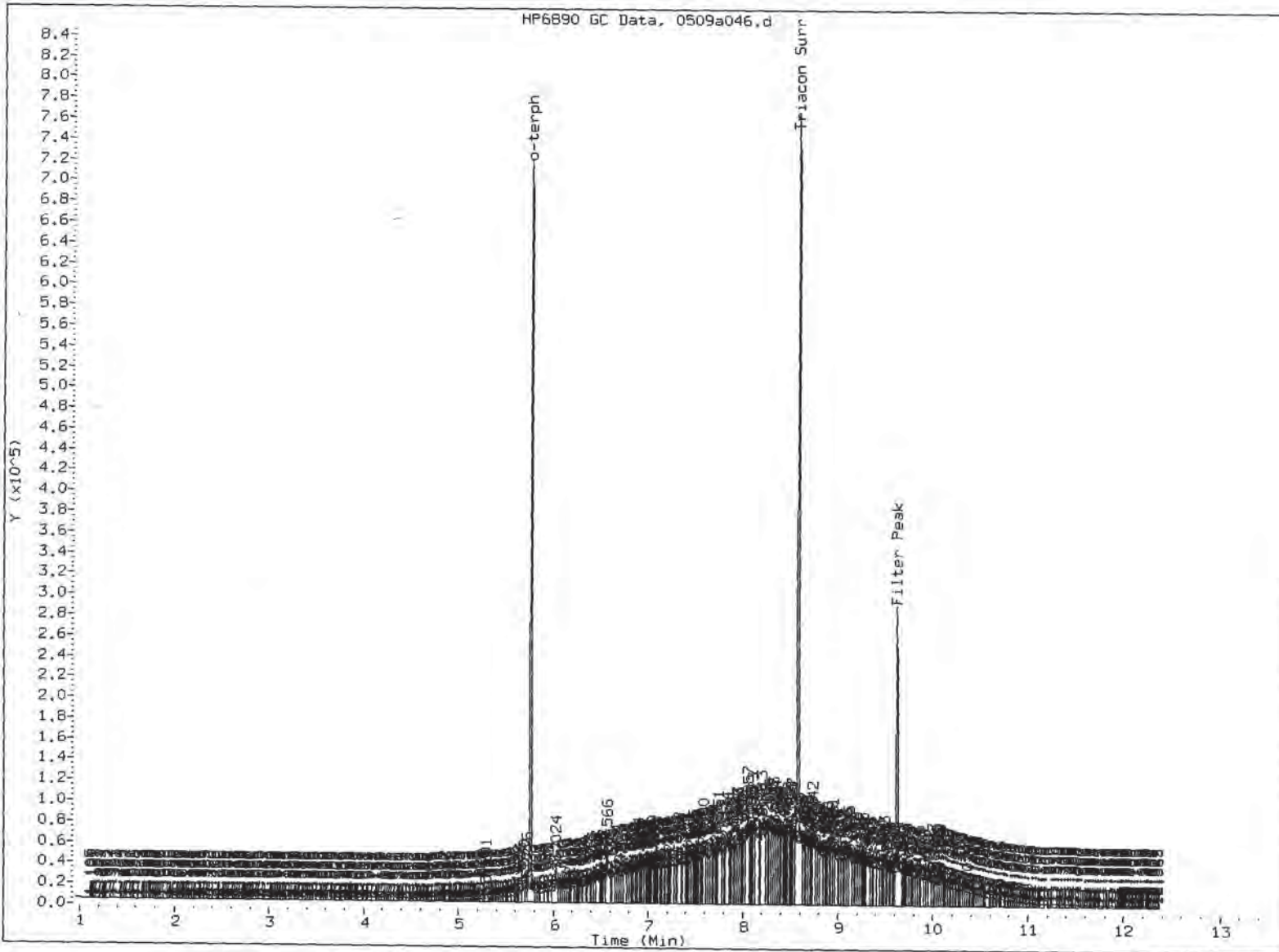
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem2/fid4a.i/20130509.b/0509a046.d
 Date: 10-May-2013 00:03
 Client ID: TP-39-050713
 Sample Info: WP36H
 Column phase: RTX-1

Instrument: fid4a.i
 Operator: JR/VTS/JM
 Column diameter: 0.25

TP
 5/10/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- ⑤ Skimmed surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a008.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36I
Client ID: TP-40-050813
Injection: 10-MAY-2013 09:35
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	32557	2.10
C8	----				WATPHD	(C12-C24)	12211260	841.31
C10	2.849	-0.004	293	278	WATPHM	(C24-C38)	20004584	1470.49*
C12	3.830	0.010	263	240	AK102	(C10-C25)	14024833	814.70
C14	4.496	-0.008	854	1952	AK103	(C25-C36)	17966516	1952.44*
C16	5.087	0.000	2679	3548				
C18	5.627	-0.001	12544	14989				
C20	6.166	-0.006	79009	102369				
C22	6.721	0.009	174440	98674	MIN.OIL	(C24-C38)	20004584	1172.67*
C24	7.233	0.007	226152	159274				
C25	7.483	0.010	261818	281855				
C26	7.723	0.000	248116	282705				
C28	8.164	-0.003	195738	169040				
C32	8.970	-0.004	77071	117831				
C34	9.345	-0.005	47166	45723				
Filter Peak	9.648	-1.784	28304	24489	CREOSOT	(C12-C22)	5956501	2729.96 M
C36	9.714	0.005	17896	23271				
C38	10.055	-0.005	8699	11871				
C40	10.402	0.002	4253	6792				
o-terph	5.770	0.008	20400	48689				
Triacon Surr	8.582	-0.010	84523	68223				

* Indicates Filter Peak subtracted

Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	48689	2.5	56.1 M
Triacotane	68223	3.7	83.3 M

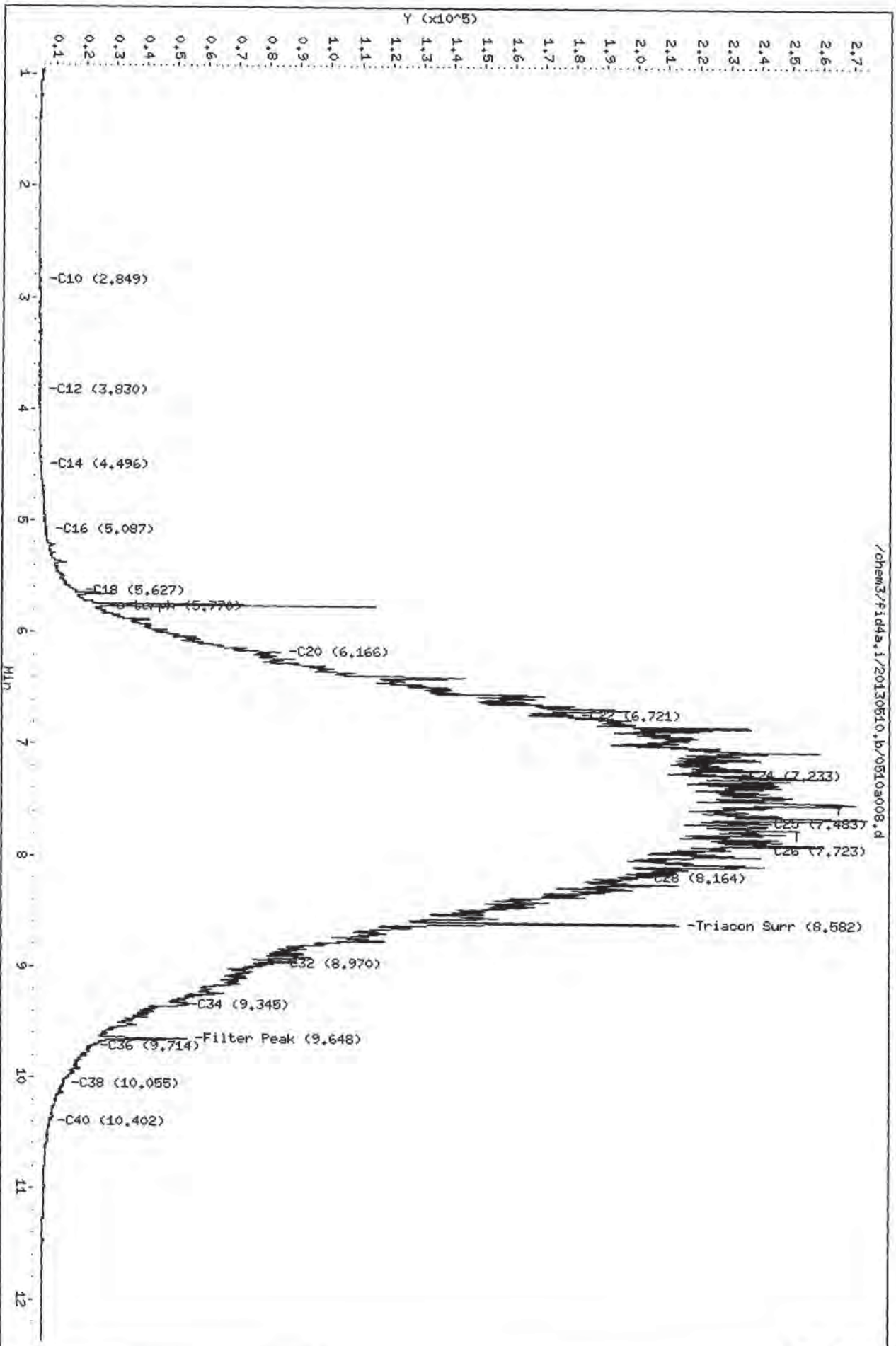
JW
5/10/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

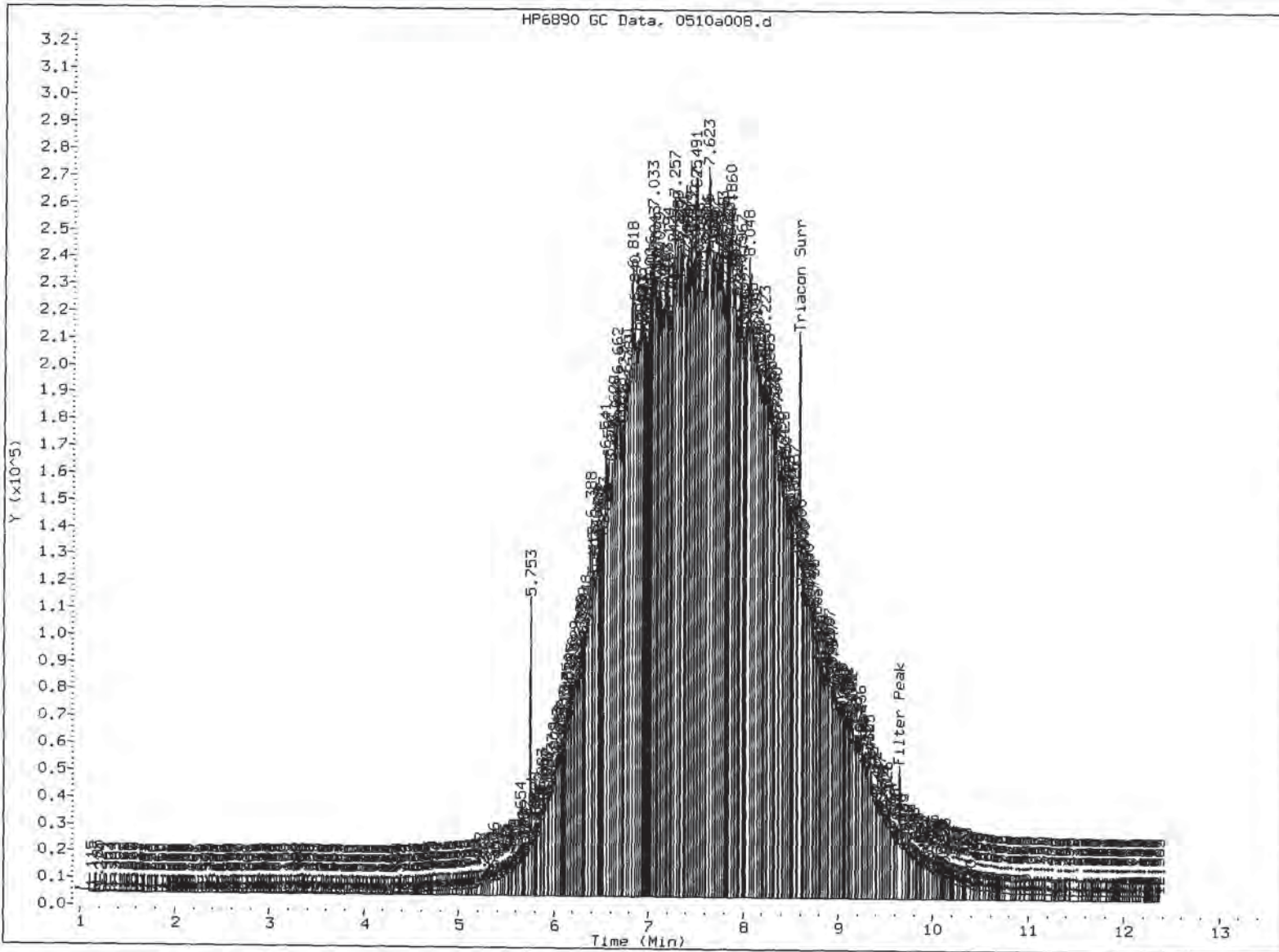
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 Date: 10-May-2013 09:36
 Client ID: TP-40-050813
 Sample Info: WP361.10
 Column phase: RTX-1

Instrument: fid4a.i
 Operator: JR/VTS/JM
 Column diameter: 0.25



/chem3/fid4a.i/20130510.b/0510a008.d

see s/10/13



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a048.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36J
Client ID: TP-41-050813
Injection: 10-MAY-2013 00:44
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	33325	2.14
C8	----				WATPHD	(C12-C24)	10912911	751.86
C10	2.851	-0.003	286	400	WATPHM	(C24-C38)	23499308	1727.38*
C12	3.819	-0.001	251	405	AK102	(C10-C25)	12416190	721.25
C14	4.503	-0.002	745	707	AK103	(C25-C36)	21055794	2288.16*
C16	5.085	-0.002	3654	4757				
C18	5.625	0.000	20624	28278				
C20	6.176	0.006	67133	92620				
C22	6.701	-0.008	155234	162369	MIN.OIL	(C24-C38)	23499308	1377.54*
C24	7.208	-0.017	190467	104513				
C25	7.481	0.009	228645	264724				
C26	7.713	-0.008	205455	84354				
C28	8.169	0.003	206289	114443				
C32	8.958	-0.006	147762	255544				
C34	9.337	0.008	98727	37098				
Filter Peak	9.606	-1.833	192467	175464	CREOSOT	(C12-C22)	5359144	2456.18 M
C36	9.685	0.004	65069	52677				
C38	10.035	0.009	37960	13251				
C40	10.371	0.010	14717	6020				
o-terph	5.763	0.002	799037	684126				
Triacon Surr	8.593	0.002	778790	690781				

* Indicates Filter Peak subtracted

Range Times: NW Diesel (3.820 - 7.224) AK102 (2.85 - 7.47) Jet A (2.85 - 5.62)
NW M.Oil (7.22 - 10.03) AK103 (7.47 - 9.68) OR Diesel (2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	684126	35.5	78.8 M
Triacotane	690781	38.0	84.4 M

Handwritten: JW 5/10/13

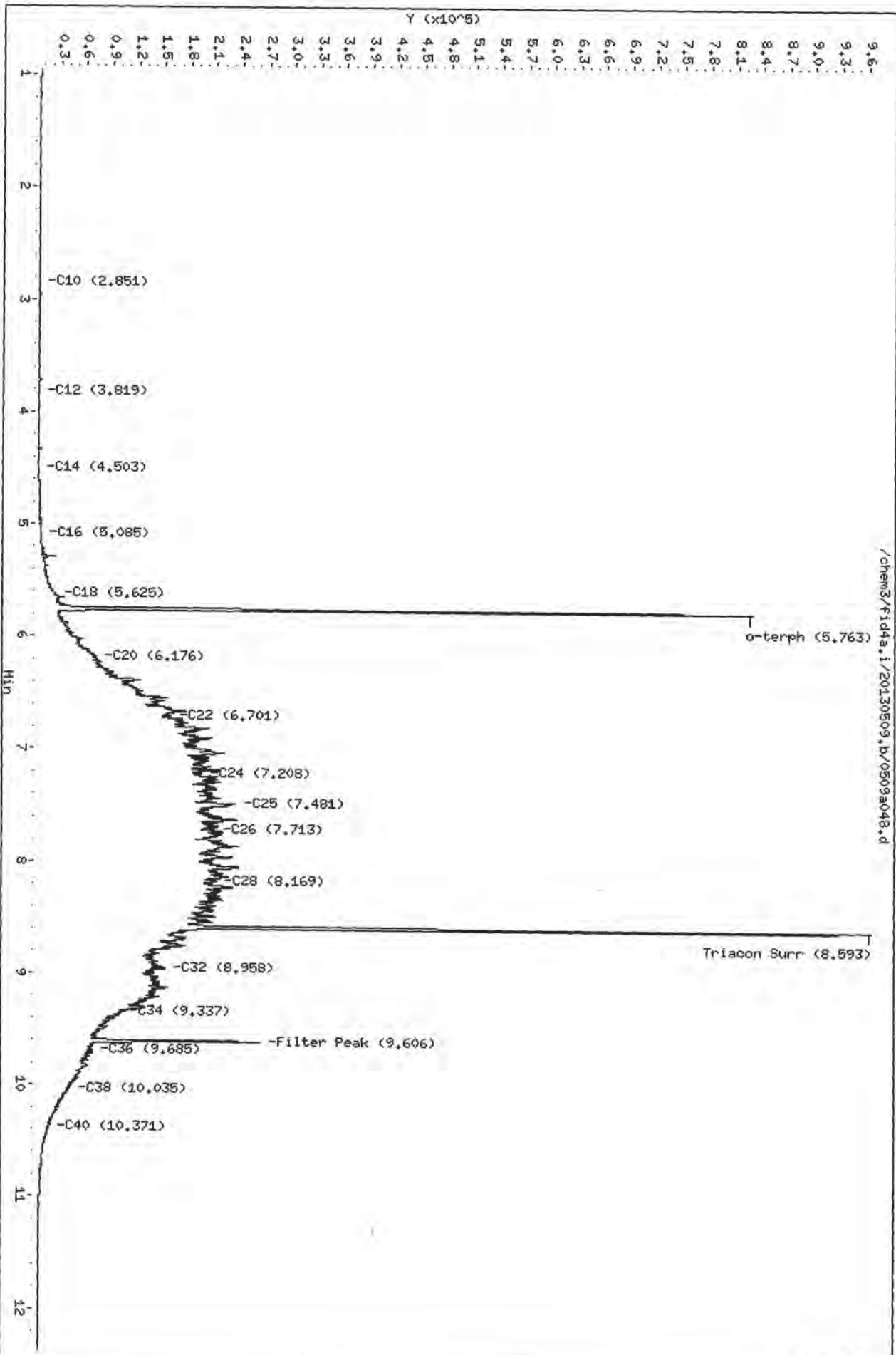
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

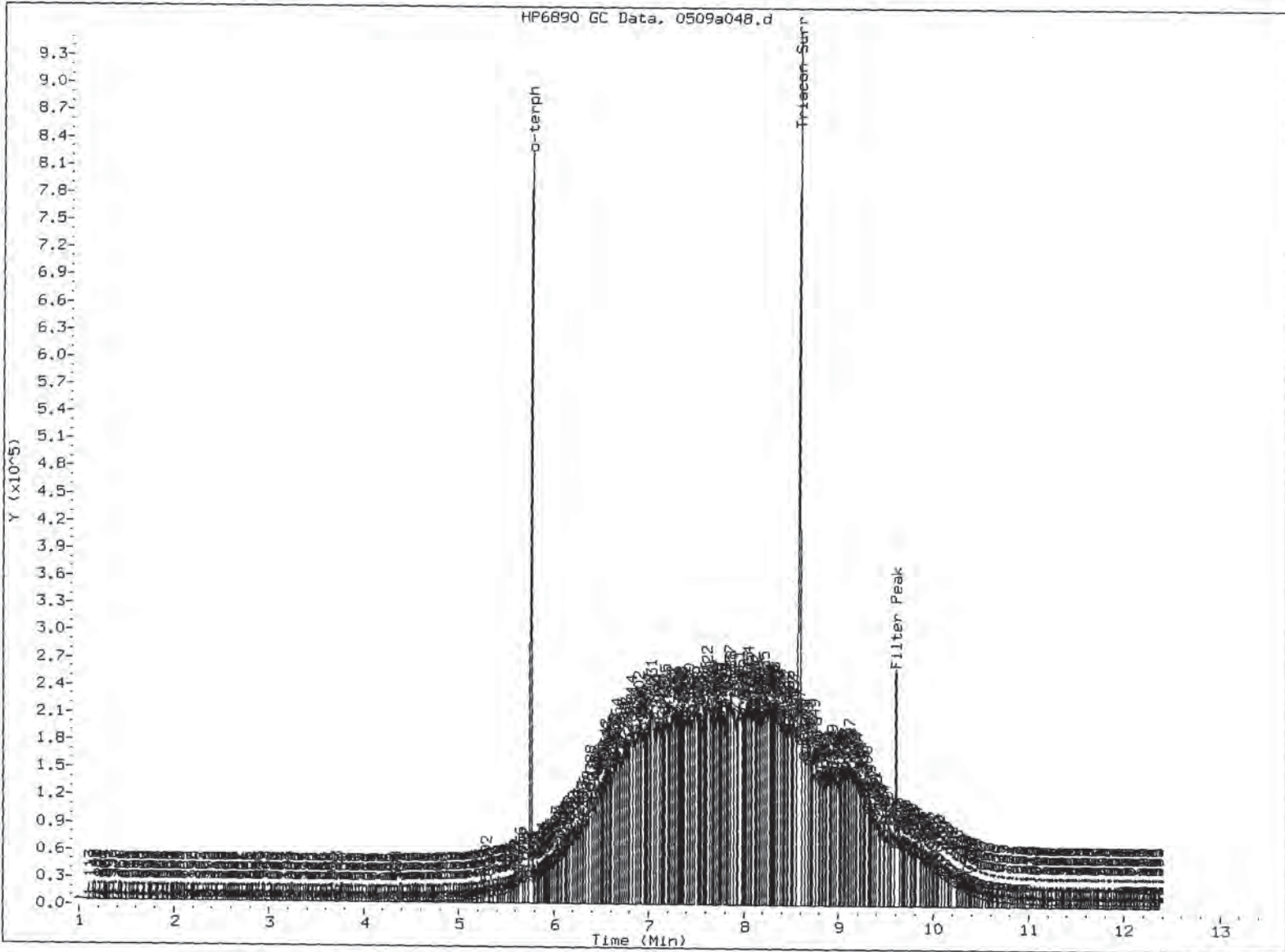
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Date: 10-MAY-2013 00:44
Client ID: TP-44-050813
Sample Info: WP36J
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JM
Column diameter: 0.25

*300
5/14/13*



/chem3/fid4a.i/20130509.b/0509a048.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130510.b/0510a009.d
Method: /chem3/fid4a.i/20130510.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36K
Client ID: TP-42-050813
Injection: 10-MAY-2013 09:56
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		22632	1.46
C8	----				WATPHD (C12-C24)		15227267	1049.11
C10	2.848	-0.006	158	136	WATPHM (C24-C38)		25764919	1893.93*
C12	3.830	0.010	167	139	AK102 (C10-C25)		17668786	1026.37
C14	4.506	0.002	617	686	AK103 (C25-C36)		23077227	2507.83*
C16	5.089	0.002	2666	3003				
C18	5.624	-0.004	13156	17257				
C20	6.164	-0.009	88839	94023				
C22	6.719	0.007	236446	195567	MIN.OIL (C24-C38)		25764919	1510.35*
C24	7.217	-0.010	282353	430361				
C25	7.473	-0.001	291364	203864				
C26	7.723	0.000	290692	165196				
C28	8.166	-0.002	227854	304667				
C32	8.974	0.000	122394	141445				
C34	9.357	0.007	87634	58041				
Filter Peak	9.645	-1.787	30231	25584	CREOSOT (C12-C22)		6957324	3188.65 M
C36	9.699	-0.010	23787	28023				
C38	10.053	-0.008	10117	18158				
C40	10.408	0.008	4330	7307				
o-terph	5.754	-0.008	89952	60144				
Triacon Surr	8.587	-0.006	89742	70210				

* Indicates Filter Peak subtracted

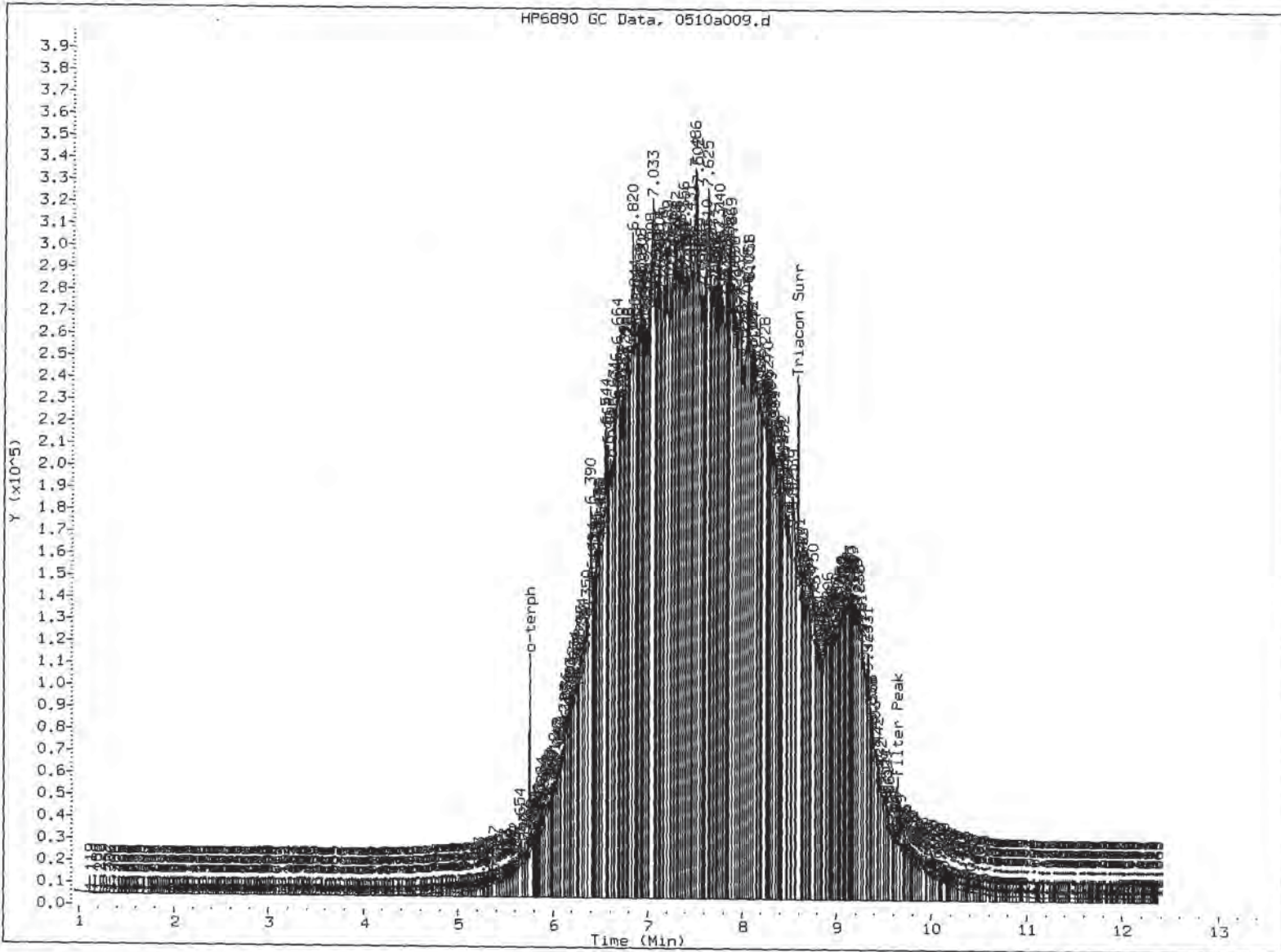
Range Times: NW Diesel(3.820 - 7.227) AK102(2.85 - 7.47) Jet A(2.85 - 5.63)
NW M.Oil(7.23 - 10.06) AK103(7.47 - 9.71) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	60144	3.1	69.3 M
Triacantane	70210	3.9	85.7 M

M Indicates the peak was manually integrated

JW
5/10/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JW

Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a050.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36L
Client ID: TP-43-050813
Injection: 10-MAY-2013 01:24
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		21881	1.41
C8	----				WATPHD (C12-C24)		1744081	120.16
C10	2.851	-0.002	216	244	WATPHM (C24-C38)		4879512	358.68*
C12	3.813	-0.007	147	187	AK102 (C10-C25)		2010711	116.80
C14	4.501	-0.004	445	851	AK103 (C25-C36)		4268062	463.82*
C16	5.085	-0.002	1672	2072				
C18	5.624	-0.001	6055	9176				
C20	6.165	-0.005	10704	8660				
C22	6.704	-0.005	21072	23481	MIN.OIL (C24-C38)		4879512	286.04*
C24	7.218	-0.007	25340	17391				
C25	7.463	-0.008	29411	57516				
C26	7.717	-0.004	31343	27057				
C28	8.169	0.003	39481	41199				
C32	8.973	0.010	27319	10747				
C34	9.325	-0.003	23528	12861				
Filter Peak	9.598	-1.841	222249	189896	CREOSOT (C12-C22)		972055	445.51 M
C36	9.678	-0.003	20963	17562				
C38	10.034	0.008	15611	5237				
C40	10.359	-0.002	10324	20925				
o-terph	5.761	0.000	879633	726082				
Triacon Surr	8.585	-0.005	866059	753447				

* Indicates Filter Peak subtracted

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	726082	37.7	83.7 M
Triacotane	753447	41.4	92.0 M

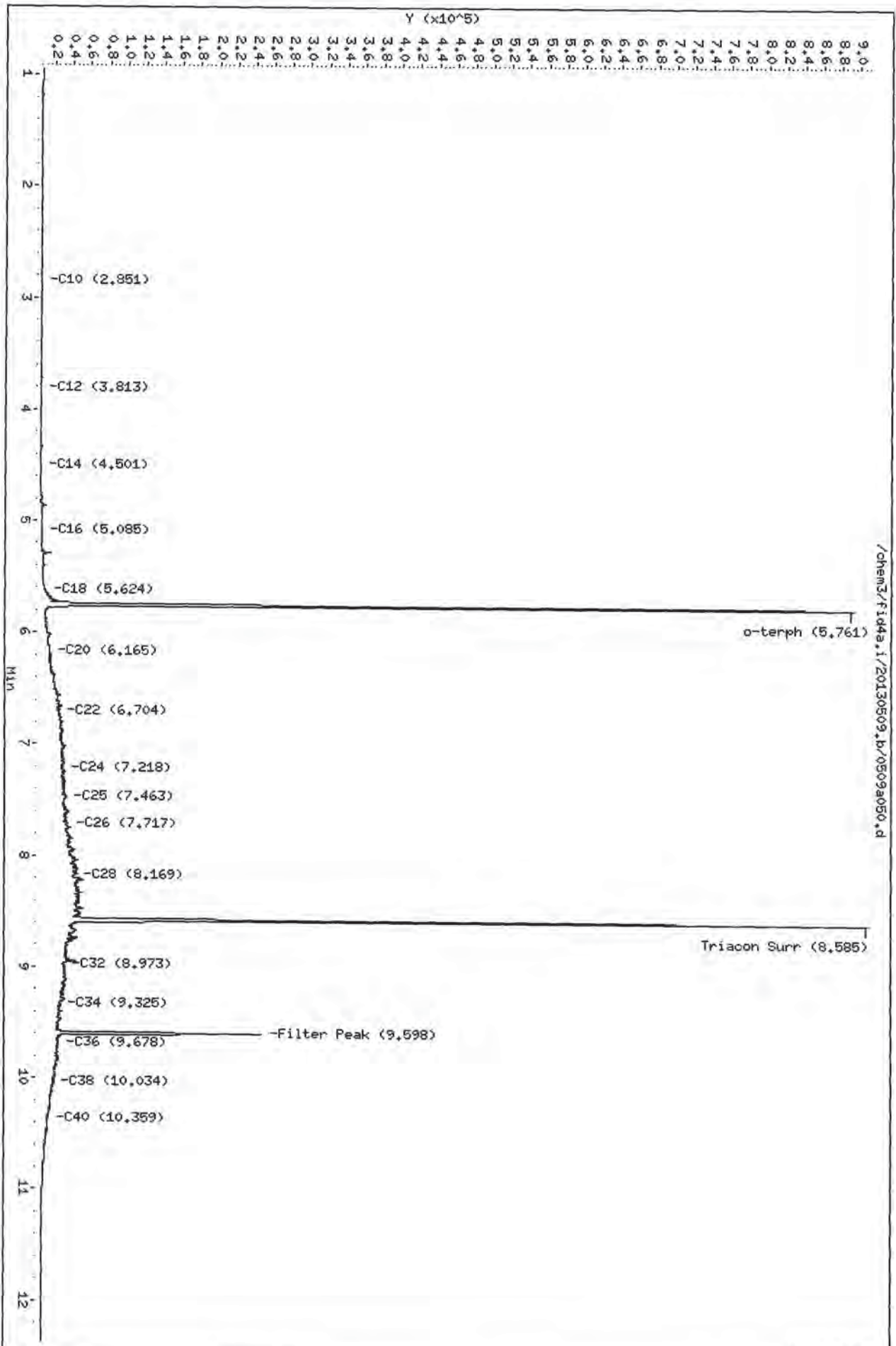
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

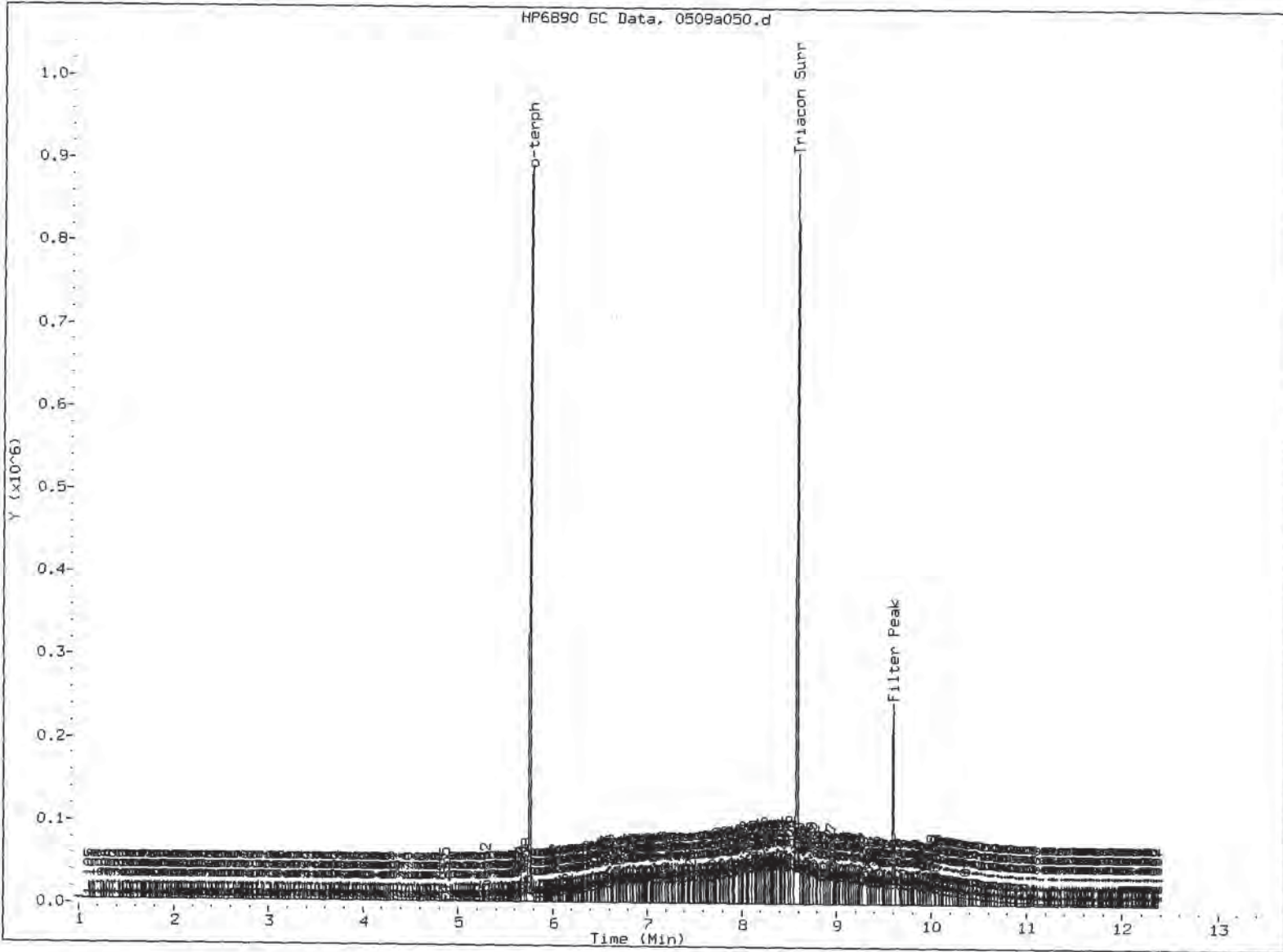
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 Date: 10-MAY-2013 01:24
 Client ID: TP-43-050813
 Sample Info: MP36L
 Column phase: RTX-1

Instrument: fid4a.i
 Operator: JR/TJS/JM
 Column diameter: 0.25

Handwritten: 5/10/13



/chem3/fid4a.i/20130509.b/0509a050.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: SW

Date: 5/10/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-050913	92.3%	0
LCS-050913	79.3%	0
TP-38-050713	66.4%	0
TP-39-050713	68.5%	0
TP-40-050813	56.0%	0
TP-41-050813	78.8%	0
TP-42-050813	69.3%	0
TP-43-050813	83.7%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)


(50-150)

Prep Method: SW3510C
Log Number Range: 13-10057 to 13-10062

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1

Sample ID: LCS-050913
LAB CONTROL

Lab Sample ID: LCS-050913
LIMS ID: 13-10057
Matrix: Water
Data Release Authorized: 
Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03
Date Sampled: 05/08/13
Date Received: 05/09/13

Date Extracted: 05/09/13
Date Analyzed: 05/09/13 23:23
Instrument/Analyst: FID/JLW

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	2.67	3.00	89.0%

TPHD Surrogate Recovery

o-Terphenyl	79.3%
-------------	-------

Results reported in mg/L

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130509.b/0509a044.d
Method: /chem3/fid4a.i/20130509.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/10/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WP36LCSW1
Client ID: WP36LCSW1
Injection: 09-MAY-2013 23:23
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	4144881	266.73
C8	----				WATPHD	(C12-C24)	19403022	1336.80
C10	2.852	-0.001	95023	87372	WATPHM	(C24-C38)	208824	15.35*
C12	3.821	0.001	181757	206177	AK102	(C10-C25)	22470203	1305.29
C14	4.506	0.002	350473	432604	AK103	(C25-C36)	141994	15.43*
C16	5.092	0.005	565652	518916				
C18	5.629	0.005	485867	513193				
C20	6.173	0.004	327699	435245				
C22	6.708	-0.001	164603	194596	MIN.OIL	(C24-C38)	208824	12.24*
C24	7.220	-0.005	48449	58907				
C25	7.465	-0.006	19961	33770				
C26	7.702	-0.018	7926	11331				
C28	8.158	-0.008	1734	2211				
C32	8.951	-0.012	7613	8453				
C34	9.341	0.013	570	656				
Filter Peak	9.612	-1.826	106034	99914	CREOSOT	(C12-C22)	18771609	8603.33 M
C36	9.643	-0.037	2713	3953				
C38	10.021	-0.004	386	144				
C40	10.352	-0.009	739	1073				
o-terph	5.765	0.004	795325	687920				
Triacon Surr	8.585	-0.005	716551	681866				

* Indicates Filter Peak subtracted

Range Times: NW Diesel(3.820 - 7.224) AK102(2.85 - 7.47) Jet A(2.85 - 5.62)
NW M.Oil(7.22 - 10.03) AK103(7.47 - 9.68) OR Diesel(2.85 - 8.17)

Surrogate	Area	Amount	%Rec
o-Terphenyl	687920	35.7	79.3 M
Triacotane	681866	37.5	83.3

JW
5/10/13

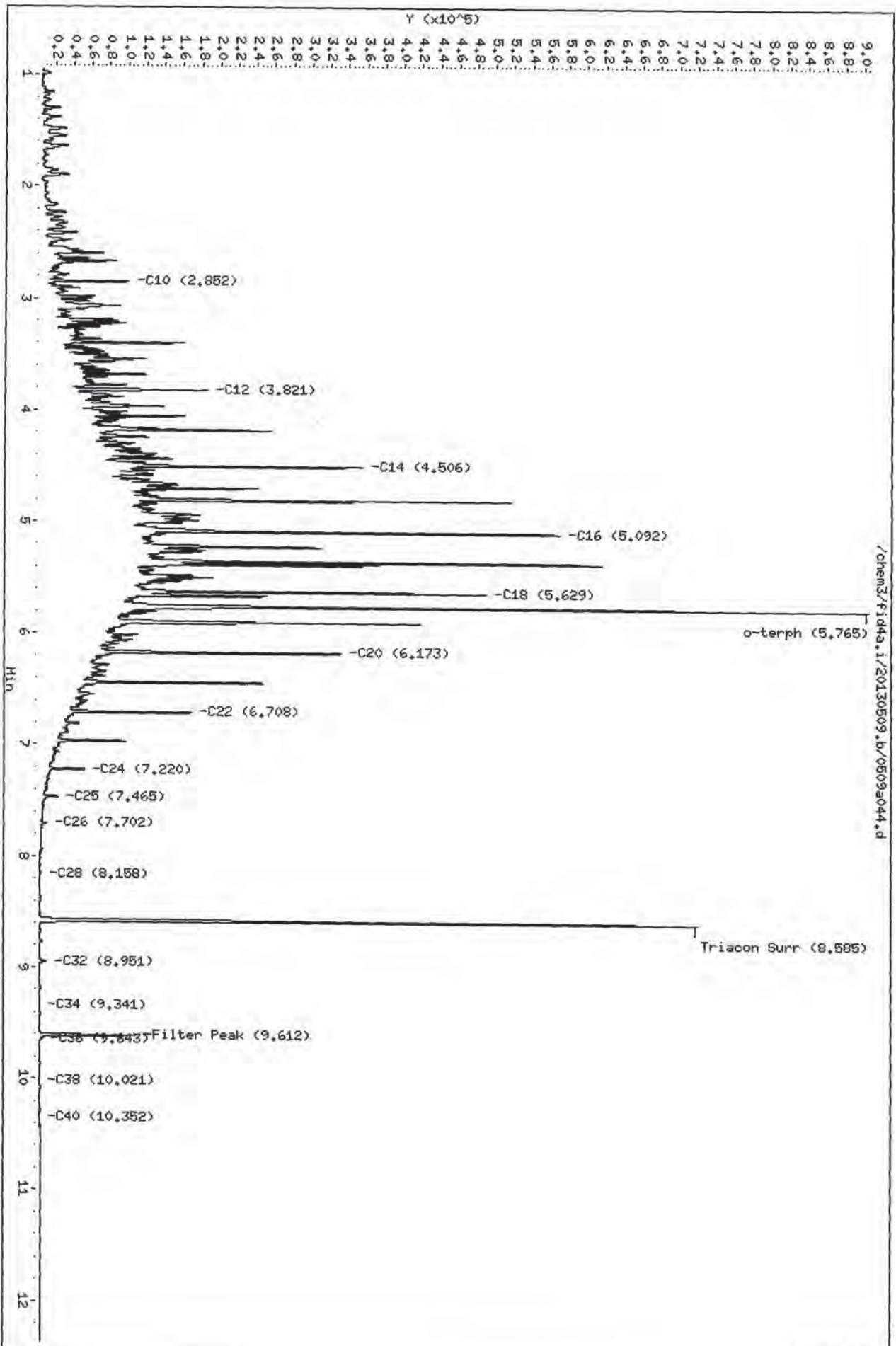
M Indicates the peak was manually integrated

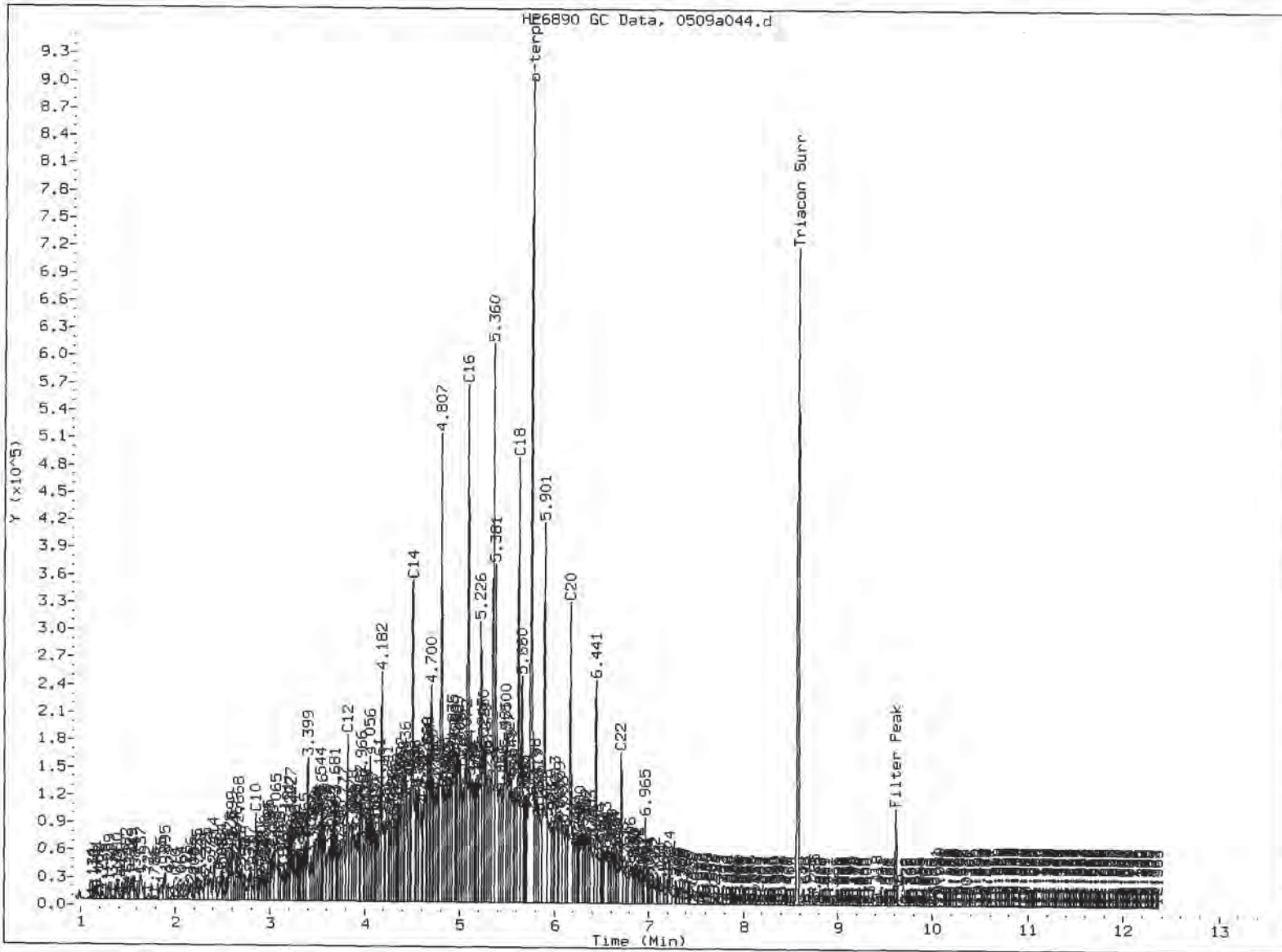
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130509.b/0509a044.d
 Date: 09-MAY-2013 23:23
 Client ID: MP36LCSM4
 Sample Info: MP36LCSM4
 Column phase: RTX-1

Instrument: fid4a.i
 Operator: JR/VTS/JM
 Column diameter: 0.25

SW
5/10/13





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JU

Date: 5/10/13

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 05/09/13

ARI Job: WP36
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
13-10057-050913MB1	Method Blank	500 mL	1.00 mL	05/09/13
13-10057-050913LCS1	Lab Control	500 mL	1.00 mL	05/09/13
13-10057-WP36G	TP-38-050713	500 mL	1.00 mL	05/09/13
13-10058-WP36H	TP-39-050713	500 mL	1.00 mL	05/09/13
13-10059-WP36I	TP-40-050813	500 mL	1.00 mL	05/09/13
13-10060-WP36J	TP-41-050813	500 mL	1.00 mL	05/09/13
13-10061-WP36K	TP-42-050813	500 mL	1.00 mL	05/09/13
13-10062-WP36L	TP-43-050813	500 mL	1.00 mL	05/09/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-38-050713
SAMPLE

Lab Sample ID: WP36A

LIMS ID: 13-10051

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/08/13

Date Received: 05/09/13

Date Analyzed: 05/09/13 13:19

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 88 mg-dry-wt

Percent Moisture: 13.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	14	< 14 U
108-88-3	Toluene	14	< 14 U
100-41-4	Ethylbenzene	14	< 14 U
179601-23-1	m,p-Xylene	28	< 28 U
95-47-6	o-Xylene	14	< 14 U

Gasoline Range Hydrocarbons 5.7 25 GAS ID GRO

BETX Surrogate Recovery

Trifluorotoluene	89.2%
Bromobenzene	87.0%

Gasoline Surrogate Recovery

Trifluorotoluene	90.8%
Bromobenzene	87.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PG
5/10/13

Data file 1: /chem3/pid1.i/20130509-1.b/0509a010.d ARI ID: WP36A
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a010.d Client ID: TP-38-050713
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 13:19
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3150	38626	90.8	TFT(Surr)
15.378	0.001	1999	17265	87.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	63370	0.177 M
8015C 2MP-TMB (4.18 to 16.20)	723723	28362	0.039 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	20532	0.035 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	163723	0.436 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3542	89.2	TFT(Surr)
15.386	0.001	7643	87.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

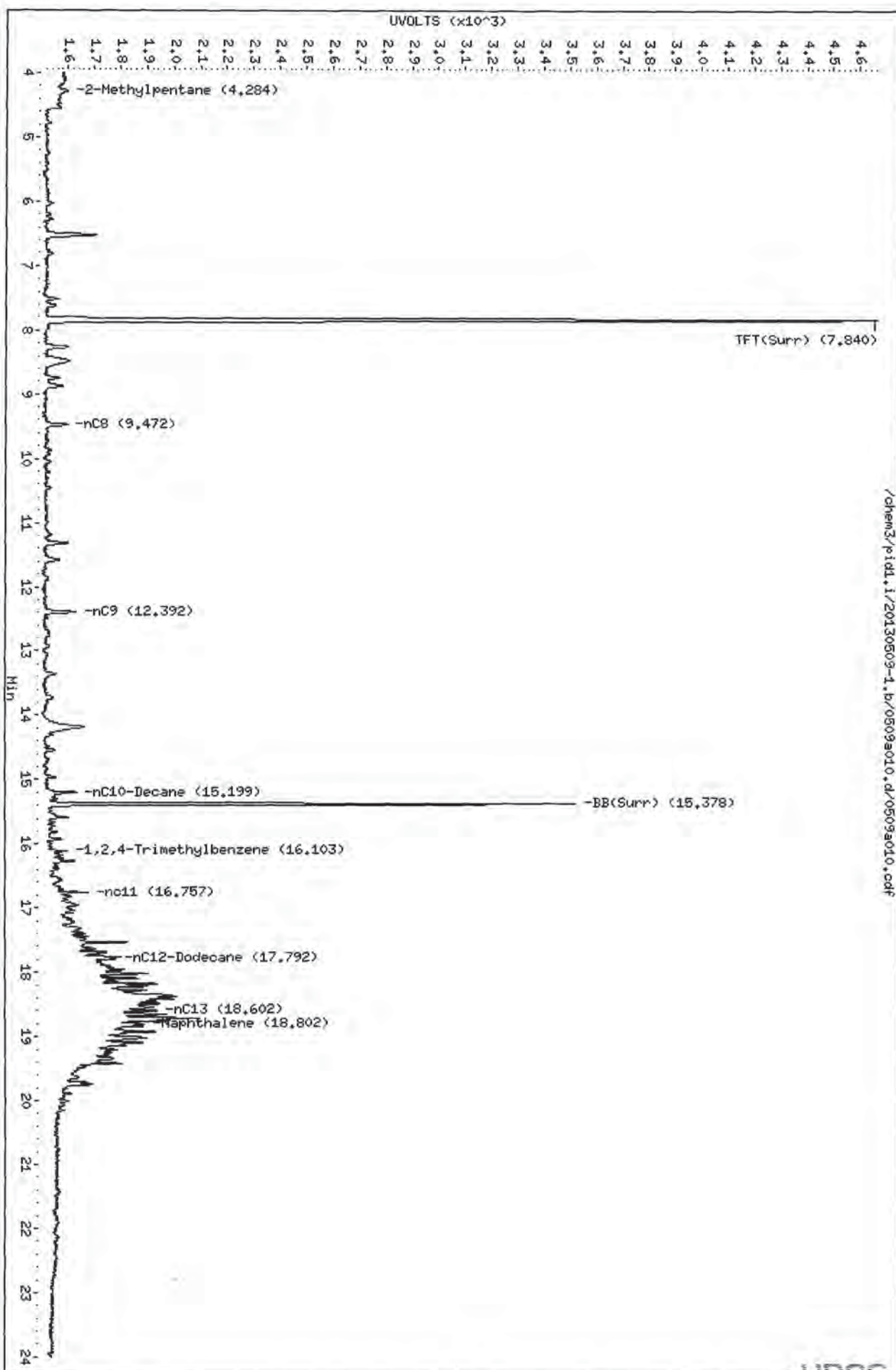
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a010.d
Date: 09-MAY-2013 13:19
Client ID: TP-38-050713
Sample Info: WP36A

Column phase: RTX 502-2 FID

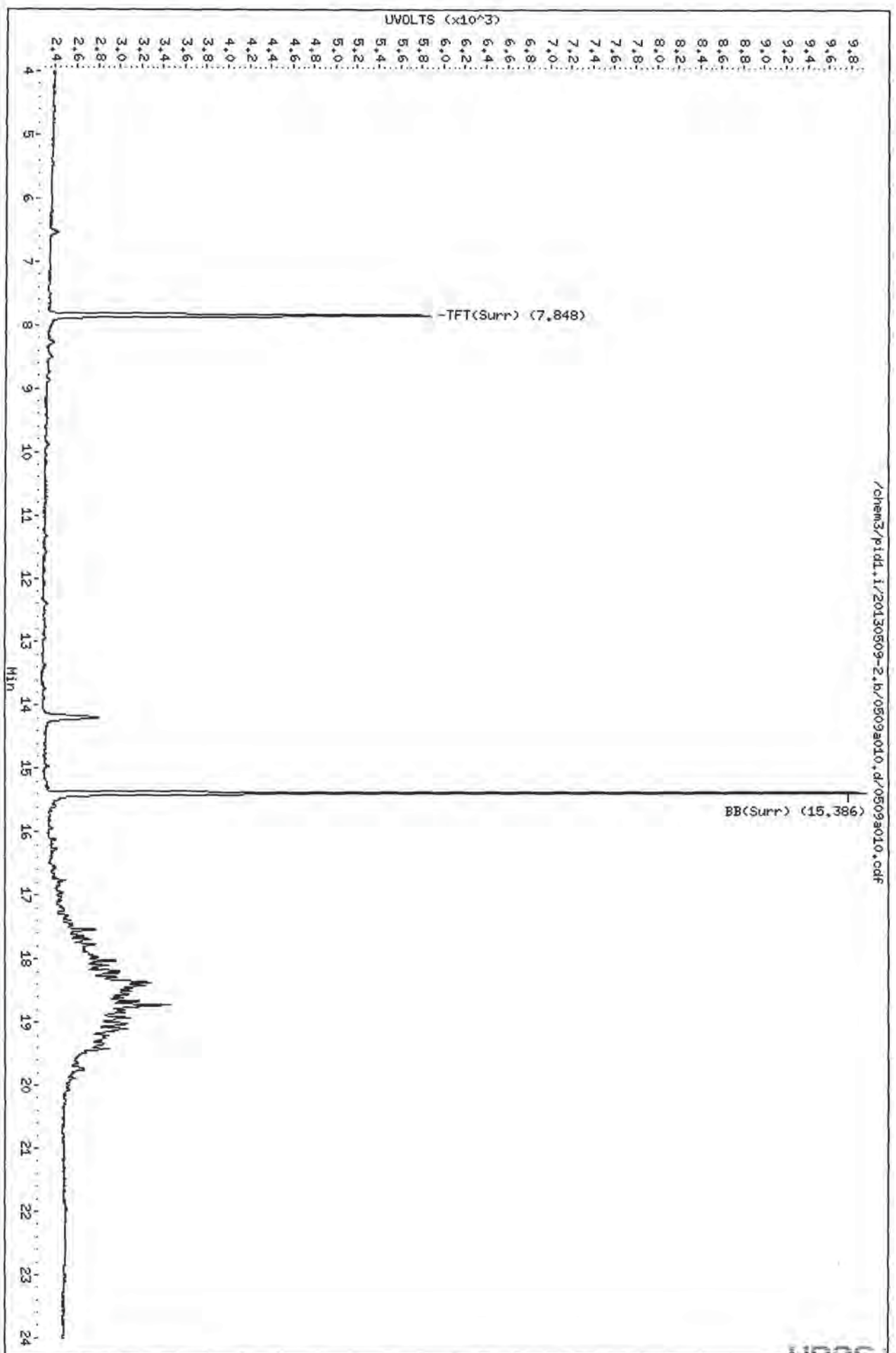
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-1.b/0509a010.d/0509a010.cdf



Data File: /chem3/pid1.i/20130509-2.b/0509a010.d
Date: 09-MAY-2013 13:19
Client ID: TP-38-050713
Sample Info: MP36A
Column phase: RTX 502-2 PID

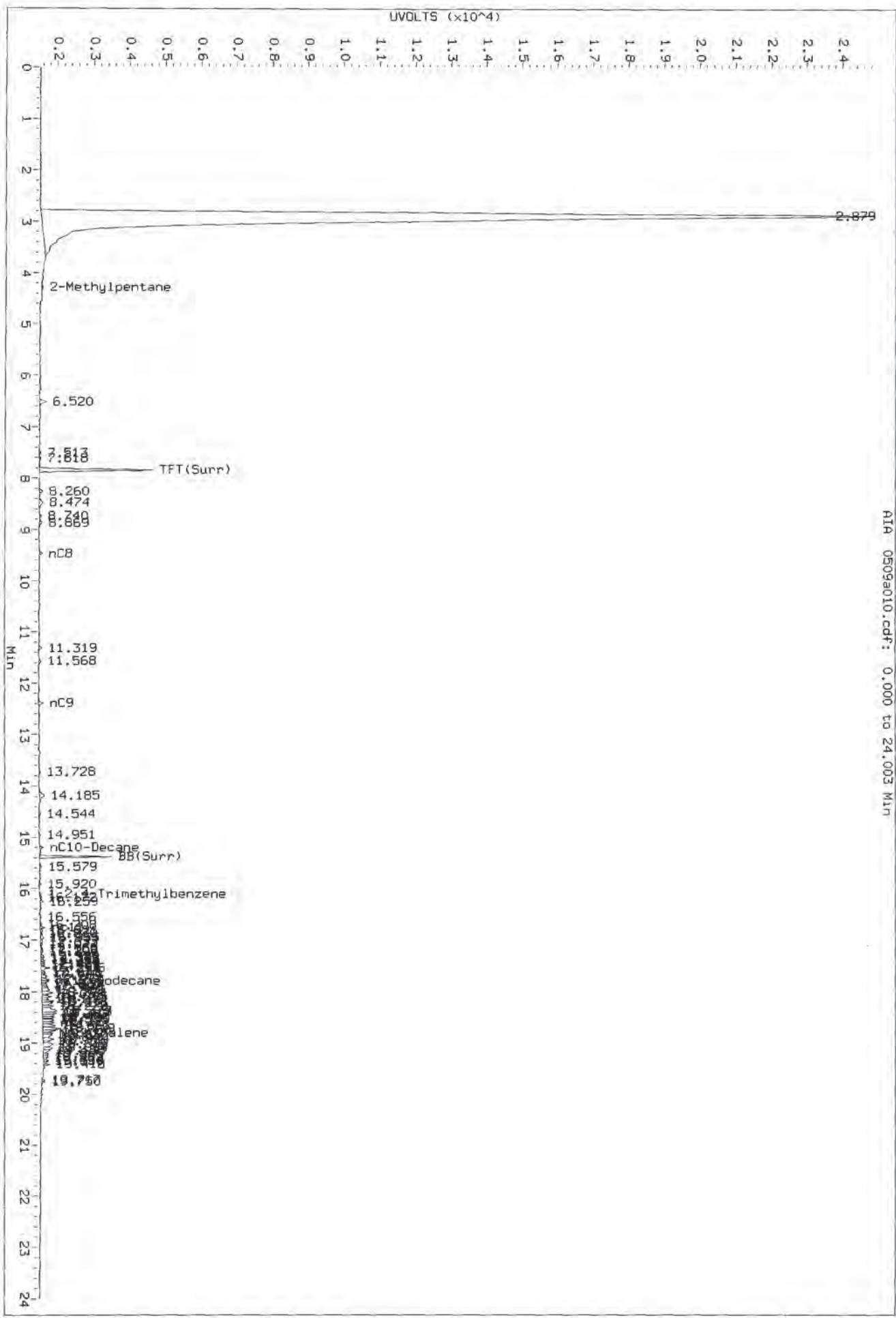
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



PK
5/10/13

Data File: /chem3/pid1.1/20130509-1.1/0509a010.d/0509a010.cdf
Injection Date: 09-MAY-2013 13:19
Instrument: pid1.1
Client Sample ID: TP-38-050713

AIA 0509a010.cdf: 0.000 to 24.003 Min



11 10 09 08 07 06 05 04 03 02 01

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-39-050713
SAMPLE

Lab Sample ID: WP36B

LIMS ID: 13-10052

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/08/13

Date Received: 05/09/13

Date Analyzed: 05/09/13 13:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 55 mg-dry-wt

Percent Moisture: 24.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	23	52
108-88-3	Toluene	23	94
100-41-4	Ethylbenzene	23	< 23 U
179601-23-1	m,p-Xylene	45	< 45 U
95-47-6	o-Xylene	23	< 23 U

Gasoline Range Hydrocarbons	9.1	< 9.1 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	86.6%
Bromobenzene	83.6%

Gasoline Surrogate Recovery

Trifluorotoluene	88.2%
Bromobenzene	85.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PG
5/14/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a011.d ARI ID: WP36B
Data file 2: /chem3/pid1.i/20130509-2.b/0509a011.d Client ID: TP-39-050713
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 13:48
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3061	37423	88.2	TFT(Surr)
15.378	0.001	1956	16425	85.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	5081	0.014
8015C 2MP-TMB (4.18 to 16.20)	723723	5273	0.007
AK101 nC6-nC10 (4.67 to 15.10)	582885	4541	0.008
NWTPHG Tol-Nap (9.76 to 18.89)	375093	5081	0.014

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3437	86.6	TFT(Surr)
15.386	0.001	7344	83.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	0.000	136	0.57N	Benzene
9.874	0.002	237	1.03	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

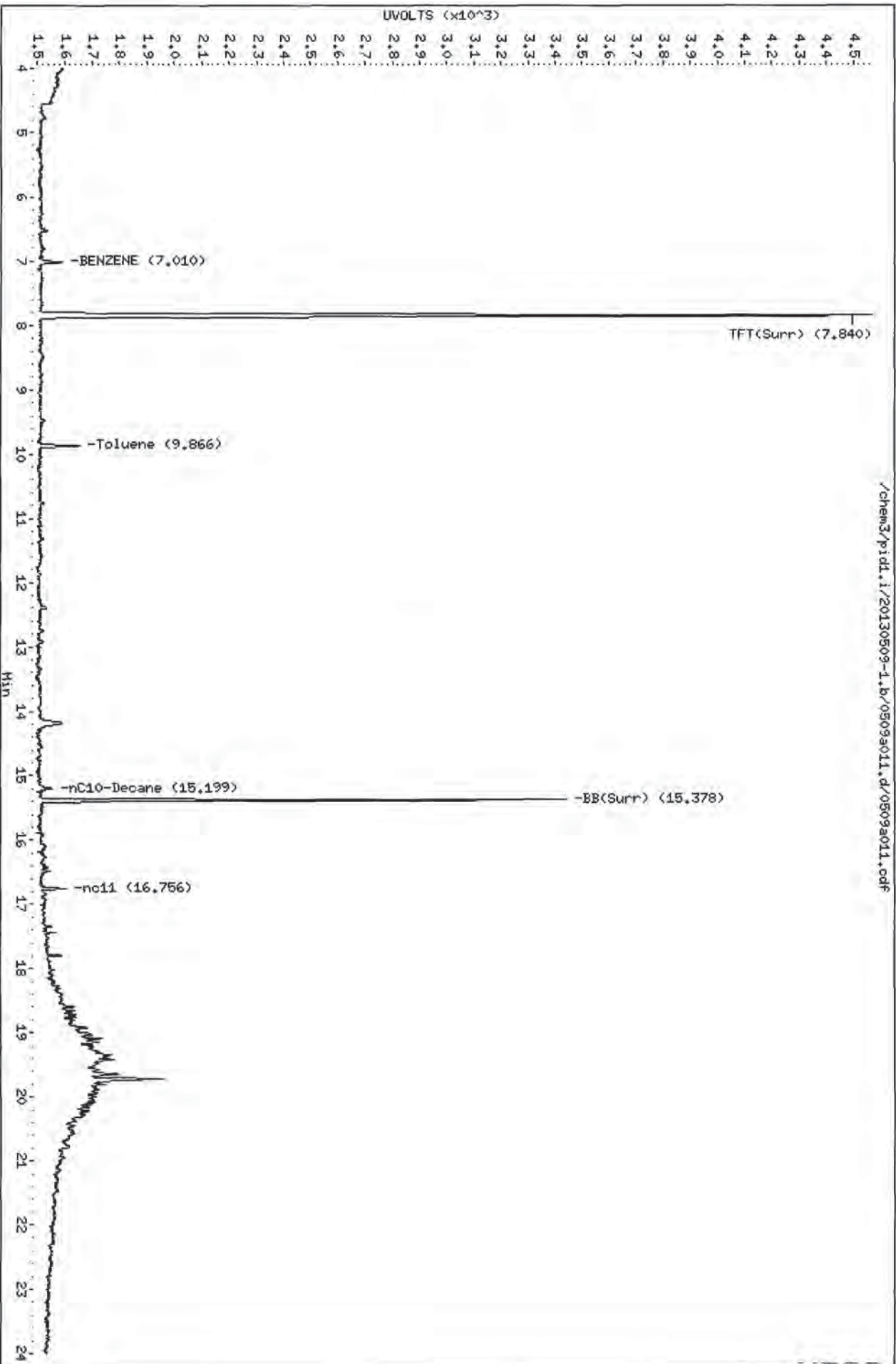
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a011.d
Date: 09-MAY-2013 13:48
Client ID: TP-39-050713
Sample Info: NP36B

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-1.b/0509a011.d/0509a011.cdf



Data File: /chem3/pid1.i/20130509-2.b/0509a011.d

Page 1

Date: 09-MAY-2013 13:48

Client ID: TP-39-050713

Sample Info: MP36B

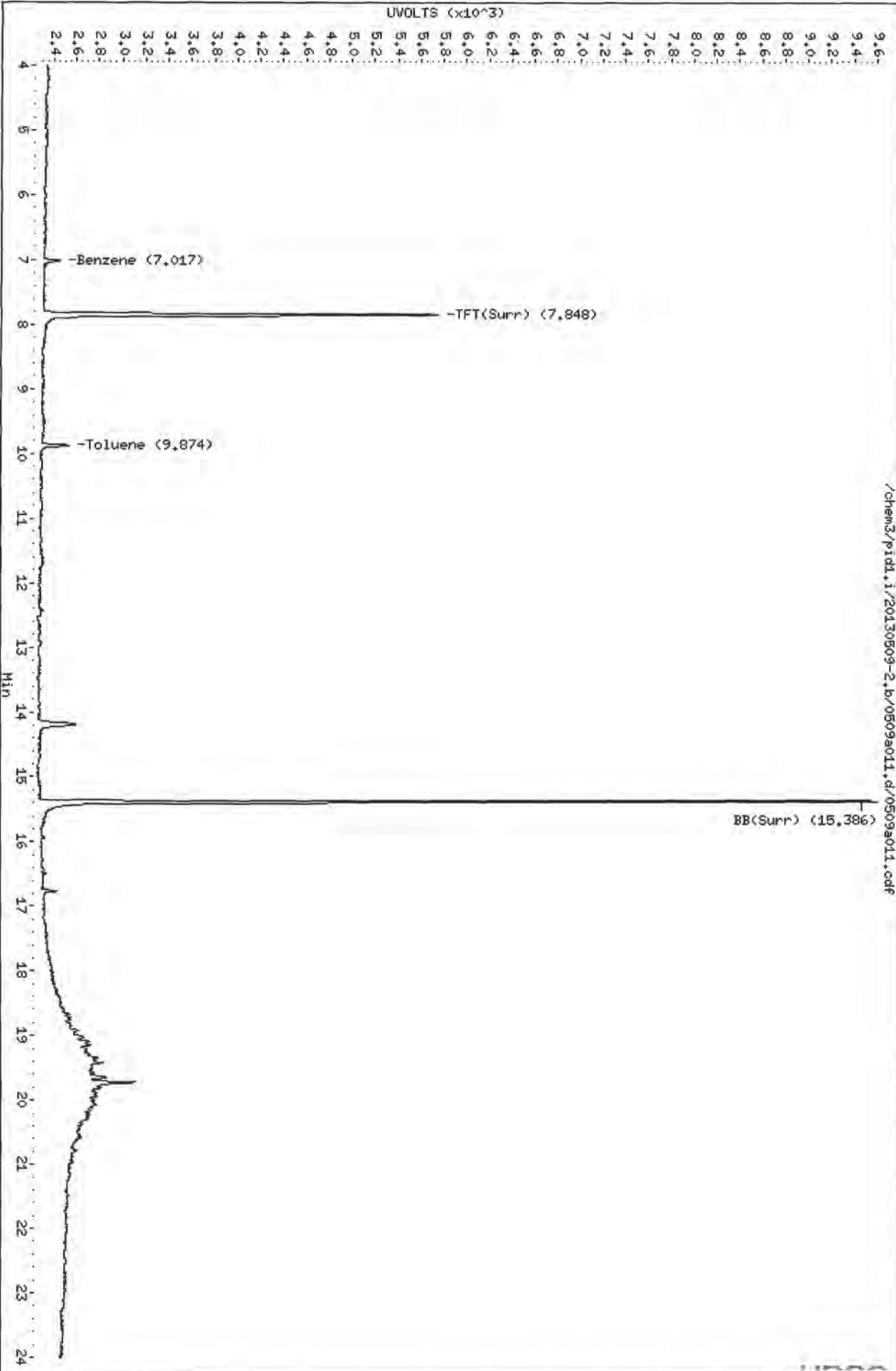
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 PID

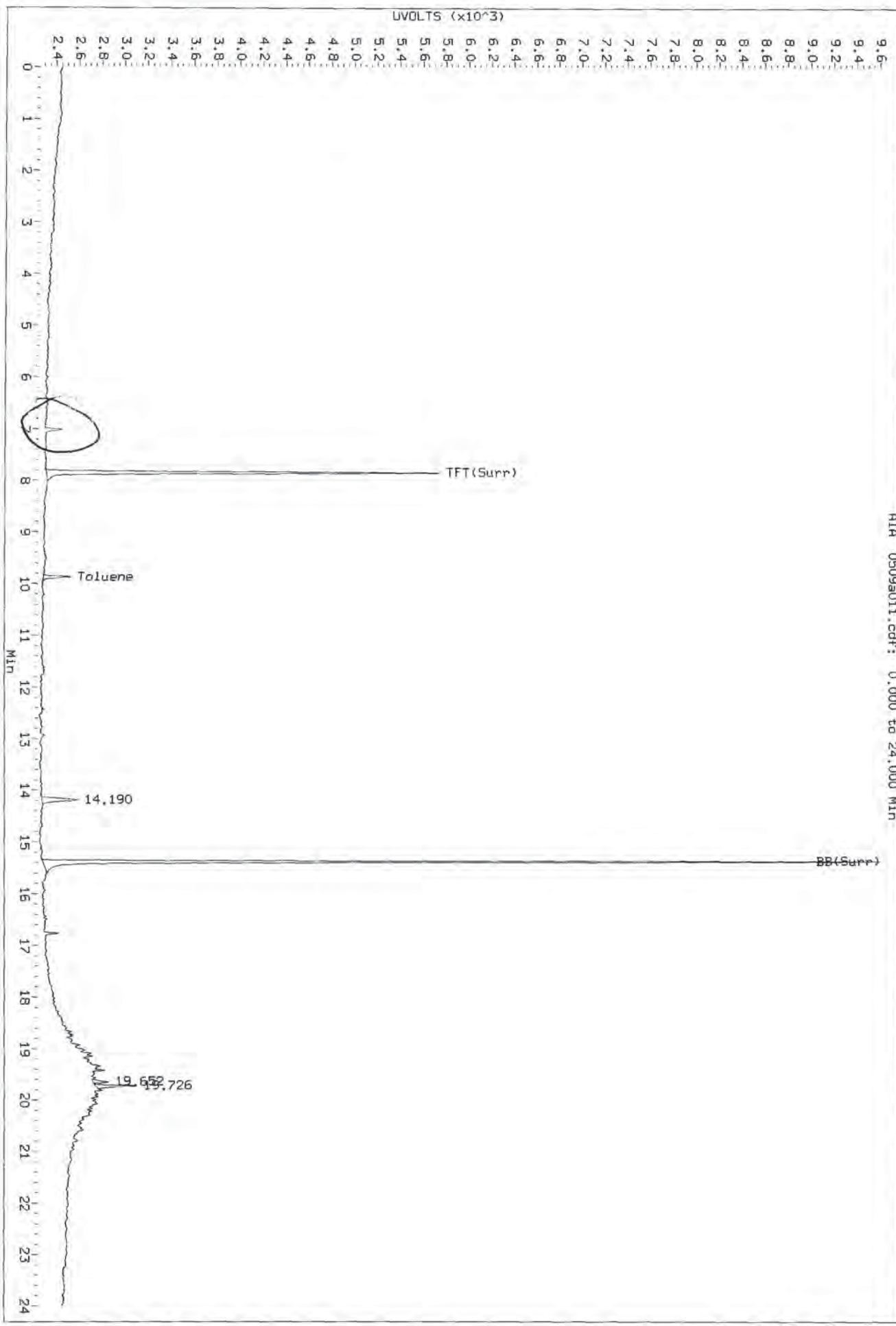
/chem3/pid1.i/20130509-2.b/0509a011.d/0509a011.cdf



PCS/10/13

Data File: /chem3/pid1.1/20130509-2.b/0509a011.d/0509a011.cdf
Injection Date: 09-MAY-2013 13:48
Instrument: pid1.1
Client Sample ID: TP-39-050713

RIA 0509a011.cdf: 0.000 to 24.000 Min



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-40-050813

SAMPLE

Lab Sample ID: WP36C

LIMS ID: 13-10053

Matrix: Soil

Data Release Authorized: *WVW*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/08/13

Date Received: 05/09/13

Date Analyzed: 05/09/13 14:18

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 74 mg-dry-wt

Percent Moisture: 16.5%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	17	< 17 U
108-88-3	Toluene	17	< 17 U
100-41-4	Ethylbenzene	17	< 17 U
179601-23-1	m,p-Xylene	34	< 34 U
95-47-6	o-Xylene	17	< 17 U

Gasoline Range Hydrocarbons 6.7 < 6.7 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	86.5%
Bromobenzene	85.3%

Gasoline Surrogate Recovery

Trifluorotoluene	88.8%
Bromobenzene	86.8%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
BETX/Gas Quantitation Report

*pc
5/10/13*

Data file 1: /chem3/pid1.i/20130509-1.b/0509a012.d ARI ID: WP36C
Data file 2: /chem3/pid1.i/20130509-2.b/0509a012.d Client ID: TP-40-050713
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 14:18
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3079	37731	88.8	TFT(Surr)
15.379	0.002	1981	16478	86.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	30659	0.086
8015C 2MP-TMB (4.18 to 16.20)	723723	20074	0.028
AK101 nC6-nC10 (4.67 to 15.10)	582885	15133	0.026
NWTPHG Tol-Nap (9.76 to 18.89)	375093	31764	0.085

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3435	86.5	TFT(Surr)
15.386	0.002	7502	85.3	BB(Surr)

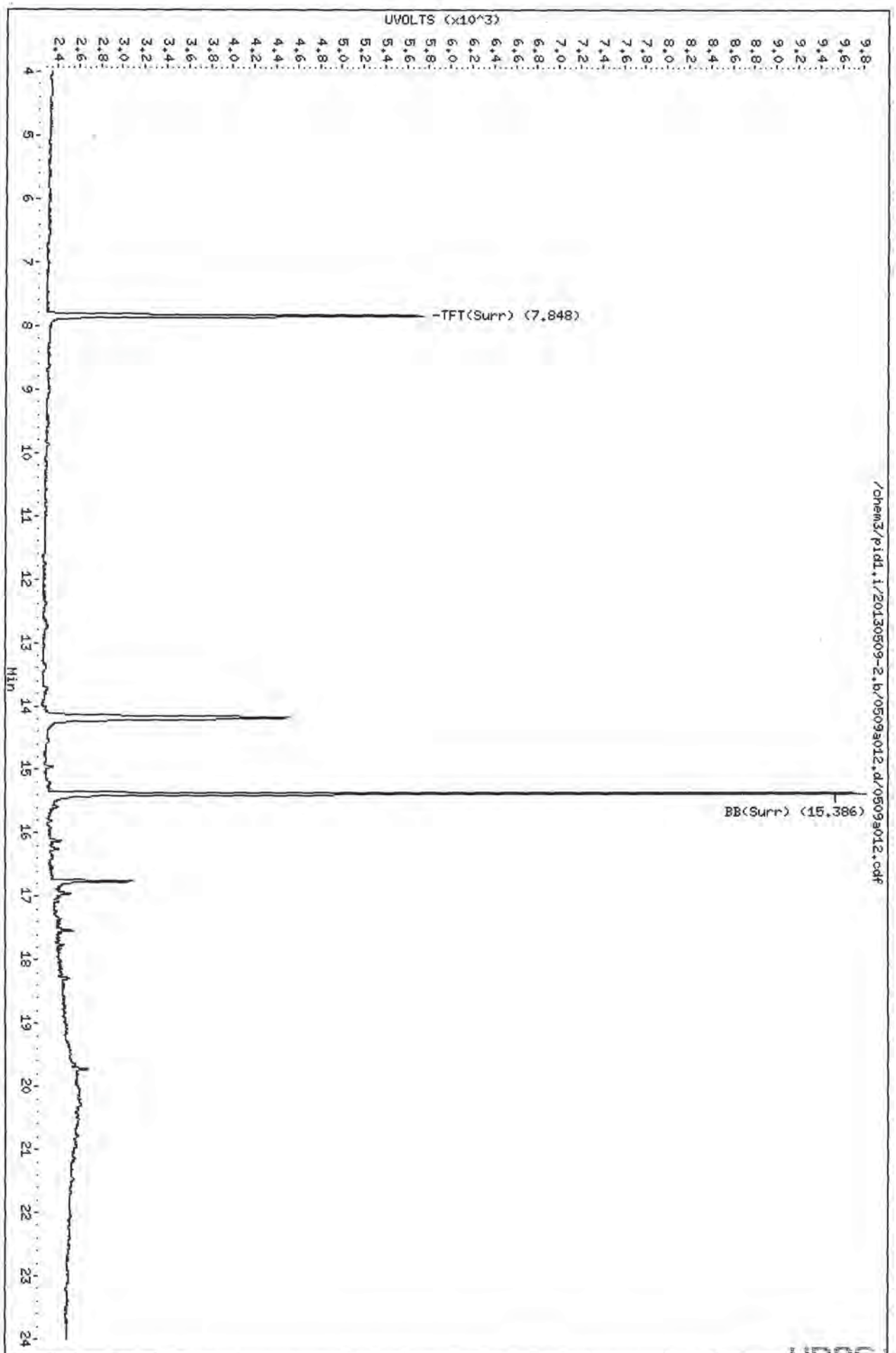
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-2.1b/0509a012.d
Date: 09-MAY-2013 14:18
Client ID: TP-40-050713
Sample Info: MP36C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-2.1b/0509a012.d/0509a012.cdf

11 12 13 14 15 16 17 18 19 20 21 22 23 24

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-41-050813
 SAMPLE

Lab Sample ID: WP36D
 LIMS ID: 13-10054
 Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/09/13 14:47
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 60 mg-dry-wt
 Percent Moisture: 24.4%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	21	< 21 U
108-88-3	Toluene	21	< 21 U
100-41-4	Ethylbenzene	21	< 21 U
179601-23-1	m,p-Xylene	42	< 42 U
95-47-6	o-Xylene	21	< 21 U

Gasoline Range Hydrocarbons 8.4 < 8.4 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	85.7%
Bromobenzene	83.9%

Gasoline Surrogate Recovery

Trifluorotoluene	87.8%
Bromobenzene	85.5%

BETX values reported in ug/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a013.d ARI ID: WP36D
Data file 2: /chem3/pid1.i/20130509-2.b/0509a013.d Client ID: TP-41-050713
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 14:47
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.003	3046	37153	87.8	TFT(Surr)
15.379	0.002	1952	16499	85.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	5027	0.014
8015C 2MP-TMB (4.18 to 16.20)	723723	3129	0.004
AK101 nC6-nC10 (4.67 to 15.10)	582885	3129	0.005
NWTPHG Tol-Nap (9.76 to 18.89)	375093	5027	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.003	3403	85.7	TFT(Surr)
15.387	0.002	7375	83.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

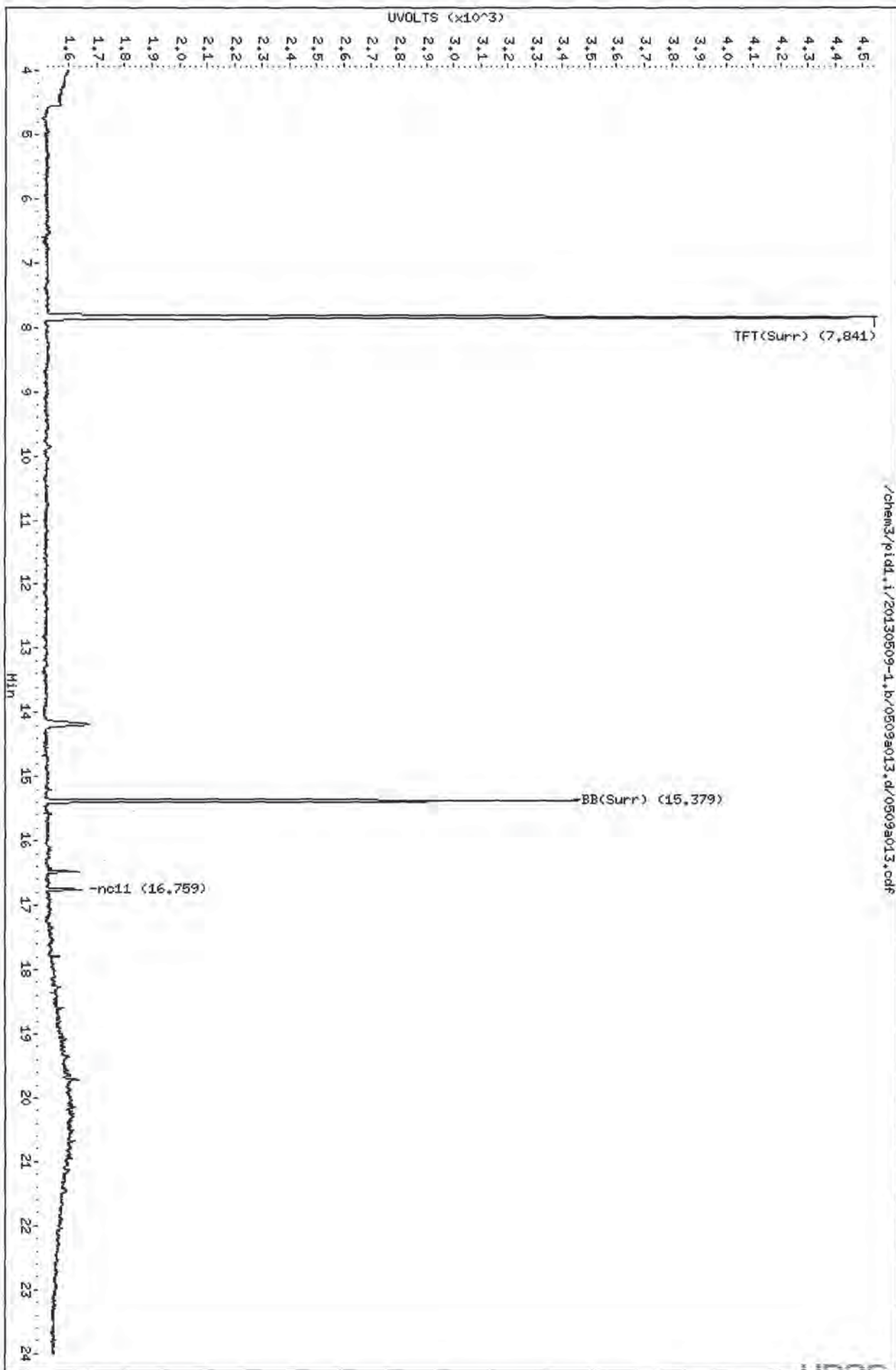
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a013.d
Date : 09-MAY-2013 14:47
Client ID: TP-41-050713
Sample Info: MP36D

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-1.b/0509a013.d/0509a013.cdf

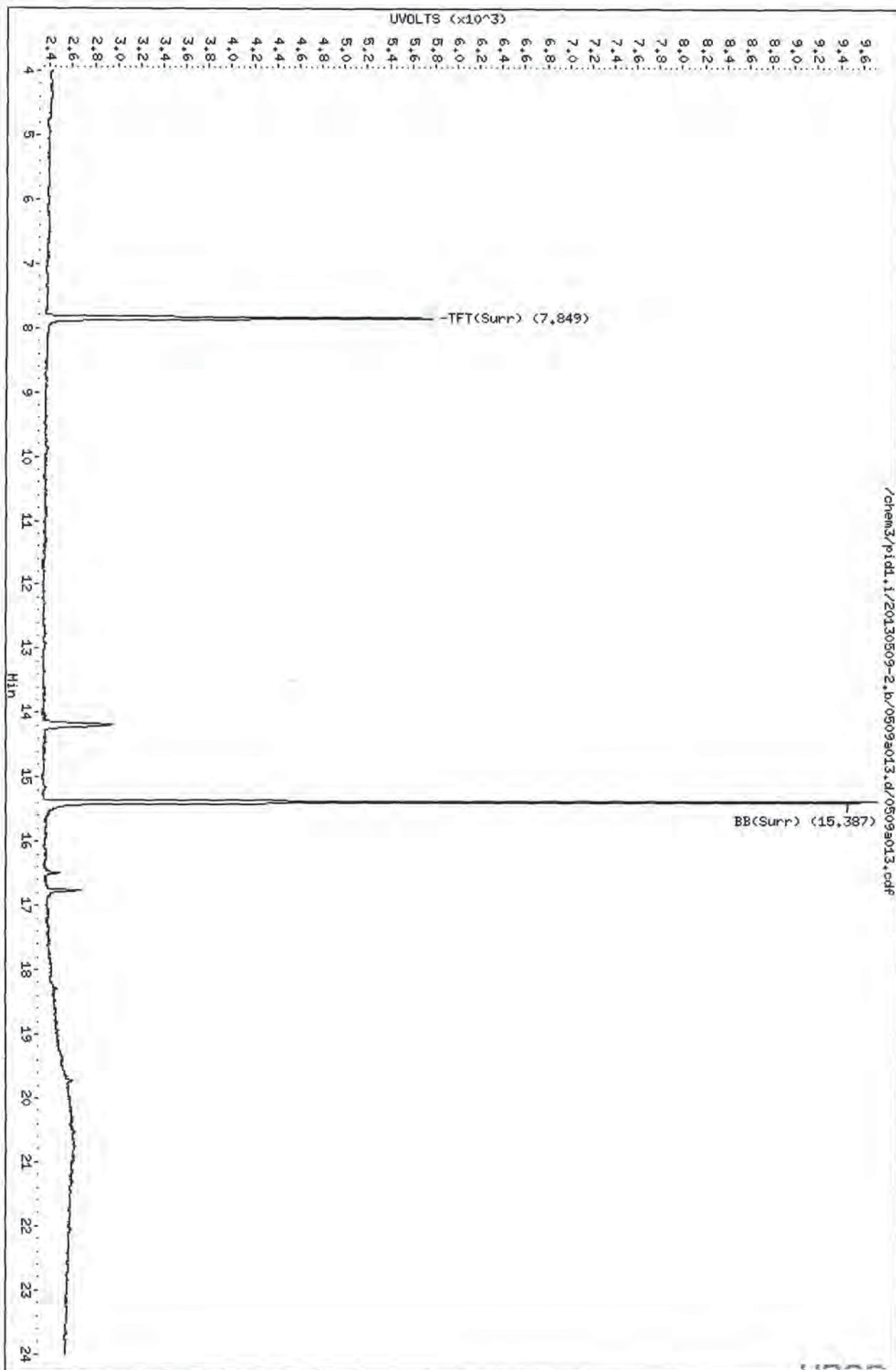


Data File: /chem3/pid1.i/20130509-2.b/0509a013.d
Date: 09-MAY-2013 14:47
Client ID: TP-41-050713
Sample Info: MP36D

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-2.b/0509a013.d/0509a013.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-42-050813

SAMPLE

Lab Sample ID: WP36E

LIMS ID: 13-10055

Matrix: Soil

Data Release Authorized: *MW*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/08/13

Date Received: 05/09/13

Date Analyzed: 05/09/13 15:17

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 55 mg-dry-wt

Percent Moisture: 30.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	23	< 23 U
108-88-3	Toluene	23	< 23 U
100-41-4	Ethylbenzene	23	< 23 U
179601-23-1	m,p-Xylene	46	< 46 U
95-47-6	o-Xylene	23	< 23 U

Gasoline Range Hydrocarbons	9.1	< 9.1 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	85.9%
Bromobenzene	83.1%

Gasoline Surrogate Recovery

Trifluorotoluene	87.5%
Bromobenzene	84.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a014.d ARI ID: WP36E
Data file 2: /chem3/pid1.i/20130509-2.b/0509a014.d Client ID: TP-42-050713
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 15:17
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	3035	37119	87.5	TFT(Surr)
15.379	0.002	1928	16504	84.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	6247	0.017
8015C 2MP-TMB (4.18 to 16.20)	723723	4303	0.006
AK101 nC6-nC10 (4.67 to 15.10)	582885	1728	0.003
NWTPHG Tol-Nap (9.76 to 18.89)	375093	7509	0.020

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.003	3408	85.9	TFT(Surr)
15.387	0.002	7308	83.1	BB(Surr)

SW8021 (PID)

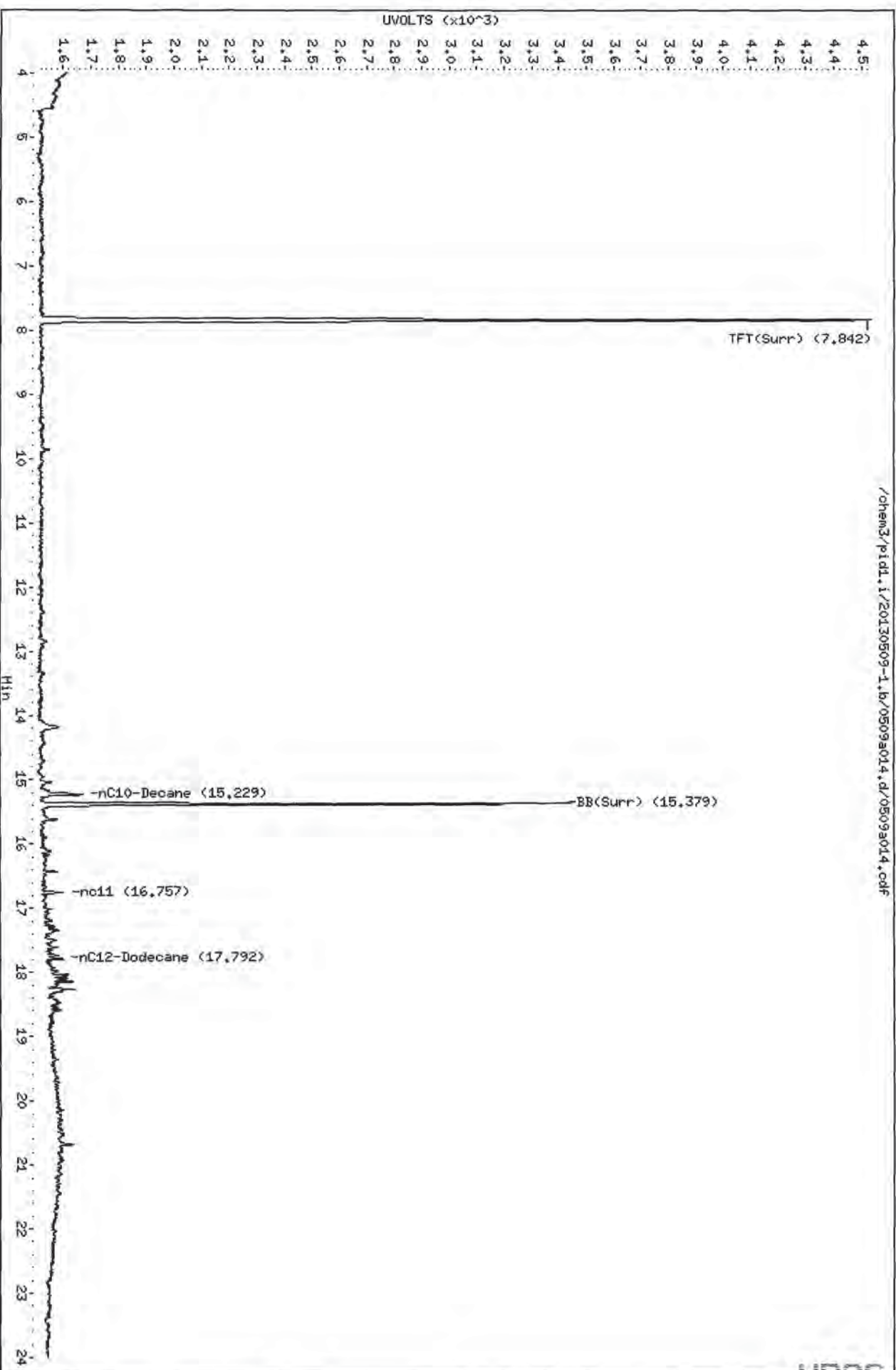
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a014.d
Date: 09-MAY-2013 15:17
Client ID: TP-42-050713
Sample Info: MP36E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

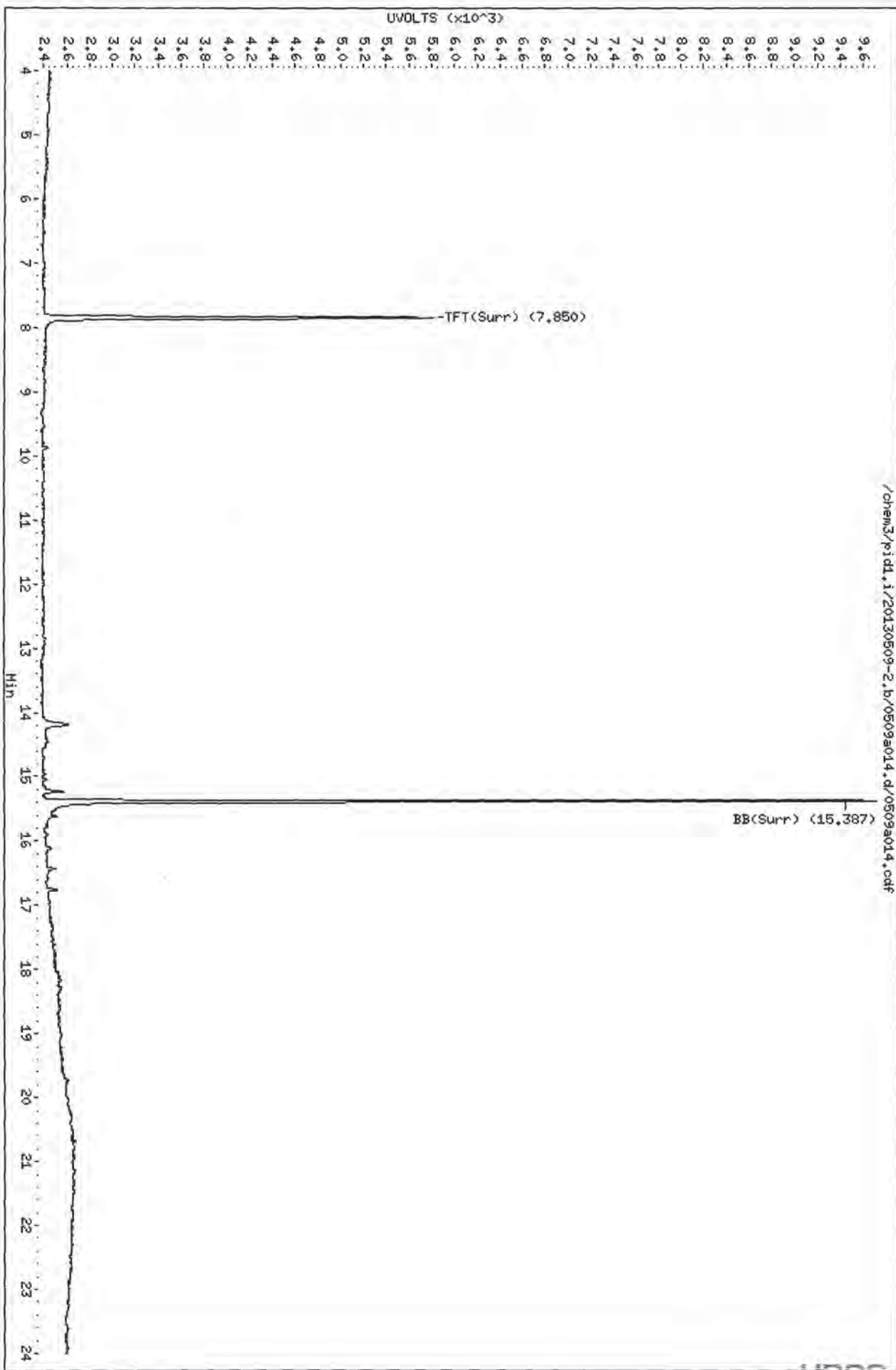
/chem3/pid1.i/20130509-1.b/0509a014.d/0509a014.cdf



Data File: /chem3/pidd,1/20130509-2,b/0509a014.d
Date: 09-MAY-2013 15:17
Client ID: TP-42-050713
Sample Info: MP36E
Column phase: RTX 502-2 PID

Instrument: pidd,1
Operator: LH
Column diameter: 0.18

/chem3/pidd,1/20130509-2,b/0509a014.d/0509a014.cdf



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ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-43-050813
SAMPLE

Lab Sample ID: WP36F

LIMS ID: 13-10056

Matrix: Soil

Data Release Authorized: *mm*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/08/13

Date Received: 05/09/13

Date Analyzed: 05/09/13 15:46

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 82 mg-dry-wt

Percent Moisture: 16.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	15	< 15 U
108-88-3	Toluene	15	< 15 U
100-41-4	Ethylbenzene	15	< 15 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	15	< 15 U

Gasoline Range Hydrocarbons 6.1 < 6.1 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	82.7%
Bromobenzene	82.9%

Gasoline Surrogate Recovery

Trifluorotoluene	84.9%
Bromobenzene	83.9%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PK
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a015.d ARI ID: WP36F
Data file 2: /chem3/pid1.i/20130509-2.b/0509a015.d Client ID: TP-43-050713
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 15:46
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	2946	35980	84.9	TFT(Surr)
15.379	0.002	1915	16044	83.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	2586	0.007
8015C 2MP-TMB (4.18 to 16.20)	723723	1613	0.002
AK101 nC6-nC10 (4.67 to 15.10)	582885	1613	0.003
NWTPHG Tol-Nap (9.76 to 18.89)	375093	2586	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.004	3283	82.7	TFT(Surr)
15.387	0.002	7286	82.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

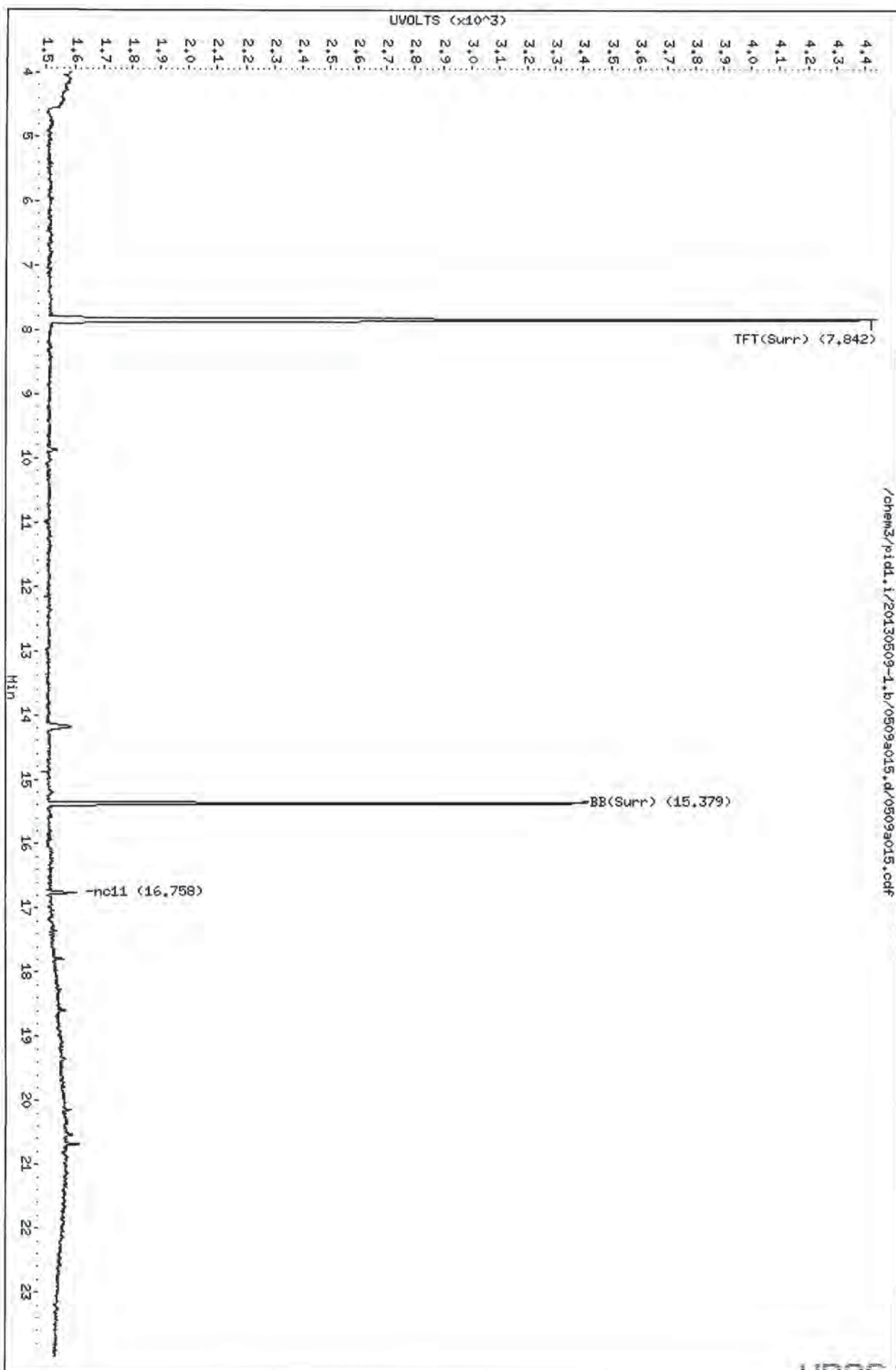
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd1.i/20130509-1.b/0509a015.d
Date: 09-MAY-2013 15:46
Client ID: TP-43-050713
Sample Info: MP36F

Column phase: RTX 502-2 FID

Instrument: pidd1.i
Operator: LH
Column diameter: 0.18

/chem3/pidd1.i/20130509-1.b/0509a015.d/0509a015.cdf



TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WP36
Matrix: Soil

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-050913	NA	85.2%	84.5%	0
LCS-050913	NA	95.4%	90.8%	0
LCSD-050913	NA	95.7%	92.5%	0
TP-38-050713	NA	90.8%	87.6%	0
TP-39-050713	NA	88.2%	85.7%	0
TP-40-050813	NA	88.8%	86.8%	0
TP-41-050813	NA	87.8%	85.5%	0
TP-42-050813	NA	87.5%	84.5%	0
TP-43-050813	NA	84.9%	83.9%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-10051 to 13-10056

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-050913

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050913

LIMS ID: 13-10051

Matrix: Soil

Data Release Authorized: *mmw*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/09/13 10:14

LCSD: 05/09/13 10:44

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS		LCS		LCSD		RPD
	LCS	Spike Added-LCS	Recovery	LCSD	Spike Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	48.0	50.0	96.0%	48.2	50.0	96.4%	0.4%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.4%	95.7%
Bromobenzene	90.8%	92.5%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-050913
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050913
 LIMS ID: 13-10051
 Matrix: Soil
 Data Release Authorized: *MW*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/09/13 10:14
 LCSD: 05/09/13 10:44
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount LCS: 100 mg-dry-wt
 LCSD: 100 mg-dry-wt

Analyte	Spike		LCS		Spike		LCSD	
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD	
Benzene	170	185	91.9%	180	185	97.3%	5.7%	
Toluene	1790	1980	90.4%	1900	1980	96.0%	6.0%	
Ethylbenzene	510	580	87.9%	536	580	92.4%	5.0%	
m,p-Xylene	1850	2120	87.3%	1940	2120	91.5%	4.7%	
o-Xylene	835	960	87.0%	888	960	92.5%	6.2%	

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	93.1%	93.8%
Bromobenzene	89.5%	92.2%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/10/13

Data file 1: /chem3/pid1.i/20130509-1.b/0509a004.d ARI ID: LCS0509
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a004.d Client ID:
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 10:14
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	-0.001	3310	45027	95.4	TFT(Surr)
15.377	0.000	2073	18181	90.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	343007	0.958 M
8015C 2MP-TMB (4.18 to 16.20)	723723	694125	0.959 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	562824	0.966 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	360234	0.960 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.000	3695	93.1	TFT(Surr)
15.386	0.001	7864	89.5	BB(Surr)

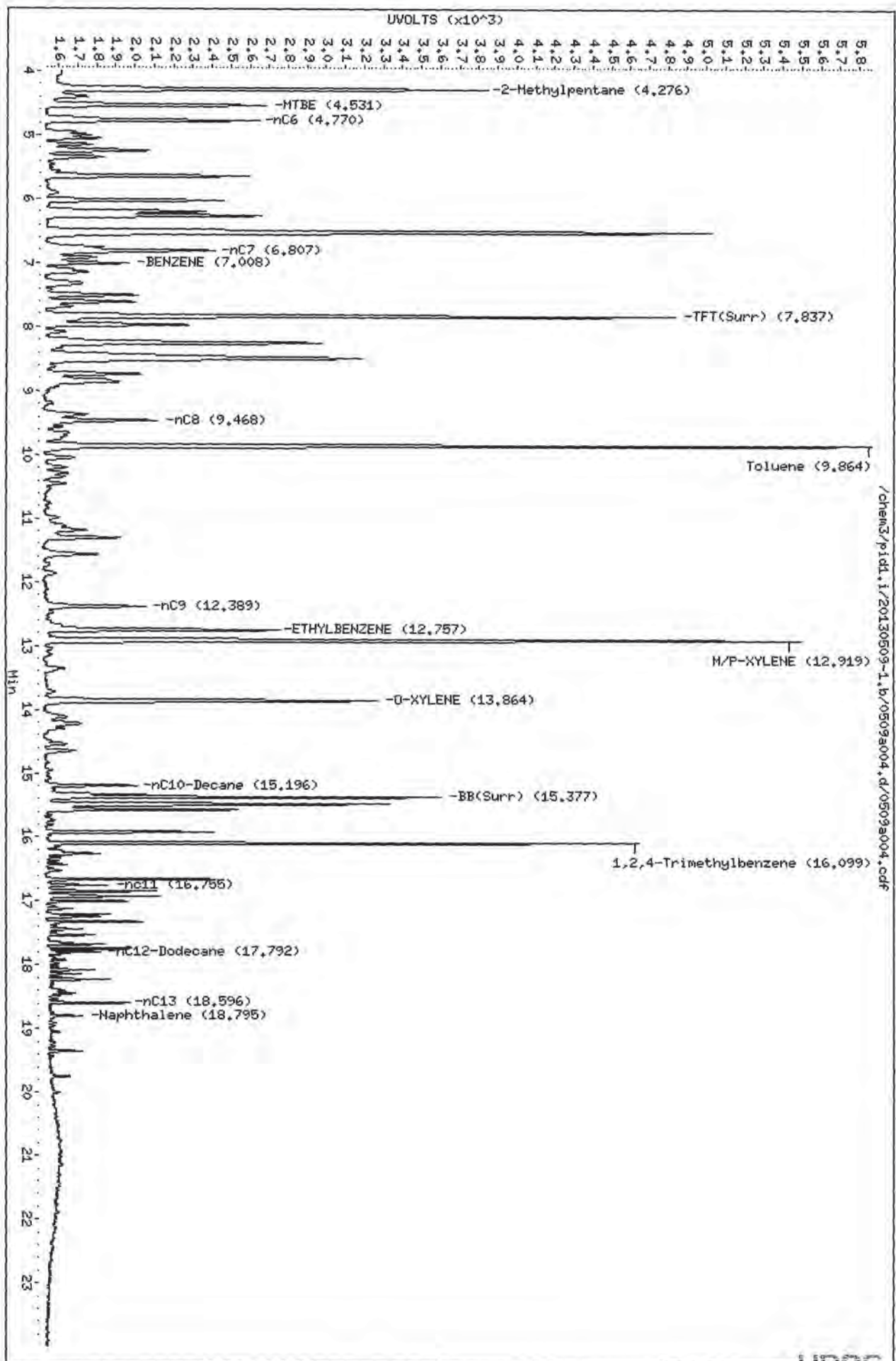
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	0.000	813	3.39	Benzene
9.873	0.000	8188	35.75	Toluene
12.766	0.000	1972	10.19	Ethylbenzene
12.929	0.003	7920	37.09	M/P-Xylene
13.874	0.001	2849	16.70	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a004.d
Date: 09-MAY-2013 10:14
Client ID:
Sample Info: LC0509
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-1.b/0509a004.d/0509a004.cdf

Data File: /chem3/pidl.i/20130509-2.b/0509a004.d
Date: 09-MAY-2013 10:14

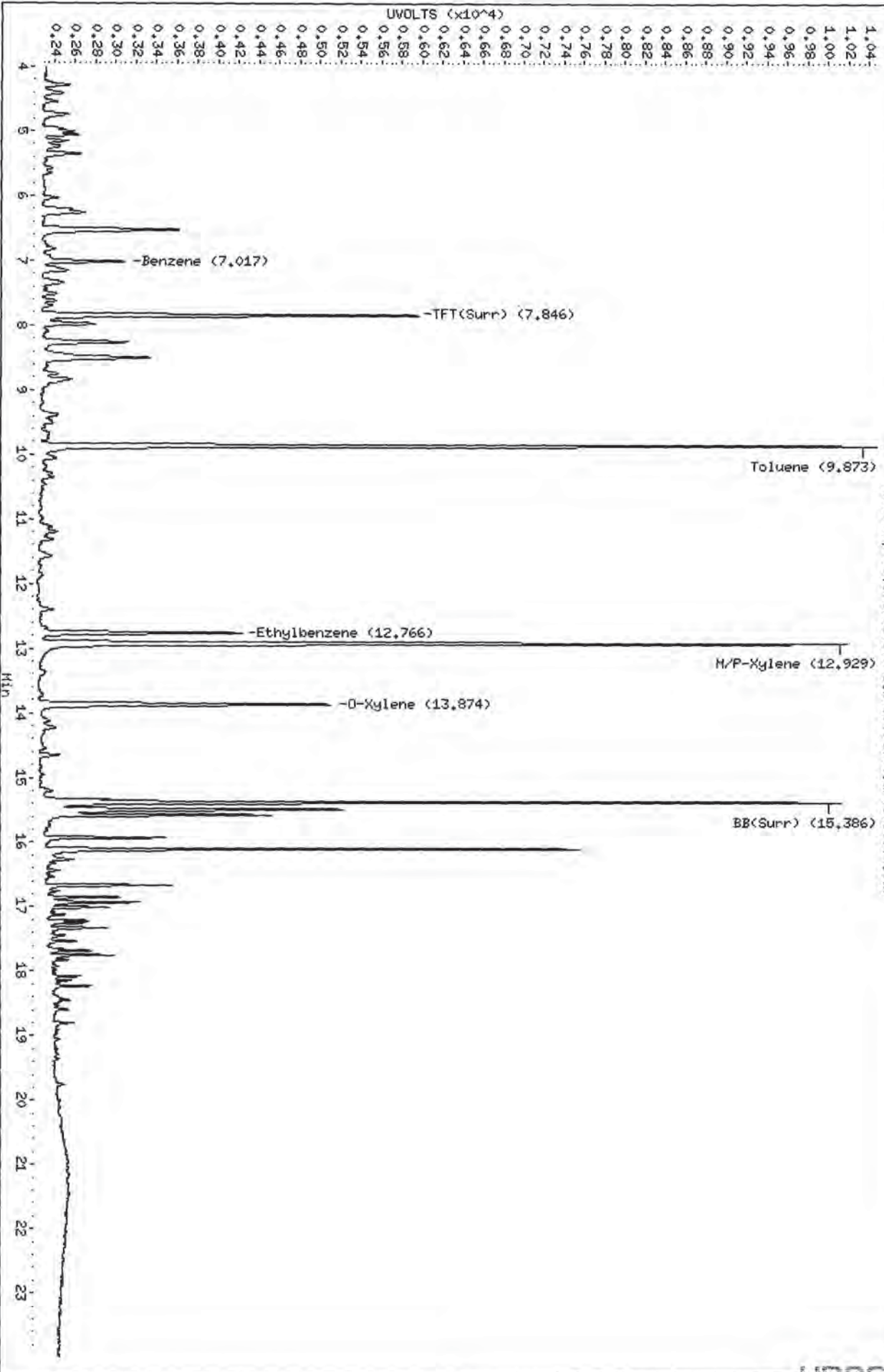
Client ID:
Sample Info: LCS0509

Column phase: RTX 502-2 PID

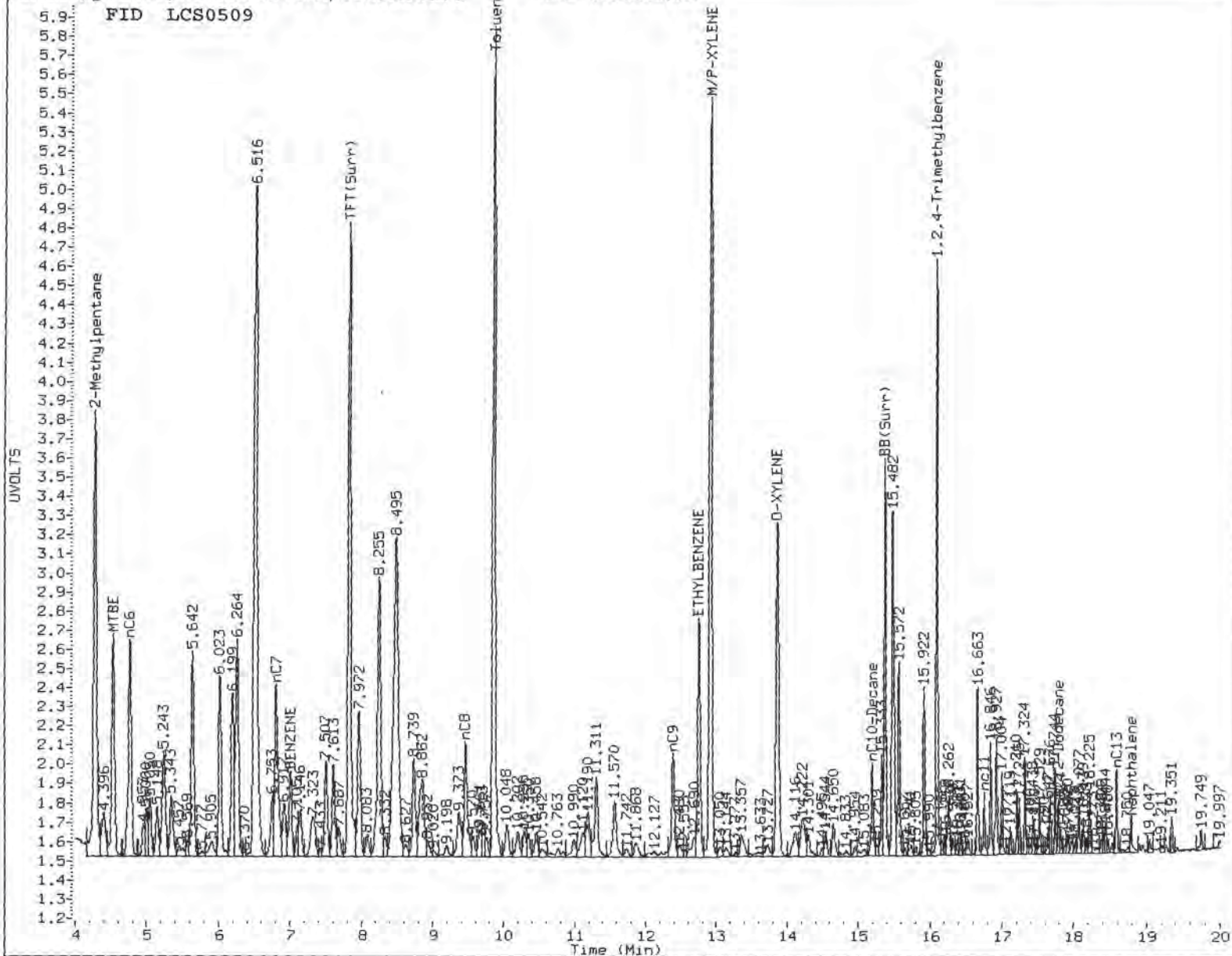
Instrument: pidl.i

Operator: LH
Column diameter: 0.18

/chem3/pidl.i/20130509-2.b/0509a004.d/0509a004.cdf



FID LCS0509



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: KL Date: 5/10/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
 5/11/13

Data file 1: /chem3/pid1.i/20130509-1.b/0509a005.d ARI ID: LCSD0509
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a005.d Client ID:
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 10:44
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.001	3320	45146	95.7	TFT (Surr)
15.379	0.001	2111	18535	92.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	346764	0.968 M
8015C 2MP-TMB (4.18 to 16.20)	723723	698654	0.965 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	563144	0.966 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	361524	0.964 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.001	3724	93.8	TFT (Surr)
15.386	0.002	8108	92.2	BB (Surr)

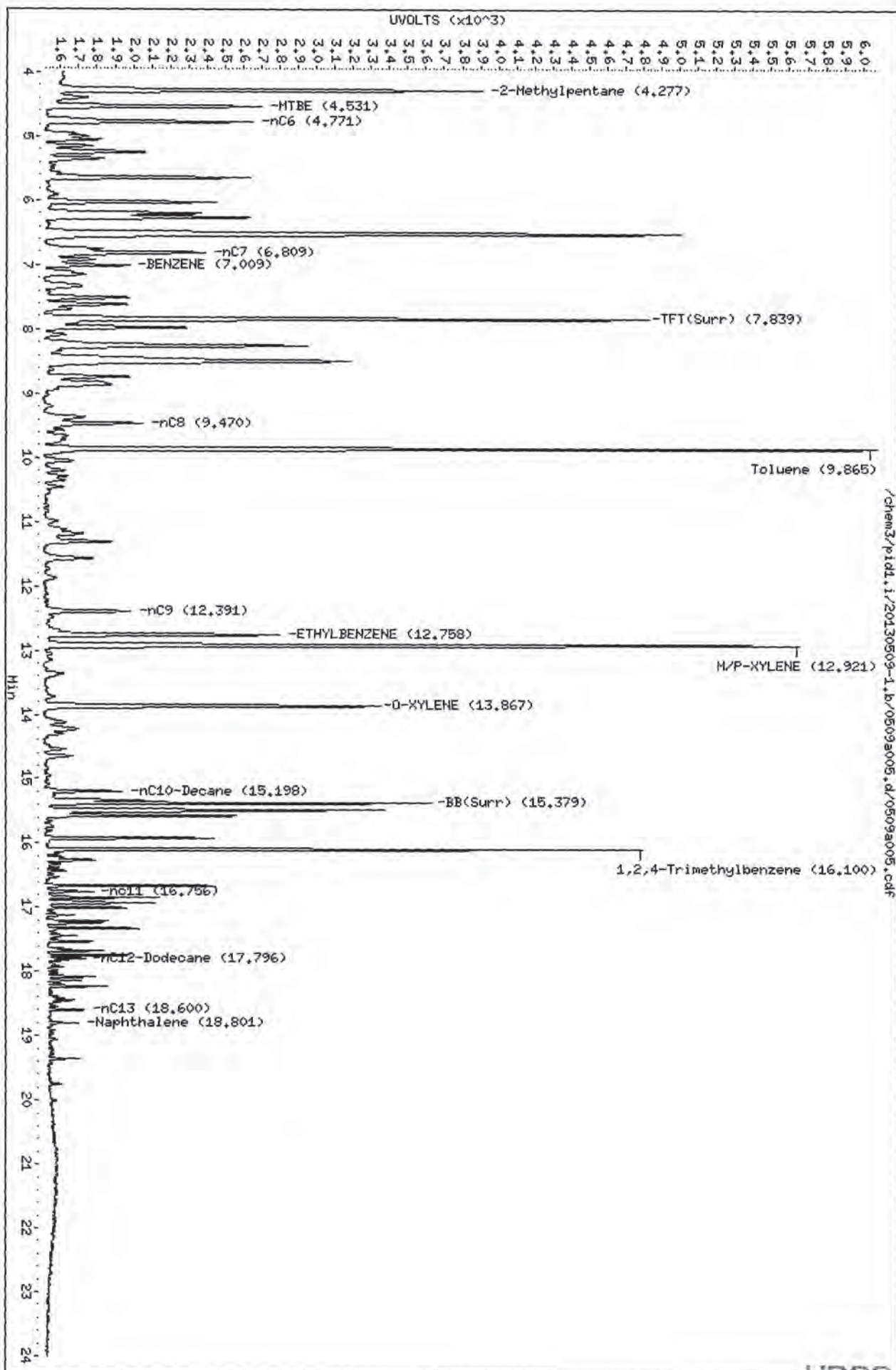
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	0.000	862	3.59	Benzene
9.874	0.001	8679	37.90	Toluene
12.767	0.001	2075	10.72	Ethylbenzene
12.930	0.004	8300	38.87	M/P-Xylene
13.875	0.002	3031	17.77	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a005.d
Date: 09-MAY-2013 10:44
Client ID:
Sample Info: LCS00509
Column Phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



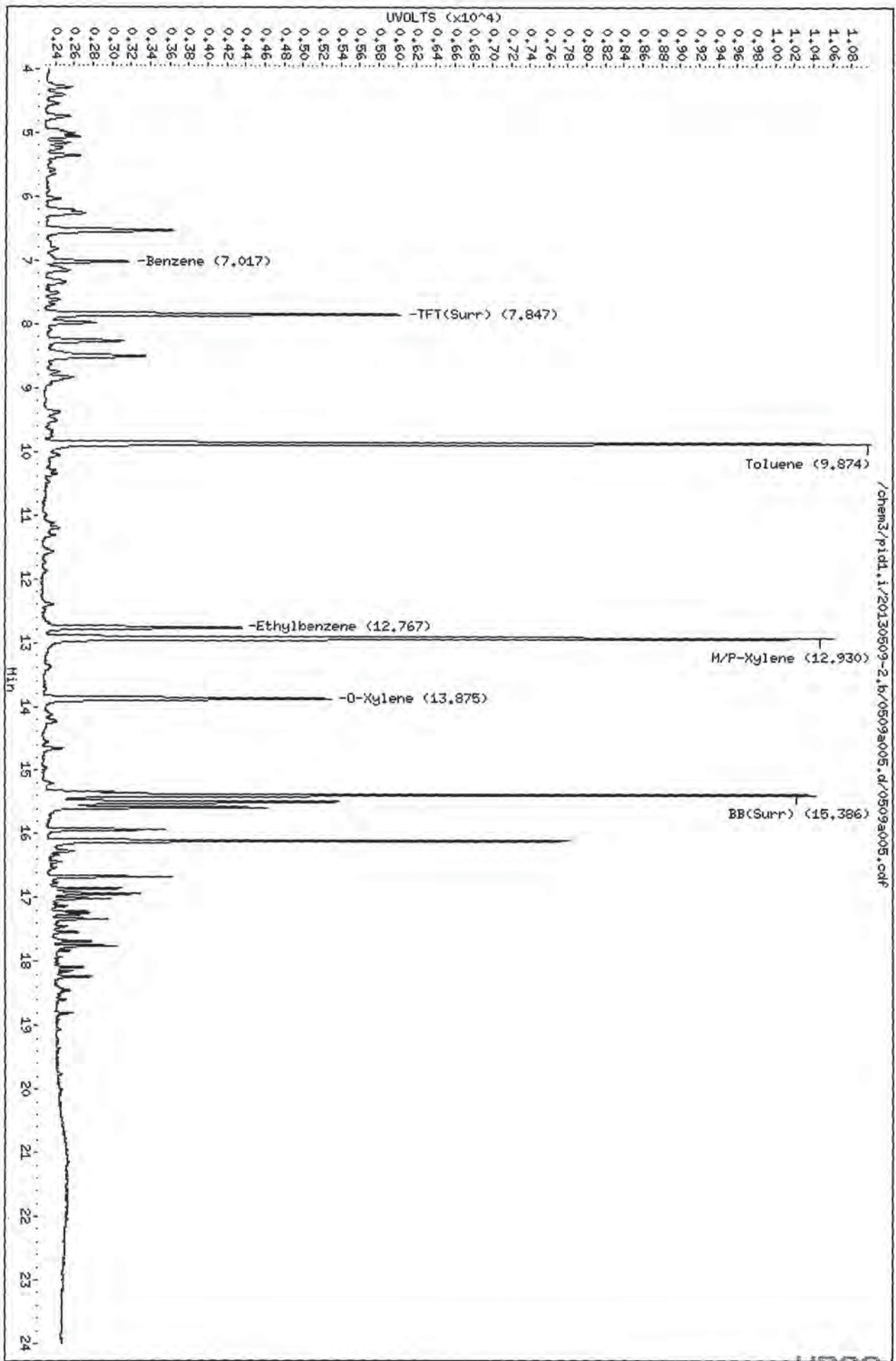
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Data File: /chem3/pid1.i/20130509-2.b/0509a005.d
Date: 09-MAY-2013 10:44

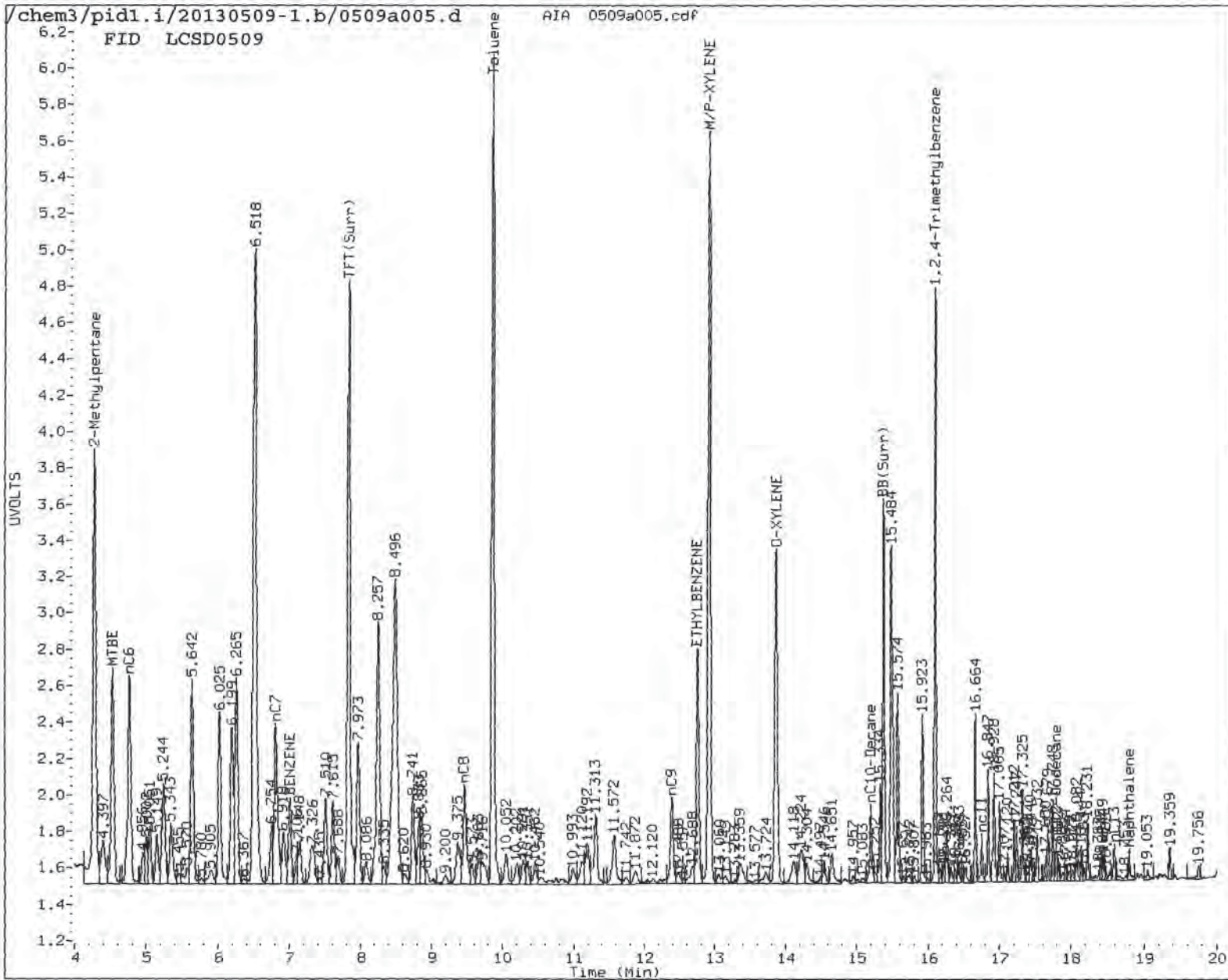
Client ID:
Sample Info: LCS10509

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



FID LCSD0509



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: PC

Date: 5/10/16

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050913

METHOD BLANK

Lab Sample ID: MB-050913

LIMS ID: 13-10051

Matrix: Soil

Data Release Authorized: *mw*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/09/13 11:13

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
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BETX Surrogate Recovery

Trifluorotoluene	83.7%
Bromobenzene	83.6%

Gasoline Surrogate Recovery

Trifluorotoluene	85.2%
Bromobenzene	84.5%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

VC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a006.d ARI ID: MB0509
Data file 2: /chem3/pid1.i/20130509-2.b/0509a006.d Client ID:
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 11:13
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	2956	35982	85.2	TFT(Surr)
15.378	0.001	1929	15993	84.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	4280	0.012
8015C 2MP-TMB (4.18 to 16.20)	723723	5966	0.008
AK101 nC6-nC10 (4.67 to 15.10)	582885	5198	0.009
NWTPHG Tol-Nap (9.76 to 18.89)	375093	4773	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3324	83.7	TFT(Surr)
15.386	0.001	7351	83.6	BB(Surr)

SW8021 (PID)

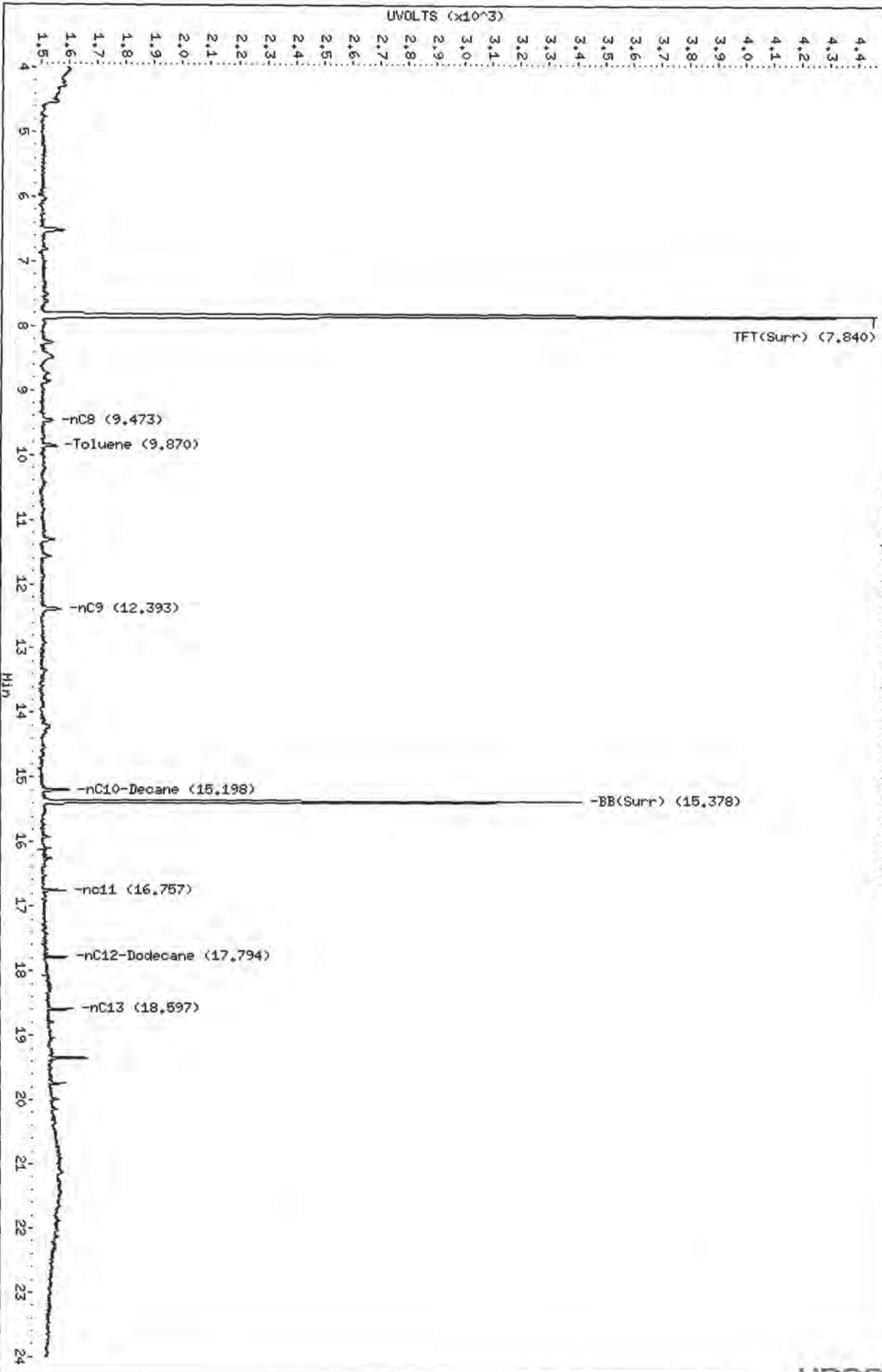
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a006.d
Date: 09-MAY-2013 11:13
Client ID:
Sample Info: MB0509
Column phase: RTX 502-2 FID

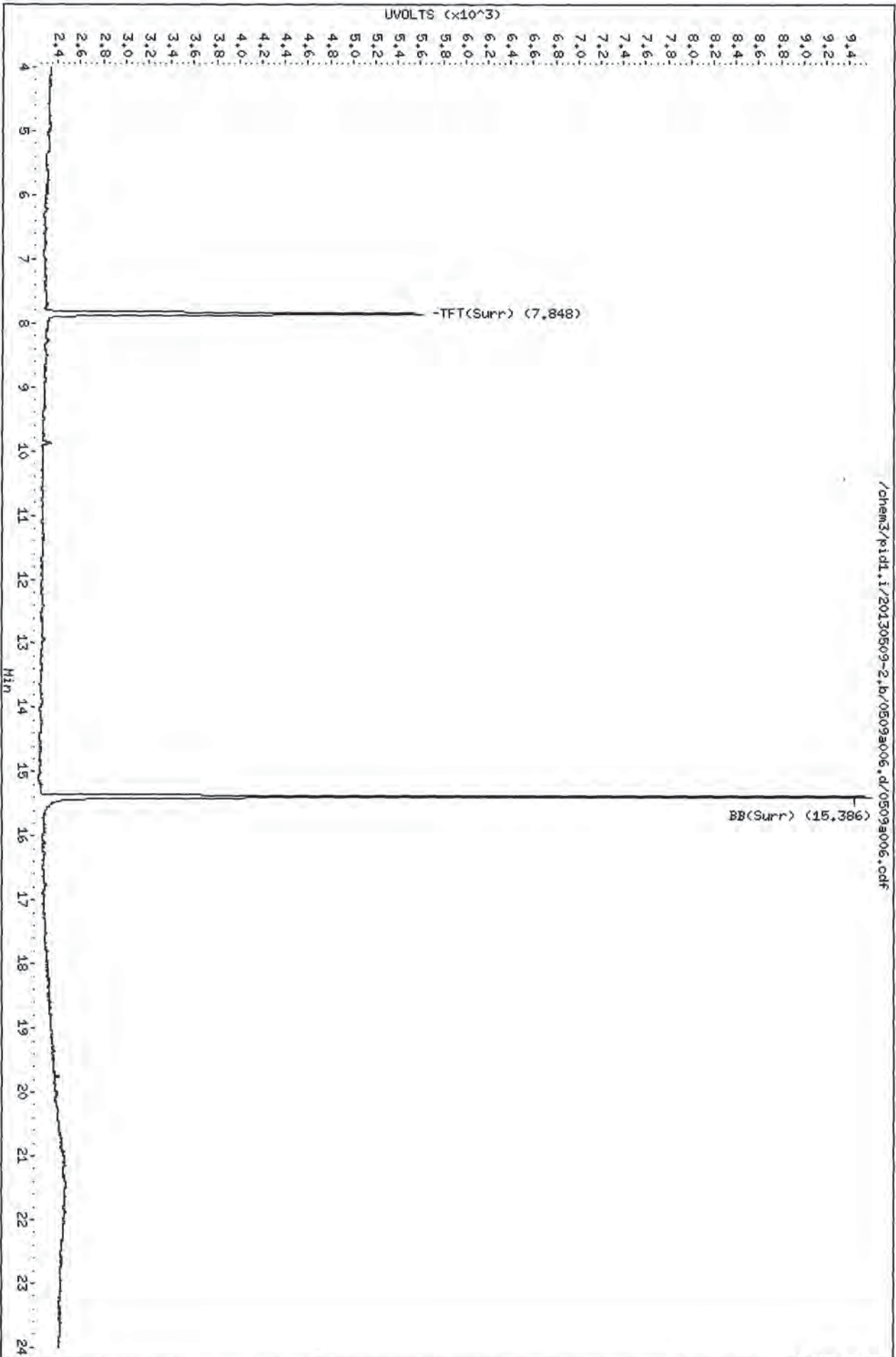
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-1.b/0509a006.d/0509a006.cdf



Data File: /chem3/pid1.i/20130509-2.b/0509a006.d
Date: 09-MAY-2013 11:13
Client ID:
Sample Info: MB0509
Column phase: RTX 502-2 PID


Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-2.b/0509a006.d/0509a006.cdf

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-38-050713
 SAMPLE

Lab Sample ID: WP36G
 LIMS ID: 13-10057
 Matrix: Water
 Data Release Authorized: 
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/09/13 16:16
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	78.5%
Bromobenzene	74.3%

Gasoline Surrogate Recovery

Trifluorotoluene	80.7%
Bromobenzene	76.2%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

*PC
 5/10/13
 report both per (1/1)*

Data file 1: /chem3/pid1.i/20130509-1.b/0509a016.d ARI ID: WP36G
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a016.d Client ID: TP-38-050713
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 16:16
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	2800	34526	80.7	TFT (Surr)
15.379	0.002	1739	14577	76.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.76 to 18.89)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.004	3115	78.5	TFT (Surr)
15.387	0.002	6532	74.3	BB (Surr)

SW8021 (PID)

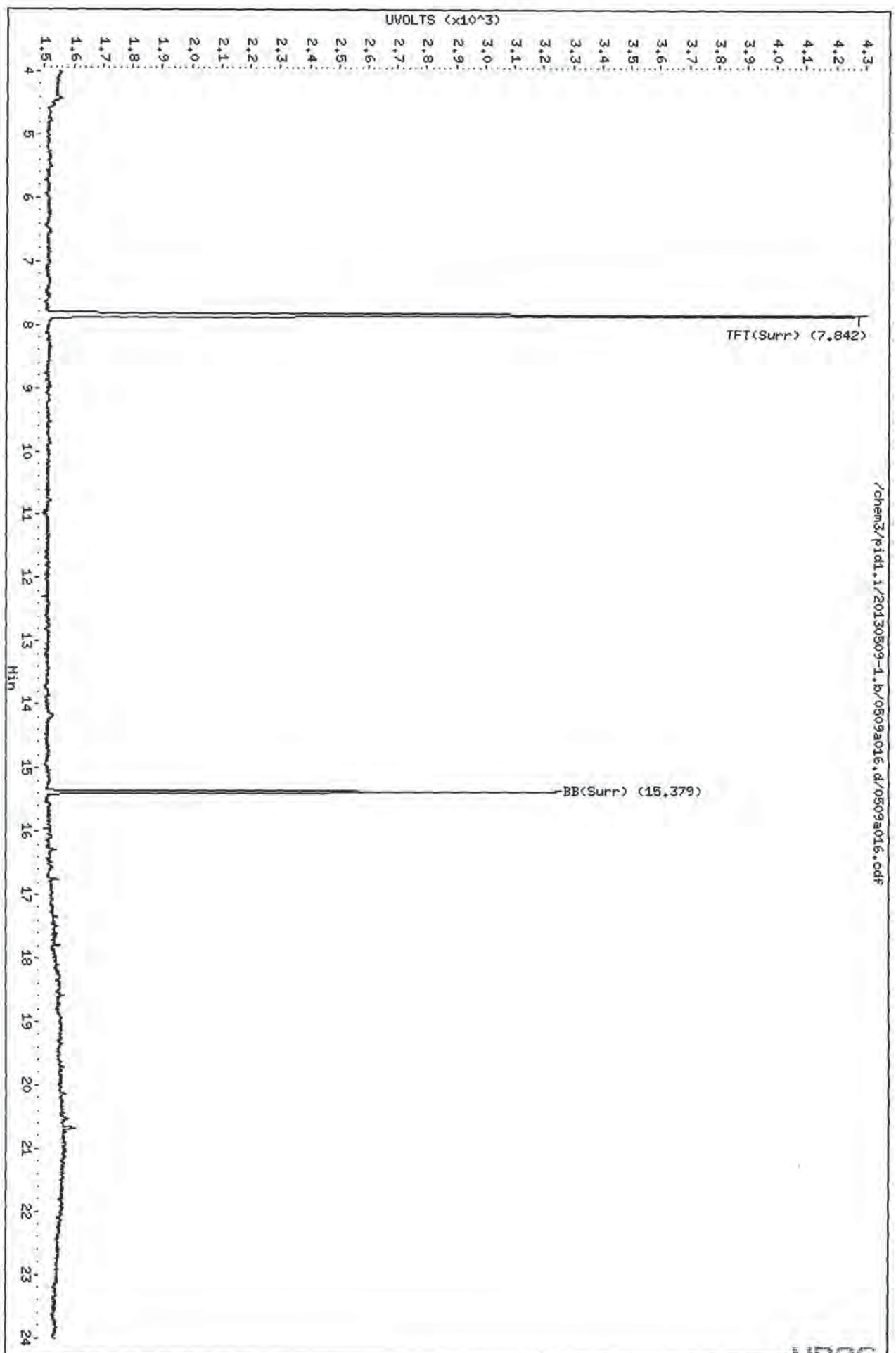
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a016.d
Date: 09-MAY-2013 16:16
Client ID: TP-38-050713
Sample Info: WP36G

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-1.b/0509a016.d/0509a016.cdf

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Data File: /chem3/pid1.i/20130509-2.b/0509a016.d

Date: 09-MAY-2013 16:16

Client ID: TP-38-050713

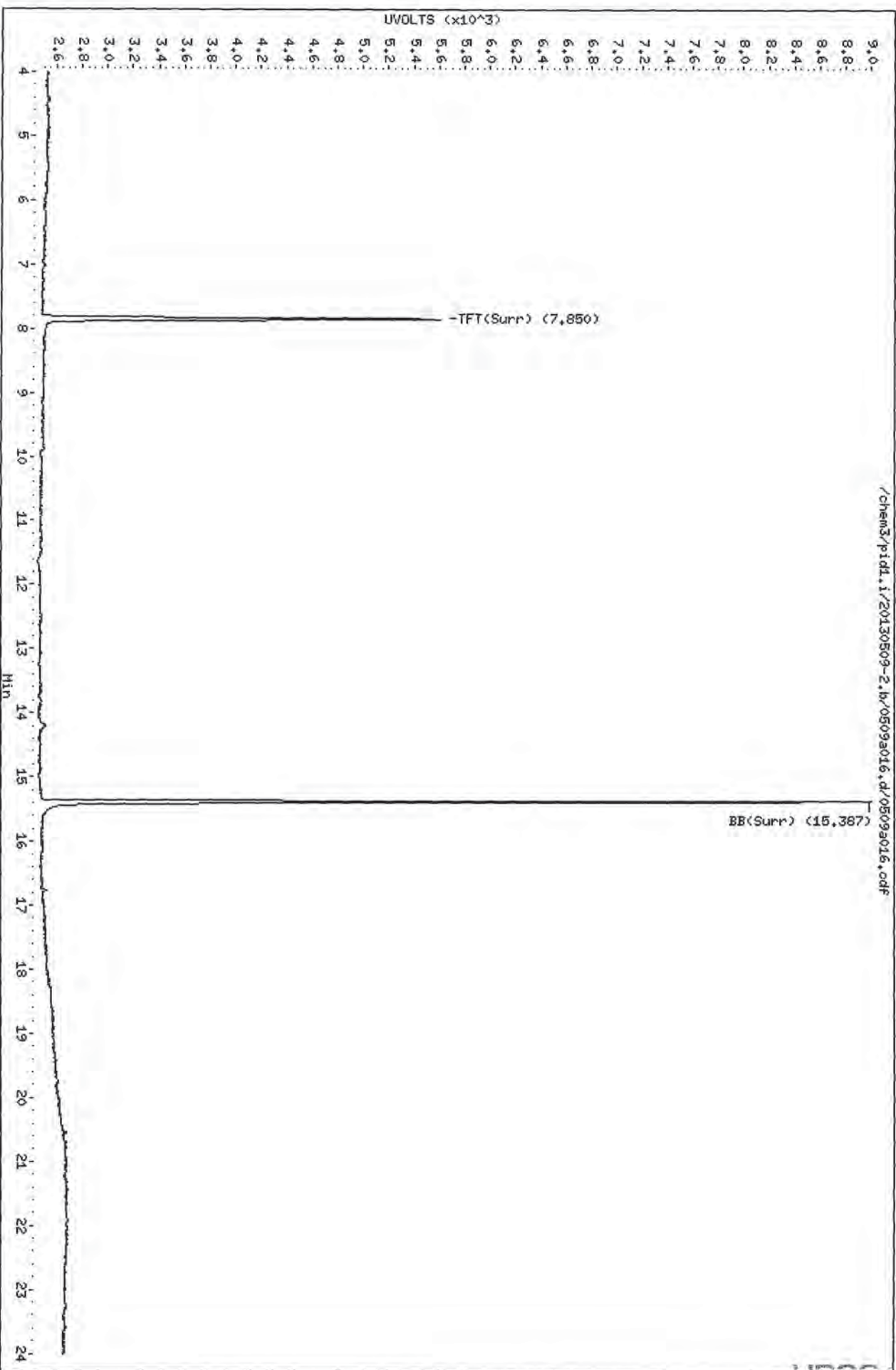
Sample Info: WP36G

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-38-050713
 REANALYSIS

Lab Sample ID: WP36G
 LIMS ID: 13-10057
 Matrix: Water
 Data Release Authorized: *VPS*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/10/13 12:25
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	88.4%
Bromobenzene	85.2%

Gasoline Surrogate Recovery

Trifluorotoluene	90.4%
Bromobenzene	85.3%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

*PC
 5/16/13
 report looks
 for kPA*

Data file 1: /chem3/pid1.i/20130510-1.b/0510a007.d ARI ID: WP36G
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a007.d Client ID: TP-38-050713
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 12:25
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	0.007	3134	38673	90.4	TFT(Surr)
15.383	0.006	1947	16290	85.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	16080	0.045 M
8015C 2MP-TMB (4.18 to 16.20)	723723	314	0.000 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	82018	0.219 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.855	0.006	3510	88.4	TFT(Surr)
15.389	0.003	7490	85.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

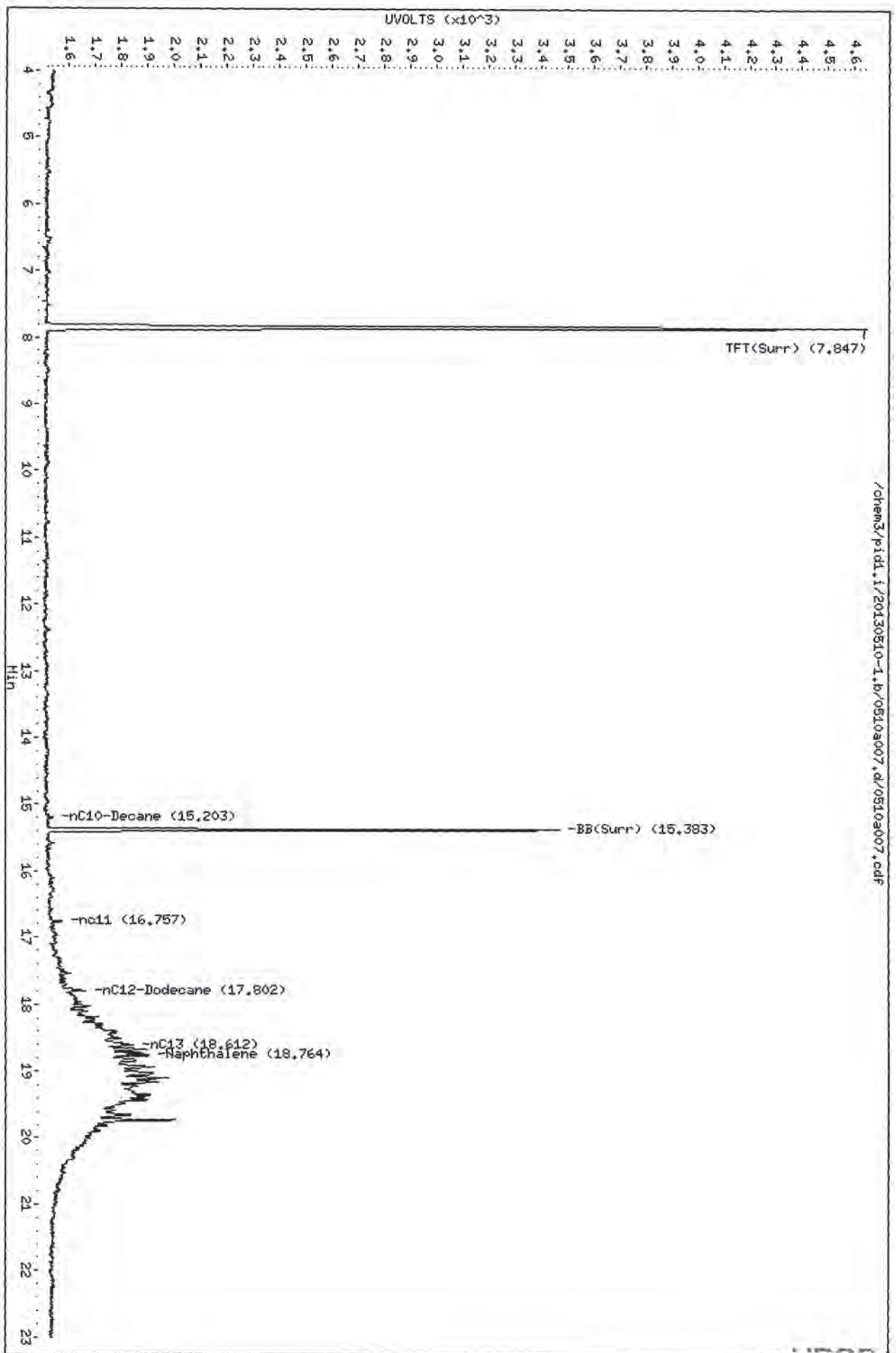
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-1.b/0510a007.d
Date: 10-MAY-2013 12:25
Client ID: TP-38-050713
Sample Info: MP36G

Column phase: RTX 502-2 FID

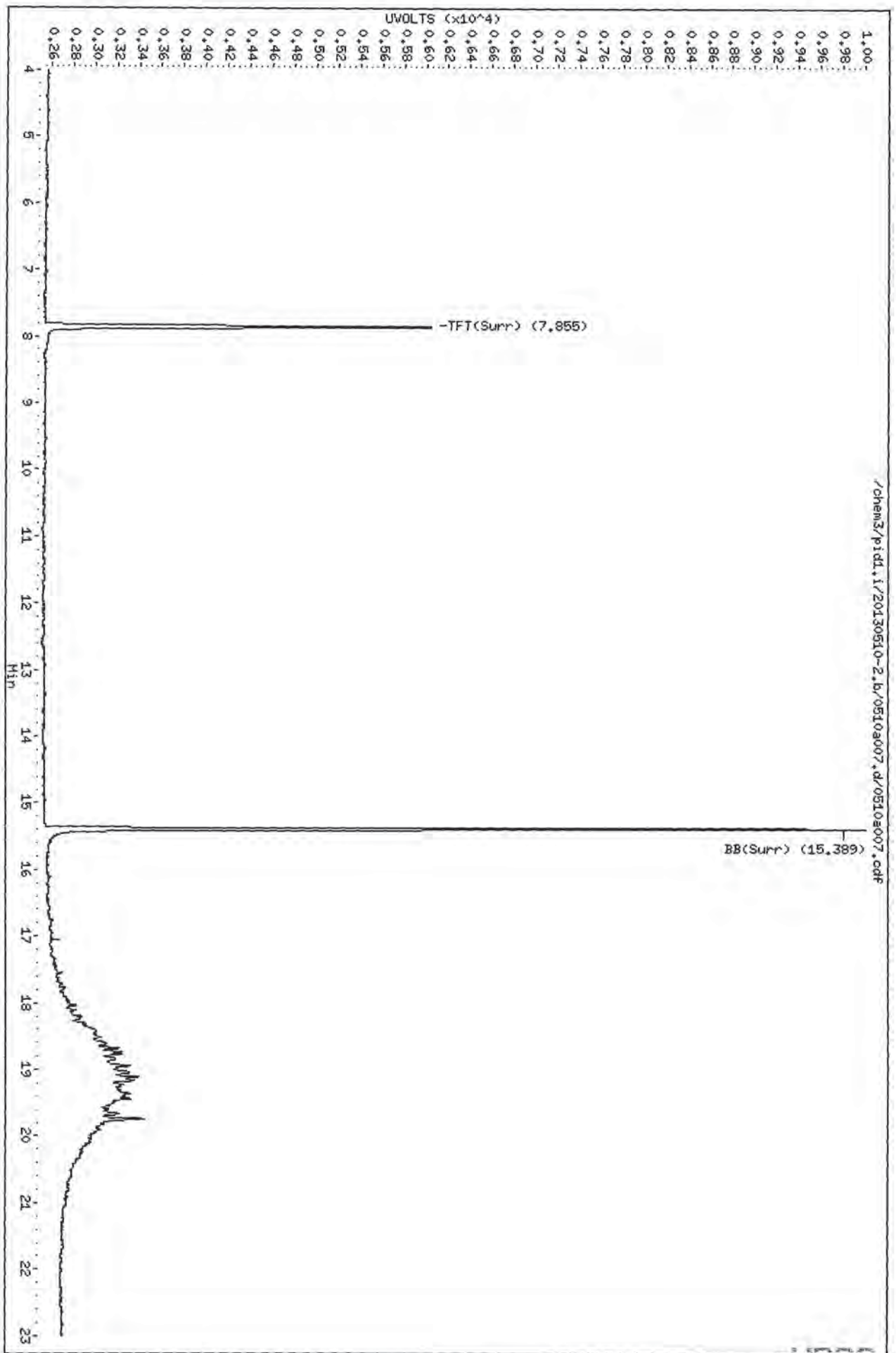
Instrument: pid1.i
Operator: FC
Column diameter: 0.18

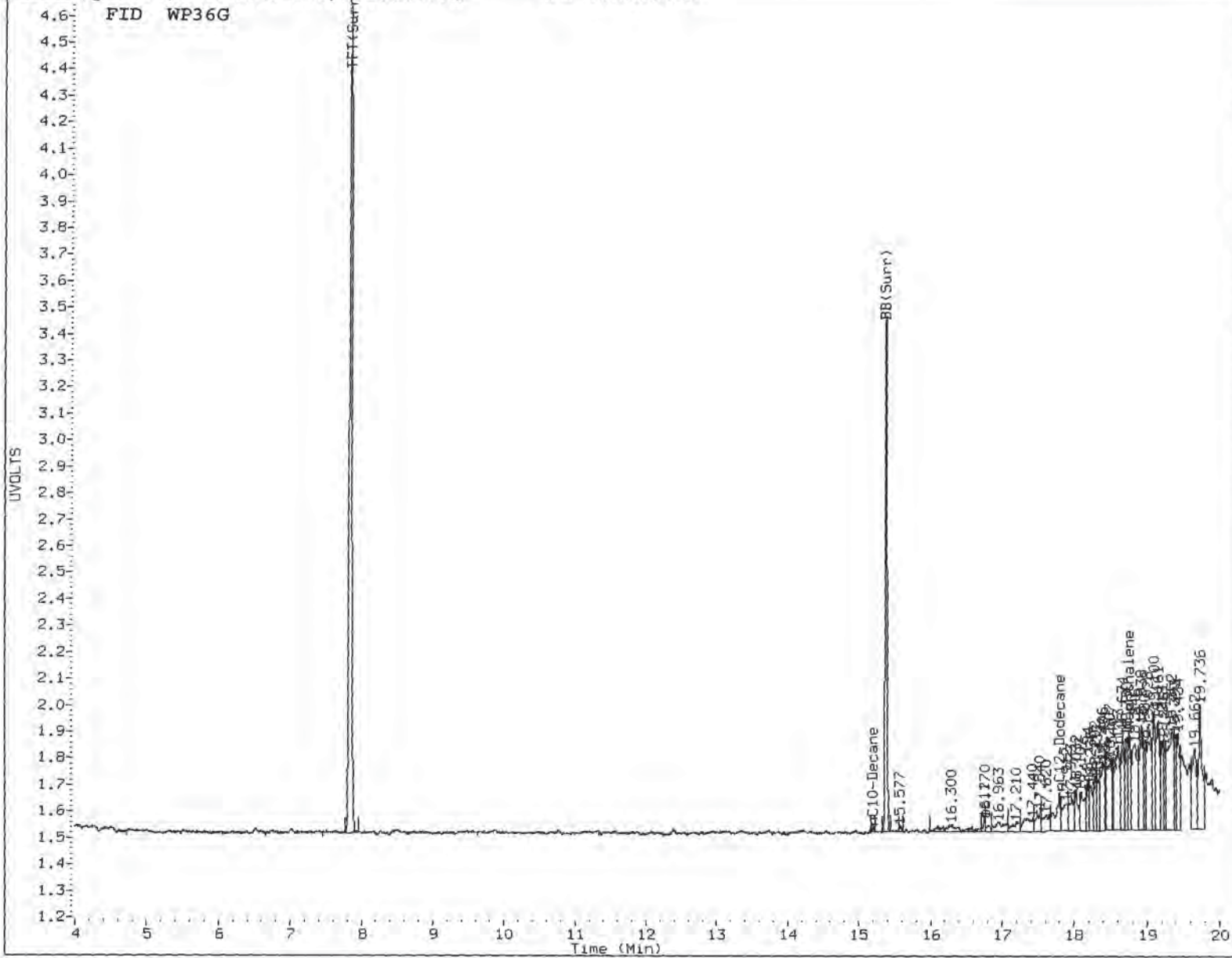
/chem3/pid1.i/20130510-1.b/0510a007.d/0510a007.cdf



Data File: /chem3/pid1.i/20130510-2.b/05102007.d
Date: 10-MAY-2013 12:25
Client ID: TP-38-050713
Sample Info: WP36C
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: PC

Date: 5/10/13

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-39-050713
 SAMPLE

Lab Sample ID: WP36H
 LIMS ID: 13-10058
 Matrix: Water
 Data Release Authorized: *VMS*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/09/13 16:45
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	86.6%
Bromobenzene	82.9%

Gasoline Surrogate Recovery

Trifluorotoluene	88.8%
Bromobenzene	83.9%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a017.d ARI ID: WP36H
Data file 2: /chem3/pid1.i/20130509-2.b/0509a017.d Client ID: TP-39-050713
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 16:45
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.005	3079	37750	88.8	TFT(Surr)
15.381	0.003	1914	16108	83.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	0	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.89)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.005	3437	86.6	TFT(Surr)
15.388	0.003	7284	82.9	BB(Surr)

SW8021 (PID)

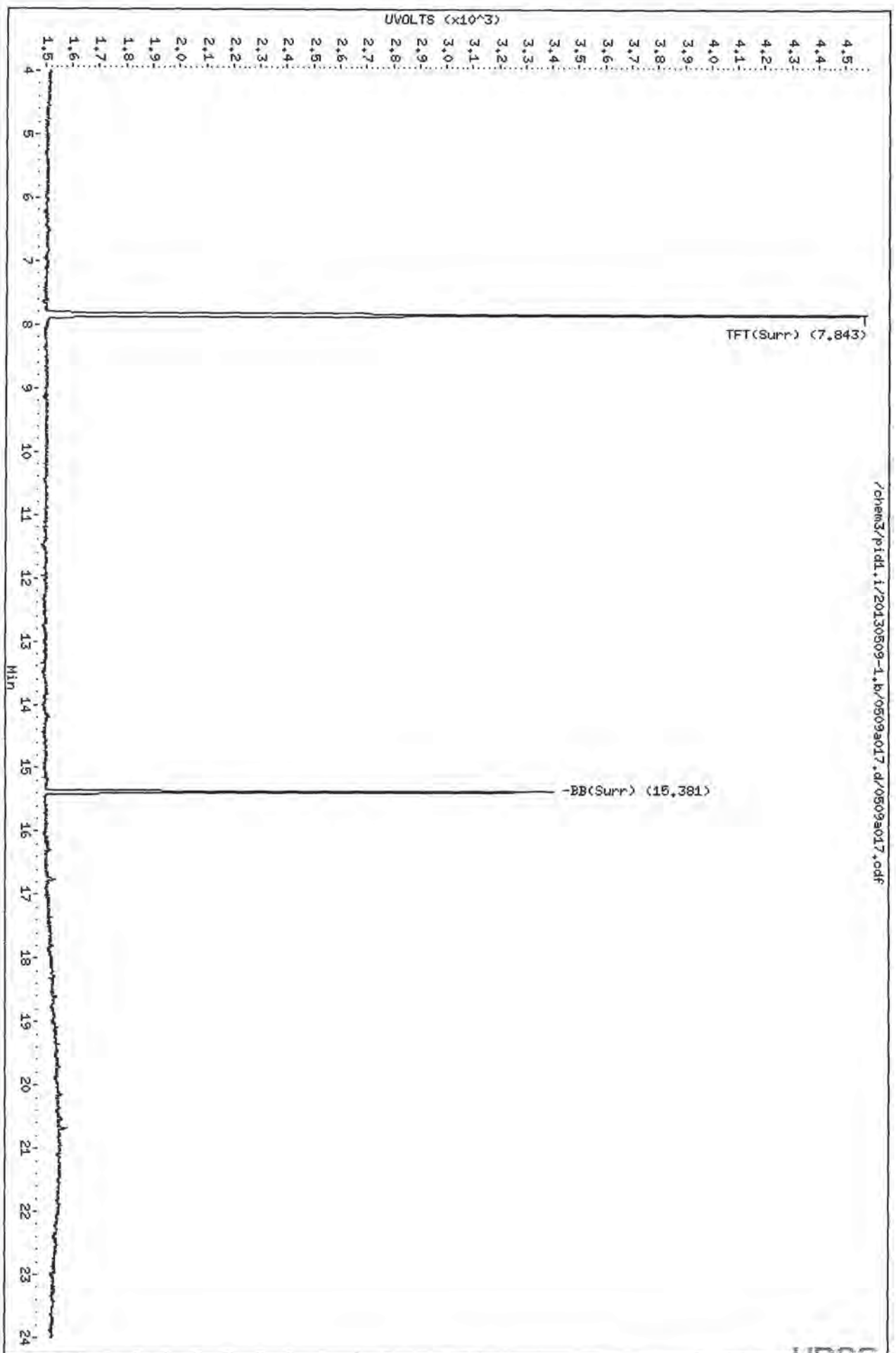
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a017.d
Date: 09-MAY-2013 16:45
Client ID: TP-39-050713
Sample Info: MP36H

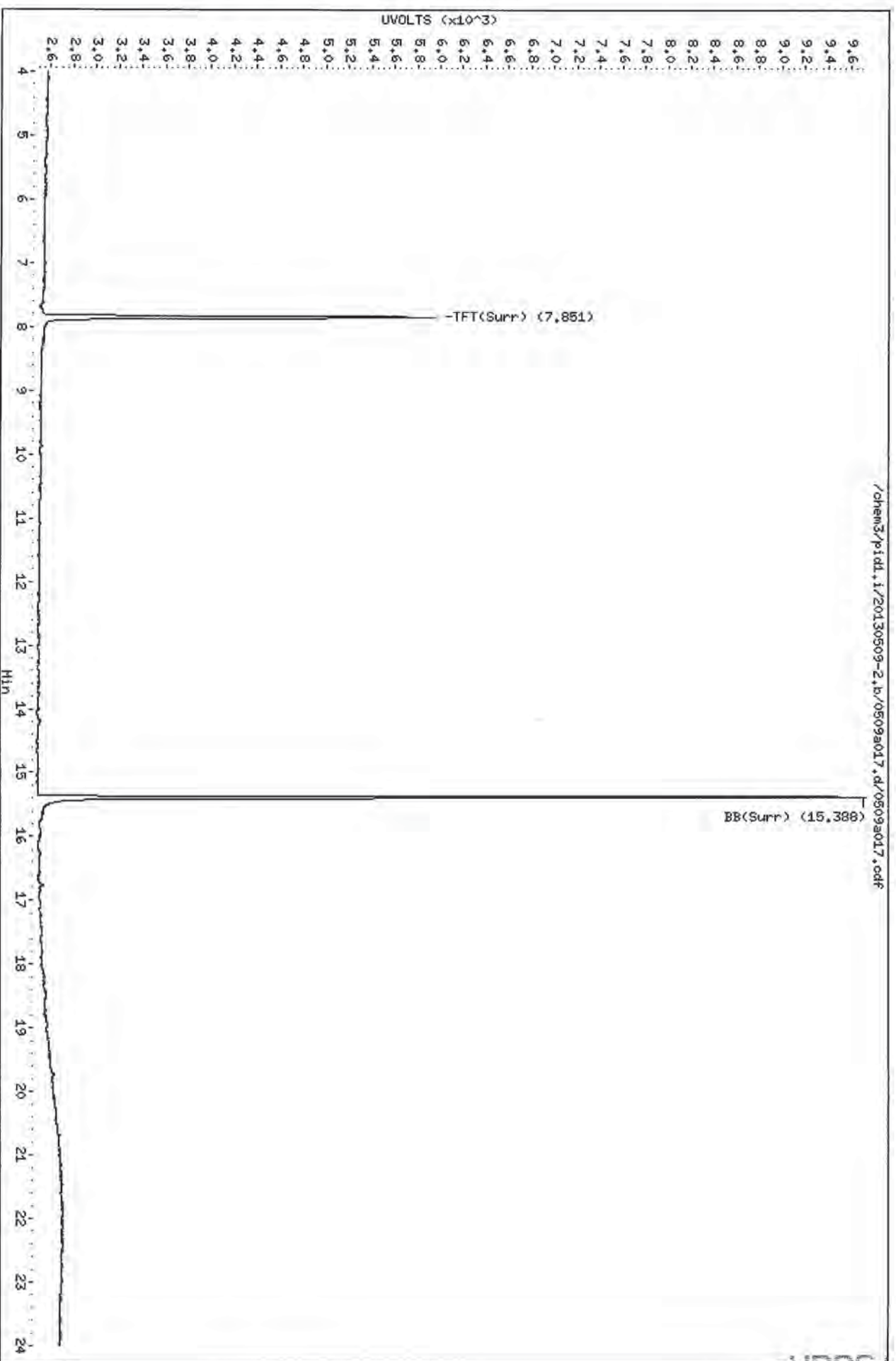
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130509-2.b/0509a017.d
Date: 09-MAY-2013 16:45
Client ID: TP-39-050713
Sample Info: MP36H
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: TP-40-050813

SAMPLE

Lab Sample ID: WP36I

LIMS ID: 13-10059

Matrix: Water

Data Release Authorized: 

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: 05/08/13

Date Received: 05/09/13

Date Analyzed: 05/10/13 12:53

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	84.0%
Bromobenzene	79.8%

Gasoline Surrogate Recovery

Trifluorotoluene	85.7%
Bromobenzene	81.1%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
BETX/Gas Quantitation Report

MC
5/10/13

Data file 1: /chem3/pid1.i/20130510-1.b/0510a008.d ARI ID: WP36I
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a008.d Client ID: TP-40-050813
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 12:53
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.004	2974	36387	85.7	TFT(Surr)
15.379	0.002	1850	15429	81.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	1009	0.003
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	1413	0.004

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3335	84.0	TFT(Surr)
15.387	0.001	7016	79.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

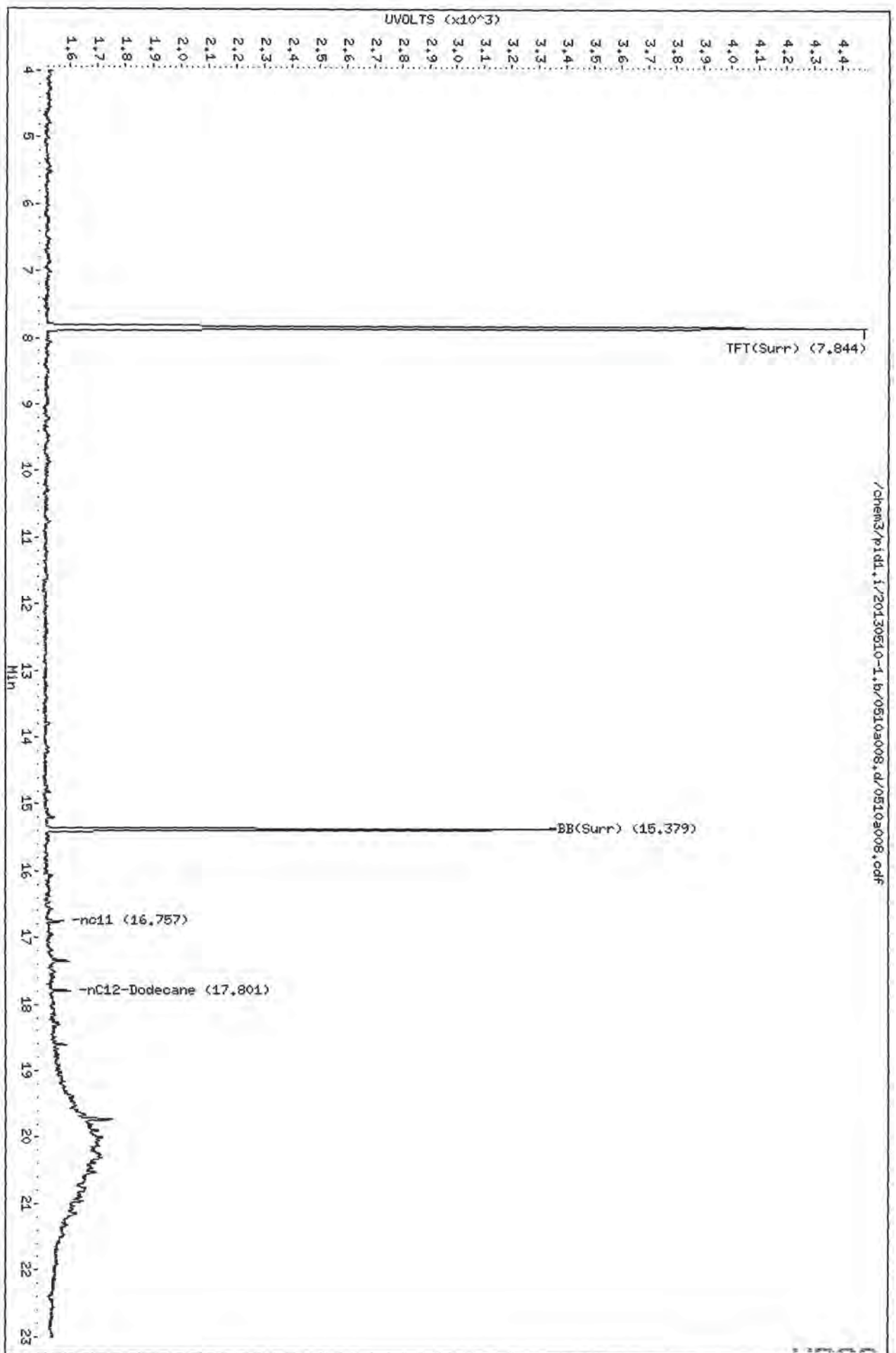
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-1.b/0510a008.d
Date: 10-MAY-2013 12:53
Client ID: TP-40-050813
Sample Info: WP361

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

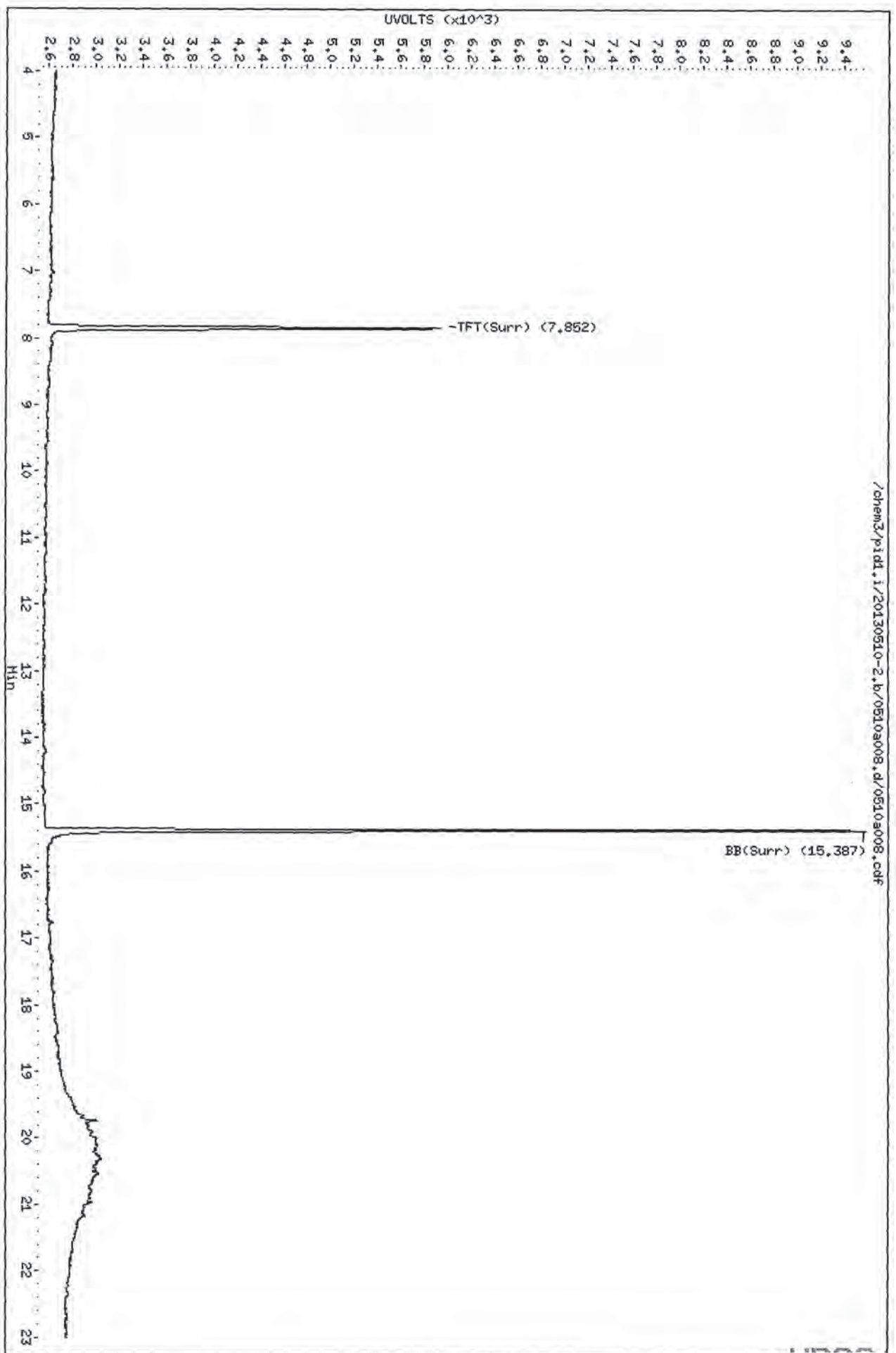
/chem3/pid1.i/20130510-1.b/0510a008.d/0510a008.cdf



Data File: /chem3/pid1.i/20130510-2.b/05103008.d
Date: 10-MAY-2013 12:53
Client ID: TP-40-050813
Sample Info: MP361

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130510-2.b/05103008.d/05103008.cdf

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-41-050813
 SAMPLE

Lab Sample ID: WP36J
 LIMS ID: 13-10060
 Matrix: Water
 Data Release Authorized: *WAD*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/09/13 17:44
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	84.6%
Bromobenzene	81.7%

Gasoline Surrogate Recovery

Trifluorotoluene	86.6%
Bromobenzene	83.2%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
BETX/Gas Quantitation Report

PC
5/14/13

Data file 1: /chem3/pid1.i/20130509-1.b/0509a019.d ARI ID: WP36J
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a019.d Client ID: TP-41-050713
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 17:44
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.005	3003	36894	86.6	TFT(Surr)
15.380	0.003	1898	15787	83.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.76 to 18.89)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.005	3357	84.6	TFT(Surr)
15.388	0.003	7183	81.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a019.d

Date: 09-MAY-2013 17:44

Client ID: TP-41-050713

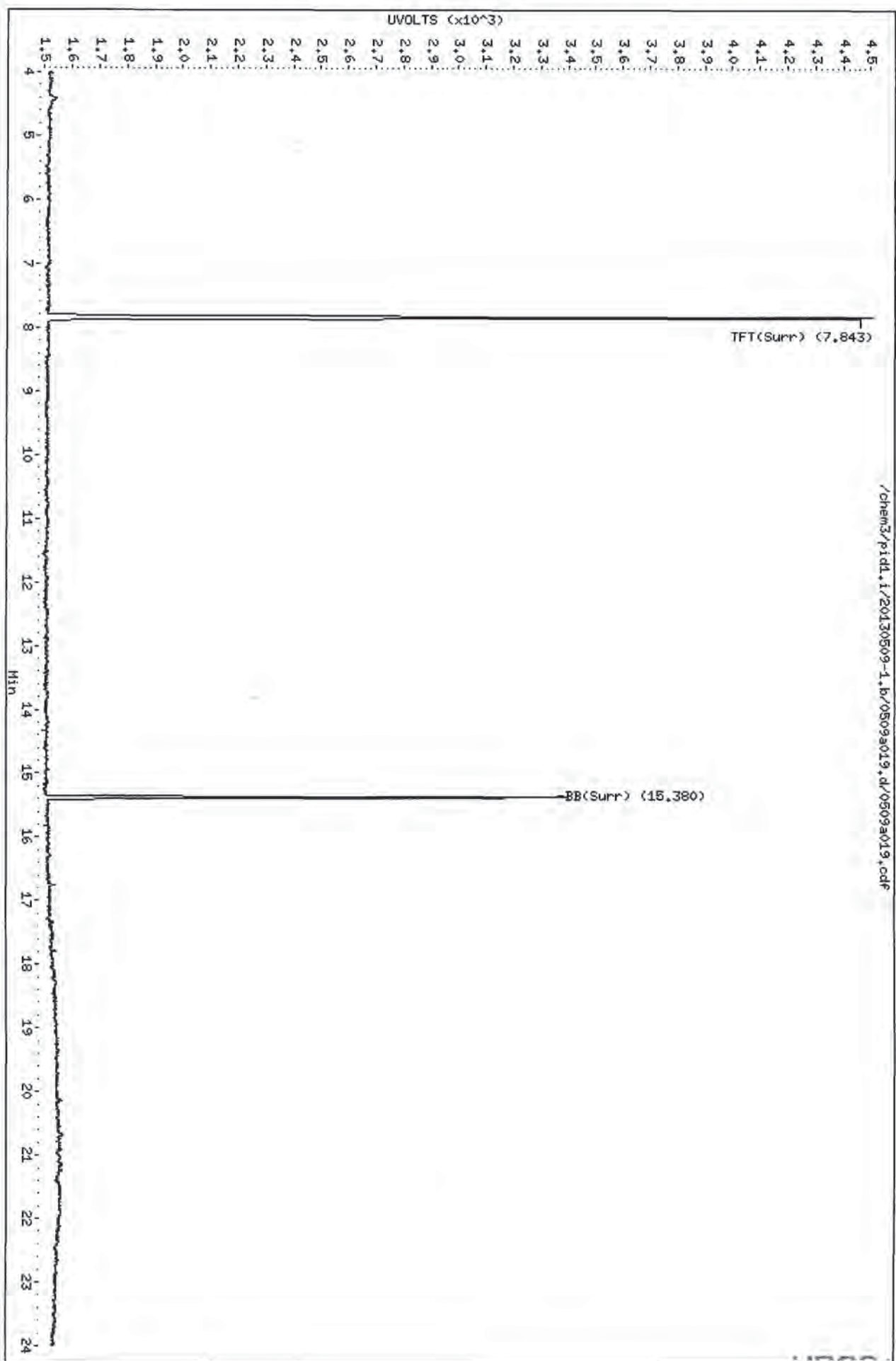
Sample Info: MP36J

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

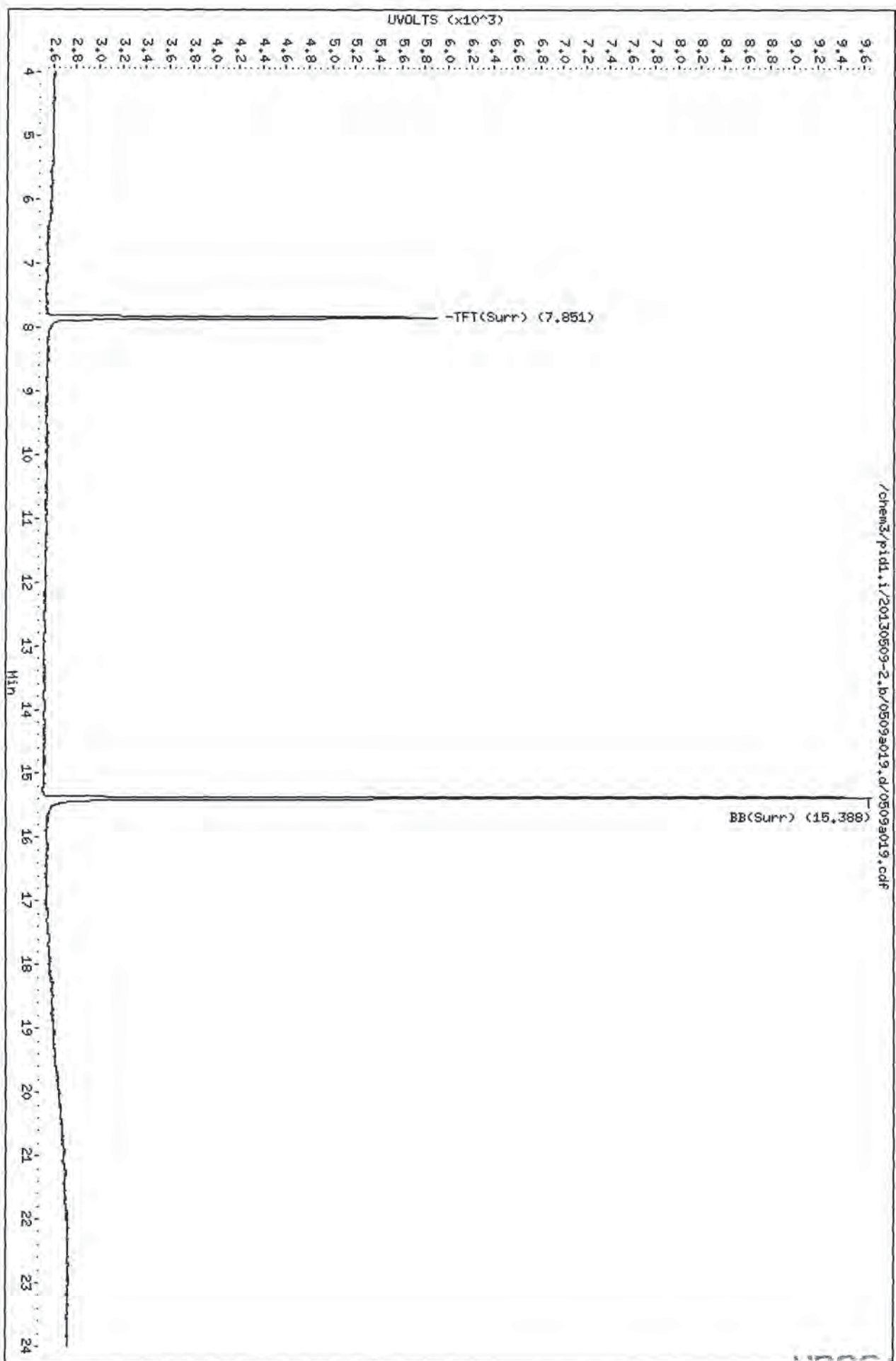


Data File: /chem3/pid1.i/20130509-2.b/0509a019.d
Date: 09-MAY-2013 17:44
Client ID: TP-41-050713
Sample Info: MP36J

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-2.b/0509a019.d/0509a019.cdf



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ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-42-050813
 SAMPLE

Lab Sample ID: WP36K
 LIMS ID: 13-10061
 Matrix: Water
 Data Release Authorized: *VP*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/09/13 19:13
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	76.0%
Bromobenzene	74.3%

Gasoline Surrogate Recovery

Trifluorotoluene	78.3%
Bromobenzene	76.3%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

4C
 5/10/13
 report both
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Data file 1: /chem3/pid1.i/20130509-1.b/0509a022.d
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a022.d
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m
 Instrument: pid1.i
 Gas Ical Date: 23-OCT-2012
 BETX Ical Date: 15-MAR-2013

ARI ID: WP36K
 Client ID: TP-42-050713
 Injection Date: 09-MAY-2013 19:13
 Matrix: WATER
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.004	2717	33437	78.3	TFT(Surr)
15.380	0.003	1741	14180	76.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	4506	0.013
8015C 2MP-TMB (4.18 to 16.20)	723723	11173	0.015
AK101 nC6-nC10 (4.67 to 15.10)	582885	10154	0.017
NWTPHG Tol-Nap (9.76 to 18.89)	375093	5021	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.004	3015	76.0	TFT(Surr)
15.387	0.002	6535	74.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

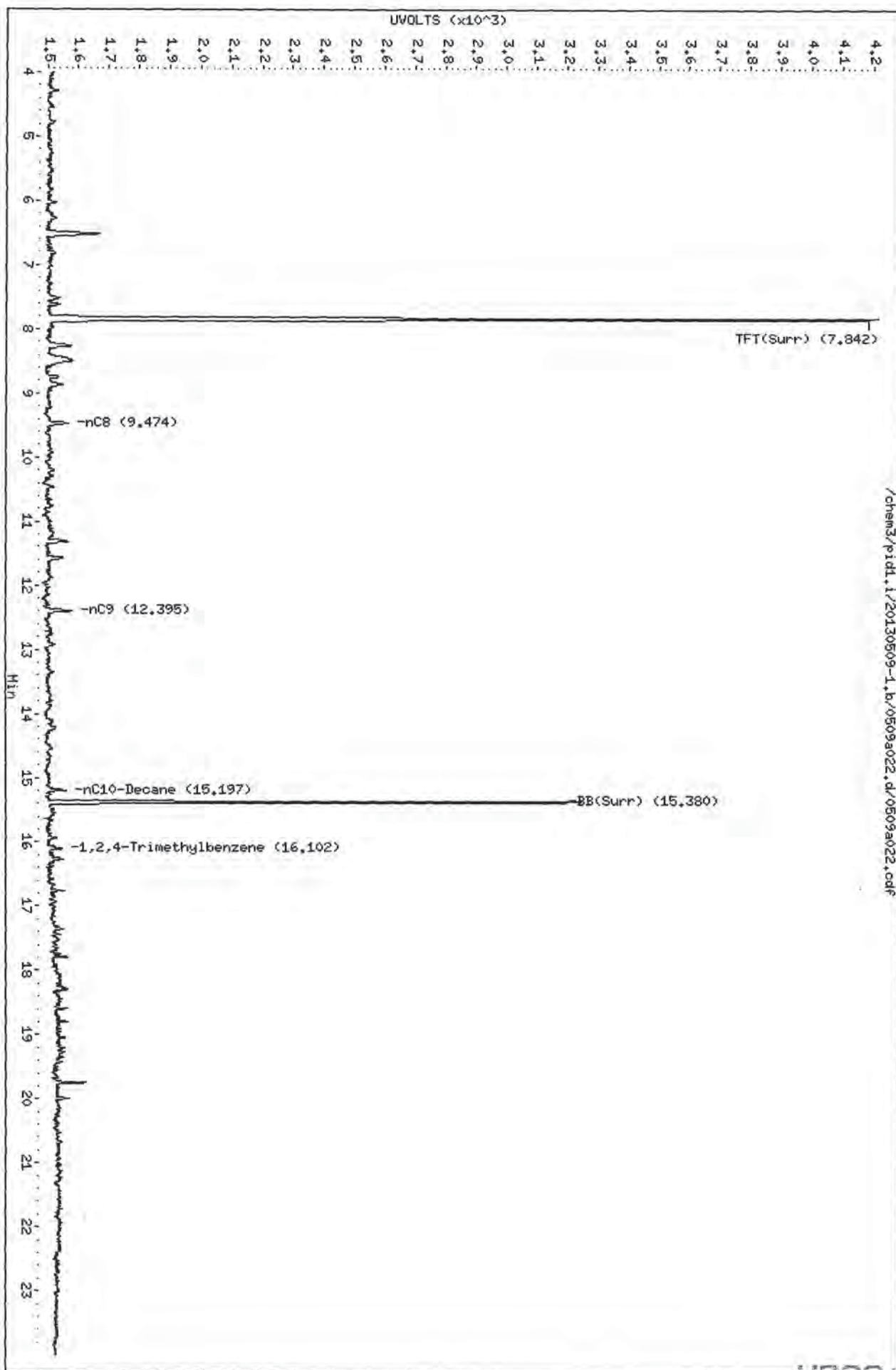
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a022.d
Date: 09-MAY-2013 19:13
Client ID: TP-42-050713
Sample Info: MP36K

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-1.b/0509a022.d/0509a022.cdf

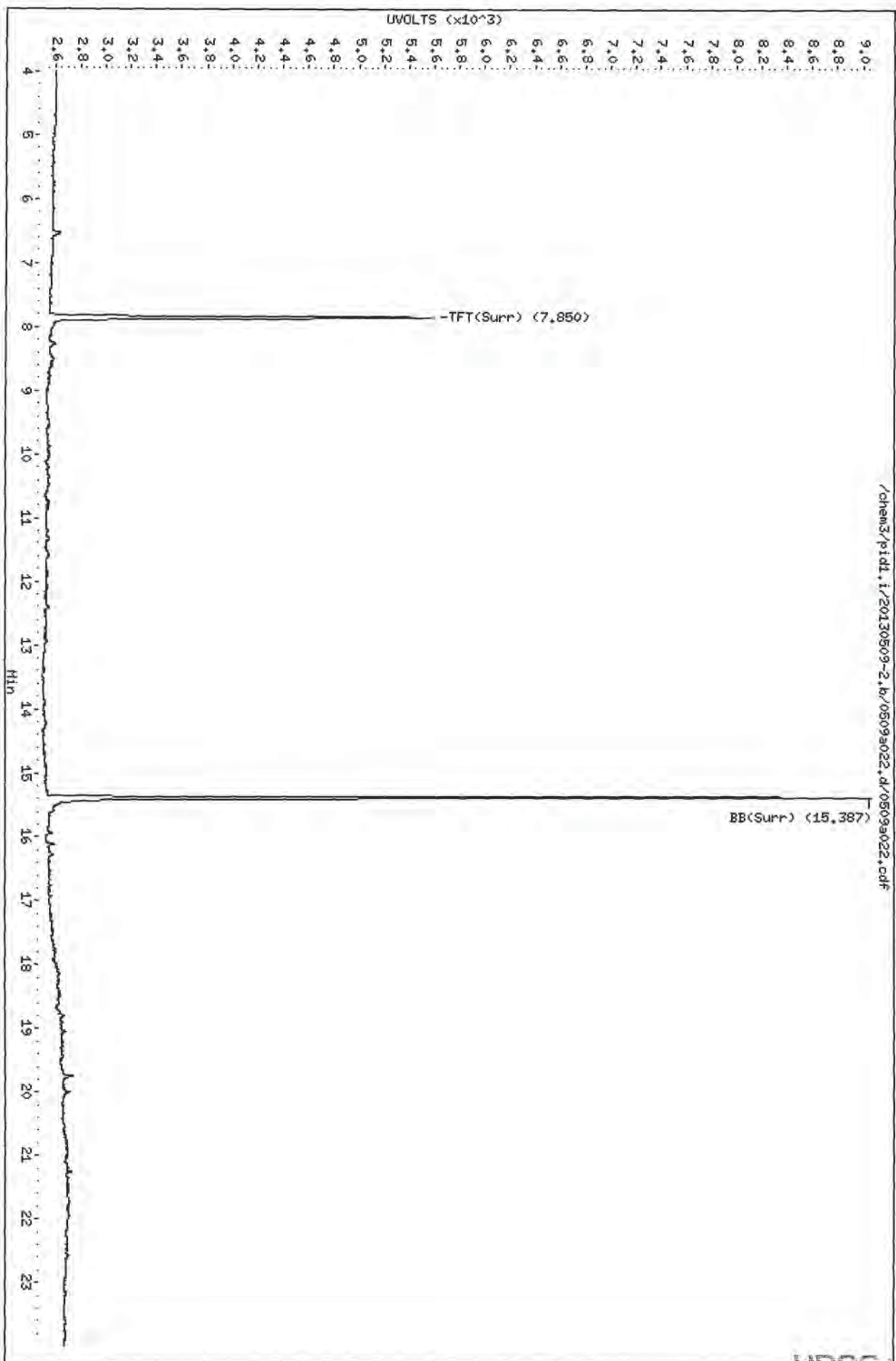


Data File: /chem3/pidd,i/20130509-2.1b/0509a022.d
Date: 09-MAY-2013 19:13
Client ID: TP-42-050713
Sample Info: MP36K

Column phase: RTX 502-2 PID

Instrument: pidd.i
Operator: LH
Column diameter: 0.18

/chem3/pidd,i/20130509-2.1b/0509a022.d/0509a022.cdf



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ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-42-050813
 REANALYSIS

Lab Sample ID: WP36K
 LIMS ID: 13-10061
 Matrix: Water
 Data Release Authorized: *WAS*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/10/13 13:22
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	77.8%
Bromobenzene	73.3%

Gasoline Surrogate Recovery

Trifluorotoluene	79.6%
Bromobenzene	74.9%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

rc
5/10/13
report betx
double fail

Data file 1: /chem3/pid1.i/20130510-1.b/0510a009.d ARI ID: WP36K
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a009.d Client ID: TP-42-050813
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 13:22
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.004	2760	34071	79.6	TFT(Surr)
15.380	0.002	1709	14313	74.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	0	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	0	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3089	77.8	TFT(Surr)
15.387	0.002	6443	73.3	BB(Surr)

SW8021 (PID)

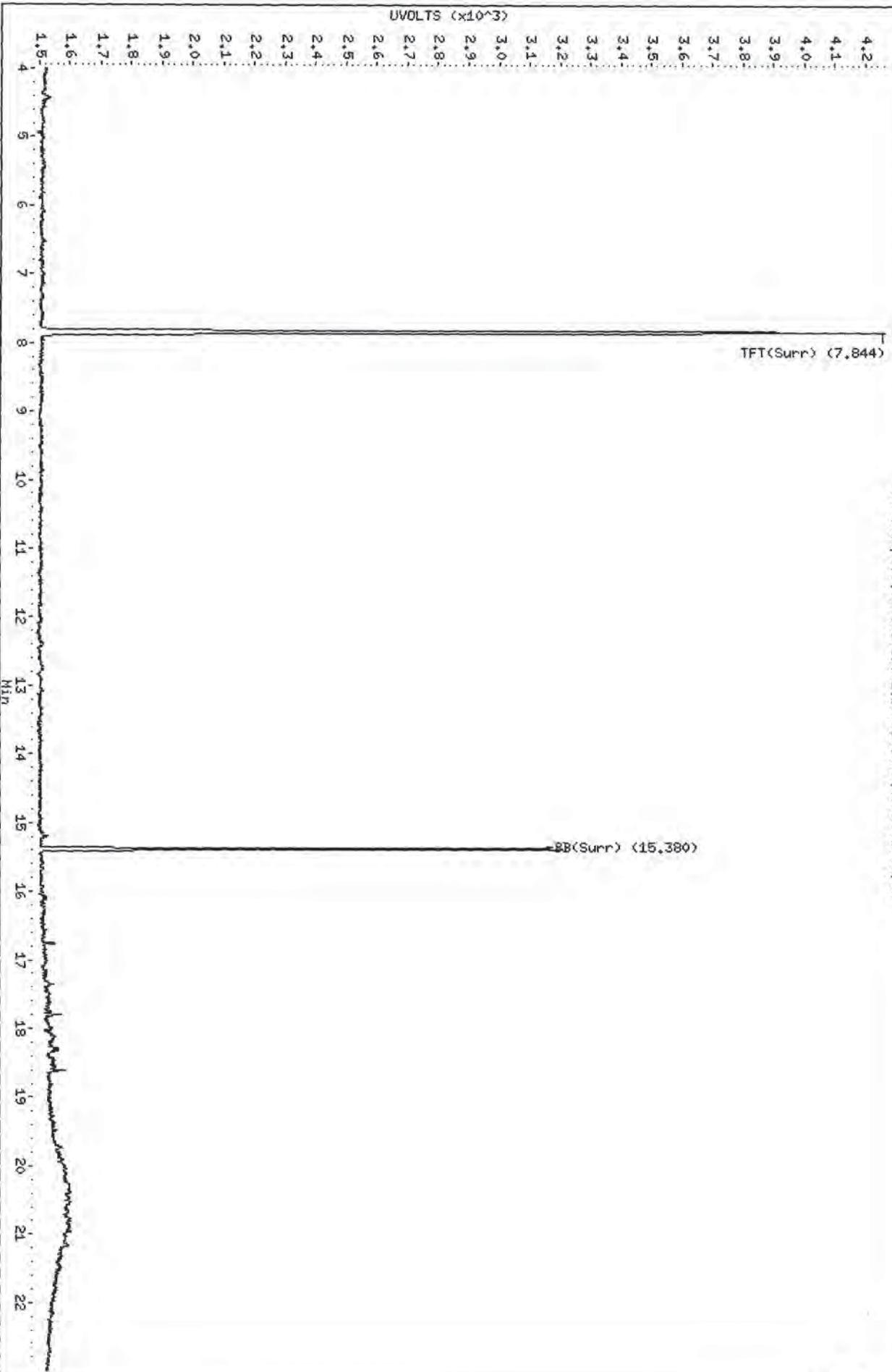
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pidl,i/20130510-1.b/0510a009.d
Date: 10-MAY-2013 13:22
Client ID: TP-42-050813
Sample Info: MP36K
Column phase: RTX 502-2 FID

Instrument: pidl.i
Operator: PC
Column diameter: 0.18

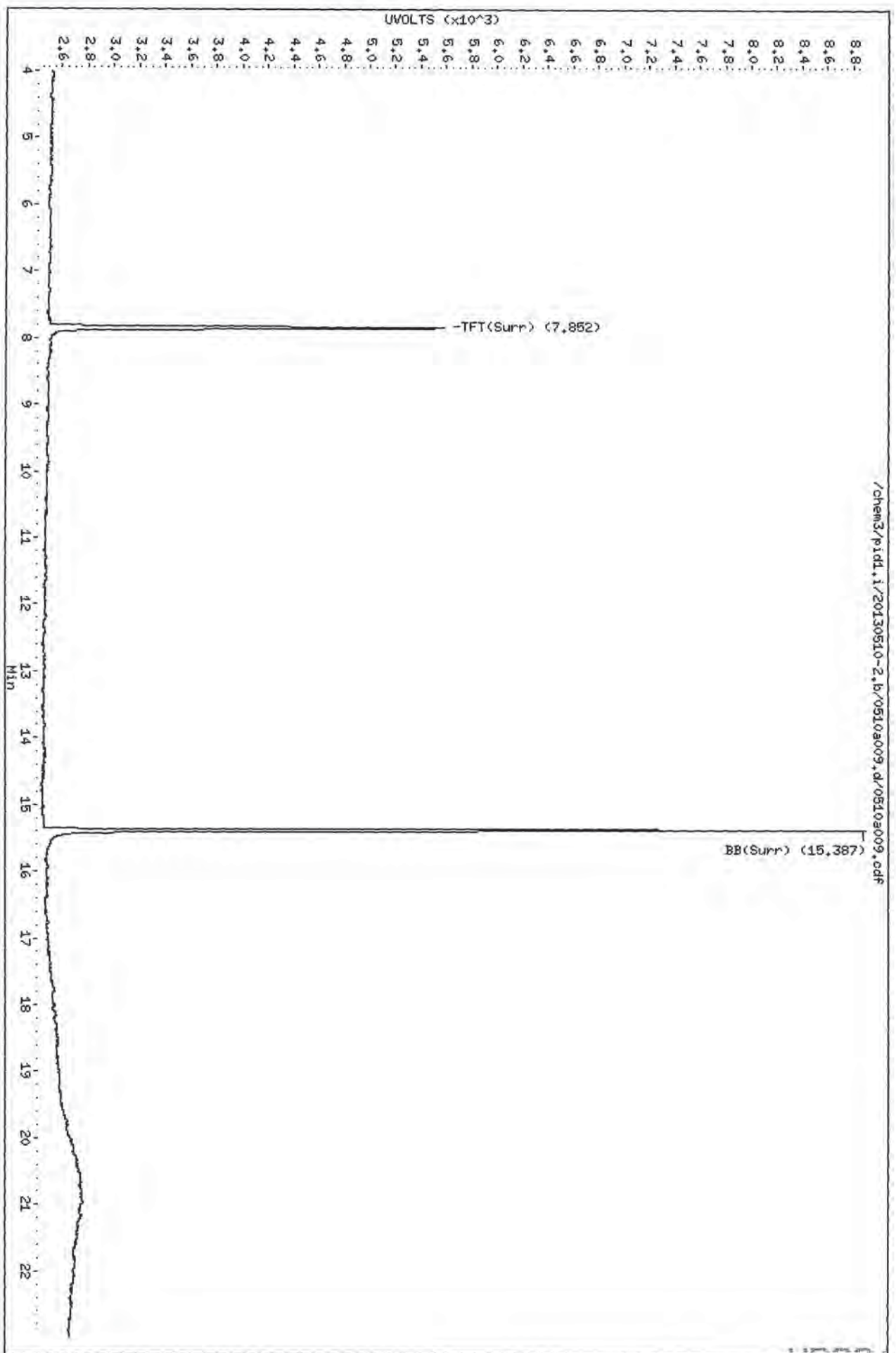
/chem3/pidl,i/20130510-1.b/0510a009.d/0510a009.cdf



Data File: /chem3/pid1.i/20130510-2.b/0510a009.d
Date: 10-MAY-2013 13:22
Client ID: TP-42-050813
Sample Info: MP36K

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130510-2.b/0510a009.d/0510a009.cdf

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: TP-43-050813
 SAMPLE

Lab Sample ID: WP36L
 LIMS ID: 13-10062
 Matrix: Water
 Data Release Authorized: *VD*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/08/13
 Date Received: 05/09/13

Date Analyzed: 05/09/13 19:43
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	85.4%
Bromobenzene	81.7%

Gasoline Surrogate Recovery

Trifluorotoluene	88.2%
Bromobenzene	82.8%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
BETX/Gas Quantitation Report

PC
5/16/13

Data file 1: /chem3/pid1.i/20130509-1.b/0509a023.d ARI ID: WP36L
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a023.d Client ID: TP-43-050713
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 19:43
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.005	3058	37383	88.2	TFT(Surr)
15.379	0.002	1890	15961	82.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	1	0.000
8015C 2MP-TMB (4.18 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.67 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.76 to 18.89)	375093	1	0.000

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.005	3389	85.4	TFT(Surr)
15.388	0.003	7182	81.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

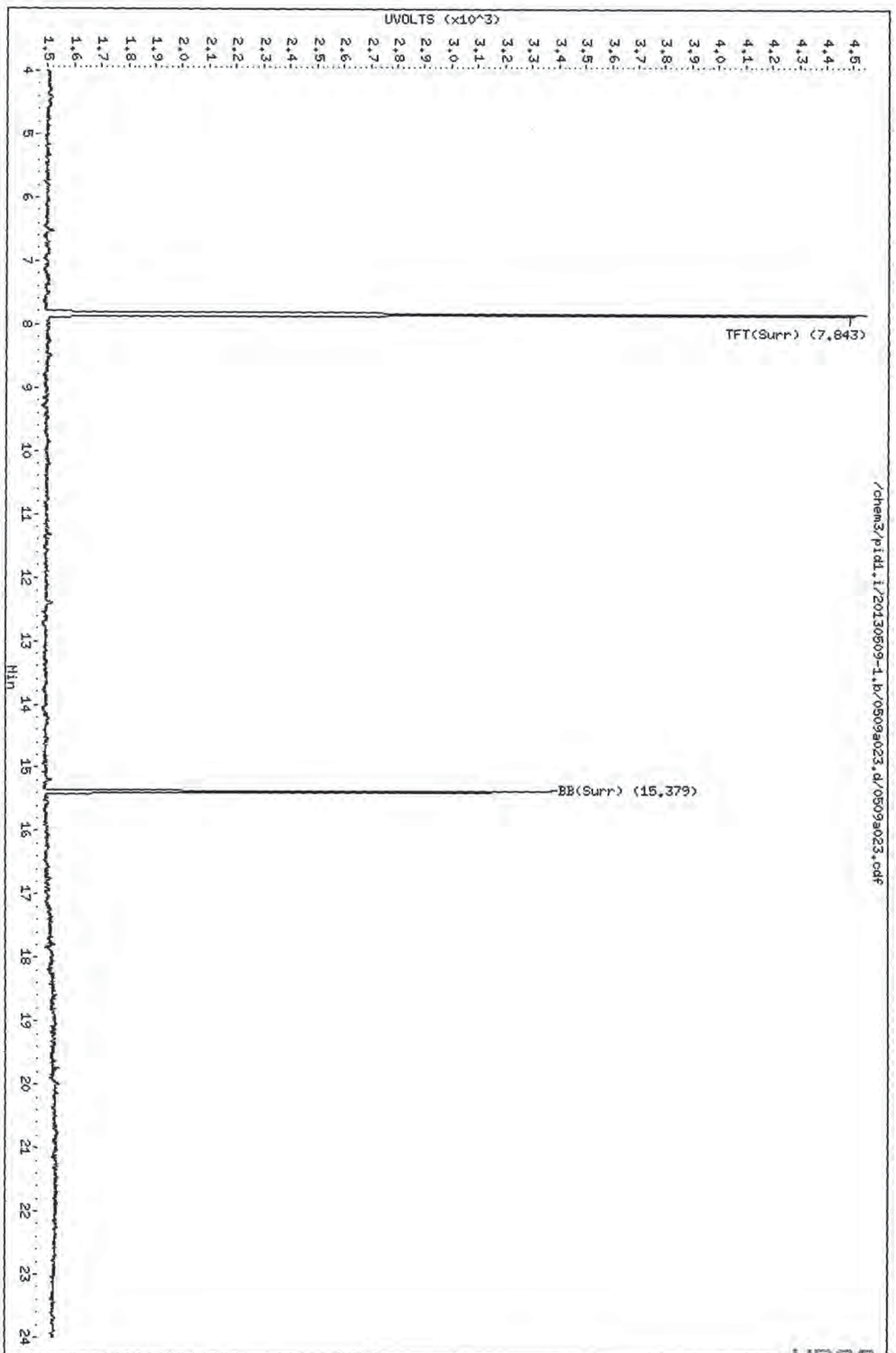
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a023.d
Date: 09-MAY-2013 19:43
Client ID: TP-43-050713
Sample Info: MP36L

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130509-1.b/0509a023.d/0509a023.cdf



TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WP36
Matrix: Water

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
TP-38-050713	80.7%	76.2%*	1
TP-38-050713 RE	90.4%	85.3%	0
MB-050913	85.2%	84.5%	0
LCS-050913	95.4%	90.8%	0
LCSD-050913	95.7%	92.5%	0
TP-39-050713	88.8%	83.9%	0
MB-051013	85.7%	82.2%	0
LCS-051013	90.4%	83.1%	0
LCSD-051013	89.1%	84.4%	0
TP-40-050813	85.7%	81.1%	0
TP-41-050813	86.6%	83.2%	0
TP-42-050813	78.3%*	76.3%*	2
TP-42-050813 RE	79.6%*	74.9%*	2
TP-43-050813	88.2%	82.8%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-10057 to 13-10062

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: WP36
Matrix: Water

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

Client ID	TFT	BBZ	TOT OUT
TP-38-050713	78.5%*	74.3%*	2
TP-38-050713 RE	88.4%	85.2%	0
MB-050913	83.7%	83.6%	0
LCS-050913	93.1%	89.5%	0
LCSD-050913	93.8%	92.2%	0
TP-39-050713	86.6%	82.9%	0
MB-051013	84.0%	81.7%	0
LCS-051013	87.9%	83.2%	0
LCSD-051013	86.1%	83.2%	0
TP-40-050813	84.0%	79.8%	0
TP-41-050813	84.6%	81.7%	0
TP-42-050813	76.0%*	74.3%*	2
TP-42-050813 RE	77.8%*	73.3%*	2
TP-43-050813	85.4%	81.7%	0

		LCS/MB LIMITS	QC LIMITS
{TFT} = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
{TFT} = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
{BBZ} = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
{BBZ} = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 13-10057 to 13-10062

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-050913
LAB CONTROL SAMPLE

Lab Sample ID: LCS-050913
LIMS ID: 13-10058
Matrix: Water
Data Release Authorized: *VA*
Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 05/09/13 10:14
LCSD: 05/09/13 10:44
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	Spike		LCS		Spike		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	0.96	1.00	96.0%	0.96	1.00	96.0%	0.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.4%	95.7%
Bromobenzene	90.8%	92.5%

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-050913
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050913
 LIMS ID: 13-10058
 Matrix: Water
 Data Release Authorized: *WAS*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/09/13 10:14
 LCSD: 05/09/13 10:44
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor LCS: 1.0
 LCSD: 1.0

Analyte	Spike		LCS		Spike		LCSD	
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD	
Benzene	3.39	3.70	91.6%	3.59	3.70	97.0%	5.7%	
Toluene	35.8	39.6	90.4%	37.9	39.6	95.7%	5.7%	
Ethylbenzene	10.2	11.6	87.9%	10.7	11.6	92.2%	4.8%	
m,p-Xylene	37.1	42.5	87.3%	38.9	42.5	91.5%	4.7%	
o-Xylene	16.7	19.2	87.0%	17.8	19.2	92.7%	6.4%	

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

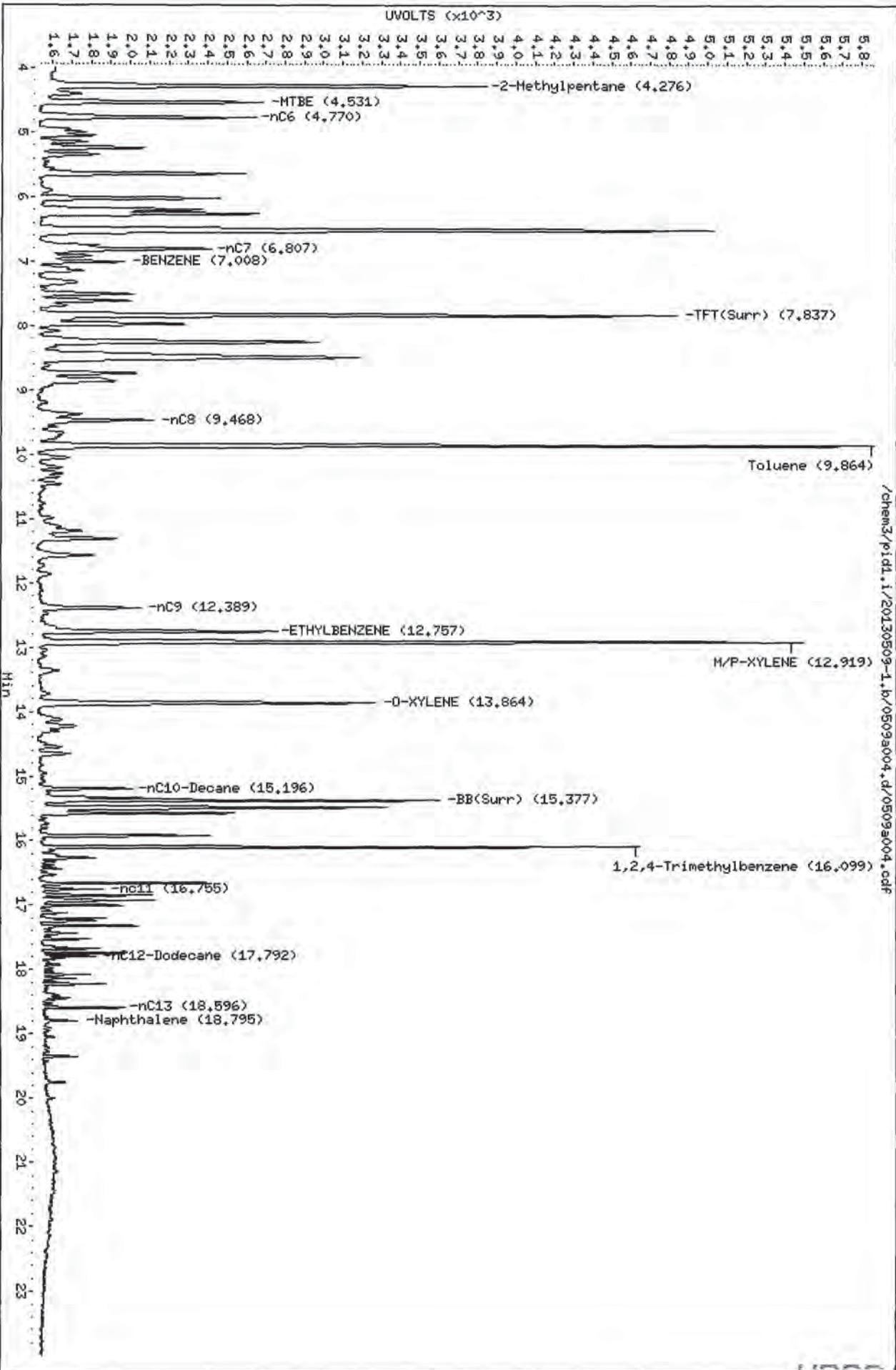
	LCS	LCSD
Trifluorotoluene	93.1%	93.8%
Bromobenzene	89.5%	92.2%

Data File: /chem3/pid1.i/20130509-1.b/0509a004.d
Date: 09-MAY-2013 10:14

Client ID:
Sample Info: LCS0509

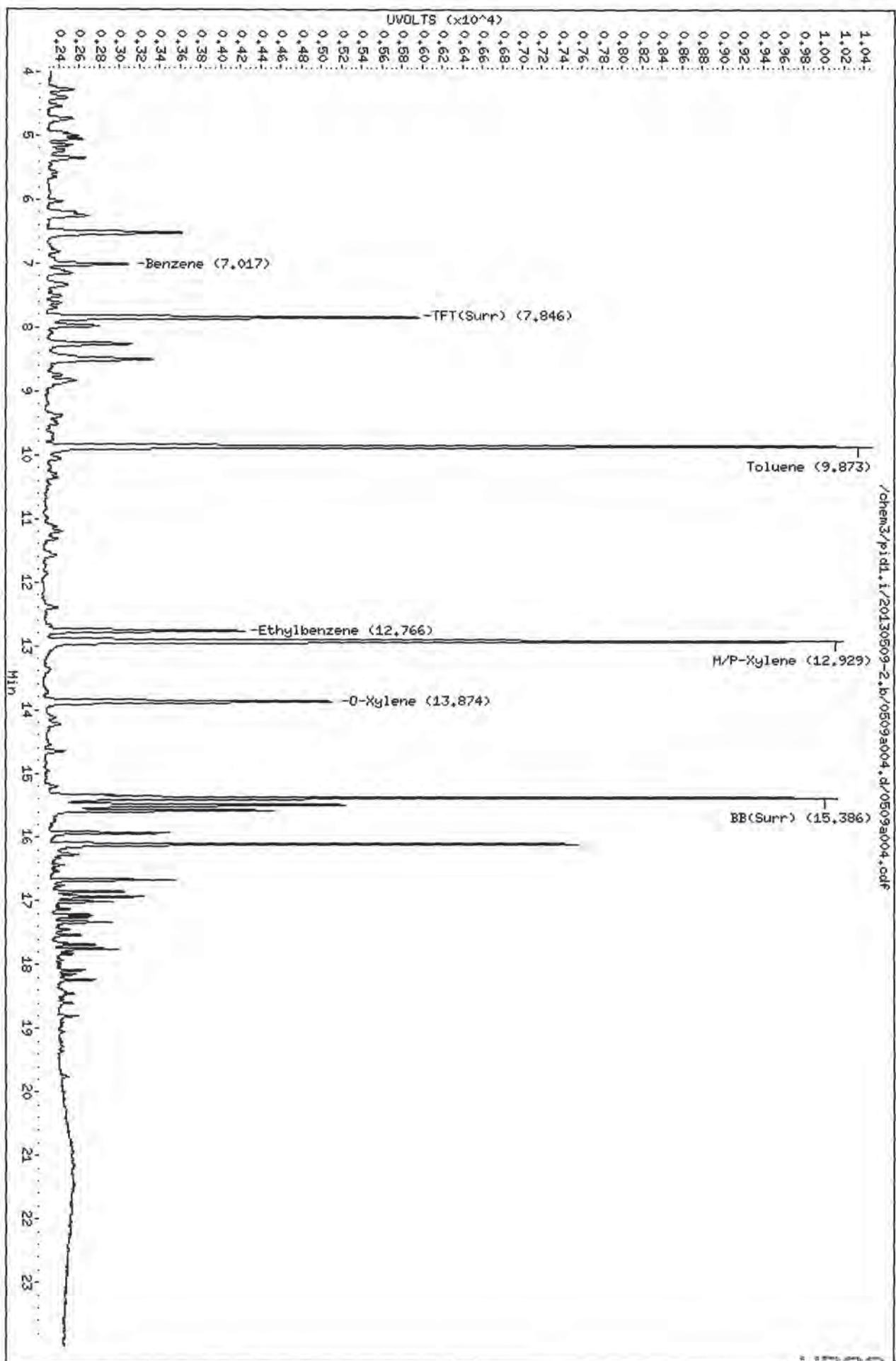
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130509-2.b/0509a004.d
Date: 09-MAY-2013 10:14
Client ID:
Sample Info: LCS0509
Column phase: RTX 502-2 PID

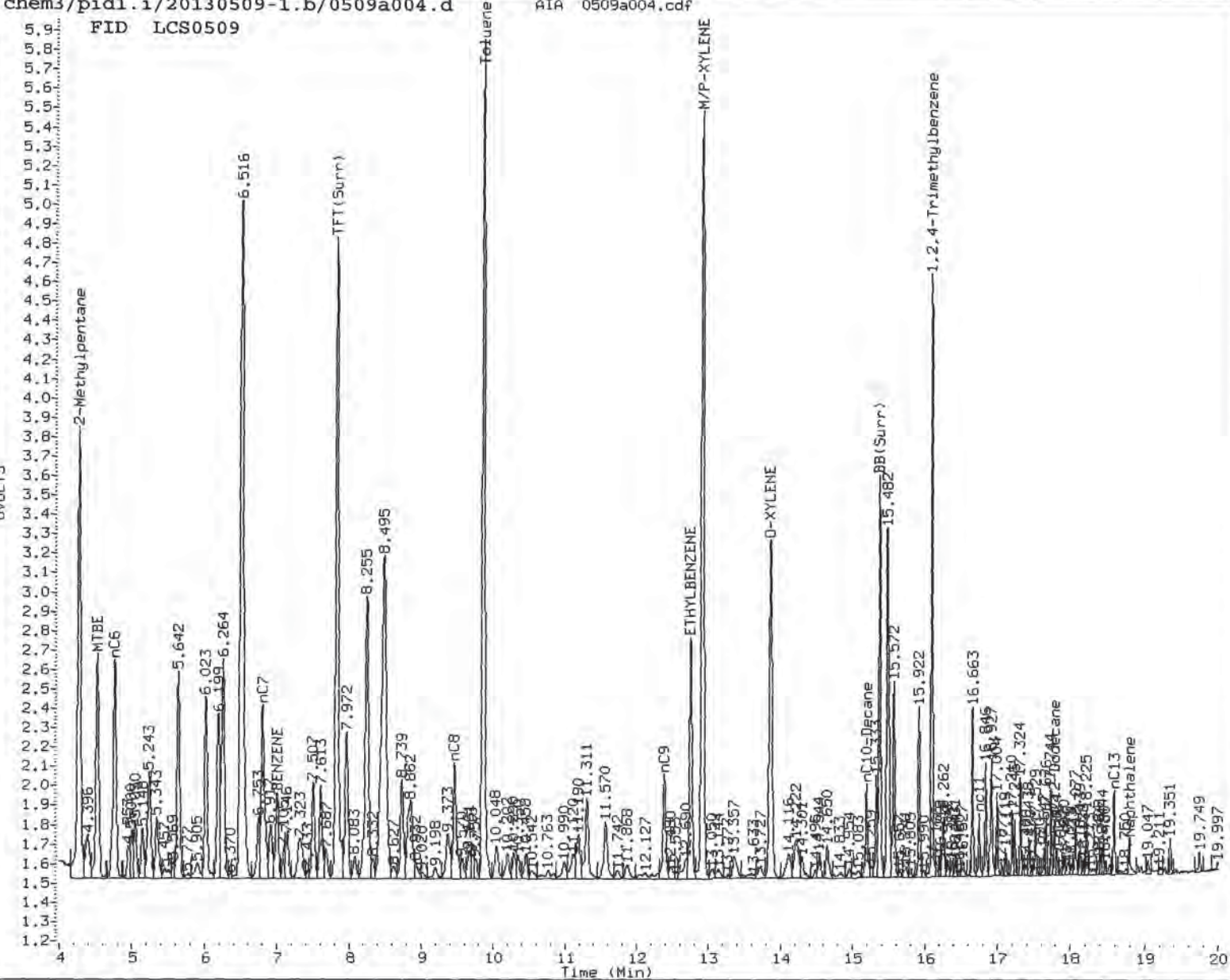
Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-2.b/0509a004.d/0509a004.odr

FID LCS0509

UVOLTS



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: lc

Date: 5/10/13

PC
5/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130509-1.b/0509a005.d ARI ID: LCSD0509
Data file 2: /chem3/pid1.i/20130509-2.b/0509a005.d Client ID:
Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 10:44
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.001	3320	45146	95.7	TFT(Surr)
15.379	0.001	2111	18535	92.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	346764	0.968 M
8015C 2MP-TMB (4.18 to 16.20)	723723	698654	0.965 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	563144	0.966 M
NWTPHG Tol-Nap (9.76 to 18.89)	375093	361524	0.964 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.001	3724	93.8	TFT(Surr)
15.386	0.002	8108	92.2	BB(Surr)

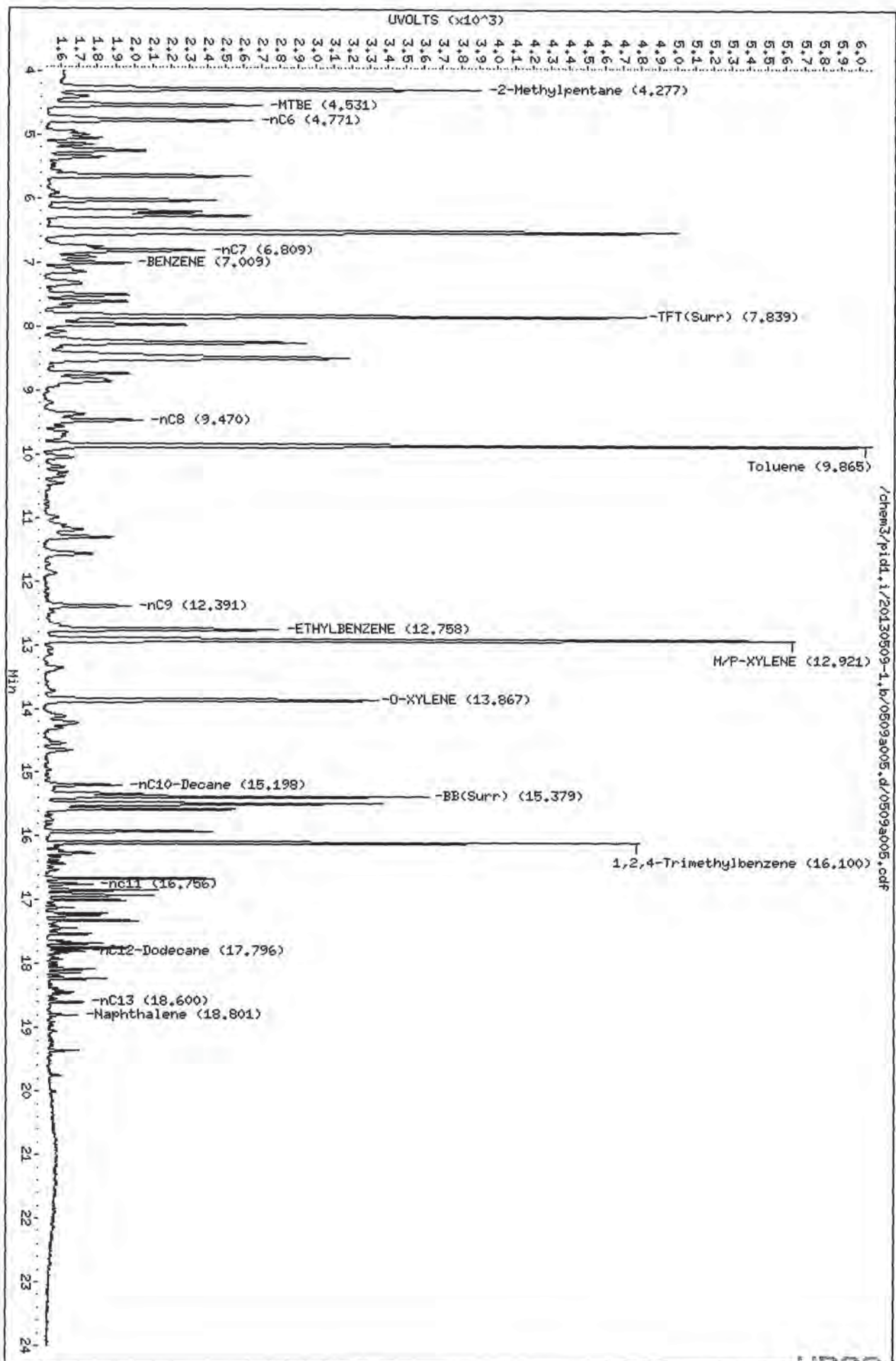
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	0.000	862	3.59	Benzene
9.874	0.001	8679	37.90	Toluene
12.767	0.001	2075	10.72	Ethylbenzene
12.930	0.004	8300	38.87	M/P-Xylene
13.875	0.002	3031	17.77	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

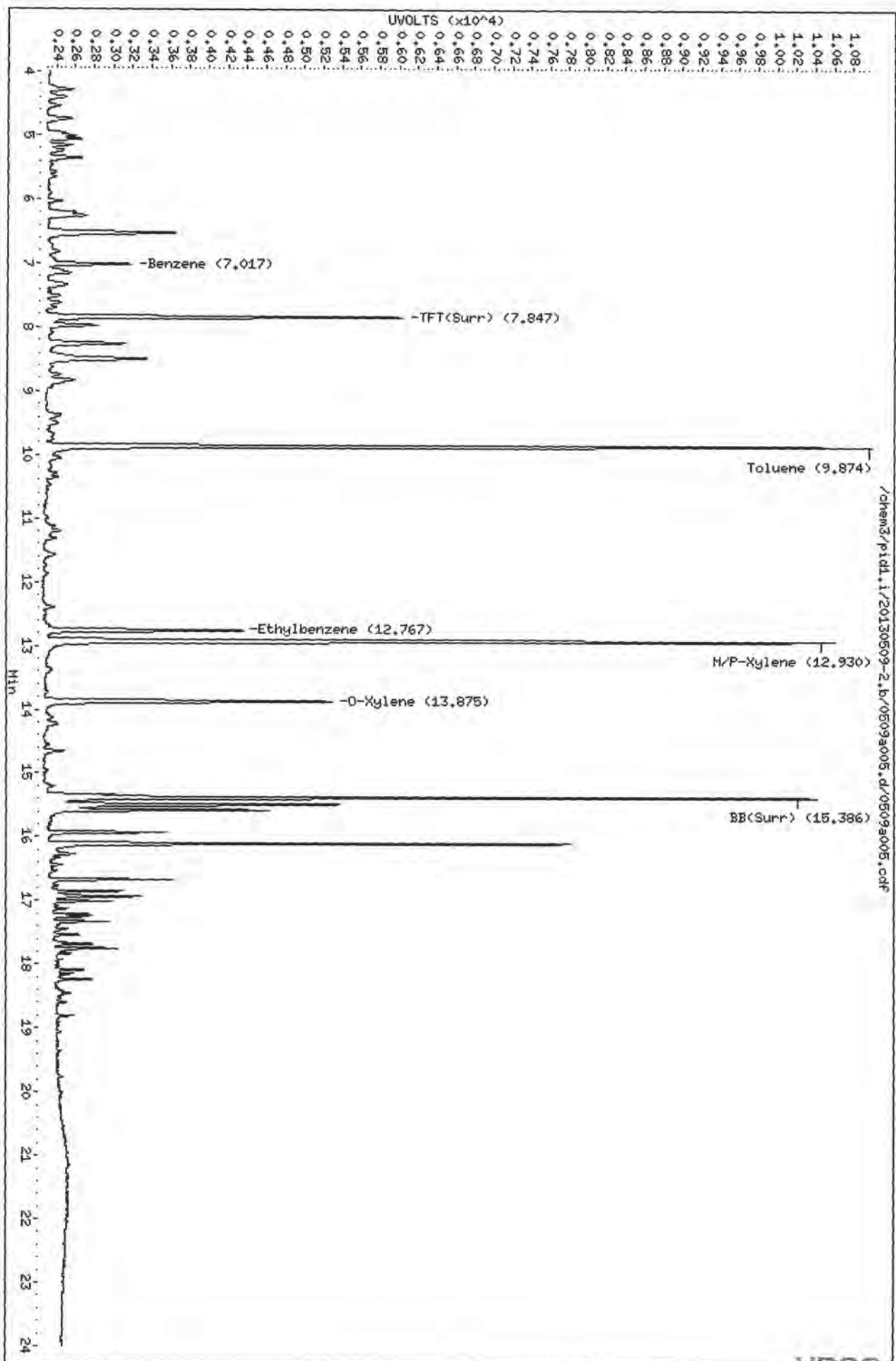
Data File: /chem3/pid1.1/20130509-1.b/0509a005.d
Date: 09-MAY-2013 10:44
Client ID:
Sample Info: LCSD0509
Column phase: RTX 502-2 FID

Instrument: pid1.1
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130509-2.b/0509a005.d
Date: 09-MAY-2013 10:44
Client ID:
Sample Info: LCSD0509
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-2.b/0509a005.d/0509a005.cdf

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: LCS-051013

LAB CONTROL SAMPLE

Lab Sample ID: LCS-051013

LIMS ID: 13-10059

Matrix: Water

Data Release Authorized: 

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 05/10/13 10:44

LCSD: 05/10/13 11:13

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	0.95	1.00	95.0%	0.94	1.00	94.0%	1.1%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	90.4%	89.1%
Bromobenzene	83.1%	84.4%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
 Page 1 of 1

Sample ID: LCS-051013
LAB CONTROL SAMPLE

Lab Sample ID: LCS-051013
 LIMS ID: 13-10059
 Matrix: Water
 Data Release Authorized: *WD*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed LCS: 05/10/13 10:44
 LCSD: 05/10/13 11:13
 Instrument/Analyst LCS: PID1/PKC
 LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
 LCSD: 1.0

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD		
Benzene	3.25	3.70	87.8%	3.25	3.70	87.8%	0.0%		
Toluene	33.8	39.6	85.4%	33.6	39.6	84.8%	0.6%		
Ethylbenzene	9.53	11.6	82.2%	9.61	11.6	82.8%	0.8%		
m,p-Xylene	34.9	42.5	82.1%	35.0	42.5	82.4%	0.3%		
o-Xylene	15.8	19.2	82.3%	15.8	19.2	82.3%	0.0%		

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	87.9%	86.1%
Bromobenzene	83.2%	83.2%

Analytical Resources Inc.
 BETX/Gas Quantitation Report

*PC
5/16/13*

Data file 1: /chem3/pid1.i/20130510-1.b/0510a004.d ARI ID: LCS0510
 Data file 2: /chem3/pid1.i/20130510-2.b/0510a004.d Client ID:
 Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 10:44
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.001	3135	42812	90.4	TFT (Surr)
15.379	0.001	1896	17175	83.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	337412	0.942 M
8015C 2MP-TMB (4.18 to 16.20)	723723	679132	0.938 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	551652	0.946 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	355024	0.946 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.001	3489	87.9	TFT (Surr)
15.386	0.000	7314	83.2	BB (Surr)

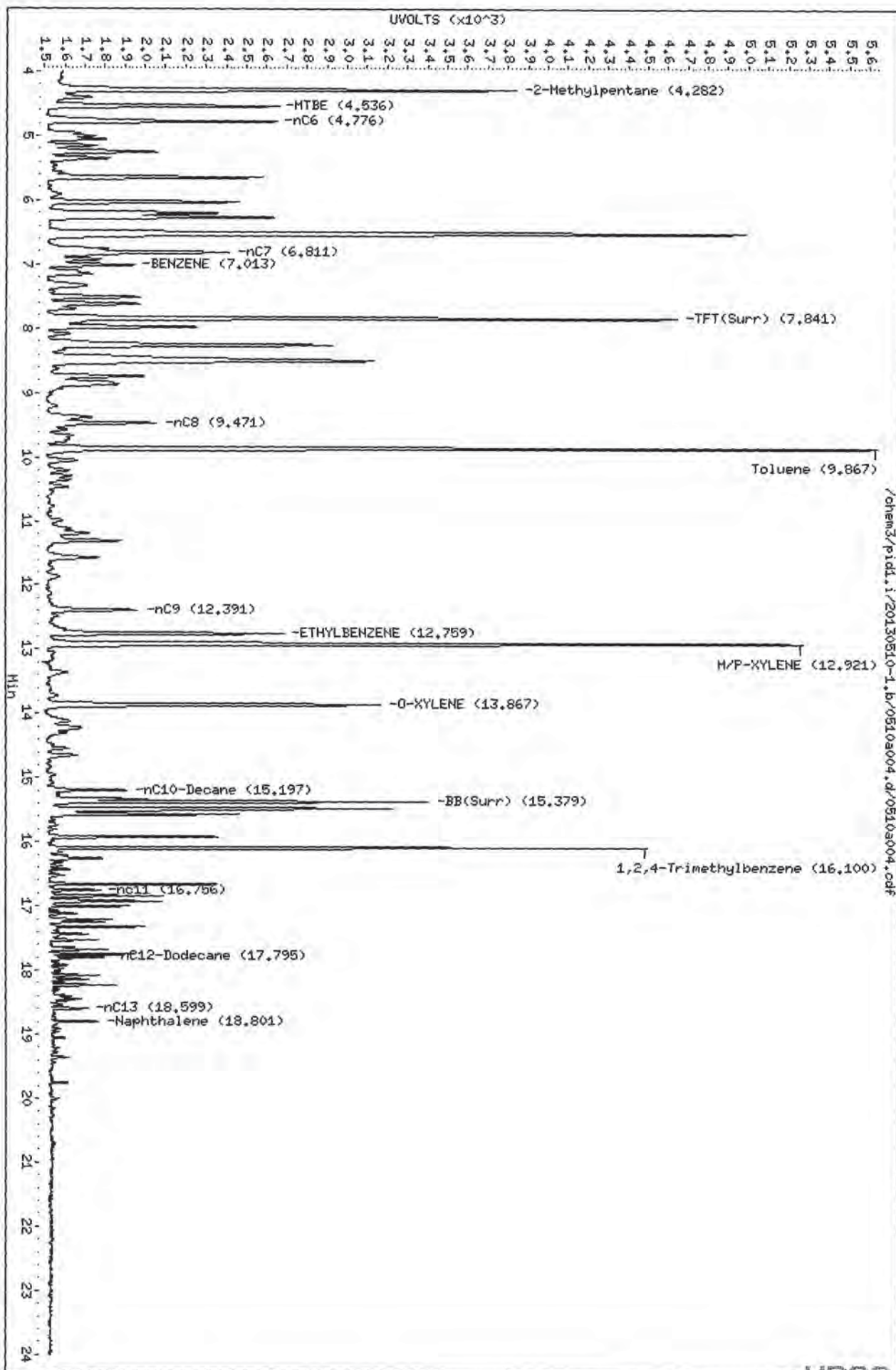
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	0.001	780	3.25	Benzene
9.875	0.001	7738	33.79	Toluene
12.767	0.000	1845	9.53	Ethylbenzene
12.930	0.003	7458	34.92	M/P-Xylene
13.876	0.001	2688	15.76	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-1.b/0510s004.d
Date: 10-MAY-2013 10:44
Client ID:
Sample Info: LCS0510
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130510-1.b/0510s004.d/0510s004.pdf

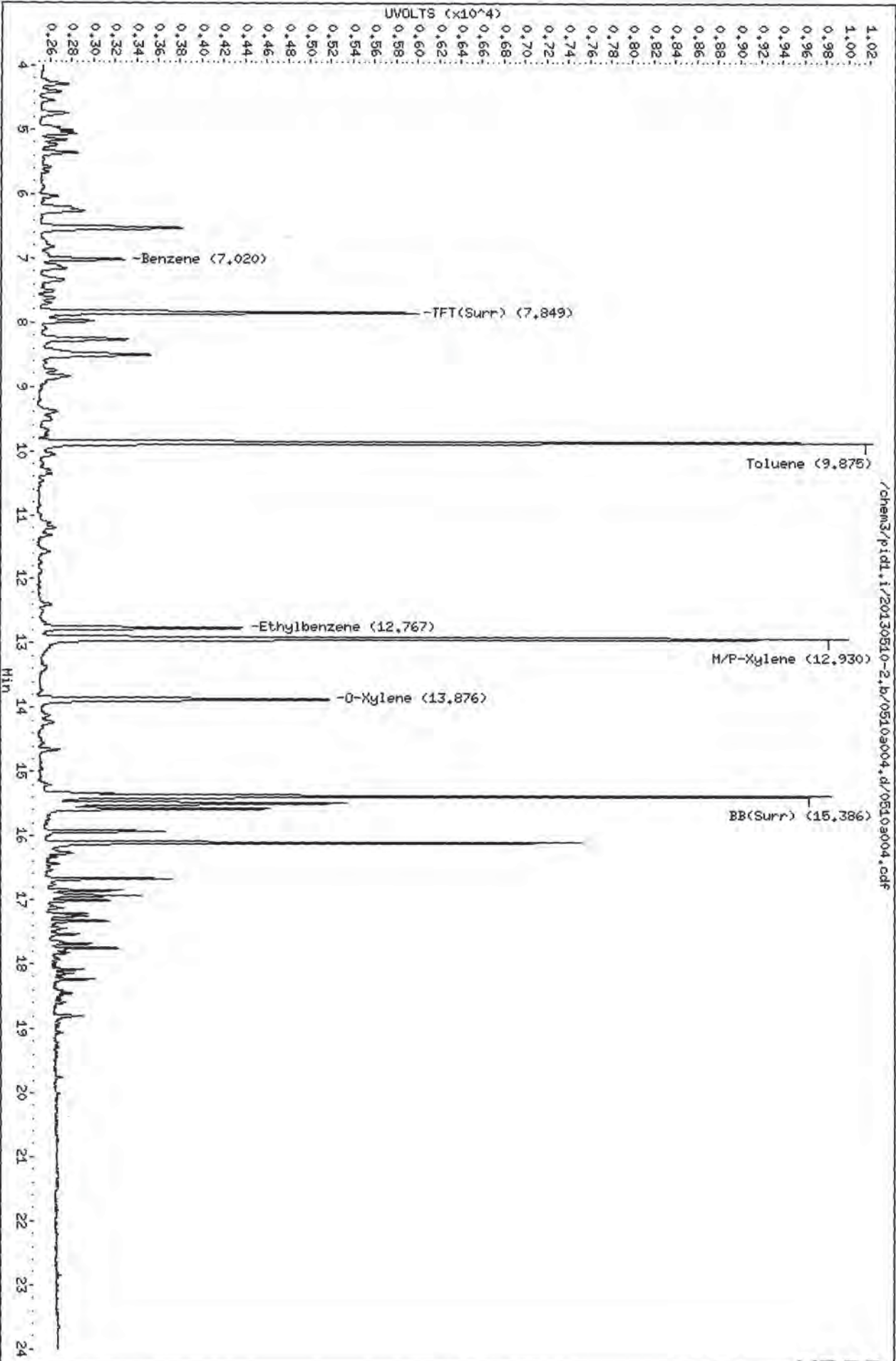
Data File: /chem3/pid1.i/20130510-2.b/0510a004.d
Date: 10-MAY-2013 10:44

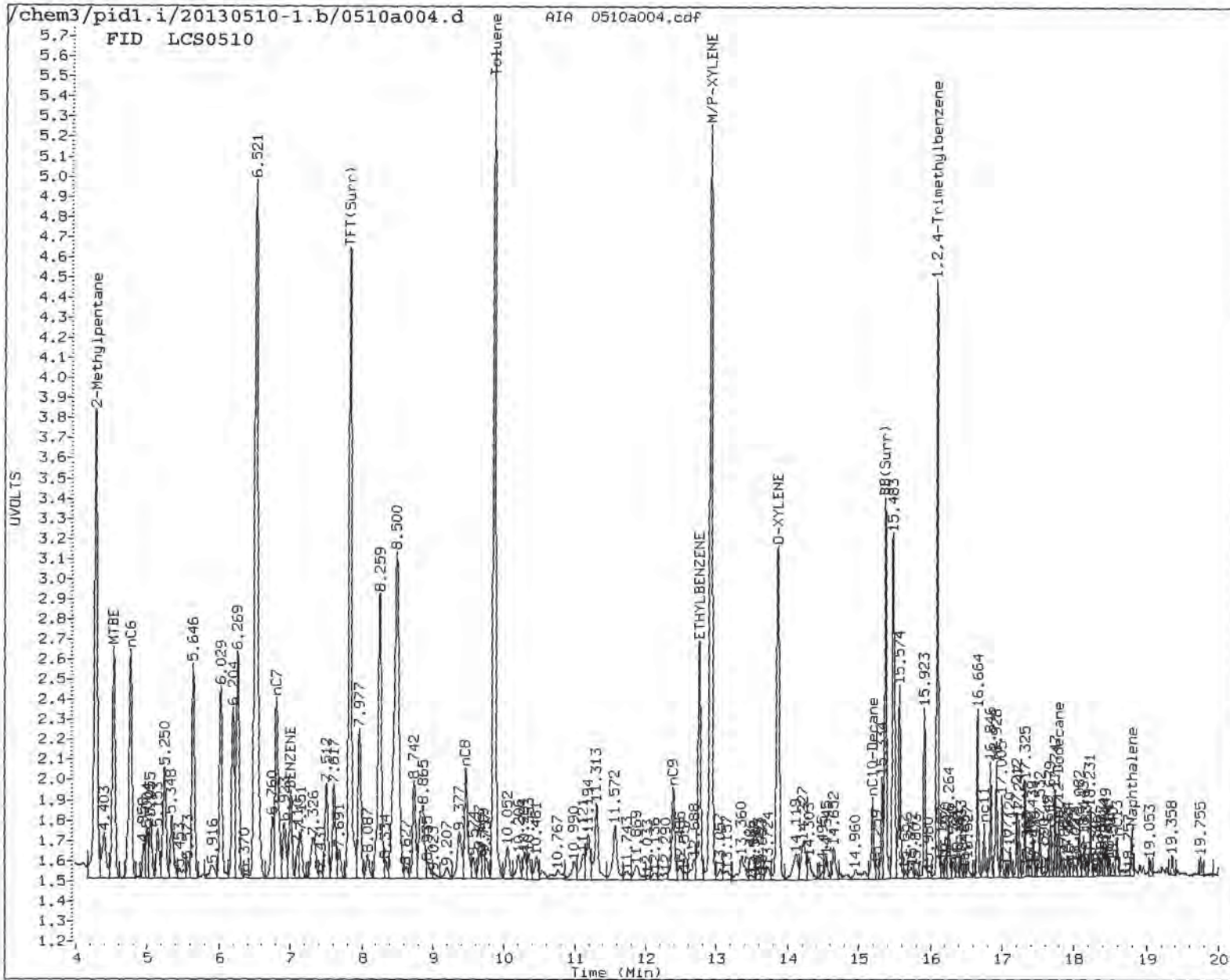
Client ID:
Sample Info: LCS0510

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst: JC

Date: 5/10/13

PK
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130510-1.b/0510a005.d ARI ID: LCSD0510
Data file 2: /chem3/pid1.i/20130510-2.b/0510a005.d Client ID:
Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 11:13
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.002	3090	40357	89.1	TFT(Surr)
15.379	0.002	1926	16763	84.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	333767	0.932 M
8015C 2MP-TMB (4.18 to 16.20)	723723	671026	0.927 M
AK101 nC6-nC10 (4.67 to 15.10)	582885	541509	0.929 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	351033	0.936 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

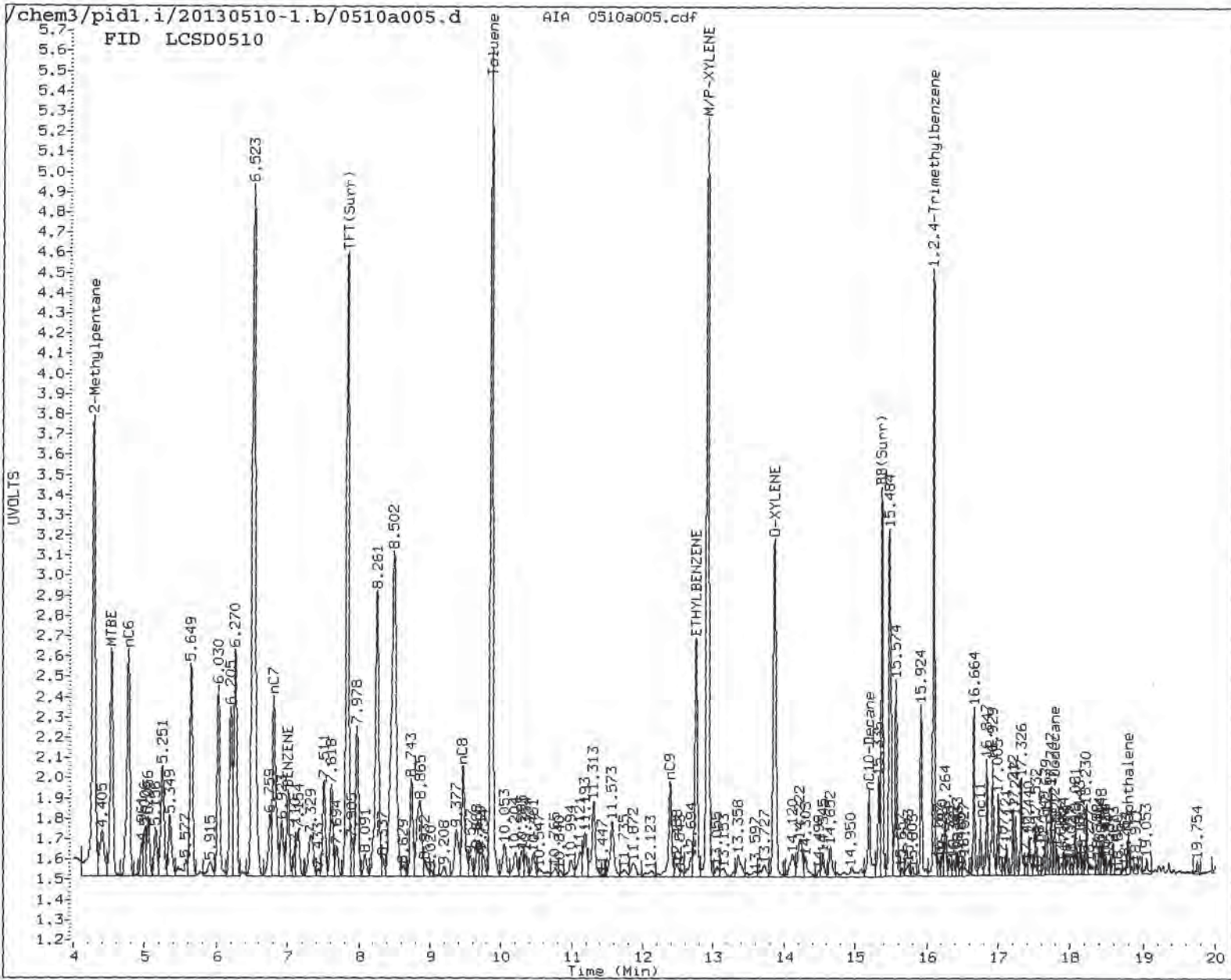
PID Surrogates

RT	Shift	Response	%Rec	Compound
7.851	0.002	3418	86.1	TFT(Surr)
15.386	0.001	7311	83.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	0.002	779	3.25	Benzene
9.876	0.002	7687	33.57	Toluene
12.768	0.001	1860	9.61	Ethylbenzene
12.931	0.004	7474	35.00	M/P-Xylene
13.876	0.002	2693	15.79	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: 10

Date: 5/10/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-050913

METHOD BLANK

Lab Sample ID: MB-050913

LIMS ID: 13-10058

Matrix: Water

Data Release Authorized: *MS*

Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 05/09/13 11:13

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	2.0	< 2.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
BETX Surrogate Recovery				
	Trifluorotoluene	83.7%		
	Bromobenzene	83.6%		
Gasoline Surrogate Recovery				
	Trifluorotoluene	85.2%		
	Bromobenzene	84.5%		

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

PC
5/14/13

Data file 1: /chem3/pid1.i/20130509-1.b/0509a006.d ARI ID: MB0509
 Data file 2: /chem3/pid1.i/20130509-2.b/0509a006.d Client ID:
 Method: /chem3/pid1.i/20130509-2.b/PIDB.m Injection Date: 09-MAY-2013 11:13
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	2956	35982	85.2	TFT (Surr)
15.378	0.001	1929	15993	84.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.76 to 17.89)	358114	4280	0.012
8015C 2MP-TMB (4.18 to 16.20)	723723	5966	0.008
AK101 nC6-nC10 (4.67 to 15.10)	582885	5198	0.009
NWTPHG Tol-Nap (9.76 to 18.89)	375093	4773	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3324	83.7	TFT (Surr)
15.386	0.001	7351	83.6	BB (Surr)

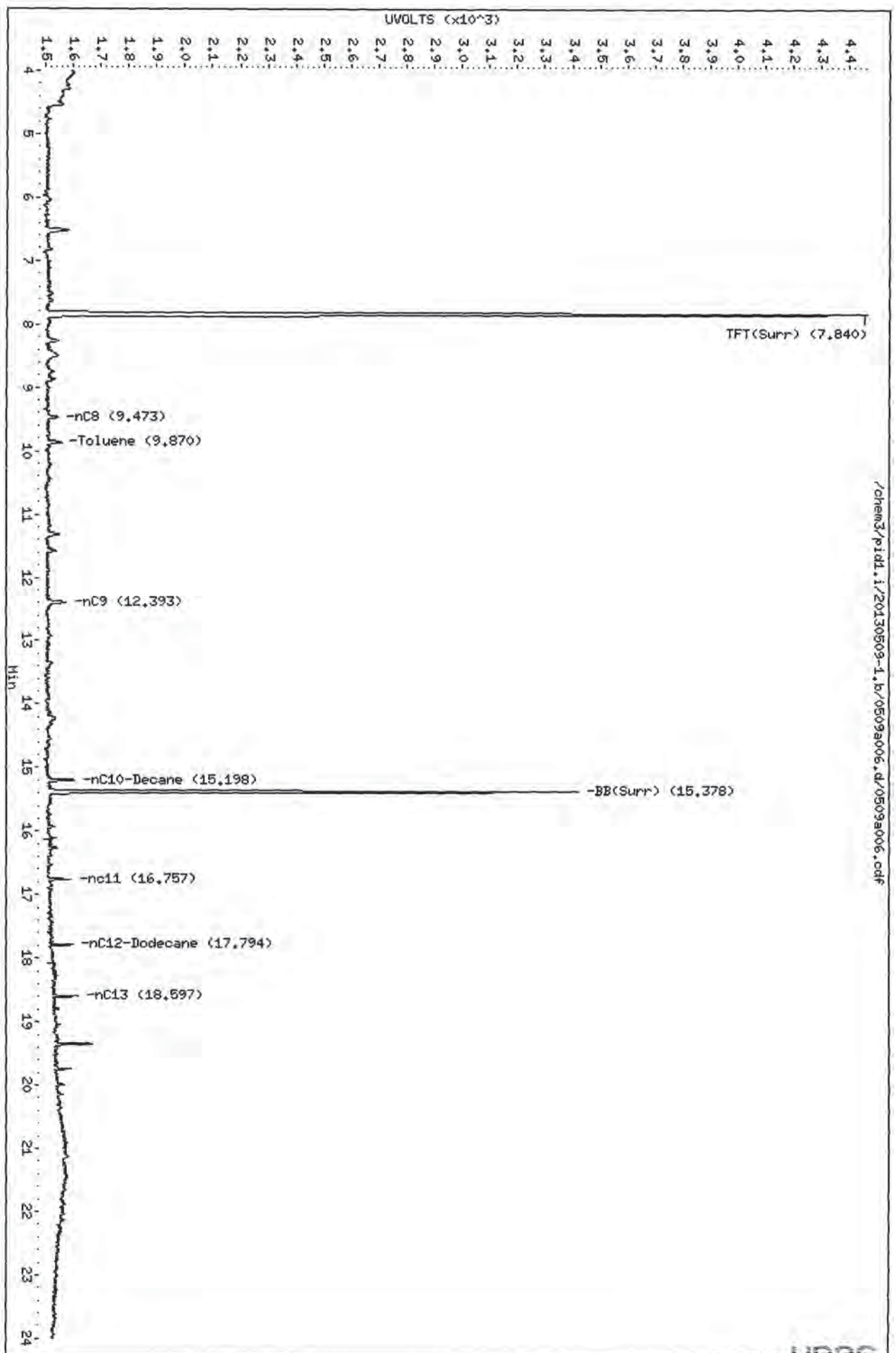
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130509-1.b/0509a006.d
Date: 09-MAY-2013 11:13
Client ID:
Sample Info: MB0509
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130509-1.b/0509a006.d/0509a006.cdf

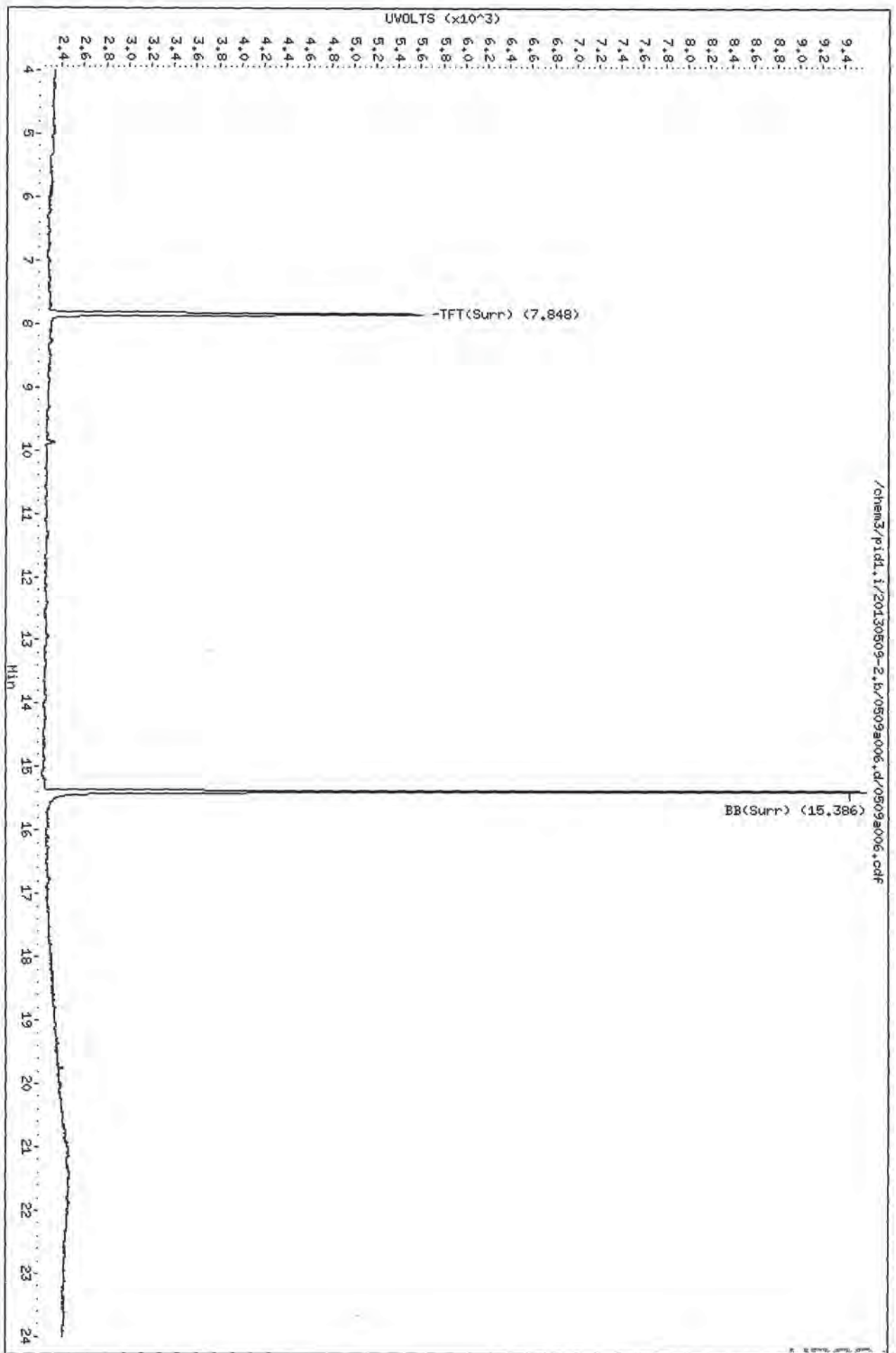
Data File: /chem3/pidl.i/20130509-2.b/0509a006.d
Date: 09-MAY-2013 11:13

Client ID:
Sample Info: MS0509

Column phase: RTX 502-2 PID

Instrument: pidl.i

Operator: LH
Column diameter: 0.18



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ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: MB-051013
 METHOD BLANK

Lab Sample ID: MB-051013
 LIMS ID: 13-10059
 Matrix: Water
 Data Release Authorized: *WAD*
 Reported: 05/10/13

QC Report No: WP36-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed: 05/10/13 11:43
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons 0.25 < 0.25 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	84.0%
Bromobenzene	81.7%

Gasoline Surrogate Recovery

Trifluorotoluene	85.7%
Bromobenzene	82.2%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PC
5/10/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130510-1.b/0510a006.d ARI ID: MB0510
Data file 2: /chem3/pid1.i/20130510-2.b/0510a006.d Client ID:
Method: /chem3/pid1.i/20130510-2.b/PIDB.m Injection Date: 10-MAY-2013 11:43
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 15-MAR-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	0.004	2973	36784	85.7	TFT(Surr)
15.379	0.002	1876	15672	82.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.89)	358114	2607	0.007
8015C 2MP-TMB (4.18 to 16.20)	723723	3278	0.005
AK101 nC6-nC10 (4.67 to 15.10)	582885	2554	0.004
NWTPHG Tol-Nap (9.77 to 18.90)	375093	2607	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	0.003	3333	84.0	TFT(Surr)
15.387	0.001	7181	81.7	BB(Surr)

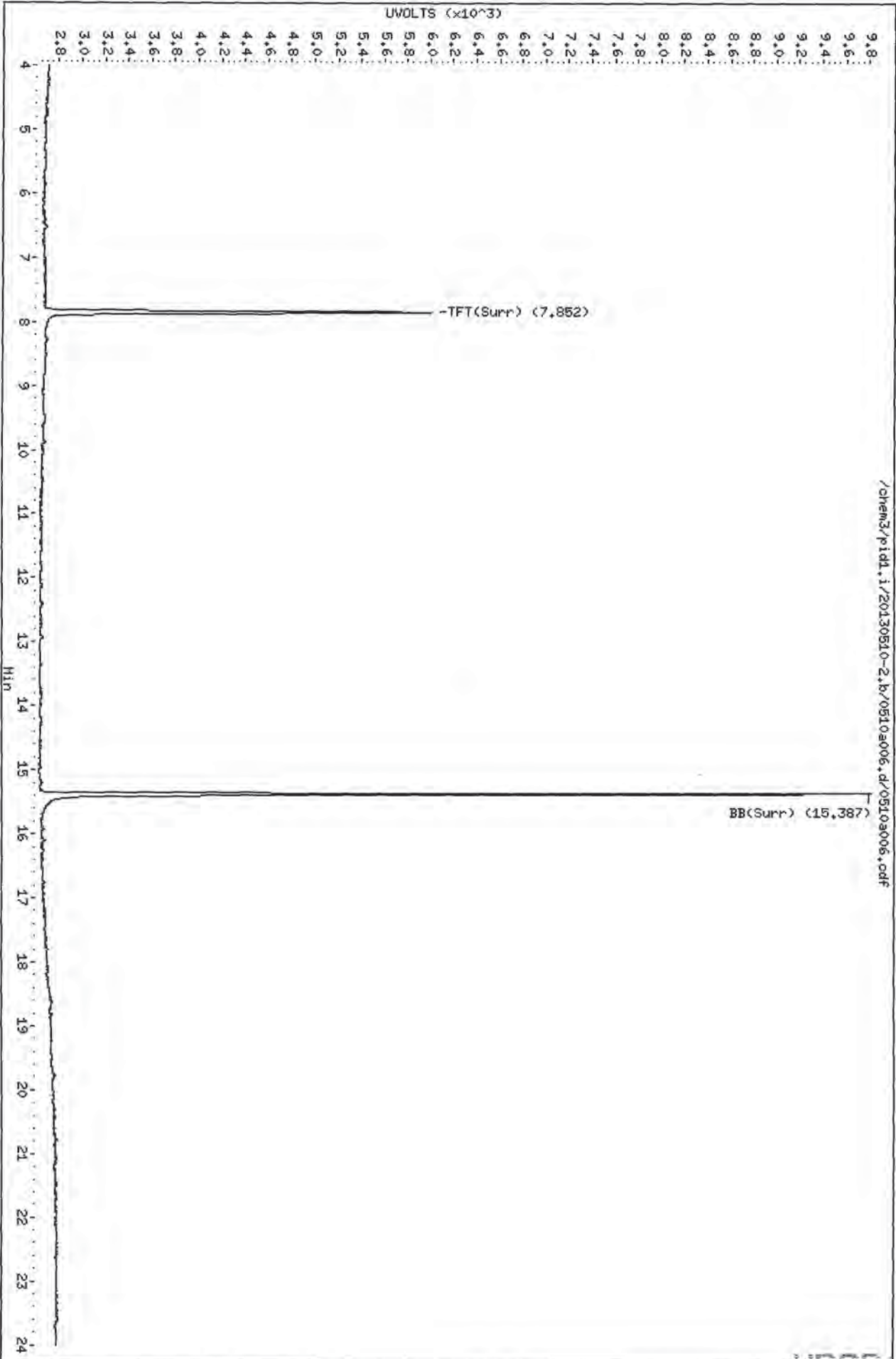
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130510-2.b/0510a006.pdf
Date: 10-MAY-2013 11:43
Client ID:
Sample Info: MB0510
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130510-2.b/0510a006.pdf

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02
03
04
05



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 4, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS31

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted six soil samples on May 31, 2013. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.



Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS31

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W331	Turn-around Requested:	Page: 1 of 1
ARI Client Company: MFA, Inc.	Phone:	Date:
Client Contact: Tony Silva	TSILVA@MAWLFOSTER.COM	Ice Present? <input checked="" type="checkbox"/>
Client Project Name: CASHMERE		No. of Coolers: 1
Client Project #: 0779.02.01-03	Samplers: Lindsey Crosby	Cooler Temps: 5.9

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested							Notes/Comments
					DX SILICA GEL CLEANUP	BTEX/GX	VPH	EPH	LEAD (only if GX detected)	VOCs (EDS, MTBE, EDC)	only if GX detected	
A2-W36-S-4	5/31	0830	S	5	X	X	X	X	X	X	X	
A2-W34-S-4		0815	S	5			X	X				
A2-W35-S-4		0815	S	5			X	X				
A2-W37-S-4		0950	S	10			X	X				
A2-W38-S-4		1000	S	10			X	X				
A2-W39-S-4		1145	S	6			X	X				

Comments/Special Instructions VPH & EPH only for samples: A2-W37-S-4 A2-W38-S-4	Relinquished by:	Received by:	Relinquished by:	Received by:
	Printed Name: LINDSEY CROSBY	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/31/13 1550	Date & Time: 5-31-13 1530	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

2000011351



Cooler Receipt Form

ARI Client: mFA
 COC No(s): _____
 Assigned ARI Job No: WS31 NA

Project Name: Cashmere
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 5.9 5.9
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 9084-2952

Cooler Accepted by: JB Date: 6/3/13 Time: 15:50

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI: NA
 Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 6/3/13 Time: 1009

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WS31
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-W36-S-4	WS31A	13-11733	Soil	05/31/13 08:30	05/31/13 15:50
2. A2-W34-S-4	WS31B	13-11734	Soil	05/31/13 08:15	05/31/13 15:50
3. A2-W35-S-4	WS31C	13-11735	Soil	05/31/13 08:15	05/31/13 15:50
4. A2-W37-S-4	WS31D	13-11736	Soil	05/31/13 09:50	05/31/13 15:50
5. A2-W38-S-4	WS31E	13-11737	Soil	05/31/13 10:00	05/31/13 15:50
6. A2-W39-S-4	WS31F	13-11738	Soil	05/31/13 11:45	05/31/13 15:50



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WS31-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

Matrix: Soil
Data Release Authorized: *AB*
Reported: 06/04/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-060313 13-11733	Method Blank HC ID: ---	06/03/13	06/04/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 76.5%
WS31A 13-11733	A2-W36-S-4 HC ID: MOTOR OIL	06/03/13	06/04/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	< 5.6 U 16 74.7%
WS31B 13-11734	A2-W34-S-4 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	8.1 16	8.8 56 59.5%
WS31C 13-11735	A2-W35-S-4 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID3B	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.5 15	19 200 61.3%
WS31D 13-11736	A2-W37-S-4 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	64 130	510 4200 50.7%
WS31E 13-11737	A2-W38-S-4 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	85 170	570 4200 54.0%
WS31F 13-11738	A2-W39-S-4 HC ID: DIESEL/MOTOR OIL	06/03/13	06/04/13 FID3B	1.00 10	Diesel Range Motor Oil Range o-Terphenyl	63 130	710 5400 58.2%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b017.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31MBS1
Client ID: WS31MBS1
Injection: 04-JUN-2013 14:26
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	119101	9
C8	0.832	0.003	3568	1782	WATPHD	(C12-C24)	120789	11.66
C10	2.240	0.000	709	379	WATPHM	(C24-C38)	102617	10.39
C12	3.037	-0.002	354	135	AK102	(C10-C25)	144565	11.70
C14	3.623	0.007	1180	1438	AK103	(C25-C36)	83115	11.69
C16	4.116	0.003	809	399				
C18	4.567	0.008	1710	1472				
C20	4.978	-0.001	639	100				
C22	5.373	-0.001	427	99	MSPiRIT	(Tol-C12)	119101	8.67
C24	5.745	0.002	227	47				
C25	5.921	0.004	41	19				
C26	6.094	0.000	181	63				
C28	6.400	-0.004	522	180				
C32	6.955	0.004	1836	853				
C34	7.189	0.003	781	601				
Filter Peak	----							
C36	7.411	0.011	1067	525				
o-terph	4.668	0.001	821999	462894	JET-A	(C10-C18)	95883	8.86
Triacon Surr	6.700	-0.001	759912	557981				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

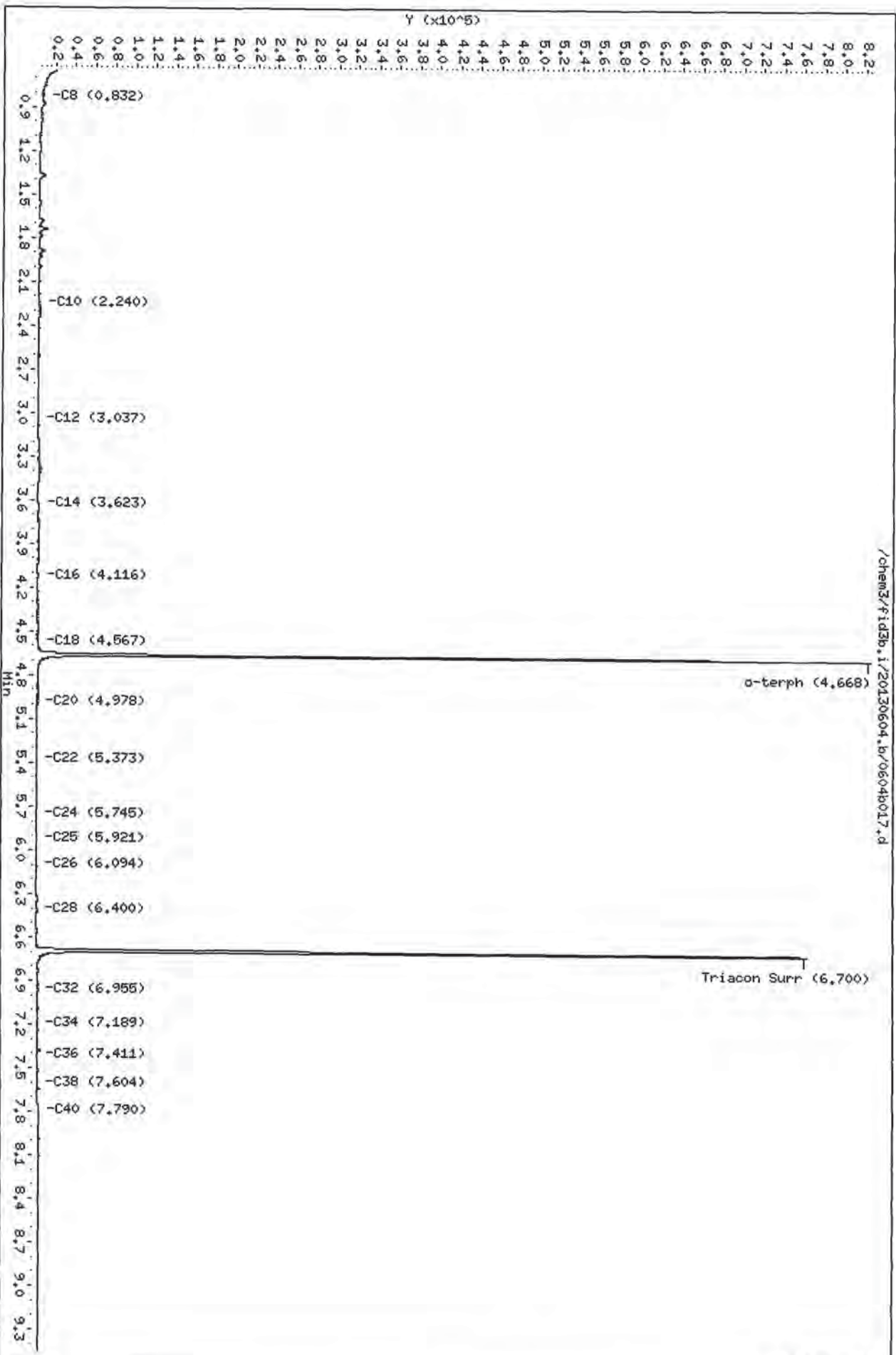
Surrogate	Area	Amount	%Rec
o-Terphenyl	462894	34.4	76.5
Triacontane	557981	42.8	95.0

JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b017.d
 Date: 04-JUN-2013 14:26
 Client ID: MS31HBS1
 Sample Info: MS31HBS1
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25



MS31 00010

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b006.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31A
Client ID: A2-W36-S-4
Injection: 04-JUN-2013 09:51
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	77583	6
C8	0.819	-0.010	2921	2198	WATPHD	(C12-C24)	294881	28.47
C10	2.242	0.003	588	517	WATPHM	(C24-C38)	1381632	139.94
C12	3.046	0.007	360	143	AK102	(C10-C25)	344903	27.91
C14	3.608	-0.008	498	194	AK103	(C25-C36)	1185651	166.79 M
C16	4.113	0.000	895	538				
C18	4.561	0.002	2121	1596				
C20	4.988	0.008	1869	1060				
C22	5.373	-0.001	3438	1401	MSPiRIT	(Tol-C12)	77583	5.65
C24	5.742	-0.001	5774	4302				
C25	5.919	0.002	6934	2396				
C26	6.096	0.002	8506	3721				
C28	6.403	-0.001	15462	8675				
C32	6.949	-0.001	19042	18011				
C34	7.187	0.002	12855	2283				
Filter Peak	----							
C36	7.399	-0.002	13620	2662				
o-terph	4.666	-0.001	864547	451865	JET-A	(C10-C18)	110668	10.22
Triacon Surr	6.700	-0.001	824806	519481				

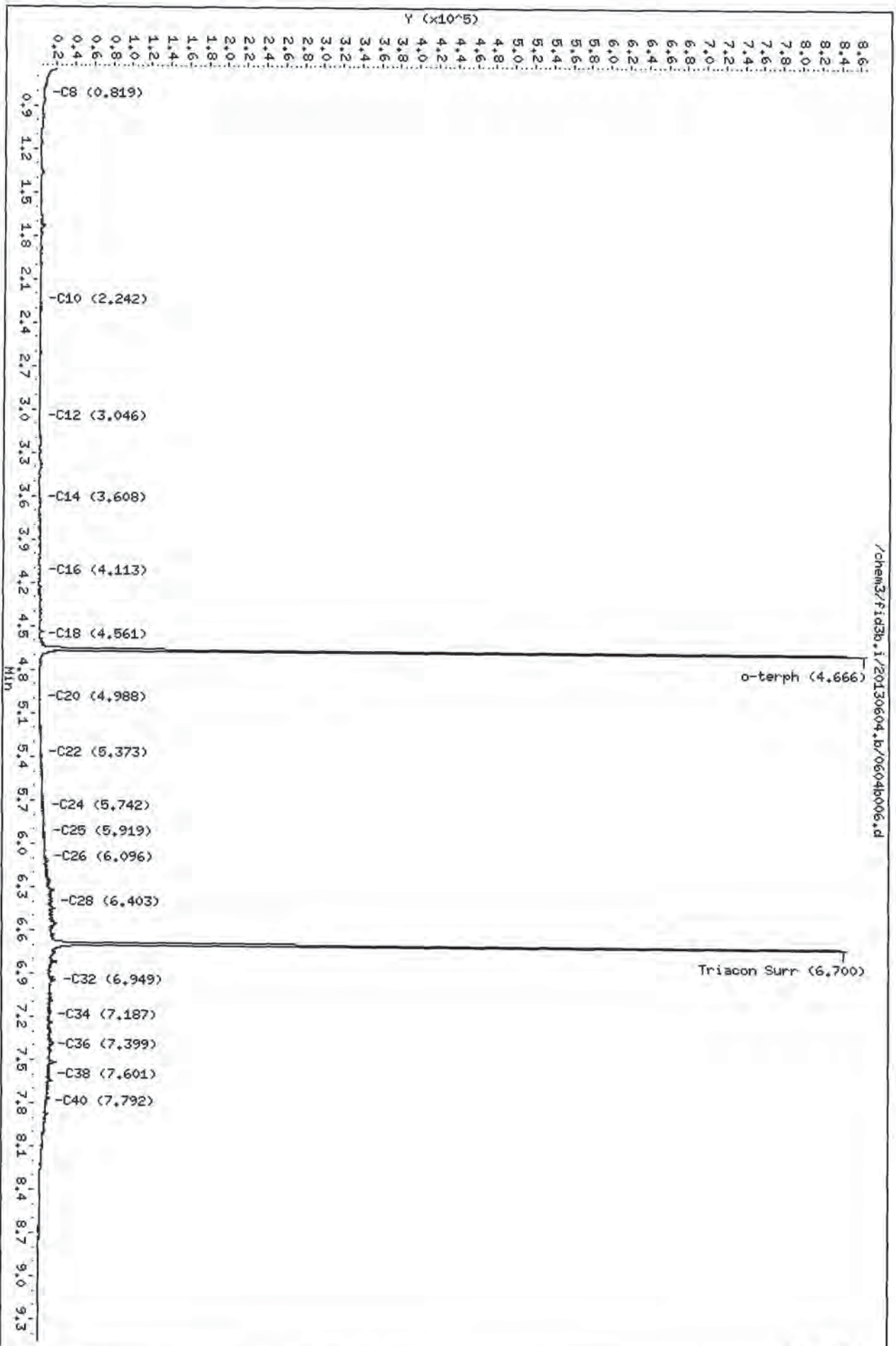
Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	451865	33.6	74.7
Triacontane	519481	39.8	88.5

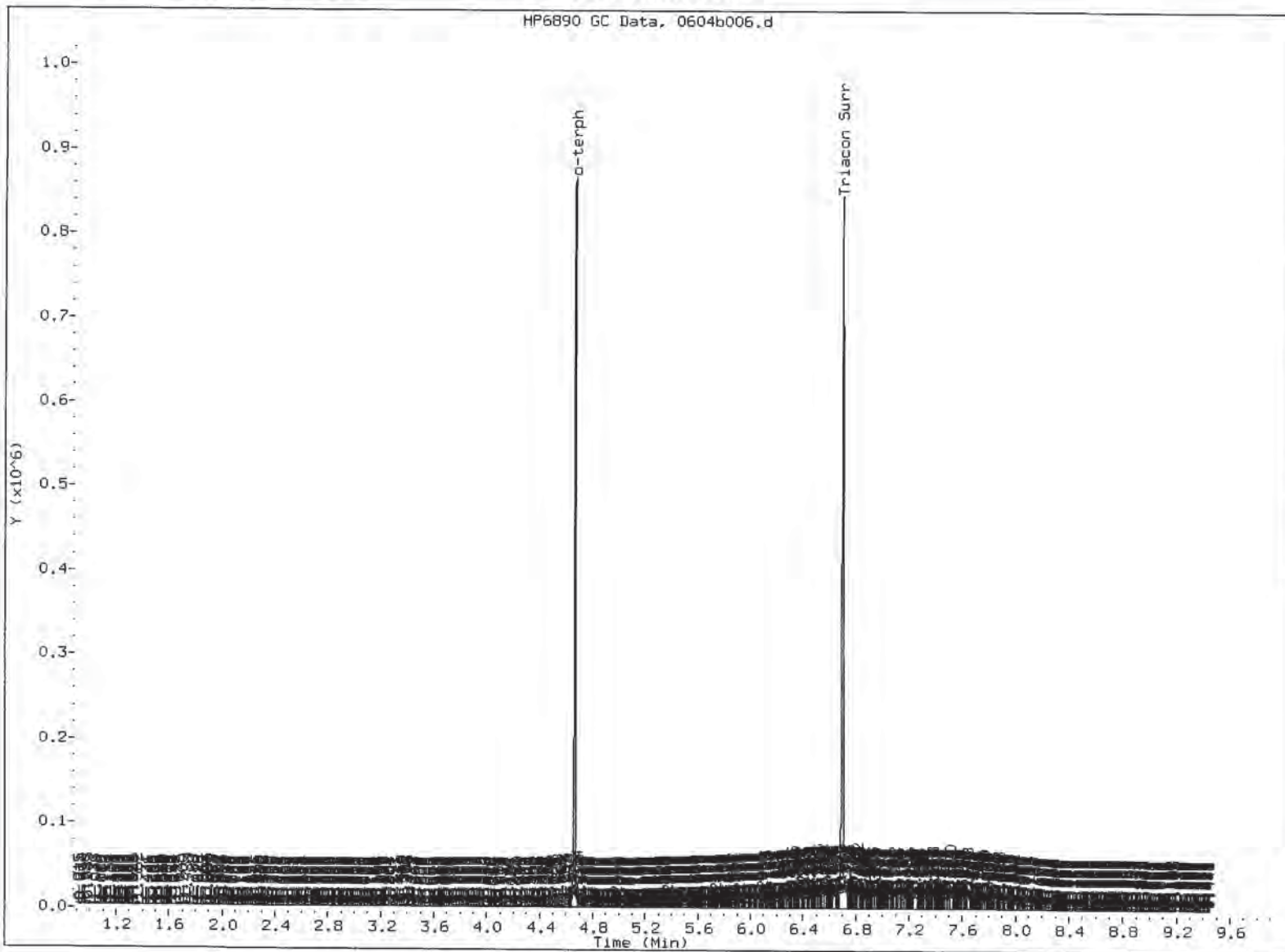
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b006.d
Date: 04-JUN-2013 09:51
Client ID: A2-M36-S-4
Sample Info: MS31A
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25



4504 00012



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- (5. Skimmed surrogate

Analyst:

Date:

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b007.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31B
Client ID: A2-W34-S-4
Injection: 04-JUN-2013 10:10
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	139939	10
C8	0.825	-0.003	4928	13273	WATPHD	(C12-C24)	564229	54.48
C10	2.241	0.002	1709	1405	WATPHM	(C24-C38)	3398168	344.19
C12	3.041	0.002	1180	162	AK102	(C10-C25)	649613	52.57
C14	3.618	0.002	3327	3786	AK103	(C25-C36)	3046222	428.53 M
C16	4.111	-0.002	2953	2457				
C18	4.556	-0.003	5556	4519				
C20	4.978	-0.002	5325	3652				
C22	5.373	-0.001	8536	7111	MSPiRIT	(Tol-C12)	139939	10.19
C24	5.742	-0.001	19966	23196				
C25	5.915	-0.002	92047	87180				
C26	6.084	-0.010	27820	29071				
C28	6.403	-0.001	47315	60269				
C32	6.950	-0.001	45504	23190				
C34	7.184	-0.001	32569	21081				
Filter Peak	----							
C36	7.406	0.005	31873	9176				
o-terph	4.664	-0.003	618667	360218	JET-A	(C10-C18)	221059	20.42
Triacon Surr	6.697	-0.004	602463	386560				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

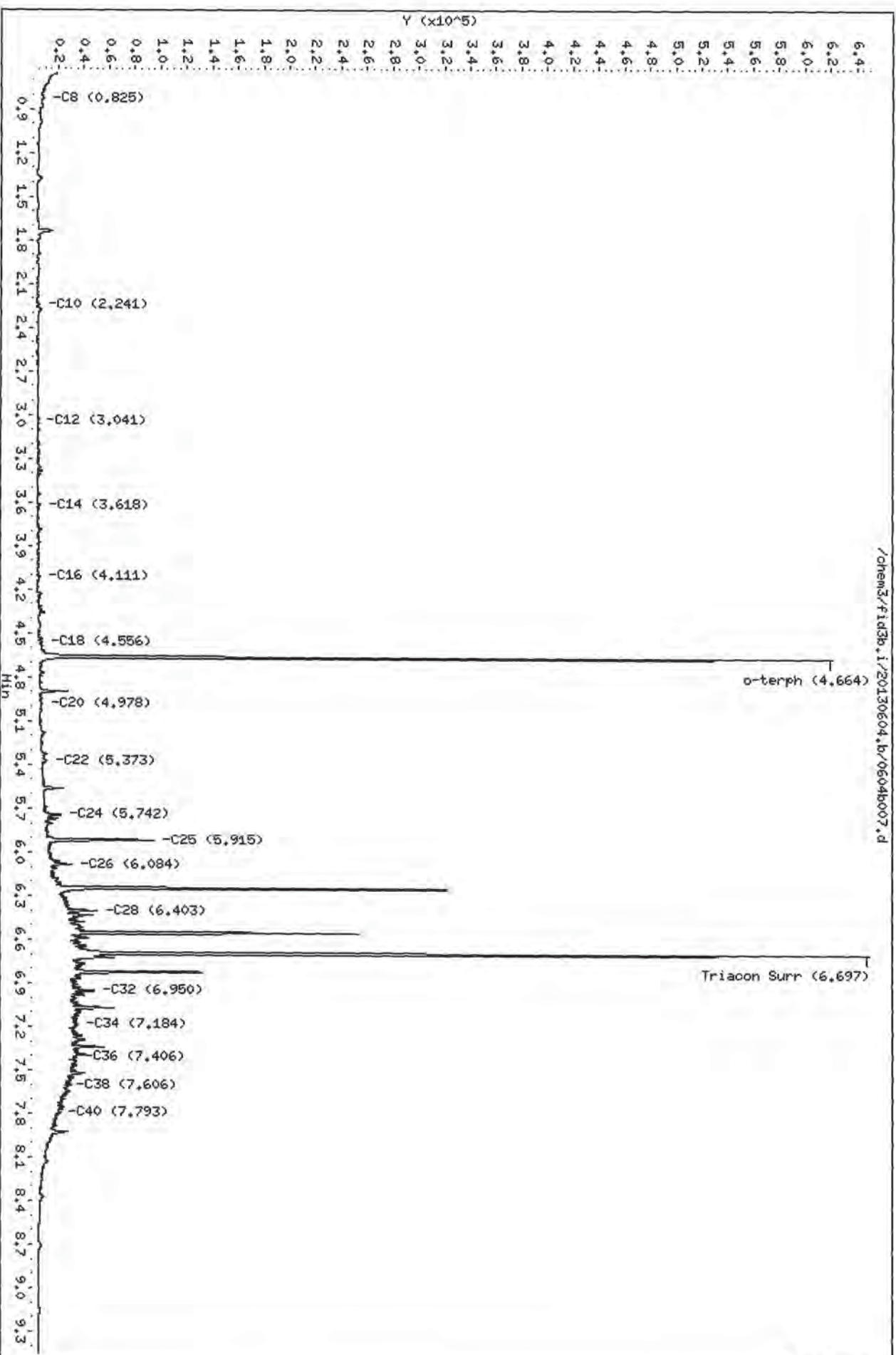
Surrogate	Area	Amount	%Rec
o-Terphenyl	360218	26.8	59.5
Triacontane	386560	29.6	65.8

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b007.d
Date: 04-JUN-2013 10:10
Client ID: R2-M34-S-4
Sample Info: MS31B
Column phase: RTX-1

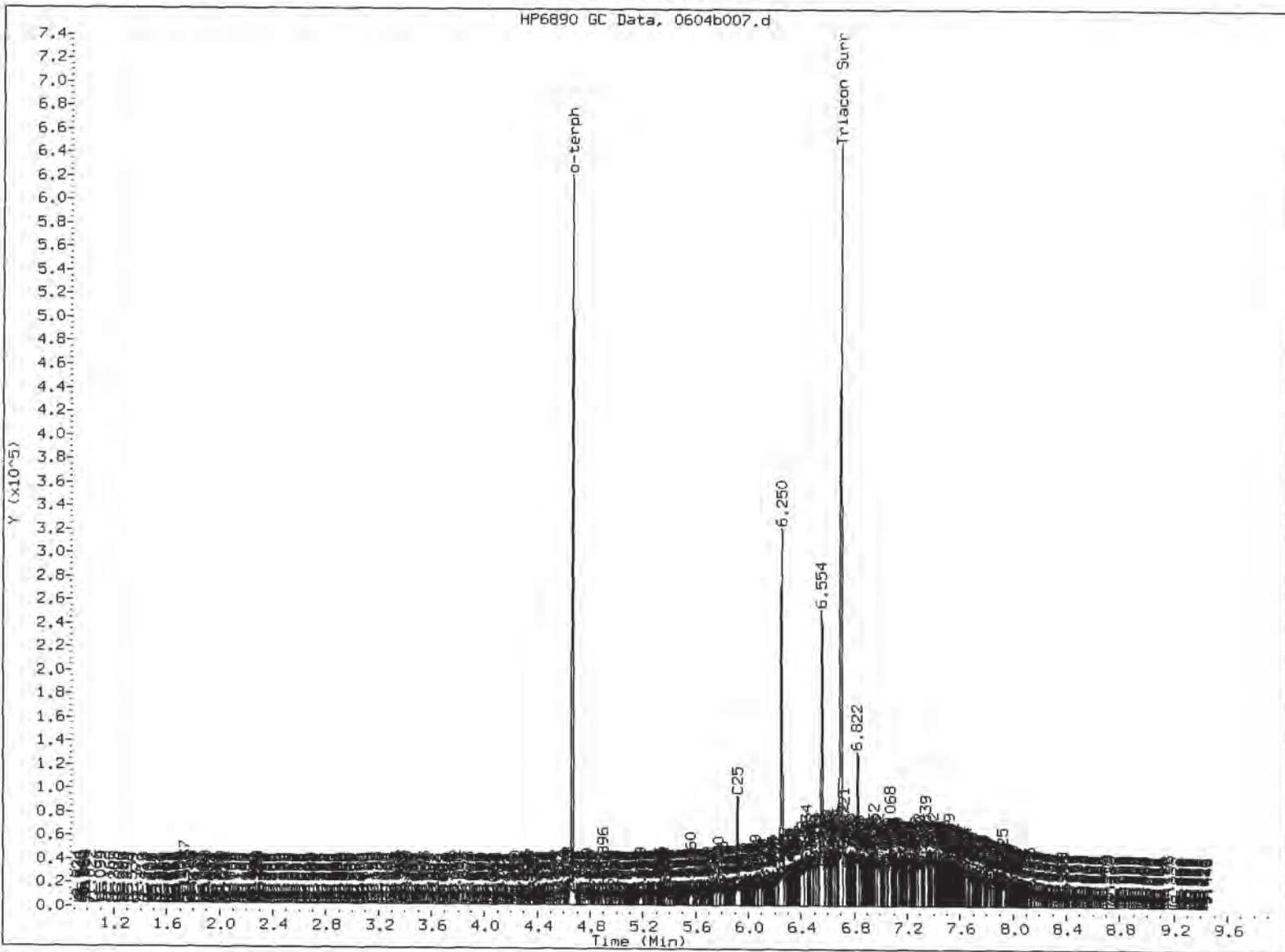
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

2
6/11/13



/chem3/fid3b.i/20130604.b/0604b007.d

MS31B 060415



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: Sta

Date: 6/4/05

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b008.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31C
Client ID: A2-W35-S-4
Injection: 04-JUN-2013 10:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		158373	12
C8	0.831	0.002	5402	3223	WATPHD (C12-C24)		1303838	125.88
C10	2.242	0.002	1733	1424	WATPHM (C24-C38)		13446717	1361.99
C12	3.040	0.001	1390	792	AK102 (C10-C25)		1521401	123.12
C14	3.619	0.003	4296	5169	AK103 (C25-C36)		11683093	1643.54 M
C16	4.112	-0.001	3494	3401				
C18	4.560	0.001	8719	8641				
C20	4.976	-0.003	9058	6498				
C22	5.376	0.002	19339	14631	MSPIRIT (Tol-C12)		158373	11.53
C24	5.742	-0.001	41254	44316				
C25	5.918	0.000	100283	98607				
C26	6.096	0.002	62578	17975				
C28	6.404	0.000	125032	39451				
C32	6.955	0.004	194540	181721				
C34	7.185	0.000	173893	72471				
Filter Peak	----							
C36	7.398	-0.003	158086	85372				
o-terph	4.668	0.001	666117	371218	JET-A (C10-C18)		264694	24.45
Triacon Surr	6.705	0.003	584576	413898				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

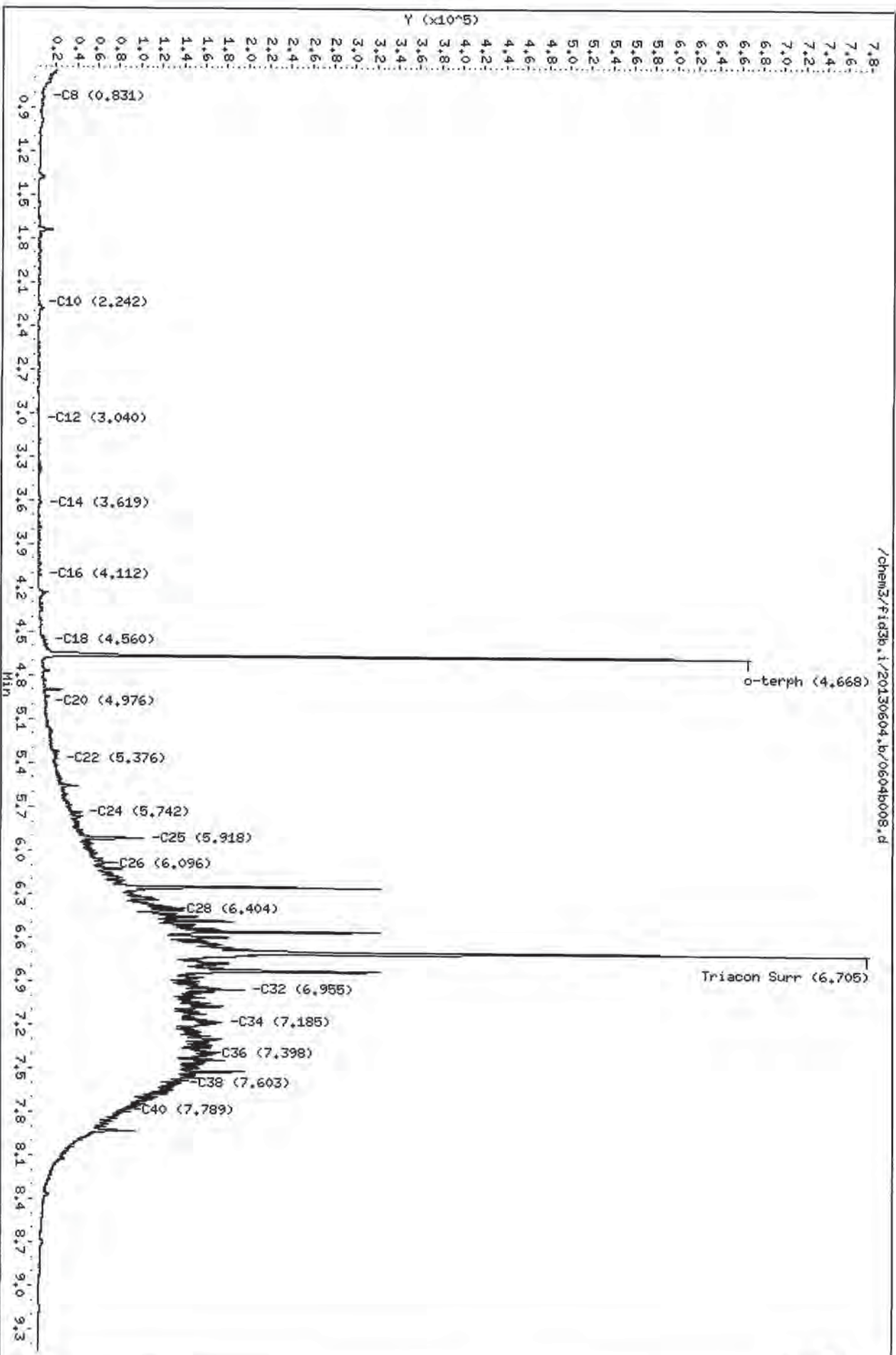
Surrogate	Area	Amount	%Rec
o-Terphenyl	371218	27.6	61.3
Triacontane	413898	31.7	70.5

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b008.d
 Date: 04-JUN-2013 10:30
 Client ID: A2-W35-S-4
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 Column phase: RTX-1

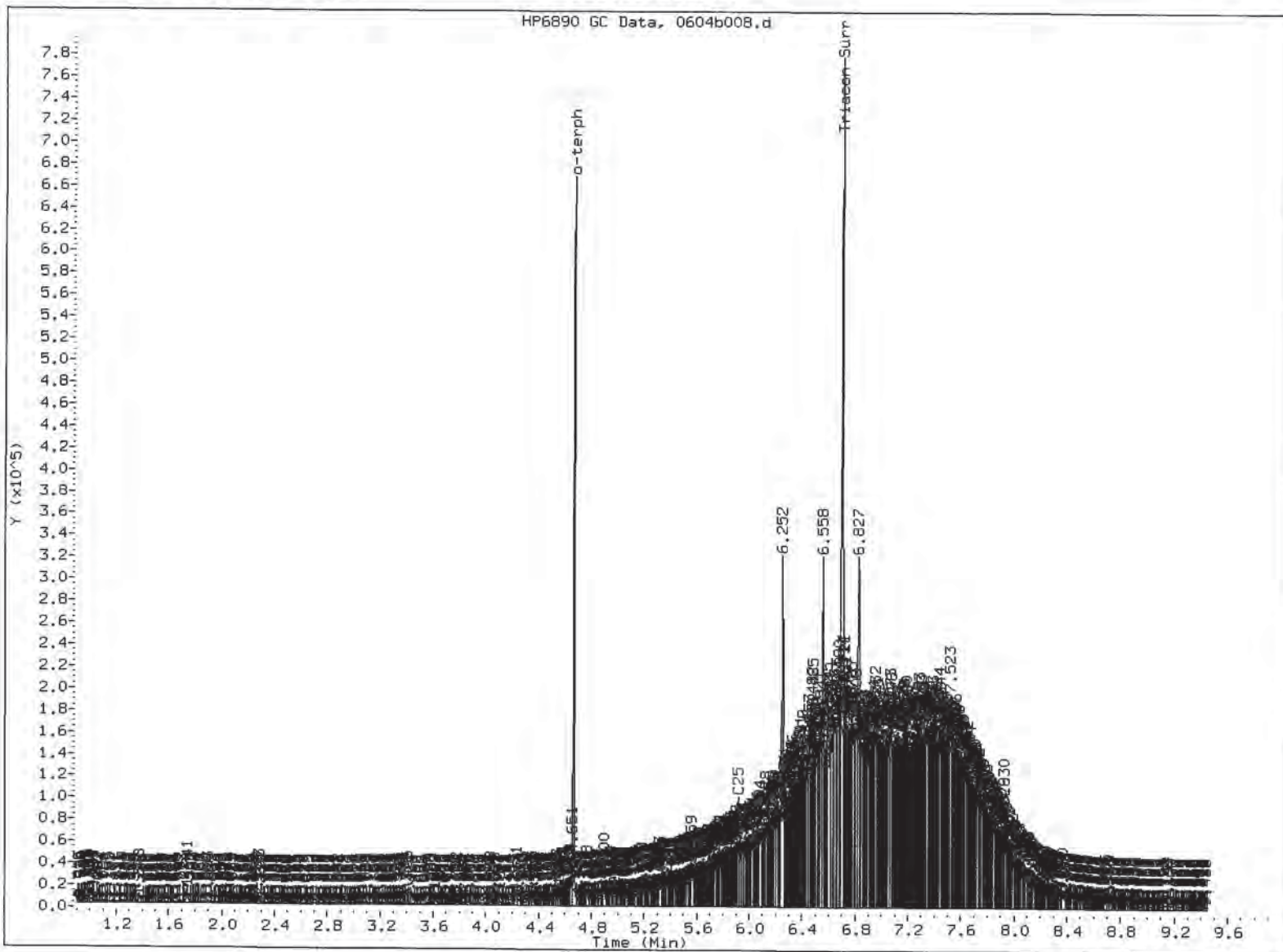
Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25

JM
6/4/13



/chem3/fid3b.i/20130604.b/0604b008.d

1531 00018



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: Jee

Date: 11/15

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b012.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31D
Client ID: A2-W37-S-4
Injection: 04-JUN-2013 12:22
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	53245	4
C8	0.822	-0.006	2841	3172	WATPHD	(C12-C24)	4127894	398.54
C10	2.238	-0.002	361	183	WATPHM	(C24-C38)	32014754	3242.70
C12	3.048	0.009	288	116	AK102	(C10-C25)	4688222	379.41 M
C14	3.619	0.003	1119	811	AK103	(C25-C36)	28711889	4039.10
C16	4.109	-0.004	2025	1196				
C18	4.560	0.001	6552	1551				
C20	4.981	0.001	25573	16045				
C22	5.372	-0.002	72119	57171	MSPIRIT	(Tol-C12)	53245	3.88
C24	5.743	0.000	121328	18845				
C25	5.926	0.008	219693	193936				
C26	6.094	0.000	215154	66760				
C28	6.406	0.002	298486	46330				
C32	6.949	-0.002	410209	215194				
C34	7.183	-0.002	382079	250560				
Filter Peak	----							
C36	7.399	-0.002	292484	85471				
o-terph	4.659	-0.008	61867	30676	JET-A	(C10-C18)	194018	17.92
Triacon Surr	----							

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	30676	2.3	50.7
Triacotane	0	0.0	0.0

Handwritten: JL
6/4/13

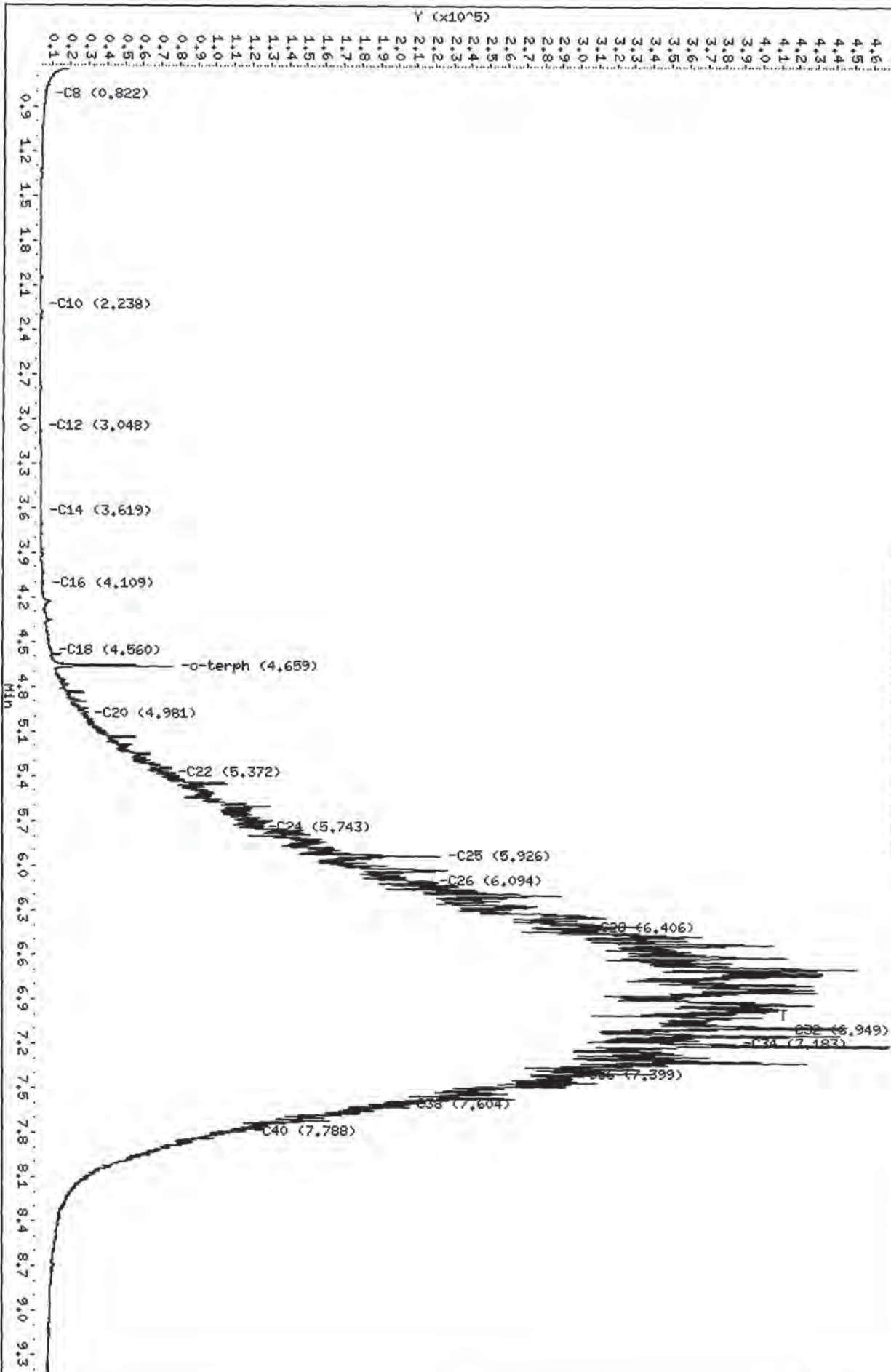
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b012.d
Date: 04-JUN-2013 12:22
Client ID: A2-M37-S-4
Sample Info: MS3ID,10

Column phase: RTX-1

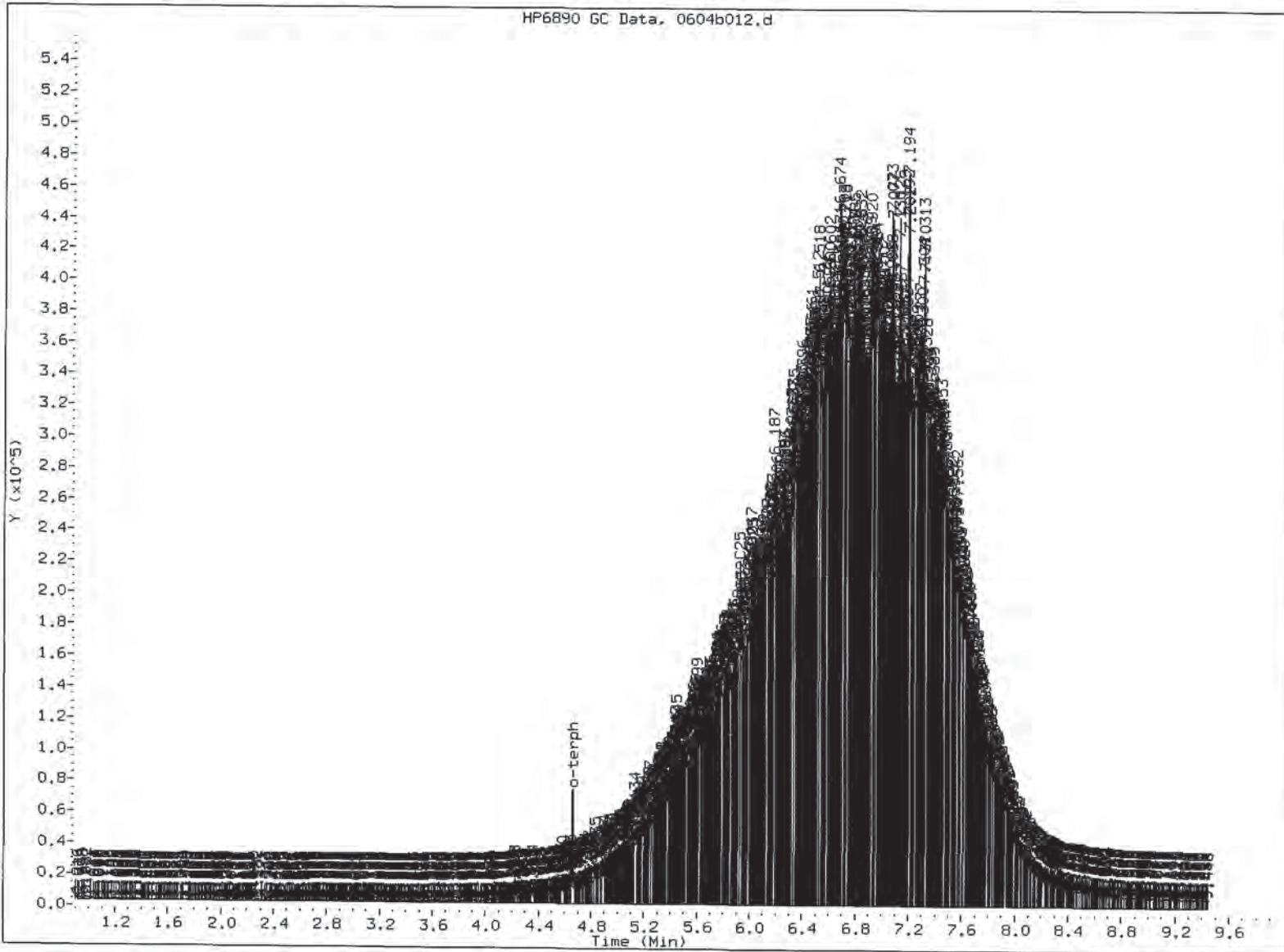
Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

Handwritten: 5/2
6/4/10



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1531 00021



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: JD

Date: 6/4/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b013.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31E
Client ID: A2-W38-S-4
Injection: 04-JUN-2013 12:53
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		86697	6
C8	0.841	0.013	2173	2548	WATPHD (C12-C24)		3482916	336.27
C10	2.242	0.003	2046	1713	WATPHM (C24-C38)		24514128	2482.98
C12	3.037	-0.003	949	464	AK102 (C10-C25)		3896774	315.36 M
C14	3.618	0.002	2380	2644	AK103 (C25-C36)		21798788	3066.59
C16	4.111	-0.002	3792	2569				
C18	4.555	-0.004	13083	12315				
C20	4.976	-0.004	28205	19942				
C22	5.372	-0.002	54630	37592	MSPIRIT (Tol-C12)		86697	6.31
C24	5.741	-0.002	87687	28449				
C25	5.916	-0.001	100097	21451				
C26	6.096	0.002	140560	106733				
C28	6.405	0.001	234829	151553				
C32	6.951	0.000	290077	67158				
C34	7.186	0.001	330990	147707				
Filter Peak	----							
C36	7.400	0.000	246369	256805				
o-terph	4.660	-0.007	59584	32725	JET-A (C10-C18)		354606	32.76
Triacon Surr	----							

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	32725	2.4	54.1
Triacotane	0	0.0	0.0

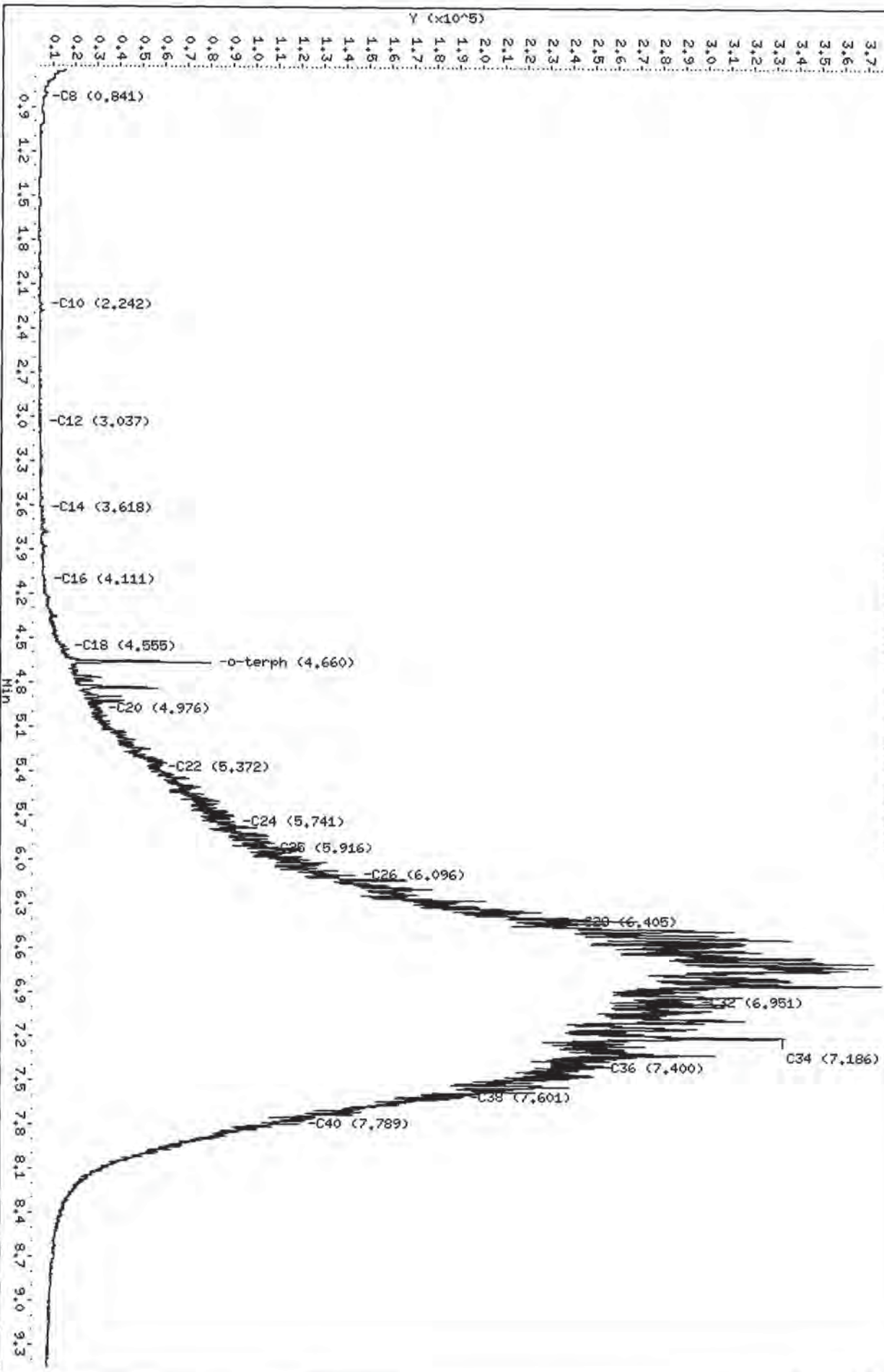
JL
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

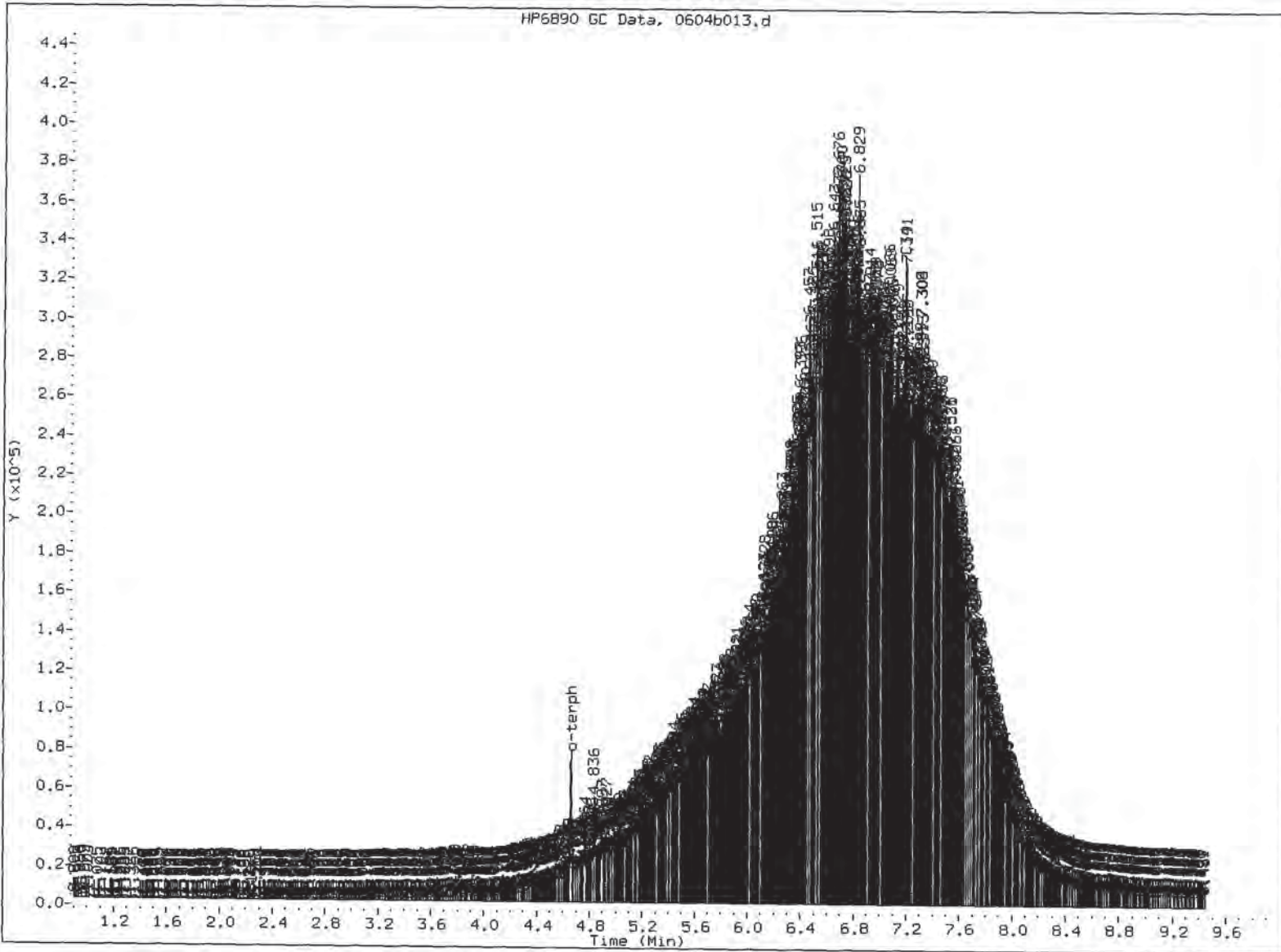
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 Date: 04-JUN-2013 12:53
 Client ID: A2-M38-S-4
 Sample Info: MS31E.10
 Column phase: RTX-1

Instrument: fid3b.i
 Operator: JM
 Column diameter: 0.25

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6/11/13



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst:

Date:

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b014.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31F
Client ID: A2-W39-S-4
Injection: 04-JUN-2013 13:24
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG (Tol-C12)		73103	5
C8	0.834	0.006	2285	1333	WATPHD (C12-C24)		5826335	562.53
C10	2.240	0.000	435	296	WATPHM (C24-C38)		42492682	4303.98
C12	3.035	-0.005	534	322	AK102 (C10-C25)		6761219	547.17 M
C14	3.618	0.002	1318	959	AK103 (C25-C36)		38462189	5410.74
C16	4.109	-0.004	3112	1351				
C18	4.553	-0.006	11186	8223				
C20	4.984	0.004	37960	9384				
C22	5.378	0.004	97911	35648	MSPIRIT (Tol-C12)		73103	5.32
C24	5.744	0.001	183340	73824				
C25	5.917	0.000	241448	153725				
C26	6.094	0.000	290082	84629				
C28	6.403	-0.001	548171	221548				
C32	6.952	0.001	489845	168992				
C34	7.187	0.001	459879	123454				
Filter Peak	----							
C36	7.401	0.001	334724	204579				
o-terph	4.659	-0.008	72689	35261	JET-A (C10-C18)		298510	27.58
Triacon Surr	----							

Range Times: NW Diesel (3.089 - 5.793) NW Gas (0.609 - 3.089) NW M.Oil (5.793 - 7.654)
AK102 (2.189 - 5.867) AK103 (5.867 - 7.451) Jet A (2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	35261	2.6	58.3
Triacontane	0	0.0	0.0

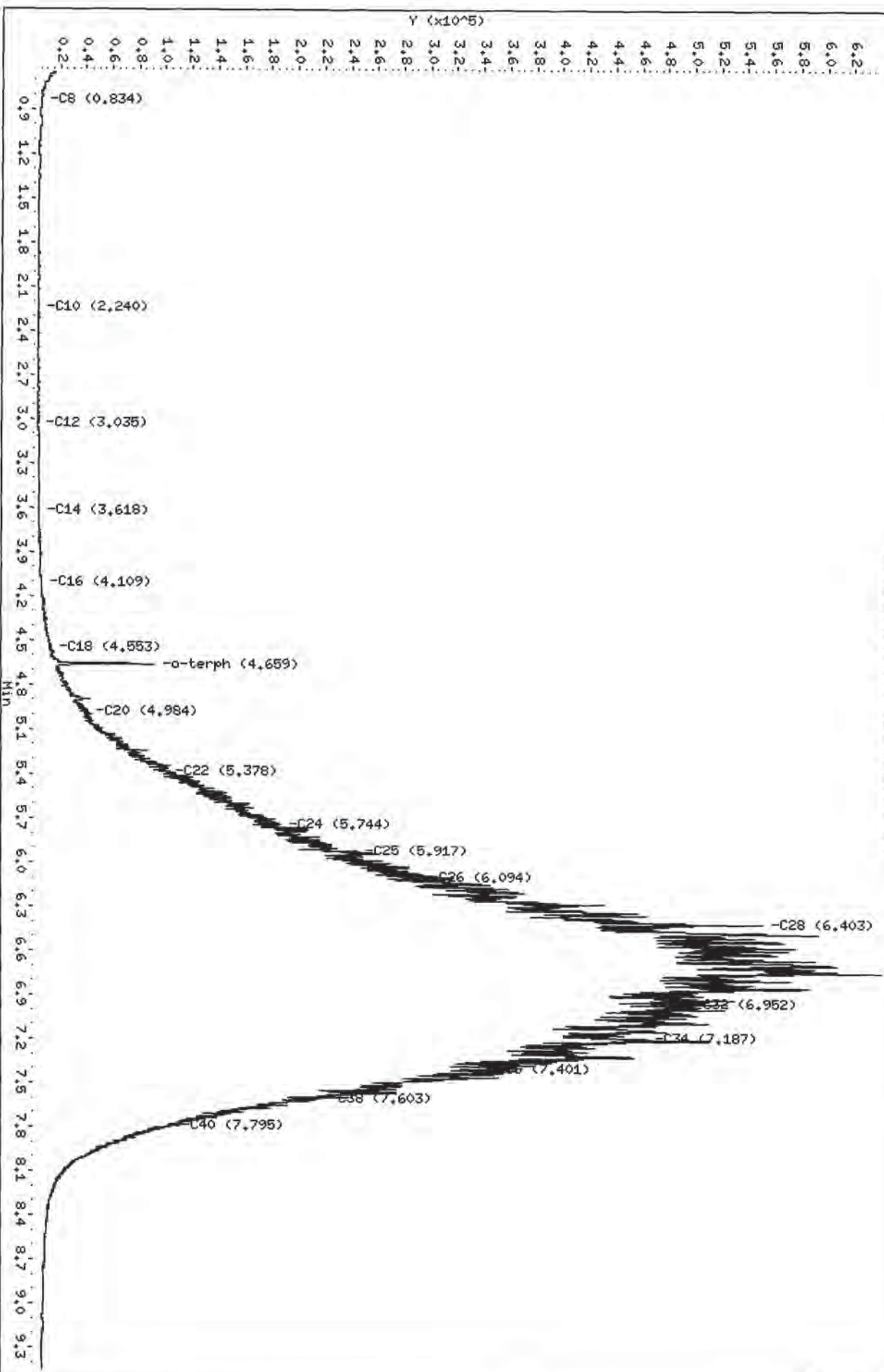
JW
6/4/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b014.d
Date: 04-JUN-2013 13:24
Client ID: R2-M39-S-4
Sample Info: MS31F,10
Column phase: RTX-1

Instrument: fid3b.i
Operator: JM
Column diameter: 0.25

/chem3/fid3b.i/20130604.b/0604b014.d

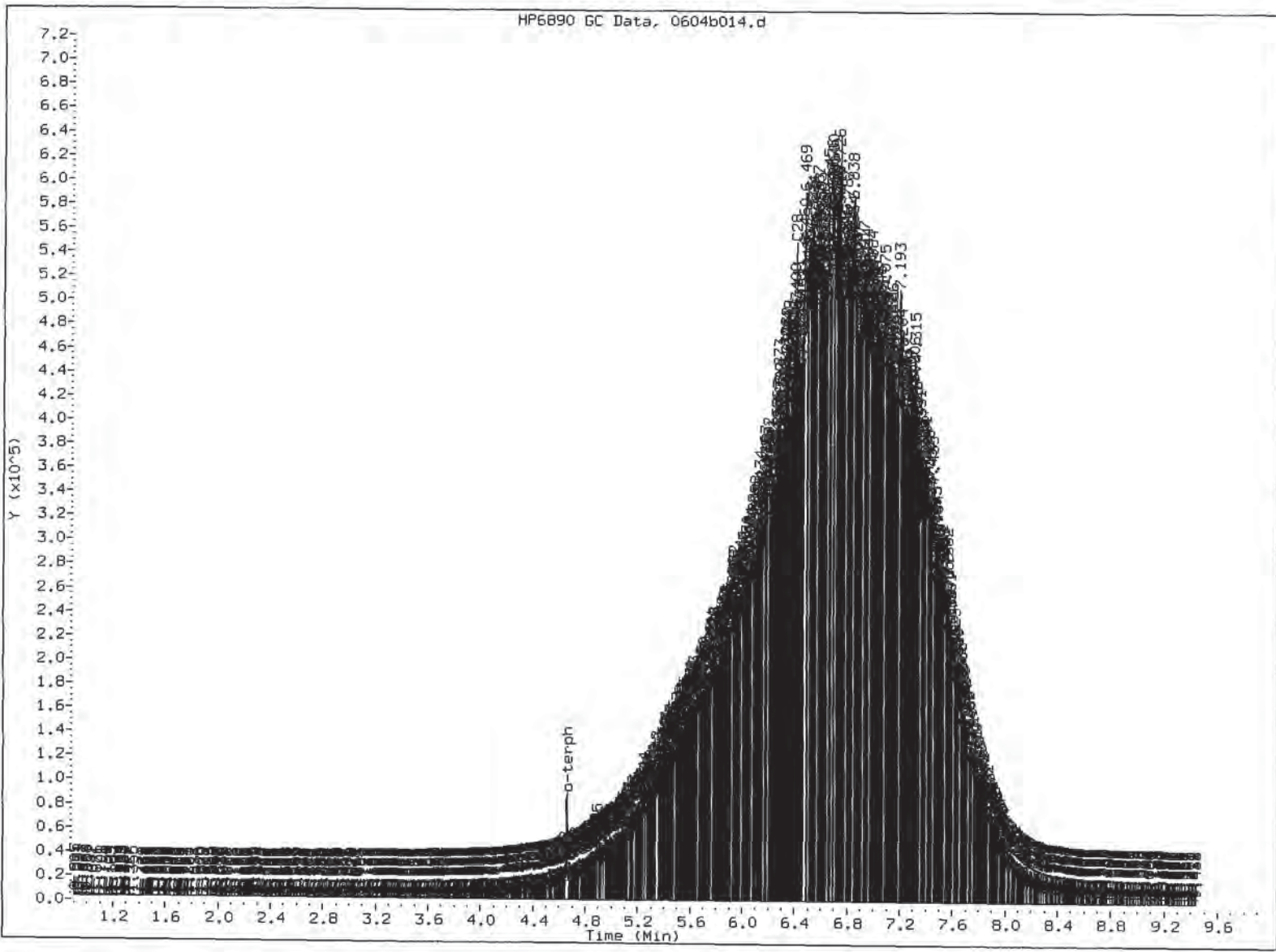


6/4/13

FID:3B-2C/RTX-1 WS31F

FID:3B SIGNAL

HP6890 GC Data, 0604b014.d



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: JL

Date: 6/4/92

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS31-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-060313	76.5%	0
LCS-060313	67.7%	0
A2-W36-S-4	74.7%	0
A2-W34-S-4	59.5%	0
A2-W35-S-4	61.3%	0
A2-W37-S-4	50.7%	0
A2-W38-S-4	54.0%	0
A2-W39-S-4	58.2%	0

LCS/MB LIMITS QC LIMITS

((OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-11733 to 13-11738

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned
 Page 1 of 1

Sample ID: LCS-060313
LAB CONTROL

Lab Sample ID: LCS-060313
 LIMS ID: 13-11733
 Matrix: Soil
 Data Release Authorized: *BB*
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Extracted: 06/03/13
 Date Analyzed: 06/04/13 14:07
 Instrument/Analyst: FID/JLW

Sample Amount: 10.0 g
 Final Extract Volume: 1.0 mL
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	100	150	66.7%

TPHD Surrogate Recovery

o-Terphenyl	67.7%
-------------	-------

Results reported in mg/kg

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130604.b/0604b016.d
Method: /chem3/fid3b.i/20130604.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/04/2013
Macro: FID:3B052113

ARI ID: WS31LCSDS1
Client ID: WS31LCSDS1
Injection: 04-JUN-2013 14:07
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2694013	199
C8	0.835	0.007	7590	14532	WATPHD	(C12-C24)	10387950	1002.95
C10	2.243	0.003	64306	47085	WATPHM	(C24-C38)	193911	19.64
C12	3.040	0.001	125204	122694	AK102	(C10-C25)	12385585	1002.34 M
C14	3.619	0.003	204495	169222	AK103	(C25-C36)	151289	21.28
C16	4.115	0.002	274379	215816				
C18	4.562	0.003	331740	243578				
C20	4.981	0.002	182018	182492				
C22	5.375	0.001	82963	82256	MSPiRIT	(Tol-C12)	2694013	196.09
C24	5.742	-0.001	25753	30123				
C25	5.918	0.000	13230	10821				
C26	6.090	-0.004	6395	7086				
C28	6.409	0.005	1626	723				
C32	6.956	0.006	2214	752				
C34	7.188	0.002	247	79				
Filter Peak	----							
C36	7.412	0.012	575	128				
o-terph	4.670	0.003	752643	410013	JET-A	(C10-C18)	9468583	874.76
Triacon Surr	6.700	-0.001	743720	538308				

Range Times: NW Diesel(3.089 - 5.793) NW Gas(0.609 - 3.089) NW M.Oil(5.793 - 7.654)
AK102(2.189 - 5.867) AK103(5.867 - 7.451) Jet A(2.189 - 4.609)

Surrogate	Area	Amount	%Rec
o-Terphenyl	410013	30.5	67.7
Triacontane	538308	41.3	91.7

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130604.b/0604b016.d

Date: 04-JUN-2013 14:07

Client ID: MS31LCSDS1

Sample Info: MS31LCSDS1

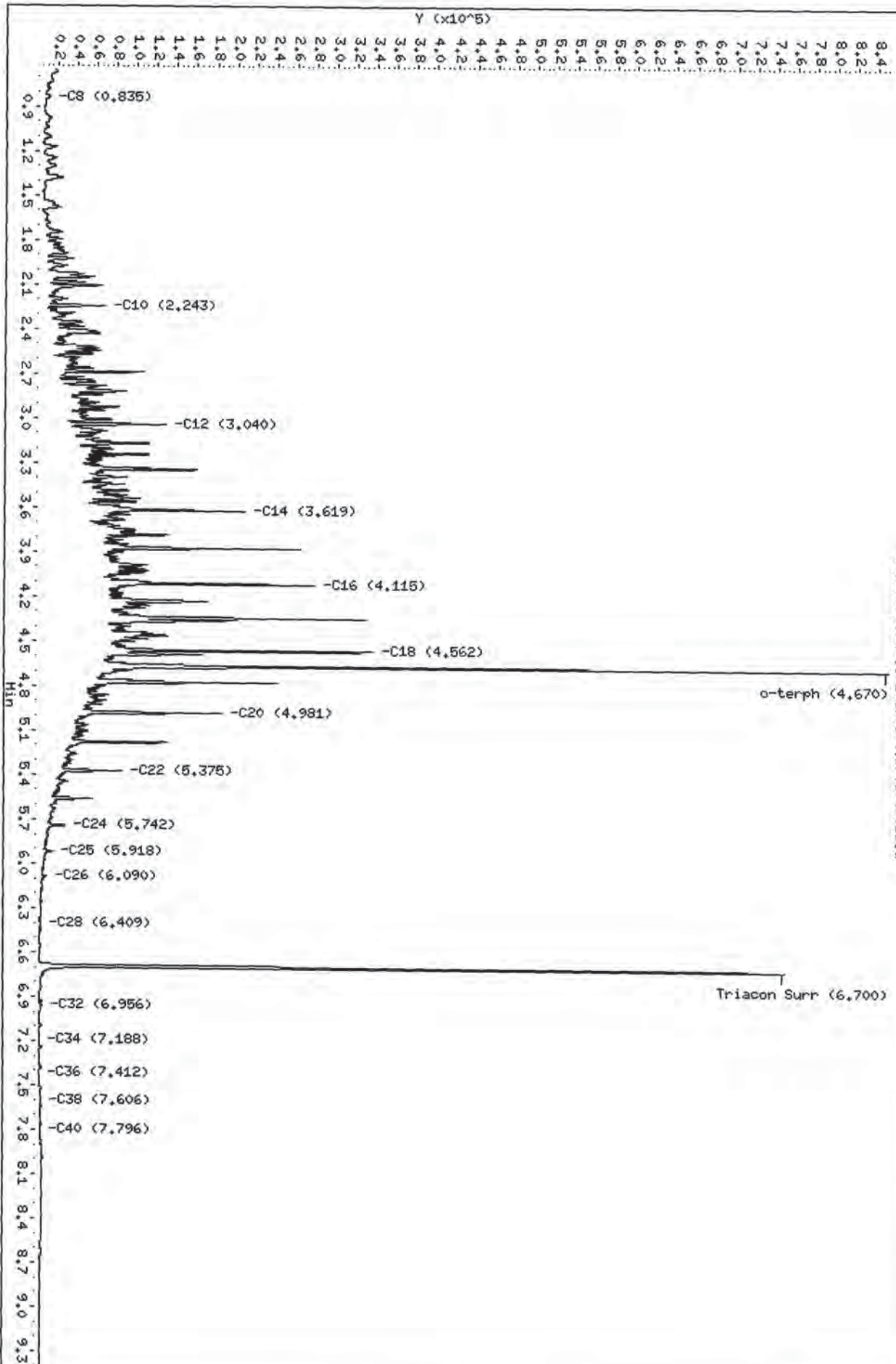
Column phase: RTX-1

Instrument: fid3b.i

Operator: JM

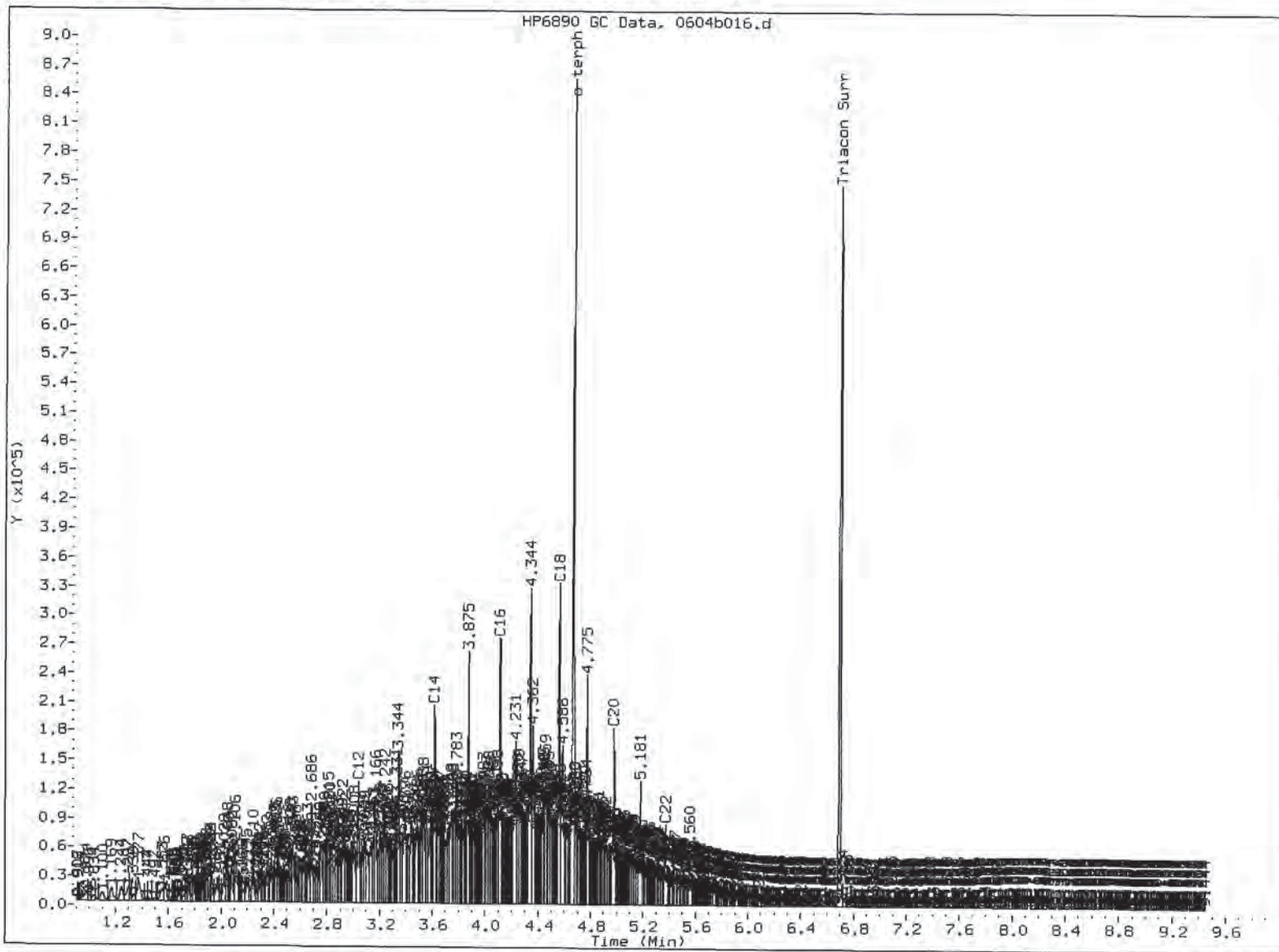
Column diameter: 0.25

6/4/13



/chem3/fid3b.i/20130604.b/0604b016.d

MS31 00032



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: *ru*

Date: *4/4/13*

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT


Matrix: Soil
Date Received: 05/31/13

ARI Job: WS31
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-11733-060313MB1	Method Blank	10.0 g	1.00 mL	-	06/03/13
13-11733-060313LCS1	Lab Control	10.0 g	1.00 mL	-	06/03/13
13-11733-WS31A	A2-W36-S-4	8.89 g	1.00 mL	D	06/03/13
13-11734-WS31B	A2-W34-S-4	6.19 g	1.00 mL	D	06/03/13
13-11735-WS31C	A2-W35-S-4	6.67 g	1.00 mL	D	06/03/13
13-11736-WS31D	A2-W37-S-4	7.81 g	1.00 mL	D	06/03/13
13-11737-WS31E	A2-W38-S-4	5.86 g	1.00 mL	D	06/03/13
13-11738-WS31F	A2-W39-S-4	7.96 g	1.00 mL	D	06/03/13

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W36-S-4
SAMPLE

Lab Sample ID: WS31A
 LIMS ID: 13-11733
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Analyzed: 06/03/13 14:03
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 86 mg-dry-wt
 Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	14	< 14 U	
108-88-3	Toluene	14	17	
100-41-4	Ethylbenzene	14	< 14 U	
179601-23-1	m,p-Xylene	29	< 29 U	
95-47-6	o-Xylene	14	< 14 U	
	Gasoline Range Hydrocarbons	5.8	< 5.8 U	---

BETX Surrogate Recovery

Trifluorotoluene	94.5%
Bromobenzene	92.4%

Gasoline Surrogate Recovery

Trifluorotoluene	93.9%
Bromobenzene	91.3%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AL
 6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a007.d ARI ID: WS31A
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a007.d Client ID: A2-W36-S-4
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 14:03
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.005	2778	35357	93.9	TFT(Surr)
15.382	0.003	1814	15317	91.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	3624	0.010
8015C 2MP-TMB (4.19 to 16.20)	723723	2715	0.004
AK101 nC6-nC10 (4.68 to 15.10)	582885	2715	0.005
NWTPHG Tol-Nap (9.77 to 18.92)	375093	3624	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.860	0.005	3045	94.5	TFT(Surr)
15.390	0.004	6679	92.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.007	57	0.29N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

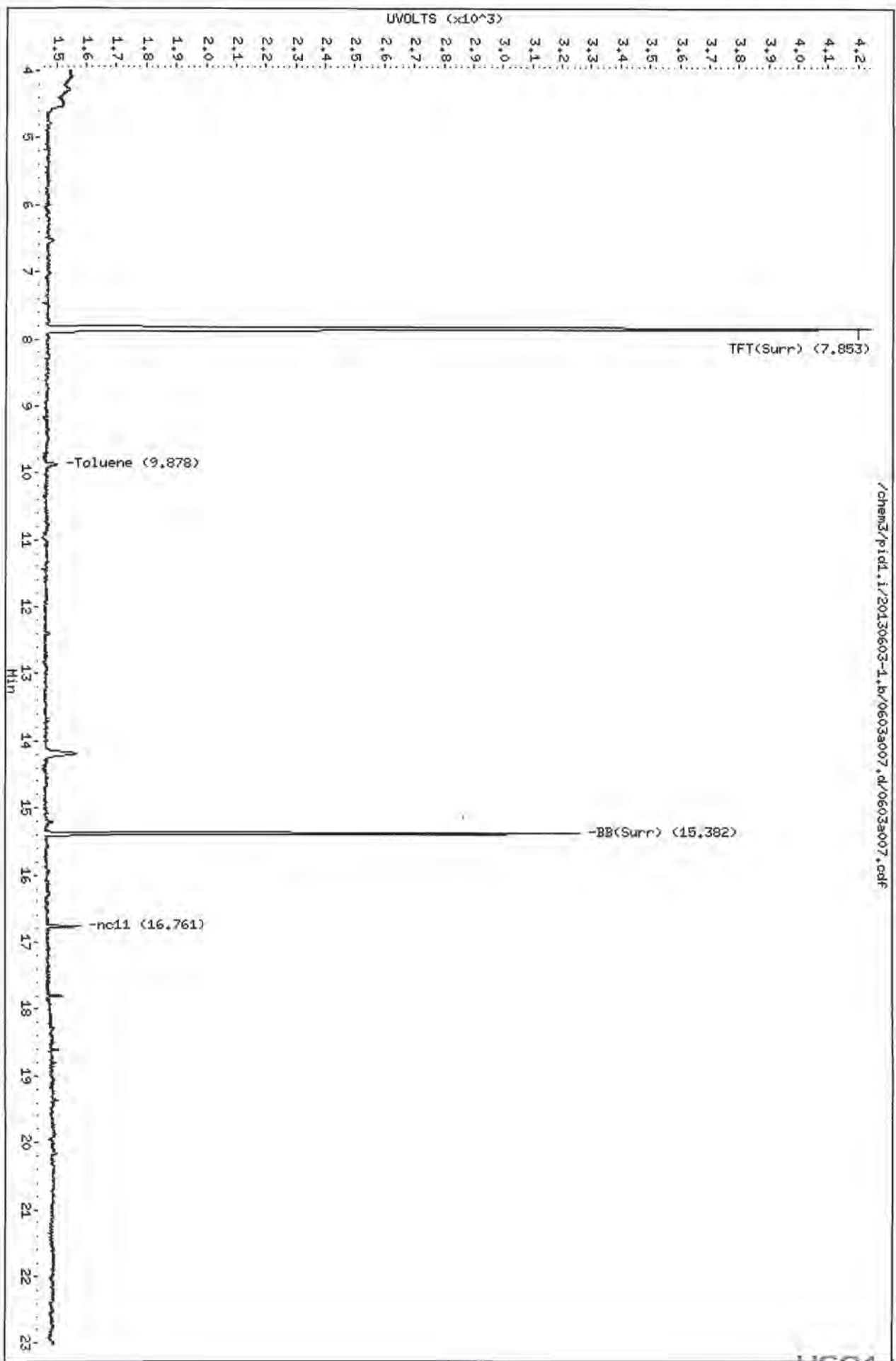
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a007.d
Date: 03-JUN-2013 14:03
Client ID: A2-N36-S-4
Sample Info: MS31A

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

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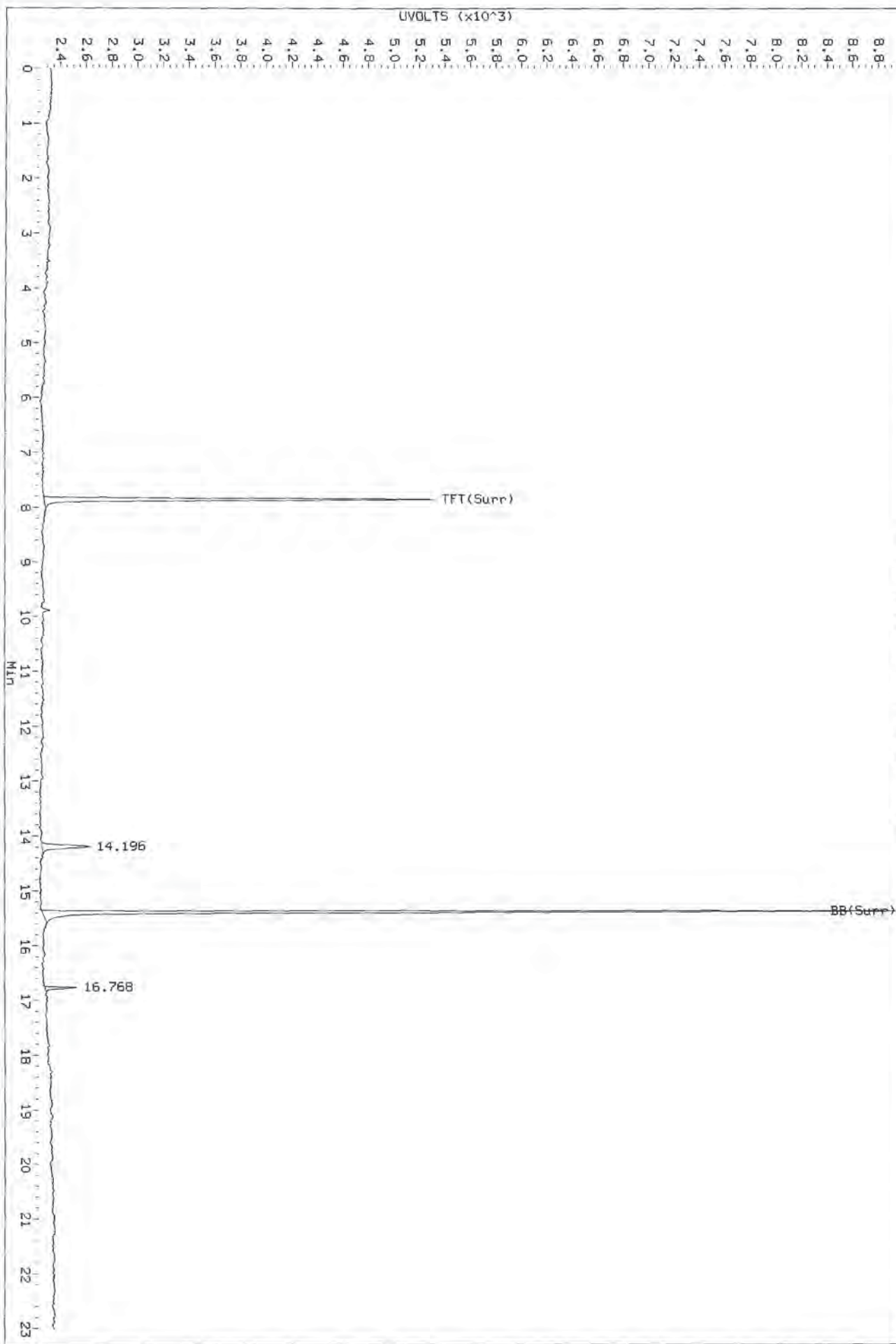


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AL
5/14/13

Data File: /chem3/pid1.1/20130603-2.1b/0603a007.d/0603a007.cdf
Injection Date: 03-JUN-2013 14:03
Instrument: pid1.1
Client Sample ID: A2-W36-S-4

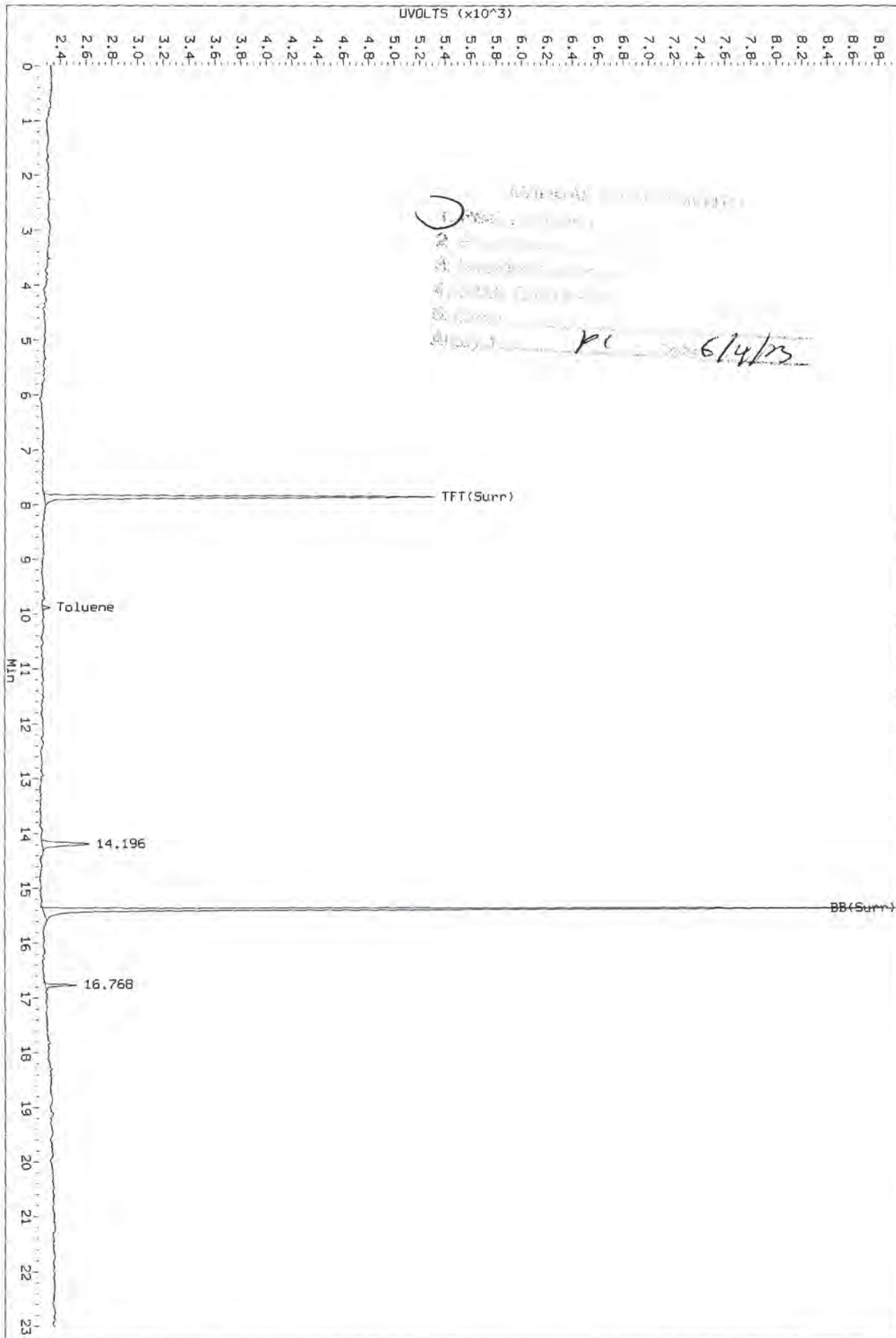
AIR 0603a007.cdf: 0.000 to 23.013 Min



000000 : 000000

Data File: /chem3/pid1.1/20130603-2.b/0603a007.d/0603a007.cdf
Injection Date: 03-JUN-2013 14:03
Instrument: pid1.1
Client Sample ID: A2-W36-S-4

AIA 0603a007.cdf: 0.000 to 23.013 Min



01000 : 1000



ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W34-S-4
 SAMPLE

Lab Sample ID: WS31B
 LIMS ID: 13-11734
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Analyzed: 06/03/13 14:31
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 37 mg-dry-wt
 Percent Moisture: 38.3%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	34	< 34 U	
108-88-3	Toluene	34	< 34 U	
100-41-4	Ethylbenzene	34	< 34 U	
179601-23-1	m,p-Xylene	68	< 68 U	
95-47-6	o-Xylene	34	< 34 U	
	Gasoline Range Hydrocarbons	14	< 14 U	---

BETX Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	98.2%

Gasoline Surrogate Recovery

Trifluorotoluene	99.3%
Bromobenzene	97.3%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a008.d ARI ID: WS31B
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a008.d Client ID: A2-W34-S-4
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 14:31
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.004	2939	37464	99.3	TFT(Surr)
15.381	0.002	1933	16391	97.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	2372	0.007
8015C 2MP-TMB (4.19 to 16.20)	723723	1761	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	1761	0.003
NWTPHG Tol-Nap (9.77 to 18.92)	375093	2372	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.859	0.004	3256	101.0	TFT(Surr)
15.389	0.003	7103	98.2	BB(Surr)

SW8021 (PID)

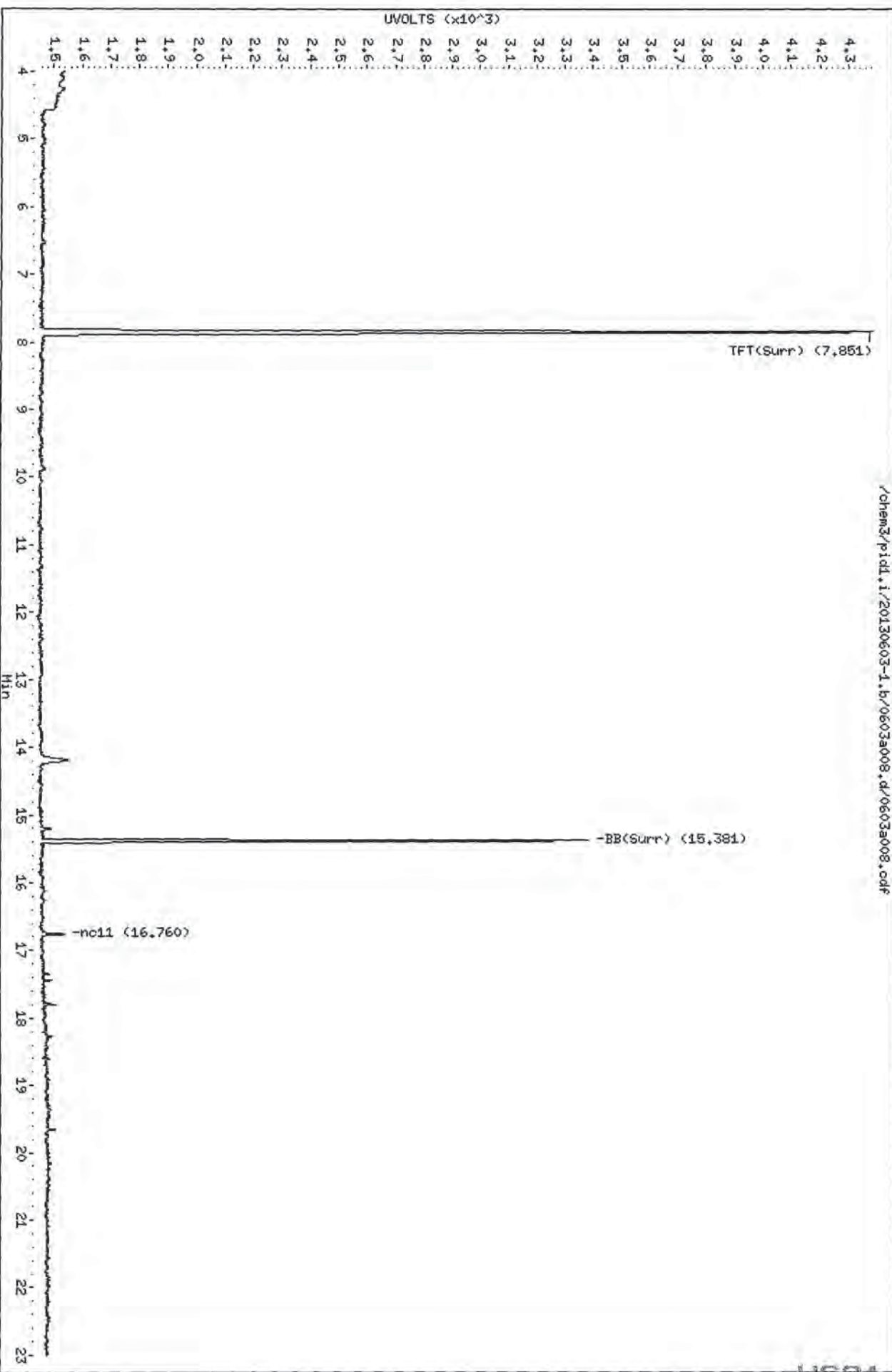
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a008.d
Date : 03-JUN-2013 14:31
Client ID: A2-M34-S-4
Sample Info: MS31B
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

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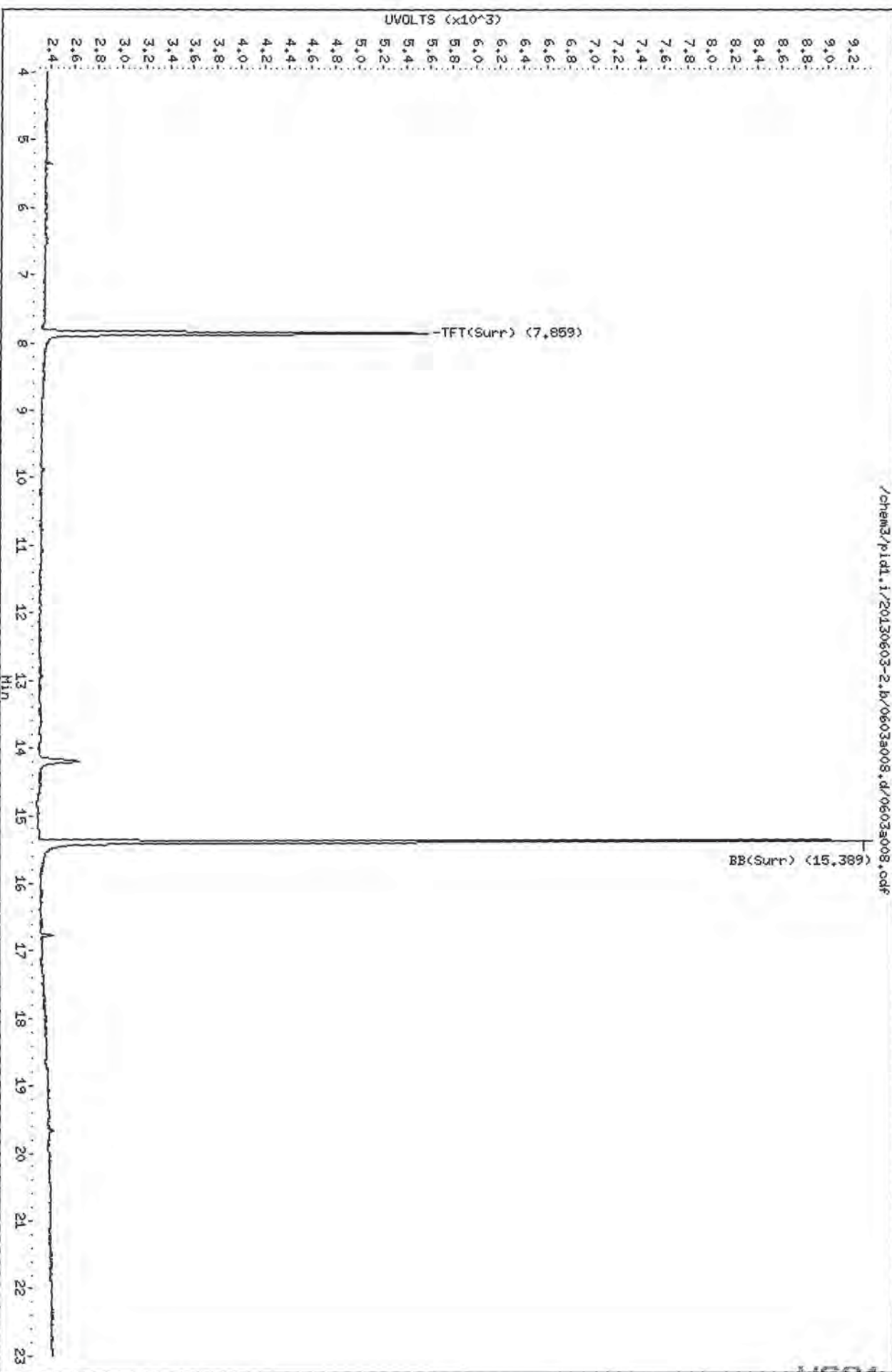


01000 1000

Data File: /chem3/pid1.1/20130603-2.b/0603a008.d
Date: 03-JUN-2013 14:31
Client ID: A2-N34-S-4
Sample Info: MS31B
Column phase: RTX 502-2 PID

Instrument: pid1.1
Operator: PC
Column diameter: 0.18


/chem3/pid1.1/20130603-2.b/0603a008.d/0603a008.cdf



11000 11000 11000

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: **A2-W35-S-4**
SAMPLE

Lab Sample ID: WS31C
 LIMS ID: 13-11735
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Analyzed: 06/03/13 14:59
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 38 mg-dry-wt
 Percent Moisture: 33.6%

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	33	< 33 U	
108-88-3	Toluene	33	40	
100-41-4	Ethylbenzene	33	< 33 U	
179601-23-1	m,p-Xylene	67	< 67 U	
95-47-6	o-Xylene	33	< 33 U	
	Gasoline Range Hydrocarbons	13	< 13 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	101%

Gasoline Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	99.3%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
BETX/Gas Quantitation Report

MC
6/14/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a009.d ARI ID: WS31C
Data file 2: /chem3/pid1.i/20130603-2.b/0603a009.d Client ID: A2-W35-S-4
Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 14:59
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.003	2968	38061	100.3	TFT(Surr)
15.380	0.002	1974	16643	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1058	0.003
8015C 2MP-TMB (4.19 to 16.20)	723723	1173	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	597	0.001
NWTPHG Tol-Nap (9.77 to 18.92)	375093	1058	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3283	101.8	TFT(Surr)
15.388	0.002	7288	100.8	BB(Surr)

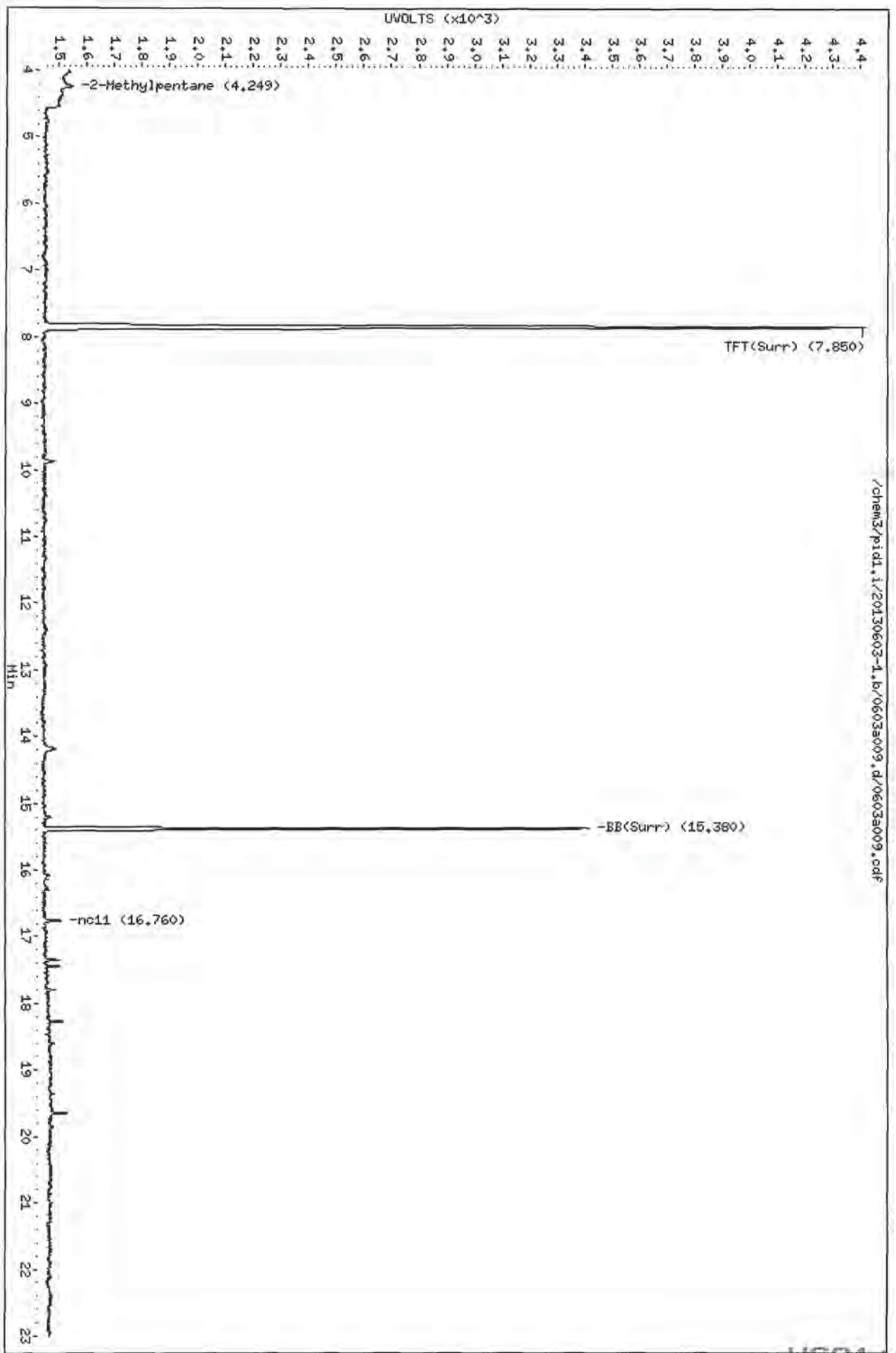
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.887	0.007	59	0.30N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a009.d
Date: 03-JUN-2013 14:59
Client ID: A2-M35-S-4
Sample Info: MS31C
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



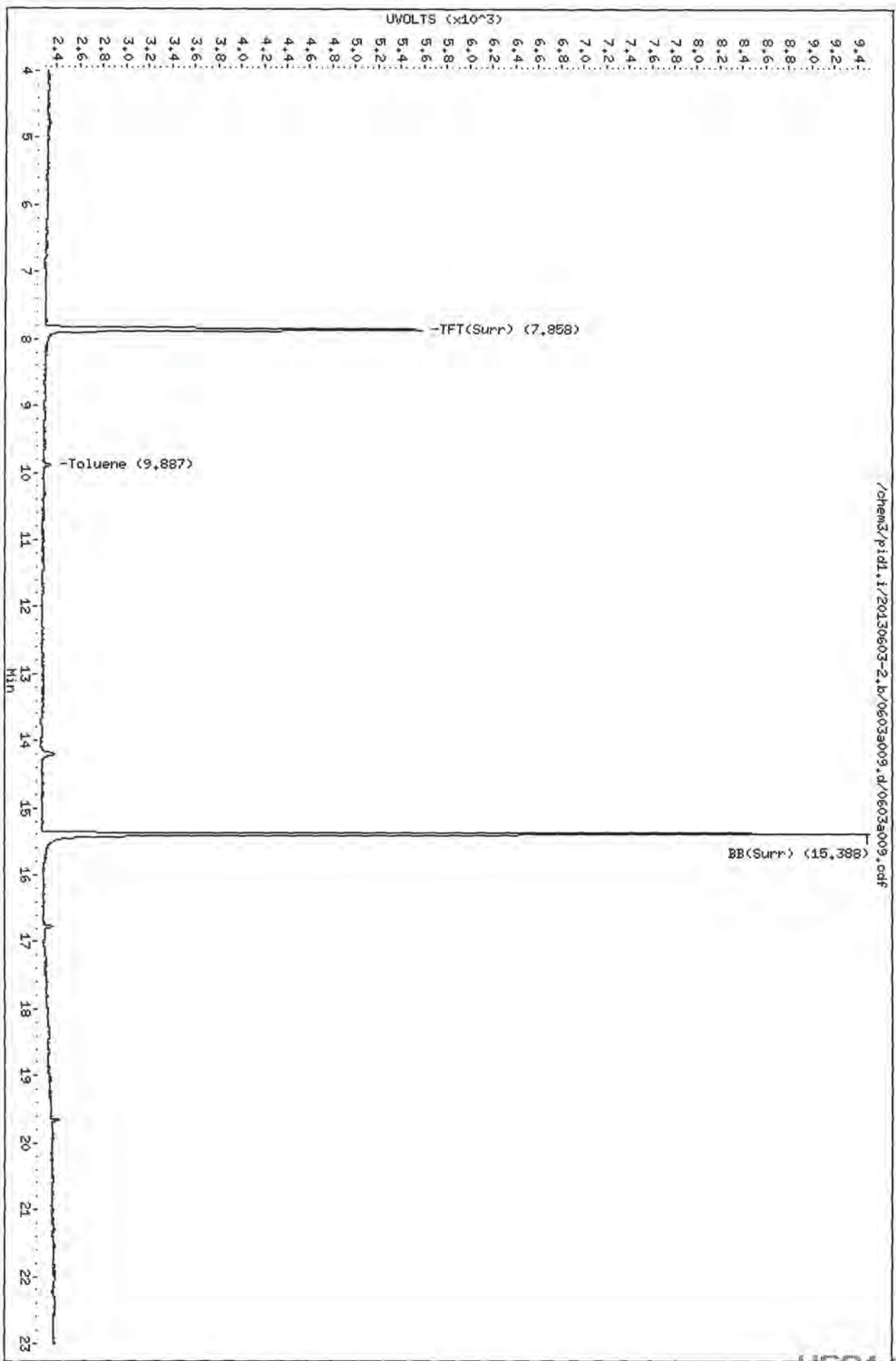
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Data File: /chem3/pid1.i/20130603-2.b/0603a009.d
Date: 03-JUN-2013 14:59
Client ID: A2-N35-S-4
Sample Info: MS31C

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

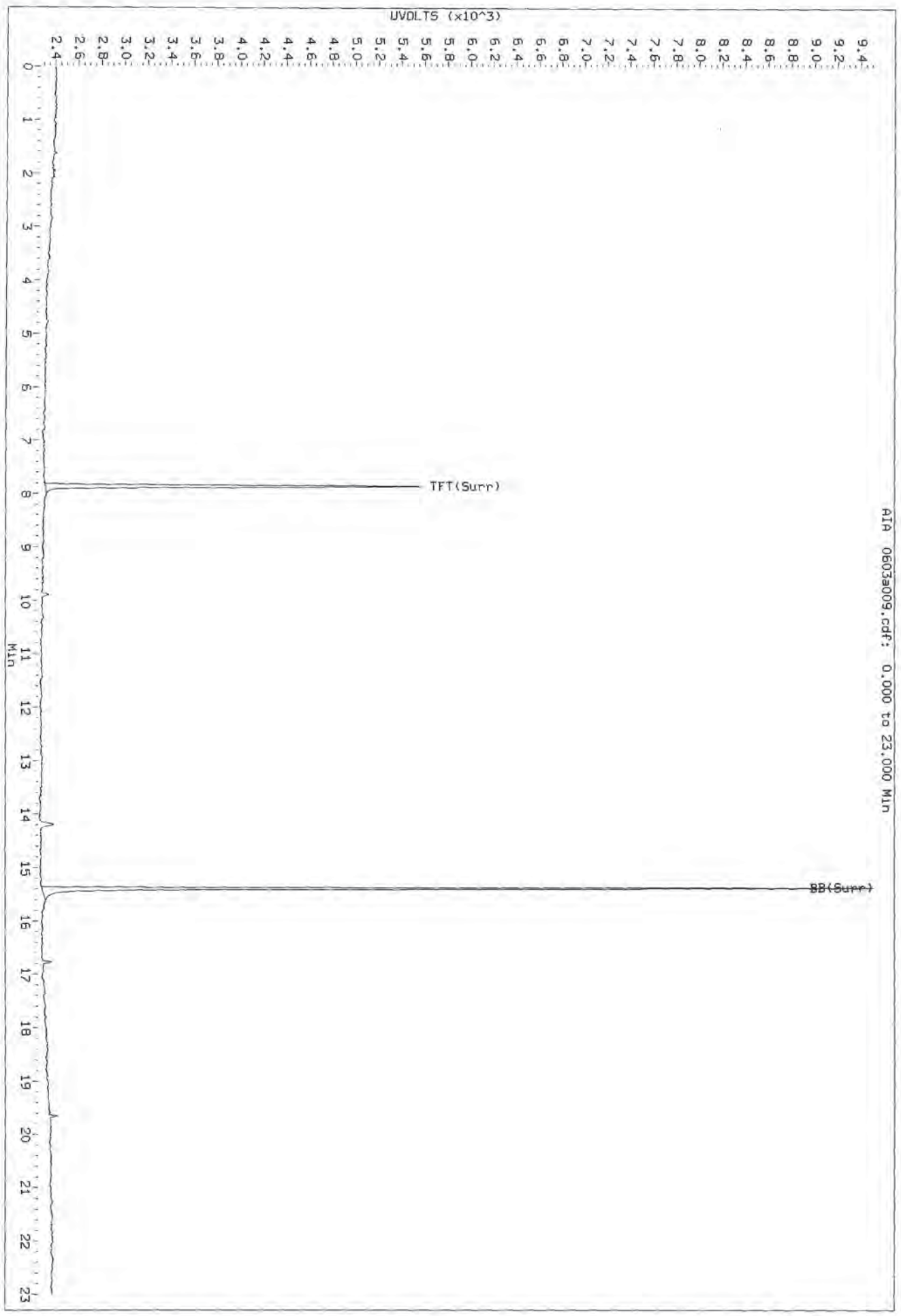
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01000 10000

PC
6/4/13

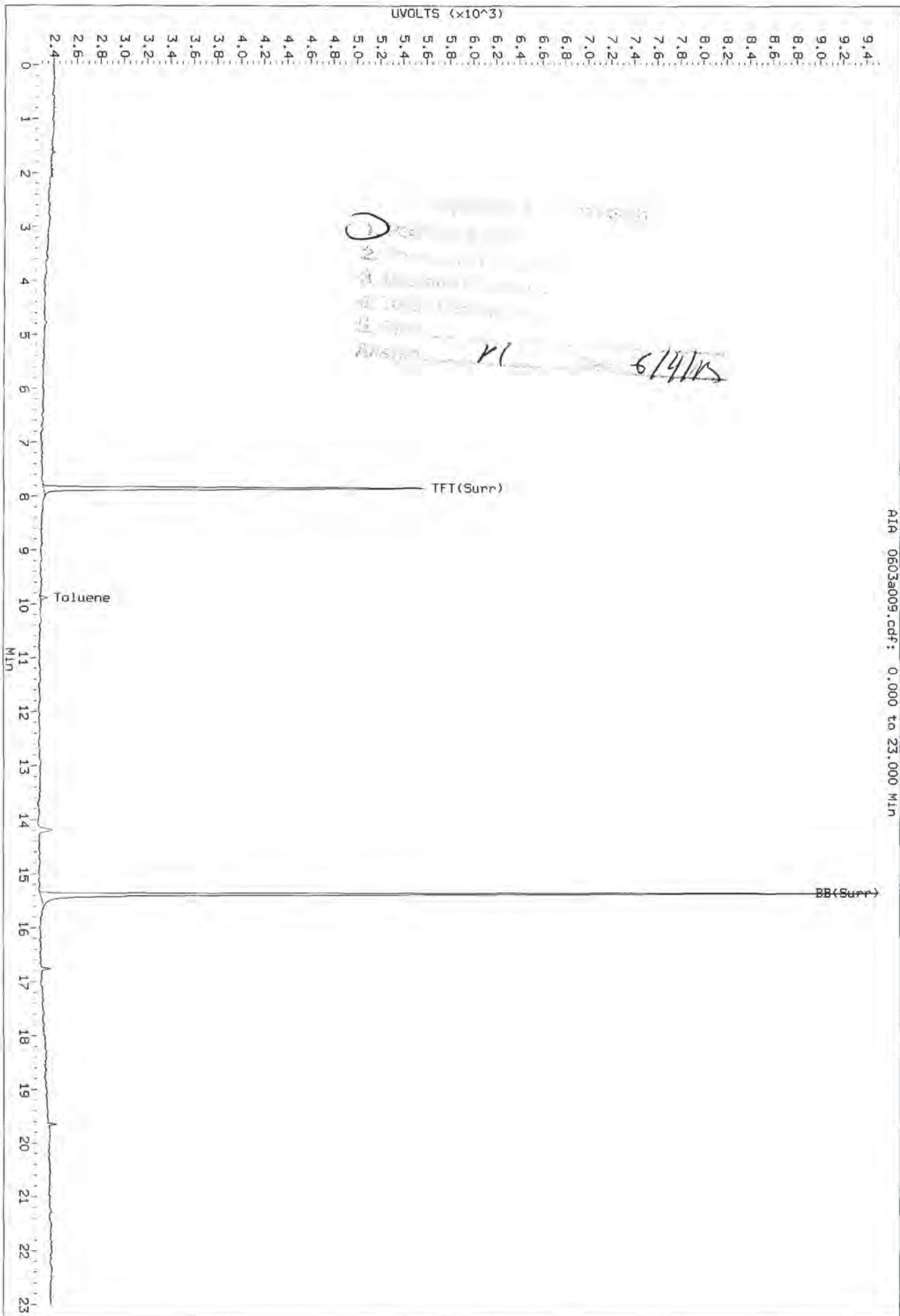
Data File: /chem3/pid1.1/20130603-2.b/0603a009.d/0603a009.cdf
Injection Date: 03-JUN-2013 14:59
Instrument: pid1.1
Client Sample ID: A2-W35-S-4



01000 : 10000

Data File: /chem3/pid1.1/20130603-2.b/0603a009.d/0603a009.cdf
Injection Date: 03-JUN-2013 14:59
Instrument: pid1.1
Client Sample ID: A2-W35-S-4

ALA 0603a009.cdf: 0.000 to 23.000 Min



060301 : 10003

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W37-S-4
SAMPLE

Lab Sample ID: WS31D
 LIMS ID: 13-11736
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Analyzed: 06/03/13 15:28
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 60 mg-dry-wt
 Percent Moisture: 22.0%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	21	< 21 U	
108-88-3	Toluene	21	< 21 U	
100-41-4	Ethylbenzene	21	< 21 U	
179601-23-1	m,p-Xylene	42	< 42 U	
95-47-6	o-Xylene	21	< 21 U	
	Gasoline Range Hydrocarbons	8.4	< 8.4 U	---

BETX Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	93.2%

Gasoline Surrogate Recovery

Trifluorotoluene	92.9%
Bromobenzene	92.4%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 C/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a010.d ARI ID: WS31D
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a010.d Client ID: A2-W37-S-4
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 15:28
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2750	35219	92.9	TFT(Surr)
15.381	0.002	1837	15322	92.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	868	0.002
8015C 2MP-TMB (4.19 to 16.20)	723723	869	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	868	0.001
NWTPHG Tol-Nap (9.77 to 18.92)	375093	868	0.002

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.858	0.003	3019	93.7	TFT(Surr)
15.388	0.002	6739	93.2	BB(Surr)

SW8021 (PID)

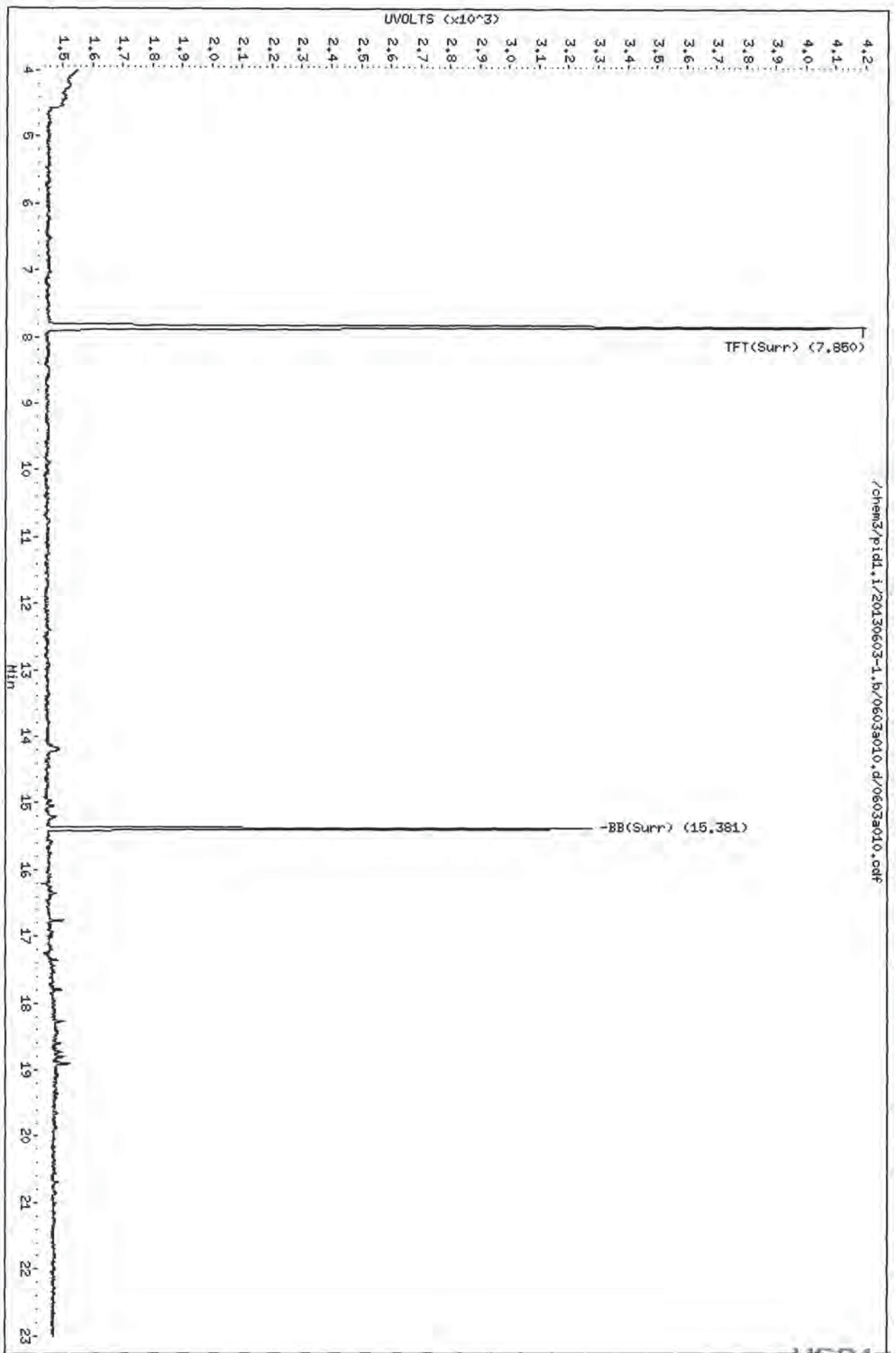
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a010.d
Date: 03-JUN-2013 15:28
Client ID: A2-M37-S-4
Sample Info: MS31D

Column phase: RTX 502-2 FID

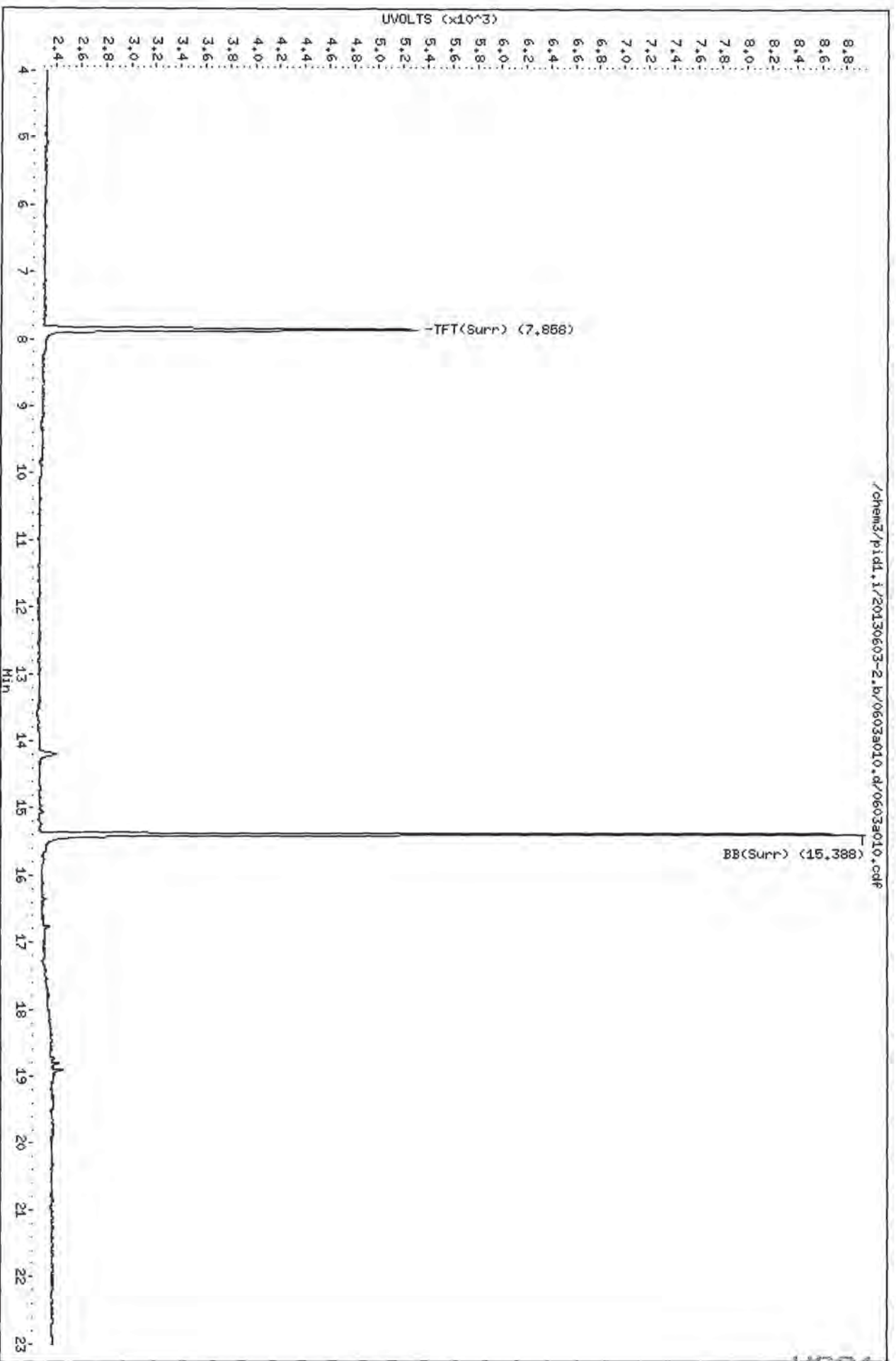
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



0000 10000

Data File: /chem3/pid1.1/20130603-2.b/0603a010.d
Date: 03-JUN-2013 15:28
Client ID: A2-M37-S-4
Sample Info: MS31D
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.1/20130603-2.b/0603a010.d/0603a010.cdf

110555 110555 110555

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W38-S-4
SAMPLE

Lab Sample ID: WS31E
 LIMS ID: 13-11737
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Analyzed: 06/03/13 15:56
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 43 mg-dry-wt
 Percent Moisture: 41.4%

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	29	< 29 U	
108-88-3	Toluene	29	630	
100-41-4	Ethylbenzene	29	< 29 U	
179601-23-1	m,p-Xylene	58	100	
95-47-6	o-Xylene	29	< 29 U	
	Gasoline Range Hydrocarbons	12	< 12 U	GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	98.0%
Bromobenzene	96.5%

Gasoline Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	96.2%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a011.d ARI ID: WS31E
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a011.d Client ID: A2-W38-S-4
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 15:56
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2874	36734	97.1	TFT(Surr)
15.381	0.002	1911	16163	96.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	24269	0.068
8015C 2MP-TMB (4.19 to 16.20)	723723	18015	0.025
AK101 nC6-nC10 (4.68 to 15.10)	582885	15345	0.026
NWTPHG Tol-Nap (9.77 to 18.92)	375093	24750	0.066

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3160	98.0	TFT(Surr)
15.388	0.002	6979	96.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.883	0.004	1085	5.48	Toluene
12.770	0.001	28	0.17N	Ethylbenzene
12.935	0.005	157	0.87	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

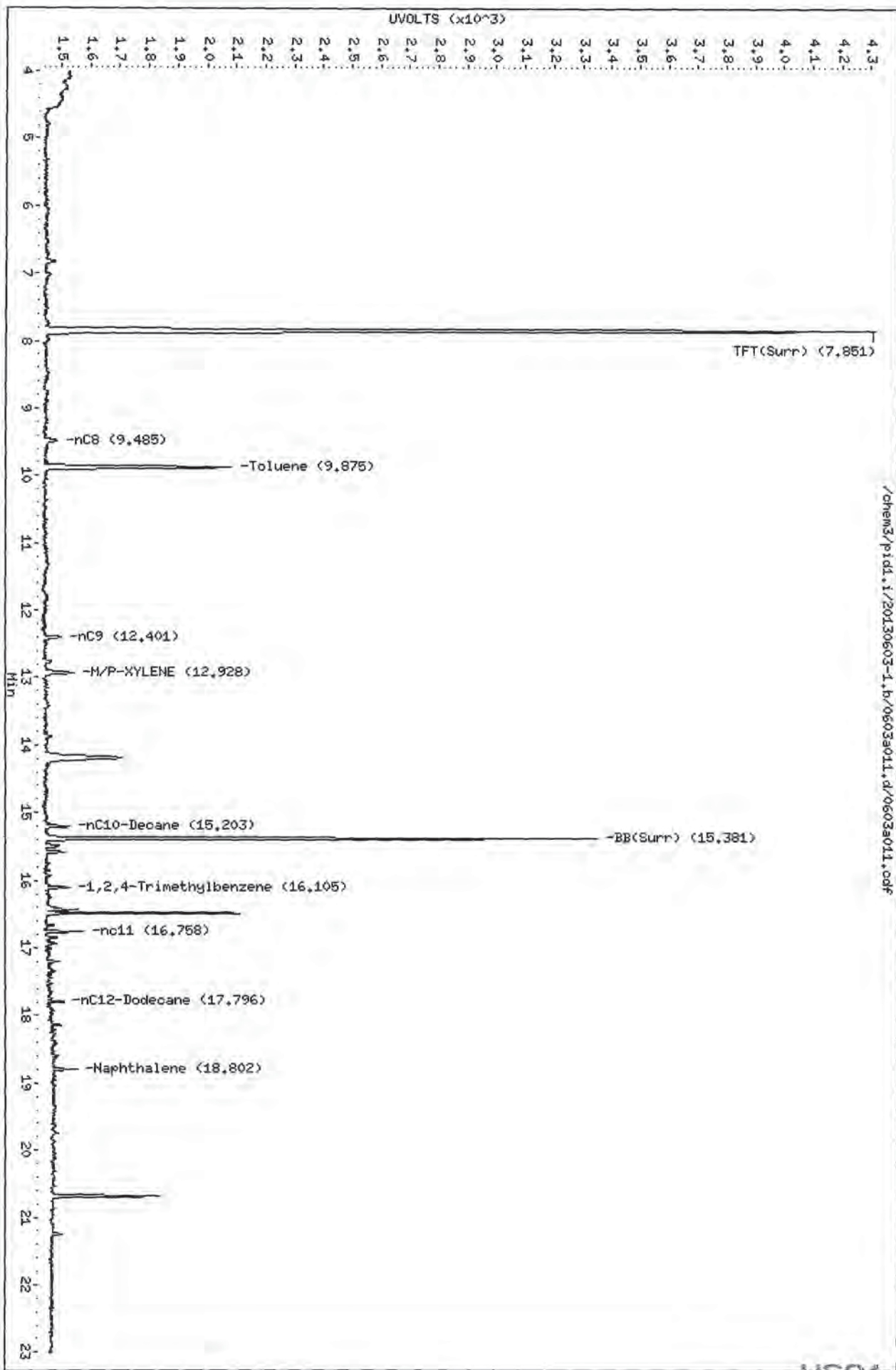
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a011.d
Date: 03-JUN-2013 15:56
Client ID: A2-N38-S-4
Sample Infor: MS31E
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130603-1.b/0603a011.d/0603a011.pdf

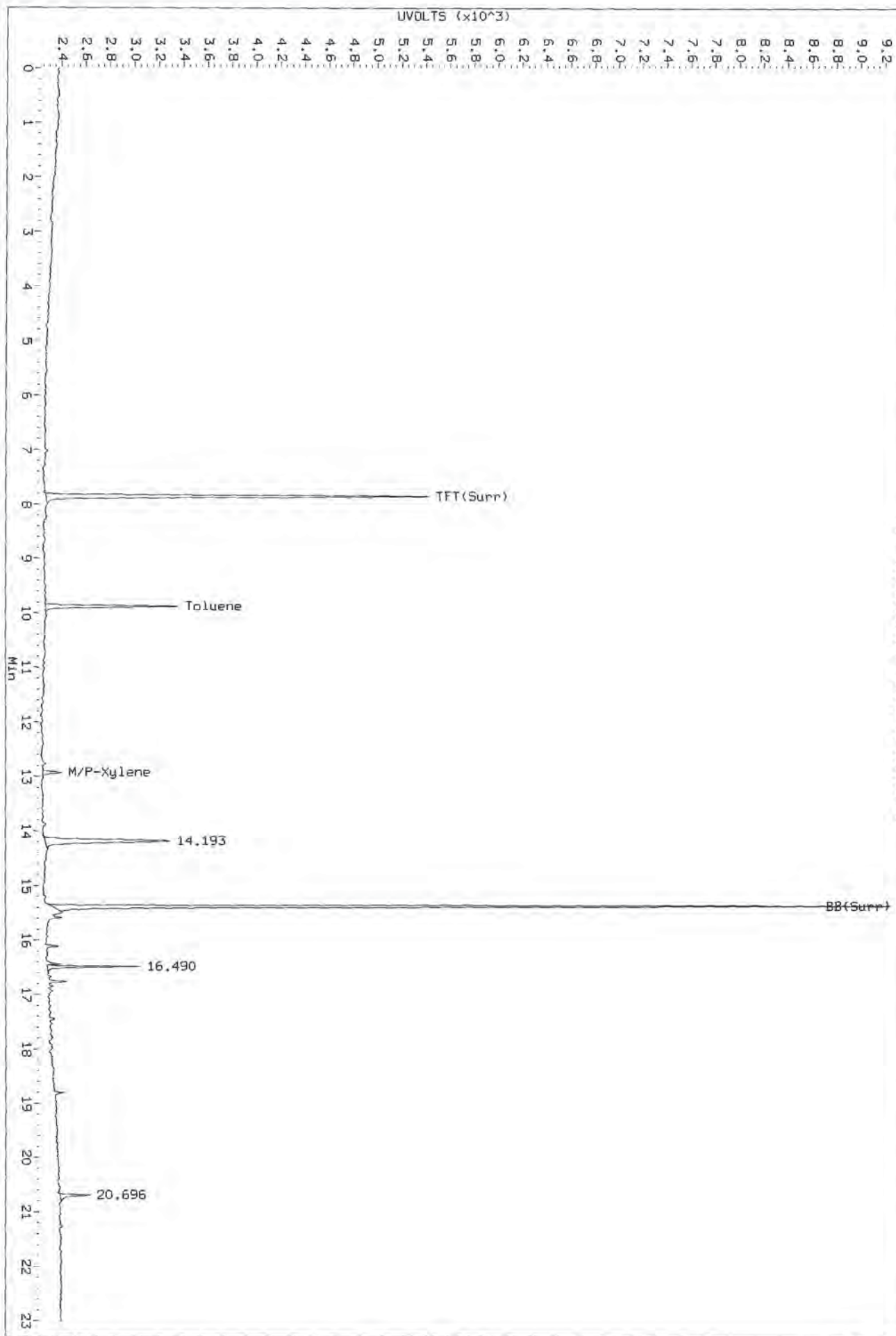


15000 10000

MC
6/4/13

Data File: /chem3/pid1.1/20130603-2.b/0603a011.d/0603a011.cdf
Injection Date: 03-JUN-2013 15:56
Instrument: pid1.1
Client Sample ID: A2-W38-5-4

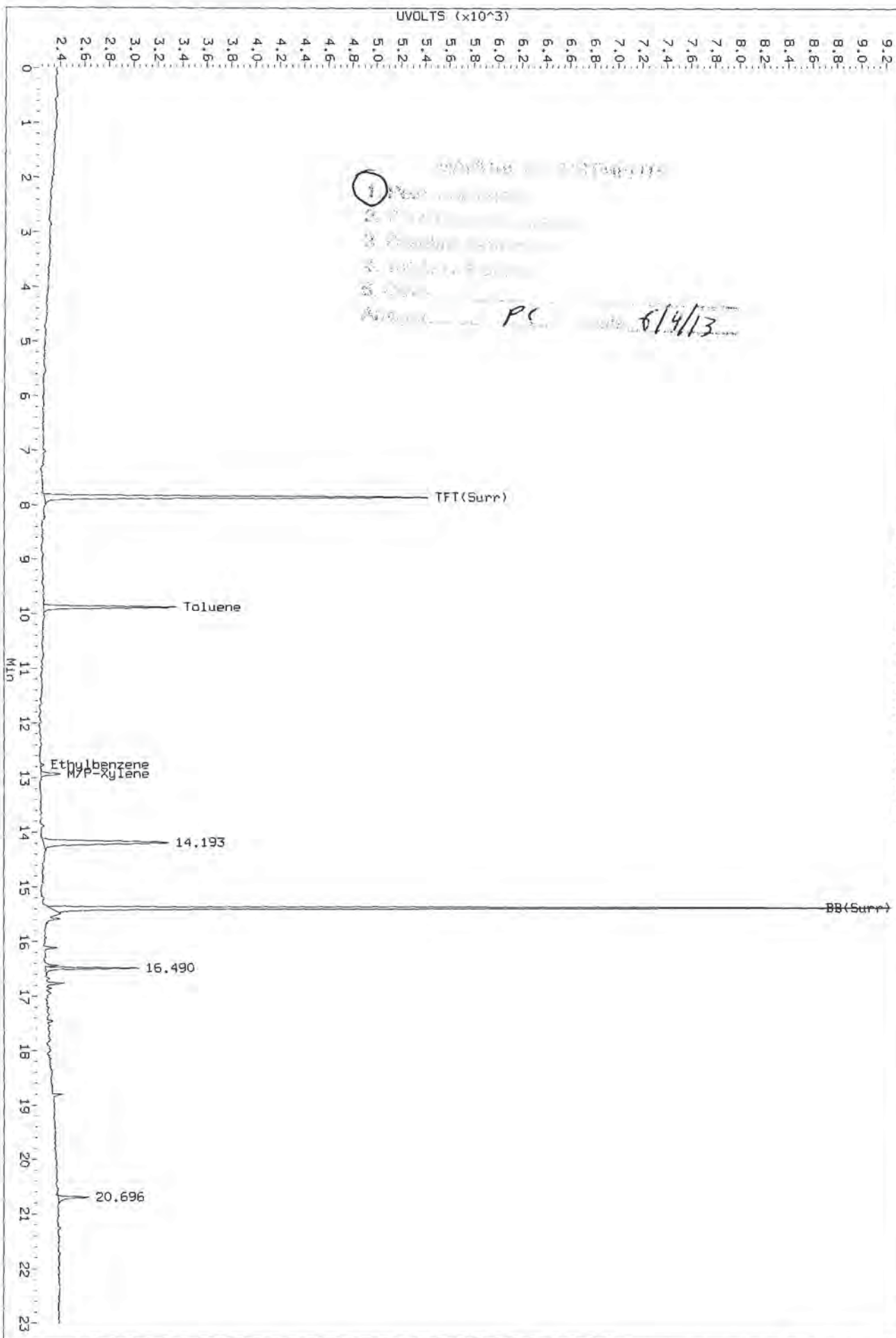
AIR 0603a011.cdf: 0.000 to 23.013 MIN



000000 : 10000

Data File: /chem3/pid1.1/20130603-2.b/06033011.d/06033011.cdf
Injection Date: 03-JUN-2013 15:56
Instrument: pid1.1
Client Sample ID: A2-W38-S-4

AIR 06033011.cdf: 0.000 to 23.013 Min



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: A2-W39-S-4
SAMPLE

Lab Sample ID: WS31F
 LIMS ID: 13-11738
 Matrix: Soil
 Data Release Authorized: *AS*
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Analyzed: 06/03/13 16:24
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 73 mg-dry-wt
 Percent Moisture: 20.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	17	< 17 U	
108-88-3	Toluene	17	100	
100-41-4	Ethylbenzene	17	< 17 U	
179601-23-1	m,p-Xylene	34	< 34 U	
95-47-6	o-Xylene	17	< 17 U	
	Gasoline Range Hydrocarbons	6.8	< 6.8 U	---

BETX Surrogate Recovery

Trifluorotoluene	96.0%
Bromobenzene	94.2%

Gasoline Surrogate Recovery

Trifluorotoluene	94.7%
Bromobenzene	93.3%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

PC
6/4/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a012.d ARI ID: WS31F
Data file 2: /chem3/pid1.i/20130603-2.b/0603a012.d Client ID: A2-W39-S-4
Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 16:24
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.003	2801	35606	94.7	TFT(Surr)
15.381	0.003	1853	15700	93.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	6921	0.019
8015C 2MP-TMB (4.19 to 16.20)	723723	6448	0.009
AK101 nC6-nC10 (4.68 to 15.10)	582885	5467	0.009
NWTPHG Tol-Nap (9.77 to 18.92)	375093	6921	0.018

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.859	0.003	3095	96.0	TFT(Surr)
15.389	0.003	6811	94.2	BB(Surr)

SW8021 (PID)

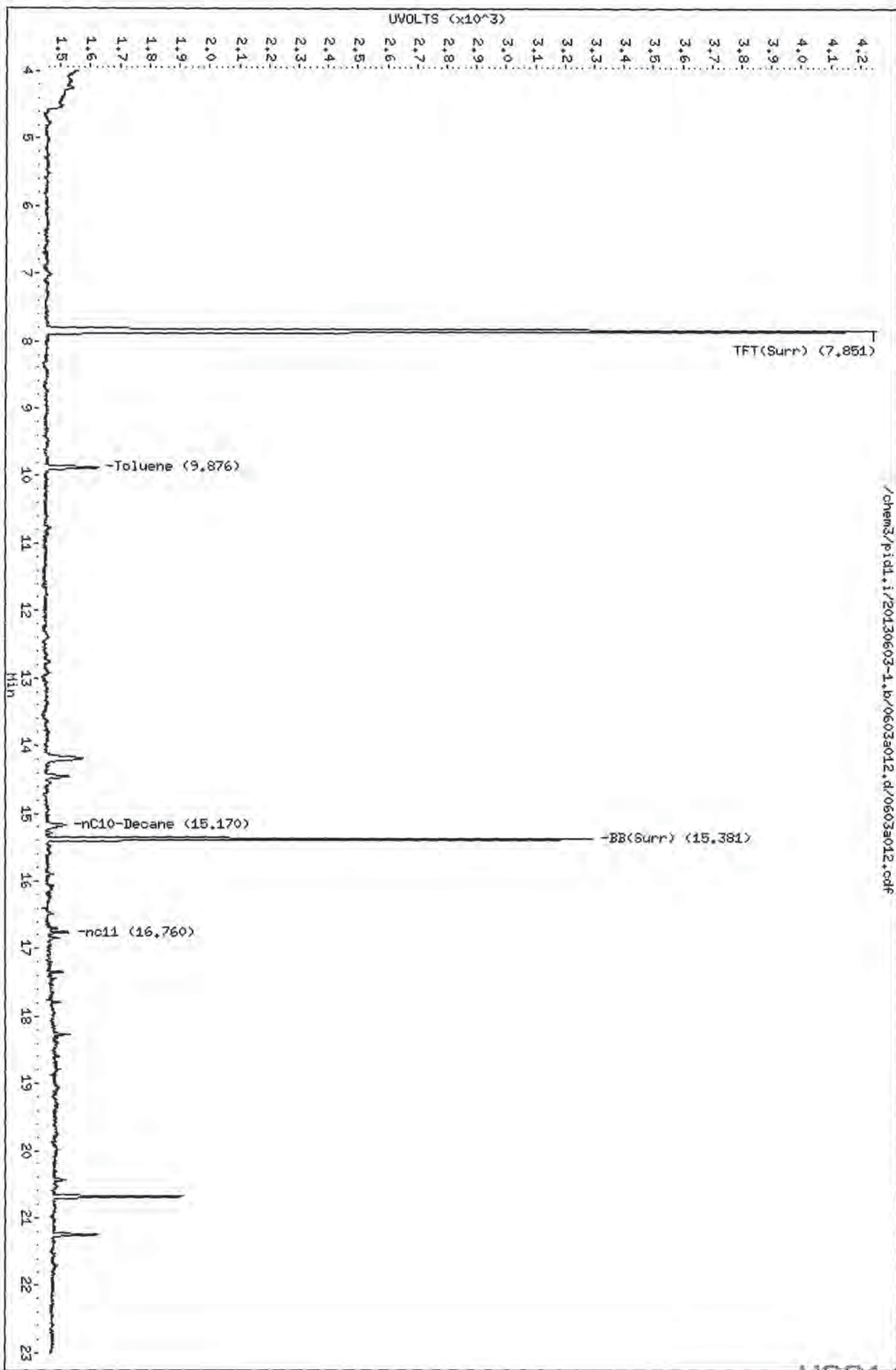
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.884	0.004	294	1.48	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a012.d
Date: 03-JUN-2013 16:24
Client ID: A2-N39-S-4
Sample Info: MS31F
Column Phase: RTX 502-2 FID

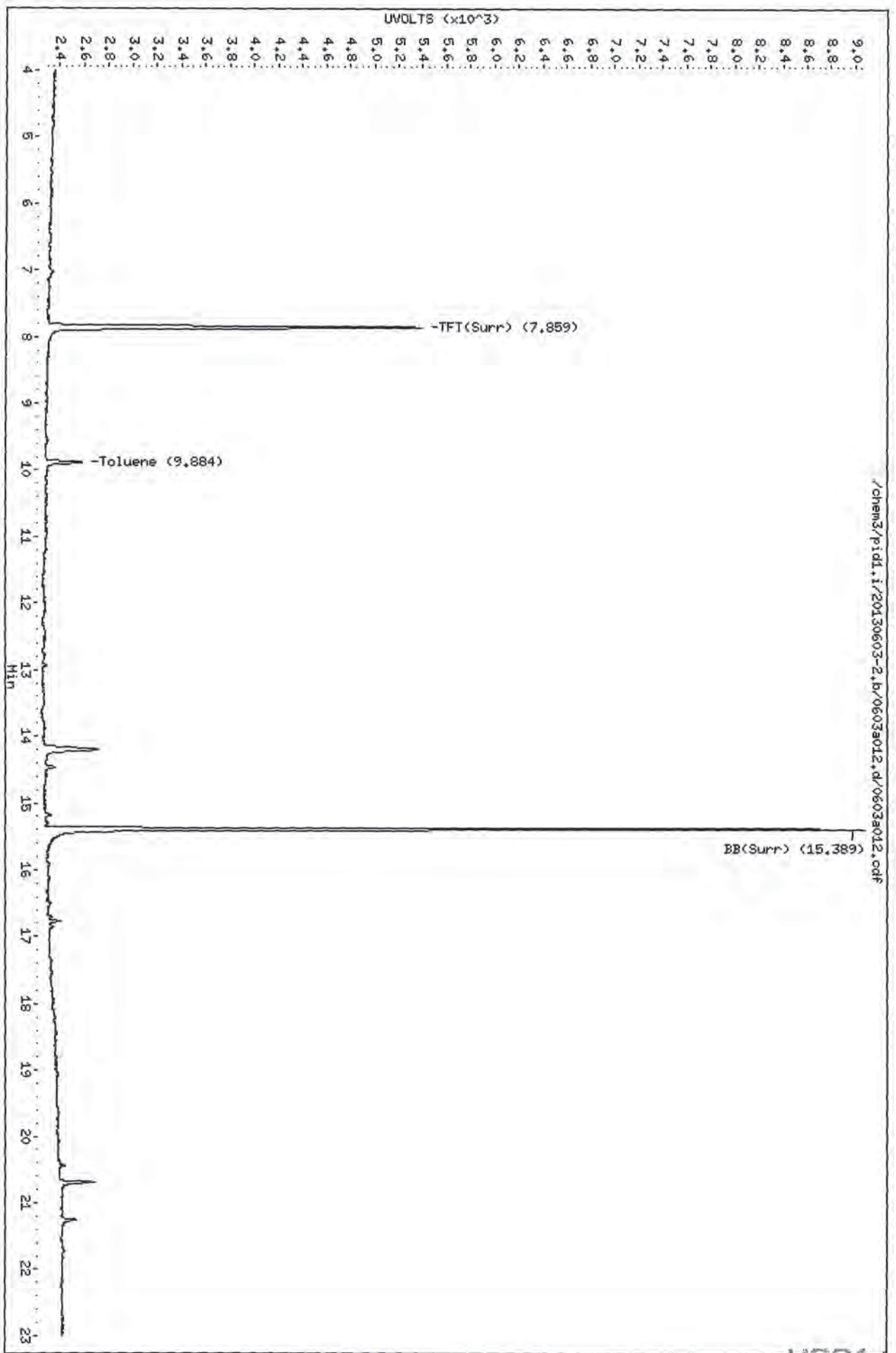
Instrument: pid1.i
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130603-1.b/0603a012.d/0603a012.cdf



Data File: /chem3/pid1.i/20130603-2.b/0603a012.d
Date: 03-JUN-2013 16:24
Client ID: A2-W39-S-4
Sample Info: MS31F
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



/chem3/pid1.i/20130603-2.b/0603a012.d/0603a012.cdf

15001 1855K

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS31
Matrix: Soil

QC Report No: WS31-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-060313	NA	98.1%	97.2%	0
LCS-060313	NA	98.6%	94.0%	0
LCSD-060313	NA	103%	98.6%	0
A2-W36-S-4	NA	93.9%	91.3%	0
A2-W34-S-4	NA	99.3%	97.3%	0
A2-W35-S-4	NA	100%	99.3%	0
A2-W37-S-4	NA	92.9%	92.4%	0
A2-W38-S-4	NA	97.1%	96.2%	0
A2-W39-S-4	NA	94.7%	93.3%	0

(TFT) = Trifluorotoluene	LCS/MB LIMITS (80-120)	QC LIMITS (65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-11733 to 13-11738

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WS31
Matrix: Soil

QC Report No: WS31-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-03

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-060313	99.2%	97.4%	0
LCS-060313	98.8%	95.1%	0
LCSD-060313	103%	99.9%	0
A2-W36-S-4	94.5%	92.4%	0
A2-W34-S-4	101%	98.2%	0
A2-W35-S-4	102%	101%	0
A2-W37-S-4	93.7%	93.2%	0
A2-W38-S-4	98.0%	96.5%	0
A2-W39-S-4	96.0%	94.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-11733 to 13-11738

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-060313

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060313

LIMS ID: 13-11733

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/03/13 12:28

LCSD: 06/03/13 12:56

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	47.7	50.0	95.4%	46.5	50.0	93.0%	2.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.6%	103%
Bromobenzene	94.0%	98.6%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-060313

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060313

LIMS ID: 13-11733

Matrix: Soil

Data Release Authorized: *AB*

Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/03/13 12:28

Purge Volume: 5.0 mL

LCS D: 06/03/13 12:56

Instrument/Analyst LCS: PID1/PKC

Sample Amount LCS: 100 mg-dry-wt

LCS D: PID1/PKC

LCS D: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Benzene	176	185	95.1%	187	185	101%	6.1%
Toluene	1910	1980	96.5%	2040	1980	103%	6.6%
Ethylbenzene	566	580	97.6%	590	580	102%	4.2%
m,p-Xylene	2040	2120	96.2%	2120	2120	100%	3.8%
o-Xylene	935	960	97.4%	982	960	102%	4.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCS D
Trifluorotoluene	98.8%	103%
Bromobenzene	95.1%	99.9%

Analytical Resources Inc.
BETX/Gas Quantitation Report

AL
6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a004.d ARI ID: LCS0603
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a004.d Client ID:
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 12:28
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.853	0.005	2918	41311	98.6	TFT(Surr)
15.383	0.004	1868	16482	94.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	340142	0.950 M
8015C 2MP-TMB (4.19 to 16.20)	723723	690507	0.954 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	556018	0.954 M
NWTPHG Tol-Nap (9.77 to 18.92)	375093	357936	0.954 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.861	0.005	3184	98.8	TFT(Surr)
15.390	0.004	6879	95.1	BB(Surr)

SW8021 (PID)

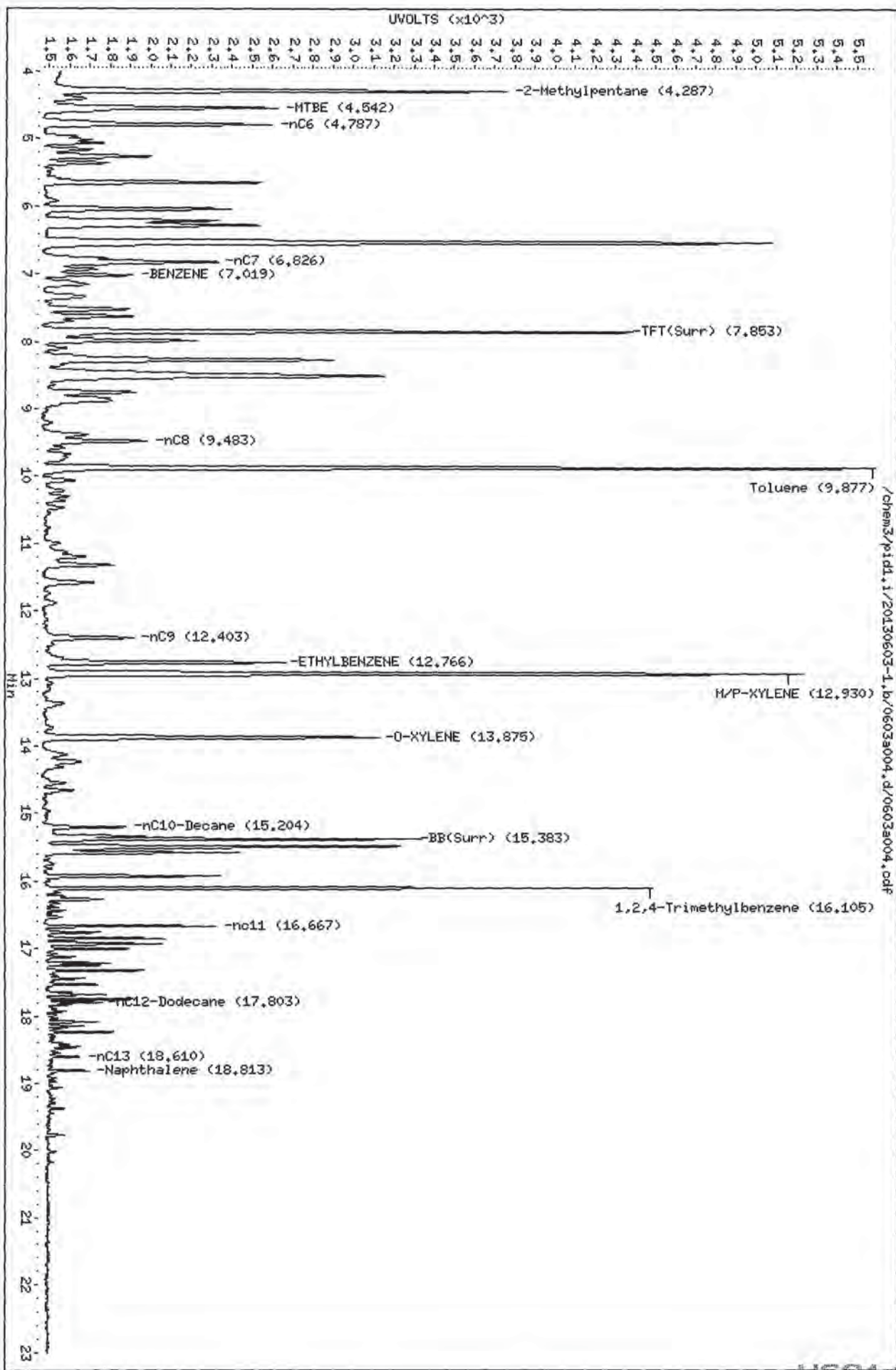
RT	Shift	Response	Amount	Compound
7.027	0.005	793	3.53	Benzene
9.886	0.007	7587	38.29	Toluene
12.775	0.006	1849	11.33	Ethylbenzene
12.939	0.009	7331	40.74	M/P-Xylene
13.884	0.007	2655	18.70	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pidd,i/20130603-1,b/0603a004.d
Date: 03-JUN-2013 12:28
Client ID:
Sample Infor: LCS0603
Column phase: RTX 502-2 FID

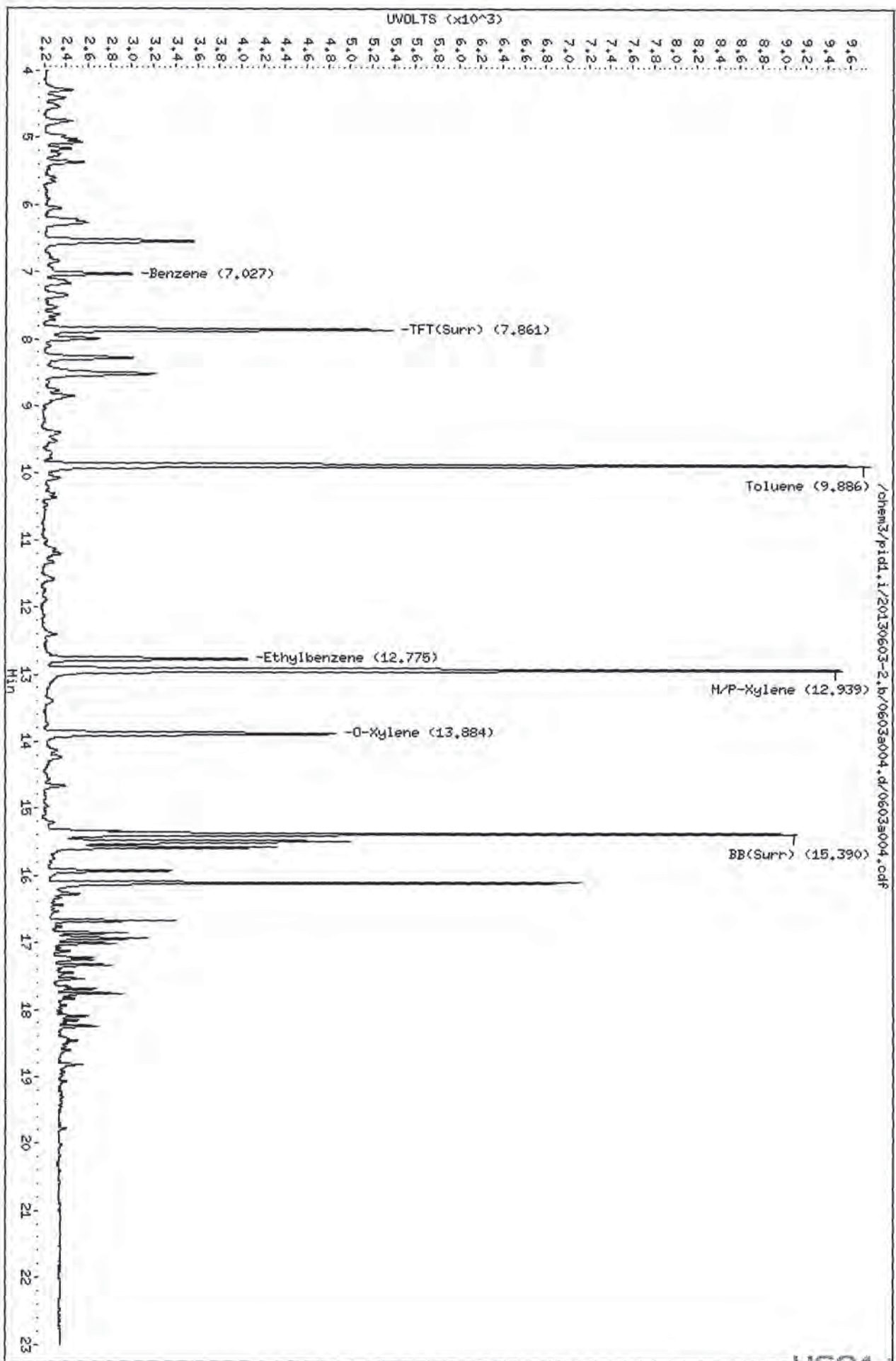
Instrument: pidd.i
Operator: PC
Column diameter: 0.18



00070 1051

Data File: /chem3/pid1.i/20130603-2.b/0603s004.d
Date: 03-JUN-2013 12:28
Client ID:
Sample Info: LCS0603
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



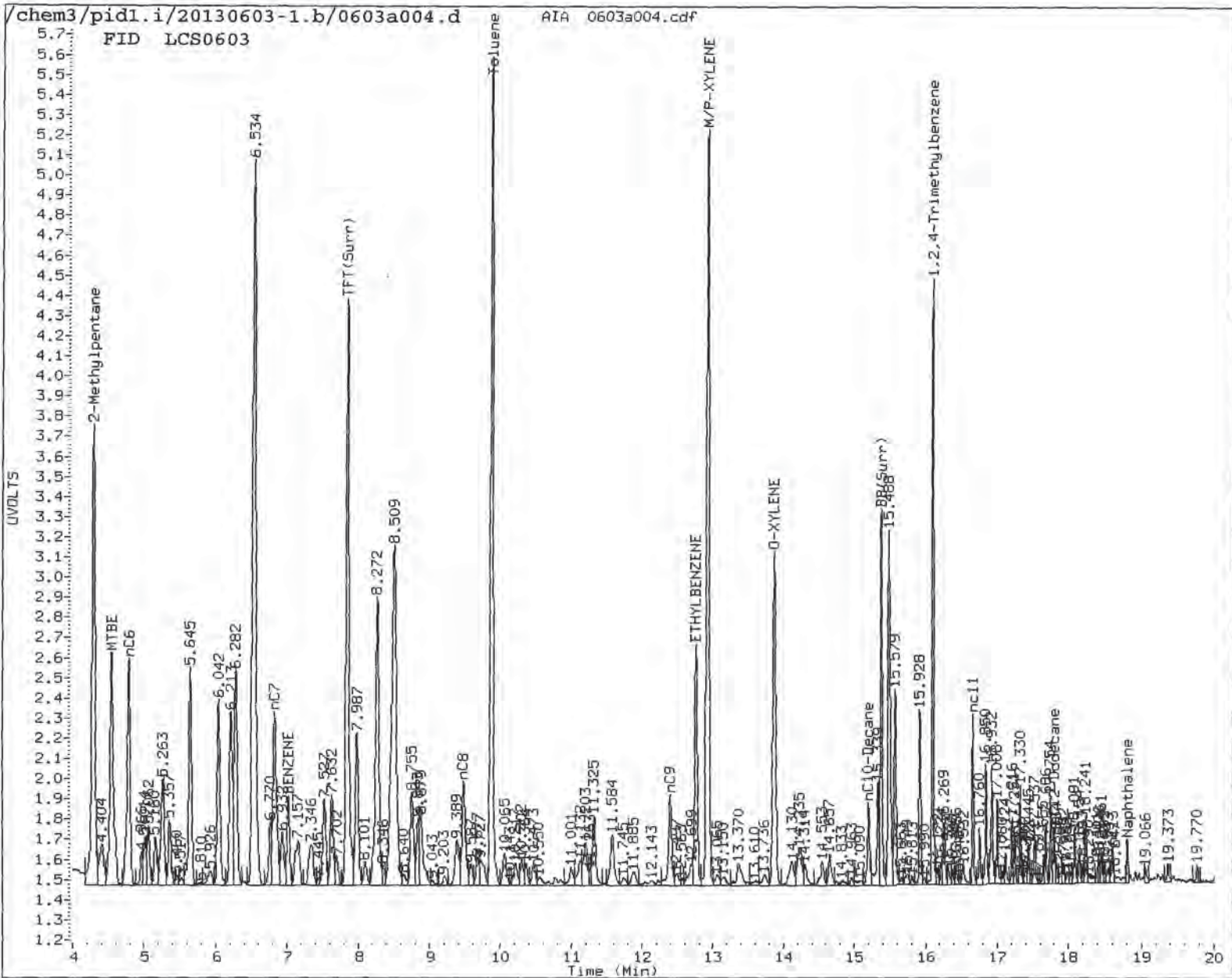
120071 1001

VC
6/4/15

Data File: /chem3/pid1.1/20130603-1.b/06033004.d/06033004.cdf
Injection Date: 03-JUN-2013 12:28
Instrument: pid1.1
Client Sample ID:



AIA 06033004.cdf: 0.000 to 23.010 MIN



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other _____

Analyst: MC

Date: 6/4/13

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130603-1.b/0603a005.d ARI ID: LCSD0603
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a005.d Client ID:
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 12:56
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	3039	42719	102.7	TFT(Surr)
15.379	0.001	1960	17127	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	333094	0.930 M
8015C 2MP-TMB (4.19 to 16.20)	723723	659829	0.912 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	527690	0.905 M
NWTPHG Tol-Nap (9.77 to 18.92)	375093	348882	0.930 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3323	103.1	TFT(Surr)
15.387	0.001	7222	99.9	BB(Surr)

SW8021 (PID)

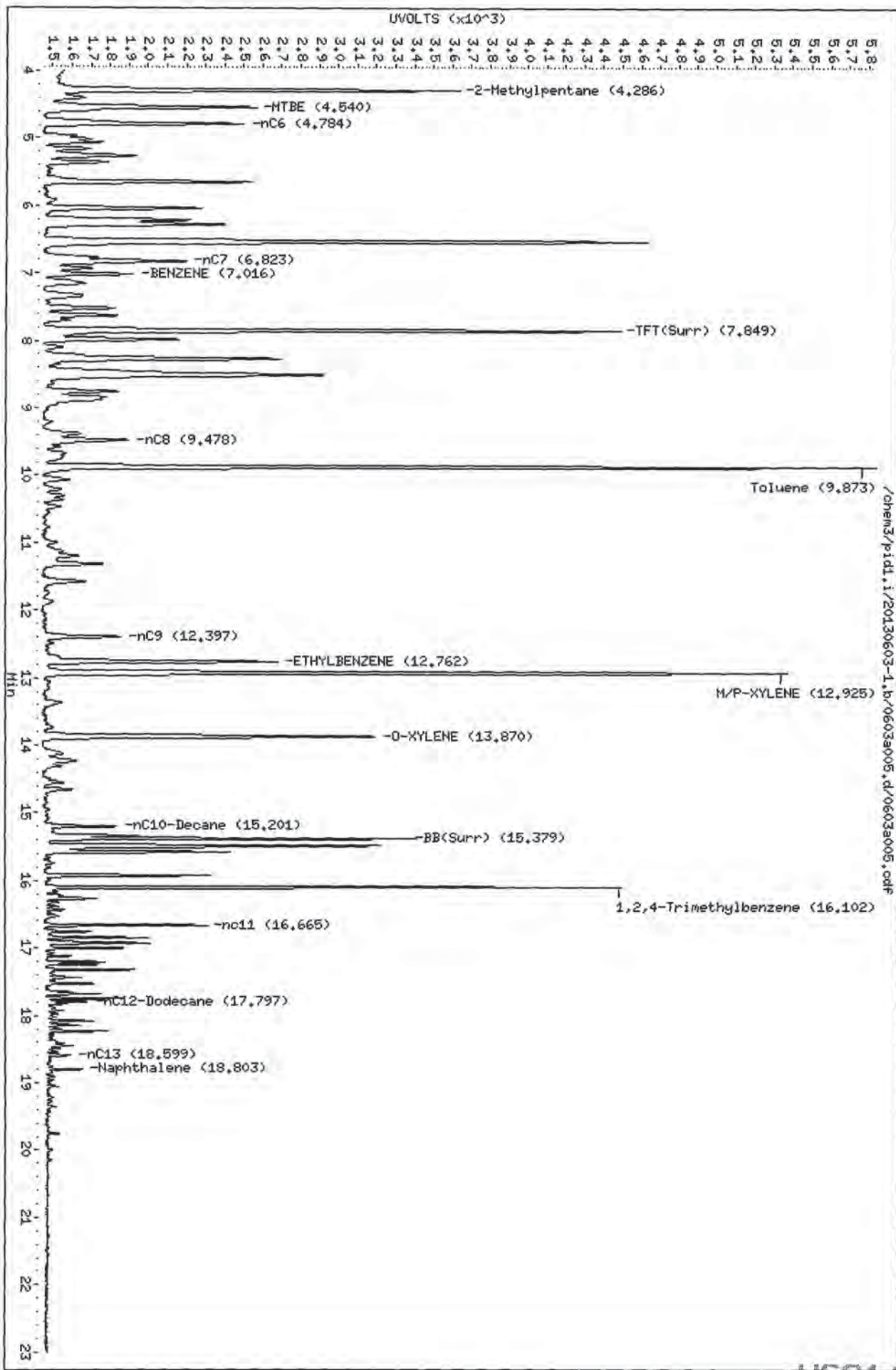
RT	Shift	Response	Amount	Compound
7.023	0.001	841	3.74	Benzene
9.881	0.002	8097	40.87	Toluene
12.771	0.002	1926	11.80	Ethylbenzene
12.934	0.004	7646	42.49	M/P-Xylene
13.879	0.002	2791	19.65	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130603-1.b/0603a005.d
Date: 03-JUN-2013 12:56
Client ID:
Sample Info: LCSID0603
Column phase: RTX 502-2 FID

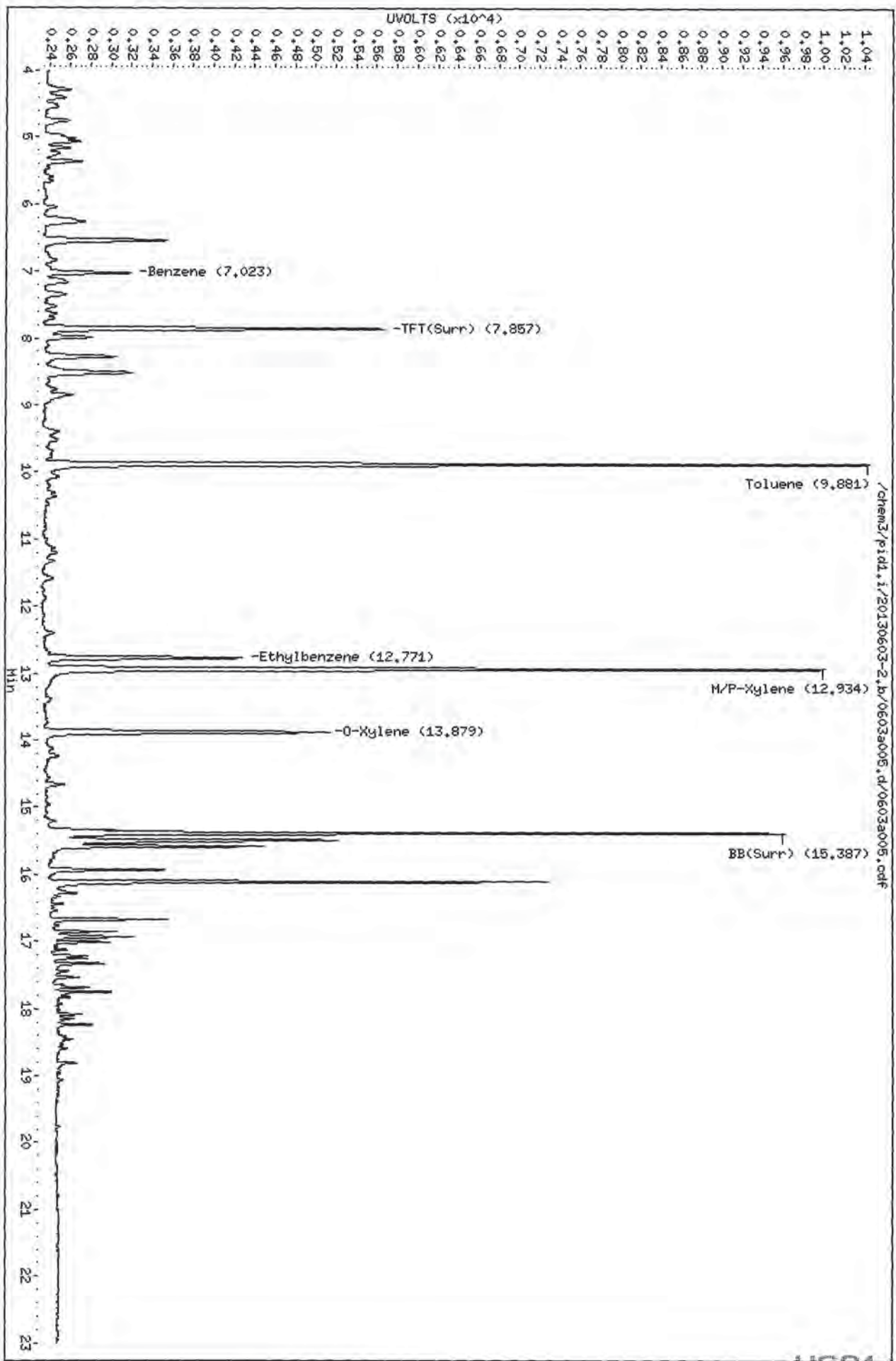
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



060310001

Data File: /chem3/pid1.i/20130603-2.b/0603a005.d
Date: 03-JUN-2013 12:56
Client ID:
Sample Infol: LCSD0603
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

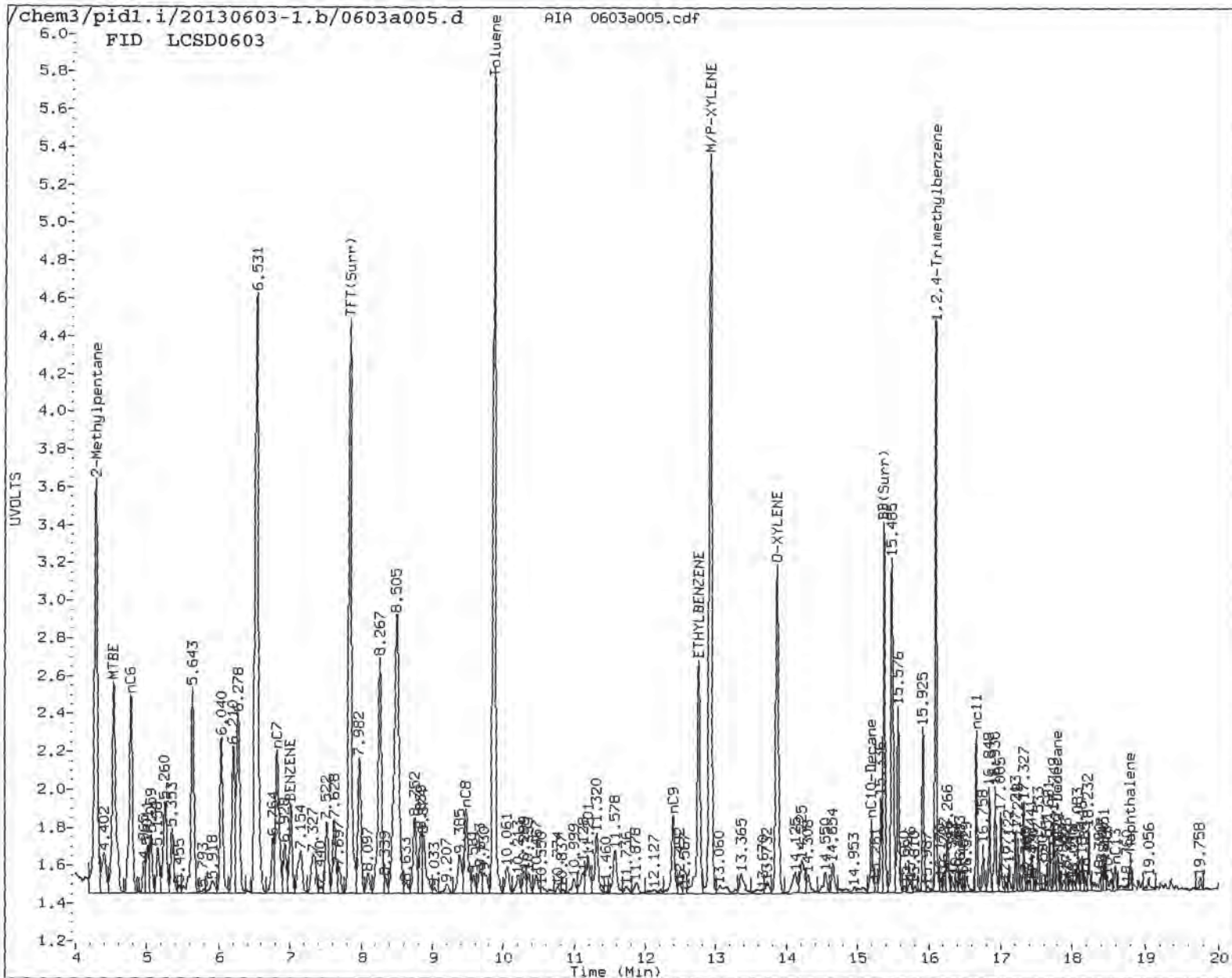


4591 00076

PC
6/4/15
Data File: /chem3/pid1.1/20130603-1.b/0603s005.d/0603s005.cdf
Injection Date: 03-JUN-2013 12:56
Instrument: pid1.1
Client Sample ID:

AIR 0603s005.cdf: 0.000 to 23.007 MIN






MANUAL INTEGRATION

- ① Baseline correction
- ② Poor chromatography
- ③ Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: PL Date: 6/4/15

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: MB-060313
METHOD BLANK

Lab Sample ID: MB-060313
 LIMS ID: 13-11733
 Matrix: Soil
 Data Release Authorized: 
 Reported: 06/04/13

QC Report No: WS31-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Analyzed: 06/03/13 13:25
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	12	< 12 U	
108-88-3	Toluene	12	< 12 U	
100-41-4	Ethylbenzene	12	< 12 U	
179601-23-1	m,p-Xylene	25	< 25 U	
95-47-6	o-Xylene	12	< 12 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	99.2%
Bromobenzene	97.4%

Gasoline Surrogate Recovery

Trifluorotoluene	98.1%
Bromobenzene	97.2%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

RC
 6/4/13

Data file 1: /chem3/pid1.i/20130603-1.b/0603a006.d ARI ID: MB0603
 Data file 2: /chem3/pid1.i/20130603-2.b/0603a006.d Client ID:
 Method: /chem3/pid1.i/20130603-2.b/PIDB.m Injection Date: 03-JUN-2013 13:25
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 22-MAY-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.002	2904	36815	98.1	TFT(Surr)
15.381	0.002	1932	16106	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1763	0.005
8015C 2MP-TMB (4.19 to 16.20)	723723	3325	0.005
AK101 nC6-nC10 (4.68 to 15.10)	582885	2641	0.005
NWTPHG Tol-Nap (9.77 to 18.92)	375093	1763	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.858	0.002	3198	99.2	TFT(Surr)
15.389	0.002	7042	97.4	BB(Surr)

SW8021 (PID)

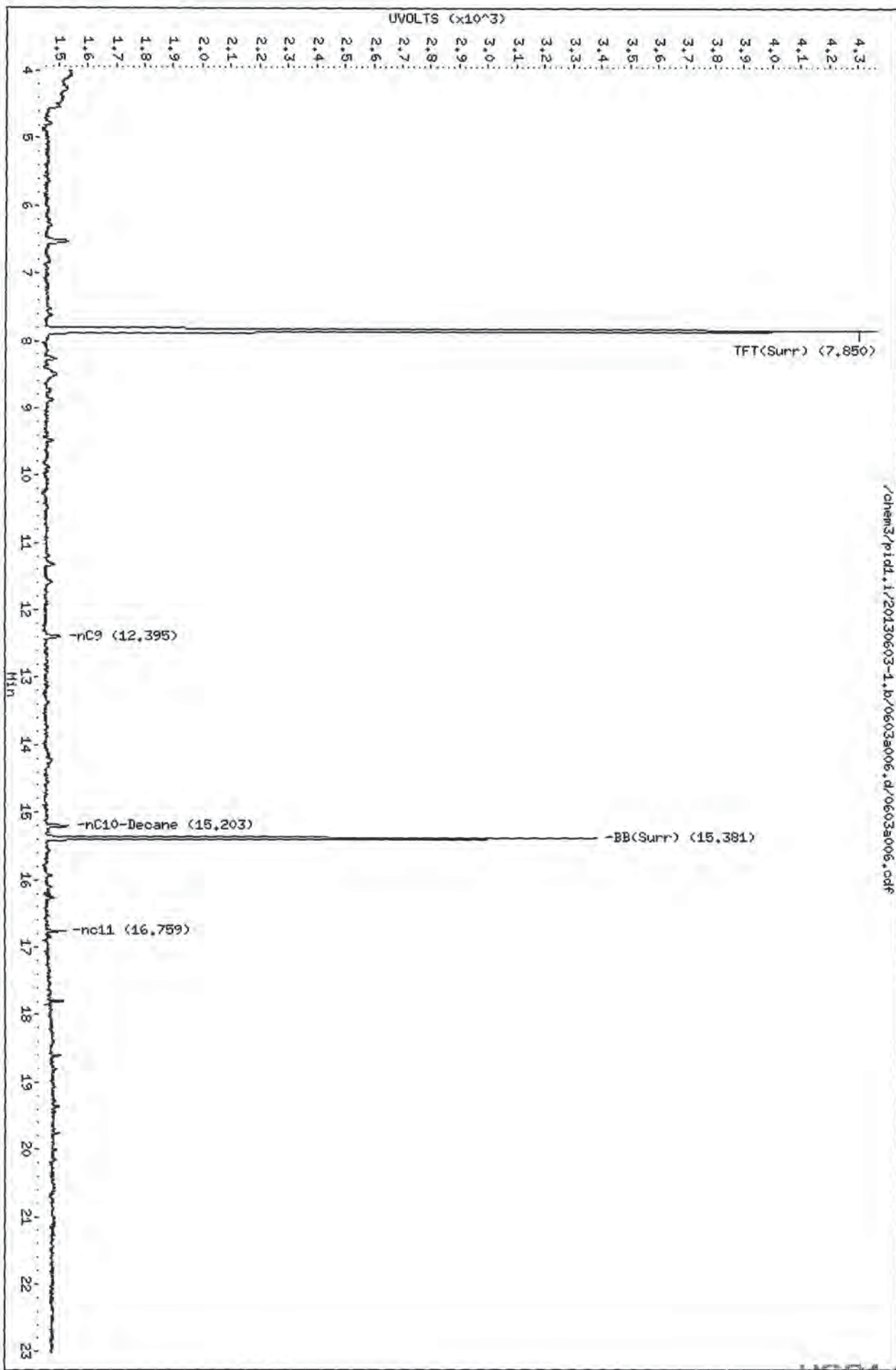
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.1/20130603-1.b/0603a006.d
Date: 03-JUN-2013 13:25
Client ID:
Sample Info: HB0603
Column phase: RTX 502-2 FID

Instrument: pid1.1
Operator: PC
Column diameter: 0.18

/chem3/pid1.1/20130603-1.b/0603a006.d/0603a006.cdf



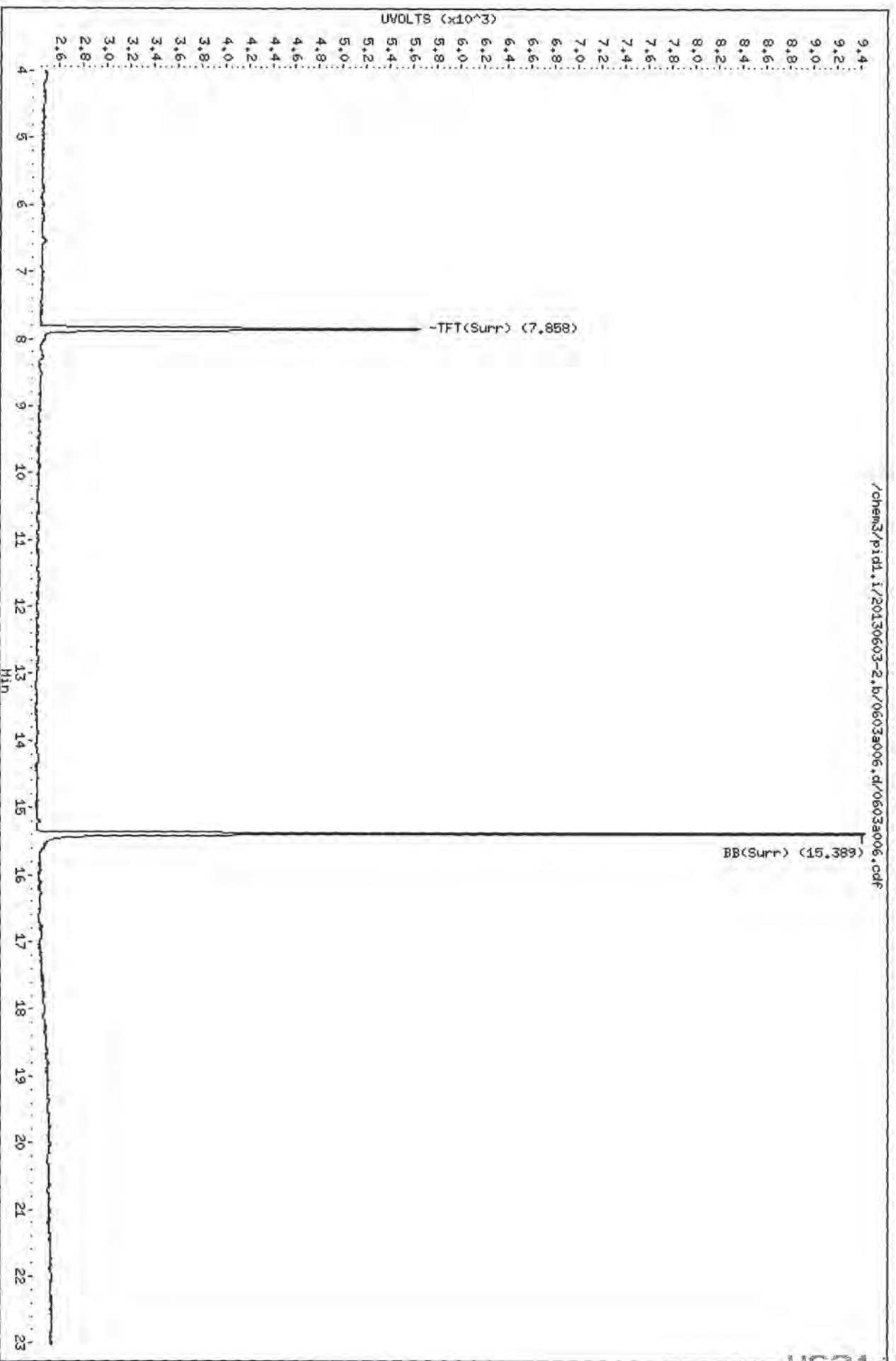
1100001 00001

Data File: /chem3/pid1.i/20130603-2.b/0603a006.d
Date: 03-JUN-2013 13:25
Client ID:
Sample Info: HB0603

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

Page 1

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/chem3/pid1.i/20130603-2.b/0603a006.d/0603a006.cdf

10001



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 19, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-03
ARI Job No.: WS84

Dear Mr. Silva:

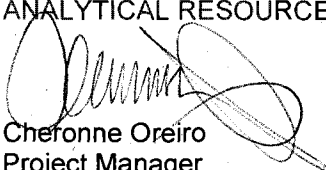
Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) removed two soil samples from archive previously logged under ARI job WS31. The samples were re-logged under the ARI job number referenced above. For details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for VOCs, SIM PAHs, EPH, and VPH, as requested.

The LCS percent recovery of Methyl tert-Butyl Ether was outside the control limits high for **LCS-061113A**. All other percent recoveries were within control limits. No corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.



Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.

eFile: WS84

Enclosures

Subject: RE: WS31 Cashmere Report

From: "Tony Silva" <tsilva@maulfoster.com>

Date: 6/5/2013 10:50 AM

To: "Cheronne Oreiro" <cheronneo@arilabs.com>

CC: "Lindsey Crosby" <lcrosby@maulfoster.com>, "Erik Naylor" <enaylor@maulfoster.com>, "Justin Clary" <jclary@maulfoster.com>

Cheronne,

For wall samples in lab report WS31, there were three samples that had MTCA exceedances.

One of the samples (W39) is a non-issue as soil in that area has been removed.

But for two of the samples, we had to leave soil in place because they were butted up against a road / property line etc.

These two samples are:

- A2-W37-S-4
- A2-W38-S-4

We need to run these samples for:

- EPH
- VPH
- VOCs (e.g. EDB, EDC, MTBE)
- PAHs by 8270 SIM

Please run these samples on a normal turnaround basis, there is no rush on these.

For lab work order number WS54 we will likely be doing these same follow ups on samples W43, W44, and W45 if they have detections above MTCA criteria. These three samples are also butted up against Mill Road and we can't dig any further. After we get the Gx and Dx data back on these we will let you know if these follow ups for WS54 are required.

Thank you.

TONY SILVA RG, LG | MAUL FOSTER & ALONGI, INC.
d. 503 501 5238 | p. 971 544 2139 | c. 503 209 2518 | f. 971 544 2140 |
www.maulfoster.com
2001 NW 19th Avenue, Suite 200, Portland, OR 97209

-----Original Message-----

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Tuesday, June 04, 2013 4:45 PM
To: Tony Silva
Cc: Lindsey Crosby; Erik Naylor
Subject: WS31 Cashmere Report

Hi Tony,

Please see attached.
Thanks,
-Cheronne

--
Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

This correspondence contains confidential information from Analytical Resources, Inc. (ARI) The information contained herein is intended solely for the use of the individual(s) named above. If you are not the intended recipient, any copying, distribution, disclosure, or use of the text and/or attached document(s) is strictly prohibited.

If you have received this correspondence in error, please notify sender immediately. Thank you.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WS31	Turn-around Requested:	Page: 1 of 1
ARI Client Company: MFA, Inc.	Phone:	Date:
Client Contact: Tony Silva	TSILVA@MAULFOSKER.COM	Ice Present? Y
Client Project Name: CASHMERE	Client Project #: 0779.02.01-03	No. of Coolers: 1
Client Project #: 0779.02.01-03	Samplers: Lindsey Crosby	Cooler Temps: 5.9

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested							Notes/Comments
					DK SILICA 6EL-CLEUP	BTEX/GX	UPH	EPH	LEAD (only if GX detected)	VOCs (EDS, MTBE, EDC)	only if GX detected	
A2-W36-S-4	5/31	0830	S	5	X	X	X	X	X	X	X	
A2-W34-S-4		0815	S	5			X	X				
A2-W35-S-4		0815	S	5			X	X				
A2-W37-S-4		0950	S	10			X	X				
A2-W38-S-4		1000	S	10			X	X				
A2-W39-S-4		1145	S	6			X	X				

Comments/Special Instructions VPH & EPH only for samples: A2-W37-S-4 A2-W38-S-4	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: LINDSEY CROSBY	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 5/31/13 1550	Date & Time: 5-31-13 1550	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

110002 : hscn



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WS31

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)
 Were custody papers included with the cooler? YES (NO)
 Were custody papers properly filled out (ink, signed, etc.) YES (NO)

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90547952

Cooler Accepted by: TB Date: 6/3/13 Time: 1550

Complete custody forms and attach all shipping documents

Log-in Phase:

Was a temperature blank included in the cooler? YES (NO)
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES (NO)
 Were all bottles sealed in individual plastic bags? YES (NO)
 Did all bottles arrive in good condition (unbroken)? YES (NO)
 Were all bottle labels complete and legible? YES (NO)
 Did the number of containers listed on COC match with the number of containers received? YES (NO)
 Did all bottle labels and tags agree with custody papers? YES (NO)
 Were all bottles used correct for the requested analyses? YES (NO)
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES (NO)
 Were all VOC vials free of air bubbles? (NA) YES (NO)
 Was sufficient amount of sample sent in each bottle? YES (NO)
 Date VOC Trip Blank was made at ARI..... (NA)
 Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____



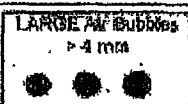
Samples Logged by: JM Date: 6/3/13 Time: 1009

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WS84
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-03
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. A2-W37-S-4	WS84A	13-12041	Soil	05/31/13 09:50	05/31/13 15:50
2. A2-W38-S-4	WS84B	13-12042	Soil	05/31/13 10:00	05/31/13 15:50



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-W37-S-4

Page 1 of 1

SAMPLE

Lab Sample ID: WS84A

QC Report No: WS84-Maul Foster & Alongi, Inc

LIMS ID: 13-12041

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *B*

Date Sampled: 05/31/13

Reported: 06/12/13

Date Received: 05/31/13

Instrument/Analyst: NT5/PAB

Sample Amount: 4.24 g-dry-wt

Date Analyzed: 06/11/13 16:52

Purge Volume: 5.0 mL

Moisture: 22.0%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.2	< 1.2	U
106-93-4	1,2-Dibromoethane	1.2	< 1.2	U
1634-04-4	Methyl tert-Butyl Ether	1.2	< 1.2	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	112%
d8-Toluene	94.6%
Bromofluorobenzene	94.4%
d4-1,2-Dichlorobenzene	96.1%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: A2-W38-S-4

Page 1 of 1

SAMPLE

Lab Sample ID: WS84B

QC Report No: WS84-Maul Foster & Alongi, Inc

LIMS ID: 13-12042

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AB*

Date Sampled: 05/31/13

Reported: 06/12/13

Date Received: 05/31/13

Instrument/Analyst: NT5/PAB

Sample Amount: 2.98 g-dry-wt

Date Analyzed: 06/11/13 17:16

Purge Volume: 5.0 mL

Moisture: 41.4%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.7	< 1.7	U
106-93-4	1,2-Dibromoethane	1.7	< 1.7	U
1634-04-4	Methyl tert-Butyl Ether	1.7	< 1.7	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	113%
d8-Toluene	98.8%
Bromofluorobenzene	85.3%
d4-1,2-Dichlorobenzene	99.5%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-061113A	Method Blank	Low	107%	101%	100%	102%	0
LCS-061113A	Lab Control	Low	102%	101%	101%	99.4%	0
LCSD-061113A	Lab Control Dup	Low	104%	101%	100%	101%	0
WS84A	A2-W37-S-4	Low	112%	94.6%	94.4%	96.1%	0
WS84B	A2-W38-S-4	Low	113%	98.8%	85.3%	99.5%	0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-12041 to 13-12042

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-061113A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-061113A

QC Report No: WS84-Maul Foster & Alongi, Inc

LIMS ID: 13-12041

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 06/12/13

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: NT5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 06/11/13 14:40

Purge Volume LCS: 5.0 mL

LCSD: 06/11/13 15:13

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	50.9	50.0	102%	49.8	50.0	99.6%	2.2%
1,2-Dibromoethane	50.7	50.0	101%	50.5	50.0	101%	0.4%
Methyl tert-Butyl Ether	62.8	50.0	126%	59.8	50.0	120%	4.9%

Reported in ug/kg (ppb)

RPD, calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	104%
d8-Toluene	101%	101%
Bromofluorobenzene	101%	100%
d4-1,2-Dichlorobenzene	99.4%	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-061113A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-061113A


QC Report No: WS84-Maul Foster & Alongi, Inc

LIMS ID: 13-12041

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: 

Date Sampled: NA

Reported: 06/12/13

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 06/11/13 15:37

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
106-93-4	1,2-Dibromoethane	1.0	< 1.0	U
1634-04-4	Methyl tert-Butyl Ether	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	101%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: A2-W37-S-4
SAMPLE

Lab Sample ID: WS84A
 LIMS ID: 13-12041
 Matrix: Soil
 Data Release Authorized: *[Signature]*
 Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Extracted: 06/11/13
 Date Analyzed: 06/14/13 12:51
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 1.60 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: 22.0%

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	31	43
91-57-6	2-Methylnaphthalene	31	51
90-12-0	1-Methylnaphthalene	31	< 31 U
208-96-8	Acenaphthylene	31	< 31 U
83-32-9	Acenaphthene	31	< 31 U
86-73-7	Fluorene	31	< 31 U
85-01-8	Phenanthrene	31	41
120-12-7	Anthracene	31	< 31 U
206-44-0	Fluoranthene	31	< 31 U
129-00-0	Pyrene	31	< 31 U
56-55-3	Benzo(a)anthracene	31	< 31 U
218-01-9	Chrysene	31	< 31 U
205-99-2	Benzo(b)fluoranthene	31	< 31 U
207-08-9	Benzo(k)fluoranthene	31	< 31 U
50-32-8	Benzo(a)pyrene	31	70
193-39-5	Indeno(1,2,3-cd)pyrene	31	< 31 U
53-70-3	Dibenz(a,h)anthracene	31	< 31 U
191-24-2	Benzo(g,h,i)perylene	31	< 31 U
132-64-9	Dibenzofuran	31	< 31 U
TOTBFA	Total Benzofluoranthenes	31	63

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	93.3%
d10-2-Methylnaphthalene	72.7%
d14-Dibenzo(a,h)anthracene	66.7%

ORGANICS ANALYSIS DATA SHEET
PNA's by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: A2-W38-S-4
SAMPLE

Lab Sample ID: WS84B
 LIMS ID: 13-12042
 Matrix: Soil
 Data Release Authorized: *AB*
 Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: 05/31/13
 Date Received: 05/31/13

Date Extracted: 06/11/13
 Date Analyzed: 06/14/13 13:19
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 1.78 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: 41.4%

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	28	340
91-57-6	2-Methylnaphthalene	28	360
90-12-0	1-Methylnaphthalene	28	170
208-96-8	Acenaphthylene	28	33
83-32-9	Acenaphthene	28	71
86-73-7	Fluorene	28	58
85-01-8	Phenanthrene	28	360
120-12-7	Anthracene	28	< 28 U
206-44-0	Fluoranthene	28	170
129-00-0	Pyrene	28	140
56-55-3	Benzo (a) anthracene	28	48
218-01-9	Chrysene	28	160
205-99-2	Benzo (b) fluoranthene	28	75
207-08-9	Benzo (k) fluoranthene	28	< 28 U
50-32-8	Benzo (a) pyrene	28	60
193-39-5	Indeno (1,2,3-cd) pyrene	28	32
53-70-3	Dibenz (a,h) anthracene	28	< 28 U
191-24-2	Benzo (g,h,i) perylene	28	64
132-64-9	Dibenzofuran	28	73
TOTBFA	Total Benzofluoranthenes	28	120

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	95.3%
d10-2-Methylnaphthalene	78.0%
d14-Dibenzo(a,h)anthracen	64.0%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>FLN</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-061113	87.7%	70.0%	76.3%	0
LCS-061113	91.3%	71.7%	83.0%	0
LCSD-061113	70.3%	57.7%	61.7%	0
A2-W37-S-4	93.3%	72.7%	66.7%	0
A2-W38-S-4	95.3%	78.0%	64.0%	0

LCS/MB LIMITS QC LIMITS

(FLN) = d10-Fluoranthene (30-160) (30-160)
(MNP) = d10-2-Methylnaphthalene (35-100) (34-100)
(DBA) = d14-Dibenzo(a,h)anthracene (37-120) (10-117)

Prep Method: SW3546
Log Number Range: 13-12041 to 13-12042

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-061113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-061113

LIMS ID: 13-12041

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted: 06/11/13

Sample Amount LCS: 10.00 g-dry-wt

LCS D: 10.00 g-dry-wt

Date Analyzed LCS: 06/14/13 02:24

Final Extract Volume LCS: 0.50 mL

LCS D: 06/14/13 02:51

LCS D: 0.50 mL

Instrument/Analyst LCS: NT4/JZ

Dilution Factor LCS: 1.00

LCS D: NT4/JZ

LCS D: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Naphthalene	104	150	69.3%	86.4	150	57.6%	18.5%
2-Methylnaphthalene	110	150	73.3%	88.6	150	59.1%	21.6%
1-Methylnaphthalene	113	150	75.3%	89.9	150	59.9%	22.8%
Acenaphthylene	108	150	72.0%	88.2	150	58.8%	20.2%
Acenaphthene	108	150	72.0%	87.6	150	58.4%	20.9%
Fluorene	116	150	77.3%	93.6	150	62.4%	21.4%
Phenanthrene	120	150	80.0%	95.6	150	63.7%	22.6%
Anthracene	119	150	79.3%	93.2	150	62.1%	24.3%
Fluoranthene	130	150	86.7%	103	150	68.7%	23.2%
Pyrene	139	150	92.7%	109	150	72.7%	24.2%
Benzo(a)anthracene	130	150	86.7%	101	150	67.3%	25.1%
Chrysene	141	150	94.0%	112	150	74.7%	22.9%
Benzo(b)fluoranthene	128	150	85.3%	99.6	150	66.4%	25.0%
Benzo(k)fluoranthene	126	150	84.0%	104	150	69.3%	19.1%
Benzo(a)pyrene	127	150	84.7%	98.5	150	65.7%	25.3%
Indeno(1,2,3-cd)pyrene	125	150	83.3%	97.6	150	65.1%	24.6%
Dibenz(a,h)anthracene	117	150	78.0%	91.6	150	61.1%	24.4%
Benzo(g,h,i)perylene	115	150	76.7%	91.8	150	61.2%	22.4%
Dibenzofuran	112	150	74.7%	91.1	150	60.7%	20.6%
Total Benzofluoranthenes	346	450	76.9%	274	450	60.9%	23.2%

Reported in µg/kg (ppb)

RPD¹ calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCS D
d10-Fluoranthene	91.3%	70.3%
d10-2-Methylnaphthalene	71.7%	57.7%
d14-Dibenzo(a,h)anthracen	83.0%	61.7%

ORGANICS ANALYSIS DATA SHEET
PNAs by SIM SW8270D-SIM GC/MS
Extraction Method: SW3546
 Page 1 of 1

Sample ID: MB-061113
METHOD BLANK

Lab Sample ID: MB-061113
 LIMS ID: 13-12041
 Matrix: Soil
 Data Release Authorized: *MB*
 Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-03
 Date Sampled: NA
 Date Received: NA

Date Extracted: 06/11/13
 Date Analyzed: 06/14/13 01:56
 Instrument/Analyst: NT4/JZ
 GPC Cleanup: No
 Silica Gel Cleanup: Yes
 Alumina Cleanup: No

Sample Amount: 10.00 g-dry-wt
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00
 Percent Moisture: NA

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	5.0	< 5.0 U
90-12-0	1-Methylnaphthalene	5.0	< 5.0 U
208-96-8	Acenaphthylene	5.0	< 5.0 U
83-32-9	Acenaphthene	5.0	< 5.0 U
86-73-7	Fluorene	5.0	< 5.0 U
85-01-8	Phenanthrene	5.0	< 5.0 U
120-12-7	Anthracene	5.0	< 5.0 U
206-44-0	Fluoranthene	5.0	< 5.0 U
129-00-0	Pyrene	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	5.0	< 5.0 U
218-01-9	Chrysene	5.0	< 5.0 U
205-99-2	Benzo(b)fluoranthene	5.0	< 5.0 U
207-08-9	Benzo(k)fluoranthene	5.0	< 5.0 U
50-32-8	Benzo(a)pyrene	5.0	< 5.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	< 5.0 U
53-70-3	Dibenz(a,h)anthracene	5.0	< 5.0 U
191-24-2	Benzo(g,h,i)perylene	5.0	< 5.0 U
132-64-9	Dibenzofuran	5.0	< 5.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	87.7%
d10-2-Methylnaphthalene	70.0%
d14-Dibenzo(a,h)anthracen	76.3%

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH
Extraction Method: SW3550C
Page 1 of 1

Sample ID: A2-W37-S-4
SAMPLE

Lab Sample ID: WS84A
LIMS ID: 13-12041
Matrix: Soil
Data Release Authorized: *MW*
Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/12/13
Percent Moisture: 22.0%

Sample Amount: 7.91 g-dry-wt
Final Extract Volume: 10 mL

Aliphatic

Date Analyzed: 06/14/13 16:47
Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 06/14/13 13:27
Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	25,000	< 25,000 U
C10-C12 Aliphatics	25,000	< 25,000 U
C12-C16 Aliphatics	25,000	< 25,000 U
C16-C21 Aliphatics	25,000	100,000
C21-C34 Aliphatics	25,000	3,400,000
C8-C10 Aromatics	25,000	< 25,000 U
C10-C12 Aromatics	25,000	< 25,000 U
C12-C16 Aromatics	25,000	< 25,000 U
C16-C21 Aromatics	25,000	39,000
C21-C34 Aromatics	25,000	530,000

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	96.7%
Aromatic	o-Terphenyl	106%

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH
Extraction Method: SW3550C
Page 1 of 1

Sample ID: A2-W38-S-4
SAMPLE

Lab Sample ID: WS84B
LIMS ID: 13-12042
Matrix: Soil
Data Release Authorized: *mm*
Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03
Date Sampled: 05/31/13
Date Received: 05/31/13

Date Extracted: 06/12/13
Percent Moisture: 41.4%

Sample Amount: 6.04 g-dry-wt
Final Extract Volume: 10 mL

Aliphatic

Date Analyzed: 06/14/13 17:12
Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 06/14/13 13:52
Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	33,000	< 33,000 U
C10-C12 Aliphatics	33,000	< 33,000 U
C12-C16 Aliphatics	33,000	< 33,000 U
C16-C21 Aliphatics	33,000	150,000
C21-C34 Aliphatics	33,000	3,200,000
C8-C10 Aromatics	33,000	< 33,000 U
C10-C12 Aromatics	33,000	< 33,000 U
C12-C16 Aromatics	33,000	< 33,000 U
C16-C21 Aromatics	33,000	40,000
C21-C34 Aromatics	33,000	300,000

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	100%
Aromatic	o-Terphenyl	99.5%

ALEPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>COD</u>	<u>TOT OUT</u>
MB-061213	106%	0
LCS-061213	105%	0
LCSD-061213	105%	0
A2-W37-S-4	96.7%	0
A2-W38-S-4	100%	0

	LCS/MB LIMITS	QC LIMITS
(COD) = 1-Chlorooctadecane	(27-128)	(39-131)

Prep Method: SW3550C
Log Number Range: 13-12041 to 13-12042

AREPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-061213	89.9%	0
LCS-061213	96.6%	0
LCSD-061213	89.6%	0
A2-W37-S-4	106%	0
A2-W38-S-4	99.5%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(34-133)

(10-143)

Prep Method: SW3550C
Log Number Range: 13-12041 to 13-12042

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH

Page 1 of 1

Sample ID: LCS-061213

LCS/LCSD

Lab Sample ID: LCS-061213

LIMS ID: 13-12041

Matrix: Soil

Data Release Authorized: *MW*

Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 06/12/13

Sample Amount LCS: 10.0 g-as-rec

LCSD: 10.0 g-as-rec

Final Extract Volume LCS: 10. mL

LCSD: 10. mL

Aliphatic

Date Analyzed LCS: 06/14/13 15:57

LCSD: 06/14/13 16:22

Instrument/Analyst LCS: FID8/JLW

LCSD: FID8/JLW

Dilution Factor LCS: 1.00

LCSD: 1.00

Aromatic

Date Analyzed LCS: 06/14/13 12:36

LCSD: 06/14/13 13:01

Instrument/Analyst LCS: FID8/JLW

LCSD: FID8/JLW

Dilution Factor LCS: 1.00

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
C8-C10 Aliphatics	52000	75000	69.3%	54000	75000	72.0%	3.8%
C10-C12 Aliphatics	57000	75000	76.0%	58000	75000	77.3%	1.7%
C12-C16 Aliphatics	69000	75000	92.0%	70000	75000	93.3%	1.4%
C16-C21 Aliphatics	72000	75000	96.0%	72000	75000	96.0%	0.0%
C10-C12 Aromatics	53000	75000	70.7%	55000	75000	73.3%	3.7%
C12-C16 Aromatics	68000	75000	90.7%	65000	75000	86.7%	4.5%
C16-C21 Aromatics	156000	150000	104%	145000	150000	96.7%	7.3%
C21-C34 Aromatics	127000	150000	84.7%	119000	150000	79.3%	6.5%

EPH Surrogate Recovery

		LCS	LCSD
Aliphatic	1-Chlorooctadecane	105%	105%
Aromatic	o-Terphenyl	96.6%	89.6%

Results reported in µg/kg

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET

Aliphatic/Aromatic GC-EPH
Extraction Method: SW3550C
Page 1 of 1

Sample ID: MB-061213
METHOD BLANK

Lab Sample ID: MB-061213
LIMS ID: 13-12041
Matrix: Soil
Data Release Authorized: *MW*
Reported: 06/17/13

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03
Date Sampled: NA
Date Received: NA

Date Extracted: 06/12/13
Percent Moisture: NA

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 10 mL

Aliphatic

Date Analyzed: 06/14/13 15:32
Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Aromatic

Date Analyzed: 06/14/13 12:11
Instrument/Analyst: FID8/JLW

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	20,000	< 20,000 U
C10-C12 Aliphatics	20,000	< 20,000 U
C12-C16 Aliphatics	20,000	< 20,000 U
C16-C21 Aliphatics	20,000	< 20,000 U
C21-C34 Aliphatics	20,000	< 20,000 U
C8-C10 Aromatics	20,000	< 20,000 U
C10-C12 Aromatics	20,000	< 20,000 U
C12-C16 Aromatics	20,000	< 20,000 U
C16-C21 Aromatics	20,000	< 20,000 U
C21-C34 Aromatics	20,000	< 20,000 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	106%
Aromatic	o-Terphenyl	89.9%



ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Sample ID: A2-W37-S-4

Page 1 of 1

SAMPLE

Lab Sample ID: WS84A

QC Report No: WS84-Maul Foster & Alongi, Inc

LIMS ID: 13-12041

Project: Cashmere

Matrix: Soil

0779.02.01-03

Data Release Authorized: *AB*

Date Sampled: 05/31/13

Reported: 06/13/13

Date Received: 05/31/13

Date Analyzed: 06/12/13 14:46

Purge Volume: 10 mL

Instrument/Analyst: PID1/PKC

Sample Amount: 36.7 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1400	< 1,400 U
108-88-3	Toluene	1400	< 1,400 U
100-41-4	Ethylbenzene	1400	< 1,400 U
179601-23-1	m,p-Xylene	2700	< 2,700 U
95-47-6	o-Xylene	1400	< 1,400 U
1634-04-4	Methyl tert-Butyl Ether	1400	< 1,400 U
109-66-0	n-Pentane	1400	< 1,400 U
110-54-3	n-Hexane	1400	< 1,400 U
111-65-9	n-Octane	1400	< 1,400 U
124-18-5	n-Decane	1400	< 1,400 U
112-40-3	n-Dodecane	1400	< 1,400 U

Range	RL	Result
C8-C10 Aromatics	14,000	< 14,000 U
C10-C12 Aromatics	14,000	< 14,000 U
C12-C13 Aromatics	14,000	< 14,000 U
C5-C6 Aliphatics	14,000	< 14,000 U
C6-C8 Aliphatics	14,000	< 14,000 U
C8-C10 Aliphatics	14,000	< 14,000 U
C10-C12 Aliphatics	14,000	< 14,000 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	84.5%
FID: 2,5-Dibromotoluene	94.5%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: A2-W38-S-4

SAMPLE

Lab Sample ID: WS84B

LIMS ID: 13-12042

Matrix: Soil

Data Release Authorized: *RB*

Reported: 06/13/13

QC Report No: WS84-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: 05/31/13

Date Received: 05/31/13

Date Analyzed: 06/12/13 15:18

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 22.1 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	2300	< 2,300 U
108-88-3	Toluene	2300	< 2,300 U
100-41-4	Ethylbenzene	2300	< 2,300 U
179601-23-1	m,p-Xylene	4500	< 4,500 U
95-47-6	o-Xylene	2300	< 2,300 U
1634-04-4	Methyl tert-Butyl Ether	2300	< 2,300 U
109-66-0	n-Pentane	2300	< 2,300 U
110-54-3	n-Hexane	2300	< 2,300 U
111-65-9	n-Octane	2300	< 2,300 U
124-18-5	n-Decane	2300	< 2,300 U
112-40-3	n-Dodecane	2300	< 2,300 U

Range	RL	Result
C8-C10 Aromatics	23,000	< 23,000 U
C10-C12 Aromatics	23,000	< 23,000 U
C12-C13 Aromatics	23,000	< 23,000 U
C5-C6 Aliphatics	23,000	< 23,000 U
C6-C8 Aliphatics	23,000	< 23,000 U
C8-C10 Aliphatics	23,000	< 23,000 U
C10-C12 Aliphatics	23,000	< 23,000 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	96.5%
FID: 2,5-Dibromotoluene	87.0%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VPH SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WS84-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-03

<u>Client ID</u>	<u>PDBT</u>	<u>FDBT</u>	<u>TOT</u>	<u>OUT</u>
MB-061213	80.5%	82.5%	0	
LCS-061213	77.5%	82.0%	0	
LCSD-061213	85.0%	84.5%	0	
A2-W37-S-4	84.5%	94.5%	0	
A2-W38-S-4	96.5%	87.0%	0	

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(PDBT) = 2,5-Dibromotoluene	(60-140)	(60-140)
(FDBT) = 2,5-Dibromotoluene	(60-140)	(60-140)

Prep Method: METHOD
Log Number Range: 13-12041 to 13-12042

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: LCS-061213

LCS/LCSD

Lab Sample ID: LCS-061213

LIMS ID: 13-12041

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/13/13

QC Report No: WS84-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 06/12/13 12:42

Date Analyzed LCSD: 06/12/13 13:14

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 111 mg-dry-wt

Analyte/Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1660	1800	92.2%	1540	1800	85.6%	7.5%
Toluene	1640	1800	91.1%	1530	1800	85.0%	6.9%
Ethylbenzene	1630	1800	90.6%	1550	1800	86.1%	5.0%
m,p-Xylene	3270	3600	90.8%	3090	3600	85.8%	5.7%
o-Xylene	1610	1800	89.4%	1550	1800	86.1%	3.8%
Methyl tert-Butyl Ether	1570	1800	87.2%	1520	1800	84.4%	3.2%
Naphthalene	1370	1800	76.1%	1530	1800	85.0%	11.0%
1,2,3-Trimethylbenzene	1770	1800	98.3%	1740	1800	96.7%	1.7%
1-Methylnaphthalene	1420	1800	78.9%	1660	1800	92.2%	15.6%
n-Pentane	1730	1800	96.1%	1300	1800	72.2%	28.4%
n-Hexane	1680	1800	93.3%	1320	1800	73.3%	24.0%
n-Octane	1600	1800	88.9%	1300	1800	72.2%	20.7%
n-Decane	1510	1800	83.9%	1320	1800	73.3%	13.4%
n-Dodecane	1760	1800	97.8%	1560	1800	86.7%	12.0%

Values reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

VPH Surrogate Recovery

	LCS	LCSD
PID: 2,5-Dibromotoluene	77.5%	85.0%
FID: 2,5-Dibromotoluene	82.0%	84.5%

ORGANICS ANALYSIS DATA SHEET

VPH by Method WA VPH

Page 1 of 1

Sample ID: MB-061213

METHOD BLANK

Lab Sample ID: MB-061213

LIMS ID: 13-12041

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 06/13/13

QC Report No: WS84-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-03

Date Sampled: NA

Date Received: NA

Date Analyzed: 06/12/13 13:45

Instrument/Analyst: PID1/PKC

Purge Volume: 10 mL

Sample Amount: 111 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	450	< 450 U
108-88-3	Toluene	450	< 450 U
100-41-4	Ethylbenzene	450	< 450 U
179601-23-1	m,p-Xylene	900	< 900 U
95-47-6	o-Xylene	450	< 450 U
1634-04-4	Methyl tert-Butyl Ether	450	< 450 U
109-66-0	n-Pentane	450	< 450 U
110-54-3	n-Hexane	450	< 450 U
111-65-9	n-Octane	450	< 450 U
124-18-5	n-Decane	450	< 450 U
112-40-3	n-Dodecane	450	< 450 U

Range	RL	Result
C8-C10 Aromatics	4,500	< 4,500 U
C10-C12 Aromatics	4,500	< 4,500 U
C12-C13 Aromatics	4,500	< 4,500 U
C5-C6 Aliphatics	4,500	< 4,500 U
C6-C8 Aliphatics	4,500	< 4,500 U
C8-C10 Aliphatics	4,500	< 4,500 U
C10-C12 Aliphatics	4,500	< 4,500 U

Values reported in µg/kg (ppb)

VPH Surrogate Recovery

PID: 2,5-Dibromotoluene	80.5%
FID: 2,5-Dibromotoluene	82.5%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 31, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-05
ARI Job No.: WY96

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted fifteen soil samples on July 27, 2013. Select samples were archived upon receipt. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested on the COC.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", written over a faint circular stamp or watermark.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.
Justin Clary/Maul Foster & Alongi, Inc.

eFile: WY96

Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **WY96** Turn-around Requested: **RUSH 24 HR**
 ARI Client Company: **MFA** Phone: _____

Page: **1** of **2**
 Date: **7/25/13** Ice Present? **Y**



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Client Contact: **TONY SILVA tsilva@maulfoster.com**

No. of Coolers: **3** Cooler Temps: **0, 7, 0, 4, 0, 8**

Client Project Name: **CASHMERE**

Analysis Requested

Client Project #: **0779.02.01-05** Samplers: **KELLY TITKEMEIER**

Sample ID	Date	Time	Matrix	No. Containers	EDB/EDC/MTBE	TPHGX	TPHDX	BTEX	Analysis Requested				Notes/Comments	
GP1-S-3.0	7/25/13	0930	SOIL	7		X	X	X						
GP2-S-3.5		1005		7		X	X	X						
GP3-S-3.0		1045		7		X	X	X						
GP4-S-4.0		1120		7		X	X	X						
GP5-S-4.0		1300		7		X	X	X						
GP5-S-5.0		1310		1										HOLD
GP5-S-6.5		1315		6										HOLD
GP5-S-7.0		1320		1										HOLD
GP5-S-8.0		1325		1										HOLD
GP6-S-4.0	✓	1400	✓	7		X	X	X						

Comments/Special Instructions HOLD FOR EDB/EDC/MTBE	Relinquished by: (Signature) <i>Kelly R. Titkemeier</i>	Received by: (Signature) <i>Jennifer Milkov</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name Kelly R. Titkemeier	Printed Name Jennifer Milkov	Printed Name	Printed Name:
	Company: MFA	Company ARI	Company	Company:
	Date & Time: 7/25/13	Date & Time: 7/27/13 730	Date & Time	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

200901051M

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W196	Turn-around Requested: RUSH 24 HR	Page: 2 of 2
ARI Client Company: MFA	Phone:	Date: 7/25/13
Client Contact: TONY SILVA	tsilva@maulfoster.com	Ice Present? Y
Client Project Name: CASHMERE		No. of Coolers: 3
		Cooler Temps: 0.7, 0.4, 0.8

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested					Notes/Comments	
					EDB/EDC/MTBE	TPHGX	TPHDX	BTEX			
GP6-S-6.5	7/25/13	1410	SOIL	6							HOLD
GP6-S-12.5	↓	1420	↓	1							HOLD
GP7-S-4.0	↓	1515	↓	7							
GP8-S-4.0	↓	1605	↓	7							
GP9-S-4.0	7/26/13	0820	SOIL	7							

Comments/Special Instructions HOLD FOR EDB/EDC/MTBE	Relinquished by (Signature): <i>Kelly R. Titkemeier</i>	Received by (Signature): <i>Jennifer Milroy</i>	Relinquished by (Signature):	Received by (Signature):
	Printed Name: Kelly R. Titkemeier	Printed Name: Jennifer Milroy	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 7/25/13	Date & Time: 7/27/13 730	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client MFA

Project Name Cashmere

COC No(s) _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No. WY916

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2-6-0 °C for chemistry) 0.7 0.4 0.8

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by: JM Date: 7/27/13 Time: 730

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: _____ (NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 7/29/13 Time: 658


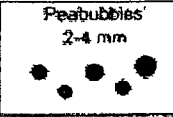
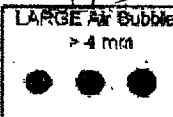
**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

No labels on containers, ID's on lids.

By: JM Date: 7/29/13

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WY96
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-05
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. GP1-S-3.0	WY96A	13-15741	Soil	07/25/13 09:30	07/27/13 07:30
2. GP2-S-3.5	WY96B	13-15742	Soil	07/25/13 10:05	07/27/13 07:30
3. GP3-S-3.0	WY96C	13-15743	Soil	07/25/13 10:45	07/27/13 07:30
4. GP4-S-4.0	WY96D	13-15744	Soil	07/25/13 11:20	07/27/13 07:30
5. GP5-S-4.0	WY96E	13-15745	Soil	07/25/13 13:00	07/27/13 07:30
6. GP6-S-4.0	WY96F	13-15746	Soil	07/25/13 14:00	07/27/13 07:30
7. GP7-S-4.0	WY96G	13-15747	Soil	07/25/13 15:15	07/27/13 07:30
8. GP8-S-4.0	WY96H	13-15748	Soil	07/25/13 16:05	07/27/13 07:30
9. GP9-S-4.0	WY96I	13-15749	Soil	07/26/13 08:20	07/27/13 07:30
10. GP5-S-5.0	WY96J	13-15750	Soil	07/25/13 13:10	07/27/13 07:30
11. GP5-S-6.5	WY96K	13-15751	Soil	07/25/13 13:15	07/27/13 07:30
12. GP5-S-7.0	WY96L	13-15752	Soil	07/25/13 13:20	07/27/13 07:30
13. GP5-S-8.0	WY96M	13-15753	Soil	07/25/13 13:25	07/27/13 07:30
14. GP6-S-6.5	WY96N	13-15754	Soil	07/25/13 14:10	07/27/13 07:30
15. GP6-S-12.5	WY96O	13-15755	Soil	07/25/13 14:20	07/27/13 07:30



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria"
(Dioxin/Furan analysis only)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers.
(Dioxin/Furan analysis only)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**




Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: WY96-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-05

Matrix: Soil
Data Release Authorized: 
Reported: 07/30/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-072913 13-15741	Method Blank HC ID: ---	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.0 10	< 5.0 U < 10 U 86.9%
WY96A 13-15741	GP1-S-3.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.6 13	87 370 71.9%
WY96B 13-15742	GP2-S-3.5 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.2 10	40 280 69.4%
WY96C 13-15743	GP3-S-3.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.4 13	12 16 80.1%
WY96D 13-15744	GP4-S-4.0 HC ID: MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.4 11	< 5.4 U 24 85.2%
WY96E 13-15745	GP5-S-4.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	5.6 11	8.0 29 82.5%
WY96F 13-15746	GP6-S-4.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 100	Diesel Range Motor Oil Range o-Terphenyl	640 1300	4600 20000 D
WY96G 13-15747	GP7-S-4.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	9.8 20	33 52 66.4%
WY96H 13-15748	GP8-S-4.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	7.1 14	7.3 32 74.3%
WY96I 13-15749	GP9-S-4.0 HC ID: DIESEL/MOTOR OIL	07/29/13	07/30/13 FID9	1.00 1.0	Diesel Range Motor Oil Range o-Terphenyl	6.1 12	14 21 82.0%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a006.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96MBS1
 Client ID: WY96MBS1
 Injection: 30-JUL-2013 10:52
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	279697	8
C8	1.059	-0.013	2881	6625	DIESEL (C12-C24)	327361	17.52
C10	2.845	-0.008	1838	1945	M.OIL (C24-C38)	209020	13.04
C12	3.838	-0.004	2050	2416	AK-102 (C10-C25)	406694	18.74
C14	4.531	-0.004	2507	1355	AK-103 (C25-C36)	169056	14.55
C16	5.117	-0.007	5448	6642			
C18	5.683	0.001	2610	1760			
C20	6.238	-0.004	1886	1765			
C22	6.787	-0.002	1400	739			
C24	7.315	-0.001	941	759			
C25	7.560	-0.002	2635	3924			
C26	7.825	0.008	723	260			
C28	8.260	0.001	9016	10044			
C32	9.031	-0.013	6981	7717			
C34	9.385	-0.004	1117	772	CREOSOT (C12-C22)	305137	82.63
Filter Peak	11.495	0.008	2383	5240			
C36	9.724	0.017	1434	618			
C38	10.002	-0.003	1666	1165			
C40	10.302	0.013	1940	806			
o-terph	5.813	-0.004	1109250	1001537	JET-A (C10-C18)	293372	17.84
Triacon Surr	8.673	-0.010	743276	896755			

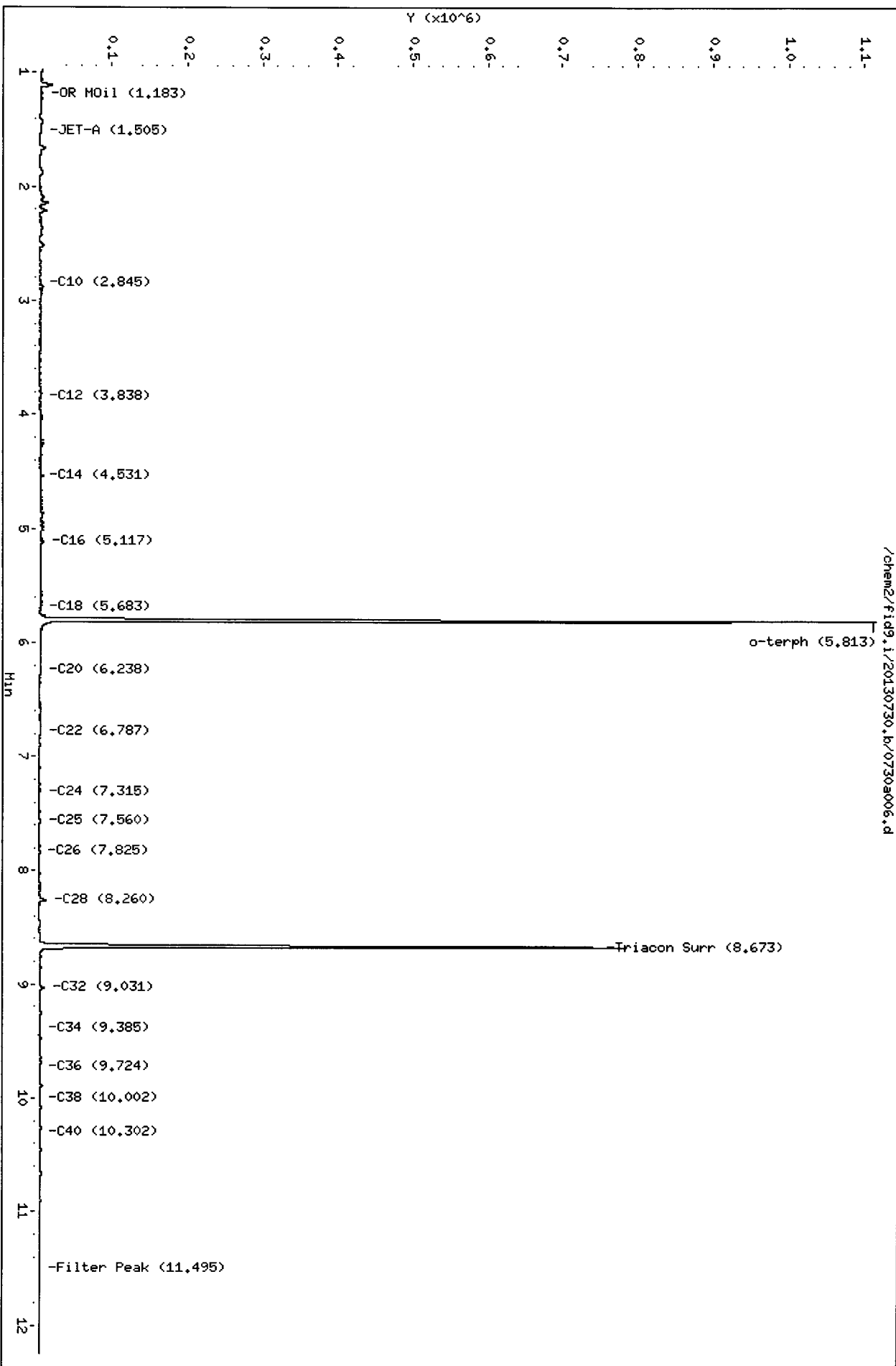
M Indicates manual integration within range.

Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1001537	39.1	86.9
Triacantane	896755	47.4	105.4

JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a009.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96A
 Client ID: GP1-S-3.0
 Injection: 30-JUL-2013 12:00
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	410900	12
C8	1.080	0.008	8355	14164	DIESEL (C12-C24)	12271147	656.92 ✓
C10	2.853	0.000	3861	4908	M.OIL (C24-C38)	44779776	2792.59 ✓
C12	3.838	-0.004	9971	10420	AK-102 (C10-C25)	14012781	645.54 M
C14	4.529	-0.005	21760	21698	AK-103 (C25-C36)	39302319	3382.93 M
C16	5.117	-0.007	48633	57587			
C18	5.675	-0.007	78699	123124			
C20	6.250	0.008	81145	77435			
C22	6.784	-0.006	137521	130001			
C24	7.312	-0.003	193355	162235			
C25	7.562	0.001	236590	187952			
C26	7.808	-0.008	269631	234385			
C28	8.255	-0.004	349767	95582			
C32	9.048	0.004	297151	98821			
C34	9.393	0.004	280939	317750	CREOSOT (C12-C22)	7561337	2047.53 M
Filter Peak	11.489	0.003	22713	22719			
C36	9.708	0.001	247539	77377			
C38	10.007	0.001	230750	197751			
C40	10.287	-0.002	159486	112813			
o-terph	5.812	-0.005	776958	829060	JET-A (C10-C18)	2212706	134.53
Triacon Surr	8.697	0.014	561048	690109			

M Indicates manual integration within range.

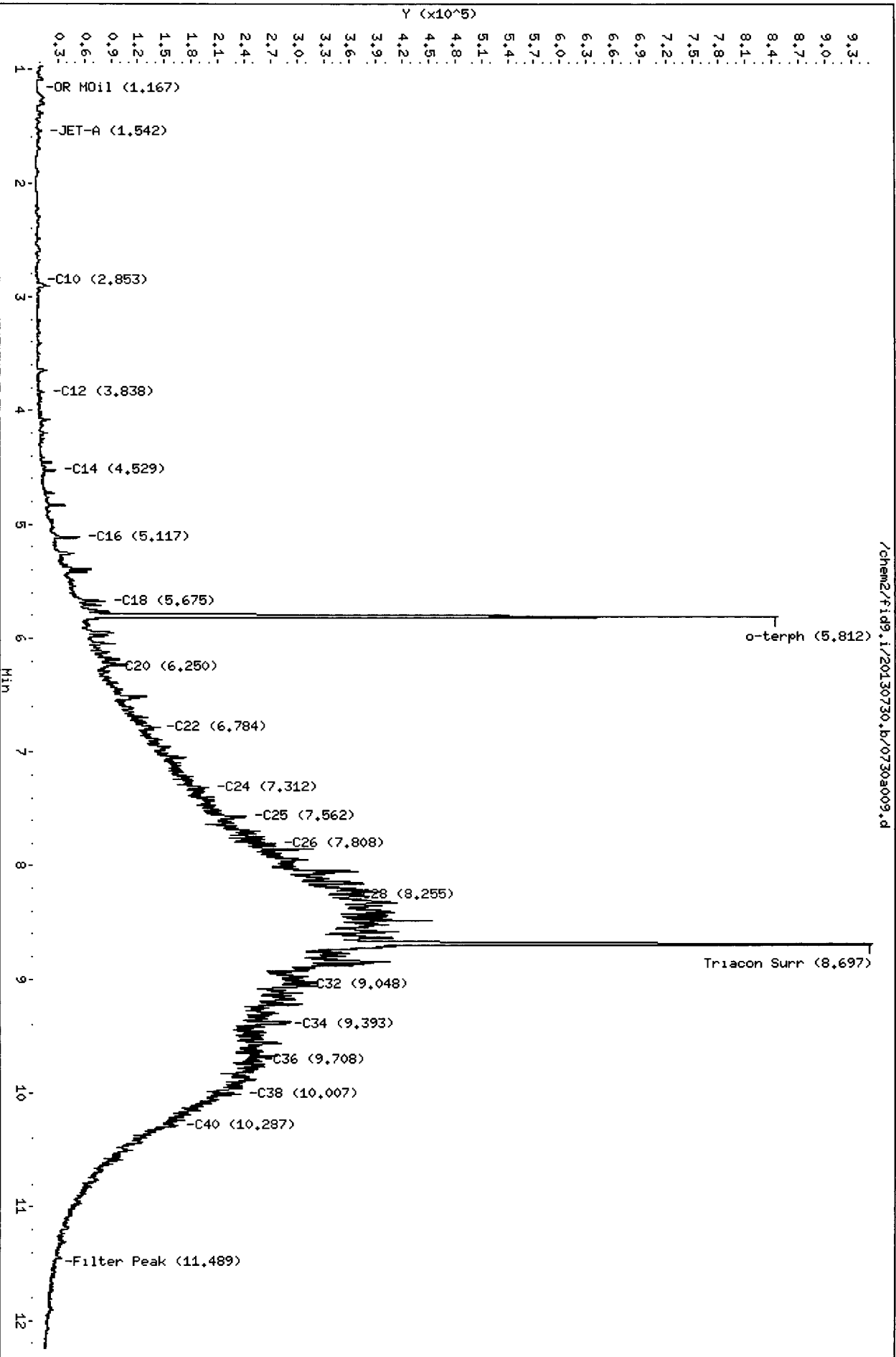
Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	829060	32.4	71.9 ✓
Triacontane	690109	36.5	81.1

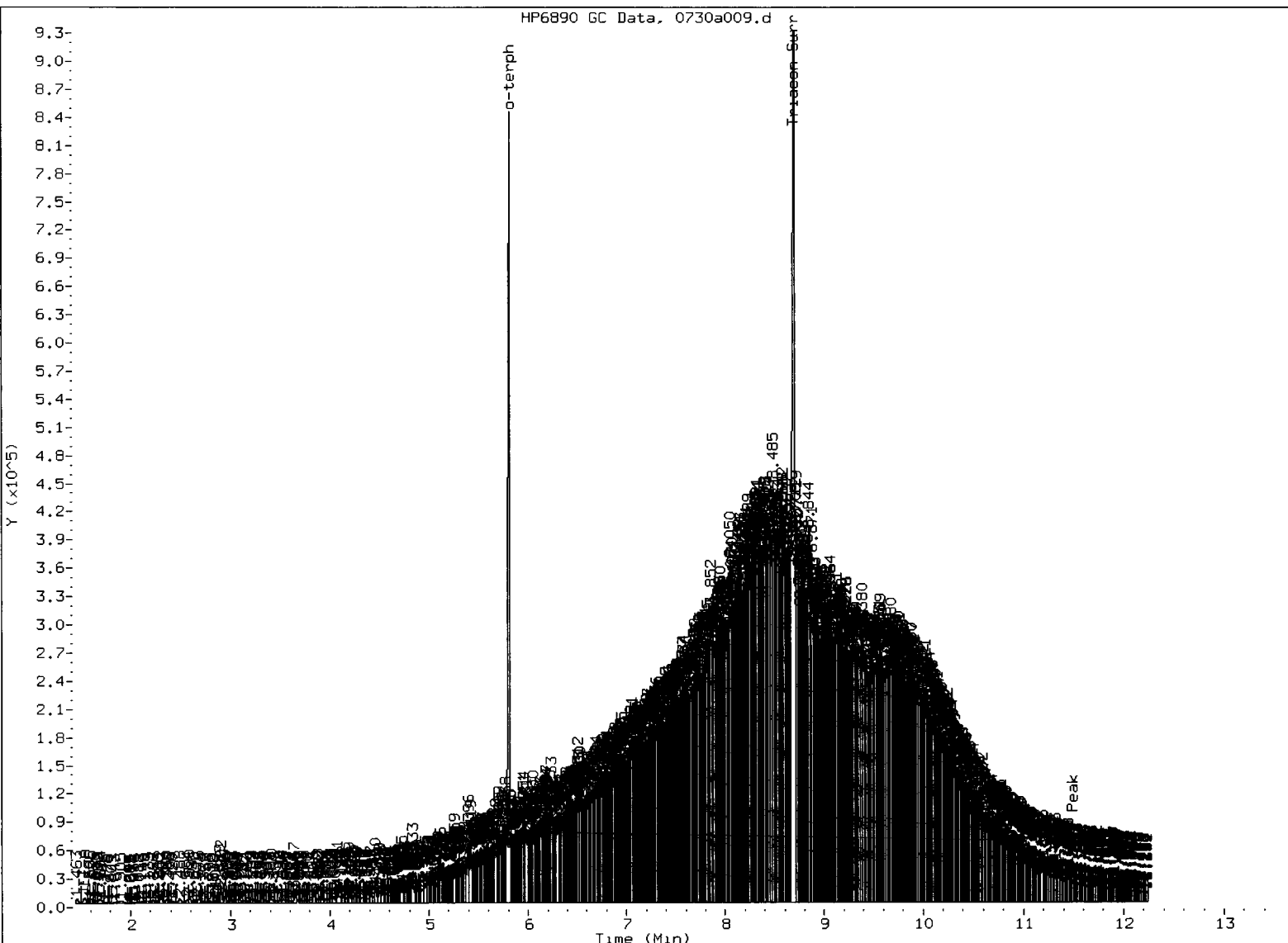
JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

JW
7/30/13



HP6890 GC Data. 0730a009.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JD

Date: 7/30/03

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a010.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96B
 Client ID: GP2-S-3.5
 Injection: 30-JUL-2013 12:23
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	251749	7
C8	1.070	-0.002	7553	12247	DIESEL (C12-C24)	7195170	385.18
C10	2.849	-0.004	1221	1399	M.OIL (C24-C38)	42822180	2670.51
C12	3.840	-0.002	5277	5806	AK-102 (C10-C25)	8808591	405.79 M
C14	4.529	-0.006	6956	8663	AK-103 (C25-C36)	37798097	3253.45 M
C16	5.118	-0.006	10181	12941			
C18	5.686	0.004	14976	9187			
C20	6.240	-0.002	38732	22124			
C22	6.788	-0.002	88659	19000			
C24	7.316	0.000	156284	24694			
C25	7.564	0.003	189326	155173			
C26	7.814	-0.003	236415	158186			
C28	8.260	0.000	380172	153580			
C32	9.043	-0.001	290414	91003			
C34	9.393	0.004	250696	260365	CREOSOT (C12-C22)	3412877	924.17 M
Filter Peak	11.483	-0.003	16102	4426			
C36	9.706	-0.001	217523	64237			
C38	10.013	0.008	191361	126240			
C40	10.292	0.003	109379	25945			
o-terph	5.812	-0.005	841278	800399	JET-A (C10-C18)	690629	41.99
Triacon Surr	8.698	0.015	549261	682167			

M Indicates manual integration within range.

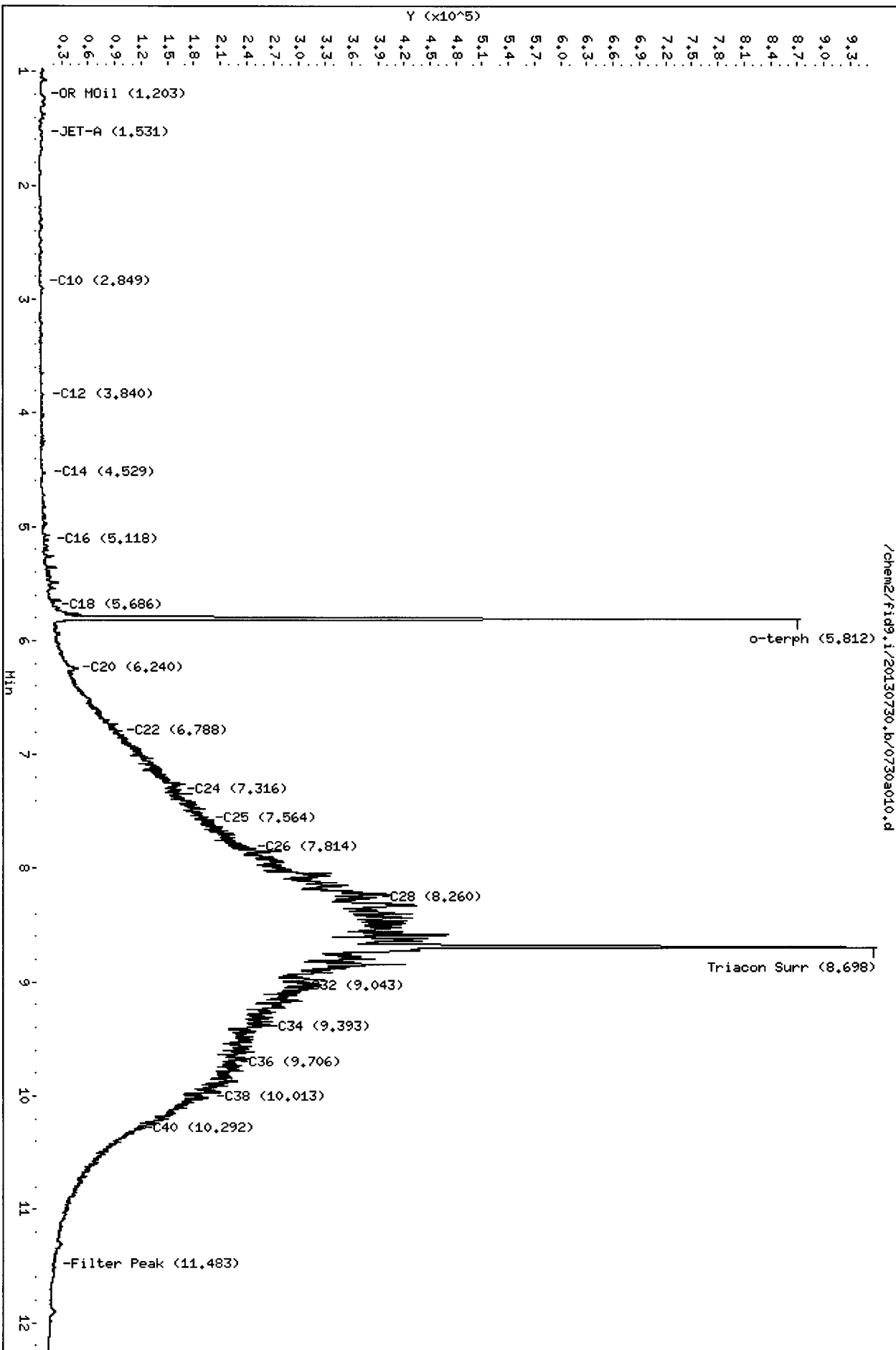
Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	800399	31.3	69.4
Triacontane	682167	36.1	80.2

JW
7/30/13

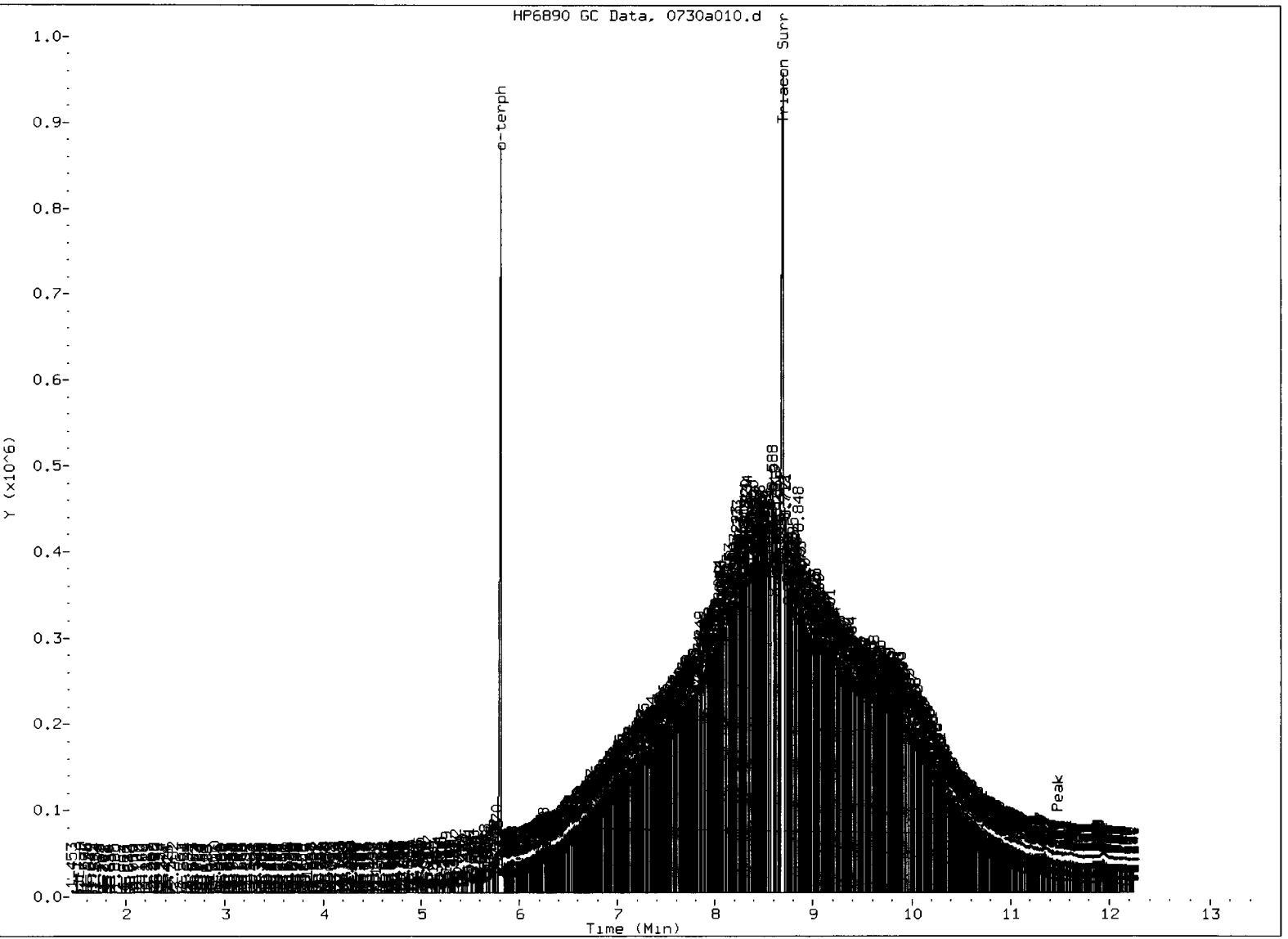
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

/chem2/fig9.i/20130730.b/0730a010.d



Handwritten note: 10/20/13

HP6890 GC Data, 0730a010.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ⑤. Surrogate Skimmed

Analyst: JW

Date: 7/30/13

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a011.d
Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 07/30/2013

ARI ID: WY96C
Client ID: GP3-S-3.0
Injection: 30-JUL-2013 12:46
Dilution Factor: 1
Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	233145	7
C8	1.076	0.004	3254	8277	DIESEL (C12-C24)	1745149	93.42
C10	2.853	0.000	1540	1581	M.OIL (C24-C38)	2075180	129.41
C12	3.838	-0.004	3727	3740	AK-102 (C10-C25)	1869310	86.12
C14	4.528	-0.006	6863	5161	AK-103 (C25-C36)	1852792	159.48 M
C16	5.114	-0.010	8643	8164			
C18	5.672	-0.010	9687	13565			
C20	6.252	0.010	8273	10558			
C22	6.800	0.010	6076	3829			
C24	7.323	0.008	7946	9130			
C25	7.548	-0.013	21305	28901			
C26	7.816	-0.001	9123	5680			
C28	8.260	0.000	14509	12230			
C32	9.051	0.006	13867	6749			
C34	9.394	0.005	9140	6939	CREOSOT (C12-C22)	1552505	420.40
Filter Peak	11.488	0.001	5662	4663			
C36	9.712	0.004	9956	7229			
C38	10.003	-0.002	10573	10376			
C40	10.292	0.003	8742	5131			
o-terph	5.813	-0.004	1065904	922946	JET-A (C10-C18)	366659	22.29
Triacon Surr	8.673	-0.010	672708	779467			

M Indicates manual integration within range.

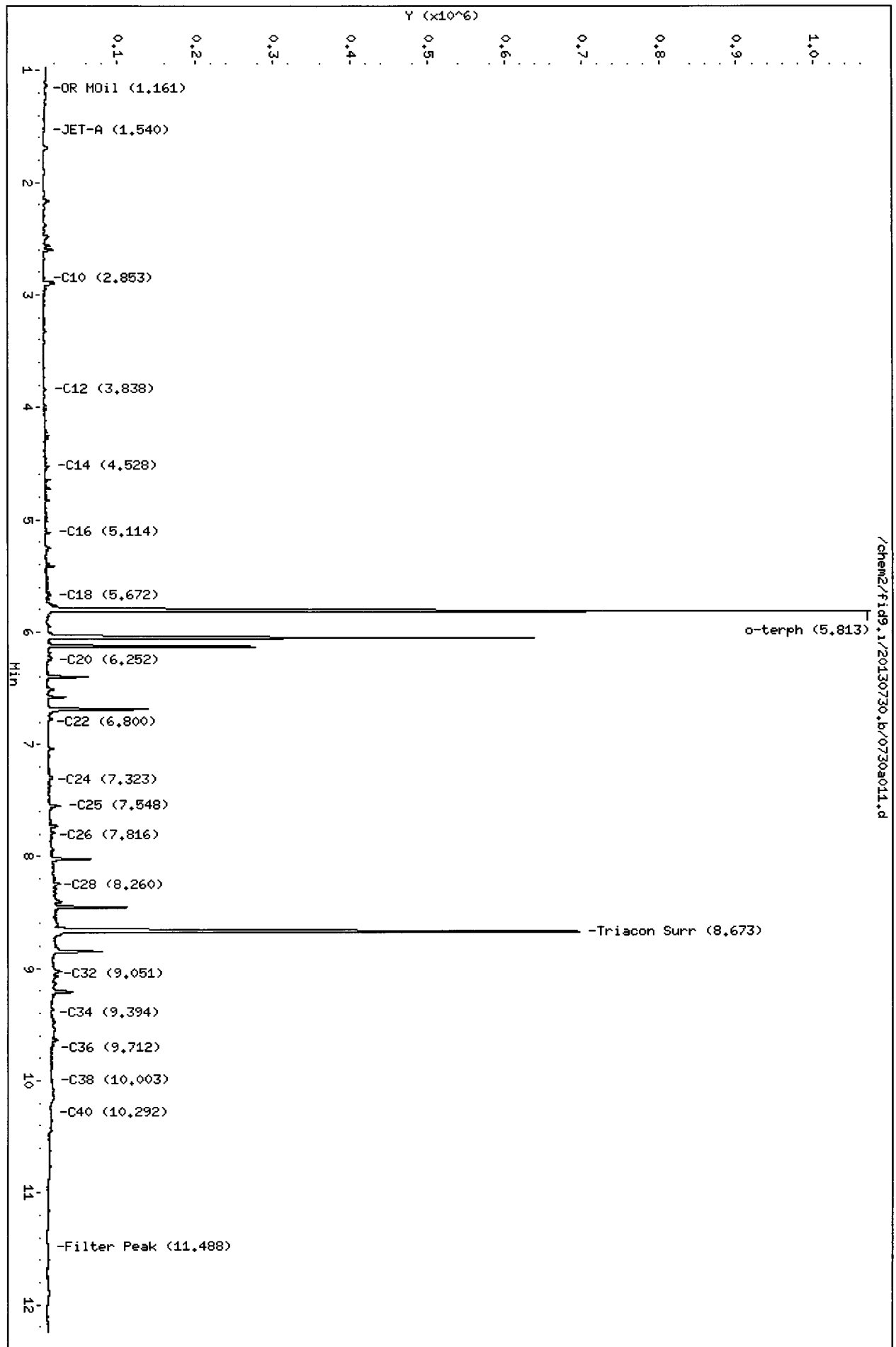
Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	922946	36.0	80.1
Triacotane	779467	41.2	91.7

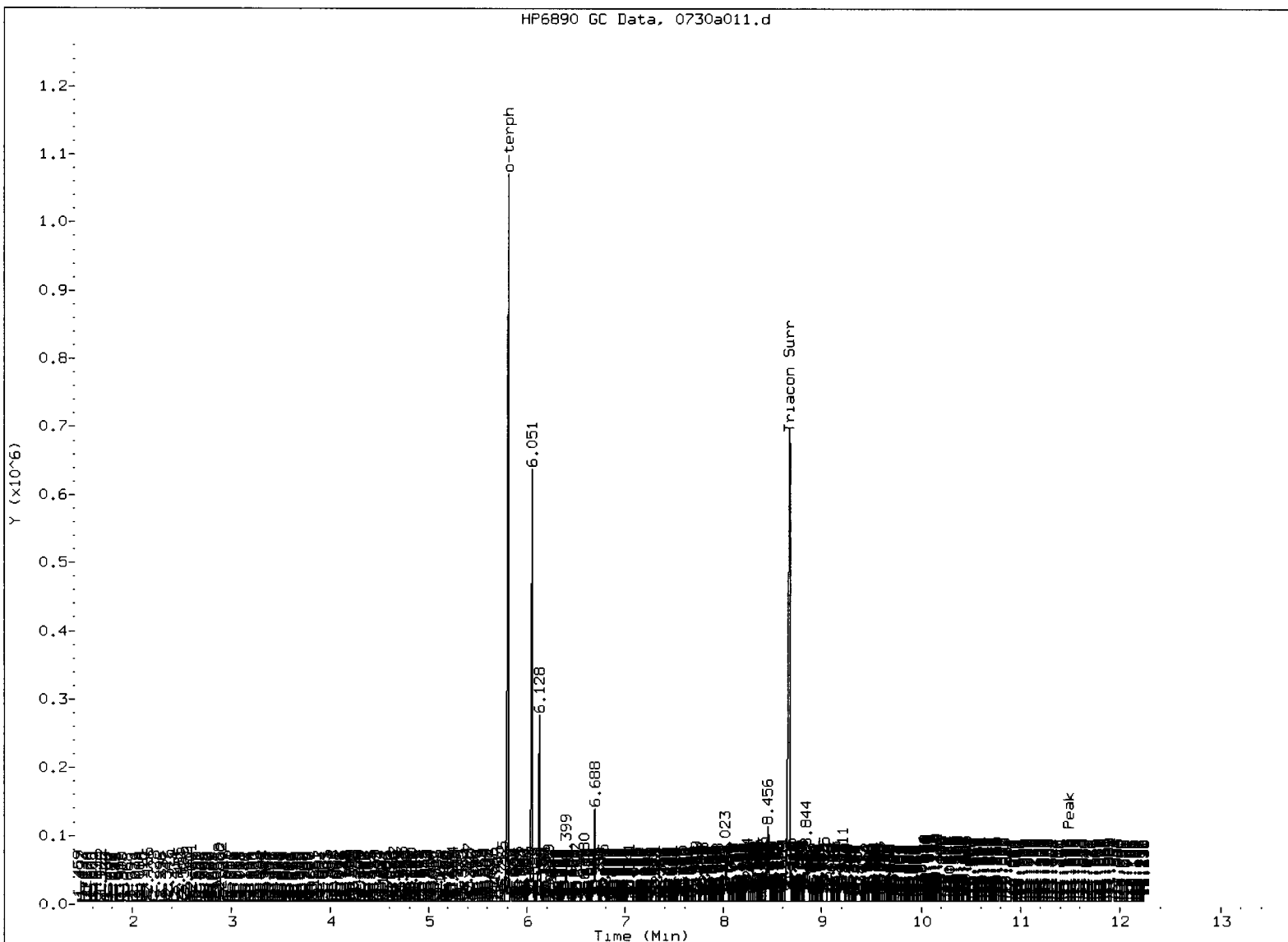
BW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

2
7/30/13



HP6890 GC Data, 0730a011.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JW

Date: 7/30/12

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a012.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96D
 Client ID: GP4-S-4.0
 Injection: 30-JUL-2013 13:08
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	218163	6
C8	1.056	-0.016	6787	7990	DIESEL (C12-C24)	742131	39.73
C10	2.853	0.000	1064	587	M.OIL (C24-C38)	3592724	224.05
C12	3.840	-0.002	2275	2429	AK-102 (C10-C25)	902129	41.56
C14	4.529	-0.005	2337	1815	AK-103 (C25-C36)	3150676	271.19 M
C16	5.117	-0.007	3735	3125			
C18	5.683	0.001	3351	2312			
C20	6.245	0.003	5210	3121			
C22	6.796	0.006	7361	5499			
C24	7.330	0.014	15929	28480			
C25	7.560	-0.001	15990	12918			
C26	7.814	-0.002	16539	7338			
C28	8.256	-0.004	26356	15534			
C32	9.056	0.012	23861	6914			
C34	9.392	0.003	21802	4659	CREOSOT (C12-C22)	465576	126.07
Filter Peak	11.486	0.000	3217	889			
C36	9.706	-0.002	23080	5449			
C38	10.000	-0.005	20154	28397			
C40	10.292	0.003	14461	3407			
o-terph	5.813	-0.004	991085	981747	JET-A (C10-C18)	193196	11.75
Triacon Surr	8.676	-0.007	745261	847973			

M Indicates manual integration within range.

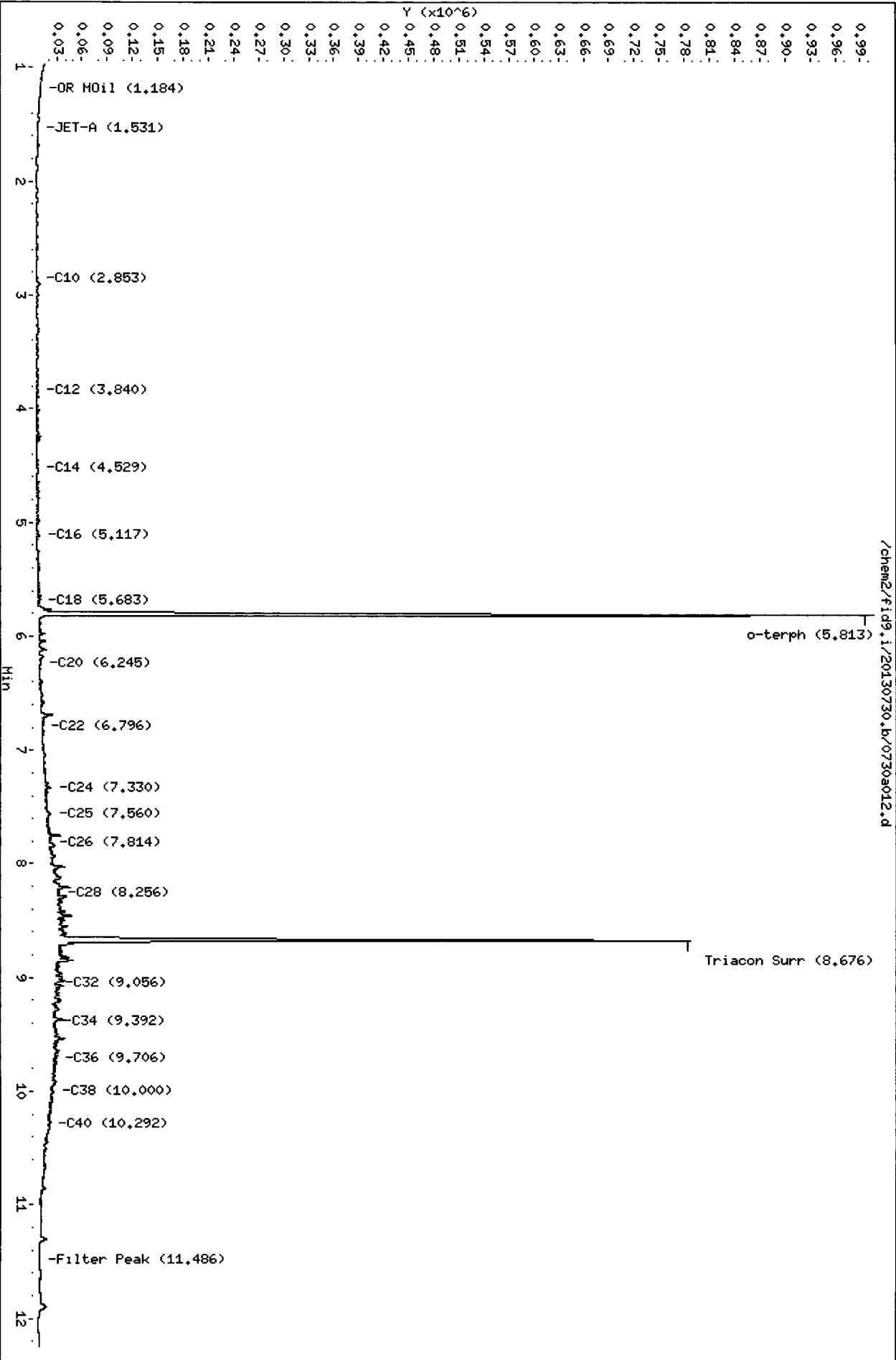
Range Times: NW Diesel (3.842 - 7.316) AK102 (2.85 - 7.56) Jet A (2.85 - 5.68)
 NW M.Oil (7.32 - 10.01) AK103 (7.56 - 9.71) OR Diesel (2.85 - 8.26)

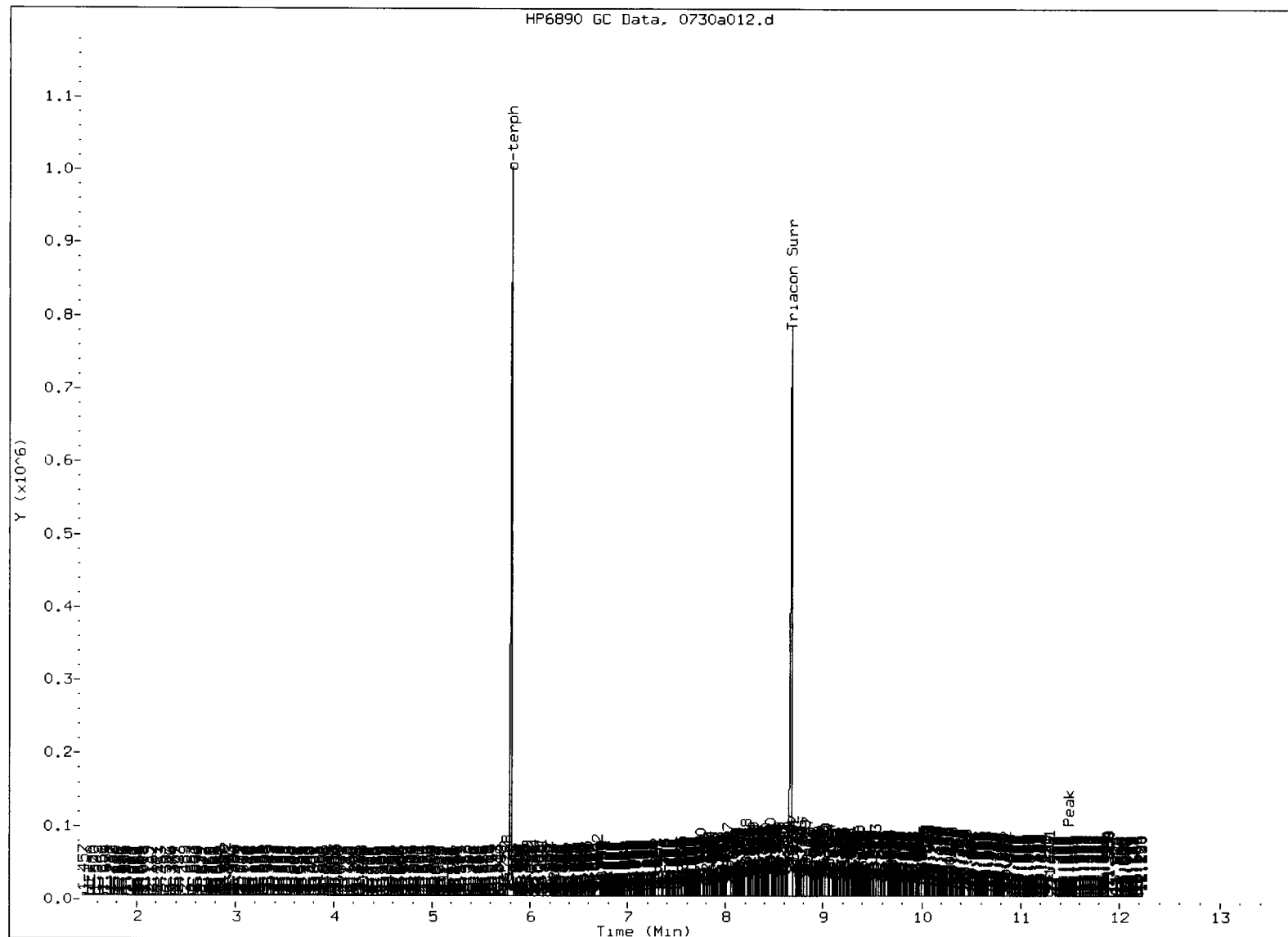
Surrogate	Area	Amount	%Rec
o-Terphenyl	981747	38.3	85.2
Triacontane	847973	44.9	99.7

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

JW
7/30/13

7/30/13





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Surrogate Skipped

Analyst: JD

Date: 7/30/12

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a013.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96E
 Client ID: GP5-S-4.0
 Injection: 30-JUL-2013 13:31
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	185192	5
C8	1.073	0.001	3041	4650	DIESEL (C12-C24)	1338531	71.66 ✓
C10	2.850	-0.003	1471	1593	M.OIL (C24-C38)	4254006	265.29 ✓
C12	3.841	-0.001	3462	4121	AK-102 (C10-C25)	1556359	71.70
C14	4.531	-0.003	5444	3480	AK-103 (C25-C36)	3762690	323.87 M
C16	5.117	-0.007	9297	14789			
C18	5.673	-0.010	7440	10711			
C20	6.241	-0.001	7716	5472			
C22	6.778	-0.011	14821	23351			
C24	7.312	-0.003	17936	4555			
C25	7.570	0.008	22547	5741			
C26	7.813	-0.004	25405	9917			
C28	8.260	0.001	39435	34774			
C32	9.055	0.011	24500	4819			
C34	9.392	0.003	21504	5885	CREOSOT (C12-C22)	880892	238.54
Filter Peak	11.490	0.003	3492	1594			
C36	9.711	0.004	21107	8593			
C38	10.006	0.001	18027	11586			
C40	10.291	0.002	12473	3935			
o-terph	5.813	-0.004	1081011	950997	JET-A (C10-C18)	390515	23.74
Triacon Surr	8.673	-0.010	693780	821785			

M Indicates manual integration within range.

Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	950997	37.1	82.5
Triacontane	821785	43.5	96.6

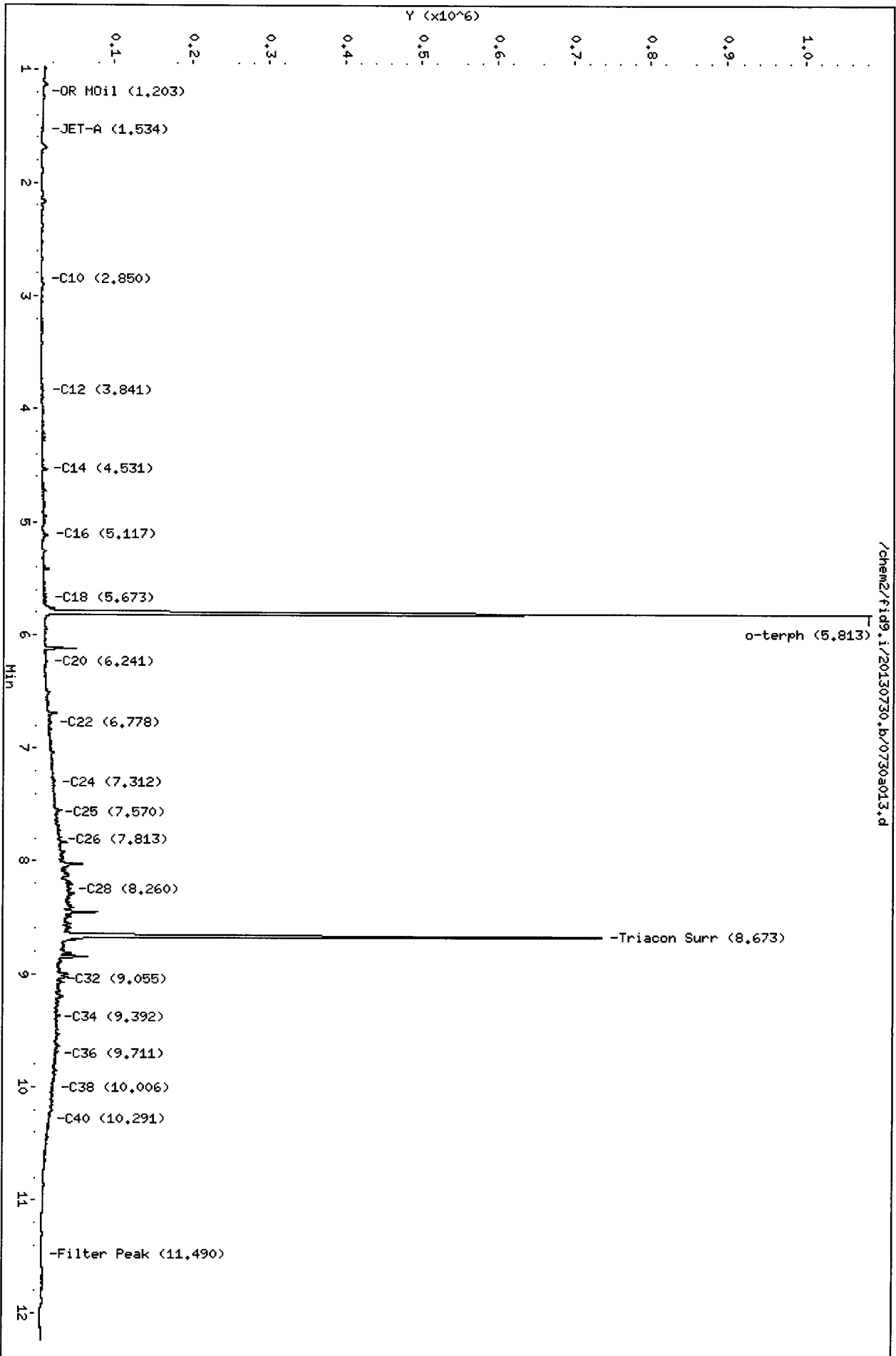
JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

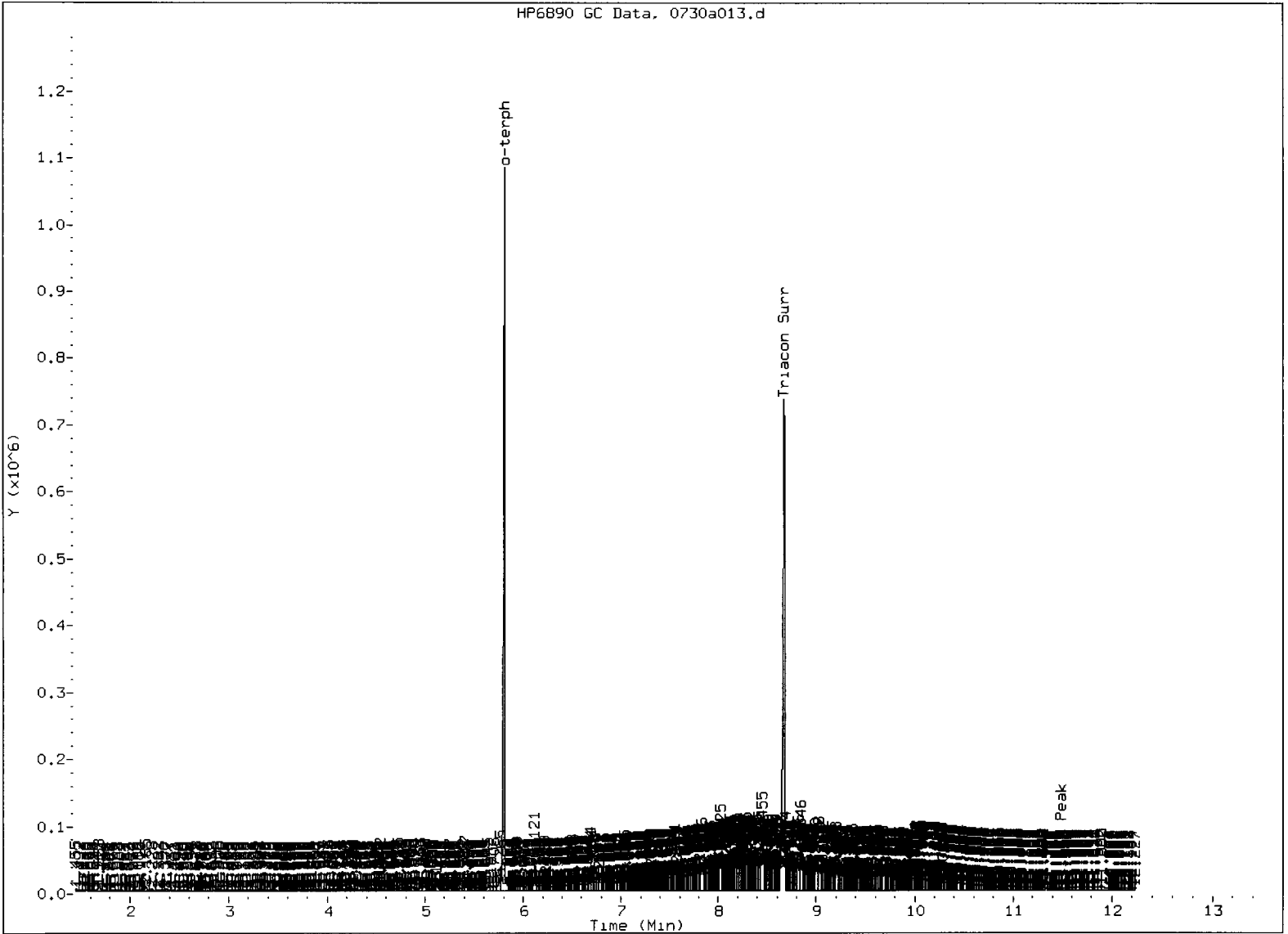
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Date: 30-JUL-2013 13:31
Client ID: GP5-S-4.0
Sample Info: WY96E
Column phase: RTX-1

Instrument: fid9.1
Operator: JM
Column diameter: 0.25

JW
7/30/13



HP6890 GC Data. 0730a013.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JD

Date: 7/30/13

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a014.d
Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
Instrument: fid9.i
Operator: JW
Report Date: 07/30/2013

ARI ID: WY96F
Client ID: GP6-S-4.0
Injection: 30-JUL-2013 13:54
Dilution Factor: 100
Macro: 30-JAN-2013

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	160813	5
C8	1.051	-0.021	2248	5771	DIESEL (C12-C24)	6599608	353.30
C10	2.852	0.000	1142	1356	M.OIL (C24-C38)	24597795	1533.99
C12	3.838	-0.005	3562	2178	AK-102 (C10-C25)	7695243	354.50
C14	4.534	-0.001	4048	2976	AK-103 (C25-C36)	22155426	1907.02
C16	5.127	0.003	5982	1394			
C18	5.675	-0.007	18133	17621			
C20	6.241	-0.001	42864	29437			
C22	6.792	0.002	71482	23584			
C24	7.316	0.000	104167	42394			
C25	7.558	-0.004	141763	145896			
C26	7.823	0.007	149101	117116			
C28	8.256	-0.003	207452	65015			
C32	9.041	-0.004	185322	185816			
C34	9.389	0.000	147814	123849	CREOSOT (C12-C22)	3664405	992.28
Filter Peak	11.491	0.005	6130	4925			
C36	9.703	-0.004	107510	75178			
C38	10.007	0.001	74279	38923			
C40	10.292	0.003	44576	25850			
o-terph	----				JET-A (C10-C18)	876852	53.31
Triacon Surr	----						

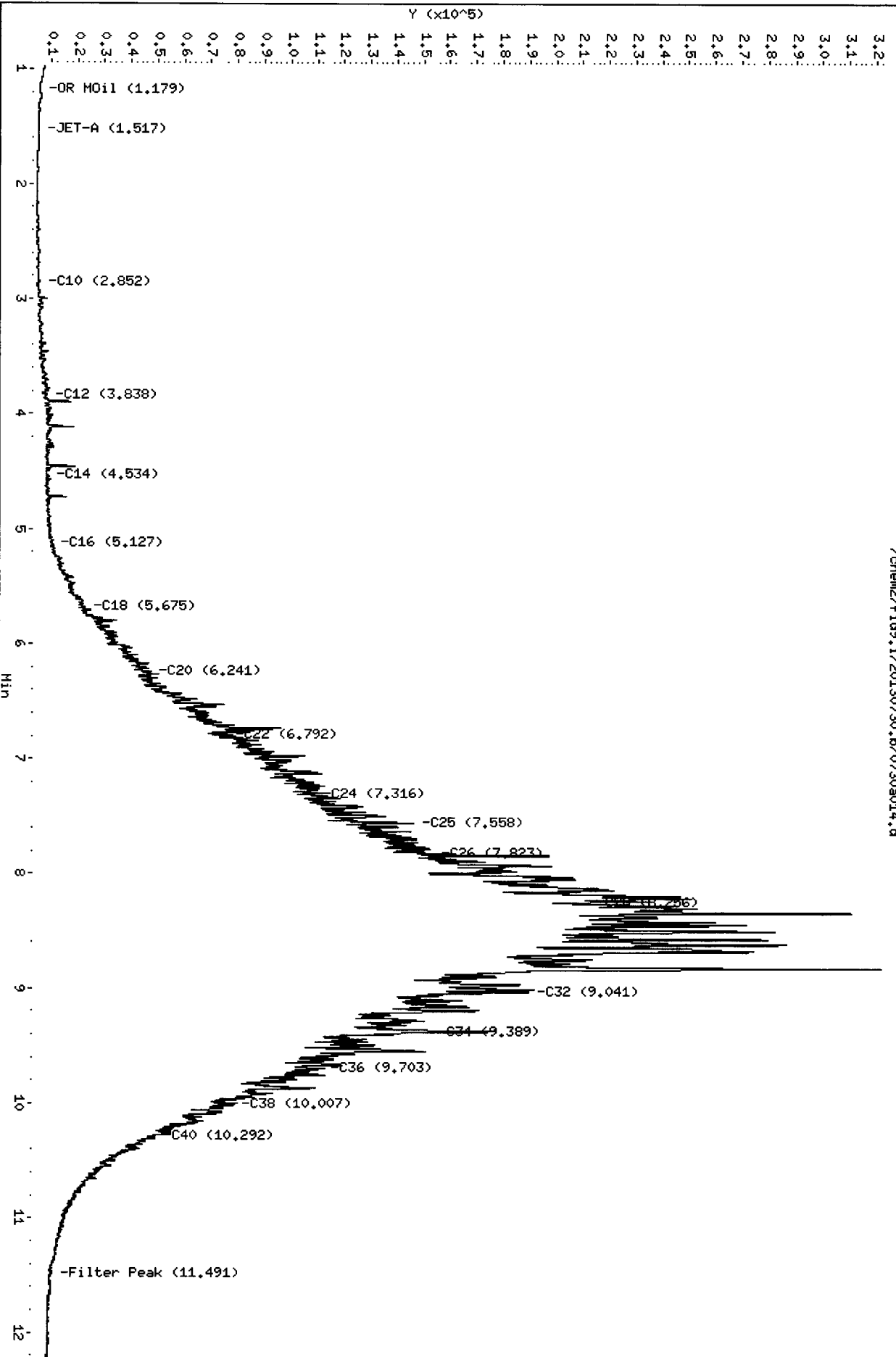
M Indicates manual integration within range.

Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013



Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a015.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96G
 Client ID: GP7-S-4.0
 Injection: 30-JUL-2013 14:17
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	363192	11
C8	1.073	0.001	3654	8967	DIESEL (C12-C24)	3120491	167.05
C10	2.850	-0.002	1880	2033	M.OIL (C24-C38)	4259934	265.66
C12	3.839	-0.004	6395	6317	AK-102 (C10-C25)	3474081	160.04 M
C14	4.528	-0.006	6772	5046	AK-103 (C25-C36)	3866477	332.80 M
C16	5.117	-0.007	8157	8851			
C18	5.686	0.004	9971	6454			
C20	6.247	0.005	16203	6938			
C22	6.798	0.008	16435	5707			
C24	7.311	-0.005	17897	5273			
C25	7.569	0.007	19316	6760			
C26	7.820	0.004	25808	31166			
C28	8.258	-0.001	32559	12129			
C32	9.027	-0.017	32533	52192			
C34	9.388	-0.001	16171	6997	CREOSOT (C12-C22)	2611120	707.06 M
Filter Peak	11.483	-0.003	3660	2237			
C36	9.703	-0.005	17512	9113			
C38	10.000	-0.005	13246	9141			
C40	10.294	0.005	8228	2418			
o-terph	5.811	-0.006	813972	764778	JET-A (C10-C18)	799929	48.63
Triacon Surr	8.669	-0.014	639144	670582			

M Indicates manual integration within range.

Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	764778	29.9	66.4
Triacontane	670582	35.5	78.8

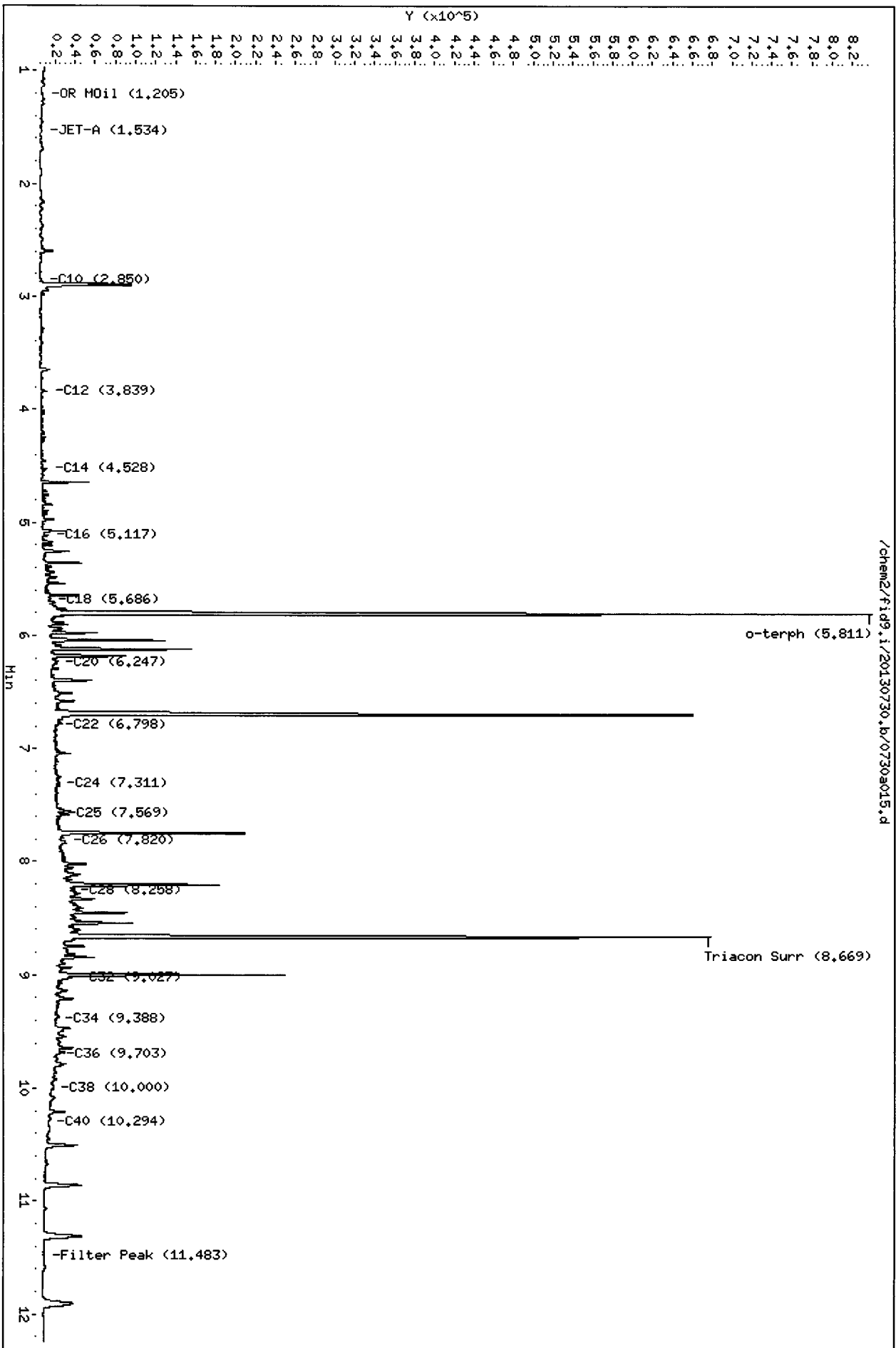
JW
 7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

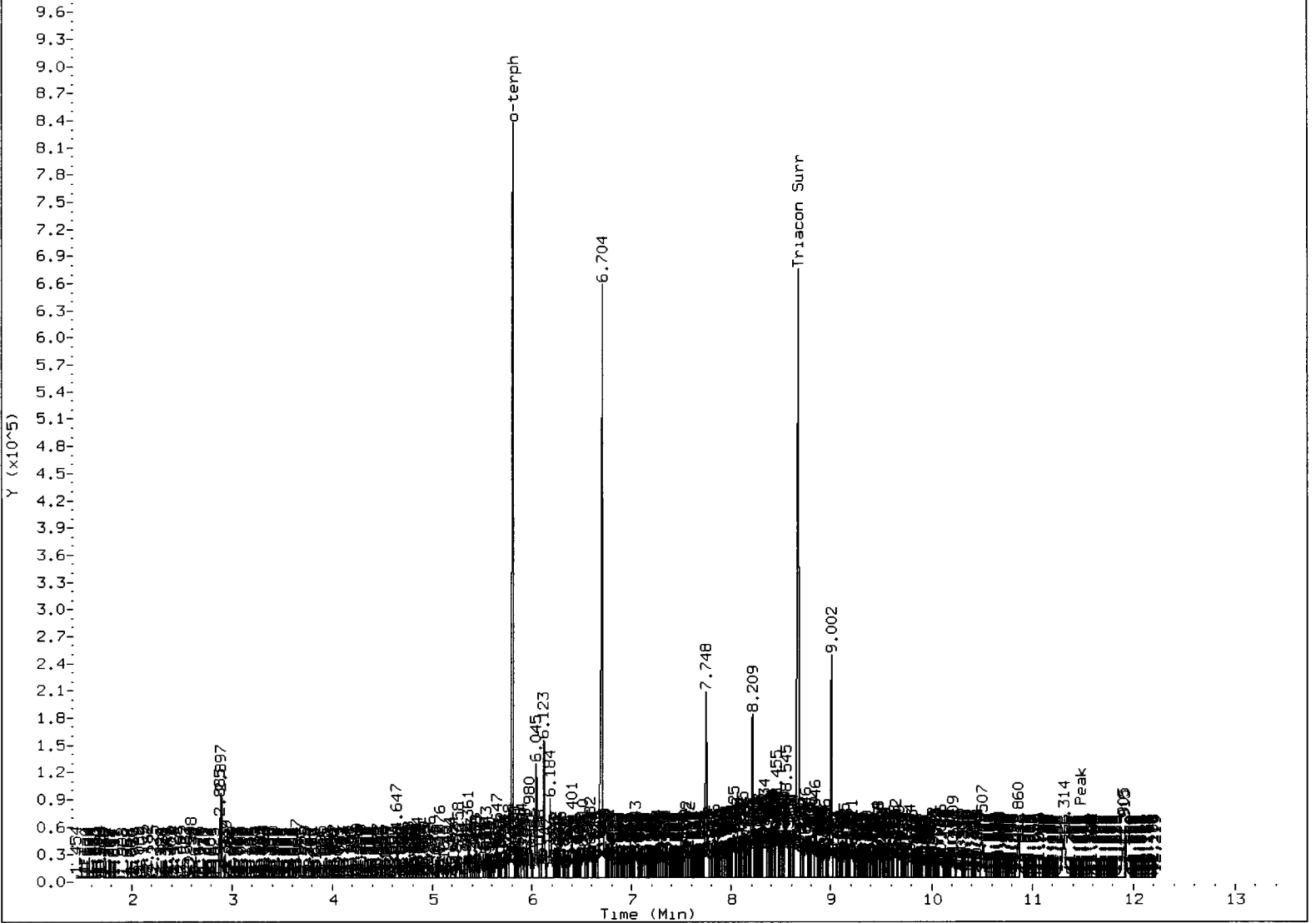
Data File: /chem2/fid9.i/20130730.b/0730a015.d
Date: 30-JUL-2013 14:17
Client ID: GP7-S-4.0
Sample Info: WY96C
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

SW
7/30/13



HP6890 GC Data, 0730a015.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skimmed

Analyst:

Date: 7/30/10

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a016.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96H
 Client ID: GP8-S-4.0
 Injection: 30-JUL-2013 14:39
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	189072	6
C8	1.077	0.005	3367	7203	DIESEL (C12-C24)	960738	51.43
C10	2.852	-0.001	2023	2478	M.OIL (C24-C38)	3670050	228.87
C12	3.839	-0.003	4619	4862	AK-102 (C10-C25)	1123349	51.75
C14	4.528	-0.006	6625	5137	AK-103 (C25-C36)	3330065	286.63 M
C16	5.116	-0.008	8081	7169			
C18	5.673	-0.009	7593	6753			
C20	6.247	0.005	4841	3405			
C22	6.797	0.007	8027	2312			
C24	7.316	0.000	11658	2761			
C25	7.549	-0.012	23580	40527			
C26	7.817	0.001	18007	8231			
C28	8.264	0.005	29191	10310			
C32	9.028	-0.016	32192	68416			
C34	9.388	-0.001	18028	5974	CREOSOT (C12-C22)	675091	182.81
Filter Peak	11.484	-0.002	3355	1847			
C36	9.710	0.003	16622	9619			
C38	10.003	-0.003	13051	7098			
C40	10.285	-0.004	9519	7386			
o-terph	5.812	-0.005	916997	856792	JET-A (C10-C18)	339571	20.65
Triacon Surr	8.675	-0.008	619869	723326			

M Indicates manual integration within range.

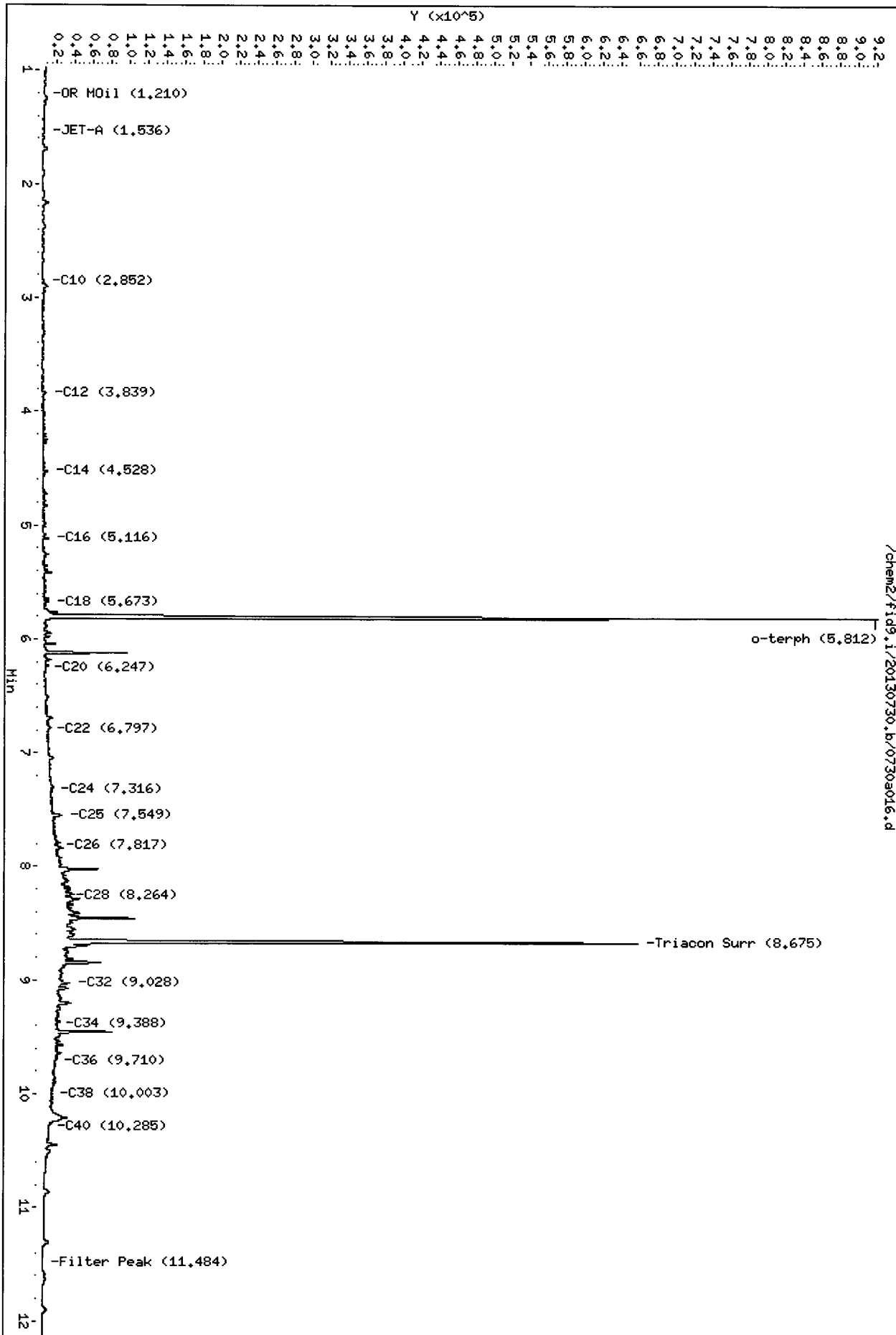
Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

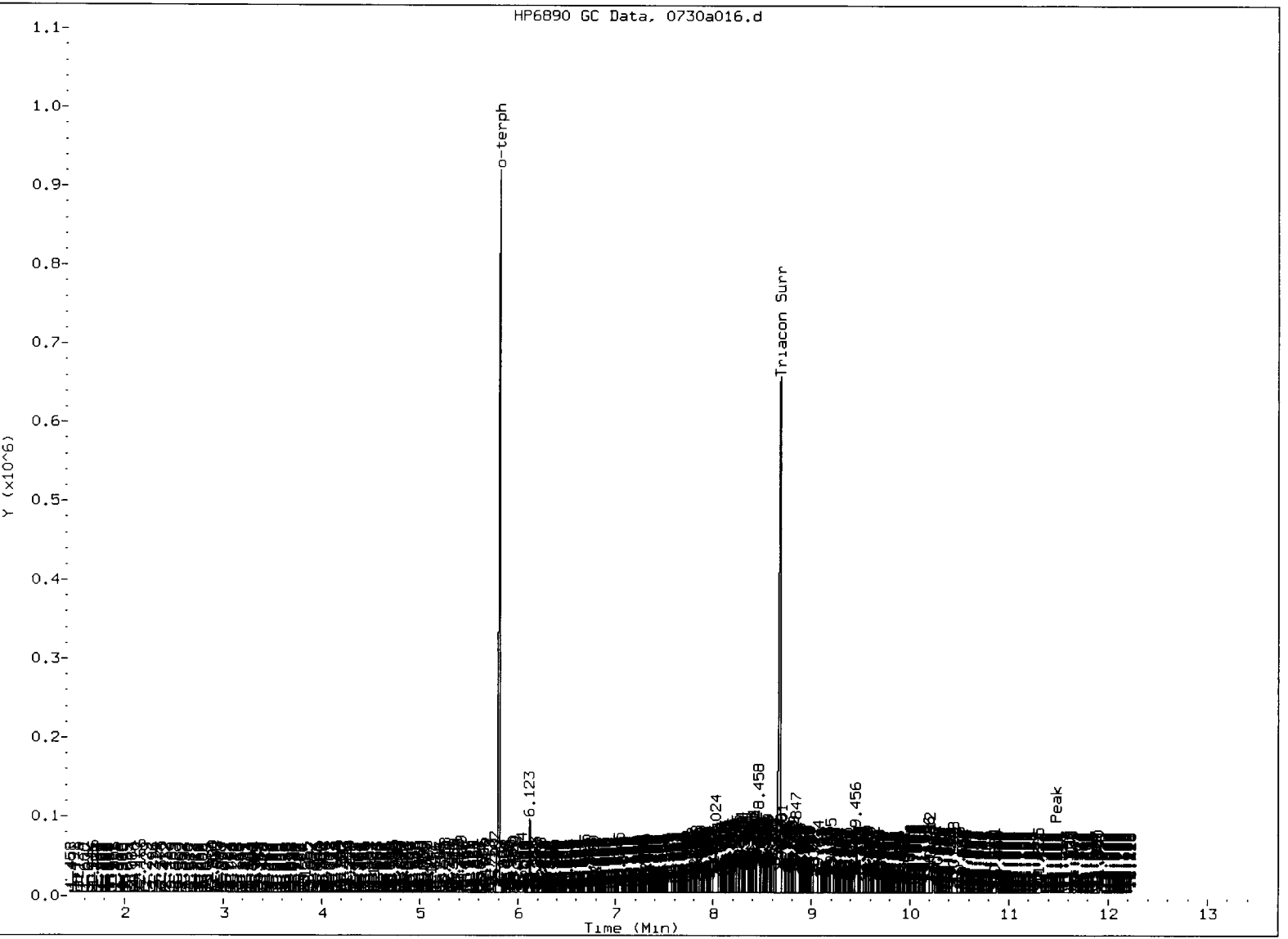
Surrogate	Area	Amount	%Rec
o-Terphenyl	856792	33.5	74.3
Triacontane	723326	38.3	85.0

JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

MS
7/30/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: SW

Date: 7/30/13

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a017.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96I
 Client ID: GP9-S-4.0
 Injection: 30-JUL-2013 15:02
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	416309	12
C8	1.071	-0.001	4494	7231	DIESEL (C12-C24)	2178989	116.65
C10	2.851	-0.002	4030	4679	M.OIL (C24-C38)	2713716	169.24
C12	3.838	-0.005	32187	35352	AK-102 (C10-C25)	2551264	117.53 M
C14	4.529	-0.006	44677	42960	AK-103 (C25-C36)	2420549	208.35 M
C16	5.117	-0.007	22624	27171			
C18	5.673	-0.009	11832	17380			
C20	6.233	-0.009	10504	13825			
C22	6.781	-0.009	12594	21713			
C24	7.322	0.006	11875	5041			
C25	7.572	0.010	12973	5430			
C26	7.819	0.002	15836	18339			
C28	8.256	-0.004	28588	27460			
C32	9.058	0.014	14152	4185			
C34	9.398	0.009	12494	7192	CREOSOT (C12-C22)	1858833	503.35 M
Filter Peak	11.488	0.002	2354	1993			
C36	9.708	0.000	12266	5252			
C38	10.009	0.004	10300	3236			
C40	10.289	0.000	7612	2394			
o-terph	5.815	-0.002	1054041	945557	JET-A (C10-C18)	1611178	97.96
Triacon Surr	8.678	-0.005	763982	849647			

M Indicates manual integration within range.

Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	945557	36.9	82.0
Triacontane	849647	45.0	99.9

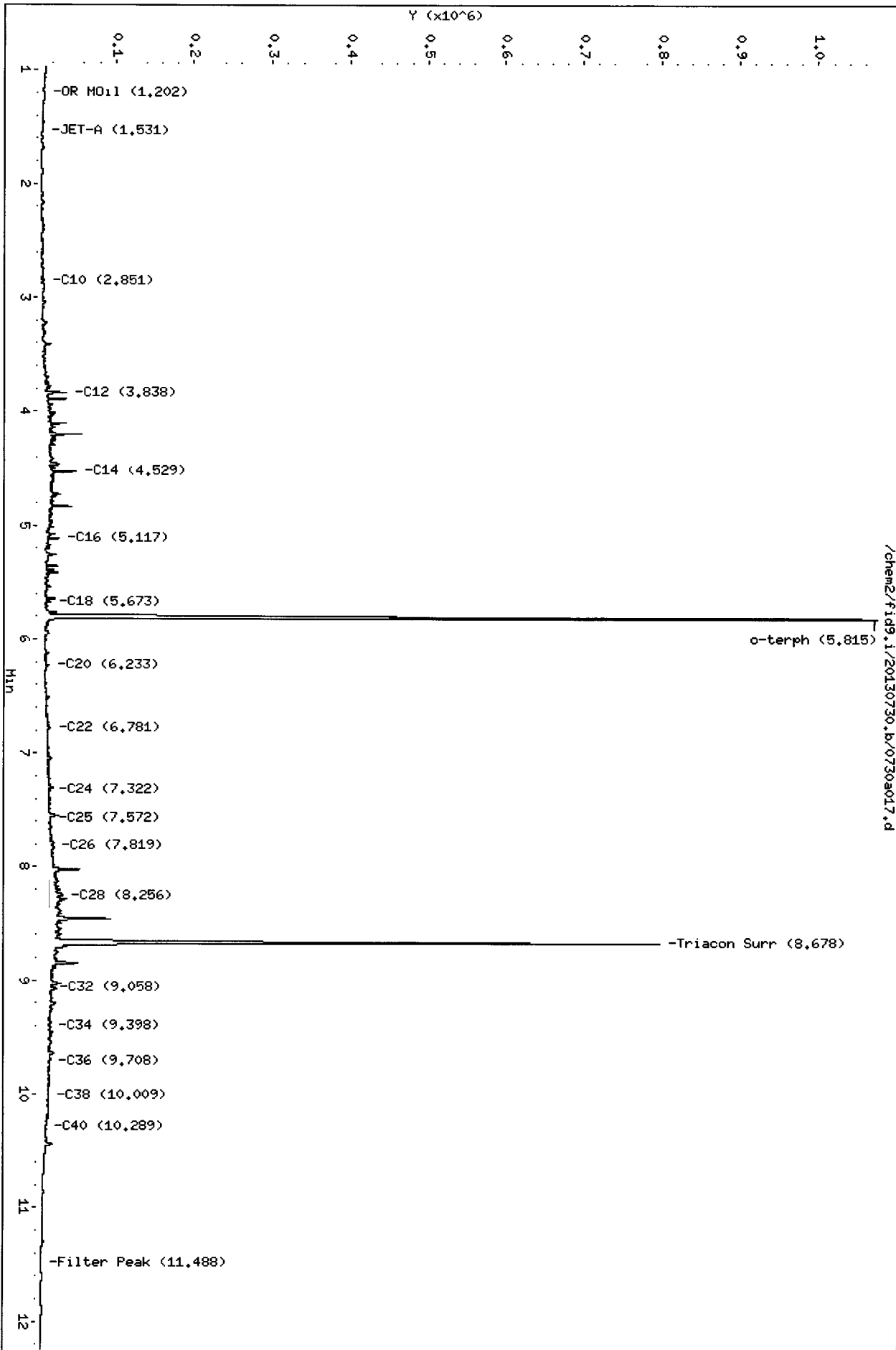
JW
7/30/13

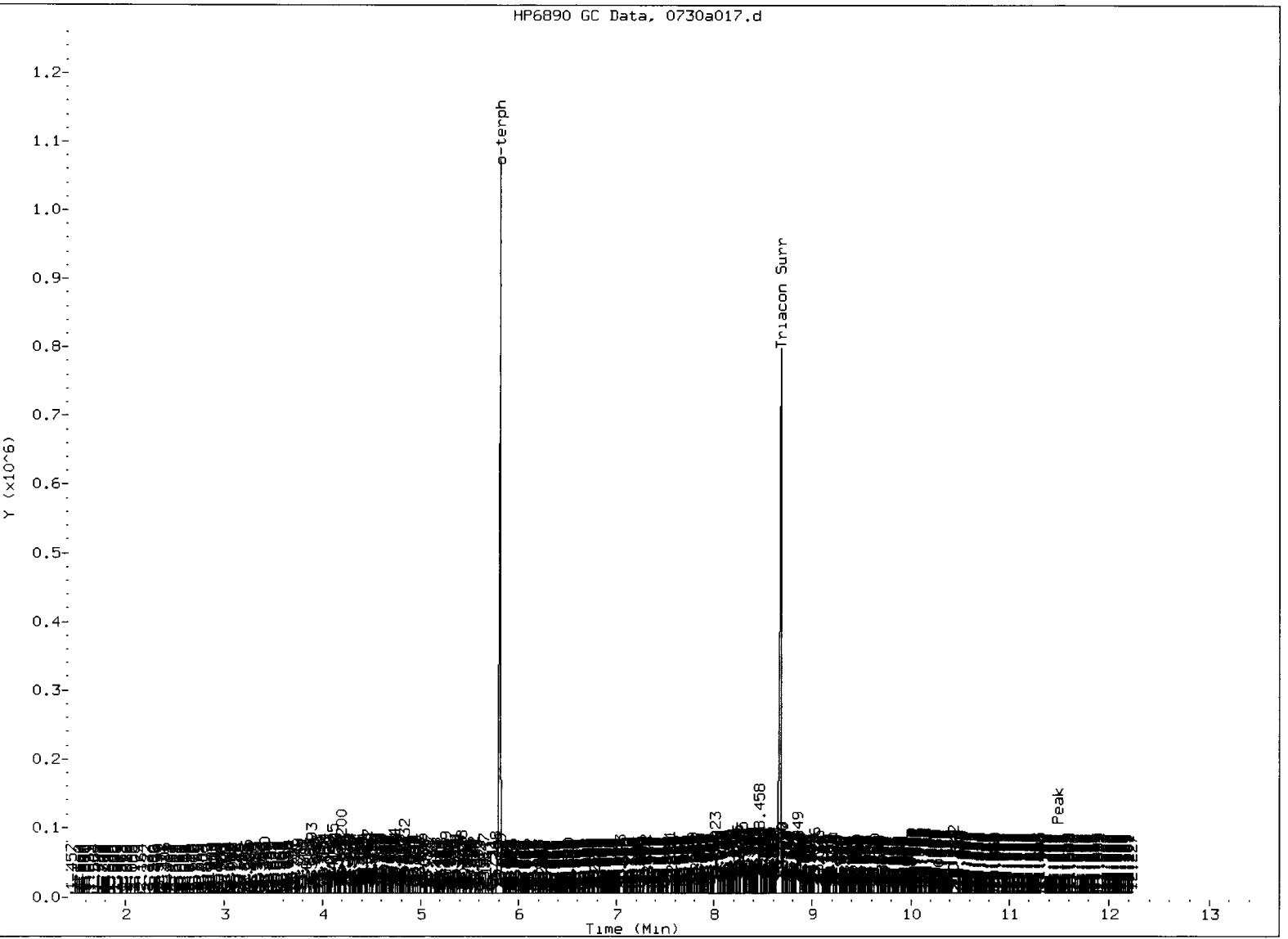
Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

Data File: /chem2/fid9.i/20130730.b/0730a017.d
Date : 30-JUL-2013 15:02
Client ID: GP9-S-4.0
Sample Info: WY96I
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

Handwritten: 7/30/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: JU

Date: 7/30/13

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: WY96-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-05

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-072913	86.9%	0
LCS-072913	86.1%	0
LCSD-072913	86.9%	0
GP1-S-3.0	71.9%	0
GP2-S-3.5	69.4%	0
GP3-S-3.0	80.1%	0
GP4-S-4.0	85.2%	0
GP5-S-4.0	82.5%	0
GP6-S-4.0	D	0
GP7-S-4.0	66.4%	0
GP8-S-4.0	74.3%	0
GP9-S-4.0	82.0%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3546
Log Number Range: 13-15741 to 13-15749

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-072913

LCS/LCSD

Lab Sample ID: LCS-072913

LIMS ID: 13-15741

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Extracted LCS/LCSD: 07/29/13

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 07/30/13 11:15

Final Extract Volume LCS: 1.0 mL

LCSD: 07/30/13 11:38

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/JLW

Dilution Factor LCS: 1.0

LCSD: FID/JLW

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	128	150	85.3%	123	150	82.0%	4.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	86.1%	86.9%

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a007.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96LCSS1
 Client ID: WY96LCSS1
 Injection: 30-JUL-2013 11:15
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	5135532	150
C8	1.076	0.004	11355	18122	DIESEL (C12-C24)	23997292	1284.66
C10	2.851	-0.001	96601	92493	M.OIL (C24-C38)	402935	25.13
C12	3.839	-0.004	222992	243534	AK-102 (C10-C25)	27835297	1282.31 M
C14	4.534	0.000	398818	401343	AK-103 (C25-C36)	293679	25.28
C16	5.124	0.000	569662	614125			
C18	5.684	0.001	483698	641597			
C20	6.236	-0.006	303820	418930			
C22	6.781	-0.009	140329	165244			
C24	7.328	0.012	14991	7963			
C25	7.549	-0.013	25511	43450			
C26	7.828	0.011	4749	2601			
C28	8.257	-0.002	12310	15899			
C32	9.029	-0.016	6918	11079			
C34	9.393	0.004	145	56	CREOSOT (C12-C22)	23236257	6292.14 M
Filter Peak	11.485	-0.002	947	1026			
C36	9.689	-0.018	2020	3421			
C38	9.996	-0.009	651	659			
C40	10.292	0.003	919	1045			
o-terph	5.820	0.002	1003661	992161	JET-A (C10-C18)	20925678	1272.23
Triacon Surr	8.675	-0.008	728419	925737			

M Indicates manual integration within range.

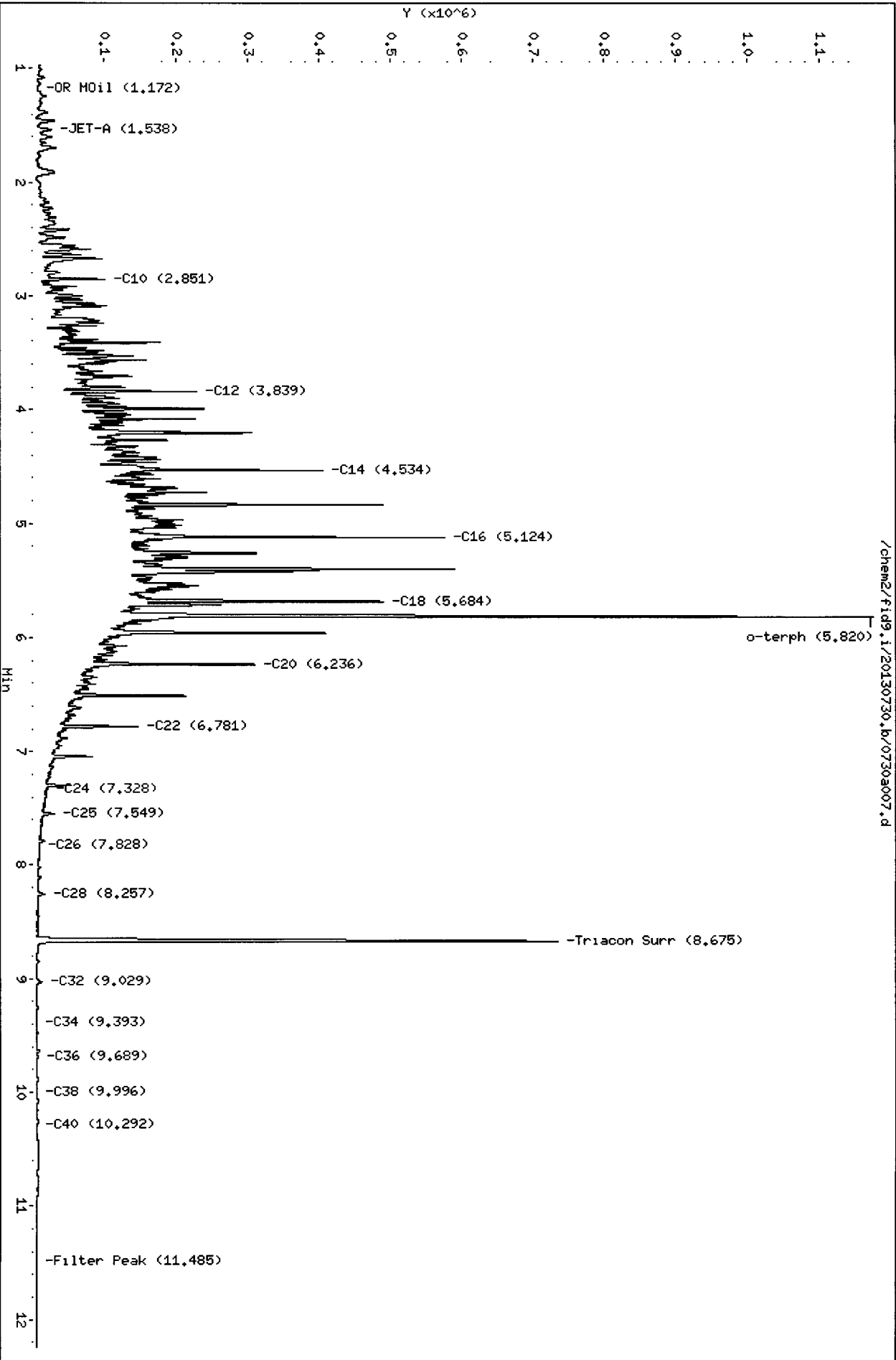
Range Times: NW Diesel (3.842 - 7.316) AK102 (2.85 - 7.56) Jet A (2.85 - 5.68)
 NW M.Oil (7.32 - 10.01) AK103 (7.56 - 9.71) OR Diesel (2.85 - 8.26)

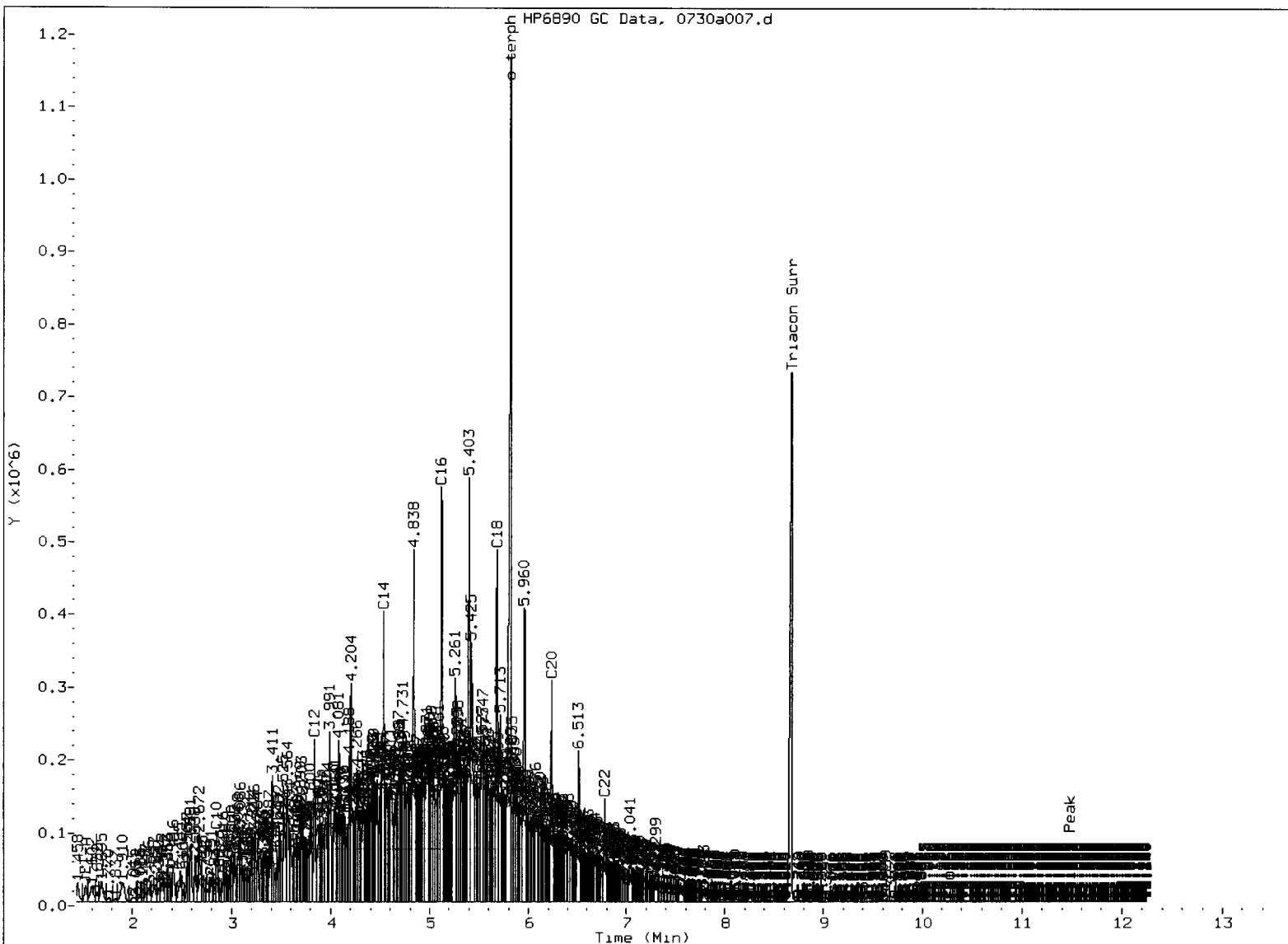
Surrogate	Area	Amount	%Rec
o-Terphenyl	992161	38.7	86.1
Triacontane	925737	49.0	108.8

JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

Handwritten: 7/30/13





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Surrogate Skipped

Analyst: 3W

Date: 7/30/0

Analytical Resources Inc.
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20130730.b/0730a008.d
 Method: /chem2/fid9.i/20130730.b/ftphfid9a.m
 Instrument: fid9.i
 Operator: JW
 Report Date: 07/30/2013

ARI ID: WY96LCSDS1
 Client ID: WY96LCSDS1
 Injection: 30-JUL-2013 11:38
 Dilution Factor: 1
 Macro: 30-JAN-2013

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	4836882	141
C8	1.073	0.001	11122	16923	DIESEL (C12-C24)	23044974	1233.68
C10	2.848	-0.004	88141	90140	M.OIL (C24-C38)	360419	22.48
C12	3.837	-0.005	208817	242637	AK-102 (C10-C25)	26642858	1227.38 M
C14	4.534	0.000	395045	374761	AK-103 (C25-C36)	274707	23.65
C16	5.124	0.000	553629	576269			
C18	5.682	-0.001	509325	606003			
C20	6.236	-0.006	284805	392877			
C22	6.780	-0.009	130975	146857			
C24	7.328	0.012	15286	13157			
C25	7.550	-0.012	23621	39560			
C26	7.814	-0.002	4489	2473			
C28	8.258	-0.002	5337	6886			
C32	9.034	-0.010	6170	10451			
C34	9.390	0.001	160	84	CREOSOT (C12-C22)	22318771	6043.70 M
Filter Peak	11.482	-0.004	925	337			
C36	9.688	-0.019	2018	3150			
C38	10.012	0.007	422	222			
C40	10.299	0.010	718	140			
o-terph	5.817	0.000	1086967	1001358	JET-A (C10-C18)	20141399	1224.55
Triacon Surr	8.674	-0.009	728396	919781			

M Indicates manual integration within range.

Range Times: NW Diesel(3.842 - 7.316) AK102(2.85 - 7.56) Jet A(2.85 - 5.68)
 NW M.Oil(7.32 - 10.01) AK103(7.56 - 9.71) OR Diesel(2.85 - 8.26)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1001358	39.1	86.9
Triacontane	919781	48.7	108.1

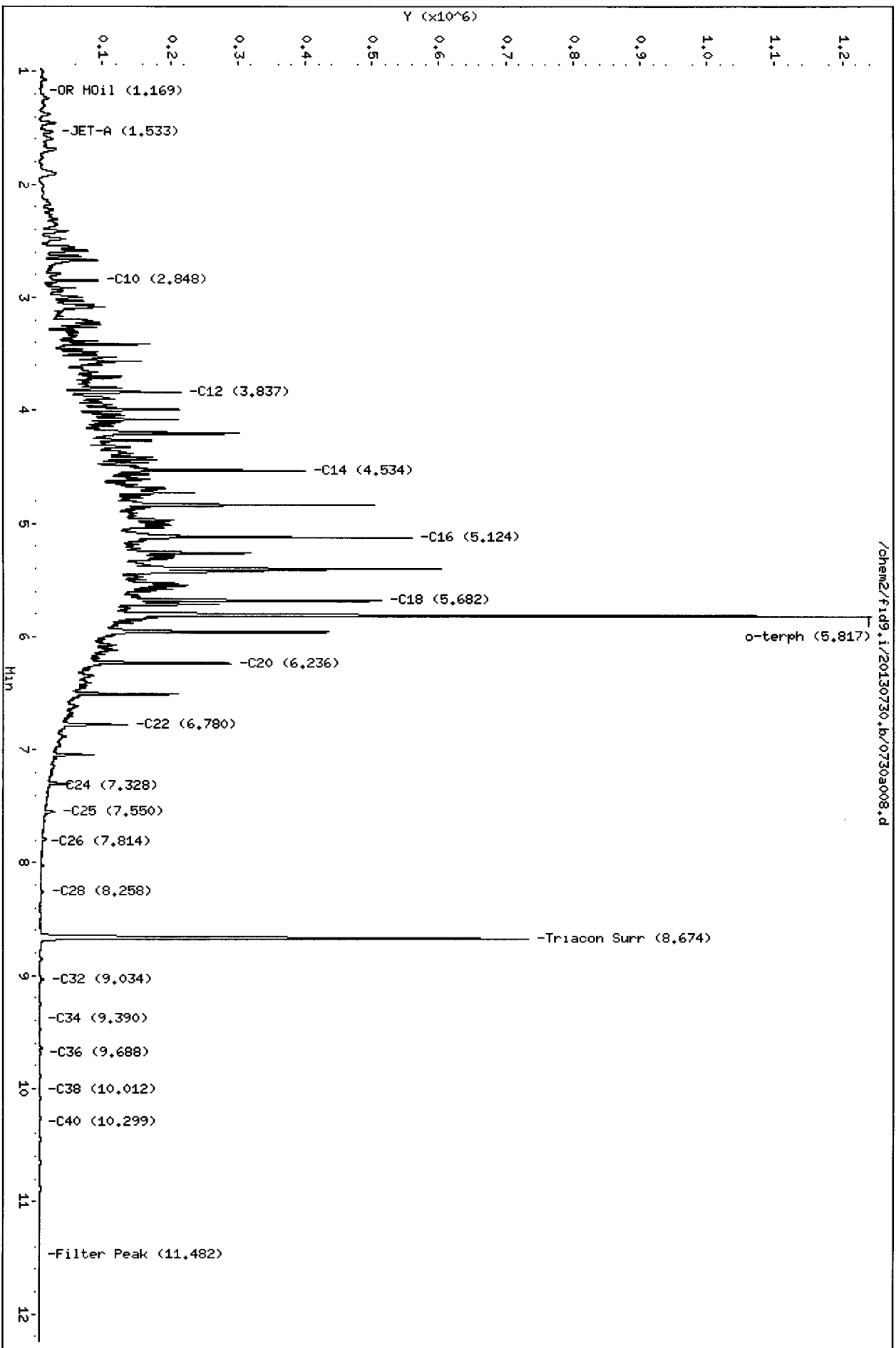
JW
7/30/13

Analyte	RF	Curve Date
o-Terph Surr	25611.4	02-MAY-2013
Triacon Surr	18899.6	02-MAY-2013
Gas	34297.9	11-FEB-2013
Diesel	18679.8	02-MAY-2013
Motor Oil	16035.2	02-MAY-2013
AK102	21707.1	02-MAY-2013
AK103	11617.9	03-MAY-2013
JetA	16448.0	29-JUL-2013
Bunker C	9266.7	25-MAR-2013
Creosote	3692.9	28-JUN-2013

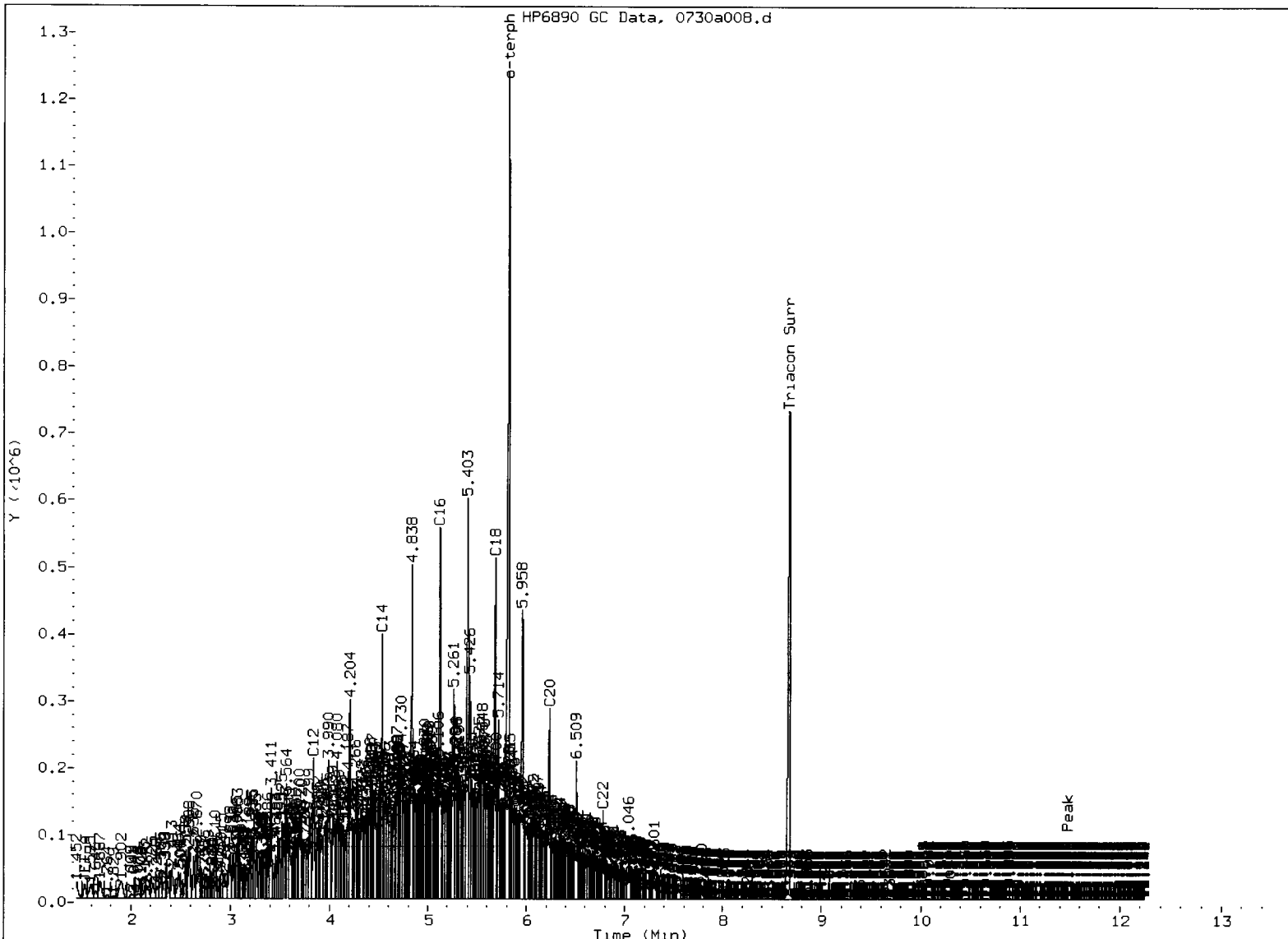
Data File: /chem2/fid9.i/20130730.b/0730a008.d
Date: 30-JUL-2013 11:38
Client ID: WY96LCSDS1
Sample Info: WY96LCSDS1
Column phase: RTX-1

Instrument: fid9.i
Operator: JM
Column diameter: 0.25

JW
7/30/13



HP6890 GC Data, 0730a008.d



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
- ⑤ Surrogate Skipped

Analyst: BW

Date: 7/30/10

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 07/27/13

ARI Job: WY96
Project: Cashmere
0779.02.01-05

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-15741-072913MB1	Method Blank	10.0 g	1.00 mL	-	07/29/13
13-15741-072913LCS1	Lab Control	10.0 g	1.00 mL	-	07/29/13
13-15741-072913LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	07/29/13
13-15741-WY96A	GP1-S-3.0	7.57 g	1.00 mL	D	07/29/13
13-15742-WY96B	GP2-S-3.5	9.56 g	1.00 mL	D	07/29/13
13-15743-WY96C	GP3-S-3.0	7.86 g	1.00 mL	D	07/29/13
13-15744-WY96D	GP4-S-4.0	9.17 g	1.00 mL	D	07/29/13
13-15745-WY96E	GP5-S-4.0	9.01 g	1.00 mL	D	07/29/13
13-15746-WY96F	GP6-S-4.0	7.76 g	1.00 mL	D	07/29/13
13-15747-WY96G	GP7-S-4.0	5.08 g	1.00 mL	D	07/29/13
13-15748-WY96H	GP8-S-4.0	7.06 g	1.00 mL	D	07/29/13
13-15749-WY96I	GP9-S-4.0	8.20 g	1.00 mL	D	07/29/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: GP1-S-3.0

SAMPLE

Lab Sample ID: WY96A

LIMS ID: 13-15741

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 15:49

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 56 mg-dry-wt

Percent Moisture: 26.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	22	< 22 U
108-88-3	Toluene	22	31
100-41-4	Ethylbenzene	22	< 22 U
179601-23-1	m,p-Xylene	45	< 45 U
95-47-6	o-Xylene	22	< 22 U

Gasoline Range Hydrocarbons	8.9	< 8.9 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	101%

Gasoline Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	97.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AC
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a007.d ARI ID: WY96A
Data file 2: /chem3/pid1.i/20130729-2.b/0729a007.d Client ID: GP1-S-3.0
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 15:49
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.848	0.003	3304	41624	101.0	TFT(Surr)
15.381	0.003	1982	17519	97.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	2723	0.008
8015C 2MP-TMB (4.18 to 16.20)	723723	1190	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	639	0.001
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3157	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.856	0.004	3517	102.0	TFT(Surr)
15.389	0.003	7500	100.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.882	0.005	75	0.35	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a007.d
Date: 29-JUL-2013 15:49
Client ID: GP1-S-3.0
Sample Info: WY96A

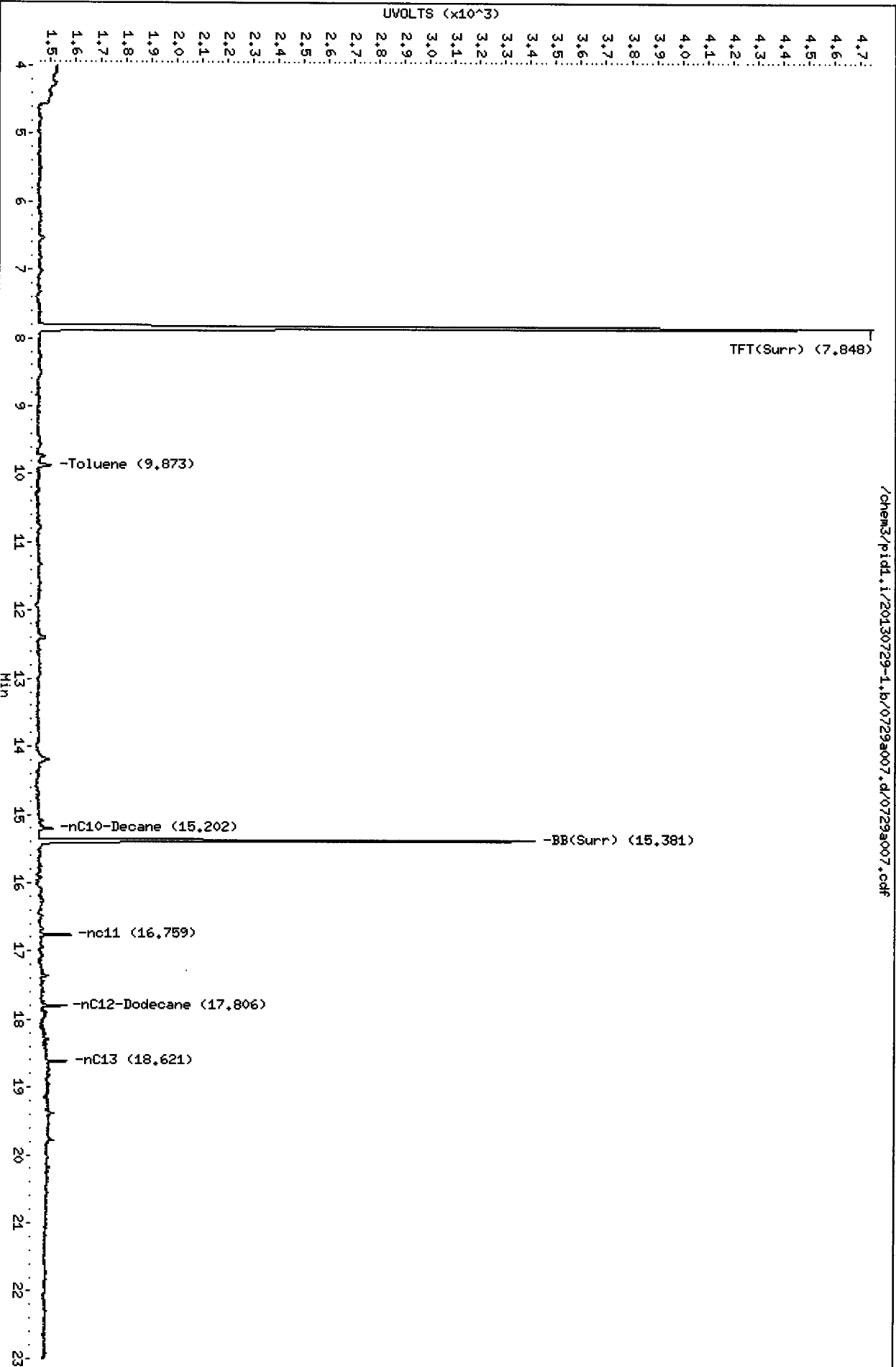
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 FID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130729-1.b/0729a007.d/0729a007.cdf



Data File: /chem3/pid1.i/20130729-2.b/0729a007.d

Date : 29-JUL-2013 15:49

Client ID: GP1-S-3.0

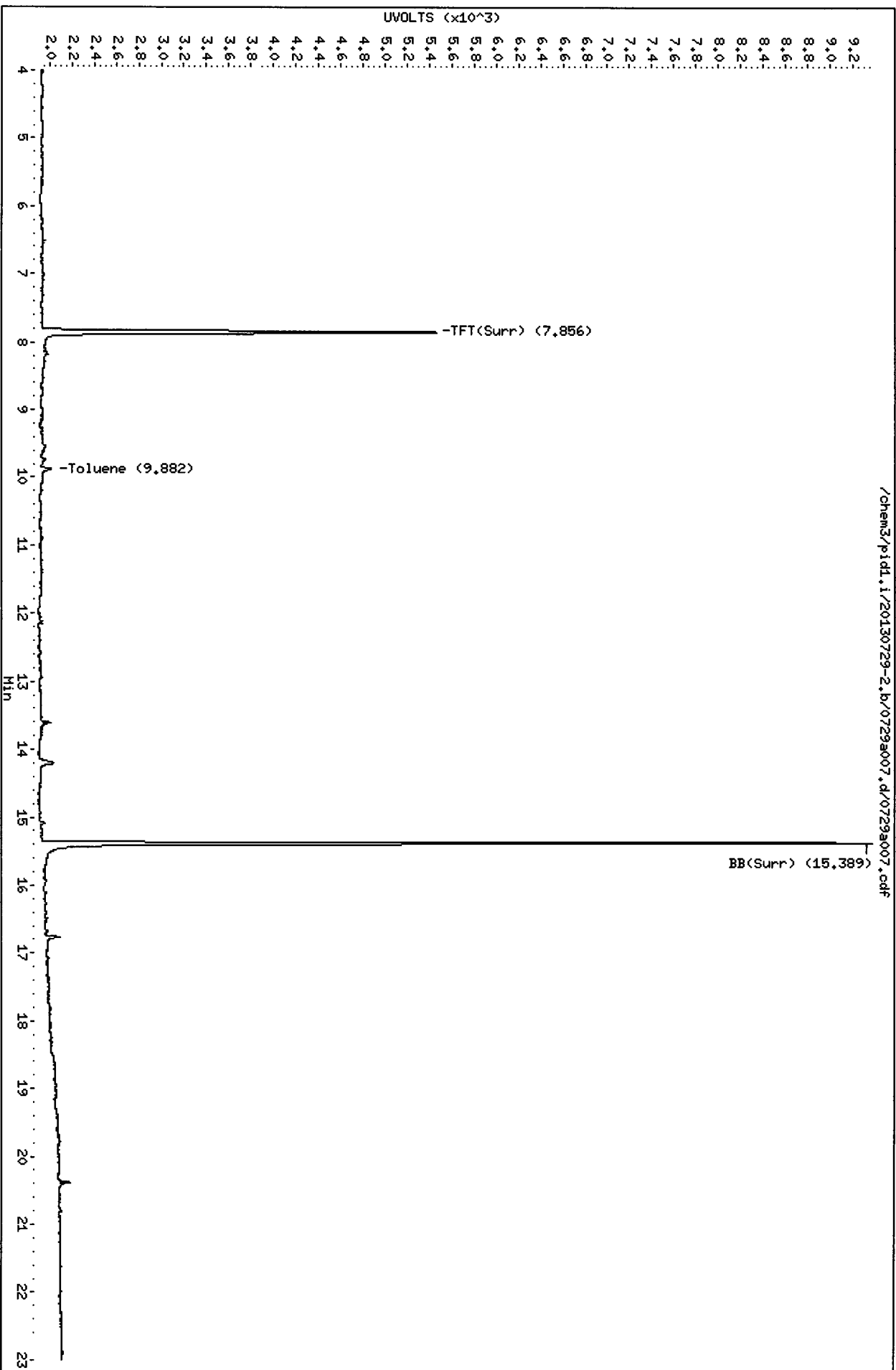
Sample Info: WY96A

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: GP2-S-3.5

SAMPLE

Lab Sample ID: WY96B

LIMS ID: 13-15742

Matrix: Soil

Data Release Authorized: 

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 16:19

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 80 mg-dry-wt

Percent Moisture: 4.9%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	22
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	31	< 31 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons	6.3	< 6.3 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	98.1%
Bromobenzene	95.2%

Gasoline Surrogate Recovery

Trifluorotoluene	97.6%
Bromobenzene	96.4%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

MC
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a008.d ARI ID: WY96B
Data file 2: /chem3/pid1.i/20130729-2.b/0729a008.d Client ID: GP2-S-3.5
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 16:19
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.846	0.001	3193	39863	97.6	TFT (Surr)
15.379	0.000	1958	16449	96.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	3666	0.010
8015C 2MP-TMB (4.18 to 16.20)	723723	1906	0.003
AK101 nC6-nC10 (4.68 to 15.10)	582885	964	0.002
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3666	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.854	0.002	3384	98.1	TFT (Surr)
15.387	0.002	7103	95.2	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
9.880	0.003	75	0.35	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a008.d

Date: 29-JUL-2013 16:19

Client ID: GP2-S-3.5

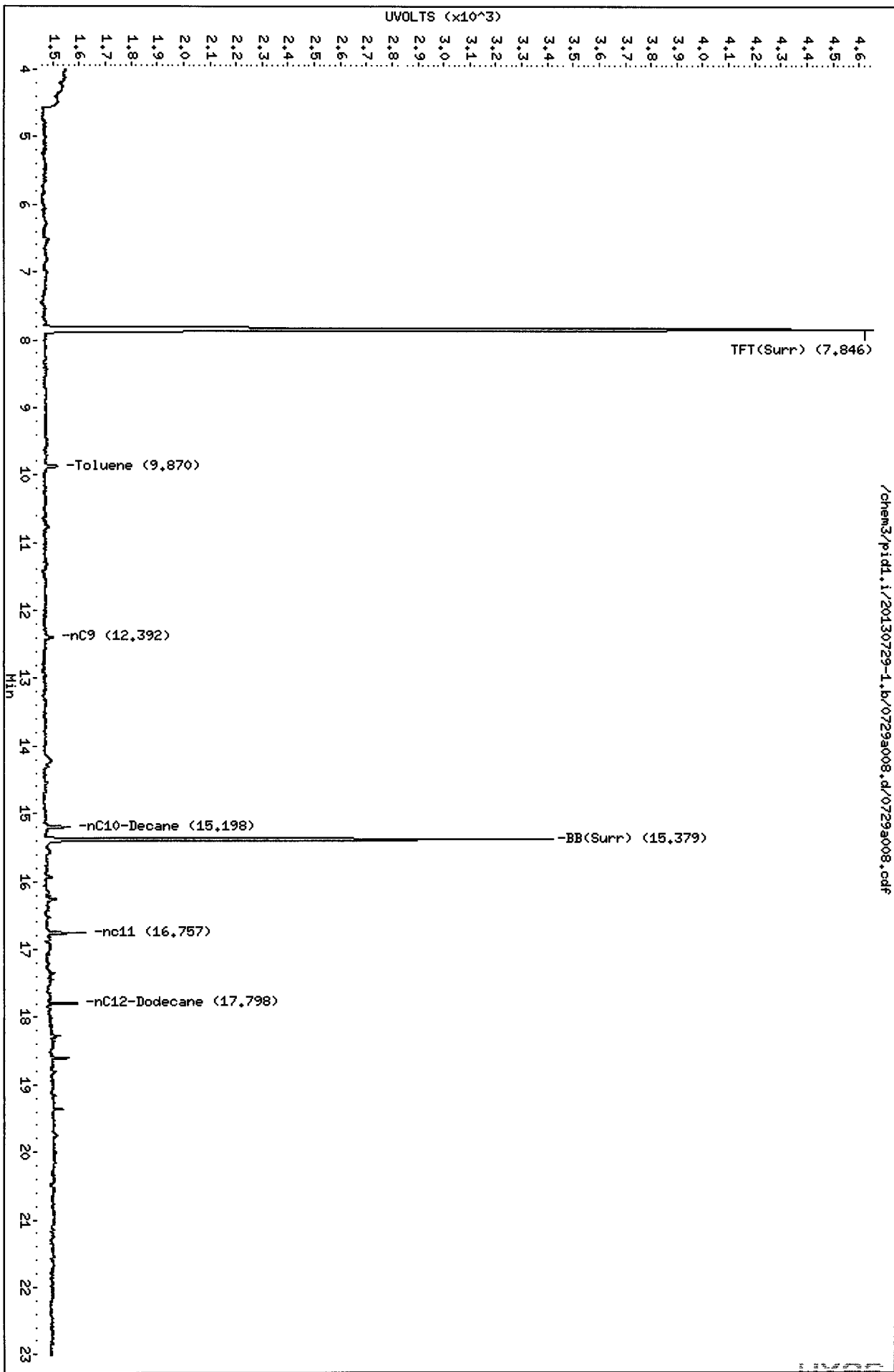
Sample Info: HV96B

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



/chem3/pid1.i/20130729-1.b/0729a008.d/0729a008.cdf

Data File: /chem3/pid1.i/20130729-2.b/0729a008.d

Page 1

Date: 29-JUL-2013 16:19

Client ID: GP2-S-3.5

Sample Info: WY96B

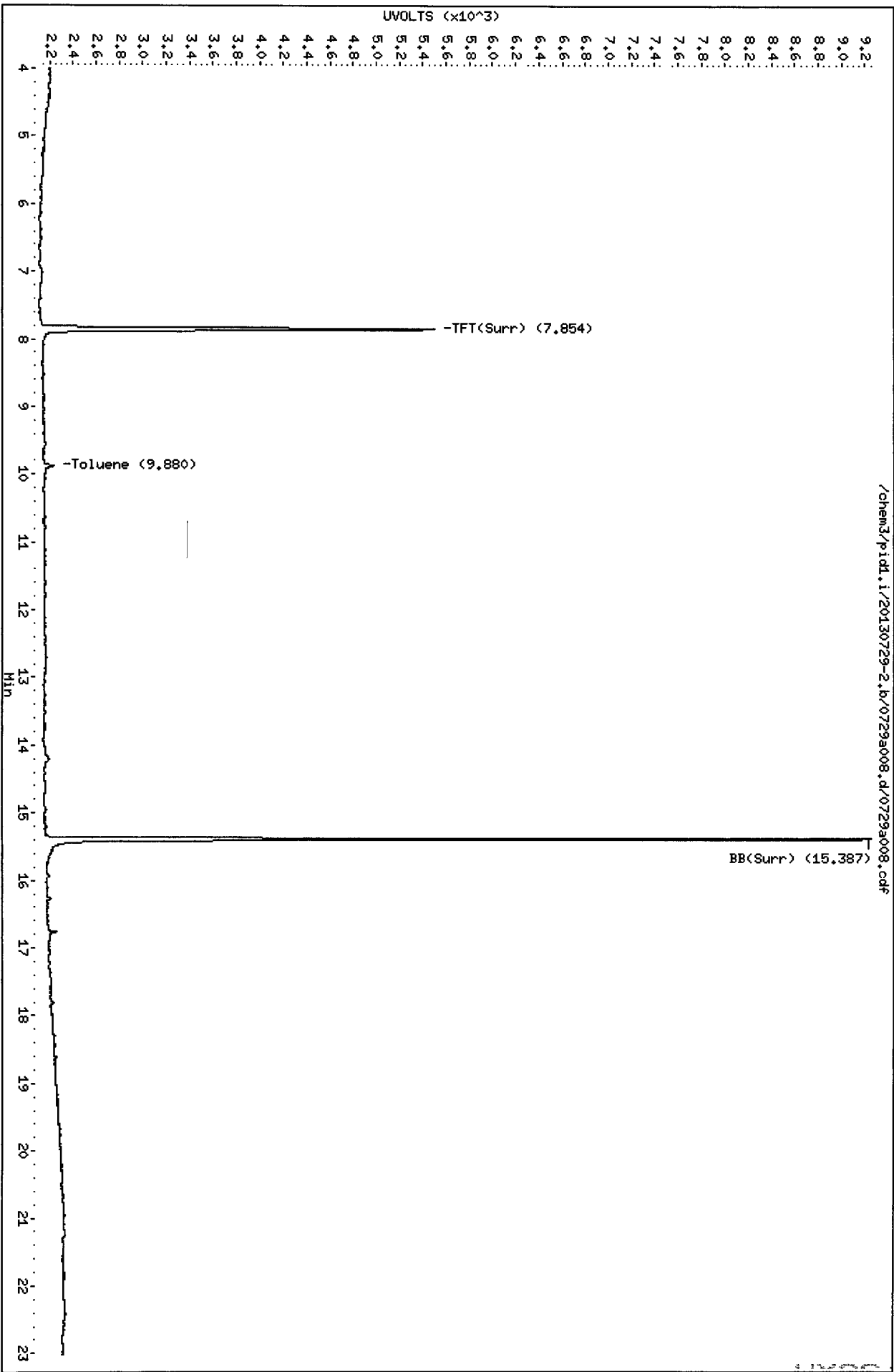
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130729-2.b/0729a008.d/0729a008.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: GP3-S-3.0
SAMPLE**

Lab Sample ID: WY96C

LIMS ID: 13-15743

Matrix: Soil

Data Release Authorized:

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 16:48

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 56 mg-dry-wt

Percent Moisture: 23.2%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	22	< 22 U	
108-88-3	Toluene	22	30	
100-41-4	Ethylbenzene	22	< 22 U	
179601-23-1	m,p-Xylene	45	< 45 U	
95-47-6	o-Xylene	22	< 22 U	
Gasoline Range Hydrocarbons		9.0	< 9.0 U	---

BETX Surrogate Recovery

Trifluorotoluene	94.8%
Bromobenzene	95.3%

Gasoline Surrogate Recovery

Trifluorotoluene	95.4%
Bromobenzene	97.2%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

W.C.
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a009.d ARI ID: WY96C
Data file 2: /chem3/pid1.i/20130729-2.b/0729a009.d Client ID: GP3-S-3.0
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 16:48
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.000	3119	39183	95.4	TFT(Surr)
15.379	0.000	1975	16568	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	10600	0.030
8015C 2MP-TMB (4.18 to 16.20)	723723	7828	0.011
AK101 nC6-nC10 (4.68 to 15.10)	582885	7828	0.013
NWTPHG Tol-Nap (9.77 to 18.90)	375093	10600	0.028

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.001	3270	94.8	TFT(Surr)
15.386	0.001	7105	95.3	BB(Surr)

SW8021 (PID)

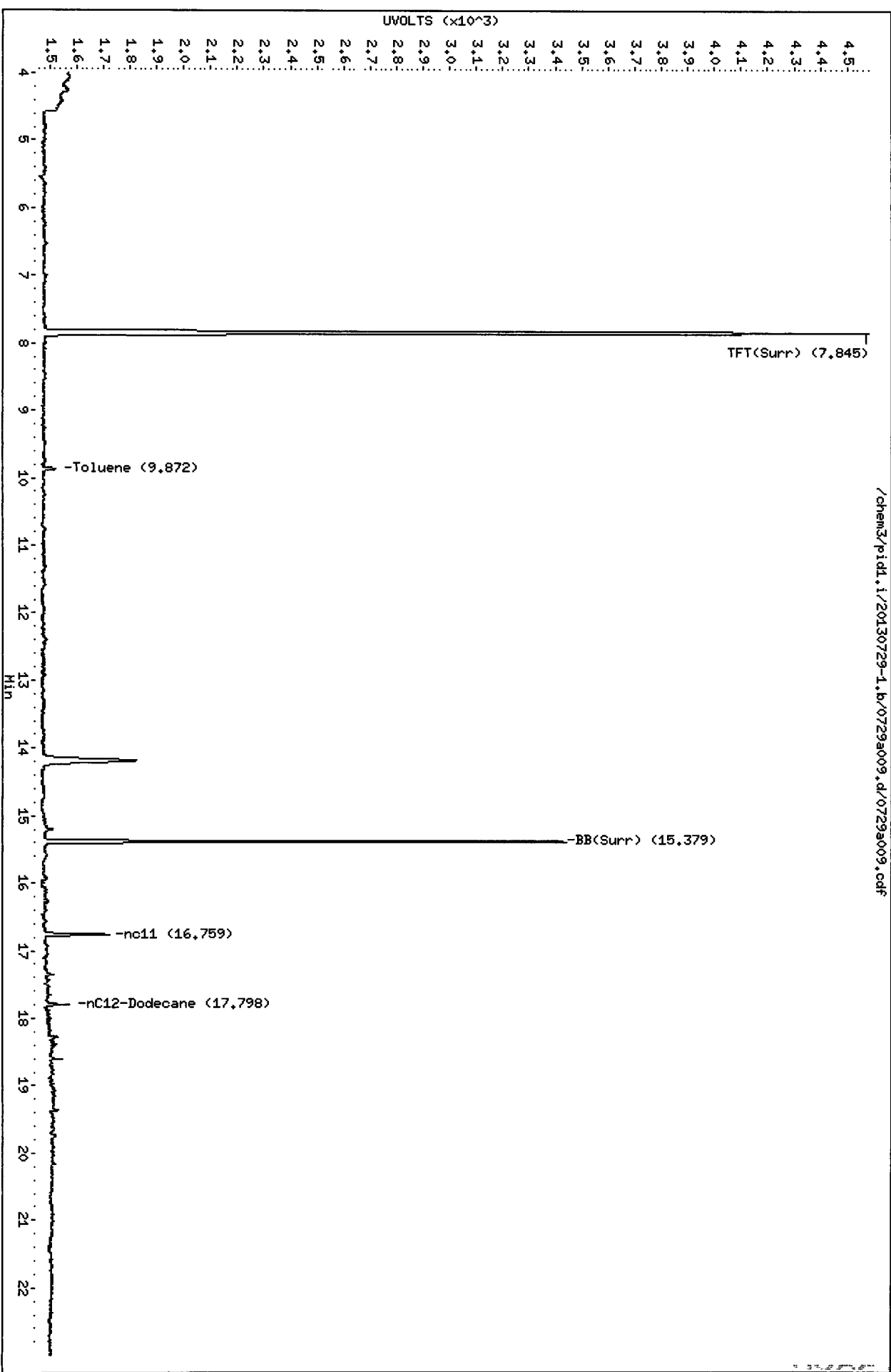
RT	Shift	Response	Amount	Compound
---	----	-----	-----	-----
ND	---	---	---	Benzene
9.877	0.000	70	0.33N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a009.d
Date : 29-JUL-2013 16:48
Client ID: GP3-S-3.0
Sample Info: HY96C

Column phase: RTX 502-2 FID

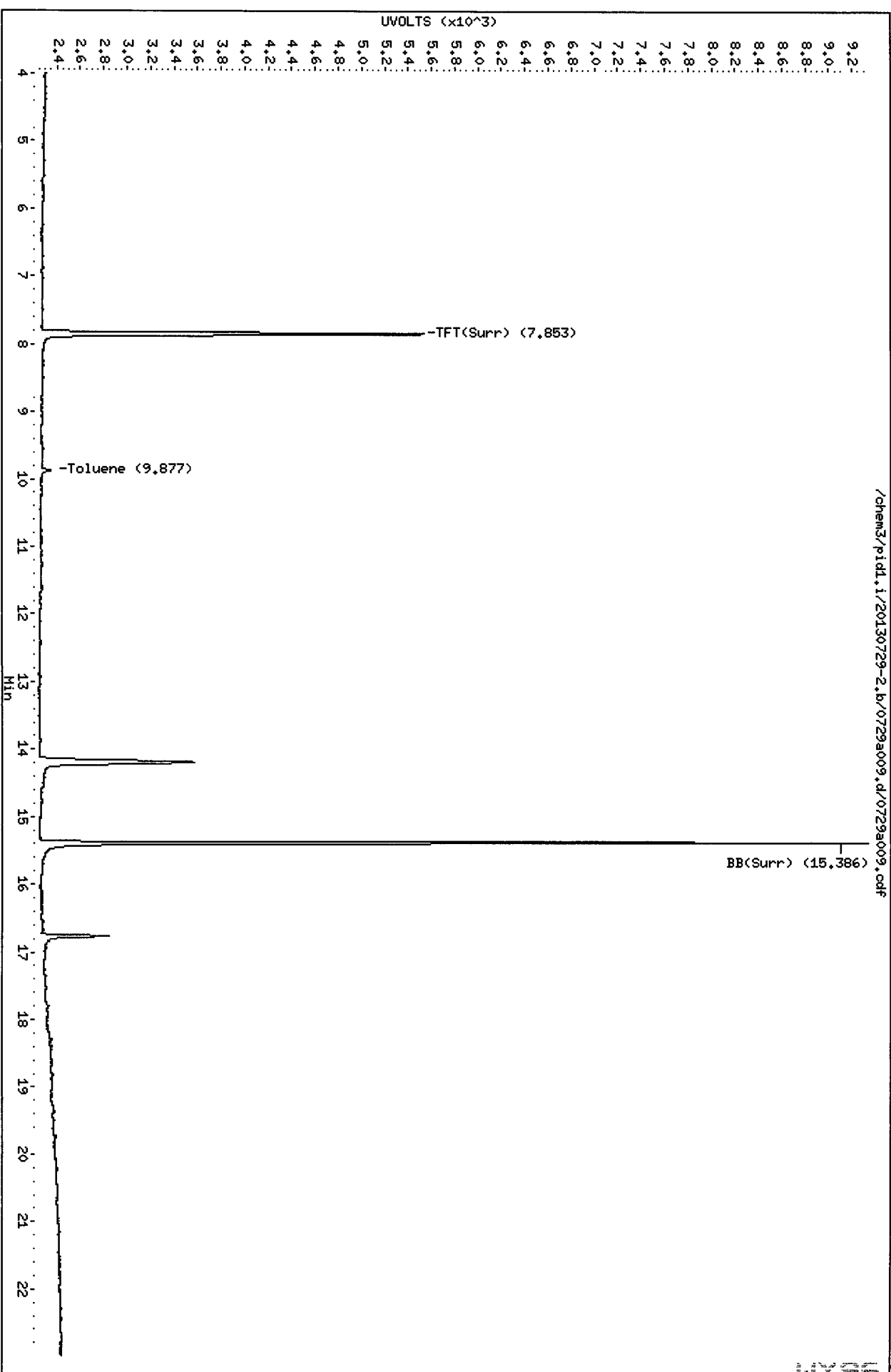
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130729-2.b/0729a009.d
Date: 29-JUL-2013 16:48
Client ID: GP3-S-3.0
Sample Info: WY96C

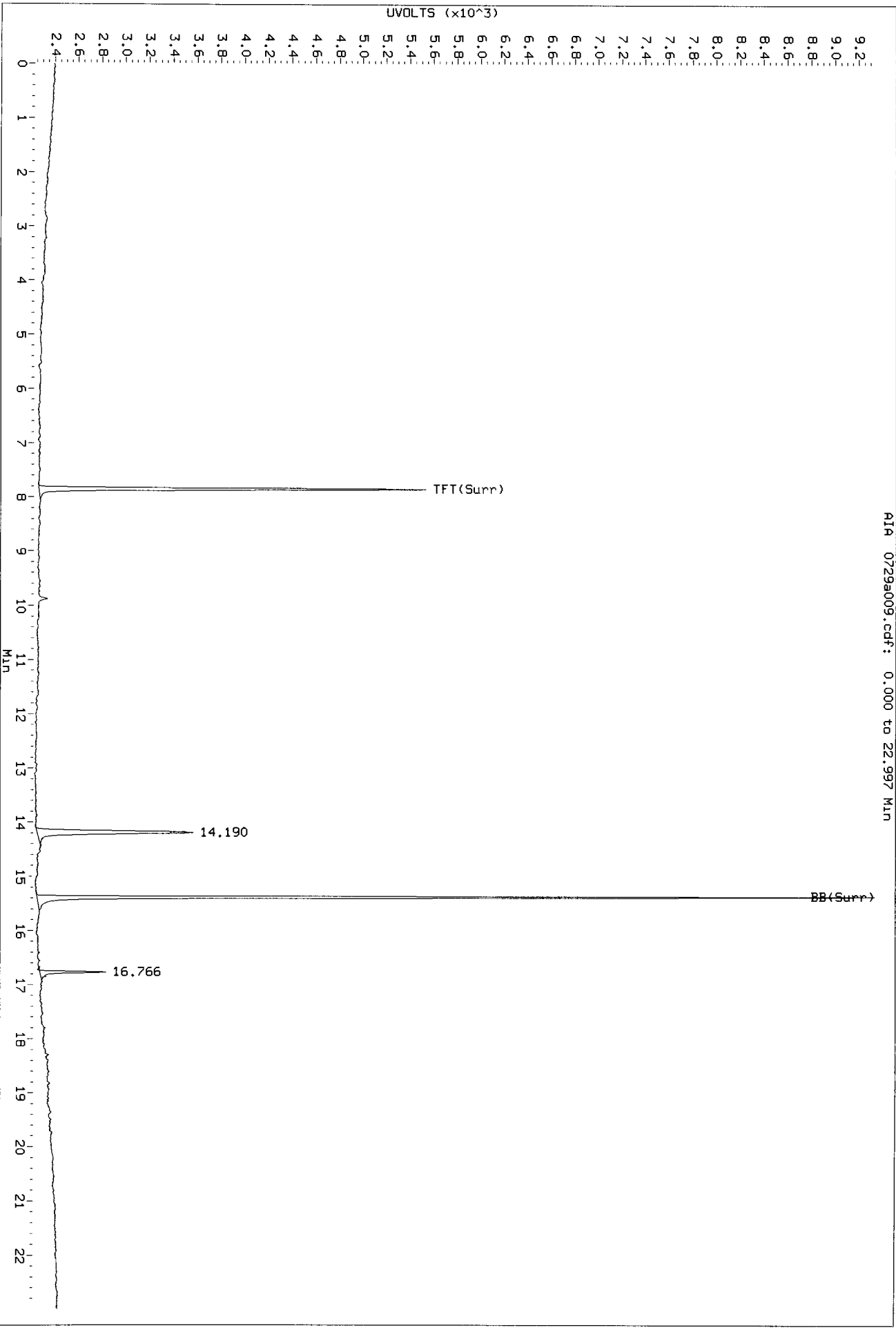
Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



MC
7/30/13

Data File: /chem3/pid1.1/20130729-2.b/0729a009.d/0729a009.cdf
Injection Date: 29-JUL-2013 16:48
Instrument: pid1.1
Client Sample ID: GP3-S-3.0



0729a009.cdf

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: GP4-S-4.0
SAMPLE

Lab Sample ID: WY96D
 LIMS ID: 13-15744
 Matrix: Soil
 Data Release Authorized:
 Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-05
 Date Sampled: 07/25/13
 Date Received: 07/27/13

Date Analyzed: 07/29/13 17:17
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 78 mg-dry-wt
 Percent Moisture: 11.0%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	16	< 16 U
108-88-3	Toluene	16	17
100-41-4	Ethylbenzene	16	< 16 U
179601-23-1	m,p-Xylene	32	< 32 U
95-47-6	o-Xylene	16	< 16 U

Gasoline Range Hydrocarbons 6.4 < 6.4 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	95.3%
Bromobenzene	95.7%

Gasoline Surrogate Recovery

Trifluorotoluene	95.9%
Bromobenzene	99.0%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

11
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a010.d ARI ID: WY96D
Data file 2: /chem3/pid1.i/20130729-2.b/0729a010.d Client ID: GP4-S-4.0
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 17:17
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.846	0.001	3136	39307	95.9	TFT(Surr)
15.379	0.000	2011	16808	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	3069	0.009
8015C 2MP-TMB (4.18 to 16.20)	723723	1793	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	1793	0.003
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3069	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.854	0.002	3285	95.3	TFT(Surr)
15.387	0.001	7136	95.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.873	-0.004	56	0.26N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a010.d
Date: 29-JUL-2013 17:17
Client ID: GP4-S-4.0
Sample Info: WY96D

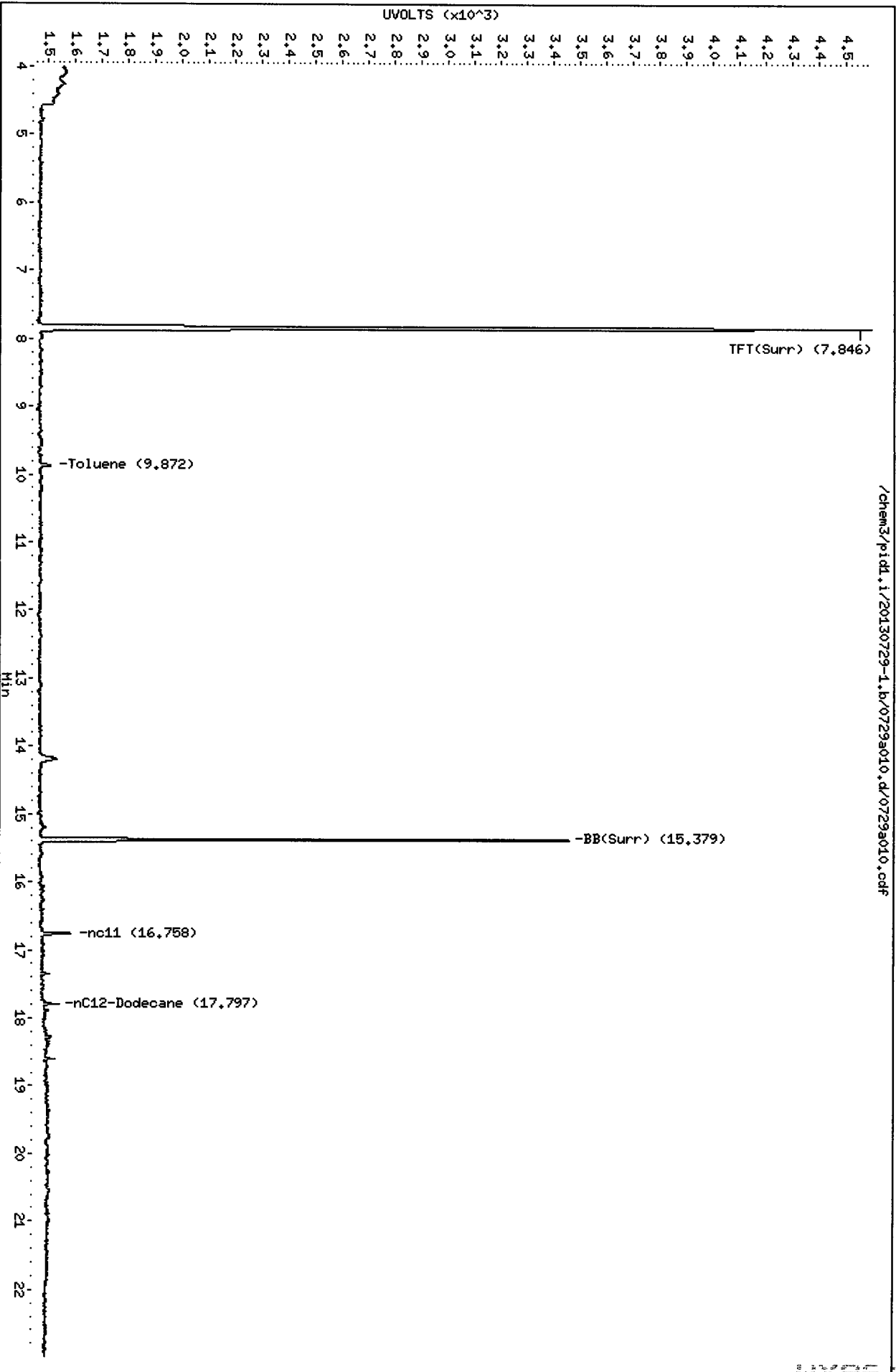
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 FID

Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130729-1.b/0729a010.d/0729a010.cdf

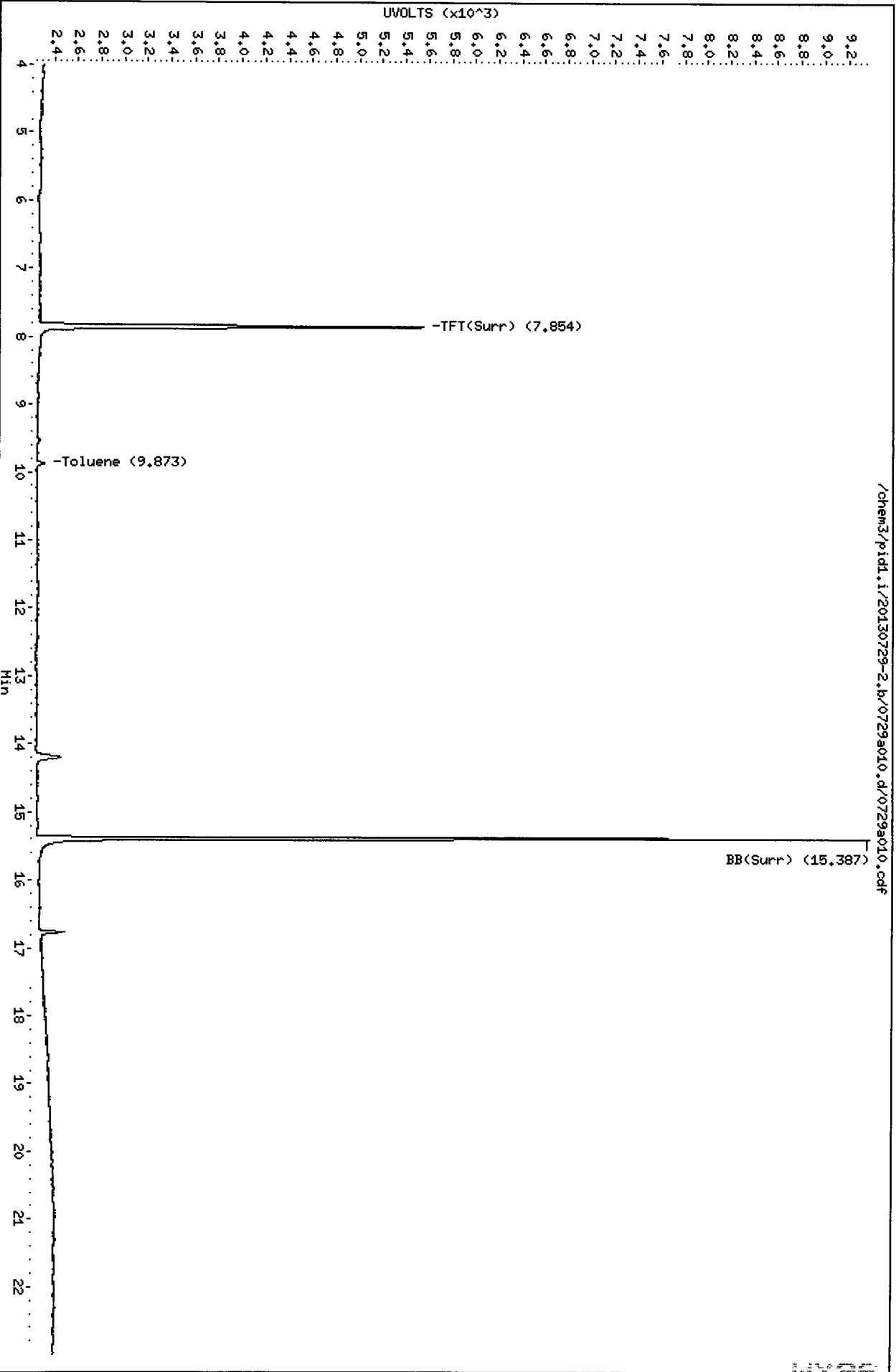


Data File: /chem3/pid1.i/20130729-2.b/0729s010.d
Date : 29-JUL-2013 17:17
Client ID: GP4-S-4.0
Sample Info: WY96D

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

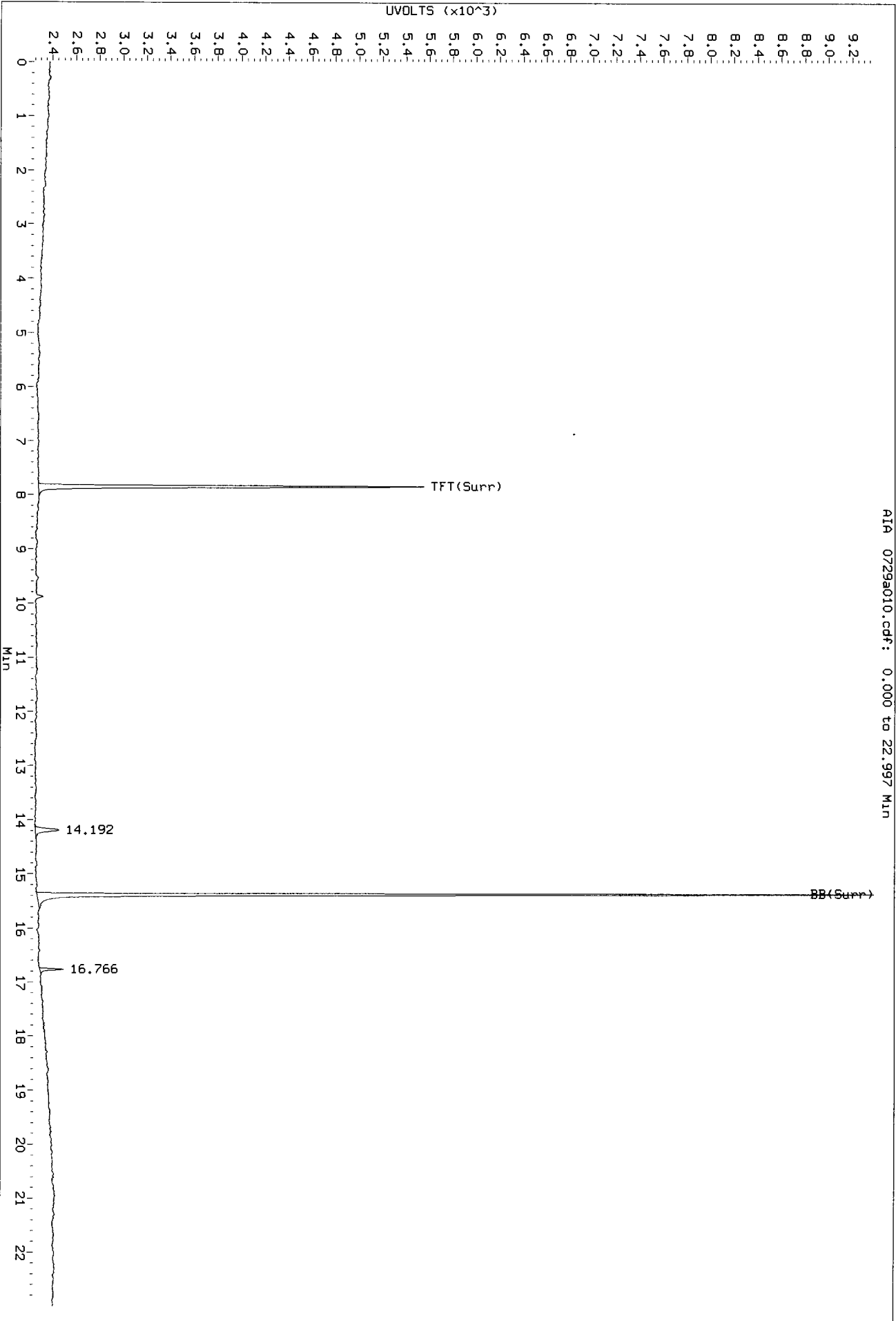
/chem3/pid1.i/20130729-2.b/0729s010.d/0729s010.cdf



Mc
7/30/13

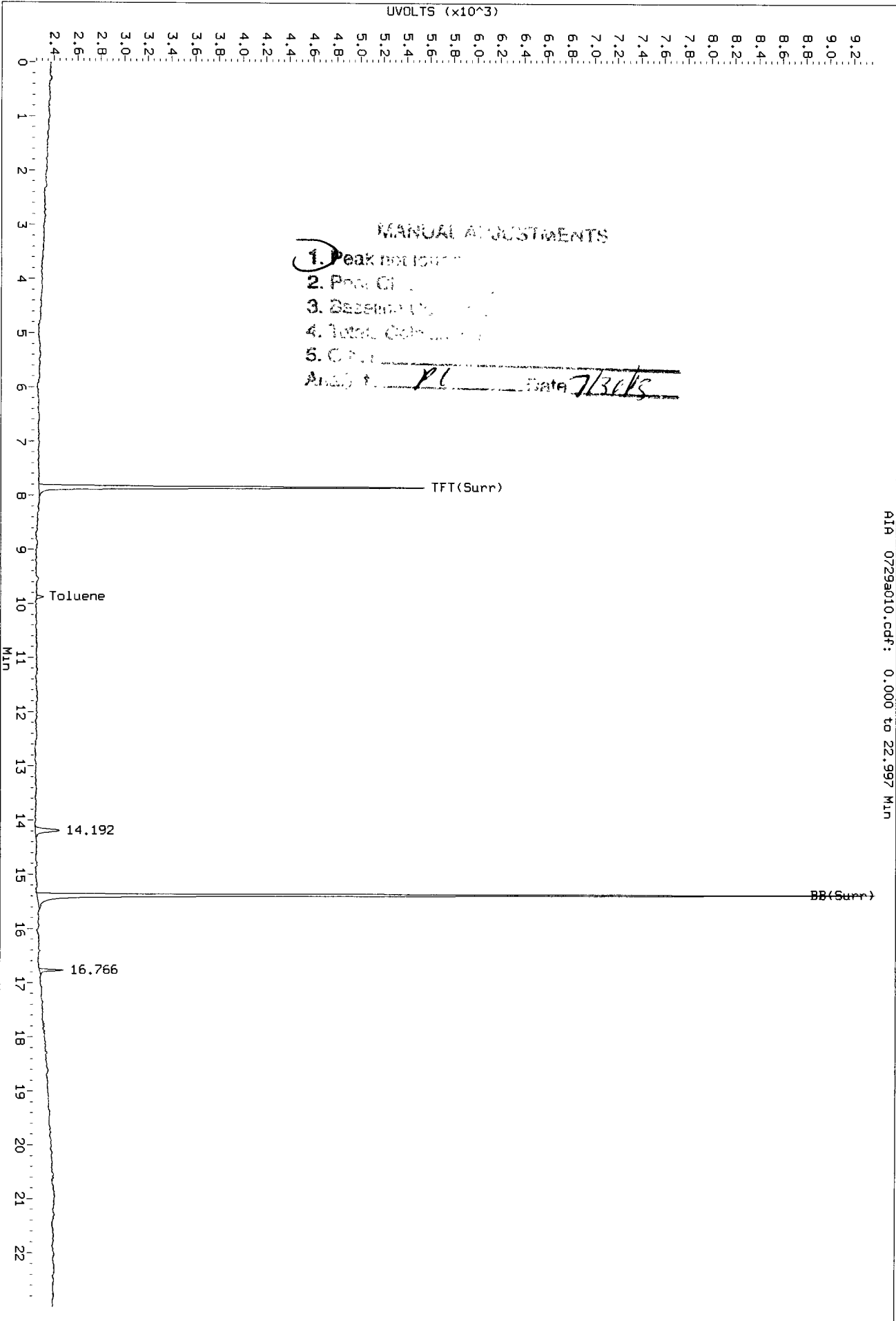
Data File: /chem3/pid1.1/20130729-2.b/0729a010.d/0729a010.cdf
Injection Date: 29-JUL-2013 17:17
Instrument: pid1.1
Client Sample ID: GP4-S-4.0

AIA 0729a010.cdf: 0.000 to 22.997 Min



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Data File: /chem3/pid1.1/20130729-2.b/0729a010.d/0729a010.cdf
Injection Date: 29-JUL-2013 17:17
Instrument: pid1.1
Client Sample ID: GP4-S-4.0



MANUAL ADJUSTMENTS

1. Peak Position
2. Peak Cl
3. Baseline
4. Total Gain
5. C.P.

Anal: PL Date 7/30/13

AIA 0729a010.cdf: 0.000 to 22.997 Min

10 00 00 : 00 00 00

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: GP5-S-4.0

SAMPLE

Lab Sample ID: WY96E

LIMS ID: 13-15745

Matrix: Soil

Data Release Authorized: *AB*

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 17:46

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 70 mg-dry-wt

Percent Moisture: 12.2%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	26
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	36	< 36 U
95-47-6	o-Xylene	18	< 18 U

Gasoline Range Hydrocarbons	7.1	< 7.1 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	92.4%
Bromobenzene	93.9%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	97.6%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 7/30/13

Data file 1: /chem3/pid1.i/20130729-1.b/0729a011.d ARI ID: WY96E
 Data file 2: /chem3/pid1.i/20130729-2.b/0729a011.d Client ID: GP5-S-4.0
 Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 17:46
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.847	0.002	3065	38614	93.7	TFT(Surr)
15.380	0.001	1984	16618	97.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	6107	0.017
8015C 2MP-TMB (4.18 to 16.20)	723723	4146	0.006
AK101 nC6-nC10 (4.68 to 15.10)	582885	4146	0.007
NWTPHG Tol-Nap (9.77 to 18.90)	375093	6107	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.855	0.003	3185	92.4	TFT(Surr)
15.387	0.002	7002	93.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.880	0.003	77	0.36N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a011.d

Date : 29-JUL-2013 17:46

Client ID: GP5-S-4.0

Sample Info: WY96E

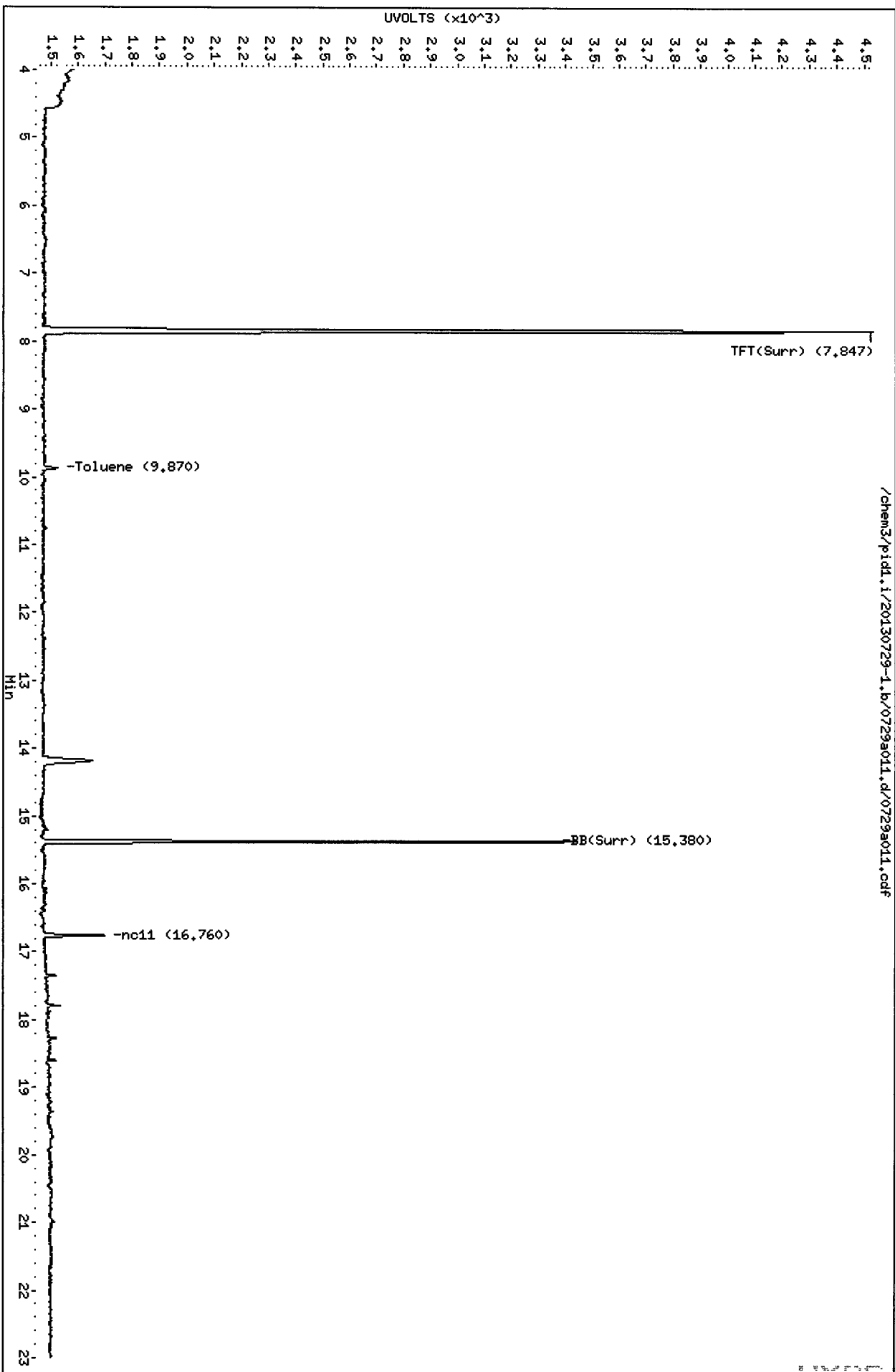
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

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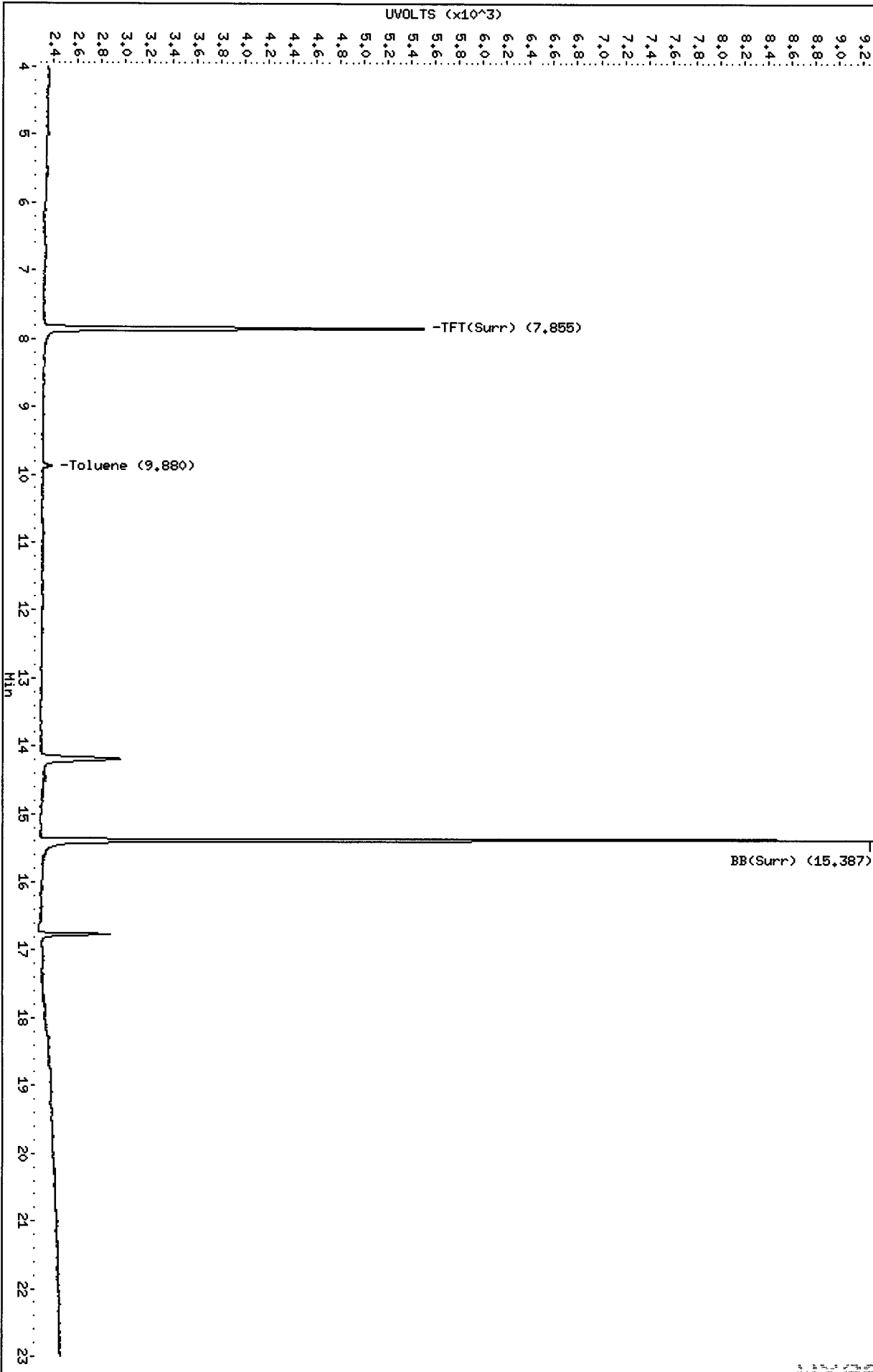
Data File: /chem3/pid1.i/20130729-2.b/0729a011.d
Date: 29-JUL-2013 17:46
Client ID: GP5-S-4.0
Sample Info: WY96E

Instrument: pid1.i

Column phase: RTX 502-2 PID

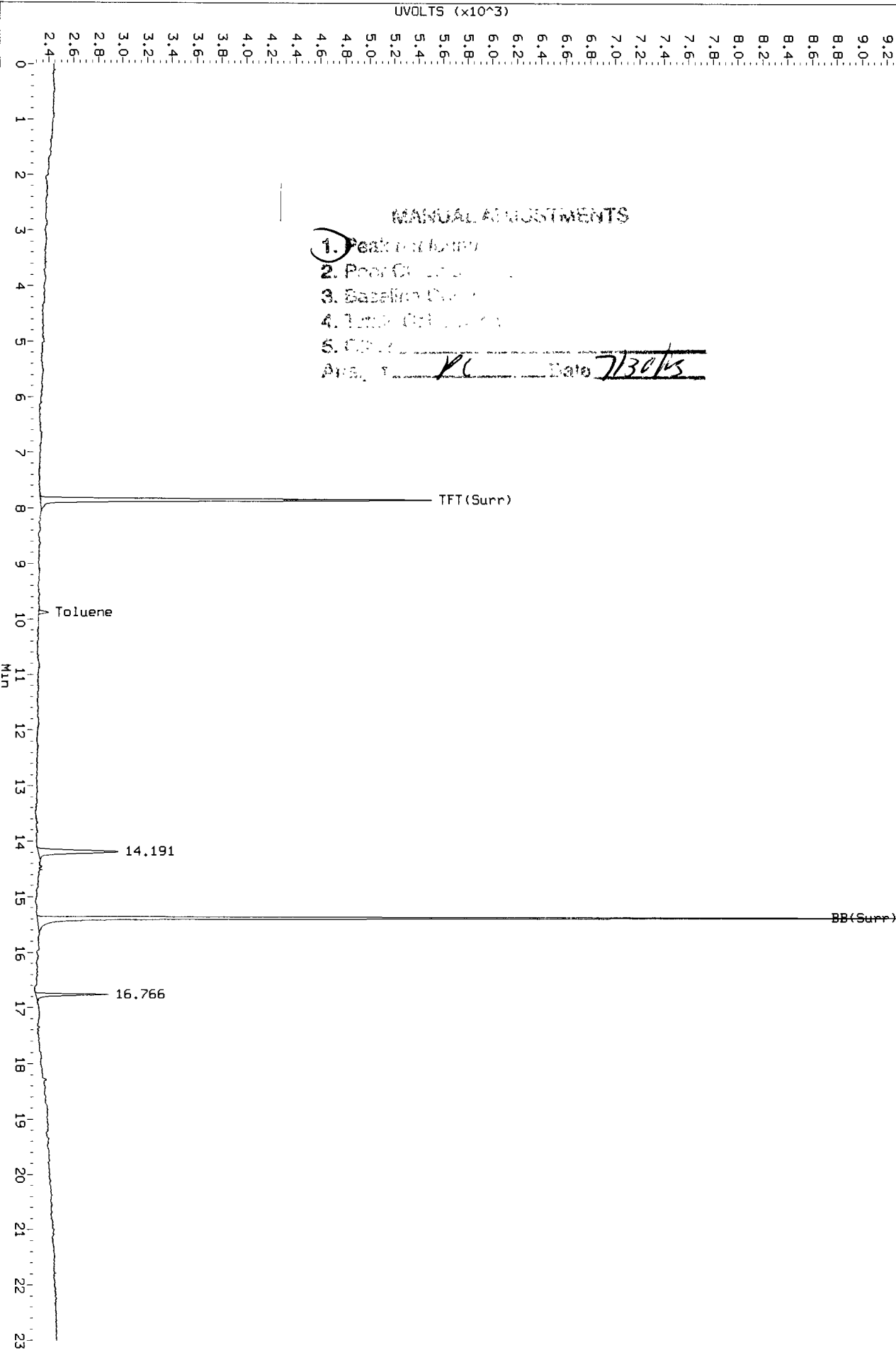
Operator: PC
Column diameter: 0.18

/chem3/pid1.i/20130729-2.b/0729a011.d/0729a011.cdf



Data File: /chem3/pid1.1/20130729-2.b/0729a011.d/0729a011.cdf
Injection Date: 29-JUL-2013 17:46
Instrument: pid1.1
Client Sample ID: GP5-S-4.0

AIA 0729a011.cdf: 0.000 to 23.000 Min



MANUAL ADJUSTMENTS


1. Peak [unclear]
2. Peak [unclear]
3. Baseline [unclear]
4. [unclear]
5. [unclear]

Anal. by VC Date 7/30/13

14 08:00 : 09:23

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: GP6-S-4.0
SAMPLE

Lab Sample ID: WY96F
 LIMS ID: 13-15746
 Matrix: Soil
 Data Release Authorized: 
 Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-05
 Date Sampled: 07/25/13
 Date Received: 07/27/13

Date Analyzed: 07/29/13 18:15
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Sample Amount: 61 mg-dry-wt
 Percent Moisture: 22.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	20	< 20 U
108-88-3	Toluene	20	49
100-41-4	Ethylbenzene	20	110
179601-23-1	m,p-Xylene	41	230
95-47-6	o-Xylene	20	240

Gasoline Range Hydrocarbons **8.2** **120** GAS ID
GRO

BETX Surrogate Recovery

Trifluorotoluene	100%
Bromobenzene	102%

Gasoline Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	98.0%

BETX values reported in µg/kg (ppb)
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

MC
 7/30/13

Data file 1: /chem3/pid1.i/20130729-1.b/0729a012.d ARI ID: WY96F
 Data file 2: /chem3/pid1.i/20130729-2.b/0729a012.d Client ID: GP6-S-4.0
 Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 18:15
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.001	3294	42771	100.7	TFT(Surr)
15.380	0.001	1991	16276	98.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	425196	1.187 M
8015C 2MP-TMB (4.18 to 16.20)	723723	291338	0.403 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	192839	0.331 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	562028	1.498 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	0.001	3448	100.0	TFT(Surr)
15.387	0.001	7627	102.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.880	0.003	129	0.60	Toluene
12.747	-0.020	235	1.33	Ethylbenzene
12.931	0.003	537	2.76	M/P-Xylene
13.879	0.003	459	2.88	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a012.d

Date: 29-JUL-2013 18:15

Client ID: GP6-S-4.0

Sample Info: WY96F

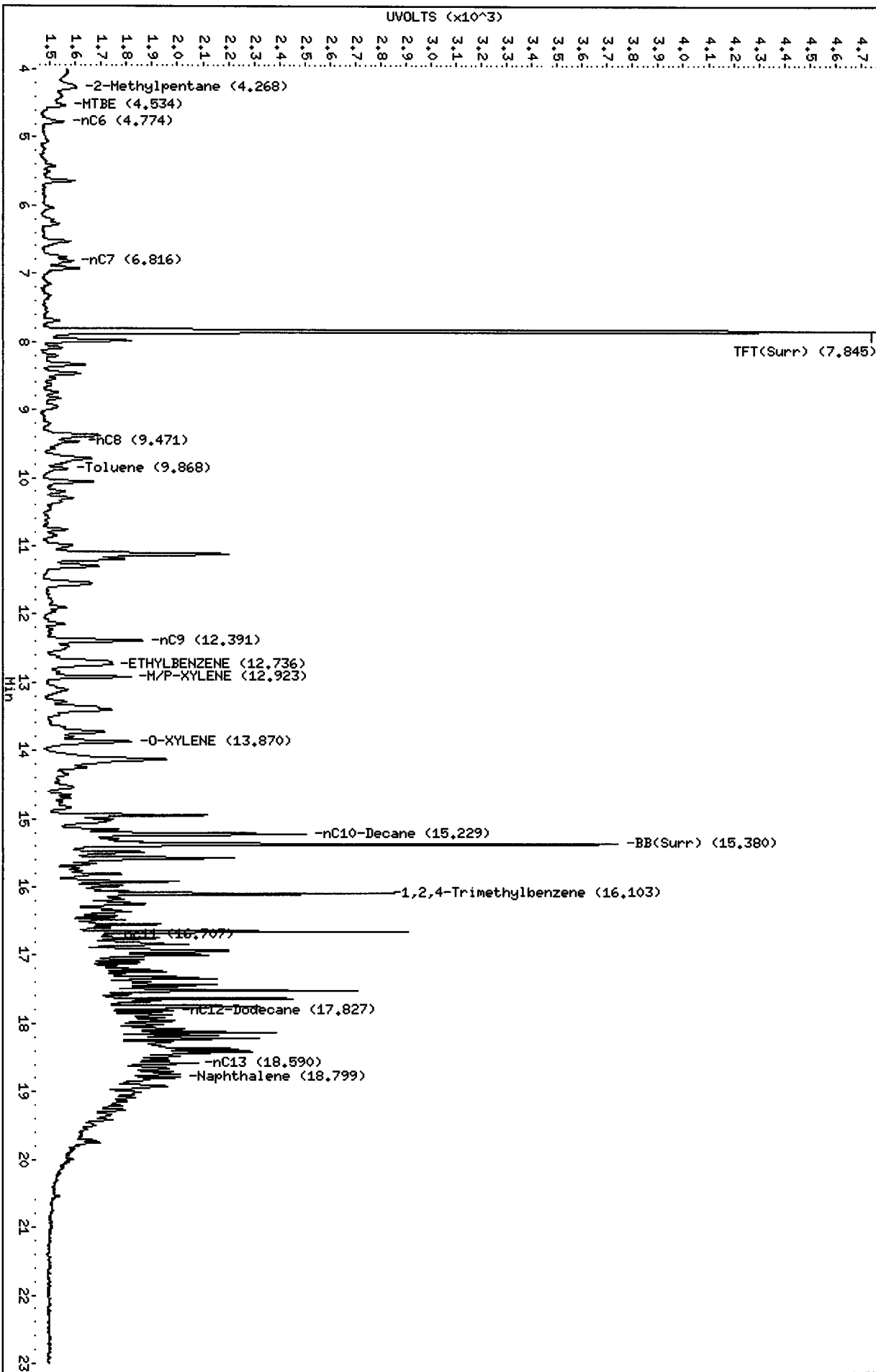
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

/chem3/pid1.i/20130729-1.b/0729a012.d/0729a012.cdf



Data File: /chem3/pid1.i/20130729-2.b/0729a012.d

Date: 29-JUL-2013 18:15

Client ID: GP6-S-4.0

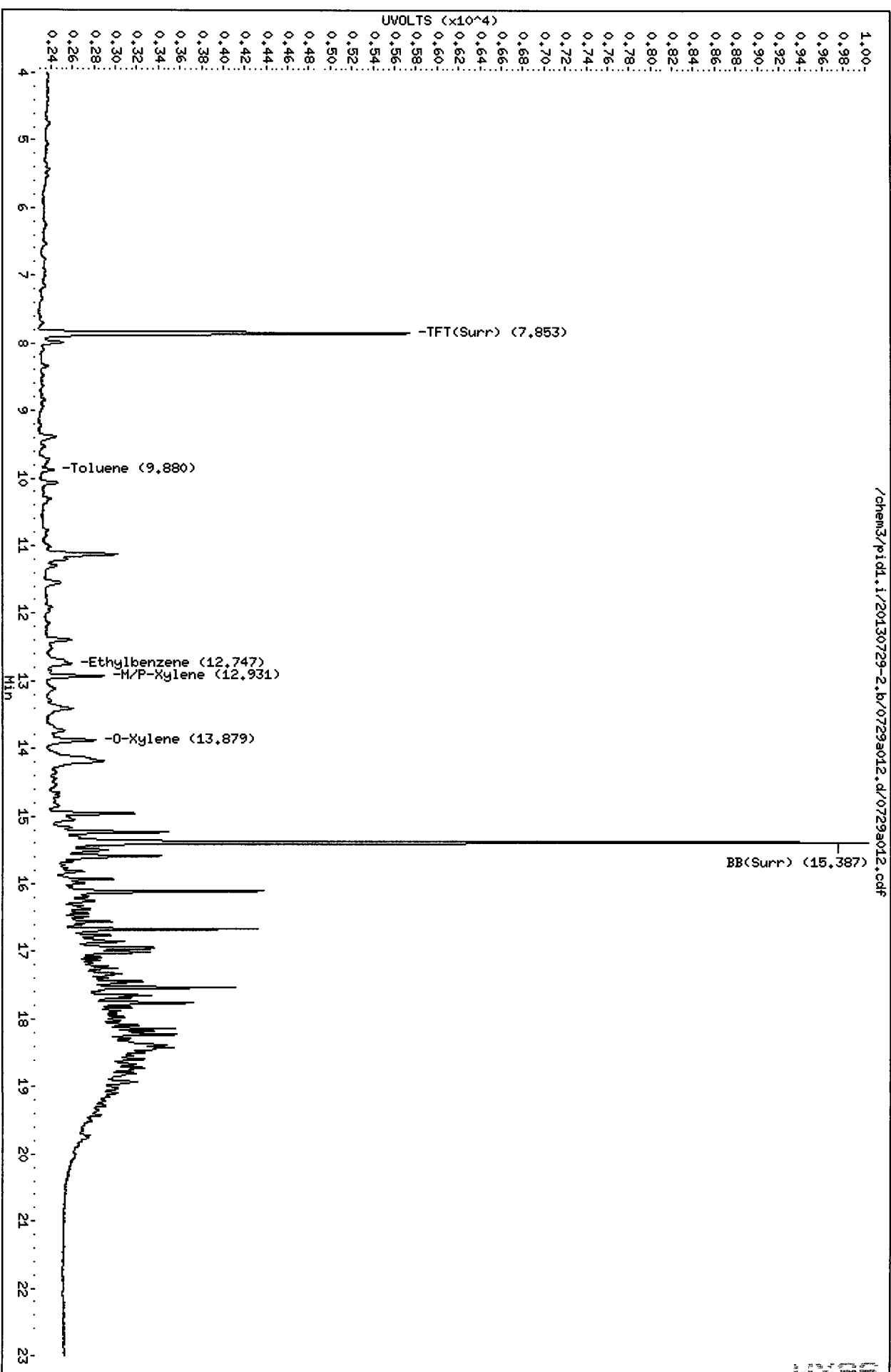
Sample Info: WY96F

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

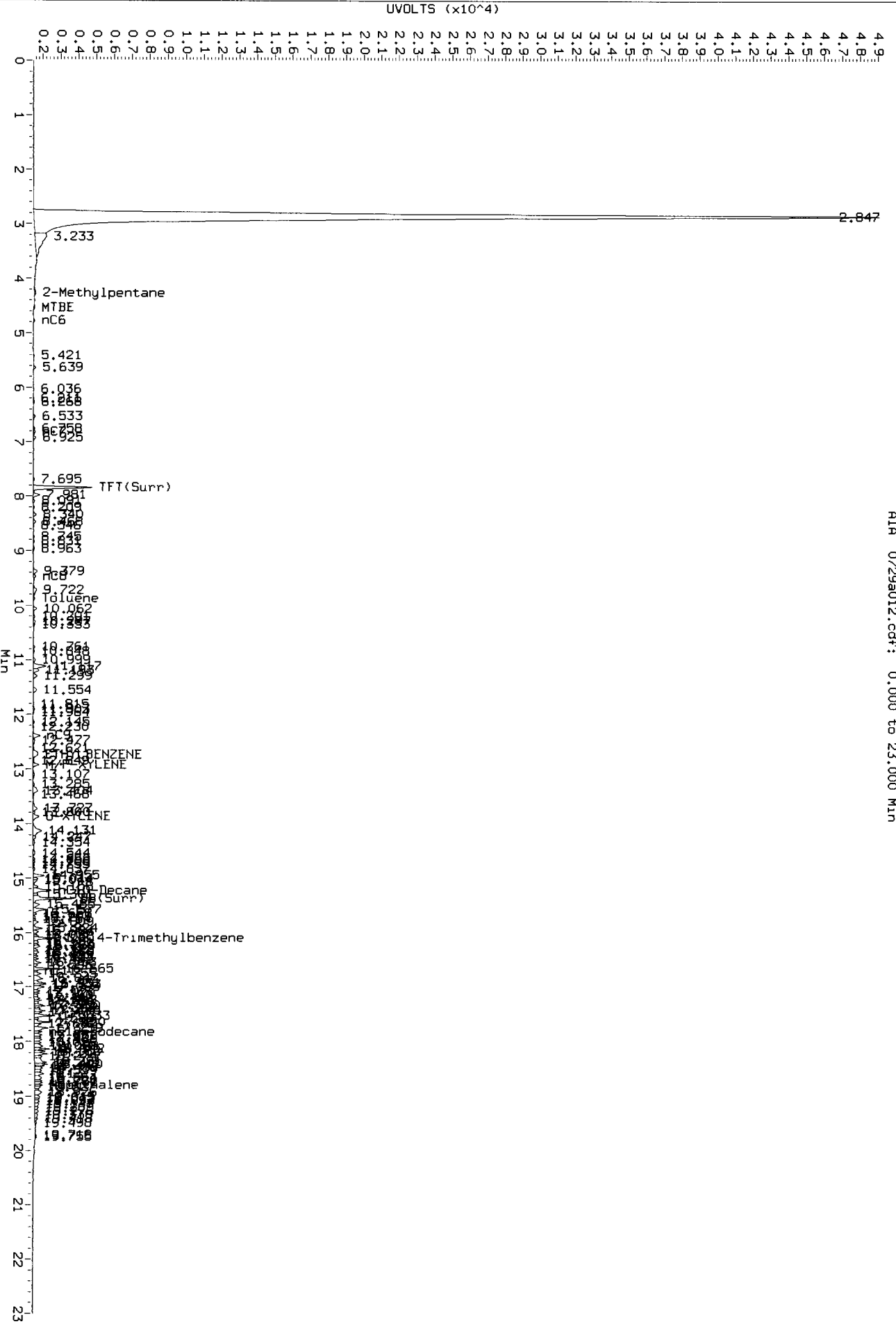
Column diameter: 0.18



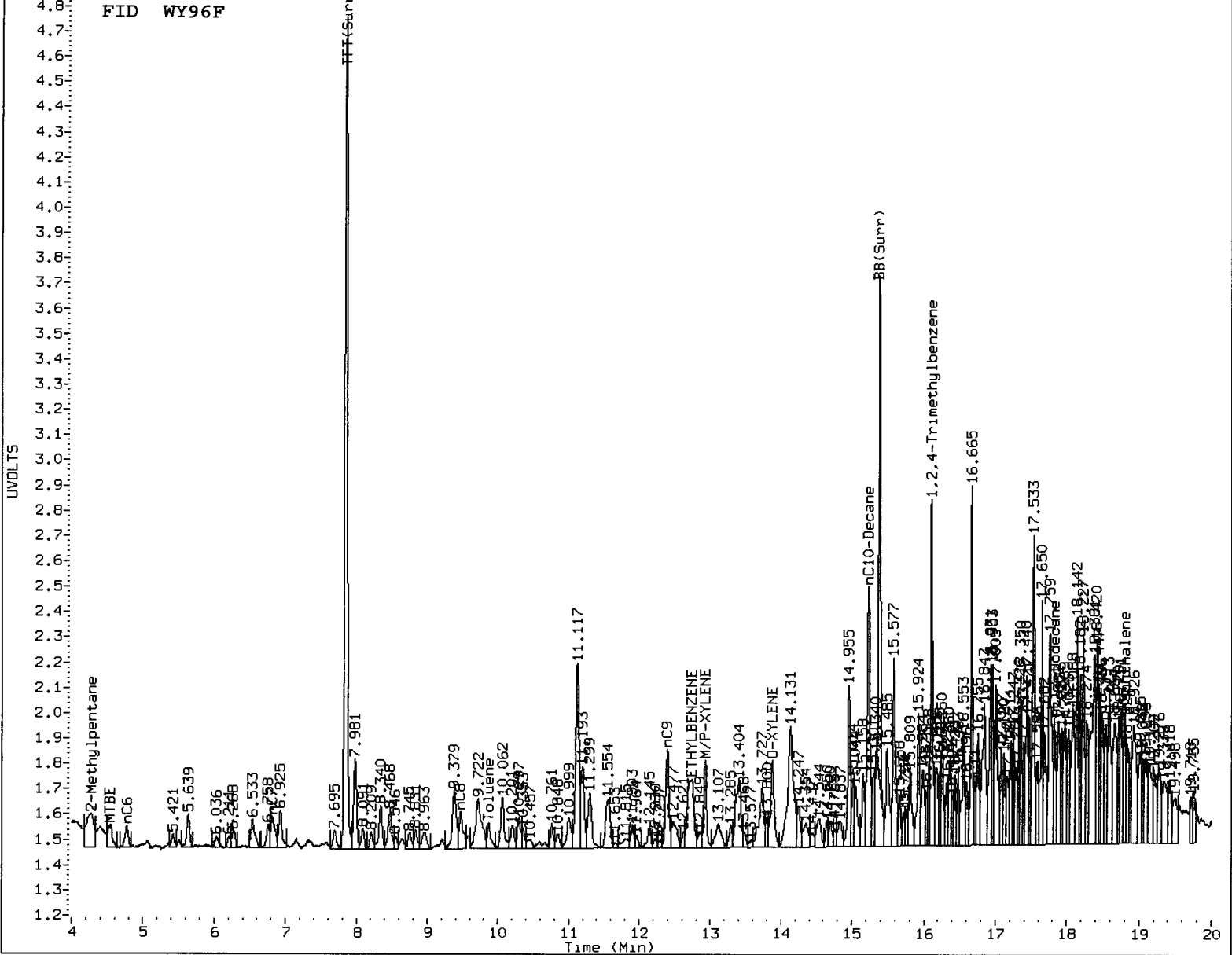
MC
7/30/13

Data File: /chem3/pid1.1/20130729-1.b/0729a012.d/0729a012.cdf
Injection Date: 29-JUL-2013 18:15
Instrument: pid1.1
Client Sample ID: GP6-S-4.0

AIA 0729a012.cdf: 0.000 to 23.000 Min



130729-1



MANUAL INTEGRATION

- 1) Baseline correction
- 2. Poor chromatography
- 3.) Peak not found
- 4. Totals calculation

5. Other _____

Analyst: KL

Date: 7/30/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1


Sample ID: GP7-S-4.0

SAMPLE

Lab Sample ID: WY96G

LIMS ID: 13-15747

Matrix: Soil

Data Release Authorized: 

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 18:45

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 27 mg-dry-wt

Percent Moisture: 49.3%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	46	< 46 U	
108-88-3	Toluene	46	100	
100-41-4	Ethylbenzene	46	< 46 U	
179601-23-1	m,p-Xylene	92	< 92 U	
95-47-6	o-Xylene	46	< 46 U	
	Gasoline Range Hydrocarbons	18	< 18 U	---

BETX Surrogate Recovery

Trifluorotoluene	91.7%
Bromobenzene	93.0%

Gasoline Surrogate Recovery

Trifluorotoluene	92.9%
Bromobenzene	95.9%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

AC
 7/5/13

Data file 1: /chem3/pid1.i/20130729-1.b/0729a013.d ARI ID: WY96G
 Data file 2: /chem3/pid1.i/20130729-2.b/0729a013.d Client ID: GP7-S-4.0
 Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 18:45
 Instrument: pid1.i Matrix: SOIL
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.846	0.002	3037	38202	92.9	TFT(Surr)
15.380	0.001	1949	16340	95.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	18336	0.051
8015C 2MP-TMB (4.18 to 16.20)	723723	12331	0.017
AK101 nC6-nC10 (4.68 to 15.10)	582885	6874	0.012
NWTPHG Tol-Nap (9.77 to 18.90)	375093	19204	0.051

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.854	0.002	3161	91.7	TFT(Surr)
15.387	0.002	6933	93.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
ND	---	---	---	Benzene
9.880	0.003	118	0.55	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

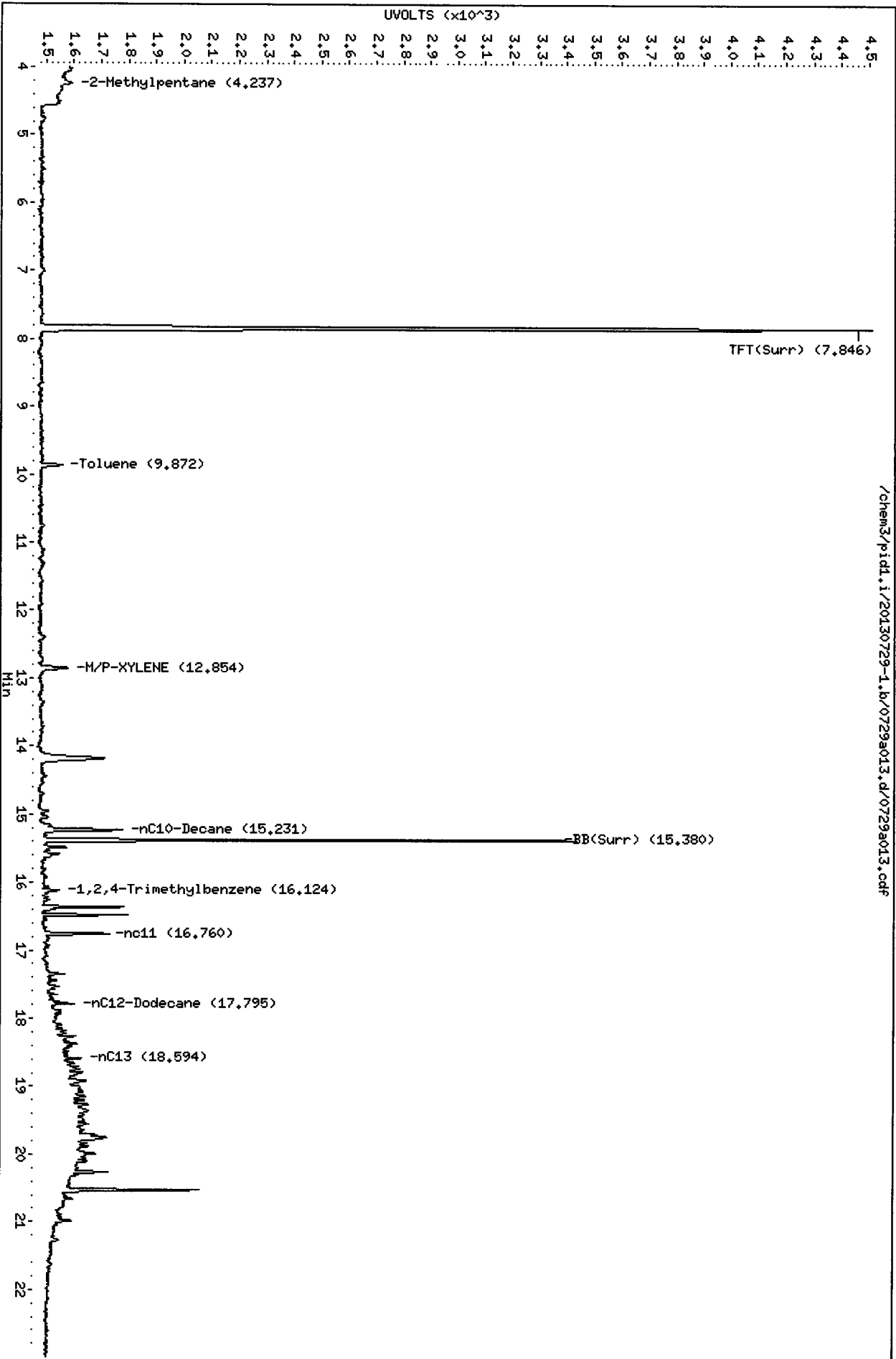
A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.k/0729a013.d
Date : 29-JUL-2013 18:45
Client ID: GP7-S-4.0
Sample Info: WY96G

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130729-1.k/0729a013.d/0729a013.cdf

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130729-2.b/0729a013.d

Date: 29-JUL-2013 18:45

Client ID: GP7-S-4.0

Sample Info: MY96G

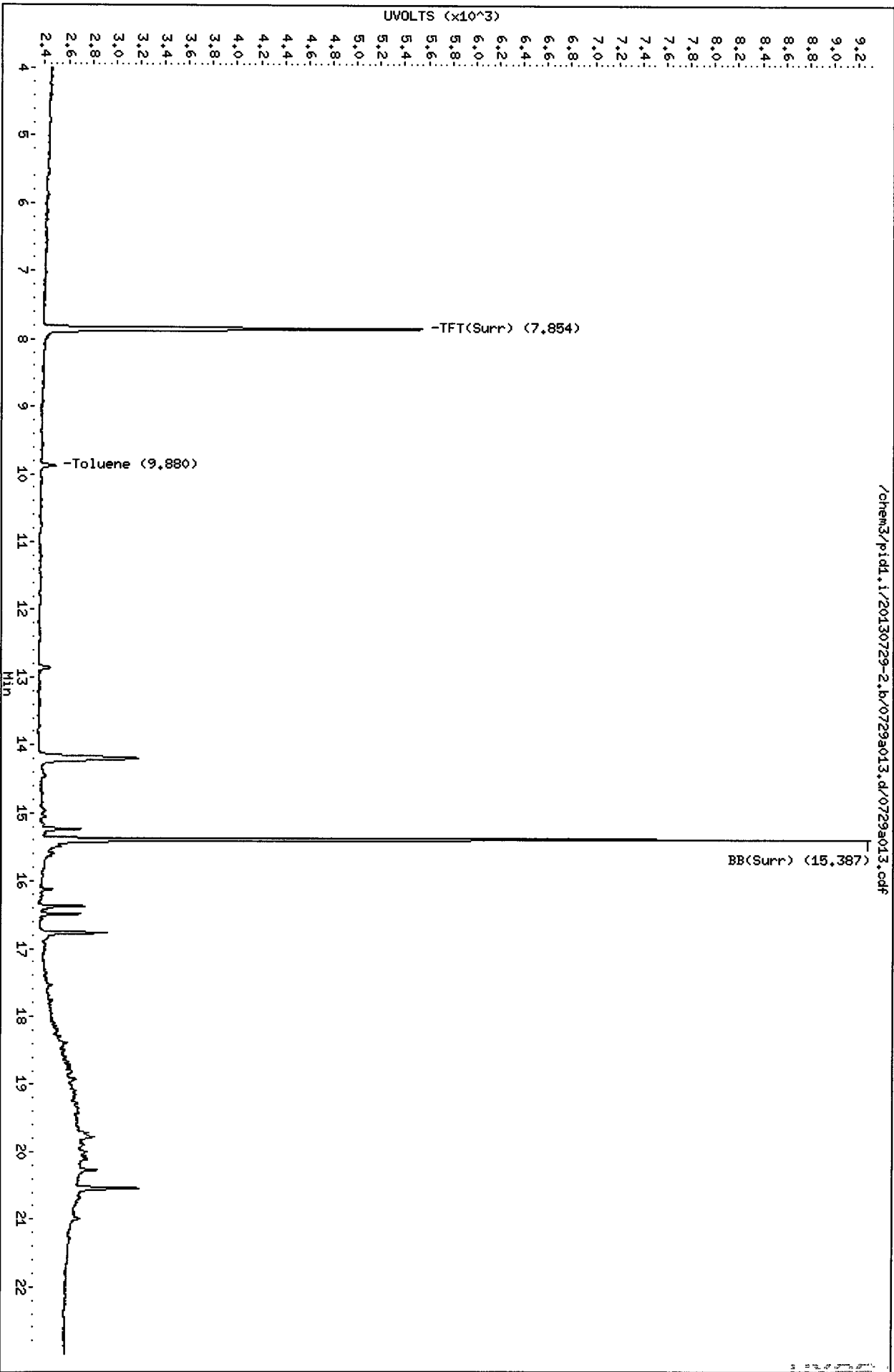
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130729-2.b/0729a013.d/0729a013.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

**Sample ID: GP8-S-4.0
SAMPLE**

Lab Sample ID: WY96H

LIMS ID: 13-15748

Matrix: Soil

Data Release Authorized: *B*

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/25/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 20:12

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 54 mg-dry-wt

Percent Moisture: 29.6%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	23	< 23 U
108-88-3	Toluene	23	31
100-41-4	Ethylbenzene	23	< 23 U
179601-23-1	m,p-Xylene	46	< 46 U
95-47-6	o-Xylene	23	< 23 U

Gasoline Range Hydrocarbons 9.2 < 9.2 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	87.4%
Bromobenzene	91.2%

Gasoline Surrogate Recovery

Trifluorotoluene	89.1%
Bromobenzene	94.4%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

AC
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a016.d ARI ID: WY96H
Data file 2: /chem3/pid1.i/20130729-2.b/0729a016.d Client ID: GP8-S-4.0
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 20:12
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
7.846	0.001	2915	36726	89.1	TFT(Surr)
15.379	0.001	1917	15977	94.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	12610	0.035
8015C 2MP-TMB (4.18 to 16.20)	723723	24569	0.034
AK101 nC6-nC10 (4.68 to 15.10)	582885	22092	0.038
NWTPHG Tol-Nap (9.77 to 18.90)	375093	13719	0.037

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
7.854	0.001	3015	87.4	TFT(Surr)
15.387	0.001	6803	91.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.879	0.002	74	0.34	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

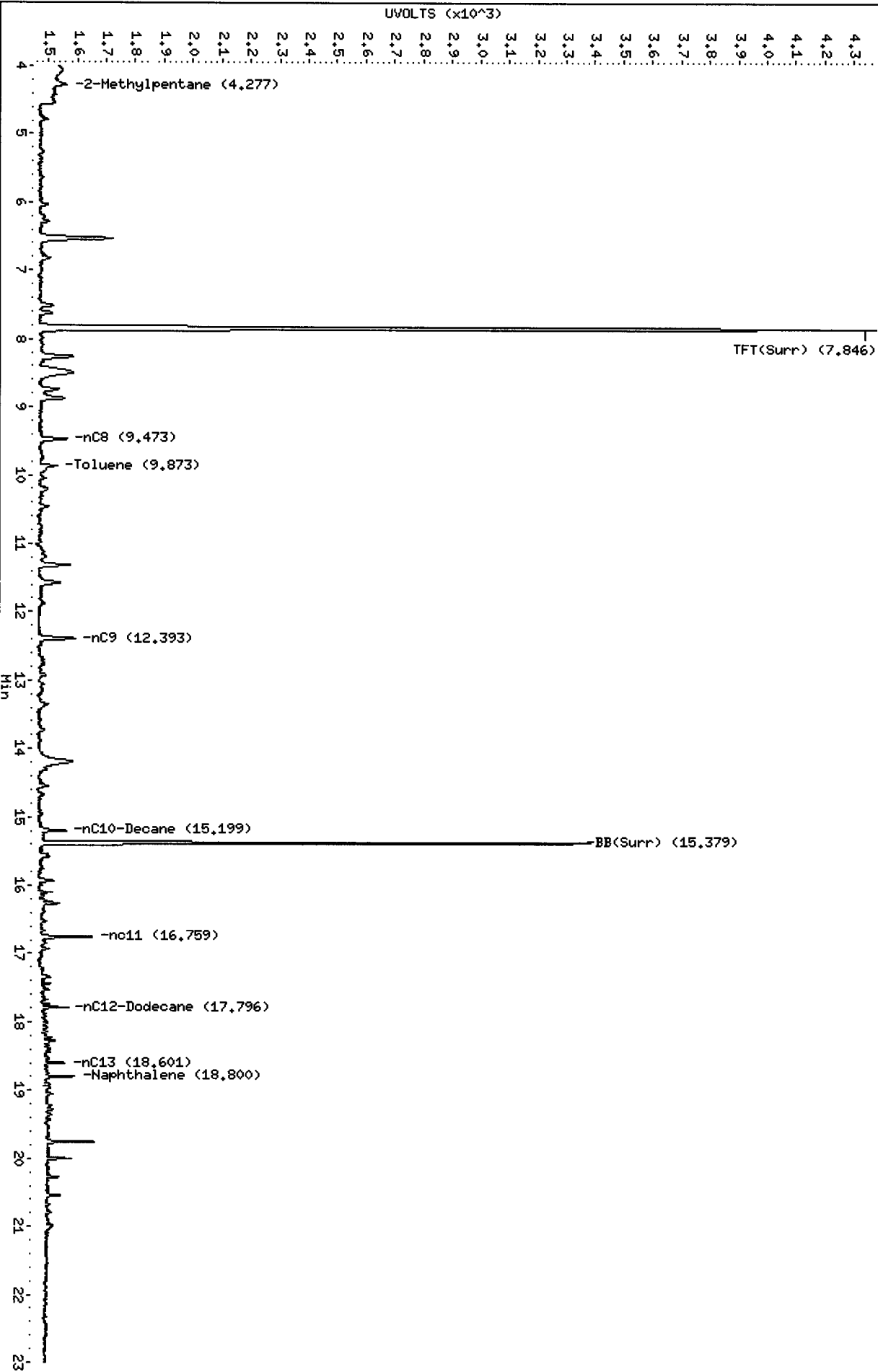
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729s016.d
Date: 29-JUL-2013 20:12
Client ID: GP8-S-4.0
Sample Info: WY96H

Column phase: RTX 502-2 FID

/chem3/pid1.i/20130729-1.b/0729s016.d/0729s016.cdf

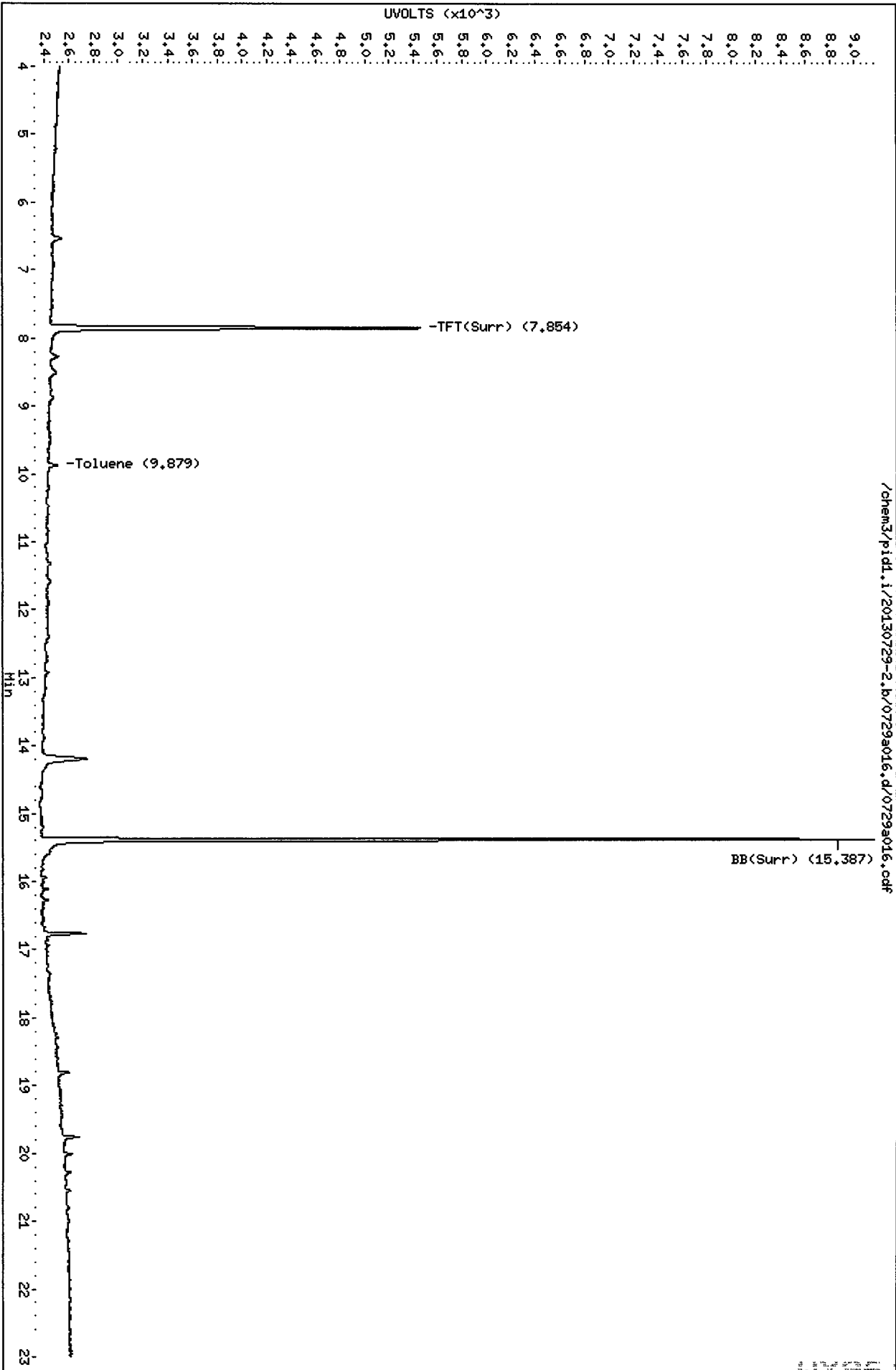
Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/pid1.i/20130729-2.b/0729a016.d
Date: 29-JUL-2013 20:12
Client ID: GP8-S-4.0
Sample Info: WY96H

Column phase: RTX 502-2 PID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG


Page 1 of 1

**Sample ID: GP9-S-4.0
SAMPLE**

Lab Sample ID: WY96I

LIMS ID: 13-15749

Matrix: Soil

Data Release Authorized: 

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/26/13

Date Received: 07/27/13

Date Analyzed: 07/29/13 20:41

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 71 mg-dry-wt

Percent Moisture: 20.1%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	18	< 18 U
108-88-3	Toluene	18	< 18 U
100-41-4	Ethylbenzene	18	< 18 U
179601-23-1	m,p-Xylene	35	< 35 U
95-47-6	o-Xylene	18	< 18 U

Gasoline Range Hydrocarbons	7.1	< 7.1 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	92.4%
Bromobenzene	96.3%

Gasoline Surrogate Recovery

Trifluorotoluene	93.3%
Bromobenzene	99.7%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ML
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a017.d ARI ID: WY96I
Data file 2: /chem3/pid1.i/20130729-2.b/0729a017.d Client ID: GP9-S-4.0
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 20:41
Instrument: pid1.i Matrix: SOIL
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

=====
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	0.000	3051	38208	93.3	TFT(Surr)
15.379	0.001	2026	17106	99.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	2694	0.008
8015C 2MP-TMB (4.18 to 16.20)	723723	0	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.90)	375093	4503	0.012

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

=====
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	0.001	3187	92.4	TFT(Surr)
15.386	0.001	7181	96.3	BB(Surr)

SW8021 (PID)

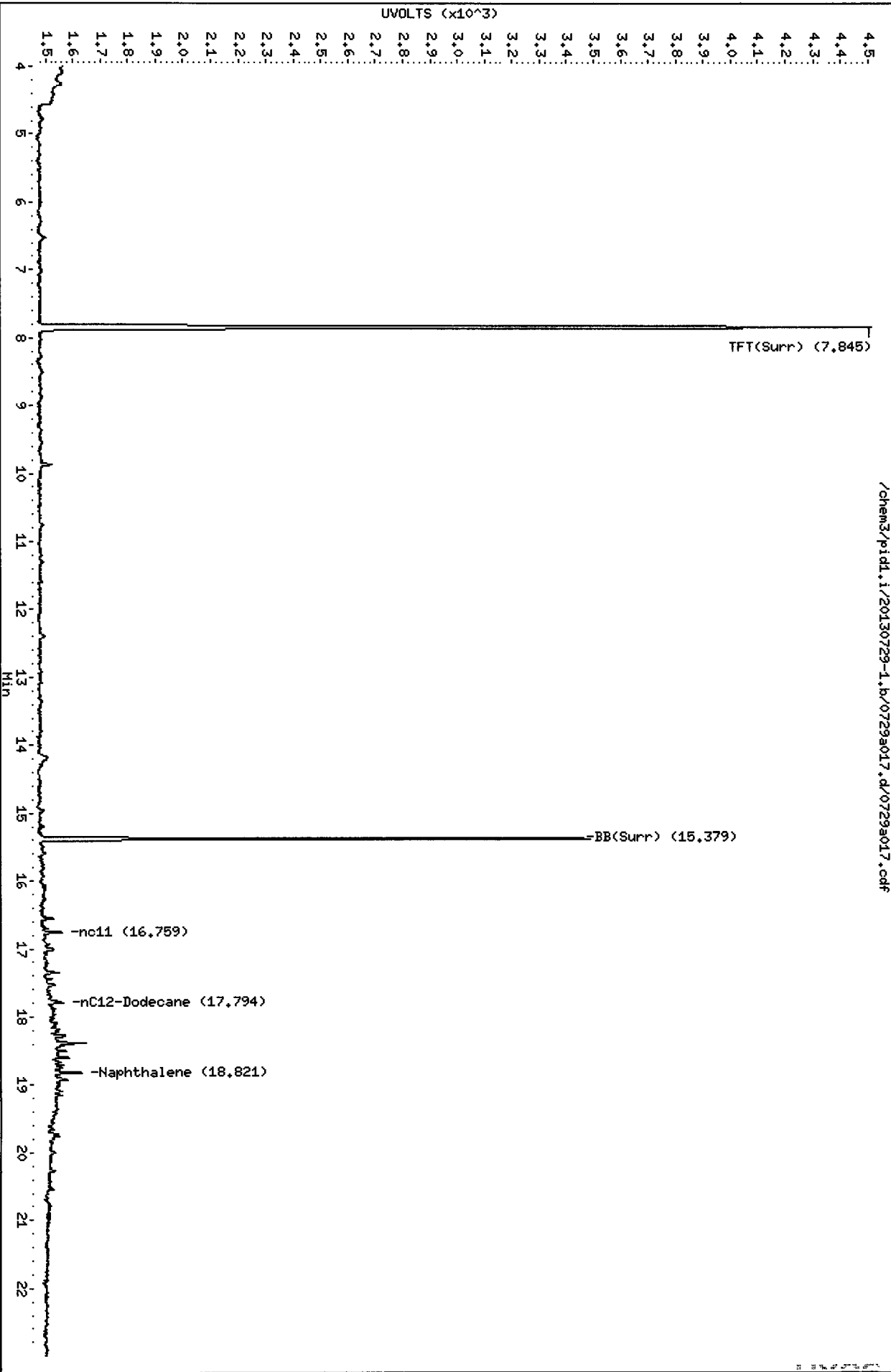
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
9.883	0.006	49	0.23N	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a017.d
Date : 29-JUL-2013 20:41
Client ID: GP9-S-4.0
Sample Info: WY961

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

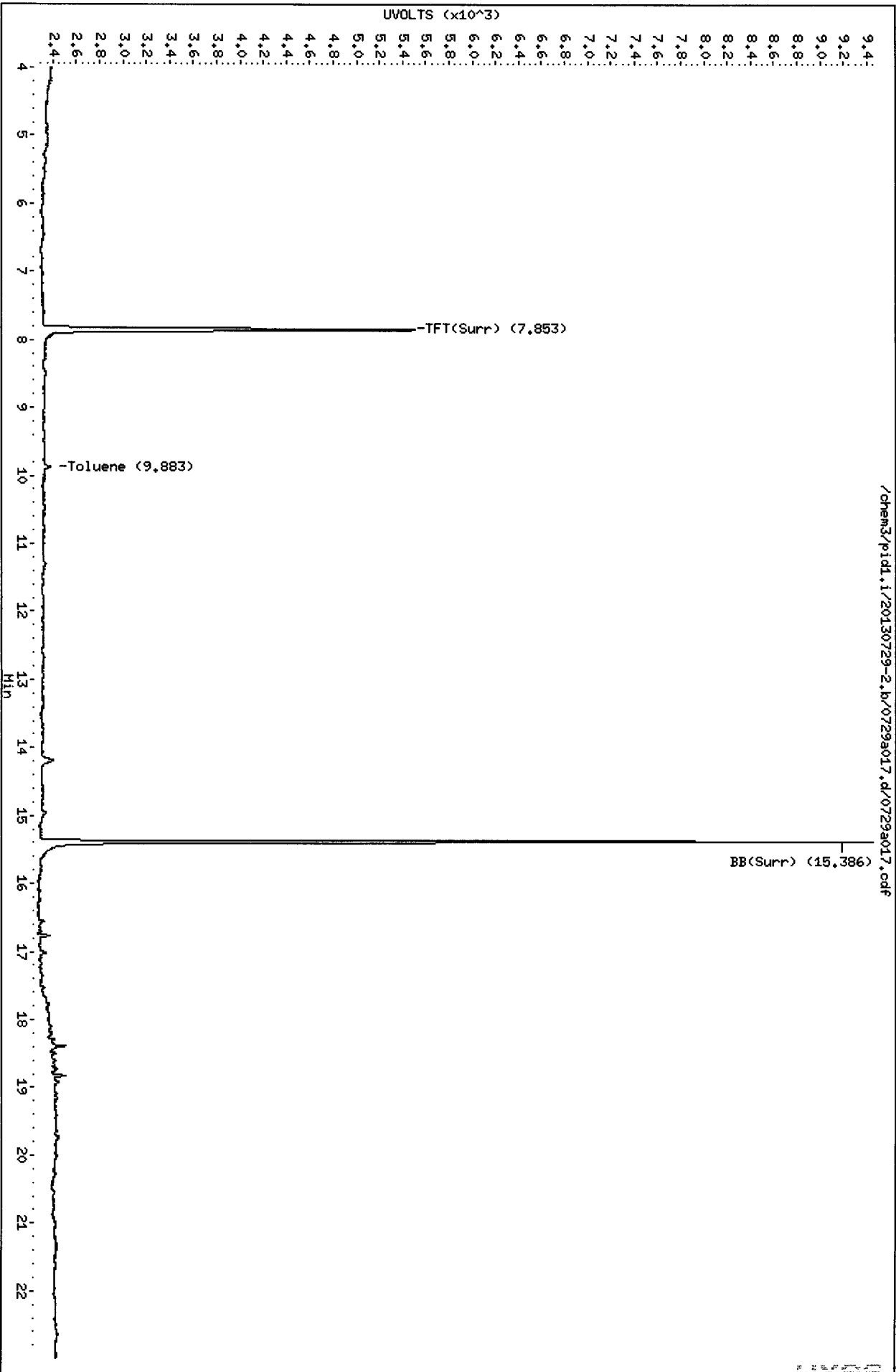


Data File: /chem3/pid1.i/20130729-2.b/0729a017.d
Date : 29-JUL-2013 20:41
Client ID: GP9-S-4.0
Sample Info: WY96I

Column phase: RTX 502-2 PID

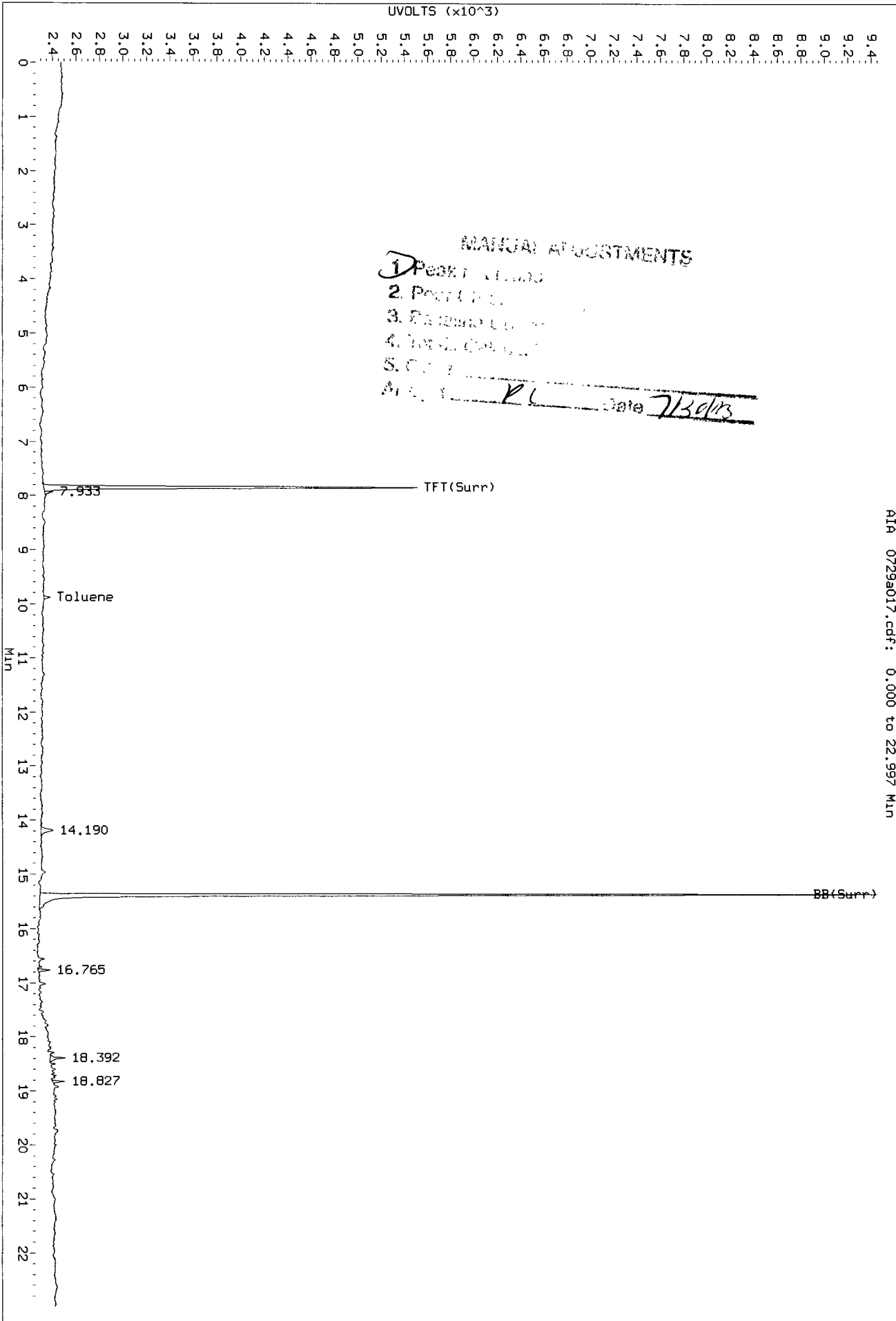
/chem3/pid1.i/20130729-2.b/0729a017.d/0729a017.cdf

Instrument: pid1.i
Operator: PC
Column diameter: 0.18



Data File: /chem3/p1d1.1/20130729-2.b/0729a017.d/0729a017.cdf
Injection Date: 29-JUL-2013 20:41
Instrument: p1d1.1
Client Sample ID: GP9-5-4.0

AIA 0729a017.cdf: 0.000 to 22.997 Min



0729a017.cdf

BETX SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WY96
Matrix: Soil

QC Report No: WY96-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-05

Client ID	TFT	BBZ	TOT OUT
MB-072913	98.3%	97.3%	0
LCS-072913	104%	99.5%	0
LCSD-072913	107%	105%	0
GP1-S-3.0	102%	101%	0
GP2-S-3.5	98.1%	95.2%	0
GP3-S-3.0	94.8%	95.3%	0
GP4-S-4.0	95.3%	95.7%	0
GP5-S-4.0	92.4%	93.9%	0
GP6-S-4.0	100%	102%	0
GP7-S-4.0	91.7%	93.0%	0
GP8-S-4.0	87.4%	91.2%	0
GP9-S-4.0	92.4%	96.3%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(69-126)
(BBZ) = Bromobenzene	(80-120)	(49-143)

Log Number Range: 13-15741 to 13-15749

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-072913

LAB CONTROL SAMPLE

Lab Sample ID: LCS-072913

LIMS ID: 13-15741

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 07/29/13 13:35

LCSD: 07/29/13 14:05

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	54.6	50.0	109%	55.4	50.0	111%	1.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	103%	109%
Bromobenzene	97.0%	106%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-072913

LAB CONTROL SAMPLE

Lab Sample ID: LCS-072913

LIMS ID: 13-15741

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 07/29/13 13:35

LCSD: 07/29/13 14:05

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	166	185	89.7%	169	185	91.4%	1.8%
Toluene	1880	1980	94.9%	1930	1980	97.5%	2.6%
Ethylbenzene	556	580	95.9%	562	580	96.9%	1.1%
m,p-Xylene	2010	2120	94.8%	2070	2120	97.6%	2.9%
o-Xylene	884	960	92.1%	912	960	95.0%	3.1%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	104%	107%
Bromobenzene	99.5%	105%

MC
7/3/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a004.d ARI ID: LCS0729
Data file 2: /chem3/pid1.i/20130729-2.b/0729a004.d Client ID:
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 13:35
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.847	0.003	3382	47015	103.4	TFT(Surr)
15.381	0.003	1971	18378	97.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	381950	1.067 M
8015C 2MP-TMB (4.18 to 16.20)	723723	746762	1.032 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	605440	1.039 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	409298	1.091 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

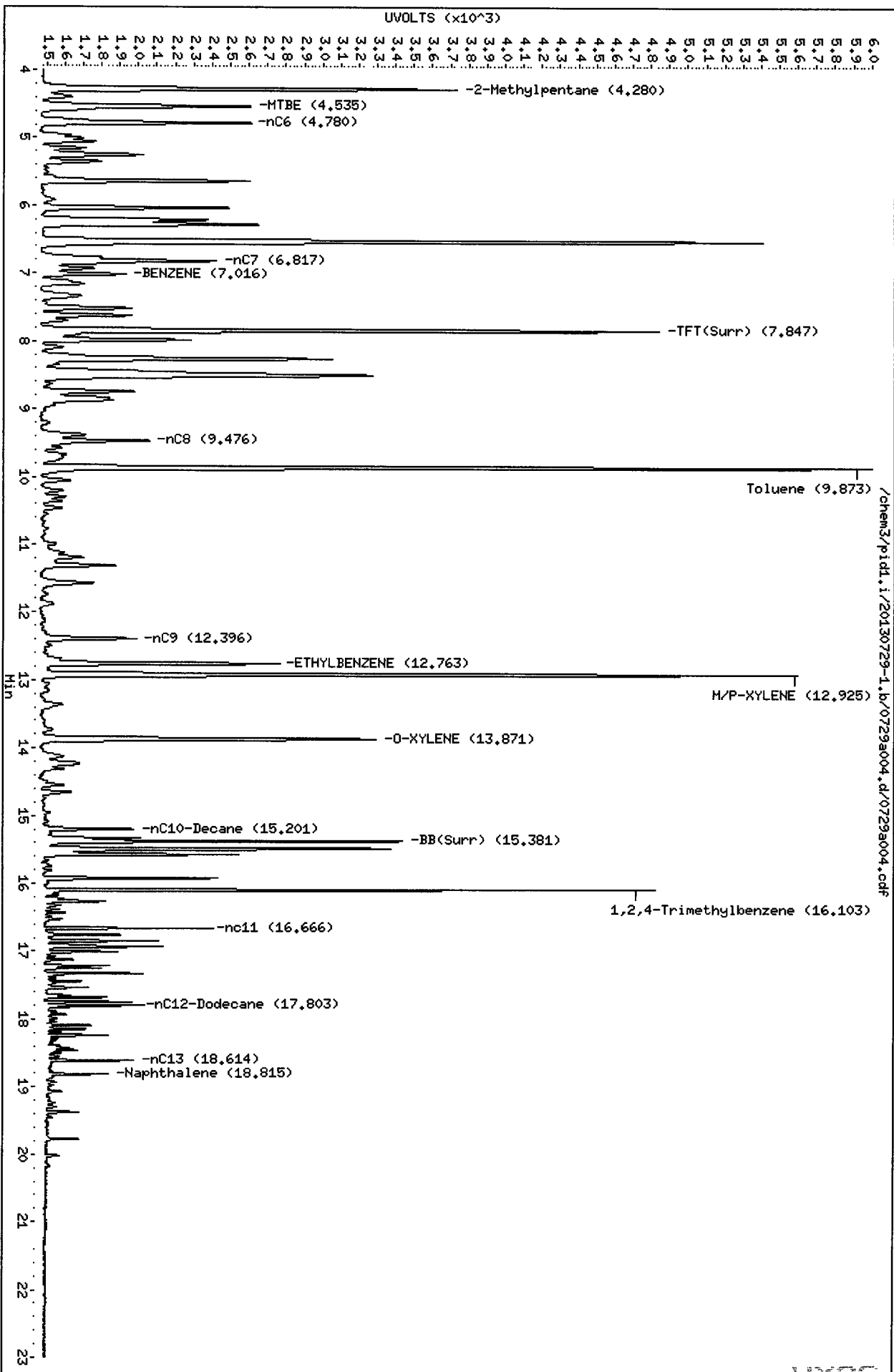
RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.855	0.003	3571	103.5	TFT(Surr)
15.388	0.003	7419	99.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.024	0.002	816	3.33	Benzene
9.881	0.004	8085	37.65	Toluene
12.771	0.004	1973	11.13	Ethylbenzene
12.934	0.006	7819	40.23	M/P-Xylene
13.879	0.004	2813	17.68	O-Xylene
4.543	-0.008	141	1.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak was manually integrated



Data File: /chem3/pid1.i/20130729-2.b/07293004.d

Date: 29-JUL-2013 13:35

Client ID:

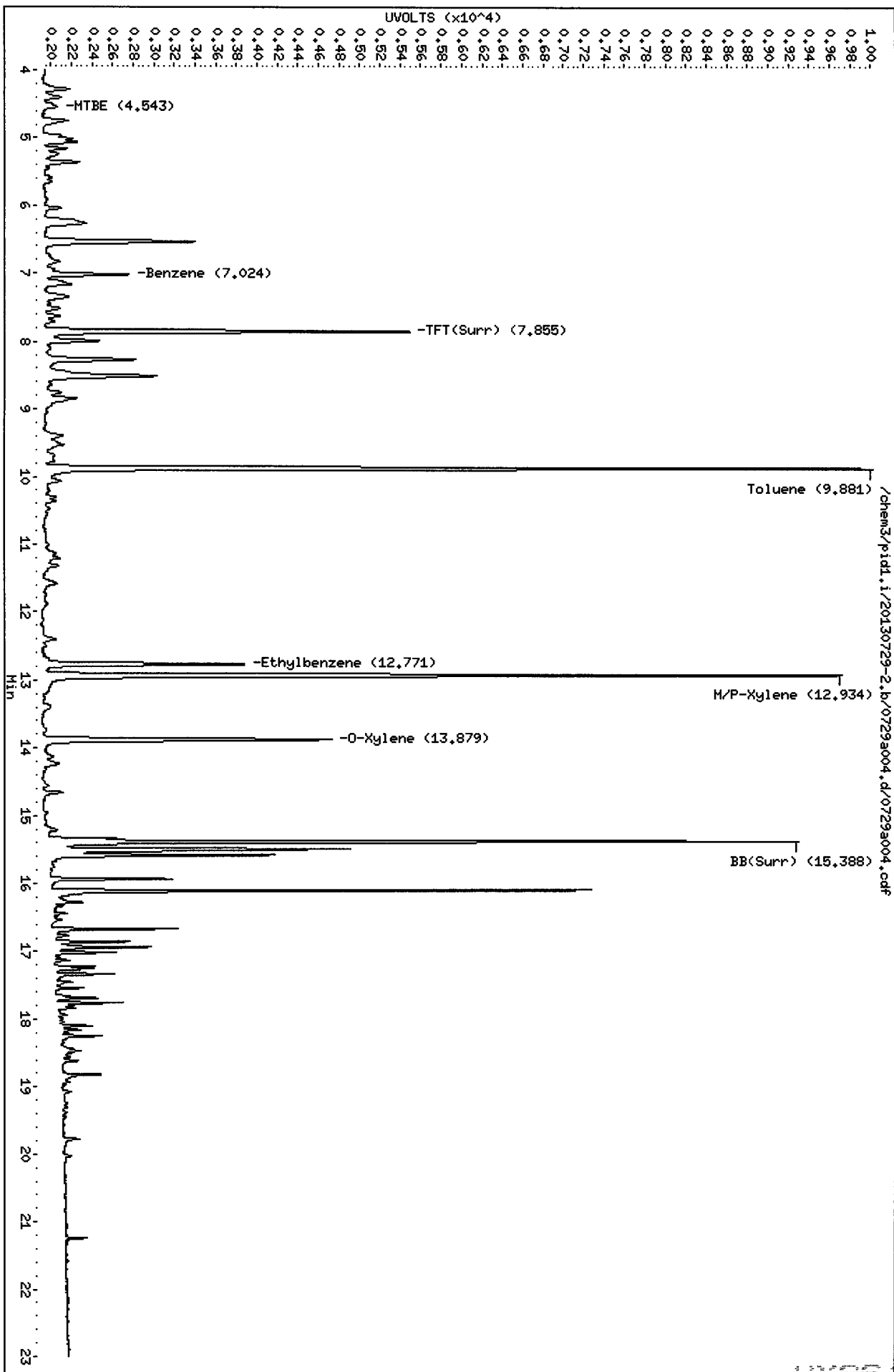
Sample Info: LCS0729

Column phase: RTX 502-2 PID

Instrument: pid1.i

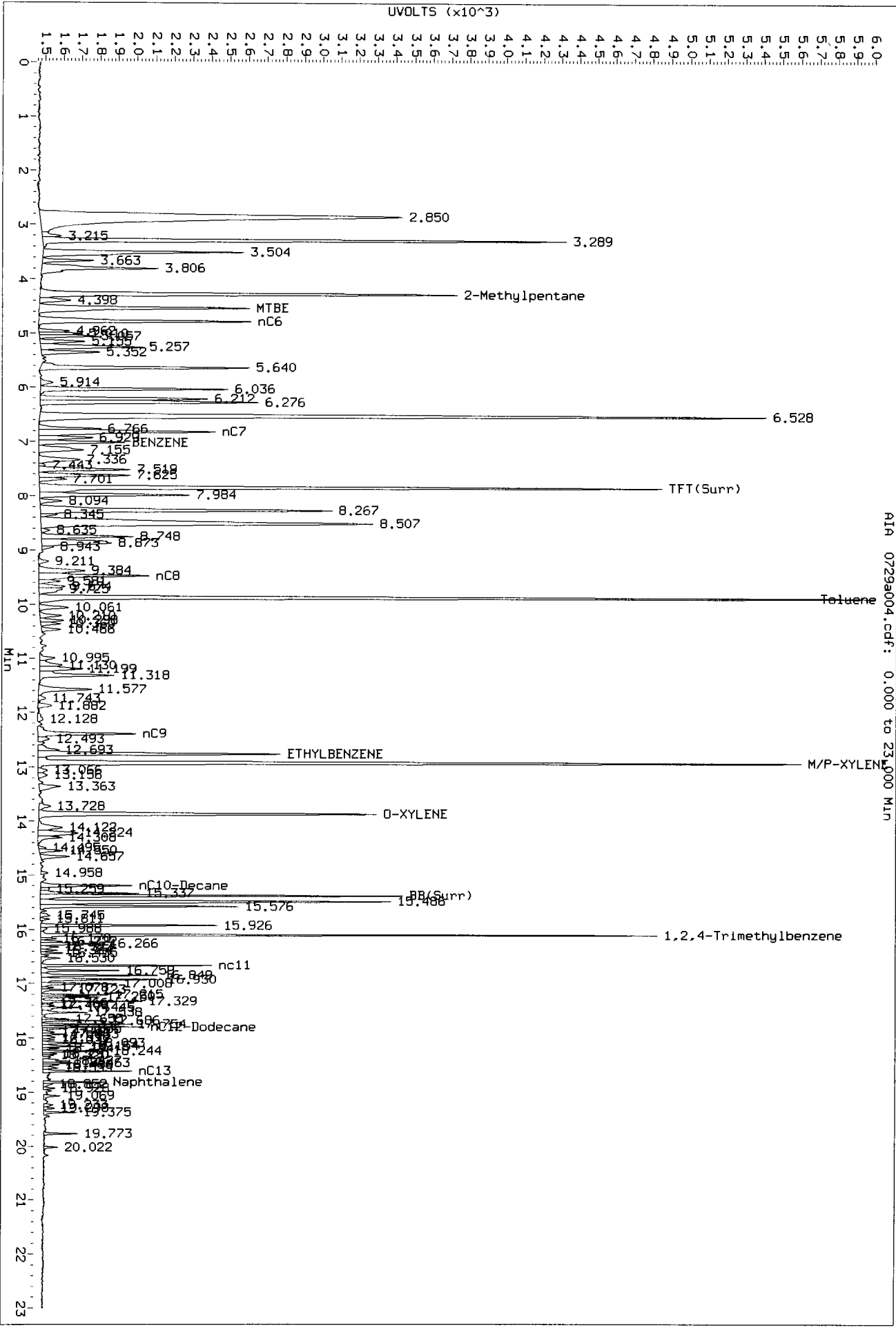
Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.1/20130729-1-b/0729a004.d/0729a004.cdf
Injection Date: 29-JUL-2013 13:35
Instrument: pid1.1
Client Sample ID:

Handwritten: VLE 7/30/13



AIA 0729a004.cdf: 0.000 to 23.000 MIN

0729a004.cdf

MC
7/30/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a005.d ARI ID: LCSD0729
Data file 2: /chem3/pid1.i/20130729-2.b/0729a005.d Client ID:
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 14:05
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.844	0.000	3550	48911	108.6	TFT(Surr)
15.379	0.001	2152	18759	105.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	393616	1.099 M
8015C 2MP-TMB (4.18 to 16.20)	723723	769548	1.063 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	625110	1.072 M
NWTPHG Tol-Nap (9.77 to 18.90)	375093	415154	1.107 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

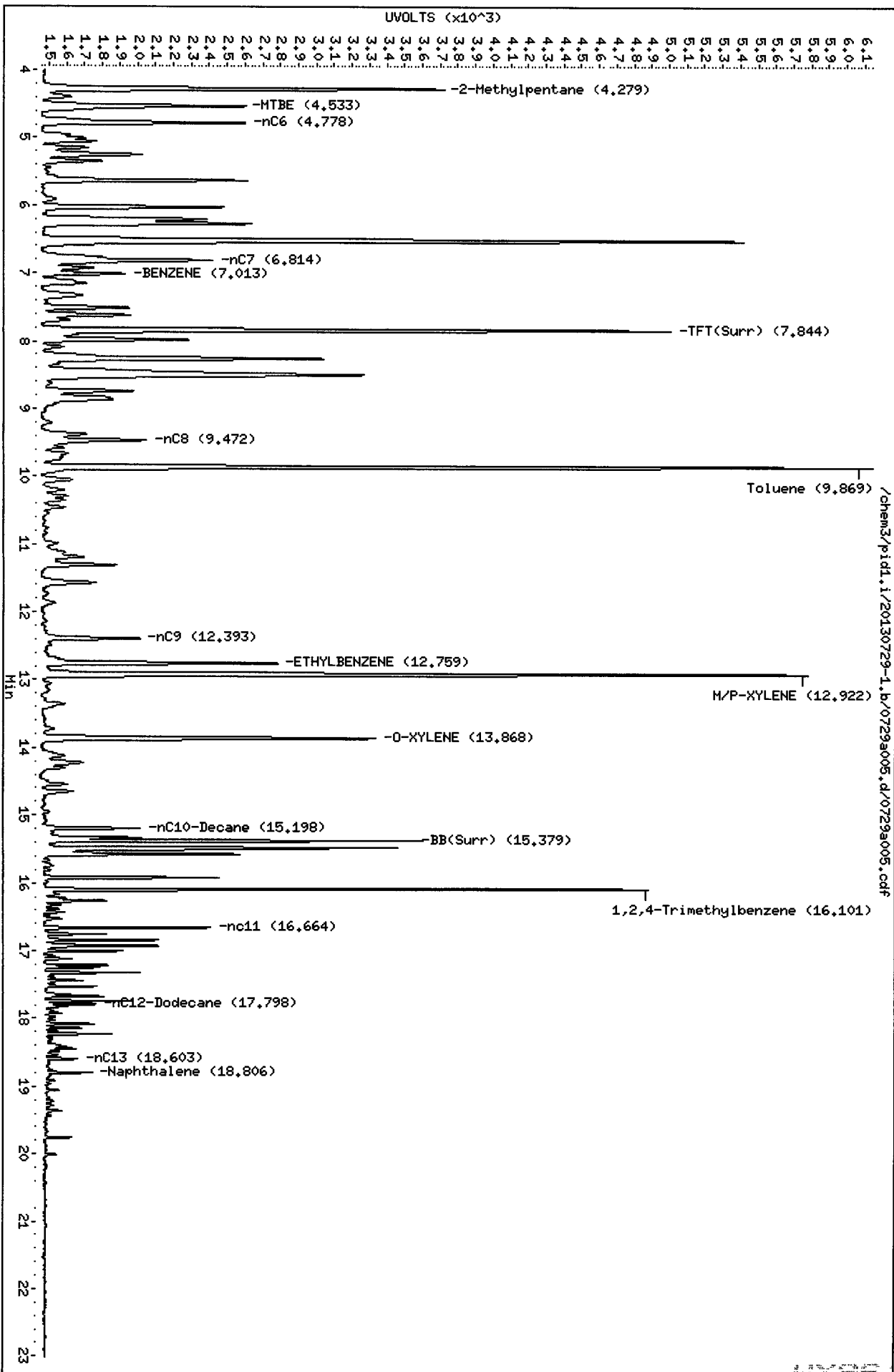
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.852	0.000	3679	106.7	TFT(Surr)
15.386	0.001	7833	105.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.021	0.000	829	3.38	Benzene
9.877	0.000	8269	38.51	Toluene
12.768	0.001	1994	11.25	Ethylbenzene
12.931	0.003	8054	41.44	M/P-Xylene
13.876	0.001	2900	18.23	O-Xylene
4.540	-0.012	128	1.38	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated



/chem3/pid1.i/20130729-1.b/0729a005.d/0729a005.caf

Data File: /chem3/pid1.i/20130729-2.k/0729a005.d
Date: 29-JUL-2013 14:05

Client ID:

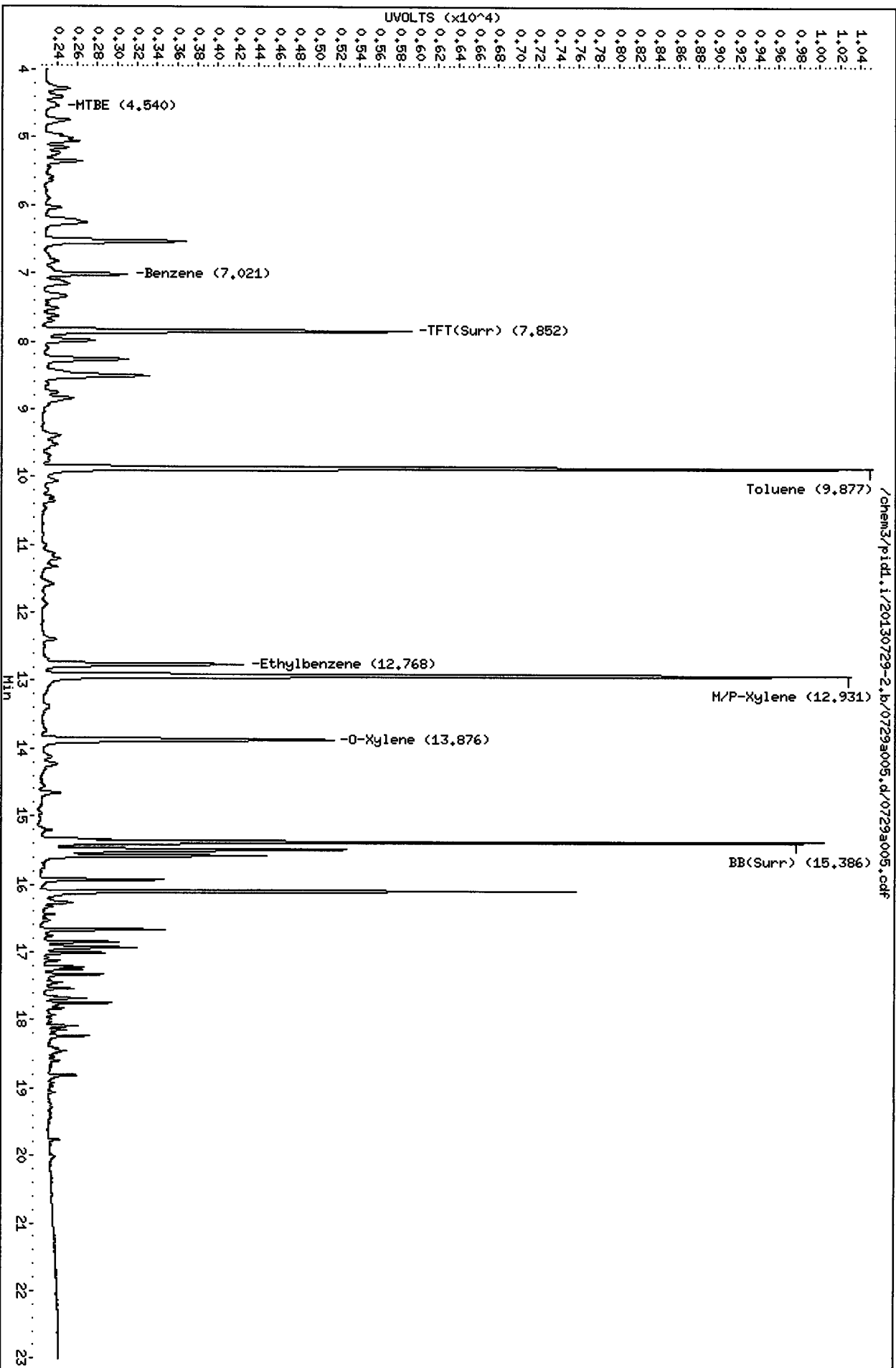
Sample Info: LCSD0729

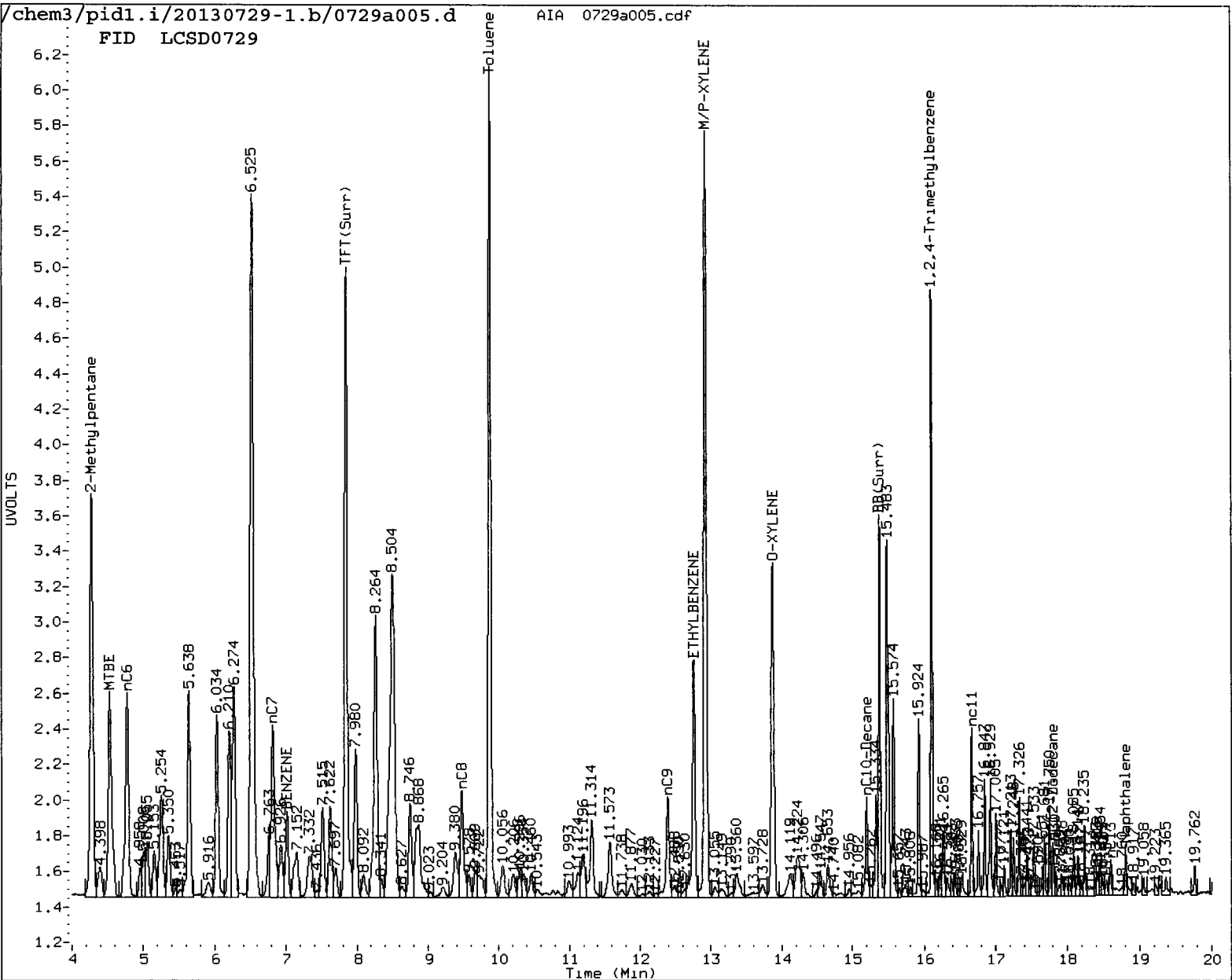
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other _____

Analyst: ML Date: 7/30/15

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-072913

METHOD BLANK

Lab Sample ID: MB-072913

LIMS ID: 13-15741

Matrix: Soil

Data Release Authorized:

Reported: 07/30/13

QC Report No: WY96-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: NA

Date Received: NA

Date Analyzed: 07/29/13 14:34

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result
71-43-2	Benzene	12	< 12 U
108-88-3	Toluene	12	< 12 U
100-41-4	Ethylbenzene	12	< 12 U
179601-23-1	m,p-Xylene	25	< 25 U
95-47-6	o-Xylene	12	< 12 U

Gasoline Range Hydrocarbons	5.0	< 5.0 U	GAS ID ---
-----------------------------	-----	---------	---------------

BETX Surrogate Recovery

Trifluorotoluene	98.3%
Bromobenzene	97.3%

Gasoline Surrogate Recovery

Trifluorotoluene	98.4%
Bromobenzene	99.0%

BETX values reported in µg/kg (ppb)
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

MC
7/50/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130729-1.b/0729a006.d ARI ID: MB0729
Data file 2: /chem3/pid1.i/20130729-2.b/0729a006.d Client ID:
Method: /chem3/pid1.i/20130729-2.b/PIDB.m Injection Date: 29-JUL-2013 14:34
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.847	0.002	3218	40840	98.4	TFT(Surr)
15.380	0.001	2012	17004	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	3436	0.010
8015C 2MP-TMB (4.18 to 16.20)	723723	5750	0.008
AK101 nC6-nC10 (4.68 to 15.10)	582885	4960	0.009
NWTPHG Tol-Nap (9.77 to 18.90)	375093	3436	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.855	0.002	3390	98.3	TFT(Surr)
15.387	0.002	7260	97.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
---	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130729-1.b/0729a006.d

Date: 29-JUL-2013 14:34

Client ID:

Sample Info: HB0729

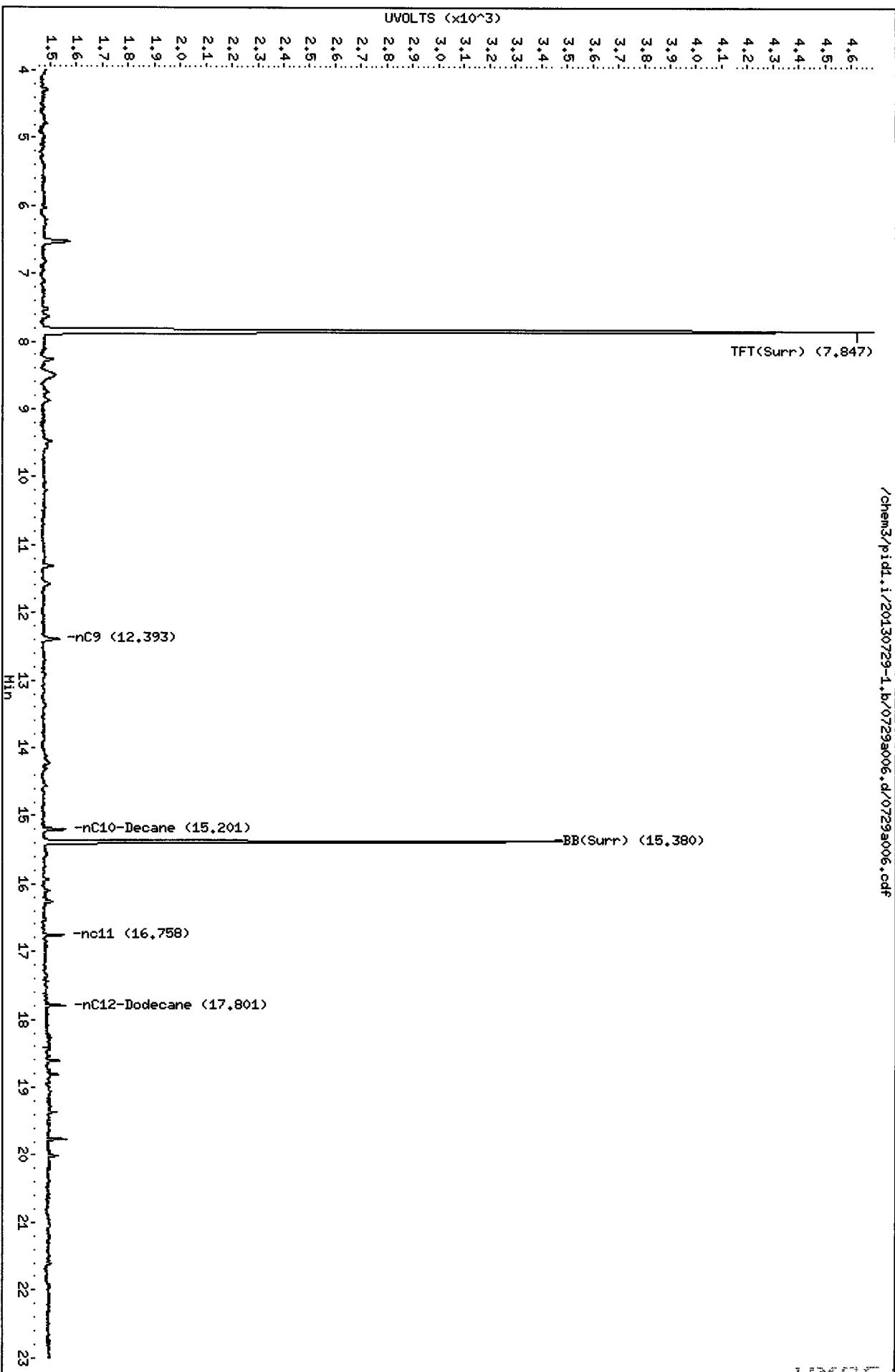
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

Page 1



/chem3/pid1.i/20130729-1.b/0729a006.d/0729a006.cdf

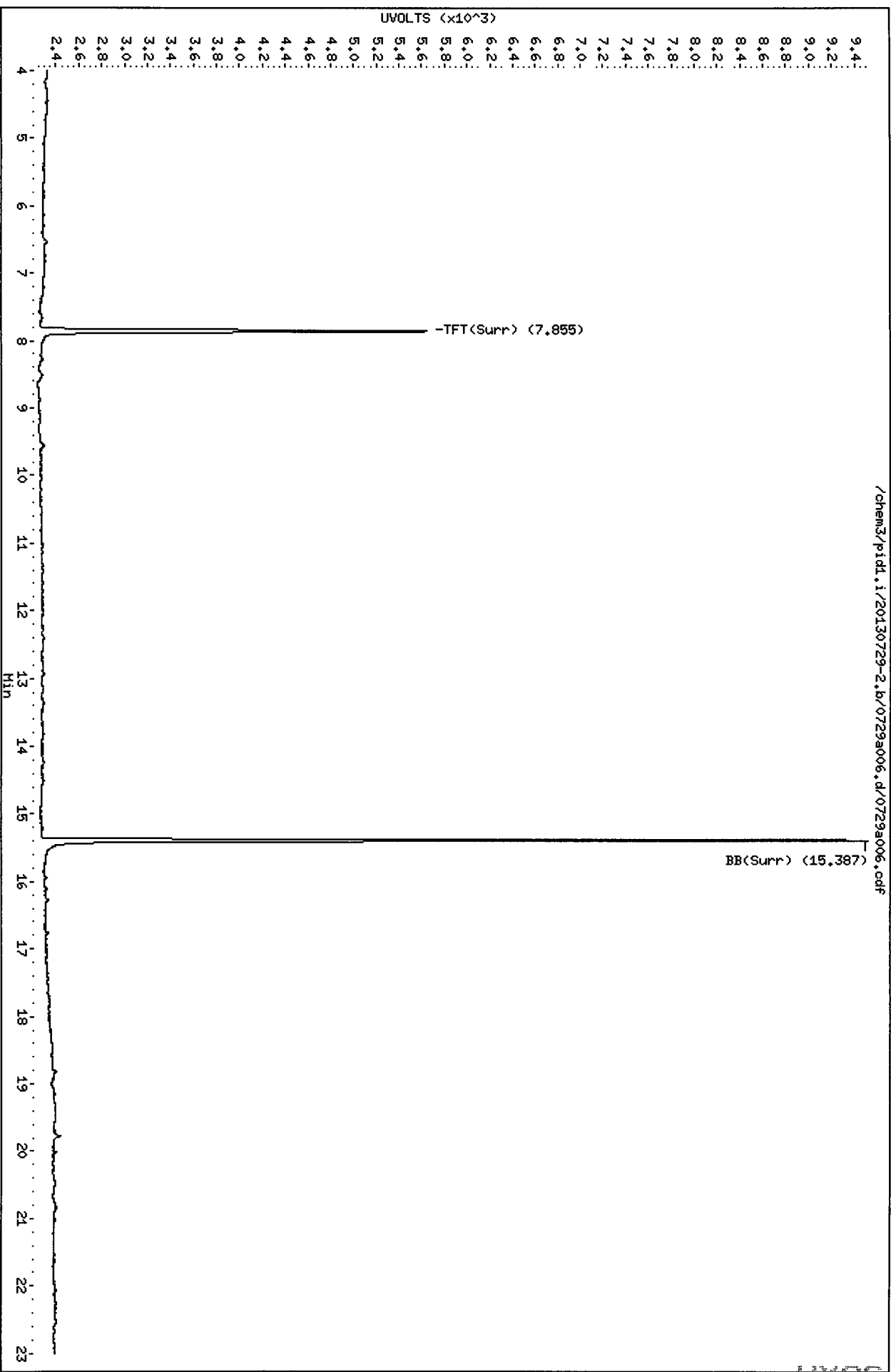
Data File: /chem3/pid1.i/20130729-2.b/0729a006.d
Date : 29-JUL-2013 14:34

Client ID:
Sample Info: MB0729

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: PC
Column diameter: 0.18





Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 7, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-05
ARI Job No.: WY97

Dear Mr. Silva:

Please find enclosed the original Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted seven water samples and a trip blank on July 27, 2013. Select sample containers were archived upon receipt. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx and NWTPH-Gx/BTEX, as requested on the COC.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro", with a large, stylized flourish extending to the right.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.
Justin Clary/Maul Foster & Alongi, Inc.

eFile: WY97

Enclosures

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WV97	Turn-around Requested: NORMAL	Page: 1 of 1
ARI Client Company: MFA	Phone:	Date: 7/25-26/13
Client Contact: TONY SILVA		Ice Present? Y
Client Project Name: CASHMERE		No. of Coolers: 3
		Cooler Temps: 0.7, 0.4, 0.8

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested					Notes/Comments
					EDB/EDC/MTBE	TPH GX	TPH DX	BTEX		
GP4-W-5.0	7/25/13	1225	GW	9		X	X	X		
GP6-W-5.5	↓	1650	↓	9		X	X	X		
GP4-W-2.5	7/26/13	1045	↓	9						HOLD
GP10-W-3.5	↓	1135	↓	9		X	X	X		
GP12-W-4.5	↓	1315	↓	9		X	X	X		
GP11-W-4.5	↓	1345	↓	9		X	X	X		
GP6-W-2.5	↓	1420	↓	9						HOLD

Comments/Special Instructions HOLD FOR EDB/EDC/MTBE.	Relinquished by (Signature): <i>Kelly R. Tittemeier</i>	Received by (Signature): <i>[Signature]</i>	Relinquished by (Signature):	Received by (Signature):
	Printed Name: Kelly R. Tittemeier	Printed Name: [Name]	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 7/27/13	Date & Time: 7/27/13 730	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmere

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No. W497

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 0.7 0.4 0.8

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by: JM Date: 7/27/13 Time: 730

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Was Sample Split by ARI: NA YES Date/Time _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 7/29/13 Time: 749

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:
 GP4-w-5.0 = sm in 1st GP 7-w-4.5 = sm in 1st No HCl vials received for Trip Blank
 GP10-w-3.5 = sm in 3rd GP 12-w-4.5 Trip Blank & all samples have
 GP12-w-4.5 = sm in 2nd GP 6-w-2.5 = sm in 1st 2 vials preserved with Na2S2O3

By: JM Date: 7/29/13

Small Air Bubbles -2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm

- Small → "sm"
- Peabubbles → "pb"
- Large → "lg"
- Headspace → "hs"

Subject: RE: WY96 Cashmere Sample Receipt and COCs
From: "Kelly Titkemeier" <ktitkemeier@maulfoster.com>
Date: 7/29/2013 10:28 AM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Justin Clary" <jclary@maulfoster.com>, <tsilva@maulfoster.com>

Hi Cheronne,

We would like to make a couple of changes on the GW COC (please see attached).

1) Please hold the following samples:

GP4-W-5.0
GP6-W-5.5

2) Please analyze the following samples for TPH-Gx, TPH-Dx, and BTEX:

GP4-W-2.5
GP6-W-2.5

Thank you,
KELLY TITKEMEIER RG | MAUL FOSTER & ALONGI, INC.

d. 503 501 5215 | p. 971 544 2139 | c. 971 645 9731 | f. 971 544 2140 |
www.maulfoster.com
2001 NW 19th Avenue, Suite 200, Portland, OR 97209

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]
Sent: Monday, July 29, 2013 10:16 AM
To: Tony Silva
Cc: Erik Naylor; Kelly Titkemeier
Subject: WY96 Cashmere Sample Receipt and COCs

Hi Tony - Please see attached.
-Cheronne

--
I will be out of the office Friday (8/2/13).

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100

Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

This correspondence contains confidential information from Analytical Resources, Inc. (ARI) The information contained herein is intended solely for the use of the individual(s) named above. If you are not the intended recipient, any copying, distribution, disclosure, or use of the text and/or attached document(s) is strictly prohibited.

If you have received this correspondence in error, please notify sender immediately. Thank you.

- Attachments: _____

20130729102642775.pdf

340 KB

Sample ID Cross Reference Report



ARI Job No: WY97
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-05
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. GP4-W-5.0	WY97A	13-15756	Water	07/25/13 12:25	07/27/13 07:30
2. GP6-W-5.5	WY97B	13-15757	Water	07/25/13 16:50	07/27/13 07:30
3. GP10-W-3.5	WY97C	13-15758	Water	07/26/13 11:35	07/27/13 07:30
4. GP12-W-4.5	WY97D	13-15759	Water	07/26/13 13:15	07/27/13 07:30
5. GP11-W-4.5	WY97E	13-15760	Water	07/26/13 13:45	07/27/13 07:30
6. GP4-W-2.5	WY97F	13-15761	Water	07/26/13 10:45	07/27/13 07:30
7. GP6-W-2.5	WY97G	13-15762	Water	07/26/13 14:20	07/27/13 07:30
8. Trip Blank	WY97H	13-15763	Water	07/25/13	07/27/13 07:30



Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ($< 20\%$ RSD, $< 20\%$ Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method:
Page 1 of 1

QC Report No: WY97-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-05

Matrix: Water
Data Release Authorized: *mm*
Reported: 08/05/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-073013 13-15758	Method Blank HC ID: ---	07/30/13	08/02/13 FID3B	1.00 1.0	Diesel Range	0.10	< 0.10 U
					Motor Oil Range o-Terphenyl	0.20	< 0.20 U 91.5%
WY97C 13-15758	GP10-W-3.5 HC ID: ---	07/30/13	08/02/13 FID3B	1.00 1.0	Diesel Range	0.10	< 0.10 U
					Motor Oil Range o-Terphenyl	0.20	< 0.20 U 92.9%
WY97D 13-15759	GP12-W-4.5 HC ID: ---	07/30/13	08/02/13 FID3B	1.00 1.0	Diesel Range	0.10	< 0.10 U
					Motor Oil Range o-Terphenyl	0.20	< 0.20 U 98.7%
WY97E 13-15760	GP11-W-4.5 HC ID: ---	07/30/13	08/02/13 FID3B	1.00 1.0	Diesel Range	0.10	< 0.10 U
					Motor Oil Range o-Terphenyl	0.20	< 0.20 U 100%
WY97F 13-15761	GP4-W-2.5 HC ID: ---	07/30/13	08/02/13 FID3B	1.00 1.0	Diesel Range	0.10	< 0.10 U
					Motor Oil Range o-Terphenyl	0.20	< 0.20 U 97.6%
WY97G 13-15762	GP6-W-2.5 HC ID: DRO/MOTOR OIL	07/30/13	08/02/13 FID3B	1.00 1.0	Diesel Range	0.10	1.3
					Motor Oil Range o-Terphenyl	0.20	4.2 88.4%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b016.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97MBW1
Client ID: WY97MBW1
Injection: 02-AUG-2013 14:13
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.171	-0.001	9449	10415	WATPHG	(Tol-C12)	187117	13.85
C8	1.414	-0.002	2087	291	WATPHD	(C12-C24)	32982	2.60
C10	2.666	0.003	929	182	WATPHM	(C24-C38)	131648	10.37
C12	3.504	-0.001	460	417	AK102	(C10-C25)	72278	4.77
C14	4.182	0.004	380	627	AK103	(C25-C36)	105804	14.88
C16	4.775	0.003	149	127				
C18	5.330	-0.009	73	56				
C20	5.901	-0.003	149	53				
C22	6.453	-0.005	56	11	MSPIRIT	(Tol-C12)	187117	13.62
C24	7.000	0.004	62	22				
C25	7.260	0.002	311	387	KEROSEN	(Tol-C18)	209394	13.57
C26	7.531	0.003	126	41				
C28	8.030	0.004	234	158				
C32	9.036	0.018	1216	1024				
C34	9.517	-0.003	762	380				
Filter Peak	11.862	-0.003	1828	581				
C36	10.016	0.002	880	468	BUNKERC	(C10-C38)	202934	41.37
o-terph	5.479	-0.004	887195	670345				
Triacon Surr	8.497	-0.035	571924	615736				

Range Times: NW Diesel(3.555 - 7.046) NW Gas(1.122 - 3.555) NW M.Oil(7.046 - 10.550)
AK102(2.613 - 7.208) AK103(7.208 - 10.064) Jet A(2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	670345	41.2	91.5
Triacontane	615736	40.5	90.0

Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

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Data File: /chem3/fid3b.i/20130802.b/0802b016.d

Date: 02-AUG-2013 14:13

Client ID: WY97HBM1

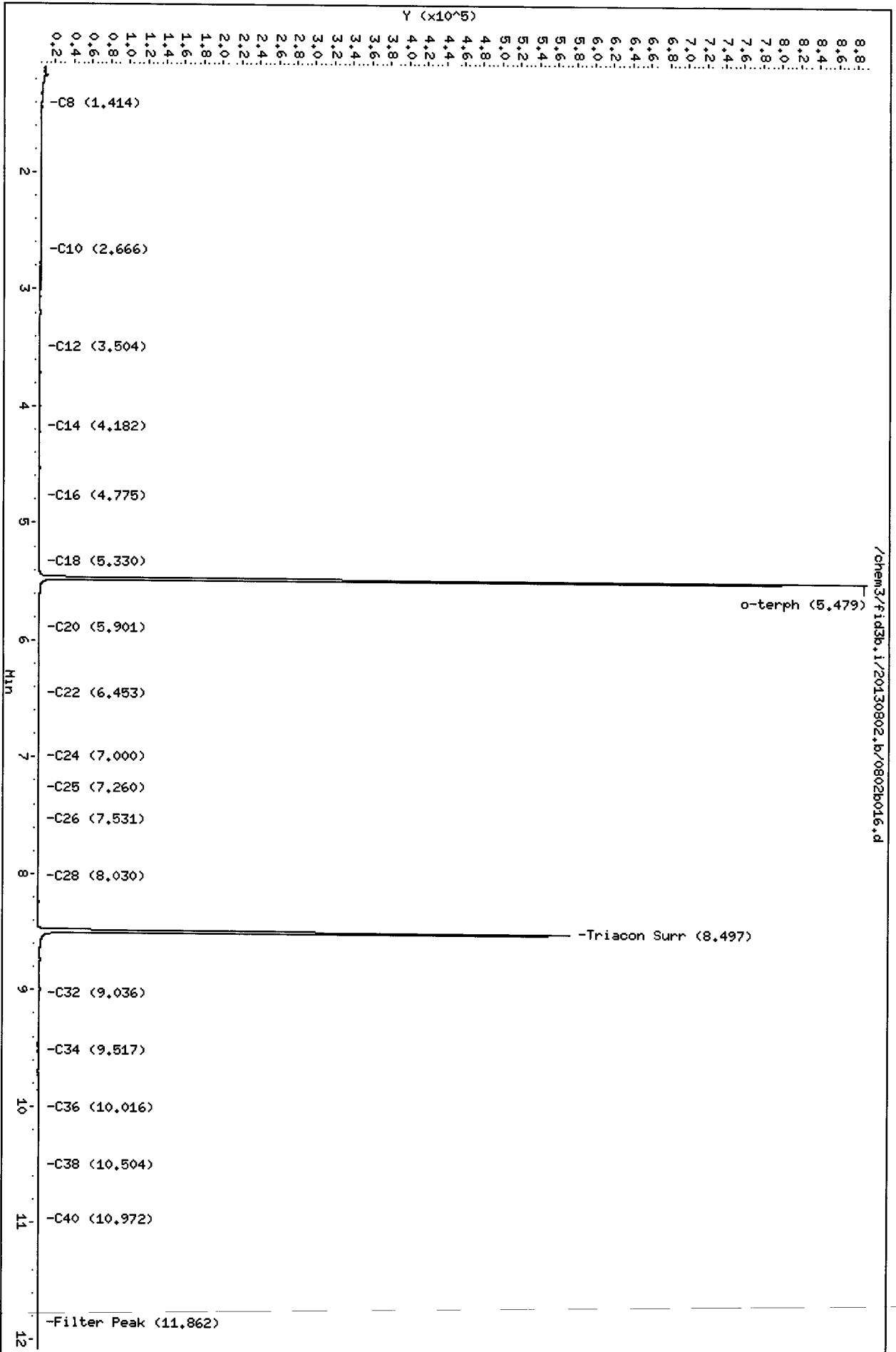
Sample Info: WY97HBM1

Column phase: RTX-1

Instrument: fid3b.i

Operator: PC

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b019.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97C
Client ID: GP10-W-3.5
Injection: 02-AUG-2013 15:18
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.176	0.004	13027	14445	WATPHG	(Tol-C12)	268760	19.90
C8	1.414	-0.002	3688	2943	WATPHD	(C12-C24)	57070	4.50
C10	2.661	-0.002	1188	902	WATPHM	(C24-C38)	101934	8.03
C12	3.504	0.000	572	310	AK102	(C10-C25)	107208	7.08
C14	4.178	0.000	310	227	AK103	(C25-C36)	91265	12.84
C16	4.765	-0.008	151	105				
C18	5.346	0.007	228	184				
C20	5.907	0.003	405	127				
C22	6.460	0.002	271	218	MSPIRIT	(Tol-C12)	268760	19.56
C24	6.996	0.000	170	78				
C25	7.258	0.000	369	557	KEROSEN	(Tol-C18)	293425	19.02
C26	7.525	-0.003	166	62				
C28	8.017	-0.008	264	271				
C32	9.025	0.007	1062	955				
C34	9.525	0.005	394	109				
Filter Peak	11.863	-0.002	1184	446				
C36	10.030	0.016	333	98	BUNKERC	(C10-C38)	207053	42.21
o-terph	5.481	-0.002	863692	680867				
Triacon Surr	8.494	-0.038	560473	613803				

Range Times: NW Diesel(3.555 - 7.046) NW Gas(1.122 - 3.555) NW M.Oil(7.046 - 10.550)
AK102(2.613 - 7.208) AK103(7.208 - 10.064) Jet A(2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	680867	41.8	92.9
Triacontane	613803	40.4	89.8

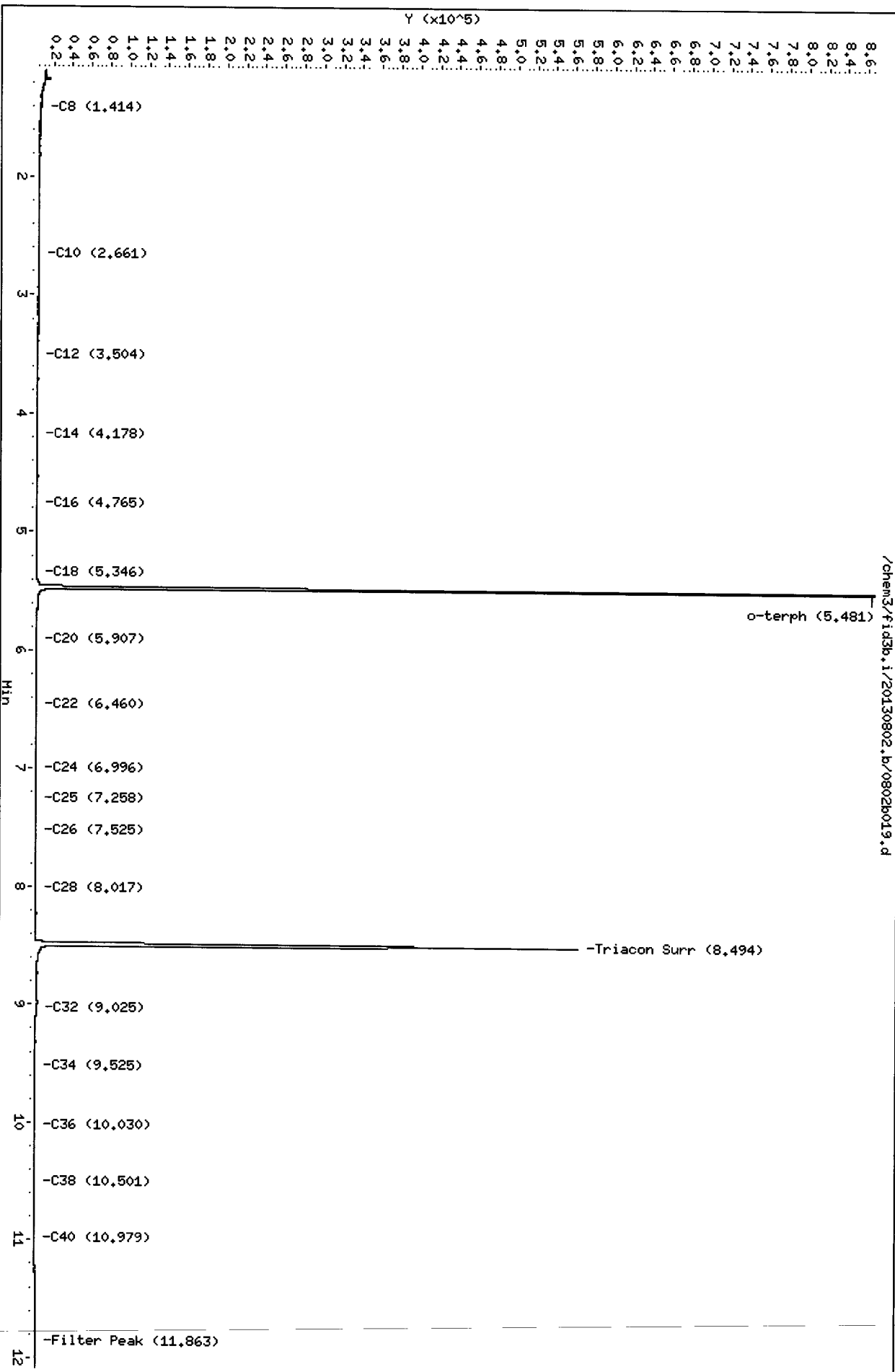
Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

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Data File: /chem3/fid3b.i/20130802.b/0802b019.d
Date : 02-AUG-2013 15:18
Client ID: GP10-M-3.5
Sample Info: WY97C

Column phase: RTX-1

Instrument: fid3b.i
Operator: PC
Column diameter: 0.25



020213 15:18

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b020.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97D
Client ID: GP12-W-4.5
Injection: 02-AUG-2013 15:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.170	-0.002	11220	16726	WATPHG	(Tol-C12)	196776	14.57
C8	1.414	-0.002	2216	1610	WATPHD	(C12-C24)	40923	3.23
C10	2.664	0.000	1072	726	WATPHM	(C24-C38)	114695	9.03
C12	3.510	0.006	654	577	AK102	(C10-C25)	86626	5.72
C14	4.182	0.004	409	370	AK103	(C25-C36)	101408	14.27
C16	4.771	-0.002	122	69				
C18	5.336	-0.003	97	38				
C20	5.908	0.004	201	127				
C22	6.460	0.002	97	20	MSPIRIT	(Tol-C12)	196776	14.32
C24	7.001	0.005	134	38				
C25	7.256	-0.002	402	412	KEROSEN	(Tol-C18)	220475	14.29
C26	7.524	-0.004	266	91				
C28	8.024	-0.001	284	66				
C32	9.023	0.005	1117	1152				
C34	9.524	0.004	492	248				
Filter Peak	11.864	0.000	1213	670				
C36	10.024	0.010	425	201	BUNKERC	(C10-C38)	199330	40.64
o-terph	5.478	-0.004	917170	723239				
Triacon Surr	8.487	-0.046	588835	652718				

Range Times: NW Diesel(3.555 - 7.046) NW Gas(1.122 - 3.555) NW M.Oil(7.046 - 10.550)
AK102(2.613 - 7.208) AK103(7.208 - 10.064) Jet A(2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	723239	44.4	98.7
Triacontane	652718	43.0	95.4

Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

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Data File: /chem3/fid3b.i/20130802.b/0802b020.d

Date: 02-AUG-2013 15:40

Client ID: GP12-M-4.5

Sample Info: MY97D

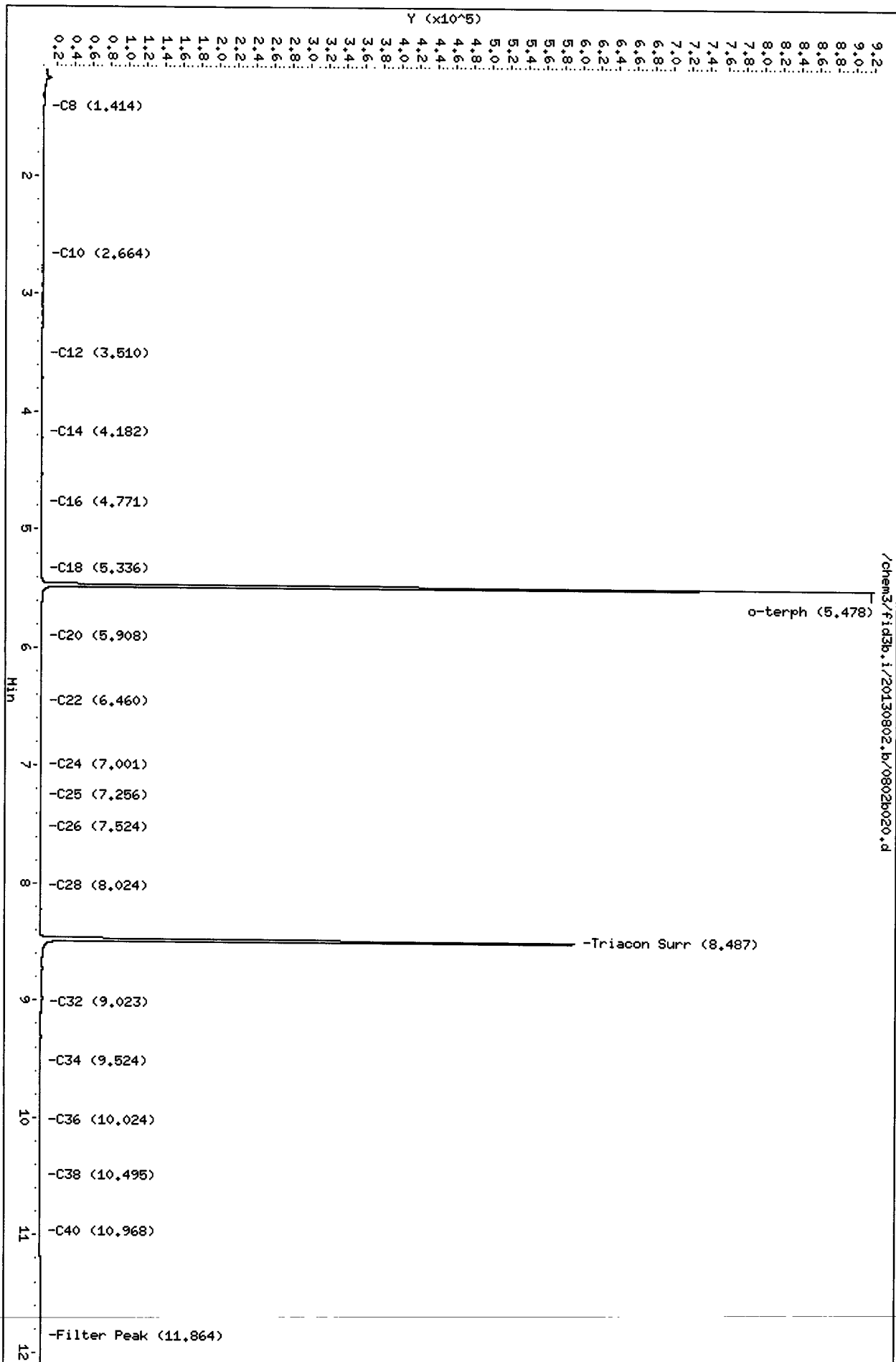
Column phase: RTX-1

Instrument: fid3b.i

Operator: PC

Column diameter: 0.25

Page 1



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b021.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97E
Client ID: GP11-W-4.5
Injection: 02-AUG-2013 16:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.173	0.001	10486	14973	WATPHG	(Tol-C12)	185663	13.75
C8	1.414	-0.002	2222	1639	WATPHD	(C12-C24)	38568	3.04
C10	2.665	0.002	967	718	WATPHM	(C24-C38)	140735	11.08
C12	3.511	0.006	452	446	AK102	(C10-C25)	79582	5.25
C14	4.182	0.004	348	284	AK103	(C25-C36)	125984	17.72
C16	4.777	0.004	111	14				
C18	5.338	-0.001	62	31				
C20	5.906	0.002	197	76				
C22	6.463	0.005	154	40	MSPIRIT	(Tol-C12)	185663	13.51
C24	7.000	0.005	256	242				
C25	7.260	0.002	485	468	KEROSEN	(Tol-C18)	205211	13.30
C26	7.526	-0.002	336	65				
C28	8.029	0.004	354	111				
C32	9.041	0.022	1084	576				
C34	9.521	0.001	533	178				
Filter Peak	11.867	0.003	1207	239				
C36	10.016	0.002	494	316	BUNKERC	(C10-C38)	217406	44.33
o-terph	5.479	-0.003	901135	736867				
Triacon Surr	8.489	-0.043	589258	648406				

Range Times: NW Diesel(3.555 - 7.046) NW Gas(1.122 - 3.555) NW M.Oil(7.046 - 10.550)
AK102(2.613 - 7.208) AK103(7.208 - 10.064) Jet A(2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	736867	45.2	100.5
Triacantane	648406	42.7	94.8

Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

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Data File: /chem3/fid3b.i/20130802.b/0802b021.d

Date: 02-AUG-2013 16:01

Client ID: GP11-N-4.5

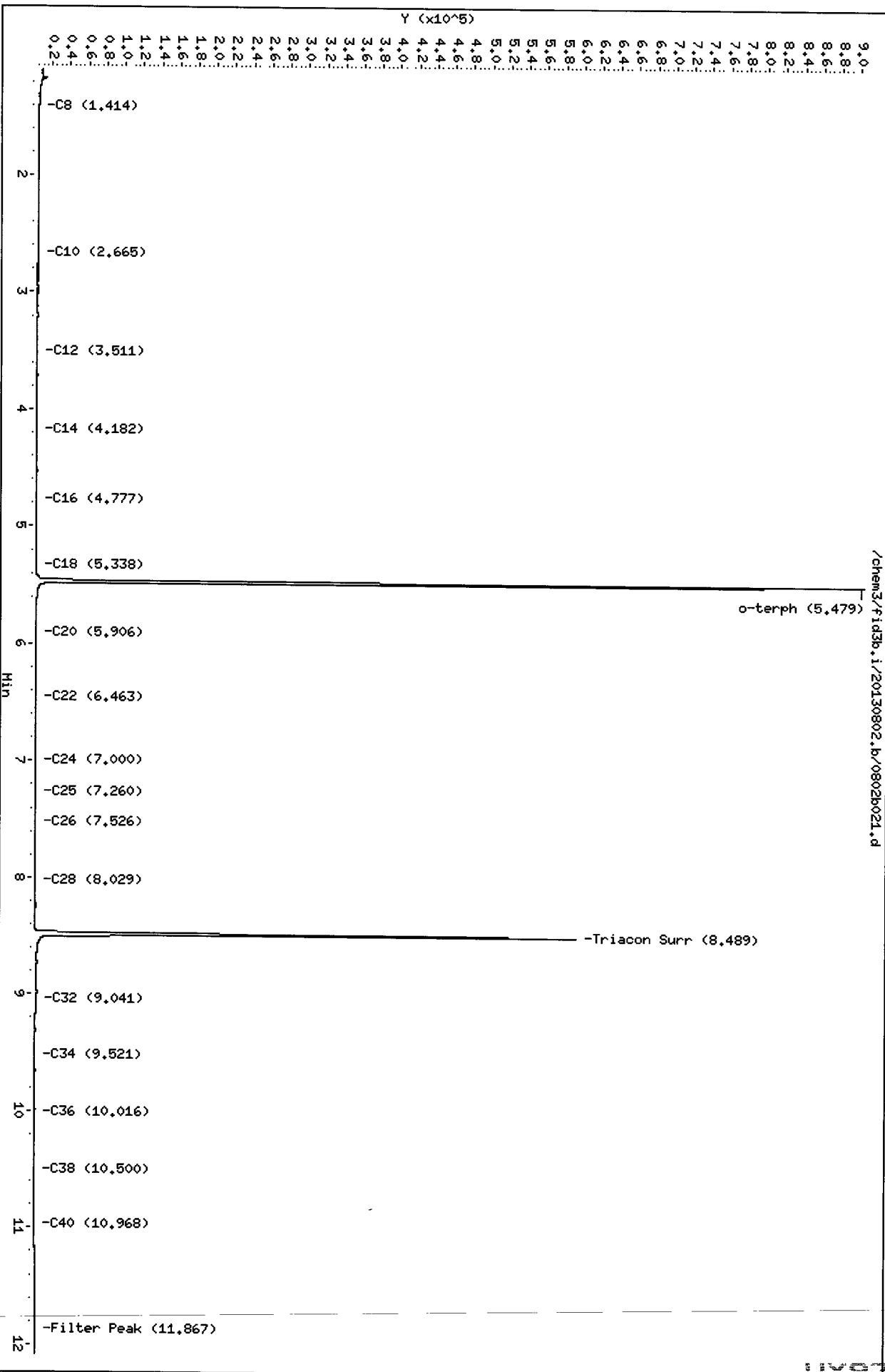
Sample Info: WY97E

Column phase: RTX-1

Instrument: fid3b.i

Operator: PC

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b022.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97F
Client ID: GP4-W-2.5
Injection: 02-AUG-2013 16:23
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.172	0.000	13725	15106	WATPHG	(Tol-C12)	276620	20.48
C8	1.413	-0.003	3656	2872	WATPHD	(C12-C24)	137973	10.88
C10	2.663	0.000	1222	900	WATPHM	(C24-C38)	543017	42.77
C12	3.511	0.006	535	455	AK102	(C10-C25)	205615	13.57
C14	4.183	0.006	384	337	AK103	(C25-C36)	484190	68.11 M
C16	4.777	0.004	121	85				
C18	5.344	0.005	228	52				
C20	5.908	0.004	678	294				
C22	6.456	-0.002	1145	1199	MSPiRIT	(Tol-C12)	276620	20.13
C24	6.990	-0.005	1639	1046				
C25	7.252	-0.005	2026	2315	KEROSEN	(Tol-C18)	300122	19.46
C26	7.526	-0.002	2164	754				
C28	8.025	0.000	3082	1568				
C32	9.015	-0.004	3326	1236				
C34	9.520	0.001	2260	1021				
Filter Peak	11.868	0.004	1125	450				
C36	10.010	-0.004	1861	1268	BUNKERC	(C10-C38)	733533	149.55
o-terph	5.478	-0.004	865574	715015				
Triacon Surr	8.489	-0.043	571374	636142				

Range Times: NW Diesel (3.555 - 7.046) NW Gas (1.122 - 3.555) NW M.Oil (7.046 - 10.550)
AK102 (2.613 - 7.208) AK103 (7.208 - 10.064) Jet A (2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	715015	43.9	97.6
Triaconthane	636142	41.9	93.0

Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

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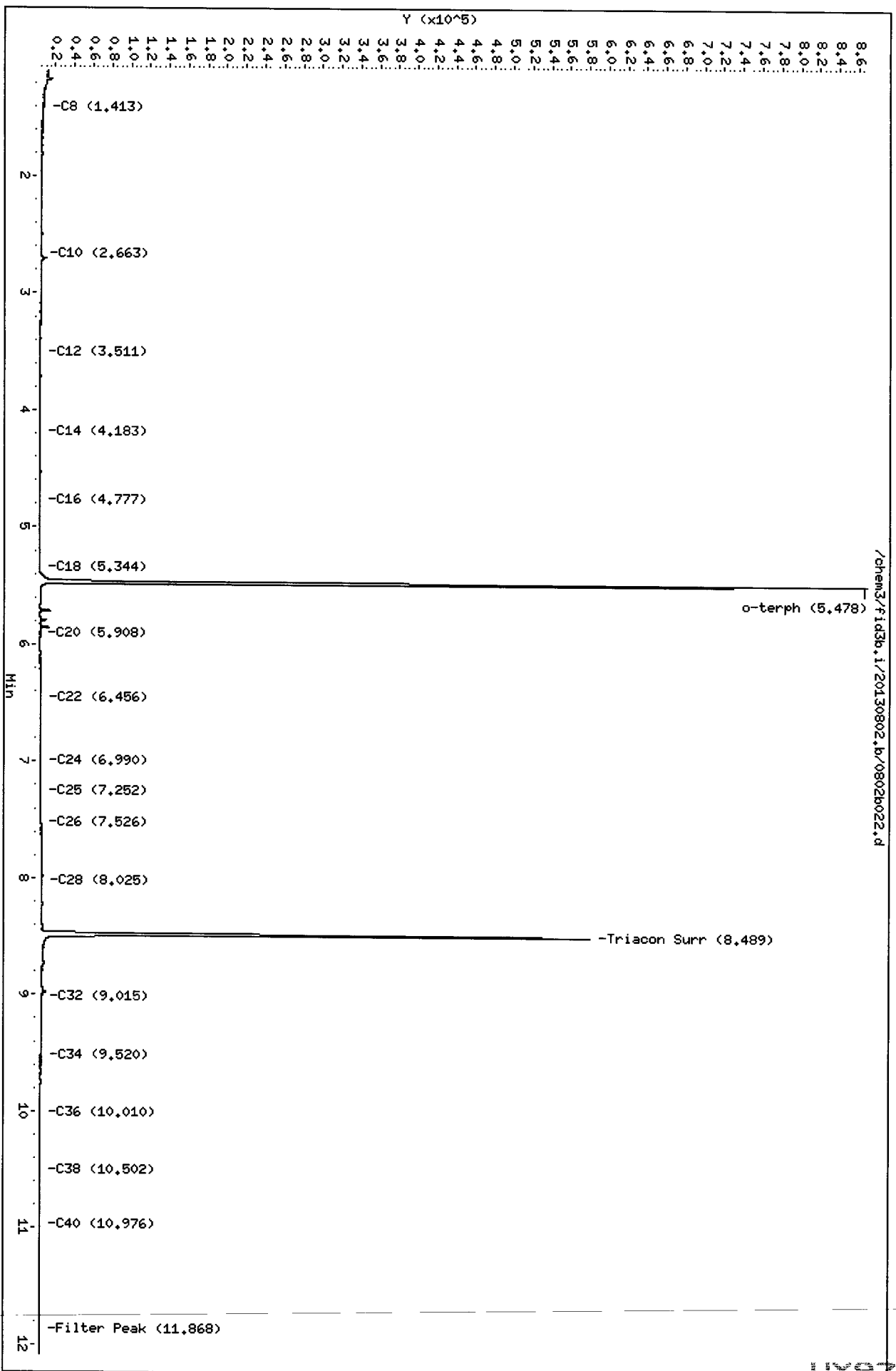
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Sample Info: WY97F

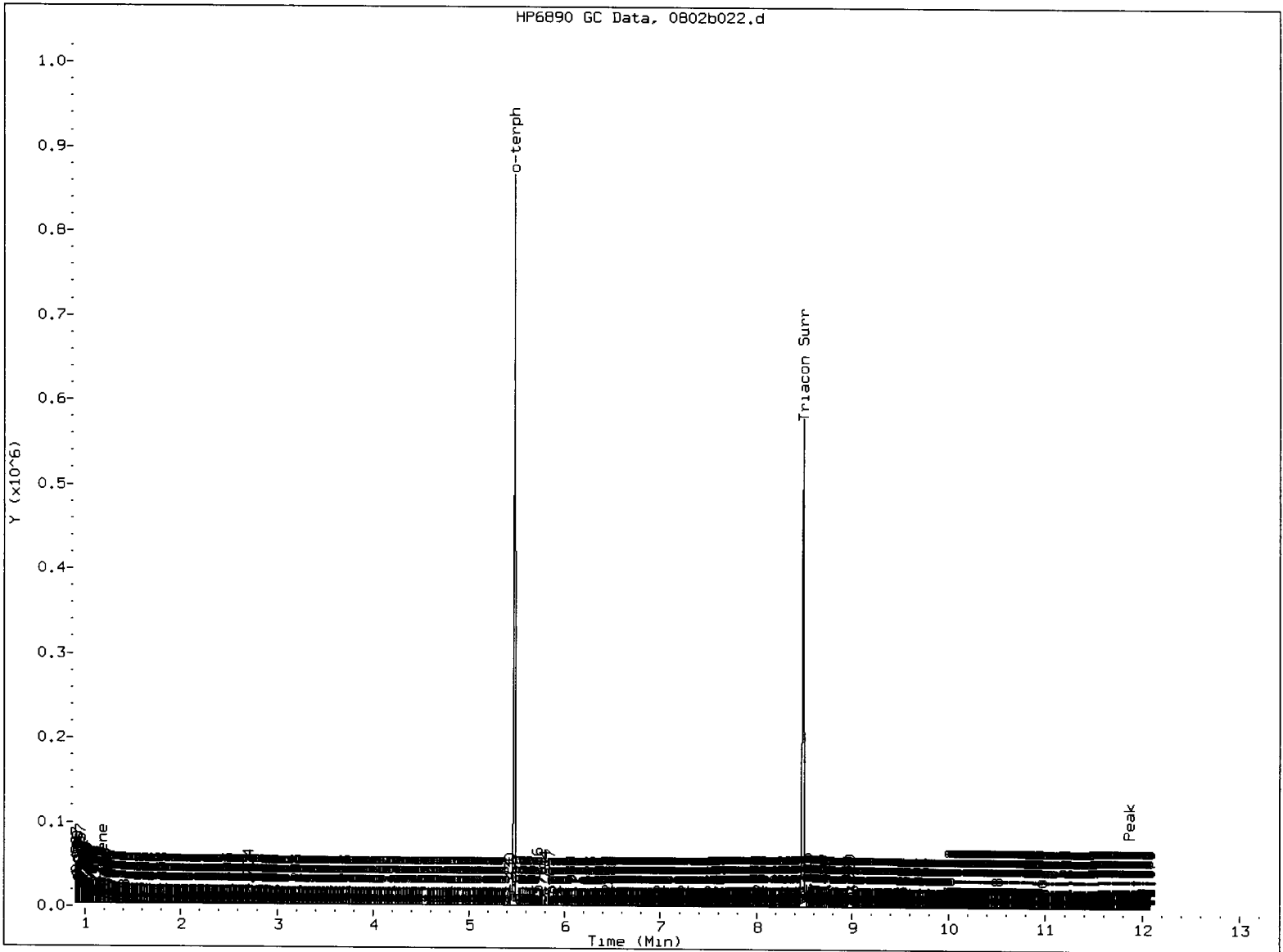
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Instrument: fid3b.i

Column phase: RTX-1

Operator: PC
Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: W

Date: 8-3-17

Data File: /chem3/fid3b.i/20130802.b/0802b023.d

Date: 02-AUG-2013 16:44

Client ID: GPe-M-2.5

Sample Info: WY97G

Column phase: RTX-1

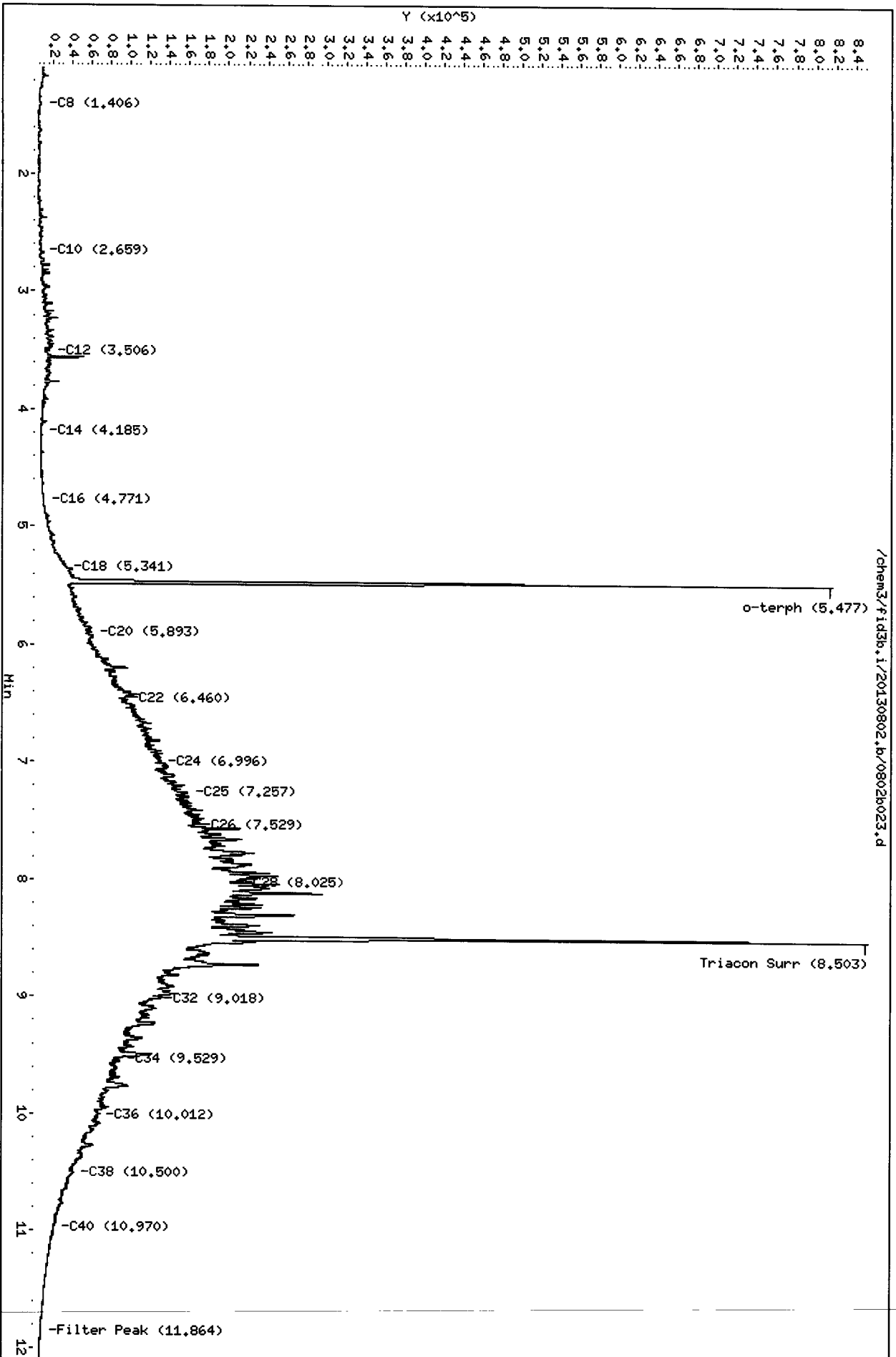
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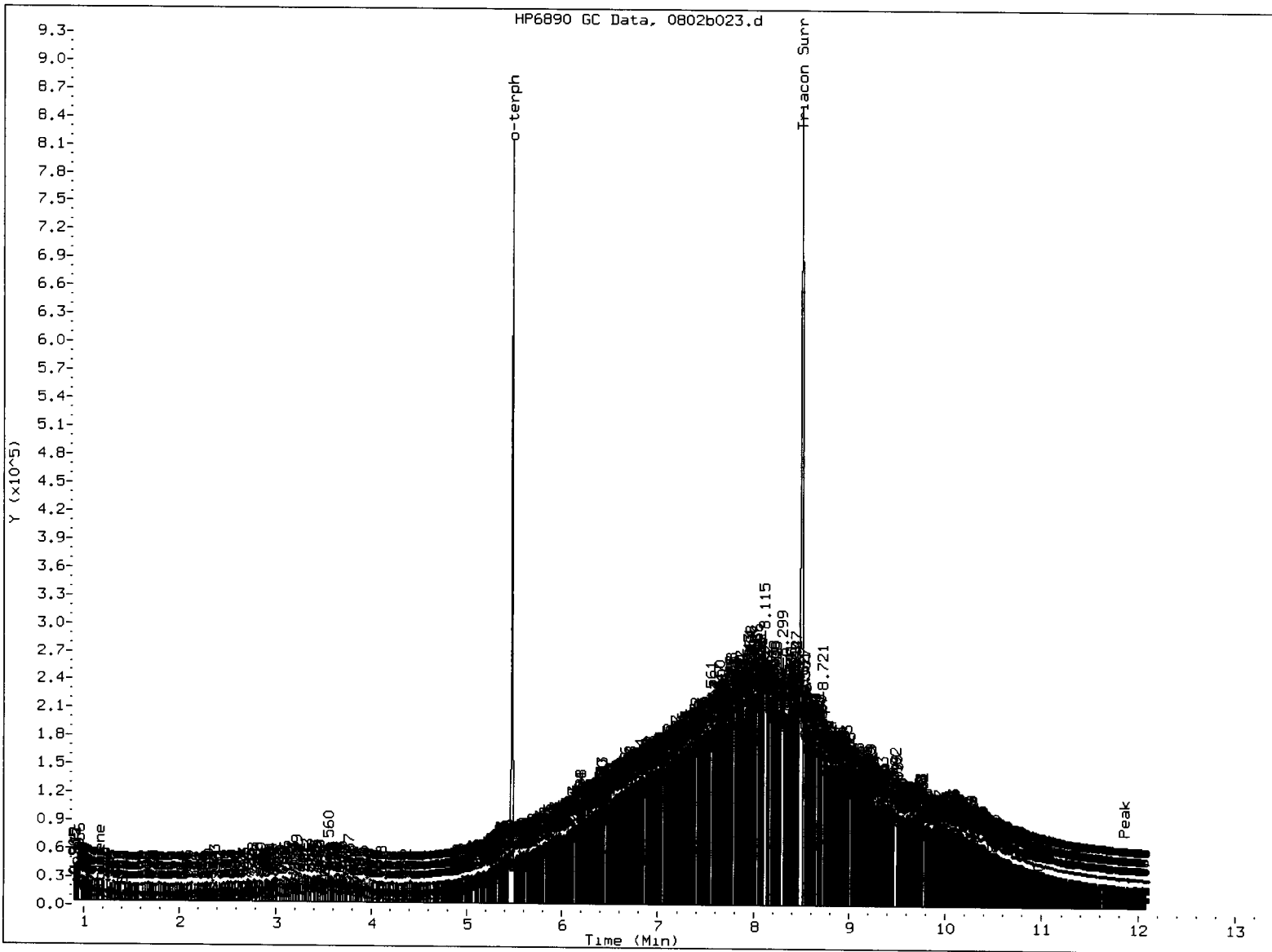
Operator: PC

Column diameter: 0.25

Page 1

Handwritten signature





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skimmed surrogate

Analyst: Y

Date: 8.3.17

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WY97-Maul Foster & Alongi, Inc
Project: Cashmere
0779.02.01-05

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-073013	91.5%	0
LCS-073013	93.9%	0
LCSD-073013	96.5%	0
GP10-W-3.5	92.9%	0
GP12-W-4.5	98.7%	0
GP11-W-4.5	100%	0
GP4-W-2.5	97.6%	0
GP6-W-2.5	88.4%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3510C
Log Number Range: 13-15758 to 13-15762

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Sample ID: LCS-073013

Page 1 of 1

LCS/LCSD

Lab Sample ID: LCS-073013

QC Report No: WY97-Maul Foster & Alongi, Inc

LIMS ID: 13-15758

Project: Cashmere

Matrix: Water

0779.02.01-05

Data Release Authorized: *mm*

Date Sampled: 07/26/13

Reported: 08/05/13

Date Received: 07/27/13

Date Extracted LCS/LCSD: 07/30/13

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 08/02/13 14:35

Final Extract Volume LCS: 1.0 mL

LCSD: 08/02/13 14:56

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/VTS

Dilution Factor LCS: 1.00

LCSD: FID/VTS

LCSD: 1.00

Range	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD		
Diesel	2.64	3.00	88.0%	2.65	3.00	88.3%	0.4%		

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	93.9%	96.5%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b017.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97LCSW1
Client ID: WY97LCSW1
Injection: 02-AUG-2013 14:35
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.163	-0.008	21786	22575	WATPHG	(Tol-C12)	3931750	291.10
C8	1.402	-0.014	12940	18340	WATPHD	(C12-C24)	16750349	1320.83
C10	2.661	-0.002	78286	78408	WATPHM	(C24-C38)	267008	21.03
C12	3.507	0.003	177935	160615	AK102	(C10-C25)	19546152	1290.33 M
C14	4.180	0.002	270544	335246	AK103	(C25-C36)	192375	27.06
C16	4.774	0.001	419435	367028				
C18	5.339	0.000	384359	401289				
C20	5.901	-0.003	220833	251757				
C22	6.453	-0.005	96084	102439	MSPIRIT	(Tol-C12)	3931750	286.18
C24	7.004	0.009	10481	2700				
C25	7.260	0.003	6702	3828	KEROSEN	(Tol-C18)	15973803	1035.51
C26	7.529	0.001	3022	1231				
C28	8.026	0.001	949	944				
C32	8.991	-0.027	3483	6699				
C34	9.515	-0.005	88	60				
Filter Peak	11.866	0.002	1017	261				
C36	10.029	0.016	33	18	BUNKERC	(C10-C38)	19740803	4024.79
o-terph	5.483	0.001	823504	688510				
Triacon Surr	8.505	-0.027	618903	682199				

Range Times: NW Diesel(3.555 - 7.046) NW Gas(1.122 - 3.555) NW M.Oil(7.046 - 10.550)
AK102(2.613 - 7.208) AK103(7.208 - 10.064) Jet A(2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	688510	42.3	93.9
Triacontane	682199	44.9	99.8

Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130802.b/0802b017.d

Date: 02-AUG-2013 14:35

Client ID: WY97LCSM1

Sample Info: WY97LCSM1

Column phase: RTX-1

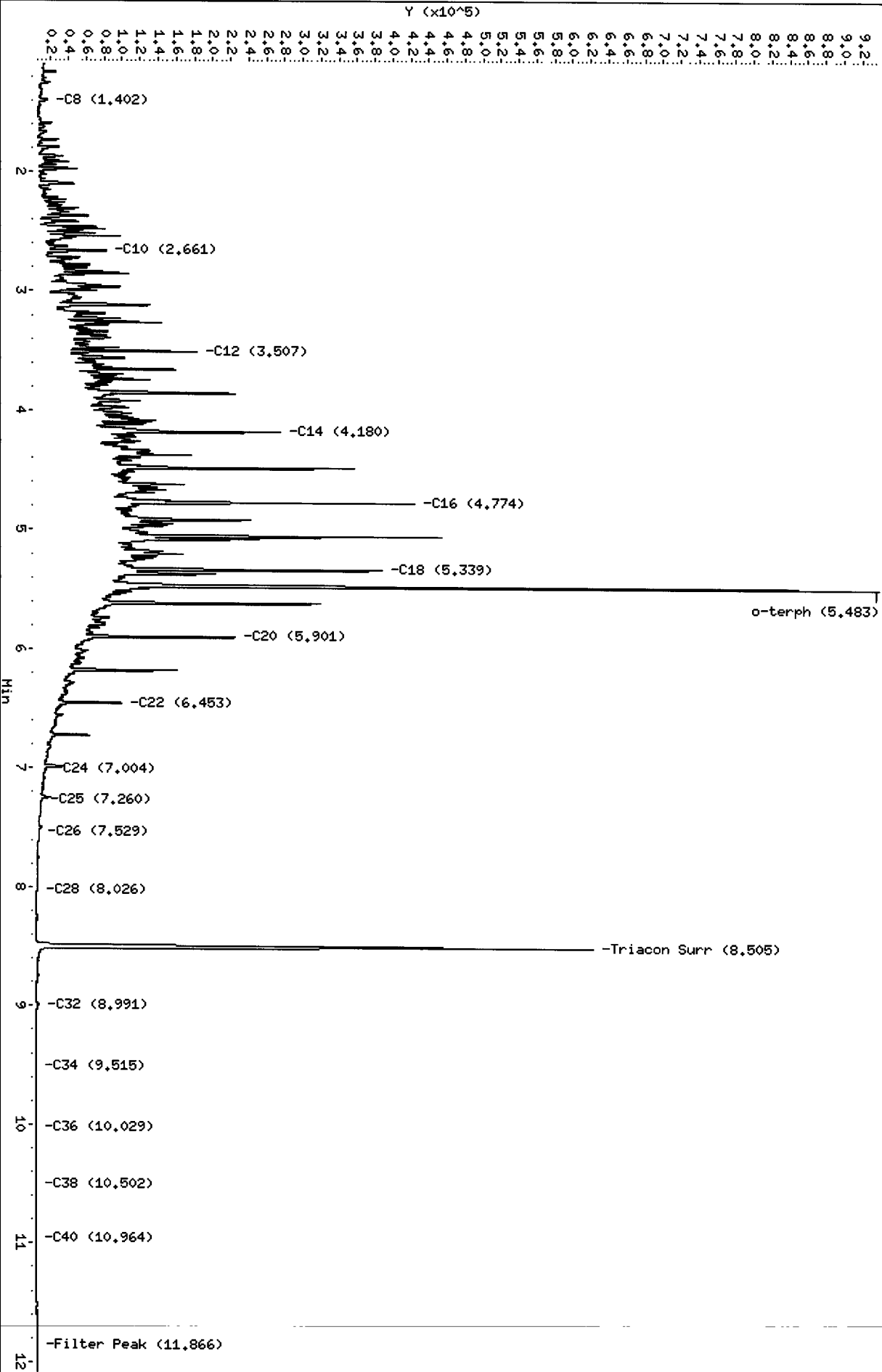
Instrument: fid3b.i

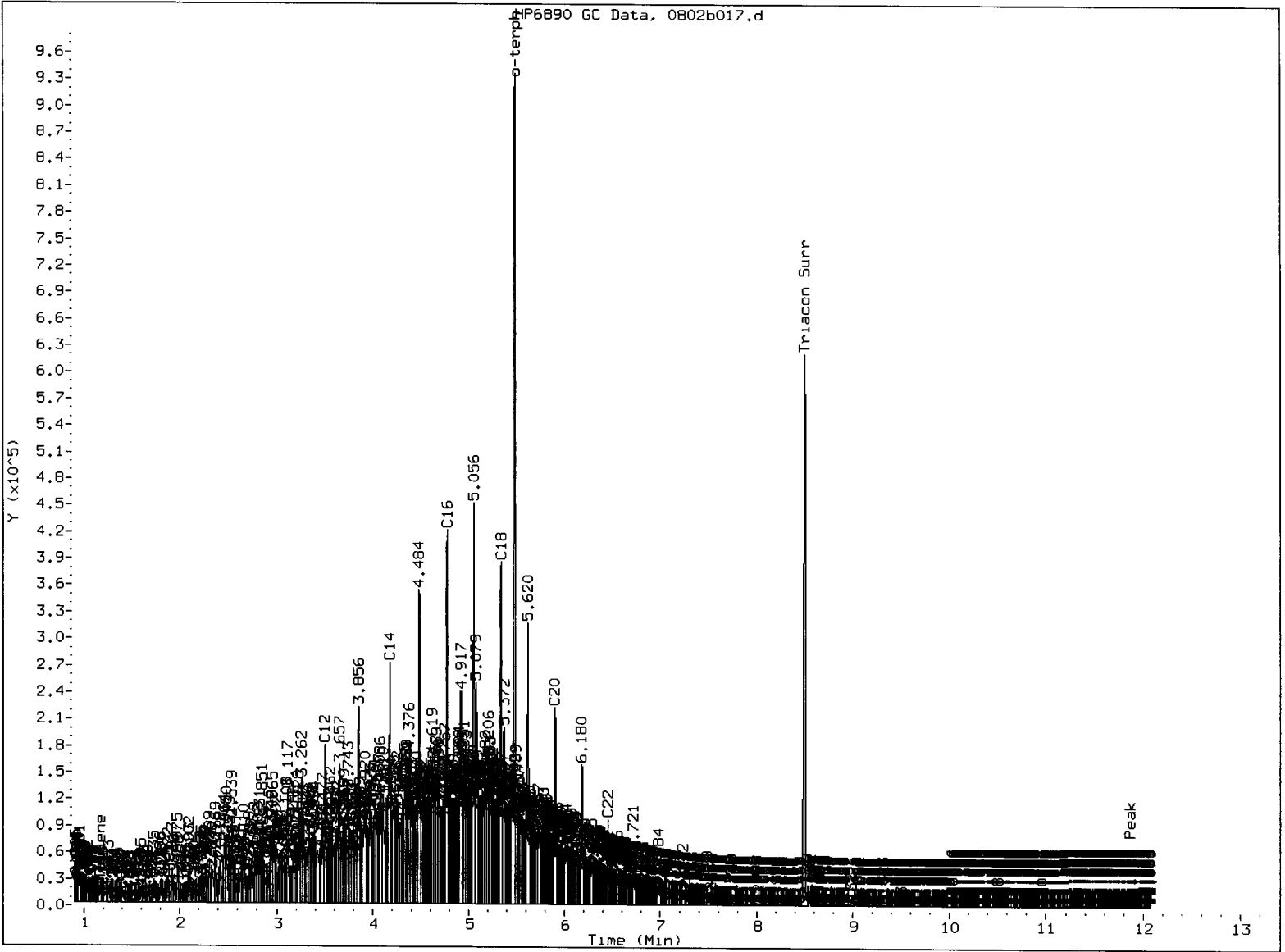
Operator: PC

Column diameter: 0.25

Handwritten initials/signature

/chem3/fid3b.i/20130802.b/0802b017.d





MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5. Skipped surrogate

Analyst: U

Date: 2-3-1

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130802.b/0802b018.d
Method: /chem3/fid3b.i/20130802.b/ftphfid3b.m
Instrument: fid3b.i
Operator: PC
Report Date: 08/03/2013
Macro: FID:3B052113

ARI ID: WY97LCSDW1
Client ID: WY97LCSDW1
Injection: 02-AUG-2013 14:56
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.181	0.009	6357	7622	WATPHG	(Tol-C12)	3818779	282.73
C8	1.398	-0.018	12230	17836	WATPHD	(C12-C24)	16816238	1326.02
C10	2.662	-0.002	79486	77173	WATPHM	(C24-C38)	276107	21.75
C12	3.507	0.002	186228	172687	AK102	(C10-C25)	19551351	1290.67 M
C14	4.180	0.002	273668	254624	AK103	(C25-C36)	204922	28.83
C16	4.774	0.001	421575	373892				
C18	5.338	-0.001	387579	420111				
C20	5.901	-0.003	217479	266167				
C22	6.453	-0.005	97942	114949	MSPIRIT	(Tol-C12)	3818779	277.96
C24	7.001	0.006	11004	4893				
C25	7.243	-0.015	15381	25972	KEROSEN	(Tol-C18)	15943240	1033.53
C26	7.529	0.001	3090	849				
C28	8.028	0.003	823	271				
C32	9.025	0.007	792	826				
C34	9.521	0.001	99	73				
Filter Peak	11.860	-0.004	910	270				
C36	10.027	0.013	49	24	BUNKERC	(C10-C38)	19758104	4028.32
o-terph	5.483	0.001	873499	707093				
Triacon Surr	8.500	-0.033	627433	692994				

Range Times: NW Diesel(3.555 - 7.046) NW Gas(1.122 - 3.555) NW M.Oil(7.046 - 10.550)
AK102(2.613 - 7.208) AK103(7.208 - 10.064) Jet A(2.613 - 5.389)

Surrogate	Area	Amount	%Rec
o-Terphenyl	707093	43.4	96.5
Triacontane	692994	45.6	101.3

Analyte	RF	Curve Date
o-Terph Surr	16288.1	30-JUL-2013
Triacon Surr	15196.5	30-JUL-2013
Gas	13506.6	20-APR-2013
Diesel	12681.7	30-JUL-2013
Motor Oil	12697.0	30-JUL-2013
AK102	15148.2	30-JUL-2013
AK103	7108.5	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013
Kerosene	15426.1	09-NOV-2004
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130802.b/0802b018.d

Date: 02-AUG-2013 14:56

Client ID: WY97LCSDDM1

Sample Info: WY97LCSDDM1

Column phase: RTX-1

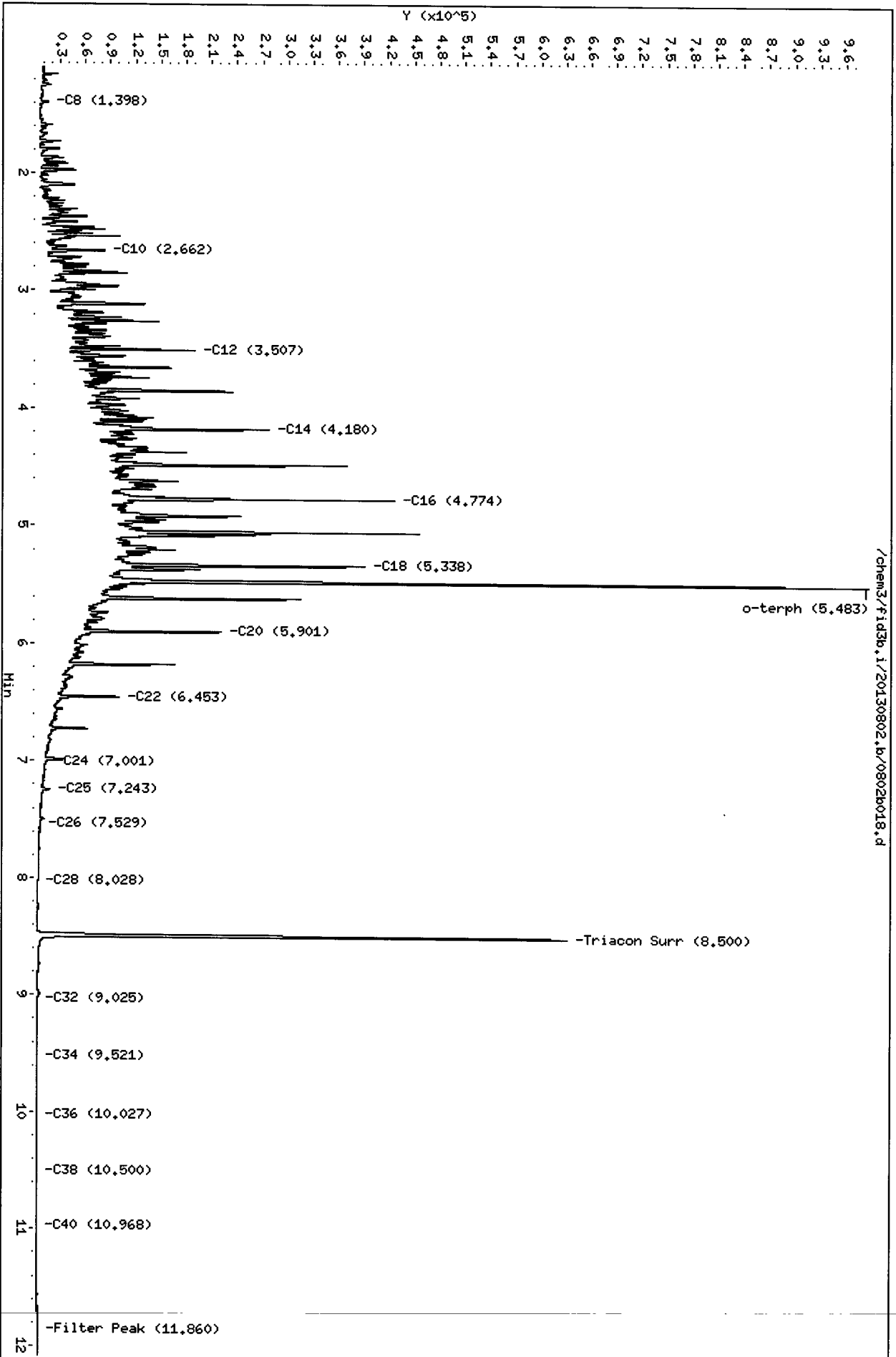
Instrument: fid3b.i

Operator: PC

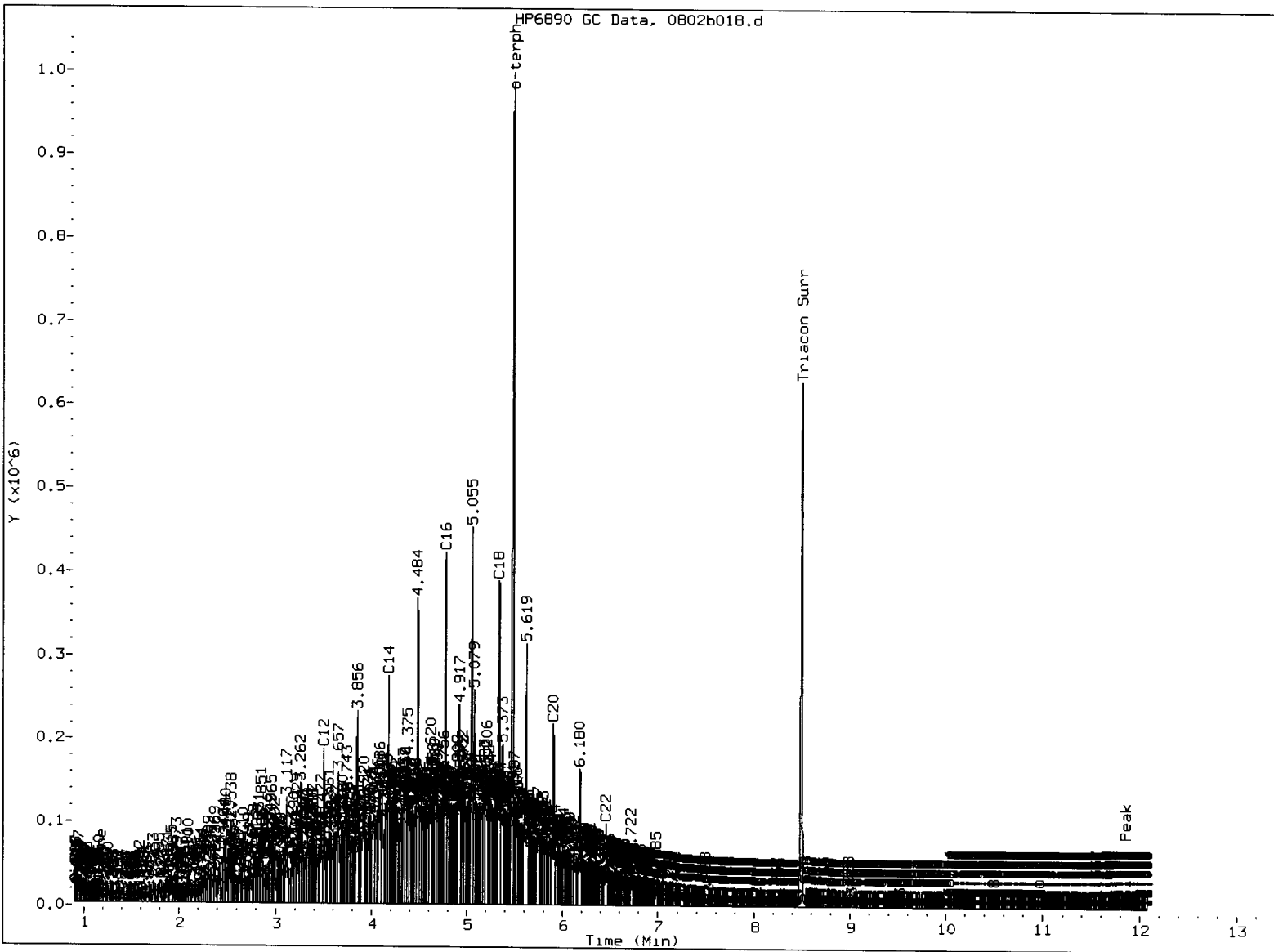
Column diameter: 0.25

Page 1

WY97.17



WY97.17



MANUAL INTEGRATION

- 1. Baseline correction
- 3. Peak not found
- 5) Skipped surrogate

Analyst: G

Date: 8.3.1

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 07/27/13

ARI Job: WY97
Project: Cashmere
0779.02.01-05

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
13-15758-073013MB1	Method Blank	500 mL	1.00 mL	07/30/13
13-15758-073013LCS1	Lab Control	500 mL	1.00 mL	07/30/13
13-15758-073013LCSD1	Lab Control Dup	500 mL	1.00 mL	07/30/13
13-15758-WY97C	GP10-W-3.5	500 mL	1.00 mL	07/30/13
13-15759-WY97D	GP12-W-4.5	500 mL	1.00 mL	07/30/13
13-15760-WY97E	GP11-W-4.5	500 mL	1.00 mL	07/30/13
13-15761-WY97F	GP4-W-2.5	500 mL	1.00 mL	07/30/13
13-15762-WY97G	GP6-W-2.5	500 mL	1.00 mL	07/30/13

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: GP10-W-3.5

SAMPLE

Lab Sample ID: WY97C

LIMS ID: 13-15758

Matrix: Water

Data Release Authorized: *AB*

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/26/13

Date Received: 07/27/13

Date Analyzed: 08/01/13 19:04

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	98.1%
Bromobenzene	96.4%

Gasoline Surrogate Recovery

Trifluorotoluene	98.4%
Bromobenzene	99.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

Handwritten initials/signature

Data file 1: /chem3/pid1.i/20130801-1.b/0801a020.d ARI ID: WY97C
 Data file 2: /chem3/pid1.i/20130801-2.b/0801a020.d Client ID: GP10-W-3.5
 Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 19:04
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	-0.004	3217	40236	98.4	TFT(Surr)
15.378	-0.003	2018	16971	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1545	0.004
8015C 2MP-TMB (4.19 to 16.20)	723723	453	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap (9.77 to 18.91)	375093	3588	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	-0.004	3383	98.1	TFT(Surr)
15.385	-0.002	7189	96.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130801-1.b/0801a020.d
Date: 01-AUG-2013 19:04
Client ID: GP10-H-3.5
Sample Info: WY97C

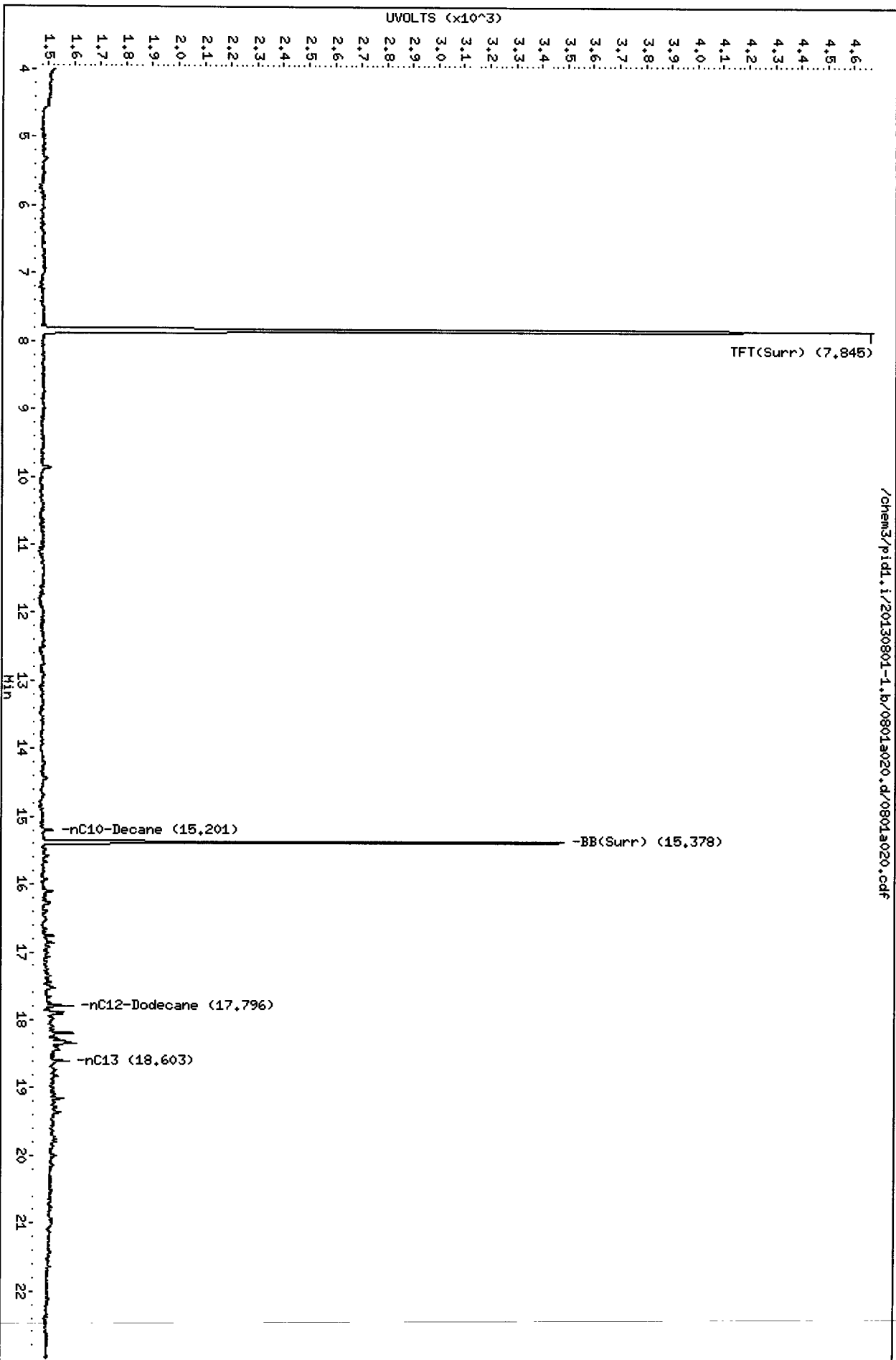
Column phase: RTX 502-2 FID

/chem3/pid1.i/20130801-1.b/0801a020.d/0801a020.cdf

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

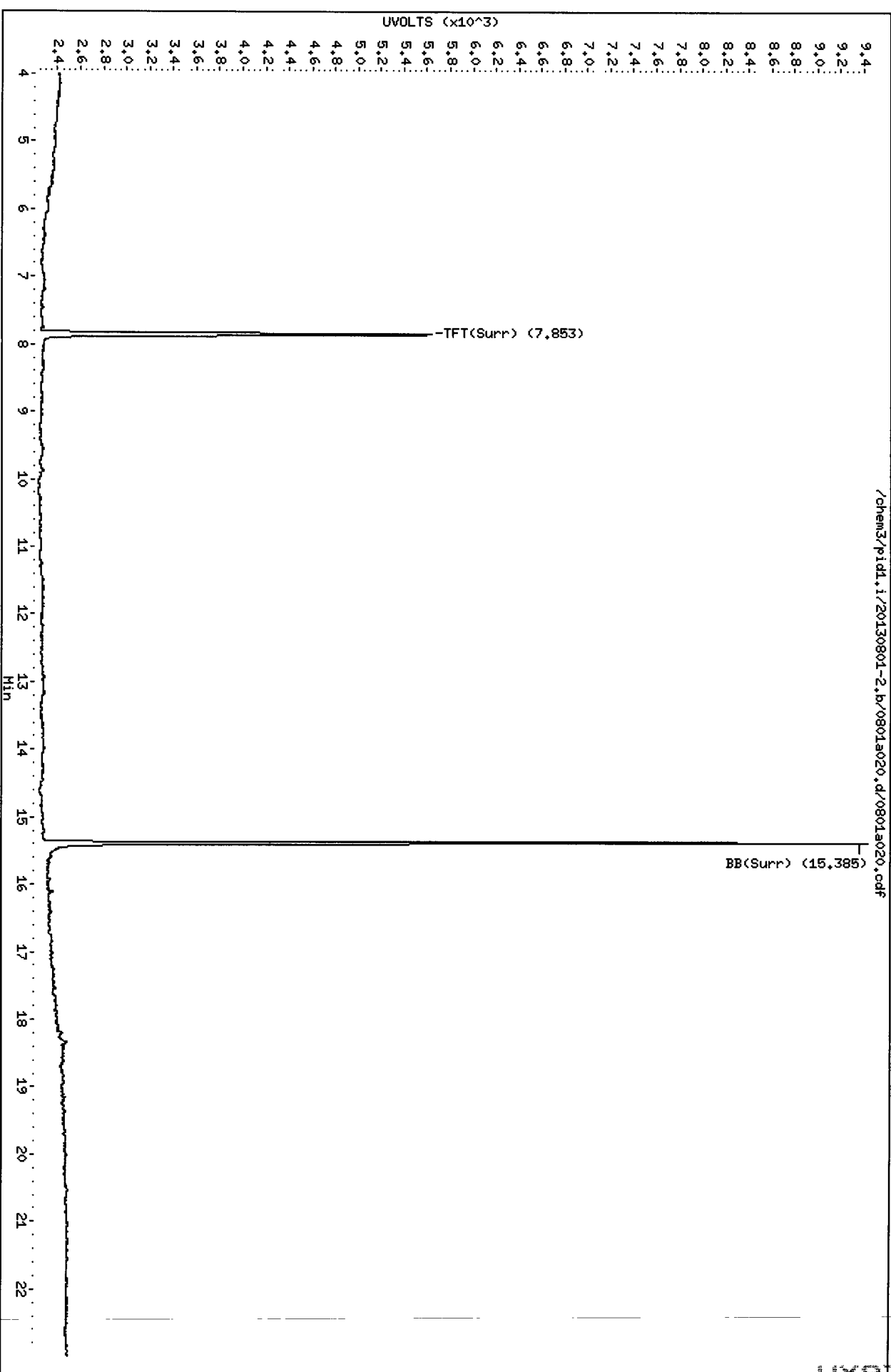


Data File: /chem3/pid1.i/20130801-2.b/0801a020.d
Date: 01-AUG-2013 19:04
Client ID: GP10-M-3.5
Sample Info: WY97C

Instrument: pid1.i


Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: GP12-W-4.5
SAMPLE

Lab Sample ID: WY97D
 LIMS ID: 13-15759
 Matrix: Water
 Data Release Authorized: 
 Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc
 Project: Cashmere
 Event: 0779.02.01-05
 Date Sampled: 07/26/13
 Date Received: 07/27/13

Date Analyzed: 08/01/13 19:33
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	95.5%
Bromobenzene	94.3%

Gasoline Surrogate Recovery

Trifluorotoluene	96.5%
Bromobenzene	96.7%

BETX values reported in ug/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PC
8/8/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130801-1.b/0801a021.d ARI ID: WY97D
Data file 2: /chem3/pid1.i/20130801-2.b/0801a021.d Client ID: GP12-W-4.5
Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 19:33
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.845	-0.004	3155	39244	96.5	TFT(Surr)
15.378	-0.003	1965	16550	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	596	0.002
8015C 2MP-TMB (4.19 to 16.20)	723723	1	0.000
AK101 nC6-nC10 (4.68 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.91)	375093	1105	0.003

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.853	-0.005	3293	95.5	TFT(Surr)
15.386	-0.002	7032	94.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130801-1.b/0801a021.d
Date: 01-AUG-2013 19:33
Client ID: GP12-W-4.5
Sample Info: WY97D

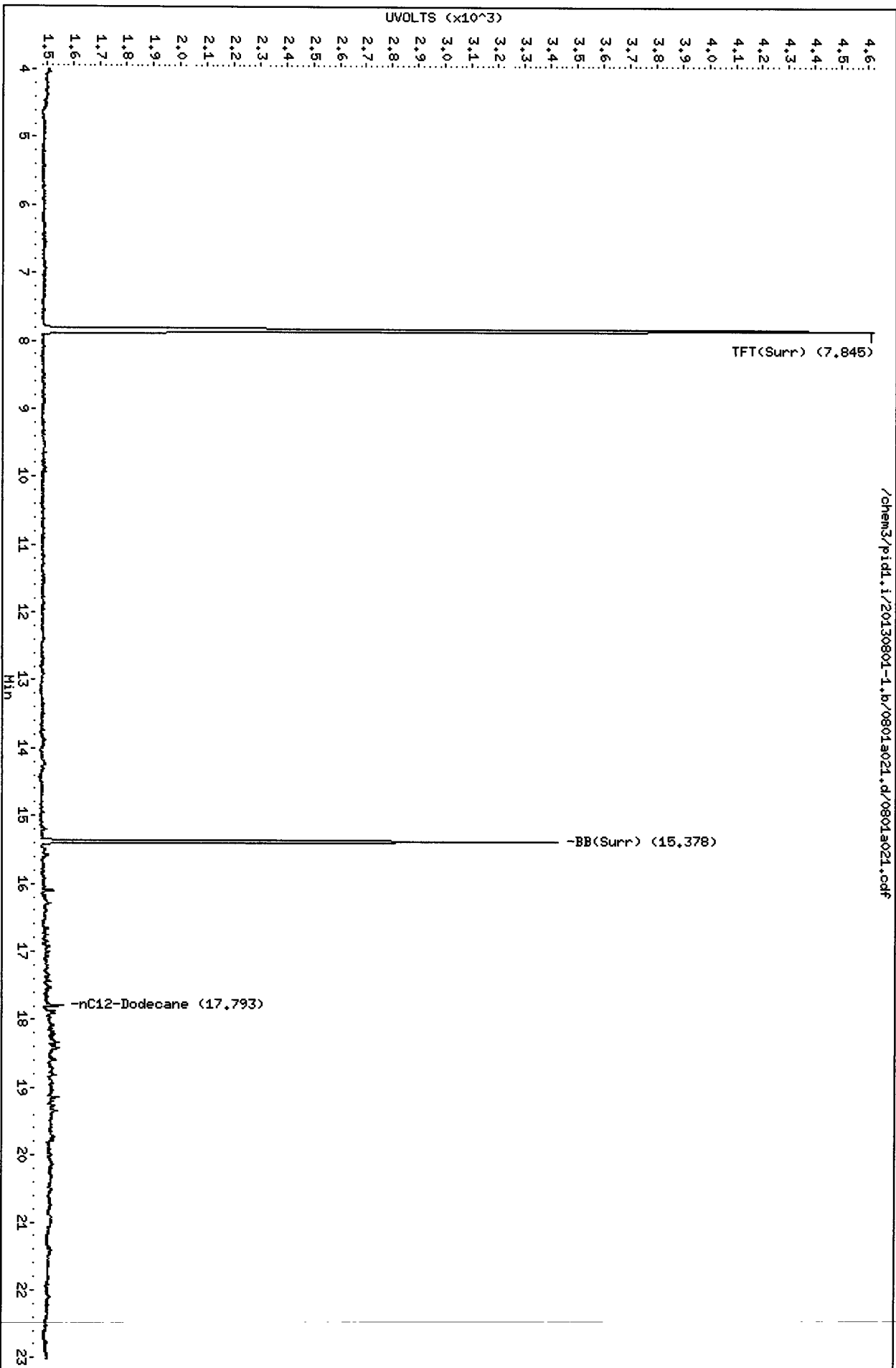
Column phase: RTX 502-2 FID

/chem3/pid1.i/20130801-1.b/0801a021.d/0801a021.cdf

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

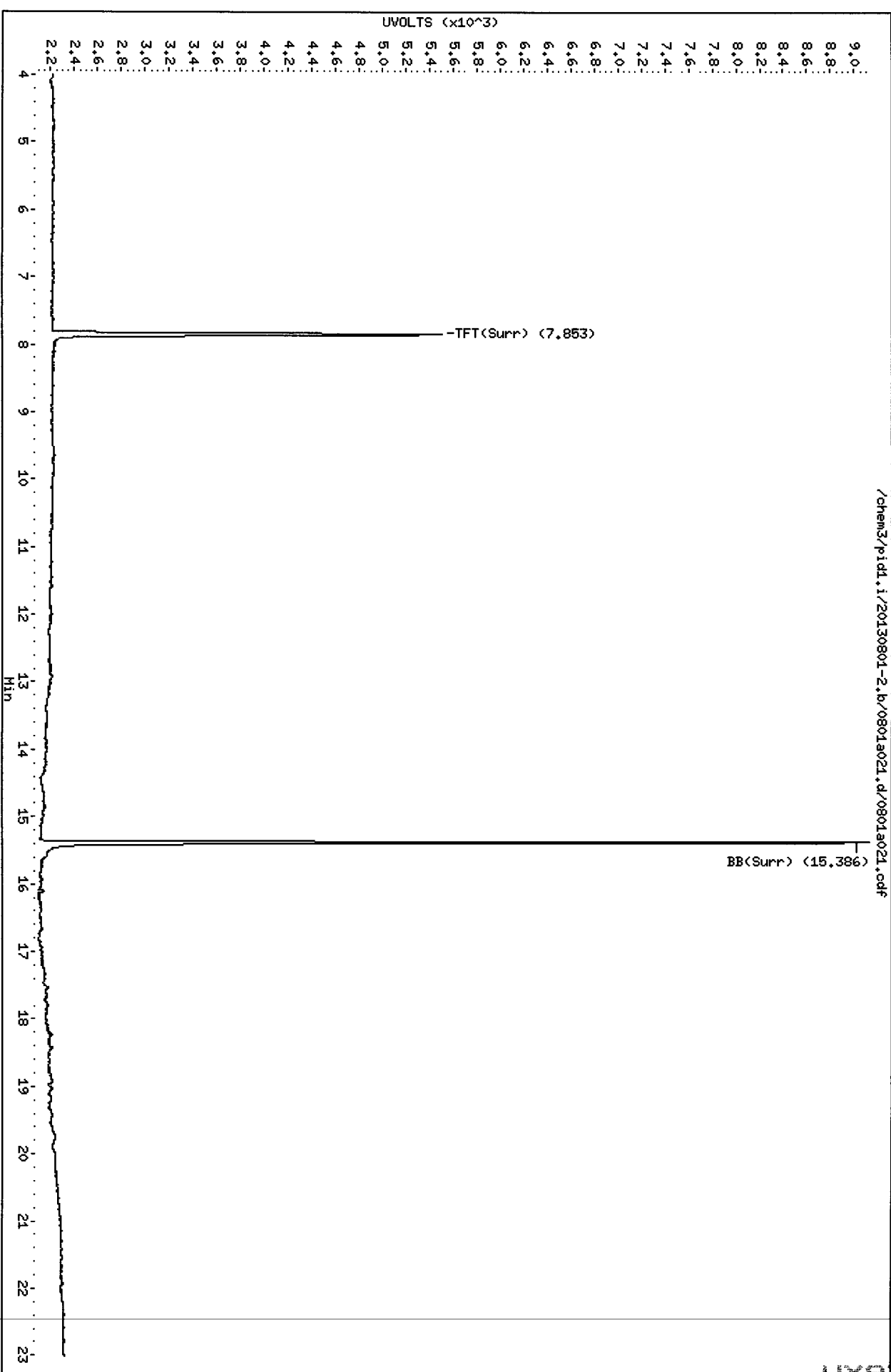


Data File: /chem3/pid1.i/20130801-2.b/0801a021.d
Date : 01-PLUG-2013 19:33
Client ID: GP12-M-4,5
Sample Info: WY97D

Instrument: pid1.i

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG


Page 1 of 1

**Sample ID: GP11-W-4.5
SAMPLE**

Lab Sample ID: WY97E

LIMS ID: 13-15760

Matrix: Water

Data Release Authorized: 

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/26/13

Date Received: 07/27/13

Date Analyzed: 08/01/13 21:00

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	96.2%
Bromobenzene	95.9%

Gasoline Surrogate Recovery

Trifluorotoluene	96.9%
Bromobenzene	99.3%

BETX values reported in ug/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PC
8/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130801-1.b/0801a024.d ARI ID: WY97E
Data file 2: /chem3/pid1.i/20130801-2.b/0801a024.d Client ID: GP11-W-4.5
Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 21:00
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
7.844	-0.005	3170	39735	96.9	TFT(Surr)
15.377	-0.003	2017	16788	99.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	5963	0.017
8015C 2MP-TMB (4.19 to 16.20)	723723	17984	0.025
AK101 nC6-nC10 (4.68 to 15.10)	582885	15125	0.026
NWTPHG Tol-Nap (9.77 to 18.91)	375093	7336	0.020

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
7.852	-0.005	3317	96.2	TFT(Surr)
15.385	-0.003	7154	95.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pidd.i/20130801-1.b/0801a024.d

Date: 01-AUG-2013 21:00

Client ID: GP11-M-4.5

Sample Info: WY97E

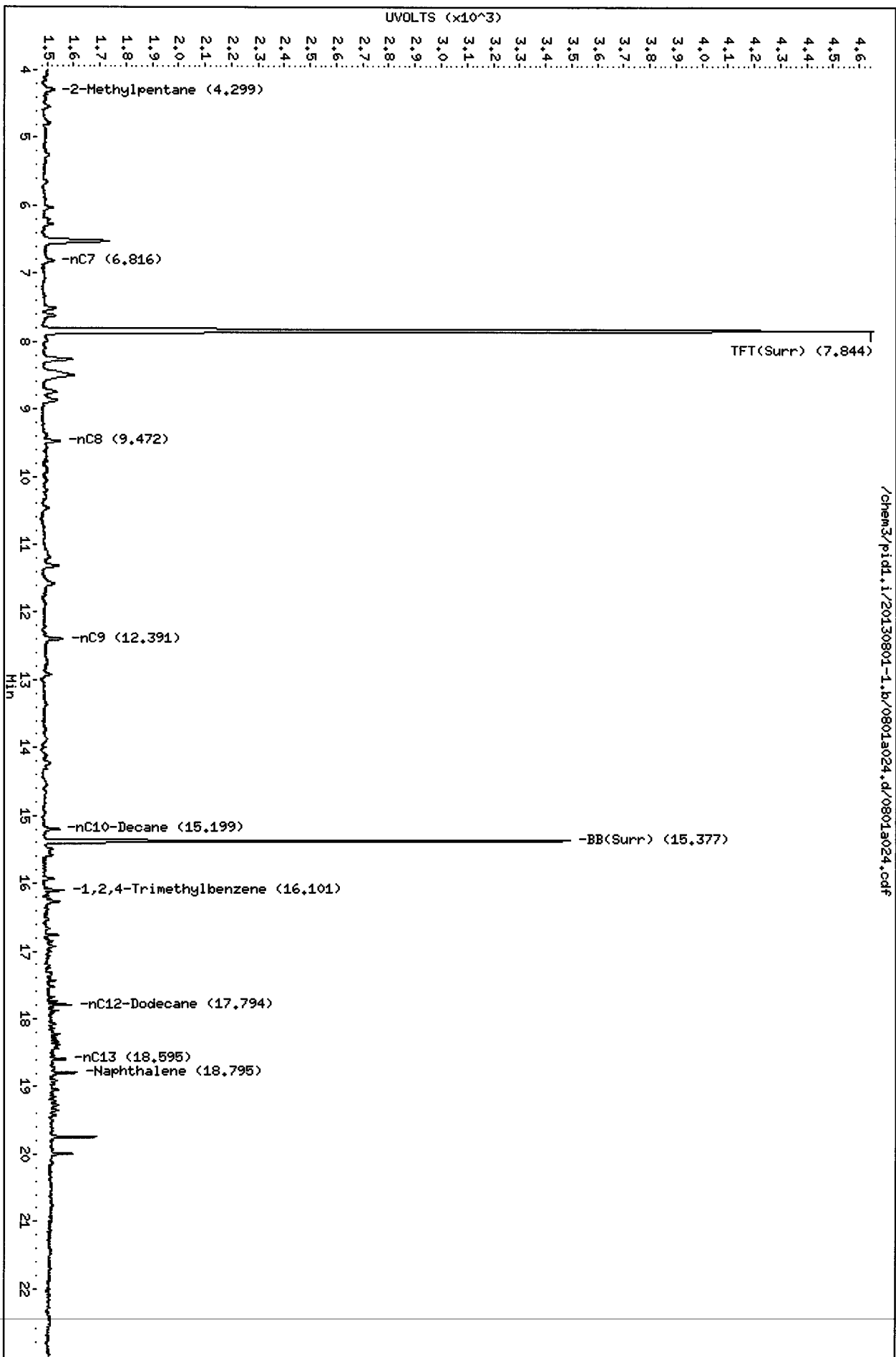
Instrument: pidd.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pidd.i/20130801-1.b/0801a024.d/0801a024.cdf



Data File: /chem3/pid1.i/20130801-2.b/0801a024.d
Date : 01-AUG-2013 21:00
Client ID: GP11-M-4.5
Sample Info: WY97E

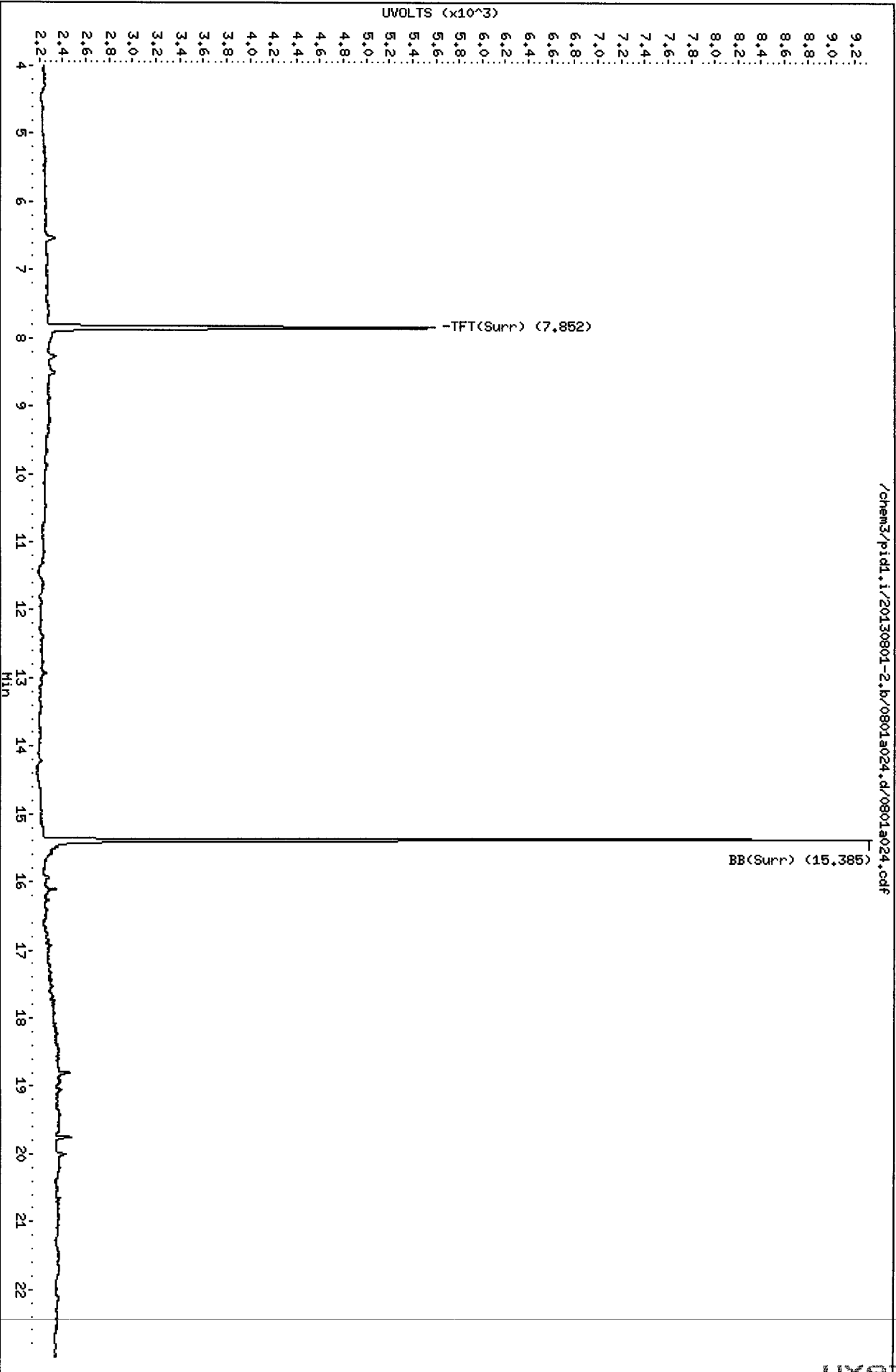
Column phase: RTX 502-2 PID

/chem3/pid1.i/20130801-2.b/0801a024.d/0801a024.cdf

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG


Page 1 of 1

**Sample ID: GP4-W-2.5
SAMPLE**

Lab Sample ID: WY97F

LIMS ID: 13-15761

Matrix: Water

Data Release Authorized: 

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/26/13

Date Received: 07/27/13

Date Analyzed: 08/01/13 21:29

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

	RL	Result	GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	93.2%
Bromobenzene	94.1%

Gasoline Surrogate Recovery

Trifluorotoluene	94.2%
Bromobenzene	96.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

15
8/8/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130801-1.b/0801a025.d ARI ID: WY97F
Data file 2: /chem3/pid1.i/20130801-2.b/0801a025.d Client ID: GP4-W-2.5
Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 21:29
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.846	-0.004	3081	38769	94.2	TFT(Surr)
15.378	-0.003	1965	16476	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	2319	0.006
8015C 2MP-TMB (4.19 to 16.20)	723723	581	0.001
AK101 nC6-nC10 (4.68 to 15.10)	582885	580	0.001
NWTPHG Tol-Nap (9.77 to 18.91)	375093	2319	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.854	-0.004	3214	93.2	TFT(Surr)
15.386	-0.002	7018	94.1	BB(Surr)

SW8021 (PID)

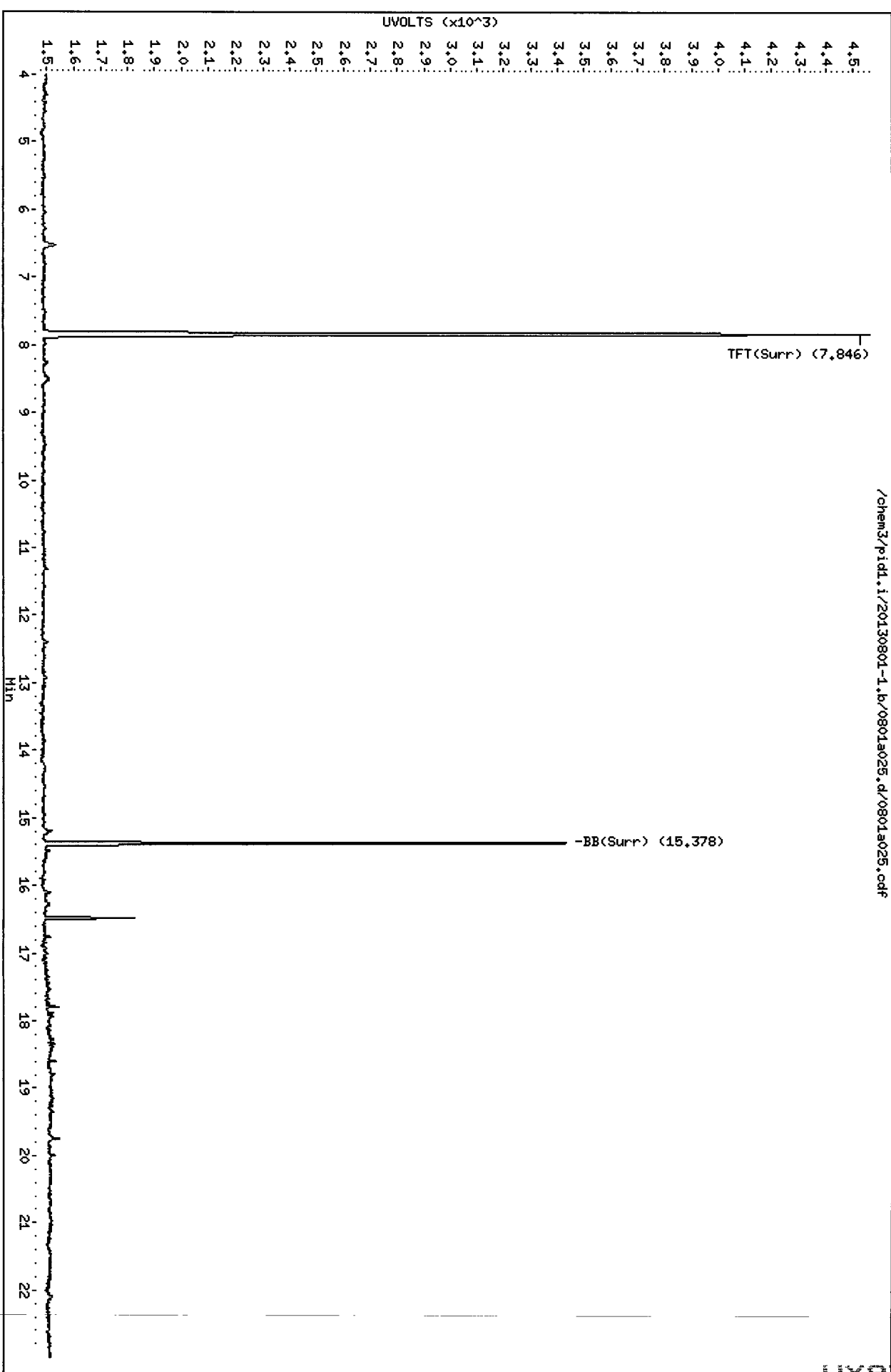
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130801-1.b/0801a025.d
Date: 01-01-2013 21:29
Client ID: GP4-N-2.5
Sample Info: WY97F

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130801-2.b/0801a025.d

Date: 01-AUG-2013 21:29

Client ID: GP4-W-2.5

Sample Info: WY97F

Page 1

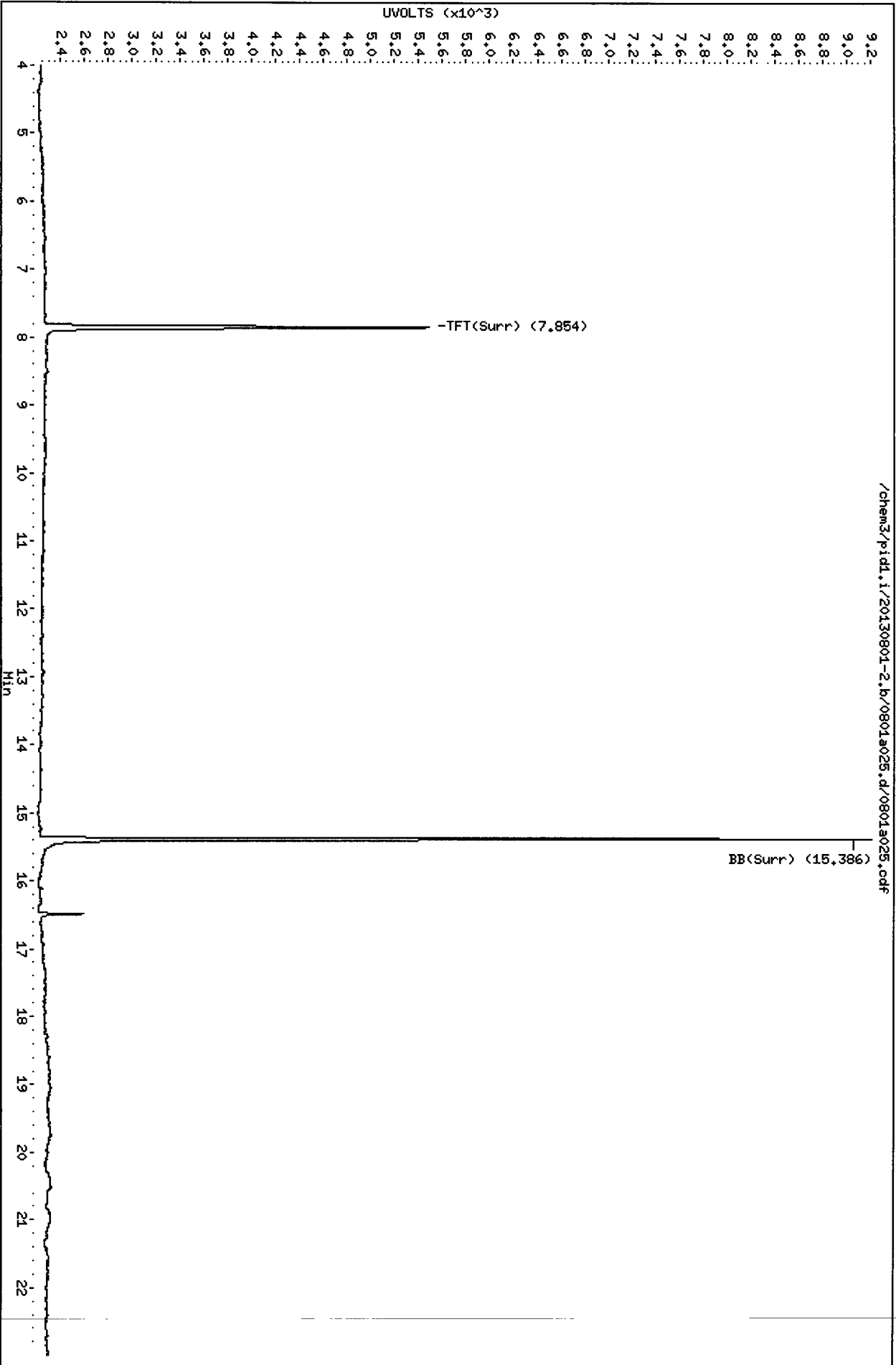
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid1.i/20130801-2.b/0801a025.d/0801a025.cdf



ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: GP6-W-2.5

SAMPLE

Lab Sample ID: WY97G

LIMS ID: 13-15762

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: 07/26/13

Date Received: 07/27/13

Date Analyzed: 08/01/13 21:59

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	94.3%
Bromobenzene	94.1%

Gasoline Surrogate Recovery

Trifluorotoluene	95.6%
Bromobenzene	97.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

PK
8/6/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130801-1.b/0801a026.d ARI ID: WY97G
Data file 2: /chem3/pid1.i/20130801-2.b/0801a026.d Client ID: GP6-W-2.5
Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 21:59
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
7.846	-0.004	3125	39182	95.6	TFT(Surr)
15.378	-0.003	1983	16748	97.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (9.77 to 17.90)	358114	1375	0.004
8015C 2MP-TMB (4.19 to 16.20)	723723	1139	0.002
AK101 nC6-nC10 (4.68 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap (9.77 to 18.91)	375093	3238	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
7.853	-0.004	3253	94.3	TFT(Surr)
15.385	-0.003	7017	94.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130801-1.b/0801a026.d
Date: 01-AUG-2013 21:59
Client ID: GP6-M-2.5
Sample Info: WY97G

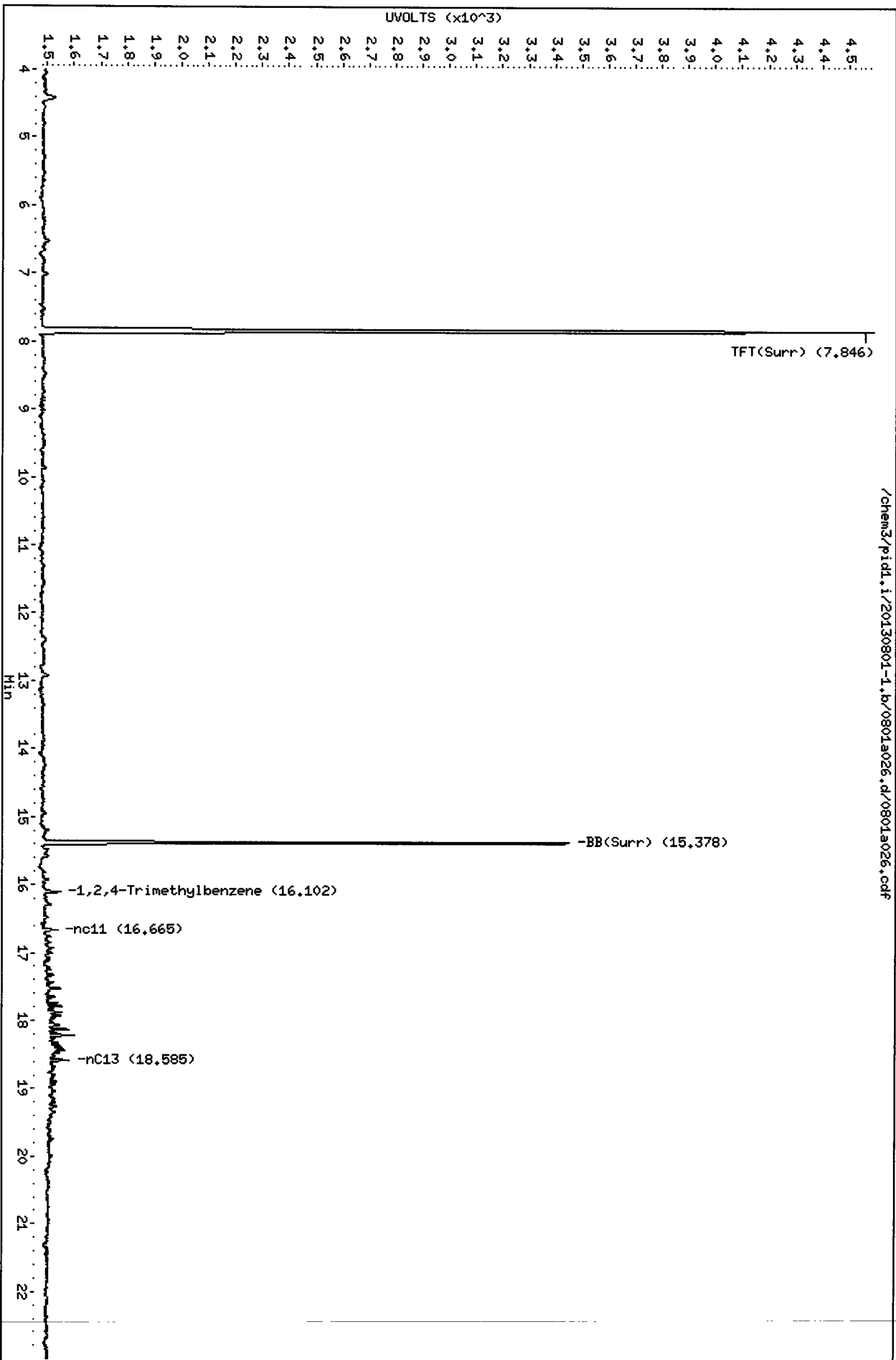
Column phase: RTX 502-2 FID

/chem3/pid1.i/20130801-1.b/0801a026.d/0801a026.caf

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/p/idd1.i/20130801-2.b/0801a026.d

Page 1

Date : 01-AUG-2013 21:59

Client ID: GP6-W-2.5

Sample Info: WY97C

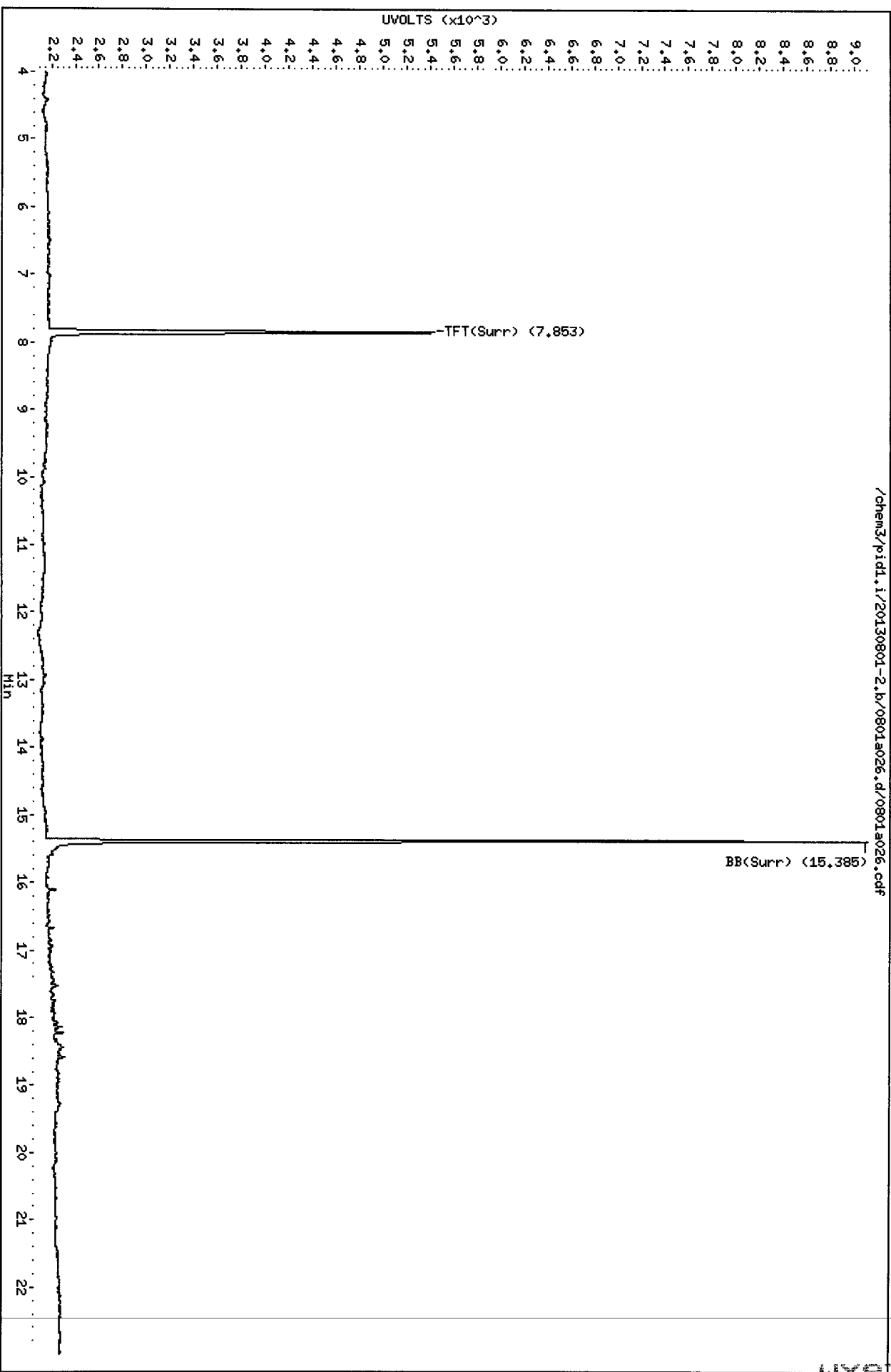
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/p/idd1.i/20130801-2.b/0801a026.d/0801a026.cdf



TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WY97
Matrix: Water

QC Report No: WY97-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-05

Client ID	TFT	BBZ	TOT OUT
MB-080113	96.4%	104%	0
LCS-080113	103%	104%	0
LCSD-080113	101%	103%	0
GP10-W-3.5	98.4%	99.3%	0
GP12-W-4.5	96.5%	96.7%	0
GP11-W-4.5	96.9%	99.3%	0
GP4-W-2.5	94.2%	96.7%	0
GP6-W-2.5	95.6%	97.6%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-15758 to 13-15762

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: WY97
Matrix: Water

QC Report No: WY97-Maul Foster & Alongi, Inc
Project: Cashmere
Event: 0779.02.01-05

Client ID	TFT	BBZ	TOT OUT
MB-080113	96.7%	100%	0
LCS-080113	102%	102%	0
LCSD-080113	99.5%	101%	0
GP10-W-3.5	98.1%	96.4%	0
GP12-W-4.5	95.5%	94.3%	0
GP11-W-4.5	96.2%	95.9%	0
GP4-W-2.5	93.2%	94.1%	0
GP6-W-2.5	94.3%	94.1%	0

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 13-15758 to 13-15762

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1



Sample ID: LCS-080113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080113

LIMS ID: 13-15758

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 08/01/13 15:13

LCSD: 08/01/13 15:42

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.03	1.00	103%	1.01	1.00	101%	2.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	103%	101%
Bromobenzene	104%	103%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1



Sample ID: LCS-080113

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080113

LIMS ID: 13-15758

Matrix: Water

Data Release Authorized: *AS*

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 08/01/13 15:13

LCSD: 08/01/13 15:42

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	3.05	3.70	82.4%	3.21	3.70	86.8%	5.1%
Toluene	35.4	39.6	89.4%	37.1	39.6	93.7%	4.7%
Ethylbenzene	10.4	11.6	89.7%	10.8	11.6	93.1%	3.8%
m,p-Xylene	38.2	42.5	89.9%	39.6	42.5	93.2%	3.6%
o-Xylene	16.9	19.2	88.0%	17.5	19.2	91.1%	3.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	102%	99.5%
Bromobenzene	102%	101%

Analytical Resources Inc.
BETX/Gas Quantitation Report

8/6/12

Data file 1: /chem3/pid1.i/20130801-1.b/0801a012.d ARI ID: LCS0801
 Data file 2: /chem3/pid1.i/20130801-2.b/0801a012.d Client ID:
 Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 15:13
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	-0.004	3377	46549	103.3	TFT(Surr)
15.379	-0.002	2111	19049	103.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	360052	1.005 M
8015C 2MP-TMB (4.19 to 16.20)	723723	687406	0.950 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	556560	0.955 M
NWTPHG Tol-Nap (9.77 to 18.91)	375093	387495	1.033 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.853	-0.005	3521	102.1	TFT(Surr)
15.386	-0.002	7622	102.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.024	-0.003	748	3.05	Benzene
9.877	-0.004	7606	35.42	Toluene
12.768	-0.004	1840	10.38	Ethylbenzene
12.930	-0.001	7413	38.15	M/P-Xylene
13.875	-0.003	2688	16.89	O-Xylene
4.551	-0.017	103	1.11	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

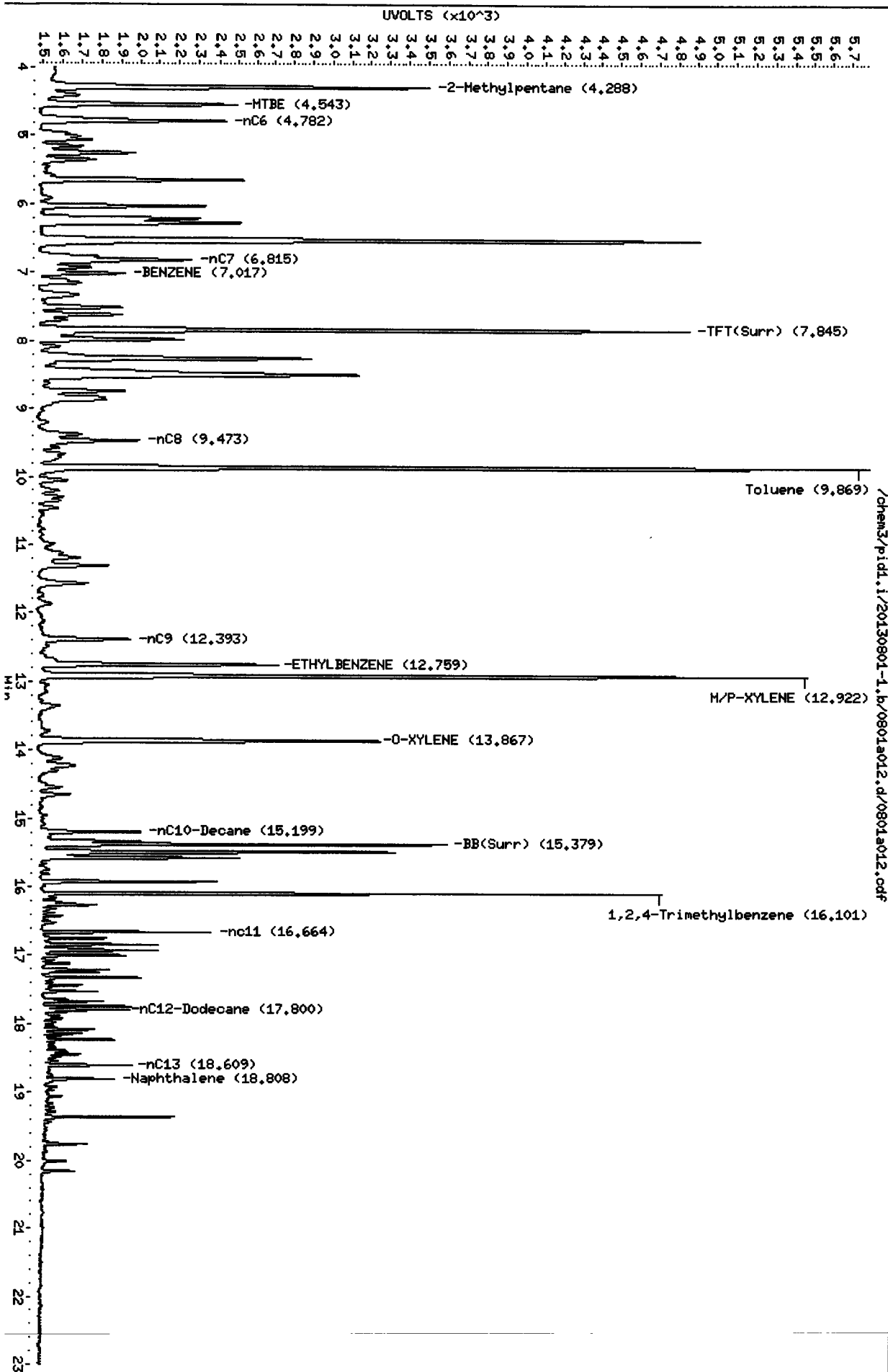
Data File: /chem3/pid1.i/20130801-1.b/0801a012.d
Date: 01-AUG-2013 15:13

Client ID:
Sample Info: LCS0801

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



/chem3/pid1.i/20130801-1.b/0801a012.d/0801a012.cdf

Data File: /chem3/pid1.1/20130801-2.b/0801a012.d

Date: 01-AUG-2013 15:13

Client ID:

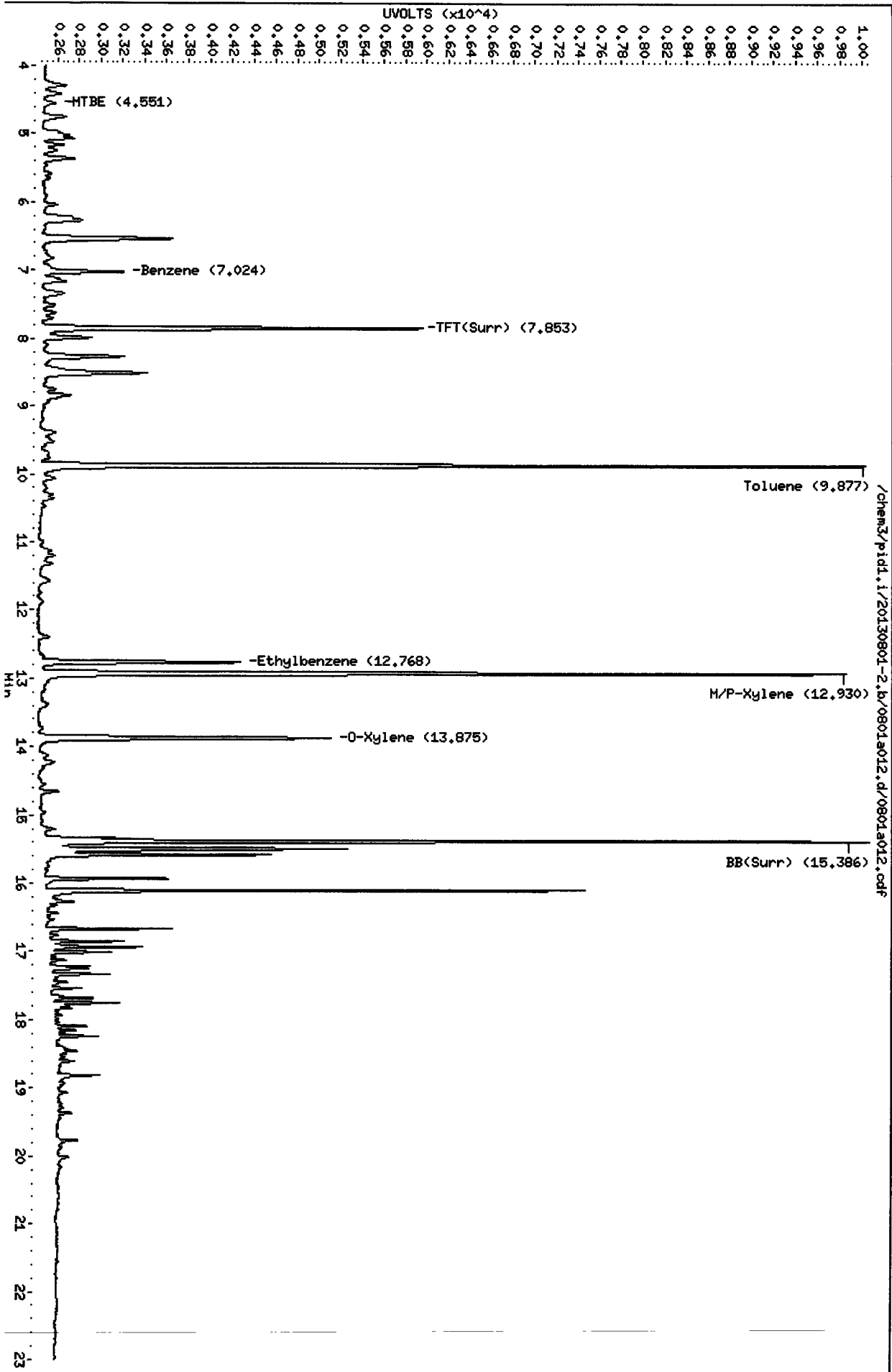
Sample Info: LCS0801

Instrument: pid1.1

Operator: LH

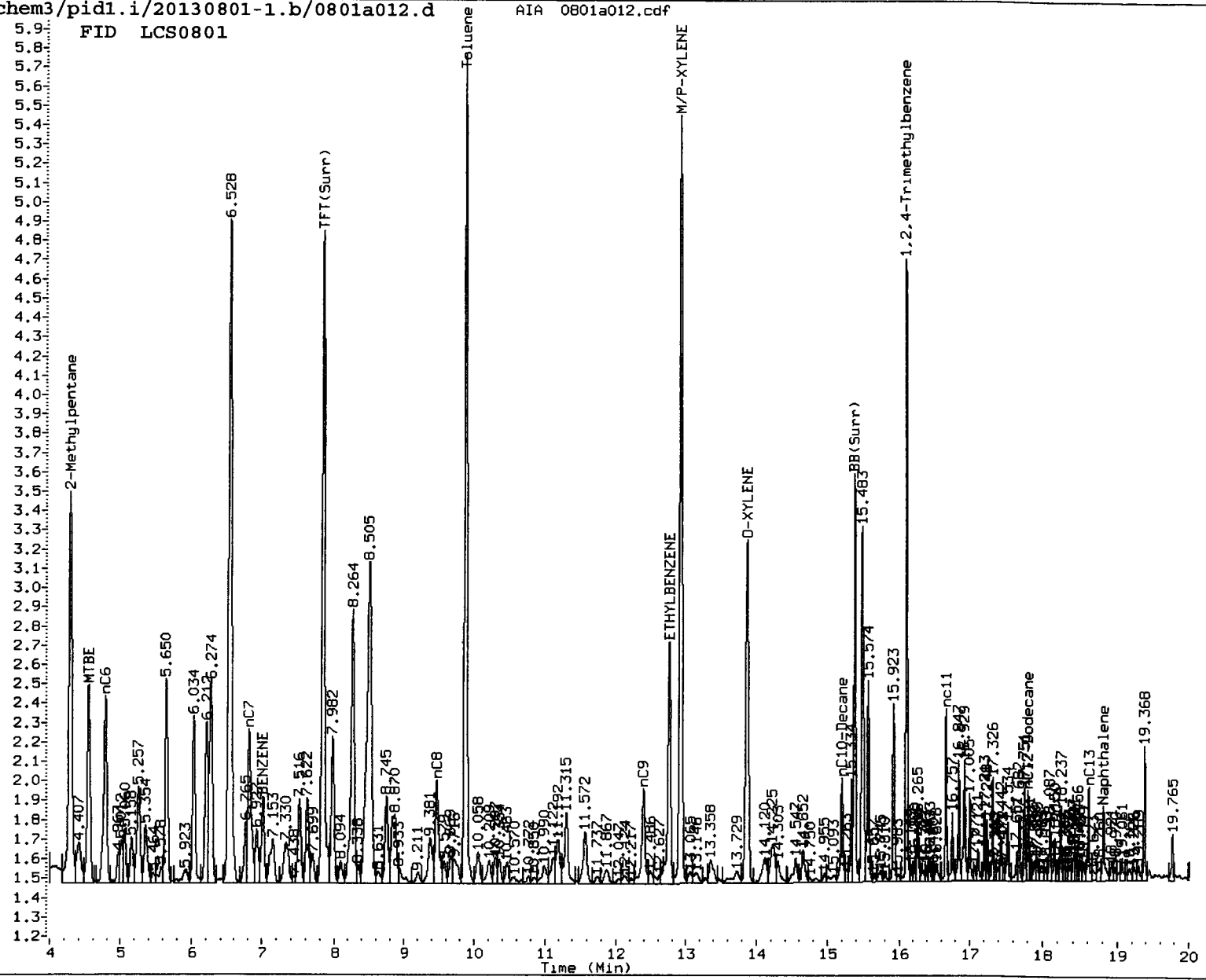
Column diameter: 0.18

Column phase: RTX 502-2 PID



FID LCS0801

UVOLTS



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other _____

Analyst:

Date: 7/31/13
8/2

8/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130801-1.b/0801a013.d ARI ID: LCSD0801
Data file 2: /chem3/pid1.i/20130801-2.b/0801a013.d Client ID:
Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 15:42
Instrument: pid1.i Matrix: WATER
Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.844	-0.005	3307	43585	101.1	TFT(Surr)
15.378	-0.003	2100	18658	103.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	355625	0.993 M
8015C 2MP-TMB (4.19 to 16.20)	723723	689651	0.953 M
AK101 nC6-nC10 (4.68 to 15.10)	582885	557540	0.957 M
NWTPHG Tol-Nap (9.77 to 18.91)	375093	380342	1.014 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.852	-0.005	3430	99.5	TFT(Surr)
15.386	-0.002	7505	100.6	BB(Surr)

SW8021 (PID)

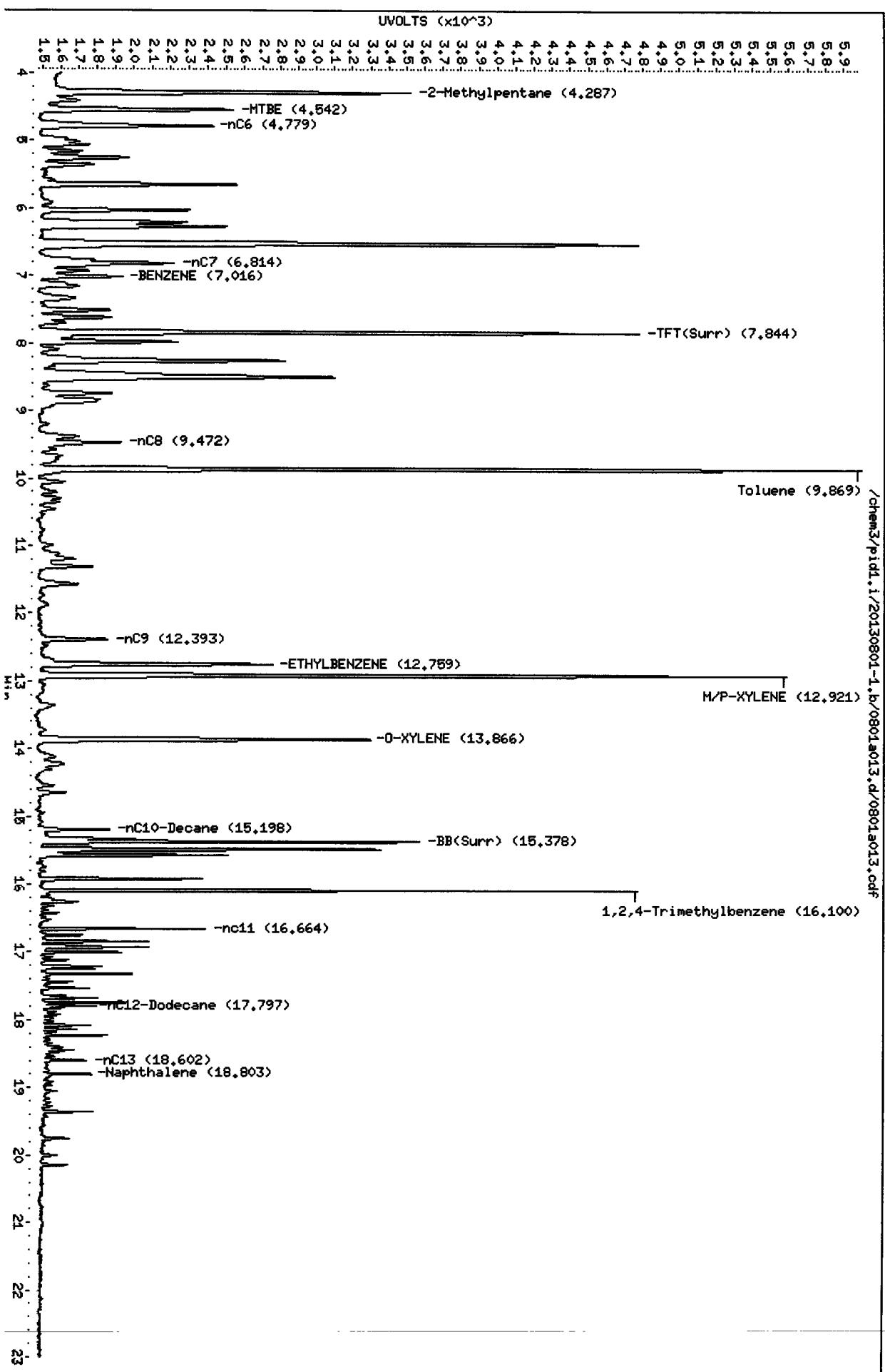
RT	Shift	Response	Amount	Compound
7.023	-0.004	788	3.21	Benzene
9.877	-0.005	7968	37.11	Toluene
12.767	-0.004	1920	10.83	Ethylbenzene
12.930	-0.001	7685	39.55	M/P-Xylene
13.875	-0.003	2787	17.52	O-Xylene
4.549	-0.019	95	1.03	MTBE

A Indicates Peak Area was used for quantitation instead of Height
V Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130801-1.b/0801a013.d
Date : 01-AUG-2013 15:42
Client ID:
Sample Info: LCSJ0801

Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130801-2.b/0801a013.d

Date: 01-AUG-2013 15:42

Client ID:

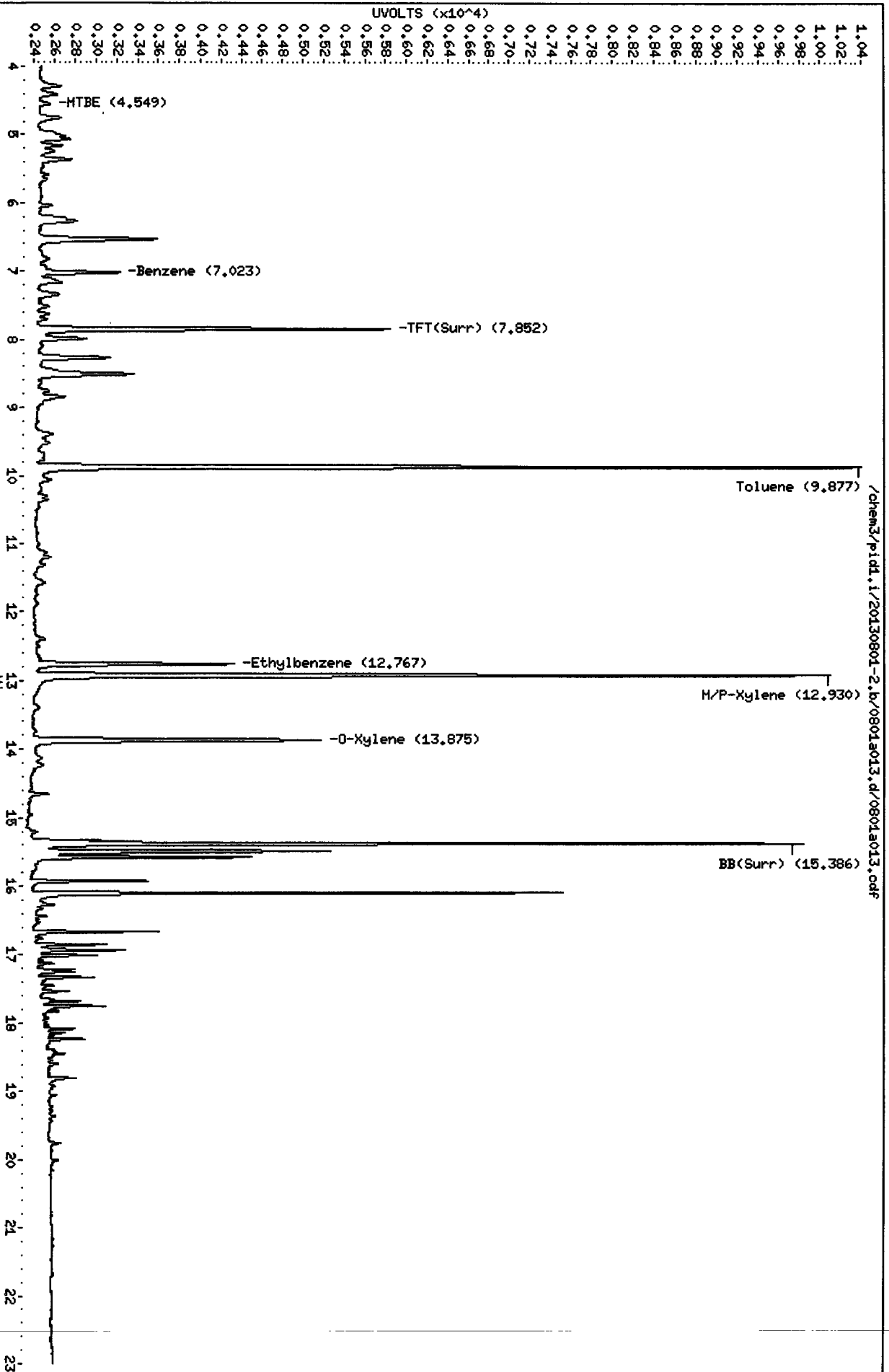
Sample Info: LCS0801

Instrument: pid1.i

Page 1

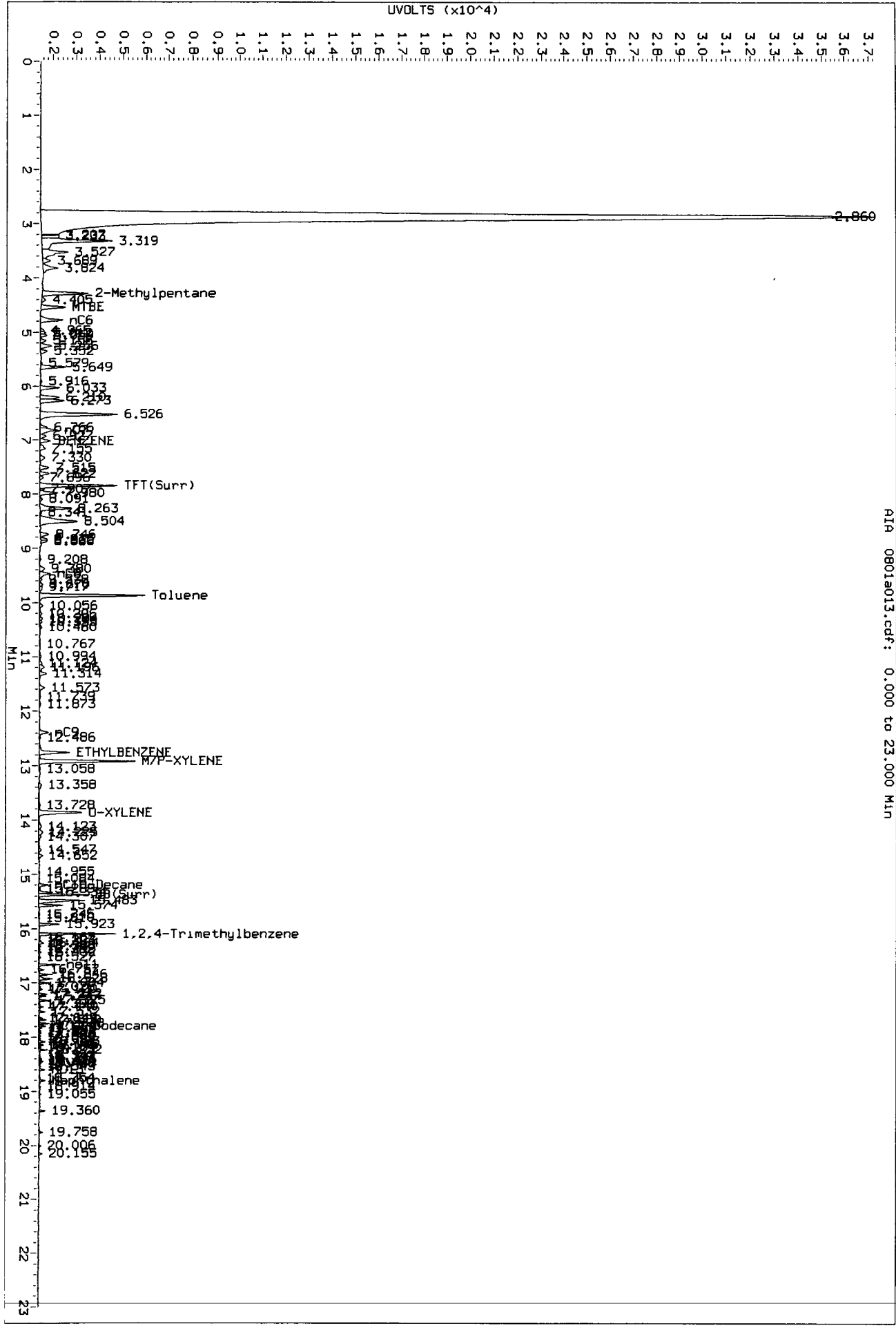
Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

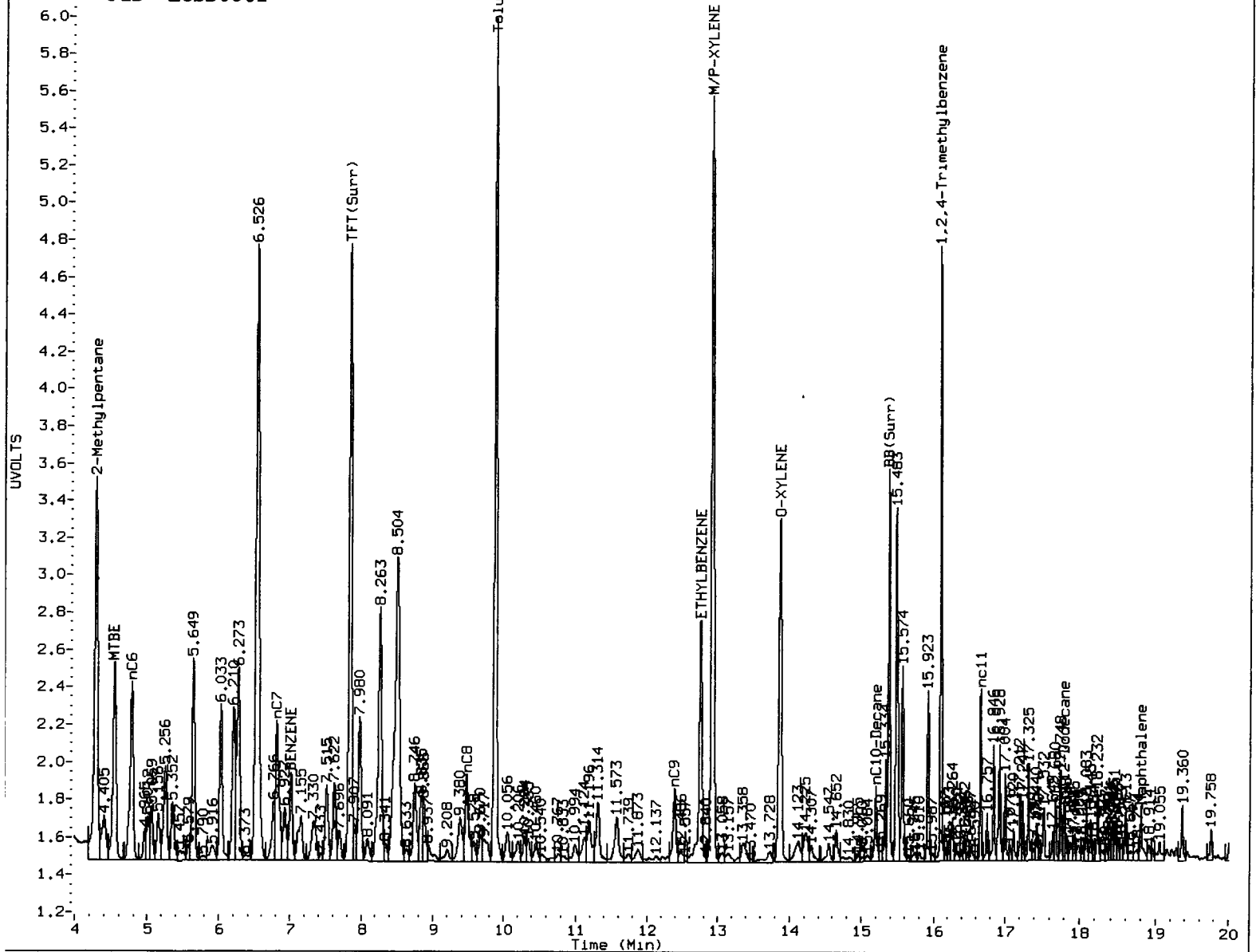


Data File: /chem3/pid1.1/20130801-1.b/0801a013.d/0801a013.cdf
 Injection Date: 01-AUG-2013 15:42
 Instrument: pid1.1
 Client Sample ID:

RK
8/2/13



AIA 0801a013.cdf: 0.000 to 23.000 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other

Analyst: VC

Date: 7/31/13
8/2

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-080113

METHOD BLANK

Lab Sample ID: MB-080113

LIMS ID: 13-15758

Matrix: Water

Data Release Authorized:

Reported: 08/06/13

QC Report No: WY97-Maul Foster & Alongi, Inc

Project: Cashmere

Event: 0779.02.01-05

Date Sampled: NA

Date Received: NA

Date Analyzed: 08/01/13 16:10

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	2.0	< 2.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	96.7%
Bromobenzene	100%

Gasoline Surrogate Recovery

Trifluorotoluene	96.4%
Bromobenzene	104%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Analytical Resources Inc.
 BETX/Gas Quantitation Report

M
7/5/13
8/2

Data file 1: /chem3/pid1.i/20130801-1.b/0801a014.d ARI ID: MB0801
 Data file 2: /chem3/pid1.i/20130801-2.b/0801a014.d Client ID:
 Method: /chem3/pid1.i/20130801-2.b/PIDB.m Injection Date: 01-AUG-2013 16:10
 Instrument: pid1.i Matrix: WATER
 Gas Ical Date: 23-OCT-2012 Dilution Factor: 1.000
 BETX Ical Date: 05-JUL-2013

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	-0.004	3151	39460	96.4	TFT(Surr)
15.378	-0.003	2111	17543	103.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (9.77 to 17.90)	358114	1761	0.005
8015C 2MP-TMB (4.19 to 16.20)	723723	2583	0.004
AK101 nC6-nC10 (4.68 to 15.10)	582885	1907	0.003
NWTPHG Tol-Nap (9.77 to 18.91)	375093	2167	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.854	-0.003	3334	96.7	TFT(Surr)
15.386	-0.002	7485	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
 N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130801-1.b/0801a014.d
Date: 01-AUG-2013 16:10
Client ID:
Sample Info: HG0804

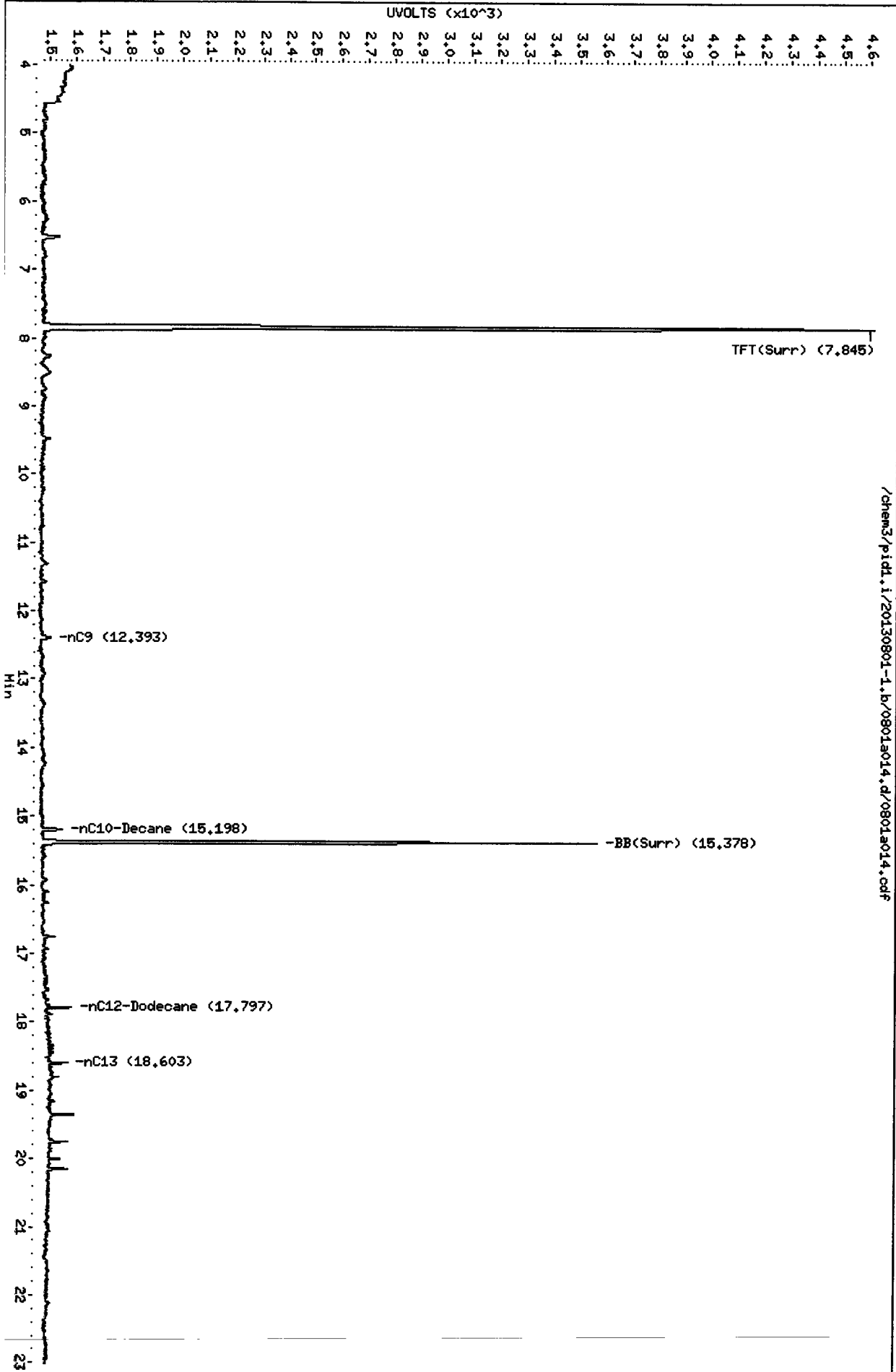
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 FID

Operator: LH
Column diameter: 0.18

/chem3/pid1.i/20130801-1.b/0801a014.d/0801a014.cdf



Data File: /chem3/pidl.1/20130801-2.b/0801a014.d

Date : 01-AUG-2013 16:10

Client ID:

Sample Info: MB0801

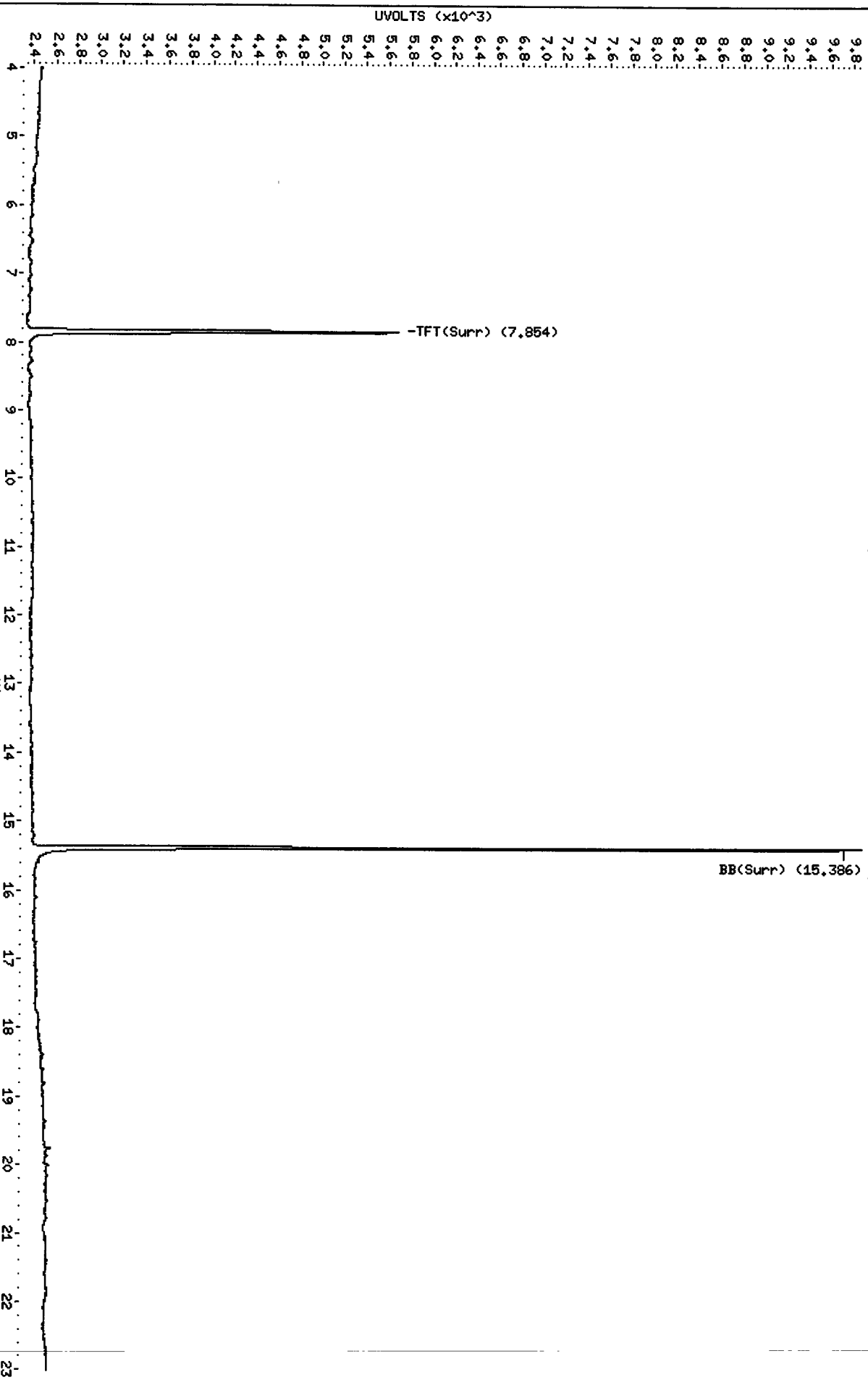
Instrument: pidl.1

Page 1

Column phase: RTX 502-2 PID

Operator: LH
Column diameter: 0.18

/chem3/pidl.1/20130801-2.b/0801a014.d/0801a014.cdf





Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 8, 2013

Tony Silva
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Project: Cashmere, 0779.02.01-05
ARI Job No.: WZ26

Dear Mr. Silva:

Please find enclosed the Chain-of-Custody records (COCs), sample receipt documentation, and the final results for samples from the project referenced above. Analytical Resources, Inc. (ARI) removed one water sample from archive on July 30, 2013. For details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The sample was analyzed for VOCs, as requested.

The internal standard area of d4-1,4-Dichlorobenzene fell outside the control limits low for sample **GP6-S-4.0**. The sample was re-analyzed with a medium level extraction and all internal standard areas were within control limits. Both sets of data have been reported for review. No further corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: Erik Naylor/Maul Foster & Alongi, Inc.
Justin Clary/Maul Foster & Alongi, Inc.

eFile: WZ26

Enclosures

Subject: RE: WY96 Cashmere TPHG/BETX finals and TPHD Preliminary Results

From: "Justin Clary" <jclary@maulfoster.com>

Date: 7/30/2013 1:45 PM

To: "Cheronne Oreiro" <cheronneo@arilabs.com>, "Tony Silva" <tsilva@maulfoster.com>

CC: "Kelly Titkemeier" <ktitkemeier@maulfoster.com>, "Erik Naylor" <enaylor@maulfoster.com>

Thank you, Cheronne.

It looks like GP6-S-4.0 was the only soil sample with a detection for gasoline range hydrocarbons. Please run the 8260 analysis for EDB/EDC/MTBE GP6-S-4.0 on a standard turnaround for this sample only. Thank you.

JUSTIN L. CLARY, PE | MAUL FOSTER & ALONGI, INC.

d. 360 594 6260 | c. 360 601 4547 | f. 360 594 6270 | www.maulfoster.com
1329 North State Street, Suite 301, Bellingham, WA 98225

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]

Sent: Tuesday, July 30, 2013 1:27 PM

To: Tony Silva

Cc: Kelly Titkemeier; Erik Naylor; Justin Clary

Subject: WY96 Cashmere TPHG/BETX finals and TPHD Preliminary Results

Hi Tony,

Please see attached final results for NWTPH-Gx/BETX. Please confirm you would like sample GP5-S-4.0 (WY96F) analyzed for VOCs.

The NWTPH-Dx results are preliminary due to a failing closing calibration standard. The samples are being re-analyzed today. I may have final data let this afternoon, I will keep you posted.

Please let me know if you have any questions.

-Cheronne

--

I will be out of the office Friday (8/2/13).

Cheronne Oreiro

Project Manager

Analytical Resources, Inc.

4611 S. 134th Place, Suite 100

Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

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If you have received this correspondence in error, please notify sender immediately. Thank you.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: WY96	Turn-around Requested: RUSH 24 HR	Page: 1 of 2
ARI Client Company: MFA	Phone:	Date: 7/25/13
Client Contact: TONY SILVA tsilva@maulfoster.com		Ice Present? Y
		No. of Coolers: 3
		Cooler Temps: 0, 7, 0, 4, 0, 8

Client Project Name: CASHMERE					Analysis Requested				Notes/Comments	
Sample ID	Date	Time	Matrix	No. Containers	EDB/EDCY	MTBE	TPHGX	TPHDX		BTEX
GP1-S-3.0	7/25/13	0930	SOIL	7			X	X	X	
GP2-S-3.5		1005		7			X	X	X	
GP3-S-3.0		1045		7			X	X	X	
GP4-S-4.0		1120		7			X	X	X	
GP5-S-4.0		1300		7			X	X	X	
GP5-S-5.0		1310		1						HOLD
GP5-S-6.5		1315		6						HOLD
GP5-S-7.0		1320		1						HOLD
GP5-S-8.0		1325		1						HOLD
GP6-S-4.0	✓	1400	✓	7			X	X	X	

Comments/Special Instructions HOLD FOR EDB/EDCY/MTBE	Relinquished by: (Signature) <i>Kelly R. Tittkemeier</i>	Received by: (Signature) <i>Jennifer Milkap</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Kelly R. Tittkemeier	Printed Name: Jennifer Milkap	Printed Name:	Printed Name:
	Company: MFA	Company: ARI	Company:	Company:
	Date & Time: 7/25/13	Date & Time: 7/27/13 TSO	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

17226-0000-01

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: W96		Turn-around Requested: RUSH 24 HR			Page: 2 of 2				
ARI Client Company: MFA		Phone:			Date: 7/25/13	Ice Present? Y			
Client Contact: TONY SILVA		tsilva@maulfoster.com			No. of Coolers: 3	Cooler Temps: 0.7, 0.4, 0.8			
Client Project Name: CASHMERE		Analysis Requested				Notes/Comments			
Client Project #: 0779.02.01-05	Samplers: KELLY TITKEMEIER			EDB/EDC/MTBE	TPH GX		TPH DX	BTEX	
Sample ID	Date	Time	Matrix	No. Containers					
GP6-S-6.5	7/25/13	1410	SOIL	6					HOLD
GP6-S-12.5	↓	1420	↓	1					HOLD
GP7-S-4.0	↓	1515	↓	7	X	X	X		
GP8-S-4.0	↓	1605	↓	7	X	X	X		
GP9-S-4.0	7/26/13	0820	SOIL	7	X	X	X		
Comments/Special Instructions HOLD FOR EDB/EDC/MTBE		Relinquished by: (Signature) <i>Kelly R. Titkemeier</i>		Received by: (Signature) <i>Janice Miller</i>		Relinquished by: (Signature)		Received by: (Signature)	
		Printed Name: Kelly R. Titkemeier		Printed Name: Janice Miller		Printed Name:		Printed Name:	
		Company: MFA		Company: ARI		Company:		Company:	
		Date & Time: 7/25/13		Date & Time: 7/27/13 730		Date & Time:		Date & Time:	

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: MFA

Project Name: Cashmore

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: WY916

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 0.7 0.4 0.8

If cooler temperature is out of compliance fill out form Q0070F

Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 7/27/13 Time: 730

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) (NO)

Were all bottle labels complete and legible? (YES) (NO)

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI..... (NA)

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 7/29/13 Time: 658

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

No labels on containers, ID's on lids.

By: JM Date: 7/29/13



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report



ARI Job No: WZ26
Client: Maul Foster & Alongi, Inc
Project Event: 0779.02.01-05
Project Name: Cashmere

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. GP6-S-4.0	WZ26A	13-15912	Soil	07/25/13 14:00	07/27/13 07:30

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

**Sample ID: GP6-S-4.0
REANALYSIS**

Page 1 of 1

Lab Sample ID: WZ26A

QC Report No: WZ26-Maul Foster & Alongi, Inc

LIMS ID: 13-16176

Project: Cashmere

Matrix: Soil

0779.02.01-05

Data Release Authorized: *CB*

Date Sampled: 07/25/13

Reported: 08/07/13

Date Received: 07/27/13

Instrument/Analyst: NT5/PAB

Sample Amount: 4.05 g-dry-wt

Date Analyzed: 08/01/13 19:58

Purge Volume: 5.0 mL

Moisture: 22.7%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.2	< 1.2	U
106-93-4	1,2-Dibromoethane	1.2	< 1.2	U
1634-04-4	Methyl tert-Butyl Ether	1.2	< 1.2	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	87.7%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: GP6-S-4.0

Page 1 of 1

SAMPLE

Lab Sample ID: WZ26A


QC Report No: WZ26-Maul Foster & Alongi, Inc

LIMS ID: 13-15912

Project: Cashmere

Matrix: Soil

0779.02.01-05

Data Release Authorized: 

Date Sampled: 07/25/13

Reported: 08/06/13

Date Received: 07/27/13

Instrument/Analyst: NT5/PAB

Sample Amount: 53.7 mg-dry-wt

Date Analyzed: 08/02/13 16:30

Purge Volume: 5.0 mL

Moisture: 22.7%

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	93	< 93	U
106-93-4	1,2-Dibromoethane	93	< 93	U
1634-04-4	Methyl tert-Butyl Ether	93	< 93	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.9%
d8-Toluene	99.9%
Bromofluorobenzene	105%
d4-1,2-Dichlorobenzene	98.6%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

VOA SURROGATE RECOVERY SUMMARY



Matrix: Soil

QC Report No: WZ26-Maul Foster & Alongi, Inc
 Project: Cashmere
 0779.02.01-05

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-080213A	Method Blank	Med	101%	98.5%	98.2%	102%	0
LCS-080213A	Lab Control	Med	97.3%	98.7%	97.8%	100%	0
LCSD-080213A	Lab Control Dup	Med	95.0%	98.3%	97.6%	99.1%	0
WZ26A	GP6-S-4.0	Med	97.9%	99.9%	105%	98.6%	0
MB-080113A	Method Blank	Low	101%	98.7%	97.0%	100%	0
LCS-080113A	Lab Control	Low	97.8%	98.2%	97.2%	98.9%	0
LCSD-080113A	Lab Control Dup	Low	98.8%	98.9%	98.5%	100%	0
WZ26ARE	GP6-S-4.0	Low	107%	87.7%	92.3%	100%	0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-15912 to 13-16176

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-080113A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080113A

QC Report No: WZ26-Maul Foster & Alongi, Inc

LIMS ID: 13-16176

Project: Cashmere

Matrix: Soil

0779.02.01-05

Data Release Authorized: *B*

Date Sampled: NA

Reported: 08/07/13

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: NT5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 08/01/13 11:03

Purge Volume LCS: 5.0 mL

LCSD: 08/01/13 11:27

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	45.1	50.0	90.2%	45.4	50.0	90.8%	0.7%
1,2-Dibromoethane	45.6	50.0	91.2%	46.5	50.0	93.0%	2.0%
Methyl tert-Butyl Ether	46.2	50.0	92.4%	47.3	50.0	94.6%	2.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	97.8%	98.8%
d8-Toluene	98.2%	98.9%
Bromofluorobenzene	97.2%	98.5%
d4-1,2-Dichlorobenzene	98.9%	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-080213A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080213A


QC Report No: WZ26-Maul Foster & Alongi, Inc

LIMS ID: 13-15912

Project: Cashmere

Matrix: Soil

0779.02.01-05

Data Release Authorized: 

Date Sampled: NA

Reported: 08/06/13

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 100 mg-dry-wt

LCSD: NT5/PAB

LCSD: 100 mg-dry-wt

Date Analyzed LCS: 08/02/13 11:46

Purge Volume LCS: 5.0 mL

LCSD: 08/02/13 12:10

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	2250	2500	90.0%	2180	2500	87.2%	3.2%
1,2-Dibromoethane	2330	2500	93.2%	2290	2500	91.6%	1.7%
Methyl tert-Butyl Ether	2380	2500	95.2%	2290	2500	91.6%	3.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	97.3%	95.0%
d8-Toluene	98.7%	98.3%
Bromofluorobenzene	97.8%	97.6%
d4-1,2-Dichlorobenzene	100%	99.1%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

**Sample ID: MB-080113A
METHOD BLANK**

Page 1 of 1

Lab Sample ID: MB-080113A


QC Report No: WZ26-Maul Foster & Alongi, Inc

LIMS ID: 13-16176

Project: Cashmere

Matrix: Soil

0779.02.01-05

Data Release Authorized: 

Date Sampled: NA

Reported: 08/07/13

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 08/01/13 11:51

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
106-93-4	1,2-Dibromoethane	1.0	< 1.0	U
1634-04-4	Methyl tert-Butyl Ether	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.7%
Bromofluorobenzene	97.0%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-080213A

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-080213A

LIMS ID: 13-15912

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 08/06/13

QC Report No: WZ26-Maul Foster & Alongi, Inc

Project: Cashmere

0779.02.01-05

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT5/PAB

Date Analyzed: 08/02/13 12:34

Sample Amount: 100 mg-dry-wt

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	50	< 50	U
106-93-4	1,2-Dibromoethane	50	< 50	U
1634-04-4	Methyl tert-Butyl Ether	50	< 50	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.5%
Bromofluorobenzene	98.2%
d4-1,2-Dichlorobenzene	102%