APPENDIX D

Site Laboratory Analytical Reports, Summary of Results, and Data Validation

Analytical Resources, Incorporated
Analytical Chemists and Consultants

October 12, 2012

Mr. Larry Beard
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall, 0001020.400.510
ARI Job Nos: VK65, VK75, VL48

Dear Larry,

Please find enclosed the Chain-of-Custody records (COCs), sample receipt documentation, and the final analytical results for samples received under the project referenced above. Analytical Resources, Inc. (ARI) accepted fifteen water samples and a trip blank on September 25, 2012. The samples were received in good condition and there were no discrepancies between the COCs and container labels.

Select samples were centrifuged prior to analysis. Details regarding centrifuging can be found in the Geotechnical Case Narrative.

The samples were analyzed for SVOCs, SIM PAHs, Pesticides, Herbicides, NWTPH-HCID, VOCs, Dissolved Metals, Anions, Sulfide, Ammonia, Total and Amenable Cyanide, TOC, COD, BOD, Turbidity, and Tannins/Lignins, as requested on the COCs. NWTPH-Gx and NWTPH-Dx were additionally listed as requested on the COCs but were only analyzed if NWTPH-HCID results were above detection limits. The Tannins/Lignins analysis was subcontracted to Aquatic Research, Inc. and all results have been included in this report.

The VOC LCSD percent recovery of 2,2-Dichloropropane fell outside the control limits low for **LCS-092612A**. All other percent recoveries were within control limits. No corrective action was taken.

Both SVOC continuing calibrations fell outside the 20% control limit low for 2,4-Dinitrophenol. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

The Pesticide LCS and LCSD percent recoveries of delta-BHC fell outside the control limits low for **LCS-092912**. All other percent recoveries were within control limits. No corrective action was taken.

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Several LCS and LCSD percent recoveries were outside control limits with wide RPDs for **LCS-092812**. The LCS, LCSD, Method Blank, and all associated samples were re-extracted and re-analyzed outside the method recommended holding time. The re-extracted LCS/LCSD percent recoveries of 2,4-D, and the LCS percent recoveries of 2,4,5-T and Dicamba fell outside the control limits low with a wide RPD for Dalapon. All samples were undetected for requested compounds. No further corrective action was taken.

Samples **MW-15D-092412**, **MW-16D-092412**, **MW-14D-092412**, **MW-15S-092412**, **MW-16S-092412**, and **MW-14S-092412** were extracted outside the seven-day recommended holding time for NWTPH-Dx. Samples **MW-13D-092412** and **MW-DUP-092412** were extracted within the recommended holding time.

The samples were analyzed outside the recommended holding time for Turbidity.

The cyanide aliquot for sample **MW-12S-092412** was not preserved upon laboratory receipt. This sample was analyzed for cyanide outside the recommended holding time for unpreserved samples.

The replicate RPD of COD was outside the 20% control limit for sample **MW-15D-092412**. All other quality control parameters were met for this analysis. No corrective action was taken.

The sulfate samples MW-15D-092412 and MW-Dup-092412 were originally analyzed within method recommended holding time and at the request of the client the samples were re-analyzed and reported outside of the method recommended holding time as the data was not consistent with a sample duplicate.

An electronic copy of this report and all associated raw data will remain on file at ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
-For-
Kelly Bottem
Client Services Manager
206-695-6211

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

0.4 - 5.9

Date 09/24/12

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LANDAU ASSOCIATES

- [X] Seattle/Edmonds (425) 778-0907
- [ ] Tacoma (253) 926-2493
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ] _____

Chain-of-Custody Record

Project Name CORNWALL Project No. 000620.400.510

Project Location/Event BELLINGHAM, WA / ADDITIONAL GROUNDWATER INVESTIGATION

Sampler's Name CHRISTOPHE VENOT / ROSEMARY TRIMMER

Project Contact " / JEREMY DAVIS / LARRY BEARD

Send Results To ANNE HALVORSEN / " / "

Turnaround Time
- [X] Standard
- [ ] Accelerated
- [ ] _____

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	SVOC	SIM PAH	PESTICIDES	HERBICIDES	HCID	VOCs	DISSOLVED METALS (c)	ANIONS (NO_2, NO_3, SO_4) (d)	SULFIDE	NH_3	TOT + FREE CYANIDE	TANNINS + LIGNINS
(a)	MW-15D-092412	092412	0826	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-16D-092412	092412	0830	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-14D-092412	092412	1000	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-15S-092412	092412	1050	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-16S-092412	092412	1130	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-14S-092412	092412	1250	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-13S-092412	092412	1300	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-12S-092412	092412	1400	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-11S-092412	092412	1425	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-12D-092412	092412	1510	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-11D-092412	092412	1535	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-13D-092412	092412	1700	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
	MW-DUP-092412	092412	—	AQ	19	X	X	X	X	X	X	X	X	X	X	X	X
(b)	MW-15S-092412	092412	1050	AQ	8	X	X	X	X								
	MW-13D-092412	092412	1700	AQ	8	X	X	X	X								
	TBS			AQ	3						X						

Observations/Comments

- [X] Allow water samples to settle, collect aliquot from clear portion
- [X] NWTPH-Dx - run acid wash/silica gel cleanup
- ___ run samples standardized to _____ product
- ___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
- ___ non-preserved
- ___ preserved w/methanol
- ___ preserved w/sodium bisulfate
- ___ Freeze upon receipt

- [X] Dissolved metal water samples field filtered

Other (a) Centrifuge prior to analysis for SVOC PAH PEST + HERB
(b) DO NOT Centrifuge prior to analysis
(c) As, Cu, Pb, Mn, Zn, Hg
(d) NOTE SHORT 48-HR HOLD TIME

Special Shipment/Handling or Storage Requirements: ON ICE

Method of Shipment: DROP-OFF

Relinquished by	Received by	Relinquished by	Received by
Signature: Rosemary Trimmer	Signature: Jennifer Millsap	Signature:	Signature:
Printed Name: Rosemary Trimmer	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
Company: Landau Associates	Company: ARI	Company:	Company:
Date: 9/25/12 Time: 12:01	Date: 9/25/12 Time: 1201	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative Rev 8/09

VKS5 : 000003

LANDAU ASSOCIATES

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☐ **Tacoma** (253) 926-2493
☐ **Spokane** (509) 327-9737
☐ **Portland** (503) 542-1080
☐ ____________

Date 09/24/12
Page 2 of 2

Chain-of-Custody Record

Project Name CORNWALL   Project No. 0001020.400.510
Project Location/Event BELLINGHAM, WA / ADDITIONAL GW INVESTIGATION
Sampler's Name CHRISTOPHE VENOT / ROSEMARY TRIMMER
Project Contact " / JEREMY DAVIS / LARRY BEARD
Send Results To ANNE HALVORSEN / " / "

Turnaround Time
☒ Standard
☐ Accelerated
☐ ____________

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	TOC AND COD	BOD (c)	NWTPH-DX (a)	NWTPH-GX (a)	TURBIDITY (b)
MW-15D-092412	092412	0826	AQ	6	X	X			
MW-16D-092412	092412	0836	AQ	6	X	X			
MW-14D-092412	092412	1000	AQ	6	X	X			
MW-15S-092412	092412	1050	AQ	6	X	X			X (b)
MW-16S-092412	092412	1130	AQ	6	X	X			
MW-14S-092412	092412	1250	AQ	6	X	X			
MW-13S-092412	092412	1300	AQ	6	X	X			
MW-12S-092412	092412	1400	AQ	6	X	X			
MW-11S-092412	092412	1425	AQ	6	X	X			
MW-12D-092412	092412	1510	AQ	6	X	X			
MW-11D-092412	092412	1535	AQ	6	X	X			
MW-13D-092412	092412	1700	AQ	6	X	X			X (b)
MW-DUP-092412	092412	—	AQ	6	X	X			
~~MW-15S-092412~~	~~092412~~	~~1050~~	~~AQ~~						~~X~~
~~MW-13D-092412~~	~~092412~~	~~1700~~	~~AQ~~						~~X~~
TBS				2				X	

OK CW 9/24/12

Observations/Comments

X Allow water samples to settle, collect aliquot from clear portion

X NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to ________ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

___ Dissolved metal water samples field filtered

Other (a) LAI TO FOLLOW-UP BASED ON HCID RESULTS
(b) MEASURE FROM CENTRIFUGED SAMPLES
(c) NOTE 48-HR HOLD TIME

Special Shipment/Handling or Storage Requirements: ON ICE

Method of Shipment: DROP-OFF

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Rosemary Trimmer	Printed Name Jennifer Millsap	Printed Name	Printed Name
Company Landau Associates	Company ARI	Company	Company
Date 9/25/12 Time 12:01	Date 9/25/12 Time 1201	Date ____ Time ____	Date ____ Time ____

WHITE COPY - Project File   **YELLOW COPY - Laboratory**   **PINK COPY - Client Representative**

Rev 8/09

VK65 : 00004

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Landau Project Name Cornwall

COC No(s) _____ NA Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other _____

Assigned ARI Job No VK65 VK65 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) 4.3 5.9 1.4 5.1 3.6 3.7

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

Cooler Accepted by JM Date _____ Time _____

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 9/13/12

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

Samples Logged by JM Date 9/25/12 Time 1358

***** 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: 0.4, 5.7, 2.9, 1.3, 1.8, 4.9, 1.9, 0.9

By JM Date 9/25/12

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
• •	• • •	• • •

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

VOA Bubbles

MW-15D-092412 = LG in 1, PB in 4 of 5
MW-16D-092412 = PB in 3 of 5
MW-14D-092412 = LG in 4, SM in 1 of 5
MW-15S-092412 = SM in 4 of 5
MW-16S-092412 = PB in 2, SM in 3 of 5
MW-14S-092412 = SM in 5 of 5
MW-13S-092412 = PB in 2, SM in 3 of 5
MW-12S-092412 = PB in 2, SM in 3 of 5
MW-11S-092412 = SM in 5 of 5
MW-12D-092412 = SM in 3, PB in 2 of 5
MW-11D-092412 = PB in 4, SM in 1 of 5
MW-13D-092412 = PB in 5 of 5
MW-DUP-092412 = PB in 3, SM in 2 of 5
TBS = SM in 4 of 9

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Landau Project Name Cornwall

COC No(s) ~~JM~~ NA Delivered by Fed-Ex UPS Courier (Hand Delivered) Other ____

Assigned ARI Job No ~~VK65~~ VK65 Tracking No ____ (NA)

Preliminary Examination Phase: VK75

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 5.9 1.4 5.1 3.6 3.7	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID# 90377752	

Cooler Accepted by: JM Date: ____ Time: ____

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: ____

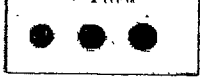
Samples Logged by: JM Date: 9/25/12 Time: 1541

*** 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: 0.4, 5.7, 2.9, 1.3, 1.8, 4.9, 1.9, 0.9

By Date

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

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

PRESERVATION VERIFICATION 09/25/12
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VK65**

Inquiry Number: NONE
Analysis Requested: 09/25/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 09/25/12

Project #: 0001020.400-510
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-18405 **VK65A**	MW-15D-092412	F		P	P		P DIS					P	F			Y						
12-18406 **VK65B**	MW-16D-092412	F		P	P		P DIS					P	F			Y						
12-18407 **VK65C**	MW-14D-092412	F		P	P		P DIS					P	F			Y						
12-18408 **VK65D**	MW-15S-092412	F		P	P		P DIS					P	F			Y						
12-18409 **VK65E**	MW-16S-092412	F		P	P		P DIS					P	F			Y						
12-18410 **VK65F**	MW-14S-092412	F		P	P		P DIS					P	F			Y						
12-18411 **VK65G**	MW-13S-092412	F		P	P		P DIS					P	F			Y						
12-18412 **VK65H**	MW-12S-092412	F		P	P		P DIS					P	F			Y						
12-18413 **VK65I**	MW-11S-092412	F		P	P		P DIS					P	F			Y						
12-18414 **VK65J**	MW-12D-092412	F		P	P		P DIS					P	F			Y						
12-18415 **VK65K**	MW-11D-092412	F		P	P		P DIS					P	F			Y						
12-18416 **VK65L**	MW-13D-092412	F		P	P		P DIS					P	F			Y						
12-18417 **VK65M**	MW-DUP-092412	F		P	P		P DIS					P	F			Y						

P = Pass
F = Fail

S2 only preserved with ZnOAc.

Checked By JM Date 9/25/12

PRESERVATION VERIFICATION 09/25/12

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VK65**

Inquiry Number: NONE
Analysis Requested: 09/25/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 09/25/12

Project #: 0001020.400-510
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-18405 **VK65A**	MW-15D-092412	F		P	P		DIS P					P	F			Y		S⁼ CN	>12 >12		2ml NaOH 6N	JM 9-25-12
12-18406 **VK65B**	MW-16D-092412	F		P	P		DIS P					P	F			Y						
12-18407 **VK65C**	MW-14D-092412	F		P	P		DIS P					P	F			Y						
12-18408 **VK65D**	MW-15S-092412	F		P	P		DIS P					P	F			Y						
12-18409 **VK65E**	MW-16S-092412	F		P	P		DIS P					P	F			Y						
12-18410 **VK65F**	MW-14S-092412	F		P	P		DIS P					P	F			Y						
12-18411 **VK65G**	MW-13S-092412	F		P	P		DIS P					P	F			Y						
12-18412 **VK65H**	MW-12S-092412	F		P	P		DIS P					P	F			Y						
12-18413 **VK65I**	MW-11S-092412	F		P	P		DIS P					P	F			Y						
12-18414 **VK65J**	MW-12D-092412	F		P	P		DIS P					P	F			Y						
12-18415 **VK65K**	MW-11D-092412	F		P	P		DIS P					P	F			Y						
12-18416 **VK65L**	MW-13D-092412	F		P	P		DIS P					P	F			Y						
12-18417 **VK65M**	MW-DUP-092412	F		P	P		DIS P					P	F			Y						

P= Pass
F= Fail

S2 only preserved with ZnOAc.

Checked By JM Date 9/25/12

PRESERVATION VERIFICATION 09/25/12
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VK75**

Inquiry Number: NONE
Analysis Requested: 09/25/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 09/25/12

Project #: 0001020.400-510
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-18431 **VK75A**	MW-15D-092412						DIS P									Y						
12-18432 **VK75B**	MW-16D-092412						DIS P									Y						
12-18433 **VK75C**	MW-14D-092412						DIS P									Y						
12-18434 **VK75D**	MW-15S-092412						DIS P									Y						
12-18435 **VK75E**	MW-16S-092412						DIS P									Y						
12-18436 **VK75F**	MW-14S-092412						DIS P									Y						
12-18437 **VK75G**	MW-13S-092412						DIS P									Y						
12-18438 **VK75H**	MW-12S-092412						DIS P									Y						
12-18439 **VK75I**	MW-11S-092412						DIS P									Y						
12-18440 **VK75J**	MW-12D-092412						DIS P									Y						
12-18441 **VK75K**	MW-11D-092412						DIS P									Y						
12-18442 **VK75L**	MW-13D-092412						DIS P									Y						
12-18443 **VK75M**	MW-DUP-092412						DIS P									Y						

P= Pass

Checked By JM Date 9/25/12

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VK65
Client: Landau Associates
Project Event: 0001020.400-510
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-15D-092412	VK65A	12-18405	Water	09/24/12 08:26	09/25/12 12:01
2.	MW-16D-092412	VK65B	12-18406	Water	09/24/12 08:30	09/25/12 12:01
3.	MW-14D-092412	VK65C	12-18407	Water	09/24/12 10:00	09/25/12 12:01
4.	MW-15S-092412	VK65D	12-18408	Water	09/24/12 10:50	09/25/12 12:01
5.	MW-16S-092412	VK65E	12-18409	Water	09/24/12 11:30	09/25/12 12:01
6.	MW-14S-092412	VK65F	12-18410	Water	09/24/12 12:50	09/25/12 12:01
7.	MW-13S-092412	VK65G	12-18411	Water	09/24/12 13:00	09/25/12 12:01
8.	MW-12S-092412	VK65H	12-18412	Water	09/24/12 14:00	09/25/12 12:01
9.	MW-11S-092412	VK65I	12-18413	Water	09/24/12 14:25	09/25/12 12:01
10.	MW-12D-092412	VK65J	12-18414	Water	09/24/12 15:10	09/25/12 12:01
11.	MW-11D-092412	VK65K	12-18415	Water	09/24/12 15:35	09/25/12 12:01
12.	MW-13D-092412	VK65L	12-18416	Water	09/24/12 17:00	09/25/12 12:01
13.	MW-DUP-092412	VK65M	12-18417	Water	09/24/12	09/25/12 12:01
14.	MW-15S-092412	VK65N	12-18418	Water	09/24/12 10:50	09/25/12 12:01
15.	MW-13D-092412	VK65O	12-18419	Water	09/24/12 17:00	09/25/12 12:01
16.	TBS	VK65P	12-18420	Water	09/24/12	09/25/12 12:01

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VK75
Client: Landau Associates
Project Event: 0001020.400-510
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-15D-092412	VK75A	12-18431	Water	09/24/12 08:26	09/25/12 12:01
2.	MW-16D-092412	VK75B	12-18432	Water	09/24/12 08:30	09/25/12 12:01
3.	MW-14D-092412	VK75C	12-18433	Water	09/24/12 10:00	09/25/12 12:01
4.	MW-15S-092412	VK75D	12-18434	Water	09/24/12 10:50	09/25/12 12:01
5.	MW-16S-092412	VK75E	12-18435	Water	09/24/12 11:30	09/25/12 12:01
6.	MW-14S-092412	VK75F	12-18436	Water	09/24/12 12:50	09/25/12 12:01
7.	MW-13S-092412	VK75G	12-18437	Water	09/24/12 13:00	09/25/12 12:01
8.	MW-12S-092412	VK75H	12-18438	Water	09/24/12 14:00	09/25/12 12:01
9.	MW-11S-092412	VK75I	12-18439	Water	09/24/12 14:25	09/25/12 12:01
10.	MW-12D-092412	VK75J	12-18440	Water	09/24/12 15:10	09/25/12 12:01
11.	MW-11D-092412	VK75K	12-18441	Water	09/24/12 15:35	09/25/12 12:01
12.	MW-13D-092412	VK75L	12-18442	Water	09/24/12 17:00	09/25/12 12:01
13.	MW-DUP-092412	VK75M	12-18443	Water	09/24/12	09/25/12 12:01

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VL48
Client: Landau Associates
Project Event: 0001020.400-510
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-15D-092412	VL48A	12-18901	Water	09/24/12 08:26	09/25/12 12:01
2.	MW-16D-092412	VL48B	12-18902	Water	09/24/12 08:30	09/25/12 12:01
3.	MW-14D-092412	VL48C	12-18903	Water	09/24/12 10:00	09/25/12 12:01
4.	MW-15S-092412	VL48D	12-18904	Water	09/24/12 10:50	09/25/12 12:01
5.	MW-16S-092412	VL48E	12-18905	Water	09/24/12 11:30	09/25/12 12:01
6.	MW-14S-092412	VL48F	12-18906	Water	09/24/12 12:50	09/25/12 12:01
7.	MW-13D-092412	VL48G	12-18907	Water	09/24/12 17:00	09/25/12 12:01
8.	MW-DUP-092412	VL48H	12-18908	Water	09/24/12	09/25/12 12:01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Landau Associates	**ARI Job No.:** VK65
Client Project: Cornwall	**Client Project No.:** 0001020.400-510

Case Narrative

1. Thirteen samples were submitted for preparation on September 25, 2012, and were in good condition. Each sample was received in eight 500 milliliters amber glass bottles, with a total of 52 liters for the entire job.
2. The samples were submitted for removal of solid particulate by means of centrifuging according to modified Corp of Engineers draft interim guide lines.
3. The samples were centrifuged in decontaminated 500mL glass bottles, in a pre-cooled centrifuge (4°C) at 1,000 x g for 30 minutes.
4. The supernatant water was decanted back into the original sample bottles and delivered to the laboratory for analysis.
5. There were no other anomalies in the sample or methods on this project.

Released by: Kristina Curtis — Date: 9/28/12
Geotechnical Laboratory Manager

Reviewed by: [signature] — Date: September 29, 2012
Lead Technician

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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 ≥ 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 ≥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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15D-092412**
 SAMPLE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 21:41

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**0.67**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.20**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.32**	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15D-092412**
SAMPLE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Date Analyzed: 09/26/12 21:41

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.42**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.74**	
99-87-6	**4-Isopropyltoluene**	**0.20**	**1.7**	
104-51-8	**n-Butylbenzene**	**0.20**	**0.26**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	95.9%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-16D-092412**
 SAMPLE

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 22:06

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**0.69**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Date Analyzed: 09/26/12 22:06

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.2%
Bromofluorobenzene	98.7%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14D-092412**
 SAMPLE

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 22:33

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**4.2**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	**m,p-Xylene**	**0.40**	**0.96**	
95-47-6	**o-Xylene**	**0.20**	**0.60**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.41**	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14D-092412**
 SAMPLE

Lab Sample ID: VK65C QC Report No: VK65-Landau Associates
LIMS ID: 12-18407 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/26/12 22:33

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.39**	
99-87-6	**4-Isopropyltoluene**	**0.20**	**0.36**	
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**0.93**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	94.4%
Bromofluorobenzene	97.1%
d4-1,2-Dichlorobenzene	104%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15S-092412**
 SAMPLE

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 22:58

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	**Benzene**	**0.20**	**0.44**	
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	**Toluene**	**0.20**	**0.38**	
108-90-7	**Chlorobenzene**	**0.20**	**6.7**	
100-41-4	**Ethylbenzene**	**0.20**	**0.49**	
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.32**	
95-50-1	**1,2-Dichlorobenzene**	**0.20**	**0.36**	
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**2.1**	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C
Sample ID: MW-15S-092412
SAMPLE

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Date Analyzed: 09/26/12 22:58

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	**1,2,4-Trimethylbenzene**	**0.20**	**0.39**	
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.70**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	**tert-Butylbenzene**	**0.20**	**0.23**	
135-98-8	**sec-Butylbenzene**	**0.20**	**0.99**	
99-87-6	**4-Isopropyltoluene**	**0.20**	**0.38**	
104-51-8	**n-Butylbenzene**	**0.20**	**0.44**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**12**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery	
d4-1,2-Dichloroethane	110%
d8-Toluene	96.1%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-16S-092412**
 SAMPLE

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 23:24

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**0.60**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.23**	

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Date Analyzed: 09/26/12 23:24

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	95.9%
Bromofluorobenzene	93.9%
d4-1,2-Dichlorobenzene	99.0%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14S-092412**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 23:50

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	**Benzene**	**0.20**	**0.22**	
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**4.6**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.29**	
95-50-1	**1,2-Dichlorobenzene**	**0.20**	**0.28**	
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**2.2**	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14S-092412**
 SAMPLE

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Date Analyzed: 09/26/12 23:50

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.28**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	**tert-Butylbenzene**	**0.20**	**0.25**	
135-98-8	**sec-Butylbenzene**	**0.20**	**1.1**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.49**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	110%
d8-Toluene	93.3%
Bromofluorobenzene	92.6%
d4-1,2-Dichlorobenzene	99.0%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MW-13S-092412
SAMPLE

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 00:16

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	5.0	< 5.0	U
78-93-3	2-Butanone	0.20	< 0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	0.20	< 0.20	U
75-25-2	Bromoform	5.0	< 5.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	0.20	< 0.20	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	**0.20**	**1.3**	
108-90-7	**Chlorobenzene**	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.40	< 0.40	U
179601-23-1	m,p-Xylene	**0.20**	**0.26**	
95-47-6	**o-Xylene**	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	**0.20**	**0.90**	
106-46-7	**1,4-Dichlorobenzene**			

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-13S-092412**
 SAMPLE

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Date Analyzed: 09/27/12 00:16

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.40**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.21**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**19**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.3%
Bromofluorobenzene	94.7%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12S-092412**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 00:42

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**3.4**	
100-41-4	**Ethylbenzene**	**0.20**	**3.1**	
100-42-5	**Styrene**	**0.20**	**0.26**	
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	**m,p-Xylene**	**0.40**	**0.68**	
95-47-6	**o-Xylene**	**0.20**	**0.43**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**1.1**	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12S-092412**
 SAMPLE

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Date Analyzed: 09/27/12 00:42

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.29**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.35**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	101%
Bromofluorobenzene	98.3%
d4-1,2-Dichlorobenzene	96.7%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11S-092412**
 SAMPLE

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 01:08

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11S-092412**
 SAMPLE

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Date Analyzed: 09/27/12 01:08

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	**4-Isopropyltoluene**	**0.20**	**0.35**	
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	97.7%
Bromofluorobenzene	97.8%
d4-1,2-Dichlorobenzene	97.6%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12D-092412**
 SAMPLE

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 01:34

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**1.2**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12D-092412**
 SAMPLE

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Date Analyzed: 09/27/12 01:34

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	100%
Bromofluorobenzene	96.7%
d4-1,2-Dichlorobenzene	94.9%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11D-092412**
 SAMPLE

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 02:00

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	**Carbon Disulfide**	**0.20**	**0.76**	
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Date Analyzed: 09/27/12 02:00

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	95.0%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-13D-092412**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 02:26

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	**Benzene**	**0.20**	**0.20**	
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**0.73**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.37**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.39**	

Lab Sample ID: VK65L QC Report No: VK65-Landau Associates
LIMS ID: 12-18416 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/27/12 02:26

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.58**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	**tert-Butylbenzene**	**0.20**	**0.22**	
135-98-8	**sec-Butylbenzene**	**0.20**	**0.86**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.41**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**0.71**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	95.8%
Bromofluorobenzene	94.5%
d4-1,2-Dichlorobenzene	97.7%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-DUP-092412**
 SAMPLE

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 02:52

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**1.0**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.24**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.49**	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-DUP-092412**
 SAMPLE

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Date Analyzed: 09/27/12 02:52

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.59**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**1.2**	
99-87-6	**4-Isopropyltoluene**	**0.20**	**2.8**	
104-51-8	**n-Butylbenzene**	**0.20**	**0.41**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	97.6%
Bromofluorobenzene	95.5%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TBS**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VK65P
LIMS ID: 12-18420
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/27/12 03:18

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TBS SAMPLE**

Lab Sample ID: VK65P
LIMS ID: 12-18420
Matrix: Water
Date Analyzed: 09/27/12 03:18

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	95.4%
Bromofluorobenzene	96.7%
d4-1,2-Dichlorobenzene	95.6%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-092612A	Method Blank	10	104%	98.3%	97.3%	98.6%	0
LCS-092612A	Lab Control	10	103%	95.3%	94.8%	100%	0
LCSD-092612A	Lab Control Dup	10	101%	96.4%	93.3%	98.5%	0
VK65A	MW-15D-092412	10	108%	95.9%	93.5%	103%	0
VK65B	MW-16D-092412	10	102%	95.2%	98.7%	102%	0
VK65C	MW-14D-092412	10	100%	94.4%	97.1%	104%	0
VK65D	MW-15S-092412	10	110%	96.1%	96.3%	102%	0
VK65E	MW-16S-092412	10	105%	95.9%	93.9%	99.0%	0
VK65F	MW-14S-092412	10	110%	93.3%	92.6%	99.0%	0
VK65G	MW-13S-092412	10	102%	95.3%	94.7%	101%	0
VK65H	MW-12S-092412	10	103%	101%	98.3%	96.7%	0
VK65I	MW-11S-092412	10	106%	97.7%	97.8%	97.6%	0
VK65J	MW-12D-092412	10	104%	100%	96.7%	94.9%	0
VK65K	MW-11D-092412	10	104%	95.0%	101%	100%	0
VK65L	MW-13D-092412	10	106%	95.8%	94.5%	97.7%	0
VK65M	MW-DUP-092412	10	106%	97.6%	95.5%	103%	0
VK65P	TBS	10	104%	95.4%	96.7%	95.6%	0

SW8260C	LCS/MB LIMITS	QC LIMITS
(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: 12-18405 to 12-18420

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-092612A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-092612A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT3/PAB
LCSD: NT3/PAB
Date Analyzed LCS: 09/26/12 19:57
LCSD: 09/26/12 20:23

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	8.77	10.0	87.7%	8.46	10.0	84.6%	3.6%
Bromomethane	9.01	10.0	90.1%	8.23	10.0	82.3%	9.0%
Vinyl Chloride	9.46	10.0	94.6%	8.99	10.0	89.9%	5.1%
Chloroethane	8.58	10.0	85.8%	8.36	10.0	83.6%	2.6%
Methylene Chloride	8.67	10.0	86.7%	8.02	10.0	80.2%	7.8%
Acetone	48.6	50.0	97.2%	47.9	50.0	95.8%	1.5%
Carbon Disulfide	9.00	10.0	90.0%	8.76	10.0	87.6%	2.7%
1,1-Dichloroethene	9.22	10.0	92.2%	8.49	10.0	84.9%	8.2%
1,1-Dichloroethane	9.48	10.0	94.8%	9.49	10.0	94.9%	0.1%
trans-1,2-Dichloroethene	8.76	10.0	87.6%	8.43	10.0	84.3%	3.8%
cis-1,2-Dichloroethene	8.11	10.0	81.1%	8.27	10.0	82.7%	2.0%
Chloroform	9.55	10.0	95.5%	9.27	10.0	92.7%	3.0%
1,2-Dichloroethane	9.73	10.0	97.3%	9.70	10.0	97.0%	0.3%
2-Butanone	55.2	50.0	110%	55.1	50.0	110%	0.2%
1,1,1-Trichloroethane	9.19	10.0	91.9%	8.61	10.0	86.1%	6.5%
Carbon Tetrachloride	8.27	10.0	82.7%	8.54	10.0	85.4%	3.2%
Vinyl Acetate	9.52	10.0	95.2%	9.18	10.0	91.8%	3.6%
Bromodichloromethane	9.38	10.0	93.8%	9.36	10.0	93.6%	0.2%
1,2-Dichloropropane	9.16	10.0	91.6%	9.44	10.0	94.4%	3.0%
cis-1,3-Dichloropropene	8.99	10.0	89.9%	8.72	10.0	87.2%	3.0%
Trichloroethene	9.05	10.0	90.5%	9.33	10.0	93.3%	3.0%
Dibromochloromethane	9.85	10.0	98.5%	9.77	10.0	97.7%	0.8%
1,1,2-Trichloroethane	8.88	10.0	88.8%	8.87	10.0	88.7%	0.1%
Benzene	9.66	10.0	96.6%	9.66	10.0	96.6%	0.0%
trans-1,3-Dichloropropene	8.71	10.0	87.1%	8.59	10.0	85.9%	1.4%
2-Chloroethylvinylether	8.84	10.0	88.4%	8.94	10.0	89.4%	1.1%
Bromoform	9.95	10.0	99.5%	10.3	10.0	103%	3.5%
4-Methyl-2-Pentanone (MIBK)	52.3	50.0	105%	52.7	50.0	105%	0.8%
2-Hexanone	55.3	50.0	111%	53.7	50.0	107%	2.9%
Tetrachloroethene	9.61	10.0	96.1%	9.67	10.0	96.7%	0.6%
1,1,2,2-Tetrachloroethane	11.2	10.0	112%	11.1	10.0	111%	0.9%
Toluene	9.21	10.0	92.1%	9.16	10.0	91.6%	0.5%
Chlorobenzene	10.3	10.0	103%	10.0	10.0	100%	3.0%
Ethylbenzene	10.4	10.0	104%	10.0	10.0	100%	3.9%
Styrene	10.2	10.0	102%	9.92	10.0	99.2%	2.8%
Trichlorofluoromethane	8.81	10.0	88.1%	8.43	10.0	84.3%	4.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	8.81	10.0	88.1%	8.59	10.0	85.9%	2.5%
m,p-Xylene	19.8	20.0	99.0%	19.7	20.0	98.5%	0.5%
o-Xylene	10.3	10.0	103%	9.74	10.0	97.4%	5.6%
1,2-Dichlorobenzene	10.4	10.0	104%	10.0	10.0	100%	3.9%
1,3-Dichlorobenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%
1,4-Dichlorobenzene	10.2	10.0	102%	10.1	10.0	101%	1.0%
Acrolein	47.2	50.0	94.4%	48.4	50.0	96.8%	2.5%
Methyl Iodide	9.05	10.0	90.5%	8.93	10.0	89.3%	1.3%
Bromoethane	8.55	10.0	85.5%	8.70	10.0	87.0%	1.7%
Acrylonitrile	8.83	10.0	88.3%	9.03	10.0	90.3%	2.2%
1,1-Dichloropropene	9.06	10.0	90.6%	9.07	10.0	90.7%	0.1%
Dibromomethane	8.82	10.0	88.2%	8.67	10.0	86.7%	1.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-092612A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-092612A QC Report No: VK65-Landau Associates
LIMS ID: 12-18405 Project: Cornwall
Matrix: Water 0001020.400-510

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,1,1,2-Tetrachloroethane	9.20	10.0	92.0%	9.34	10.0	93.4%	1.5%
1,2-Dibromo-3-chloropropane	10.0	10.0	100%	9.74	10.0	97.4%	2.6%
1,2,3-Trichloropropane	11.0	10.0	110%	10.9	10.0	109%	0.9%
trans-1,4-Dichloro-2-butene	10.4	10.0	104%	9.97	10.0	99.7%	4.2%
1,3,5-Trimethylbenzene	11.2	10.0	112%	11.2	10.0	112%	0.0%
1,2,4-Trimethylbenzene	11.0	10.0	110%	10.9	10.0	109%	0.9%
Hexachlorobutadiene	8.94	10.0	89.4%	8.52	10.0	85.2%	4.8%
Ethylene Dibromide	8.67	10.0	86.7%	8.69	10.0	86.9%	0.2%
Bromochloromethane	9.57	10.0	95.7%	10.1	10.0	101%	5.4%
2,2-Dichloropropane	7.38	10.0	73.8%	7.00	10.0	70.0%	5.3%
1,3-Dichloropropane	10.4	10.0	104%	10.4	10.0	104%	0.0%
Isopropylbenzene	11.1	10.0	111%	11.4	10.0	114%	2.7%
n-Propylbenzene	10.7	10.0	107%	11.0	10.0	110%	2.8%
Bromobenzene	10.1	10.0	101%	10.4	10.0	104%	2.9%
2-Chlorotoluene	10.6	10.0	106%	10.8	10.0	108%	1.9%
4-Chlorotoluene	10.8	10.0	108%	10.8	10.0	108%	0.0%
tert-Butylbenzene	10.6	10.0	106%	10.6	10.0	106%	0.0%
sec-Butylbenzene	10.8	10.0	108%	10.8	10.0	108%	0.0%
4-Isopropyltoluene	10.3	10.0	103%	10.1	10.0	101%	2.0%
n-Butylbenzene	10.5	10.0	105%	10.1	10.0	101%	3.9%
1,2,4-Trichlorobenzene	9.99	10.0	99.9%	9.33	10.0	93.3%	6.8%
Naphthalene	11.7	10.0	117%	10.9	10.0	109%	7.1%
1,2,3-Trichlorobenzene	10.2	10.0	102%	9.43	10.0	94.3%	7.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	103%	101%
d8-Toluene	95.3%	96.4%
Bromofluorobenzene	94.8%	93.3%
d4-1,2-Dichlorobenzene	100%	98.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-092612A**
 METHOD BLANK

Lab Sample ID: MB-092612A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT3/PAB
Date Analyzed: 09/26/12 20:49

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-092612A**
 METHOD BLANK

Lab Sample ID: MB-092612A
LIMS ID: 12-18405
Matrix: Water
Date Analyzed: 09/26/12 20:49

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	98.3%
Bromofluorobenzene	97.3%
d4-1,2-Dichlorobenzene	98.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-15D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 19:06
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-15D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65A QC Report No: VK65-Landau Associates
LIMS ID: 12-18405 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 19:06

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	3.0	< 3.0 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	65.2%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	78.8%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	68.5%	2-Fluorophenol	68.5%
2,4,6-Tribromophenol	93.1%	d4-2-Chlorophenol	67.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-16D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 19:40
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

Lab Sample ID: VK65B QC Report No: VK65-Landau Associates
LIMS ID: 12-18406 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 19:40

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	3.0	< 3.0 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	70.8%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	76.4%	d4-1,2-Dichlorobenzene	60.4%
d5-Phenol	70.7%	2-Fluorophenol	74.9%
2,4,6-Tribromophenol	86.4%	d4-2-Chlorophenol	70.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-14D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 20:14
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

Lab Sample ID: VK65C QC Report No: VK65-Landau Associates
LIMS ID: 12-18407 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 20:14

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**
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	3.0	< 3.0 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	65.2%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	56.4%
d5-Phenol	60.8%	2-Fluorophenol	67.5%
2,4,6-Tribromophenol	86.7%	d4-2-Chlorophenol	64.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-15S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 20:48
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**	**4.0**
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**	**1.4**
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

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Date Analyzed: 09/28/12 20:48

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

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	3.0	< 3.0 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**	**1.8**
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	73.2%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	64.0%	2-Fluorophenol	64.5%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	63.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-16S-092412
SAMPLE

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 21:22
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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-16S-092412
SAMPLE

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Date Analyzed: 09/28/12 21:22

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

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	3.0	< 3.0 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	68.4%	2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	71.6%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	67.2%	2-Fluorophenol	73.1%
2,4,6-Tribromophenol	84.5%	d4-2-Chlorophenol	68.0%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-14S-092412
SAMPLE

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 21:56
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**
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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-14S-092412
SAMPLE

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Date Analyzed: 09/28/12 21:56

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

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	3.0	< 3.0 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	65.2%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	64.0%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	63.5%	2-Fluorophenol	69.3%
2,4,6-Tribromophenol	78.7%	d4-2-Chlorophenol	65.1%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-13S-092412
SAMPLE

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 22:30
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**	**3.0**
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 **Sample ID: MW-13S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65G QC Report No: VK65-Landau Associates
LIMS ID: 12-18411 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 22:30

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	3.0	< 3.0 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	59.6%	2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	59.2%	2-Fluorophenol	64.5%
2,4,6-Tribromophenol	76.3%	d4-2-Chlorophenol	60.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-12S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 23:03
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 **Sample ID: MW-12S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65H QC Report No: VK65-Landau Associates
LIMS ID: 12-18412 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 23:03

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	3.0	< 3.0 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	62.0%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	71.2%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	63.5%	2-Fluorophenol	66.4%
2,4,6-Tribromophenol	85.9%	d4-2-Chlorophenol	63.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-11S-092412
SAMPLE

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 23:38
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-11S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65I QC Report No: VK65-Landau Associates
LIMS ID: 12-18413 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 23:38

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	3.0	< 3.0 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	70.8%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	68.0%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	69.1%	2-Fluorophenol	74.1%
2,4,6-Tribromophenol	85.9%	d4-2-Chlorophenol	70.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-12D-092412
SAMPLE

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 09/29/12 00:11
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 **Sample ID: MW-12D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65J QC Report No: VK65-Landau Associates
LIMS ID: 12-18414 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/29/12 00:11

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	3.0	< 3.0 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	64.4%	2-Fluorobiphenyl	64.0%
d14-p-Terphenyl	58.8%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	64.0%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	80.5%	d4-2-Chlorophenol	63.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-11D-092412
SAMPLE

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 10/01/12 13:51
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-11D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65K QC Report No: VK65-Landau Associates
LIMS ID: 12-18415 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 10/01/12 13:51

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	3.0	< 3.0 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	66.0%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	60.0%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	67.5%	2-Fluorophenol	67.2%
2,4,6-Tribromophenol	84.5%	d4-2-Chlorophenol	65.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-13D-092412
SAMPLE

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 10/01/12 18:59
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-13D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65L QC Report No: VK65-Landau Associates
LIMS ID: 12-18416 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 10/01/12 18:59

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	3.0	< 3.0 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	66.8%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	79.6%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	66.9%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	81.6%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-DUP-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 10/01/12 19:33
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-DUP-092412
SAMPLE

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Date Analyzed: 10/01/12 19:33

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

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	3.0	< 3.0 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	59.2%	2-Fluorobiphenyl	60.8%
d14-p-Terphenyl	72.8%	d4-1,2-Dichlorobenzene	51.2%
d5-Phenol	59.7%	2-Fluorophenol	61.6%
2,4,6-Tribromophenol	74.1%	d4-2-Chlorophenol	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-15S-092412
SAMPLE

Lab Sample ID: VK65N
LIMS ID: 12-18418
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 10/01/12 20:06
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**	**1.2**
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**	**5.2**
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**	**1.8**
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-15S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65N QC Report No: VK65-Landau Associates
LIMS ID: 12-18418 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 10/01/12 20:06

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	3.0	< 3.0 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**	**2.4**
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	54.4%
d5-Phenol	65.3%	2-Fluorophenol	66.4%
2,4,6-Tribromophenol	81.9%	d4-2-Chlorophenol	64.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-13D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK650
LIMS ID: 12-18419
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/27/12
Date Analyzed: 10/01/12 20:41
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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-13D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK650 QC Report No: VK65-Landau Associates
LIMS ID: 12-18419 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 10/01/12 20:41

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	3.0	< 3.0 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	68.0%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	63.6%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	68.5%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	82.1%	d4-2-Chlorophenol	66.9%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-092712	66.8%	64.4%	78.0%	59.2%	66.9%	63.7%	75.5%	66.4%	0
LCS-092712	68.4%	67.2%	76.4%	59.2%	69.3%	64.8%	87.5%	68.5%	0
LCSD-092712	66.4%	63.6%	73.2%	52.8%	67.5%	66.4%	82.9%	65.9%	0
MW-15D-092412	65.2%	65.6%	78.8%	57.6%	68.5%	68.5%	93.1%	67.2%	0
MW-16D-092412	70.8%	69.2%	76.4%	60.4%	70.7%	74.9%	86.4%	70.4%	0
MW-14D-092412	65.2%	62.8%	73.6%	56.4%	60.8%	67.5%	86.7%	64.8%	0
MW-15S-092412	63.2%	62.4%	73.2%	55.6%	64.0%	64.5%	84.0%	63.2%	0
MW-16S-092412	68.4%	67.2%	71.6%	60.8%	67.2%	73.1%	84.5%	68.0%	0
MW-14S-092412	65.2%	63.2%	64.0%	58.0%	63.5%	69.3%	78.7%	65.1%	0
MW-13S-092412	59.6%	59.2%	66.0%	54.0%	59.2%	64.5%	76.3%	60.3%	0
MW-12S-092412	62.0%	64.4%	71.2%	54.8%	63.5%	66.4%	85.9%	63.2%	0
MW-11S-092412	70.8%	68.4%	68.0%	61.2%	69.1%	74.1%	85.9%	70.7%	0
MW-12D-092412	64.4%	64.0%	58.8%	58.0%	64.0%	66.7%	80.5%	63.7%	0
MW-11D-092412	66.0%	64.4%	60.0%	56.8%	67.5%	67.2%	84.5%	65.6%	0
MW-13D-092412	66.8%	66.8%	79.6%	59.2%	66.9%	69.1%	81.6%	66.4%	0
MW-DUP-092412	59.2%	60.8%	72.8%	51.2%	59.7%	61.6%	74.1%	59.2%	0
MW-15S-092412	66.4%	65.6%	60.8%	54.4%	65.3%	66.4%	81.9%	64.3%	0
MW-13D-092412	68.0%	62.8%	63.6%	55.6%	68.5%	69.1%	82.1%	66.9%	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: 12-18405 to 12-18419

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-092712
LCS/LCSD

Lab Sample ID: LCS-092712
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized: 
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted LCS/LCSD: 09/27/12

Date Analyzed LCS: 09/28/12 17:24
LCSD: 09/28/12 17:58
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

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
Phenol	19.3	25.0	77.2%	19.4	25.0	77.6%	0.5%
Bis-(2-Chloroethyl) Ether	18.8	25.0	75.2%	17.6	25.0	70.4%	6.6%
2-Chlorophenol	18.2	25.0	72.8%	17.8	25.0	71.2%	2.2%
1,3-Dichlorobenzene	12.4	25.0	49.6%	11.9	25.0	47.6%	4.1%
1,4-Dichlorobenzene	12.8	25.0	51.2%	12.5	25.0	50.0%	2.4%
Benzyl Alcohol	6.1	25.0	24.4%	6.5	25.0	26.0%	6.3%
1,2-Dichlorobenzene	13.6	25.0	54.4%	13.4	25.0	53.6%	1.5%
2-Methylphenol	17.4	25.0	69.6%	17.4	25.0	69.6%	0.0%
2,2'-Oxybis(1-Chloropropane)	17.2	25.0	68.8%	17.1	25.0	68.4%	0.6%
4-Methylphenol	36.4	50.0	72.8%	36.1	50.0	72.2%	0.8%
N-Nitroso-Di-N-Propylamine	18.2	25.0	72.8%	18.0	25.0	72.0%	1.1%
Hexachloroethane	11.1	25.0	44.4%	10.6	25.0	42.4%	4.6%
Nitrobenzene	16.9	25.0	67.6%	16.8	25.0	67.2%	0.6%
Isophorone	19.1	25.0	76.4%	18.7	25.0	74.8%	2.1%
2-Nitrophenol	18.6	25.0	74.4%	18.6	25.0	74.4%	0.0%
2,4-Dimethylphenol	54.4	75.0	72.5%	54.4	75.0	72.5%	0.0%
Benzoic Acid	125	138	90.6%	127	138	92.0%	1.6%
bis(2-Chloroethoxy) Methane	17.2	25.0	68.8%	17.2	25.0	68.8%	0.0%
2,4-Dichlorophenol	56.9	75.0	75.9%	57.2	75.0	76.3%	0.5%
1,2,4-Trichlorobenzene	13.6	25.0	54.4%	13.4	25.0	53.6%	1.5%
Naphthalene	15.4	25.0	61.6%	15.5	25.0	62.0%	0.6%
4-Chloroaniline	43.9	75.0	58.5%	43.8	75.0	58.4%	0.2%
Hexachlorobutadiene	10.1	25.0	40.4%	9.8	25.0	39.2%	3.0%
4-Chloro-3-methylphenol	61.9	75.0	82.5%	61.6	75.0	82.1%	0.5%
2-Methylnaphthalene	13.1	25.0	52.4%	13.2	25.0	52.8%	0.8%
Hexachlorocyclopentadiene	28.7	75.0	38.3%	27.4	75.0	36.5%	4.6%
2,4,6-Trichlorophenol	58.2	75.0	77.6%	57.4	75.0	76.5%	1.4%
2,4,5-Trichlorophenol	64.0	75.0	85.3%	63.0	75.0	84.0%	1.6%
2-Chloronaphthalene	16.6	25.0	66.4%	16.6	25.0	66.4%	0.0%
2-Nitroaniline	50.0	75.0	66.7%	48.7	75.0	64.9%	2.6%
Dimethylphthalate	19.0	25.0	76.0%	18.3	25.0	73.2%	3.8%
Acenaphthylene	16.6	25.0	66.4%	16.3	25.0	65.2%	1.8%
3-Nitroaniline	51.7	75.0	68.9%	50.9	75.0	67.9%	1.6%
Acenaphthene	15.9	25.0	63.6%	15.6	25.0	62.4%	1.9%
2,4-Dinitrophenol	108 Q	138	78.3%	109 Q	138	79.0%	0.9%
4-Nitrophenol	58.3	75.0	77.7%	59.0	75.0	78.7%	1.2%
Dibenzofuran	14.5	25.0	58.0%	14.3	25.0	57.2%	1.4%
2,6-Dinitrotoluene	58.0	75.0	77.3%	56.4	75.0	75.2%	2.8%
2,4-Dinitrotoluene	58.1	75.0	77.5%	56.5	75.0	75.3%	2.8%
Diethylphthalate	19.0	25.0	76.0%	18.4	25.0	73.6%	3.2%
4-Chlorophenyl-phenylether	17.1	25.0	68.4%	16.8	25.0	67.2%	1.8%
Fluorene	16.4	25.0	65.6%	16.1	25.0	64.4%	1.8%
4-Nitroaniline	51.3	75.0	68.4%	50.0	75.0	66.7%	2.6%
4,6-Dinitro-2-Methylphenol	112	138	81.2%	111	138	80.4%	0.9%
N-Nitrosodiphenylamine	17.8	25.0	71.2%	17.0	25.0	68.0%	4.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCS-092712**
 LCS/LCSD

Lab Sample ID: LCS-092712 QC Report No: VK65-Landau Associates
LIMS ID: 12-18405 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed LCS: 09/28/12 17:24
LCSD: 09/28/12 17:58

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	18.5	25.0	74.0%	18.0	25.0	72.0%	2.7%
Hexachlorobenzene	17.8	25.0	71.2%	17.2	25.0	68.8%	3.4%
Pentachlorophenol	69.5	75.0	92.7%	69.1	75.0	92.1%	0.6%
Phenanthrene	17.2	25.0	68.8%	16.8	25.0	67.2%	2.4%
Carbazole	20.2	25.0	80.8%	19.8	25.0	79.2%	2.0%
Anthracene	17.3	25.0	69.2%	16.7	25.0	66.8%	3.5%
Di-n-Butylphthalate	19.9	25.0	79.6%	19.1	25.0	76.4%	4.1%
Fluoranthene	17.6	25.0	70.4%	17.2	25.0	68.8%	2.3%
Pyrene	18.0	25.0	72.0%	17.8	25.0	71.2%	1.1%
Butylbenzylphthalate	18.6	25.0	74.4%	18.4	25.0	73.6%	1.1%
3,3'-Dichlorobenzidine	51.0	75.0	68.0%	51.0	75.0	68.0%	0.0%
Benzo(a)anthracene	17.1	25.0	68.4%	16.5	25.0	66.0%	3.6%
bis(2-Ethylhexyl)phthalate	20.4	25.0	81.6%	20.0	25.0	80.0%	2.0%
Chrysene	15.8	25.0	63.2%	15.5	25.0	62.0%	1.9%
Di-n-Octyl phthalate	19.4	25.0	77.6%	19.0	25.0	76.0%	2.1%
Benzo(a)pyrene	16.6	25.0	66.4%	16.3	25.0	65.2%	1.8%
Indeno(1,2,3-cd)pyrene	16.8	25.0	67.2%	16.2	25.0	64.8%	3.6%
Dibenz(a,h)anthracene	15.8	25.0	63.2%	15.0	25.0	60.0%	5.2%
Benzo(g,h,i)perylene	15.6	25.0	62.4%	15.0	25.0	60.0%	3.9%
1-Methylnaphthalene	19.4	25.0	77.6%	19.4	25.0	77.6%	0.0%
Total Benzofluoranthenes	33.9	50.0	67.8%	33.2	50.0	66.4%	2.1%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	68.4%	66.4%
2-Fluorobiphenyl	67.2%	63.6%
d14-p-Terphenyl	76.4%	73.2%
d4-1,2-Dichlorobenzene	59.2%	52.8%
d5-Phenol	69.3%	67.5%
2-Fluorophenol	64.8%	66.4%
2,4,6-Tribromophenol	87.5%	82.9%
d4-2-Chlorophenol	68.5%	65.9%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-092712**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-092712
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Date Extracted: 09/27/12
Date Analyzed: 09/28/12 16:49
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 **Sample ID: MB-092712**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-092712 QC Report No: VK65-Landau Associates
LIMS ID: 12-18405 Project: Cornwall
Matrix: Water 0001020.400-510
Date Analyzed: 09/28/12 16:49

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	3.0	< 3.0 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	66.8%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	78.0%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	66.9%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	75.5%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: MW-15D-092412
SAMPLE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 18:50
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**0.11**
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.17**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.32**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.11**
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	**Phenanthrene**	**0.10**	**0.10**
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	47.7%
d14-Dibenzo(a,h)anthracene	14.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
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Extraction Method: SW3520C
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Sample ID: MW-16D-092412
SAMPLE

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 19:18
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.16**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.52**
86-73-7	**Fluorene**	**0.10**	**0.13**
85-01-8	**Phenanthrene**	**0.10**	**0.11**
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	54.3%
d14-Dibenzo(a,h)anthracene	36.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
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Sample ID: MW-14D-092412
SAMPLE

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 19:47
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**0.28**
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.12**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.23**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.17**
86-73-7	**Fluorene**	**0.10**	**0.12**
85-01-8	**Phenanthrene**	**0.10**	**0.13**
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	60.7%
d14-Dibenzo(a,h)anthracene	20.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
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Sample ID: MW-15S-092412
SAMPLE

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 20:15
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**3.7**
91-57-6	**2-Methylnaphthalene**	**0.10**	**1.5**
90-12-0	**1-Methylnaphthalene**	**0.10**	**1.6**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.76**
86-73-7	**Fluorene**	**0.10**	**0.58**
85-01-8	**Phenanthrene**	**0.10**	**0.63**
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**	**0.23**
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	55.3%
d14-Dibenzo(a,h)anthracene	19.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS **Sample ID: MW-16S-092412**
Extraction Method: SW3520C **SAMPLE**
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Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 20:43
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	1-Methylnaphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.29**
86-73-7	Fluorene	0.10	< 0.10 U
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	55.7%
d14-Dibenzo(a,h)anthracene	40.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS **Sample ID: MW-14S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 21:12
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.25**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.64**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.30**
86-73-7	**Fluorene**	**0.10**	**0.15**
85-01-8	**Phenanthrene**	**0.10**	**0.17**
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	53.0%
d14-Dibenzo(a,h)anthracene	19.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS **Sample ID: MW-13S-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 21:40
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**3.0**
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.25**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.32**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.17**
86-73-7	**Fluorene**	**0.10**	**0.11**
85-01-8	**Phenanthrene**	**0.10**	**0.12**
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	55.3%
d14-Dibenzo(a,h)anthracene	22.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
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Sample ID: MW-12S-092412
SAMPLE

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 22:08
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.14**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
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	55.7%
d14-Dibenzo(a,h)anthracene	24.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
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Sample ID: MW-11S-092412
SAMPLE

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 22:37
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	1-Methylnaphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
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	53.3%
d14-Dibenzo(a,h)anthracene	43.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS **Sample ID: MW-12D-092412**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/03/12 15:30
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.16**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
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	53.0%
d14-Dibenzo(a,h)anthracene	30.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C

Sample ID: MW-11D-092412
SAMPLE

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/03/12 15:58
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	1-Methylnaphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
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	54.3%
d14-Dibenzo(a,h)anthracene	41.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
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Sample ID: MW-13D-092412
SAMPLE

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/03/12 16:27
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**0.24**
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.32**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.54**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.14**
86-73-7	**Fluorene**	**0.10**	**0.12**
85-01-8	**Phenanthrene**	**0.10**	**0.16**
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	48.0%
d14-Dibenzo(a,h)anthracene	29.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
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Sample ID: MW-DUP-092412
SAMPLE

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/03/12 16:55
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**0.12**
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.14**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.32**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.13**
86-73-7	Fluorene	0.10	< 0.10 U
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	53.0%
d14-Dibenzo(a,h)anthracene	37.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS **Sample ID: MW-15S-092412**
Extraction Method: SW3520C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65N
LIMS ID: 12-18418
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/03/12 17:23
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**3.4**
91-57-6	**2-Methylnaphthalene**	**0.10**	**1.4**
90-12-0	**1-Methylnaphthalene**	**0.10**	**1.4**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.64**
86-73-7	**Fluorene**	**0.10**	**0.53**
85-01-8	**Phenanthrene**	**0.10**	**0.58**
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**	**0.20**
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	45.7%
d14-Dibenzo(a,h)anthracene	26.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: MW-13D-092412
SAMPLE

Lab Sample ID: VK650
LIMS ID: 12-18419
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/03/12 17:52
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**0.27**
91-57-6	**2-Methylnaphthalene**	**0.10**	**0.33**
90-12-0	**1-Methylnaphthalene**	**0.10**	**0.56**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.11**
86-73-7	**Fluorene**	**0.10**	**0.13**
85-01-8	**Phenanthrene**	**0.10**	**0.18**
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	48.3%
d14-Dibenzo(a,h)anthracene	20.0%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Client ID	MNP	DBA	TOT OUT
MB-092812	57.7%	49.0%	0
LCS-092812	44.0%	49.0%	0
LCSD-092812	47.3%	65.3%	0
MW-15D-092412	47.7%	14.0%	0
MW-16D-092412	54.3%	36.0%	0
MW-14D-092412	60.7%	20.3%	0
MW-15S-092412	55.3%	19.0%	0
MW-16S-092412	55.7%	40.3%	0
MW-14S-092412	53.0%	19.0%	0
MW-13S-092412	55.3%	22.0%	0
MW-12S-092412	55.7%	24.7%	0
MW-11S-092412	53.3%	43.0%	0
MW-12D-092412	53.0%	30.3%	0
MW-11D-092412	54.3%	41.7%	0
MW-13D-092412	48.0%	29.3%	0
MW-DUP-092412	53.0%	37.7%	0
MW-15S-092412	45.7%	26.0%	0
MW-13D-092412	48.3%	20.0%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(40-110)	(33-107)
(DBA) = d14-Dibenzo(a,h)anthracene	(33-140)	(10-142)

Prep Method: SW3520C
Log Number Range: 12-18405 to 12-18419

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: LCS-092812
LAB CONTROL SAMPLE

Lab Sample ID: LCS-092812
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 09/28/12

Date Analyzed LCS: 10/02/12 17:53
LCSD: 10/02/12 18:22
Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ

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	1.29	3.00	43.0%	1.36	3.00	45.3%	5.3%
2-Methylnaphthalene	1.24	3.00	41.3%	1.29	3.00	43.0%	4.0%
1-Methylnaphthalene	1.47	3.00	49.0%	1.54	3.00	51.3%	4.7%
Acenaphthylene	1.22	3.00	40.7%	1.34	3.00	44.7%	9.4%
Acenaphthene	1.50	3.00	50.0%	1.62	3.00	54.0%	7.7%
Fluorene	1.54	3.00	51.3%	1.64	3.00	54.7%	6.3%
Phenanthrene	2.13	3.00	71.0%	2.18	3.00	72.7%	2.3%
Anthracene	1.70	3.00	56.7%	1.54	3.00	51.3%	9.9%
Fluoranthene	2.27	3.00	75.7%	2.36	3.00	78.7%	3.9%
Pyrene	2.23	3.00	74.3%	2.19	3.00	73.0%	1.8%
Benzo(a)anthracene	1.88	3.00	62.7%	1.82	3.00	60.7%	3.2%
Chrysene	2.34	3.00	78.0%	2.38	3.00	79.3%	1.7%
Benzo(a)pyrene	1.82	3.00	60.7%	1.70	3.00	56.7%	6.8%
Indeno(1,2,3-cd)pyrene	1.87	3.00	62.3%	2.02	3.00	67.3%	7.7%
Dibenz(a,h)anthracene	1.66	3.00	55.3%	1.89	3.00	63.0%	13.0%
Benzo(g,h,i)perylene	1.99	3.00	66.3%	1.98	3.00	66.0%	0.5%
Dibenzofuran	1.52	3.00	50.7%	1.58	3.00	52.7%	3.9%
Total Benzofluoranthenes	7.88	9.00	87.6%	7.56	9.00	84.0%	4.1%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	44.0%	47.3%
d14-Dibenzo(a,h)anthracene	49.0%	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS **Sample ID: MB-092812**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-092812
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/04/12

QC Report No: VK65-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: NA
Date Received: NA

Date Extracted: 09/28/12
Date Analyzed: 10/02/12 17:25
Instrument/Analyst: NT4/JZ

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

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	1-Methylnaphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
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	57.7%
d14-Dibenzo(a,h)anthracene	49.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-15D-092412**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 19:21
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 445 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.056	< 0.056 U
319-85-7	beta-BHC	0.056	< 0.056 U
319-86-8	delta-BHC	0.056	< 0.056 U
58-89-9	gamma-BHC (Lindane)	0.056	< 0.056 U
76-44-8	Heptachlor	0.056	< 0.056 U
309-00-2	Aldrin	0.056	< 0.056 U
1024-57-3	Heptachlor Epoxide	0.056	< 0.056 U
959-98-8	Endosulfan I	0.056	< 0.056 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.56	< 0.56 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.056	< 0.056 U
5103-71-9	cis-Chlordane $	0.056	< 0.056 U
8001-35-2	Toxaphene	5.6	< 5.6 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	63.2%
Tetrachlorometaxylene	46.0%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-16D-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 19:39
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 440 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.057	< 0.057 U
319-85-7	beta-BHC	0.057	< 0.057 U
319-86-8	delta-BHC	0.057	< 0.057 U
58-89-9	gamma-BHC (Lindane)	0.057	< 0.057 U
76-44-8	Heptachlor	0.057	< 0.057 U
309-00-2	Aldrin	0.057	< 0.057 U
1024-57-3	Heptachlor Epoxide	0.057	< 0.057 U
959-98-8	Endosulfan I	0.057	< 0.057 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.57	< 0.57 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.057	< 0.057 U
5103-71-9	cis-Chlordane $	0.057	< 0.057 U
8001-35-2	Toxaphene	5.7	< 5.7 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	52.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-14D-092412**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 19:57
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 470 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.053	< 0.053 U
319-85-7	beta-BHC	0.053	< 0.053 U
319-86-8	delta-BHC	0.053	< 0.053 U
58-89-9	gamma-BHC (Lindane)	0.053	< 0.053 U
76-44-8	Heptachlor	0.053	< 0.053 U
309-00-2	Aldrin	0.053	< 0.053 U
1024-57-3	Heptachlor Epoxide	0.053	< 0.053 U
959-98-8	Endosulfan I	0.053	< 0.053 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.53	< 0.53 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.053	< 0.053 U
5103-71-9	cis-Chlordane $	0.053	< 0.053 U
8001-35-2	Toxaphene	5.3	< 5.3 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	58.8%
Tetrachlorometaxylene	39.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-15S-092412**
Extraction Method: SW3510C **SAMPLE**
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Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 20:14
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 470 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.053	< 0.053 U
319-85-7	beta-BHC	0.053	< 0.053 U
319-86-8	delta-BHC	0.053	< 0.053 U
58-89-9	gamma-BHC (Lindane)	0.053	< 0.053 U
76-44-8	Heptachlor	0.053	< 0.053 U
309-00-2	Aldrin	0.053	< 0.053 U
1024-57-3	Heptachlor Epoxide	0.053	< 0.053 U
959-98-8	Endosulfan I	0.053	< 0.053 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.53	< 0.53 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.053	< 0.053 U
5103-71-9	cis-Chlordane $	0.053	< 0.053 U
8001-35-2	Toxaphene	5.3	< 5.3 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	57.5%
Tetrachlorometaxylene	49.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-16S-092412**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 20:32
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 470 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.053	< 0.053 U
319-85-7	beta-BHC	0.053	< 0.053 U
319-86-8	delta-BHC	0.053	< 0.053 U
58-89-9	gamma-BHC (Lindane)	0.053	< 0.053 U
76-44-8	Heptachlor	0.053	< 0.053 U
309-00-2	Aldrin	0.053	< 0.053 U
1024-57-3	Heptachlor Epoxide	0.053	< 0.053 U
959-98-8	Endosulfan I	0.053	< 0.053 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.53	< 0.53 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.053	< 0.053 U
5103-71-9	cis-Chlordane $	0.053	< 0.053 U
8001-35-2	Toxaphene	5.3	< 5.3 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	65.2%
Tetrachlorometaxylene	42.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-14S-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 20:50
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 445 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.056	< 0.056 U
319-85-7	beta-BHC	0.056	< 0.056 U
319-86-8	delta-BHC	0.056	< 0.056 U
58-89-9	gamma-BHC (Lindane)	0.056	< 0.056 U
76-44-8	Heptachlor	0.056	< 0.056 U
309-00-2	Aldrin	0.056	< 0.056 U
1024-57-3	Heptachlor Epoxide	0.056	< 0.056 U
959-98-8	Endosulfan I	0.056	< 0.056 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.56	< 0.56 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.056	< 0.056 U
5103-71-9	cis-Chlordane $	0.056	< 0.056 U
8001-35-2	Toxaphene	5.6	< 5.6 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	61.8%
Tetrachlorometaxylene	47.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-13S-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 21:08
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 455 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.055	< 0.055 U
319-85-7	beta-BHC	0.055	< 0.055 U
319-86-8	delta-BHC	0.055	< 0.055 U
58-89-9	gamma-BHC (Lindane)	0.055	< 0.055 U
76-44-8	Heptachlor	0.055	< 0.055 U
309-00-2	Aldrin	0.055	< 0.055 U
1024-57-3	Heptachlor Epoxide	0.055	< 0.055 U
959-98-8	Endosulfan I	0.055	< 0.055 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.55	< 0.55 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.055	< 0.055 U
5103-71-9	cis-Chlordane $	0.055	< 0.055 U
8001-35-2	Toxaphene	5.5	< 5.5 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	58.0%
Tetrachlorometaxylene	45.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-12S-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 22:55
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 445 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.056	< 0.056 U
319-85-7	beta-BHC	0.056	< 0.056 U
319-86-8	delta-BHC	0.056	< 0.056 U
58-89-9	gamma-BHC (Lindane)	0.056	< 0.056 U
76-44-8	Heptachlor	0.056	< 0.056 U
309-00-2	Aldrin	0.056	< 0.056 U
1024-57-3	Heptachlor Epoxide	0.056	< 0.056 U
959-98-8	Endosulfan I	0.056	< 0.056 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.56	< 0.56 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.056	< 0.056 U
5103-71-9	cis-Chlordane $	0.056	< 0.056 U
8001-35-2	Toxaphene	5.6	< 5.6 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	55.0%
Tetrachlorometaxylene	46.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-11S-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 23:12
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 470 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.053	< 0.053 U
319-85-7	beta-BHC	0.053	< 0.053 U
319-86-8	delta-BHC	0.053	< 0.053 U
58-89-9	gamma-BHC (Lindane)	0.053	< 0.053 U
76-44-8	Heptachlor	0.053	< 0.053 U
309-00-2	Aldrin	0.053	< 0.053 U
1024-57-3	Heptachlor Epoxide	0.053	< 0.053 U
959-98-8	Endosulfan I	0.053	< 0.053 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.53	< 0.53 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.053	< 0.053 U
5103-71-9	cis-Chlordane $	0.053	< 0.053 U
8001-35-2	Toxaphene	5.3	< 5.3 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	68.8%
Tetrachlorometaxylene	48.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-12D-092412**
Extraction Method: SW3510C **SAMPLE**
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Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 23:30
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 470 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.053	< 0.053 U
319-85-7	beta-BHC	0.053	< 0.053 U
319-86-8	delta-BHC	0.053	< 0.053 U
58-89-9	gamma-BHC (Lindane)	0.053	< 0.053 U
76-44-8	Heptachlor	0.053	< 0.053 U
309-00-2	Aldrin	0.053	< 0.053 U
1024-57-3	Heptachlor Epoxide	0.053	< 0.053 U
959-98-8	Endosulfan I	0.053	< 0.053 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.53	< 0.53 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.053	< 0.053 U
5103-71-9	cis-Chlordane $	0.053	< 0.053 U
8001-35-2	Toxaphene	5.3	< 5.3 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	43.0%
Tetrachlorometaxylene	37.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-11D-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 23:48
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 450 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.056	< 0.056 U
319-85-7	beta-BHC	0.056	< 0.056 U
319-86-8	delta-BHC	0.056	< 0.056 U
58-89-9	gamma-BHC (Lindane)	0.056	< 0.056 U
76-44-8	Heptachlor	0.056	< 0.056 U
309-00-2	Aldrin	0.056	< 0.056 U
1024-57-3	Heptachlor Epoxide	0.056	< 0.056 U
959-98-8	Endosulfan I	0.056	< 0.056 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.56	< 0.56 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.056	< 0.056 U
5103-71-9	cis-Chlordane $	0.056	< 0.056 U
8001-35-2	Toxaphene	5.6	< 5.6 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	44.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-13D-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/05/12 00:06
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 470 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.053	< 0.053 U
319-85-7	beta-BHC	0.053	< 0.053 U
319-86-8	delta-BHC	0.053	< 0.053 U
58-89-9	gamma-BHC (Lindane)	0.053	< 0.053 U
76-44-8	Heptachlor	0.053	< 0.053 U
309-00-2	Aldrin	0.053	< 0.053 U
1024-57-3	Heptachlor Epoxide	0.053	< 0.053 U
959-98-8	Endosulfan I	0.053	< 0.053 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.53	< 0.53 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.053	< 0.053 U
5103-71-9	cis-Chlordane $	0.053	< 0.053 U
8001-35-2	Toxaphene	5.3	< 5.3 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	61.0%
Tetrachlorometaxylene	48.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-DUP-092412**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/05/12 00:24
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 440 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.057	< 0.057 U
319-85-7	beta-BHC	0.057	< 0.057 U
319-86-8	delta-BHC	0.057	< 0.057 U
58-89-9	gamma-BHC (Lindane)	0.057	< 0.057 U
76-44-8	Heptachlor	0.057	< 0.057 U
309-00-2	Aldrin	0.057	< 0.057 U
1024-57-3	Heptachlor Epoxide	0.057	< 0.057 U
959-98-8	Endosulfan I	0.057	< 0.057 U
60-57-1	Dieldrin	0.11	< 0.11 U
72-55-9	4,4'-DDE	0.11	< 0.11 U
72-20-8	Endrin	0.11	< 0.11 U
33213-65-9	Endosulfan II	0.11	< 0.11 U
72-54-8	4,4'-DDD	0.11	< 0.11 U
1031-07-8	Endosulfan Sulfate	0.11	< 0.11 U
50-29-3	4,4'-DDT	0.11	< 0.11 U
72-43-5	Methoxychlor	0.57	< 0.57 U
53494-70-5	Endrin Ketone	0.11	< 0.11 U
7421-93-4	Endrin Aldehyde	0.11	< 0.11 U
5103-74-2	trans-Chlordane #	0.057	< 0.057 U
5103-71-9	cis-Chlordane $	0.057	< 0.057 U
8001-35-2	Toxaphene	5.7	< 5.7 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	68.0%
Tetrachlorometaxylene	51.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-15S-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK65N
LIMS ID: 12-18418
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/05/12 00:41
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	48.0%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-13D-092412**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VK650
LIMS ID: 12-18419
Matrix: Water
Data Release Authorized:
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/29/12
Date Analyzed: 10/05/12 00:59
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	49.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Client ID	DCBP	TCMX	TOT OUT
MB-092912	71.0%	43.0%	0
LCS-092912	68.5%	44.8%	0
LCSD-092912	62.2%	45.8%	0
MW-15D-092412	63.2%	46.0%	0
MW-16D-092412	75.5%	52.5%	0
MW-14D-092412	58.8%	39.5%	0
MW-15S-092412	57.5%	49.5%	0
MW-16S-092412	65.2%	42.2%	0
MW-14S-092412	61.8%	47.2%	0
MW-13S-092412	58.0%	45.5%	0
MW-12S-092412	55.0%	46.8%	0
MW-11S-092412	68.8%	48.2%	0
MW-12D-092412	43.0%	37.8%	0
MW-11D-092412	64.0%	44.8%	0
MW-13D-092412	61.0%	48.8%	0
MW-DUP-092412	68.0%	51.5%	0
MW-15S-092412	64.2%	48.0%	0
MW-13D-092412	64.2%	49.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(37-125)	(11-144)
(TCMX) = Tetrachlorometaxylene	(38-103)	(30-105)

Prep Method: SW3510C
Log Number Range: 12-18405 to 12-18419

FORM-II SW8081

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-092912**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-092912 QC Report No: VK65-Landau Associates
LIMS ID: 12-18405 Project: Cornwall
Matrix: Water 0001020.400-510
Data Release Authorized: Date Sampled: 09/24/12
Reported: 10/05/12 Date Received: 09/25/12

Date Extracted LCS/LCSD: 09/29/12 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 10/04/12 18:45 Final Extract Volume LCS: 5.0 mL
LCSD: 10/04/12 19:03 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/AAR Dilution Factor LCS: 1.00
LCSD: ECD6/AAR LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: Yes
Florisil Cleanup: No Silica Gel: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.128	0.200	64.0%	0.137	0.200	68.5%	6.8%
beta-BHC	0.138	0.200	69.0%	0.148	0.200	74.0%	7.0%
delta-BHC	0.0789	0.200	39.4%	0.0829	0.200	41.4%	4.9%
gamma-BHC (Lindane)	0.142	0.200	71.0%	0.152	0.200	76.0%	6.8%
Heptachlor	0.130	0.200	65.0%	0.140	0.200	70.0%	7.4%
Aldrin	0.125	0.200	62.5%	0.134	0.200	67.0%	6.9%
Heptachlor Epoxide	0.156	0.200	78.0%	0.164	0.200	82.0%	5.0%
Endosulfan I	0.158	0.200	79.0%	0.165	0.200	82.5%	4.3%
Dieldrin	0.316	0.400	79.0%	0.331	0.400	82.8%	4.6%
4,4'-DDE	0.315	0.400	78.8%	0.333	0.400	83.2%	5.6%
Endrin	0.332	0.400	83.0%	0.351	0.400	87.8%	5.6%
Endosulfan II	0.342	0.400	85.5%	0.352	0.400	88.0%	2.9%
4,4'-DDD	0.346	0.400	86.5%	0.356	0.400	89.0%	2.8%
Endosulfan Sulfate	0.298	0.400	74.5%	0.303	0.400	75.8%	1.7%
4,4'-DDT	0.343	0.400	85.8%	0.353	0.400	88.2%	2.9%
Methoxychlor	1.60	2.00	80.0%	1.62	2.00	81.0%	1.2%
Endrin Ketone	0.372	0.400	93.0%	0.373	0.400	93.2%	0.3%
Endrin Aldehyde	0.251	0.400	62.8%	0.244	0.400	61.0%	2.8%
trans-Chlordane	0.152	0.200	76.0%	0.160	0.200	80.0%	5.1%
cis-Chlordane	0.151	0.200	75.5%	0.159	0.200	79.5%	5.2%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	68.5%	62.2%
Tetrachlorometaxylene	44.8%	45.8%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MB-092912**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-092912
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized: MW
Reported: 10/05/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Date Extracted: 09/29/12
Date Analyzed: 10/04/12 18:28
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	43.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15D-092412
SAMPLE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 11:12
Instrument/Analyst: ECD1/YZ

Sample Amount: 450 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.56	< 0.56 U
1918-00-9	Dicamba	0.56	< 0.56 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.6	< 5.6 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	95.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15D-092412
REEXTRACT

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/10/12 21:52
Instrument/Analyst: ECD1/YZ

Sample Amount: 450 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.56	< 0.56 U
1918-00-9	Dicamba	0.56	< 0.56 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.6	< 5.6 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	83.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-16D-092412
SAMPLE

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 11:48
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	94.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD **Sample ID: MW-16D-092412**
Extraction Method: SW3510C **REEXTRACT**

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/10/12 22:29
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	79.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-14D-092412
SAMPLE

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 12:24
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	84.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-14D-092412
REEXTRACT

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/10/12 23:05
Instrument/Analyst: ECD1/YZ

Sample Amount: 440 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.57	< 0.57 U
1918-00-9	Dicamba	0.57	< 0.57 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.7	< 5.7 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	87.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15S-092412
SAMPLE

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 13:00
Instrument/Analyst: ECD1/YZ

Sample Amount: 445 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.56	< 0.56 U
1918-00-9	Dicamba	0.56	< 0.56 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.6	< 5.6 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	93.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15S-092412
REEXTRACT

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/10/12 23:41
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	82.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-16S-092412
SAMPLE

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 13:37
Instrument/Analyst: ECD1/YZ

Sample Amount: 420 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.30	< 0.30 U
93-76-5	2,4,5-T	0.30	< 0.30 U
88-85-7	Dinoseb	0.60	< 0.60 U
1918-00-9	Dicamba	0.60	< 0.60 U
94-75-7	2,4-D	1.2	< 1.2 U
94-82-6	2,4-DB	6.0	< 6.0 U
75-99-0	Dalapon	1.2	< 1.2 U
94-74-6	MCPA	300	< 300 U
120-36-5	Dichloroprop	1.2	< 1.2 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	88.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-16S-092412
REEXTRACT

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 00:17
Instrument/Analyst: ECD1/YZ

Sample Amount: 475 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.26	< 0.26 U
93-76-5	2,4,5-T	0.26	< 0.26 U
88-85-7	Dinoseb	0.53	< 0.53 U
1918-00-9	Dicamba	0.53	< 0.53 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.3	< 5.3 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	260	< 260 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	83.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-14S-092412
SAMPLE

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 14:13
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	84.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-14S-092412
REEXTRACT

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 02:06
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	83.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13S-092412
SAMPLE

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 16:02
Instrument/Analyst: ECD1/YZ

Sample Amount: 455 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.55	< 0.55 U
1918-00-9	Dicamba	0.55	< 0.55 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.5	< 5.5 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	83.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13S-092412
REEXTRACT

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 02:42
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	82.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-12S-092412
SAMPLE

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 16:38
Instrument/Analyst: ECD1/YZ

Sample Amount: 465 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	87.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-12S-092412
REEXTRACT

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 03:19
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	86.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C

Sample ID: MW-11S-092412
SAMPLE

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 17:14
Instrument/Analyst: ECD1/YZ

Sample Amount: 440 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.57	< 0.57 U
1918-00-9	Dicamba	0.57	< 0.57 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.7	< 5.7 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	112%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-11S-092412
REEXTRACT

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 03:55
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	74.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-12D-092412
SAMPLE

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 17:51
Instrument/Analyst: ECD1/YZ

Sample Amount: 440 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.57	< 0.57 U
1918-00-9	Dicamba	0.57	< 0.57 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.7	< 5.7 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	87.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-12D-092412
REEXTRACT

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 04:31
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	114%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-11D-092412
SAMPLE

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 18:27
Instrument/Analyst: ECD1/YZ

Sample Amount: 450 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.28	< 0.28 U
93-76-5	2,4,5-T	0.28	< 0.28 U
88-85-7	Dinoseb	0.56	< 0.56 U
1918-00-9	Dicamba	0.56	< 0.56 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.6	< 5.6 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	62.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-11D-092412
REEXTRACT

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 05:07
Instrument/Analyst: ECD1/YZ

Sample Amount: 470 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.53	< 0.53 U
1918-00-9	Dicamba	0.53	< 0.53 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.3	< 5.3 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	56.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13D-092412
SAMPLE

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 19:03
Instrument/Analyst: ECD1/YZ

Sample Amount: 455 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.55	< 0.55 U
1918-00-9	Dicamba	0.55	< 0.55 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.5	< 5.5 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	87.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
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Sample ID: MW-13D-092412 REEXTRACT

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 05:44
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	81.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-DUP-092412
SAMPLE

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 19:39
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	93.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-DUP-092412
REEXTRACT

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 06:20
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	85.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15S-092412
SAMPLE

Lab Sample ID: VK65N
LIMS ID: 12-18418
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 20:16
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	83.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15S-092412
REEXTRACT

Lab Sample ID: VK65N
LIMS ID: 12-18418
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 06:56
Instrument/Analyst: ECD1/YZ

Sample Amount: 460 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.54	< 0.54 U
1918-00-9	Dicamba	0.54	< 0.54 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.4	< 5.4 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	270	< 270 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	89.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13D-092412
SAMPLE

Lab Sample ID: VK650
LIMS ID: 12-18419
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 20:52
Instrument/Analyst: ECD1/YZ

Sample Amount: 455 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.27	< 0.27 U
93-76-5	2,4,5-T	0.27	< 0.27 U
88-85-7	Dinoseb	0.55	< 0.55 U
1918-00-9	Dicamba	0.55	< 0.55 U
94-75-7	2,4-D	1.1	< 1.1 U
94-82-6	2,4-DB	5.5	< 5.5 U
75-99-0	Dalapon	1.1	< 1.1 U
94-74-6	MCPA	280	< 280 U
120-36-5	Dichloroprop	1.1	< 1.1 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	95.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13D-092412
REEXTRACT

Lab Sample ID: VK650
LIMS ID: 12-18419
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted: 10/10/12
Date Analyzed: 10/11/12 07:33
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	111%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Client ID	DCPA	TOT OUT
MB-092812	81.6%	0
LCS-092812	88.5%	0
LCSD-092812	80.7%	0
MW-15D-092412	95.0%	0
MW-15D-092412 RE	83.6%	0
MB-101012	74.6%	0
LCS-101012	87.0%	0
LCSD-101012	94.8%	0
MW-16D-092412	94.4%	0
MW-16D-092412 RE	79.8%	0
MW-14D-092412	84.2%	0
MW-14D-092412 RE	87.1%	0
MW-15S-092412	93.6%	0
MW-15S-092412 RE	82.4%	0
MW-16S-092412	88.0%	0
MW-16S-092412 RE	83.9%	0
MW-14S-092412	84.8%	0
MW-14S-092412 RE	83.2%	0
MW-13S-092412	83.9%	0
MW-13S-092412 RE	82.3%	0
MW-12S-092412	87.5%	0
MW-12S-092412 RE	86.0%	0
MW-11S-092412	112%	0
MW-11S-092412 RE	74.4%	0
MW-12D-092412	87.8%	0
MW-12D-092412 RE	114%	0
MW-11D-092412	62.2%	0
MW-11D-092412 RE	56.4%	0
MW-13D-092412	87.9%	0
MW-13D-092412 RE	81.2%	0
MW-DUP-092412	93.2%	0
MW-DUP-092412 RE	85.0%	0
MW-15S-092412	83.1%	0
MW-15S-092412 RE	89.2%	0
MW-13D-092412	95.6%	0
MW-13D-092412 RE	111%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(66-112)	(28-140)

Log Number Range: 12-18405 to 12-18419

FORM-II SW8151A

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: LCS-092812
LCS/LCSD

Lab Sample ID: LCS-092812
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted LCS/LCSD: 09/28/12

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 10/05/12 09:23
LCSD: 10/05/12 09:59

Final Extract Volume LCS: 50 mL
LCSD: 50 mL

Instrument/Analyst LCS: ECD1/YZ
LCSD: ECD1/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	6.02	2.50	241%	6.17	2.50	247%	2.5%
2,4,5-T	< 0.25	0.625	NR%	0.330	0.625	52.8%	NR%
Dinoseb	1.58	1.25	126%	1.53	1.25	122%	3.2%
Dicamba	3.13	1.25	250%	3.27	1.25	262%	4.4%
2,4-D	< 1.00	2.50	NR%	1.42	2.50	56.8%	NR%
2,4-DB	44.5	12.5	356%	42.9	12.5	343%	3.7%
Dalapon	1.79	2.50	71.6%	2.86	2.50	114%	46.0%
Dichloroprop	6.36	2.50	254%	6.56	2.50	262%	3.1%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	88.5%	80.7%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: LCS-101012
LCS/LCSD

Lab Sample ID: LCS-101012
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted LCS/LCSD: 10/10/12

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 10/11/12 09:21
LCSD: 10/11/12 12:59

Final Extract Volume LCS: 50 mL
LCSD: 50 mL

Instrument/Analyst LCS: ECD1/YZ
LCSD: ECD1/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	6.11	10.0	61.1%	7.22	10.0	72.2%	16.7%
2,4,5-T	0.540	2.50	21.6%	1.81	2.50	72.4%	108%
Dinoseb	2.04	5.00	40.8%	2.04	5.00	40.8%	0.0%
Dicamba	3.26	5.00	65.2%	4.20	5.00	84.0%	25.2%
2,4-D	1.88	10.0	18.8%	3.09	10.0	30.9%	48.7%
2,4-DB	43.0	50.0	86.0%	50.1	50.0	100%	15.3%
Dalapon	2.92	10.0	29.2%	4.99	10.0	49.9%	52.3%
Dichloroprop	5.85	10.0	58.5%	7.23	10.0	72.3%	21.1%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	87.0%	94.8%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-092812
METHOD BLANK

Lab Sample ID: MB-092812
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Date Extracted: 09/28/12
Date Analyzed: 10/05/12 08:47
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	81.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD **Sample ID: MB-101012**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-101012
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Date Extracted: 10/10/12
Date Analyzed: 10/10/12 19:27
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	74.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Extraction Method: SW3510C

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Matrix: Water

Data Release Authorized: MW
Reported: 10/01/12

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-092712	Method Blank	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18405					Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	90.7%
VK65A	MW-15D-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18405	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	76.9%
VK65B	MW-16D-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18406	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	82.8%
VK65C	MW-14D-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18407	HC ID: **DRO/MOTOR OIL**				**Diesel**	**> 0.50**
					Oil	**> 0.50**
					o-Terphenyl	81.8%
VK65D	MW-15S-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18408	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	82.8%
VK65E	MW-16S-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18409	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	81.0%
VK65F	MW-14S-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18410	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	78.5%
VK65G	MW-13S-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18411	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	84.4%
VK65H	MW-12S-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18412	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	77.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Extraction Method: SW3510C

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Matrix: Water

Data Release Authorized:
Reported: 10/01/12

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
VK65I	MW-11S-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18413	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	90.4%
VK65J	MW-12D-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18414	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	87.7%
VK65K	MW-11D-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18415	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	74.4%
VK65L	MW-13D-092412	09/27/12	09/28/12	1.0	**Gas**	**> 0.25**
12-18416	HC ID: **GRO/DRO/MOTOR OIL**				**Diesel**	**> 0.50**
					Oil	**> 0.50**
					o-Terphenyl	82.1%
VK65M	MW-DUP-092412	09/27/12	09/28/12	1.0	Gas	< 0.25 U
12-18417	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	76.1%

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.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a012.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65MBW1
Client ID: VK65MBW1
Injection: 28-SEP-2012 11:14
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.290	-0.003	11583	21573	WATPHG	(Tol-C12)	336350	18.16
C8	1.544	-0.007	2955	12465	WATPHD	(C12-C24)	37480	2.34
C10	3.160	-0.006	624	475	WATPHM	(C24-C38)	66461	5.02
C12	4.075	0.001	266	551	AK102	(C10-C25)	65225	3.45
C14	4.757	0.000	183	185	AK103	(C25-C36)	47834	5.20
C16	5.346	0.004	202	158				
C18	5.880	-0.025	1138	1208				
C20	6.475	0.004	154	112	JET-A	(C10-C18)	50728	9.37
C22	7.018	-0.004	80	23	MIN.OIL	(C24-C38)	66461	4.94
C24	7.554	0.011	76	104				
C25	7.815	0.019	2678	2733				
C26	8.039	0.002	92	121				
C28	8.491	-0.001	1971	1877				
C32	9.293	-0.007	456	220				
C34	9.659	-0.014	542	308				
Filter Peak	11.328	0.005	1978	3434	BUNKERC	(C10-C38)	131490	14.36
C36	10.061	0.028	852	1525				
C38	10.375	-0.009	1151	2508				
C40	10.757	0.034	1166	873				
o-terph	6.045	0.001	961138	884853				
Triacon Surr	8.925	0.008	855560	868698	NAS DIES	(C10-C24)	65029	3.55

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	884853	40.8	90.7
Triacontane	868698	46.7	103.8

JA 10/1/12

M Indicates the peak was manually integrated

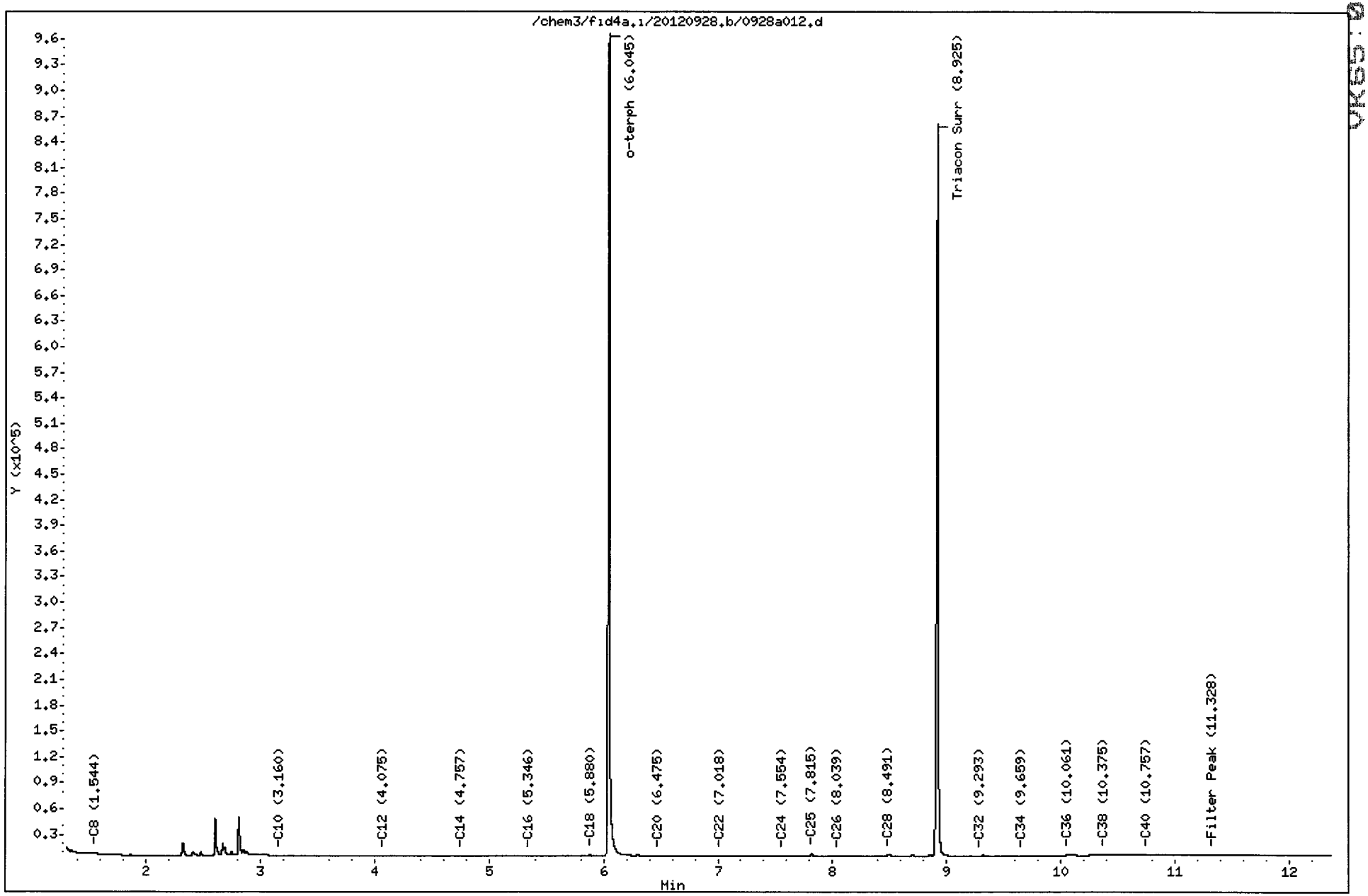
Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a012.d
Date : 28-SEP-2012 11:14
Client ID: VK65MBW1
Sample Info: VK65MBW1

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

VK65:001160



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a015.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65A
Client ID: MW-15D-092412
Injection: 28-SEP-2012 12:18
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.281	-0.012	13369	17372	WATPHG	(Tol-C12)	1276195	68.92
C8	1.539	-0.012	2115	6317	WATPHD	(C12-C24)	6592129	411.64
C10	3.181	0.015	14076	40203	WATPHM	(C24-C38)	1166288	88.13
C12	4.082	0.008	26282	43702	AK102	(C10-C25)	7608108	401.92
C14	4.746	-0.011	69734	127719	AK103	(C25-C36)	941054	102.27
C16	5.365	0.023	36434	68534				
C18	5.919	0.015	32655	103622				
C20	6.474	0.003	21418	9273	JET-A	(C10-C18)	5398505	996.68
C22	7.018	-0.003	18132	21715	MIN.OIL	(C24-C38)	1166288	86.77
C24	7.567	0.024	18041	37537				
C25	7.806	0.010	18453	35889				
C26	8.028	-0.009	13610	34008				
C28	8.504	0.012	19948	50630				
C32	9.300	-0.001	6130	14319				
C34	9.677	0.004	4873	14974				
Filter Peak	11.311	-0.012	1981	9326	BUNKERC	(C10-C38)	8608735	940.22
C36	10.042	0.009	3653	12402				
C38	10.402	0.017	2868	7805				
C40	10.725	0.002	2059	1301				
o-terph	6.046	0.001	908702	749522				
Triacon Surr	8.918	0.001	714380	782439	NAS DIES	(C10-C24)	7442447	406.16

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	749522	34.6	76.9 M
Triacontane	782439	42.1	93.5

JK 10/01/12

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a015.d

Page 1

Date : 28-SEP-2012 12:18

Client ID: MW-15D-092412

Instrument: fid4a.i

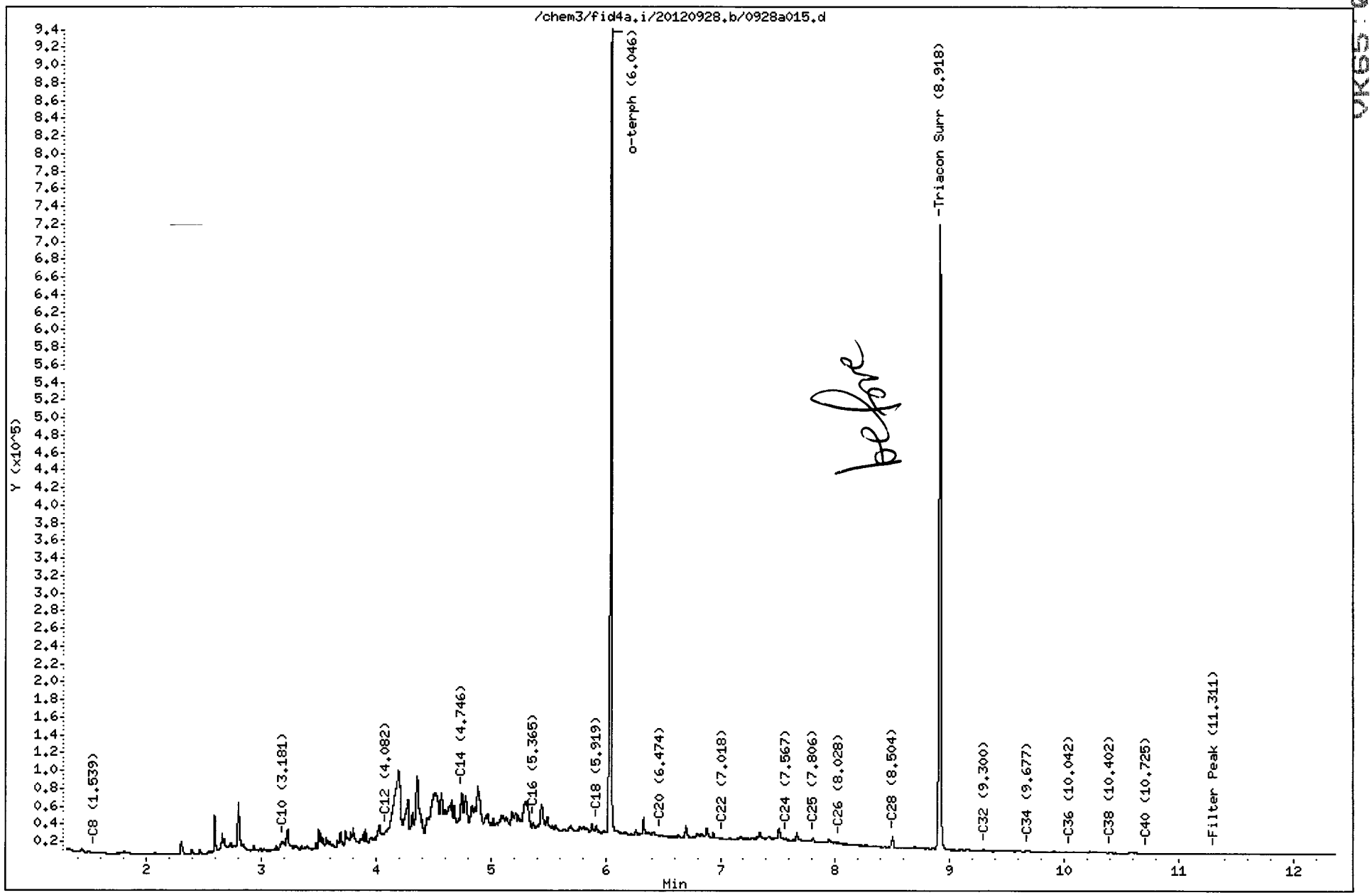
Sample Info: VK65A

Operator: JR

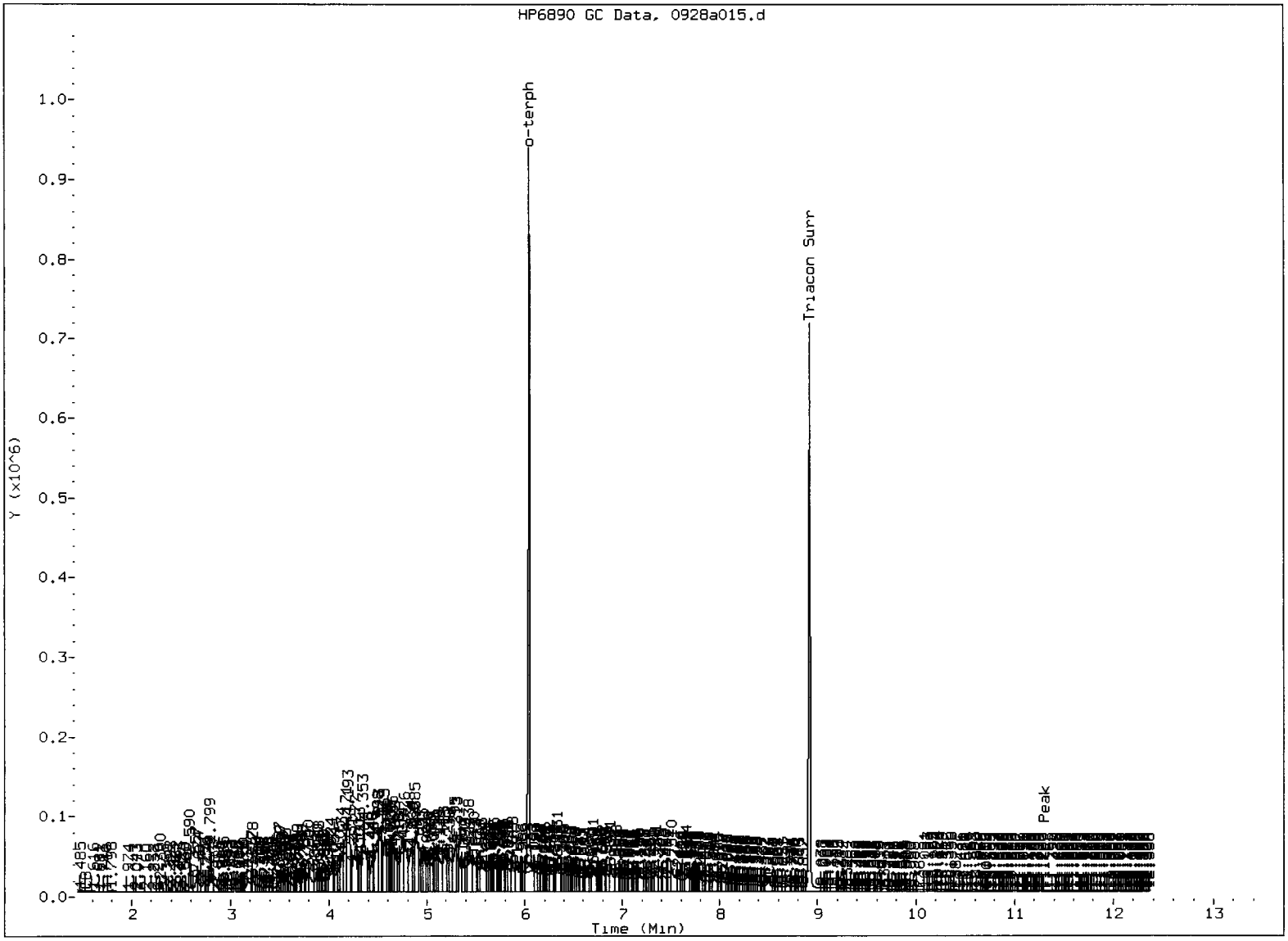
Column phase: RTX-1

Column diameter: 0.25

VK65-001G2



FID:4A-2C/RTX-1 VK65A FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a016.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65B
Client ID: MW-16D-092412
Injection: 28-SEP-2012 12:39
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.272	-0.021	10597	15323	WATPHG	(Tol-C12)	689004	37.21
C8	1.540	-0.011	7476	34031	WATPHD	(C12-C24)	4666532	291.40
C10	3.157	-0.009	1588	1478	WATPHM	(C24-C38)	973450	73.56
C12	4.086	0.012	12608	23001	AK102	(C10-C25)	5093356	269.07
C14	4.771	0.014	19008	13722	AK103	(C25-C36)	804354	87.41
C16	5.361	0.019	33056	53919				
C18	5.909	0.004	27154	30214				
C20	6.467	-0.004	22942	8599	JET-A	(C10-C18)	2963642	547.15
C22	7.026	0.005	18608	24617	MIN.OIL	(C24-C38)	973450	72.43
C24	7.555	0.011	15861	4080				
C25	7.796	0.000	14304	7298				
C26	8.025	-0.012	11762	25779				
C28	8.490	-0.002	9541	9503				
C32	9.314	0.014	5271	16443				
C34	9.679	0.006	3007	1412				
Filter Peak	11.322	-0.001	1772	457	BUNKERC	(C10-C38)	5937018	648.42
C36	10.042	0.008	2108	1042				
C38	10.380	-0.005	1883	674				
C40	10.726	0.003	1680	1386				
o-terph	6.045	0.001	991052	807970				
Triacon Surr	8.927	0.010	775336	826436	NAS DIES	(C10-C24)	4963569	270.88

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	807970	37.3	82.9 M
Triacontane	826436	44.5	98.8

M Indicates the peak was manually integrated

JE 10/01/12

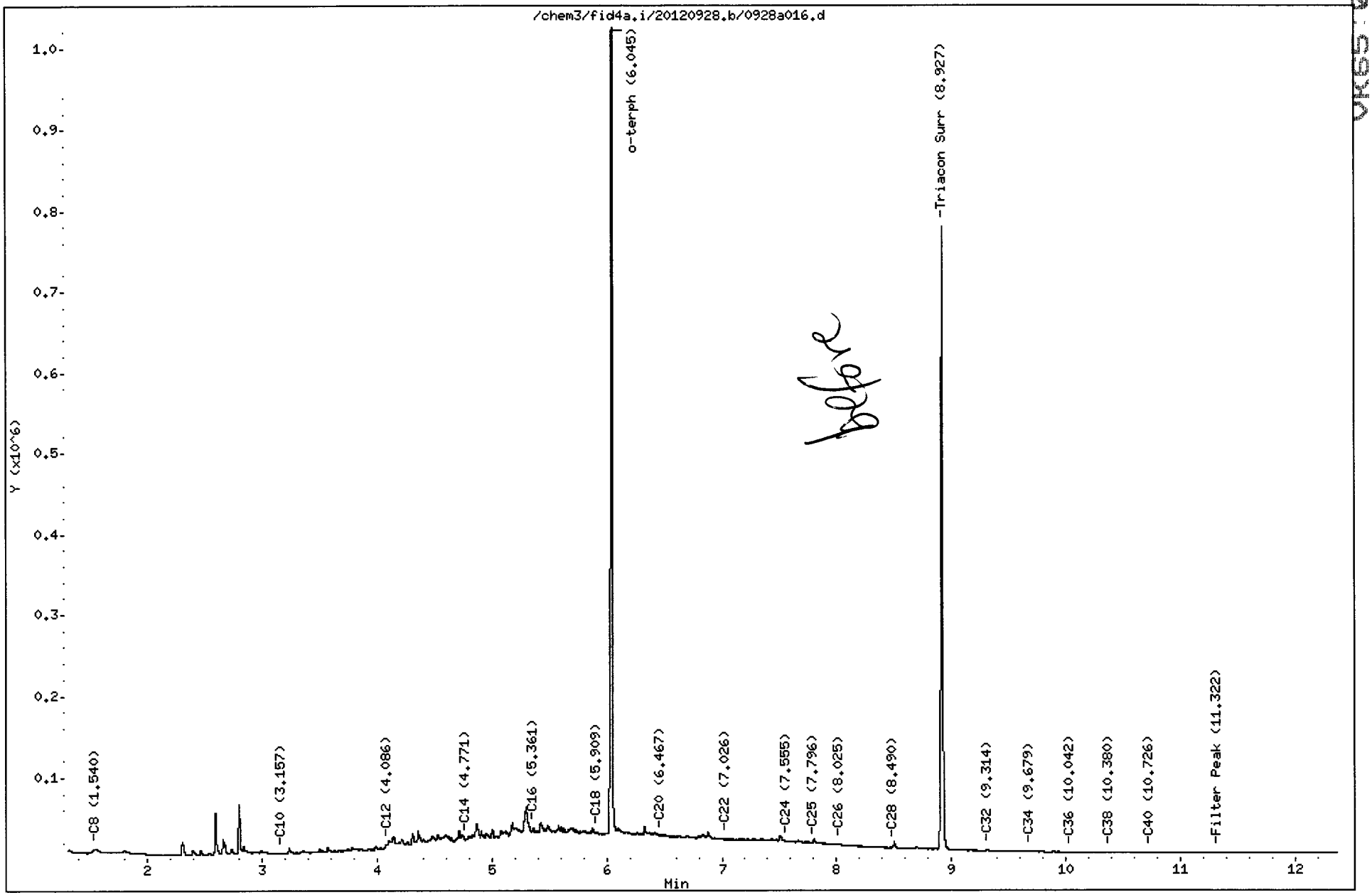
Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a016.d
Date : 28-SEP-2012 12:39
Client ID: MW-16D-092412
Sample Info: VK65B

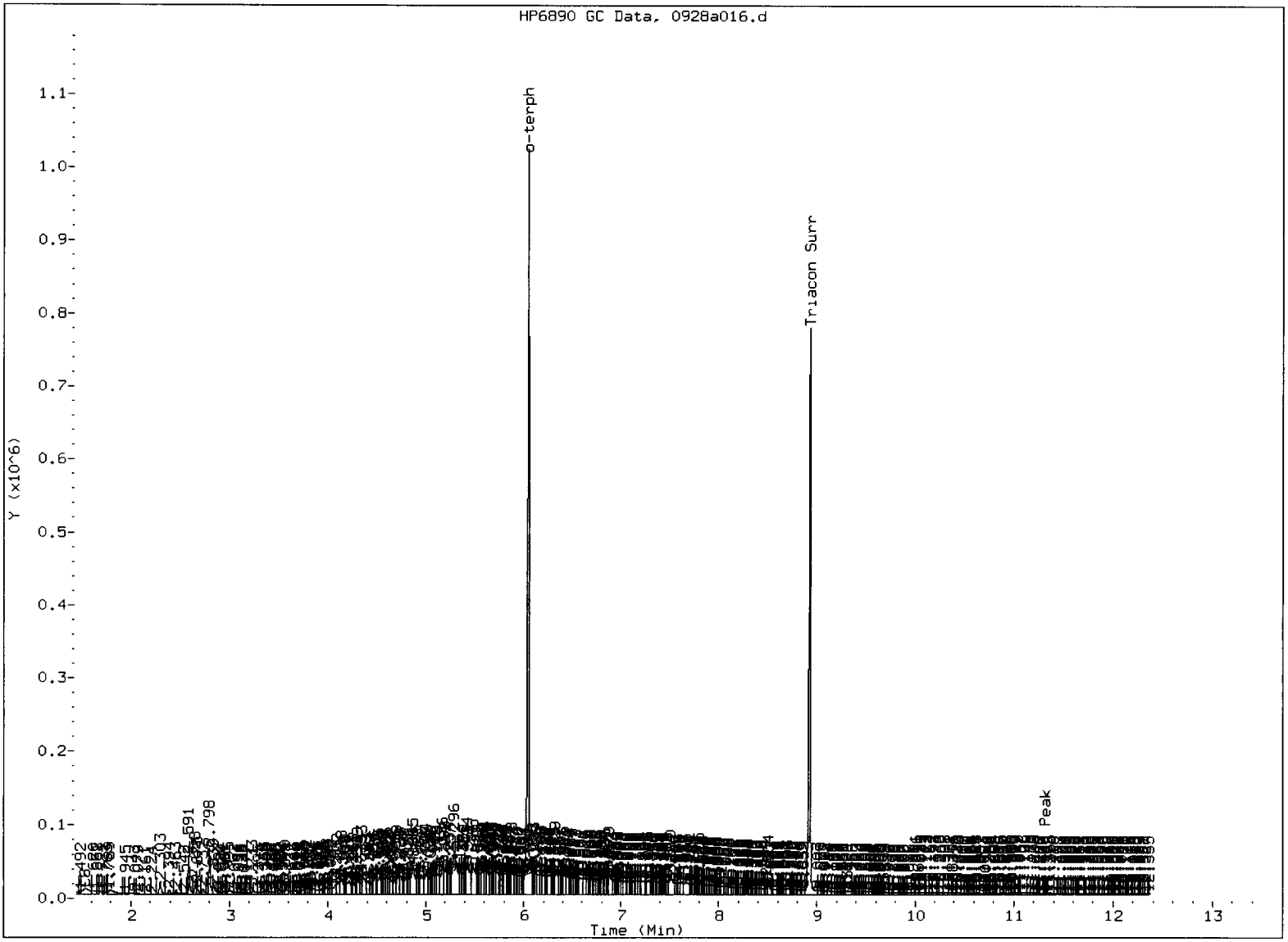
Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

VK65-091655



FID:4A-2C/RTX-1 VK65B FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a017.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65C
Client ID: MW-14D-092412
Injection: 28-SEP-2012 13:01
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.272	-0.021	15513	21072	WATPHG	(Tol-C12)	899779	48.59
C8	1.543	-0.008	2402	6689	WATPHD	(C12-C24)	4956861	309.53
C10	3.156	-0.010	2967	2923	WATPHM	(C24-C38)	4427072	334.52
C12	4.075	0.001	14000	17936	AK102	(C10-C25)	5756202	304.09
C14	4.742	-0.015	28011	74320	AK103	(C25-C36)	3811756	414.23
C16	5.342	-0.001	22831	23605				
C18	5.908	0.003	22335	7029				
C20	6.481	0.010	22066	31186	JET-A	(C10-C18)	2982277	550.59
C22	7.018	-0.004	28919	51000	MIN.OIL	(C24-C38)	4427072	329.38
C24	7.539	-0.004	49829	73071				
C25	7.791	-0.005	50212	130557				
C26	8.035	-0.002	50441	112429				
C28	8.492	0.000	56416	120076				
C32	9.289	-0.011	26696	21924				
C34	9.655	-0.019	25016	33497				
Filter Peak	11.324	0.001	3975	1572	BUNKERC	(C10-C38)	9900936	1081.35
C36	10.030	-0.003	19005	18974				
C38	10.382	-0.002	14868	25368				
C40	10.733	0.010	8953	5607				
o-terph	6.048	0.003	939638	797546				
Triacon Surr	8.930	0.013	767923	806348	NAS DIES	(C10-C24)	5473863	298.73

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	797546	36.8	81.8 M
Triacontane	806348	43.4	96.4 M

M Indicates the peak was manually integrated

10/01/12

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a017.d

Date : 28-SEP-2012 13:01

Client ID: MW-14D-092412

Sample Info: VK65C

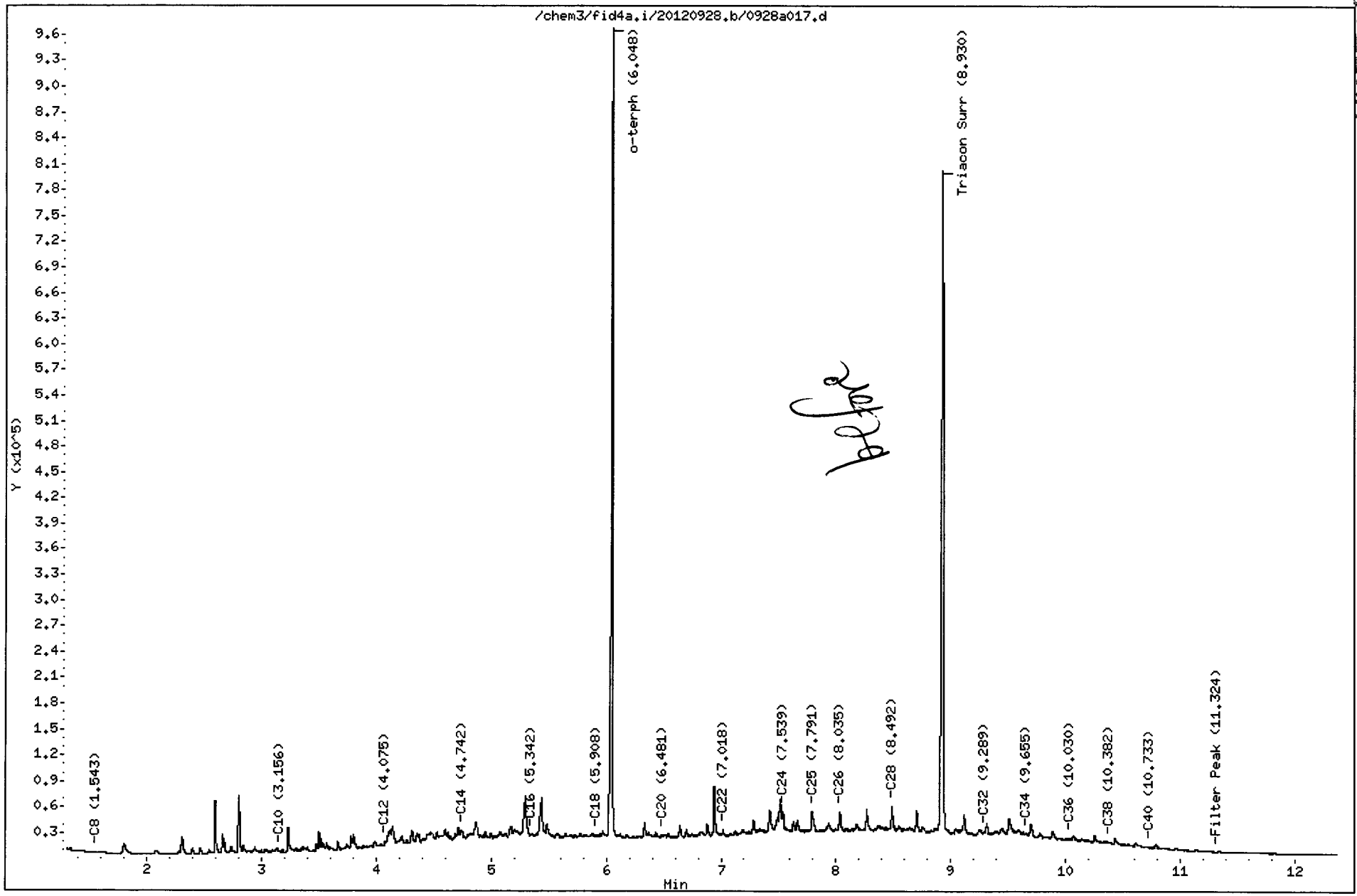
Column phase: RTX-1

Instrument: fid4a.i

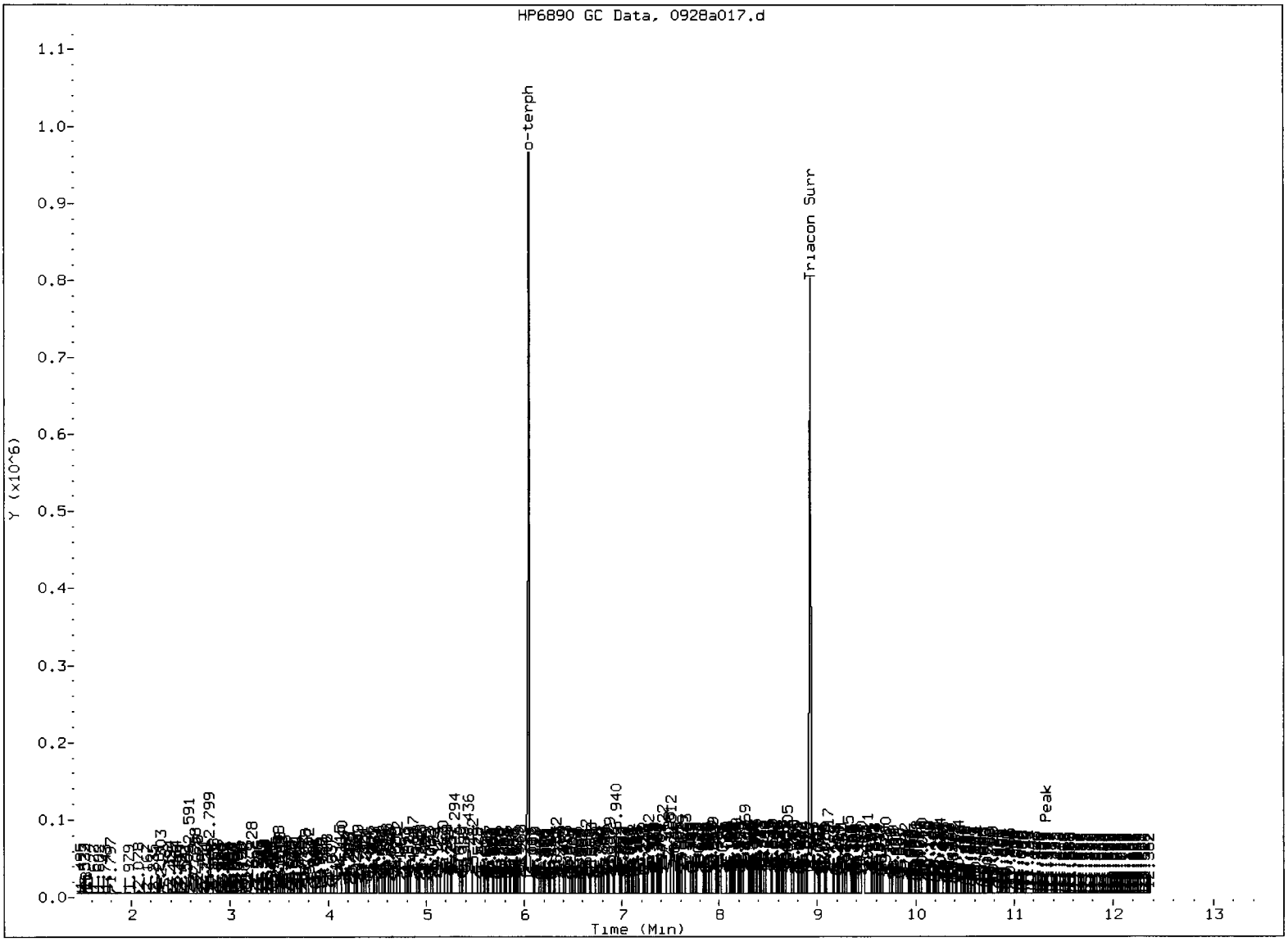
Operator: JR

Column diameter: 0.25

VK65 100168



FID:4A-2C/RTX-1 VK65C FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: JR Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a018.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65D
Client ID: MW-15S-092412
Injection: 28-SEP-2012 13:22
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.272	-0.021	13926	18834	WATPHG	(Tol-C12)	1299428	70.17
C8	1.541	-0.010	3321	7976	WATPHD	(C12-C24)	6900155	430.87
C10	3.179	0.013	6362	7689	WATPHM	(C24-C38)	3051066	230.54
C12	4.068	-0.006	20993	26058	AK102	(C10-C25)	7986073	421.89
C14	4.757	0.000	47711	119003	AK103	(C25-C36)	2588482	281.29
C16	5.349	0.006	34498	12216				
C18	5.905	0.000	31900	43249				
C20	6.466	-0.005	27379	29661	JET-A	(C10-C18)	4882872	901.48
C22	7.018	-0.004	27467	55570	MIN.OIL	(C24-C38)	3051066	227.00
C24	7.562	0.019	27985	38322				
C25	7.791	-0.005	33569	32967				
C26	8.032	-0.005	32156	86236				
C28	8.489	-0.003	32421	67008				
C32	9.292	-0.009	15596	12435				
C34	9.679	0.005	14269	6630				
Filter Peak	11.326	0.003	3116	1795	BUNKERC	(C10-C38)	10756217	1174.76
C36	10.032	-0.001	10908	16305				
C38	10.392	0.008	8215	13611				
C40	10.718	-0.004	5752	3067				
o-terph	6.047	0.002	955089	807433				
Triacon Surr	8.926	0.009	770797	807500	NAS DIES	(C10-C24)	7705151	420.50

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	807433	37.3	82.8 M
Triacontane	807500	43.4	96.5 M

M Indicates the peak was manually integrated

JR 10/01/12

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

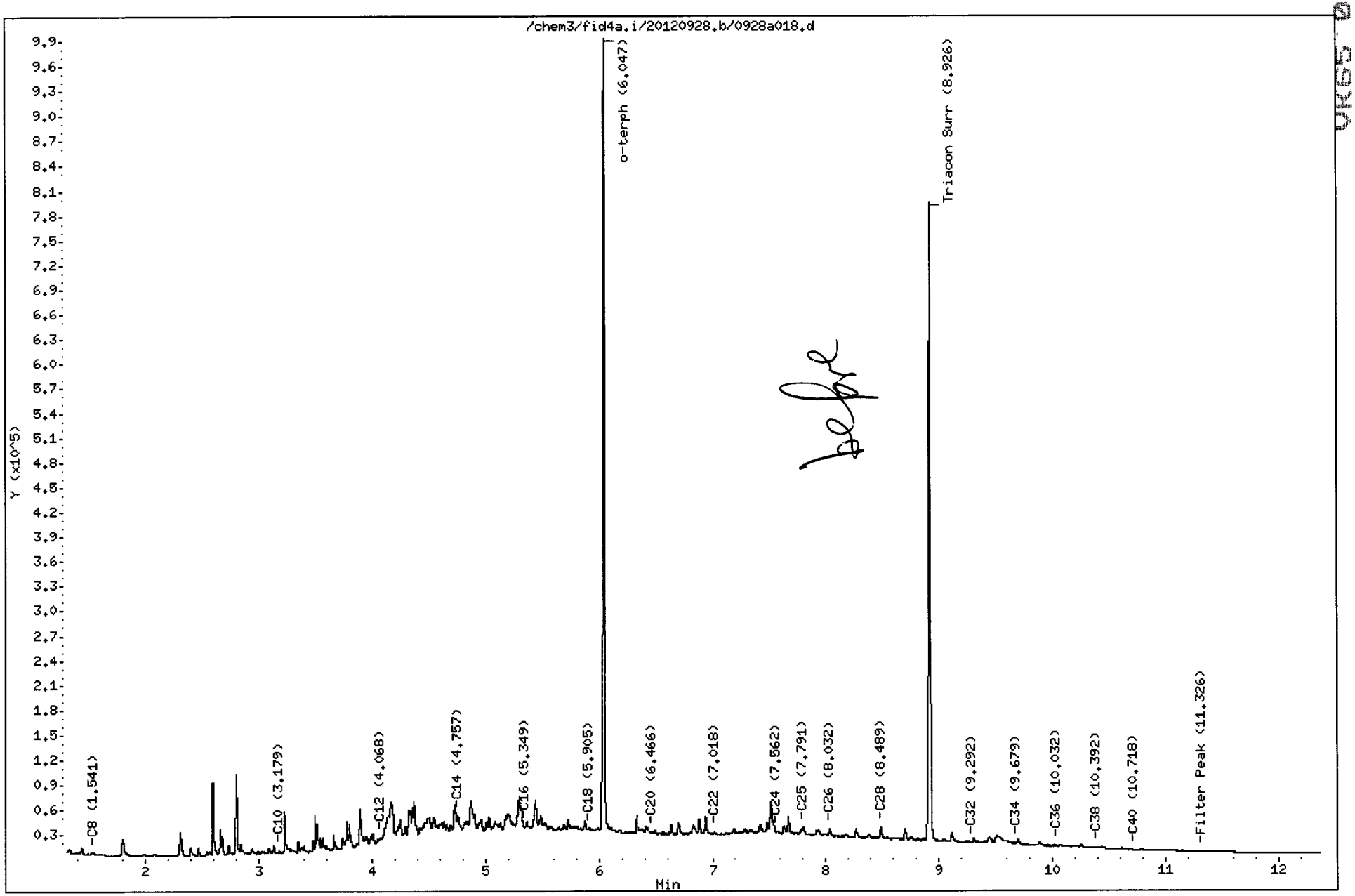
Data File: /chem3/fid4a.i/20120928.b/0928a018.d
Date : 28-SEP-2012 13:22
Client ID: MW-15S-092412
Sample Info: VK65D

Instrument: fid4a.i

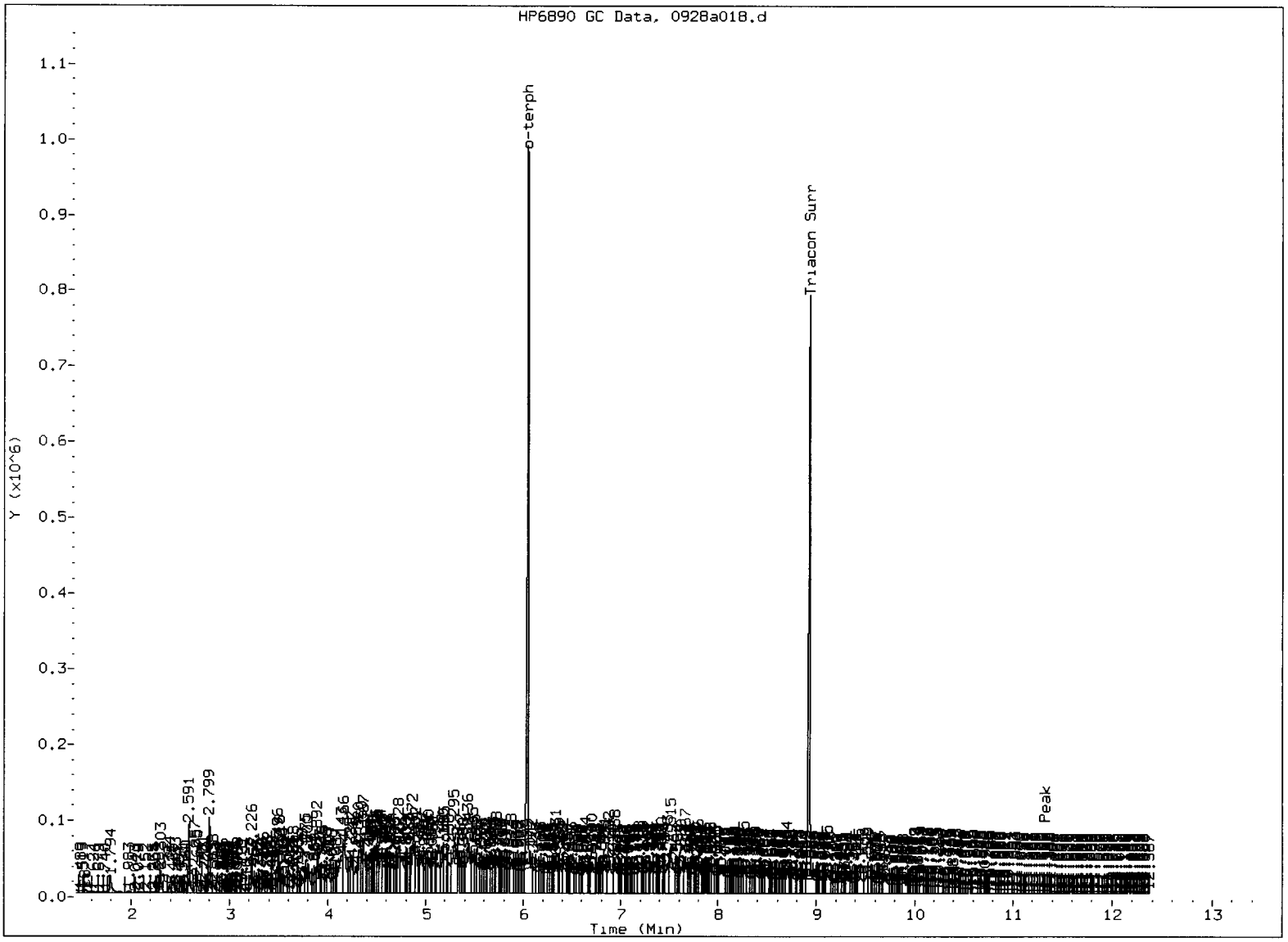
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

VK65 001 71



FID:4A-2C/RTX-1 VK65D FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a019.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65E
Client ID: MW-16S-092412
Injection: 28-SEP-2012 13:44
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.282	-0.011	9652	15259	WATPHG	(Tol-C12)	667764	36.06
C8	1.546	-0.005	2345	8864	WATPHD	(C12-C24)	4633375	289.33
C10	3.192	0.026	2280	4384	WATPHM	(C24-C38)	1231844	93.08
C12	4.090	0.016	13296	24034	AK102	(C10-C25)	5074408	268.07
C14	4.739	-0.018	23981	62946	AK103	(C25-C36)	1033913	112.36
C16	5.350	0.008	27630	20840				
C18	5.897	-0.008	25626	14463				
C20	6.469	-0.002	21799	9386	JET-A	(C10-C18)	2950572	544.74
C22	7.018	-0.004	20022	32226	MIN.OIL	(C24-C38)	1231844	91.65
C24	7.540	-0.004	22358	31122				
C25	7.791	-0.005	20218	28864				
C26	8.034	-0.003	18602	44790				
C28	8.490	-0.001	15113	18510				
C32	9.296	-0.004	5254	4261				
C34	9.686	0.012	4086	2923				
Filter Peak	11.318	-0.005	2199	1698	BUNKERC	(C10-C38)	6161134	672.90
C36	10.027	-0.006	3540	8781				
C38	10.389	0.005	2645	1306				
C40	10.726	0.004	2427	1436				
o-terph	6.046	0.002	966565	790203				
Triacon Surr	8.930	0.013	745525	829622	NAS DIES	(C10-C24)	4929290	269.01

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	790203	36.5	81.0
Triacontane	829622	44.6	99.2

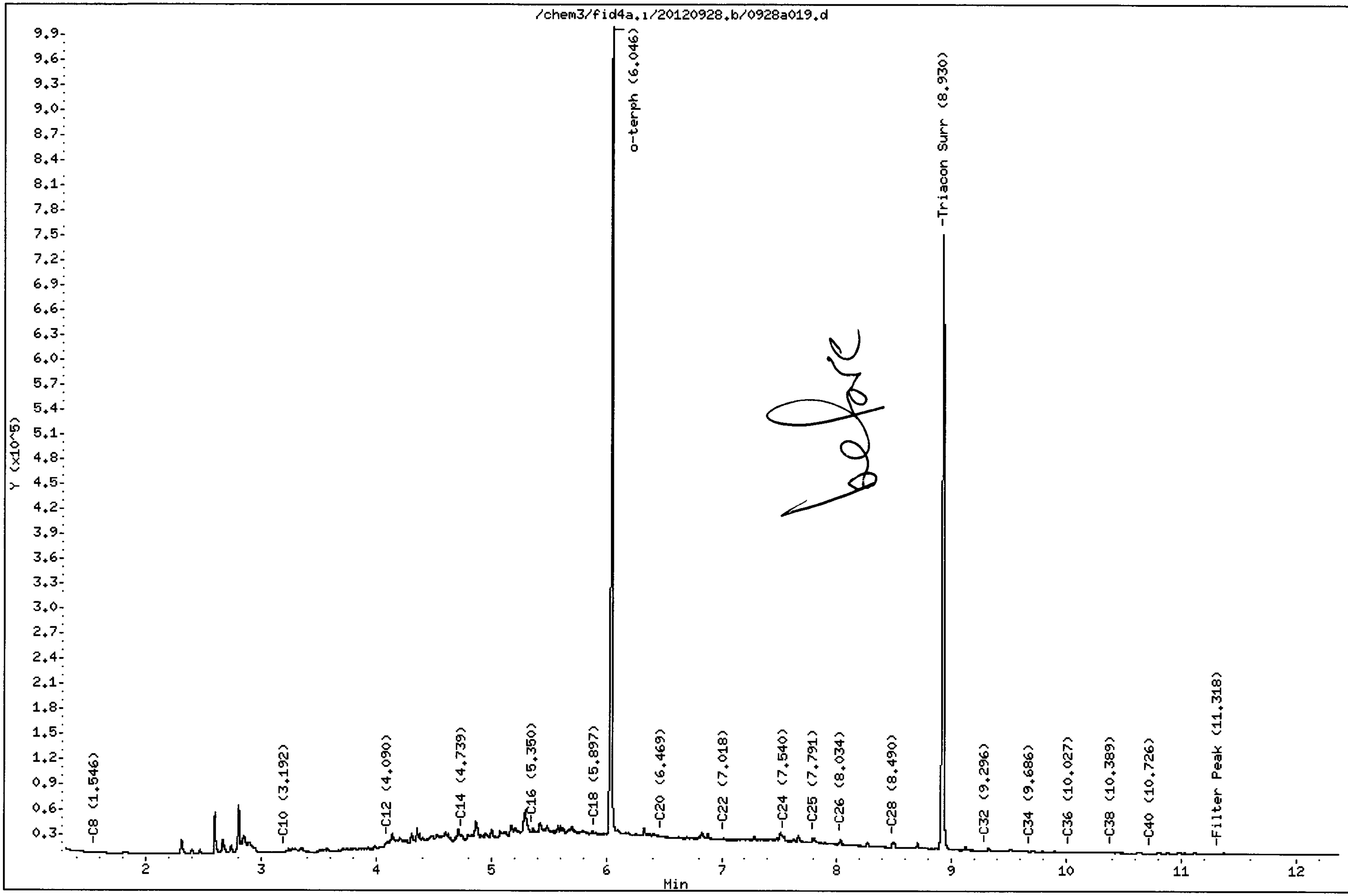
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

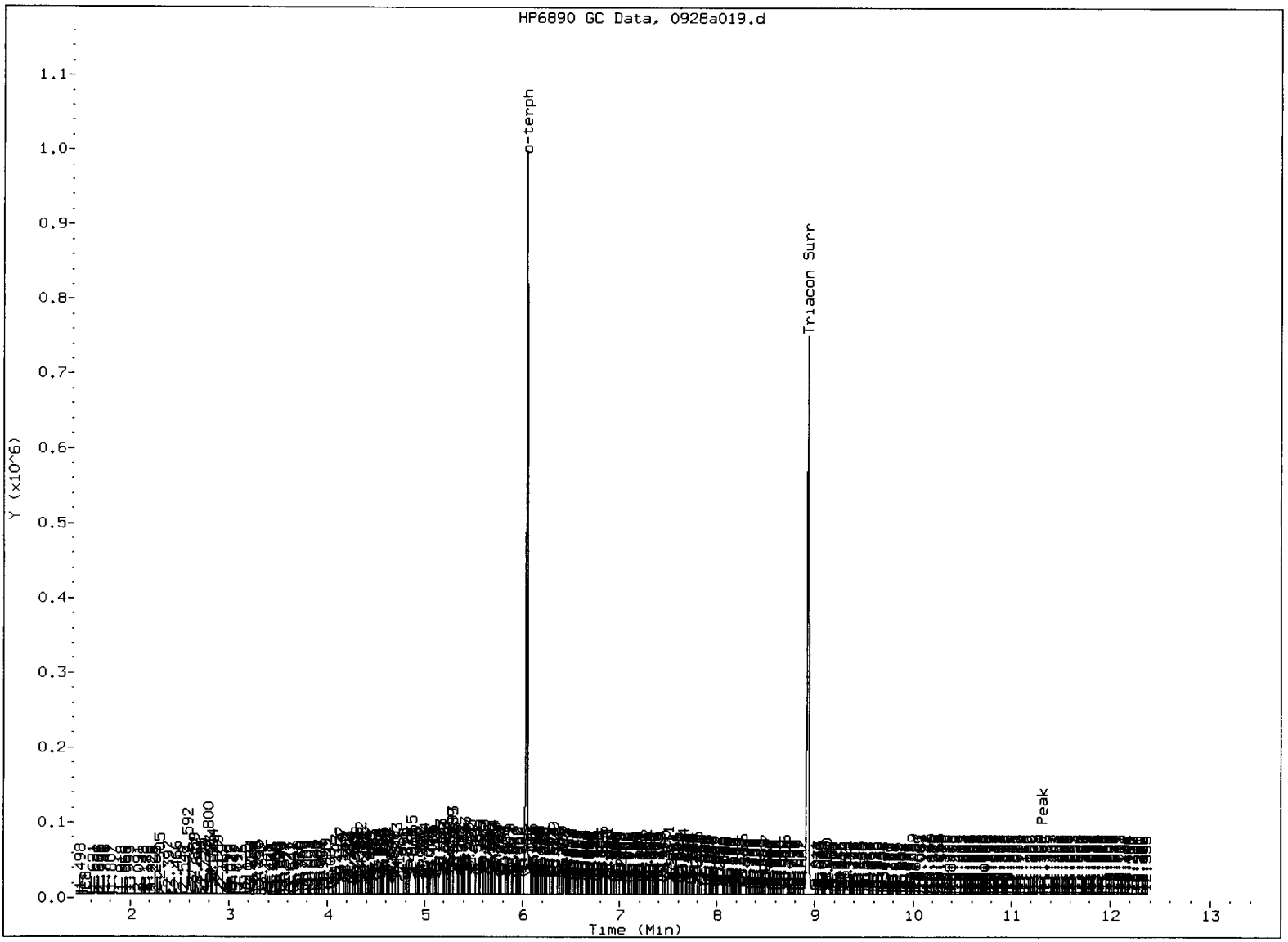
10/01/12

Data File: /chem3/fid4a.i/20120928.b/0928a019.d
Date : 28-SEP-2012 13:44
Client ID: MW-16S-092412
Sample Info: VK65E
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25



FID:4A-2C/RTX-1 VK65E FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a022.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65F
Client ID: MW-14S-092412
Injection: 28-SEP-2012 14:48
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.274	-0.018	12567	17727	WATPHG	(Tol-C12)	1144687	61.82
C8	1.551	0.000	2038	5577	WATPHD	(C12-C24)	5446831	340.12
C10	3.179	0.013	4214	5808	WATPHM	(C24-C38)	1101952	83.27
C12	4.082	0.008	19929	33541	AK102	(C10-C25)	6312417	333.47
C14	4.758	0.001	45733	113748	AK103	(C25-C36)	907718	98.64
C16	5.353	0.010	28536	14585				
C18	5.913	0.008	24368	40579				
C20	6.469	-0.002	18772	18848	JET-A	(C10-C18)	4346651	802.48
C22	7.020	-0.002	16839	25788	MIN.OIL	(C24-C38)	1101952	81.99
C24	7.542	-0.002	16516	17258				
C25	7.789	-0.007	14426	10146				
C26	8.041	0.004	11951	14002				
C28	8.488	-0.004	10879	13713				
C32	9.289	-0.011	5982	14595				
C34	9.680	0.007	3477	1936				
Filter Peak	11.315	-0.008	1925	1790	BUNKERC	(C10-C38)	7265537	793.52
C36	10.021	-0.012	2807	6895				
C38	10.374	-0.011	2299	6947				
C40	10.711	-0.011	2146	5708				
o-terph	6.045	0.001	946622	765505				
Triacon Surr	8.915	-0.002	748349	803080	NAS DIES	(C10-C24)	6163585	336.37

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	765505	35.3	78.5 M
Triacontane	803080	43.2	96.0

JR 10/01/12

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a022.d

Date : 28-SEP-2012 14:48

Client ID: MW-14S-092412

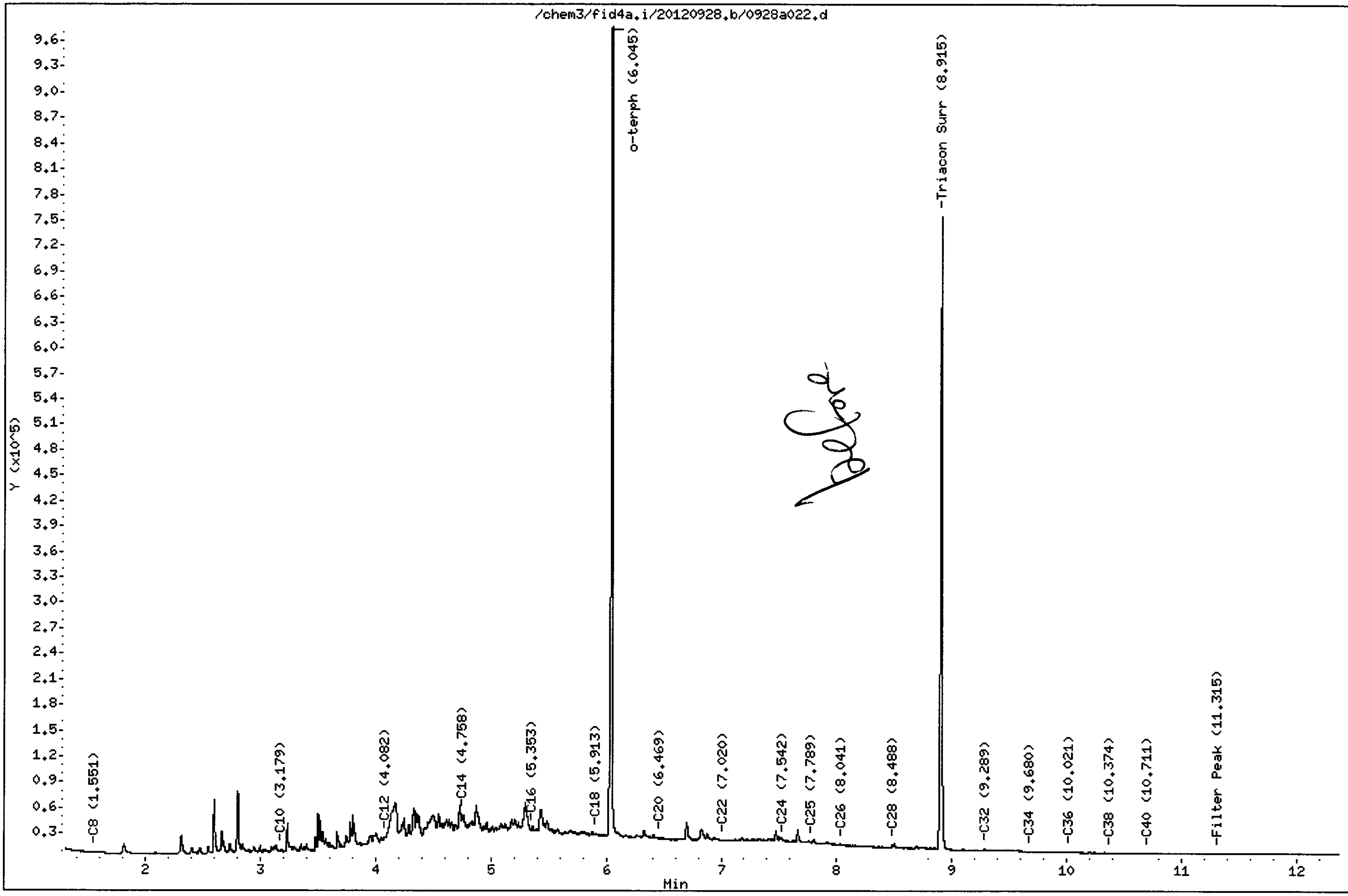
Sample Info: VK65F

Column phase: RTX-1

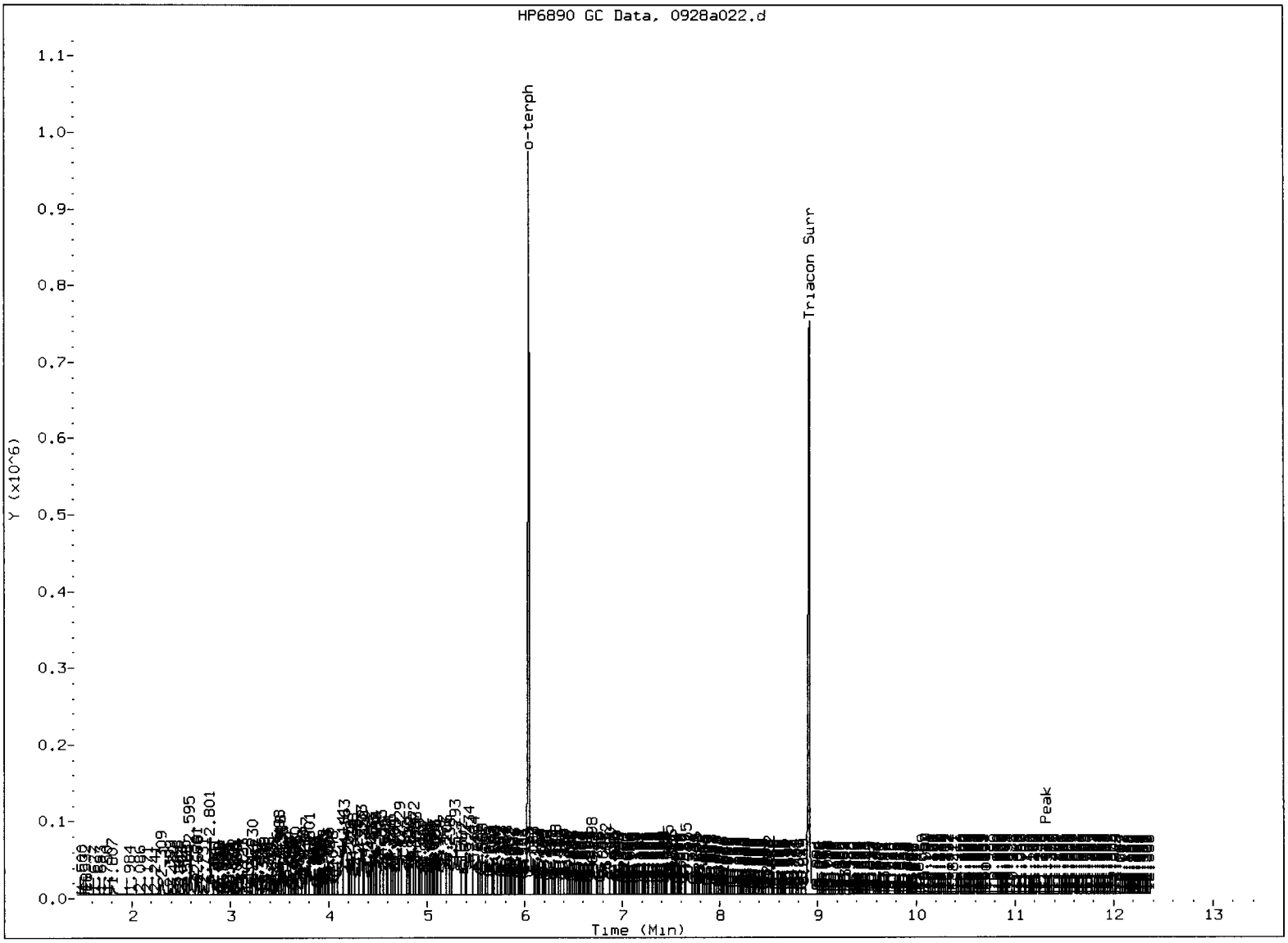
Instrument: fid4a.i

Operator: JR

Column diameter: 0.25



FID:4A-2C/RTX-1 VK65F FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a023.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65G
Client ID: MW-13S-092412
Injection: 28-SEP-2012 15:10

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.282	-0.011	11373	15051	WATPHG	(Tol-C12)	919293	49.64
C8	1.541	-0.010	1875	5118	WATPHD	(C12-C24)	3559171	222.25
C10	3.156	-0.010	2732	2552	WATPHM	(C24-C38)	745745	56.35
C12	4.082	0.008	15629	17074	AK102	(C10-C25)	4241311	224.06
C14	4.750	-0.007	33805	78484	AK103	(C25-C36)	611296	66.43
C16	5.360	0.018	21667	40797				
C18	5.913	0.008	15223	25321				
C20	6.470	-0.001	11135	9638	JET-A	(C10-C18)	3036772	560.65
C22	7.017	-0.004	10668	19204	MIN.OIL	(C24-C38)	745745	55.48
C24	7.548	0.005	10368	7428				
C25	7.792	-0.004	9352	8314				
C26	8.032	-0.005	8344	19100				
C28	8.488	-0.003	6301	9145				
C32	9.306	0.006	4814	11525				
C34	9.671	-0.003	2999	2067				
Filter Peak	11.325	0.002	1847	1136	BUNKERC	(C10-C38)	4896190	534.75
C36	10.025	-0.008	2271	1754				
C38	10.382	-0.002	2045	3077				
C40	10.722	-0.001	1753	971				
o-terph	6.046	0.002	967719	823374				
Triacon Surr	8.923	0.006	779658	832927	NAS DIES	(C10-C24)	4150445	226.50

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	823374	38.0	84.4
Triacontane	832927	44.8	99.6

JL 10/01/12

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a023.d

Date : 28-SEP-2012 15:10

Client ID: MW-13S-092412

Sample Info: VK65G

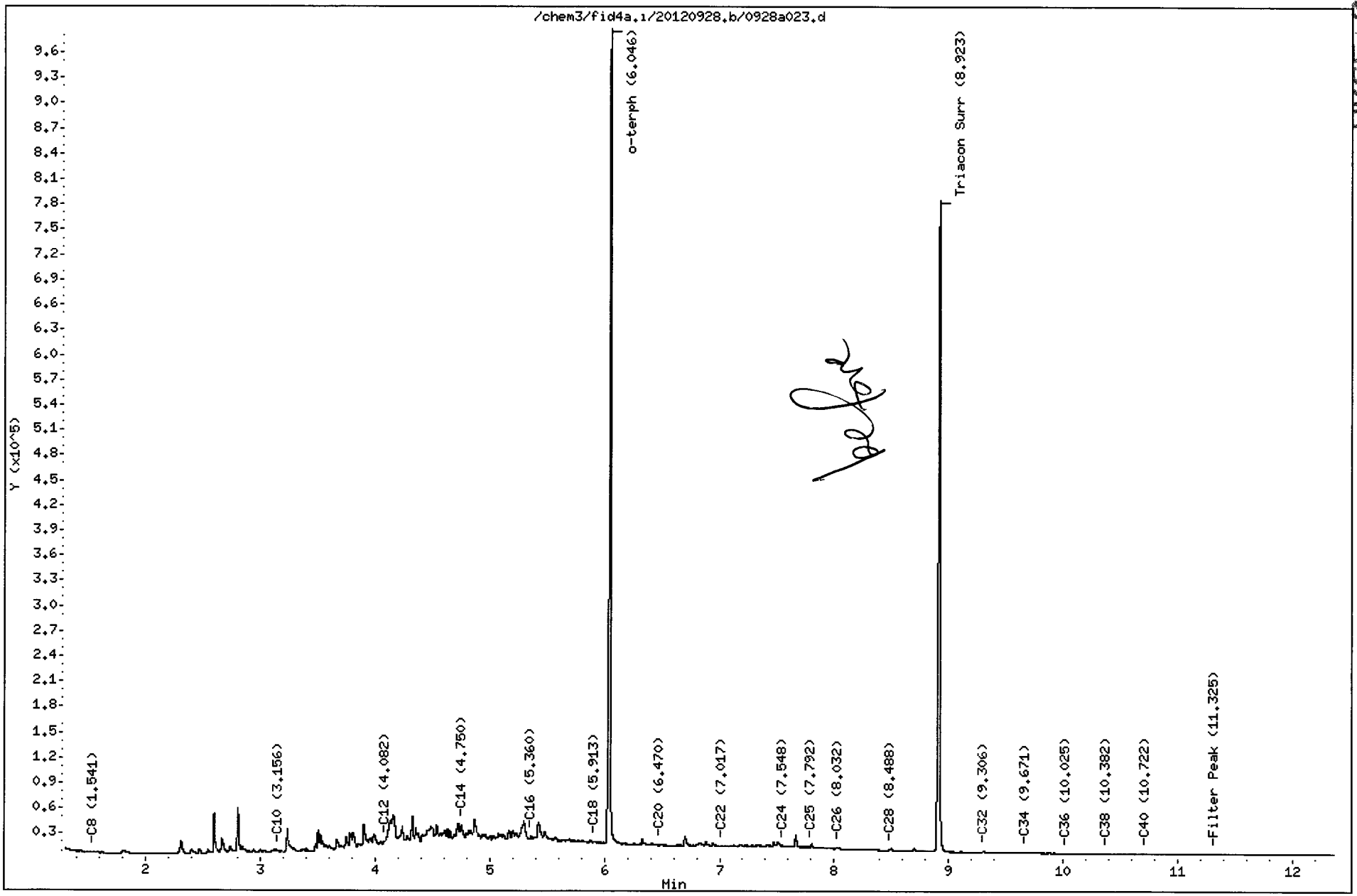
Column phase: RTX-1

Instrument: fid4a.i

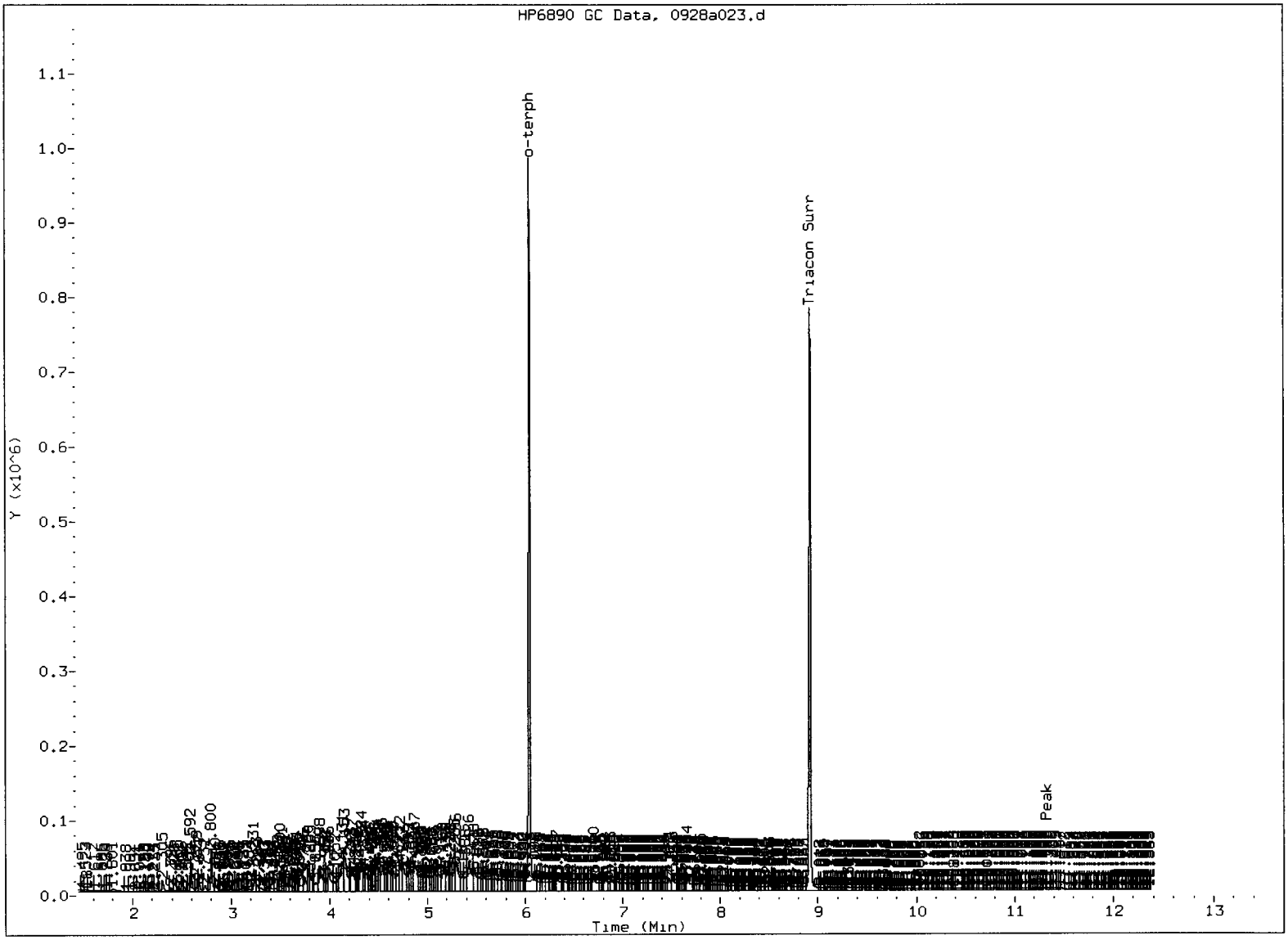
Operator: JR

Column diameter: 0.25

VK65 09139



FID:4A-2C/RTX-1 VK65G FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a024.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65H
Client ID: MW-12S-092412
Injection: 28-SEP-2012 15:31
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.271	-0.021	11377	20976	WATPHG	(Tol-C12)	700597	37.83
C8	1.587	0.036	1049	567	WATPHD	(C12-C24)	3652529	228.08
C10	3.183	0.017	2012	3617	WATPHM	(C24-C38)	837655	63.29
C12	4.052	-0.022	10255	14157	AK102	(C10-C25)	4063519	214.67
C14	4.752	-0.005	34032	78157	AK103	(C25-C36)	707770	76.91
C16	5.345	0.002	17291	5792				
C18	5.897	-0.007	14203	9872				
C20	6.467	-0.004	12074	14964	JET-A	(C10-C18)	2738775	505.64
C22	7.019	-0.003	12555	13088	MIN.OIL	(C24-C38)	837655	62.32
C24	7.537	-0.006	12802	17333				
C25	7.794	-0.002	11134	13458				
C26	8.027	-0.010	9355	12434				
C28	8.490	-0.001	7282	8509				
C32	9.310	0.010	4801	10518				
C34	9.671	-0.002	2775	988				
Filter Peak	11.320	-0.003	1661	759	BUNKERC	(C10-C38)	4806904	524.99
C36	10.039	0.005	2021	1939				
C38	10.388	0.003	1805	3177				
C40	10.734	0.011	1540	794				
o-terph	6.045	0.001	946896	759870				
Triacon Surr	8.927	0.009	739020	786215	NAS DIES	(C10-C24)	3969248	216.61

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	759870	35.1	77.9
Triacontane	786215	42.3	94.0

JK 10/01/12

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

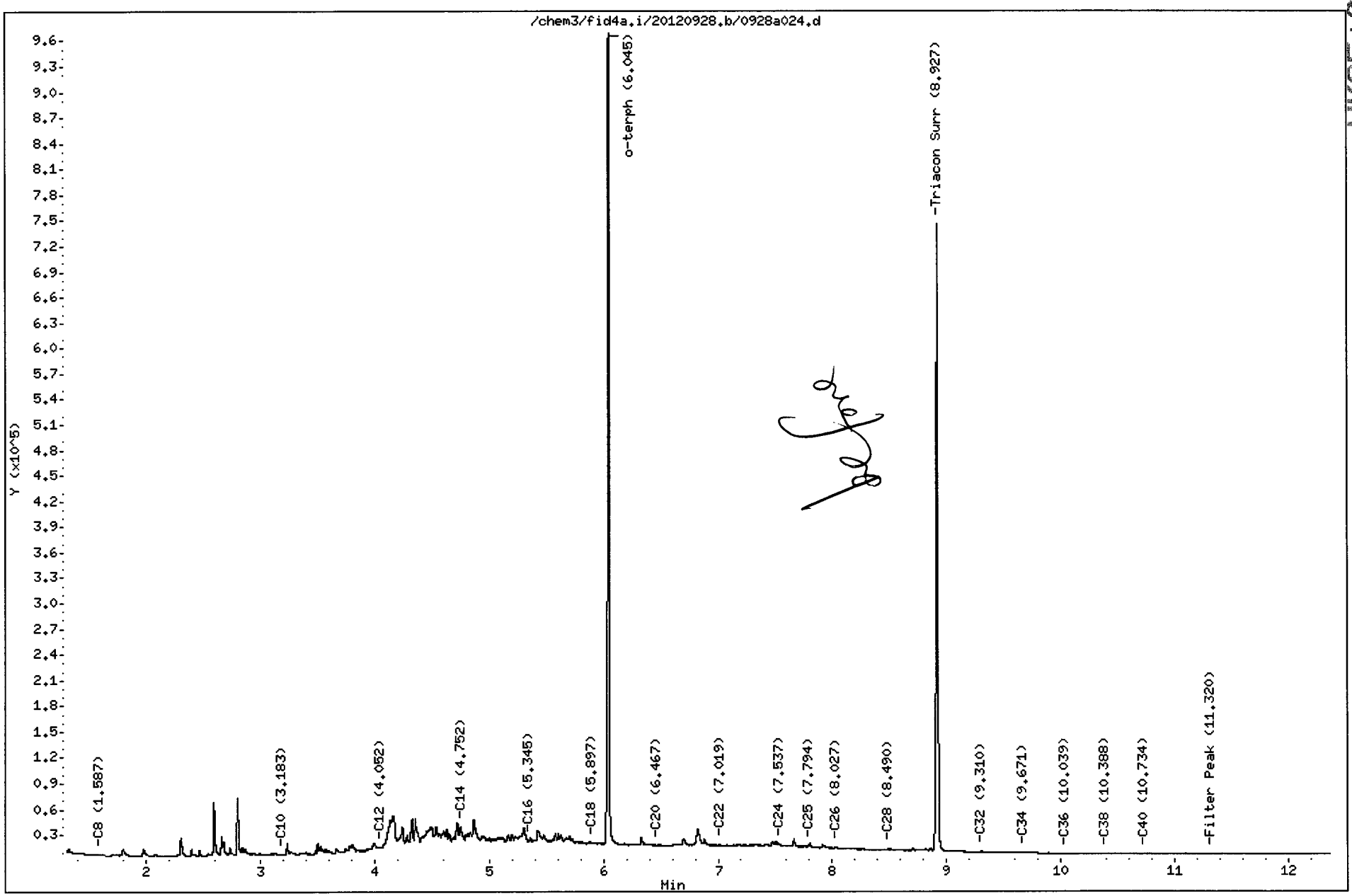
Data File: /chem3/fid4a.i/20120928.b/0928a024.d
Date : 28-SEP-2012 15:31
Client ID: MW-12S-092412
Sample Info: VK65H

Instrument: fid4a.i

Operator: JR
Column diameter: 0.25

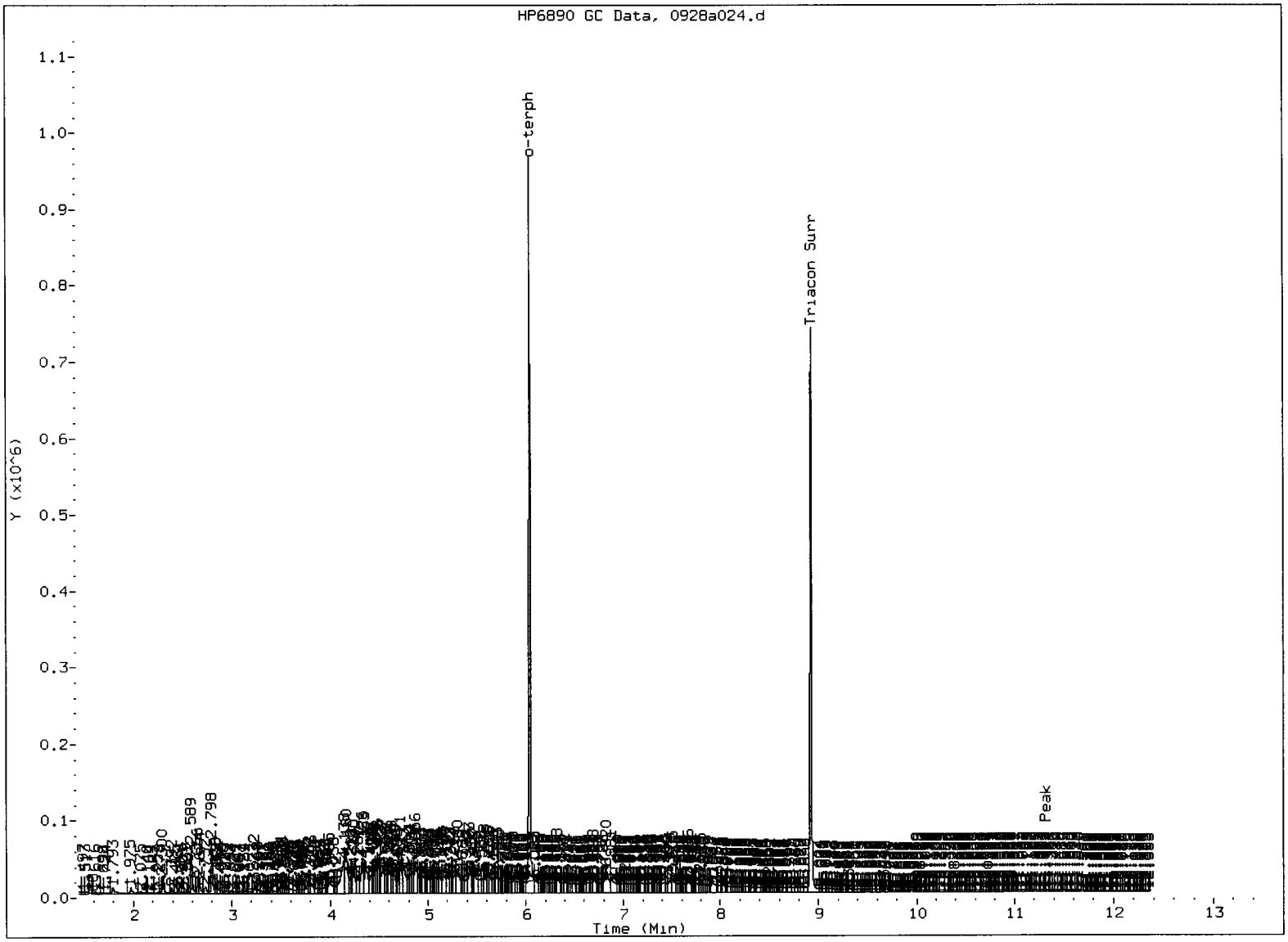
Column phase: RTX-1

VK65 00183



FID:4A-2C/RTX-1 VK65H

FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a025.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65I
Client ID: MW-11S-092412
Injection: 28-SEP-2012 15:53
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.293	0.000	12883	12272	WATPHG	(Tol-C12)	547807	29.58
C8	1.538	-0.013	2479	6940	WATPHD	(C12-C24)	1894326	~~118.29~~
C10	3.159	-0.007	1137	1146	WATPHM	(C24-C38)	722686	54.61
C12	4.092	0.018	7783	17659	AK102	(C10-C25)	2127734	112.40
C14	4.769	0.012	7350	1754	AK103	(C25-C36)	599505	65.15
C16	5.341	-0.001	8889	7751				
C18	5.919	0.014	9376	6270				
C20	6.469	-0.002	13689	30741	JET-A	(C10-C18)	1036875	191.43
C22	7.016	-0.006	10600	14955	MIN.OIL	(C24-C38)	722686	53.77
C24	7.558	0.015	9395	3721				
C25	7.790	-0.006	8539	3944				
C26	8.033	-0.004	6869	9941				
C28	8.489	-0.002	6437	11253				
C32	9.305	0.005	4793	12261				
C34	9.671	-0.003	2989	1522				
Filter Peak	11.321	-0.002	2030	2821	BUNKERC	(C10-C38)	2771823	302.73
C36	10.021	-0.012	2356	2377				
C38	10.371	-0.014	2292	4467				
C40	10.726	0.003	1960	2280				
o-terph	6.047	0.002	973773	881238				
Triacon Surr	8.923	0.006	761635	832880	NAS DIES	(C10-C24)	2049137	111.83

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	881238	40.7	90.4
Triacontane	832880	44.8	99.6

M Indicates the peak was manually integrated

JR 10/01/12

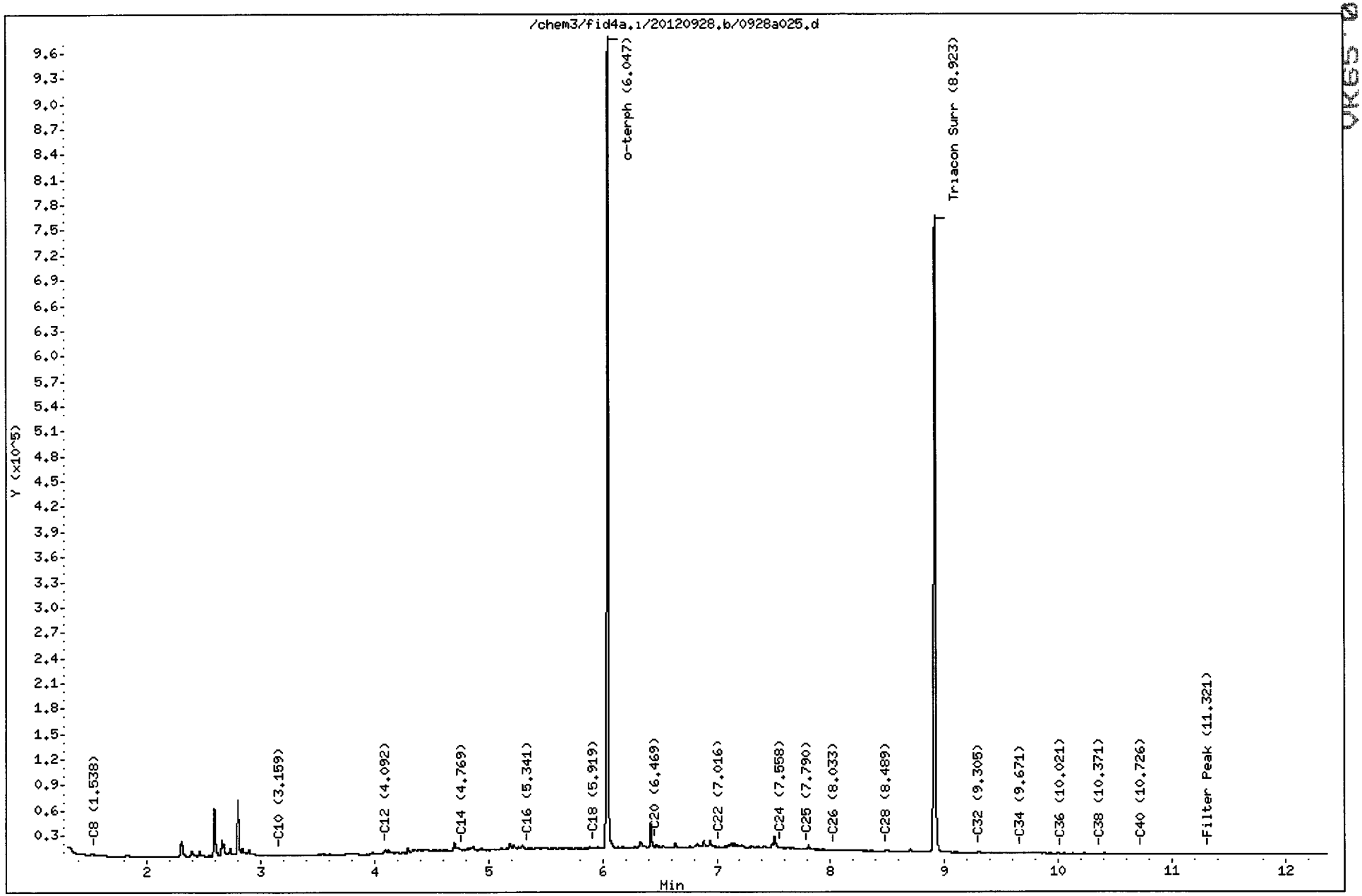
Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a025.d
Date : 28-SEP-2012 15:53
Client ID: MW-11S-092412
Sample Info: VK65I

Instrument: fid4a.i

Operator: JR
Column diameter: 0.25

Column phase: RTX-1



VK65 00136

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a026.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65J
Client ID: MW-12D-092412
Injection: 28-SEP-2012 16:14
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.281	-0.012	13897	18441	WATPHG	(Tol-C12)	598110	32.30
C8	1.521	-0.030	1759	3976	WATPHD	(C12-C24)	1731454	108.12
C10	3.159	-0.007	3256	4540	WATPHM	(C24-C38)	1071695	80.98
C12	4.065	-0.009	4732	6128	AK102	(C10-C25)	2069554	109.33
C14	4.743	-0.014	7749	4097	AK103	(C25-C36)	896851	97.46
C16	5.347	0.005	12339	17501				
C18	5.896	-0.009	9160	11177				
C20	6.491	0.020	10750	17179	JET-A	(C10-C18)	1014994	187.39
C22	7.019	-0.003	12113	18288	MIN.OIL	(C24-C38)	1071695	79.74
C24	7.539	-0.004	17131	34921				
C25	7.792	-0.004	17899	19524				
C26	8.032	-0.005	16389	38247				
C28	8.489	-0.002	15676	35878				
C32	9.296	-0.004	8227	14560				
C34	9.669	-0.004	6995	20033				
Filter Peak	11.301	-0.022	1885	9231	BUNKERC	(C10-C38)	3026542	330.55
C36	10.034	0.001	4123	12240				
C38	10.390	0.006	3393	9488				
C40	10.736	0.013	2761	9591				
o-terph	6.048	0.004	986764	855128				
Triacon Surr	8.920	0.003	773123	830429	NAS DIES	(C10-C24)	1954847	106.68

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	855128	39.5	87.7
Triacontane	830429	44.7	99.3

M Indicates the peak was manually integrated

JM 10/01/12

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a026.d

Date : 28-SEP-2012 16:14

Client ID: MW-12D-092412

Sample Info: VK65J

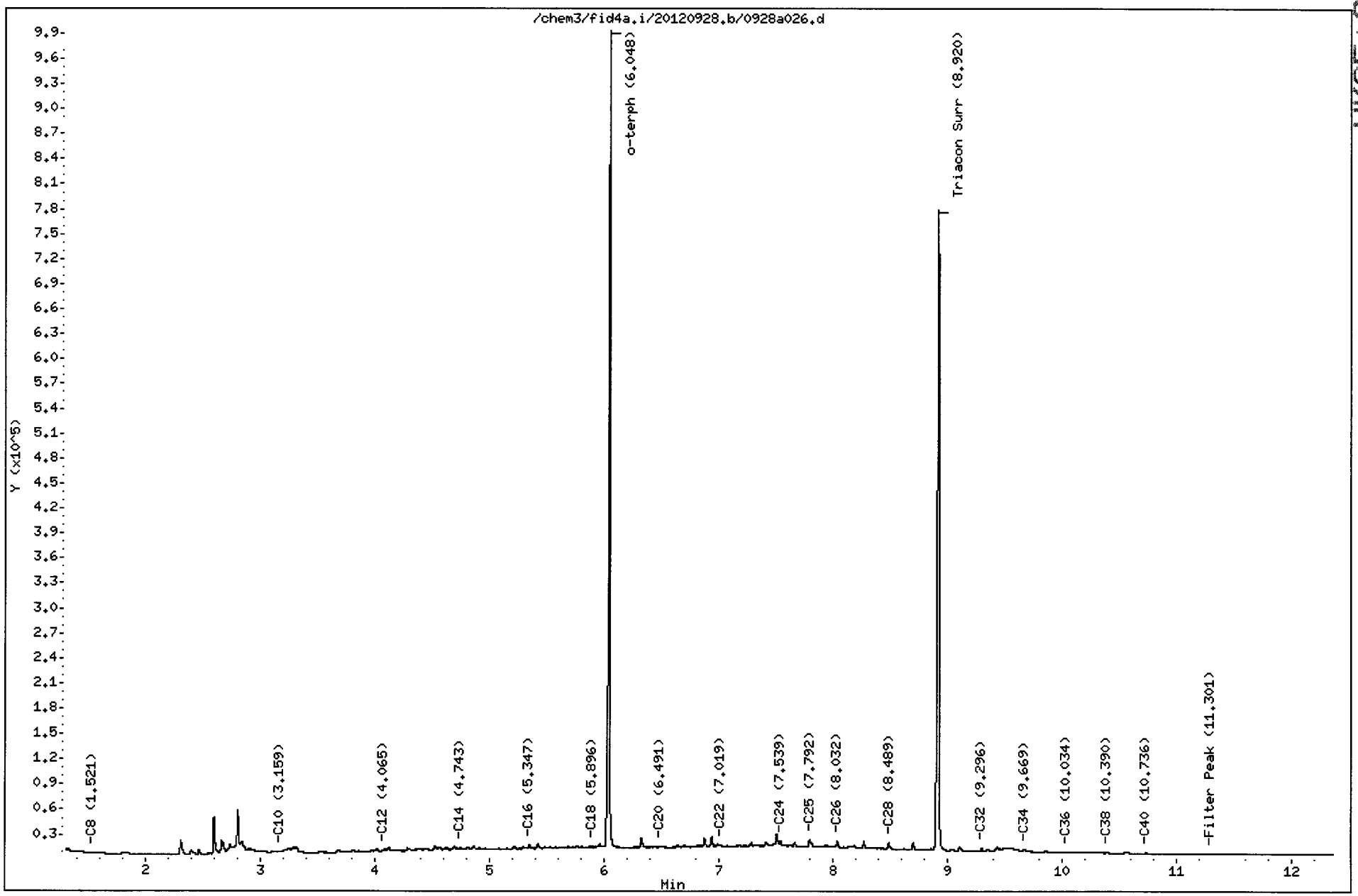
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR

Column diameter: 0.25

VK65:50188



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a027.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65K
Client ID: MW-11D-092412
Injection: 28-SEP-2012 16:36
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.282	-0.011	15642	19540	WATPHG	(Tol-C12)	540365	29.18
C8	1.573	0.022	5170	8199	WATPHD	(C12-C24)	525934	32.84
C10	3.159	-0.007	1773	3104	WATPHM	(C24-C38)	399958	30.22
C12	4.075	0.001	1119	1320	AK102	(C10-C25)	714733	37.76
C14	4.751	-0.006	1479	933	AK103	(C25-C36)	342371	37.21
C16	5.332	-0.010	2629	4601				
C18	5.901	-0.003	3104	4652				
C20	6.475	0.004	2974	1951	JET-A	(C10-C18)	361276	66.70
C22	7.014	-0.008	3541	4351	MIN.OIL	(C24-C38)	399958	29.76
C24	7.562	0.019	4088	7891				
C25	7.807	0.011	7935	15357				
C26	8.046	0.009	3064	957				
C28	8.488	-0.004	4625	14320				
C32	9.301	0.000	2584	5744				
C34	9.678	0.005	3674	7854				
Filter Peak	11.313	-0.010	1811	4490	BUNKERC	(C10-C38)	1087117	118.73
C36	10.036	0.003	1698	2146				
C38	10.394	0.009	1414	1553				
C40	10.715	-0.008	1557	1712				
o-terph	6.046	0.002	872112	725560				
Triacon Surr	8.920	0.002	671398	678120	NAS DIES	(C10-C24)	687159	37.50

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	725560	33.5	74.4
Triacontane	678120	36.5	81.1

M Indicates the peak was manually integrated

JL 10/01/12

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a027.d

Date : 28-SEP-2012 16:36

Client ID: MW-11D-092412

Sample Info: VK65K

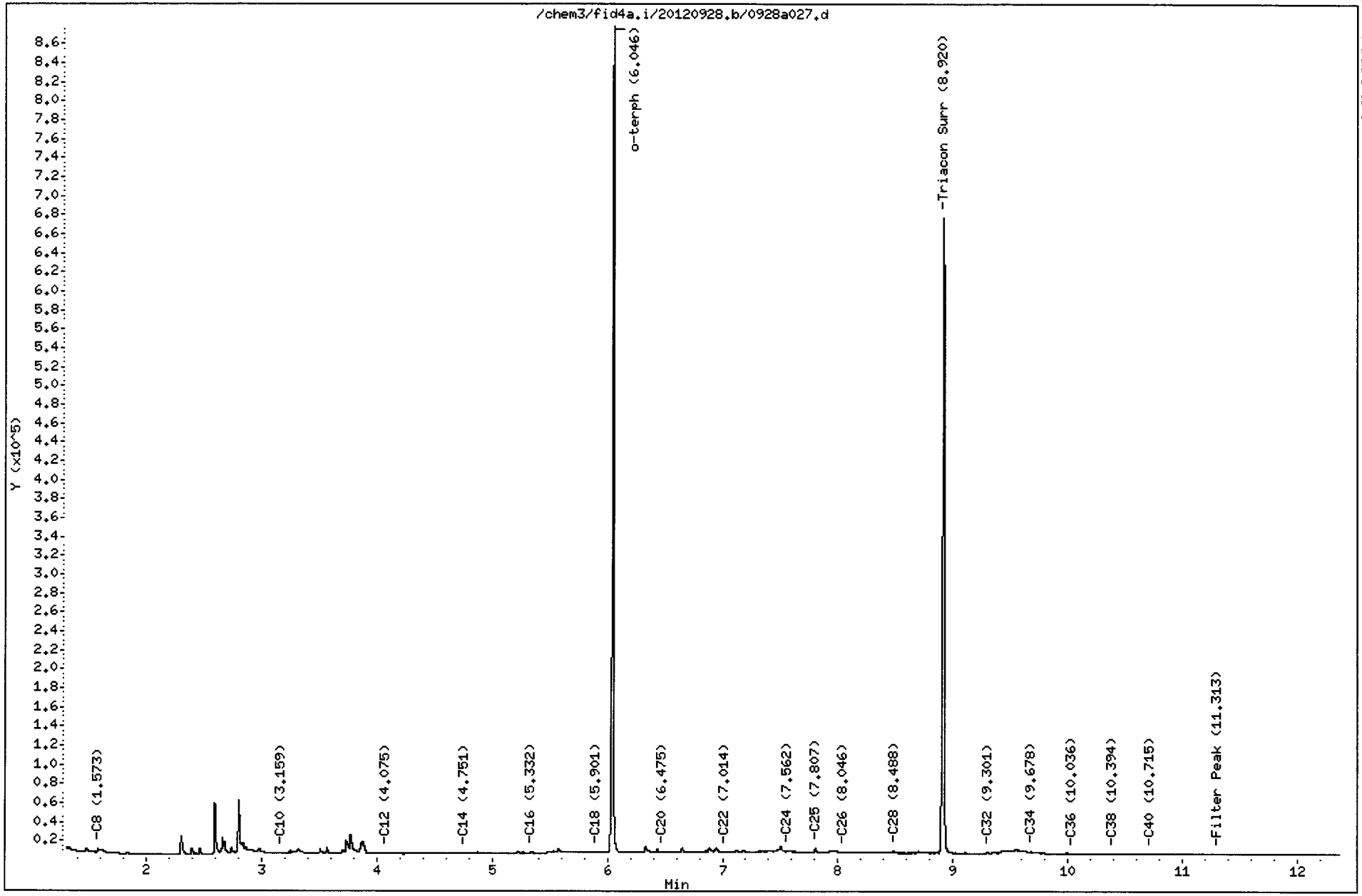
Instrument: fid4a.i

Operator: JR

Column phase: RTX-1

Column diameter: 0.25

VK65 00199



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a028.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65L
Client ID: MW-13D-092412
Injection: 28-SEP-2012 16:57
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.272	-0.021	15393	21564	WATPHG	(Tol-C12)	3626452	195.83
C8	1.537	-0.014	4500	10461	WATPHD	(C12-C24)	6850604	427.78
C10	3.176	0.010	13611	12954	WATPHM	(C24-C38)	4783874	361.48
C12	4.070	-0.004	29029	55090	AK102	(C10-C25)	10137295	535.53
C14	4.767	0.010	52259	89003	AK103	(C25-C36)	4154781	451.50
C16	5.360	0.017	34148	41450				
C18	5.898	-0.006	28121	18197				
C20	6.469	-0.002	26796	39439	JET-A	(C10-C18)	7143359	1318.82
C22	7.020	-0.001	27504	34046	MIN.OIL	(C24-C38)	4783874	355.92
C24	7.540	-0.004	44971	58150				
C25	7.794	-0.002	43716	20341				
C26	8.032	-0.005	44730	95901				
C28	8.486	-0.005	44953	91954				
C32	9.296	-0.005	35629	49685				
C34	9.671	-0.002	34570	101632				
Filter Peak	11.314	-0.009	3805	4971	BUNKERC	(C10-C38)	14638654	1598.79
C36	10.026	-0.007	22579	34693				
C38	10.376	-0.008	18026	26979				
C40	10.715	-0.008	12265	28906				
o-terph	6.047	0.002	971016	800255				
Triacon Surr	8.920	0.002	785780	792167	NAS DIES	(C10-C24)	9854780	537.81

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	800255	36.9	82.1 M
Triacontane	792167	42.6	94.7 M

JL 10/01/12

M Indicates the peak was manually integrated

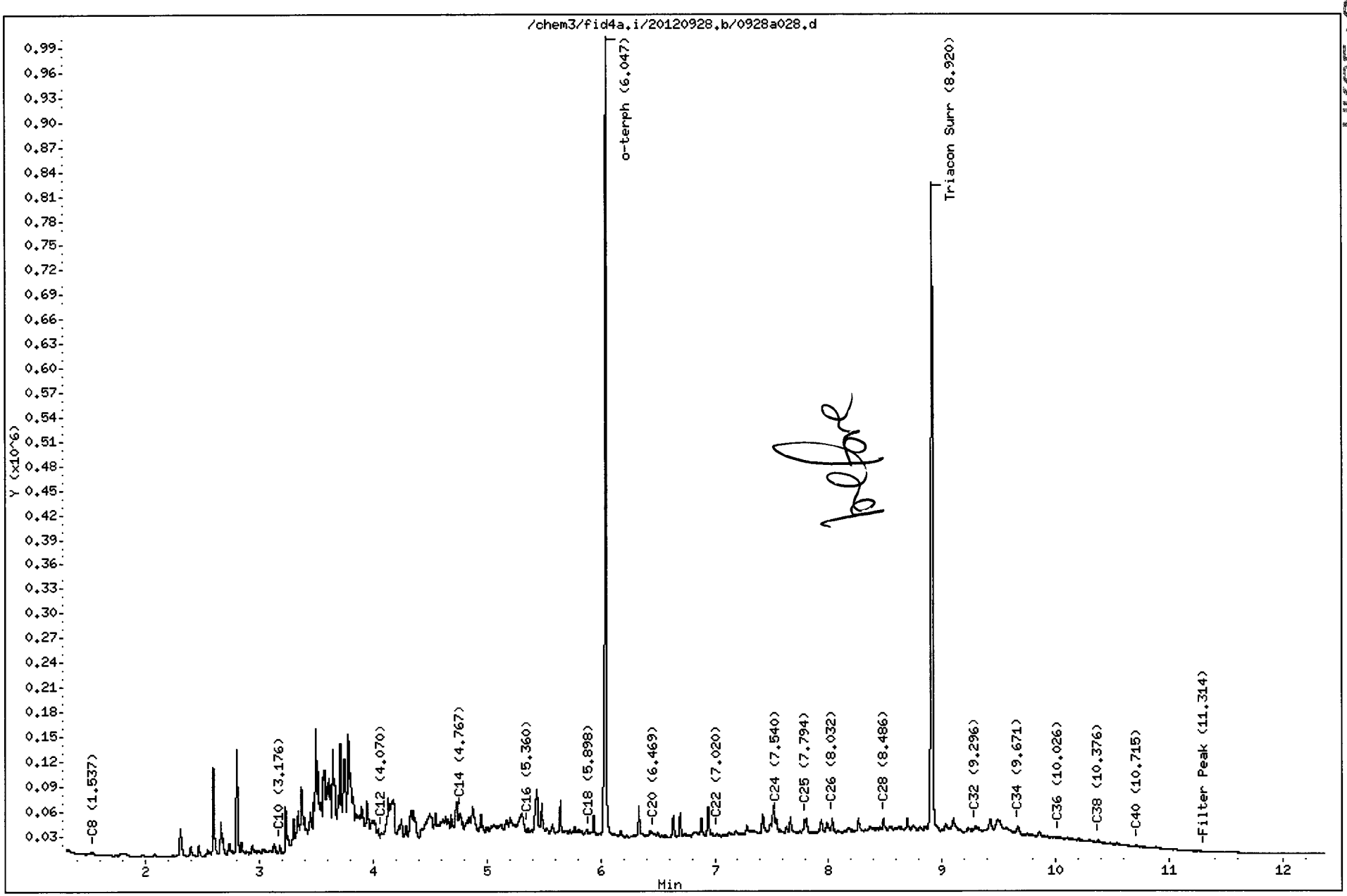
Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a028.d
Date : 28-SEP-2012 16:57
Client ID: MW-13D-092412
Sample Info: VK65L

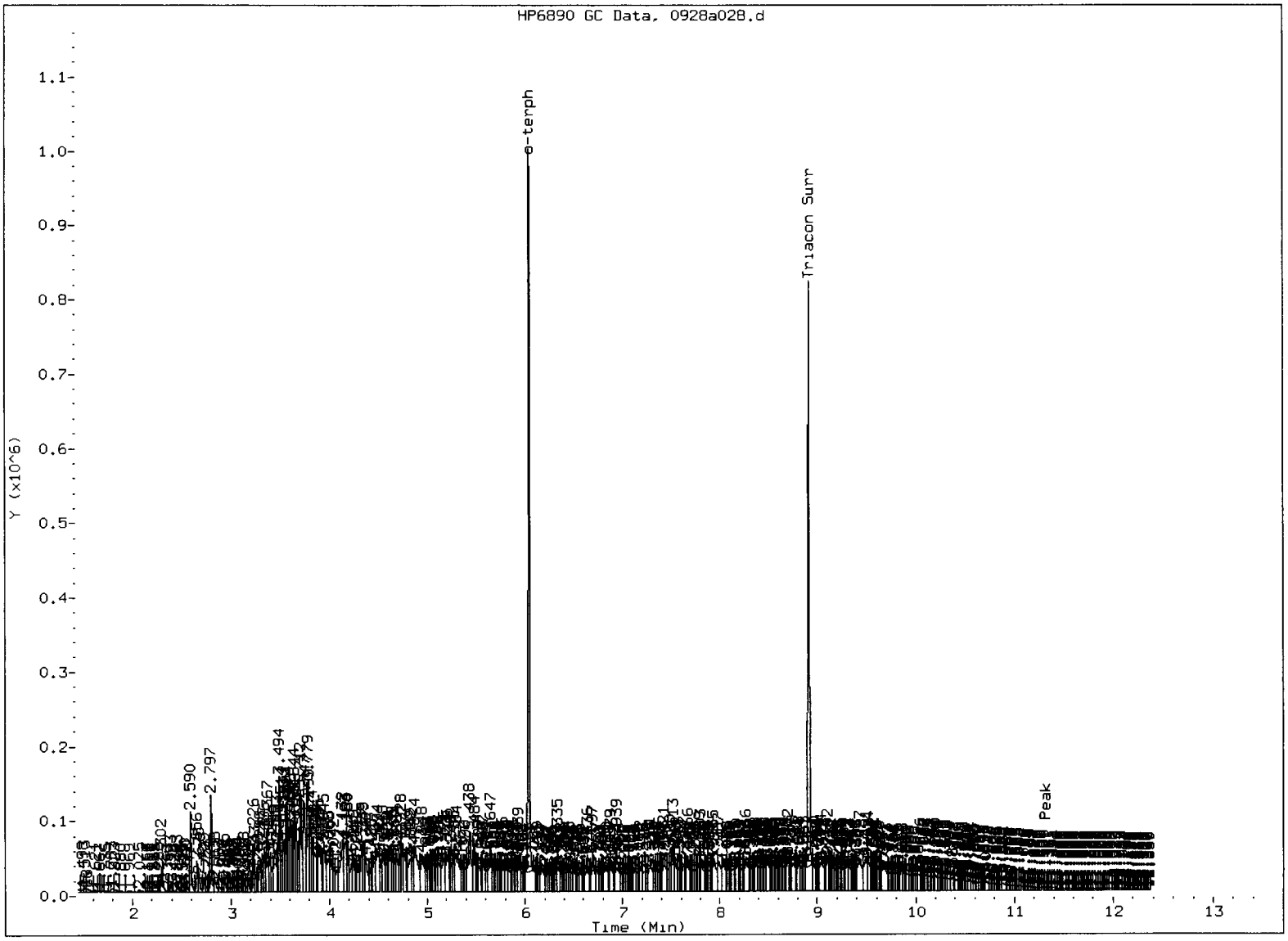
Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

VK65-091492



FID:4A-2C/RTX-1 VK65L FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a029.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65M
Client ID: MW-DUP-092412
Injection: 28-SEP-2012 17:18
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.281	-0.011	15623	22804	WATPHG	(Tol-C12)	1269693	68.57
C8	1.540	-0.011	2927	4231	WATPHD	(C12-C24)	7309937	456.46
C10	3.181	0.015	4654	8262	WATPHM	(C24-C38)	1331197	100.59
C12	4.078	0.004	26029	31525	AK102	(C10-C25)	8289004	437.89
C14	4.750	-0.007	77835	178381	AK103	(C25-C36)	1095021	119.00
C16	5.364	0.022	40512	85085				
C18	5.917	0.012	36397	96308				
C20	6.468	-0.003	22155	10493	JET-A	(C10-C18)	5985357	1105.02
C22	7.025	0.003	19666	31569	MIN.OIL	(C24-C38)	1331197	99.04
C24	7.567	0.024	20911	38991				
C25	7.804	0.008	20975	31579				
C26	8.029	-0.008	16043	21074				
C28	8.486	-0.006	11419	16684				
C32	9.289	-0.011	7104	16421				
C34	9.679	0.006	4910	6856				
Filter Peak	11.320	-0.003	2222	1322	BUNKERC	(C10-C38)	9442830	1031.32
C36	10.043	0.010	3413	3446				
C38	10.377	-0.008	2891	5519				
C40	10.737	0.014	2522	802				
o-terph	6.045	0.001	890012	742419				
Triacon Surr	8.915	-0.002	746919	784879	NAS DIES	(C10-C24)	8111632	442.68

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	742419	34.3	76.1 M
Triacontane	784879	42.2	93.8

M Indicates the peak was manually integrated

JR 10/01/12

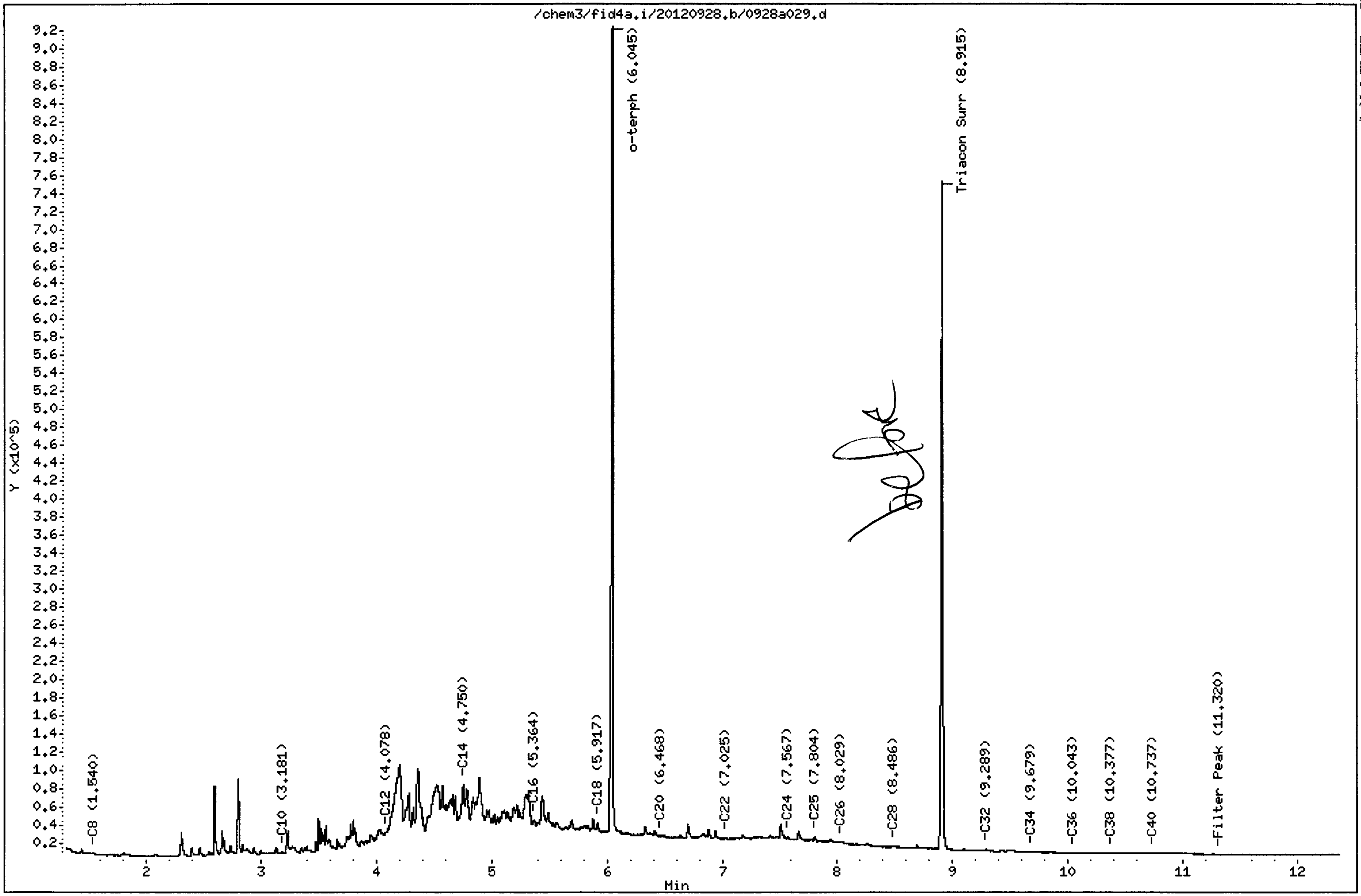
Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a029.d
Date : 28-SEP-2012 17:18
Client ID: MW-DUP-092412
Sample Info: VK65M

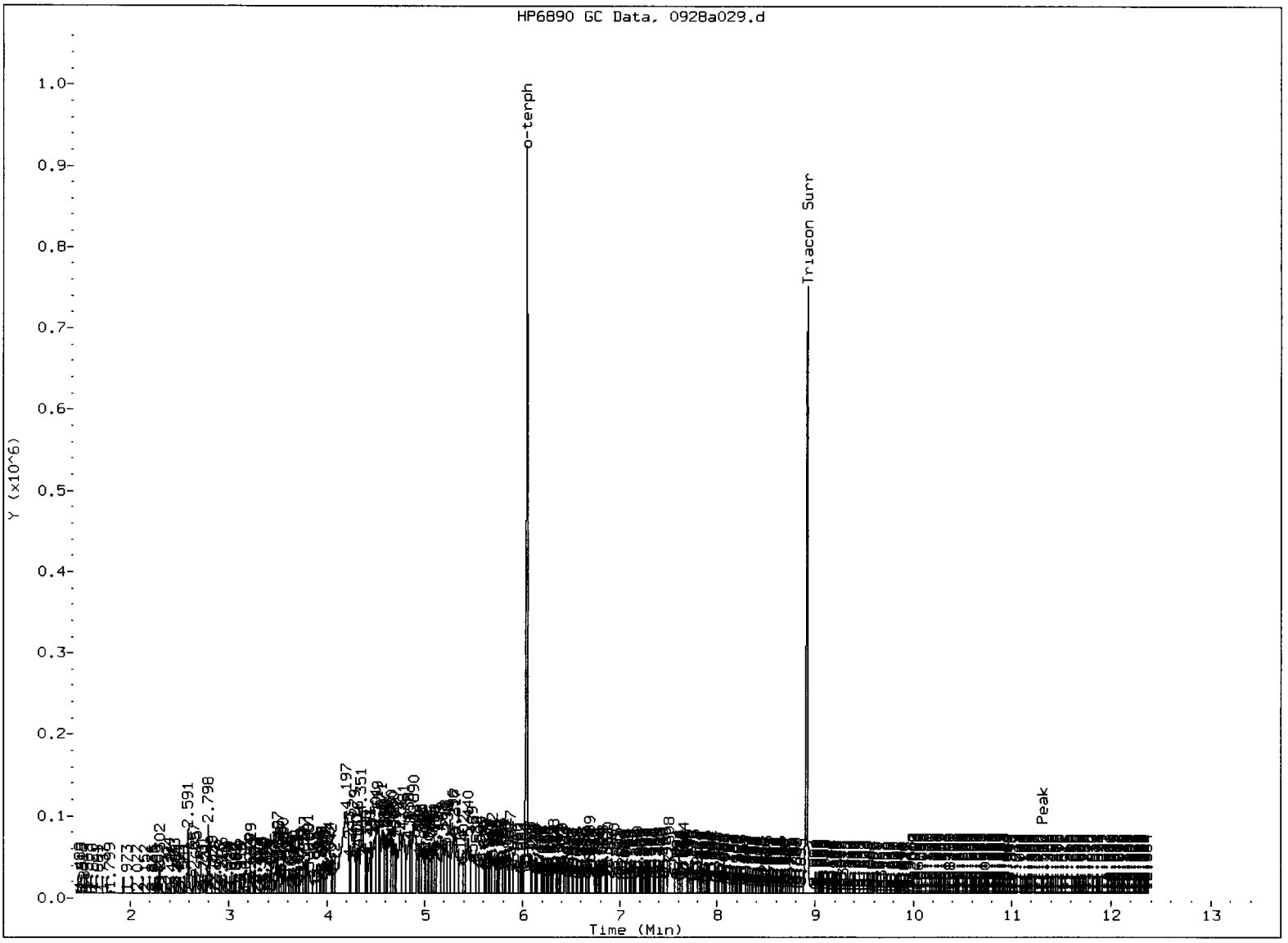
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR
Column diameter: 0.25



FID:4A-2C/RTX-1 VK65M FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

ANALYTICAL RESOURCES INCORPORATED

HCID SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510

Client ID	O-TER	TOT OUT
MB-092712	90.7%	0
LCS-092712	81.8%	0
LCSD-092712	81.3%	0
MW-15D-092412	76.9%	0
MW-16D-092412	82.8%	0
MW-14D-092412	81.8%	0
MW-15S-092412	82.8%	0
MW-16S-092412	81.0%	0
MW-14S-092412	78.5%	0
MW-13S-092412	84.4%	0
MW-12S-092412	77.9%	0
MW-11S-092412	90.4%	0
MW-12D-092412	87.7%	0
MW-11D-092412	74.4%	0
MW-13D-092412	82.1%	0
MW-DUP-092412	76.1%	0

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(55-110)	(50-150)

Prep Method: SW3510C
Log Number Range: 12-18405 to 12-18417

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Page 1 of 1

Sample ID: LCS-092712
LCS/LCSD

Lab Sample ID: LCS-092712
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/01/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Date Extracted LCS/LCSD: 09/27/12

Date Analyzed LCS: 09/28/12 11:35
LCSD: 09/28/12 11:57
Instrument/Analyst LCS: FID/JGR
LCSD: FID/JGR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.51	3.00	83.7%	2.47	3.00	82.3%	1.6%

HCID Surrogate Recovery

	LCS	LCSD
o-Terphenyl	81.8%	81.3%

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

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a013.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65LCSW1
Client ID: VK65LCSW1
Injection: 28-SEP-2012 11:35
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.273	-0.020	11187	15853	WATPHG	(Tol-C12)	4420504	238.72
C8	1.577	0.026	7142	16426	WATPHD	(C12-C24)	20104764	1255.42
C10	3.172	0.006	81651	77382	WATPHM	(C24-C38)	233961	17.68
C12	4.073	-0.001	198129	186941	AK102	(C10-C25)	22919768	1210.80
C14	4.754	-0.003	341854	456347	AK103	(C25-C36)	156118	16.97
C16	5.345	0.003	560695	712642				
C18	5.911	0.006	449890	667073				
C20	6.473	0.002	311569	500025	JET-A	(C10-C18)	16841902	3109.37
C22	7.021	-0.001	163956	255929	MIN.OIL	(C24-C38)	233961	17.41
C24	7.543	-0.001	41422	76047				
C25	7.794	-0.002	16561	21463				
C26	8.037	0.000	6782	12544				
C28	8.492	0.000	2734	2062				
C32	9.288	-0.012	141	66				
C34	9.696	0.022	278	721				
Filter Peak	11.328	0.005	1695	4771	BUNKERC	(C10-C38)	23086975	2521.48
C36	10.063	0.029	443	1576				
C38	10.369	-0.016	1450	2315				
C40	10.733	0.011	724	639				
o-terph	6.050	0.006	920081	797909				
Triacon Surr	8.924	0.007	778653	816421	NAS DIES	(C10-C24)	22853014	1247.16

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	797909	36.8	81.8 M
Triacontane	816421	43.9	97.6

JL 10/01/12

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

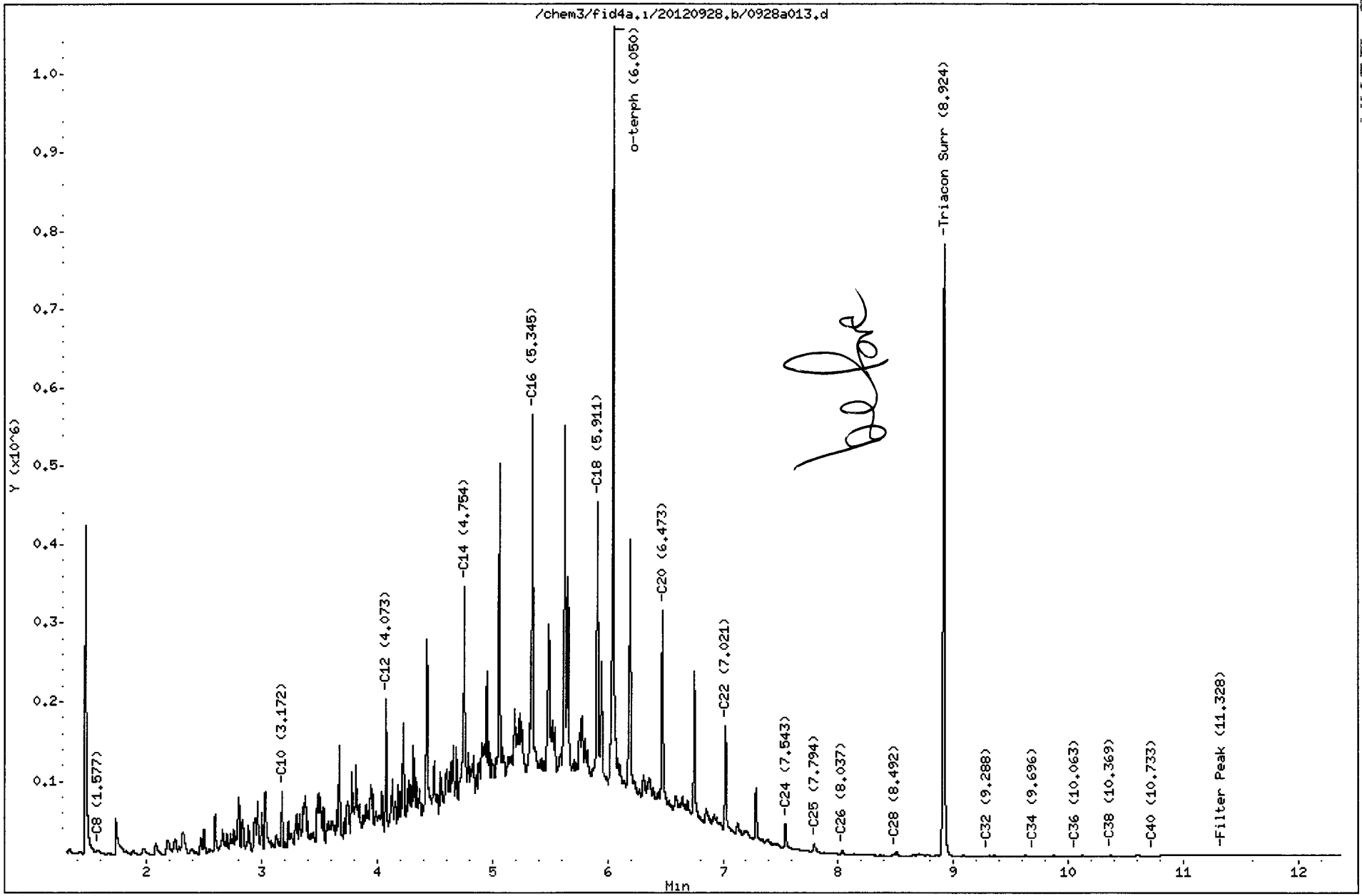
Data File: /chem3/fid4a.i/20120928.b/0928a013.d
Date : 28-SEP-2012 11:35
Client ID: VK65LCSW1
Sample Info: VK65LCSW1

Instrument: fid4a.i

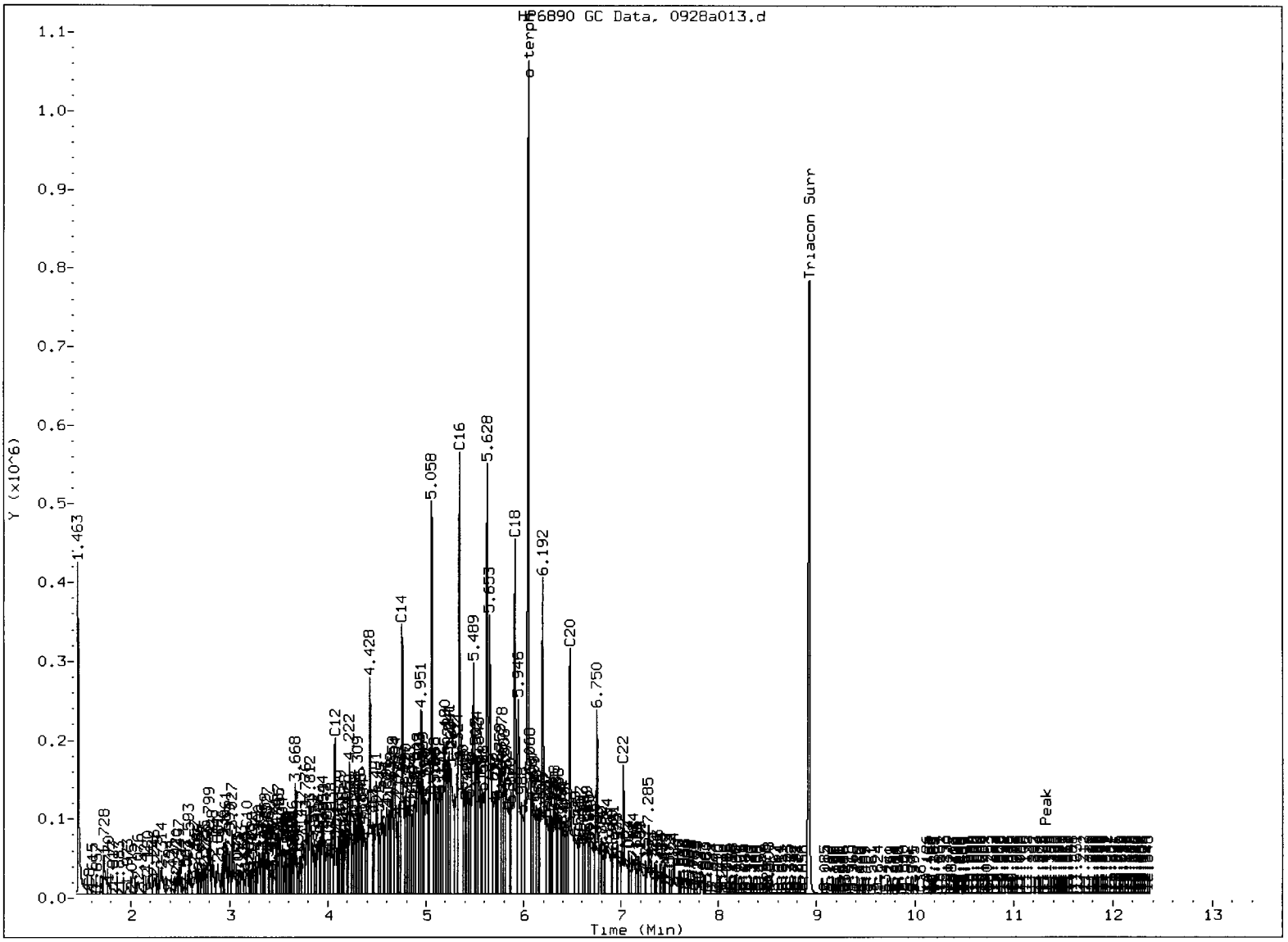
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

VK65:90209



FID:4A-2C/RTX-1 VK65LCSW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: 10/01/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20120928.b/0928a014.d
Method: /chem3/fid4a.i/20120928.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/01/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VK65LCSDW1
Client ID: VK65LCSDW1
Injection: 28-SEP-2012 11:57
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.280	-0.013	8734	11590	WATPHG	(Tol-C12)	4581612	247.42
C8	1.569	0.018	6813	15574	WATPHD	(C12-C24)	19740148	1232.65
C10	3.171	0.005	86150	79551	WATPHM	(C24-C38)	234908	17.75
C12	4.072	-0.002	202407	187564	AK102	(C10-C25)	22638662	1195.95
C14	4.753	-0.004	367019	354215	AK103	(C25-C36)	156114	16.97
C16	5.344	0.002	571989	571428				
C18	5.908	0.004	440300	561720				
C20	6.472	0.001	318809	523384	JET-A	(C10-C18)	16697090	3082.64
C22	7.019	-0.002	154706	234946	MIN.OIL	(C24-C38)	234908	17.48
C24	7.542	-0.001	40500	55462				
C25	7.792	-0.004	15903	20592				
C26	8.035	-0.002	6944	13608				
C28	8.490	-0.002	3012	1833				
C32	9.292	-0.008	160	78				
C34	9.700	0.027	307	725				
Filter Peak	11.318	-0.005	1293	1117	BUNKERC	(C10-C38)	22804871	2490.67
C36	10.037	0.004	302	156				
C38	10.384	-0.001	1561	2383				
C40	10.731	0.008	722	513				
o-terph	6.049	0.005	974464	792520				
Triacon Surr	8.923	0.005	779171	804823	NAS DIES	(C10-C24)	22569962	1231.72

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.80) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.38) AK103(7.80 - 10.03) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	792520	36.6	81.3 M
Triacontane	804823	43.3	96.2

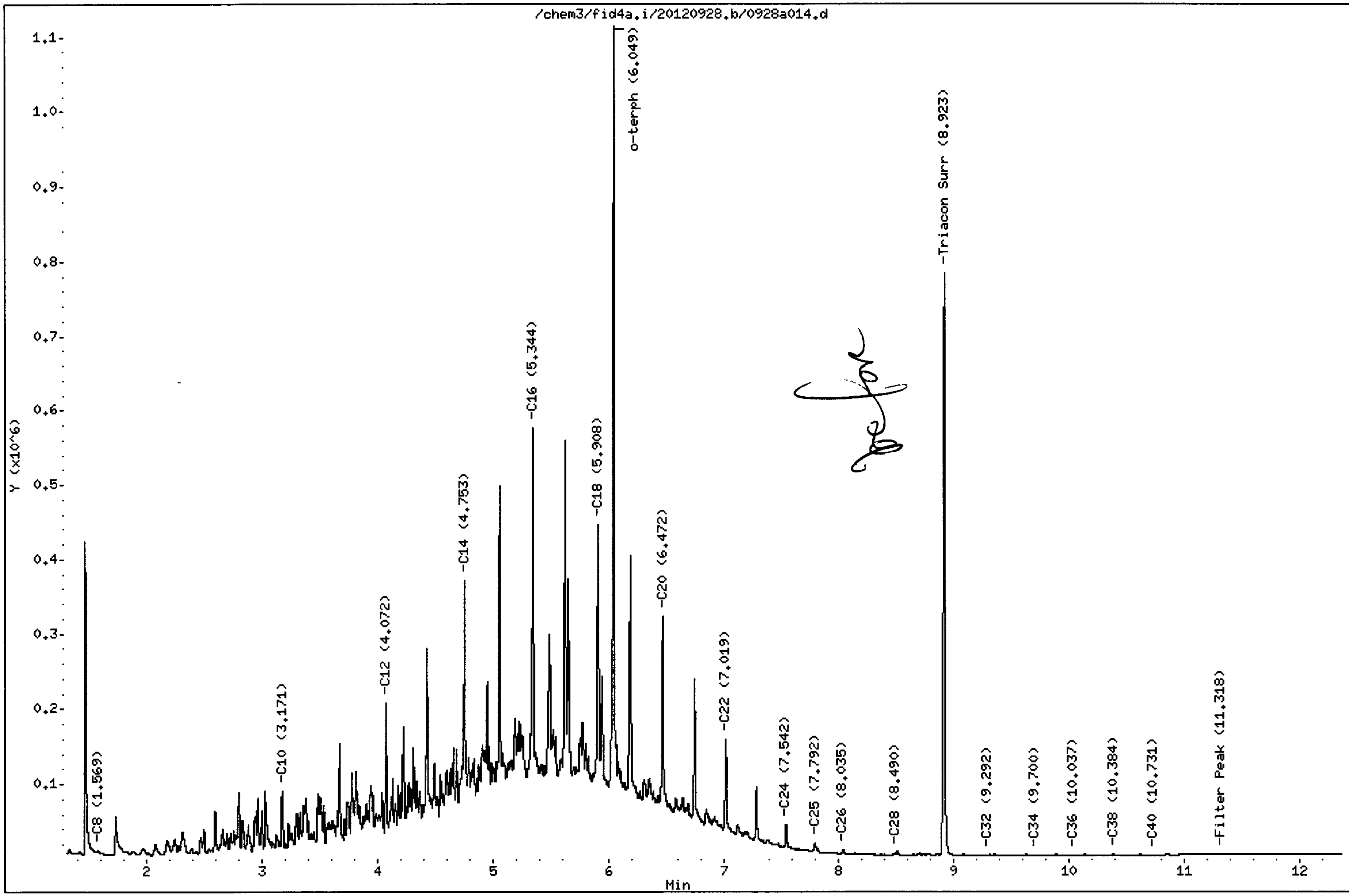
M Indicates the peak was manually integrated

10/01/12

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20120928.b/0928a014.d
Date : 28-SEP-2012 11:57
Client ID: VK65LCSDW1
Sample Info: VK65LCSDW1
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25



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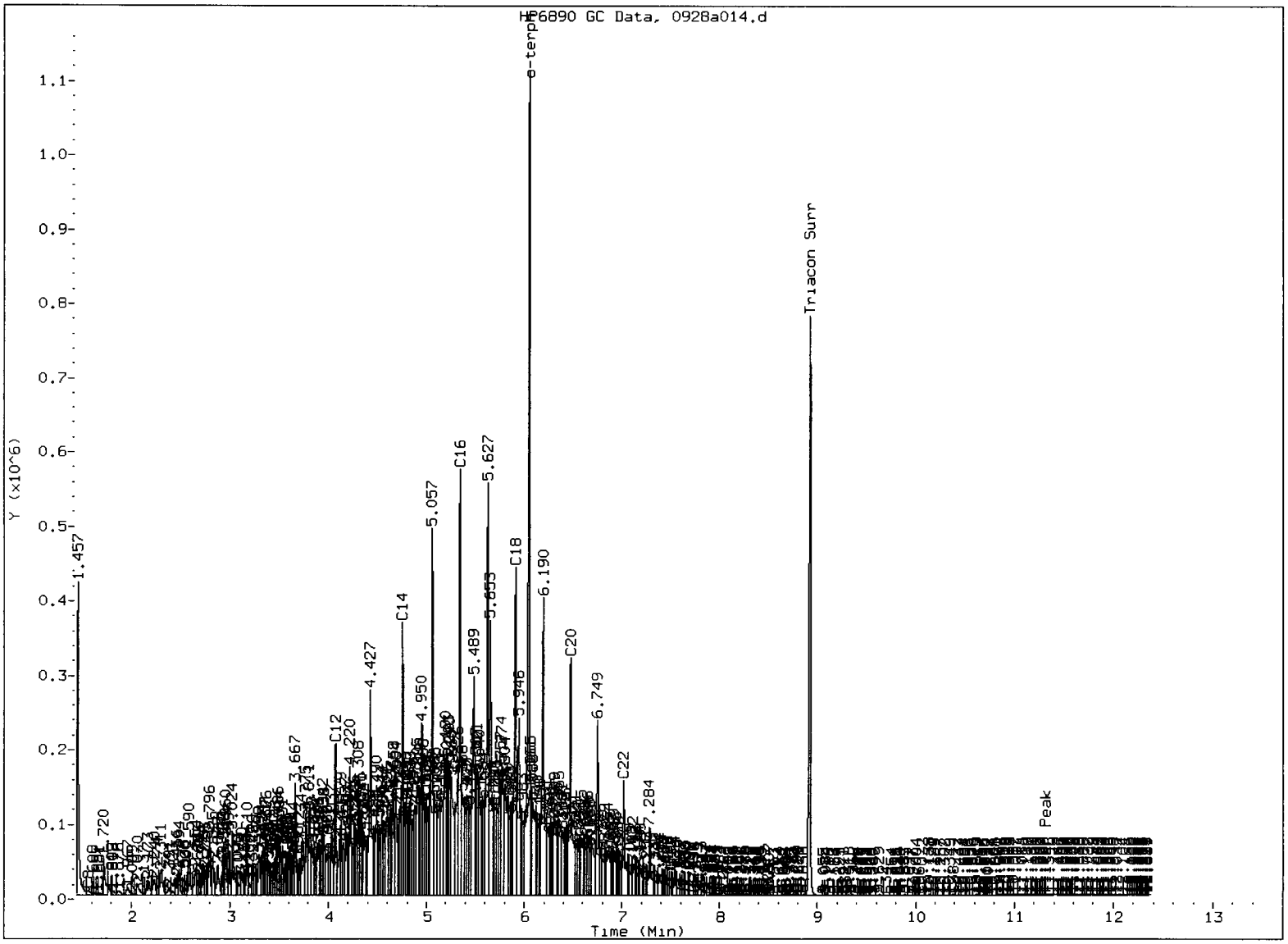


MANUAL INTEGRATION

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

Analyst: _____ Date: 10/21/12

ANALYTICAL RESOURCES INCORPORATED

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VK65
Matrix: Water — Project: Cornwall
Date Received: 09/25/12 — 0001020.400-510

ARI ID	Client ID	Sample Amt	Final Vol	Prep Date
12-18405-092712MB	Method Blank	500 mL	1.00 mL	09/27/12
12-18405-092712LCS	Lab Control	500 mL	1.00 mL	09/27/12
12-18405-092712LCSD	Lab Control Dup	500 mL	1.00 mL	09/27/12
12-18405-VK65A	MW-15D-092412	500 mL	1.00 mL	09/27/12
12-18406-VK65B	MW-16D-092412	500 mL	1.00 mL	09/27/12
12-18407-VK65C	MW-14D-092412	500 mL	1.00 mL	09/27/12
12-18408-VK65D	MW-15S-092412	500 mL	1.00 mL	09/27/12
12-18409-VK65E	MW-16S-092412	500 mL	1.00 mL	09/27/12
12-18410-VK65F	MW-14S-092412	500 mL	1.00 mL	09/27/12
12-18411-VK65G	MW-13S-092412	500 mL	1.00 mL	09/27/12
12-18412-VK65H	MW-12S-092412	500 mL	1.00 mL	09/27/12
12-18413-VK65I	MW-11S-092412	500 mL	1.00 mL	09/27/12
12-18414-VK65J	MW-12D-092412	500 mL	1.00 mL	09/27/12
12-18415-VK65K	MW-11D-092412	500 mL	1.00 mL	09/27/12
12-18416-VK65L	MW-13D-092412	500 mL	1.00 mL	09/27/12
12-18417-VK65M	MW-DUP-092412	500 mL	1.00 mL	09/27/12

ANALYTICAL RESOURCES INCORPORATED

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: VL48-Landau Associates
Project: Cornwall
0001020.400-510

Matrix: Water
Data Release Authorized:
Reported: 10/03/12

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range/Surrogate	RL	Result
MB-100112	Method Blank	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18901	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		84.9%
VL48A	MW-15D-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18901	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		82.1%
VL48B	MW-16D-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18902	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		72.1%
VL48C	MW-14D-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18903	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		79.8%
VL48D	MW-15S-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18904	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		75.8%
VL48E	MW-16S-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18905	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		73.5%
VL48F	MW-14S-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18906	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		76.8%
VL48G	MW-13D-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18907	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		81.2%
VL48H	MW-DUP-092412	10/01/12	10/02/12	1.00	Diesel Range	0.10	< 0.10 U
12-18908	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		74.3%

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.

VC
10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a022.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48MBW1
Client ID:
Injection: 02-OCT-2012 13:52
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.282	-0.010	15774	21638	WATPHG	(Tol-C12)	164297	8.87
C8	1.530	-0.020	2075	8525	WATPHD	(C12-C24)	40420	2.52
C10	3.165	0.000	301	490	WATPHM	(C24-C38)	70133	5.30
C12	4.065	-0.009	94	98	AK102	(C10-C25)	52273	2.76
C14	4.754	-0.001	225	292	AK103	(C25-C36)	51904	5.64
C16	5.365	0.023	776	2222				
C18	5.902	-0.001	342	589				
C20	6.463	-0.006	216	276	JET-A	(C10-C18)	38203	7.05
C22	7.010	-0.009	167	130	MIN.OIL	(C24-C38)	70133	5.22
C24	7.554	0.011	183	278				
C25	7.814	0.021	1745	2311				
C26	8.039	0.003	187	374				
C28	8.489	-0.001	668	544				
C32	9.320	0.019	1035	2875				
C34	9.671	-0.006	517	520				
Filter Peak	11.365	-0.004	1793	3022	BUNKERC	(C10-C38)	121307	13.25
C36	10.045	0.007	712	345				
C38	10.393	0.000	882	856				
C40	10.740	0.003	1250	1242				
o-terph	6.044	0.001	878628	827789				
Triacon Surr	8.921	0.005	783931	819191	NAS DIES	(C10-C24)	51174	2.79

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	827789	38.2	84.9
Triacontane	819191	44.1	97.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a022.d

Date : 02-OCT-2012 13:52

Client ID:

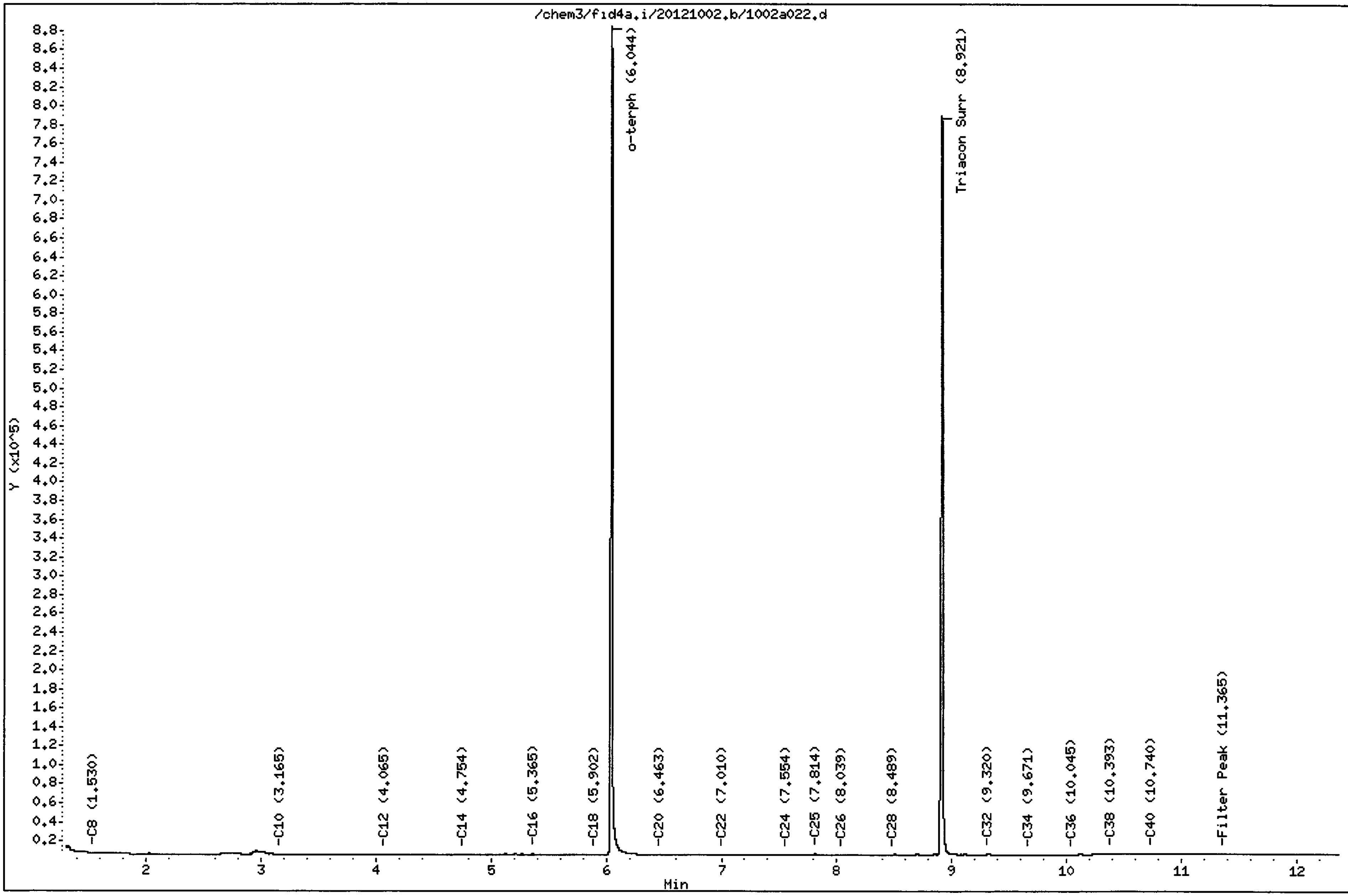
Sample Info: VL48MBW1

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR

Column diameter: 0.25



VC 10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a025.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48A
Client ID:
Injection: 02-OCT-2012 14:56
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.280	-0.012	10835	13360	WATPHG	(Tol-C12)	307327	16.60
C8	1.493	-0.058	5657	11394	WATPHD	(C12-C24)	194094	12.12
C10	3.177	0.011	1138	1201	WATPHM	(C24-C38)	76727	5.80
C12	4.085	0.011	2848	4679	AK102	(C10-C25)	412527	21.79
C14	4.755	-0.001	2782	5227	AK103	(C25-C36)	59588	6.48
C16	5.350	0.008	1887	2008				
C18	5.902	-0.001	1312	2129				
C20	6.463	-0.007	722	591	JET-A	(C10-C18)	362768	66.97
C22	7.034	0.015	792	2038	MIN.OIL	(C24-C38)	76727	5.71
C24	7.550	0.006	444	1098				
C25	7.815	0.021	3950	5414				
C26	8.037	0.001	404	639				
C28	8.489	-0.001	966	1015				
C32	9.311	0.010	1088	3343				
C34	9.675	-0.002	469	272				
Filter Peak	11.373	0.004	1469	1902	BUNKERC	(C10-C38)	486653	53.15
C36	10.043	0.004	607	247				
C38	10.393	0.000	754	428				
C40	10.753	0.016	1120	2815				
o-terph	6.044	0.001	880757	800880				
Triacon Surr	8.918	0.002	757300	792796	NAS DIES	(C10-C24)	409926	22.37

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	800880	37.0	82.1
Triacontane	792796	42.6	94.8

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a025.d

Page 1

Date : 02-OCT-2012 14:56

Client ID:

Instrument: fid4a.i

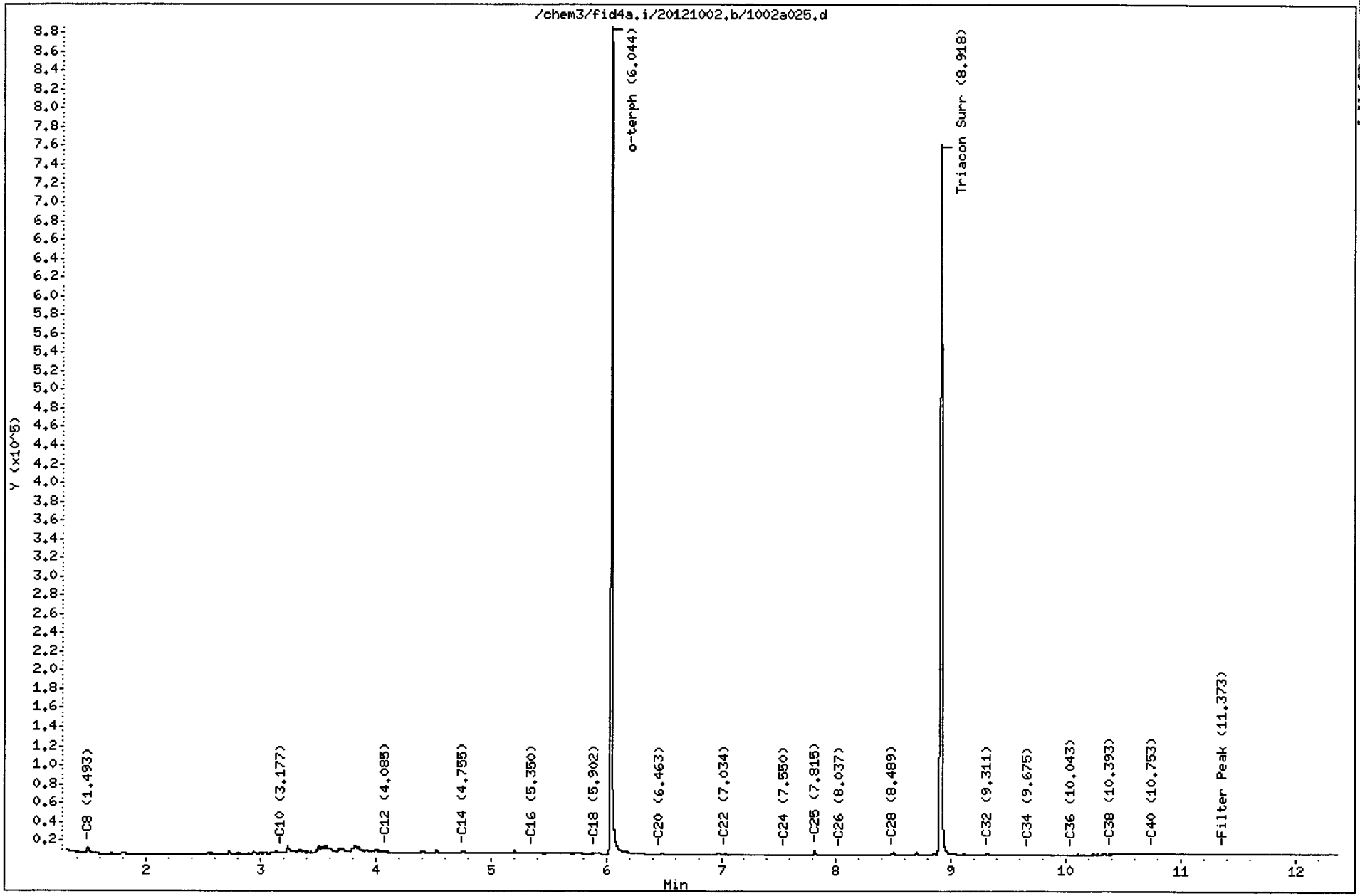
Sample Info: VL48A

Operator: JR

Column phase: RTX-1

Column diameter: 0.25

VK65:90210



PG 10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a026.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48B
Client ID:
Injection: 02-OCT-2012 15:17
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.284	-0.008	10699	14580	WATPHG	(Tol-C12)	157171	8.49
C8	1.615	0.065	921	2636	WATPHD	(C12-C24)	65724	4.10
C10	3.178	0.013	320	448	WATPHM	(C24-C38)	42288	3.20
C12	4.069	-0.005	783	1550	AK102	(C10-C25)	116114	6.13
C14	4.765	0.009	492	805	AK103	(C25-C36)	31669	3.44
C16	5.353	0.011	831	996				
C18	5.903	0.000	514	790				
C20	6.465	-0.004	275	239	JET-A	(C10-C18)	97115	17.93
C22	7.014	-0.005	202	115	MIN.OIL	(C24-C38)	42288	3.15
C24	7.552	0.009	157	231				
C25	7.776	-0.018	100	83				
C26	8.041	0.005	131	136				
C28	8.489	-0.001	719	649				
C32	9.315	0.014	767	2192				
C34	9.660	-0.017	237	82				
Filter Peak	11.371	0.002	1339	1565	BUNKERC	(C10-C38)	158165	17.27
C36	10.031	-0.008	380	272				
C38	10.400	0.007	585	494				
C40	10.733	-0.004	943	999				
o-terph	6.043	0.000	776593	703113				
Triacon Surr	8.916	0.001	727433	716687	NAS DIES	(C10-C24)	115876	6.32

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	703113	32.4	72.1
Triacontane	716687	38.6	85.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a026.d

Date : 02-OCT-2012 15:17

Client ID:

Sample Info: VL48B

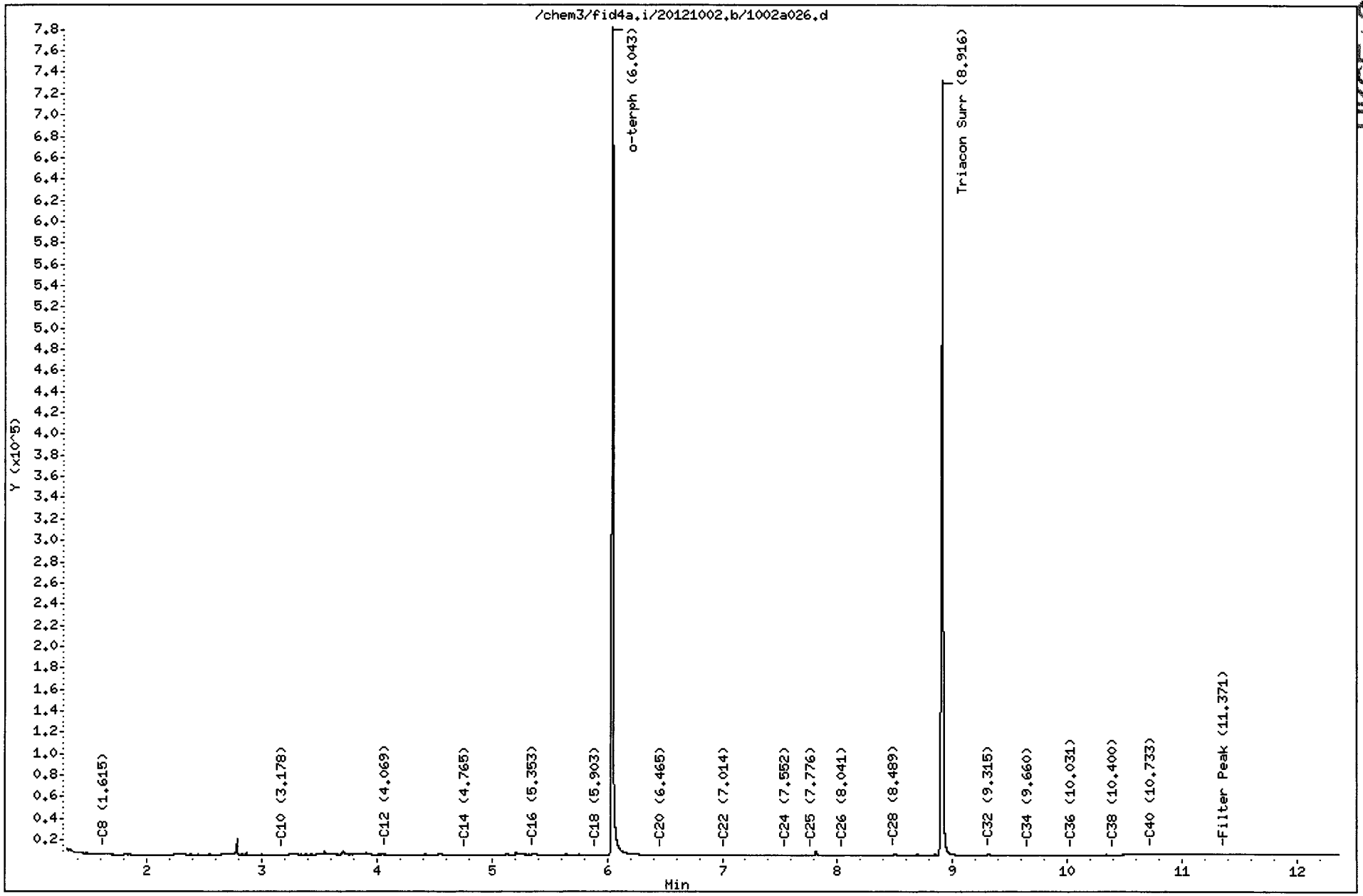
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR

Column diameter: 0.25

VK65:092112



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a027.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48C
Client ID:
Injection: 02-OCT-2012 15:38
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.284	-0.009	9345	12133	WATPHG	(Tol-C12)	208655	11.27
C8	1.531	-0.019	1352	4518	WATPHD	(C12-C24)	147860	9.23
C10	3.191	0.025	961	1327	WATPHM	(C24-C38)	153819	11.62
C12	4.077	0.003	1464	859	AK102	(C10-C25)	277464	14.66
C14	4.756	0.001	1468	1820	AK103	(C25-C36)	129331	14.05
C16	5.351	0.008	1197	950				
C18	5.904	0.001	719	1245				
C20	6.464	-0.005	523	355	JET-A	(C10-C18)	219770	40.57
C22	7.030	0.011	750	2125	MIN.OIL	(C24-C38)	153819	11.44
C24	7.546	0.003	921	2068				
C25	7.812	0.018	16548	20912				
C26	8.037	0.001	1347	2960				
C28	8.489	-0.002	1926	3149				
C32	9.310	0.009	1798	4199				
C34	9.688	0.011	1080	2884				
Filter Peak	11.367	-0.002	1424	1612	BUNKERC	(C10-C38)	426235	46.55
C36	10.043	0.005	934	1984				
C38	10.398	0.005	963	2209				
C40	10.736	-0.002	1138	1473				
o-terph	6.043	0.000	864962	777684				
Triacon Surr	8.919	0.004	747663	770524	NAS DIES	(C10-C24)	272416	14.87

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	777684	35.9	79.7
Triacontane	770524	41.4	92.1

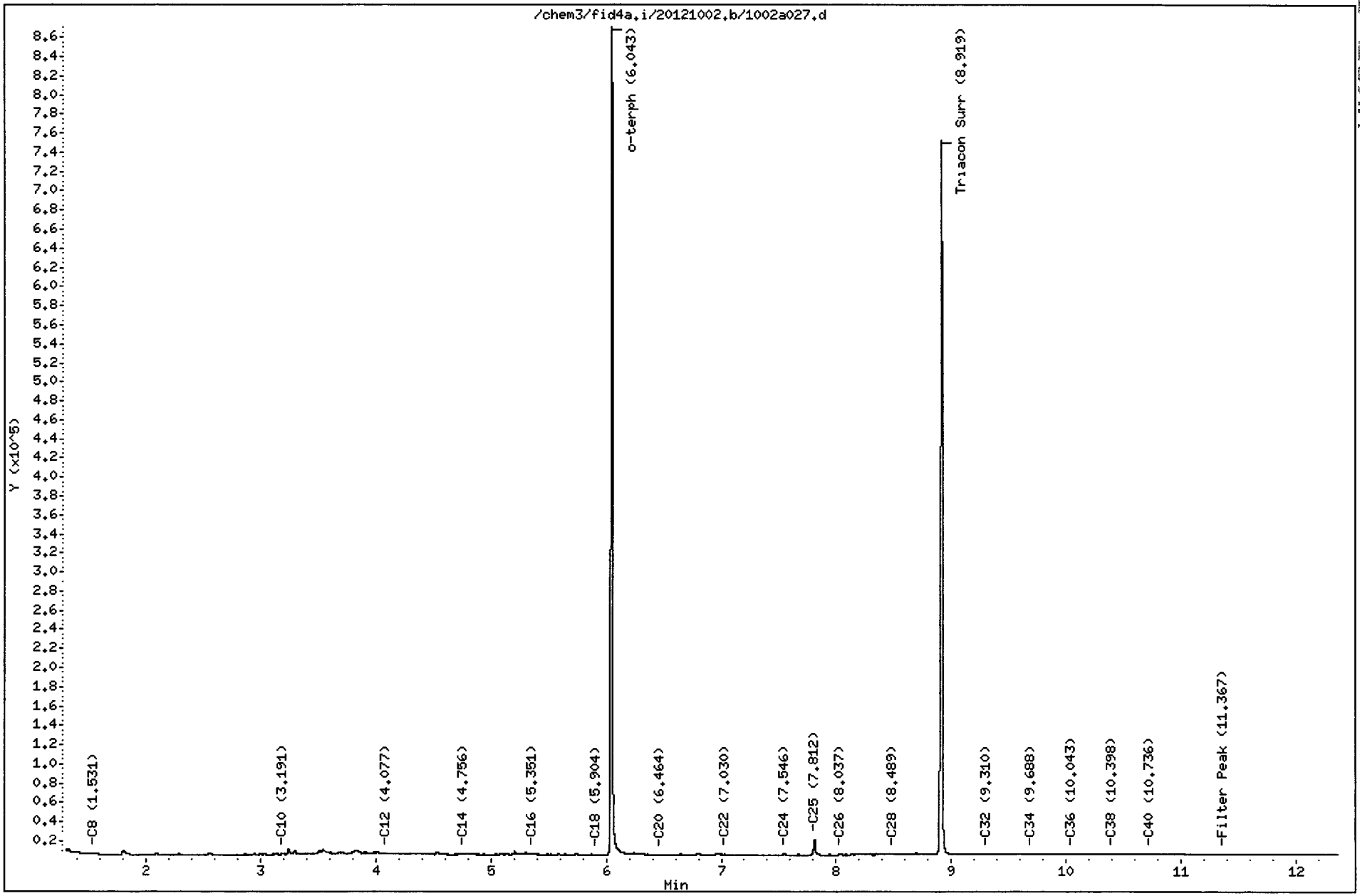
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a027.d
Date : 02-OCT-2012 15:38
Client ID:
Sample Info: VL48C

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a028.d ARI ID: VL48D
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-OCT-2012 16:00
Operator: JR
Report Date: 10/03/2012 Dilution Factor: 1
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.280	-0.012	8462	10763	WATPHG	(Tol-C12)	371132	20.04
C8	1.553	0.003	934	1547	WATPHD	(C12-C24)	233146	14.56
C10	3.187	0.021	1713	3093	WATPHM	(C24-C38)	81188	6.13
C12	4.099	0.025	2844	3647	AK102	(C10-C25)	497687	26.29
C14	4.753	-0.003	3897	9938	AK103	(C25-C36)	62524	6.79
C16	5.352	0.010	1637	1621				
C18	5.903	0.000	955	1816				
C20	6.462	-0.007	548	511	JET-A	(C10-C18)	451528	83.36
C22	7.034	0.015	685	2162	MIN.OIL	(C24-C38)	81188	6.04
C24	7.553	0.010	454	864				
C25	7.775	-0.019	305	271				
C26	8.039	0.003	779	1340				
C28	8.489	-0.001	1615	1585				
C32	9.310	0.009	1072	2859				
C34	9.684	0.007	535	1179				
Filter Peak	11.374	0.005	1409	1395	BUNKERC	(C10-C38)	576217	62.93
C36	10.042	0.004	612	1500				
C38	10.395	0.002	746	600				
C40	10.734	-0.003	1050	702				
o-terph	6.042	-0.001	781557	739440				
Triacon Surr	8.915	-0.001	700480	729127	NAS DIES	(C10-C24)	495029	27.02

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	739440	34.1	75.8
Triacontane	729127	39.2	87.2

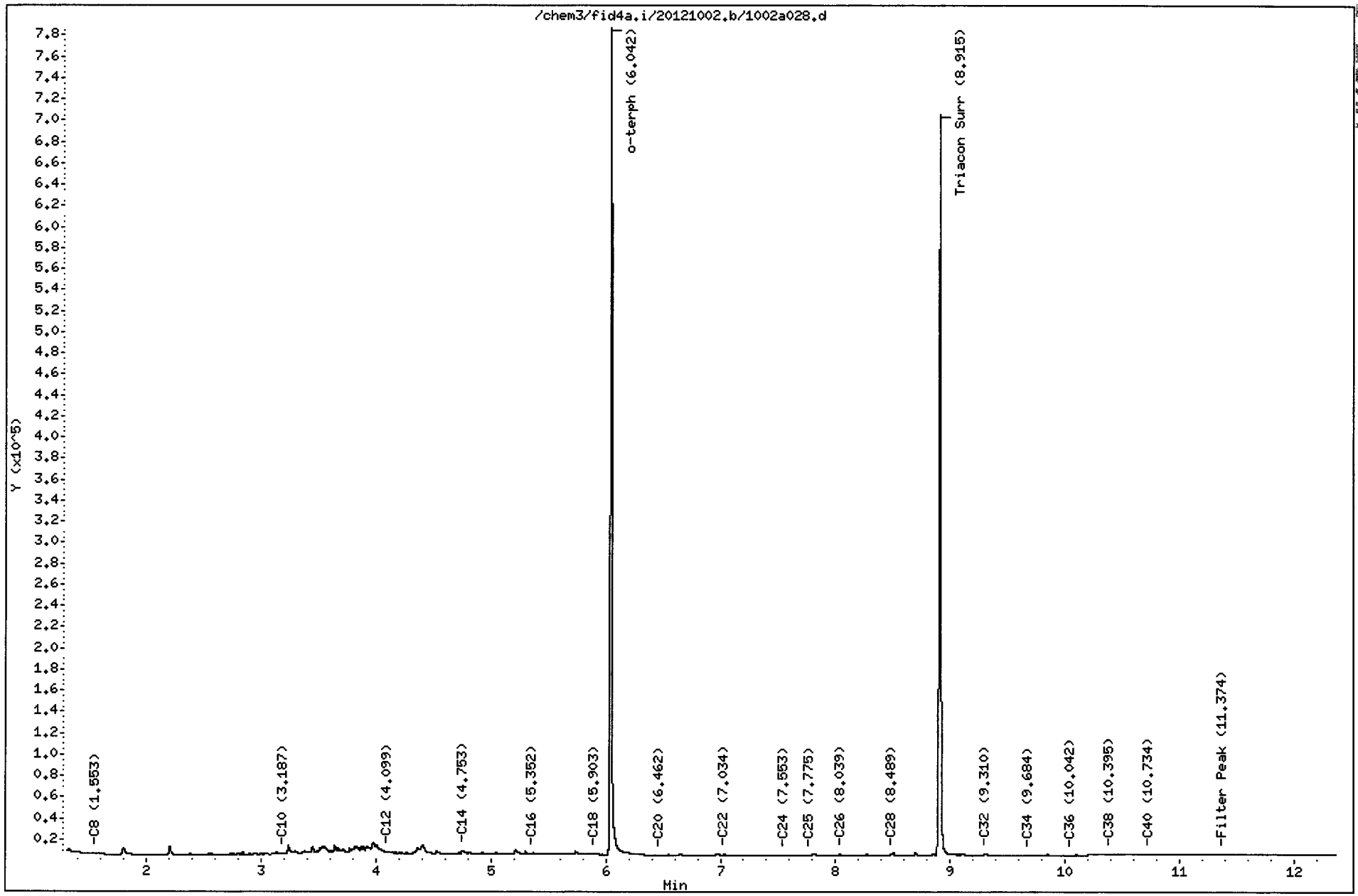
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a028.d
Date : 02-OCT-2012 16:00
Client ID:
Sample Info: VL48D

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1



PG 10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a029.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48E
Client ID:
Injection: 02-OCT-2012 16:21
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.282	-0.010	10809	14860	WATPHG	(Tol-C12)	143296	7.74
C8	1.544	-0.006	1370	1934	WATPHD	(C12-C24)	142172	8.88
C10	3.182	0.017	442	922	WATPHM	(C24-C38)	83335	6.30
C12	4.099	0.025	710	764	AK102	(C10-C25)	195942	10.35
C14	4.752	-0.003	939	1654	AK103	(C25-C36)	63797	6.93
C16	5.350	0.008	1389	852				
C18	5.903	0.000	895	1718				
C20	6.464	-0.005	640	198	JET-A	(C10-C18)	147541	27.24
C22	7.007	-0.012	557	686	MIN.OIL	(C24-C38)	83335	6.20
C24	7.550	0.007	637	1357				
C25	7.778	-0.016	385	217				
C26	8.039	0.003	707	1498				
C28	8.488	-0.002	1050	1269				
C32	9.313	0.012	1037	2911				
C34	9.663	-0.014	477	311				
Filter Peak	11.363	-0.006	1513	1676	BUNKERC	(C10-C38)	275708	30.11
C36	10.032	-0.006	615	431				
C38	10.388	-0.005	779	786				
C40	10.736	-0.002	1115	572				
o-terph	6.043	0.000	777941	716899				
Triacon Surr	8.915	0.000	662504	703531	NAS DIES	(C10-C24)	192373	10.50

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	716899	33.1	73.5
Triacontane	703531	37.8	84.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a029.d

Date : 02-OCT-2012 16:21

Client ID:

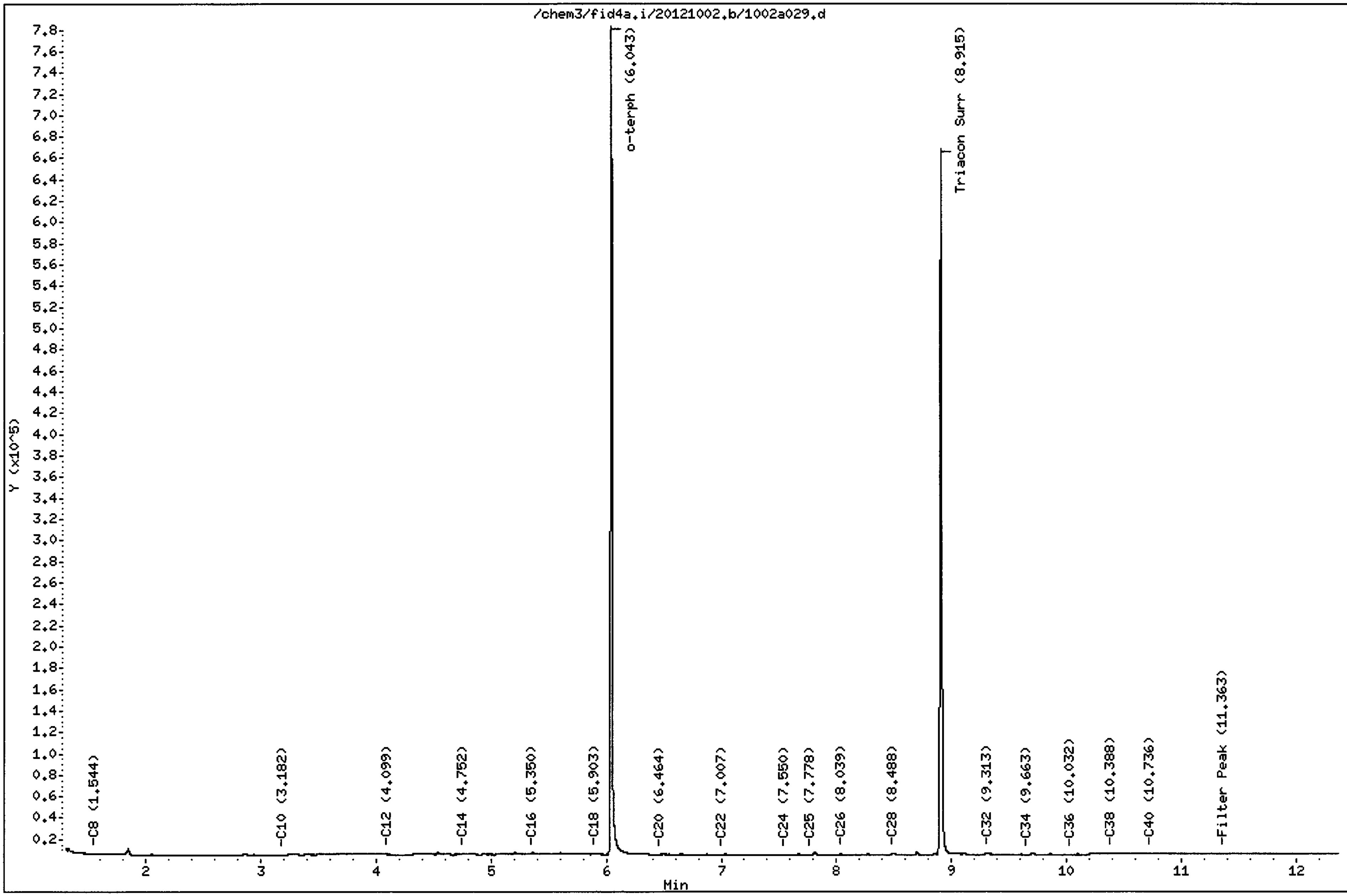
Sample Info: VL48E

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR

Column diameter: 0.25



RK 10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a030.d ARI ID: VL48F
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-OCT-2012 16:42
Operator: JR
Report Date: 10/03/2012 Dilution Factor: 1
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.270	-0.022	12419	21110	WATPHG	(Tol-C12)	409878	22.13
C8	1.546	-0.004	1231	840	WATPHD	(C12-C24)	224801	14.04
C10	3.184	0.019	1732	3068	WATPHM	(C24-C38)	47775	3.61
C12	4.080	0.006	3876	8439	AK102	(C10-C25)	512652	27.08
C14	4.749	-0.007	4455	7090	AK103	(C25-C36)	36132	3.93
C16	5.349	0.007	1687	1290				
C18	5.903	0.000	854	1604				
C20	6.467	-0.002	537	734	JET-A	(C10-C18)	468293	86.46
C22	7.034	0.015	565	978	MIN.OIL	(C24-C38)	47775	3.55
C24	7.530	-0.013	272	578				
C25	7.814	0.020	1535	2086				
C26	8.038	0.002	142	151				
C28	8.506	0.016	5849	5911				
C32	9.315	0.014	866	2376				
C34	9.688	0.011	343	957				
Filter Peak	11.361	-0.008	1225	436	BUNKERC	(C10-C38)	558401	60.99
C36	10.050	0.011	471	1266				
C38	10.392	-0.001	536	251				
C40	10.740	0.002	811	1221				
o-terph	6.043	0.000	834489	748446				
Triacon Surr	8.918	0.002	751953	742684	NAS DIES	(C10-C24)	510626	27.87

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	748446	34.5	76.7
Triacontane	742684	39.9	88.8

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a030.d

Date : 02-OCT-2012 16:42

Client ID:

Sample Info: VL48F

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR

Column diameter: 0.25

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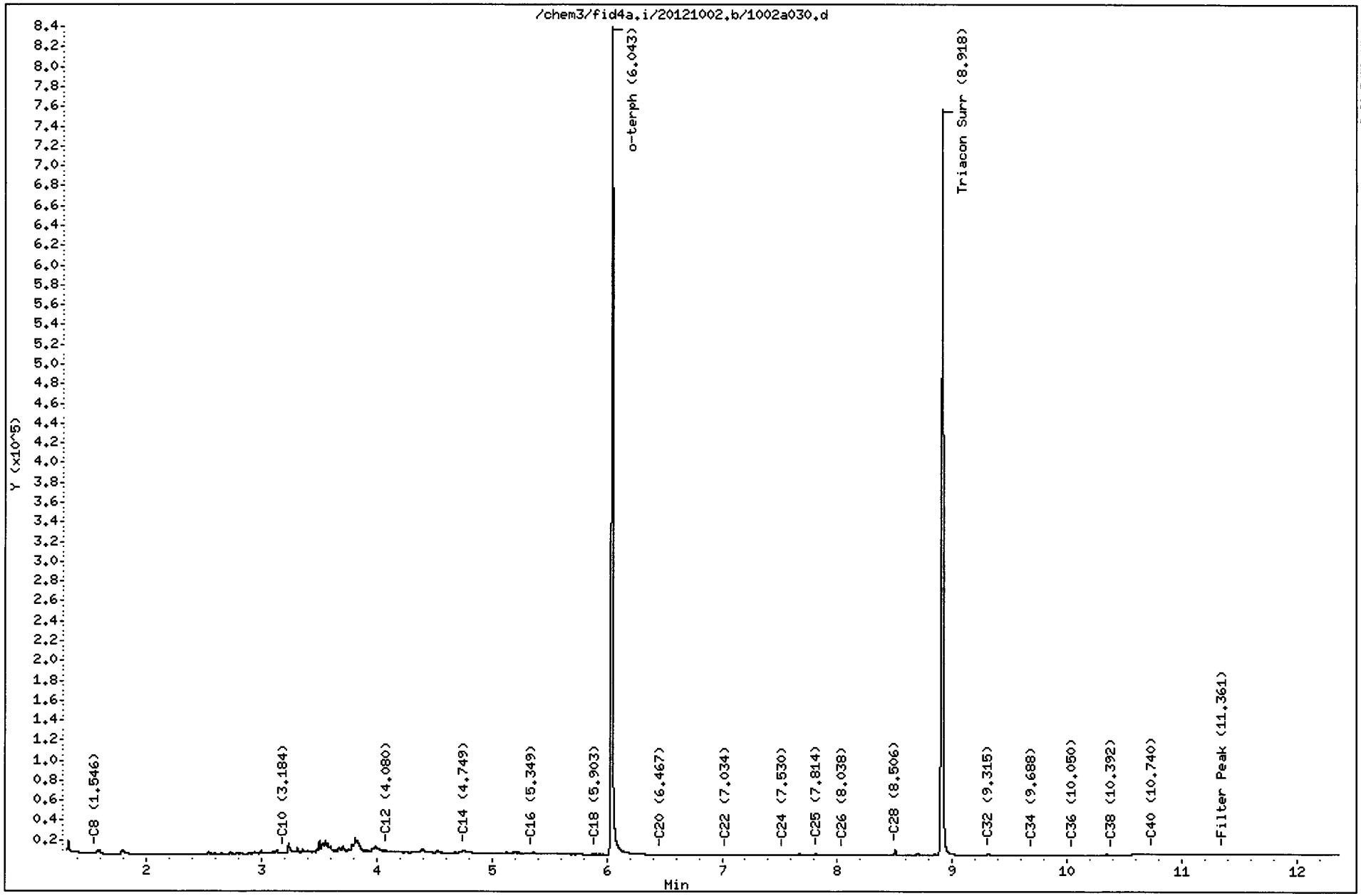

10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a031.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48G
Client ID:
Injection: 02-OCT-2012 17:03
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.271	-0.021	13690	18241	WATPHG	(Tol-C12)	649170	35.06
C8	1.560	0.010	1060	2794	WATPHD	(C12-C24)	311185	19.43
C10	3.180	0.014	3295	3375	WATPHM	(C24-C38)	199006	15.04
C12	4.081	0.007	5394	6861	AK102	(C10-C25)	860545	45.46
C14	4.757	0.002	4858	12888	AK103	(C25-C36)	169712	18.44
C16	5.350	0.008	2114	2424				
C18	5.902	-0.001	1358	1781				
C20	6.475	0.006	945	1120	JET-A	(C10-C18)	776110	143.29
C22	7.031	0.012	1003	2844	MIN.OIL	(C24-C38)	199006	14.81
C24	7.546	0.003	1523	3425				
C25	7.794	0.001	2005	2068				
C26	8.035	-0.001	2261	4195				
C28	8.489	-0.001	2866	6509				
C32	9.299	-0.002	2299	5404				
C34	9.676	-0.001	1403	3030				
Filter Peak	11.362	-0.007	1428	710	BUNKERC	(C10-C38)	1052454	114.95
C36	10.034	-0.004	1159	1710				
C38	10.391	-0.001	1105	434				
C40	10.745	0.008	1240	1351				
o-terph	6.044	0.001	910251	791731				
Triacon Surr	8.916	0.000	785369	790195	NAS DIES	(C10-C24)	853448	46.58

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	791731	36.5	81.2
Triacontane	790195	42.5	94.5

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a031.d

Page 1

Date : 02-OCT-2012 17:03

Client ID:

Instrument: fid4a.i

Sample Info: VL48G

Operator: JR

Column phase: RTX-1

Column diameter: 0.25

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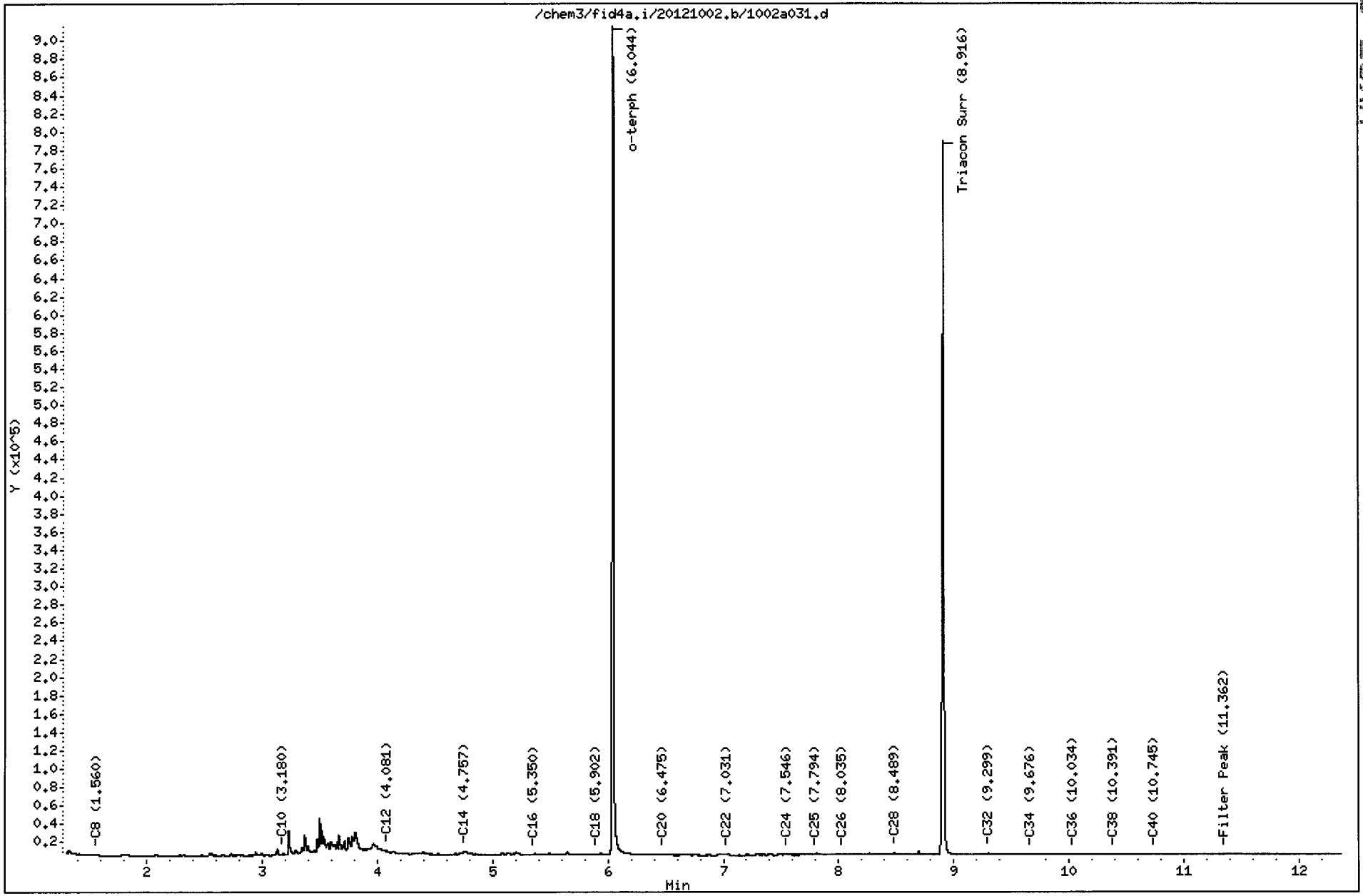


PC 10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a032.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48H
Client ID:
Injection: 02-OCT-2012 17:24
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.272	-0.020	12785	17820	WATPHG	(Tol-C12)	432632	23.36
C8	1.560	0.010	1087	2788	WATPHD	(C12-C24)	250828	15.66
C10	3.181	0.016	2250	3003	WATPHM	(C24-C38)	172638	13.04
C12	4.082	0.008	3458	8946	AK102	(C10-C25)	566058	29.90
C14	4.753	-0.003	3260	8551	AK103	(C25-C36)	145883	15.85
C16	5.353	0.011	1491	1981				
C18	5.903	0.000	1066	1845				
C20	6.469	0.000	1067	792	JET-A	(C10-C18)	471732	87.09
C22	7.030	0.011	1292	4047	MIN.OIL	(C24-C38)	172638	12.84
C24	7.548	0.005	1302	3137				
C25	7.798	0.005	1424	1202				
C26	8.039	0.003	1499	2426				
C28	8.489	-0.001	2914	3592				
C32	9.311	0.010	1895	4922				
C34	9.674	-0.003	1066	522				
Filter Peak	11.370	0.001	1392	605	BUNKERC	(C10-C38)	731914	79.94
C36	10.044	0.005	1034	1885				
C38	10.389	-0.004	970	532				
C40	10.751	0.014	1159	1956				
o-terph	6.044	0.001	809291	724760				
Triacon Surr	8.917	0.002	705773	718573	NAS DIES	(C10-C24)	559276	30.52

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	724760	33.4	74.3
Triacontane	718573	38.7	85.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a032.d

Page 1

Date : 02-OCT-2012 17:24

Client ID:

Instrument: fid4a.i

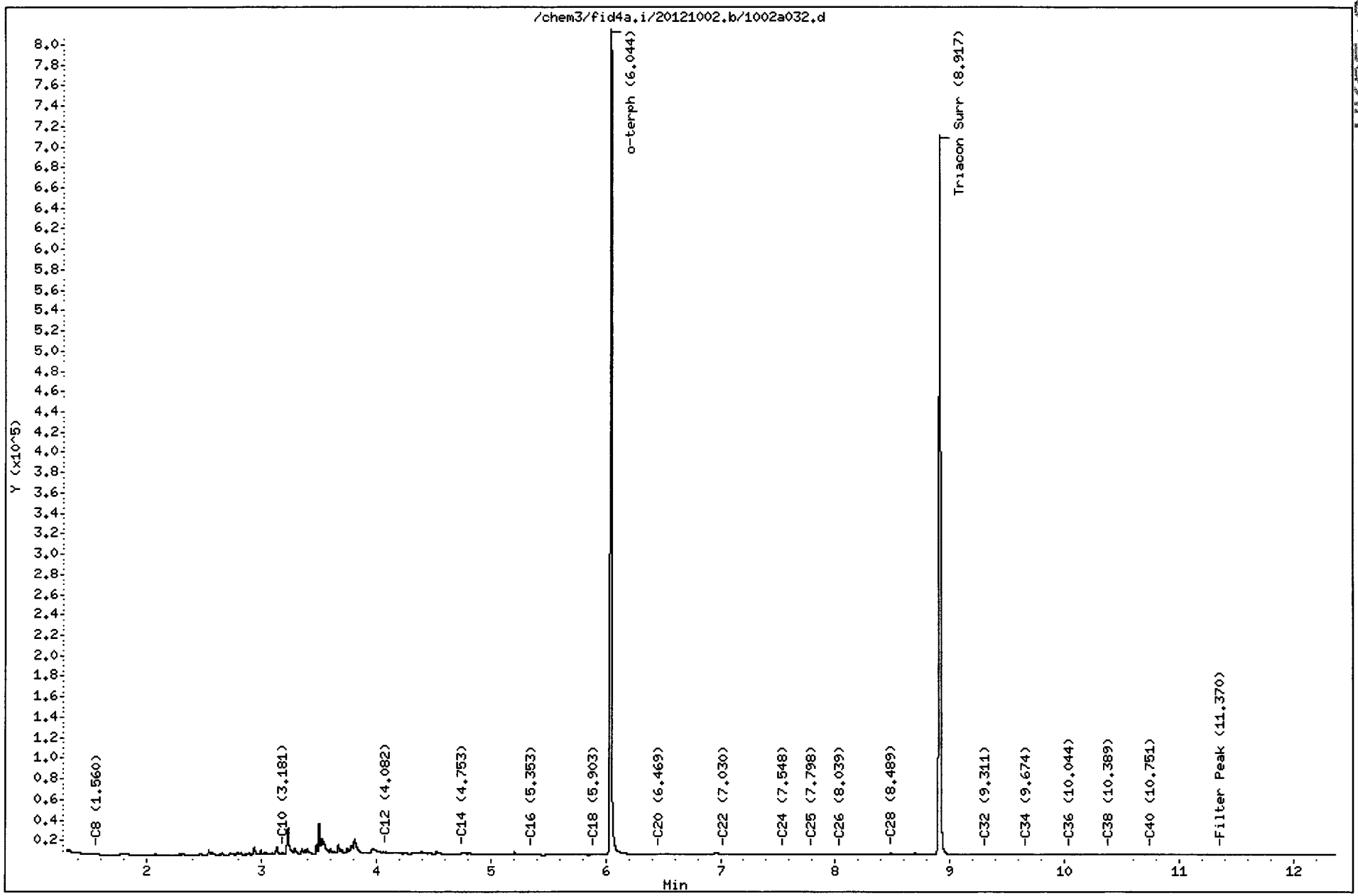
Sample Info: VL48H

Operator: JR

Column phase: RTX-1

Column diameter: 0.25

VK65-0822



ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VL48-Landau Associates
Project: Cornwall
0001020.400-510

Client ID	OTER	TOT OUT
MB-100112	84.9%	0
LCS-100112	81.5%	0
LCSD-100112	79.9%	0
MW-15D-092412	82.1%	0
MW-16D-092412	72.1%	0
MW-14D-092412	79.8%	0
MW-15S-092412	75.8%	0
MW-16S-092412	73.5%	0
MW-14S-092412	76.8%	0
MW-13D-092412	81.2%	0
MW-DUP-092412	74.3%	0

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

Prep Method: SW3510C
Log Number Range: 12-18901 to 12-18908

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-100112**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-100112 QC Report No: VL48-Landau Associates
LIMS ID: 12-18901 Project: Cornwall
Matrix: Water 0001020.400-510
Data Release Authorized: Date Sampled: 09/24/12
Reported: 10/03/12 Date Received: 09/25/12

Date Extracted LCS/LCSD: 10/01/12 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 10/02/12 14:13 Final Extract Volume LCS: 1.0 mL
LCSD: 10/02/12 14:34 LCSD: 1.0 mL
Instrument/Analyst LCS: FID/PKC Dilution Factor LCS: 1.00
LCSD: FID/PKC LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.22	3.00	74.0%	2.18	3.00	72.7%	1.8%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	81.5%	79.9%

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

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a023.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48LCSW1
Client ID:
Injection: 02-OCT-2012 14:13
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.279	-0.013	12527	15487	WATPHG	(Tol-C12)	3862290	208.57
C8	1.573	0.023	3941	9436	WATPHD	(C12-C24)	17763058	1109.20
C10	3.171	0.006	73249	81970	WATPHM	(C24-C38)	173918	13.14
C12	4.071	-0.003	200404	185704	AK102	(C10-C25)	20582162	1087.31
C14	4.751	-0.004	328140	497932	AK103	(C25-C36)	117426	12.76
C16	5.342	0.000	522718	617003				
C18	5.908	0.005	426984	531269				
C20	6.470	0.001	298653	423335	JET-A	(C10-C18)	15432739	2849.21
C22	7.018	-0.001	145323	211315	MIN.OIL	(C24-C38)	173918	12.94
C24	7.542	-0.001	37079	77392				
C25	7.793	-0.001	14557	34120				
C26	8.037	0.001	5911	12141				
C28	8.490	0.000	1523	2111				
C32	9.316	0.015	627	1336				
C34	9.675	-0.002	109	43				
Filter Peak	11.370	0.001	1139	1339	BUNKERC	(C10-C38)	20705034	2261.34
C36	10.038	-0.001	162	175				
C38	10.397	0.004	344	213				
C40	10.744	0.007	660	377				
o-terph	6.048	0.005	938190	794996				
Triacon Surr	8.920	0.004	759176	750831	NAS DIES	(C10-C24)	20531116	1120.45

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	794996	36.7	81.5 M
Triacontane	750831	40.4	89.8

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

Data File: /chem3/fid4a.i/20121002.b/1002a023.d

Date : 02-OCT-2012 14:13

Client ID:

Sample Info: VL48LCSW1

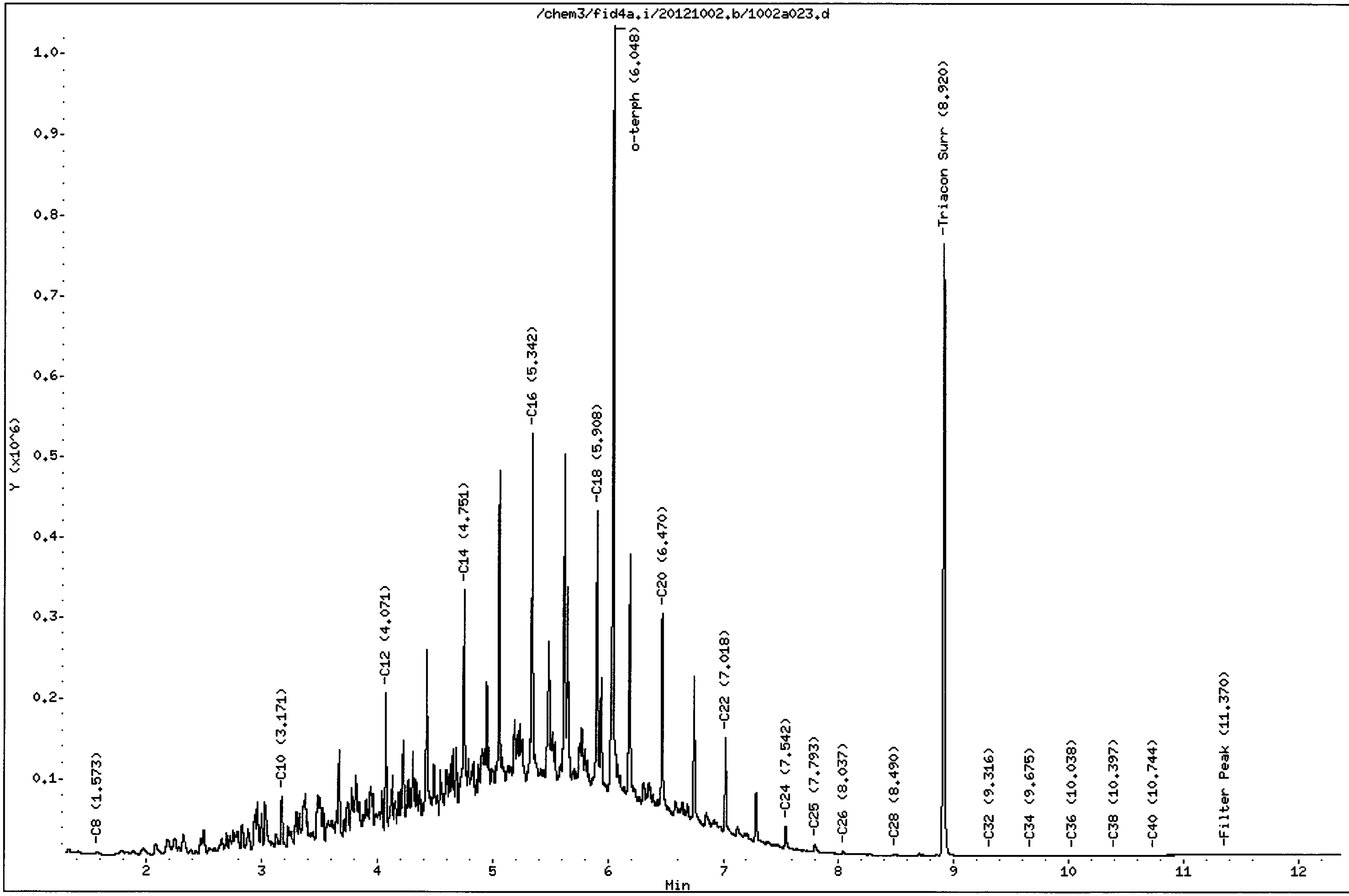
Column phase: RTX-1

Page 1

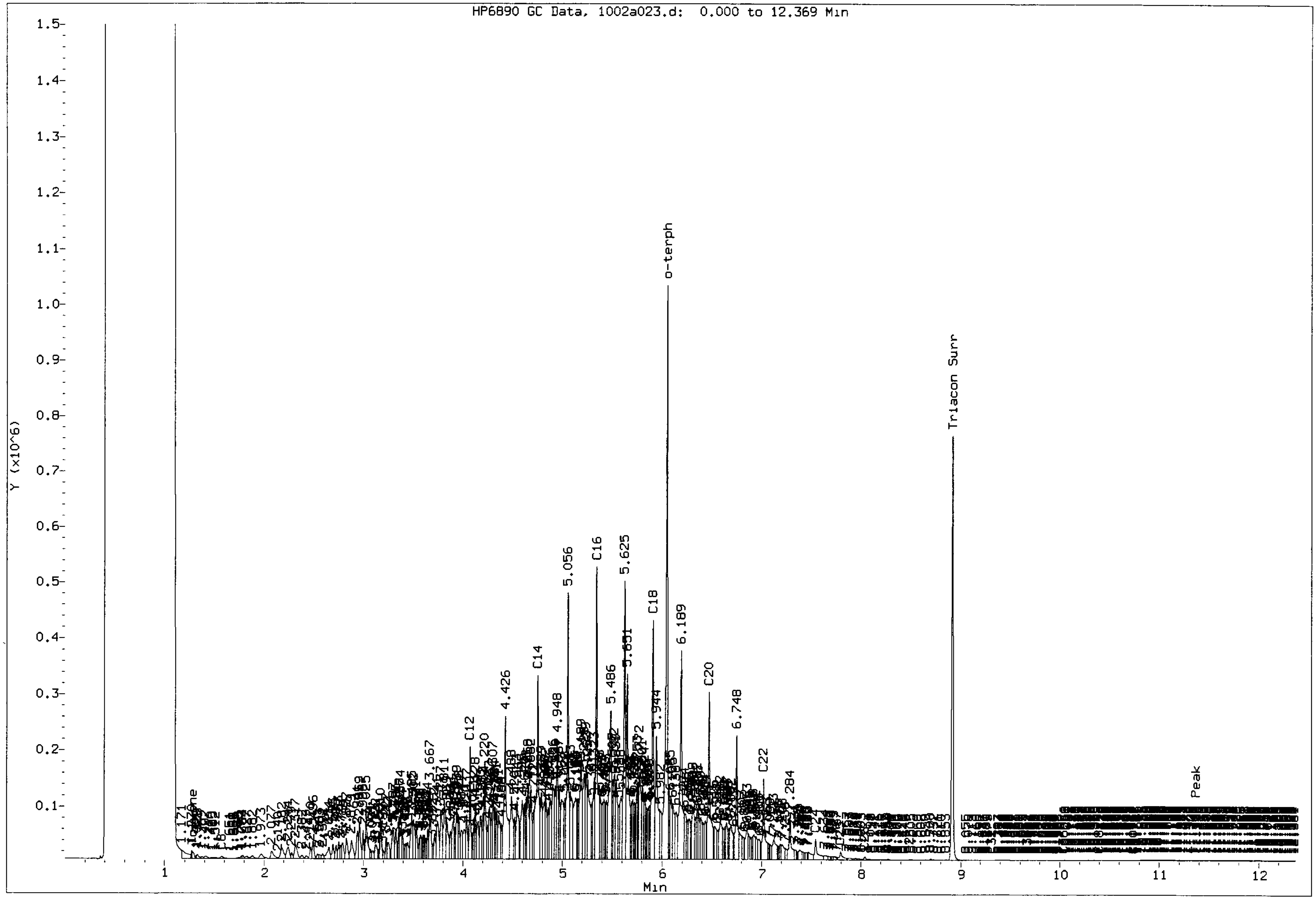
Instrument: fid4a.i

Operator: JR

Column diameter: 0.25

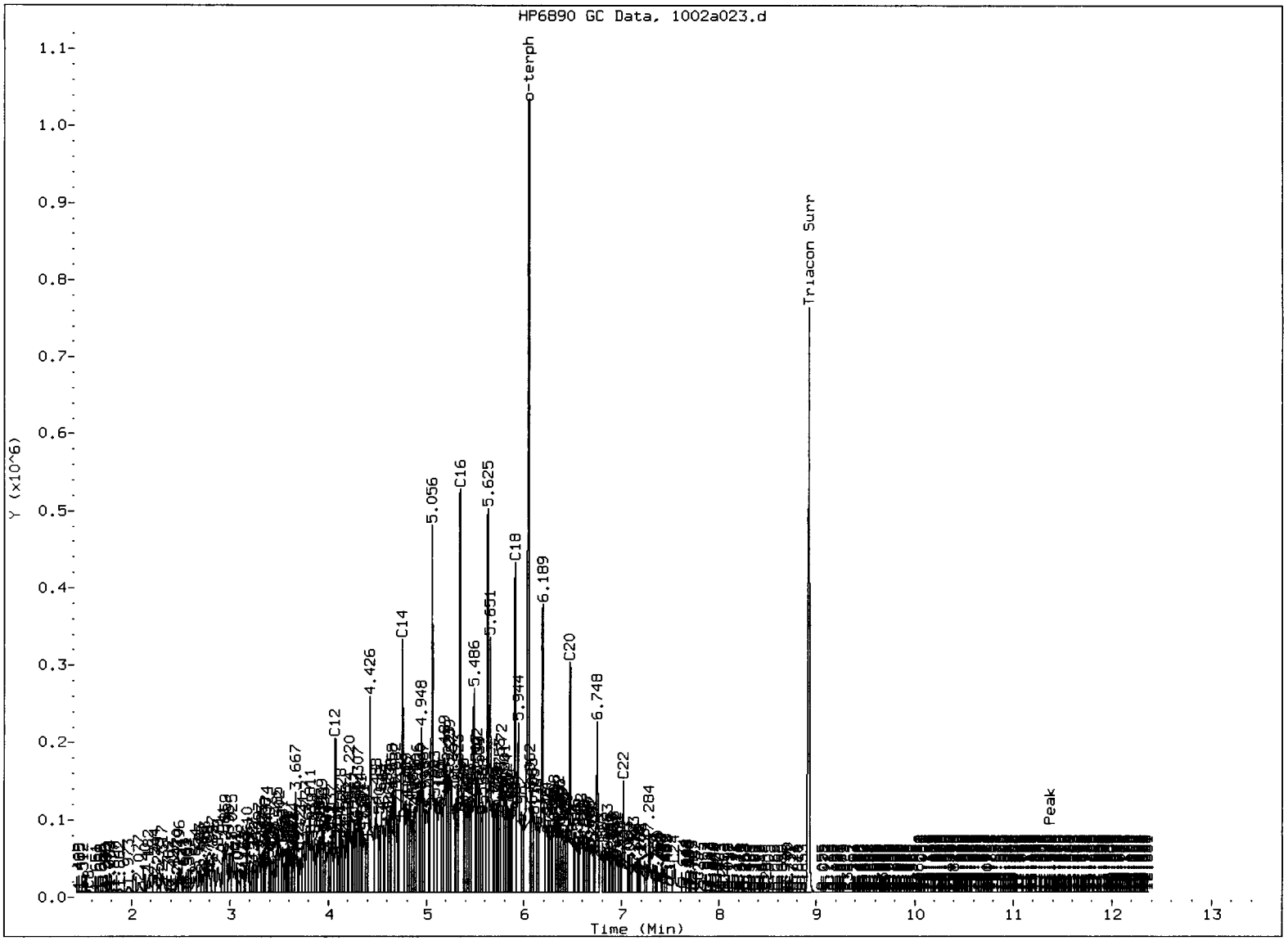


Data File: /chem3/fid4a.i/20121002.b/1002a023.d
Injection Date: 02-OCT-2012 14:13
Instrument: fid4a.i
Client Sample ID:



VK65 : 00229

FID:4A-2C/RTX-1 VL48LCSW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: PL Date: 6/13/12

PC 10/3/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20121002.b/1002a024.d
Method: /chem3/fid4a.i/20121002.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 10/03/2012
Macro: 24-AUG-2012
Calibration Dates: Gas:28-SEP-2012 Diesel:25-SEP-2012 M.Oil:25-SEP-2012

ARI ID: VL48LCSDW1
Client ID:
Injection: 02-OCT-2012 14:34
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.313	0.021	5159	3412	WATPHG	(Tol-C12)	3781550	204.21
C8	1.567	0.017	3730	8460	WATPHD	(C12-C24)	17431816	1088.51
C10	3.169	0.003	72837	79564	WATPHM	(C24-C38)	191418	14.46
C12	4.071	-0.003	196606	187826	AK102	(C10-C25)	20208433	1067.56
C14	4.751	-0.004	308974	483203	AK103	(C25-C36)	119070	12.94
C16	5.342	0.000	511785	753844				
C18	5.906	0.003	410991	501488				
C20	6.471	0.002	292770	456658	JET-A	(C10-C18)	14966556	2763.15
C22	7.019	0.000	140286	204657	MIN.OIL	(C24-C38)	191418	14.24
C24	7.542	-0.001	34009	67561				
C25	7.795	0.001	14515	26743				
C26	8.035	-0.001	6065	11307				
C28	8.506	0.016	5382	7993				
C32	9.312	0.011	940	1432				
C34	9.674	-0.003	170	187				
Filter Peak	11.381	0.012	988	919	BUNKERC	(C10-C38)	20336372	2221.07
C36	10.045	0.007	338	349				
C38	10.394	0.002	419	180				
C40	10.739	0.002	682	489				
o-terph	6.047	0.004	898613	779286				
Triacon Surr	8.919	0.003	710880	741292	NAS DIES	(C10-C24)	20144954	1099.38

Range Times: NW Diesel(4.074 - 7.543) AK102(3.17 - 7.79) Jet A(3.17 - 5.90)
NW M.Oil(7.54 - 10.39) AK103(7.79 - 10.04) OR Diesel(3.17 - 8.49)

Surrogate	Area	Amount	%Rec
o-Terphenyl	779286	36.0	79.9 M
Triacontane	741292	39.9	88.6

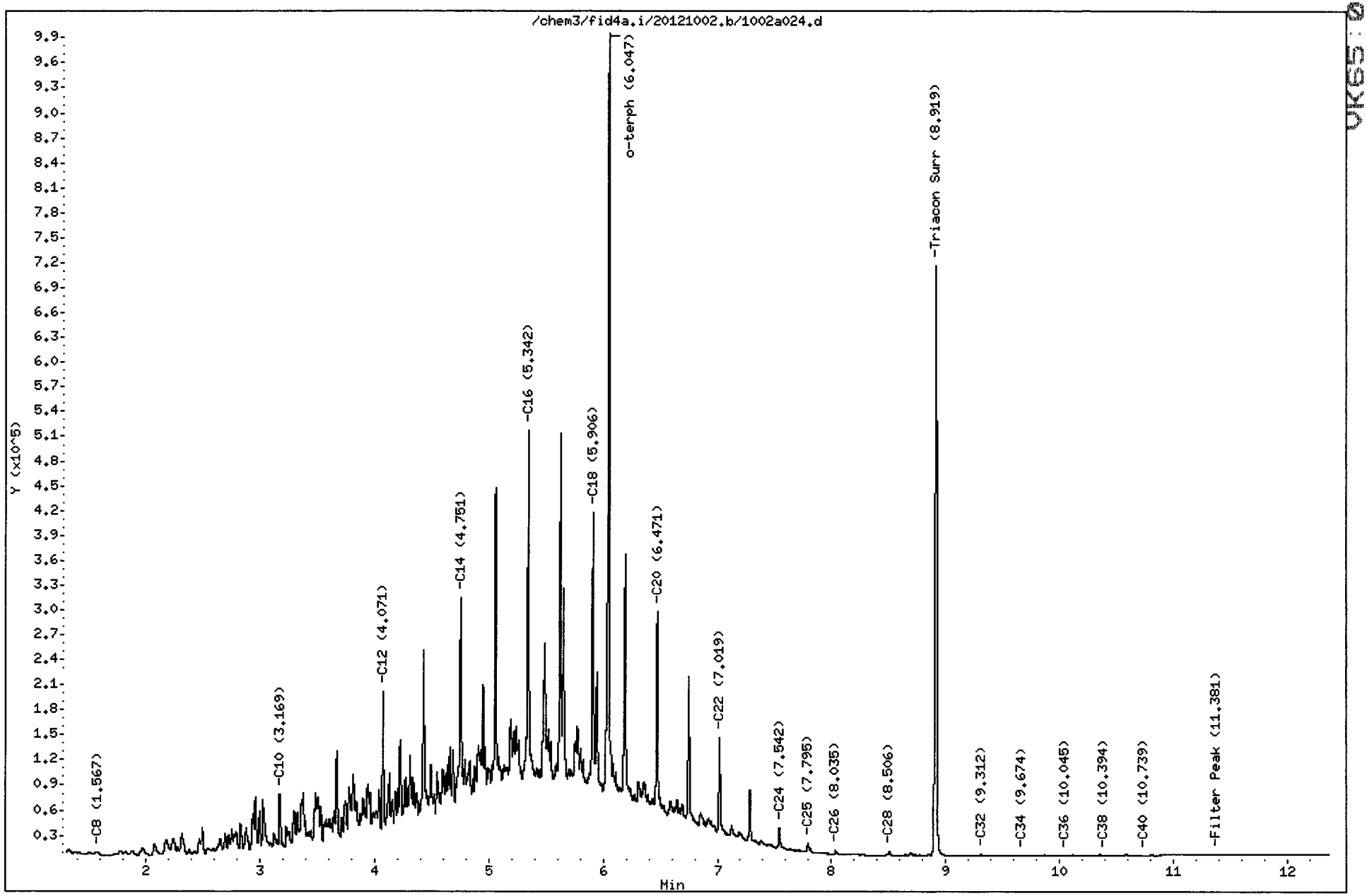
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	21670.6	25-SEP-2012
Triacon Surr	18590.6	25-SEP-2012
Gas	18517.9	28-SEP-2012
Diesel	16014.3	25-SEP-2012
Motor Oil	13234.2	25-SEP-2012
AK102	18929.5	25-SEP-2012
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	18324.0	24-AUG-2012
Bunker C	9156.1	24-AUG-2012

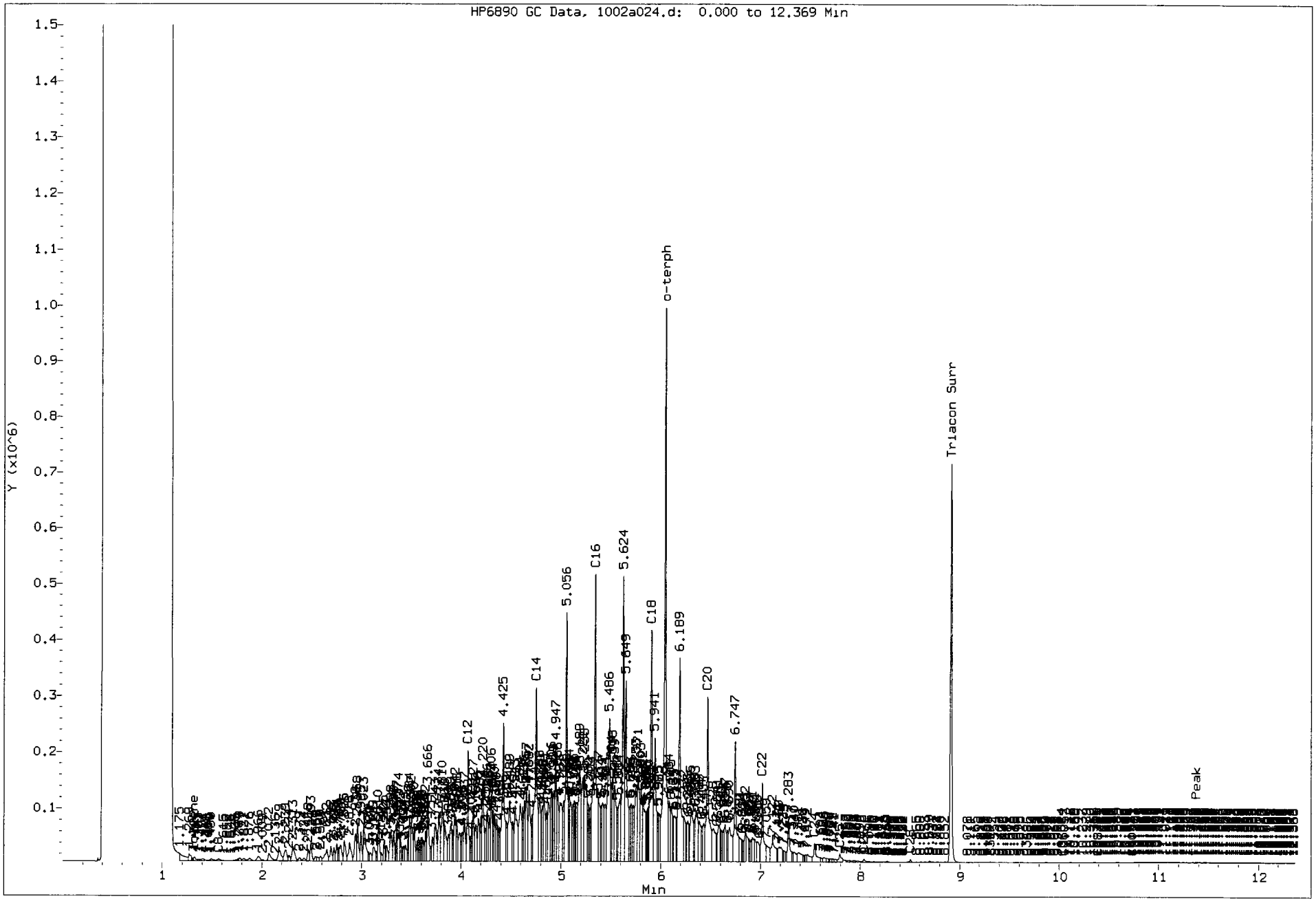
Data File: /chem3/fid4a.i/20121002.b/1002a024.d
Date : 02-OCT-2012 14:34
Client ID:
Sample Info: VL48LCSDW1

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

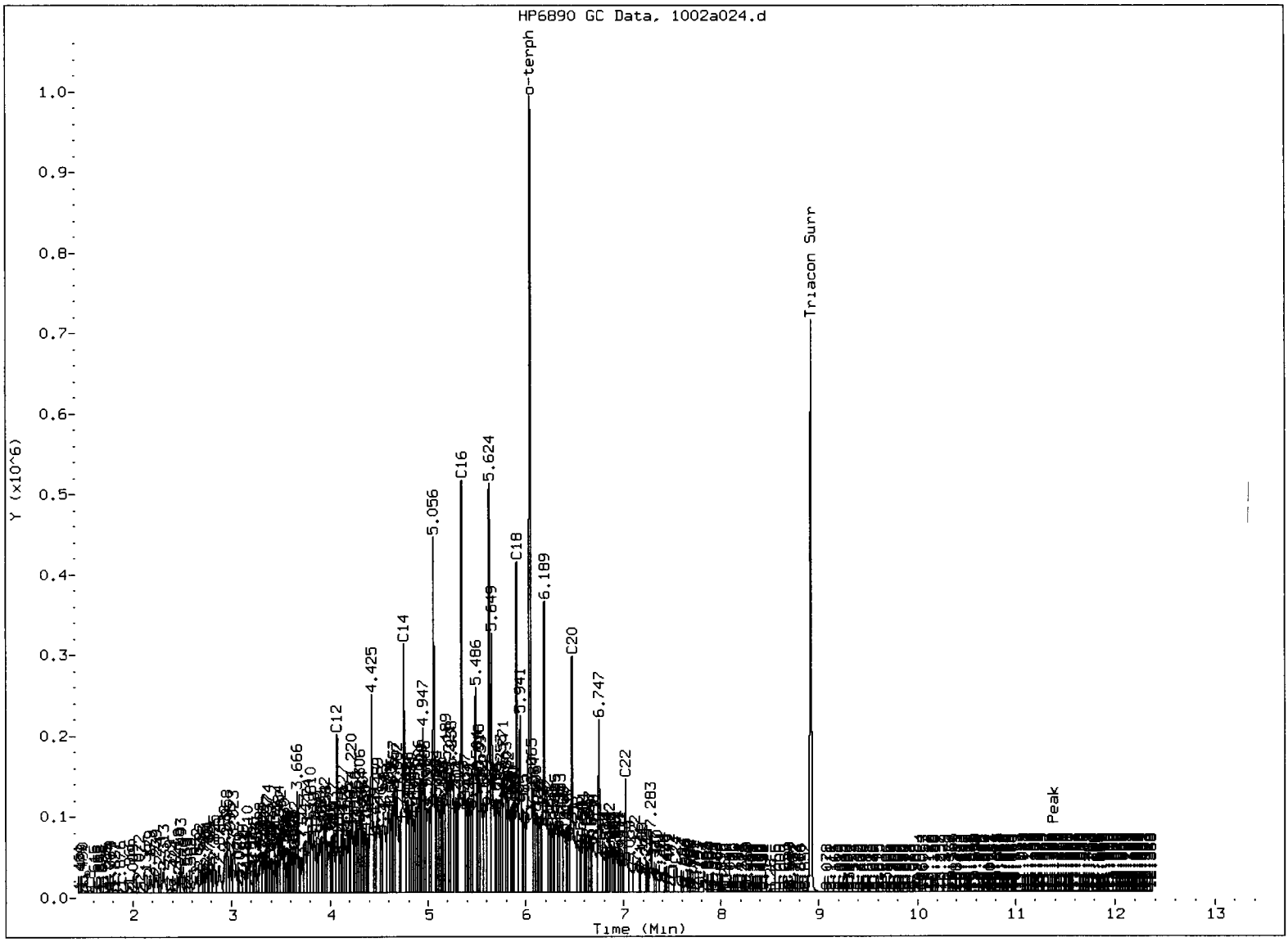


Data File: /chem3/fid4a.i/20121002.b/1002a024.d
Injection Date: 02-OCT-2012 14:34
Instrument: fid4a.i
Client Sample ID:



VK65:00233

FID:4A-2C/RTX-1 VL48LCSDW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: PC Date: 10/3/12

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VL48
Matrix: Water Project: Cornwall
Date Received: 09/25/12 0001020.400-510

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
12-18901-100112MB1	Method Blank	500 mL	1.00 mL	10/01/12
12-18901-100112LCS1	Lab Control	500 mL	1.00 mL	10/01/12
12-18901-100112LCSD1	Lab Control Dup	500 mL	1.00 mL	10/01/12
12-18901-VL48A	MW-15D-092412	500 mL	1.00 mL	10/01/12
12-18902-VL48B	MW-16D-092412	500 mL	1.00 mL	10/01/12
12-18903-VL48C	MW-14D-092412	500 mL	1.00 mL	10/01/12
12-18904-VL48D	MW-15S-092412	500 mL	1.00 mL	10/01/12
12-18905-VL48E	MW-16S-092412	500 mL	1.00 mL	10/01/12
12-18906-VL48F	MW-14S-092412	500 mL	1.00 mL	10/01/12
12-18907-VL48G	MW-13D-092412	500 mL	1.00 mL	10/01/12
12-18908-VL48H	MW-DUP-092412	500 mL	1.00 mL	10/01/12

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized:
Reported: 10/02/12

QC Report No: VL48-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

ARI ID	Client ID	Analysis Date	DL	Range	Result
MB-100112	Method Blank	10/01/12	1.0	Gasoline	< 0.25 U
12-18907		PID2		HC ID	---
				Trifluorotoluene	101%
				Bromobenzene	98.4%
VL48G	MW-13D-092412	10/01/12	1.0	**Gasoline**	**0.33**
12-18907		PID2		HC ID	GRO
				Trifluorotoluene	107%
				Bromobenzene	101%

Gasoline values reported in mg/L (ppm)

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

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/100112-1.b/1001a009.d
Data file 2: /chem3/pid2.i/100112-2.b/1001a009.d
Method: /chem3/pid2.i/100112-2.b/PIDB.m
Instrument: pid2.i
Gas Ical Date: 24-SEP-2012
BETX Ical Date: 24-SEP-2012

ARI ID: MB1001
Client ID:
Injection Date: 01-OCT-2012 13:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.171	-0.010	3485	45074	101.1	TFT(Surr)
14.780	-0.011	1920	19562	98.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Method	Range		RF	Total Area*	Amount
WATPHG	Tol-C12	(9.05 to 17.57)	356871	1	0.000
8015C	2MP-TMB	(3.70 to 15.72)	745375	1	0.000
AK101	nC6-nC10	(4.16 to 14.45)	595259	0	0.000
NWTPHG	Tol-Nap	(9.05 to 18.58)	373460	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
7.196	-0.010	14236	105.2	TFT(Surr)
14.798	-0.012	20548	108.6	BB(Surr)

SW8021B (PID)

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

NR
JW 10/2/12

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

Data File: /chem3/pid2.i/100112-1.b/1001a009.d

Date : 01-OCT-2012 13:47

Client ID:

Sample Info: MB1001

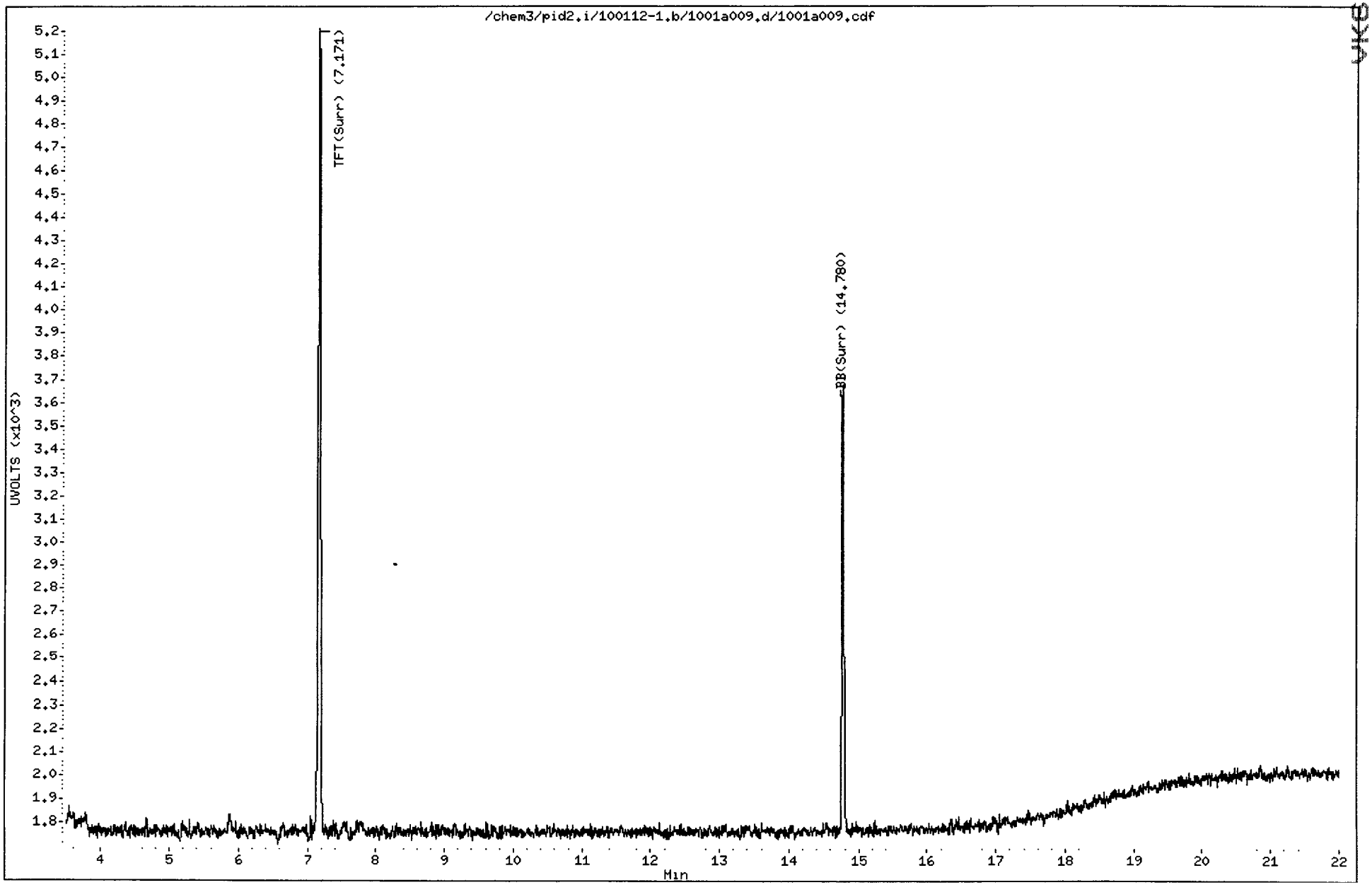
Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: JW

Column diameter: 0.18

UK05 88238



Data File: /chem3/pid2.i/100112-2.b/1001a009.d

Date : 01-OCT-2012 13:47

Client ID:

Sample Info: MB1001

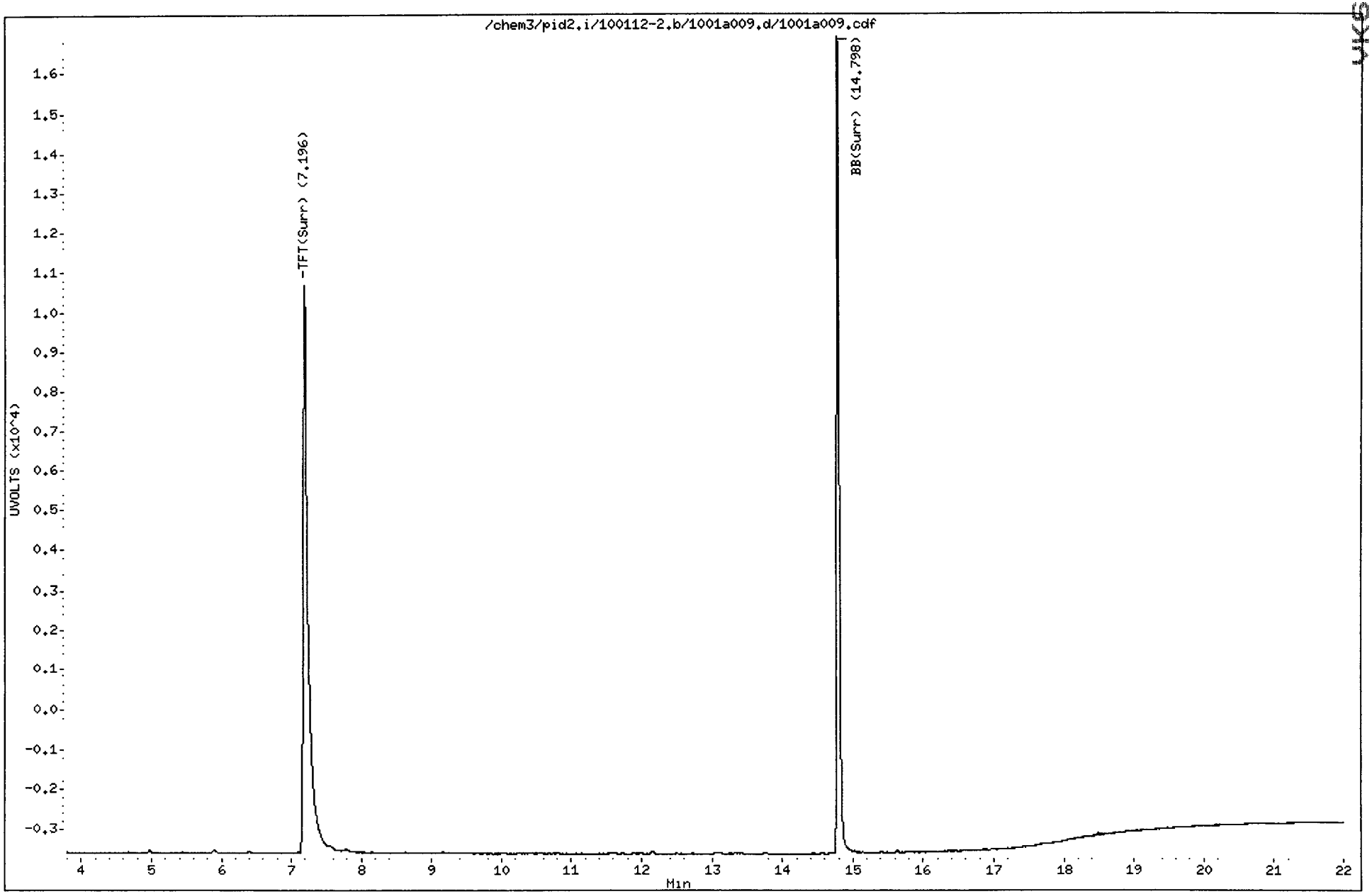
Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: JW

Column diameter: 0.18

UK65-00239



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/100112-1.b/1001a013.d
Data file 2: /chem3/pid2.i/100112-2.b/1001a013.d
Method: /chem3/pid2.i/100112-2.b/PIDB.m
Instrument: pid2.i
Gas Ical Date: 24-SEP-2012
BETX Ical Date: 24-SEP-2012

ARI ID: VL48G
Client ID: MW-13D-092412
Injection Date: 01-OCT-2012 15:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.177	-0.004	3679	45996	106.7	TFT(Surr)
14.783	-0.008	1971	20071	101.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Method	Range		RF	Total Area*	Amount
WATPHG	Tol-C12	(9.05 to 17.57)	356871	94508	0.265 M
8015C	2MP-TMB	(3.70 to 15.72)	745375	12210	0.016 M
AK101	nC6-nC10	(4.16 to 14.45)	595259	6028	0.010 M
NWTPHG	Tol-Nap	(9.05 to 18.58)	373460	121792	0.326 M

JW 10/2/12

M Indicates manual integration within range

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

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.201	-0.004	14981	110.7	TFT(Surr)
14.802	-0.007	20509	108.4	BB(Surr)

SW8021B (PID)

NR

RT	Shift	Response	Amount	Compound
6.402	-0.005	152	0.15	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/pid2.i/100112-1.b/1001a013.d

Date : 01-OCT-2012 15:58

Client ID: MW-13D-092412

Sample Info: VL48G

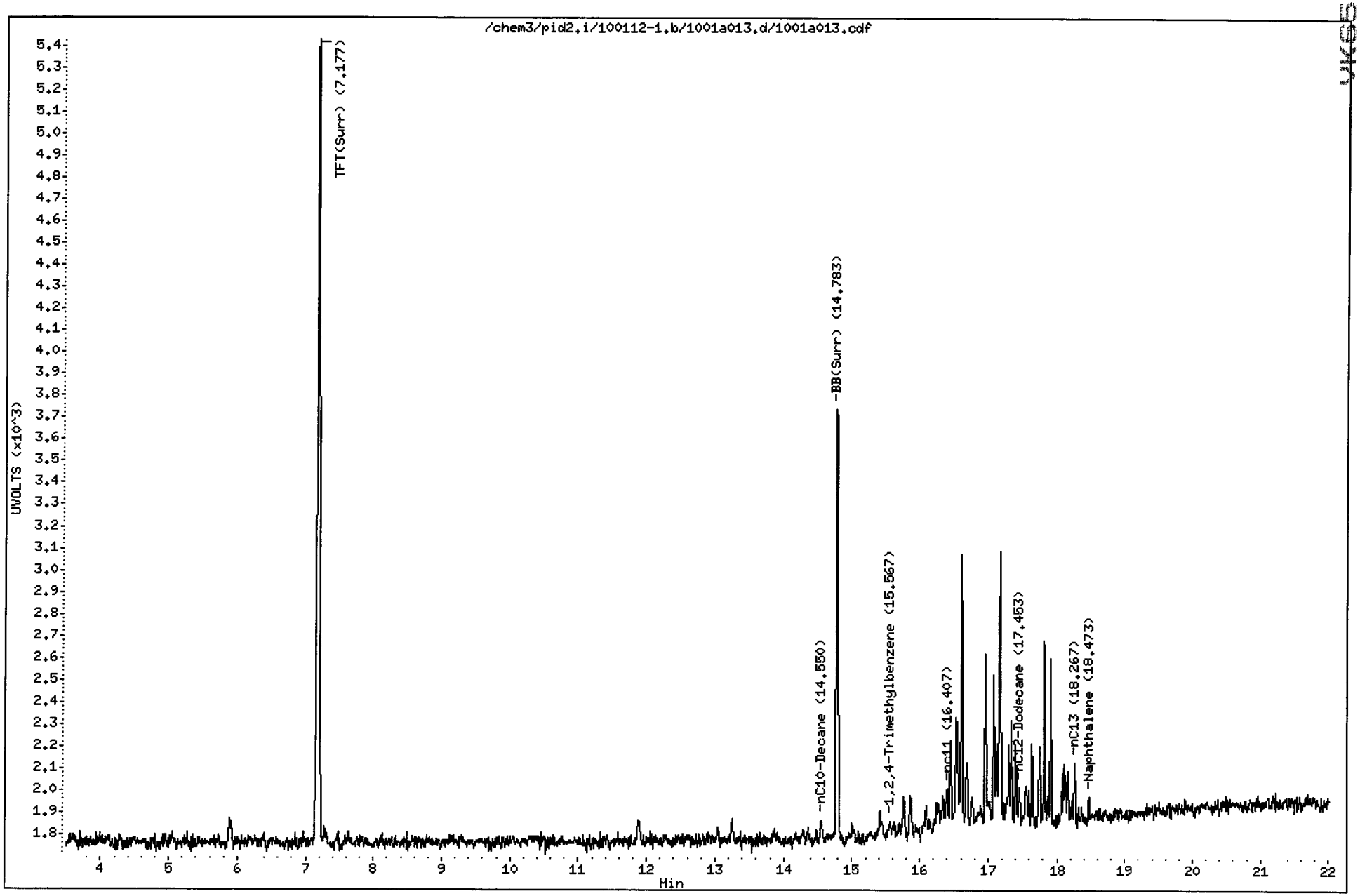
Column phase: RTX 502-2 FID

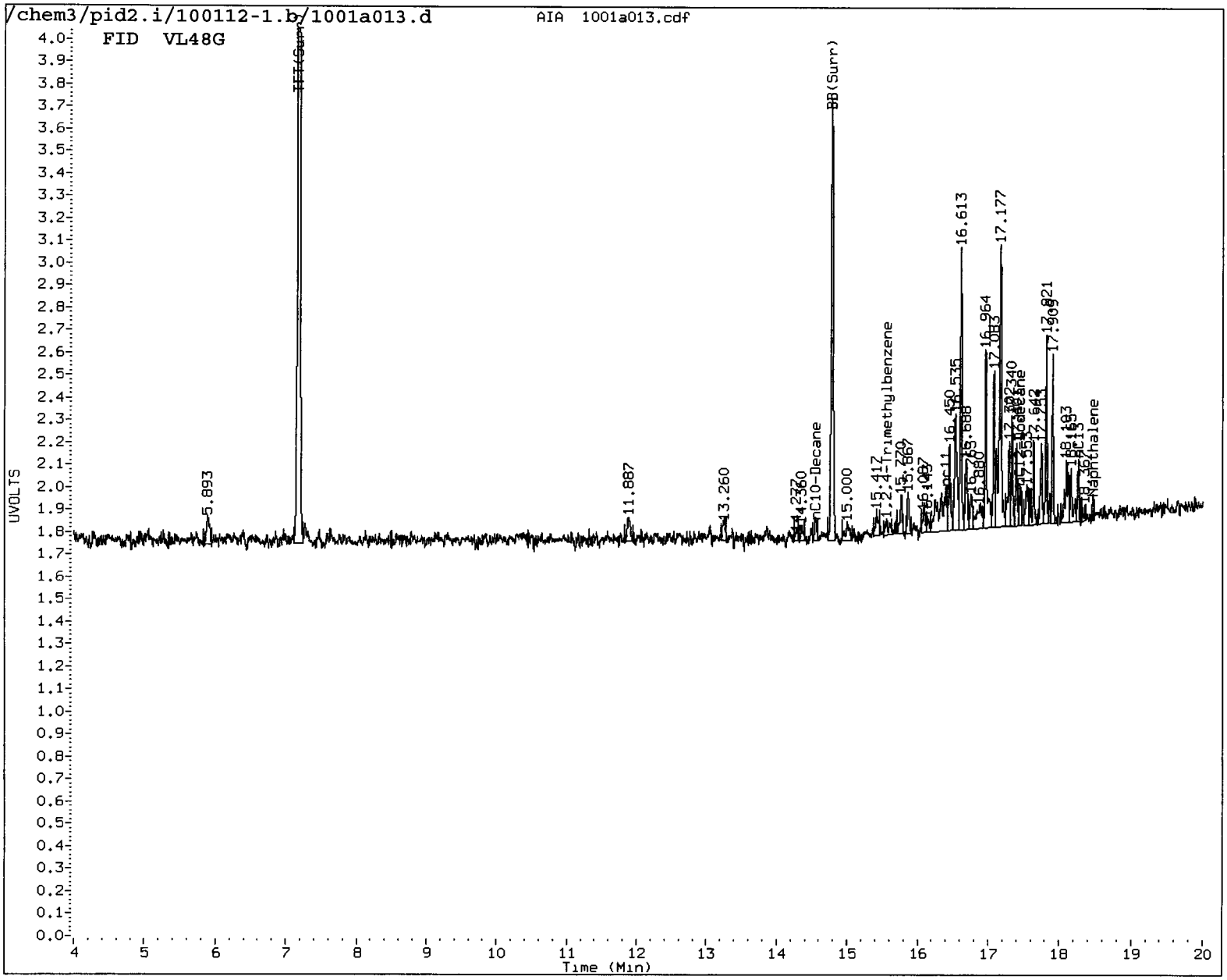
Instrument: pid2.i

Operator: JW

Column diameter: 0.18

VK65 : 092411





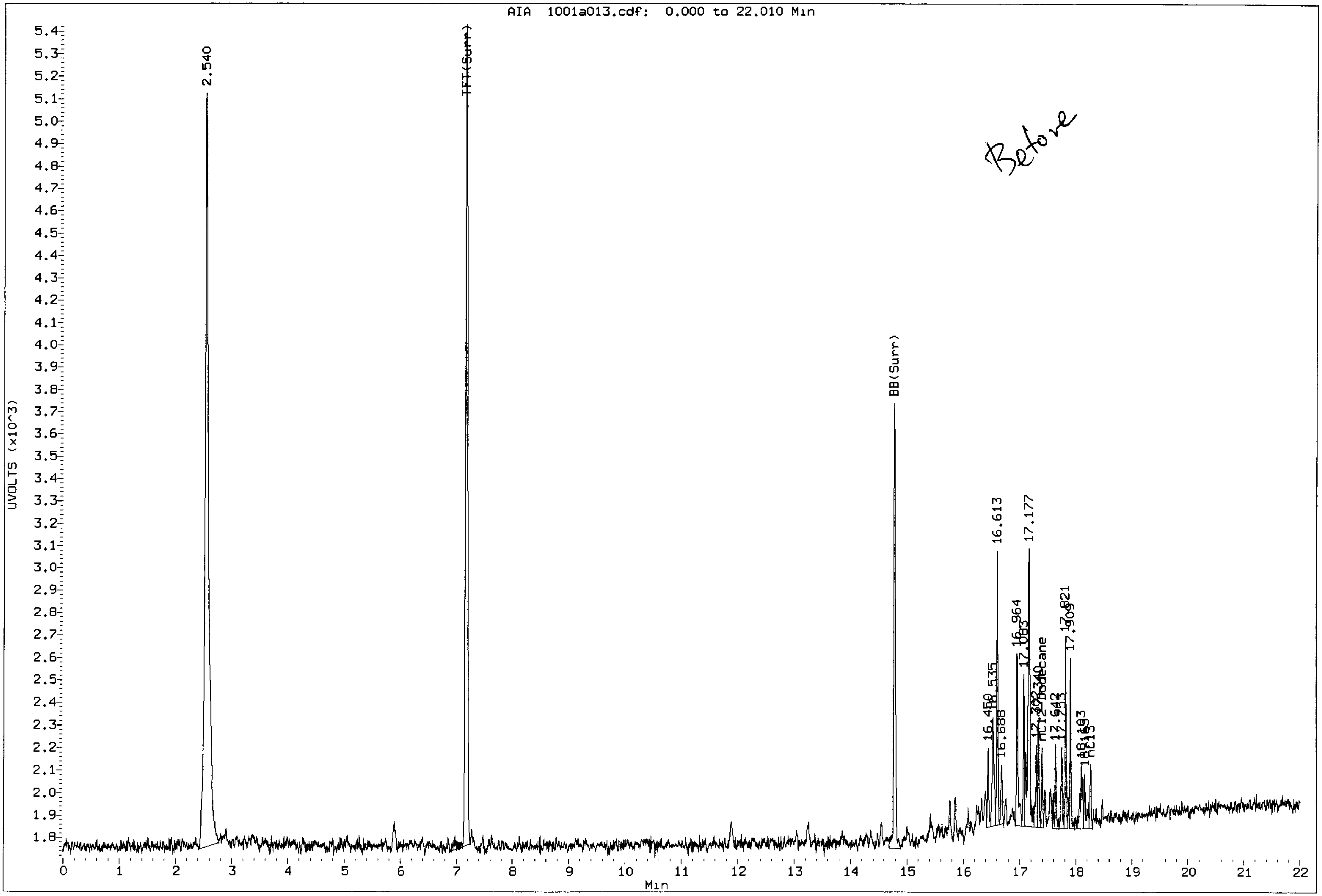
MANUAL INTEGRATION

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

5. Other _____

Analyst: JW Date: ~~10/12~~ 10/2/12

Data File: /chem3/pid2.i/100112-1.b/1001a013.d/1001a013.cdf
Injection Date: 01-OCT-2012 15:58
Instrument: pid2.i
Client Sample ID: MW-13D-092412



ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: VL48
Matrix: Water

QC Report No: VL48-Landau Associates
Project: Cornwall
Event: 0001020.400-510

Client ID	TFT	BBZ	TOT OUT
MB-100112	101%	98.4%	0
LCS-100112	104%	98.8%	0
LCSD-100112	103%	98.5%	0
MW-13D-092412	107%	101%	0

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

Log Number Range: 12-18907 to 12-18907

VK65 00244

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-100112
LAB CONTROL SAMPLE

Lab Sample ID: LCS-100112
LIMS ID: 12-18907
Matrix: Water
Data Release Authorized:
Reported: 10/02/12

QC Report No: VL48-Landau Associates
Project: Cornwall
Event: 0001020.400-510
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 10/01/12 12:50
LCSD: 10/01/12 13:19
Instrument/Analyst LCS: PID2/JLW
LCSD: PID2/JLW

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	1.14	1.00	114%	1.11	1.00	111%	2.7%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	104%	103%
Bromobenzene	98.8%	98.5%

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/100112-1.b/1001a007.d
Data file 2: /chem3/pid2.i/100112-2.b/1001a007.d
Method: /chem3/pid2.i/100112-2.b/PIDB.m
Instrument: pid2.i
Gas Ical Date: 24-SEP-2012
BETX Ical Date: 24-SEP-2012

ARI ID: LCS1001
Client ID:
Injection Date: 01-OCT-2012 12:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.175	-0.006	3600	52196	104.4	TFT(Surr)
14.784	-0.007	1928	20344	98.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Method	Range		RF	Total Area*	Amount
WATPHG	Tol-C12	(9.05 to 17.57)	356871	405365	1.136 M
8015C	2MP-TMB	(3.70 to 15.72)	745375	882966	1.185 M
AK101	nC6-nC10	(4.16 to 14.45)	595259	713286	1.198 M
NWTPHG	Tol-Nap	(9.05 to 18.58)	373460	426392	1.142 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
7.200	-0.005	15350	113.5	TFT(Surr)
14.802	-0.007	21076	111.3	BB(Surr)

SW8021B (PID)

RT	Shift	Response	Amount	Compound
6.400	-0.007	4162	4.19N	Benzene
9.161	-0.006	29060	46.84	Toluene
12.001	-0.009	6719	12.54	Ethylbenzene
12.161	-0.006	25525	47.44	M/P-Xylene
13.064	-0.009	9743	21.98	O-Xylene
4.055	-0.012	1112	2.86	MTBE

NR

JW 10/2/12

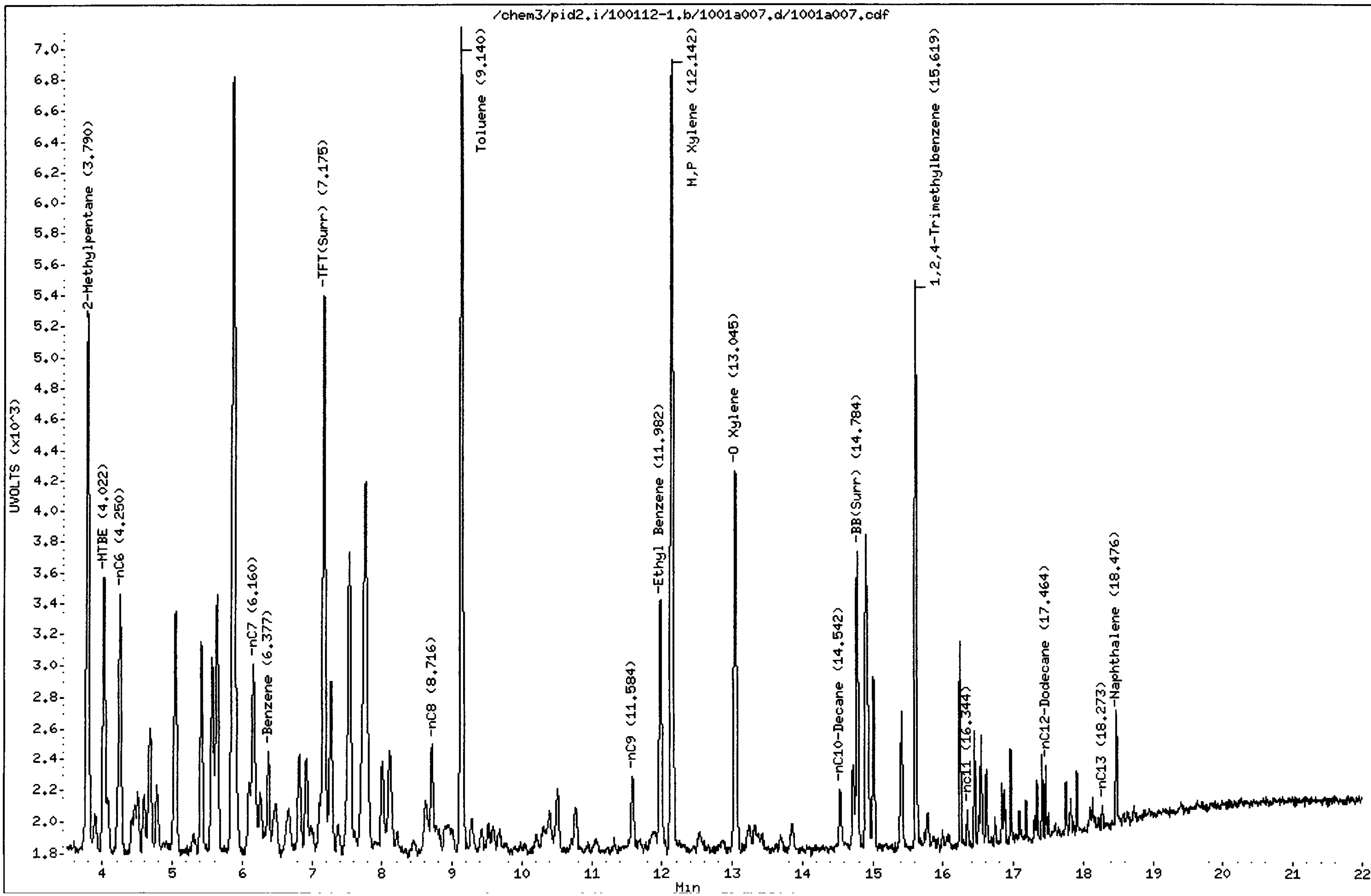
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid2.i/100112-1.b/1001a007.d
Date : 01-OCT-2012 12:50
Client ID:
Sample Info: LCS1001

Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: JW
Column diameter: 0.18

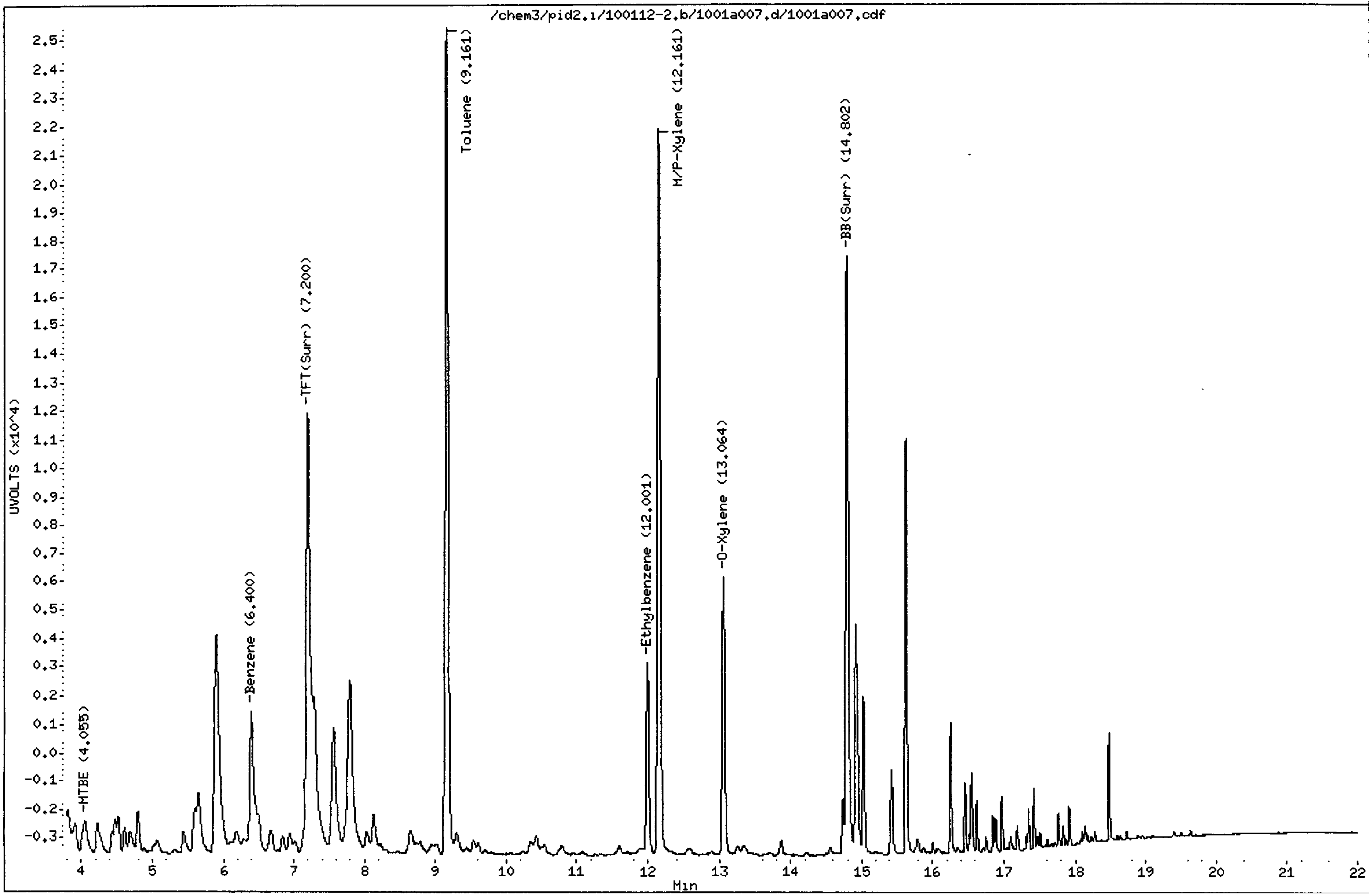


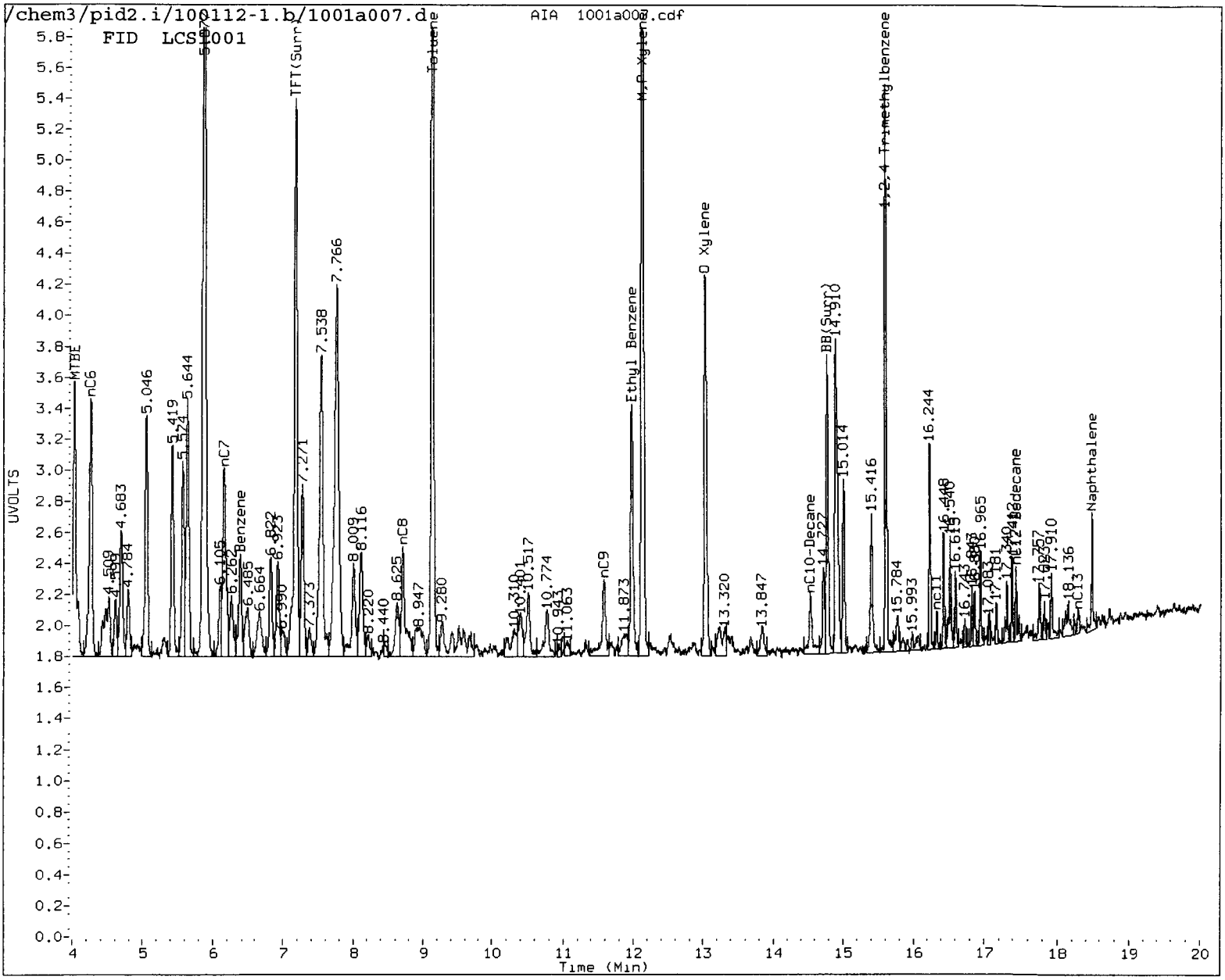
Data File: /chem3/pid2.i/100112-2.b/1001a007.d
Date : 01-OCT-2012 12:50
Client ID:
Sample Info: LCS1001

Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: JW
Column diameter: 0.18





MANUAL INTEGRATION

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

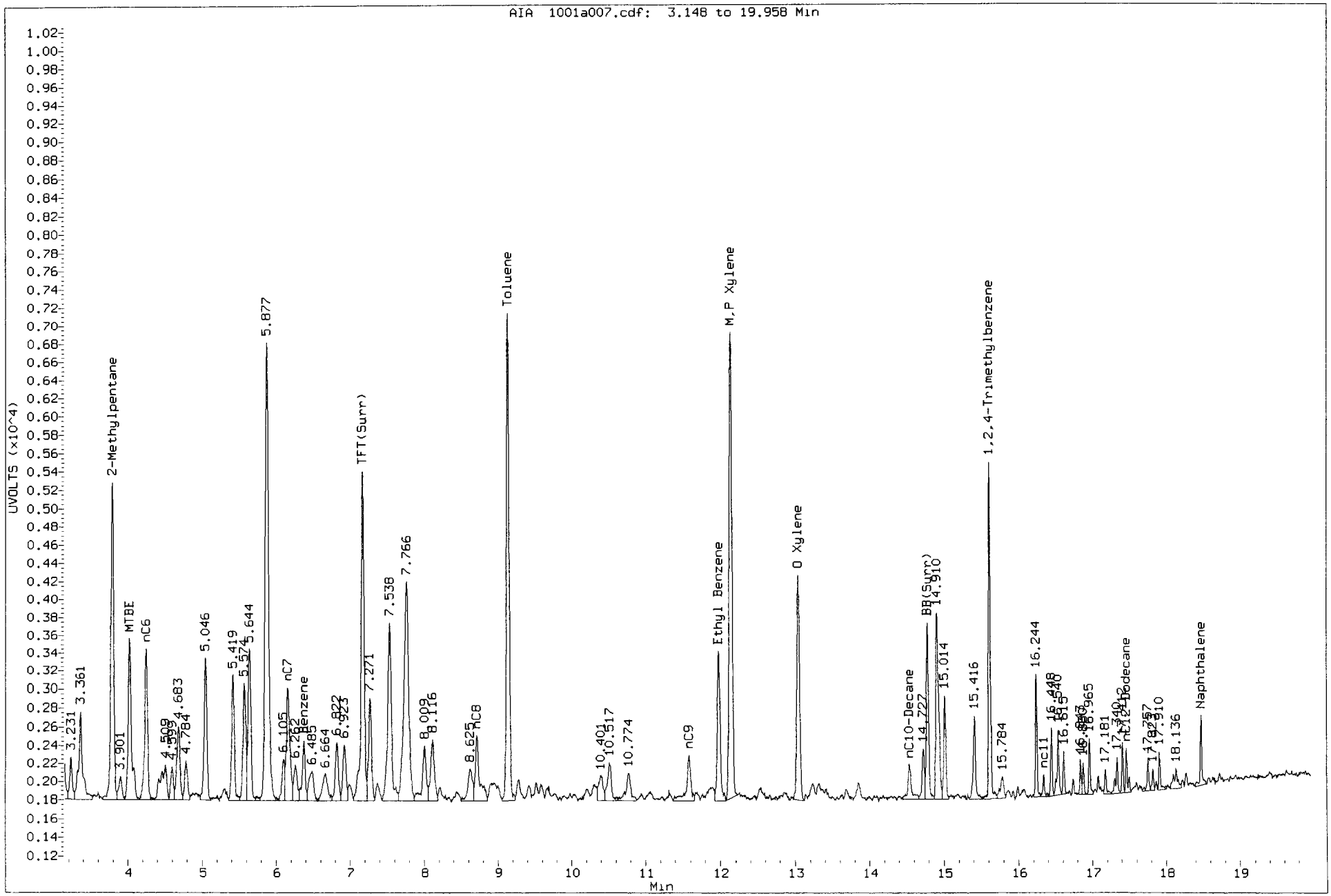
5. Other _____

Analyst: _____ Date: 10/2/12

Data File: /chem3/pid2.i/100112-1.b/1001a007.d/1001a007.cdf
Injection Date: 01-OCT-2012 12:50
Instrument: pid2.i
Client Sample ID:

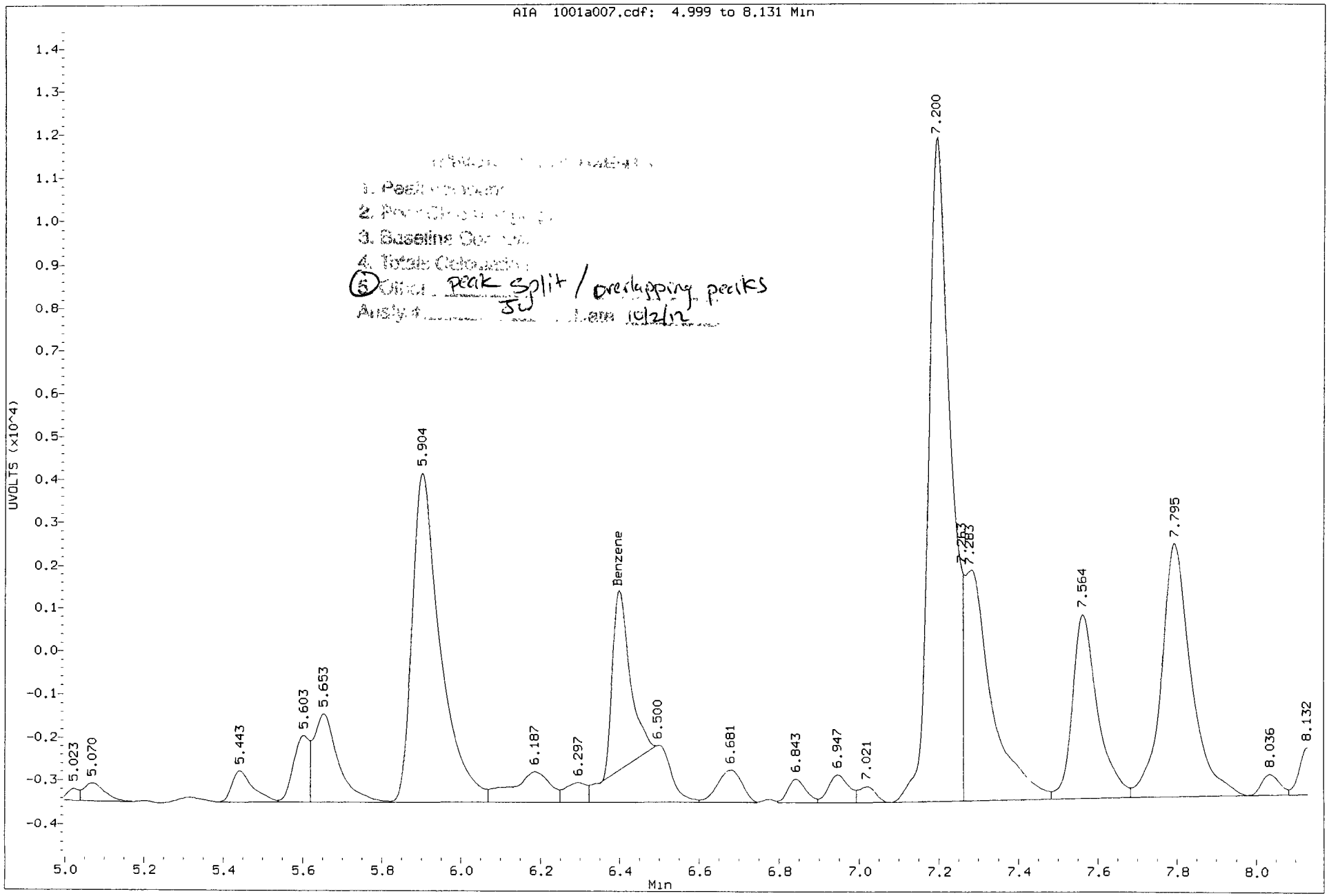
Before

VK65 00250



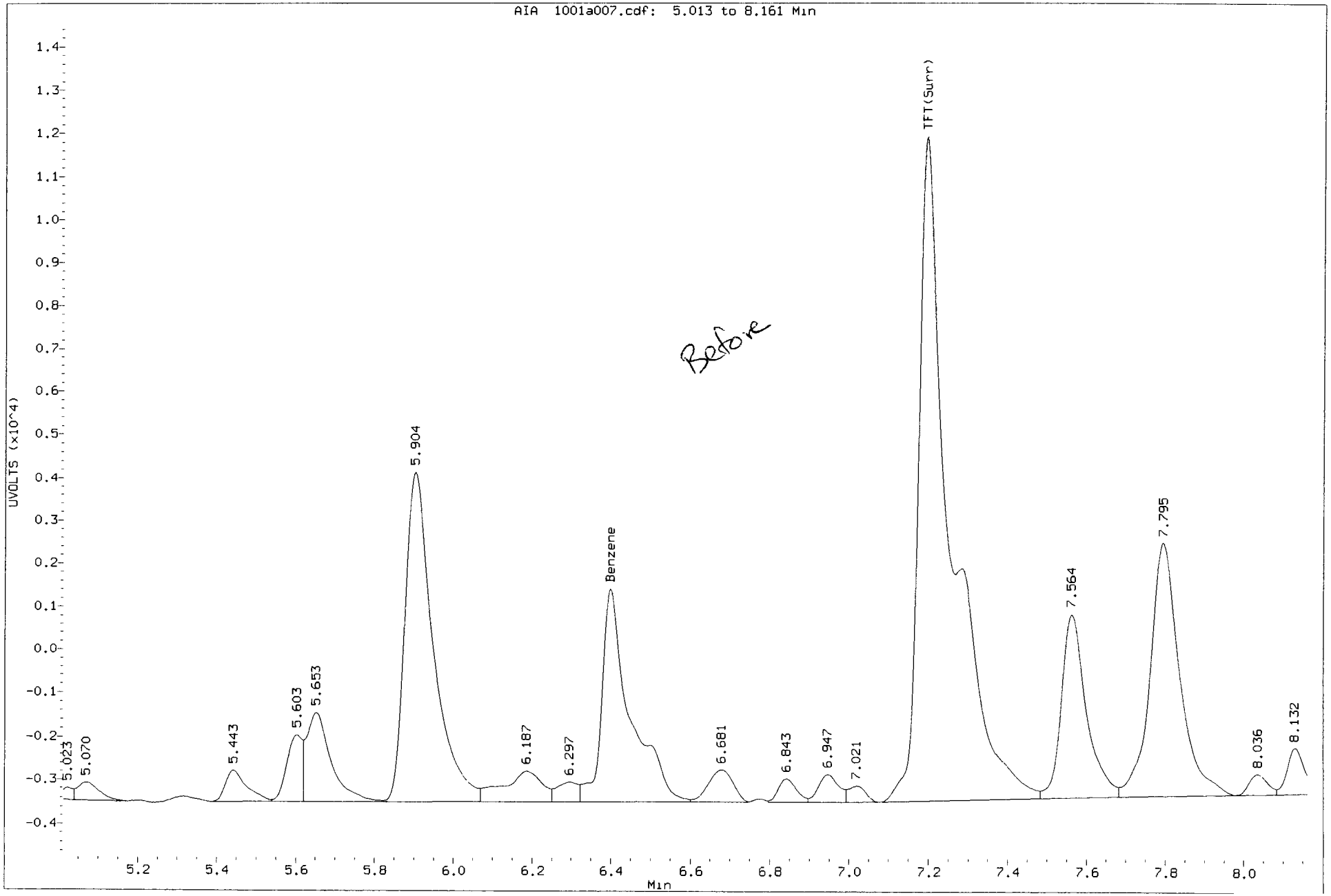
Data File: /chem3/pid2.i/100112-2.b/1001a007.d/1001a007.cdf
Injection Date: 01-OCT-2012 12:50
Instrument: pid2.i
Client Sample ID:

VK65 : 00251



1. Peak [illegible]
2. [illegible]
3. Baseline [illegible]
4. [illegible]
5. Other: peak split / overlapping peaks
JW
Analyst: [illegible] Date: 10/2/12

Data File: /chem3/pid2.i/100112-2.b/1001a007.d/1001a007.cdf
Injection Date: 01-OCT-2012 12:50
Instrument: pid2.i
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/100112-1.b/1001a008.d
Data file 2: /chem3/pid2.i/100112-2.b/1001a008.d
Method: /chem3/pid2.i/100112-2.b/PIDB.m
Instrument: pid2.i
Gas Ical Date: 24-SEP-2012
BETX Ical Date: 24-SEP-2012

ARI ID: LCSD1001
Client ID:
Injection Date: 01-OCT-2012 13:19
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.174	-0.007	3548	51128	102.9	TFT(Surr)
14.782	-0.009	1922	20421	98.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Method	Range		RF	Total Area*	Amount
WATPHG	Tol-C12	(9.05 to 17.57)	356871	395082	1.107 M
8015C	2MP-TMB	(3.70 to 15.72)	745375	846832	1.136 M
AK101	nC6-nC10	(4.16 to 14.45)	595259	686581	1.153 M
NWTPHG	Tol-Nap	(9.05 to 18.58)	373460	413474	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
7.197	-0.009	14714	108.8	TFT(Surr)
14.800	-0.009	20764	109.7	BB(Surr)

SW8021B (PID)

RT	Shift	Response	Amount	Compound
6.400	-0.007	3194	3.22N	Benzene
9.160	-0.007	28130	45.34	Toluene
11.999	-0.011	5934	11.07	Ethylbenzene
12.160	-0.008	23778	44.19	M/P-Xylene
13.062	-0.011	8960	20.22	O-Xylene
ND	---	---	---	MTBE

JW 10/2/12

NR

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

Data File: /chem3/pid2.i/100112-1.b/1001a008.d

Date : 01-OCT-2012 13:19

Client ID:

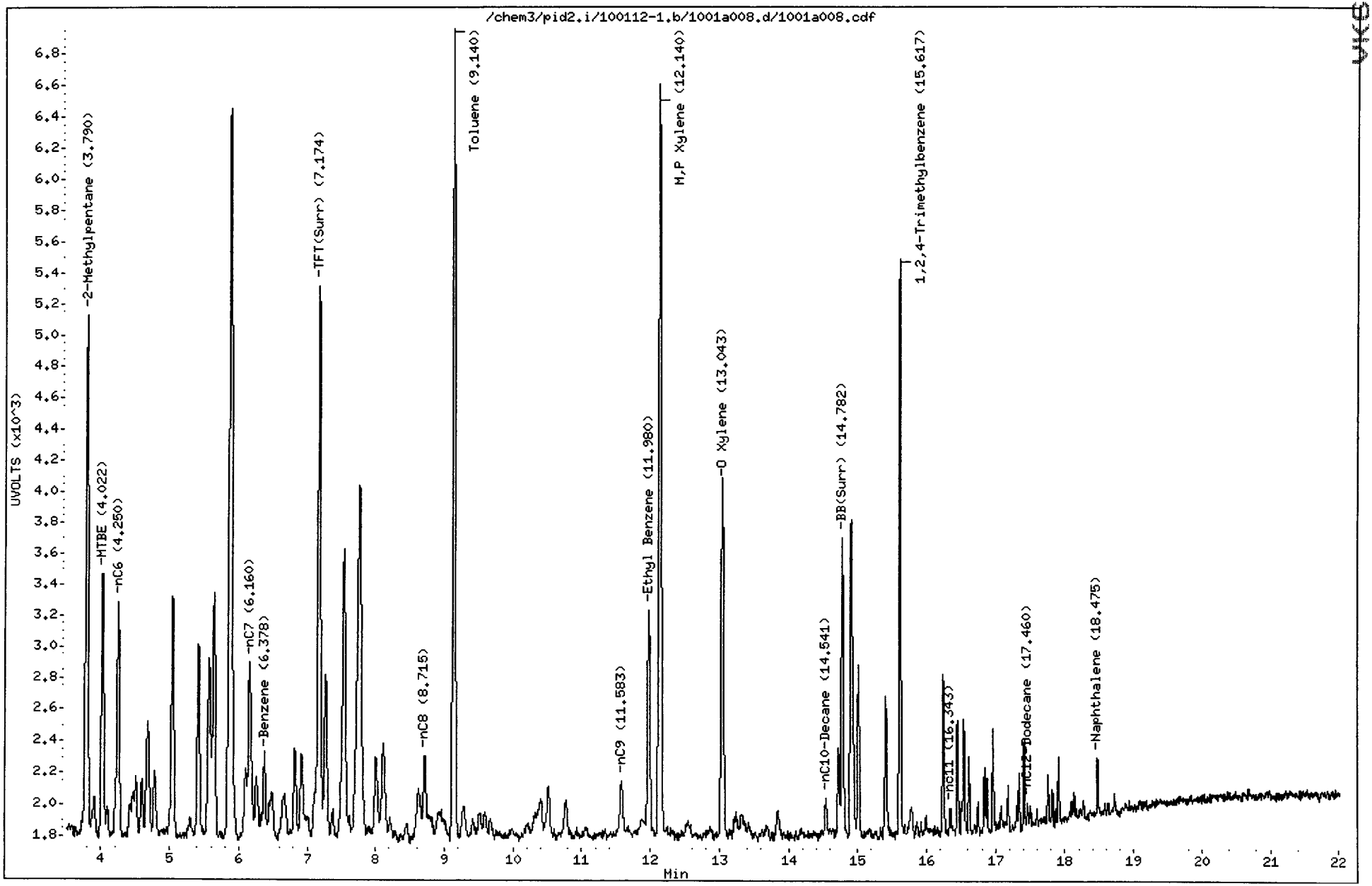
Sample Info: LCSD1001

Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: JW

Column diameter: 0.18



Data File: /chem3/pid2.i/100112-2.b/1001a008.d

Date : 01-OCT-2012 13:19

Client ID:

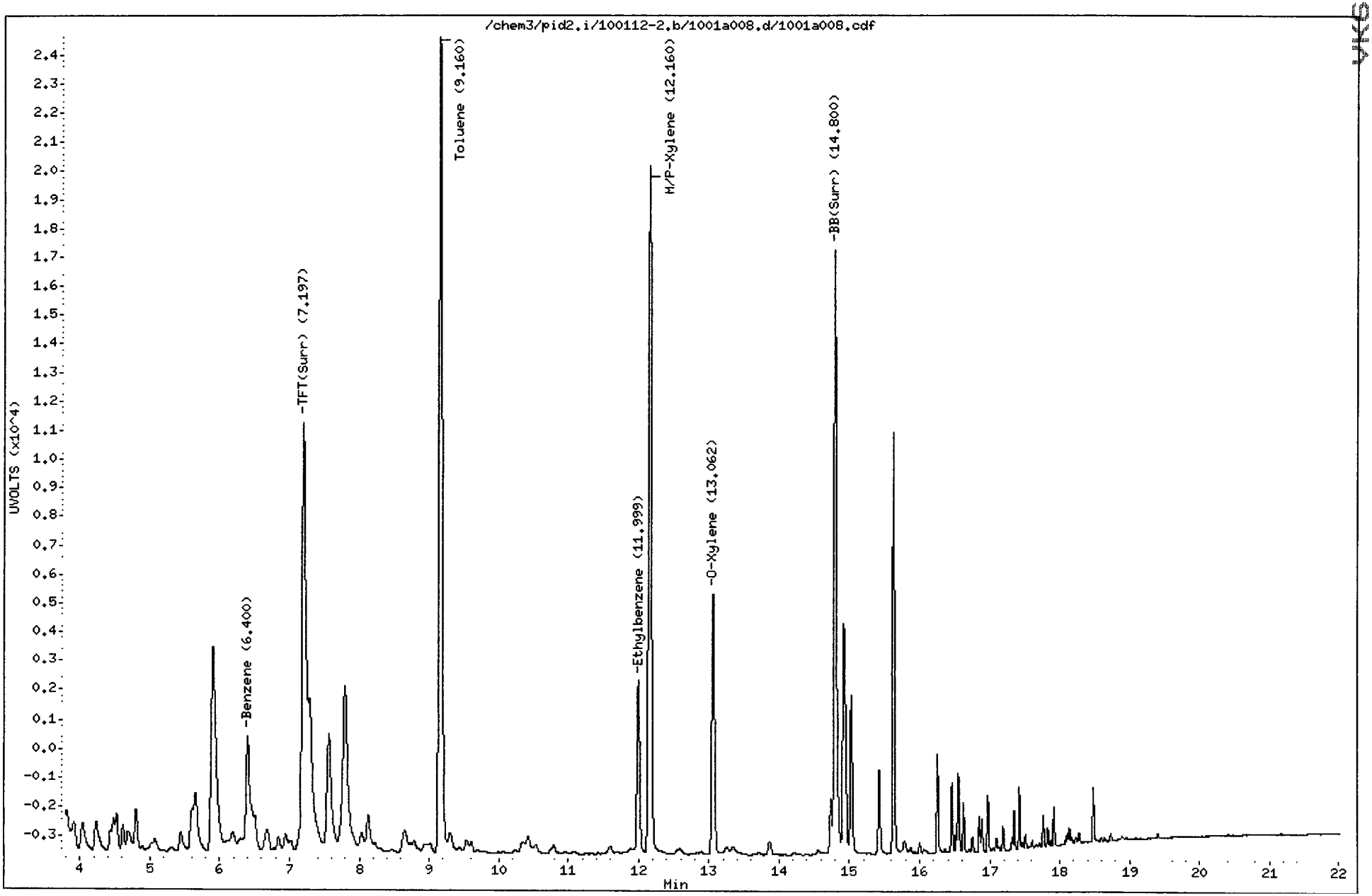
Sample Info: LCSD1001

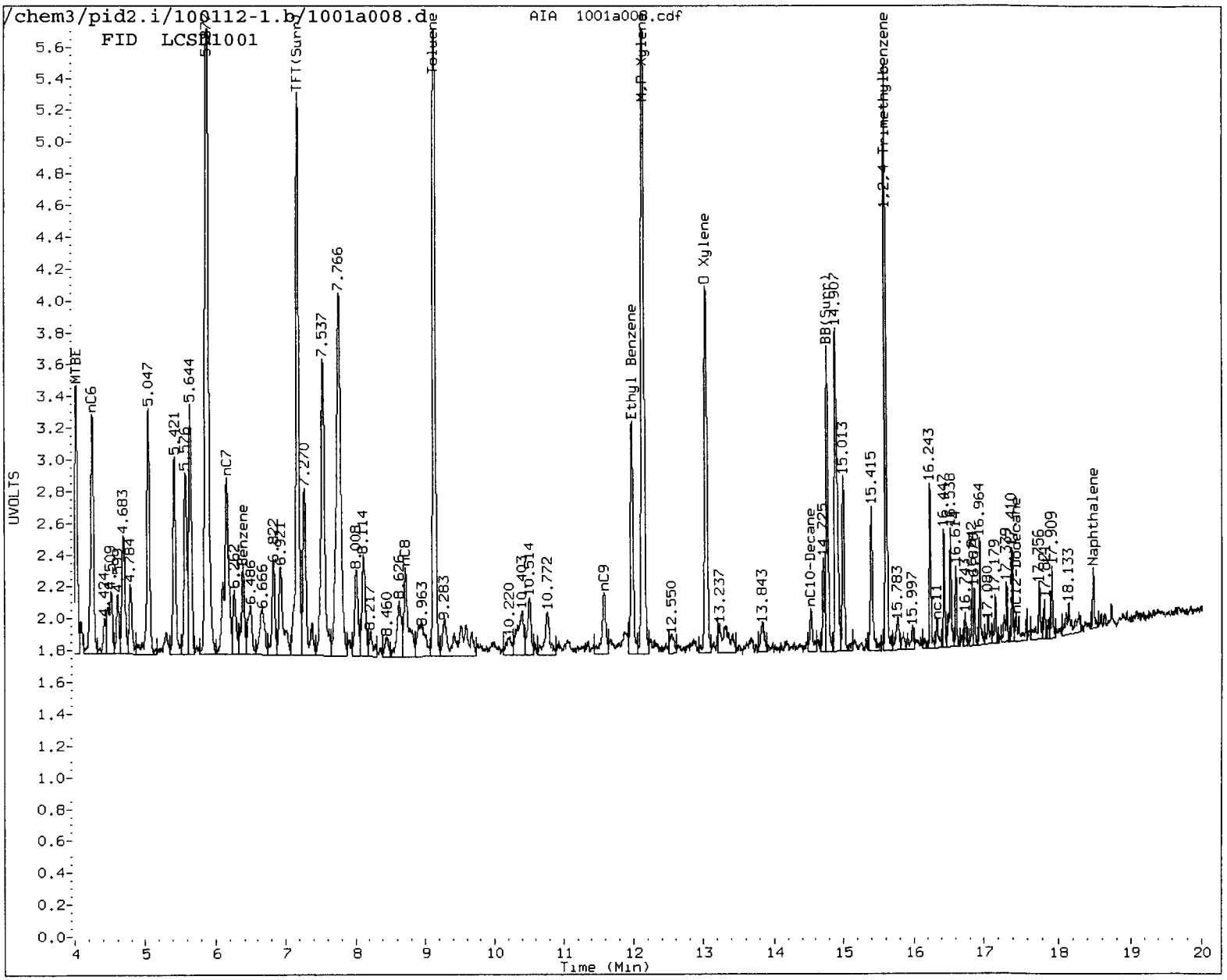
Instrument: pid2.i

Operator: JW

Column phase: RTX 502-2 PID

Column diameter: 0.18



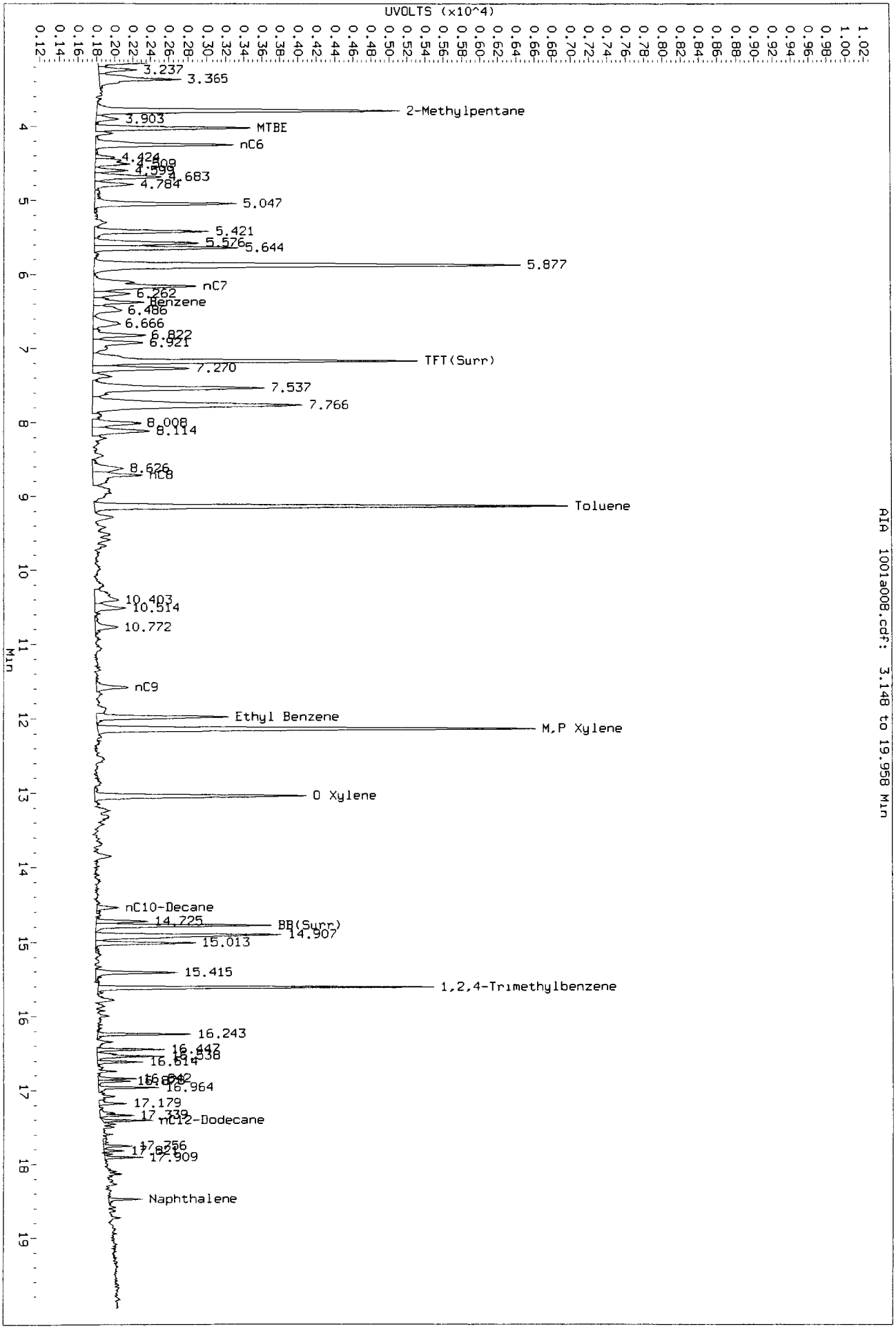


MANUAL INTEGRATION

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

5. Other _____

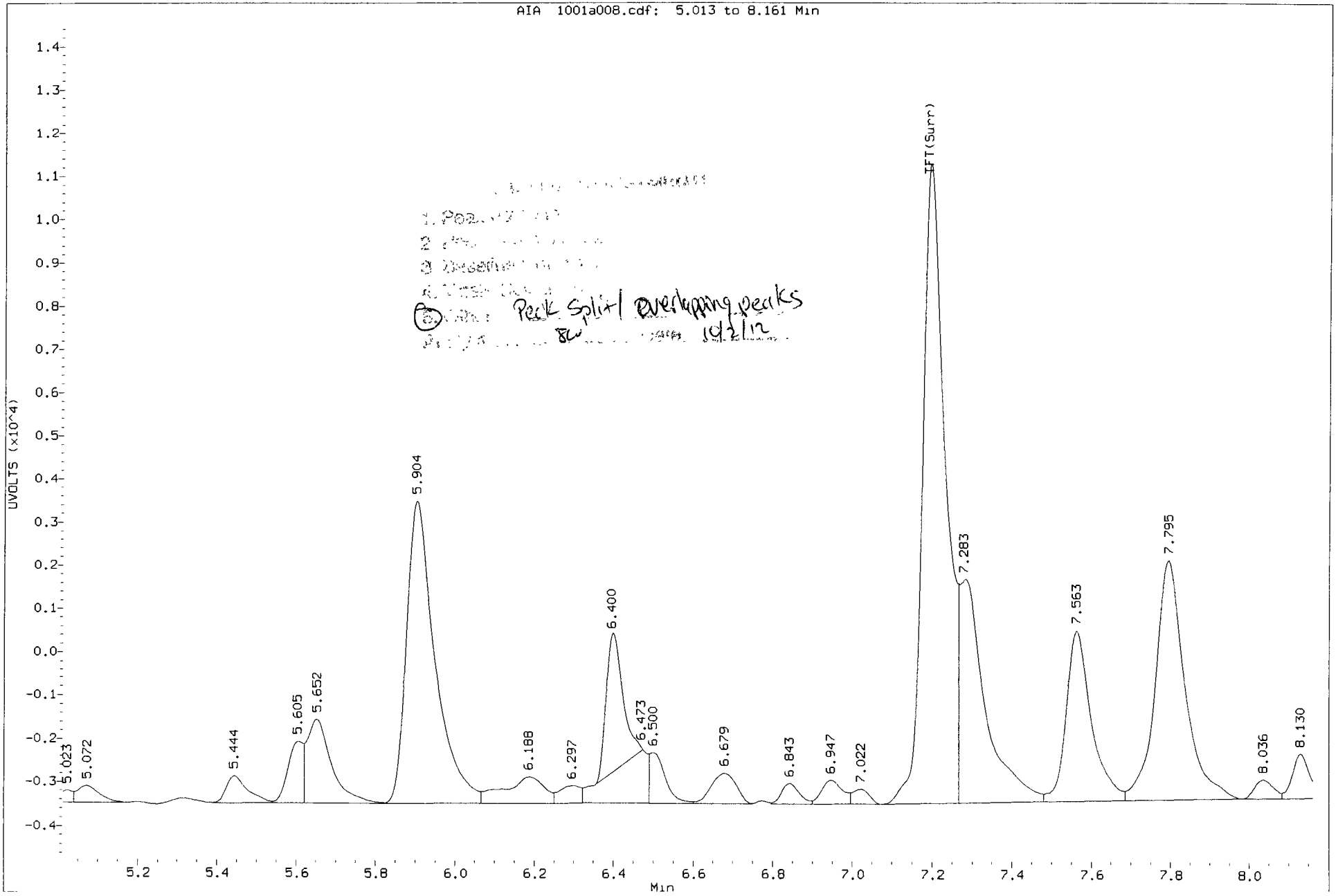
Analyst: JW Date: 10/2/12



Data File: /chem3/pid2.1/100112-1.b/1001a008.d/1001a008.cdf
Injection Date: 01-OCT-2012 13:19
Instrument: pid2.1
Client Sample ID:

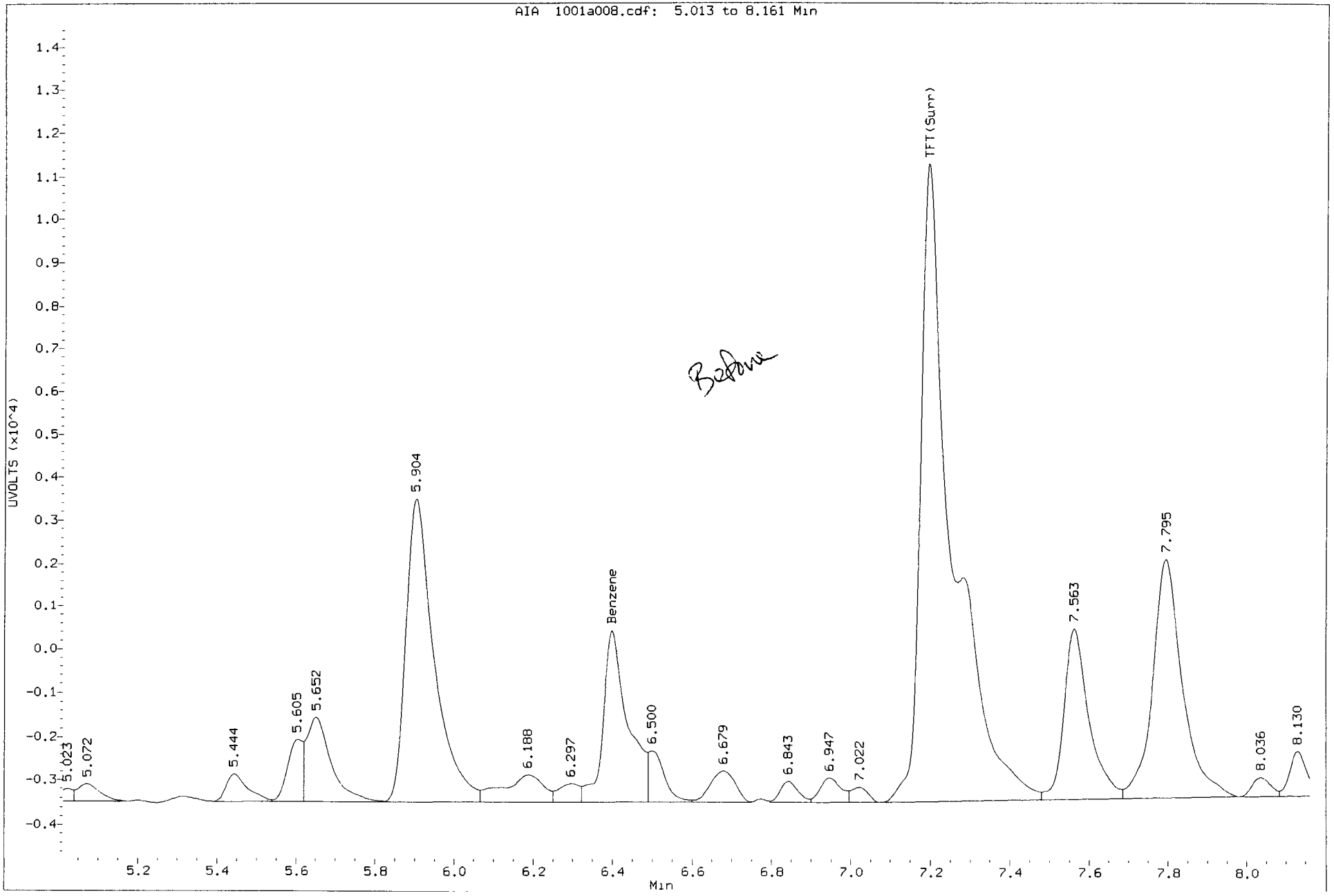
AIA 1001a008.cdf: 3.148 to 19.958 Min

Data File: /chem3/pid2.i/100112-2.b/1001a008.d/1001a008.cdf
Injection Date: 01-OCT-2012 13:19
Instrument: pid2.i
Client Sample ID:



Peak Split/ overlapping peaks
BW 10/2/12

Data File: /chem3/pid2.i/100112-2.b/1001a008.d/1001a008.cdf
Injection Date: 01-OCT-2012 13:19
Instrument: pid2.i
Client Sample ID:



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Sample ID: MW-15D-092412
SAMPLE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/02/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/05/12	**7439-96-5**	**Manganese**	5	**189**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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INORGANICS ANALYSIS DATA SHEET
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Sample ID: MW-16D-092412
SAMPLE

Lab Sample ID: VK65B
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/02/12	**7440-38-2**	**Arsenic**	0.5	**0.7**	
200.8	09/27/12	200.8	10/01/12	**7440-50-8**	**Copper**	0.5	**0.5**	
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/05/12	**7439-96-5**	**Manganese**	5	**391**	
200.8	09/27/12	200.8	10/01/12	**7440-66-6**	**Zinc**	4	**50**	

U-Analyte undetected at given RL
RL-Reporting Limit

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DISSOLVED METALS
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Sample ID: MW-14D-092412
SAMPLE

Lab Sample ID: VK65C
LIMS ID: 12-18407
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/02/12	**7440-38-2**	**Arsenic**	1	**2**	
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	2	**1,340**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-15S-092412
SAMPLE

Lab Sample ID: VK65D
LIMS ID: 12-18408
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/02/12	**7440-38-2**	**Arsenic**	0.5	**0.9**	
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	1	**375**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-16S-092412
SAMPLE

Lab Sample ID: VK65E
LIMS ID: 12-18409
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/02/12	**7440-38-2**	**Arsenic**	0.5	**0.5**	
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	1	**328**	
200.8	09/27/12	200.8	10/01/12	**7440-66-6**	**Zinc**	4	**27**	

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-14S-092412
SAMPLE

Lab Sample ID: VK65F
LIMS ID: 12-18410
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/02/12	**7440-38-2**	**Arsenic**	0.5	**0.8**	
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	1	**498**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-13S-092412
SAMPLE

Lab Sample ID: VK65G
LIMS ID: 12-18411
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	2	**724**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-12S-092412
SAMPLE

Lab Sample ID: VK65H
LIMS ID: 12-18412
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	2	**600**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

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Sample ID: MW-11S-092412
SAMPLE

Lab Sample ID: VK65I
LIMS ID: 12-18413
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	**7440-50-8**	**Copper**	0.5	**0.9**	
200.8	09/27/12	200.8	10/01/12	**7439-92-1**	**Lead**	0.1	**0.2**	
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	2	**858**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-12D-092412
SAMPLE

Lab Sample ID: VK65J
LIMS ID: 12-18414
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	2	**205**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-11D-092412
SAMPLE

Lab Sample ID: VK65K
LIMS ID: 12-18415
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	**7440-50-8**	**Copper**	0.5	**0.5**	
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	1	**72**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

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Sample ID: MW-13D-092412
SAMPLE

Lab Sample ID: VK65L
LIMS ID: 12-18416
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	1	**244**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-DUP-092412
SAMPLE

Lab Sample ID: VK65M
LIMS ID: 12-18417
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/02/12	**7439-96-5**	**Manganese**	1	**172**	
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-15D-092412
MATRIX SPIKE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.5 U	24.0	25.0	96.0%	
Copper	200.8	0.5 U	24.3	25.0	97.2%	
Lead	200.8	0.1 U	23.6	25.0	94.4%	
Manganese	200.8	189	209	25	80.0%	H
Zinc	200.8	4 U	71	80	88.8%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
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Sample ID: MW-15D-092412
DUPLICATE

Lab Sample ID: VK65A
LIMS ID: 12-18405
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Copper	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Lead	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Manganese	200.8	189	188	0.5%	+/- 20%	
Zinc	200.8	4 U	4 U	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VK65LCS
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.0	25.0	104%	
Copper	200.8	25.8	25.0	103%	
Lead	200.8	25.5	25.0	102%	
Manganese	200.8	25.7	25.0	103%	
Zinc	200.8	79	80	98.8%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VK65MB
LIMS ID: 12-18406
Matrix: Water
Data Release Authorized:
Reported: 10/08/12

QC Report No: VK65-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	09/27/12	200.8	10/01/12	7440-38-2	Arsenic	0.2	0.2	U
200.8	09/27/12	200.8	10/01/12	7440-50-8	Copper	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7439-92-1	Lead	0.1	0.1	U
200.8	09/27/12	200.8	10/01/12	7439-96-5	Manganese	0.5	0.5	U
200.8	09/27/12	200.8	10/01/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

ANALYTICAL RESOURCES INCORPORATED

Data Release Authorized:
Reported: 10/01/12
Date Received: 09/25/12
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QC Report No238: VK75-Landau Associates
Project: Cornwall
0001020.400-510

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
MW-15D-092412 VK75A 12-18431	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-16D-092412 VK75B 12-18432	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-14D-092412 VK75C 12-18433	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-15S-092412 VK75D 12-18434	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-16S-092412 VK75E 12-18435	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-14S-092412 VK75F 12-18436	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-13S-092412 VK75G 12-18437	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-12S-092412 VK75H 12-18438	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-11S-092412 VK75I 12-18439	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-12D-092412 VK75J 12-18440	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-11D-092412 VK75K 12-18441	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-13D-092412 VK75L 12-18442	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MW-DUP-092412 VK75M 12-18443	09/24/12	Water	09/26/12 09/28/12	20.0	20.0 U
MB-092612 Method Blank	NA	Water	09/26/12 09/28/12	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-092412
MATRIX SPIKE

Lab Sample ID: VK75A
LIMS ID: 12-18431
Matrix: Water
Data Release Authorized:
Reported: 10/01/12

QC Report No: VK75-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	116	100	116%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-092412
DUPLICATE

Lab Sample ID: VK75A
LIMS ID: 12-18431
Matrix: Water
Data Release Authorized:
Reported: 10/01/12

QC Report No: VK75-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VK75LCS
LIMS ID: 12-18432
Matrix: Water
Data Release Authorized:
Reported: 10/01/12

QC Report No: VK75-Landau Associates
Project: Cornwall
0001020.400-510
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	234	200	117%	

Reported in ng/L

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

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/31/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-15D-092412
ARI ID: 12-18405 VK65A

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/27/12 092712#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	29.2
Sulfate	10/24/12 102412#1	EPA 300.0	mg/L	0.1	1.8
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	44.5
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	15.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	14.9

RL Analytical reporting limit
U Undetected at reported detection limit

VK65:281 R 11/2/12 Kelly

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-16D-092412
ARI ID: 12-18406 VK65B

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/27/12 092712#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	19.2
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	1.4
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	60.8
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	20.0	< 20.0 U
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	19.3

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 282R Bc 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-14D-092412
ARI ID: 12-18407 VK65C

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/27/12 092712#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	14.1
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	1.5
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	0.447
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	63.6
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	24.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	15.8

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 283R 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-15S-092412
ARI ID: 12-18408 VK65D

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/27/12 092712#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	28.7
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	0.9
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	0.054
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	53.7
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	20.0	< 20.0 U
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	17.0

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 284R 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-16S-092412
ARI ID: 12-18409 VK65E

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/27/12 092712#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	18.8
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	3.2
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	53.1
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	< 12.0 U
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	18.2

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 285R 10/24/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-14S-092412
ARI ID: 12-18410 VK65F

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/27/12 092712#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/27/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	21.9
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	3.0
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	46.7
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	17.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	14.7

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 2862 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-13S-092412
ARI ID: 12-18411 VK65G

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	15.8
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	2.5
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	37.8
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	< 12.0 U
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	11.7

RL Analytical reporting limit
U Undetected at reported detection limit

VK65:287R 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-12S-092412
ARI ID: 12-18412 VK65H

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	17.7
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	0.1
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	46.4
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	< 12.0 U
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	14.7

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 259R 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-11S-092412
ARI ID: 12-18413 VK65I

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.200	4.79
Sulfate	09/25/12 092512#1	EPA 300.0	mg/L	0.1	2.8
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	0.059
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	57.9
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	16.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	20.3

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 2892 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-12D-092412
ARI ID: 12-18414 VK65J

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	12.4
Sulfate	10/04/12 100412#1	EPA 300.0	mg/L	1.0	37.6
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.500	5.97
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	101
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	27.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	25.1

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 290R BE 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-11D-092412
ARI ID: 12-18415 VK65K

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.200	4.19
Sulfate	10/04/12 100412#1	EPA 300.0	mg/L	0.2	9.6
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	10.0	105
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	25.0	277
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	25.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	6.00	33.8

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 291R BL 10/26/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-13D-092412
ARI ID: 12-18416 VK65L

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	0.5
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	22.5
Sulfate	10/04/12 100412#1	EPA 300.0	mg/L	1.0	34.8
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	0.902
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	50.9
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	24.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	13.7

RL Analytical reporting limit
U Undetected at reported detection limit

VK65: 292L BL 10/24/12

SAMPLE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/31/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Client ID: MW-DUP-092412
ARI ID: 12-18417 VK65M

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	09/25/12 092512#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	09/28/12 092812#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	09/28/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	09/28/12 092812#1	EPA 350.1M	mg-N/L	0.500	29.2
Sulfate	10/24/12 102412#1	EPA 300.0	mg/L	0.1	1.9
Sulfide	09/27/12 092712#1	EPA 376.2	mg/L	0.050	< 0.050 U
Chemical Oxygen Demand	10/02/12 100212#1	EPA 410.4	mg/L	5.00	49.3
Biological Oxygen Demand	09/26/12 092612#1	EPA 405.1	mg/L	12.0	21.0
Total Organic Carbon	10/03/12 100312#1	EPA 9060	mg/L	1.50	14.9

RL Analytical reporting limit
U Undetected at reported detection limit

VK69:293r 11/2/12 Kelly

MS/MSD RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/05/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VK65A Client ID: MW-15D-092412							
N-Nitrate	EPA 300.0	09/25/12	mg-N/L	< 0.1	1.9	2.0	95.0%
N-Nitrite	EPA 300.0	09/25/12	mg-N/L	< 0.1	2.0	2.0	100.0%
Total Cyanide	EPA 335.4	09/27/12	mg/L	< 0.005	0.161	0.200	80.5%
N-Ammonia	EPA 350.1M	09/28/12	mg-N/L	29.2	81.8	50.0	105.2%
Sulfate	EPA 300.0	09/25/12	mg/L	< 0.1	1.8	2.0	90.0%
Sulfide	EPA 376.2	09/27/12	mg/L	< 0.050	0.554	0.500	110.8%
Chemical Oxygen Demand	EPA 410.4	10/02/12	mg/L	44.5	133	100	88.5%
Total Organic Carbon	EPA 9060	10/03/12	mg/L	14.9	36.5	20.0	108.0%

REPLICATE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: 09/24/12
Date Received: 09/25/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VK65A Client ID: MW-15D-092412						
N-Nitrate	EPA 300.0	09/25/12	mg-N/L	< 0.1	< 0.1	NA
N-Nitrite	EPA 300.0	09/25/12	mg-N/L	< 0.1	< 0.1	NA
Total Cyanide	EPA 335.4	09/27/12	mg/L	< 0.005	< 0.005	NA
N-Ammonia	EPA 350.1M	09/28/12	mg-N/L	29.2	29.1	0.3%
Sulfate	EPA 300.0	09/25/12	mg/L	< 0.1	< 0.1	NA
Sulfide	EPA 376.2	09/27/12	mg/L	< 0.050	< 0.050	NA
Chemical Oxygen Demand	EPA 410.4	10/02/12	mg/L	44.5	32.7	30.6%
Total Organic Carbon	EPA 9060	10/03/12	mg/L	14.9	16.3	9.0%

VK65: 295R BC 10/26/12

LAB CONTROL RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/24/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Sulfide	ICVL	09/27/12	mg/L	0.460	0.504	91.3%
EPA 376.2						
Biological Oxygen Demand	ICVL	09/26/12	mg/L	155	198	78.3%
EPA 405.1	ICVL	09/26/12		158	198	79.8%

VK65: 2962 BL 10/26/12

STANDARD REFERENCE RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/31/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
N-Nitrate ERA #230511	EPA 300.0	09/25/12	mg-N/L	3.0	3.0	100.0%
N-Nitrite ERA #401010	EPA 300.0	09/25/12	mg-N/L	3.0	3.0	100.0%
Total Cyanide ERA 220811	EPA 335.4	09/27/12 09/28/12	mg/L	0.394 0.377	0.400 0.400	98.5% 94.2%
N-Ammonia ERA #15125	EPA 350.1M	09/28/12	mg-N/L	0.506	0.500	101.2%
Sulfate ERA #070811	EPA 300.0	09/25/12 10/04/12 10/24/12	mg/L	3.0 2.9 3.0	3.0 3.0 3.0	100.0% 96.7% 100.0%
Chemical Oxygen Demand Thermo Orion #I01	EPA 410.4	10/02/12	mg/L	84.6	90.0	94.0%
Total Organic Carbon ERA 0409-12-01	EPA 9060	10/03/12	mg/L	18.9	20.0	94.5%

Kelly
11/2/12

VK65:297 x

METHOD BLANK RESULTS-CONVENTIONALS
VK65-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 10/31/12

Project: Cornwall
Event: 0001020.400-510
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
N-Nitrate	EPA 300.0	09/25/12	mg-N/L	< 0.1 U	
N-Nitrite	EPA 300.0	09/25/12	mg-N/L	< 0.1 U	
Total Cyanide	EPA 335.4	09/27/12	mg/L	< 0.005 U	
		09/28/12		< 0.005 U	
N-Ammonia	EPA 350.1M	09/28/12	mg-N/L	< 0.010 U	FB
Sulfate	EPA 300.0	09/25/12	mg/L	< 0.1 U	
		10/04/12		< 0.1 U	
		10/24/12		< 0.1 U	
Sulfide	EPA 376.2	09/27/12	mg/L	< 0.050 U	
Chemical Oxygen Demand	EPA 410.4	10/02/12	mg/L	< 5.00 U	
Biological Oxygen Demand	EPA 405.1	09/26/12	mg/L	< 1.0 U	
		09/26/12		< 1.0 U	
Total Organic Carbon	EPA 9060	10/03/12	mg/L	< 1.50 U	

FB Filtration Blank

VK65: 298r 11/2/12

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI098-49**	**PAGE 1**	
REPORT DATE:	**10/05/12**		
DATE SAMPLED:	**09/24/12**	**DATE RECEIVED:**	**09/26/12**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES INC. / VK65

CASE NARRATIVE

Thirteen water samples were received by the laboratory in good condition Analysis was performed according to the chain of custody received with the samples No difficulties were encountered in the preparation or analysis of these samples Sample data follows while QA/QC data is contained on the following page

SAMPLE DATA

SAMPLE ID	LAB ID	TANNIN/LIGNIN (mg/L)
12-18405-VK65A	MW-15D-092412	1.35
12-18406-VK65B	MW-16D-092412	1.31
12-18407-VK65C	MW-14D-092412	3.83
12-18408-VK65D	MW-15S-092412	1.54
12-18409-VK65E	MW-16S-092412	1.31
12-18105-VK65F	MW-14S-092412	3.14
12-18411-VK65G	MW-13S-092412	0.953
12-18412-VK65H	MW-12S-092412	1.01
12-18413-VK65I	MW-11S-092412	1.58
12-18414-VK65J	MW-12D-092412	12.2
12-18415-VK65K	MW-11D-092412	37.9
12-18416-VK65L	MW-13D-092412	6.45
12-18417-VK65M	MW-DUP-092412	1.38

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI098-49**	**PAGE 2**	
REPORT DATE:	**10/05/12**		
DATE SAMPLED:	**09/24/12**	**DATE RECEIVED:**	**09/26/12**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES INC. / VK65

QA/QC DATA

QC PARAMETER	TANNIN/LIGNIN (mg/L)
METHOD	SM5550
DATE ANALYZED	10/05/12
DETECTION LIMIT	0.010
DUPLICATE	
SAMPLE ID	MW-15D-092412
ORIGINAL	1.35
DUPLICATE	1.34
RPD	0.91%
SPIKE SAMPLE	
SAMPLE ID	MW-15D-092412
ORIGINAL	1.35
SPIKED SAMPLE	2.29
SPIKE ADDED	1.00
% RECOVERY	94.55%
QC CHECK	
FOUND	1.07
TRUE	1.00
% RECOVERY	106.95%
BLANK	<0.010

RPD = RELATIVE PERCENT DIFFERENCE
NA = NOT APPLICABLE OR NOT AVAILABLE
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TO LOW RELATIVE TOO SAMPLE CONCENTRATION

SUBMITTED BY:

Damien Gadomski

Damien Gadomski
Project Manager

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 09/25/12

ANALYTICAL RESOURCES INCORPORATED

ARI Project: VK65

VAR1098.49

Laboratory: Aquatic Research, Inc
Lab Contact: Steve Lazoff
Lab Address: 3927 Aurora Ave N.
Seattle, WA 98103
Phone: 206-632-2715
Fax: 206-632-2417

ARI Client: Landau Associates
Project ID: Cornwall
ARI PM: Kelly Bottem
Phone: 206-695-6211
Fax: 206-695-6201
Email: subdata@arilabs.com

Analytical Protocol: In-house
Special Instructions:

Requested Turn Around:
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 sucessors, 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
12-18405-VK65A	MW-15D-092412	09/24/12 08:26	Water	1	Tannins & Lignins
Special Instructions: None					
12-18406-VK65B	MW-16D-092412	09/24/12 08:30	Water	1	Tannins & Lignins
Special Instructions: None					
12-18407-VK65C	MW-14D-092412	09/24/12 10:00	Water	1	Tannins & Lignins
Special Instructions: None					
12-18408-VK65D	MW-15S-092412	09/24/12 10:50	Water	1	Tannins & Lignins
Special Instructions: None					
12-18409-VK65E	MW-16S-092412	09/24/12 11:30	Water	1	Tannins & Lignins
Special Instructions: None					
12-18410-VK65F	MW-14S-092412	09/24/12 12:50	Water	1	Tannins & Lignins
Special Instructions: None					
12-18411-VK65G	MW-13S-092412	09/24/12 13:00	Water	1	Tannins & Lignins
Special Instructions: None					

Carrier		Airbill	Date
Relinquished by	Company ARI	Date 9/26/12	Time 0850
Received by	Company ARI	Date 9/26/12	Time 0950

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 09/25/12

ANALYTICAL RESOURCES INCORPORATED

ARI Project: VK65

Laboratory: Aquatic Research, Inc
Lab Contact: Steve Lazoff

ARI Client: Landau Associates
Project ID: 0001020.400-510

ARI Sample ID	Client Sample ID/ Add'l Sample ID	Sampled	Matrix	Bottles	Analyses
12-18412-VK65H	MW-12S-092412	09/24/12 14:00	Water	1	Tannins & Lignins
Special Instructions: None					
12-18413-VK65I	MW-11S-092412	09/24/12 14:25	Water	1	Tannins & Lignins
Special Instructions: None					
12-18414-VK65J	MW-12D-092412	09/24/12 15:10	Water	1	Tannins & Lignins
Special Instructions: None					
12-18415-VK65K	MW-11D-092412	09/24/12 15:35	Water	1	Tannins & Lignins
Special Instructions: None					
12-18416-VK65L	MW-13D-092412	09/24/12 17:00	Water	1	Tannins & Lignins
Special Instructions: None					
12-18417-VK65M	MW-DUP-092412	09/24/12	Water	1	Tannins & Lignins
Special Instructions: None					

Carrier		Airbill		Date	
Relinquished by		Company ARI	Date 9/26/12	Time 0850	
Received by		Company ARI	Date 9/26/12	Time 0850	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 16, 2012

Mr. Larry Beard
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall 001020.400.500
ARI Job No: VE38, VE43, VE90

Dear Larry,

Please find enclosed analytical results for the conventionals analyses of samples received for the project referenced above. Analytical Resources, Inc. (ARI) accepted five water samples and a trip blank on August 1, 2012. The samples were received in good condition and there were no discrepancies between the COC and containers' labels.

The samples were analyzed for SVOCs, SIM PAHs, HCID, VOCs, Pesticides, Herbicides, Dissolved Metals, Anions, Sulfide, COD, BOD, Ammonia, TOC, Cyanide and NWTPH-Dx follow ups as requested on the COC. The Tannins and Lignins were subcontracted to Aquatic Research, Inc.

The VOCs 8/7/12 CCAL is out of control low for acrolein. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 8/8/12 CCAL is out of control high for 2,4,6-Tribromophenol and Pentachlorophenol. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The dissolved metals matrix spike in association with sample MW-16D-073112 is out of control low for zinc with a sample duplicate RPD for zinc outside of control limits. All other QC is in control.

The dissolved mercury LCS is out of control high. All associated samples were non-detect and no further corrective action was taken.

The sulfate matrix spike is out of control, low in association with sample MW-16D-073112. All other QC is in control and no further corrective action was taken.

The herbicide LCS and LCSD are out of control low for 2,4,5-T with a RPD for Dalapon outside of the +/-40% control limits. All other spike recoveries are in control and no further corrective action was taken.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

The herbicide sample MW-11D-073112 was analyzed twice due to matrix effects. Both sets of data have been reported.

The pesticides LCS and/or LCSD are out of control high for several analytes. The associated samples are non-detect and no further corrective action was taken.

Quality control analyses are included for your review. No other analytical complications were noted.

A copy of these reports and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
206-695-6211
kellyb@arilabs.com

KFB/kfb
Enclosure
cc: File VE38, VE43, VE90

LANDAU ASSOCIATES

☒ Seattle/Edmonds (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

VE38

Chain-of-Custody Record

Date 073112

Page 1 of 2

Project Name Carnwall Project No. 000102D.400.500

Project Location/Event Bellingham, WA / Additional GW Investigation

Sampler's Name Christophe Venot

Project Contact " / Jeremy Davis / Larry Beard

Send Results To Anne Halvorsen / " / "

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	SVOCs	cPAHs	HCID *	VOCs	Pesticides	Herbicides	Dissolved Metals **	Anions (SO4, NO2, NO3) ***	Sulfide	NH3	TOC + Free Cyanide	Tannins + Lignins
MW-16D-073112	073112	0830	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X
MW-12D-073112	073112	1040	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X
MW-11D-073112	073112	1230	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X
MW-12S-073112	073112	1300	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X
MW-11S-073112 ****	073112	1415	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X
TBS	072512	—	AQ	2				X								

Observations/Comments

X Allow water samples to settle, collect aliquot from clear portion

X NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to _____ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

X Dissolved metal water samples field filtered

Other * LAI to follow up with GX/DX based on results
** NOTE 48hr hold time
*** As, Cu, Pb, Mn, Zn, Hg
**** METALS NOT PRESERVED BUT WERE FILTERED

Special Shipment/Handling or Storage Requirements: ON ICE

Method of Shipment: Pick-up

Relinquished by	Received by	Relinquished by	Received by
Signature: Christophe Venot	Signature: A. Volgardsen	Signature:	Signature:
Printed Name: Christophe Venot	Printed Name: ARI	Printed Name:	Printed Name:
Company: LAI	Company:	Company:	Company:
Date: 080112 Time: 0800	Date: 8/1/12 Time: 1245	Date: Time:	Date: Time:

NOTE: Centrifuge SVOCs, cPAH, Pesticides & herbicides

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

LANDAU ASSOCIATES

☒ Seattle/Edmonds (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

Date 073112
Page 2 of 2

Chain-of-Custody Record

Project Name Cornwall Project No. _____
Project Location/Event Bellingham, WA / Additional GW Investigation
Sampler's Name Christophe Venot
Project Contact " / Jeremy Davis /
Send Results To Anne Hallvorsen / " / Larry Beard

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	TOC, LOD	BOD*	NWTPH-Dx**	NWTPH-Gx**	Observations/Comments
MW-16D-073112	073112	0830	AQ	6	X	X			
MW-12D-073112	073112	1040	AQ	6	X	X			
MW-11D-073112	073112	1230	AQ	6	X	X			
MW-12S-073112	073112	1700	AQ	6	X	X			
MW-11S-073112	073112	1415	AQ	6	X	X			
TQS	072512	—	AQ	2					

X Allow water samples to settle, collect aliquot from clear portion
X NWTPH-Dx - run acid wash/silica gel cleanup
___ run samples standardized to _____ product
___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

X Dissolved metal water samples field filtered

Other * Note 48-hr hold time
** LAI to follow up with Dx/Gx based on TOC results

Special Shipment/Handling or Storage Requirements: ON ICE

Method of Shipment: Pick-up

Relinquished by	Received by	Relinquished by	Received by
Signature: Christophe Venot	Signature:	Signature:	Signature:
Printed Name: Christophe Venot	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
Company: LAI	Company: ARI	Company:	Company:
Date: 08012 Time: 0900	Date: 8/1/12 Time: 1245	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau Project Name: Cornwall

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: VE38 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 1.9 5.4 4.9 2.1

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90077952

Cooler Accepted by: AV Date: 8/1/12 Time: 1245

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: BOX

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 7/25/12

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

Samples Logged by: AV Date: 8/1/12 Time: 1537

***** 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:

16D = 2PB 12D = 5PB 11D = 5PB 12S = 3PB, 11S = 5PB

TB = 1HS, 3PB

By: AV Date: 8/1/12

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

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

PRESERVATION VERIFICATION 08/01/12
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VE38**

Inquiry Number: NONE
Analysis Requested: 08/01/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 08/01/12

Project #: 0001020.400.500
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-14610 **VE38A**	MW-16D-073112	F		P	P		DIS P					P	F			Y						
12-14611 **VE38B**	MW-12D-073112	F		P	P		DIS P					P	F			Y						
12-14612 **VE38C**	MW-11D-073112	F		P	P		DIS P					P	F			Y						
12-14613 **VE38D**	MW-12S-073112	F		P	P		DIS P					P	F			Y						
12-14614 **VE38E**	MW-11S-073112	F		P	P		DIS F					P	F			Y			L2	MP2276	2 ml	8/2/12 CB

E = Filtered/unpreserved P = Pass F = Fail
Sulfide preserved with zinc Ac lab to adjust pH
Cyanide = unpreserved

preserved Sample E in lab CB 8/2/12

Checked By AV Date 8/1/12

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

Project Name: Cornwall

COC No(s): _____ (NA)

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

Assigned ARI Job No: VE43

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 1.9 5.4 4.9 2.1	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#: 90877952	

Cooler Accepted by: AV Date: 8/1/12 Time: 1245

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: Box		
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: _____

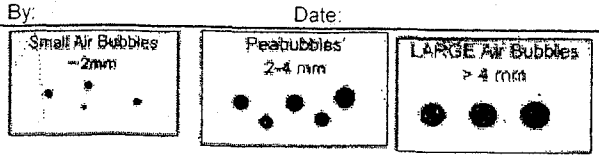
Samples Logged by: AV Date: 8/2/12 Time: 1300

*** 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"	

PRESERVATION VERIFICATION 08/01/12
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VE43**

Inquiry Number: NONE
Analysis Requested: 08/01/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 08/01/12

Project #: 0001020.400.500
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-14616 **VE43A**	MW-16D-073112						DIS									Y						
12-14617 **VE43B**	MW-12D-073112						DIS									Y						
12-14618 **VE43C**	MW-11D-073112						DIS									Y						
12-14619 **VE43D**	MW-12S-073112						DIS									Y						
12-14620 **VE43E**	MW-11S-073112						DIS F*									Y			<2	MP2276	2ml	8/2/12 CB

*E = Filtered/unpreserved P = Pass F = Fail

Sample preserved ~~samples~~ CB 8/2/12 E in lab - CB 8/2/12

Checked By AV Date 8/1/12

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VE38
Client: Landau Associates
Project Event: 0001020.400.500
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-16D-073112	VE38A	12-14610	Water	07/31/12 08:30	08/01/12 12:45
2.	MW-12D-073112	VE38B	12-14611	Water	07/31/12 10:40	08/01/12 12:45
3.	MW-11D-073112	VE38C	12-14612	Water	07/31/12 12:30	08/01/12 12:45
4.	MW-12S-073112	VE38D	12-14613	Water	07/31/12 13:00	08/01/12 12:45
5.	MW-11S-073112	VE38E	12-14614	Water	07/31/12 14:15	08/01/12 12:45
6.	Trip Blanks	VE38F	12-14615	Water	07/31/12	08/01/12 12:45

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VE43
Client: Landau Associates
Project Event: 0001020.400.500
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-16D-073112	VE43A	12-14616	Water	07/31/12 08:30	08/01/12 12:45
2.	MW-12D-073112	VE43B	12-14617	Water	07/31/12 10:40	08/01/12 12:45
3.	MW-11D-073112	VE43C	12-14618	Water	07/31/12 12:30	08/01/12 12:45
4.	MW-12S-073112	VE43D	12-14619	Water	07/31/12 13:00	08/01/12 12:45
5.	MW-11S-073112	VE43E	12-14620	Water	07/31/12 14:15	08/01/12 12:45

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VE90
Client: Landau Associates
Project Event: 0001020.400.500
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-16D-073112	VE90A	12-14876	Water	07/31/12 08:30	08/01/12 12:45

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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 ≥ 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 ≥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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Landau Associates	**ARI Job No.:** VE38
Client Project: Cornwall	**Client Project No.:** 0001020.400.500

Case Narrative

1. Five samples were submitted for preparation on August 1, 2012, and were in good condition. Each sample was received in eight 500 milliliters amber glass bottles, with a total of 20 liters for the entire job.
2. The samples were submitted for removal of solid particulate by means of centrifuging according to modified Corp of Engineers draft interim guide lines.
3. The samples were centrifuged in decontaminated 500mL glass bottles, in a pre-cooled centrifuge (4°C) at 1,000 x g for 30 minutes.
4. The supernatant water was decanted back into the original sample bottles and delivered to sample receiving for distribution.
5. There were no other anomalies in the sample or methods on this project.

Released by: Yvonne Curtis — *Geotechnical Laboratory Manager* Date: 8/3/12

Reviewed by: _____ — *Lead Technician* Date: 8.3.2012

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI098-44**	**PAGE 1**	
REPORT DATE:	**08/16/12**		
DATE SAMPLED:	**07/31/12**	**DATE RECEIVED:**	**08/02/12**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES INC. / VE38

CASE NARRATIVE

Five water samples were received by the laboratory in good condition. Analysis was performed according to the chain of custody received with the samples. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on the following page.

SAMPLE DATA

SAMPLE ID	LAB ID	TANNIN/LIGNIN (mg/L)
12-14610-VE38A	MW-16D-073112	1.22
12-14611-VE38B	MW-12D-073112	9.54
12-14612-VE38C	MW-11D-073112	29.9
12-14613-VE38D	MW-12S-073112	7.83
12-14614-VE38E	MW-11S-073112	1.90

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI098-44**	**PAGE 2**	
REPORT DATE:	**08/16/12**		
DATE SAMPLED:	**07/31/12**	**DATE RECEIVED:**	**08/02/12**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES INC. / VE38

QA/QC DATA

QC PARAMETER	TANNIN/LIGNIN (mg/L)
METHOD	SM5550
DATE ANALYZED	08/16/12
DETECTION LIMIT	0.010
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	1.22
DUPLICATE	1.22
RPD	0.00%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	1.22
SPIKED SAMPLE	2.16
SPIKE ADDED	1.00
% RECOVERY	94.85%
QC CHECK	
FOUND	1.04
TRUE	1.00
% RECOVERY	103.58%
BLANK	<0.010

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski

Damien Gadomski
Project Manager

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 08/01/12

ANALYTICAL RESOURCES INCORPORATED

ARI Project: VE38

AR1098.44

Laboratory: Aquatic Research, Inc
Lab Contact: Steve Lazoff
Lab Address: 3927 Aurora Ave N.
Seattle, WA 98103
Phone: 206-632-2715
Fax: 206-632-2417

ARI Client: Landau Associates
Project ID: Cornwall
ARI PM: Kelly Bottem
Phone: 206-695-6211
Fax: 206-695-6201
Email: subdata@arilabs.com

Analytical Protocol: In-house
Special Instructions:

Requested Turn Around:
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 sucessors, 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
12-14610-VE38A	MW-16D-073112	07/31/12 08:30	Water	1	Tannins & Lignins
Special Instructions: None					
12-14611-VE38B	MW-12D-073112	07/31/12 10:40	Water	1	Tannins & Lignins
Special Instructions: None					
12-14612-VE38C	MW-11D-073112	07/31/12 12:30	Water	1	Tannins & Lignins
Special Instructions: None					
12-14613-VE38D	MW-12S-073112	07/31/12 13:00	Water	1	Tannins & Lignins
Special Instructions: None					
12-14614-VE38E	MW-11S-073112	07/31/12 14:15	Water	1	Tannins & Lignins
Special Instructions: None					

Carrier		Airbill		Date	
Relinquished by		Company ARI		Date 8/02/12	Time 1051
Received by		Company BARE		Date 8/2/12	Time 1051

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-16D-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 22:32
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	82.0%
Tetrachlorometaxylene	57.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-12D-073112**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 22:50
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	52.5%
Tetrachlorometaxylene	55.0%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-11D-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 23:08
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	74.0%
Tetrachlorometaxylene	63.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-12S-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 23:26
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	63.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-11S-073112
SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 23:43
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.0%
Tetrachlorometaxylene	60.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MB-080612**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 21:21
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	67.0%
Tetrachlorometaxylene	62.2%

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Client ID	DCBP	TCMX	TOT OUT
MB-080612	67.0%	62.2%	0
LCS-080612	70.5%	60.5%	0
LCSD-080612	73.8%	59.5%	0
MW-16D-073112	82.0%	57.8%	0
MW-12D-073112	52.5%	55.0%	0
MW-11D-073112	74.0%	63.2%	0
MW-12S-073112	64.2%	63.2%	0
MW-11S-073112	78.0%	60.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(54-100)	(32-116)
(TCMX) = Tetrachlorometaxylene	(52-100)	(43-106)

Prep Method: SW3510C
Log Number Range: 12-14610 to 12-14614

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-080612**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted LCS/LCSD: 08/06/12

Date Analyzed LCS: 08/15/12 21:39
LCSD: 08/15/12 21:57
Instrument/Analyst LCS: ECD6/AAR
LCSD: ECD6/AAR
GPC Cleanup: No
Florisil Cleanup: No

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 5.0 mL
LCSD: 5.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Sulfur Cleanup: Yes
Silica Gel: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.196	0.200	98.0%	0.199	0.200	99.5%	1.5%
beta-BHC	0.175	0.200	87.5%	0.179	0.200	89.5%	2.3%
delta-BHC	0.183	0.200	91.5%	0.182	0.200	91.0%	0.5%
gamma-BHC (Lindane)	0.232	0.200	116%	0.236	0.200	118%	1.7%
Heptachlor	0.176	0.200	88.0%	0.182	0.200	91.0%	3.4%
Aldrin	0.175	0.200	87.5%	0.170	0.200	85.0%	2.9%
Heptachlor Epoxide	0.223	0.200	112%	0.235	0.200	118%	5.2%
Endosulfan I	0.210	0.200	105%	0.215	0.200	108%	2.4%
Dieldrin	0.423	0.400	106%	0.435	0.400	109%	2.8%
4,4'-DDE	0.412	0.400	103%	0.418	0.400	104%	1.4%
Endrin	0.478	0.400	120%	0.473	0.400	118%	1.1%
Endosulfan II	0.407	0.400	102%	0.417	0.400	104%	2.4%
4,4'-DDD	0.383	0.400	95.8%	0.393	0.400	98.2%	2.6%
Endosulfan Sulfate	0.372	0.400	93.0%	0.378	0.400	94.5%	1.6%
4,4'-DDT	0.405	0.400	101%	0.413	0.400	103%	2.0%
Methoxychlor	1.91	2.00	95.5%	1.96	2.00	98.0%	2.6%
Endrin Ketone	0.390	0.400	97.5%	0.408	0.400	102%	4.5%
Endrin Aldehyde	0.304	0.400	76.0%	0.317	0.400	79.2%	4.2%
trans-Chlordane	0.217	0.200	108%	0.219	0.200	110%	0.9%
cis-Chlordane	0.220	0.200	110%	0.224	0.200	112%	1.8%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	70.5%	73.8%
Tetrachlorometaxylene	60.5%	59.5%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-16D-073112**
 SAMPLE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 16:29

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-16D-073112**
 SAMPLE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Date Analyzed: 08/07/12 16:29

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.6%
d8-Toluene	97.8%
Bromofluorobenzene	95.9%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12D-073112**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 16:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**0.44**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12D-073112**
 SAMPLE

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Date Analyzed: 08/07/12 16:56

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	97.7%
Bromofluorobenzene	99.2%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11D-073112**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 17:22

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11D-073112**
 SAMPLE

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Date Analyzed: 08/07/12 17:22

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	97.6%
Bromofluorobenzene	97.1%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12S-073112**
 SAMPLE

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 17:49

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**5.0**	
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**2.6**	
100-41-4	**Ethylbenzene**	**0.20**	**0.46**	
100-42-5	**Styrene**	**0.20**	**0.82**	
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	**m,p-Xylene**	**0.40**	**0.42**	
95-47-6	**o-Xylene**	**0.20**	**0.31**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.86**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-12S-073112**
 SAMPLE

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Date Analyzed: 08/07/12 17:49

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.25**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	97.8%
Bromofluorobenzene	97.4%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11S-073112**
 SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 18:15

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-11S-073112**
 SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Date Analyzed: 08/07/12 18:15

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	**4-Isopropyltoluene**	**0.20**	**0.86**	
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	97.8%
Bromofluorobenzene	99.0%
d4-1,2-Dichlorobenzene	104%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
 SAMPLE

Lab Sample ID: VE38F
LIMS ID: 12-14615
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 12:24

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
 SAMPLE

Lab Sample ID: VE38F
LIMS ID: 12-14615
Matrix: Water
Date Analyzed: 08/07/12 12:24

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.3%
d8-Toluene	96.5%
Bromofluorobenzene	96.7%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-080712A**
 METHOD BLANK

Lab Sample ID: MB-080712A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 11:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-080712A**
 METHOD BLANK

Lab Sample ID: MB-080712A
LIMS ID: 12-14610
Matrix: Water
Date Analyzed: 08/07/12 11:56

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.7%
d8-Toluene	96.7%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	100%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-080712A	Method Blank	10	98.7%	96.7%	97.7%	100%	0
LCS-080712A	Lab Control	10	99.9%	99.2%	98.6%	99.9%	0
LCSD-080712A	Lab Control Dup	10	101%	99.8%	99.0%	102%	0
VE38A	MW-16D-073112	10	99.6%	97.8%	95.9%	100%	0
VE38B	MW-12D-073112	10	102%	97.7%	99.2%	105%	0
VE38C	MW-11D-073112	10	103%	97.6%	97.1%	102%	0
VE38D	MW-12S-073112	10	99.0%	97.8%	97.4%	102%	0
VE38E	MW-11S-073112	10	100%	97.8%	99.0%	104%	0
VE38F	Trip Blanks	10	99.3%	96.5%	96.7%	100%	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: 12-14610 to 12-14615

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-080712A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-080712A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/08/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT2/PKC
LCSD: NT2/PKC
Date Analyzed LCS: 08/07/12 10:25
LCSD: 08/07/12 10:52

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	8.72	10.0	87.2%	8.42	10.0	84.2%	3.5%
Bromomethane	8.94	10.0	89.4%	8.87	10.0	88.7%	0.8%
Vinyl Chloride	8.94	10.0	89.4%	8.67	10.0	86.7%	3.1%
Chloroethane	9.00	10.0	90.0%	8.75	10.0	87.5%	2.8%
Methylene Chloride	8.84	10.0	88.4%	8.50	10.0	85.0%	3.9%
Acetone	45.5	50.0	91.0%	45.6	50.0	91.2%	0.2%
Carbon Disulfide	9.30	10.0	93.0%	8.96	10.0	89.6%	3.7%
1,1-Dichloroethene	9.33	10.0	93.3%	9.12	10.0	91.2%	2.3%
1,1-Dichloroethane	9.29	10.0	92.9%	8.95	10.0	89.5%	3.7%
trans-1,2-Dichloroethene	8.73	10.0	87.3%	8.56	10.0	85.6%	2.0%
cis-1,2-Dichloroethene	8.99	10.0	89.9%	8.73	10.0	87.3%	2.9%
Chloroform	9.43	10.0	94.3%	9.11	10.0	91.1%	3.5%
1,2-Dichloroethane	9.63	10.0	96.3%	9.54	10.0	95.4%	0.9%
2-Butanone	45.3	50.0	90.6%	44.7	50.0	89.4%	1.3%
1,1,1-Trichloroethane	9.65	10.0	96.5%	9.25	10.0	92.5%	4.2%
Carbon Tetrachloride	9.88	10.0	98.8%	9.75	10.0	97.5%	1.3%
Vinyl Acetate	8.80	10.0	88.0%	8.56	10.0	85.6%	2.8%
Bromodichloromethane	9.79	10.0	97.9%	9.54	10.0	95.4%	2.6%
1,2-Dichloropropane	9.24	10.0	92.4%	9.14	10.0	91.4%	1.1%
cis-1,3-Dichloropropene	9.61	10.0	96.1%	9.35	10.0	93.5%	2.7%
Trichloroethene	9.58	10.0	95.8%	9.43	10.0	94.3%	1.6%
Dibromochloromethane	10.3	10.0	103%	9.84	10.0	98.4%	4.6%
1,1,2-Trichloroethane	9.59	10.0	95.9%	9.35	10.0	93.5%	2.5%
Benzene	9.31	10.0	93.1%	9.20	10.0	92.0%	1.2%
trans-1,3-Dichloropropene	9.74	10.0	97.4%	9.52	10.0	95.2%	2.3%
2-Chloroethylvinylether	9.04	10.0	90.4%	8.77	10.0	87.7%	3.0%
Bromoform	10.4	10.0	104%	9.85	10.0	98.5%	5.4%
4-Methyl-2-Pentanone (MIBK)	46.5	50.0	93.0%	45.8	50.0	91.6%	1.5%
2-Hexanone	47.9	50.0	95.8%	46.1	50.0	92.2%	3.8%
Tetrachloroethene	10.0	10.0	100%	9.56	10.0	95.6%	4.5%
1,1,2,2-Tetrachloroethane	9.47	10.0	94.7%	9.28	10.0	92.8%	2.0%
Toluene	9.57	10.0	95.7%	9.36	10.0	93.6%	2.2%
Chlorobenzene	10.1	10.0	101%	9.72	10.0	97.2%	3.8%
Ethylbenzene	9.91	10.0	99.1%	9.56	10.0	95.6%	3.6%
Styrene	10.0	10.0	100%	9.42	10.0	94.2%	6.0%
Trichlorofluoromethane	9.90	10.0	99.0%	9.50	10.0	95.0%	4.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.56	10.0	95.6%	9.14	10.0	91.4%	4.5%
m,p-Xylene	20.3	20.0	102%	19.6	20.0	98.0%	3.5%
o-Xylene	10.1	10.0	101%	9.86	10.0	98.6%	2.4%
1,2-Dichlorobenzene	9.91	10.0	99.1%	9.90	10.0	99.0%	0.1%
1,3-Dichlorobenzene	9.91	10.0	99.1%	9.74	10.0	97.4%	1.7%
1,4-Dichlorobenzene	9.96	10.0	99.6%	9.71	10.0	97.1%	2.5%
Acrolein	42.0 Q	50.0	84.0%	41.4 Q	50.0	82.8%	1.4%
Methyl Iodide	9.58	10.0	95.8%	9.23	10.0	92.3%	3.7%
Bromoethane	9.56	10.0	95.6%	9.20	10.0	92.0%	3.8%
Acrylonitrile	8.43	10.0	84.3%	8.34	10.0	83.4%	1.1%
1,1-Dichloropropene	9.48	10.0	94.8%	9.31	10.0	93.1%	1.8%
Dibromomethane	9.72	10.0	97.2%	9.65	10.0	96.5%	0.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-080712A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-080712A QC Report No: VE38-Landau Associates
LIMS ID: 12-14610 Project: Cornwall
Matrix: Water 0001020.400.500

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,1,1,2-Tetrachloroethane	10.3	10.0	103%	10.1	10.0	101%	2.0%
1,2-Dibromo-3-chloropropane	8.63	10.0	86.3%	8.75	10.0	87.5%	1.4%
1,2,3-Trichloropropane	9.89	10.0	98.9%	9.54	10.0	95.4%	3.6%
trans-1,4-Dichloro-2-butene	9.35	10.0	93.5%	8.77	10.0	87.7%	6.4%
1,3,5-Trimethylbenzene	9.97	10.0	99.7%	9.81	10.0	98.1%	1.6%
1,2,4-Trimethylbenzene	10.0	10.0	100%	9.84	10.0	98.4%	1.6%
Hexachlorobutadiene	8.87	10.0	88.7%	9.25	10.0	92.5%	4.2%
Ethylene Dibromide	9.76	10.0	97.6%	9.46	10.0	94.6%	3.1%
Bromochloromethane	9.39	10.0	93.9%	8.96	10.0	89.6%	4.7%
2,2-Dichloropropane	9.42	10.0	94.2%	9.03	10.0	90.3%	4.2%
1,3-Dichloropropane	9.78	10.0	97.8%	9.32	10.0	93.2%	4.8%
Isopropylbenzene	9.85	10.0	98.5%	9.53	10.0	95.3%	3.3%
n-Propylbenzene	9.91	10.0	99.1%	9.61	10.0	96.1%	3.1%
Bromobenzene	9.79	10.0	97.9%	9.39	10.0	93.9%	4.2%
2-Chlorotoluene	9.88	10.0	98.8%	9.57	10.0	95.7%	3.2%
4-Chlorotoluene	9.82	10.0	98.2%	9.58	10.0	95.8%	2.5%
tert-Butylbenzene	10.2	10.0	102%	10.0	10.0	100%	2.0%
sec-Butylbenzene	9.96	10.0	99.6%	9.87	10.0	98.7%	0.9%
4-Isopropyltoluene	9.95	10.0	99.5%	9.92	10.0	99.2%	0.3%
n-Butylbenzene	9.49	10.0	94.9%	9.41	10.0	94.1%	0.8%
1,2,4-Trichlorobenzene	8.82	10.0	88.2%	9.25	10.0	92.5%	4.8%
Naphthalene	8.53	10.0	85.3%	8.95	10.0	89.5%	4.8%
1,2,3-Trichlorobenzene	8.28	10.0	82.8%	8.90	10.0	89.0%	7.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	99.9%	101%
d8-Toluene	99.2%	99.8%
Bromofluorobenzene	98.6%	99.0%
d4-1,2-Dichlorobenzene	99.9%	102%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-16D-073112
SAMPLE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 17:53
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-16D-073112
SAMPLE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Date Analyzed: 08/08/12 17:53

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

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	5.0	< 5.0 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	5.0	< 5.0 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**	**1.3**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.6%	2-Fluorobiphenyl	59.6%
d14-p-Terphenyl	76.0%	d4-1,2-Dichlorobenzene	46.0%
d5-Phenol	63.5%	2-Fluorophenol	56.0%
2,4,6-Tribromophenol	94.9%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-12D-073112
SAMPLE

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 18:27
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-12D-073112
SAMPLE

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Date Analyzed: 08/08/12 18:27

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

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	5.0	< 5.0 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	5.0	< 5.0 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**	**1.4**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.0%	2-Fluorobiphenyl	54.4%
d14-p-Terphenyl	53.2%	d4-1,2-Dichlorobenzene	47.2%
d5-Phenol	60.5%	2-Fluorophenol	56.3%
2,4,6-Tribromophenol	90.1%	d4-2-Chlorophenol	61.3%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-11D-073112
SAMPLE

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 19:01
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-11D-073112
SAMPLE

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Date Analyzed: 08/08/12 19:01

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

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	5.0	< 5.0 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	5.0	< 5.0 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**	**1.7**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	53.6%
d14-p-Terphenyl	42.0%	d4-1,2-Dichlorobenzene	46.4%
d5-Phenol	57.6%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	82.7%	d4-2-Chlorophenol	59.5%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-12S-073112
SAMPLE

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 19:35
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MW-12S-073112**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: VE38D QC Report No: VE38-Landau Associates
LIMS ID: 12-14613 Project: Cornwall
Matrix: Water 0001020.400.500
Date Analyzed: 08/08/12 19:35

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	5.0	< 5.0 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	5.0	< 5.0 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**	**1.8**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	57.2%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	47.6%
d5-Phenol	64.3%	2-Fluorophenol	60.5%
2,4,6-Tribromophenol	88.3%	d4-2-Chlorophenol	65.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-11S-073112
SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 20:09
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-11S-073112
SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Date Analyzed: 08/08/12 20:09

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

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	5.0	< 5.0 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	5.0	< 5.0 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**	**1.2**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	57.6%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	49.2%
d5-Phenol	62.1%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-080612
METHOD BLANK

Lab Sample ID: MB-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 14:28
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-080612**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-080612 QC Report No: VE38-Landau Associates
LIMS ID: 12-14610 Project: Cornwall
Matrix: Water 0001020.400.500
Date Analyzed: 08/08/12 14:28

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	5.0	< 5.0 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	5.0	< 5.0 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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	64.0%
d14-p-Terphenyl	82.4%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	66.9%	2-Fluorophenol	64.0%
2,4,6-Tribromophenol	87.5%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-080612	64.4%	64.0%	82.4%	52.8%	66.9%	64.0%	87.5%	68.5%	0
LCS-080612	62.4%	68.0%	79.2%	52.4%	65.6%	61.3%	98.9%	66.4%	0
LCSD-080612	64.0%	65.2%	78.8%	48.0%	66.4%	64.0%	97.9%	67.7%	0
MW-16D-073112	57.6%	59.6%	76.0%	46.0%	63.5%	56.0%	94.9%	62.7%	0
MW-12D-073112	58.0%	54.4%	53.2%	47.2%	60.5%	56.3%	90.1%	61.3%	0
MW-11D-073112	56.8%	53.6%	42.0%	46.4%	57.6%	55.7%	82.7%	59.5%	0
MW-12S-073112	61.6%	57.2%	73.6%	47.6%	64.3%	60.5%	88.3%	65.6%	0
MW-11S-073112	59.6%	57.6%	67.2%	49.2%	62.1%	58.9%	84.0%	62.9%	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: 12-14610 to 12-14614

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-080612
LCS/LCSD

Lab Sample ID: LCS-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted LCS/LCSD: 08/06/12

Date Analyzed LCS: 08/08/12 15:02
LCSD: 08/08/12 15:36
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

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
Phenol	17.0	25.0	68.0%	17.7	25.0	70.8%	4.0%
Bis-(2-Chloroethyl) Ether	15.9	25.0	63.6%	17.1	25.0	68.4%	7.3%
2-Chlorophenol	17.2	25.0	68.8%	18.3	25.0	73.2%	6.2%
1,3-Dichlorobenzene	11.2	25.0	44.8%	11.9	25.0	47.6%	6.1%
1,4-Dichlorobenzene	11.7	25.0	46.8%	12.4	25.0	49.6%	5.8%
Benzyl Alcohol	14.1	25.0	56.4%	14.5	25.0	58.0%	2.8%
1,2-Dichlorobenzene	12.2	25.0	48.8%	13.0	25.0	52.0%	6.3%
2-Methylphenol	16.9	25.0	67.6%	17.5	25.0	70.0%	3.5%
2,2'-Oxybis(1-Chloropropane)	15.2	25.0	60.8%	15.7	25.0	62.8%	3.2%
4-Methylphenol	34.2	50.0	68.4%	34.8	50.0	69.6%	1.7%
N-Nitroso-Di-N-Propylamine	16.1	25.0	64.4%	16.2	25.0	64.8%	0.6%
Hexachloroethane	9.9	25.0	39.6%	10.6	25.0	42.4%	6.8%
Nitrobenzene	16.1	25.0	64.4%	17.1	25.0	68.4%	6.0%
Isophorone	18.3	25.0	73.2%	18.8	25.0	75.2%	2.7%
2-Nitrophenol	18.6	25.0	74.4%	20.1	25.0	80.4%	7.8%
2,4-Dimethylphenol	48.7	75.0	64.9%	49.8	75.0	66.4%	2.2%
Benzoic Acid	107	138	77.5%	110	138	79.7%	2.8%
bis(2-Chloroethoxy) Methane	16.1	25.0	64.4%	16.9	25.0	67.6%	4.8%
2,4-Dichlorophenol	53.5	75.0	71.3%	55.6	75.0	74.1%	3.8%
1,2,4-Trichlorobenzene	13.0	25.0	52.0%	13.9	25.0	55.6%	6.7%
Naphthalene	13.8	25.0	55.2%	14.4	25.0	57.6%	4.3%
4-Chloroaniline	40.2	75.0	53.6%	40.6	75.0	54.1%	1.0%
Hexachlorobutadiene	11.2	25.0	44.8%	12.2	25.0	48.8%	8.5%
4-Chloro-3-methylphenol	54.7	75.0	72.9%	54.8	75.0	73.1%	0.2%
2-Methylnaphthalene	13.3	25.0	53.2%	13.8	25.0	55.2%	3.7%
Hexachlorocyclopentadiene	28.3	75.0	37.7%	28.6	75.0	38.1%	1.1%
2,4,6-Trichlorophenol	59.8	75.0	79.7%	61.9	75.0	82.5%	3.5%
2,4,5-Trichlorophenol	59.9	75.0	79.9%	61.6	75.0	82.1%	2.8%
2-Chloronaphthalene	17.0	25.0	68.0%	17.9	25.0	71.6%	5.2%
2-Nitroaniline	41.8	75.0	55.7%	42.7	75.0	56.9%	2.1%
Dimethylphthalate	19.4	25.0	77.6%	19.8	25.0	79.2%	2.0%
Acenaphthylene	16.3	25.0	65.2%	16.8	25.0	67.2%	3.0%
3-Nitroaniline	47.0	75.0	62.7%	47.5	75.0	63.3%	1.1%
Acenaphthene	15.9	25.0	63.6%	16.6	25.0	66.4%	4.3%
2,4-Dinitrophenol	135 Q	138	97.8%	143 Q	138	104%	5.8%
4-Nitrophenol	68.9	75.0	91.9%	68.2	75.0	90.9%	1.0%
Dibenzofuran	14.8	25.0	59.2%	15.4	25.0	61.6%	4.0%
2,6-Dinitrotoluene	59.4	75.0	79.2%	60.6	75.0	80.8%	2.0%
2,4-Dinitrotoluene	59.3	75.0	79.1%	61.0	75.0	81.3%	2.8%
Diethylphthalate	19.1	25.0	76.4%	19.5	25.0	78.0%	2.1%
4-Chlorophenyl-phenylether	18.2	25.0	72.8%	19.0	25.0	76.0%	4.3%
Fluorene	16.9	25.0	67.6%	17.5	25.0	70.0%	3.5%
4-Nitroaniline	49.1	75.0	65.5%	49.6	75.0	66.1%	1.0%
4,6-Dinitro-2-Methylphenol	120	138	87.0%	124	138	89.9%	3.3%
N-Nitrosodiphenylamine	16.0	25.0	64.0%	16.8	25.0	67.2%	4.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-080612
LCS/LCSD

Lab Sample ID: LCS-080612
LIMS ID: 12-14610
Matrix: Water
Date Analyzed LCS: 08/08/12 15:02
LCSD: 08/08/12 15:36

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	19.0	25.0	76.0%	19.7	25.0	78.8%	3.6%
Hexachlorobenzene	19.0	25.0	76.0%	19.8	25.0	79.2%	4.1%
Pentachlorophenol	73.7 Q	75.0	98.3%	75.3 Q	75.0	100%	2.1%
Phenanthrene	17.4	25.0	69.6%	17.6	25.0	70.4%	1.1%
Carbazole	19.1	25.0	76.4%	19.0	25.0	76.0%	0.5%
Anthracene	15.8	25.0	63.2%	15.9	25.0	63.6%	0.6%
Di-n-Butylphthalate	19.9	25.0	79.6%	19.7	25.0	78.8%	1.0%
Fluoranthene	18.0	25.0	72.0%	18.0	25.0	72.0%	0.0%
Pyrene	17.4	25.0	69.6%	17.6	25.0	70.4%	1.1%
Butylbenzylphthalate	18.6	25.0	74.4%	19.0	25.0	76.0%	2.1%
3,3'-Dichlorobenzidine	50.7	75.0	67.6%	50.2	75.0	66.9%	1.0%
Benzo(a)anthracene	17.7	25.0	70.8%	17.8	25.0	71.2%	0.6%
bis(2-Ethylhexyl)phthalate	19.6	25.0	78.4%	20.3	25.0	81.2%	3.5%
Chrysene	16.0	25.0	64.0%	16.3	25.0	65.2%	1.9%
Di-n-Octyl phthalate	19.1	25.0	76.4%	19.2	25.0	76.8%	0.5%
Benzo(a)pyrene	16.3	25.0	65.2%	16.4	25.0	65.6%	0.6%
Indeno(1,2,3-cd)pyrene	16.3	25.0	65.2%	16.4	25.0	65.6%	0.6%
Dibenz(a,h)anthracene	15.4	25.0	61.6%	15.3	25.0	61.2%	0.7%
Benzo(g,h,i)perylene	15.5	25.0	62.0%	15.7	25.0	62.8%	1.3%
1-Methylnaphthalene	19.1	25.0	76.4%	19.9	25.0	79.6%	4.1%
Total Benzofluoranthenes	34.2	50.0	68.4%	34.5	50.0	69.0%	0.9%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	62.4%	64.0%
2-Fluorobiphenyl	68.0%	65.2%
d14-p-Terphenyl	79.2%	78.8%
d4-1,2-Dichlorobenzene	52.4%	48.0%
d5-Phenol	65.6%	66.4%
2-Fluorophenol	61.3%	64.0%
2,4,6-Tribromophenol	98.9%	97.9%
d4-2-Chlorophenol	66.4%	67.7%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-16D-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 19:22
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**	**0.032**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.026**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.36**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.29**
86-73-7	**Fluorene**	**0.010**	**0.082**
85-01-8	**Phenanthrene**	**0.010**	**0.11**
120-12-7	**Anthracene**	**0.010**	**0.013**
206-44-0	**Fluoranthene**	**0.010**	**0.053**
129-00-0	**Pyrene**	**0.010**	**0.039**
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**	**0.012**
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.0%
d14-Dibenzo(a,h)anthracene	65.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-12D-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/09/12 13:38
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**	**0.046**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.034**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.053**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.025**
86-73-7	**Fluorene**	**0.010**	**0.023**
85-01-8	**Phenanthrene**	**0.010**	**0.040**
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	35.3%
d14-Dibenzo(a,h)anthracene	33.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-11D-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 20:20
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	49.0%
d14-Dibenzo(a,h)anthracene	54.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-12S-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 20:49
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**	**0.062**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.025**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.082**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.078**
86-73-7	**Fluorene**	**0.010**	**0.069**
85-01-8	**Phenanthrene**	**0.010**	**0.062**
120-12-7	Anthracene	0.010	< 0.010 U
206-44-0	**Fluoranthene**	**0.010**	**0.029**
129-00-0	**Pyrene**	**0.010**	**0.019**
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	67.0%
d14-Dibenzo(a,h)anthracene	64.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-11S-073112**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 21:18
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**	**0.027**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.052**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.082**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.042**
86-73-7	**Fluorene**	**0.010**	**0.036**
85-01-8	**Phenanthrene**	**0.010**	**0.065**
120-12-7	**Anthracene**	**0.010**	**0.010**
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	60.7%
d14-Dibenzo(a,h)anthracene	58.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-080612**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: NA
Date Received: NA

Date Extracted: 08/06/12
Date Analyzed: 08/08/12 17:26
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	61.7%
d14-Dibenzo(a,h)anthracene	64.3%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Client ID	MNP	DBA	TOT OUT
MB-080612	61.7%	64.3%	0
LCS-080612	63.0%	66.7%	0
LCSD-080612	59.7%	65.7%	0
MW-16D-073112	63.0%	65.7%	0
MW-12D-073112	35.3%	33.3%	0
MW-11D-073112	49.0%	54.7%	0
MW-12S-073112	67.0%	64.0%	0
MW-11S-073112	60.7%	58.0%	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: 12-14610 to 12-14614

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-080612
LAB CONTROL SAMPLE

Lab Sample ID: LCS-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE38-Landau Associates
Project: Cornwall
Event: 0001020.400.500
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 08/06/12

Date Analyzed LCS: 08/08/12 17:55
LCSD: 08/08/12 18:24
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	0.172	0.300	57.3%	0.173	0.300	57.7%	0.6%
2-Methylnaphthalene	0.173	0.300	57.7%	0.171	0.300	57.0%	1.2%
1-Methylnaphthalene	0.173	0.300	57.7%	0.170	0.300	56.7%	1.7%
Acenaphthylene	0.203	0.300	67.7%	0.193	0.300	64.3%	5.1%
Acenaphthene	0.186	0.300	62.0%	0.183	0.300	61.0%	1.6%
Fluorene	0.195	0.300	65.0%	0.187	0.300	62.3%	4.2%
Phenanthrene	0.187	0.300	62.3%	0.184	0.300	61.3%	1.6%
Anthracene	0.170	0.300	56.7%	0.152	0.300	50.7%	11.2%
Fluoranthene	0.211	0.300	70.3%	0.200	0.300	66.7%	5.4%
Pyrene	0.209	0.300	69.7%	0.204	0.300	68.0%	2.4%
Benzo(a)anthracene	0.209	0.300	69.7%	0.203	0.300	67.7%	2.9%
Chrysene	0.194	0.300	64.7%	0.192	0.300	64.0%	1.0%
Benzo(a)pyrene	0.173	0.300	57.7%	0.148	0.300	49.3%	15.6%
Indeno(1,2,3-cd)pyrene	0.188	0.300	62.7%	0.179	0.300	59.7%	4.9%
Dibenz(a,h)anthracene	0.185	0.300	61.7%	0.182	0.300	60.7%	1.6%
Benzo(g,h,i)perylene	0.193	0.300	64.3%	0.190	0.300	63.3%	1.6%
Dibenzofuran	0.172	0.300	57.3%	0.166	0.300	55.3%	3.6%
Total Benzofluoranthenes	0.573	0.600	95.5%	0.567	0.600	94.5%	1.1%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	63.0%	59.7%
d14-Dibenzo(a,h)anthracene	66.7%	65.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-16D-073112
SAMPLE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 19:50
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	91.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-12D-073112
SAMPLE

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 20:26
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	81.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-11D-073112
SAMPLE

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/09/12 10:51
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	47	< 47 Y
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	2,000	< 2,000 Y
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	NR

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C

Sample ID: MW-11D-073112
DILUTION

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized: MW
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 17:25
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 10.0

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	2.5	< 2.5 U
93-76-5	2,4,5-T	2.5	< 2.5 U
88-85-7	Dinoseb	5.0	< 5.0 U
1918-00-9	Dicamba	5.0	< 5.0 U
94-75-7	2,4-D	10	< 10 U
94-82-6	2,4-DB	50	< 50 U
75-99-0	Dalapon	10	< 10 U
94-74-6	MCPA	2,500	< 2,500 U
120-36-5	Dichloroprop	10	< 10 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	NR

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-12S-073112
SAMPLE

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 21:03
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	83.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-11S-073112
SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted: 08/06/12
Date Analyzed: 08/15/12 21:39
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	87.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-080612
METHOD BLANK

Lab Sample ID: MB-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized: MW
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

Date Extracted: 08/06/12
Date Analyzed: 08/09/12 07:15
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	84.2%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Client ID	DCPA	TOT OUT
MB-080612	84.2%	0
LCS-080612	87.8%	0
LCSD-080612	87.7%	0
MW-16D-073112	91.6%	0
MW-12D-073112	81.7%	0
MW-11D-073112	NR	0
MW-11D-073112 DL	NR	0
MW-12S-073112	83.6%	0
MW-11S-073112	87.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(66-112)	(28-140)

Log Number Range: 12-14610 to 12-14614

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: LCS-080612
LCS/LCSD

Lab Sample ID: LCS-080612
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/16/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted LCS/LCSD: 08/06/12

Date Analyzed LCS: 08/09/12 07:51
LCSD: 08/09/12 08:27
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 50 mL
LCSD: 50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	6.67	10.0	66.7%	6.79	10.0	67.9%	1.8%
2,4,5-T	1.13	2.50	45.2%	1.61	2.50	64.4%	35.0%
Dinoseb	2.15	5.00	43.0%	1.94	5.00	38.8%	10.3%
Dicamba	3.33	5.00	66.6%	3.70	5.00	74.0%	10.5%
2,4-D	5.41	10.0	54.1%	7.29	10.0	72.9%	29.6%
2,4-DB	47.5	50.0	95.0%	47.3	50.0	94.6%	0.4%
Dalapon	2.96	10.0	29.6%	4.45	10.0	44.5%	40.2%
Dichloroprop	6.88	10.0	68.8%	6.94	10.0	69.4%	0.9%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	87.8%	87.7%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Extraction Method: SW3510C

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Matrix: Water

Data Release Authorized:
Reported: 08/06/12

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-080312	Method Blank	08/03/12	08/03/12	1.0	Gas	< 0.25 U
12-14610					Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	84.9%
VE38A	MW-16D-073112	08/03/12	08/03/12	1.0	Gas	< 0.25 U
12-14610	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	108%
VE38B	MW-12D-073112	08/03/12	08/03/12	1.0	Gas	< 0.25 U
12-14611	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	84.8%
VE38C	MW-11D-073112	08/03/12	08/04/12	1.0	Gas	< 0.25 U
12-14612	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	84.0%
VE38D	MW-12S-073112	08/03/12	08/04/12	1.0	Gas	< 0.25 U
12-14613	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	89.1%
VE38E	MW-11S-073112	08/03/12	08/04/12	1.0	Gas	< 0.25 U
12-14614	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	85.8%

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.

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a028.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38MBW1
Client ID: VE38MBW1
Injection: 03-AUG-2012 22:17

Dilution Factor: 1

YZ 8/6/12

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.398	-0.005	3913	8779	GAS (Tol-C12)	54959	3.65
C8	1.718	0.038	779	2283	DIESEL (C12-C24)	42269	2.89
C10	3.238	0.005	353	689	M.OIL (C24-C38)	104348	8.30
C12	4.121	-0.002	324	428	AK-102 (C10-C25)	63317	3.66
C14	4.801	-0.004	126	112	AK-103 (C25-C36)	65499	7.67
C16	5.392	0.005	122	182			
C18	5.946	-0.002	95	138			
C20	6.521	0.001	335	447	JET-A (C10-C18)	33214	2.69
C22	7.074	0.002	70	76	MIN.OIL (C24-C38)	104348	7.76
C24	7.590	-0.003	68	42			
C25	7.844	0.000	124	123			
C26	8.092	0.003	164	295			
C28	8.540	-0.005	887	819			
C32	9.379	-0.007	596	350			
C34	9.778	-0.005	780	1359			
Filter Peak	9.967	0.013	942	708	BUNKERC (C10-C38)	167146	21.89
C36	10.169	0.001	1318	3411			
C38	10.527	-0.015	1874	2084			
C40	10.923	0.011	2912	6148			
o-terph	6.090	-0.001	568983	777921			
Triacon Surr	8.967	-0.018	700998	777928	NAS DIES (C10-C24)	62798	3.67

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	777921	38.2	84.9
Triacontane	777928	40.8	90.6

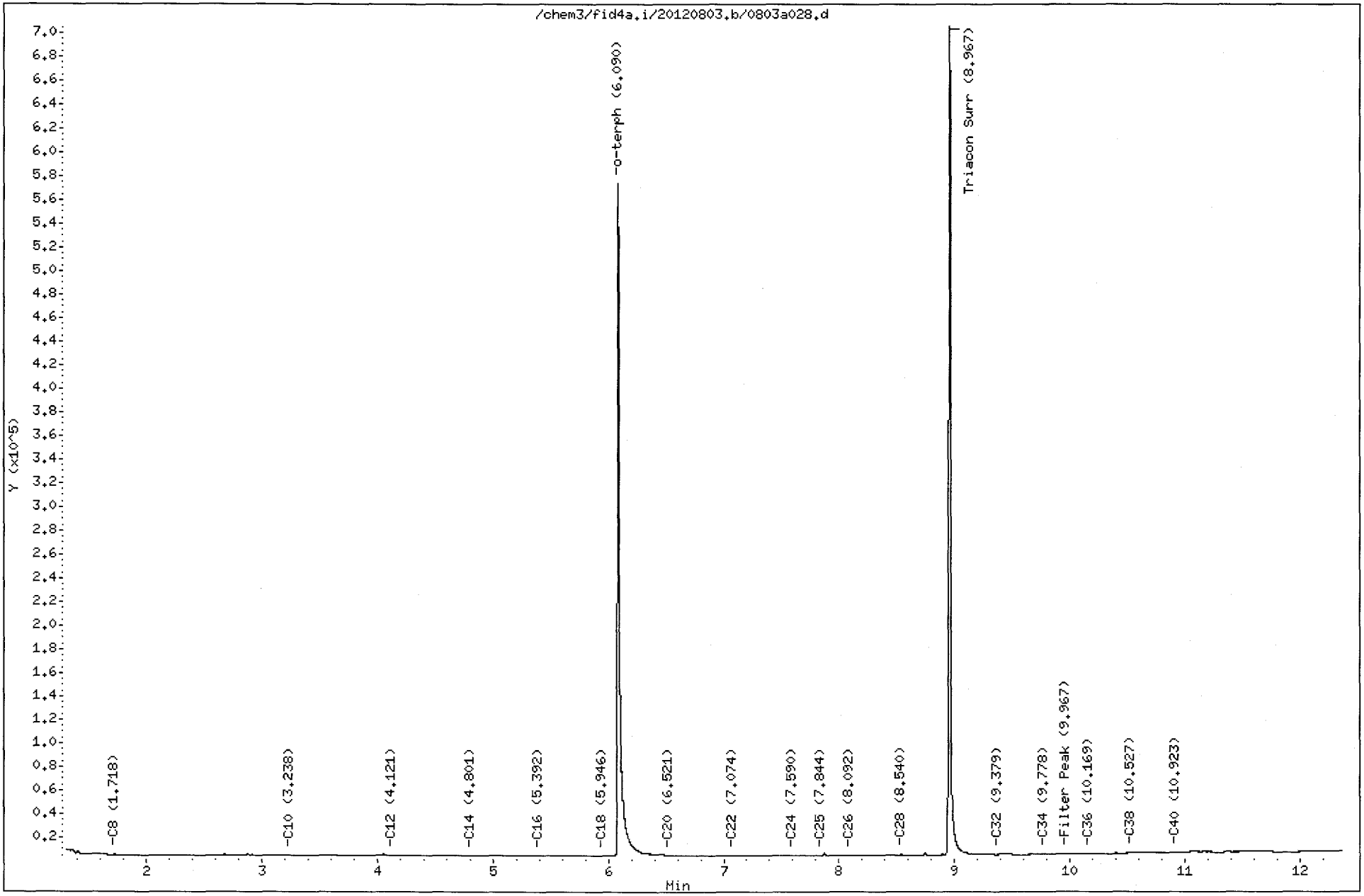
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120803.b/0803a028.d
Date : 03-AUG-2012 22:17
Client ID: WE38MBW1
Sample Info: WE38MBW1

Instrument: fid4a.i

Operator: AR
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
407S TPH Quantitation Report

YR 8/6/12

Data file: /chem3/fid4a.i/20120803.b/0803a031.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38A
Client ID: MW-16D-073112
Injection: 03-AUG-2012 23:21
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.408	0.005	5274	10385	GAS (Tol-C12)	329946	21.93
C8	1.729	0.048	937	2424	DIESEL (C12-C24)	4211008	287.44
C10	3.242	0.009	1989	4312	M.OIL (C24-C38)	1255760	99.91
C12	4.141	0.017	10692	32462	AK-102 (C10-C25)	4593072	265.51
C14	4.806	0.001	17227	8802	AK-103 (C25-C36)	1053028	123.33
C16	5.405	0.018	30197	11964			
C18	5.940	-0.008	27552	34413			
C20	6.526	0.005	24654	12684	JET-A (C10-C18)	2591060	209.60
C22	7.081	0.008	19874	32142	MIN.OIL (C24-C38)	1255760	93.43
C24	7.602	0.009	17208	5133			
C25	7.832	-0.012	15127	16927			
C26	8.078	-0.011	12753	18667			
C28	8.550	0.004	10019	14364			
C32	9.389	0.003	5483	7710			
C34	9.793	0.010	3960	2500			
Filter Peak	9.947	-0.007	3725	5910	BUNKERC (C10-C38)	5714807	748.60
C36	10.174	0.005	3349	3445			
C38	10.532	-0.010	3500	5060			
C40	10.910	-0.002	3858	5896			
o-terph	6.091	0.000	962389	987052			
Triacon Surr	8.963	-0.022	794942	788277	NAS DIES (C10-C24)	4459047	260.25

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

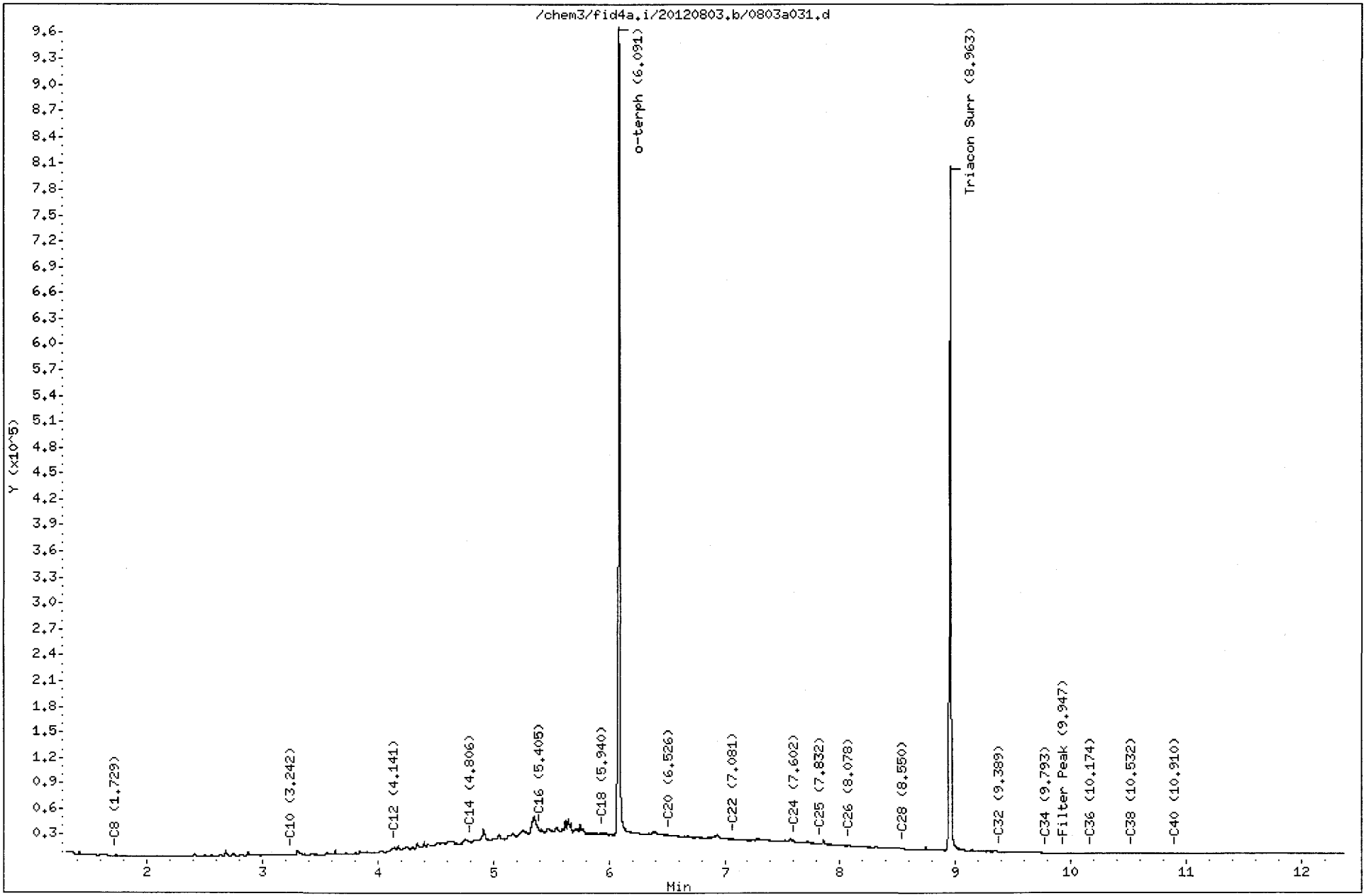
Surrogate	Area	Amount	%Rec
o-Terphenyl	987052	48.5	107.7
Triacontane	788277	41.3	91.8

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120803.b/0803a031.d
Date : 03-AUG-2012 23:21
Client ID: MW-16D-073112
Sample Info: VE38A

Instrument: fid4a.i
Operator: AR
Column phase: RTX-1
Column diameter: 0.25



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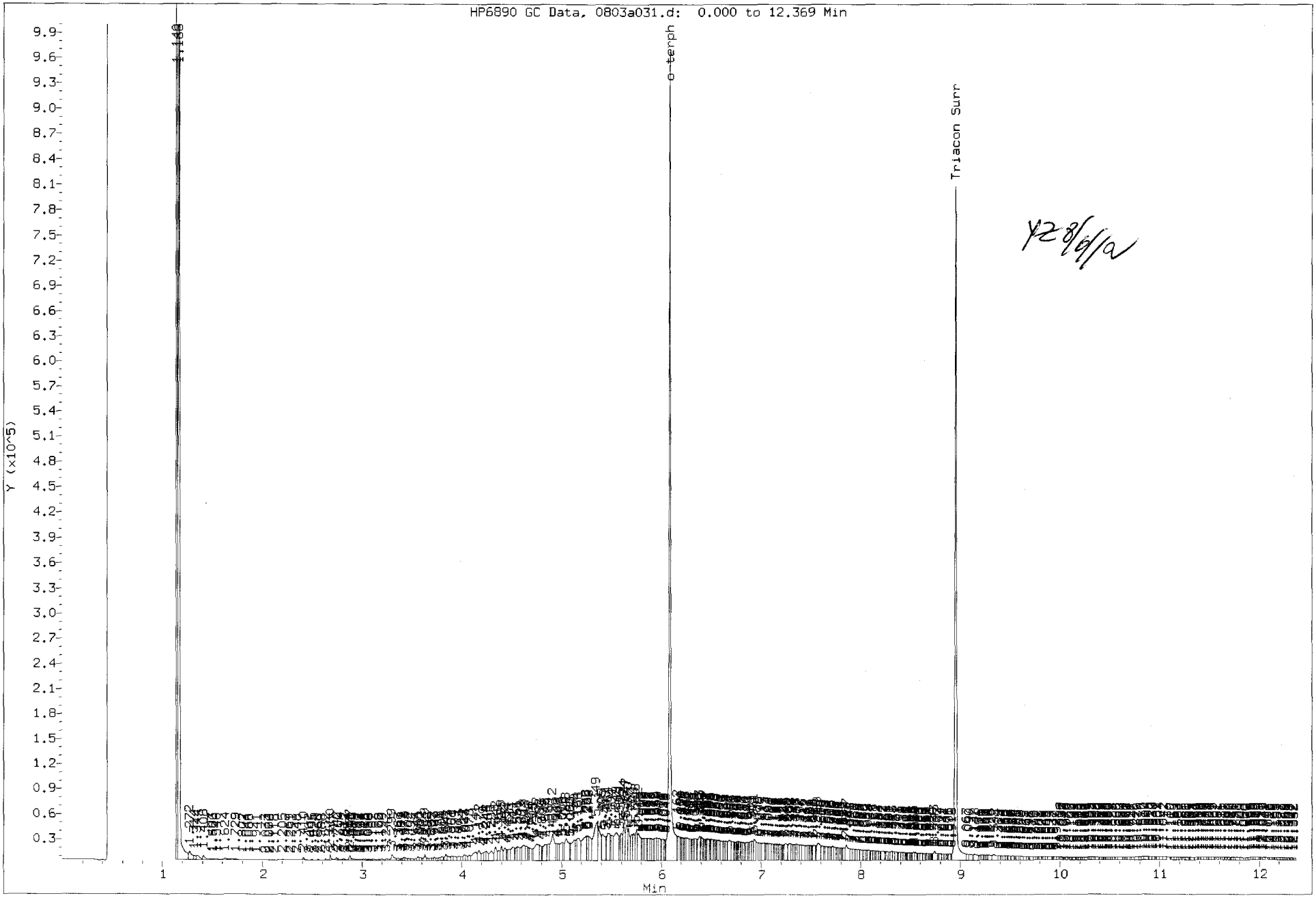
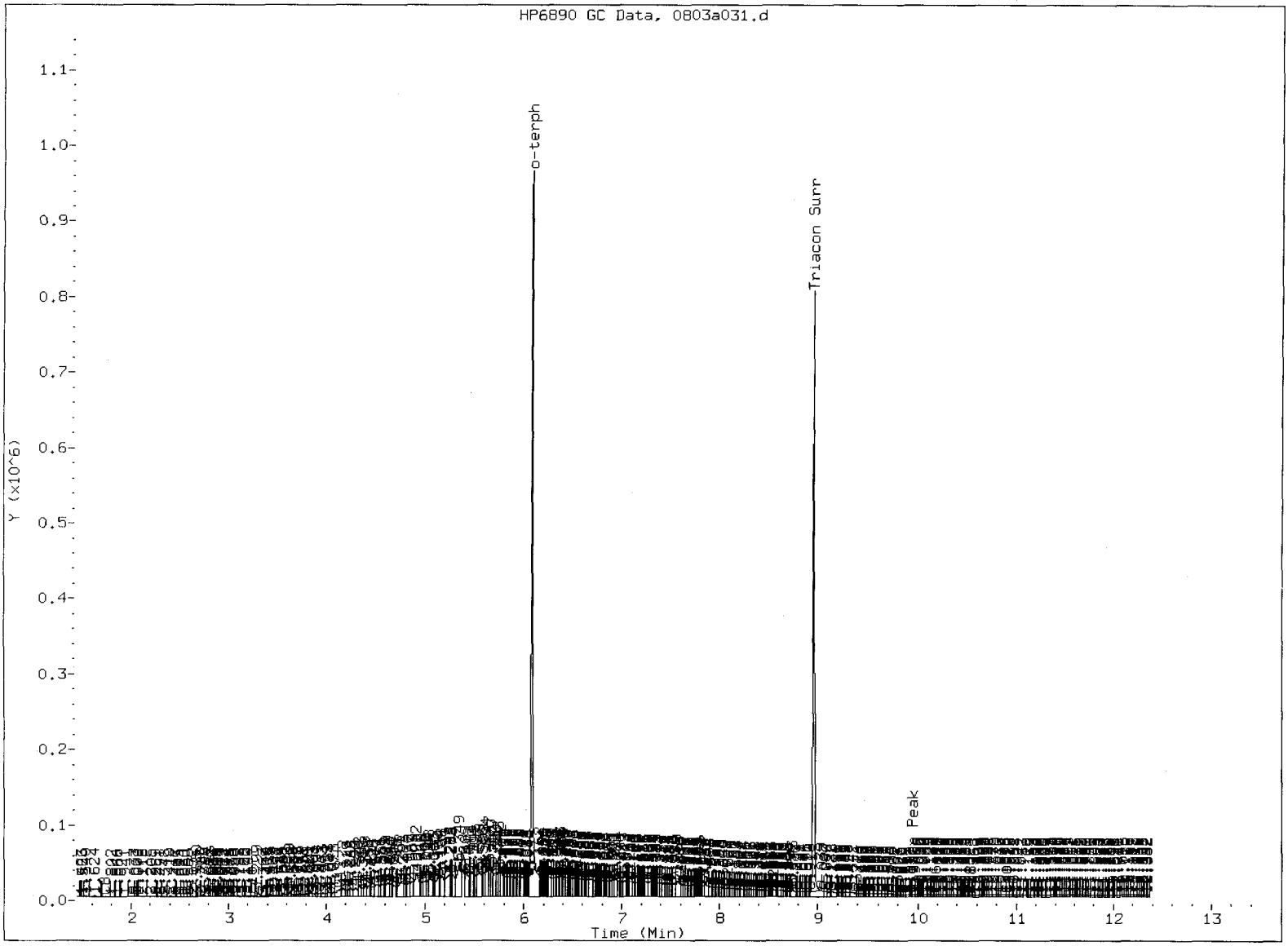
Injection Date: 03-AUG-2012 23:21
Instrument: fid4a.i
Client Sample ID: MW-16D-073112



8/6/12

FID:4A-2C/RTX-1 VE38A

FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: YE Date: 8/9/17

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a032.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38B
Client ID: MW-12D-073112
Injection: 03-AUG-2012 23:43
Dilution Factor: 1

YZ 8/6/12

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.393	-0.010	4491	9955	GAS (Tol-C12)	190971	12.69
C8	1.714	0.033	786	2605	DIESEL (C12-C24)	1503893	102.65
C10	3.240	0.006	919	1147	M.OIL (C24-C38)	993244	79.02
C12	4.110	-0.014	3544	2994	AK-102 (C10-C25)	1712340	98.98
C14	4.806	0.001	5932	8363	AK-103 (C25-C36)	840738	98.47
C16	5.392	0.005	10270	16077			
C18	5.943	-0.005	8392	11242			
C20	6.529	0.008	8745	2405	JET-A (C10-C18)	752240	60.85
C22	7.062	-0.010	11533	24951	MIN.OIL (C24-C38)	993244	73.90
C24	7.586	-0.007	13808	24649			
C25	7.836	-0.008	12092	22410			
C26	8.079	-0.010	11171	26034			
C28	8.532	-0.014	9635	22058			
C32	9.384	-0.002	5782	13330			
C34	9.791	0.008	4105	6702			
Filter Peak	9.949	-0.005	3766	5482	BUNKERC (C10-C38)	2620512	343.27
C36	10.169	0.001	3344	4122			
C38	10.542	0.000	3469	1931			
C40	10.906	-0.006	3913	5546			
o-terph	6.095	0.003	883908	777243			
Triacon Surr	8.960	-0.026	807498	756241	NAS DIES (C10-C24)	1627268	94.97

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	777243	38.2	84.8
Triacontane	756241	39.6	88.1

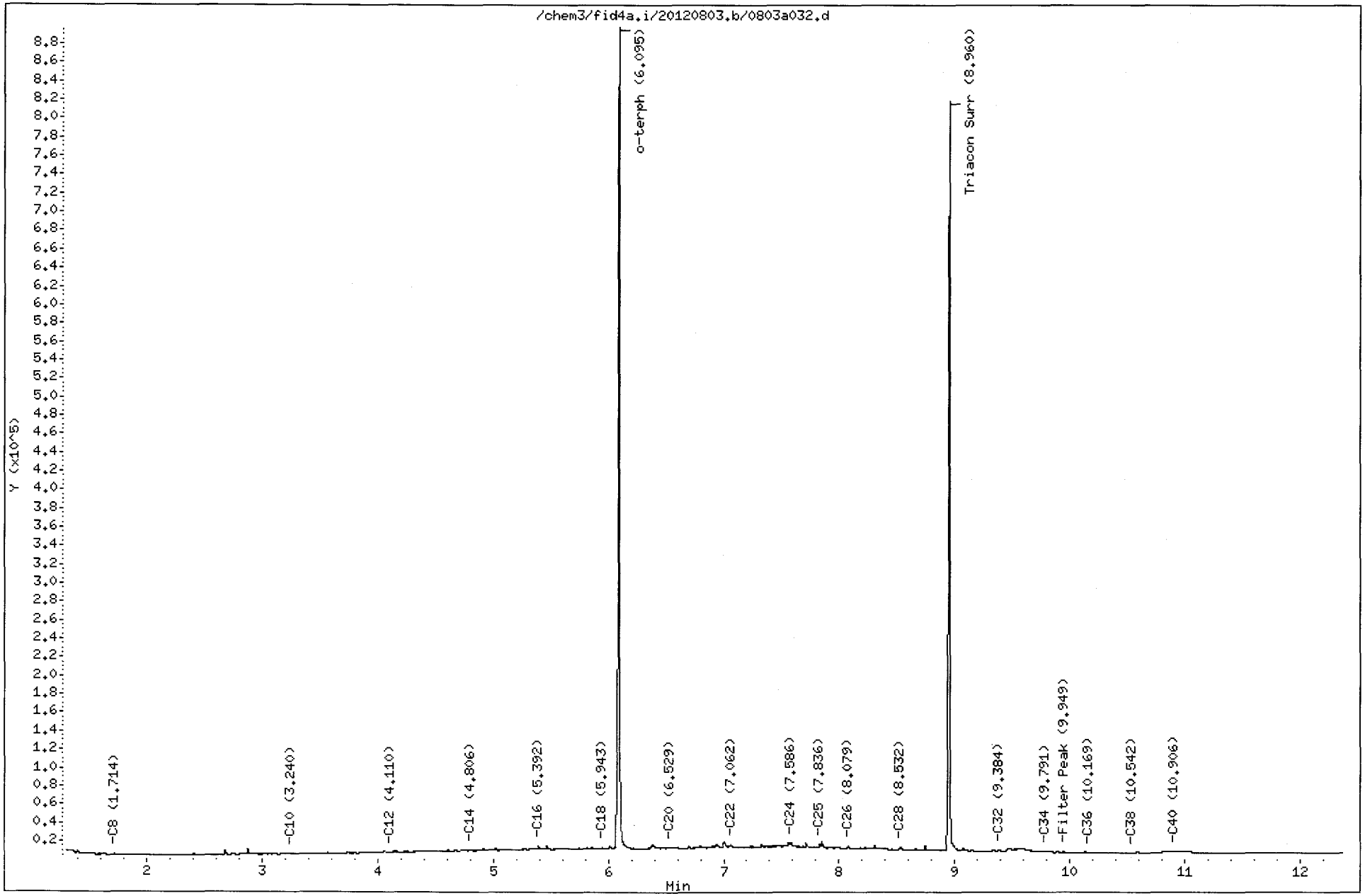
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

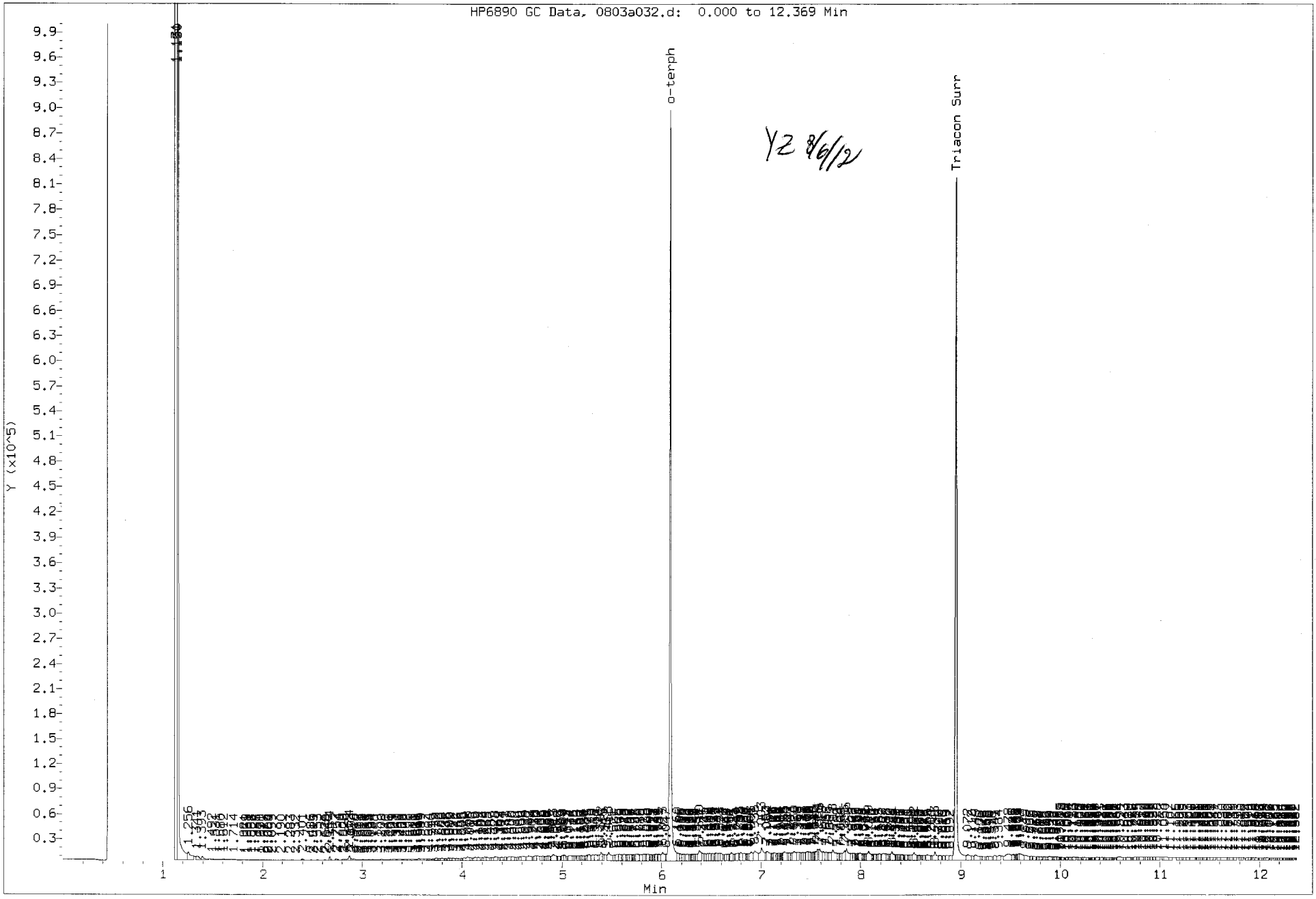
Data File: /chem3/fid4a.i/20120803.b/0803a032.d
Date : 03-AUG-2012 23:43
Client ID: MW-12D-073112
Sample Info: VE38B

Instrument: fid4a.i
Operator: AR
Column diameter: 0.25

Column phase: RTX-1

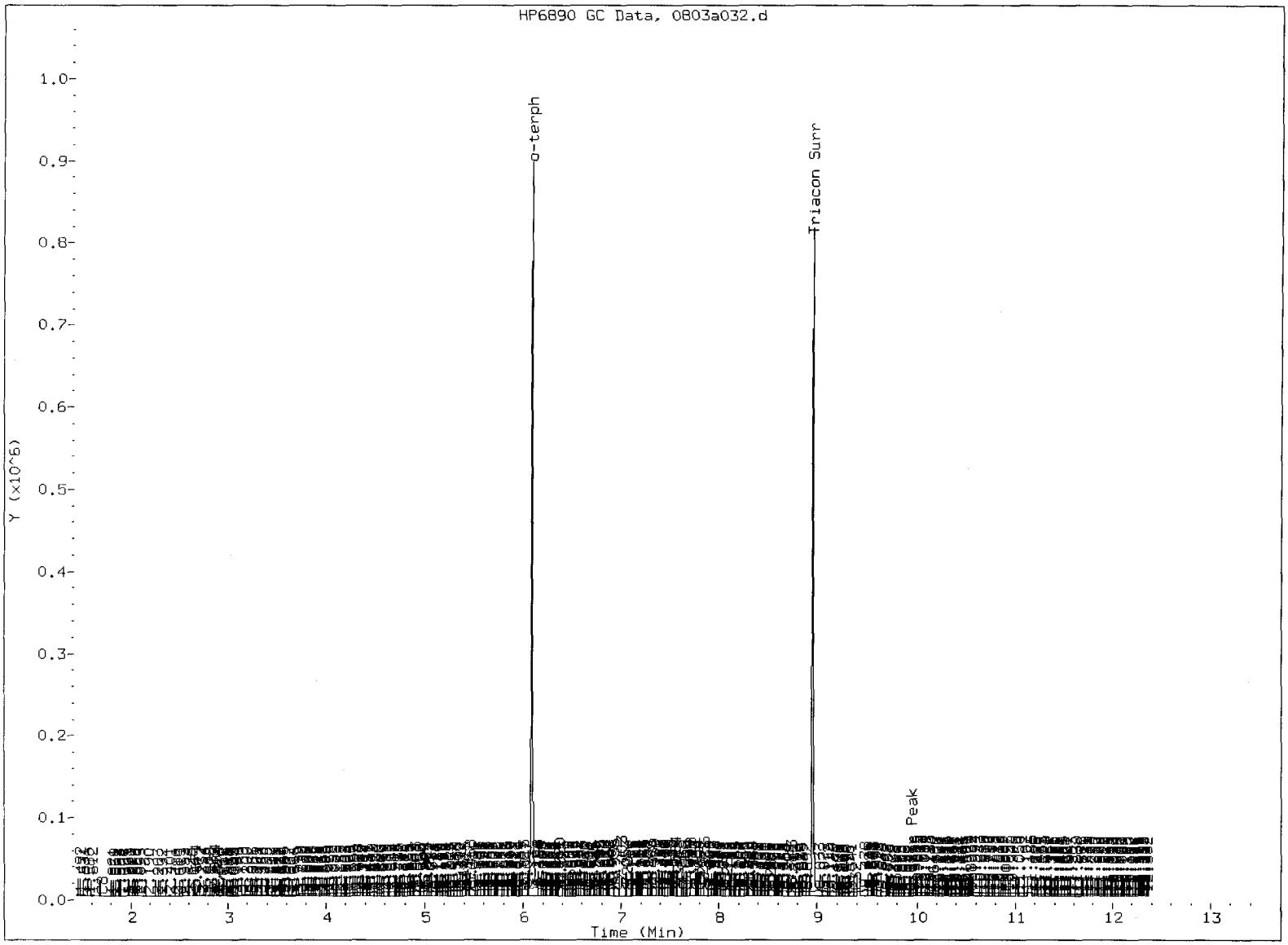


Data File: /chem3/fid4a.i/20120803.b/0803a032.d
Injection Date: 03-AUG-2012 23:43
Instrument: fid4a.i
Client Sample ID: MW-12D-073112



YZ 8/6/12

FID:4A-2C/RTX-1 VE38B FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: YB Date: 8/6/12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a033.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38C
Client ID: MW-11D-073112
Injection: 04-AUG-2012 00:04
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.405	0.002	5822	8144	GAS (Tol-C12)	201490	13.39
C8	1.682	0.001	567	1039	DIESEL (C12-C24)	828885	56.58
C10	3.224	-0.009	541	106	M.OIL (C24-C38)	599916	47.73
C12	4.151	0.027	2306	3512	AK-102 (C10-C25)	1012998	58.56
C14	4.811	0.006	3432	9141	AK-103 (C25-C36)	495084	57.99
C16	5.379	-0.008	4179	5347			
C18	5.942	-0.005	4273	7811			
C20	6.537	0.017	4790	2555	JET-A (C10-C18)	484086	39.16
C22	7.062	-0.011	5034	6198	MIN.OIL (C24-C38)	599916	44.63
C24	7.609	0.016	5883	3560			
C25	7.840	-0.005	4987	2826			
C26	8.081	-0.008	4825	6638			
C28	8.534	-0.011	5533	12950			
C32	9.382	-0.004	3445	6275			
C34	9.780	-0.003	3148	5414			
Filter Peak	9.941	-0.013	2661	3735	BUNKERC (C10-C38)	1568481	205.46
C36	10.186	0.018	2477	1378			
C38	10.535	-0.007	2875	2007			
C40	10.913	0.001	3321	2249			
o-terph	6.095	0.004	891251	769814			
Triacon Surr	8.959	-0.026	781072	727111	NAS DIES (C10-C24)	968564	56.53

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

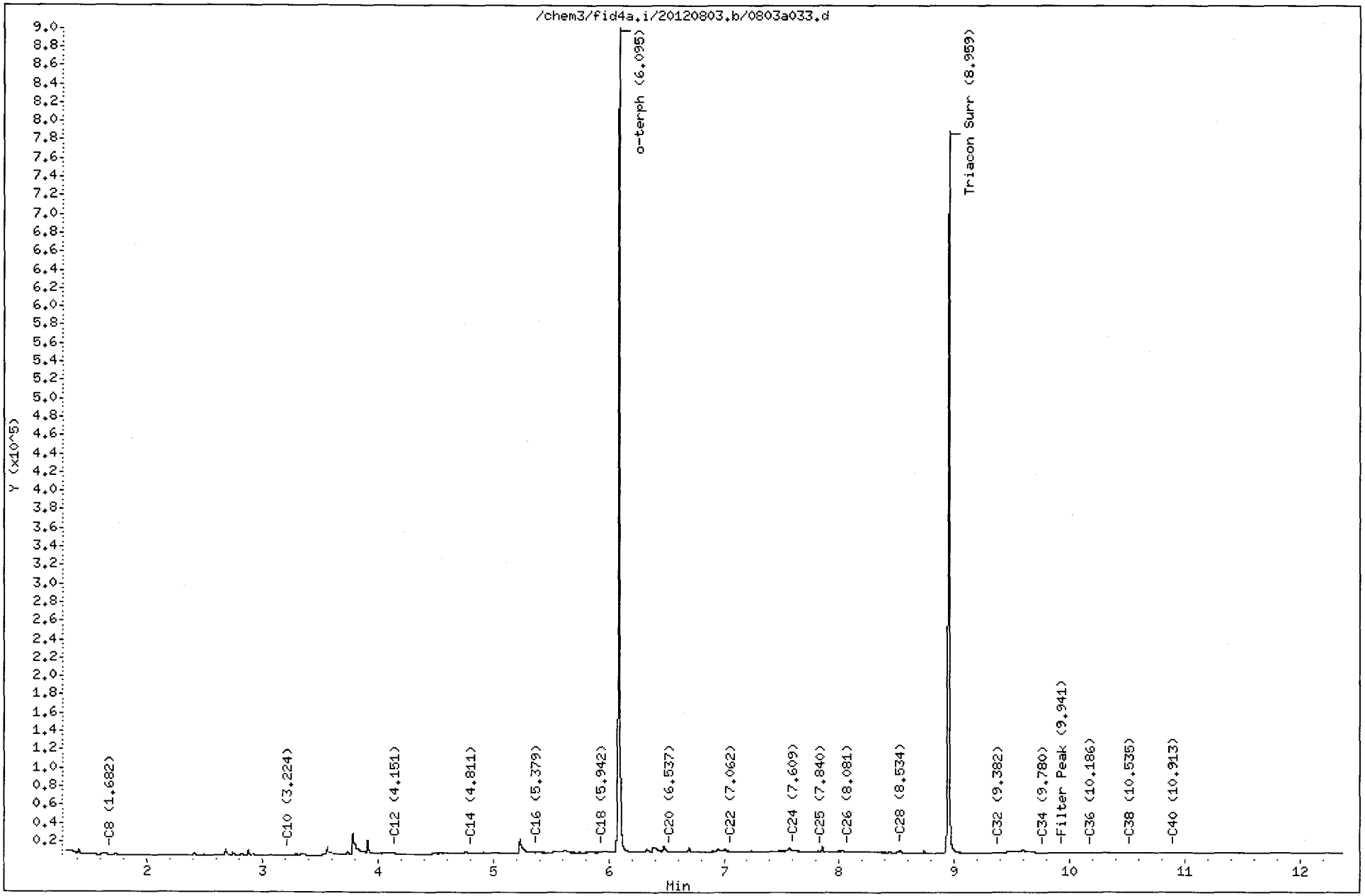
Surrogate	Area	Amount	%Rec
o-Terphenyl	769814	37.8	84.0
Triacontane	727111	38.1	84.7

M Indicates the peak was manually integrated

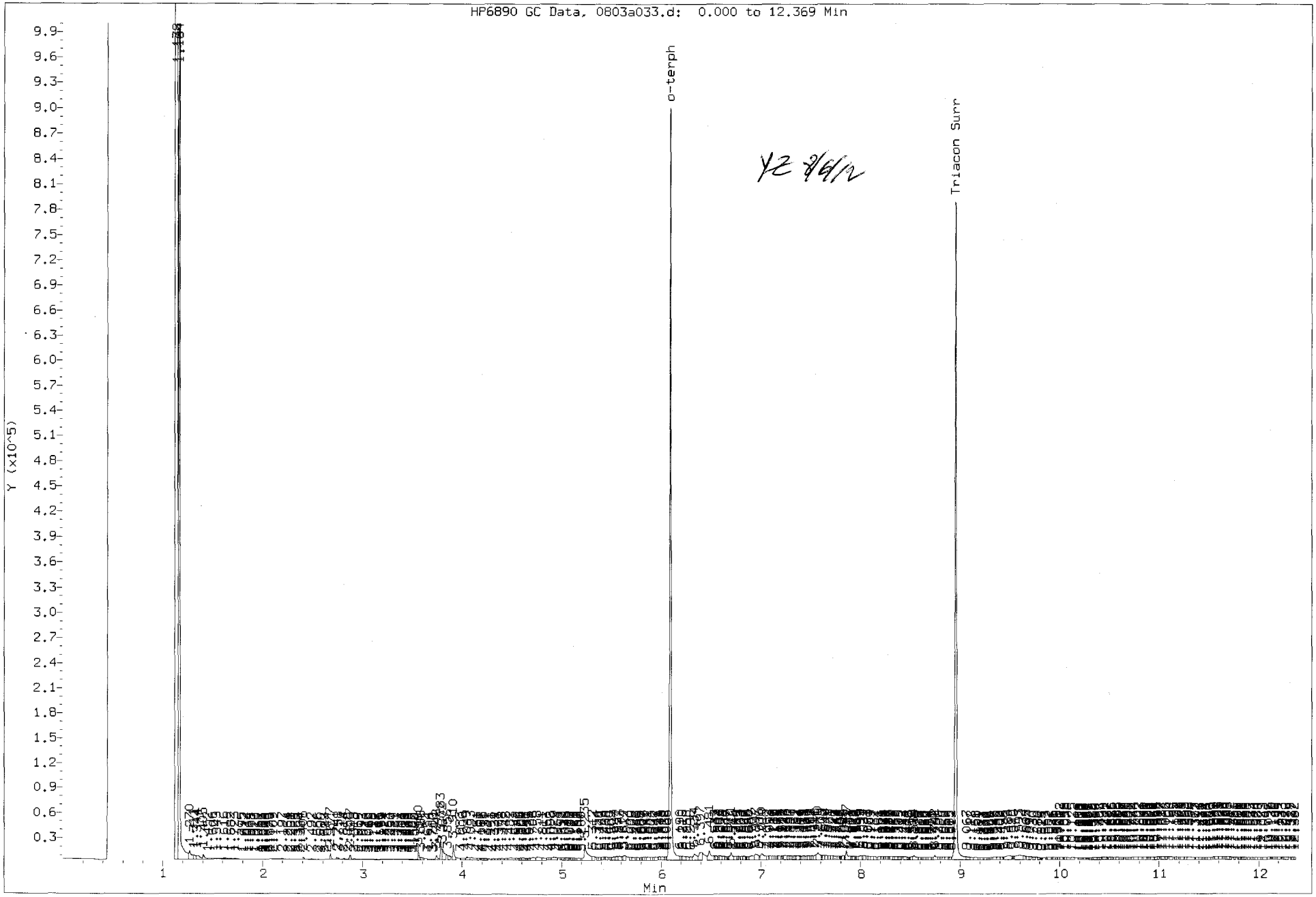
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120803.b/0803a033.d
Date : 04-AUG-2012 00:04
Client ID: MW-11D-073112
Sample Info: VE38C

Instrument: fid4a.i
Operator: AR
Column phase: RTX-1
Column diameter: 0.25

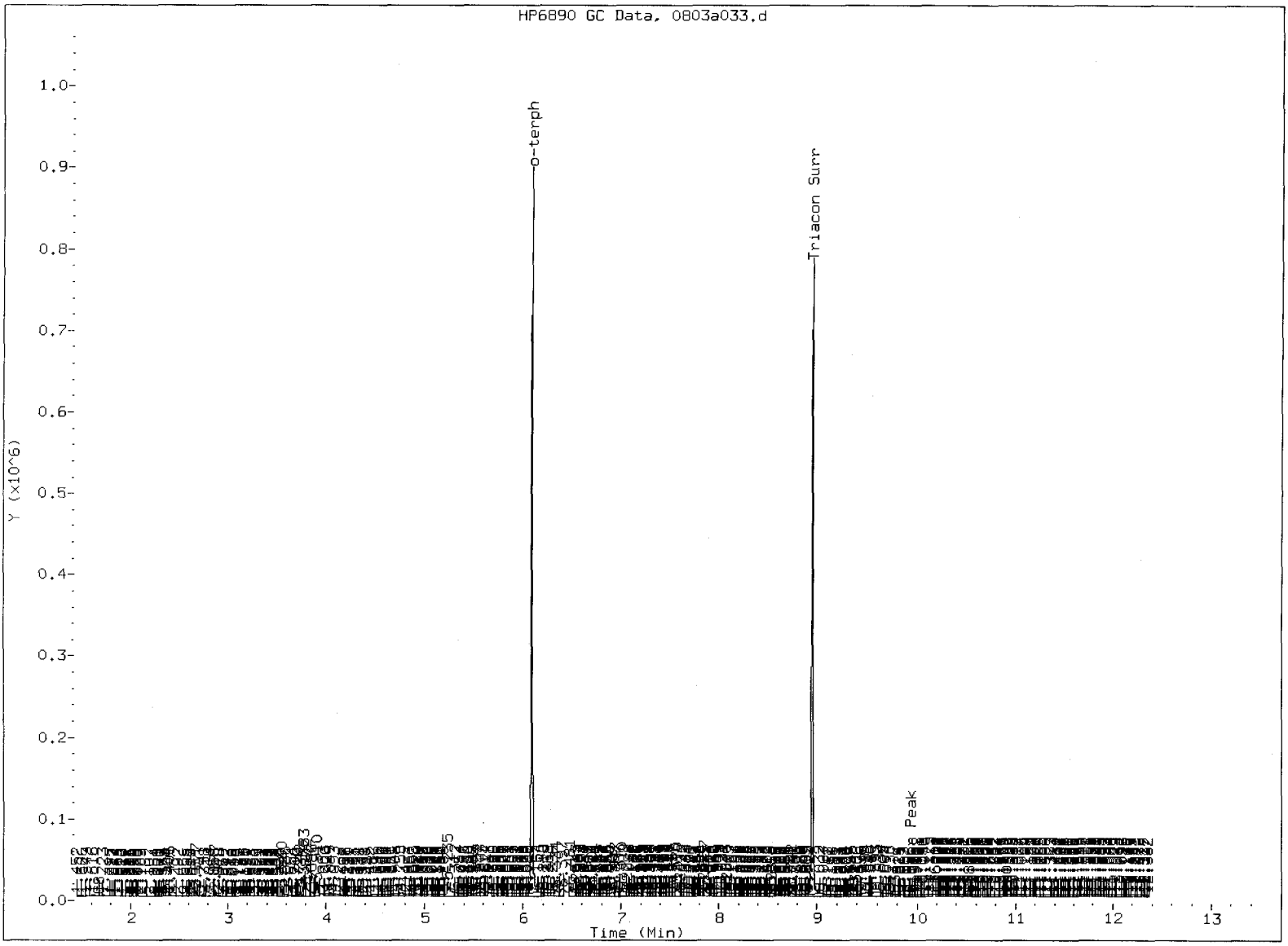


Data File: /chem3/fid4a.i/20120803.b/0803a033.d
Injection Date: 04-AUG-2012 00:04
Instrument: fid4a.i
Client Sample ID: MW-11D-073112



YZ 8/9/12

FID:4A-2C/RTX-1 VE38C FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: _____ Date: _____

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a034.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38D
Client ID: MW-12S-073112
Injection: 04-AUG-2012 00:25

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.395	-0.009	4139	10948	GAS (Tol-C12)	362290	24.08
C8	1.714	0.033	669	1744	DIESEL (C12-C24)	3606354	246.17
C10	3.249	0.016	1655	3428	M.OIL (C24-C38)	1033244	82.21
C12	4.102	-0.021	9346	4985	AK-102 (C10-C25)	3987276	230.49
C14	4.795	-0.010	29991	71953	AK-103 (C25-C36)	863407	101.13
C16	5.400	0.012	18061	24738			
C18	5.936	-0.012	15206	26223			
C20	6.525	0.004	12952	7640	JET-A (C10-C18)	2624160	212.28
C22	7.075	0.003	12900	5110	MIN.OIL (C24-C38)	1033244	76.87
C24	7.603	0.010	12746	8270			
C25	7.837	-0.007	11798	9600			
C26	8.082	-0.006	10200	15226			
C28	8.551	0.005	7611	8394			
C32	9.389	0.002	4924	4972			
C34	9.785	0.002	3749	2119			
Filter Peak	9.961	0.008	3397	3221	BUNKERC (C10-C38)	4914941	643.82
C36	10.163	-0.005	3123	2908			
C38	10.545	0.002	3230	4109			
C40	10.902	-0.011	3643	5329			
o-terph	6.093	0.002	928954	816652			
Triacon Surr	8.961	-0.024	801764	792225	NAS DIES (C10-C24)	3881697	226.55

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	816652	40.1	89.1
Triacontane	792225	41.5	92.2

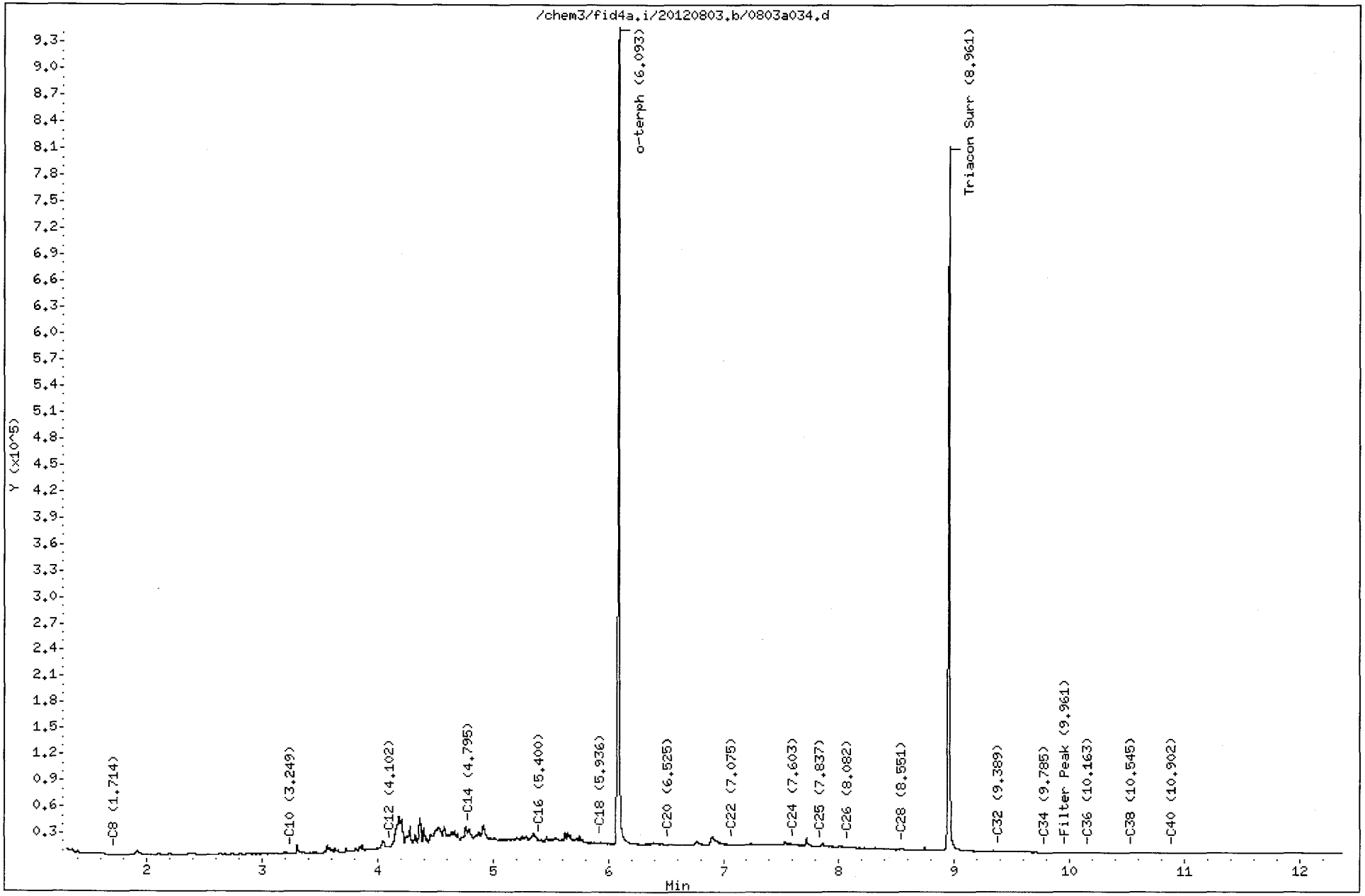
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120803.b/0803a034.d
Date : 04-AUG-2012 00:25
Client ID: MW-12S-073112
Sample Info: VE38D

Instrument: fid4a.i
Operator: AR
Column diameter: 0.25

Column phase: RTX-1



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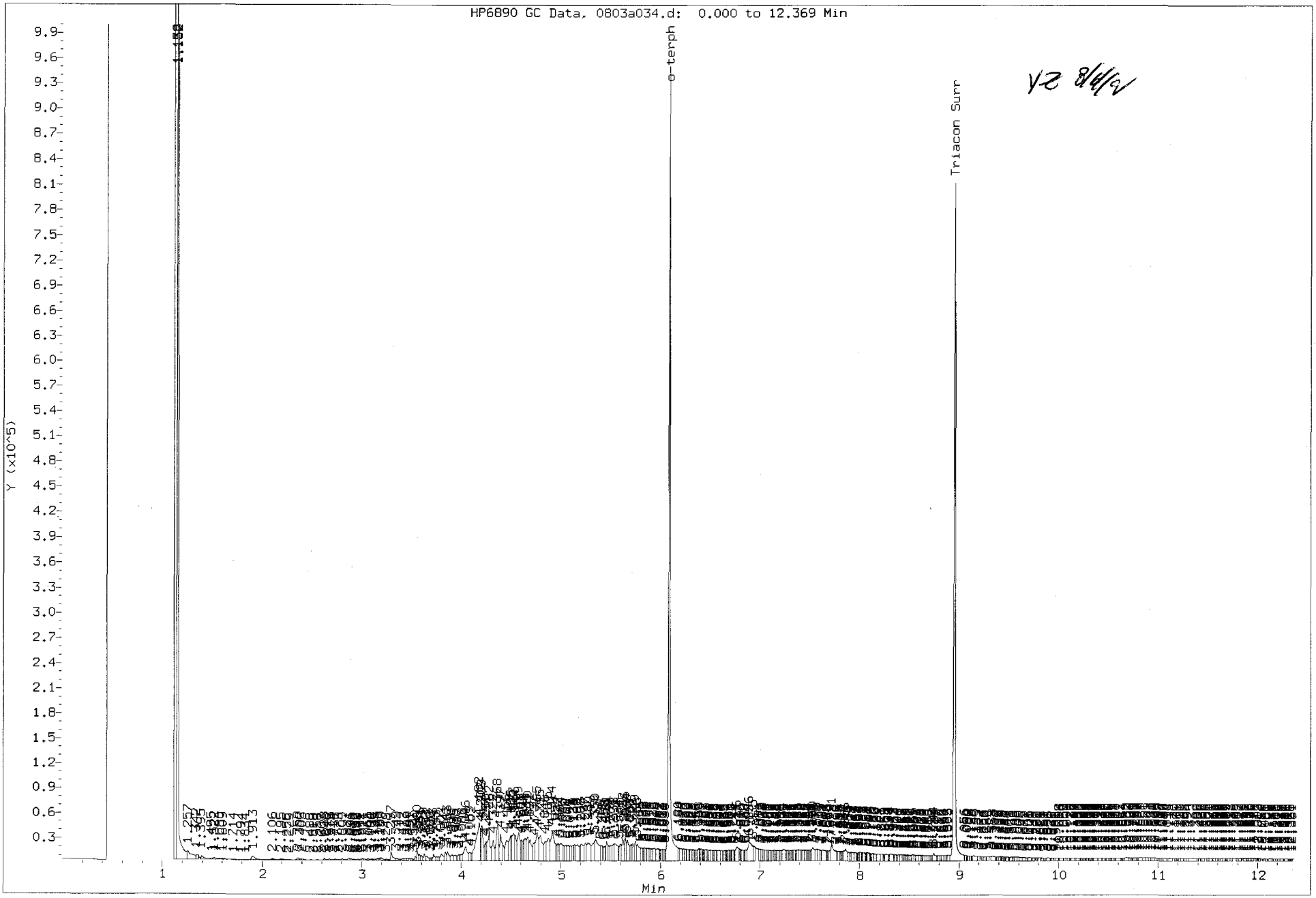
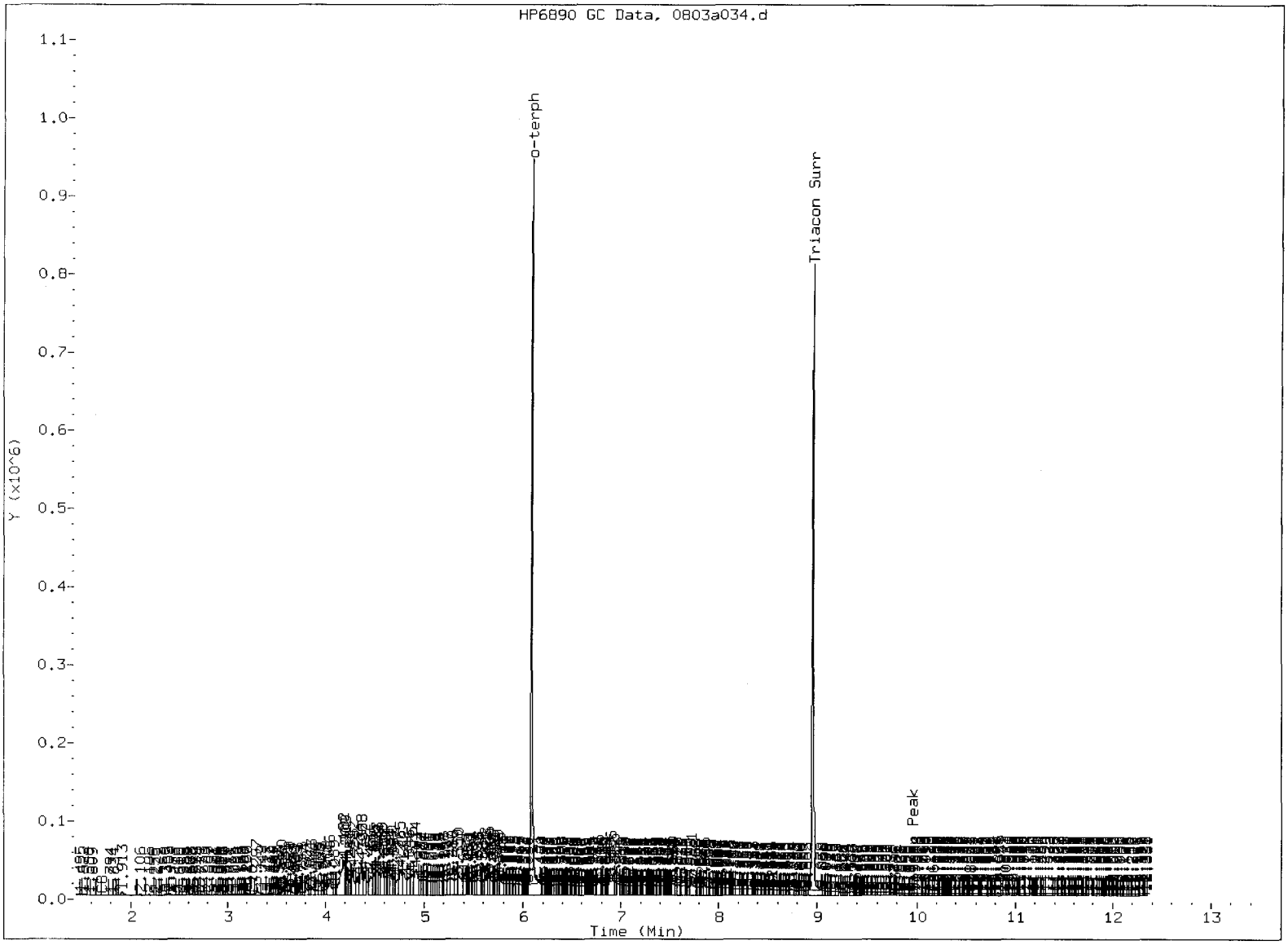
Injection Date: 04-AUG-2012 00:25
Instrument: fid4a.i
Client Sample ID: MW-12S-073112



VZ 8/6/12

FID:4A-2C/RTX-1 VE38D FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: YZ Date: 8/6/12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a035.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38E
Client ID: MW-11S-073112
Injection: 04-AUG-2012 00:47
Dilution Factor: 1

12 8/6/12

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.401	-0.003	5835	8813	GAS (Tol-C12)	194699	12.94
C8	1.718	0.037	1134	2255	DIESEL (C12-C24)	2542149	173.53
C10	3.242	0.008	991	773	M.OIL (C24-C38)	852127	67.80
C12	4.118	-0.006	3629	4056	AK-102 (C10-C25)	2770317	160.14
C14	4.802	-0.004	10312	23707	AK-103 (C25-C36)	696205	81.54
C16	5.367	-0.021	13770	31669			
C18	5.938	-0.010	12408	26071			
C20	6.536	0.015	17603	45614	JET-A (C10-C18)	1203167	97.33
C22	7.084	0.012	14328	25818	MIN.OIL (C24-C38)	852127	63.40
C24	7.567	-0.026	21724	18423			
C25	7.836	-0.009	10389	7560			
C26	8.081	-0.008	8210	13070			
C28	8.551	0.005	6863	13135			
C32	9.387	0.001	3891	8665			
C34	9.766	-0.017	2865	3587			
Filter Peak	9.960	0.006	2601	2670	BUNKERC (C10-C38)	3521043	461.23
C36	10.165	-0.003	2438	2911			
C38	10.544	0.001	2828	5346			
C40	10.896	-0.016	3305	2696			
o-terph	6.091	0.000	834033	786420			
Triacon Surr	8.961	-0.024	799140	761309	NAS DIES (C10-C24)	2668915	155.77

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	786420	38.6	85.8
Triacontane	761309	39.9	88.6

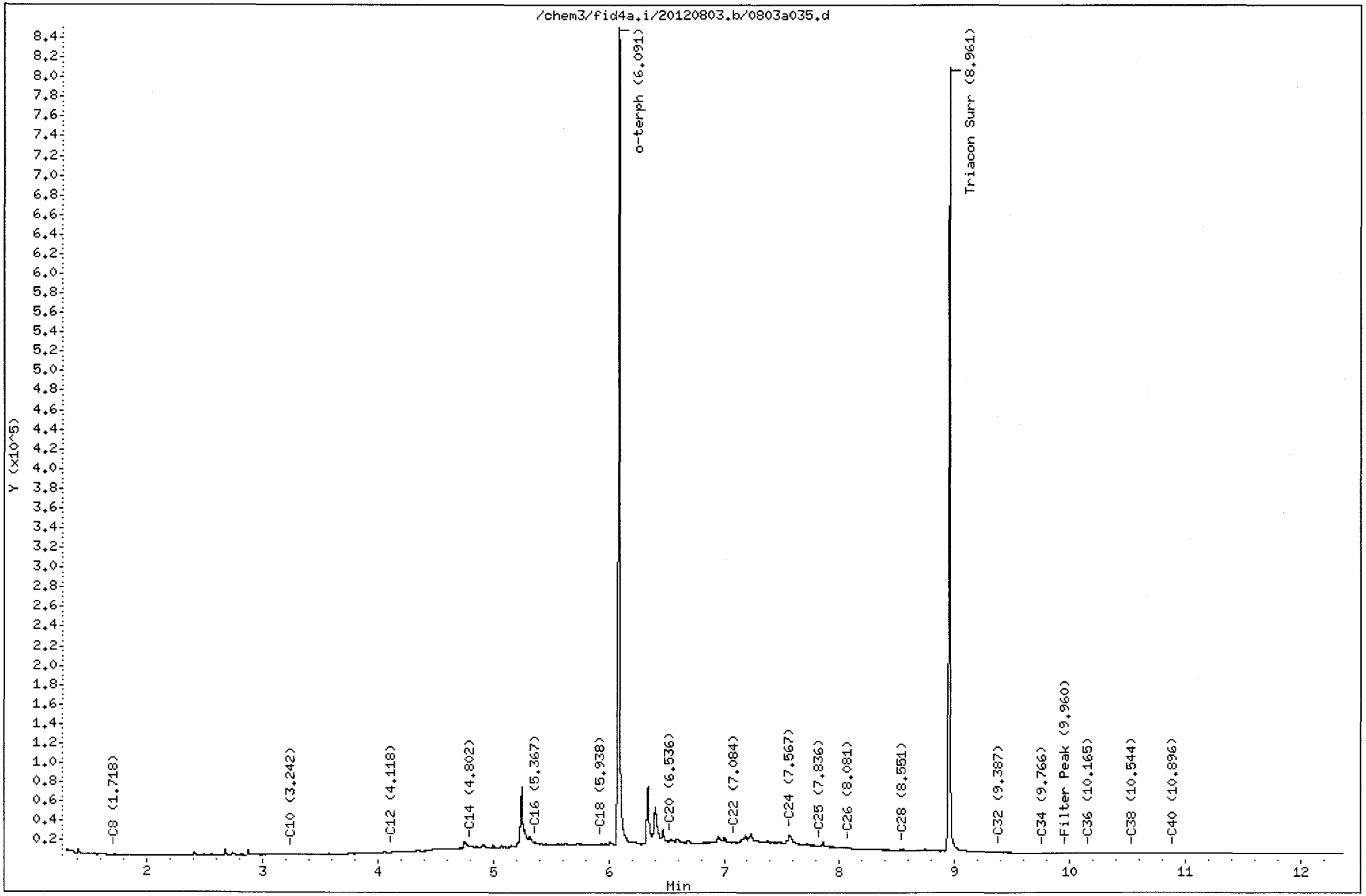
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

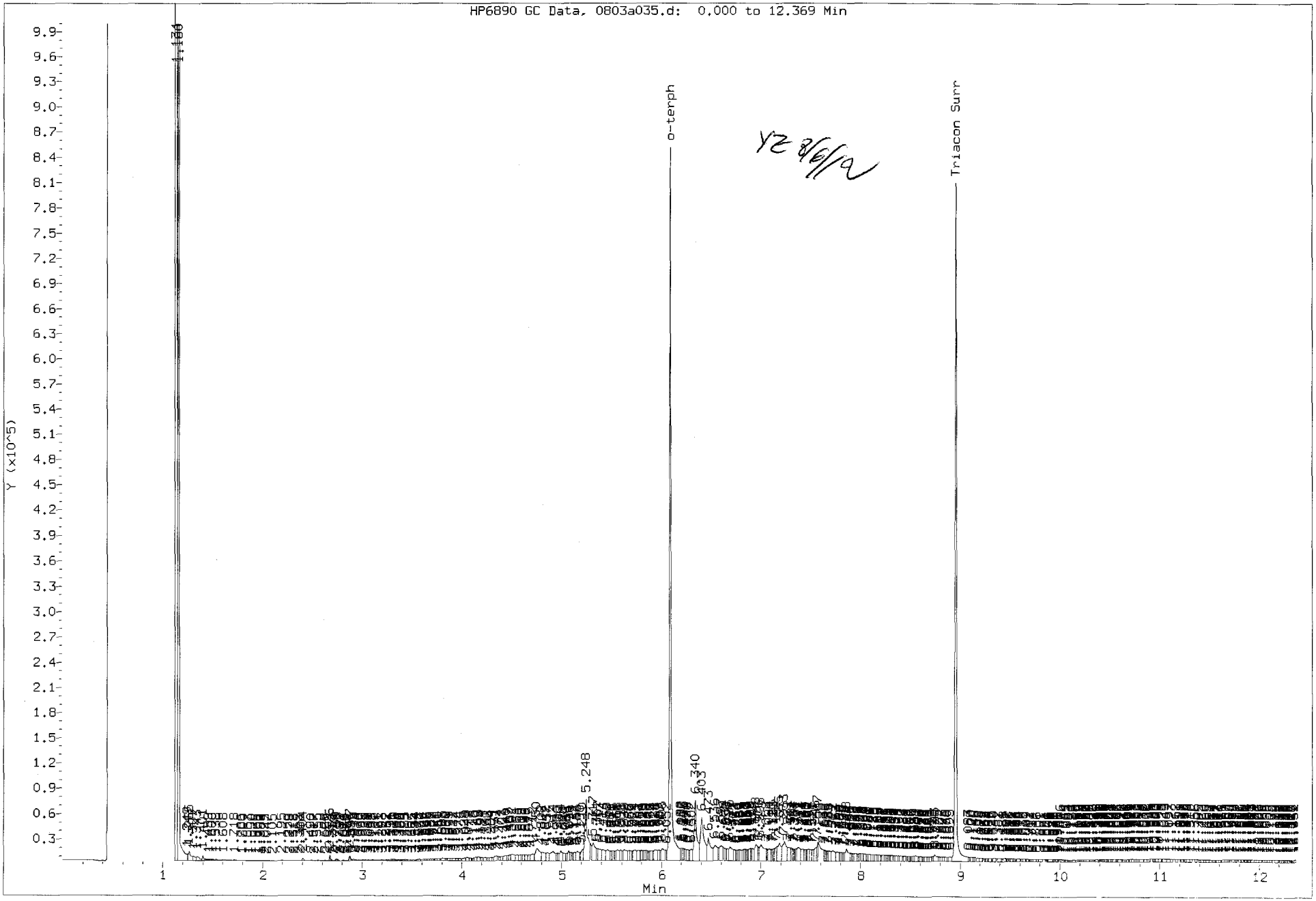
Data File: /chem3/fid4a.i/20120803.b/0803a035.d
Date : 04-AUG-2012 00:47
Client ID: MW-11S-073112
Sample Info: VE38E

Instrument: fid4a.i
Operator: AR
Column diameter: 0.25

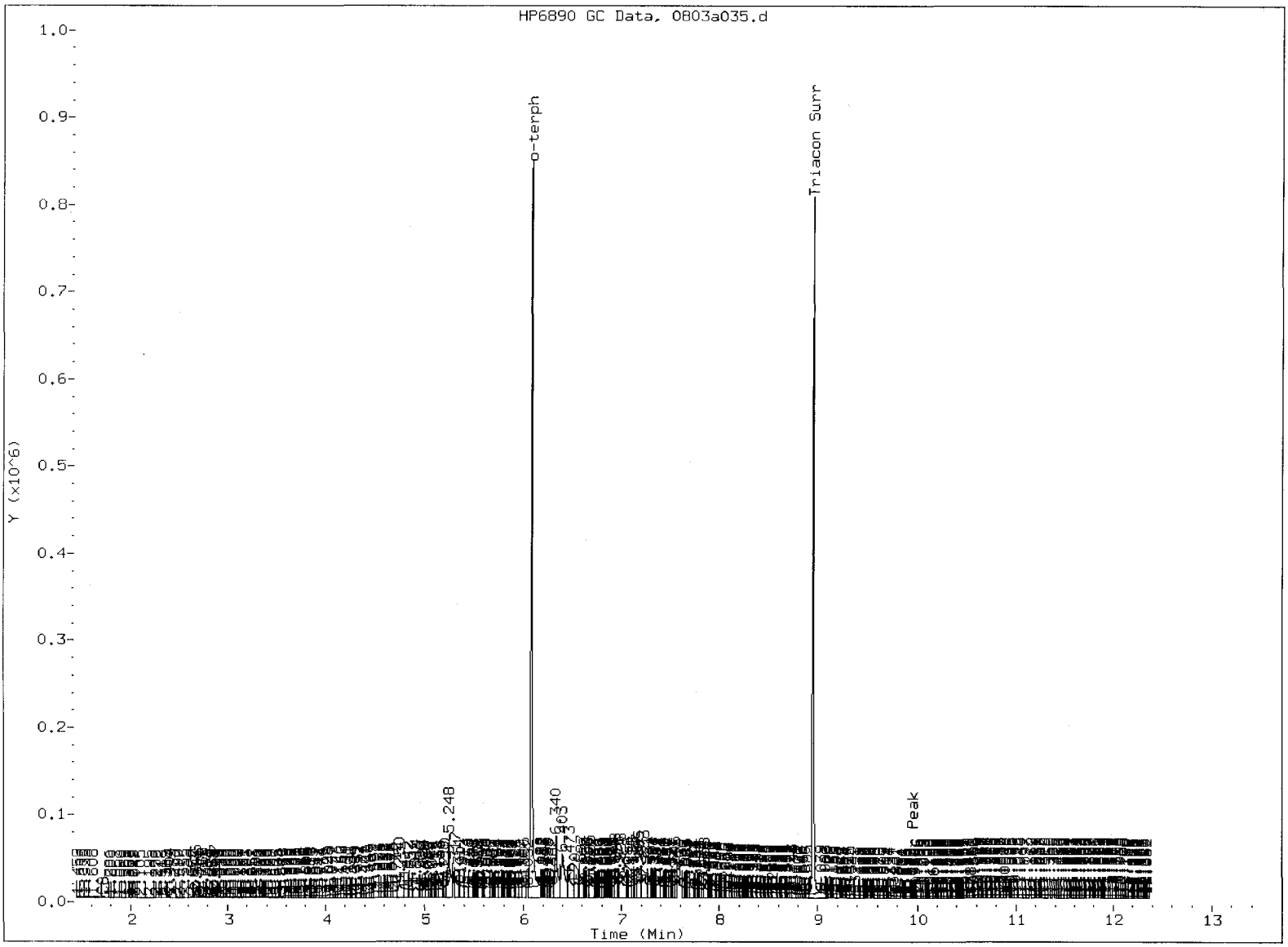
Column phase: RTX-1



Data File: /chem3/fid4a.i/20120803.b/0803a035.d
Injection Date: 04-AUG-2012 00:47
Instrument: fid4a.i
Client Sample ID: MW-11S-073112



FID:4A-2C/RTX-1 VE38E FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: VZ Date: 8/6/a

ANALYTICAL RESOURCES INCORPORATED

HCID SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500

Client ID	O-TER	TOT OUT
MB-080312	84.9%	0
LCS-080312	85.1%	0
LCSD-080312	85.7%	0
MW-16D-073112	108%	0
MW-12D-073112	84.8%	0
MW-11D-073112	84.0%	0
MW-12S-073112	89.1%	0
MW-11S-073112	85.8%	0

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(55-110)	(50-150)

Prep Method: SW3510C
Log Number Range: 12-14610 to 12-14614

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Page 1 of 1

Sample ID: LCS-080312
LCS/LCSD

Lab Sample ID: LCS-080312
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted LCS/LCSD: 08/03/12

Date Analyzed LCS: 08/03/12 22:39
LCSD: 08/03/12 23:00
Instrument/Analyst LCS: FID/YZ
LCSD: FID/YZ

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.51	3.00	83.7%	2.60	3.00	86.7%	3.5%

HCID Surrogate Recovery

	LCS	LCSD
o-Terphenyl	85.1%	85.7%

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

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a029.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38LCSW1
Client ID: VE38LCSW1
Injection: 03-AUG-2012 22:39
Dilution Factor: 1

YZ 8/6/12

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.414	0.010	5201	11168	GAS (Tol-C12)	3624700	240.94
C8	1.674	-0.006	4643	10647	DIESEL (C12-C24)	18379191	1254.55
C10	3.235	0.002	63921	85950	M.OIL (C24-C38)	190206	15.13
C12	4.119	-0.005	189870	174921	AK-102 (C10-C25)	21000866	1213.99
C14	4.794	-0.011	324003	383461	AK-103 (C25-C36)	117280	13.74
C16	5.384	-0.003	518429	737232			
C18	5.952	0.004	450212	612549			
C20	6.517	-0.004	309566	412383	JET-A (C10-C18)	15387044	1244.71
C22	7.066	-0.006	149675	198343	MIN.OIL (C24-C38)	190206	14.15
C24	7.596	0.003	30888	82790			
C25	7.849	0.005	13746	10287			
C26	8.091	0.002	6454	11363			
C28	8.538	-0.008	1529	1256			
C32	9.389	0.002	1703	2171			
C34	9.790	0.007	201	394			
Filter Peak	9.951	-0.003	318	356	BUNKERC (C10-C38)	21134846	2768.52
C36	10.175	0.007	577	270			
C38	10.508	-0.034	1184	1882			
C40	10.879	-0.033	2212	8711			
o-terph	6.097	0.006	905513	780206			
Triacon Surr	8.962	-0.023	724084	797569	NAS DIES (C10-C24)	20944640	1222.40

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	780206	38.3	85.1
Triacontane	797569	41.8	92.9

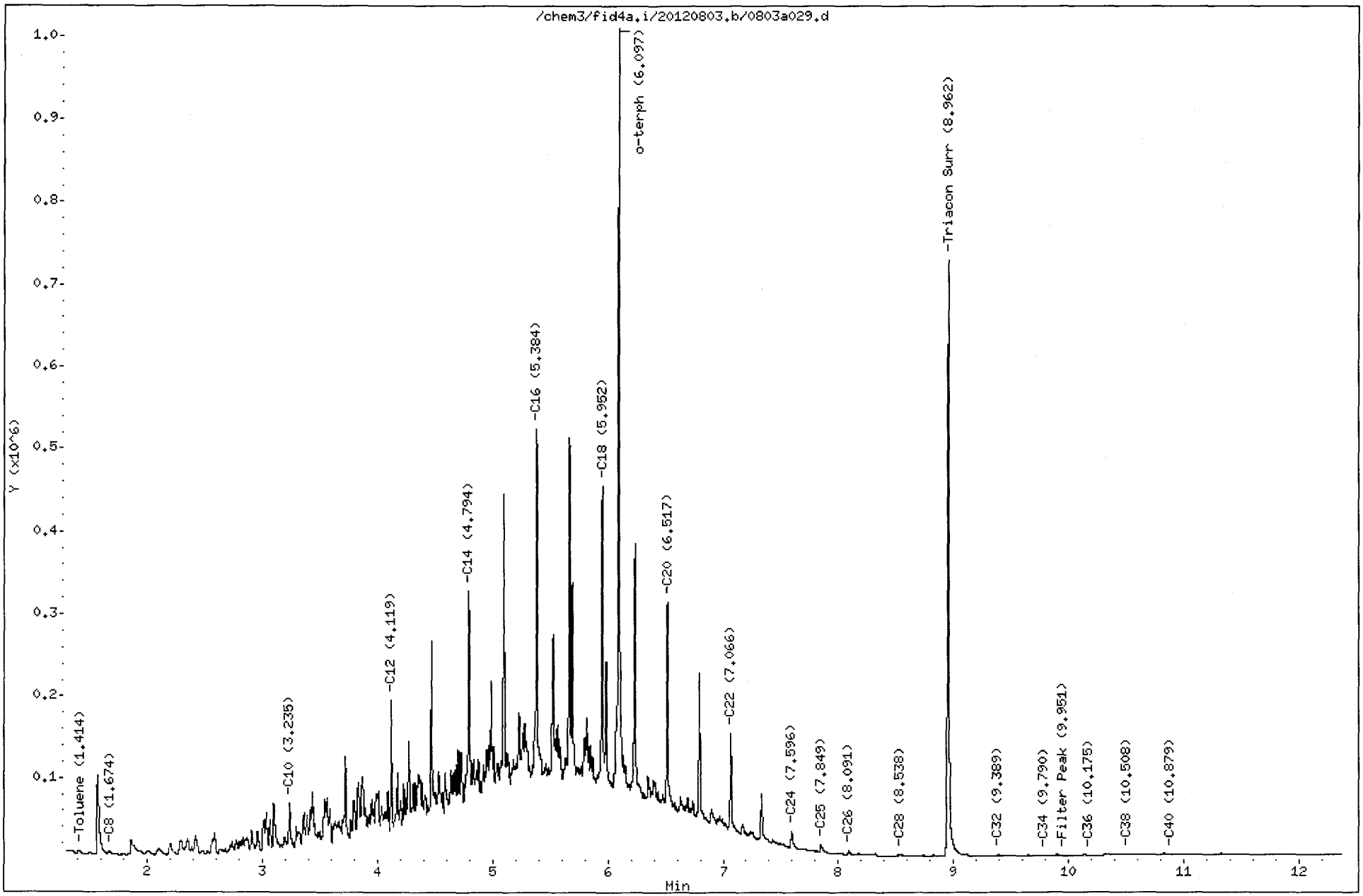
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

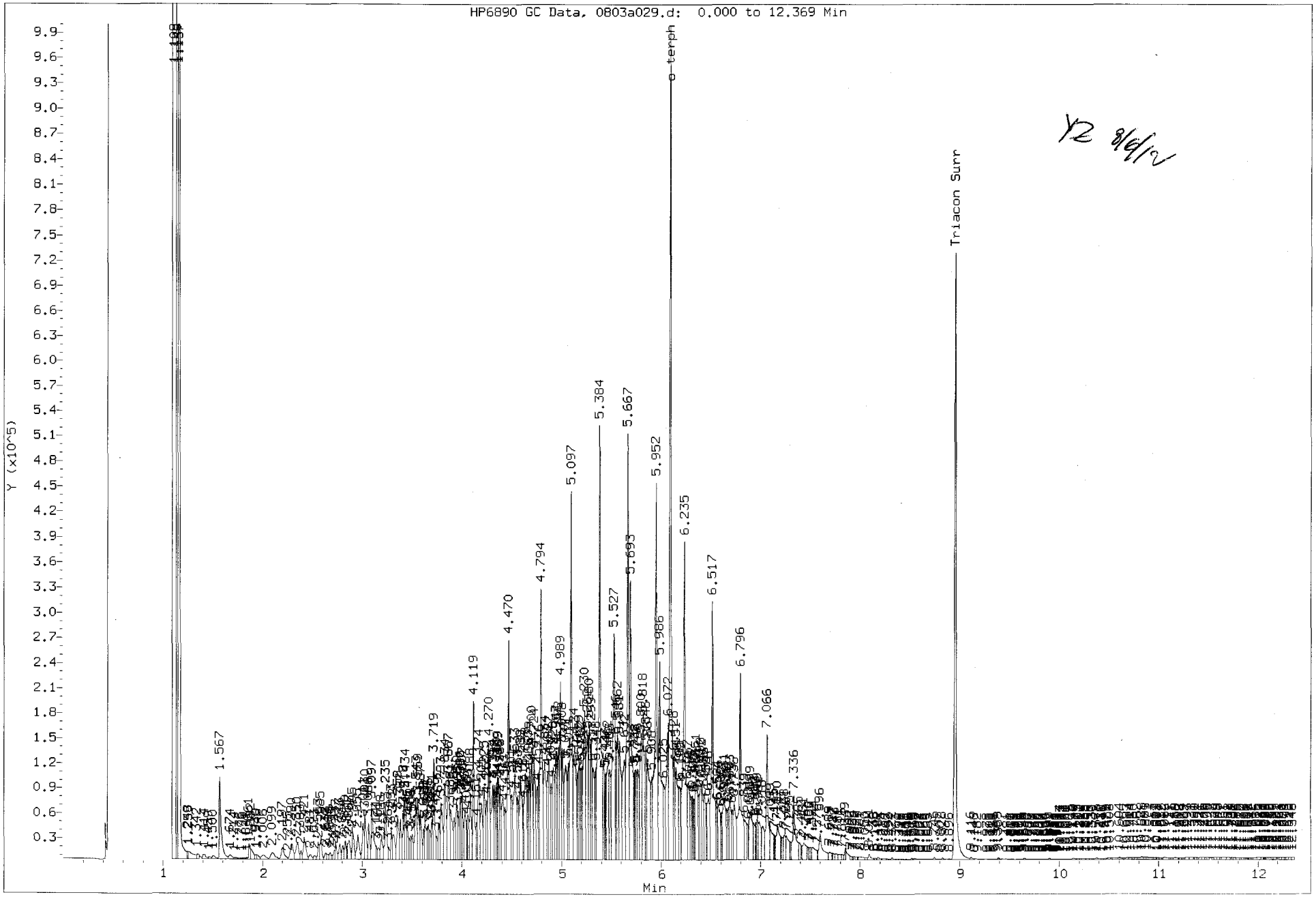
Data File: /chem3/fid4a.i/20120803.b/0803a029.d
Date : 03-AUG-2012 22:39
Client ID: VE38LCSW1
Sample Info: VE38LCSW1

Instrument: fid4a.i
Operator: AR
Column diameter: 0.25

Column phase: RTX-1

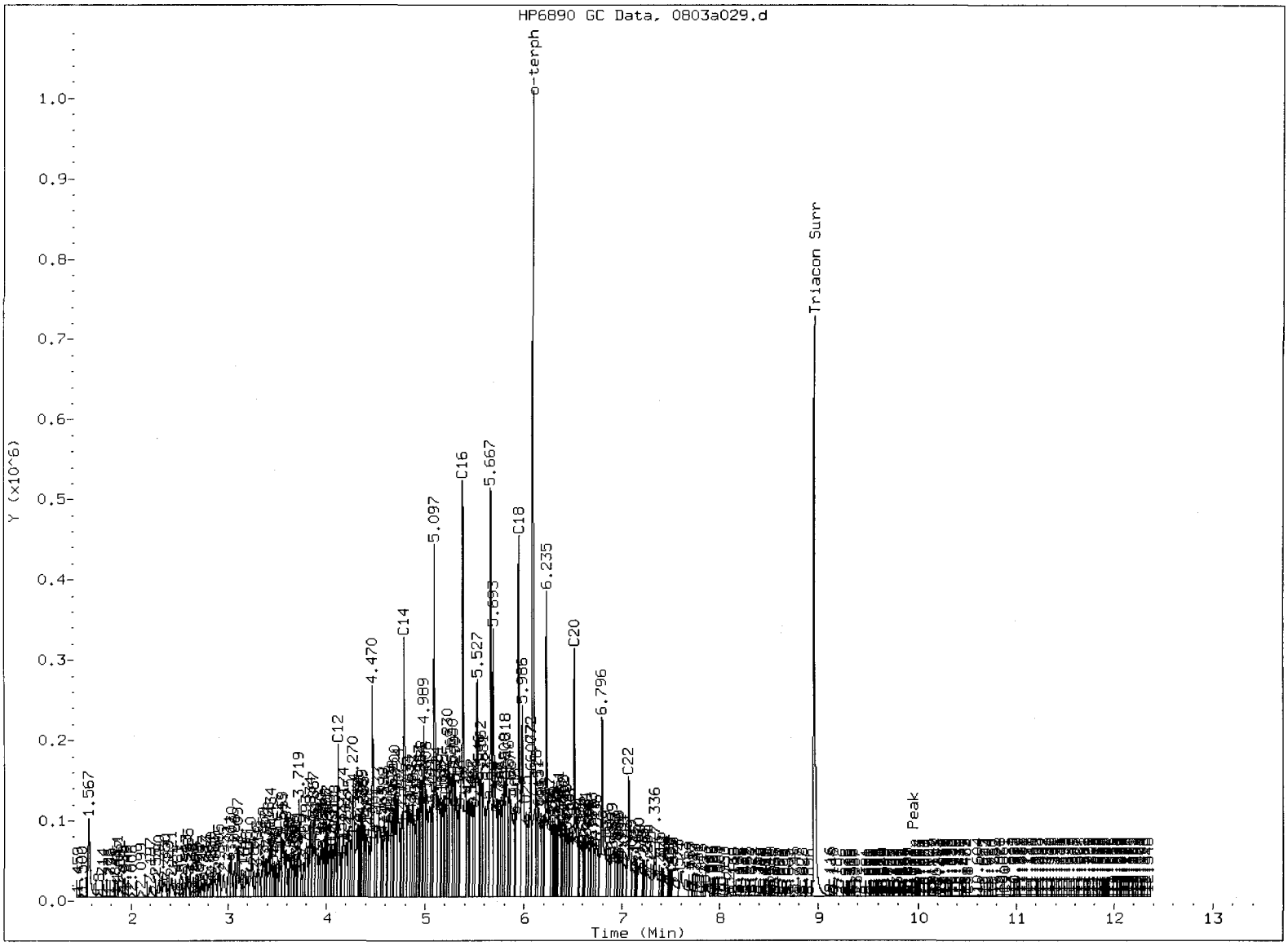


Data File: /chem3/fid4a.i/20120803.b/0803a029.d
Injection Date: 03-AUG-2012 22:39
Instrument: fid4a.i
Client Sample ID: VE38LCSW1



YZ 8/9/12

FID:4A-2C/RTX-1 VE38LCSW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: VZ Date: 8/6/11

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120803.b/0803a030.d
Method: /chem3/fid4a.i/20120803.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/06/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE38LCSDW1
Client ID: VE38LCSDW1
Injection: 03-AUG-2012 23:00

YZ 8/6/12

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.406	0.003	6205	11080	GAS (Tol-C12)	3564587	236.95
C8	1.677	-0.004	4770	10168	DIESEL (C12-C24)	19024001	1298.57
C10	3.234	0.000	63870	83057	M.OIL (C24-C38)	200293	15.94
C12	4.119	-0.005	196721	174084	AK-102 (C10-C25)	21601734	1248.73
C14	4.794	-0.012	339514	387091	AK-103 (C25-C36)	129532	15.17
C16	5.384	-0.004	532614	649219			
C18	5.952	0.004	470597	625751			
C20	6.518	-0.003	322850	479604	JET-A (C10-C18)	15753691	1274.36
C22	7.067	-0.005	152779	173051	MIN.OIL (C24-C38)	200293	14.90
C24	7.598	0.005	31345	72417			
C25	7.851	0.006	14885	28339			
C26	8.093	0.004	6524	10770			
C28	8.538	-0.008	1459	1165			
C32	9.386	-0.001	1892	2930			
C34	9.786	0.002	124	146			
Filter Peak	9.950	-0.004	261	228	BUNKERC (C10-C38)	21756050	2849.89
C36	10.181	0.013	499	725			
C38	10.550	0.007	1251	639			
C40	10.909	-0.003	1880	3660			
o-terph	6.097	0.006	905167	785789			
Triacon Surr	8.962	-0.023	729263	801862	NAS DIES (C10-C24)	21555757	1258.07

Range Times: NW Diesel(4.124 - 7.593) AK102(3.23 - 7.84) Jet A(3.23 - 5.95)
NW M.Oil(7.59 - 10.54) AK103(7.84 - 10.17) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	785789	38.6	85.7
Triacontane	801862	42.0	93.4

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120803.b/0803a030.d

Date : 03-AUG-2012 23:00

Client ID: VE38LCSDW1

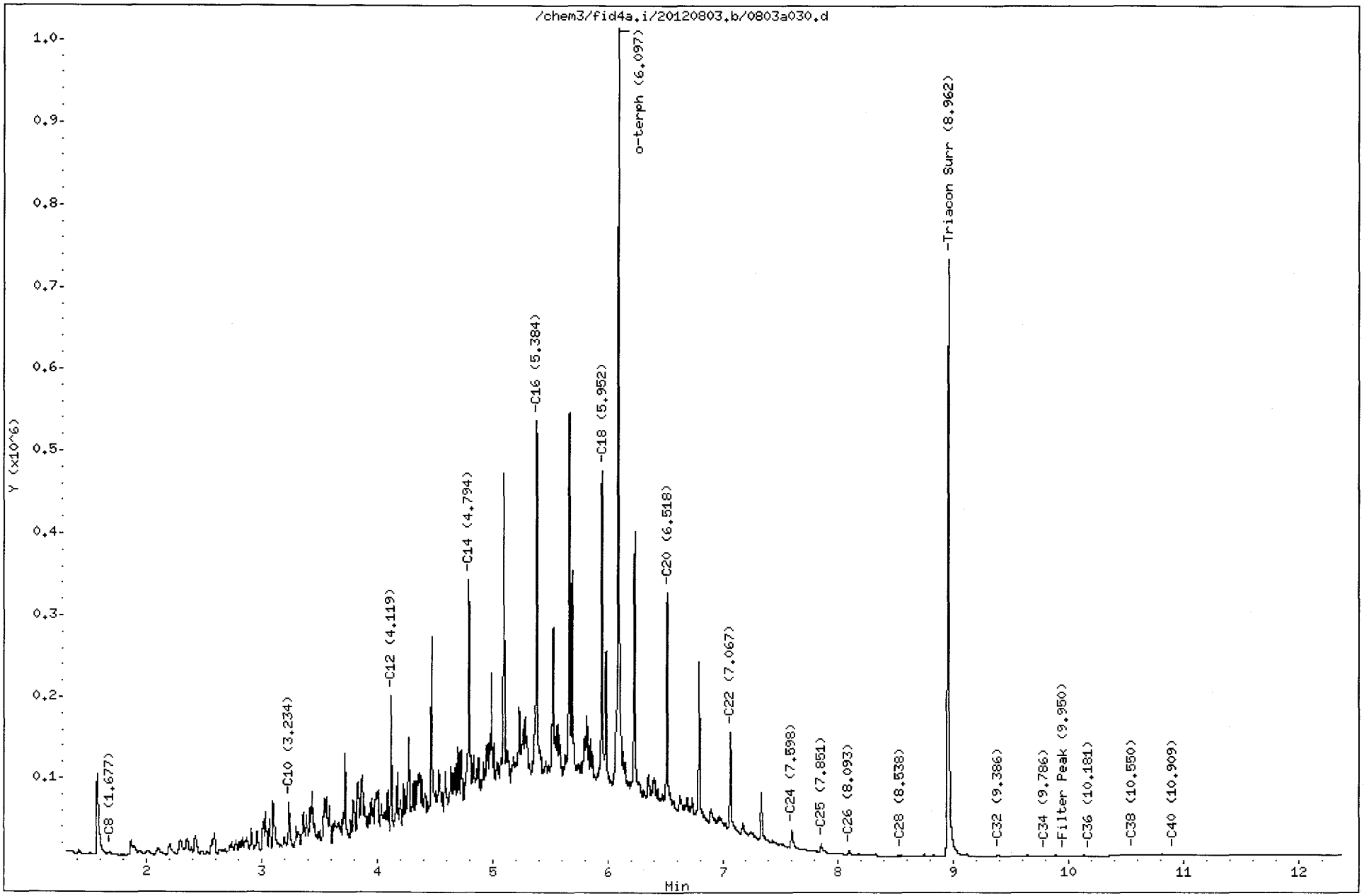
Sample Info: VE38LCSDW1

Column phase: RTX-1

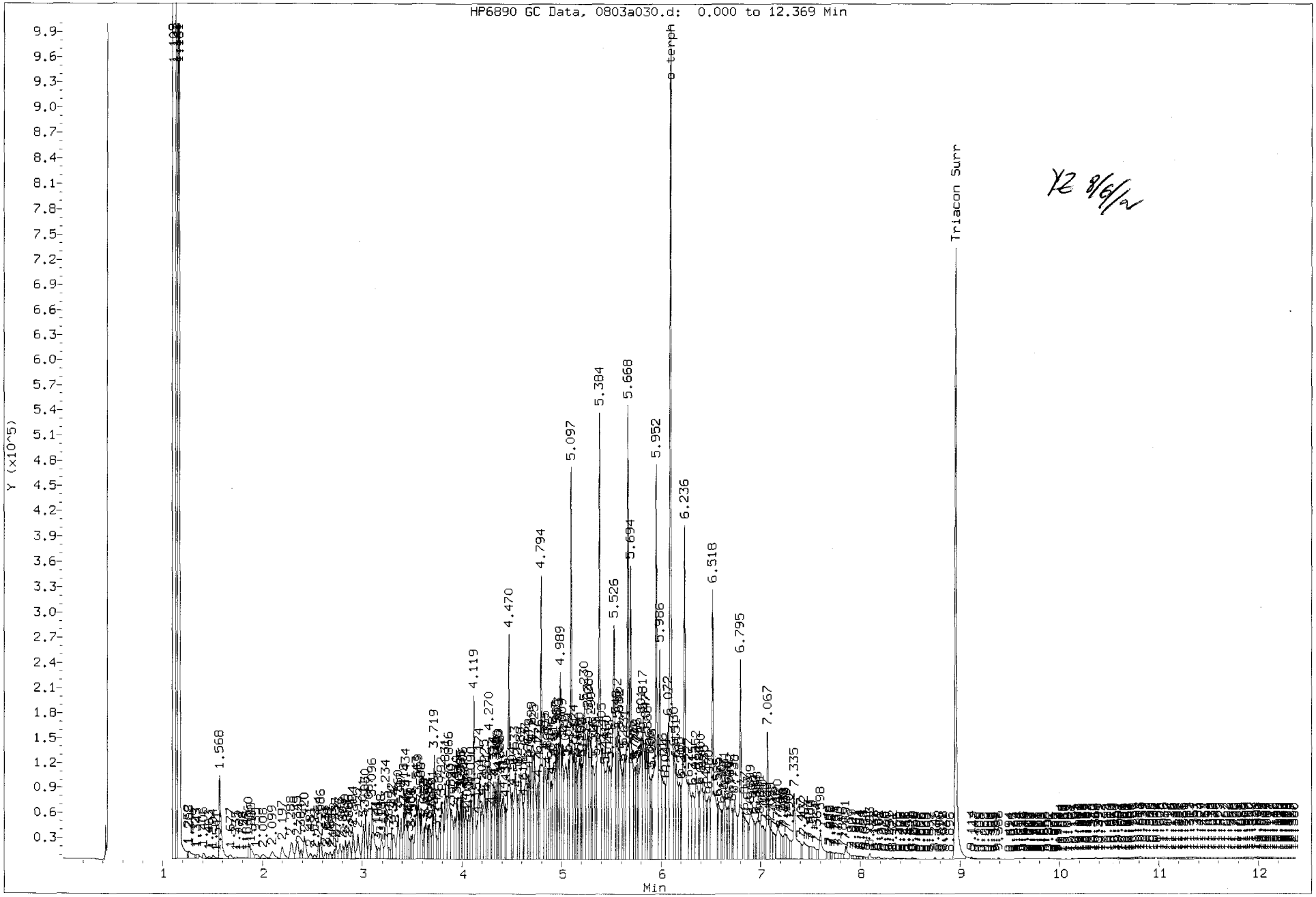
Instrument: fid4a.i

Operator: AR

Column diameter: 0.25

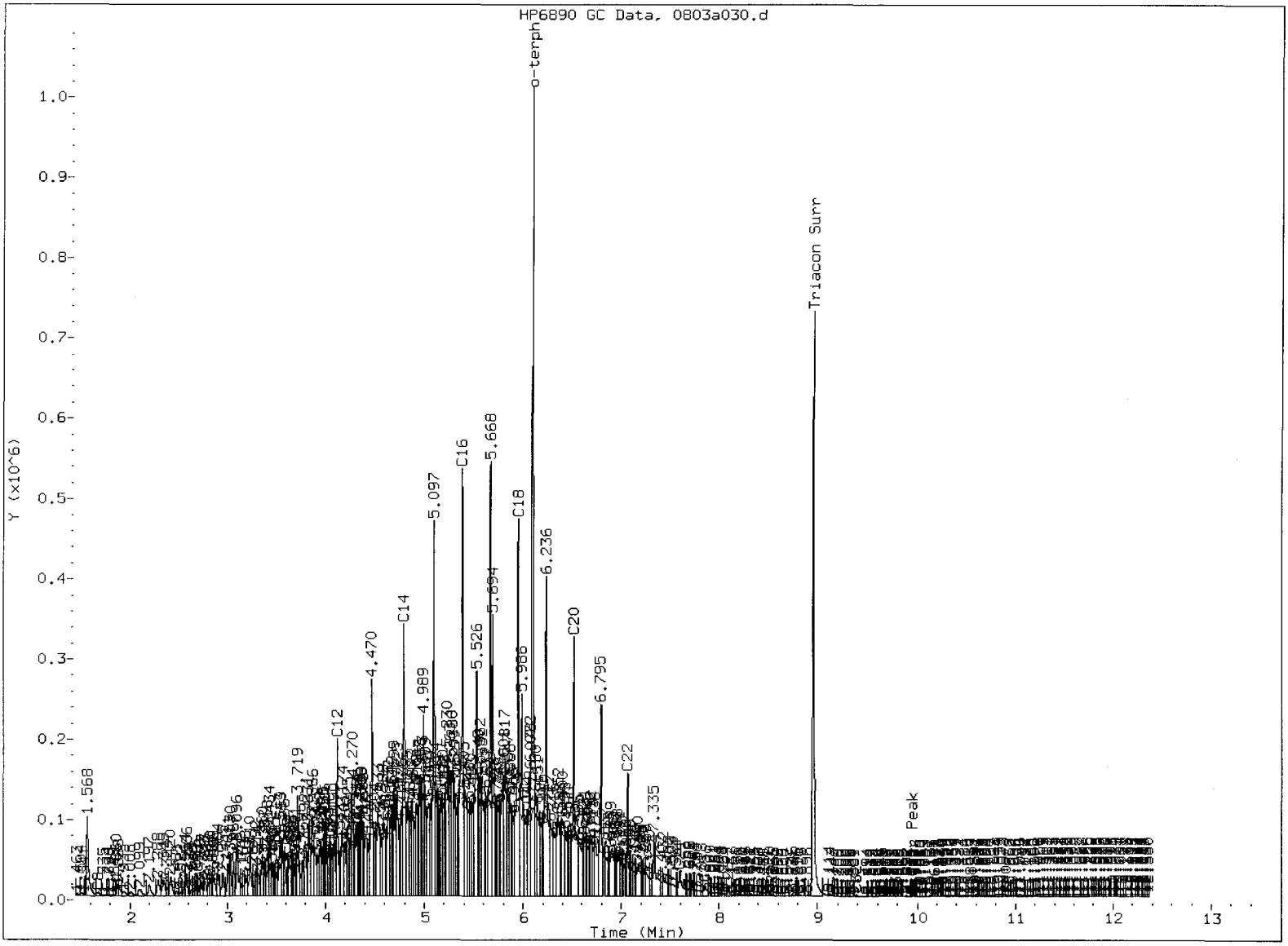


Data File: /chem3/fid4a.i/20120803.b/0803a030.d
Injection Date: 03-AUG-2012 23:00
Instrument: fid4a.i
Client Sample ID: VE38LCSDW1



YZ 8/6/12

FID:4A-2C/RTX-1 VE38LCSDW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: YZ Date: 8/6/12

ANALYTICAL RESOURCES INCORPORATED

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VE38
Matrix: Water Project: Cornwall
Date Received: 08/01/12 0001020.400.500

ARI ID	Client ID	Sample Amt	Final Vol	Prep Date
12-14610-080312MB	Method Blank	500 mL	1.00 mL	08/03/12
12-14610-080312LCS	Lab Control	500 mL	1.00 mL	08/03/12
12-14610-080312LCSD	Lab Control Dup	500 mL	1.00 mL	08/03/12
12-14610-VE38A	MW-16D-073112	500 mL	1.00 mL	08/03/12
12-14611-VE38B	MW-12D-073112	500 mL	1.00 mL	08/03/12
12-14612-VE38C	MW-11D-073112	500 mL	1.00 mL	08/03/12
12-14613-VE38D	MW-12S-073112	500 mL	1.00 mL	08/03/12
12-14614-VE38E	MW-11S-073112	500 mL	1.00 mL	08/03/12

ANALYTICAL RESOURCES INCORPORATED

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: VE90-Landau Associates
Project: Cornwall
0001020.400.500

Matrix: Water
Data Release Authorized: MW
Reported: 08/07/12

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range/Surrogate	RL	Result
MB-080612	Method Blank	08/06/12	08/07/12	1.00	Diesel Range	0.10	< 0.10 U
12-14876	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		83.4%
VE90A	MW-16D-073112	08/06/12	08/07/12	1.00	Diesel Range	0.10	< 0.10 U
12-14876	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		81.3%

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 INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE90-Landau Associates
Project: Cornwall
0001020.400.500

Client ID	OTER	TOT OUT
MB-080612	83.4%	0
LCS-080612	79.0%	0
LCSD-080612	67.1%	0
MW-16D-073112	81.3%	0

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

Prep Method: SW3510C
Log Number Range: 12-14876 to 12-14876

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-080612**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-080612
LIMS ID: 12-14876
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE90-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Date Extracted LCS/LCSD: 08/06/12

Date Analyzed LCS: 08/07/12 09:13
LCSD: 08/07/12 09:35
Instrument/Analyst LCS: FID/AAR
LCSD: FID/AAR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.32	3.00	77.3%	2.17	3.00	72.3%	6.7%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	79.0%	67.1%

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

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VE90
Matrix: Water Project: Cornwall
Date Received: 08/01/12 0001020.400.500

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
12-14876-080612MB1	Method Blank	500 mL	1.00 mL	08/06/12
12-14876-080612LCS1	Lab Control	500 mL	1.00 mL	08/06/12
12-14876-080612LCSD1	Lab Control Dup	500 mL	1.00 mL	08/06/12
12-14876-VE90A	MW-16D-073112	500 mL	1.00 mL	08/06/12

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-16D-073112
SAMPLE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/03/12	200.8	08/07/12	7440-38-2	Arsenic	1	1	U
200.8	08/03/12	200.8	08/07/12	7440-50-8	Copper	1	1	U
200.8	08/03/12	200.8	08/07/12	7439-92-1	Lead	0.2	0.2	U
200.8	08/03/12	200.8	08/07/12	**7439-96-5**	**Manganese**	1	**540**	
200.8	08/03/12	200.8	08/07/12	**7440-66-6**	**Zinc**	10	**40**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-12D-073112
SAMPLE

Lab Sample ID: VE38B
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/03/12	200.8	08/07/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	08/03/12	200.8	08/06/12	**7440-50-8**	**Copper**	0.5	**0.6**	
200.8	08/03/12	200.8	08/06/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/03/12	200.8	08/06/12	**7439-96-5**	**Manganese**	0.5	**163**	
200.8	08/03/12	200.8	08/06/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-11D-073112
SAMPLE

Lab Sample ID: VE38C
LIMS ID: 12-14612
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/03/12	200.8	08/06/12	**7440-38-2**	**Arsenic**	0.2	**0.4**	
200.8	08/03/12	200.8	08/07/12	**7440-50-8**	**Copper**	0.5	**0.7**	
200.8	08/03/12	200.8	08/06/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/03/12	200.8	08/06/12	**7439-96-5**	**Manganese**	0.5	**84.0**	
200.8	08/03/12	200.8	08/06/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-12S-073112
SAMPLE

Lab Sample ID: VE38D
LIMS ID: 12-14613
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/03/12	200.8	08/06/12	**7440-38-2**	**Arsenic**	0.2	**0.6**	
200.8	08/03/12	200.8	08/07/12	7440-50-8	Copper	1	1	U
200.8	08/03/12	200.8	08/06/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/03/12	200.8	08/09/12	**7439-96-5**	**Manganese**	10	**680**	
200.8	08/03/12	200.8	08/06/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-11S-073112
SAMPLE

Lab Sample ID: VE38E
LIMS ID: 12-14614
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/03/12	200.8	08/06/12	**7440-38-2**	**Arsenic**	0.2	**1.3**	
200.8	08/03/12	200.8	08/07/12	**7440-50-8**	**Copper**	0.5	**2.6**	
200.8	08/03/12	200.8	08/06/12	**7439-92-1**	**Lead**	0.1	**1.0**	
200.8	08/03/12	200.8	08/07/12	**7439-96-5**	**Manganese**	2	**1,430**	
200.8	08/03/12	200.8	08/06/12	**7440-66-6**	**Zinc**	4	**26**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: MW-16D-073112
MATRIX SPIKE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	1 U	25	25	100%	
Copper	200.8	1 U	26	25	104%	
Lead	200.8	0.2 U	25.6	25.0	102%	
Manganese	200.8	540	571	25	124%	H
Zinc	200.8	40	90	80	62.5%	N

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-16D-073112
DUPLICATE

Lab Sample ID: VE38A
LIMS ID: 12-14610
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	1 U	2	66.7%	+/- 1	L
Copper	200.8	1 U	1 U	0.0%	+/- 1	L
Lead	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Manganese	200.8	540	550	1.8%	+/- 20%	
Zinc	200.8	40	20	66.7%	+/- 10	L*

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VE38MB
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/03/12	200.8	08/07/12	7440-38-2	Arsenic	0.2	0.2	U
200.8	08/03/12	200.8	08/06/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/03/12	200.8	08/06/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/03/12	200.8	08/06/12	7439-96-5	Manganese	0.5	0.5	U
200.8	08/03/12	200.8	08/06/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VE38LCS
LIMS ID: 12-14611
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE38-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.2	25.0	105%	
Copper	200.8	27.1	25.0	108%	
Lead	200.8	27.6	25.0	110%	
Manganese	200.8	25.5	25.0	102%	
Zinc	200.8	86	80	108%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 08/10/12
Date Received: 08/01/12
Page 1 of 1

QC Report No238: VE43-Landau Associates
Project: Cornwall
0001020.400.500

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
MW-16D-073112 VE43A 12-14616	07/31/12	Water	08/02/12 08/10/12	20.0	20.0 U
MW-12D-073112 VE43B 12-14617	07/31/12	Water	08/02/12 08/10/12	20.0	20.0 U
MW-11D-073112 VE43C 12-14618	07/31/12	Water	08/02/12 08/10/12	20.0	20.0 U
MW-12S-073112 VE43D 12-14619	07/31/12	Water	08/02/12 08/10/12	20.0	20.0 U
MW-11S-073112 VE43E 12-14620	07/31/12	Water	08/02/12 08/10/12	20.0	20.0 U
MB-080212 Method Blank	NA	Water	08/02/12 08/10/12	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-16D-073112
MATRIX SPIKE

Lab Sample ID: VE43A
LIMS ID: 12-14616
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE43-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	106	100	106%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-16D-073112
DUPLICATE

Lab Sample ID: VE43A
LIMS ID: 12-14616
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE43-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: VE43LCS
LIMS ID: 12-14617
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE43-Landau Associates
Project: Cornwall
0001020.400.500
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	251	200	126%	N

Reported in ng/L

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

SAMPLE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Client ID: MW-16D-073112
ARI ID: 12-14610 VE38A

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	08/02/12 080212#1	EPA 300.0	mg-N/L	0.5	< 0.5 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.200	14.2
Sulfate	08/02/12 080212#1	EPA 300.0	mg/L	0.1	3.0
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.187
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	52.2
Biological Oxygen Demand	08/02/12 080212#1	EPA 405.1	mg/L	3.0	7.5
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	17.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Client ID: MW-12D-073112
ARI ID: 12-14611 VE38B

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.200	12.0
Sulfate	08/02/12 080212#1	EPA 300.0	mg/L	0.2	6.6
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.834
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	108
Biological Oxygen Demand	08/02/12 080212#1	EPA 405.1	mg/L	15.0	15.7
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	26.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Client ID: MW-11D-073112
ARI ID: 12-14612 VE38C

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.100	4.23
Sulfate	08/01/12 080112#1	EPA 300.0	mg/L	0.1	3.0
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.868
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	10.0	236
Biological Oxygen Demand	08/02/12 080212#1	EPA 405.1	mg/L	20.0	85.4
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	21.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Client ID: MW-12S-073112
ARI ID: 12-14613 VE38D

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.500	18.0
Sulfate	08/01/12 080112#1	EPA 300.0	mg/L	0.1	0.7
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.321
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	43.4
Biological Oxygen Demand	08/02/12 080212#1	EPA 405.1	mg/L	4.0	15.1
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	13.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Client ID: MW-11S-073112
ARI ID: 12-14614 VE38E

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	08/01/12 080112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.100	4.52
Sulfate	08/01/12 080112#1	EPA 300.0	mg/L	0.1	1.2
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.087
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	61.6
Biological Oxygen Demand	08/02/12 080212#1	EPA 405.1	mg/L	6.0	14.5
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	22.4

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
N-Nitrate	EPA 300.0	08/01/12	mg-N/L	< 0.1 U	
N-Nitrite	EPA 300.0	08/01/12	mg-N/L	< 0.1 U	
		08/02/12		< 0.1 U	
Total Cyanide	EPA 335.4	08/10/12	mg/L	< 0.005 U	
N-Ammonia	EPA 350.1M	08/03/12	mg-N/L	< 0.010 U	FB
Sulfate	EPA 300.0	08/01/12	mg/L	< 0.1 U	
		08/02/12		< 0.1 U	
Sulfide	EPA 376.2	08/02/12	mg/L	< 0.050 U	
Chemical Oxygen Demand	EPA 410.4	08/13/12	mg/L	< 5.00 U	
Biological Oxygen Demand	EPA 405.1	08/02/12	mg/L	< 1.0 U	
Total Organic Carbon	EPA 9060	08/07/12	mg/L	< 1.50 U	

FB Filtration Blank

LAB CONTROL RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Sulfide EPA 376.2	ICVL	08/02/12	mg/L	0.496	0.501	99.0%
Biological Oxygen Demand EPA 405.1	ICVL	08/02/12	mg/L	195	198	98.5%

STANDARD REFERENCE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
N-Nitrate ERA #230511	EPA 300.0	08/01/12	mg-N/L	3.0	3.0	100.0%
N-Nitrite ERA #401010	EPA 300.0	08/01/12 08/02/12	mg-N/L	3.0 3.0	3.0 3.0	100.0% 100.0%
Total Cyanide ERA 11107	EPA 335.4	08/10/12	mg/L	0.386	0.400	96.5%
N-Ammonia ERA #15125	EPA 350.1M	08/03/12	mg-N/L	0.498	0.500	99.6%
Sulfate ERA #070811	EPA 300.0	08/01/12 08/02/12	mg/L	3.0 3.1	3.0 3.0	100.0% 103.3%
Chemical Oxygen Demand Thermo Orion #I01	EPA 410.4	08/13/12	mg/L	84.8	90.0	94.2%
Total Organic Carbon ERA 0409-12-01	EPA 9060	08/07/12	mg/L	20.4	20.0	102.0%

REPLICATE RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VE38A Client ID: MW-16D-073112						
N-Nitrate	EPA 300.0	08/01/12	mg-N/L	< 0.1	< 0.1	NA
N-Nitrite	EPA 300.0	08/02/12	mg-N/L	< 0.5	< 0.5	NA
Sulfate	EPA 300.0	08/02/12	mg/L	3.0	2.9	3.4%
Sulfide	EPA 376.2	08/02/12	mg/L	0.187	0.191	2.1%

MS/MSD RESULTS-CONVENTIONALS
VE38-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.500
Date Sampled: 07/31/12
Date Received: 08/01/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VE38A Client ID: MW-16D-073112							
N-Nitrate	EPA 300.0	08/01/12	mg-N/L	< 0.1	1.9	2.0	95.0%
N-Nitrite	EPA 300.0	08/02/12	mg-N/L	< 0.5	12.3	10.0	123.0%
Sulfate	EPA 300.0	08/02/12	mg/L	3.0	5.2	4.0	55.0%
Sulfide	EPA 376.2	08/02/12	mg/L	0.187	0.655	0.500	93.6%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 16, 2012

Mr. Larry Beard
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall 001020.400.500
ARI Job No: VE22, VE24

Dear Larry,

Please find enclosed analytical results for the conventionals analyses of samples received for the project referenced above. Analytical Resources, Inc. (ARI) accepted eight water samples and a trip blank on July 31, 2012. The samples were received in good condition and there were no discrepancies between the COC and containers' labels.

The samples were analyzed for SVOCs, SIM PAHs, HCID, VOCs, Pesticides, Herbicides, Dissolved Metals, Anions, Sulfide, COD, BOD, Ammonia, TOC, Cyanide and NWTPH-Dx follow ups as requested on the COC. The Tannins and Lignins were subcontracted to Aquatic Research, Inc.

The VOCs 8/6/12 method blank contained hexachlorobutadiene and n-Butylbenzene. All associated samples that contain analyte have been flagged with a "B" qualifier.

The VOCs 8/7/12 CCAL is out of control low for acrolein. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 8/3/12 CCAL is out of control high for 2,4-Dinitrophenol and Pentachlorophenol. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 8/6/12 CCAL is out of control low for 2,4-Dinitrophenol and 2,4,6-Tribromophenol. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The BOD ICV is out of control low. All sample volume was consumed during the analysis. All other QC is in control and no further corrective action was taken.

The herbicide surrogate DCPA is out of control high in association with sample MW-16S-073012. The sample was non-detect and no further corrective action was taken.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

The herbicide LCS and LCSD are out of control low for 2,4,5-T. All other spike recoveries are in control and no further corrective action was taken.

Quality control analyses are included for your review. No other analytical complications were noted.

A copy of these reports and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
206-695-6211
kellyb@arilabs.com

KFB/kfb
Enclosure
cc: File VE22 and VE24

LANDAU ASSOCIATES

☒ Seattle/Edmonds (425) 778-0907 VE22
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

Chain-of-Custody Record

Date 7/30/12
Page 1 of 2

Project Name CORNWALL Project No. 000102a.400.510
Project Location/Event BELLINGHAM, WA / ADDITIONAL GW INVESTIGATION
Sampler's Name CHRISTOPHE VENOT
Project Contact " / JEREMY DAVIS / LARRY BEARD
Send Results To ANNE MALMORSEN / " / "

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	* SVOCs	* SIM PAHs w/ LOW LEVEL	HCID *	VOCs	* PESTICIDES	* HERBICIDES	* DISSOLVED METALS ***	AMMONIA ***	NO2, NO3, SO4 **	SULFIDE	NH3	TOT FREE CYANIDE	TANNINS & LIGNINS	Observations/Comments
MW-15D-073012	073012	1050	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-16S-073012	073012	1215	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-15S-073012	073012	1220	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-14S-073012	073012	1350	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-13S-073012	073012	1505	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-14D-073012	073012	1540	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-13D-073012	073012	1625	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-DUP-073012	073012	—	AQ	18	X	X	X	X	X	X	X	X	X	X	X	X	X	
TBS		—	AQ	3				X										

X Allow water samples to settle, collect aliquot from clear portion
X NWTPH-Dx - run acid wash/silica gel cleanup
! Centrifuge! *
___ run samples standardized to _____ product
___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

☒ Dissolved metal water samples field filtered

Other * LAT TO FOLLOW UP WITH NWTPHDX/NWTPHDX BASED ON RESULTS.
*** NOTE 48-hr Hold TIME
** As, Cu, Pb, Mn, Zn, Hg COC 5 LL Hg

Special Shipment/Handling or Storage Requirements: ON ICE

Method of Shipment: Pick-up

Relinquished by	Received by	Relinquished by	Received by
Signature: Rosemary Trimmer	Signature:	Signature: Jeremy Davis	Signature:
Printed Name: Rosemary Trimmer	Printed Name: Jeremy Davis	Printed Name:	Printed Name: Taylor Streeter
Company: Landau Associates	Company: Landau Associates	Company: Landau Associates	Company: ART
Date: 7/30/12 Time: 7:30 pm	Date: 7/31/12 Time: 0900	Date: 7/31/12 Time: 0930	Date: 7-31-12 Time: 1305

Shipping via lab courier

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

LANDAU ASSOCIATES

- [X] **Seattle/Edmonds** (425) 778-0907
- [ ] **Tacoma** (253) 926-2493
- [ ] **Spokane** (509) 327-9737
- [ ] **Portland** (503) 542-1080
- [ ] _____

Chain-of-Custody Record

Date 7/30/12

Page 2 of 2

Project Name CORNWALL Project No. 000/020.400.510

Project Location/Event BELLINGHAM, WA / ADDITIONAL GW INVESTIGATION

Sampler's Name CHRISTOPHE JENOT

Project Contact " / JEREMY DAVIS / LARRY BEARD

Send Results To ANNE THURNSEN / " / "

Turnaround Time
- [X] Standard
- [ ] Accelerated
- [ ] _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: TOC / COD	BOD *	NWTPH-Dx **	NWTPH-Gx **	Observations/Comments
MW15D-073012	073012	0950	AQ	6	X	X*			
MW-163-073012	073012	1215	AQ	6	X	X*			
MW-155-073012	073012	1220	AQ	6	X	X			
MW-145-073012	073012	1350	AQ	6	X	X			
MW-135-073012	073012	1505	AQ	6	X	X			
MW-140-073012	073012	1540	AQ	6	X	X			
MW-130-073012	073012	1625	AQ	6	X	X			
MW-DUP-073012	073012	—	AQ	6	X	X			
TBS			AQ	2			X**		

X Allow water samples to settle, collect aliquot from clear portion

X NWTPH-Dx - run acid wash/silica gel cleanup

*! Centrifuge!

___ run samples standardized to _____ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
- ___ non-preserved
- ___ preserved w/methanol
- ___ preserved w/sodium bisulfate
- ___ Freeze upon receipt

X Dissolved metal water samples field filtered

Other * NOTE 48-hr HOLD TIME
** LAI TO FOLLOWUP WITH DX/GW BASED ON HOLD RESULTS.

Special Shipment/Handling or Storage Requirements: ON ICE

Method of Shipment: PICK-UP

Relinquished by	Received by	Relinquished by	Received by
Signature: Rosemary Trimmer	Signature:	Signature: Shipping via lab courier	Signature:
Printed Name: Rosemary Trimmer	Printed Name: Jeremy Davis	Printed Name: Jeremy Davis	Printed Name:
Company: Landau Associates	Company: Landau Associates	Company: Landau Associates	Company: ART
Date: 7/30/12 Time: 7:30 pm	Date: 7/31/12 Time: 0800	Date: 7/31/12 Time: 0930	Date: 7-31-12 Time: 1305

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau Project Name: Cornwall

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: VE21 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) 4.1 5.1 1.6 5.1 3.4 4.5

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

Cooler Accepted by: TS Date: 7-31-12 Time: 1305

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: Box

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 7/25/12

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

Samples Logged by: AV Date: 7/31/12 Time: 1430

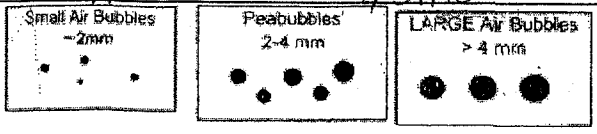
***** Notify Project Manager of discrepancies or concerns *****

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

Additional Notes, Discrepancies, & Resolutions:

3.3, 4.3, 2.9: Dup=3pb, 13D=4pb, 14D=5pb, 13S=3pb TB=4pb
14S=3pb, 15S=3pb, 16S=3pb, 15D=4pb ~~There are~~

By: AV Date: 7/31/12



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

PRESERVATION VERIFICATION 07/31/12
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VE22**

Inquiry Number: NONE
Analysis Requested: 07/31/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 07/31/12

Project #: 0001020.400.510
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-14520 **VE22A**	MW-15D-073012	F		P	P		DIS P					P	F			Y						
12-14521 **VE22B**	MW-16S-073012	F		P	P		DIS P					P	F			Y						
12-14522 **VE22C**	MW-15S-073012	F		P	P		DIS Fail					P	F			Y			<2	mp1276	2ml	8/1/12 CB
12-14523 **VE22D**	MW-14S-073012	F		P	P		DIS Fail					P	F			Y			<2	mp1276	2ml	8/1/12 CB
12-14524 **VE22E**	MW-13S-073012	F		P	P		DIS P					P	F			Y						
12-14525 **VE22F**	MW-14D-073012	F		P	P		DIS P					P	F			Y						
12-14526 **VE22G**	MW-13D-073012	F		P	P		DIS P					P	F			Y						
12-14527 **VE22H**	MW-DUP-073012	F		P	P		DIS P					P	F			Y						

P=Pass ~~Fail-PA~~ F=Fail

Cyanide=unpreserved
Sulfide=only preserved with znOAC. Lab to adjust ph

preserved samples C-D in 196 - CB 08/01/12

Checked By AV Date 7/31/12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

Project Name: Cornwall

COC No(s): (NA)

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

Assigned ARI Job No: VE04 ~~VE21~~ AV

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) 4.1 5.1 1.6 5.1 3.4 4.5

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

Cooler Accepted by: TS Date: 7-31-12 Time: 1305

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: Box

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: 7/31/12 Time: 1430

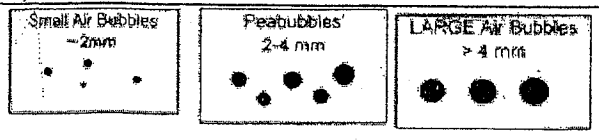
***** Notify Project Manager of discrepancies or concerns *****

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

Additional Notes, Discrepancies, & Resolutions:

3.3, 4.3, 2.9

By: Date:



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

PRESERVATION VERIFICATION 07/31/12
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VE24**

PC: Kelly
VTSR: 07/31/12

Inquiry Number: NONE
Analysis Requested: 07/31/12
Contact: Davis, Jeremy
Client: Landau Associates
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

Project #: 0001020.400.510
Project: Cornwall
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
12-14529 **VE24A**	MW-15D-073012						DIS P									Y						
12-14530 **VE24B**	MW-16S-073012						DIS P									Y						
12-14531 **VE24C**	MW-15S-073012						DIS F									Y			<2	mp2276	2mL	8/1/12 CB
12-14532 **VE24D**	MW-14S-073012						DIS F									Y			<2	mp2276	2mL	8/1/12 CB
12-14533 **VE24E**	MW-13S-073012						DIS P									Y						
12-14534 **VE24F**	MW-14D-073012						DIS P									Y						
12-14535 **VE24G**	MW-13D-073012						DIS P									Y						
12-14536 **VE24H**	MW-DUP-073012						DIS P									Y						

P=Pass F=Fail

preserved samples C-D in 196

CB 08/01/12

Checked By AV Date 7/31/12

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VE22
Client: Landau Associates
Project Event: 0001020.400.510
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-15D-073012	VE22A	12-14520	Water	07/30/12 10:50	07/31/12 13:05
2.	MW-16S-073012	VE22B	12-14521	Water	07/30/12 12:15	07/31/12 13:05
3.	MW-15S-073012	VE22C	12-14522	Water	07/30/12 12:20	07/31/12 13:05
4.	MW-14S-073012	VE22D	12-14523	Water	07/30/12 13:50	07/31/12 13:05
5.	MW-13S-073012	VE22E	12-14524	Water	07/30/12 15:05	07/31/12 13:05
6.	MW-14D-073012	VE22F	12-14525	Water	07/30/12 15:40	07/31/12 13:05
7.	MW-13D-073012	VE22G	12-14526	Water	07/30/12 16:25	07/31/12 13:05
8.	MW-DUP-073012	VE22H	12-14527	Water	07/30/12	07/31/12 13:05
9.	Trip Blanks	VE22I	12-14528	Water	07/30/12	07/31/12 13:05

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VE24
Client: Landau Associates
Project Event: 0001020.400.510
Project Name: Cornwall

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-15D-073012	VE24A	12-14529	Water	07/30/12 10:50	07/31/12 13:05
2.	MW-16S-073012	VE24B	12-14530	Water	07/30/12 12:15	07/31/12 13:05
3.	MW-15S-073012	VE24C	12-14531	Water	07/30/12 12:20	07/31/12 13:05
4.	MW-14S-073012	VE24D	12-14532	Water	07/30/12 13:50	07/31/12 13:05
5.	MW-13S-073012	VE24E	12-14533	Water	07/30/12 15:05	07/31/12 13:05
6.	MW-14D-073012	VE24F	12-14534	Water	07/30/12 15:40	07/31/12 13:05
7.	MW-13D-073012	VE24G	12-14535	Water	07/30/12 16:25	07/31/12 13:05
8.	MW-DUP-073012	VE24H	12-14536	Water	07/30/12	07/31/12 13:05

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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 ≥ 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 ≥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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Landau Associates	**ARI Job No.:** VE22
Client Project: Cornwall	**Client Project No.:** 0001020.400.510

Case Narrative

1. Eight samples were submitted for analysis on July 31, 2012, and were in good condition. Each sample was received in eight 500 milliliters amber glass bottles, with a total of 32 liters for the entire job.
2. The samples were submitted for removal of solid particulate by means of centrifuging according to modified Corp of Engineers draft interim guide lines.
3. The samples were centrifuged in decontaminated 500mL glass bottles, in a pre-cooled centrifuge (4°C) at 1,000 x g for 30 minutes.
4. The supernatant water was decanted back into the original sample bottles and delivered to sample receiving for distribution.
5. There were no other anomalies in the sample or methods on this project.

Released by: Gemma Curtis *Geotechnical Laboratory Manager* Date: 8/2/12

Reviewed by: Gabriel Noble *Technician* Date: August 2, 2012

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI098-45**	**PAGE 1**	
REPORT DATE:	**08/16/12**		
DATE SAMPLED:	**07/30/12**	**DATE RECEIVED:**	**08/02/12**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES INC. / VE22

CASE NARRATIVE

Eight water samples were received by the laboratory in good condition. Analysis was performed according to the chain of custody received with the samples. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on the following page.

SAMPLE DATA

SAMPLE ID	LAB ID	TANNIN/LIGNIN (mg/L)
12-14520-VE22A	MW-15D-073012	1.46
12-14521-VE22B	MW-16S-073012	1.46
12-14522-VE22C	MW-15S-073012	1.95
12-14523-VE22D	MW-14S-073012	1.19
12-14524-VE22E	MW-13S-073012	1.07
12-14525-VE22F	MW-14D-073012	1.24
12-14526-VE22G	MW-13D-073012	1.12
12-14527-VE22H	MW-DUP-073012	1.22

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**ARI098-45**	**PAGE 2**	
REPORT DATE:	**08/16/12**		
DATE SAMPLED:	**07/30/12**	**DATE RECEIVED:**	**08/02/12**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER SAMPLES FROM ANALYTICAL RESOURCES INC. / VE22

QA/QC DATA

QC PARAMETER	TANNIN/LIGNIN (mg/L)
METHOD	SM5550
DATE ANALYZED	08/16/12
DETECTION LIMIT	0.010
DUPLICATE	
SAMPLE ID	MW-DUP-073012
ORIGINAL	1.22
DUPLICATE	1.22
RPD	0.00%
SPIKE SAMPLE	
SAMPLE ID	MW-DUP-073012
ORIGINAL	1.22
SPIKED SAMPLE	2.16
SPIKE ADDED	1.00
% RECOVERY	94.85%
QC CHECK	
FOUND	1.04
TRUE	1.00
% RECOVERY	103.58%
BLANK	<0.010

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski

Damien Gadomski
Project Manager

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 07/31/12

ANALYTICAL RESOURCES INCORPORATED

ARI Project: VE22

AR1098-48

Laboratory: Aquatic Research, Inc
Lab Contact: Steve Lazoff
Lab Address: 3927 Aurora Ave N.
Seattle, WA 98103
Phone: 206-632-2715
Fax: 206-632-2417

ARI Client: Landau Associates
Project ID: Cornwall
ARI PM: Kelly Bottem
Phone: 206-695-6211
Fax: 206-695-6201
Email: subdata@arilabs.com

Analytical Protocol: In-house
Special Instructions:

Requested Turn Around:
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 sucessors, 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
12-14520-VE22A	MW-15D-073012	07/30/12 10:50	Water	1	Tannins & Lignins
Special Instructions: None					
12-14521-VE22B	MW-16S-073012	07/30/12 12:15	Water	1	Tannins & Lignins
Special Instructions: None					
12-14522-VE22C	MW-15S-073012	07/30/12 12:20	Water	1	Tannins & Lignins
Special Instructions: None					
12-14523-VE22D	MW-14S-073012	07/30/12 13:50	Water	1	Tannins & Lignins
Special Instructions: None					
12-14524-VE22E	MW-13S-073012	07/30/12 15:05	Water	1	Tannins & Lignins
Special Instructions: None					
12-14525-VE22F	MW-14D-073012	07/30/12 15:40	Water	1	Tannins & Lignins
Special Instructions: None					
12-14526-VE22G	MW-13D-073012	07/30/12 16:25	Water	1	Tannins & Lignins
Special Instructions: None					

Carrier		Airbill		Date	
Relinquished by		Company AR1		Date 8/2/12	Time 1051
Received by		Company ARI		Date 8/2/12	Time 1051

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 07/31/12

ANALYTICAL RESOURCES INCORPORATED

ARI Project: VE22
AR1098-45

Laboratory: Aquatic Research, Inc
Lab Contact: Steve Lazoff

ARI Client: Landau Associates
Project ID: 0001020.400.510

ARI Sample ID	Client Sample ID/ Add'l Sample ID	Sampled	Matrix	Bottles	Analyses
12-14527-VE22H	MW-DUP-073012	07/30/12	Water	1	Tannins & Lignins

Special Instructions: None

Carrier		Airbill		Date	
Relinquished by	Company ARI		Date 8/2/12	Time 1051	
Received by	Company ARI		Date 8/2/12	Time 1051	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15D-073012**
 SAMPLE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 16:02

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**0.64**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.36**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15D-073012**
 SAMPLE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Date Analyzed: 08/07/12 16:02

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.41**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.83**	
99-87-6	**4-Isopropyltoluene**	**0.20**	**1.4**	
104-51-8	**n-Butylbenzene**	**0.20**	**0.26**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	97.2%
Bromofluorobenzene	97.4%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-16S-073012**
 SAMPLE

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 16:24

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-16S-073012**
 SAMPLE

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Date Analyzed: 08/06/12 16:24

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	97.9%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15S-073012**
 SAMPLE

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 16:51

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	**Benzene**	**0.20**	**0.51**	
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**10**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.28**	
95-50-1	**1,2-Dichlorobenzene**	**0.20**	**0.32**	
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**3.2**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-15S-073012**
 SAMPLE

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Date Analyzed: 08/06/12 16:51

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	**1,2,4-Trimethylbenzene**	**0.20**	**0.26**	
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.69**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	**tert-Butylbenzene**	**0.20**	**0.22**	
135-98-8	**sec-Butylbenzene**	**0.20**	**1.1**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.50**	**B**
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**7.6**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	99.0%
Bromofluorobenzene	104%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14S-073012**
Page 1 of 2 **SAMPLE**

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 17:17

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	**Benzene**	**0.20**	**0.22**	
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**4.2**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.23**	
95-50-1	**1,2-Dichlorobenzene**	**0.20**	**0.24**	
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**1.9**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14S-073012**
 SAMPLE

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Date Analyzed: 08/06/12 17:17

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.23**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	**tert-Butylbenzene**	**0.20**	**0.22**	
135-98-8	**sec-Butylbenzene**	**0.20**	**0.96**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.38**	**B**
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.4%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-13S-073012**
 SAMPLE

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 17:44

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**1.6**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.25**	
95-50-1	**1,2-Dichlorobenzene**	**0.20**	**0.20**	
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.73**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-13S-073012**
 SAMPLE

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Date Analyzed: 08/06/12 17:44

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.35**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.25**	**B**
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**0.50**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.5%
d8-Toluene	98.3%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	104%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14D-073012**
 SAMPLE

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 18:10

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**3.6**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	**m,p-Xylene**	**0.40**	**1.1**	
95-47-6	**o-Xylene**	**0.20**	**0.50**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.38**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-14D-073012**
 SAMPLE

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Date Analyzed: 08/06/12 18:10

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.42**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	98.9%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-13D-073012**
 SAMPLE

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 18:37

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	**Toluene**	**0.20**	**0.20**	
108-90-7	**Chlorobenzene**	**0.20**	**0.30**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.31**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.24**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-13D-073012**
 SAMPLE

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Date Analyzed: 08/06/12 18:37

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**0.40**	
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.66**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.33**	**B**
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**0.66**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.8%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-DUP-073012**
 SAMPLE

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 19:03

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	**Chlorobenzene**	**0.20**	**3.4**	
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	**m,p-Xylene**	**0.40**	**1.1**	
95-47-6	**o-Xylene**	**0.20**	**0.52**	
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	**1,4-Dichlorobenzene**	**0.20**	**0.38**	

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MW-DUP-073012**
 SAMPLE

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Date Analyzed: 08/06/12 19:03

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.46**	
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	100%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
 SAMPLE

Lab Sample ID: VE22I
LIMS ID: 12-14528
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 19:30

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
 SAMPLE

Lab Sample ID: VE22I
LIMS ID: 12-14528
Matrix: Water
Date Analyzed: 08/06/12 19:30

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	99.5%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	105%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-080712A**
 METHOD BLANK

Lab Sample ID: MB-080712A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/07/12 11:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-080712A**
 METHOD BLANK

Lab Sample ID: MB-080712A
LIMS ID: 12-14520
Matrix: Water
Date Analyzed: 08/07/12 11:56

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.7%
d8-Toluene	96.7%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-080612A**
 METHOD BLANK

Lab Sample ID: MB-080612A
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT2/PKC
Date Analyzed: 08/06/12 10:53

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-080612A**
 METHOD BLANK

Lab Sample ID: MB-080612A QC Report No: VE22-Landau Associates
LIMS ID: 12-14521 Project: Cornwall
Matrix: Water 0001020.400.510
Date Analyzed: 08/06/12 10:53

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	**Hexachlorobutadiene**	**0.50**	**0.45**	**J**
106-93-4	Ethylene Dibromide	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	**n-Butylbenzene**	**0.20**	**0.16**	**J**
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.7%
d8-Toluene	98.9%
Bromofluorobenzene	98.4%
d4-1,2-Dichlorobenzene	101%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-080712A	Method Blank	10	98.7%	96.7%	97.7%	100%	0
LCS-080712A	Lab Control	10	99.9%	99.2%	98.6%	99.9%	0
LCSD-080712A	Lab Control Dup	10	101%	99.8%	99.0%	102%	0
VE22A	MW-15D-073012	10	99.2%	97.2%	97.4%	101%	0
MB-080612A	Method Blank	10	99.7%	98.9%	98.4%	101%	0
LCS-080612A	Lab Control	10	99.0%	99.6%	99.9%	100%	0
LCSD-080612A	Lab Control Dup	10	100%	100%	100%	101%	0
VE22B	MW-16S-073012	10	99.2%	97.9%	100%	102%	0
VE22C	MW-15S-073012	10	100%	99.0%	104%	100%	0
VE22D	MW-14S-073012	10	101%	98.4%	102%	105%	0
VE22E	MW-13S-073012	10	99.5%	98.3%	103%	104%	0
VE22F	MW-14D-073012	10	100%	98.9%	103%	102%	0
VE22G	MW-13D-073012	10	101%	98.8%	103%	105%	0
VE22H	MW-DUP-073012	10	101%	100%	101%	102%	0
VE22I	Trip Blanks	10	101%	99.5%	102%	105%	0

SW8260C	LCS/MB LIMITS	QC LIMITS
(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: 12-14520 to 12-14528

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-080712A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-080712A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT2/PKC
LCSD: NT2/PKC
Date Analyzed LCS: 08/07/12 10:25
LCSD: 08/07/12 10:52

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	8.72	10.0	87.2%	8.42	10.0	84.2%	3.5%
Bromomethane	8.94	10.0	89.4%	8.87	10.0	88.7%	0.8%
Vinyl Chloride	8.94	10.0	89.4%	8.67	10.0	86.7%	3.1%
Chloroethane	9.00	10.0	90.0%	8.75	10.0	87.5%	2.8%
Methylene Chloride	8.84	10.0	88.4%	8.50	10.0	85.0%	3.9%
Acetone	45.5	50.0	91.0%	45.6	50.0	91.2%	0.2%
Carbon Disulfide	9.30	10.0	93.0%	8.96	10.0	89.6%	3.7%
1,1-Dichloroethene	9.33	10.0	93.3%	9.12	10.0	91.2%	2.3%
1,1-Dichloroethane	9.29	10.0	92.9%	8.95	10.0	89.5%	3.7%
trans-1,2-Dichloroethene	8.73	10.0	87.3%	8.56	10.0	85.6%	2.0%
cis-1,2-Dichloroethene	8.99	10.0	89.9%	8.73	10.0	87.3%	2.9%
Chloroform	9.43	10.0	94.3%	9.11	10.0	91.1%	3.5%
1,2-Dichloroethane	9.63	10.0	96.3%	9.54	10.0	95.4%	0.9%
2-Butanone	45.3	50.0	90.6%	44.7	50.0	89.4%	1.3%
1,1,1-Trichloroethane	9.65	10.0	96.5%	9.25	10.0	92.5%	4.2%
Carbon Tetrachloride	9.88	10.0	98.8%	9.75	10.0	97.5%	1.3%
Vinyl Acetate	8.80	10.0	88.0%	8.56	10.0	85.6%	2.8%
Bromodichloromethane	9.79	10.0	97.9%	9.54	10.0	95.4%	2.6%
1,2-Dichloropropane	9.24	10.0	92.4%	9.14	10.0	91.4%	1.1%
cis-1,3-Dichloropropene	9.61	10.0	96.1%	9.35	10.0	93.5%	2.7%
Trichloroethene	9.58	10.0	95.8%	9.43	10.0	94.3%	1.6%
Dibromochloromethane	10.3	10.0	103%	9.84	10.0	98.4%	4.6%
1,1,2-Trichloroethane	9.59	10.0	95.9%	9.35	10.0	93.5%	2.5%
Benzene	9.31	10.0	93.1%	9.20	10.0	92.0%	1.2%
trans-1,3-Dichloropropene	9.74	10.0	97.4%	9.52	10.0	95.2%	2.3%
2-Chloroethylvinylether	9.04	10.0	90.4%	8.77	10.0	87.7%	3.0%
Bromoform	10.4	10.0	104%	9.85	10.0	98.5%	5.4%
4-Methyl-2-Pentanone (MIBK)	46.5	50.0	93.0%	45.8	50.0	91.6%	1.5%
2-Hexanone	47.9	50.0	95.8%	46.1	50.0	92.2%	3.8%
Tetrachloroethene	10.0	10.0	100%	9.56	10.0	95.6%	4.5%
1,1,2,2-Tetrachloroethane	9.47	10.0	94.7%	9.28	10.0	92.8%	2.0%
Toluene	9.57	10.0	95.7%	9.36	10.0	93.6%	2.2%
Chlorobenzene	10.1	10.0	101%	9.72	10.0	97.2%	3.8%
Ethylbenzene	9.91	10.0	99.1%	9.56	10.0	95.6%	3.6%
Styrene	10.0	10.0	100%	9.42	10.0	94.2%	6.0%
Trichlorofluoromethane	9.90	10.0	99.0%	9.50	10.0	95.0%	4.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.56	10.0	95.6%	9.14	10.0	91.4%	4.5%
m,p-Xylene	20.3	20.0	102%	19.6	20.0	98.0%	3.5%
o-Xylene	10.1	10.0	101%	9.86	10.0	98.6%	2.4%
1,2-Dichlorobenzene	9.91	10.0	99.1%	9.90	10.0	99.0%	0.1%
1,3-Dichlorobenzene	9.91	10.0	99.1%	9.74	10.0	97.4%	1.7%
1,4-Dichlorobenzene	9.96	10.0	99.6%	9.71	10.0	97.1%	2.5%
Acrolein	42.0 Q	50.0	84.0%	41.4 Q	50.0	82.8%	1.4%
Methyl Iodide	9.58	10.0	95.8%	9.23	10.0	92.3%	3.7%
Bromoethane	9.56	10.0	95.6%	9.20	10.0	92.0%	3.8%
Acrylonitrile	8.43	10.0	84.3%	8.34	10.0	83.4%	1.1%
1,1-Dichloropropene	9.48	10.0	94.8%	9.31	10.0	93.1%	1.8%
Dibromomethane	9.72	10.0	97.2%	9.65	10.0	96.5%	0.7%

Lab Sample ID: LCS-080712A QC Report No: VE22-Landau Associates
LIMS ID: 12-14520 Project: Cornwall
Matrix: Water 0001020.400.510

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,1,1,2-Tetrachloroethane	10.3	10.0	103%	10.1	10.0	101%	2.0%
1,2-Dibromo-3-chloropropane	8.63	10.0	86.3%	8.75	10.0	87.5%	1.4%
1,2,3-Trichloropropane	9.89	10.0	98.9%	9.54	10.0	95.4%	3.6%
trans-1,4-Dichloro-2-butene	9.35	10.0	93.5%	8.77	10.0	87.7%	6.4%
1,3,5-Trimethylbenzene	9.97	10.0	99.7%	9.81	10.0	98.1%	1.6%
1,2,4-Trimethylbenzene	10.0	10.0	100%	9.84	10.0	98.4%	1.6%
Hexachlorobutadiene	8.87	10.0	88.7%	9.25	10.0	92.5%	4.2%
Ethylene Dibromide	9.76	10.0	97.6%	9.46	10.0	94.6%	3.1%
Bromochloromethane	9.39	10.0	93.9%	8.96	10.0	89.6%	4.7%
2,2-Dichloropropane	9.42	10.0	94.2%	9.03	10.0	90.3%	4.2%
1,3-Dichloropropane	9.78	10.0	97.8%	9.32	10.0	93.2%	4.8%
Isopropylbenzene	9.85	10.0	98.5%	9.53	10.0	95.3%	3.3%
n-Propylbenzene	9.91	10.0	99.1%	9.61	10.0	96.1%	3.1%
Bromobenzene	9.79	10.0	97.9%	9.39	10.0	93.9%	4.2%
2-Chlorotoluene	9.88	10.0	98.8%	9.57	10.0	95.7%	3.2%
4-Chlorotoluene	9.82	10.0	98.2%	9.58	10.0	95.8%	2.5%
tert-Butylbenzene	10.2	10.0	102%	10.0	10.0	100%	2.0%
sec-Butylbenzene	9.96	10.0	99.6%	9.87	10.0	98.7%	0.9%
4-Isopropyltoluene	9.95	10.0	99.5%	9.92	10.0	99.2%	0.3%
n-Butylbenzene	9.49	10.0	94.9%	9.41	10.0	94.1%	0.8%
1,2,4-Trichlorobenzene	8.82	10.0	88.2%	9.25	10.0	92.5%	4.8%
Naphthalene	8.53	10.0	85.3%	8.95	10.0	89.5%	4.8%
1,2,3-Trichlorobenzene	8.28	10.0	82.8%	8.90	10.0	89.0%	7.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	99.9%	101%
d8-Toluene	99.2%	99.8%
Bromofluorobenzene	98.6%	99.0%
d4-1,2-Dichlorobenzene	99.9%	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-080612A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-080612A
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized: MW
Reported: 08/10/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT2/PKC
LCSD: NT2/PKC
Date Analyzed LCS: 08/06/12 09:59
LCSD: 08/06/12 10:26

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	9.61	10.0	96.1%	9.55	10.0	95.5%	0.6%
Bromomethane	9.38	10.0	93.8%	9.27	10.0	92.7%	1.2%
Vinyl Chloride	9.60	10.0	96.0%	9.70	10.0	97.0%	1.0%
Chloroethane	9.67	10.0	96.7%	9.70	10.0	97.0%	0.3%
Methylene Chloride	9.33	10.0	93.3%	9.43	10.0	94.3%	1.1%
Acetone	51.4	50.0	103%	50.6	50.0	101%	1.6%
Carbon Disulfide	9.83	10.0	98.3%	9.93	10.0	99.3%	1.0%
1,1-Dichloroethene	9.87	10.0	98.7%	9.99	10.0	99.9%	1.2%
1,1-Dichloroethane	9.91	10.0	99.1%	9.90	10.0	99.0%	0.1%
trans-1,2-Dichloroethene	9.20	10.0	92.0%	9.31	10.0	93.1%	1.2%
cis-1,2-Dichloroethene	9.42	10.0	94.2%	9.51	10.0	95.1%	1.0%
Chloroform	9.84	10.0	98.4%	9.93	10.0	99.3%	0.9%
1,2-Dichloroethane	10.1	10.0	101%	10.1	10.0	101%	0.0%
2-Butanone	52.7	50.0	105%	51.9	50.0	104%	1.5%
1,1,1-Trichloroethane	9.73	10.0	97.3%	9.87	10.0	98.7%	1.4%
Carbon Tetrachloride	10.2	10.0	102%	10.2	10.0	102%	0.0%
Vinyl Acetate	10.0	10.0	100%	9.99	10.0	99.9%	0.1%
Bromodichloromethane	10.3	10.0	103%	10.4	10.0	104%	1.0%
1,2-Dichloropropane	9.81	10.0	98.1%	9.91	10.0	99.1%	1.0%
cis-1,3-Dichloropropene	10.3	10.0	103%	10.2	10.0	102%	1.0%
Trichloroethene	9.98	10.0	99.8%	9.93	10.0	99.3%	0.5%
Dibromochloromethane	10.7	10.0	107%	10.7	10.0	107%	0.0%
1,1,2-Trichloroethane	10.2	10.0	102%	10.2	10.0	102%	0.0%
Benzene	9.74	10.0	97.4%	9.84	10.0	98.4%	1.0%
trans-1,3-Dichloropropene	10.4	10.0	104%	10.5	10.0	105%	1.0%
2-Chloroethylvinylether	10.3	10.0	103%	10.2	10.0	102%	1.0%
Bromoform	11.0	10.0	110%	11.1	10.0	111%	0.9%
4-Methyl-2-Pentanone (MIBK)	51.0	50.0	102%	51.5	50.0	103%	1.0%
2-Hexanone	51.3	50.0	103%	51.0	50.0	102%	0.6%
Tetrachloroethene	9.98	10.0	99.8%	9.99	10.0	99.9%	0.1%
1,1,2,2-Tetrachloroethane	9.86	10.0	98.6%	9.81	10.0	98.1%	0.5%
Toluene	10.1	10.0	101%	10.0	10.0	100%	1.0%
Chlorobenzene	10.0	10.0	100%	10.1	10.0	101%	1.0%
Ethylbenzene	9.94	10.0	99.4%	9.88	10.0	98.8%	0.6%
Styrene	10.1	10.0	101%	9.97	10.0	99.7%	1.3%
Trichlorofluoromethane	10.1	10.0	101%	10.1	10.0	101%	0.0%
1,1,2-Trichloro-1,2,2-trifluoroetha	10.0	10.0	100%	10.1	10.0	101%	1.0%
m,p-Xylene	20.3	20.0	102%	20.2	20.0	101%	0.5%
o-Xylene	10.1	10.0	101%	10.0	10.0	100%	1.0%
1,2-Dichlorobenzene	9.89	10.0	98.9%	9.78	10.0	97.8%	1.1%
1,3-Dichlorobenzene	9.73	10.0	97.3%	9.82	10.0	98.2%	0.9%
1,4-Dichlorobenzene	9.79	10.0	97.9%	9.79	10.0	97.9%	0.0%
Acrolein	49.0	50.0	98.0%	48.1	50.0	96.2%	1.9%
Methyl Iodide	9.96	10.0	99.6%	10.0	10.0	100%	0.4%
Bromoethane	9.82	10.0	98.2%	9.81	10.0	98.1%	0.1%
Acrylonitrile	9.73	10.0	97.3%	9.42	10.0	94.2%	3.2%
1,1-Dichloropropene	9.82	10.0	98.2%	9.93	10.0	99.3%	1.1%
Dibromomethane	10.2	10.0	102%	10.3	10.0	103%	1.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-080612A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-080612A QC Report No: VE22-Landau Associates
LIMS ID: 12-14521 Project: Cornwall
Matrix: Water 0001020.400.510

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,1,1,2-Tetrachloroethane	10.4	10.0	104%	10.3	10.0	103%	1.0%
1,2-Dibromo-3-chloropropane	9.84	10.0	98.4%	9.18	10.0	91.8%	6.9%
1,2,3-Trichloropropane	10.0	10.0	100%	10.0	10.0	100%	0.0%
trans-1,4-Dichloro-2-butene	10.1	10.0	101%	9.71	10.0	97.1%	3.9%
1,3,5-Trimethylbenzene	9.97	10.0	99.7%	10.0	10.0	100%	0.3%
1,2,4-Trimethylbenzene	9.87	10.0	98.7%	9.86	10.0	98.6%	0.1%
Hexachlorobutadiene	9.67 B	10.0	96.7%	9.51 B	10.0	95.1%	1.7%
Ethylene Dibromide	10.2	10.0	102%	10.2	10.0	102%	0.0%
Bromochloromethane	10.0	10.0	100%	9.97	10.0	99.7%	0.3%
2,2-Dichloropropane	9.34	10.0	93.4%	9.40	10.0	94.0%	0.6%
1,3-Dichloropropane	10.1	10.0	101%	10.1	10.0	101%	0.0%
Isopropylbenzene	9.77	10.0	97.7%	9.93	10.0	99.3%	1.6%
n-Propylbenzene	9.88	10.0	98.8%	9.99	10.0	99.9%	1.1%
Bromobenzene	9.75	10.0	97.5%	9.89	10.0	98.9%	1.4%
2-Chlorotoluene	9.71	10.0	97.1%	9.81	10.0	98.1%	1.0%
4-Chlorotoluene	9.79	10.0	97.9%	9.88	10.0	98.8%	0.9%
tert-Butylbenzene	10.1	10.0	101%	10.1	10.0	101%	0.0%
sec-Butylbenzene	9.95	10.0	99.5%	9.93	10.0	99.3%	0.2%
4-Isopropyltoluene	9.92	10.0	99.2%	9.95	10.0	99.5%	0.3%
n-Butylbenzene	9.58 B	10.0	95.8%	9.47 B	10.0	94.7%	1.2%
1,2,4-Trichlorobenzene	9.61	10.0	96.1%	9.52	10.0	95.2%	0.9%
Naphthalene	9.74	10.0	97.4%	9.37	10.0	93.7%	3.9%
1,2,3-Trichlorobenzene	9.69	10.0	96.9%	9.45	10.0	94.5%	2.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	99.0%	100%
d8-Toluene	99.6%	100%
Bromofluorobenzene	99.9%	100%
d4-1,2-Dichlorobenzene	100%	101%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-15D-073012
SAMPLE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/03/12 21:25
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-15D-073012
SAMPLE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Date Analyzed: 08/03/12 21:25

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**2.5**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	53.2%
d14-p-Terphenyl	56.4%	d4-1,2-Dichlorobenzene	36.9%
d5-Phenol	62.7%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	81.6%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-16S-073012
SAMPLE

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/03/12 21:59
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-16S-073012
SAMPLE

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Date Analyzed: 08/03/12 21:59

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**2.4**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	54.4%
d14-p-Terphenyl	65.6%	d4-1,2-Dichlorobenzene	38.4%
d5-Phenol	64.0%	2-Fluorophenol	60.3%
2,4,6-Tribromophenol	85.6%	d4-2-Chlorophenol	64.0%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-15S-073012
SAMPLE

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/03/12 22:33
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**	**1.4**
100-51-6	Benzyl Alcohol	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	**Naphthalene**	**1.0**	**3.4**
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	**2-Methylnaphthalene**	**1.0**	**2.5**
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	**Acenaphthene**	**1.0**	**1.2**
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-15S-073012
SAMPLE

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Date Analyzed: 08/03/12 22:33

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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**	**1.1**
100-01-6	4-Nitroaniline	5.0	< 5.0 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	5.0	< 5.0 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**	**3.0**
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**	**2.8**
TOTBFA	Total Benzofluoranthenes	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	56.4%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	40.8%
d5-Phenol	66.4%	2-Fluorophenol	61.9%
2,4,6-Tribromophenol	86.9%	d4-2-Chlorophenol	65.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-14S-073012
SAMPLE

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/03/12 23:07
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-14S-073012
SAMPLE

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Date Analyzed: 08/03/12 23:07

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**2.2**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	53.2%
d14-p-Terphenyl	59.6%	d4-1,2-Dichlorobenzene	39.8%
d5-Phenol	61.1%	2-Fluorophenol	58.1%
2,4,6-Tribromophenol	80.3%	d4-2-Chlorophenol	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C
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Sample ID: MW-13S-073012
SAMPLE

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/06/12 13:04
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-13S-073012
SAMPLE

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Date Analyzed: 08/06/12 13:04

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**2.5**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	54.4%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	41.2%
d5-Phenol	62.7%	2-Fluorophenol	59.7%
2,4,6-Tribromophenol	82.1%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-14D-073012
SAMPLE

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/06/12 13:38
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-14D-073012
SAMPLE

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Date Analyzed: 08/06/12 13:38

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**2.2**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	77.6%	d4-1,2-Dichlorobenzene	44.0%
d5-Phenol	70.4%	2-Fluorophenol	66.9%
2,4,6-Tribromophenol	92.8%	d4-2-Chlorophenol	71.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-13D-073012
SAMPLE

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/06/12 14:13
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-13D-073012
SAMPLE

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Date Analyzed: 08/06/12 14:13

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**2.1**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	60.8%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	44.8%
d5-Phenol	64.0%	2-Fluorophenol	60.3%
2,4,6-Tribromophenol	86.1%	d4-2-Chlorophenol	64.3%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-DUP-073012
SAMPLE

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/06/12 14:47
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MW-DUP-073012
SAMPLE

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Date Analyzed: 08/06/12 14:47

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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**	**1.9**
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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.0%	2-Fluorobiphenyl	47.6%
d14-p-Terphenyl	56.0%	d4-1,2-Dichlorobenzene	36.3%
d5-Phenol	54.4%	2-Fluorophenol	53.3%
2,4,6-Tribromophenol	68.5%	d4-2-Chlorophenol	56.5%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-080212
METHOD BLANK

Lab Sample ID: MB-080212
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Date Extracted: 08/02/12
Date Analyzed: 08/03/12 19:43
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	5.0	< 5.0 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	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 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	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 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	5.0	< 5.0 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	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-080212
METHOD BLANK

Lab Sample ID: MB-080212
LIMS ID: 12-14520
Matrix: Water
Date Analyzed: 08/03/12 19:43

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

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	5.0	< 5.0 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	5.0	< 5.0 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	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	60.0%
d14-p-Terphenyl	80.4%	d4-1,2-Dichlorobenzene	46.4%
d5-Phenol	69.6%	2-Fluorophenol	67.2%
2,4,6-Tribromophenol	81.1%	d4-2-Chlorophenol	70.4%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-080212	66.4%	60.0%	80.4%	46.4%	69.6%	67.2%	81.1%	70.4%	0
LCS-080212	62.4%	60.8%	77.2%	48.0%	64.8%	61.3%	86.9%	64.3%	0
LCSD-080212	61.2%	60.4%	76.0%	45.6%	63.5%	59.7%	87.7%	63.7%	0
MW-15D-073012	58.4%	53.2%	56.4%	36.9%	62.7%	58.9%	81.6%	62.9%	0
MW-16S-073012	61.6%	54.4%	65.6%	38.4%	64.0%	60.3%	85.6%	64.0%	0
MW-15S-073012	62.0%	56.4%	73.6%	40.8%	66.4%	61.9%	86.9%	65.6%	0
MW-14S-073012	58.8%	53.2%	59.6%	39.8%	61.1%	58.1%	80.3%	61.3%	0
MW-13S-073012	59.2%	54.4%	69.2%	41.2%	62.7%	59.7%	82.1%	62.9%	0
MW-14D-073012	67.2%	61.6%	77.6%	44.0%	70.4%	66.9%	92.8%	71.2%	0
MW-13D-073012	62.4%	60.8%	75.2%	44.8%	64.0%	60.3%	86.1%	64.3%	0
MW-DUP-073012	54.0%	47.6%	56.0%	36.3%	54.4%	53.3%	68.5%	56.5%	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: 12-14520 to 12-14527

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-080212
LCS/LCSD

Lab Sample ID: LCS-080212
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/06/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted LCS/LCSD: 08/02/12

Date Analyzed LCS: 08/03/12 20:17
LCSD: 08/03/12 20:51
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

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
Phenol	17.1	25.0	68.4%	17.4	25.0	69.6%	1.7%
Bis-(2-Chloroethyl) Ether	16.1	25.0	64.4%	16.4	25.0	65.6%	1.8%
2-Chlorophenol	17.1	25.0	68.4%	17.3	25.0	69.2%	1.2%
1,3-Dichlorobenzene	9.9	25.0	39.6%	9.6	25.0	38.4%	3.1%
1,4-Dichlorobenzene	10.4	25.0	41.6%	10.0	25.0	40.0%	3.9%
Benzyl Alcohol	14.1	25.0	56.4%	14.6	25.0	58.4%	3.5%
1,2-Dichlorobenzene	10.9	25.0	43.6%	10.6	25.0	42.4%	2.8%
2-Methylphenol	16.8	25.0	67.2%	17.3	25.0	69.2%	2.9%
2,2'-Oxybis(1-Chloropropane)	15.5	25.0	62.0%	15.6	25.0	62.4%	0.6%
4-Methylphenol	33.2	50.0	66.4%	34.7	50.0	69.4%	4.4%
N-Nitroso-Di-N-Propylamine	16.0	25.0	64.0%	16.7	25.0	66.8%	4.3%
Hexachloroethane	8.9	25.0	35.6%	8.5	25.0	34.0%	4.6%
Nitrobenzene	16.0	25.0	64.0%	16.5	25.0	66.0%	3.1%
Isophorone	18.4	25.0	73.6%	19.4	25.0	77.6%	5.3%
2-Nitrophenol	18.2	25.0	72.8%	19.0	25.0	76.0%	4.3%
2,4-Dimethylphenol	44.5	75.0	59.3%	48.2	75.0	64.3%	8.0%
Benzoic Acid	112	138	81.2%	115	138	83.3%	2.6%
bis(2-Chloroethoxy) Methane	16.1	25.0	64.4%	16.7	25.0	66.8%	3.7%
2,4-Dichlorophenol	49.4	75.0	65.9%	51.9	75.0	69.2%	4.9%
1,2,4-Trichlorobenzene	11.2	25.0	44.8%	11.1	25.0	44.4%	0.9%
Naphthalene	12.6	25.0	50.4%	12.7	25.0	50.8%	0.8%
4-Chloroaniline	36.8	75.0	49.1%	40.0	75.0	53.3%	8.3%
Hexachlorobutadiene	9.7	25.0	38.8%	9.6	25.0	38.4%	1.0%
4-Chloro-3-methylphenol	52.5	75.0	70.0%	54.8	75.0	73.1%	4.3%
2-Methylnaphthalene	12.1	25.0	48.4%	12.3	25.0	49.2%	1.6%
Hexachlorocyclopentadiene	23.5	75.0	31.3%	27.8	75.0	37.1%	16.8%
2,4,6-Trichlorophenol	54.8	75.0	73.1%	58.1	75.0	77.5%	5.8%
2,4,5-Trichlorophenol	54.6	75.0	72.8%	58.1	75.0	77.5%	6.2%
2-Chloronaphthalene	15.3	25.0	61.2%	15.7	25.0	62.8%	2.6%
2-Nitroaniline	41.6	75.0	55.5%	44.3	75.0	59.1%	6.3%
Dimethylphthalate	18.7	25.0	74.8%	19.6	25.0	78.4%	4.7%
Acenaphthylene	15.3	25.0	61.2%	15.9	25.0	63.6%	3.8%
3-Nitroaniline	46.8	75.0	62.4%	50.6	75.0	67.5%	7.8%
Acenaphthene	14.9	25.0	59.6%	15.6	25.0	62.4%	4.6%
2,4-Dinitrophenol	137 Q	138	99.3%	139 Q	138	101%	1.4%
4-Nitrophenol	66.4	75.0	88.5%	70.0	75.0	93.3%	5.3%
Dibenzofuran	14.1	25.0	56.4%	14.7	25.0	58.8%	4.2%
2,6-Dinitrotoluene	55.7	75.0	74.3%	58.8	75.0	78.4%	5.4%
2,4-Dinitrotoluene	57.1	75.0	76.1%	60.2	75.0	80.3%	5.3%
Diethylphthalate	19.0	25.0	76.0%	19.8	25.0	79.2%	4.1%
4-Chlorophenyl-phenylether	17.2	25.0	68.8%	17.8	25.0	71.2%	3.4%
Fluorene	16.3	25.0	65.2%	16.8	25.0	67.2%	3.0%
4-Nitroaniline	48.5	75.0	64.7%	52.5	75.0	70.0%	7.9%
4,6-Dinitro-2-Methylphenol	122	138	88.4%	126	138	91.3%	3.2%
N-Nitrosodiphenylamine	16.7	25.0	66.8%	17.6	25.0	70.4%	5.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-080212
LCS/LCSD

Lab Sample ID: LCS-080212
LIMS ID: 12-14520
Matrix: Water
Date Analyzed LCS: 08/03/12 20:17
LCSD: 08/03/12 20:51

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	17.8	25.0	71.2%	18.3	25.0	73.2%	2.8%
Hexachlorobenzene	17.3	25.0	69.2%	17.7	25.0	70.8%	2.3%
Pentachlorophenol	68.9 Q	75.0	91.9%	72.4 Q	75.0	96.5%	5.0%
Phenanthrene	17.0	25.0	68.0%	17.3	25.0	69.2%	1.7%
Carbazole	18.9	25.0	75.6%	19.6	25.0	78.4%	3.6%
Anthracene	15.2	25.0	60.8%	15.9	25.0	63.6%	4.5%
Di-n-Butylphthalate	19.5	25.0	78.0%	20.0	25.0	80.0%	2.5%
Fluoranthene	17.0	25.0	68.0%	17.7	25.0	70.8%	4.0%
Pyrene	17.1	25.0	68.4%	17.5	25.0	70.0%	2.3%
Butylbenzylphthalate	18.8	25.0	75.2%	18.8	25.0	75.2%	0.0%
3,3'-Dichlorobenzidine	49.0	75.0	65.3%	53.3	75.0	71.1%	8.4%
Benzo(a)anthracene	17.2	25.0	68.8%	17.8	25.0	71.2%	3.4%
bis(2-Ethylhexyl)phthalate	19.4	25.0	77.6%	20.0	25.0	80.0%	3.0%
Chrysene	16.1	25.0	64.4%	16.4	25.0	65.6%	1.8%
Di-n-Octyl phthalate	18.4	25.0	73.6%	19.2	25.0	76.8%	4.3%
Benzo(a)pyrene	16.5	25.0	66.0%	17.0	25.0	68.0%	3.0%
Indeno(1,2,3-cd)pyrene	15.9	25.0	63.6%	16.3	25.0	65.2%	2.5%
Dibenz(a,h)anthracene	15.1	25.0	60.4%	15.5	25.0	62.0%	2.6%
Benzo(g,h,i)perylene	14.5	25.0	58.0%	14.8	25.0	59.2%	2.0%
1-Methylnaphthalene	17.7	25.0	70.8%	17.8	25.0	71.2%	0.6%
Total Benzofluoranthenes	32.8	50.0	65.6%	34.2	50.0	68.4%	4.2%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	62.4%	61.2%
2-Fluorobiphenyl	60.8%	60.4%
d14-p-Terphenyl	77.2%	76.0%
d4-1,2-Dichlorobenzene	48.0%	45.6%
d5-Phenol	64.8%	63.5%
2-Fluorophenol	61.3%	59.7%
2,4,6-Tribromophenol	86.9%	87.7%
d4-2-Chlorophenol	64.3%	63.7%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-15D-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 12:40
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**	**0.17**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.21**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.40**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.10**
86-73-7	**Fluorene**	**0.010**	**0.10**
85-01-8	**Phenanthrene**	**0.010**	**0.11**
120-12-7	**Anthracene**	**0.010**	**0.011**
206-44-0	**Fluoranthene**	**0.010**	**0.017**
129-00-0	**Pyrene**	**0.010**	**0.015**
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**	**0.016**
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	68.0%
d14-Dibenzo(a,h)anthracene	66.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-16S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized: YNW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 13:08
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**	**0.14**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.016**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.049**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.19**
86-73-7	**Fluorene**	**0.010**	**0.070**
85-01-8	**Phenanthrene**	**0.010**	**0.017**
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	71.0%
d14-Dibenzo(a,h)anthracene	73.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-15S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 13:37
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**	**3.7 E**
91-57-6	**2-Methylnaphthalene**	**0.010**	**3.1 E**
90-12-0	**1-Methylnaphthalene**	**0.010**	**2.4 E**
208-96-8	**Acenaphthylene**	**0.010**	**0.038**
83-32-9	**Acenaphthene**	**0.010**	**1.4 E**
86-73-7	**Fluorene**	**0.010**	**1.3 E**
85-01-8	**Phenanthrene**	**0.010**	**1.4 E**
120-12-7	**Anthracene**	**0.010**	**0.14**
206-44-0	**Fluoranthene**	**0.010**	**0.18**
129-00-0	**Pyrene**	**0.010**	**0.11**
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**	**0.54**
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	71.7%
d14-Dibenzo(a,h)anthracene	69.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-15S-073012**
Extraction Method: SW3510C **DILUTION**

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 16:58
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**	**3.9**
91-57-6	**2-Methylnaphthalene**	**0.10**	**3.3**
90-12-0	**1-Methylnaphthalene**	**0.10**	**2.5**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**1.4**
86-73-7	**Fluorene**	**0.10**	**1.4**
85-01-8	**Phenanthrene**	**0.10**	**1.5**
120-12-7	**Anthracene**	**0.10**	**0.19**
206-44-0	**Fluoranthene**	**0.10**	**0.24**
129-00-0	**Pyrene**	**0.10**	**0.17**
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**	**0.58**
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.0%
d14-Dibenzo(a,h)anthracene	58.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-14S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 14:06
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**	**0.084**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.32**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.56**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.18**
86-73-7	**Fluorene**	**0.010**	**0.14**
85-01-8	**Phenanthrene**	**0.010**	**0.12**
120-12-7	Anthracene	0.010	< 0.010 U
206-44-0	**Fluoranthene**	**0.010**	**0.024**
129-00-0	**Pyrene**	**0.010**	**0.030**
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	63.3%
d14-Dibenzo(a,h)anthracene	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-13S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 14:35
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**	**0.14**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.12**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.27**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.16**
86-73-7	**Fluorene**	**0.010**	**0.12**
85-01-8	**Phenanthrene**	**0.010**	**0.11**
120-12-7	**Anthracene**	**0.010**	**0.015**
206-44-0	**Fluoranthene**	**0.010**	**0.020**
129-00-0	**Pyrene**	**0.010**	**0.018**
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	66.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-14D-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 15:04
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**	**0.12**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.13**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.21**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.18**
86-73-7	**Fluorene**	**0.010**	**0.12**
85-01-8	**Phenanthrene**	**0.010**	**0.14**
120-12-7	**Anthracene**	**0.010**	**0.014**
206-44-0	**Fluoranthene**	**0.010**	**0.026**
129-00-0	**Pyrene**	**0.010**	**0.020**
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**	**0.019**
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	65.7%
d14-Dibenzo(a,h)anthracene	59.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-13D-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 16:00
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**	**0.31**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.48**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.66**
208-96-8	**Acenaphthylene**	**0.010**	**0.011**
83-32-9	**Acenaphthene**	**0.010**	**0.091**
86-73-7	**Fluorene**	**0.010**	**0.16**
85-01-8	**Phenanthrene**	**0.010**	**0.18**
120-12-7	**Anthracene**	**0.010**	**0.018**
206-44-0	**Fluoranthene**	**0.010**	**0.028**
129-00-0	**Pyrene**	**0.010**	**0.025**
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**	**0.024**
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	71.7%
d14-Dibenzo(a,h)anthracene	69.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-DUP-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 16:29
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**	**0.12**
91-57-6	**2-Methylnaphthalene**	**0.010**	**0.13**
90-12-0	**1-Methylnaphthalene**	**0.010**	**0.22**
208-96-8	Acenaphthylene	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.010**	**0.20**
86-73-7	**Fluorene**	**0.010**	**0.14**
85-01-8	**Phenanthrene**	**0.010**	**0.16**
120-12-7	**Anthracene**	**0.010**	**0.018**
206-44-0	**Fluoranthene**	**0.010**	**0.030**
129-00-0	**Pyrene**	**0.010**	**0.024**
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**	**0.021**
TOTBFA	Total Benzofluoranthenes	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.7%
d14-Dibenzo(a,h)anthracene	69.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-080312**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-080312
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: NA
Date Received: NA

Date Extracted: 08/03/12
Date Analyzed: 08/08/12 10:44
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	62.7%
d14-Dibenzo(a,h)anthracene	65.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Client ID	MNP	DBA	TOT OUT
MB-080312	62.7%	65.7%	0
LCS-080312	70.7%	77.3%	0
LCSD-080312	63.0%	68.0%	0
MW-15D-073012	68.0%	66.7%	0
MW-16S-073012	71.0%	73.7%	0
MW-15S-073012	71.7%	69.7%	0
MW-15S-073012 DL	73.0%	58.7%	0
MW-14S-073012	63.3%	61.3%	0
MW-13S-073012	67.3%	66.0%	0
MW-14D-073012	65.7%	59.7%	0
MW-13D-073012	71.7%	69.7%	0
MW-DUP-073012	66.7%	69.0%	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: 12-14520 to 12-14527

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-080312**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-080312
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
Event: 0001020.400.510
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 08/03/12

Date Analyzed LCS: 08/08/12 11:13
LCSD: 08/08/12 11:42
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	0.200	0.300	66.7%	0.183	0.300	61.0%	8.9%
2-Methylnaphthalene	0.200	0.300	66.7%	0.181	0.300	60.3%	10.0%
1-Methylnaphthalene	0.200	0.300	66.7%	0.181	0.300	60.3%	10.0%
Acenaphthylene	0.230	0.300	76.7%	0.209	0.300	69.7%	9.6%
Acenaphthene	0.211	0.300	70.3%	0.196	0.300	65.3%	7.4%
Fluorene	0.228	0.300	76.0%	0.219	0.300	73.0%	4.0%
Phenanthrene	0.213	0.300	71.0%	0.200	0.300	66.7%	6.3%
Anthracene	0.200	0.300	66.7%	0.167	0.300	55.7%	18.0%
Fluoranthene	0.240	0.300	80.0%	0.217	0.300	72.3%	10.1%
Pyrene	0.243	0.300	81.0%	0.214	0.300	71.3%	12.7%
Benzo(a)anthracene	0.236	0.300	78.7%	0.217	0.300	72.3%	8.4%
Chrysene	0.224	0.300	74.7%	0.208	0.300	69.3%	7.4%
Benzo(a)pyrene	0.200	0.300	66.7%	0.166	0.300	55.3%	18.6%
Indeno(1,2,3-cd)pyrene	0.215	0.300	71.7%	0.194	0.300	64.7%	10.3%
Dibenz(a,h)anthracene	0.213	0.300	71.0%	0.192	0.300	64.0%	10.4%
Benzo(g,h,i)perylene	0.227	0.300	75.7%	0.206	0.300	68.7%	9.7%
Dibenzofuran	0.194	0.300	64.7%	0.182	0.300	60.7%	6.4%
Total Benzofluoranthenes	0.665	0.600	111%	0.612	0.600	102%	8.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	70.7%	63.0%
d14-Dibenzo(a,h)anthracene	77.3%	68.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-15D-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 14:02
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	59.8%
Tetrachlorometaxylene	45.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-16S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 14:19
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	66.0%
Tetrachlorometaxylene	51.0%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-15S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 14:37
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	60.2%
Tetrachlorometaxylene	52.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-14S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 14:55
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	56.0%
Tetrachlorometaxylene	49.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-13S-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Data Release Authorized: MW
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 15:13
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	60.8%
Tetrachlorometaxylene	53.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-14D-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 15:31
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	54.2%
Tetrachlorometaxylene	50.0%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-13D-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 15:48
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	57.5%
Tetrachlorometaxylene	50.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MW-DUP-073012**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 16:06
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane #	0.050	< 0.050 U
5103-71-9	cis-Chlordane $	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	59.0%
Tetrachlorometaxylene	48.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B **Sample ID: MB-080312**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-080312
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Date Extracted: 08/03/12
Date Analyzed: 08/07/12 12:50
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: Yes

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.0%
Tetrachlorometaxylene	54.5%

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Client ID	DCBP	TCMX	TOT OUT
MB-080312	72.0%	54.5%	0
LCS-080312	67.5%	54.5%	0
LCSD-080312	59.5%	52.8%	0
MW-15D-073012	59.8%	45.5%	0
MW-16S-073012	66.0%	51.0%	0
MW-15S-073012	60.2%	52.5%	0
MW-14S-073012	56.0%	49.8%	0
MW-13S-073012	60.8%	53.2%	0
MW-14D-073012	54.2%	50.0%	0
MW-13D-073012	57.5%	50.2%	0
MW-DUP-073012	59.0%	48.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(54-100)	(32-116)
(TCMX) = Tetrachlorometaxylene	(52-100)	(43-106)

Prep Method: SW3510C
Log Number Range: 12-14520 to 12-14527

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-080312**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-080312
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/09/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted LCS/LCSD: 08/03/12

Date Analyzed LCS: 08/07/12 13:08
LCSD: 08/07/12 13:26
Instrument/Analyst LCS: ECD6/AAR
LCSD: ECD6/AAR
GPC Cleanup: No
Florisil Cleanup: No

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 5.0 mL
LCSD: 5.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Sulfur Cleanup: Yes
Silica Gel: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.163	0.200	81.5%	0.162	0.200	81.0%	0.6%
beta-BHC	0.159	0.200	79.5%	0.158	0.200	79.0%	0.6%
delta-BHC	0.105	0.200	52.5%	0.0971	0.200	48.6%	7.8%
gamma-BHC (Lindane)	0.162	0.200	81.0%	0.159	0.200	79.5%	1.9%
Heptachlor	0.161	0.200	80.5%	0.158	0.200	79.0%	1.9%
Aldrin	0.136	0.200	68.0%	0.135	0.200	67.5%	0.7%
Heptachlor Epoxide	0.201	0.200	100%	0.199	0.200	99.5%	1.0%
Endosulfan I	0.205	0.200	102%	0.201	0.200	100%	2.0%
Dieldrin	0.402	0.400	100%	0.392	0.400	98.0%	2.5%
4,4'-DDE	0.394	0.400	98.5%	0.386	0.400	96.5%	2.1%
Endrin	0.359	0.400	89.8%	0.326	0.400	81.5%	9.6%
Endosulfan II	0.353	0.400	88.2%	0.322	0.400	80.5%	9.2%
4,4'-DDD	0.355	0.400	88.8%	0.325	0.400	81.2%	8.8%
Endosulfan Sulfate	0.312	0.400	78.0%	0.286	0.400	71.5%	8.7%
4,4'-DDT	0.332	0.400	83.0%	0.302	0.400	75.5%	9.5%
Methoxychlor	1.67	2.00	83.5%	1.51	2.00	75.5%	10.1%
Endrin Ketone	0.377	0.400	94.2%	0.350	0.400	87.5%	7.4%
Endrin Aldehyde	0.273	0.400	68.2%	0.265	0.400	66.2%	3.0%
trans-Chlordane	0.209	0.200	104%	0.207	0.200	104%	1.0%
cis-Chlordane	0.188	0.200	94.0%	0.191	0.200	95.5%	1.6%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	67.5%	59.5%
Tetrachlorometaxylene	54.5%	52.8%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15D-073012
SAMPLE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/15/12 11:23
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-16S-073012
SAMPLE

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/15/12 13:47
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	306%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-15S-073012
SAMPLE

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 19:46
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	95.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-14S-073012
SAMPLE

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 20:22
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	95.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13S-073012
SAMPLE

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 20:58
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	98.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-14D-073012
SAMPLE

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 21:34
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	107%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-13D-073012
SAMPLE

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 22:10
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	98.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MW-DUP-073012
SAMPLE

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 22:46
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	110%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-080212
METHOD BLANK

Lab Sample ID: MB-080212
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Date Extracted: 08/02/12
Date Analyzed: 08/08/12 16:11
Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	0.25	< 0.25 U
93-76-5	2,4,5-T	0.25	< 0.25 U
88-85-7	Dinoseb	0.50	< 0.50 U
1918-00-9	Dicamba	0.50	< 0.50 U
94-75-7	2,4-D	1.0	< 1.0 U
94-82-6	2,4-DB	5.0	< 5.0 U
75-99-0	Dalapon	1.0	< 1.0 U
94-74-6	MCPA	250	< 250 U
120-36-5	Dichloroprop	1.0	< 1.0 U

Reported in µg/L (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	104%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Client ID	DCPA	TOT OUT
MB-080212	104%	0
LCS-080212	87.8%	0
LCSD-080212	104%	0
MW-15D-073012	105%	0
MW-16S-073012	306%*	1
MW-15S-073012	95.0%	0
MW-14S-073012	95.7%	0
MW-13S-073012	98.5%	0
MW-14D-073012	107%	0
MW-13D-073012	98.8%	0
MW-DUP-073012	110%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(66-112)	(28-140)

Log Number Range: 12-14520 to 12-14527

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: LCS-080212
LCS/LCSD

Lab Sample ID: LCS-080212
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/15/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted LCS/LCSD: 08/02/12

Date Analyzed LCS: 08/15/12 10:47
LCSD: 08/08/12 17:22
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 50 mL
LCSD: 50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	7.05	10.0	70.5%	6.99	10.0	69.9%	0.9%
2,4,5-T	1.71	2.50	68.4%	1.72	2.50	68.8%	0.6%
Dinoseb	2.64	5.00	52.8%	2.55	5.00	51.0%	3.5%
Dicamba	3.88	5.00	77.6%	4.52	5.00	90.4%	15.2%
2,4-D	8.49	10.0	84.9%	8.00	10.0	80.0%	5.9%
2,4-DB	45.0	50.0	90.0%	46.8	50.0	93.6%	3.9%
Dalapon	5.79	10.0	57.9%	6.60	10.0	66.0%	13.1%
Dichloroprop	7.61	10.0	76.1%	7.43	10.0	74.3%	2.4%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	87.8%	104%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Extraction Method: SW3510C

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Matrix: Water

Data Release Authorized:
Reported: 08/03/12

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-080112	Method Blank	08/01/12	08/02/12	1.0	Gas	< 0.25 U
12-14520					Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	87.6%
VE22A	MW-15D-073012	08/01/12	08/02/12	1.0	Gas	< 0.25 U
12-14520	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	83.0%
VE22B	MW-16S-073012	08/01/12	08/02/12	1.0	Gas	< 0.25 U
12-14521	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	81.0%
VE22C	MW-15S-073012	08/01/12	08/02/12	1.0	Gas	< 0.25 U
12-14522	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	80.9%
VE22D	MW-14S-073012	08/01/12	08/02/12	1.0	Gas	< 0.25 U
12-14523	HC ID: **DRO**				**Diesel**	**> 0.50**
					Oil	< 0.50 U
					o-Terphenyl	82.9%
VE22E	MW-13S-073012	08/01/12	08/03/12	1.0	Gas	< 0.25 U
12-14524	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	75.8%
VE22F	MW-14D-073012	08/01/12	08/03/12	1.0	Gas	< 0.25 U
12-14525	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	82.6%
VE22G	MW-13D-073012	08/01/12	08/03/12	1.0	Gas	< 0.25 U
12-14526	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	81.3%
VE22H	MW-DUP-073012	08/01/12	08/03/12	1.0	Gas	< 0.25 U
12-14527	HC ID: ---				Diesel	< 0.50 U
					Oil	< 0.50 U
					o-Terphenyl	84.8%

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.

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a038.d ARI ID: VE22MBW1
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-AUG-2012 21:50
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.405	0.018	2634	7882	GAS (Tol-C12)	110130	7.32
C8	1.613	-0.051	1210	3285	DIESEL (C12-C24)	34039	2.32
C10	3.231	0.001	536	385	M.OIL (C24-C38)	65819	5.24
C12	4.120	-0.004	402	220	AK-102 (C10-C25)	62770	3.63
C14	4.803	0.000	198	185	AK-103 (C25-C36)	47434	5.56
C16	5.394	0.010	149	244			
C18	5.945	0.000	135	193			
C20	6.530	0.013	351	658	JET-A (C10-C18)	47395	3.83
C22	7.074	0.005	138	233	MIN.OIL (C24-C38)	65819	4.90
C24	7.618	0.028	110	180			
C25	7.836	-0.007	53	19			
C26	8.093	0.008	93	117			
C28	8.556	0.017	7599	6658			
C32	9.342	-0.005	557	1314			
C34	9.719	-0.001	690	1787			
Filter Peak	9.938	-0.007	697	275	BUNKERC (C10-C38)	128388	16.82
C36	10.103	0.020	868	1149			
C38	10.435	0.000	1029	1568			
C40	10.781	0.000	1521	2006			
o-terph	6.089	0.000	628537	802553			
Triacon Surr	8.964	0.000	731554	792964	NAS DIES (C10-C24)	62569	3.65

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	802553	39.4	87.5
Triacontane	792964	41.5	92.3

M Indicates the peak was manually integrated

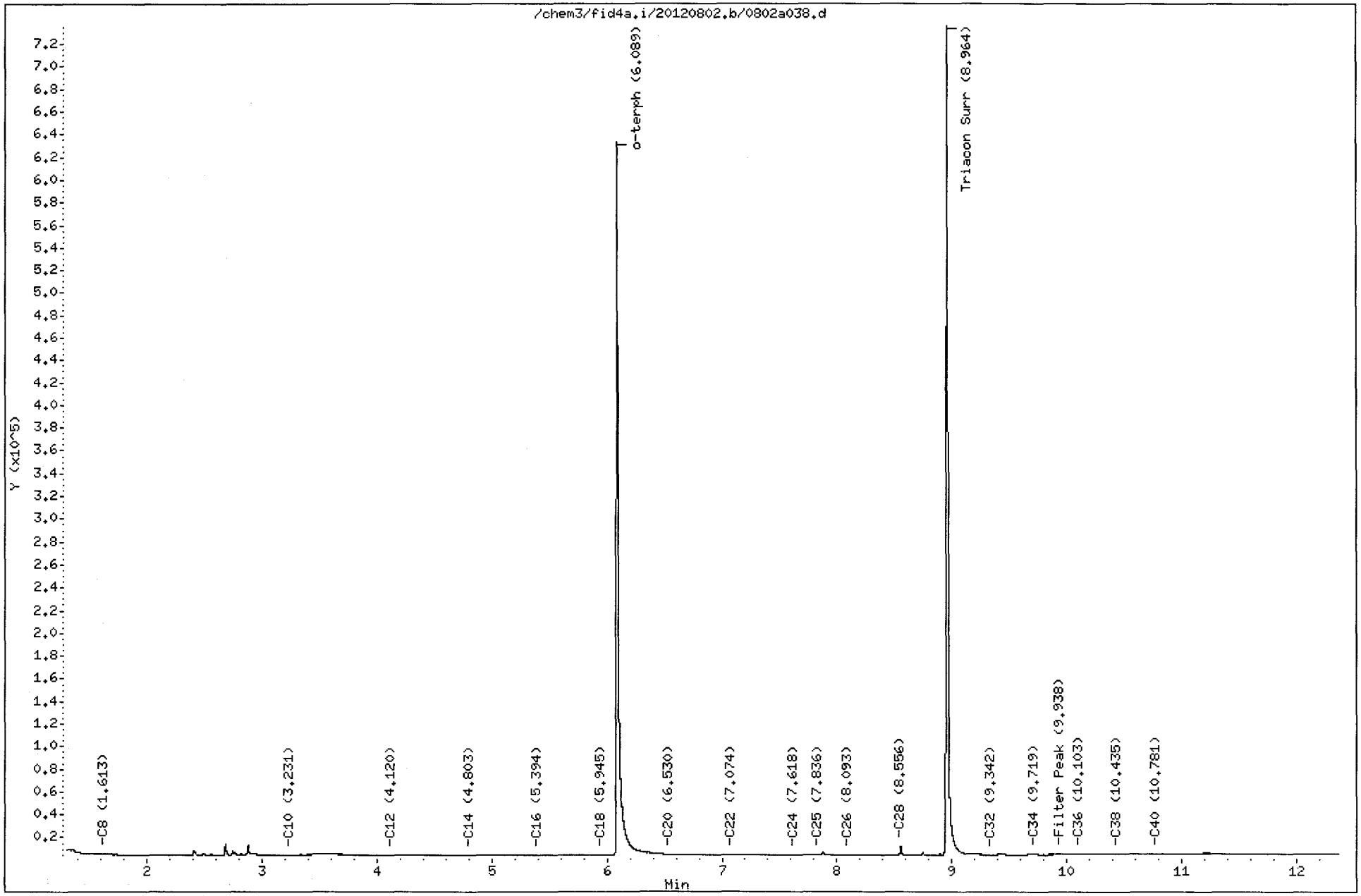
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a038.d
Date : 02-AUG-2012 21:50
Client ID:
Sample Info: VE22MBW1

Instrument: fid4a.i

Operator: AR
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a041.d ARI ID: VE22A
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-AUG-2012 22:54
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.403	0.016	3550	7028	GAS (Tol-C12)	808096	53.72	GRO
C8	1.667	0.003	954	1866	DIESEL (C12-C24)	6681177	456.05	DRO
C10	3.246	0.015	2797	4301	M.OIL (C24-C38)	1434542	114.13	RRO
C12	4.120	-0.003	21668	11496	AK-102 (C10-C25)	7519008	434.65	
C14	4.788	-0.014	65971	141479	AK-103 (C25-C36)	1193629	139.80	
C16	5.360	-0.024	56988	157424				
C18	5.931	-0.013	33220	65607				
C20	6.509	-0.008	23290	32308	JET-A (C10-C18)	5182208	419.20	
C22	7.076	0.007	20261	18509	MIN.OIL (C24-C38)	1434542	106.73	
C24	7.568	-0.022	25676	87516				
C25	7.841	-0.002	17095	5419				
C26	8.077	-0.008	15286	21100				
C28	8.549	0.010	11269	26297				
C32	9.329	-0.018	7613	20490				
C34	9.696	-0.024	5345	9527				
Filter Peak	9.957	0.012	4251	5482	BUNKERC (C10-C38)	8776852	1149.71	
C36	10.087	0.005	3944	2340				
C38	10.441	0.006	3244	3721				
C40	10.769	-0.012	3256	3762				
o-terph	6.091	0.003	898677	761352				
Triacon Surr	8.957	-0.006	789768	734414	NAS DIES (C10-C24)	7342310	428.52	

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	761352	37.4	83.1	M
Triacontane	734414	38.5	85.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a041.d

Date : 02-AUG-2012 22:54

Client ID:

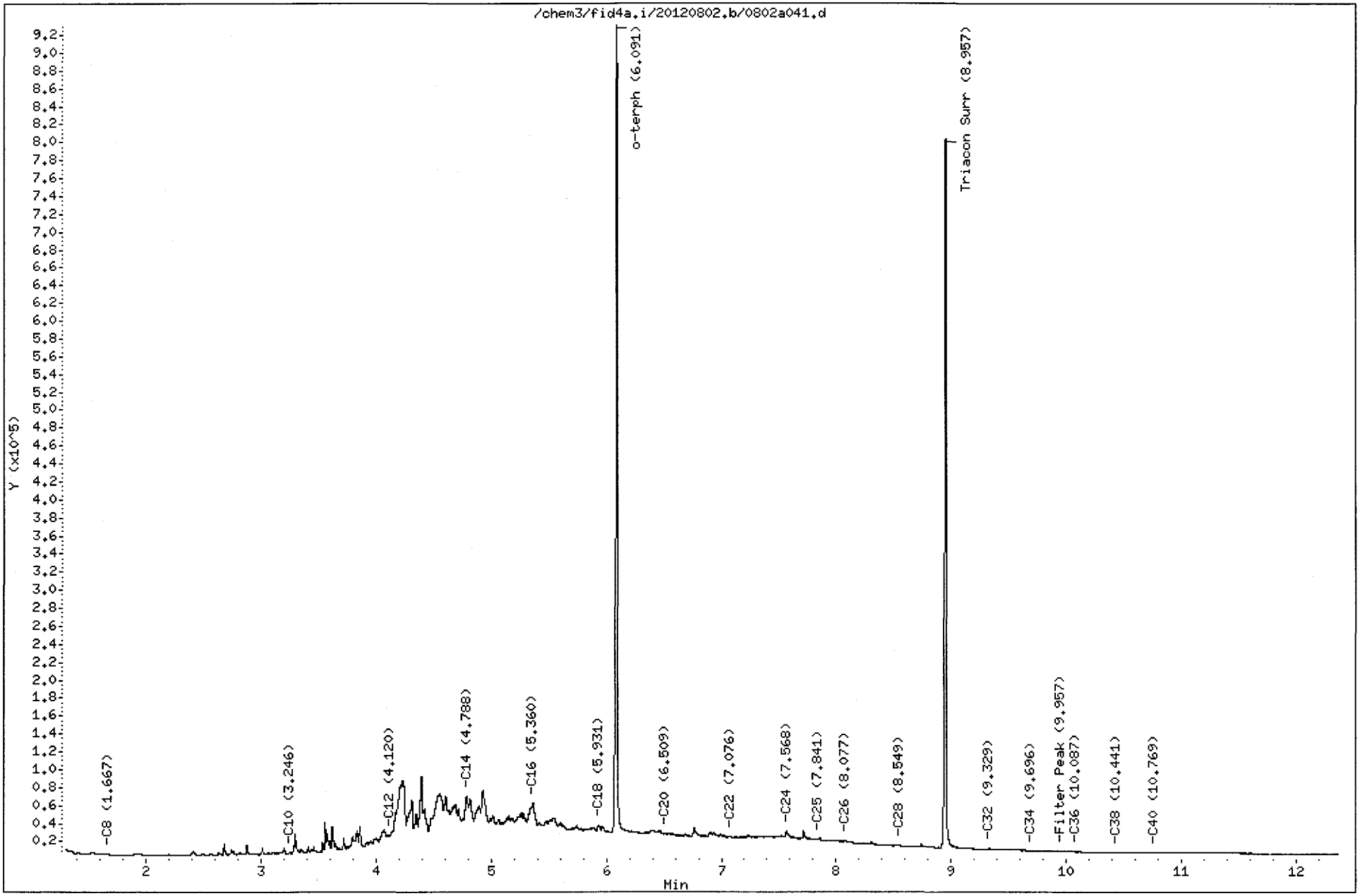
Instrument: fid4a.i

Sample Info: VE22A

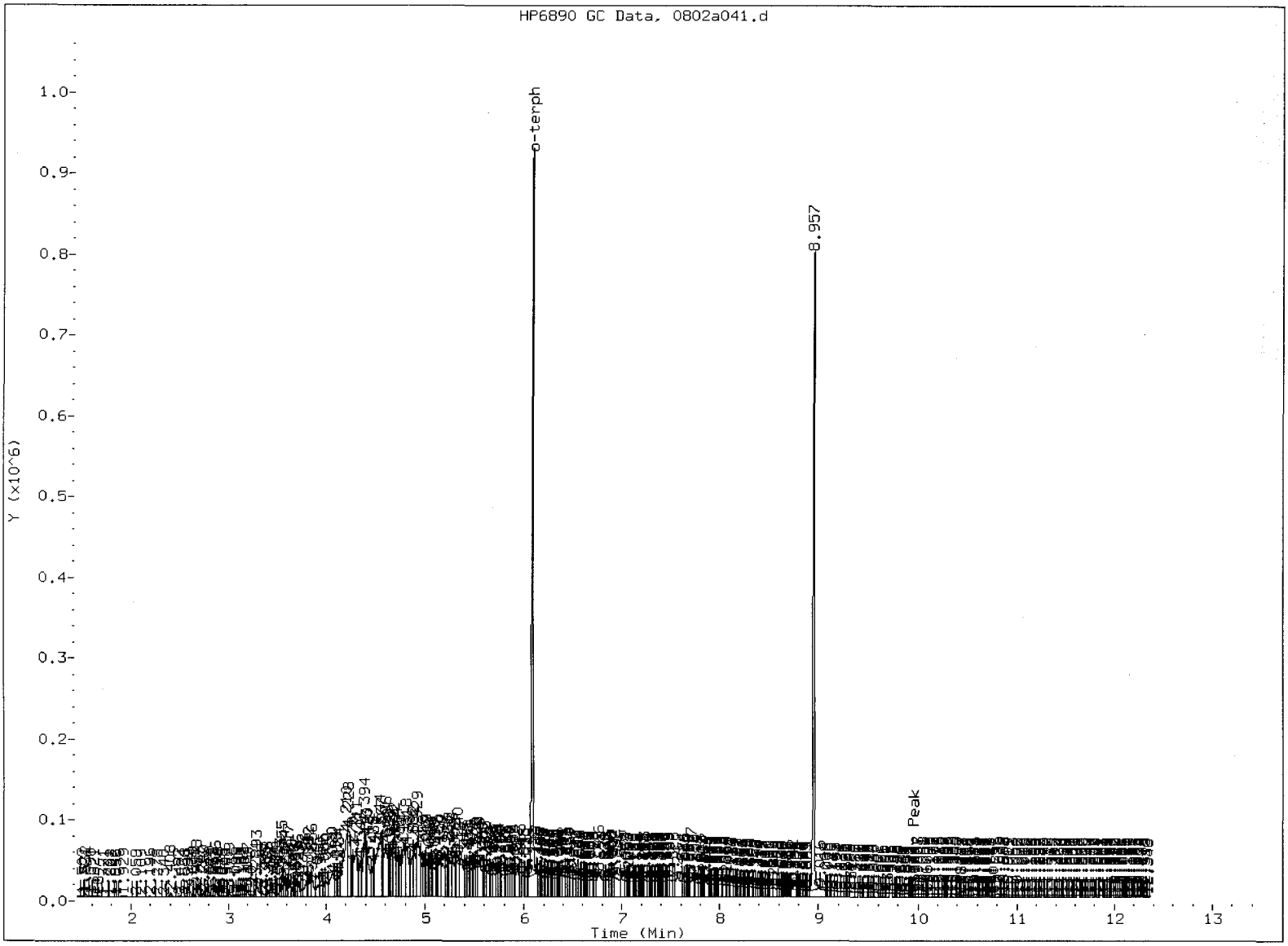
Operator: AR

Column phase: RTX-1

Column diameter: 0.25



FID:4A-2C/RTX-1 VE22A FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AP Date: 8/13/12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a042.d
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/03/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE22B
Client ID:
Injection: 02-AUG-2012 23:15
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.400	0.013	4988	12027	GAS (Tol-C12)	312457	20.77 GRO
C8	1.718	0.054	1073	2719	DIESEL (C12-C24)	4388798	299.58 DRO
C10	3.248	0.018	1076	1619	M.OIL (C24-C38)	1587345	126.29 RRO
C12	4.125	0.002	11152	18857	AK-102 (C10-C25)	4757392	275.01
C14	4.827	0.024	18716	10681	AK-103 (C25-C36)	1347633	157.84
C16	5.411	0.027	28567	55850			
C18	5.935	-0.010	25037	42916			
C20	6.525	0.008	23405	11092	JET-A (C10-C18)	2449119	198.12
C22	7.057	-0.012	20932	42395	MIN.OIL (C24-C38)	1587345	118.10
C24	7.582	-0.009	25367	60611			
C25	7.835	-0.008	19862	24772			
C26	8.077	-0.008	17822	42318			
C28	8.548	0.009	15088	22959			
C32	9.354	0.006	7984	7630			
C34	9.734	0.014	5811	3450			
Filter Peak	9.943	-0.003	5209	2477	BUNKERC (C10-C38)	6181223	809.70
C36	10.080	-0.003	4667	2025			
C38	10.442	0.007	3759	2009			
C40	10.777	-0.004	3881	7224			
o-terph	6.091	0.002	864099	742771			
Triacon Surr	8.954	-0.010	790653	737283	NAS DIES (C10-C24)	4593877	268.11

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	742771	36.5	81.0 M
Triacontane	737283	38.6	85.8 M

M Indicates the peak was manually integrated

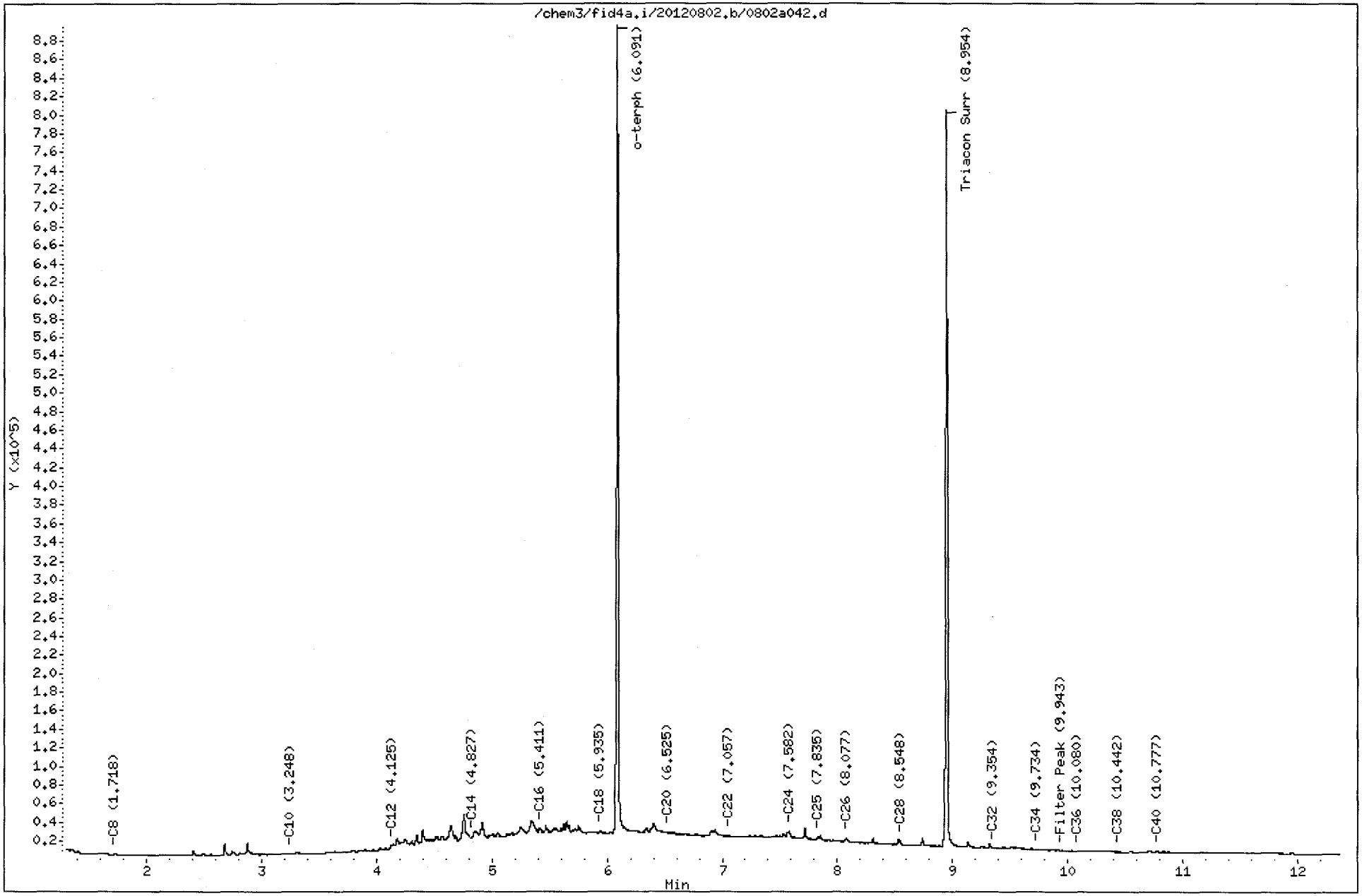
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a042.d
Date : 02-AUG-2012 23:15
Client ID:
Sample Info: VE22B

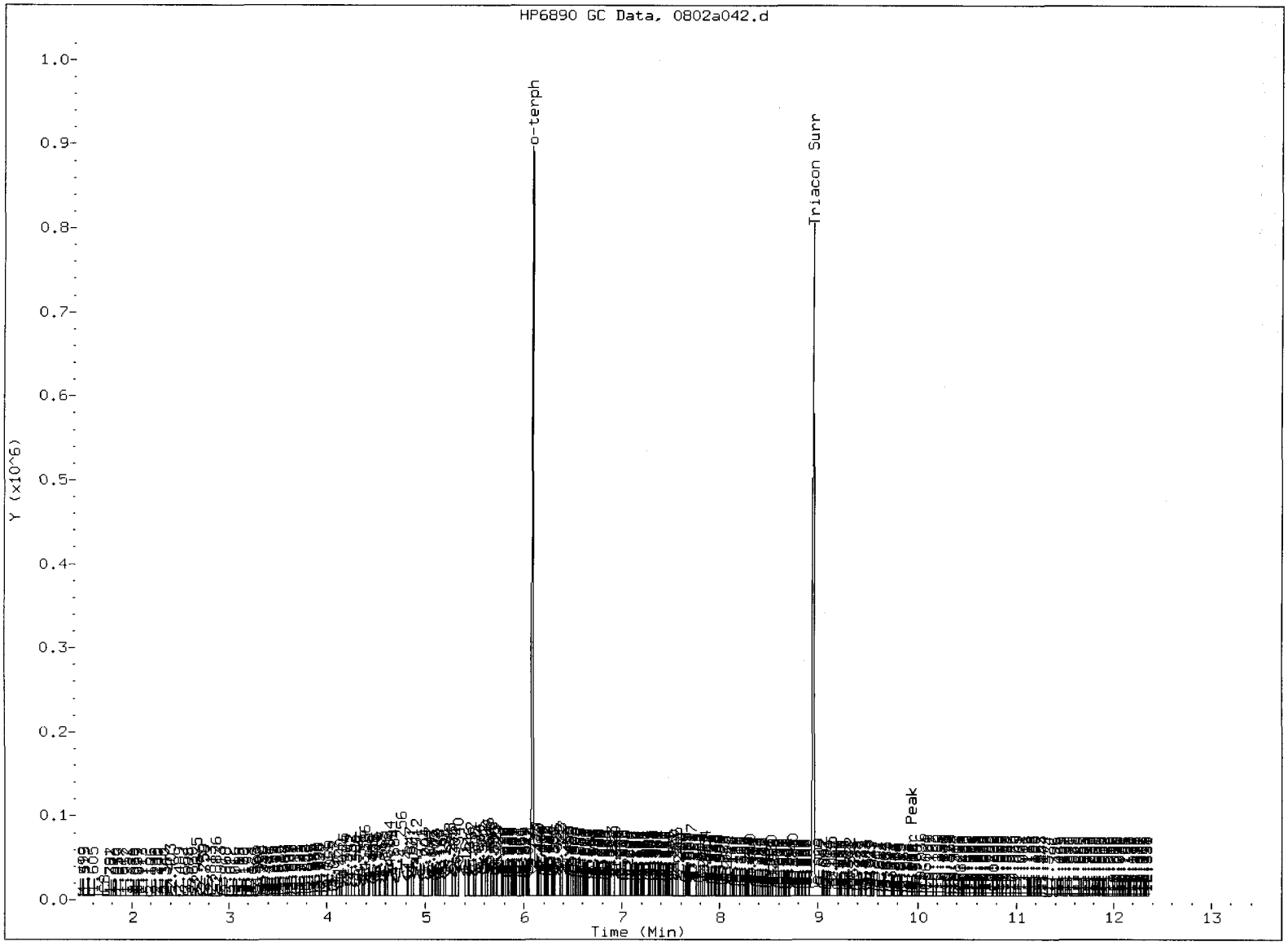
Instrument: fid4a.i

Operator: AR
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 VE22B FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
6. Skimmed surrogate

Analyst: AL Date: 8/3/2012

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a043.d ARI ID: VE22C
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-AUG-2012 23:36
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.404	0.017	3608	9914	GAS (Tol-C12)	700654	46.57
C8	1.620	-0.045	1334	4935	DIESEL (C12-C24)	4937676	337.04
C10	3.247	0.016	4026	4946	M.OIL (C24-C38)	1296671	103.16
C12	4.099	-0.024	14563	15274	AK-102 (C10-C25)	5616801	324.69
C14	4.826	0.023	27099	9669	AK-103 (C25-C36)	1086418	127.25
C16	5.408	0.024	28706	20771			
C18	5.937	-0.008	25571	37147			
C20	6.523	0.006	19676	32074	JET-A (C10-C18)	3617603	292.64
C22	7.073	0.004	16838	12662	MIN.OIL (C24-C38)	1296671	96.47
C24	7.601	0.010	16577	10123			
C25	7.840	-0.003	14284	3384			
C26	8.082	-0.003	12432	11169			
C28	8.532	-0.007	9857	9934			
C32	9.337	-0.011	7187	18214			
C34	9.707	-0.013	5220	16643			
Filter Peak	9.950	0.004	4240	4967	BUNKERC (C10-C38)	6766107	886.31
C36	10.083	0.001	3840	2445			
C38	10.442	0.007	3182	4717			
C40	10.780	-0.001	3255	1621			
o-terph	6.091	0.002	885868	741593			
Triacon Surr	8.959	-0.005	789282	735725	NAS DIES (C10-C24)	5469436	319.22

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	741593	36.4	80.9 M
Triacontane	735725	38.5	85.7 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a043.d

Date : 02-AUG-2012 23:36

Client ID:

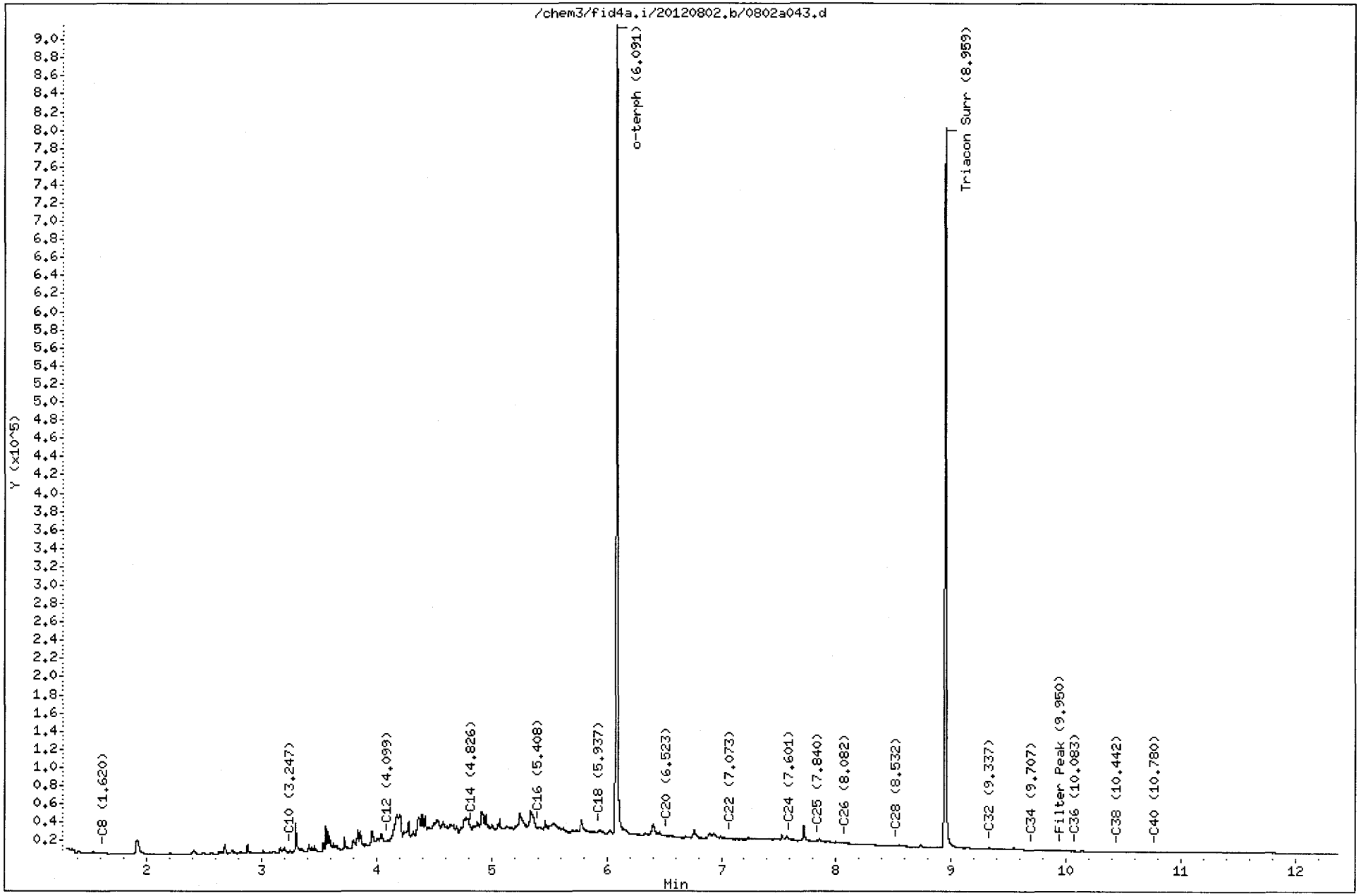
Instrument: fid4a.i

Sample Info: VE22C

Operator: AR

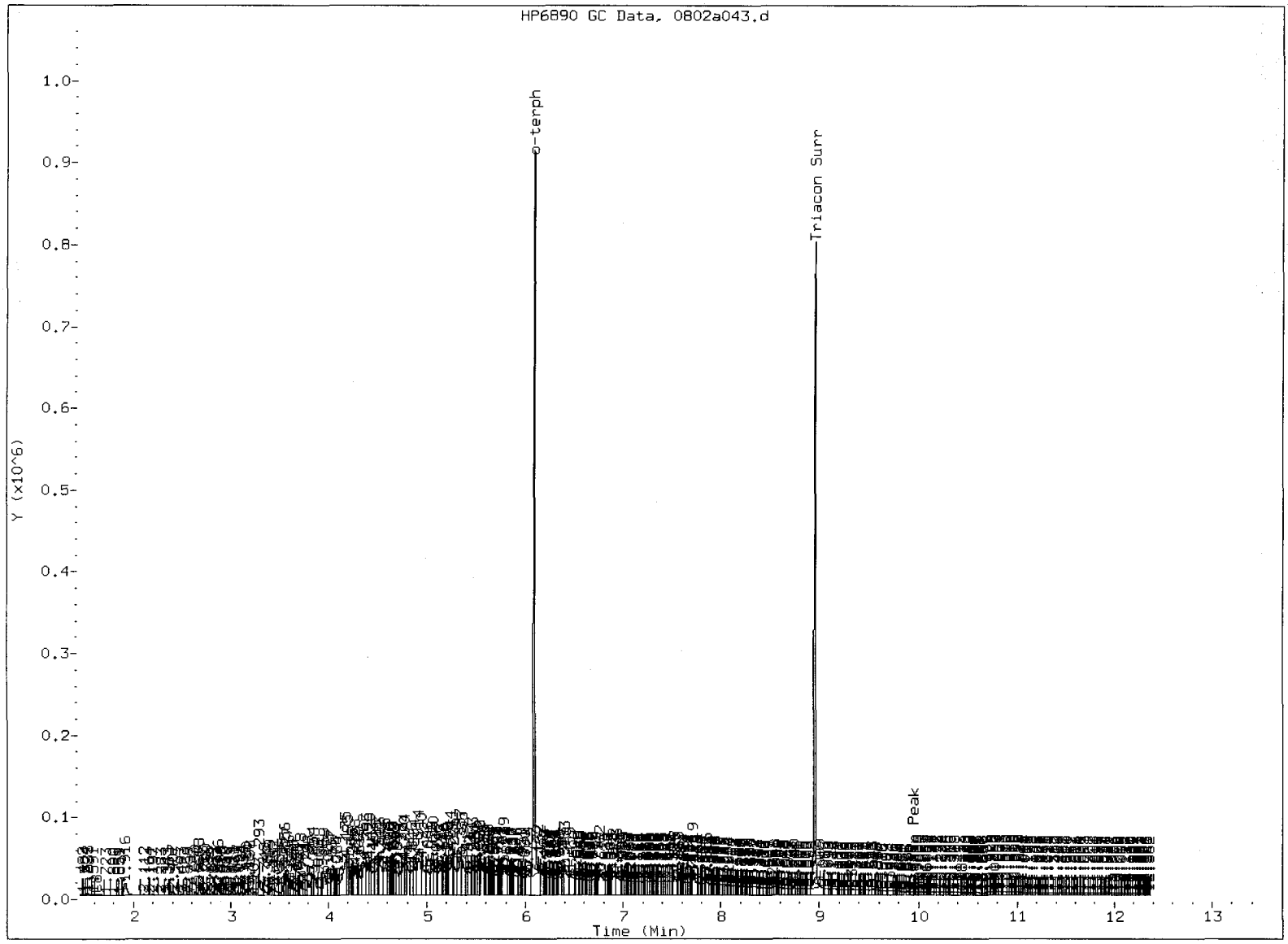
Column phase: RTX-1

Column diameter: 0.25



FID:4A-2C/RTX-1 VE22C

FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AL Date: 8/3/2012

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a044.d ARI ID: VE22D
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-AUG-2012 23:57
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.388	0.000	3356	5537	GAS (Tol-C12)	711364	47.29
C8	1.708	0.044	534	1550	DIESEL (C12-C24)	4406956	300.82
C10	3.241	0.011	3102	5293	M.OIL (C24-C38)	1240482	98.69
C12	4.099	-0.025	14256	14146	AK-102 (C10-C25)	5097901	294.69
C14	4.796	-0.006	37554	64549	AK-103 (C25-C36)	1025597	120.12
C16	5.401	0.017	24966	12344			
C18	5.952	0.007	19422	8104			
C20	6.510	-0.007	17043	24875	JET-A (C10-C18)	3328297	269.24
C22	7.071	0.002	15863	6553	MIN.OIL (C24-C38)	1240482	92.29
C24	7.601	0.011	15415	10950			
C25	7.843	0.000	13949	5205			
C26	8.095	0.010	11738	14276			
C28	8.531	-0.008	9382	11079			
C32	9.328	-0.020	7031	20597			
C34	9.715	-0.005	4688	4174			
Filter Peak	9.957	0.012	4115	5638	BUNKERC (C10-C38)	6193530	811.31
C36	10.085	0.003	3780	3077			
C38	10.433	-0.002	3240	4896			
C40	10.776	-0.005	3510	7035			
o-terph	6.091	0.002	904428	759930			
Triacon Surr	8.956	-0.007	793565	748755	NAS DIES (C10-C24)	4953048	289.08

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	759930	37.3	82.9 M
Triacontane	748755	39.2	87.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a044.d

Date : 02-AUG-2012 23:57

Client ID:

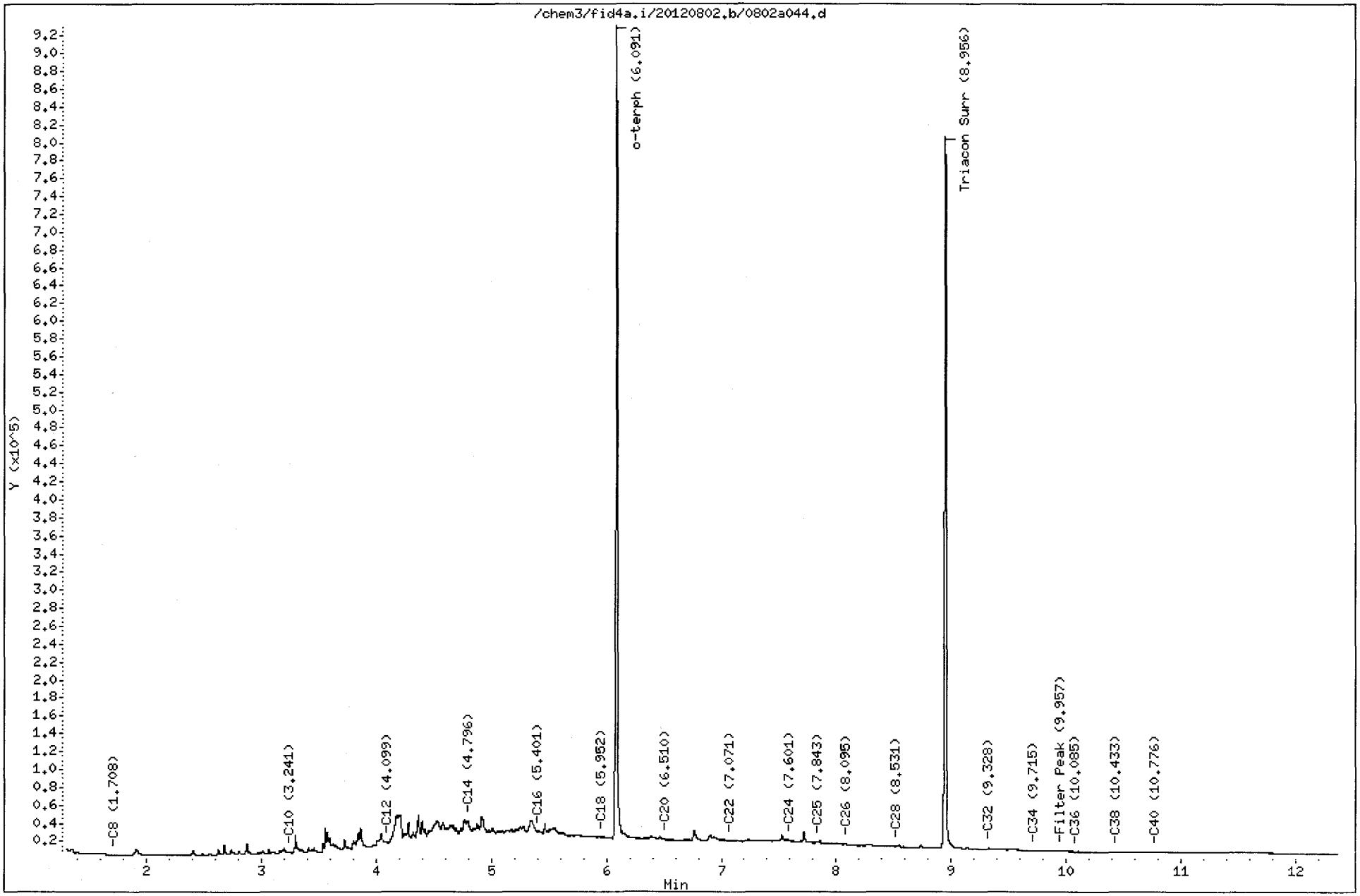
Sample Info: VE22D

Instrument: fid4a.i

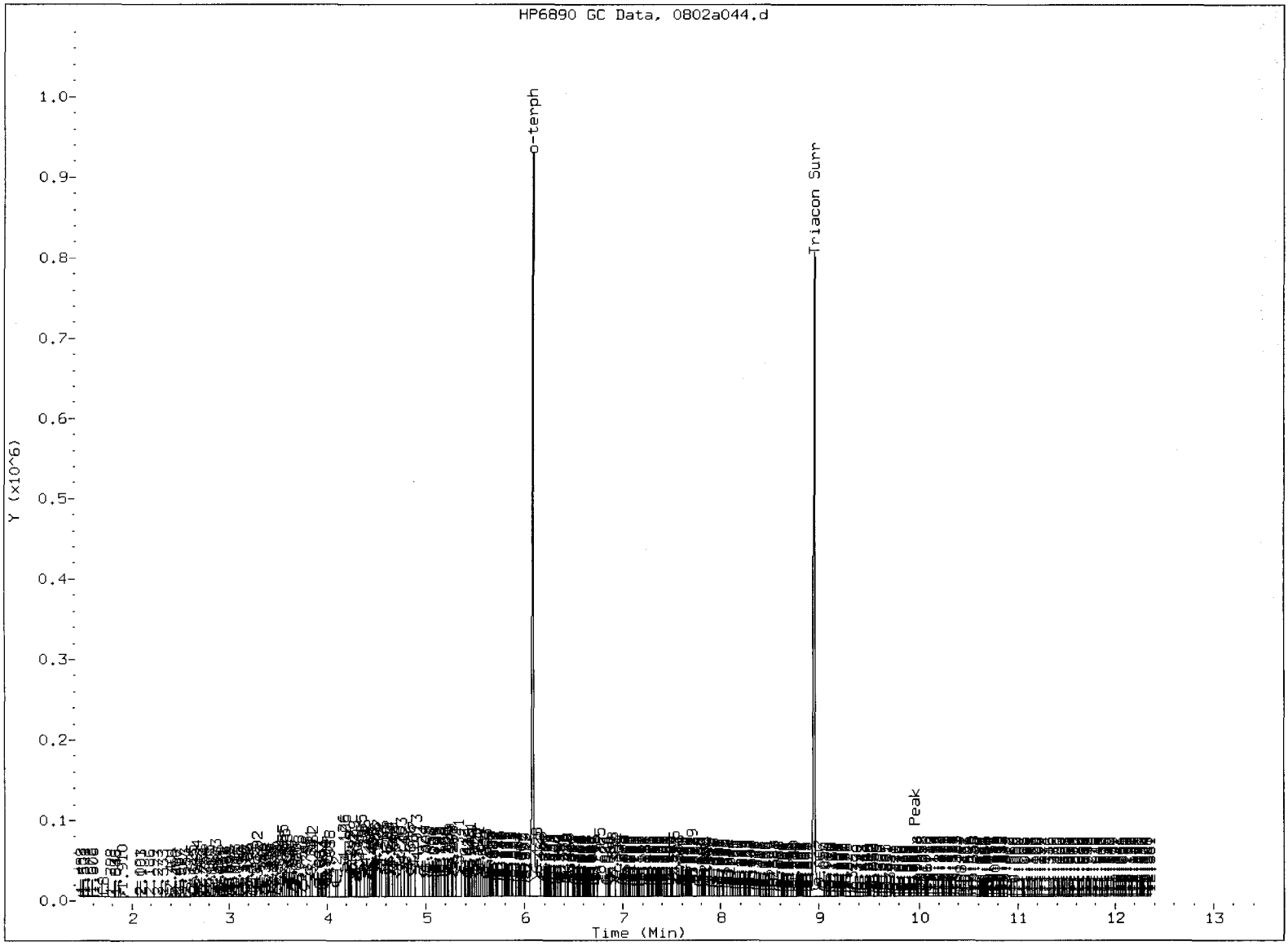
Operator: AR

Column phase: RTX-1

Column diameter: 0.25



FID:4A-2C/RTX-1 VE22D FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AL Date: 8/7/2012

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a045.d ARI ID: VE22E
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 03-AUG-2012 00:19
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.402	0.014	3209	10477	GAS (Tol-C12)	579702	38.53
C8	1.617	-0.047	1467	5484	DIESEL (C12-C24)	3320446	226.65
C10	3.247	0.017	3289	5086	M.OIL (C24-C38)	964819	76.76
C12	4.101	-0.022	12365	11205	AK-102 (C10-C25)	3863798	223.35
C14	4.793	-0.010	29545	77131	AK-103 (C25-C36)	810244	94.90
C16	5.409	0.025	18428	31693			
C18	5.939	-0.006	14605	26854			
C20	6.522	0.006	11072	6116	JET-A (C10-C18)	2671331	216.09
C22	7.060	-0.009	10836	17549	MIN.OIL (C24-C38)	964819	71.78
C24	7.590	-0.001	11397	19822			
C25	7.843	0.000	9769	9326			
C26	8.090	0.005	8246	5647			
C28	8.534	-0.005	7510	4416			
C32	9.335	-0.013	5602	14807			
C34	9.729	0.009	4201	6773			
Filter Peak	9.938	-0.007	3591	4332	BUNKERC (C10-C38)	4738876	620.76
C36	10.086	0.004	3262	3504			
C38	10.430	-0.005	2898	2755			
C40	10.776	-0.005	3113	1606			
o-terph	6.090	0.001	831146	694835			
Triacon Surr	8.957	-0.007	741285	695765	NAS DIES (C10-C24)	3774056	220.27

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	694835	34.1	75.8 M
Triacontane	695765	36.5	81.0 M

M Indicates the peak was manually integrated

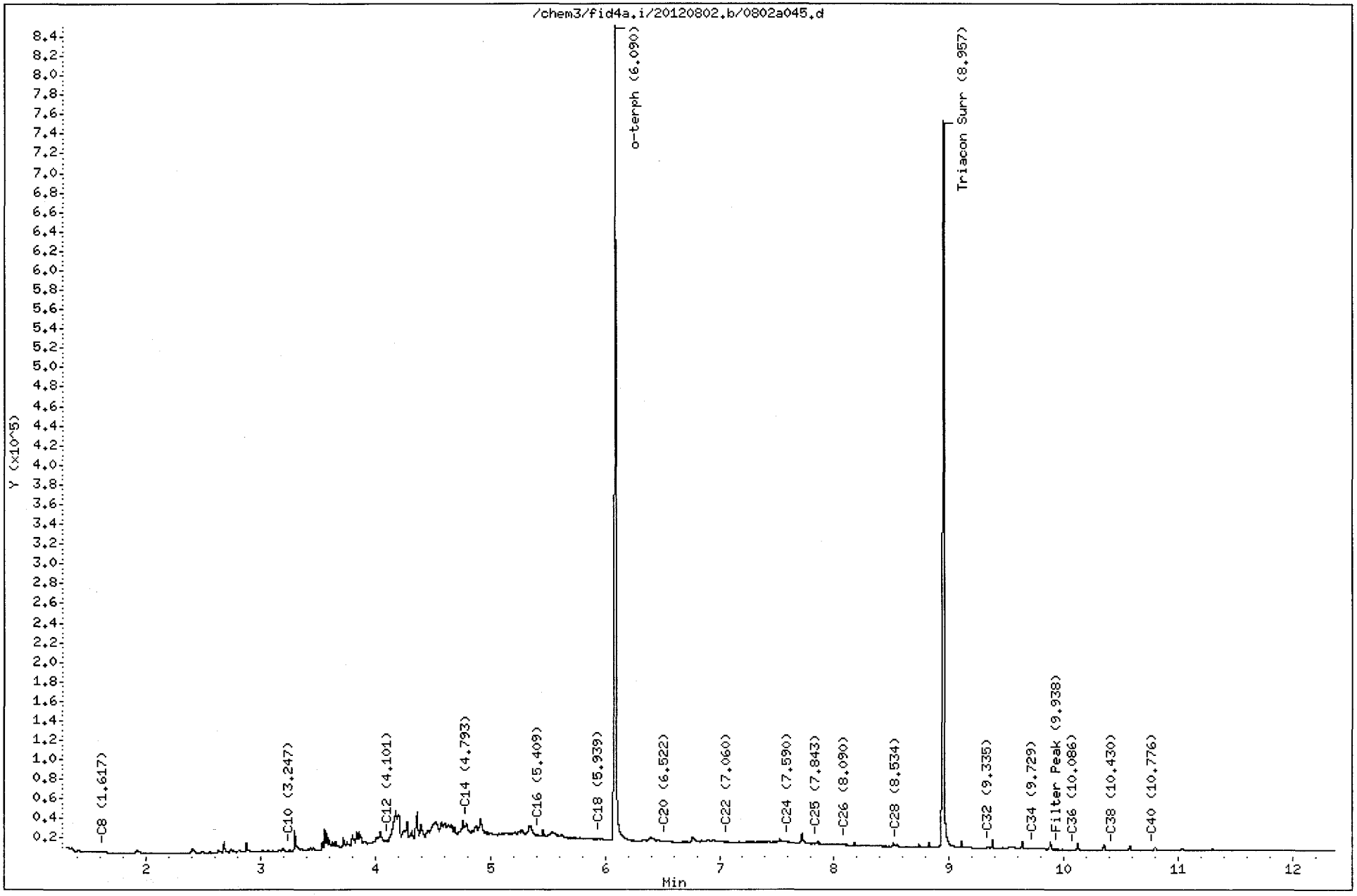
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a045.d
Date : 03-AUG-2012 00:19
Client ID:
Sample Info: VE22E

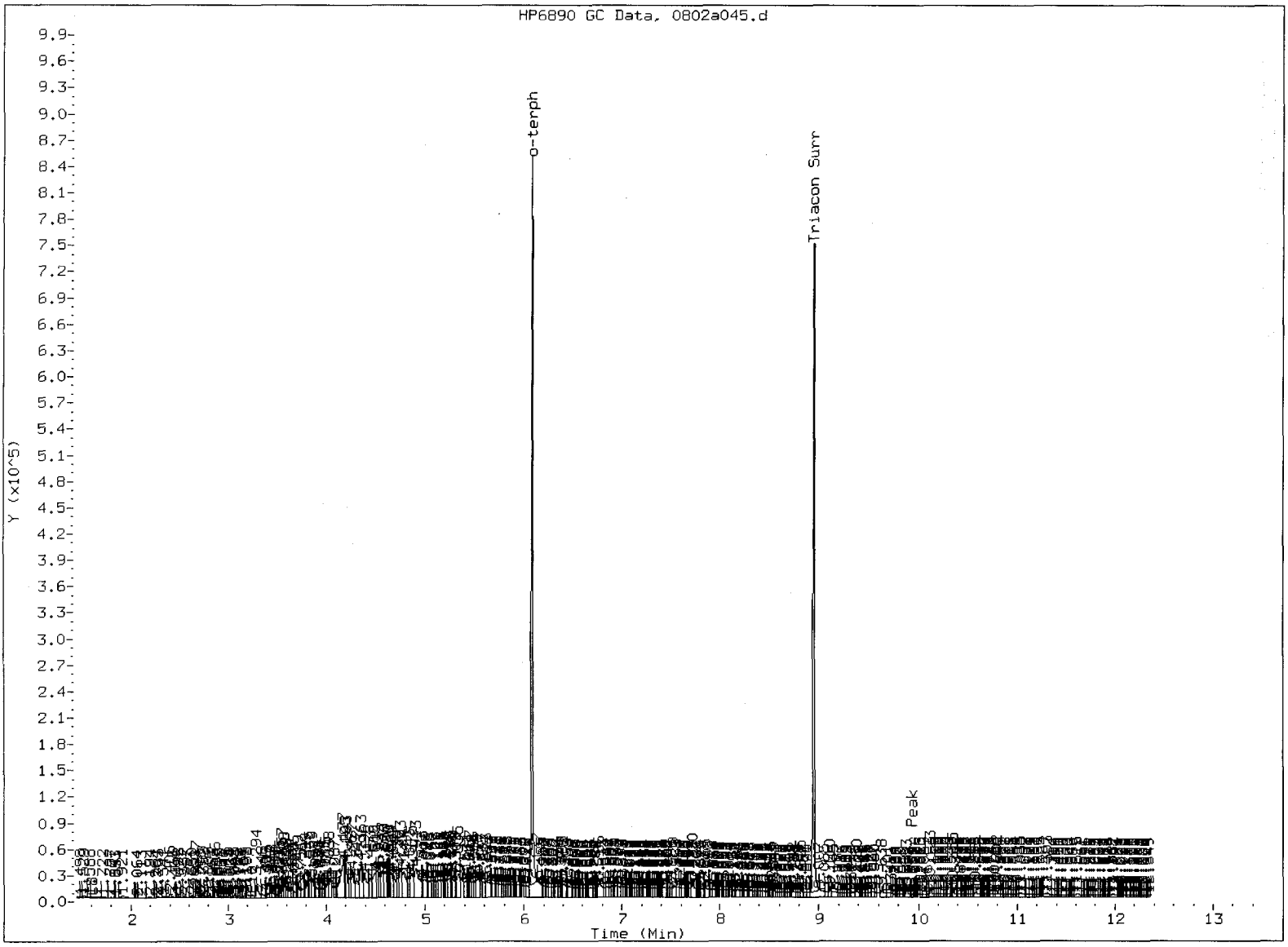
Instrument: fid4a.i

Operator: AR
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 VE22E FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AR Date: 8/3/2012

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a046.d ARI ID: VE22F
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 03-AUG-2012 00:40
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.396	0.009	5043	13001	GAS (Tol-C12)	442088	29.39
C8	1.659	-0.005	743	1715	DIESEL (C12-C24)	2842448	194.02
C10	3.239	0.009	1584	2463	M.OIL (C24-C38)	1022782	81.37
C12	4.151	0.028	20847	54311	AK-102 (C10-C25)	3260654	188.49
C14	4.781	-0.021	19796	55502	AK-103 (C25-C36)	861607	100.91
C16	5.394	0.011	17349	8547			
C18	5.932	-0.012	14567	32966			
C20	6.507	-0.009	11964	10329	JET-A (C10-C18)	2014395	162.95
C22	7.067	-0.002	11280	12659	MIN.OIL (C24-C38)	1022782	76.10
C24	7.587	-0.003	12835	22124			
C25	7.838	-0.004	10769	11103			
C26	8.078	-0.007	9650	25506			
C28	8.533	-0.005	9775	11351			
C32	9.334	-0.013	6333	18522			
C34	9.727	0.007	4610	6902			
Filter Peak	9.932	-0.013	3895	7965	BUNKERC (C10-C38)	4183440	548.00
C36	10.075	-0.007	3552	3499			
C38	10.440	0.005	3055	2895			
C40	10.788	0.008	3372	7043			
o-terph	6.090	0.002	912820	757542			
Triacon Surr	8.957	-0.006	794548	740452	NAS DIES (C10-C24)	3160658	184.47

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	757542	37.2	82.6 M
Triacontane	740452	38.8	86.2 M

M Indicates the peak was manually integrated

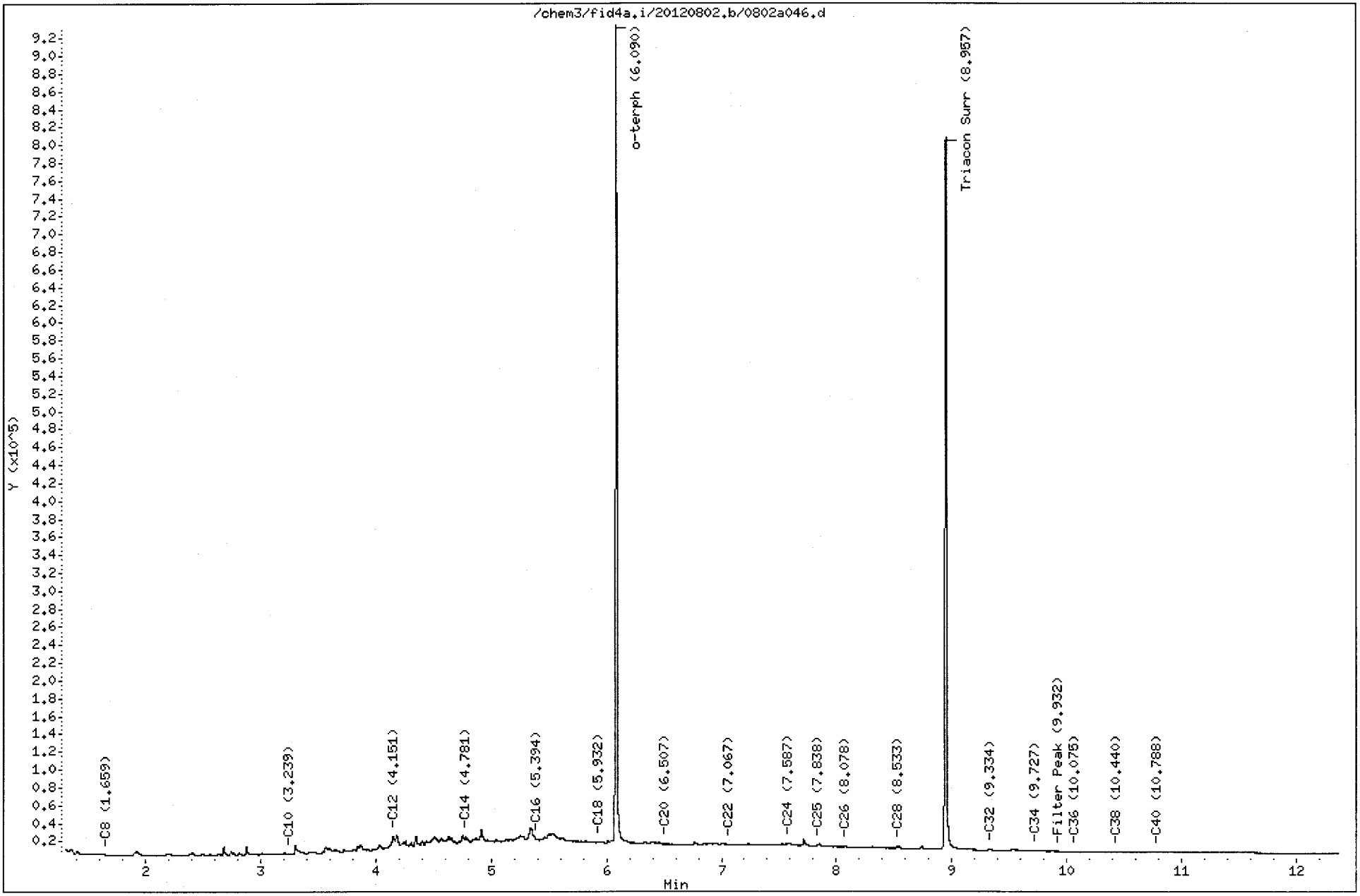
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a046.d
Date : 03-AUG-2012 00:40
Client ID:
Sample Info: VE22F

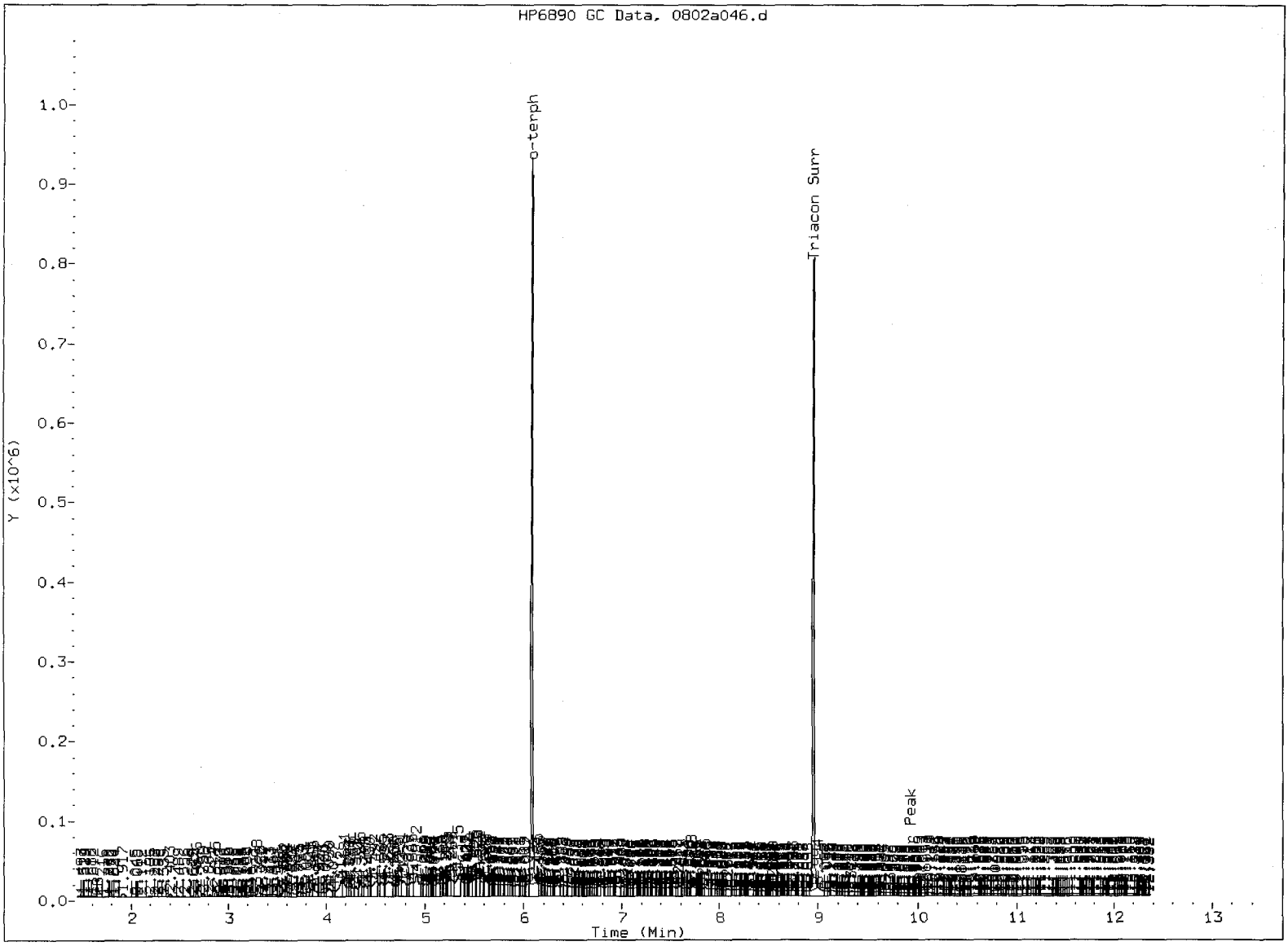
Instrument: fid4a.i

Operator: AR
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 VE22F FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AR Date: 8/3/12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a047.d
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/03/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE22G
Client ID:
Injection: 03-AUG-2012 01:01
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.395	0.008	6795	13761	GAS (Tol-C12)	820946	54.57
C8	1.658	-0.006	1014	1919	DIESEL (C12-C24)	3492393	238.39
C10	3.244	0.014	4157	4500	M.OIL (C24-C38)	923551	73.48
C12	4.101	-0.022	13312	14694	AK-102 (C10-C25)	4243049	245.28
C14	4.795	-0.008	36187	82537	AK-103 (C25-C36)	766860	89.82
C16	5.415	0.031	18306	19650			
C18	5.935	-0.010	14388	27948			
C20	6.508	-0.008	10659	12986	JET-A (C10-C18)	3109067	251.50
C22	7.074	0.005	10256	10265	MIN.OIL (C24-C38)	923551	68.71
C24	7.583	-0.008	11673	18297			
C25	7.839	-0.004	9535	9177			
C26	8.072	-0.013	8330	9026			
C28	8.536	-0.003	8255	8989			
C32	9.353	0.006	4995	3351			
C34	9.721	0.001	5226	14407			
Filter Peak	9.945	0.000	3619	1930	BUNKERC (C10-C38)	5070695	664.23
C36	10.092	0.010	3394	3408			
C38	10.440	0.005	2985	1896			
C40	10.772	-0.009	3501	13418			
o-terph	6.091	0.003	845472	745494			
Triacon Surr	8.956	-0.007	757635	727303	NAS DIES (C10-C24)	4147145	242.04

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	745494	36.6	81.3 M
Triacontane	727303	38.1	84.7 M

M Indicates the peak was manually integrated

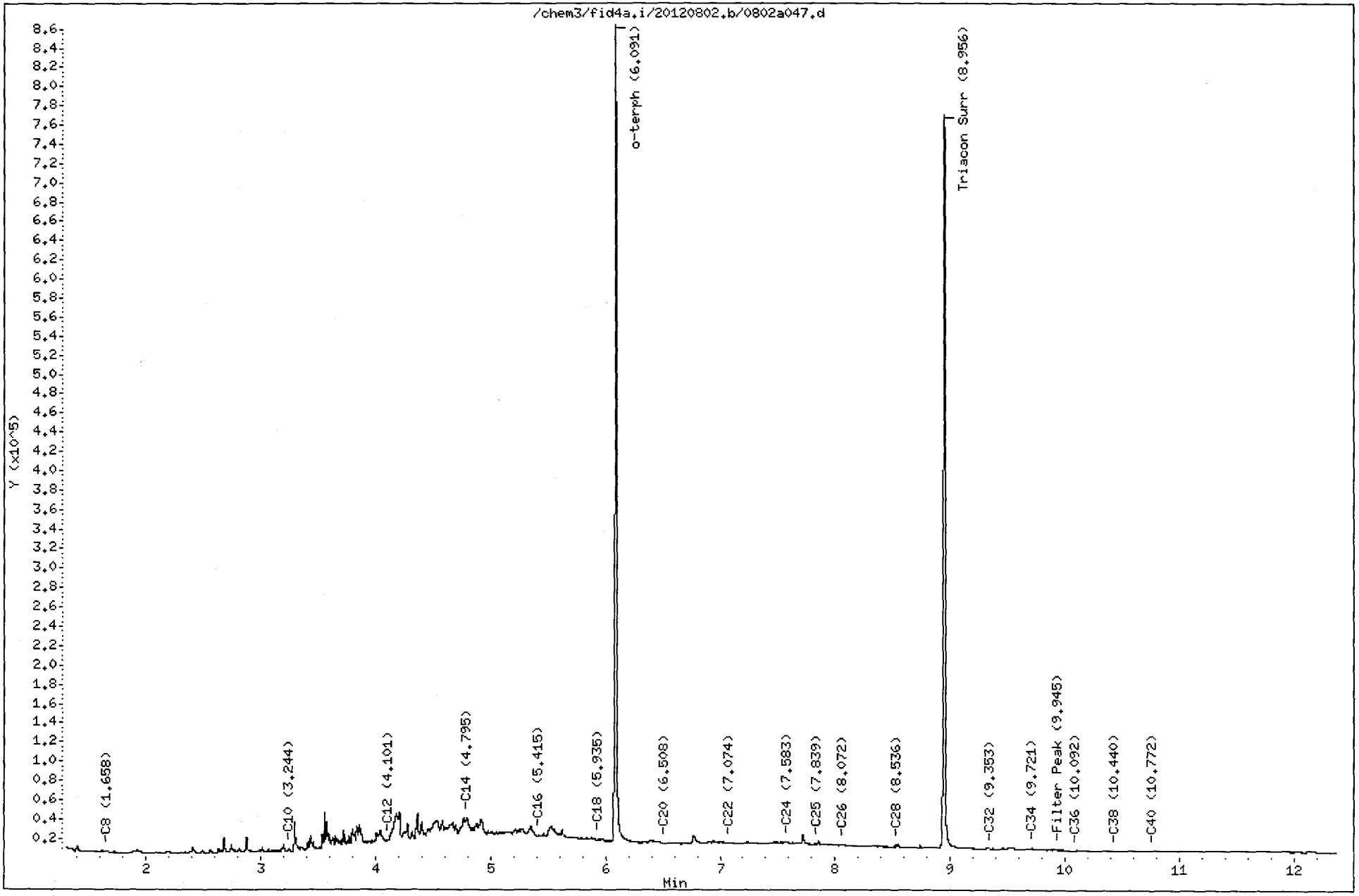
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120802.b/0802a047.d
Date : 03-AUG-2012 01:01
Client ID:
Sample Info: VE22G

Instrument: fid4a.i

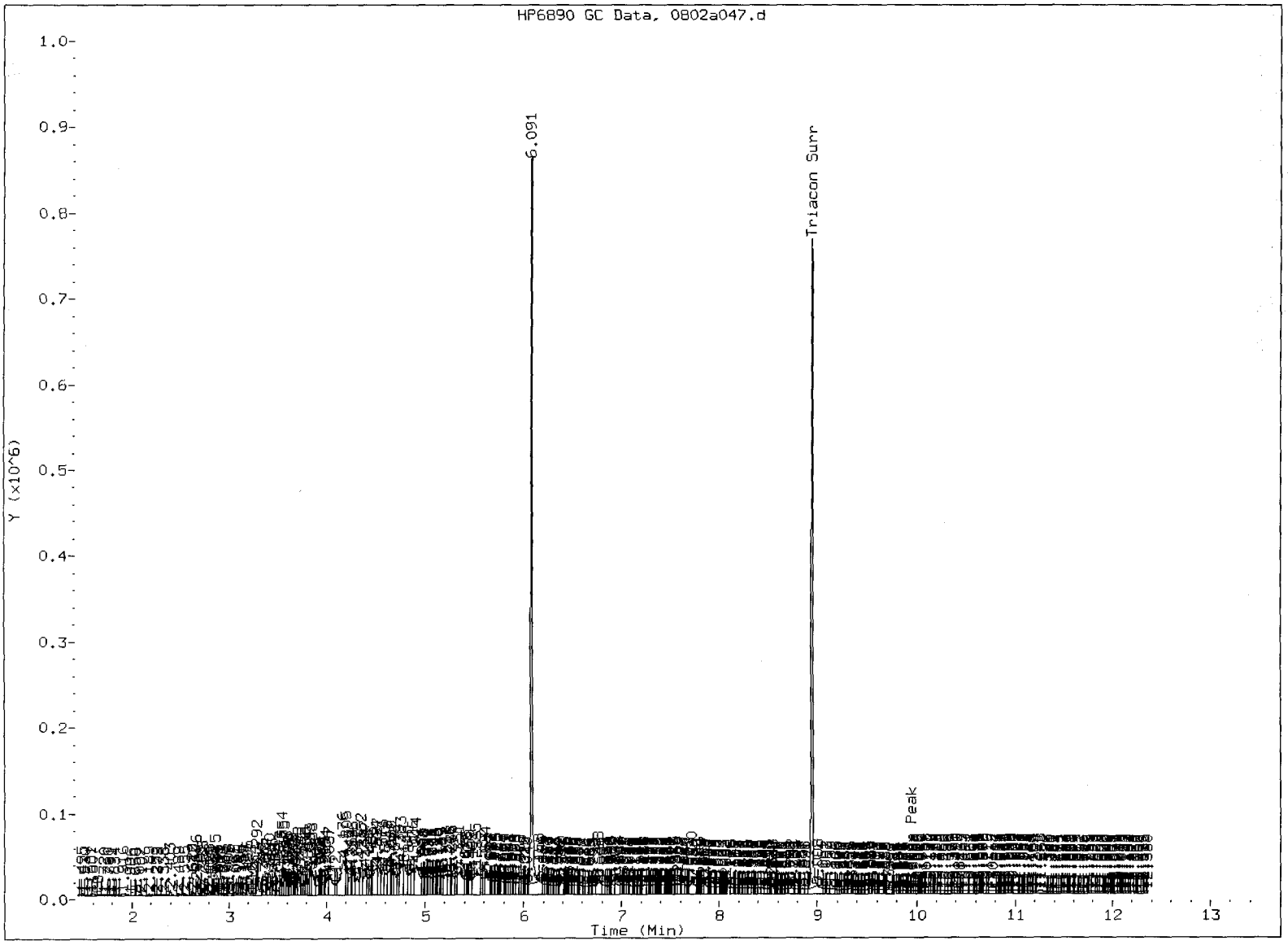
Operator: AR
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 VE22G

FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AL

Date: 8/3/12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a048.d ARI ID: VE22H
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 03-AUG-2012 01:22
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.395	0.007	3596	10875	GAS (Tol-C12)	492802	32.76
C8	1.713	0.049	647	1862	DIESEL (C12-C24)	3064201	209.16
C10	3.249	0.018	1906	4220	M.OIL (C24-C38)	990334	78.79
C12	4.155	0.032	23188	63992	AK-102 (C10-C25)	3515474	203.22
C14	4.782	-0.021	21115	55811	AK-103 (C25-C36)	835659	97.88
C16	5.404	0.020	18673	26095			
C18	5.936	-0.009	15413	28529			
C20	6.505	-0.011	12403	15892	JET-A (C10-C18)	2236029	180.88
C22	7.072	0.003	11443	15796	MIN.OIL (C24-C38)	990334	73.68
C24	7.590	0.000	12861	25142			
C25	7.842	-0.001	10095	5354			
C26	8.088	0.003	8596	5222			
C28	8.534	-0.005	7757	8369			
C32	9.360	0.013	5324	6967			
C34	9.708	-0.012	4278	4148			
Filter Peak	9.952	0.006	3748	3334	BUNKERC (C10-C38)	4412889	578.06
C36	10.085	0.003	3441	2451			
C38	10.437	0.002	3008	1788			
C40	10.771	-0.010	3373	16713			
o-terph	6.090	0.002	917455	777027			
Triacon Surr	8.955	-0.008	802049	764547	NAS DIES (C10-C24)	3422555	199.75

Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

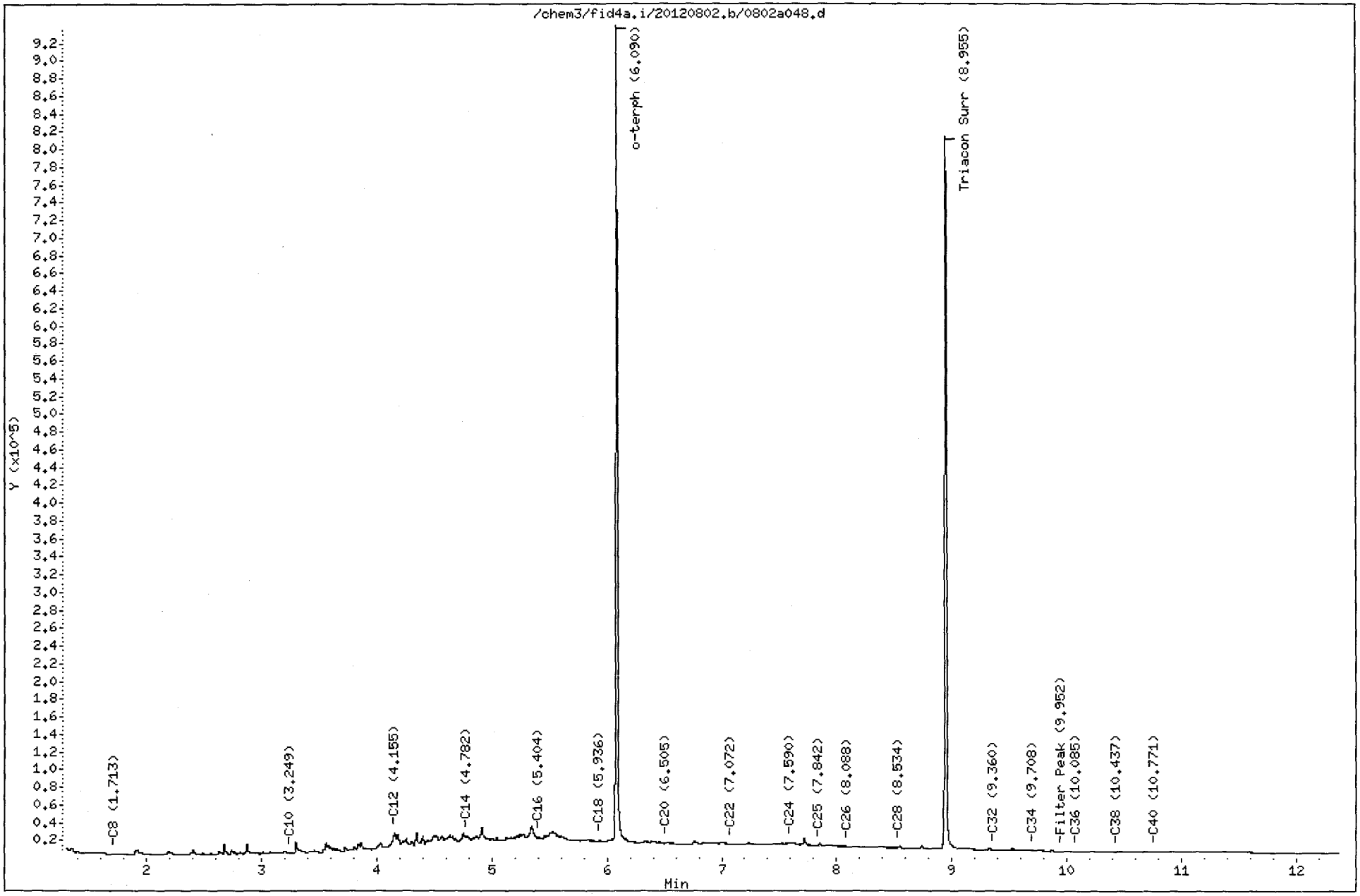
Surrogate	Area	Amount	%Rec
o-Terphenyl	777027	38.1	84.8 M
Triacontane	764547	40.1	89.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

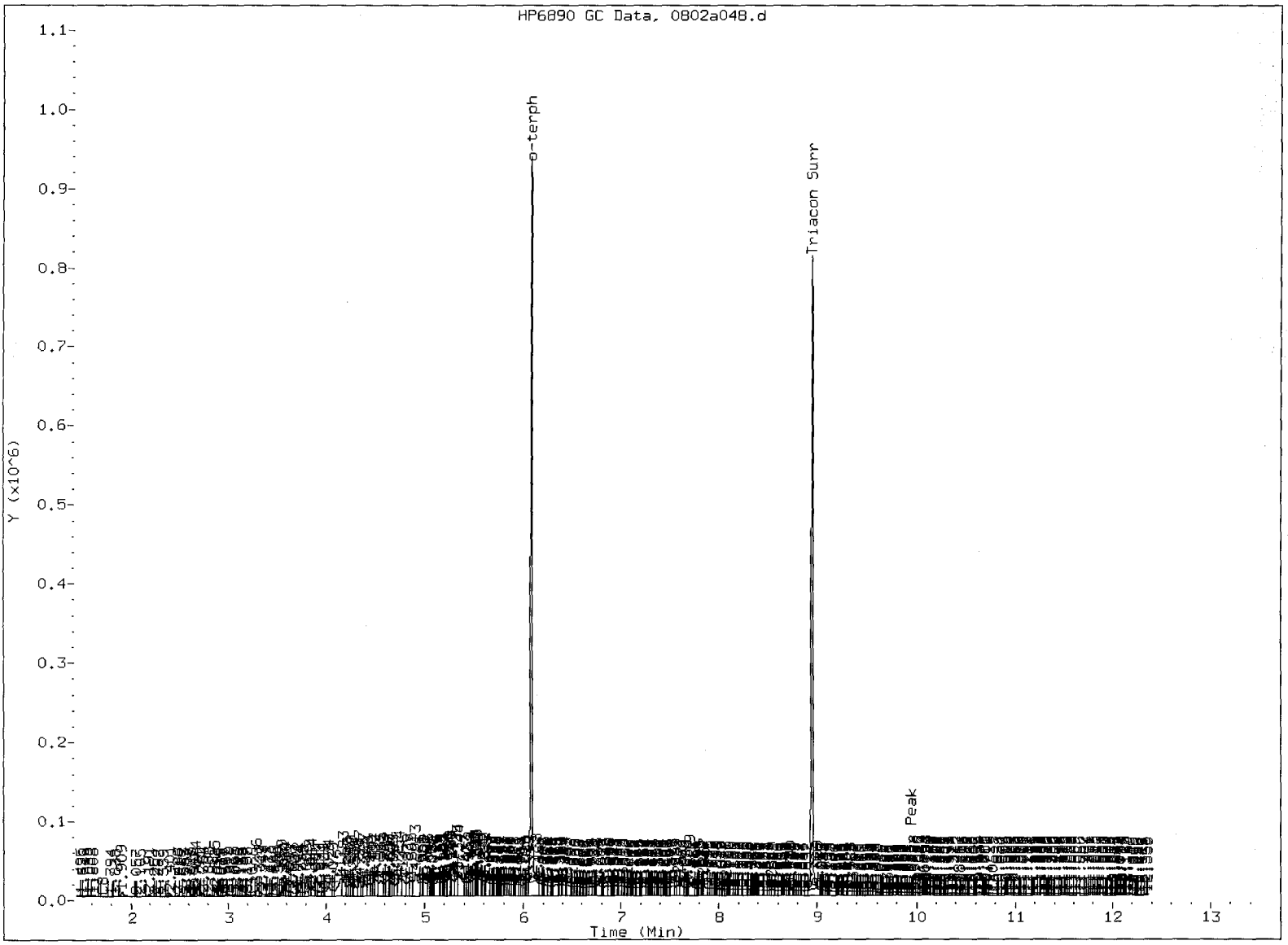
Data File: /chem3/fid4a.i/20120802.b/0802a048.d
Date : 03-AUG-2012 01:22
Client ID:
Sample Info: VE22H

Instrument: fid4a.i
Operator: AR
Column phase: RTX-1
Column diameter: 0.25



FID:4A-2C/RTX-1 VE22H

FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AR Date: 8/3/12

ANALYTICAL RESOURCES INCORPORATED

HCID SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Client ID	O-TER	TOT OUT
MB-080112	87.6%	0
LCS-080112	79.3%	0
LCSD-080112	80.4%	0
MW-15D-073012	83.0%	0
MW-16S-073012	81.0%	0
MW-15S-073012	80.9%	0
MW-14S-073012	82.9%	0
MW-13S-073012	75.8%	0
MW-14D-073012	82.6%	0
MW-13D-073012	81.3%	0
MW-DUP-073012	84.8%	0

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(55-110)	(50-150)

Prep Method: SW3510C
Log Number Range: 12-14520 to 12-14527

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Page 1 of 1

Sample ID: LCS-080112
LCS/LCSD

Lab Sample ID: LCS-080112
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/03/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted LCS/LCSD: 08/01/12

Date Analyzed LCS: 08/02/12 22:11
LCSD: 08/02/12 22:32
Instrument/Analyst LCS: FID/AAR
LCSD: FID/AAR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.44	3.00	81.3%	2.44	3.00	81.3%	0.0%

HCID Surrogate Recovery

	LCS	LCSD
o-Terphenyl	79.3%	80.4%

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

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a039.d
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m
Instrument: fid4a.i
Operator: AR
Report Date: 08/03/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE22LCSW1
Client ID:
Injection: 02-AUG-2012 22:11
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.406	0.018	5353	11351	GAS (Tol-C12)	3541175	235.39
C8	1.677	0.013	4754	10860	DIESEL (C12-C24)	17875078	1220.14
C10	3.234	0.004	54696	100426	M.OIL (C24-C38)	171414	13.64
C12	4.119	-0.005	183515	164246	AK-102 (C10-C25)	20387200	1178.52
C14	4.793	-0.010	322220	373297	AK-103 (C25-C36)	117302	13.74
C16	5.383	-0.001	534997	658135			
C18	5.949	0.004	444568	580680			
C20	6.516	-0.001	307647	458602	JET-A (C10-C18)	14870021	1202.88
C22	7.065	-0.004	139430	251520	MIN.OIL (C24-C38)	171414	12.75
C24	7.596	0.006	29282	77393			
C25	7.850	0.007	13736	27395			
C26	8.092	0.007	6309	11311			
C28	8.538	-0.001	1466	1151			
C32	9.344	-0.003	102	144			
C34	9.711	-0.009	61	82			
Filter Peak	9.957	0.011	94	72	BUNKERC (C10-C38)	20511446	2686.86
C36	10.078	-0.004	222	159			
C38	10.439	0.004	341	198			
C40	10.780	-0.001	824	473			
o-terph	6.096	0.007	866090	726752			
Triacon Surr	8.963	-0.001	704955	763361	NAS DIES (C10-C24)	20340032	1187.12

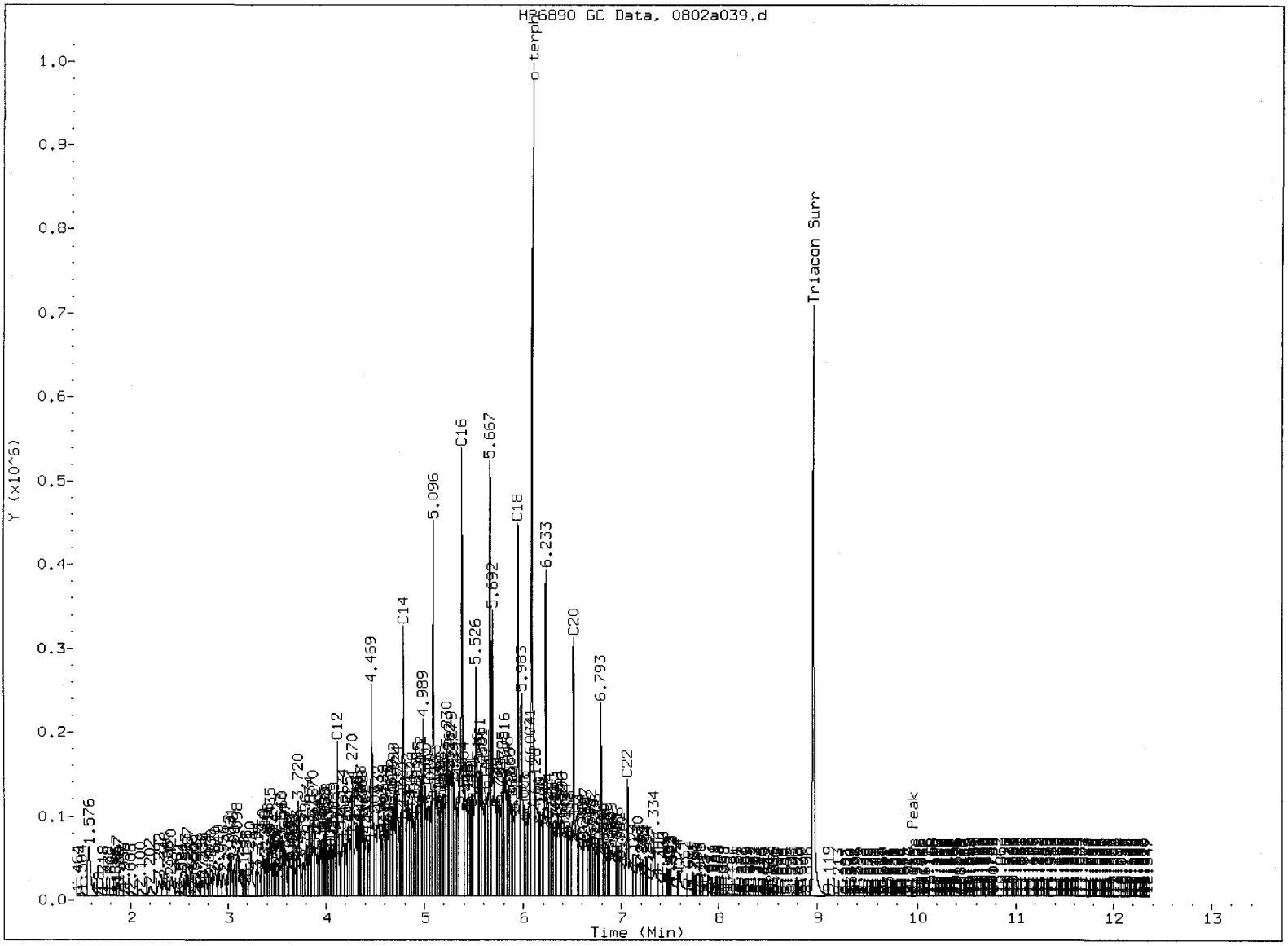
Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	726752	35.7	79.3 M
Triacontane	763361	40.0	88.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

FID:4A-2C/RTX-1 VE22LCSW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

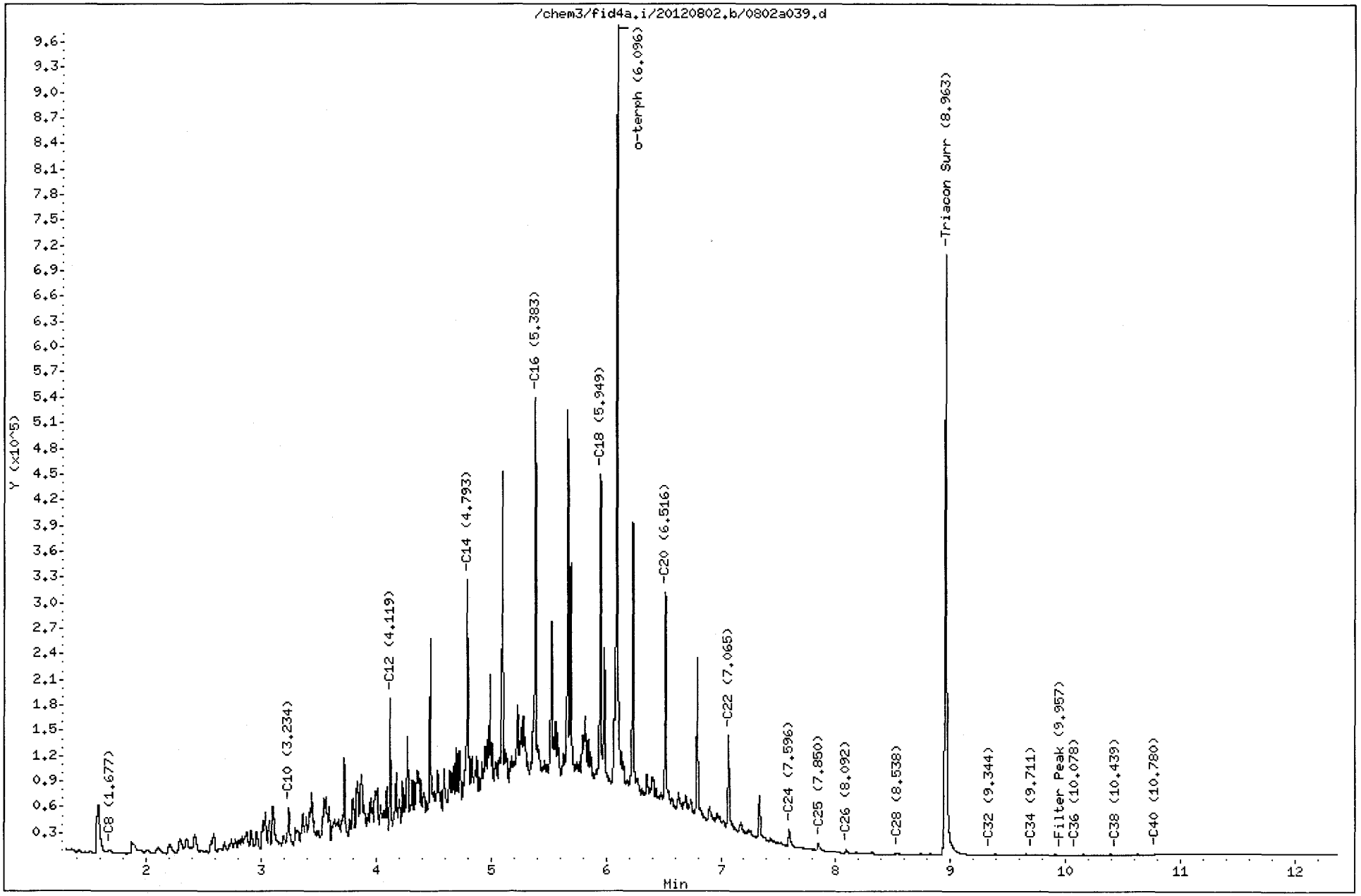
Analyst: AR Date: 8/3/12

Data File: /chem3/fid4a.i/20120802.b/0802a039.d
Date : 02-AUG-2012 22:11
Client ID:
Sample Info: VE22LCSW1

Instrument: fid4a.i

Operator: AR
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120802.b/0802a040.d ARI ID: VE22LCSDW1
Method: /chem3/fid4a.i/20120802.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 02-AUG-2012 22:32
Operator: AR
Report Date: 08/03/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.396	0.009	5843	5471	GAS (Tol-C12)	3477075	231.13
C8	1.660	-0.004	4296	3539	DIESEL (C12-C24)	17892717	1221.35
C10	3.234	0.004	55682	94943	M.OIL (C24-C38)	162145	12.90
C12	4.119	-0.005	172346	160512	AK-102 (C10-C25)	20333936	1175.44
C14	4.793	-0.010	299374	371153	AK-103 (C25-C36)	119173	13.96
C16	5.382	-0.002	506217	530164			
C18	5.950	0.005	432636	582766			
C20	6.516	-0.001	301626	404351	JET-A (C10-C18)	14753370	1193.45
C22	7.066	-0.003	139478	238211	MIN.OIL (C24-C38)	162145	12.06
C24	7.598	0.007	29489	77270			
C25	7.851	0.009	14027	26956			
C26	8.092	0.007	6223	11791			
C28	8.539	0.000	1440	1131			
C32	9.358	0.011	84	30			
C34	9.722	0.002	72	76			
Filter Peak	9.940	-0.006	105	63	BUNKERC (C10-C38)	20460622	2680.20
C36	10.081	-0.001	231	497			
C38	10.437	0.002	365	263			
C40	10.792	0.011	906	1301			
o-terph	6.096	0.008	901833	736634			
Triacon Surr	8.960	-0.003	716951	772779	NAS DIES (C10-C24)	20298478	1184.69

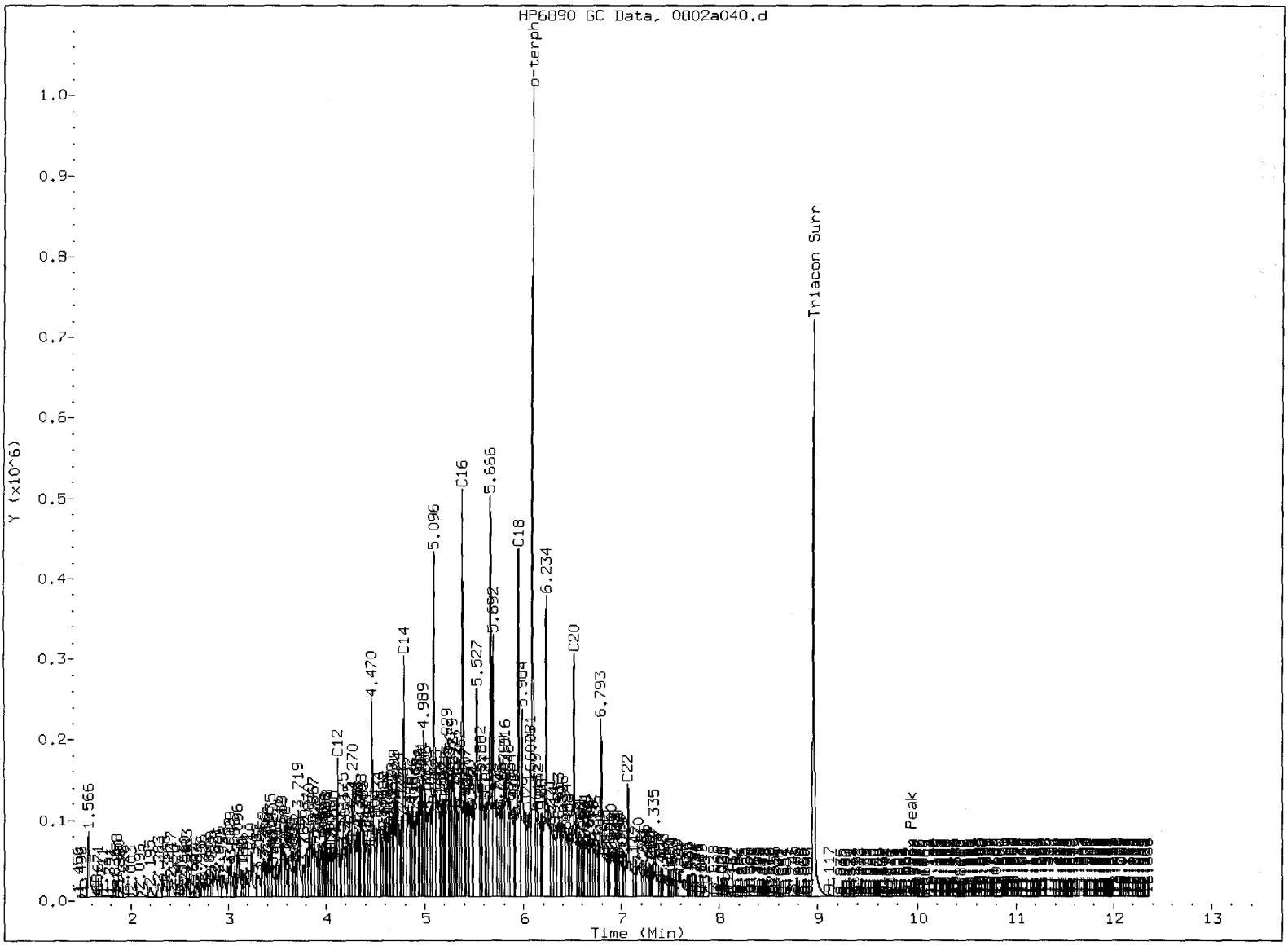
Range Times: NW Diesel(4.124 - 7.590) AK102(3.23 - 7.84) Jet A(3.23 - 5.94)
NW M.Oil(7.59 - 10.43) AK103(7.84 - 10.08) OR Diesel(3.23 - 8.54)

Surrogate	Area	Amount	%Rec
o-Terphenyl	736634	36.2	80.4 M
Triacontane	772779	40.5	90.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

FID:4A-2C/RTX-1 VE22LCSDW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: AL Date: 6/3/12

Data File: /chem3/fid4a.i/20120802.b/0802a040.d

Date : 02-AUG-2012 22:32

Client ID:

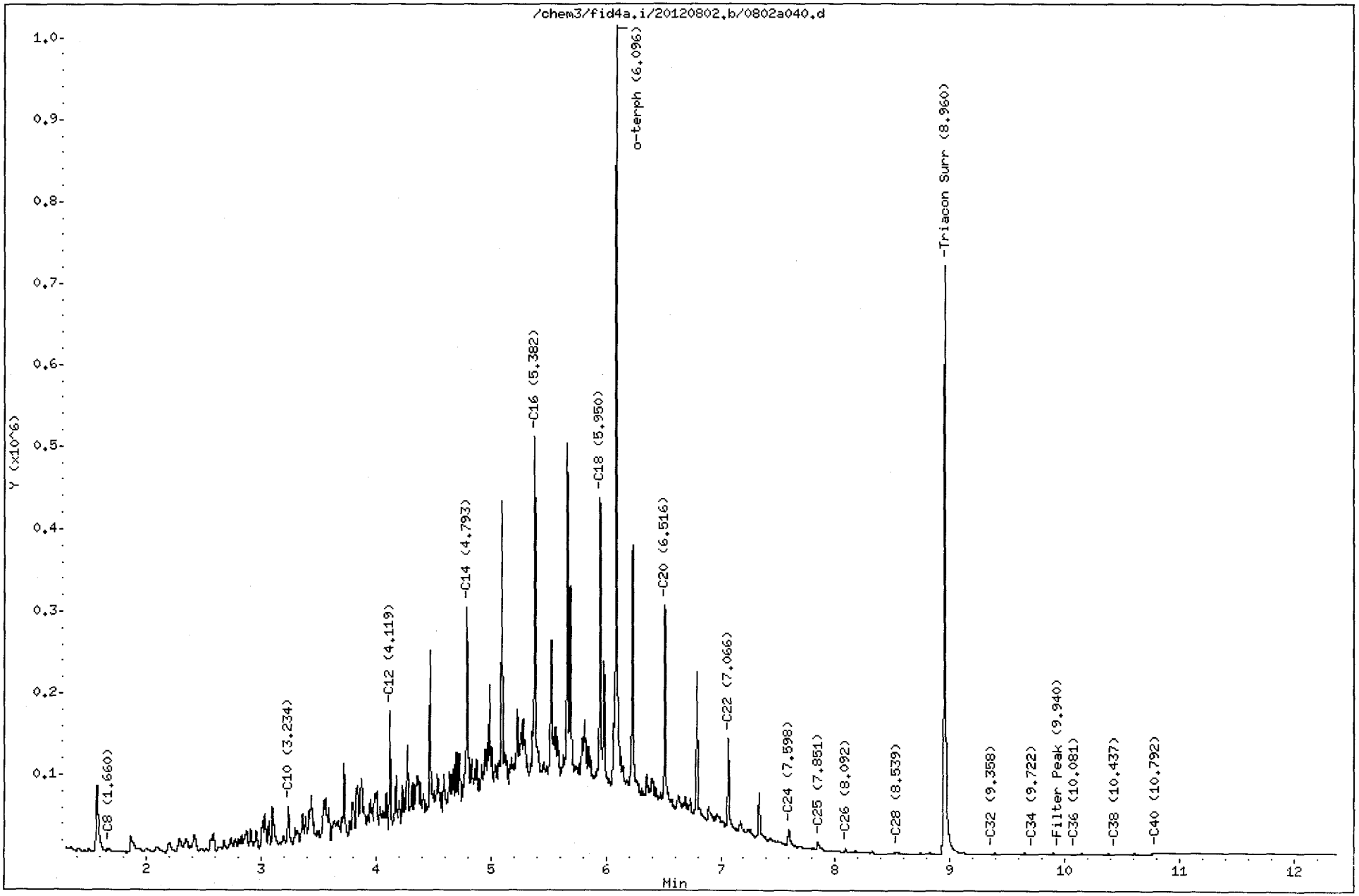
Instrument: fid4a.i

Sample Info: VE22LCSDW1

Operator: AR

Column phase: RTX-1

Column diameter: 0.25



ANALYTICAL RESOURCES INCORPORATED

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VE22
Matrix: Water Project: Cornwall
Date Received: 07/31/12 0001020.400.510

ARI ID	Client ID	Sample Amt	Final Vol	Prep Date
12-14520-080112MB	Method Blank	500 mL	1.00 mL	08/01/12
12-14520-080112LCS	Lab Control	500 mL	1.00 mL	08/01/12
12-14520-080112LCSD	Lab Control Dup	500 mL	1.00 mL	08/01/12
12-14520-VE22A	MW-15D-073012	500 mL	1.00 mL	08/01/12
12-14521-VE22B	MW-16S-073012	500 mL	1.00 mL	08/01/12
12-14522-VE22C	MW-15S-073012	500 mL	1.00 mL	08/01/12
12-14523-VE22D	MW-14S-073012	500 mL	1.00 mL	08/01/12
12-14524-VE22E	MW-13S-073012	500 mL	1.00 mL	08/01/12
12-14525-VE22F	MW-14D-073012	500 mL	1.00 mL	08/01/12
12-14526-VE22G	MW-13D-073012	500 mL	1.00 mL	08/01/12
12-14527-VE22H	MW-DUP-073012	500 mL	1.00 mL	08/01/12

ANALYTICAL RESOURCES INCORPORATED

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: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Matrix: Water
Data Release Authorized:
Reported: 08/07/12

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range/Surrogate	RL	Result
MB-080312	Method Blank	08/03/12	08/06/12	1.00	Diesel Range	0.10	< 0.10 U
12-14520	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		76.2%
VE22A	MW-15D-073012	08/03/12	08/06/12	1.00	Diesel Range	0.10	< 0.10 U
12-14520	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		75.2%
VE22B	MW-16S-073012	08/03/12	08/06/12	1.00	Diesel Range	0.10	< 0.10 U
12-14521	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		71.5%
VE22C	MW-15S-073012	08/03/12	08/06/12	1.00	**Diesel Range**	**0.10**	**0.20**
12-14522	HC ID: **DIESEL**		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		67.9%
VE22D	MW-14S-073012	08/03/12	08/06/12	1.00	Diesel Range	0.10	< 0.10 U
12-14523	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		70.9%

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.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a025.d ARI ID: VE22MBW1
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 06-AUG-2012 21:09
Operator: JR
Report Date: 08/07/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.387	0.006	2851	6248	GAS (Tol-C12)	55060	3.66
C8	1.662	0.002	464	844	DIESEL (C12-C24)	179672	12.26
C10	3.240	0.006	269	168	M.OIL (C24-C38)	337481	26.85
C12	4.137	0.005	319	304	AK-102 (C10-C25)	205581	11.88
C14	4.822	0.014	331	118	AK-103 (C25-C36)	310170	36.33
C16	5.400	0.010	885	1490			
C18	5.952	0.002	1295	2193			
C20	6.529	0.007	1043	2129	JET-A (C10-C18)	136489	11.04
C22	7.083	0.010	957	1870	MIN.OIL (C24-C38)	337481	25.11
C24	7.590	-0.006	673	225			
C25	7.847	0.000	468	213			
C26	8.088	-0.003	708	1056			
C28	8.542	-0.007	1015	1208			
C32	9.387	-0.007	702	1096			
C34	9.779	-0.013	978	1229			
Filter Peak	9.939	-0.018	1023	1139	BUNKERC (C10-C38)	537224	70.37
C36	10.222	0.044	1774	3296			
C38	10.551	-0.003	1298	1826			
C40	10.930	0.005	1735	2194			
o-terph	6.094	0.000	530883	698219			
Triacon Surr	8.962	-0.028	706569	708966	NAS DIES (C10-C24)	199743	11.66

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	698219	34.3	76.2
Triacontane	708966	37.1	82.5

M Indicates the peak was manually integrated

8.7.12

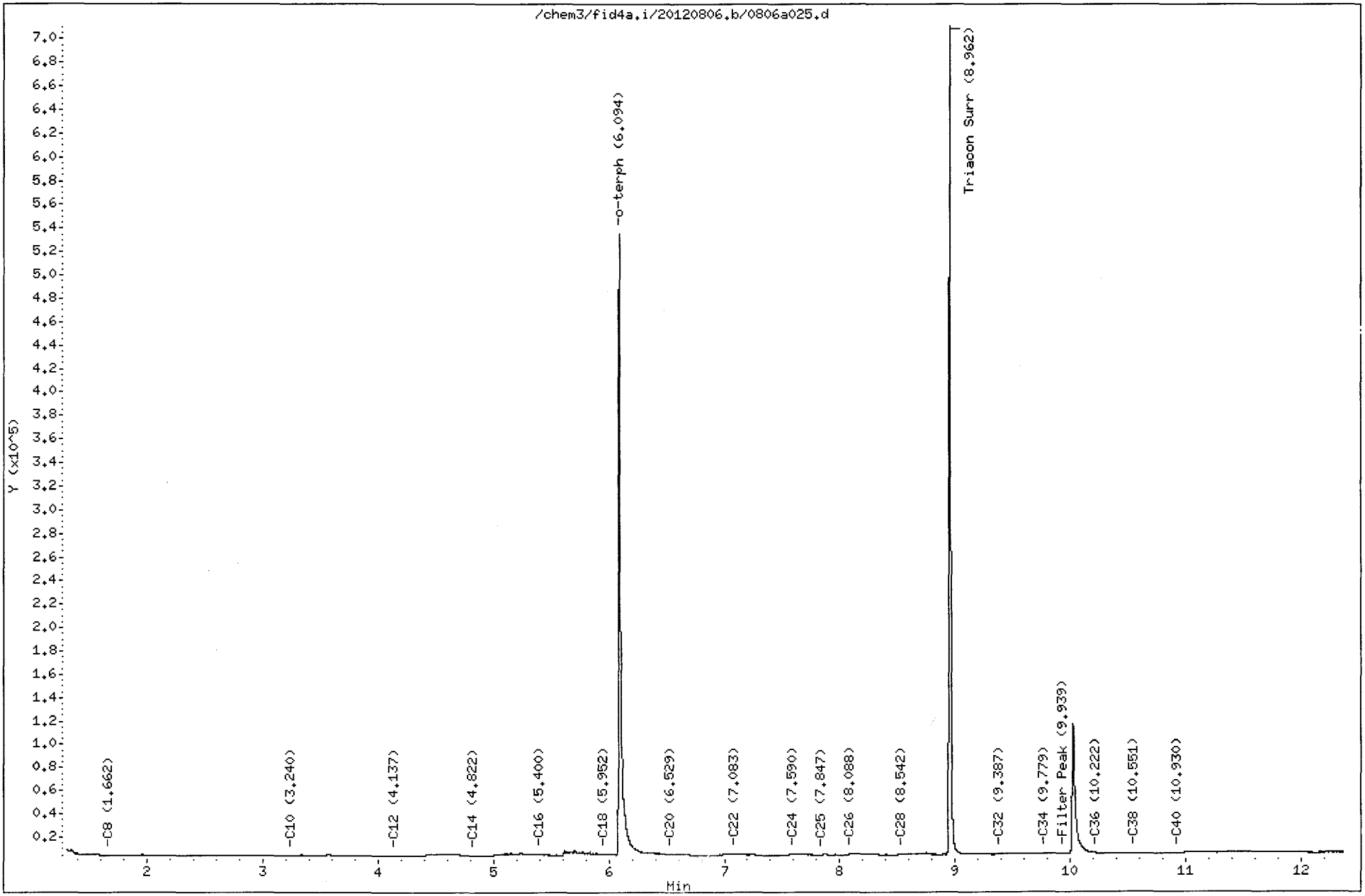
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

4454

Data File: /chem3/fid4a.i/20120806.b/0806a025.d
Date : 06-AUG-2012 21:09
Client ID:
Sample Info: VE22MBW1

Instrument: fid4a.i

Operator: JR
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a028.d ARI ID: VE22A
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 06-AUG-2012 22:12
Operator: JR
Report Date: 08/07/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.395	0.014	6838	9781	GAS (Tol-C12)	228134	15.16
C8	1.665	0.005	594	1780	DIESEL (C12-C24)	224779	15.34
C10	3.257	0.024	989	1393	M.OIL (C24-C38)	132698	10.56
C12	4.142	0.011	2938	8299	AK-102 (C10-C25)	397847	23.00
C14	4.811	0.003	1927	839	AK-103 (C25-C36)	109976	12.88
C16	5.401	0.011	1368	615			
C18	5.954	0.004	992	924			
C20	6.527	0.006	900	1048	JET-A (C10-C18)	338094	27.35
C22	7.084	0.012	862	1805	MIN.OIL (C24-C38)	132698	9.87
C24	7.595	0.000	510	352			
C25	7.822	-0.025	507	860			
C26	8.084	-0.006	361	275			
C28	8.545	-0.004	999	816			
C32	9.388	-0.006	1051	3206			
C34	9.801	0.009	453	713			
Filter Peak	9.947	-0.010	511	708	BUNKERC (C10-C38)	526113	68.92
C36	----						
C38	10.561	0.008	929	1504			
C40	10.918	-0.006	1342	1547			
o-terph	6.095	0.001	556217	689566			
Triacon Surr	8.968	-0.023	631912	670916	NAS DIES (C10-C24)	393415	22.96

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	689566	33.9	75.2
Triacontane	670916	35.2	78.1

M Indicates the peak was manually integrated

VD
8-7-12

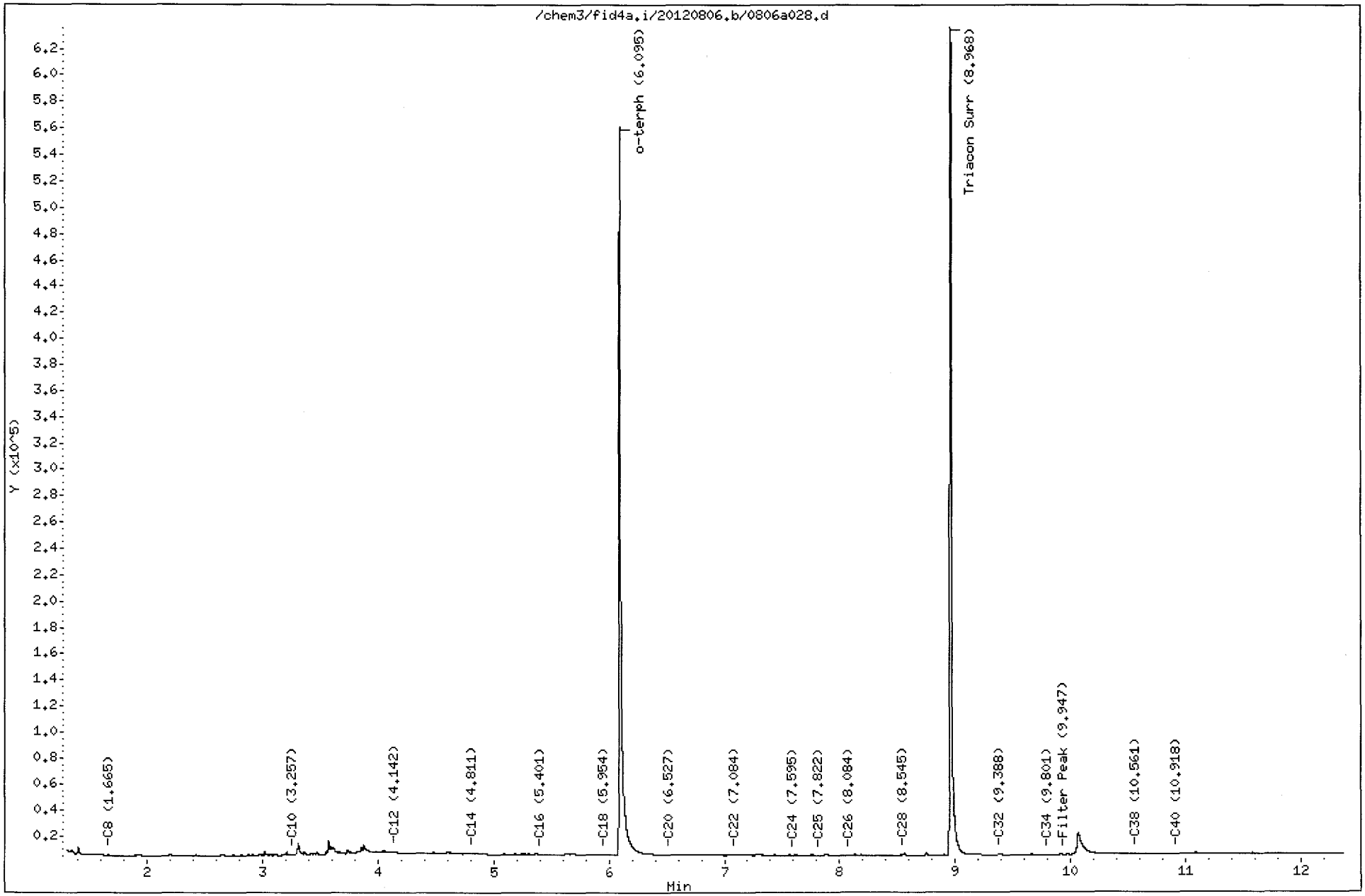
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120806.b/0806a028.d
Date : 06-AUG-2012 22:12
Client ID:
Sample Info: VE22A

Instrument: fid4a.i

Operator: JR
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a029.d ARI ID: VE22B
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 06-AUG-2012 22:34
Operator: JR
Report Date: 08/07/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.397	0.016	4951	9283	GAS (Tol-C12)	72438	4.82
C8	1.663	0.003	470	1303	DIESEL (C12-C24)	116947	7.98
C10	3.251	0.018	343	663	M.OIL (C24-C38)	123492	9.83
C12	4.133	0.002	650	793	AK-102 (C10-C25)	152055	8.79
C14	4.800	-0.008	500	642	AK-103 (C25-C36)	104715	12.26
C16	5.403	0.013	695	1136			
C18	5.952	0.001	798	418			
C20	6.530	0.008	746	1037	JET-A (C10-C18)	107195	8.67
C22	7.068	-0.005	411	191	MIN.OIL (C24-C38)	123492	9.19
C24	7.624	0.028	607	2050			
C25	7.867	0.019	737	795			
C26	8.099	0.009	750	1138			
C28	8.543	-0.006	1152	1011			
C32	9.391	-0.003	1186	2958			
C34	9.794	0.002	411	703			
Filter Peak	9.965	0.007	477	476	BUNKERC (C10-C38)	273096	35.77
C36	10.194	0.016	1782	2911			
C38	10.557	0.003	871	778			
C40	10.917	-0.007	1283	611			
o-terph	6.095	0.001	498148	655626			
Triacon Surr	8.966	-0.025	598244	658532	NAS DIES (C10-C24)	149604	8.73

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	655626	32.2	71.5
Triacontane	658532	34.5	76.7

M Indicates the peak was manually integrated

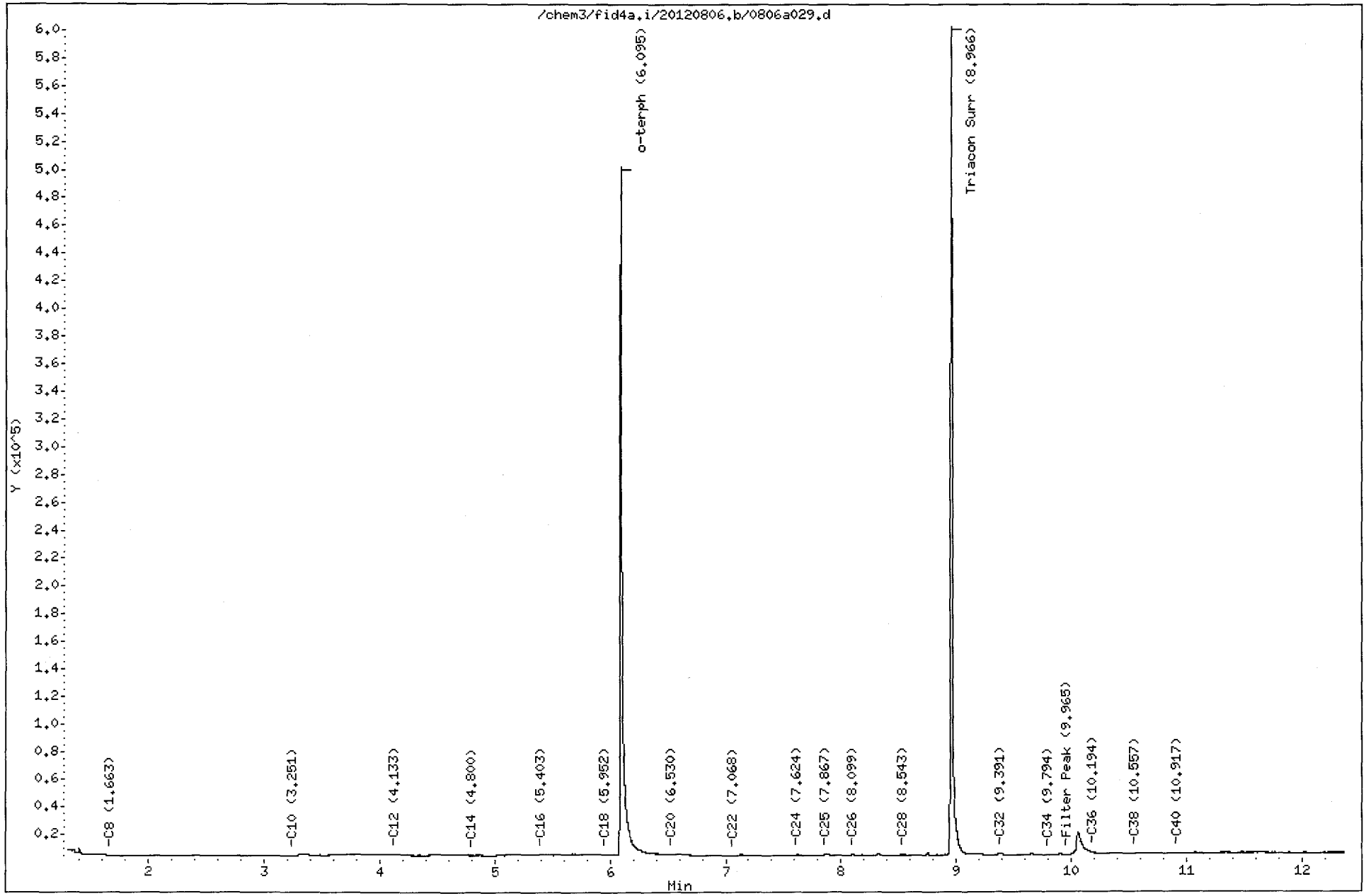
Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

LD 8-7-12

Data File: /chem3/fid4a.i/20120806.b/0806a029.d
Date : 06-AUG-2012 22:34
Client ID:
Sample Info: VE22B

Instrument: fid4a.i
Operator: JR
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a030.d
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 08/07/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE22C
Client ID:
Injection: 06-AUG-2012 22:55
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.385	0.004	3357	5630	GAS (Tol-C12)	433570	28.82
C8	1.650	-0.010	497	1170	DIESEL (C12-C24)	1449730	98.96
C10	3.253	0.020	2271	3769	M.OIL (C24-C38)	322118	25.63
C12	4.125	-0.006	10003	14117	AK-102 (C10-C25)	1810315	104.65
C14	4.792	-0.016	15559	37398	AK-103 (C25-C36)	278382	32.61
C16	5.421	0.031	9393	24316			
C18	5.951	0.000	5458	7575			
C20	6.528	0.006	3986	4197	JET-A (C10-C18)	1468341	118.78
C22	7.083	0.011	3268	1817	MIN.OIL (C24-C38)	322118	23.97
C24	7.592	-0.003	2186	1100			
C25	7.841	-0.006	1704	1312			
C26	8.096	0.006	1331	1872			
C28	8.544	-0.006	1310	1218			
C32	9.388	-0.006	767	1993			
C34	9.808	0.016	649	724			
Filter Peak	9.938	-0.019	859	1661	BUNKERC (C10-C38)	2108002	276.13
C36	10.220	0.042	1553	3070			
C38	10.551	-0.003	1146	1247			
C40	10.933	0.008	1513	1466			
o-terph	6.095	0.001	638347	622832			
Triacon Surr	8.963	-0.027	620568	658417	NAS DIES (C10-C24)	1785883	104.23

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	622832	30.6	67.9 M
Triacontane	658417	34.5	76.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

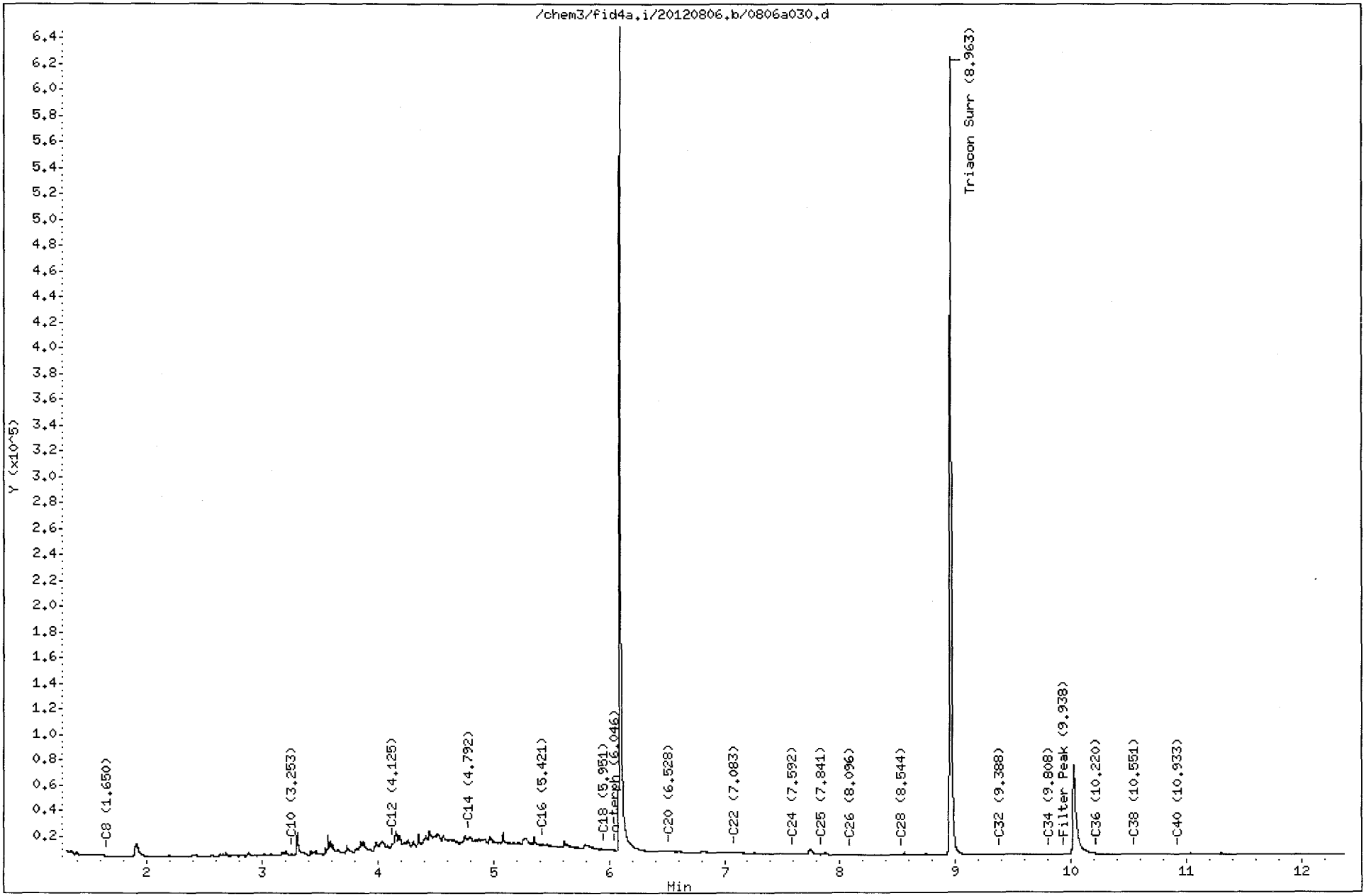
Data File: /chem3/fid4a.i/20120806.b/0806a030.d
Date : 06-AUG-2012 22:55
Client ID:
Sample Info: VE22C

Instrument: fid4a.i

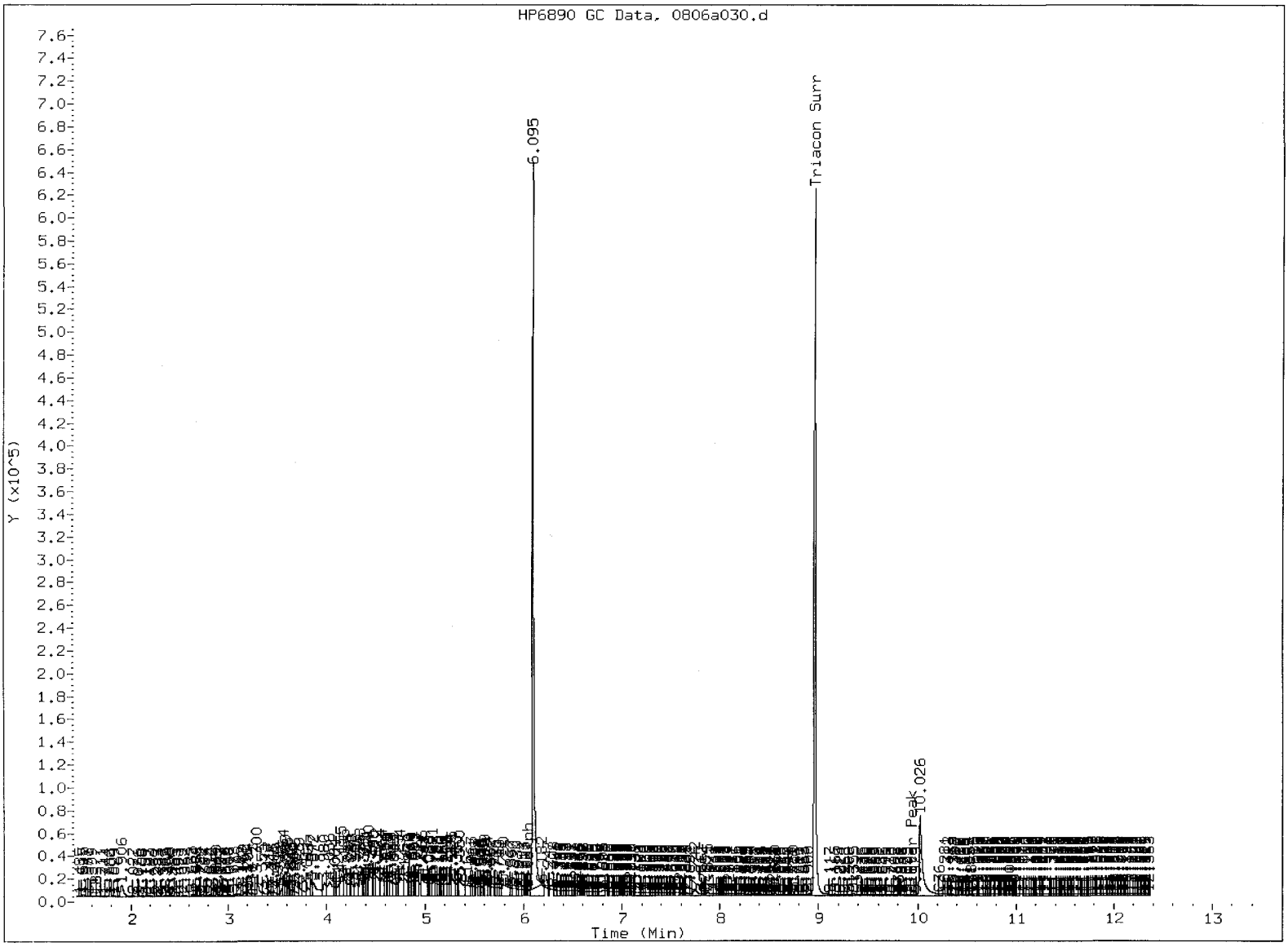
Operator: JR
Column diameter: 0.25

Column phase: RTX-1

VD 8.7.12



FID:4A-2C/RTX-1 VE22C FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: VD Date: 8.7.12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a031.d
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR
Report Date: 08/07/2012
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

ARI ID: VE22D
Client ID:
Injection: 06-AUG-2012 23:16
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.389	0.008	5412	9029	GAS (Tol-C12)	298848	19.87
C8	1.655	-0.005	488	1221	DIESEL (C12-C24)	253605	17.31
C10	3.255	0.021	1416	1869	M.OIL (C24-C38)	184401	14.67
C12	4.121	-0.010	3825	5912	AK-102 (C10-C25)	481210	27.82
C14	4.789	-0.019	1872	1138	AK-103 (C25-C36)	162089	18.98
C16	5.401	0.011	1399	3486			
C18	5.957	0.006	1046	951			
C20	6.523	0.001	965	966	JET-A (C10-C18)	414391	33.52
C22	7.066	-0.007	616	899	MIN.OIL (C24-C38)	184401	13.72
C24	7.586	-0.009	554	598			
C25	7.823	-0.024	503	840			
C26	8.082	-0.009	367	437			
C28	8.546	-0.003	843	643			
C32	9.386	-0.009	783	900			
C34	9.826	0.034	451	441			
Filter Peak	9.938	-0.019	684	1564	BUNKERC (C10-C38)	662245	86.75
C36	10.171	-0.007	1975	6469			
C38	10.544	-0.009	1013	743			
C40	10.921	-0.004	1418	1496			
o-terph	6.096	0.002	487167	649939			
Triacon Surr	8.962	-0.028	602254	650438	NAS DIES (C10-C24)	477844	27.89

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	649939	31.9	70.9
Triacontane	650438	34.1	75.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120806.b/0806a031.d

Date : 06-AUG-2012 23:16

Client ID:

Sample Info: VE22D

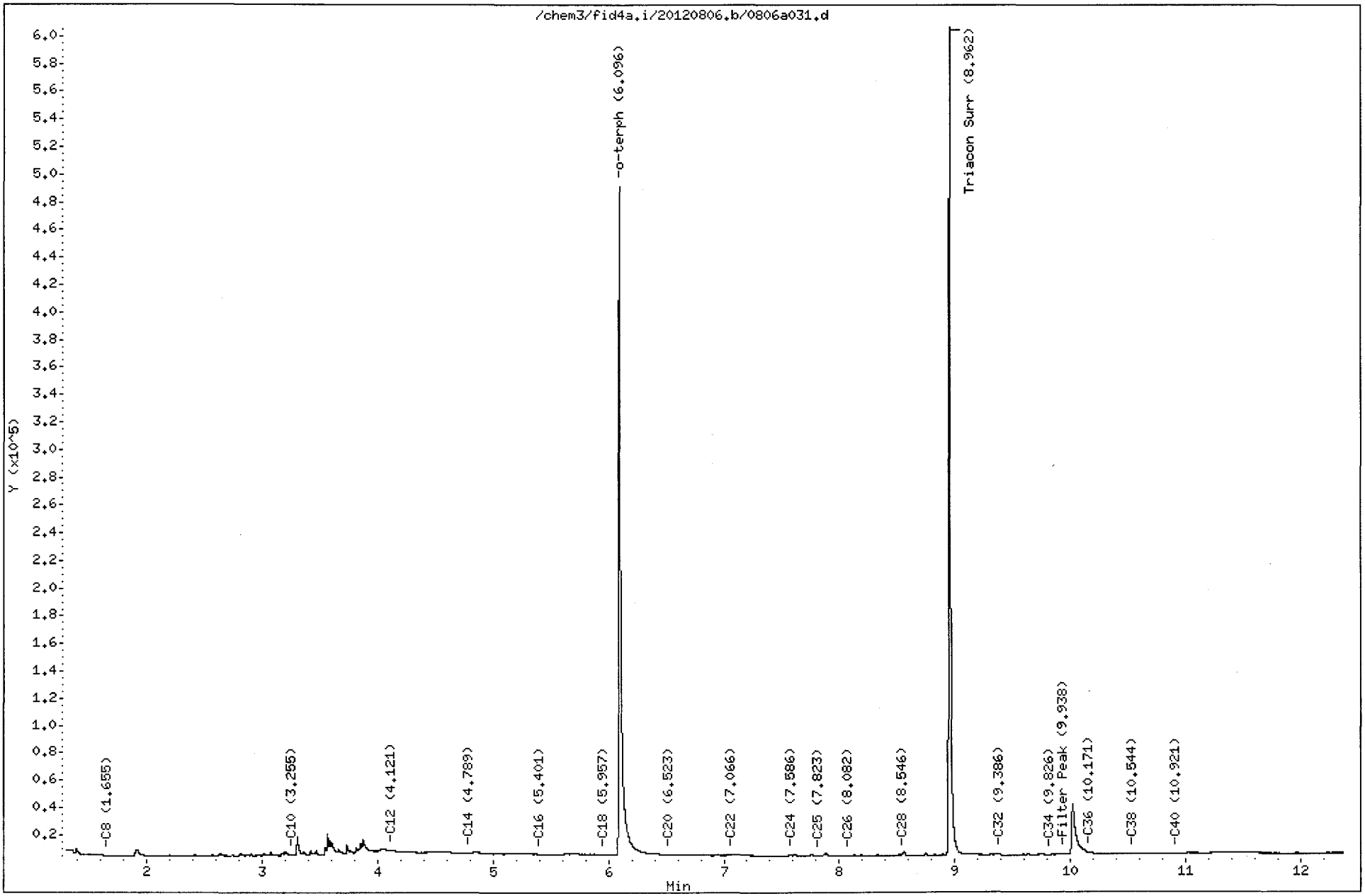
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR

Column diameter: 0.25

VJ 8.7.12



ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510

Client ID	OTER	TOT OUT
MB-080312	76.2%	0
LCS-080312	59.6%	0
LCSD-080312	68.6%	0
MW-15D-073012	75.2%	0
MW-16S-073012	71.5%	0
MW-15S-073012	67.9%	0
MW-14S-073012	70.9%	0

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

Prep Method: SW3510C
Log Number Range: 12-14520 to 12-14523

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-080312**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-080312
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Date Extracted LCS/LCSD: 08/03/12
Date Analyzed LCS: 08/06/12 21:30
LCSD: 08/06/12 21:51
Instrument/Analyst LCS: FID/VTS
LCSD: FID/VTS

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	1.97	3.00	65.7%	1.98	3.00	66.0%	0.5%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	59.6%	68.6%

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

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a026.d ARI ID: VE22LCSW1
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 06-AUG-2012 21:30
Operator: JR
Report Date: 08/07/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.381	0.000	4348	3480	GAS (Tol-C12)	2664675	177.13
C8	1.661	0.001	2593	3539	DIESEL (C12-C24)	14451591	986.46
C10	3.238	0.005	39724	61184	M.OIL (C24-C38)	272925	21.71
C12	4.125	-0.006	147334	135831	AK-102 (C10-C25)	16483912	952.88
C14	4.799	-0.009	261365	286442	AK-103 (C25-C36)	220409	25.82
C16	5.388	-0.002	427159	415601			
C18	5.956	0.005	381737	392717			
C20	6.521	0.000	259614	360564	JET-A (C10-C18)	11906073	963.12
C22	7.072	0.000	112765	223247	MIN.OIL (C24-C38)	272925	20.31
C24	7.607	0.012	22689	57823			
C25	7.859	0.012	11721	25529			
C26	8.099	0.008	5461	10007			
C28	8.545	-0.004	1194	1749			
C32	9.381	-0.013	852	1172			
C34	9.803	0.012	98	71			
Filter Peak	9.960	0.003	198	213	BUNKERC (C10-C38)	16714281	2189.45
C36	----						
C38	10.544	-0.010	564	344			
C40	10.921	-0.003	1044	970			
o-terph	6.101	0.006	714727	546368			
Triacon Surr	8.973	-0.018	590217	649441	NAS DIES (C10-C24)	16441356	959.57

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	546368	26.8	59.6 M
Triacontane	649441	34.0	75.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120806.b/0806a026.d

Date : 06-AUG-2012 21:30

Client ID:

Sample Info: VE22LCSW1

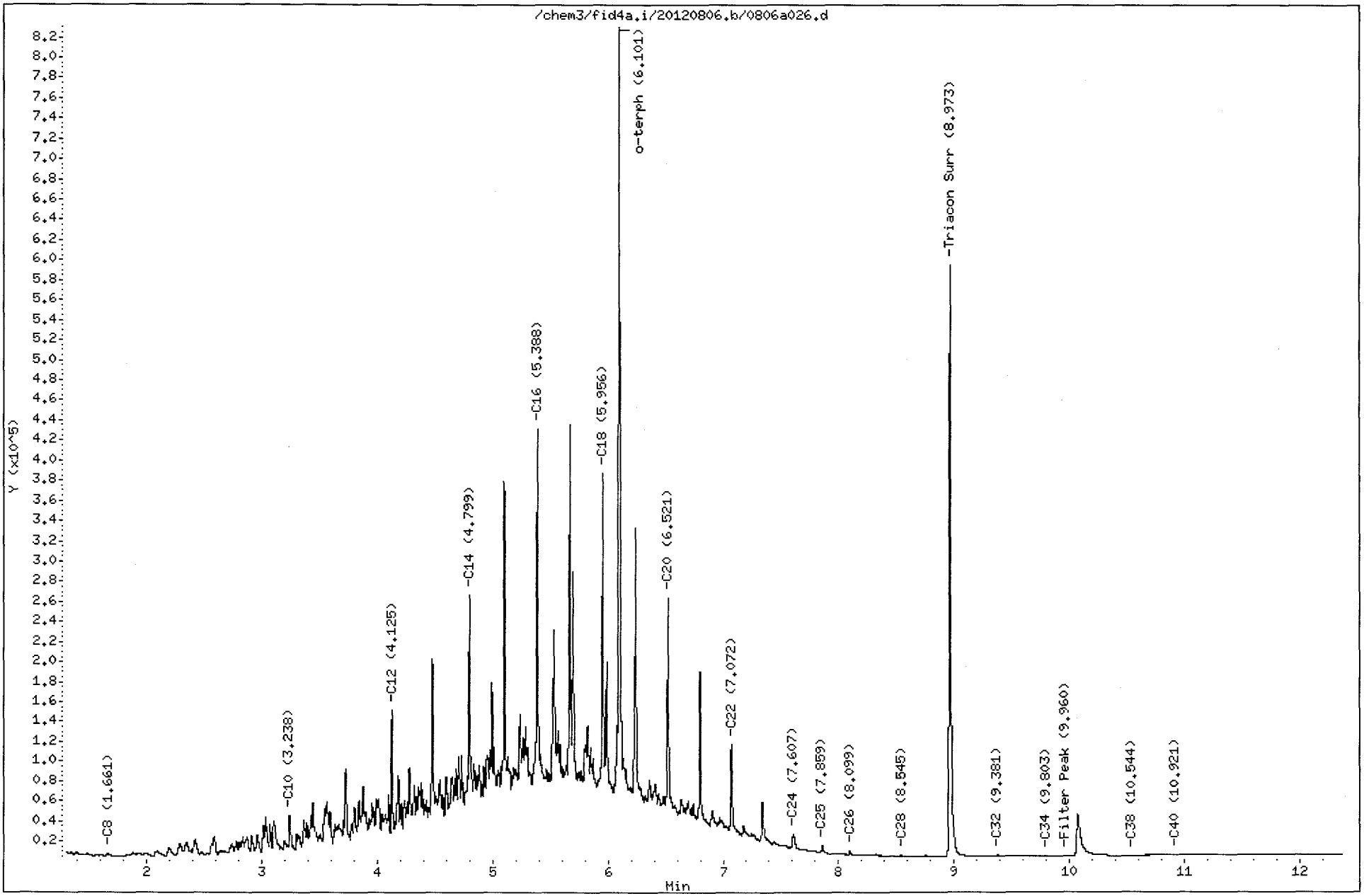
Column phase: RTX-1

VJ 8.7.12

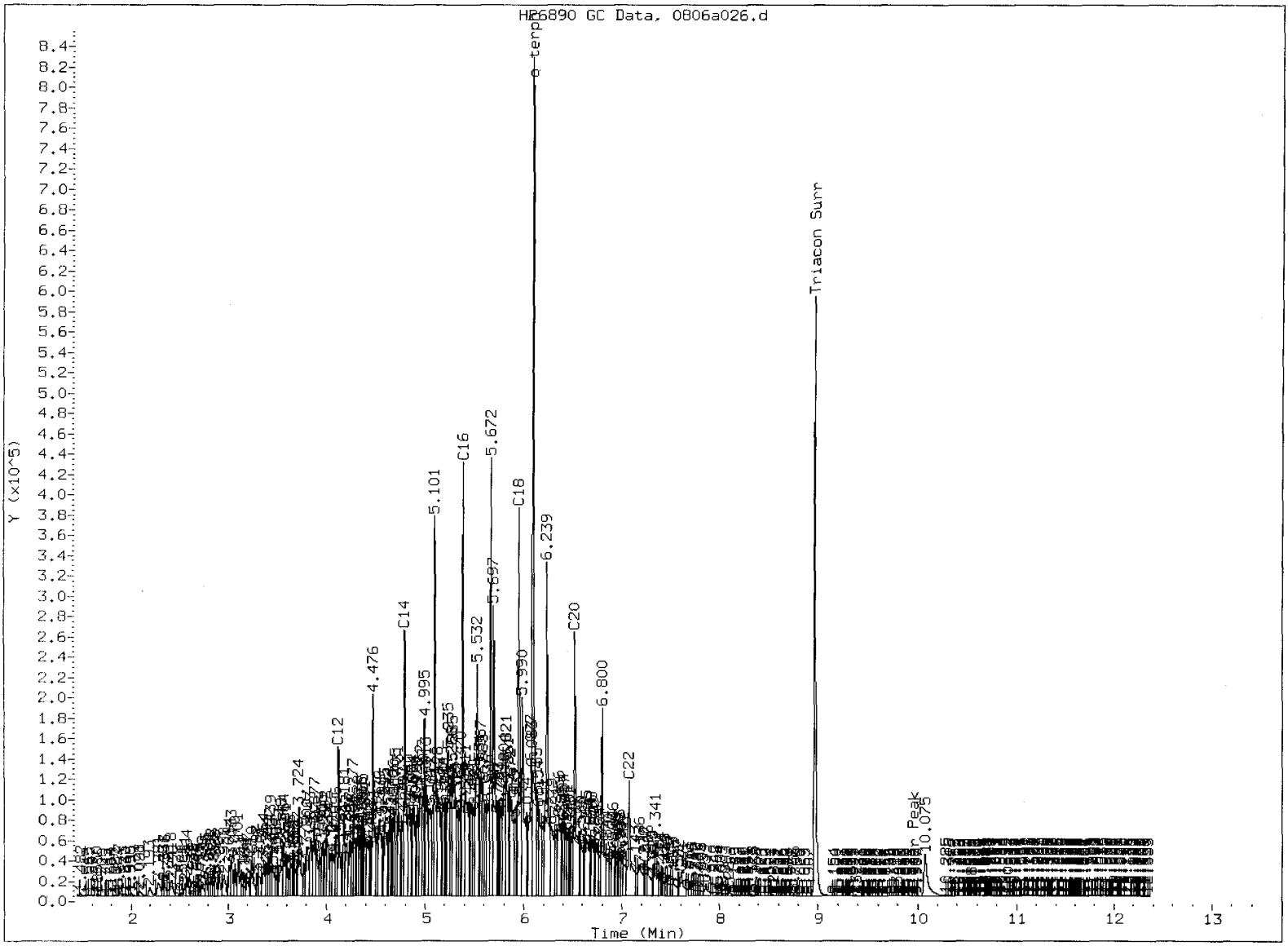
Instrument: fid4a.i

Operator: JR

Column diameter: 0.25



FID:4A-2C/RTX-1 VE22LCSW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: VD Date: 8.7.12

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20120806.b/0806a027.d ARI ID: VE22LCSDW1
Method: /chem3/fid4a.i/20120806.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 06-AUG-2012 21:51
Operator: JR
Report Date: 08/07/2012 Dilution Factor: 1
Macro: 13-JUL-2012
Calibration Dates: Gas:10-MAY-2012 Diesel:10-JUL-2012 M.Oil:12-JUN-2012

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.388	0.007	6940	4823	GAS (Tol-C12)	2709770	180.12
C8	1.667	0.007	2903	5475	DIESEL (C12-C24)	14475822	988.11
C10	3.239	0.006	44417	50962	M.OIL (C24-C38)	307529	24.47
C12	4.124	-0.007	158033	137523	AK-102 (C10-C25)	16538700	956.05
C14	4.798	-0.010	276561	298496	AK-103 (C25-C36)	258739	30.30
C16	5.387	-0.003	441814	499765			
C18	5.955	0.005	392564	473421			
C20	6.522	0.001	263537	338865	JET-A (C10-C18)	12004956	971.12
C22	7.072	0.000	117874	211506	MIN.OIL (C24-C38)	307529	22.88
C24	7.605	0.010	23456	70730			
C25	7.858	0.011	12133	27712			
C26	8.097	0.007	5478	9977			
C28	8.543	-0.006	1372	1270			
C32	9.395	0.001	166	163			
C34	9.781	-0.011	133	282			
Filter Peak	9.953	-0.004	210	283	BUNKERC (C10-C38)	16809854	2201.97
C36	----						
C38	10.552	-0.001	621	607			
C40	10.916	-0.008	1072	1062			
o-terph	6.100	0.006	770393	629188			
Triacon Surr	8.966	-0.024	638682	680351	NAS DIES (C10-C24)	16502325	963.13

Range Times: NW Diesel(4.131 - 7.595) AK102(3.23 - 7.85) Jet A(3.23 - 5.95)
NW M.Oil(7.60 - 10.55) AK103(7.85 - 10.18) OR Diesel(3.23 - 8.55)

Surrogate	Area	Amount	%Rec
o-Terphenyl	629188	30.9	68.6 M
Triacontane	680351	35.6	79.2

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20371.2	10-JUL-2012
Triacon Surr	19086.0	12-JUN-2012
Gas	15043.9	10-MAY-2012
Diesel	14650.0	10-JUL-2012
Motor Oil	12569.0	12-JUN-2012
AK102	17299.0	10-JUL-2012
AK103	8538.0	24-MAY-2012
JetA	12362.0	31-JUL-2012
Min Oil	13440.7	09-MAY-2012
NAS Diesel	17134.0	10-JUL-2012
Bunker C	7634.0	13-JUL-2012

Data File: /chem3/fid4a.i/20120806.b/0806a027.d

Date : 06-AUG-2012 21:51

Client ID:

Sample Info: VE22LCSDW1

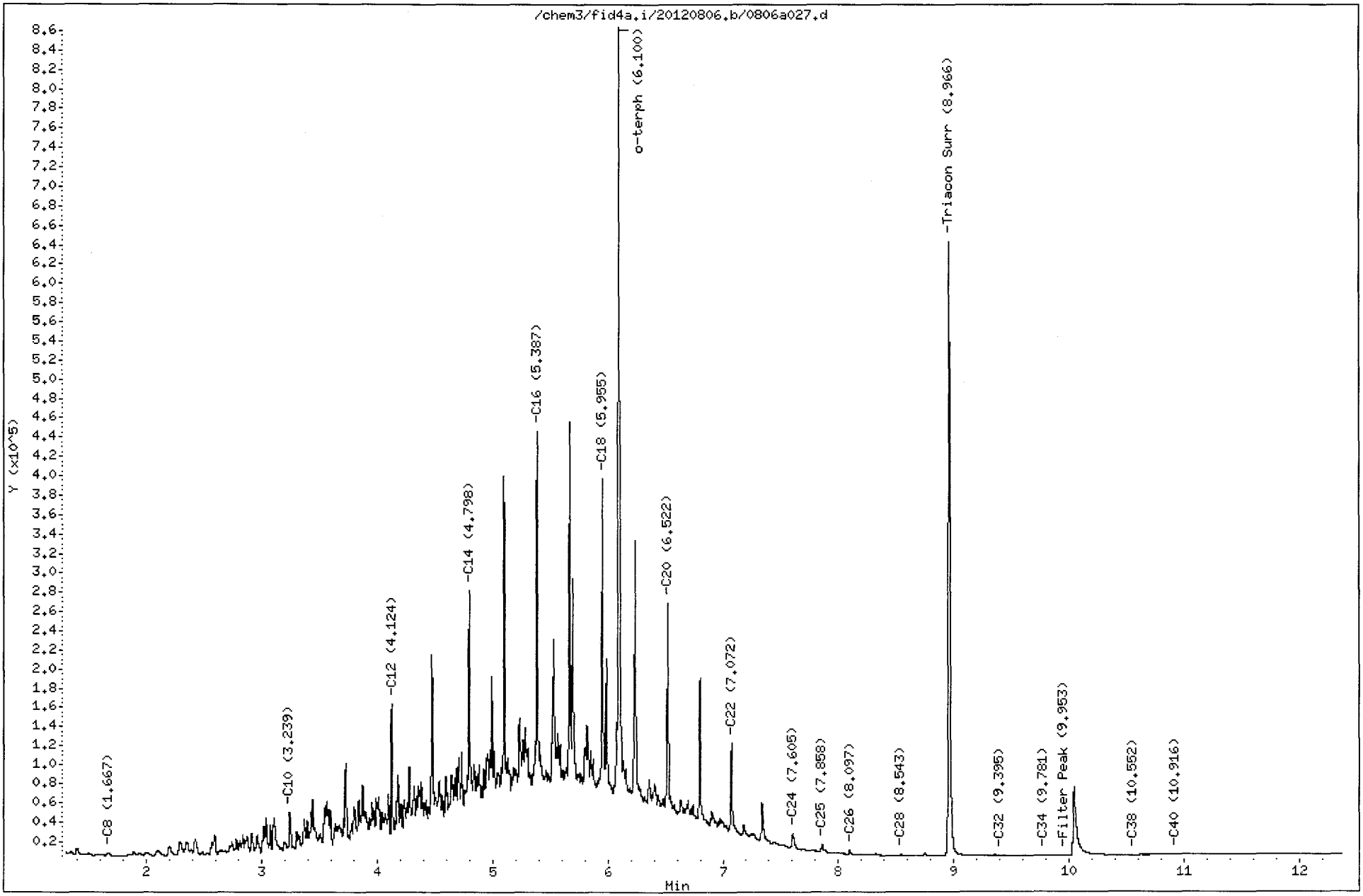
Column phase: RTX-1

VJ 8.7.12

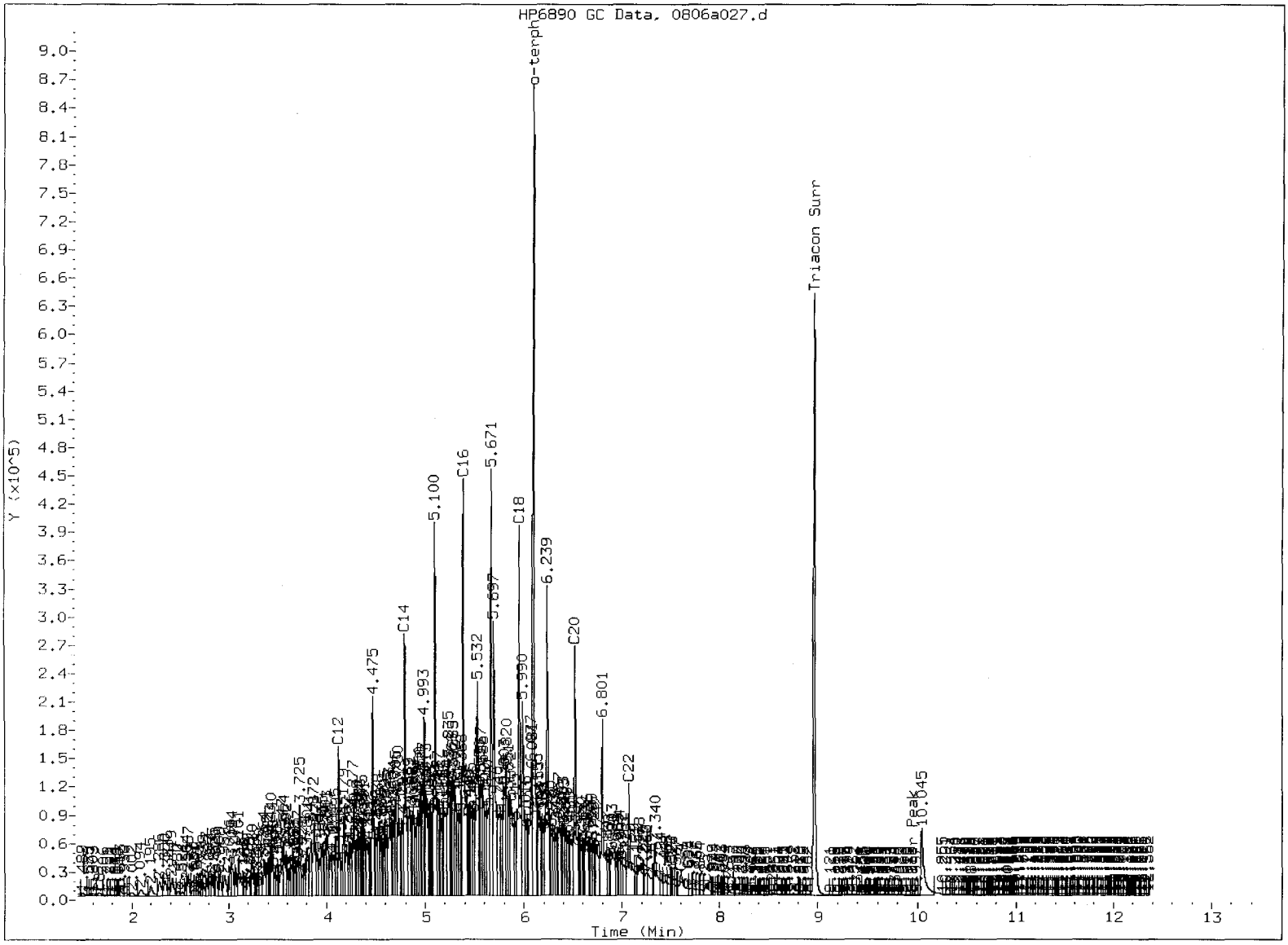
Instrument: fid4a.i

Operator: JR

Column diameter: 0.25



FID:4A-2C/RTX-1 VE22LCSDW1 FID:4A SIGNAL



MANUAL INTEGRATION

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

Analyst: VD Date: 8.7.12

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VE22
Matrix: Water Project: Cornwall
Date Received: 07/31/12 0001020.400.510

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
12-14520-080312MB1	Method Blank	500 mL	1.00 mL	08/03/12
12-14520-080312LCS1	Lab Control	500 mL	1.00 mL	08/03/12
12-14520-080312LCSD1	Lab Control Dup	500 mL	1.00 mL	08/03/12
12-14520-VE22A	MW-15D-073012	500 mL	1.00 mL	08/03/12
12-14521-VE22B	MW-16S-073012	500 mL	1.00 mL	08/03/12
12-14522-VE22C	MW-15S-073012	500 mL	1.00 mL	08/03/12
12-14523-VE22D	MW-14S-073012	500 mL	1.00 mL	08/03/12

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-073012
SAMPLE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.8**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/03/12	**7439-96-5**	**Manganese**	1	**182**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-16S-073012
SAMPLE

Lab Sample ID: VE22B
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.8**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/03/12	**7439-96-5**	**Manganese**	1	**380**	
200.8	08/01/12	200.8	08/03/12	**7440-66-6**	**Zinc**	4	**5**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15S-073012
SAMPLE

Lab Sample ID: VE22C
LIMS ID: 12-14522
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.7**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	**7439-92-1**	**Lead**	0.1	**0.1**	
200.8	08/01/12	200.8	08/03/12	**7439-96-5**	**Manganese**	1	**529**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-14S-073012
SAMPLE

Lab Sample ID: VE22D
LIMS ID: 12-14523
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.8**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/03/12	**7439-96-5**	**Manganese**	1	**584**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-13S-073012
SAMPLE

Lab Sample ID: VE22E
LIMS ID: 12-14524
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.6**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/03/12	**7439-96-5**	**Manganese**	1	**704**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-14D-073012
SAMPLE

Lab Sample ID: VE22F
LIMS ID: 12-14525
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.7**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/06/12	**7439-96-5**	**Manganese**	5	**1,440**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-13D-073012
SAMPLE

Lab Sample ID: VE22G
LIMS ID: 12-14526
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	**7440-38-2**	**Arsenic**	0.5	**0.9**	
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/03/12	**7439-96-5**	**Manganese**	0.5	**257**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-DUP-073012
SAMPLE

Lab Sample ID: VE22H
LIMS ID: 12-14527
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	7440-38-2	Arsenic	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/06/12	**7439-96-5**	**Manganese**	5	**1,430**	
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-073012
MATRIX SPIKE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.8	24.9	25.0	96.4%	
Copper	200.8	0.5 U	23.2	25.0	92.8%	
Lead	200.8	0.1 U	27.7	25.0	111%	
Manganese	200.8	182	204	25	88.0%	H
Zinc	200.8	4 U	64	80	80.0%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-073012
DUPLICATE

Lab Sample ID: VE22A
LIMS ID: 12-14520
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.8	0.7	13.3%	+/- 0.5	L
Copper	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Lead	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Manganese	200.8	182	184	1.1%	+/- 20%	
Zinc	200.8	4 U	4 U	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: VE22MB
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/01/12	200.8	08/03/12	7440-38-2	Arsenic	0.2	0.2	U
200.8	08/01/12	200.8	08/03/12	7440-50-8	Copper	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7439-92-1	Lead	0.1	0.1	U
200.8	08/01/12	200.8	08/03/12	7439-96-5	Manganese	0.5	0.5	U
200.8	08/01/12	200.8	08/03/12	7440-66-6	Zinc	4	4	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: VE22LCS
LIMS ID: 12-14521
Matrix: Water
Data Release Authorized:
Reported: 08/07/12

QC Report No: VE22-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	25.1	25.0	100%	
Copper	200.8	26.6	25.0	106%	
Lead	200.8	25.6	25.0	102%	
Manganese	200.8	25.8	25.0	103%	
Zinc	200.8	78	80	97.5%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 08/10/12
Date Received: 07/31/12
Page 1 of 1

QC Report No238: VE24-Landau Associates
Project: Cornwall
0001020.400.510

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
MW-15D-073012 VE24A 12-14529	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-16S-073012 VE24B 12-14530	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-15S-073012 VE24C 12-14531	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-14S-073012 VE24D 12-14532	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-13S-073012 VE24E 12-14533	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-14D-073012 VE24F 12-14534	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-13D-073012 VE24G 12-14535	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MW-DUP-073012 VE24H 12-14536	07/30/12	Water	08/01/12 08/10/12	20.0	20.0 U
MB-080112 Method Blank	NA	Water	08/01/12 08/10/12	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-073012
MATRIX SPIKE

Lab Sample ID: VE24A
LIMS ID: 12-14529
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE24-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	115	100	115%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: MW-15D-073012
DUPLICATE

Lab Sample ID: VE24A
LIMS ID: 12-14529
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE24-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VE24LCS
LIMS ID: 12-14530
Matrix: Water
Data Release Authorized:
Reported: 08/10/12

QC Report No: VE24-Landau Associates
Project: Cornwall
0001020.400.510
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	225	200	112%	

Reported in ng/L

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

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-15D-073012
ARI ID: 12-14520 VE22A

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/09/12 080912#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	1.00	29.7
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	2.0
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.153
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	42.4
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	6.0	19.5
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	13.8

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-16S-073012
ARI ID: 12-14521 VE22B

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/09/12 080912#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.500	16.9
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	3.2
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.076
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	59.0
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	4.0	12.9
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	20.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-15S-073012
ARI ID: 12-14522 VE22C

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/09/12 080912#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.500	22.2
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	1.1
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.091
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	50.5
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	4.0	14.9
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	16.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-14S-073012
ARI ID: 12-14523 VE22D

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/09/12 080912#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.500	21.3
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	1.6
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.084
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	10.0	183
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	6.0	19.6
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	16.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-13S-073012
ARI ID: 12-14524 VE22E

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/09/12 080912#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.500	17.6
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	0.8
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.118
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	31.6
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	4.0	18.7
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	11.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-14D-073012
ARI ID: 12-14525 VE22F

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/09/12 080912#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/09/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.200	13.4
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	0.8
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.132
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	42.7
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	6.0	17.9
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	13.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-13D-073012
ARI ID: 12-14526 VE22G

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.500	19.7
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	1.2
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.201
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	33.2
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	4.0	13.9
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	11.8

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Client ID: MW-DUP-073012
ARI ID: 12-14527 VE22H

Analyte	Date Batch	Method	Units	RL	Sample
N-Nitrate	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	07/31/12 073112#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Total Cyanide	08/10/12 081012#1	EPA 335.4	mg/L	0.005	< 0.005 U
Post Chlorination Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
Amenable Cyanide	08/10/12	EPA 335.1	mg/L	0.005	< 0.005 U
N-Ammonia	08/03/12 080312#1	EPA 350.1M	mg-N/L	0.200	14.2
Sulfate	07/31/12 073112#1	EPA 300.0	mg/L	0.1	1.2
Sulfide	08/02/12 080212#1	EPA 376.2	mg/L	0.050	0.123
Chemical Oxygen Demand	08/13/12 081312#1	EPA 410.4	mg/L	5.00	43.7
Biological Oxygen Demand	08/01/12 080112#1	EPA 405.1	mg/L	4.0	15.2
Total Organic Carbon	08/07/12 080712#1	EPA 9060	mg/L	1.50	12.3

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
N-Nitrate	EPA 300.0	07/31/12	mg-N/L	< 0.1 U	
N-Nitrite	EPA 300.0	07/31/12	mg-N/L	< 0.1 U	
Total Cyanide	EPA 335.4	08/09/12	mg/L	< 0.005 U	
		08/10/12		< 0.005 U	
N-Ammonia	EPA 350.1M	08/03/12	mg-N/L	< 0.010 U	FB
		08/03/12		< 0.010 U	FB
Sulfate	EPA 300.0	07/31/12	mg/L	< 0.1 U	
Sulfide	EPA 376.2	08/02/12	mg/L	< 0.050 U	
Chemical Oxygen Demand	EPA 410.4	08/13/12	mg/L	< 5.00 U	
Biological Oxygen Demand	EPA 405.1	08/01/12	mg/L	< 1.0 U	
Total Organic Carbon	EPA 9060	08/07/12	mg/L	< 1.50 U	

FB Filtration Blank

LAB CONTROL RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Sulfide EPA 376.2	ICVL	08/02/12	mg/L	0.496	0.501	99.0%
Biological Oxygen Demand EPA 405.1	ICVL	08/01/12	mg/L	101	198	51.0%

STANDARD REFERENCE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
N-Nitrate ERA #230511	EPA 300.0	07/31/12	mg-N/L	2.8	3.0	93.3%
N-Nitrite ERA #401010	EPA 300.0	07/31/12	mg-N/L	2.9	3.0	96.7%
Total Cyanide ERA 11107	EPA 335.4	08/09/12 08/10/12	mg/L	0.376 0.386	0.400 0.400	94.0% 96.5%
N-Ammonia ERA #15125	EPA 350.1M	08/03/12 08/03/12	mg-N/L	0.484 0.498	0.500 0.500	96.8% 99.6%
Sulfate ERA #070811	EPA 300.0	07/31/12	mg/L	3.0	3.0	100.0%
Chemical Oxygen Demand Thermo Orion #I01	EPA 410.4	08/13/12	mg/L	84.8	90.0	94.2%
Total Organic Carbon ERA 0409-12-01	EPA 9060	08/07/12	mg/L	20.4	20.0	102.0%

REPLICATE RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VE22A Client ID: MW-15D-073012						
N-Nitrate	EPA 300.0	07/31/12	mg-N/L	< 0.1	< 0.1	NA
N-Nitrite	EPA 300.0	07/31/12	mg-N/L	< 0.1	< 0.1	NA
Total Cyanide	EPA 335.4	08/09/12	mg/L	< 0.005	< 0.005	NA
N-Ammonia	EPA 350.1M	08/03/12	mg-N/L	29.7	29.5	0.7%
Sulfate	EPA 300.0	07/31/12	mg/L	2.0	2.0	0.0%
Sulfide	EPA 376.2	08/02/12	mg/L	0.153	0.169	9.9%
Chemical Oxygen Demand	EPA 410.4	08/13/12	mg/L	42.4	37.8	11.5%
Total Organic Carbon	EPA 9060	08/07/12	mg/L	13.8	15.0	8.3%
ARI ID: VE22F Client ID: MW-14D-073012						
N-Ammonia	EPA 350.1M	08/03/12	mg-N/L	13.4	13.4	0.0%

MS/MSD RESULTS-CONVENTIONALS
VE22-Landau Associates

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/15/12

Project: Cornwall
Event: 0001020.400.510
Date Sampled: 07/30/12
Date Received: 07/31/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VE22A Client ID: MW-15D-073012							
N-Nitrate	EPA 300.0	07/31/12	mg-N/L	< 0.1	1.9	2.0	95.0%
N-Nitrite	EPA 300.0	07/31/12	mg-N/L	< 0.1	2.2	2.0	110.0%
Total Cyanide	EPA 335.4	08/09/12	mg/L	< 0.005	0.160	0.200	80.0%
Sulfate	EPA 300.0	07/31/12	mg/L	2.0	4.1	2.0	105.0%
Sulfide	EPA 376.2	08/02/12	mg/L	0.153	0.693	0.500	108.0%
Chemical Oxygen Demand	EPA 410.4	08/13/12	mg/L	42.4	128	100	85.6%
Total Organic Carbon	EPA 9060	08/07/12	mg/L	13.8	34.4	20.0	103.0%
ARI ID: VE22F Client ID: MW-14D-073012							
N-Ammonia	EPA 350.1M	08/03/12	mg-N/L	13.4	41.4	25.0	112.0%

Table of Contents: ARI Job UK00, UK01, UK02

Client: Landau Associates, Inc.

Project: 1020.400.480 Port Of Bellingham

Signature

March-21-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 21, 2012

Jeremy Davis
Landau Associates, Inc.
130 2nd Avenue S.
Edmonds, WA 98020

RE: Project: Cornwall Avenue
ARI Job No: UK00, UK01, UK02

Dear Jeremy:

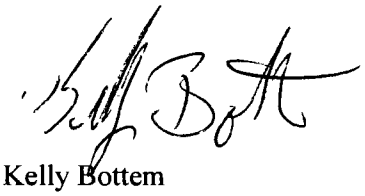
Please find enclosed the original and revised Chain of Custody documentation, e-mail documentation and the analytical results for the samples from the projects referenced above. Analytical Resources, Inc. (ARI) accepted several sediment samples between February 2, 2012 and February 27, 2012. There were no discrepancies between the sample containers' labels and the COCs.

Please reference the Case Narrative for analytical details associated with this project.

An electronic copy of these reports and the supporting data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.



Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: files UK00, UK01 and UK02

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: UK00, UK01, UK02

LANDAU ASSOCIATES

☒ Seattle/Edmonds (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

Chain-of-Custody Record

UG98

Date 2/1/2012
Page 1 of 1

Project Name Cornwall Avenue LF / Interim Action Project No. 001020.400.470
Project Location/Event Interim Placement Area #1
Sampler's Name Brian Christiansen
Project Contact Jeremy Davis 425-778-0907
Send Results To Jeremy Davis - Edmonds

Testing Parameters: Dioxins (EPA 1613B); PH

Turnaround Time
☐ Standard
☐ Accelerated
☒ HOLD

Sample I.D.	Date	Time	Matrix	No. of Containers	Observations/Comments
CA-LF-IPA1-020112A	2/1/12	1310	Soil	1	

_X_ Allow water samples to settle, collect aliquot from clear portion
_X_ NWTPH-Dx - run acid wash/silica gel cleanup
___ run samples standardized to _____ product
___ Analyze for EPH if no specific product identified
VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt
___ Dissolved metal water samples field filtered
Other _____

Special Shipment/Handling or Storage Requirements: Keep Cool / Hold Sample for Analysis

Method of Shipment: Federal Express Courier

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Brian E Christiansen	Printed Name Taylor Streeter	Printed Name	Printed Name
Company Landau Associates	Company ARI	Company	Company
Date 2/1/12 Time 1445	Date 2-2-12 Time 955	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative Rev 8/09

UG98 00002

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Lindau | Project Name: Cornwall Ave LF

COC No(s): _____ NA | Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 1698 | Tracking No: 8467 7C E7 8736 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#: 90441619	

Cooler Accepted by: AV Date: 2/2/12 Time: 955

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: _____

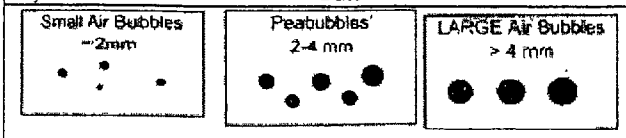
Samples Logged by: _____ Date: 2-2-12 Time: 1124

***** 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"

UKGE : 66664

LANDAU ASSOCIATES

- [x] **Seattle/Edmonds** (425) 778-0907
- [ ] **Tacoma** (253) 926-2493
- [ ] **Spokane** (509) 327-9737
- [ ] **Portland** (503) 542-1080
- [ ] ______

Chain-of-Custody Record

VJ34

Date 2/15/12
Page 1 of 1

Project Name POB-Cornwall LF Interim Action Project No. 870020.400.480
Project Location/Event IPA1 Stockpile Sample
Sampler's Name Brian Christianson
Project Contact Jeremy Davis
Send Results To Jeremy Davis

Testing Parameters: EPA-1613B Dioxin

Turnaround Time
- [ ] Standard
- [ ] Accelerated
- [x] HOLD

Sample I.D.	Date	Time	Matrix	No. of Containers	EPA-1613B Dioxin
CA-LF-IPA1-021512B	2/15/12	0830	Soil	2	
CA-LF-IPA1-021512C	2/15/12	0845	Soil	2	

Observations/Comments

X Allow water samples to settle, collect aliquot from clear portion

X NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to ______ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

___ Dissolved metal water samples field filtered

Other HOLD FOR TESTING!!

Special Shipment/Handling or Storage Requirements: Keep Cool

Method of Shipment: ARI Courier

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Brian E Christianson	Printed Name Chris Atwell	Printed Name	Printed Name
Company Landau Associates	Company ARI	Company	Company
Date 2/15/12 Time 12:50PM	Date 2/15/12 Time 15:14	Date Time	Date Time

WHITE COPY - Project File **YELLOW COPY - Laboratory** **PINK COPY - Client Representative**

Rev 8/09

UK00 : 00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau Project Name ROB - Cornwall

COC No(s). _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No. VI 34 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) 11.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: CA Date: 2/15/12 Time: 15:14

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: _____

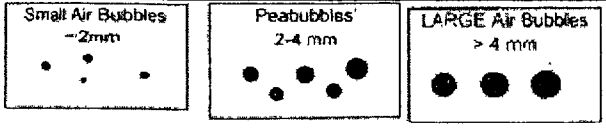
Samples Logged by: JS Date: 2-15-12 Time: 1702

***** 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"

UK66 . 00006

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

Cooler#: 1 Temperature(°C): 11.4

Sample ID	Bottle Count	Bottle Type
Samples received		
above		
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: TS Date: 2-12-09 Time: 1701

UK08 : 08007

LANDAU ASSOCIATES

☐ **Seattle/Edmonds** (425) 778-0907
☐ **Tacoma** (253) 926-2493
☐ **Spokane** (509) 327-9737
☐ **Portland** (503) 542-1080
☐

Chain-of-Custody Record

Date 2/21/12
Page 1 of 1

UJ76

Project Name Port of Bellingham Project No. 1020.400.480
Project Location/Event Cornwall/Interim Action
Sampler's Name Brian Christianson
Project Contact Jeremy Davis
Send Results To Jeremy Davis

Testing Parameters: Dioxins EPA 1613B; pH

Turnaround Time
☐ Standard
☐ Accelerated
☐ HOLD

Sample I.D.	Date	Time	Matrix	No. of Containers	Dioxins EPA 1613B	pH
CA-LF-IPA2-022412D	2/24/12	1535	Soil	2		
CA-LF-IPA2-022412E	2/24/12	1545	Soil	2		

Observations/Comments

X Allow water samples to settle, collect aliquot from clear portion

X NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to ______ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

___ Dissolved metal water samples field filtered

Other X Hold to Run all samples

Special Shipment/Handling or Storage Requirements 4

Method of Shipment Handcarried / Courier

Relinquished by	Received by (opened to re-ice)	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature [signature]	Signature [signature]
Printed Name Brian E Christianson	Printed Name Jeremy Davis	Printed Name Jeremy Davis	Printed Name Chris Atwell
Company Landau Associates	Company LAI	Company LAI	Company ARI
Date 2/24/12 Time 6:10 PM	Date 2/27/12 Time 0830	Date 2/27/12 Time 0840	Date 2/27/12 Time 1315

WHITE COPY - Project File **YELLOW COPY - Laboratory** **PINK COPY - Client Representative**

Rev 8/09

UK00 : 00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Port of Bellingham Project Name: Port of Bellingham

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: UJ76 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): 5.1

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 9014165

Cooler Accepted by: _____ Date: 2/27/12 Time: 1315

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: _____

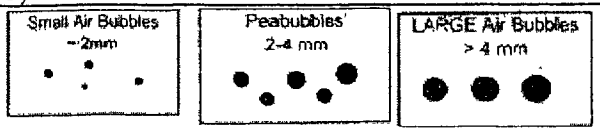
Samples Logged by: TS Date: 2-27-12 Time: 1701

*** 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"

UK66 : 66665

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: UK00, UK01, UK02

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Landau Associates, Inc.
Cornwall Avenue
ARI Job:UK00, UK01 and UK02
March 21, 2012

Sample Receipt:
Please find enclosed the original chain of custody and a revised (COC) record, e-mail documentation and analytical results for the project referenced above. Analytical Resources, Inc. originally accepted several sediment samples in good condition between February 2, 2012 and February 27, 2012. The samples were received at cooler temperatures between 4.8 and 11.4°C. Please see the Cooler Receipt Form for further details.

Dioxin/Furans by Method 1613B:

The samples were extracted on 3/7/12. The extracts were analyzed between 3/14/12 and 3/15/12 - within the method recommended holding times.

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique elution order and selectivity for the target compounds, as well as a unique isomer separation for the 2378-TCDF. A resolution test mixture was designed specifically for this column, consisting of 2348-TCDF, 2378-TCDF and 3467-TCDF to evaluate the method required minimum valley between isomer of 25%. Use of the RTX-Dioxin2 column eliminates the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

The percent recoveries for all preparation and cleanup surrogates were within established QC limits.

The method blank contained reportable responses below the reporting limit for all compounds. "B" qualifiers were applied to associated results that were less than ten times the levels found in the method blank. No qualifiers were applied to sample results that were greater than ten times the levels found in the method blank.

The OPR (Ongoing Precision and Accuracy or LCS) sample percent recoveries were within control limits.

The TEQ was calculated with WHO2005 with both ND=0 for undetects (flagged "U") and ND= ½ EDL. The TEC includes EMPC values in the calculation.

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Landau Associates, Inc.
Cornwall Avenue
ARI Job:UK00, UK01 and UK02
March 21, 2012

pH Analysis:

The samples were analyzed on 3/1/12 – The ph analysis for ARI associated job UK00 was analyzed outside of the method recommended holding time per the client request.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Sample Duplicates: Are in control.

Samples: There were no anomalies associated with this analysis.

LCS: The LCS is in control.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UK00
Client: Landau Associates, Inc.
Project Event: 001020.400.470
Project Name: Cornwall Avenue LF/Interim Action

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CA-LF-IPA1-0201112A	UK00A	12-3457	Soil	02/01/12 13:10	02/02/12 09:55

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UK01
Client: Landau Associates, Inc.
Project Event: 07020.400.480
Project Name: POB-Cornwall LF Interim

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CA-LF-IPA1-021512B	UK01A	12-3474	Soil	02/15/12 08:30	02/15/12 15:14
2.	CA-LF-IPA1-021512C	UK01B	12-3475	Soil	02/15/12 08:45	02/15/12 15:14

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UK02
Client: Landau Associates, Inc.
Project Event: 1020.400.480
Project Name: Port Of Bellingham

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CA-LF-IPA2-022412D	UK02A	12-3476	Soil	02/24/12 15:35	02/27/12 13:15
2.	CA-LF-IPA2-022412E	UK02B	12-3477	Soil	02/24/12 15:45	02/27/12 13:15

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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 ≥ 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 ≥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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: UK00, UK01, UK02

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-0201112A**
Page 1 of 1

Lab Sample ID: UK00A
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized:
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: 02/01/12
Date Received: 02/02/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 16:40
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.75	0.65-0.89		0.998	1.51	
2,3,7,8-TCDD	0.50	0.65-0.89		0.998	0.269	JEMPC
1,2,3,7,8-PeCDF	1.29	1.32-1.78		2.00	0.828	JEMPC
2,3,4,7,8-PeCDF	1.71	1.32-1.78		0.998	1.08	
1,2,3,7,8-PeCDD	1.48	1.32-1.78		0.998	1.83	
1,2,3,4,7,8-HxCDF	1.24	1.05-1.43		2.00	3.32	
1,2,3,6,7,8-HxCDF	1.25	1.05-1.43		2.00	1.42	J
2,3,4,6,7,8-HxCDF	1.14	1.05-1.43		2.00	2.19	
1,2,3,7,8,9-HxCDF	1.01	1.05-1.43		2.00	1.23	JEMPC
1,2,3,4,7,8-HxCDD	1.29	1.05-1.43		2.00	3.24	
1,2,3,6,7,8-HxCDD	1.26	1.05-1.43		2.00	13.2	
1,2,3,7,8,9-HxCDD	1.31	1.05-1.43		2.00	7.23	
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		2.00	35.7	
1,2,3,4,7,8,9-HpCDF	0.83	0.88-1.20		2.00	2.12	EMPC
1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20		2.00	355	
OCDF	0.87	0.76-1.02		4.99	83.9	
OCDD	0.88	0.76-1.02		4.99	3,220	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.998	6.31	8.53
Total TCDD		0.998	22.5	23.9
Total PeCDF		2.00	21.8	24.7
Total PeCDD		0.998	27.9	28.7
Total HxCDF		2.00	68.0	69.3
Total HxCDD		2.00	120	122
Total HpCDF		2.00	118	120
Total HpCDD		2.00	836	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 10.7

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 10.7

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-0201112A**

Lab Sample ID: UK00A
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: 02/01/12
Date Received: 02/02/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 16:40
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.77	0.65-0.89	85.7	24-169
13C-2,3,7,8-TCDD	0.78	0.65-0.89	83.0	25-164
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	72.3	24-185
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	70.6	21-178
13C-1,2,3,7,8-PeCDD	1.60	1.32-1.78	73.0	25-181
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	84.5	26-152
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	79.9	26-123
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	83.0	28-136
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	90.5	29-147
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	86.3	32-141
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	83.7	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	72.6	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	73.9	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	80.7	23-140
13C-OCDD	0.91	0.76-1.02	69.5	17-157
37Cl4-2,3,7,8-TCDD			86.4	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-021512B**
Page 1 of 1

Lab Sample ID: UK01A
LIMS ID: 12-3474
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK01-Landau Associates, Inc.
Project: POB-Cornwall LF Interim
07020.400.480
Date Sampled: 02/15/12
Date Received: 02/15/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 17:33
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.82	0.65-0.89		1.00	2.17	
2,3,7,8-TCDD	0.54	0.65-0.89		1.00	0.312	JEMPC
1,2,3,7,8-PeCDF	1.52	1.32-1.78		2.00	2.36	
2,3,4,7,8-PeCDF	1.68	1.32-1.78		1.00	2.24	
1,2,3,7,8-PeCDD	1.61	1.32-1.78		1.00	3.87	
1,2,3,4,7,8-HxCDF	1.18	1.05-1.43		2.00	6.31	
1,2,3,6,7,8-HxCDF	1.14	1.05-1.43		2.00	2.85	
2,3,4,6,7,8-HxCDF	1.23	1.05-1.43		2.00	4.40	
1,2,3,7,8,9-HxCDF	1.18	1.05-1.43		2.00	3.21	
1,2,3,4,7,8-HxCDD	1.21	1.05-1.43		2.00	5.72	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		2.00	31.7	
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43		2.00	15.3	
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20		2.00	76.4	
1,2,3,4,7,8,9-HpCDF	1.05	0.88-1.20		2.00	3.68	
1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20		2.00	735	
OCDF	0.85	0.76-1.02		5.00	142	
OCDD	0.89	0.76-1.02		25.0	6,330	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	9.23	12.3
Total TCDD		1.00	22.8	23.7
Total PeCDF		2.00	58.8	60.2
Total PeCDD		1.00	34.6	36.1
Total HxCDF		2.00	173	
Total HxCDD		2.00	223	
Total HpCDF		2.00	256	258
Total HpCDD		2.00	1,660	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 22.2

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 22.2

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-021512B**

Lab Sample ID: UK01A
LIMS ID: 12-3474
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK01-Landau Associates, Inc.
Project: POB-Cornwall LF Interim 07020.400.480
Date Sampled: 02/15/12
Date Received: 02/15/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 17:33
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.78	0.65-0.89	81.6	24-169
13C-2,3,7,8-TCDD	0.77	0.65-0.89	84.2	25-164
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	76.4	24-185
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	77.1	21-178
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	77.6	25-181
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	78.5	26-152
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	73.3	26-123
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	78.0	28-136
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	94.0	29-147
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	83.6	32-141
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	78.5	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	70.2	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	75.2	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	81.3	23-140
13C-OCDD	0.90	0.76-1.02	75.7	17-157
37Cl4-2,3,7,8-TCDD			89.6	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-021512B**
Page 1 of 1 **DILUTION**

Lab Sample ID: UK01A
LIMS ID: 12-3474
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK01-Landau Associates, Inc.
Project: POB-Cornwall LF Interim 07020.400.480
Date Sampled: 02/15/12
Date Received: 02/15/12

Date Extracted: 03/07/12
Date Analyzed: 03/15/12 11:37
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-OCDD	0.88	0.76-1.02	98.8	17-157
37Cl4-2,3,7,8-TCDD			99.2	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-021512C**

Lab Sample ID: UK01B
LIMS ID: 12-3475
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK01-Landau Associates, Inc.
Project: POB-Cornwall LF Interim 07020.400.480
Date Sampled: 02/15/12
Date Received: 02/15/12

Date Extracted: 03/07/12
Date Analyzed: 03/15/12 12:27
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.76	0.65-0.89		4.99	1.70	
2,3,7,8-TCDD	0.59	0.65-0.89		4.99	0.405	JEMPC
1,2,3,7,8-PeCDF	1.34	1.32-1.78		9.98	1.07	J
2,3,4,7,8-PeCDF	1.29	1.32-1.78		4.99	1.04	JEMPC
1,2,3,7,8-PeCDD	1.83	1.32-1.78		4.99	3.43	JEMPC
1,2,3,4,7,8-HxCDF	1.21	1.05-1.43		9.98	4.75	J
1,2,3,6,7,8-HxCDF	0.98	1.05-1.43		9.98	1.95	JEMPC
2,3,4,6,7,8-HxCDF	1.03	1.05-1.43		9.98	3.33	JEMPC
1,2,3,7,8,9-HxCDF	1.32	1.05-1.43		9.98	1.70	J
1,2,3,4,7,8-HxCDD	1.19	1.05-1.43		9.98	6.24	J
1,2,3,6,7,8-HxCDD	1.17	1.05-1.43		9.98	24.6	
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43		9.98	15.6	
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		9.98	80.4	
1,2,3,4,7,8,9-HpCDF	1.21	0.88-1.20		9.98	3.63	JEMPC
1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20		9.98	695	
OCDF	0.88	0.76-1.02		25.0	230	
OCDD	0.88	0.76-1.02		25.0	6,550	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		4.99	6.37	9.51
Total TCDD		4.99	24.9	28.3
Total PeCDF		9.98	30.4	36.6
Total PeCDD		4.99	38.8	45.5
Total HxCDF		9.98	114	121
Total HxCDD		9.98	258	261
Total HpCDF		9.98	260	265
Total HpCDD		9.98	1,810	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 20.0

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 20.0

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA1-021512C**

Lab Sample ID: UK01B
LIMS ID: 12-3475
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK01-Landau Associates, Inc.
Project: POB-Cornwall LF Interim 07020.400.480
Date Sampled: 02/15/12
Date Received: 02/15/12

Date Extracted: 03/07/12
Date Analyzed: 03/15/12 12:27
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.76	0.65-0.89	91.6	24-169
13C-2,3,7,8-TCDD	0.79	0.65-0.89	96.3	25-164
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	89.6	24-185
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	89.8	21-178
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	91.1	25-181
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	92.3	26-152
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	92.5	26-123
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	94.4	28-136
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	105	29-147
13C-1,2,3,4,7,8-HxCDD	1.29	1.05-1.43	99.2	32-141
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	97.2	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	88.6	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	100	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	104	23-140
13C-OCDD	0.90	0.76-1.02	107	17-157
37Cl4-2,3,7,8-TCDD			100	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA2-022412D**
Page 1 of 1

Lab Sample ID: UK02A
LIMS ID: 12-3476
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK02-Landau Associates, Inc.
Project: Port Of Bellingham
1020.400.480
Date Sampled: 02/24/12
Date Received: 02/27/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 19:20
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.81	0.65-0.89		0.984	1.53	
2,3,7,8-TCDD	0.50	0.65-0.89		0.984	0.248	JEMPC
1,2,3,7,8-PeCDF	1.61	1.32-1.78		1.97	0.813	J
2,3,4,7,8-PeCDF	1.91	1.32-1.78		0.984	0.900	JEMPC
1,2,3,7,8-PeCDD	1.68	1.32-1.78		0.984	2.42	
1,2,3,4,7,8-HxCDF	1.09	1.05-1.43		1.97	3.22	
1,2,3,6,7,8-HxCDF	1.18	1.05-1.43		1.97	1.72	J
2,3,4,6,7,8-HxCDF	1.55	1.05-1.43		1.97	1.06	JEMPC
1,2,3,7,8,9-HxCDF	1.16	1.05-1.43		1.97	1.37	J
1,2,3,4,7,8-HxCDD	1.35	1.05-1.43		1.97	4.17	
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43		1.97	17.4	
1,2,3,7,8,9-HxCDD	1.27	1.05-1.43		1.97	9.94	
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		1.97	42.3	
1,2,3,4,7,8,9-HpCDF	1.03	0.88-1.20		1.97	2.38	
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		1.97	459	
OCDF	0.86	0.76-1.02		4.92	103	
OCDD	0.90	0.76-1.02		24.6	4,280	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.984	8.93	9.69
Total TCDD		0.984	23.6	25.0
Total PeCDF		1.97	24.7	27.8
Total PeCDD		0.984	31.6	33.5
Total HxCDF		1.97	77.1	79.1
Total HxCDD		1.97	166	168
Total HpCDF		1.97	139	140
Total HpCDD		1.97	1,190	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 13.4

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 13.4

#-Result from diluted secondary analysis.

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA2-022412D**
Page 1 of 1

Lab Sample ID: UK02A
LIMS ID: 12-3476
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK02-Landau Associates, Inc.
Project: Port Of Bellingham
1020.400.480
Date Sampled: 02/24/12
Date Received: 02/27/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 19:20
Instrument/Analyst: AS1/PK

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.77	0.65-0.89	85.4	24-169
13C-2,3,7,8-TCDD	0.77	0.65-0.89	85.4	25-164
13C-1,2,3,7,8-PeCDF	1.59	1.32-1.78	76.6	24-185
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	75.4	21-178
13C-1,2,3,7,8-PeCDD	1.54	1.32-1.78	77.3	25-181
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	85.1	26-152
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	82.3	26-123
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	82.4	28-136
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	90.2	29-147
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	87.1	32-141
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	84.9	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	75.8	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	79.0	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	85.1	23-140
13C-OCDD	0.90	0.76-1.02	77.5	17-157
37Cl4-2,3,7,8-TCDD			88.8	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA2-022412D**
Page 1 of 1 **DILUTION**

Lab Sample ID: UK02A
LIMS ID: 12-3476
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK02-Landau Associates, Inc.
Project: Port Of Bellingham
1020.400.480
Date Sampled: 02/24/12
Date Received: 02/27/12

Date Extracted: 03/07/12
Date Analyzed: 03/15/12 13:21
Instrument/Analyst: AS1/PK

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-OCDD	0.86	0.76-1.02	98.1	17-157
37Cl4-2,3,7,8-TCDD			95.2	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA2-022412E**

Lab Sample ID: UK02B
LIMS ID: 12-3477
Matrix: Soil
Data Release Authorized:
Reported: 03/21/12

QC Report No: UK02-Landau Associates, Inc.
Project: Port Of Bellingham
1020.400.480
Date Sampled: 02/24/12
Date Received: 02/27/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 20:13
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.82	0.65-0.89		0.997	1.16	
2,3,7,8-TCDD	0.51	0.65-0.89		0.997	0.201	JEMPC
1,2,3,7,8-PeCDF	1.51	1.32-1.78		1.99	0.634	J
2,3,4,7,8-PeCDF	1.24	1.32-1.78		0.997	0.670	JEMPC
1,2,3,7,8-PeCDD	1.60	1.32-1.78		0.997	1.67	
1,2,3,4,7,8-HxCDF	1.22	1.05-1.43		1.99	2.49	
1,2,3,6,7,8-HxCDF	1.03	1.05-1.43		1.99	1.27	JEMPC
2,3,4,6,7,8-HxCDF	1.07	1.05-1.43		1.99	1.06	J
1,2,3,7,8,9-HxCDF	1.34	1.05-1.43		1.99	0.921	J
1,2,3,4,7,8-HxCDD	1.33	1.05-1.43		1.99	2.84	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		1.99	13.2	
1,2,3,7,8,9-HxCDD	1.31	1.05-1.43		1.99	7.02	
1,2,3,4,6,7,8-HpCDF	0.98	0.88-1.20		1.99	35.5	
1,2,3,4,7,8,9-HpCDF	0.90	0.88-1.20		1.99	2.05	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.99	348	
OCDF	0.85	0.76-1.02		4.99	94.1	
OCDD	0.89	0.76-1.02		4.99	3,380	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.997	4.23	6.29
Total TCDD		0.997	15.2	16.1
Total PeCDF		1.99	19.5	20.5
Total PeCDD		0.997	22.6	
Total HxCDF		1.99	60.8	63.2
Total HxCDD		1.99	114	118
Total HpCDF		1.99	120	
Total HpCDD		1.99	922	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 9.98

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 9.98

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CA-LF-IPA2-022412E**
Page 1 of 1

Lab Sample ID: UK02B
LIMS ID: 12-3477
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK02-Landau Associates, Inc.
Project: Port Of Bellingham
1020.400.480
Date Sampled: 02/24/12
Date Received: 02/27/12

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 20:13
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.78	0.65-0.89	89.6	24-169
13C-2,3,7,8-TCDD	0.77	0.65-0.89	81.3	25-164
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	70.7	24-185
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	68.9	21-178
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	70.6	25-181
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	79.9	26-152
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	75.4	26-123
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	78.5	28-136
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	89.2	29-147
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	83.0	32-141
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	78.2	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	71.7	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	76.4	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	80.1	23-140
13C-OCDD	0.88	0.76-1.02	76.4	17-157
37Cl4-2,3,7,8-TCDD			87.4	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-030712**

Lab Sample ID: OPR-030712
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized:
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: NA
Date Received: NA

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 15:47
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.74	0.65-0.89	1.00	19.5
2,3,7,8-TCDD	0.78	0.65-0.89	1.00	19.6
1,2,3,7,8-PeCDF	1.51	1.32-1.78	2.00	99.0
2,3,4,7,8-PeCDF	1.49	1.32-1.78	1.00	96.5
1,2,3,7,8-PeCDD	1.55	1.32-1.78	1.00	100
1,2,3,4,7,8-HxCDF	1.19	1.05-1.43	2.00	98.3
1,2,3,6,7,8-HxCDF	1.19	1.05-1.43	2.00	96.1
2,3,4,6,7,8-HxCDF	1.21	1.05-1.43	2.00	97.8
1,2,3,7,8,9-HxCDF	1.23	1.05-1.43	2.00	100
1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	2.00	101
1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	2.00	98.2
1,2,3,7,8,9-HxCDD	1.23	1.05-1.43	2.00	99.6
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20	2.00	116
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20	2.00	98.4
1,2,3,4,6,7,8-HpCDD	1.10	0.88-1.20	2.00	99.5
OCDF	0.87	0.76-1.02	5.00	171
OCDD	0.87	0.76-1.02	5.00	203

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	21.1	21.5
Total TCDD		1.00	19.6	20.1
Total PeCDF		2.00	202	205
Total PeCDD		1.00	100	101
Total HxCDF		2.00	395	
Total HxCDD		2.00	299	
Total HpCDF		2.00	215	
Total HpCDD		2.00	99.5	100

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-030712**

Lab Sample ID: OPR-030712
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: NA
Date Received: NA

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 15:47
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.76	0.65-0.89	88.8	24-169
13C-2,3,7,8-TCDD	0.76	0.65-0.89	87.0	25-164
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	74.4	24-185
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	71.2	21-178
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	76.0	25-181
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	82.0	26-152
13C-1,2,3,6,7,8-HxCDF	0.54	0.43-0.59	86.0	26-123
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	80.7	28-136
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	74.0	29-147
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	88.4	32-141
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	90.2	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	71.6	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	71.0	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	82.9	23-140
13C-OCDD	0.89	0.76-1.02	69.8	17-157
37Cl4-2,3,7,8-TCDD			89.2	35-197

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-030712**

Lab Sample ID: OPR-030712
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: NA
Date Received: NA

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 15:47
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	19.5	20.0	97.5	30-160
2,3,7,8-TCDD	19.6	20.0	98.0	30-160
1,2,3,7,8-PeCDF	99.0	100	99.0	30-160
2,3,4,7,8-PeCDF	96.5	100	96.5	30-160
1,2,3,7,8-PeCDD	100	100	100	30-160
1,2,3,4,7,8-HxCDF	98.3	100	98.3	30-160
1,2,3,6,7,8-HxCDF	96.1	100	96.1	30-160
2,3,4,6,7,8-HxCDF	97.8	100	97.8	30-160
1,2,3,7,8,9-HxCDF	100	100	100	30-160
1,2,3,4,7,8-HxCDD	101	100	101	30-160
1,2,3,6,7,8-HxCDD	98.2	100	98.2	30-160
1,2,3,7,8,9-HxCDD	99.6	100	99.6	30-160
1,2,3,4,6,7,8-HpCDF	116	100	116	30-160
1,2,3,4,7,8,9-HpCDF	98.4	100	98.4	30-160
1,2,3,4,6,7,8-HpCDD	99.5	100	99.5	30-160
OCDF	171	200	85.5	30-160
OCDD	203	200	102	30-160

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
UK00MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: LANDAU

Lab Code: UK00 Project: CORNWALL AVE.

Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL Lab Sample ID: UK00MB

Sample wt/vol: 10 (g/ml) g Lab File ID: 12031405

Water Sample Prep: (sep/spe) Date Received: 02-FEB-12

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 07-MAR-12

Instrument ID: AUTOSPEC1 Date Analyzed: 14-MAR-12

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
UK00OPR	UK05OPR	12031406	03/14/12
CA-LF-IPA1-0201112A	UK00A	12031407	03/14/12
CA-LF-IPA1-0201512B	UK01A	12031408	03/14/12
CA-LF-IPA1-0201512C	UK01B	12031409	03/14/12
CA-LF-IPA2-0202412D	UK02A	12031410	03/14/12
CA-LF-IPA2-0202412E	UK02B	12031411	03/14/12
CA-LF-IPA1-0201512B	UK01A 5X	12031504	03/15/12
CA-LF-IPA1-0201512C	UK01B 5X	12031505	03/15/12
CA-LF-IPA2-0202412D	UK02A 5X	12031506	03/15/12

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-030712**

Lab Sample ID: MB-030712
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: NA
Date Received: NA

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 14:57
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.0102	1.00	< 0.0102	U
2,3,7,8-TCDD		0.65-0.89	0.0230	1.00	< 0.0230	U
1,2,3,7,8-PeCDF		1.32-1.78	0.0143	2.00	< 0.0143	U
2,3,4,7,8-PeCDF	1.91	1.32-1.78		1.00	0.0360	JEMPC
1,2,3,7,8-PeCDD		1.32-1.78	0.0219	1.00	< 0.0219	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0217	2.00	< 0.0217	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0196	2.00	< 0.0196	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0227	2.00	< 0.0227	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0364	2.00	< 0.0364	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0288	2.00	< 0.0288	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0300	2.00	< 0.0300	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0318	2.00	< 0.0318	U
1,2,3,4,6,7,8-HpCDF	1.26	0.88-1.20		2.00	0.0680	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0444	2.00	< 0.0444	U
1,2,3,4,6,7,8-HpCDD		0.88-1.20	0.0397	2.00	< 0.0397	U
OCDF		0.76-1.02	0.0810	5.00	< 0.0810	U
OCDD	0.83	0.76-1.02		5.00	0.334	J

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC	
Total TCDF	0.0102	1.00	< 0.0102		U
Total TCDD	0.0230	1.00	< 0.0230		U
Total PeCDF		2.00	< 0.0143	0.0360	U
Total PeCDD	0.0219	1.00	< 0.0219		U
Total HxCDF	0.0364	2.00	< 0.0364		U
Total HxCDD	0.0318	2.00	< 0.0318		U
Total HpCDF		2.00	< 0.0444	0.0680	U
Total HpCDD	0.0397	2.00	< 0.0397		U

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-030712**

Lab Sample ID: MB-030712
LIMS ID: 12-3457
Matrix: Soil
Data Release Authorized: MW
Reported: 03/21/12

QC Report No: UK00-Landau Associates, Inc.
Project: Cornwall Avenue LF/Interim Action 001020.400.470
Date Sampled: NA
Date Received: NA

Date Extracted: 03/07/12
Date Analyzed: 03/14/12 14:57
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits
13C-2,3,7,8-TCDF	0.78	0.65-0.89	88.6	24-169
13C-2,3,7,8-TCDD	0.76	0.65-0.89	86.6	25-164
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	74.4	24-185
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	68.8	21-178
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	74.8	25-181
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	84.4	26-152
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	88.8	26-123
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	83.0	28-136
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	72.6	29-147
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	92.0	32-141
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	91.9	28-130
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	71.8	28-143
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	68.5	26-138
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	83.2	23-140
13C-OCDD	0.90	0.76-1.02	67.3	17-157
37Cl4-2,3,7,8-TCDD			89.5	35-197

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: LANDAU

Lab Code: UK00 Project: CORNWALL AVE.

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 12031402

Instrument ID: AUTOSPEC1 Date Analyzed: 14-MAR-12

Time Analyzed: 1145

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	22.75	26.17
TCDF	21.51	26.42
PeCDD	27.89	30.99
PeCDF	26.24	31.36
HxCDD	33.04	35.72
HxCDF	32.25	36.18
HpCDD	38.74	39.89
HpCDF	38.23	40.71

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.
TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: UK00
GC Column: RTX-DIOXIN2 ID: .25 mm
Instrument ID:
AUTOSPEC1

Contract: LANDAU
Project: CORNWALL AVE.
Lab File ID: 12031403
Date Analyzed: 14-MAR-12
Time Analyzed: 1237

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 21.4

Quality Control (QC) Limits:

Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 17.7

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: LANDAU

Lab Code: UK00 Project: CORNWALL AVE.

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 15-FEB-11

Init: Calib. Times: 17:54 to 22:21

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
I6804	CS3	12031402	03/14/12	1145
1929-2	TETRA ISC	12031403	03/14/12	1237
UK00MB	UK00MB	12031405	03/14/12	1457
UK00OPR	UK00OPR	12031406	03/14/12	1547
CA-LF-IPA1-0201112A	UK00A	12031407	03/14/12	1640
CA-LF-IPA1-0201512B	UK01A	12031408	03/14/12	1733
CA-LF-IPA1-0201512C	UK01B	12031409	03/14/12	1827
CA-LF-IPA2-0202412D	UK02A	12031410	03/14/12	1920
CA-LF-IPA2-0202412E	UK02B	12031411	03/14/12	2013
I6804	CS3	12031412	03/14/12	2106

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: LANDAU

Lab Code: UK00 Project: CORNWALL AVE.

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 15-FEB-11

Init: Calib. Times: 17:54 to 22:21

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
I6804	CS3	12031502	03/15/12	0941
1929-2	TETRA ISC	12031503	03/15/12	1032
CA-LF-IPA1-0201512B	UK01A 5X	12031504	03/15/12	1137
CA-LF-IPA1-0201512C	UK01B 5X	12031505	03/15/12	1227
CA-LF-IPA2-0202412D	UK02A 5X	12031506	03/15/12	1321
I6804	CS3	12031509	03/15/12	1600

USEPA
6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	15-Feb-12	Init.Calib.Time CSL:	17:54:44
Init.Calib.Date CS1:	15-Feb-12	Init.Calib.Time CS1:	18:48:03
Init.Calib.Date CS2:	15-Feb-12	Init.Calib.Time CS2:	19:41:15
Init.Calib.Date CS3:	15-Feb-12	Init.Calib.Time CS3:	20:34:33
Init.Calib.Date CS4:	15-Feb-12	Init.Calib.Time CS4:	21:27:45
Init.Calib.Date CS5:	15-Feb-12	Init.Calib.Time CS5:	22:21:04

Target Analytes	RRF						Mean RRF	% RSD	QC Limits
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	1.15	0.98	1.00	1.02	1.02	1.02	1.03	5.8	20.0
2378-TCDF	0.84	0.84	0.84	0.83	0.88	0.89	0.85	2 8	20.0
12378-PeCDF	0.96	0.87	0.89	0.90	0.91	0.95	0 91	3.9	20.0
12378-PeCDD	1.04	0.97	0.95	0.96	0.97	1.00	0.98	3.3	20.0
23478-PeCDF	0.88	0.94	0.92	0.93	0.95	0.96	0.93	3.1	20.0
123478-HxCDF	1.05	1.07	1.09	1.10	1.12	1.13	1.09	2.6	20.0
123678-HxCDF	1.06	1.05	1.06	1.08	1.07	1.10	1.07	1.8	20.0
123478-HxCDD	0.99	0.96	0.94	0.98	0.97	0.97	0.97	1.7	20 0
123678-HxCDD	0.88	0.93	0.90	0.90	0.95	0.93	0.91	2.7	20.0
123789-HxCDD[2]	0.86	0.86	0.86	0.89	0.89	0.89	0.88	1.9	20 0
234678-HxCDF	1.04	1.08	1.07	1.08	1.08	1.11	1.08	2.2	20.0
123789-HxCDF	0.95	1.00	1.00	1.00	1.04	1.04	1.01	3.4	20.0
1234678-HpCDF	1.28	1.17	1.22	1.26	1.24	1.28	1.24	3.2	20.0
1234678-HpCDD	1.02	0.99	1.00	0.99	1.00	1.02	1.00	1.5	20.0
1234789-HpCDF	1.19	1.20	1.22	1.26	1.27	1.27	1.24	2.9	20.0
OCDD	0.95	0.97	0.96	0.99	0.99	1.01	0.98	2.1	20.0
OCDF[1]	1.02	1.10	1.08	1.13	1.18	1.23	1.12	6.8	20.0

(1) The RRF is calculated based on the labeled analog of OCDD.
(2) The relative response factor (RRF) is calculated based on the labeled analogs of the other two HxCDDs.

Labeled Compounds	RRF						Mean RRF	% RSD	QC Limits
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.95	0.94	0.91	0.91	0.93	1.06	0 95	5.9	20.0
13C-12378-PeCDD	0.69	0.71	0.68	0.68	0.73	0.86	0.72	9.5	20.0
13C-123478-HxCDD	1.03	1.02	1.04	1.00	1.02	1.04	1.03	1.4	20.0
13C-123678-HxCDD	1.11	1.10	1.13	1 10	1 08	1.08	1.10	1.8	20 0
13C-1234678-HpCDD	0.75	0.75	0.77	0.76	0.78	0.77	0.76	1.6	20.0
13C-OCDD	0.56	0.56	0.59	0.61	0.65	0.68	0.61	8.1	20.0
13C-2378-TCDF	1.48	1.42	1.39	1.40	1.42	1.57	1.45	4.8	20.0
13C-12378-PeCDF	1.13	1.14	1.11	1.11	1.17	1.37	1.17	8.4	20.0
13C-23478-PeCDF	1.06	1.07	1.04	1.03	1.10	1.31	1.10	9.6	20.0
13C-123478-HxCDF	1.28	1.26	1.31	1.27	1.27	1.22	1.27	2.1	20.0
13C-123678-HxCDF	1.45	1.40	1.47	1.42	1.42	1.34	1.42	3.2	20.0
13C-234678-HxCDF	1.26	1.26	1.29	1.27	1.28	1.24	1.27	1.4	20.0
13C-123789-HxCDF	0.99	1.01	1.02	1.05	1.02	1.06	1.03	2.4	20.0
13C-1234678-HpCDF	0.98	1.01	1.01	0.98	1.02	0.98	1.00	1.9	20.0
13C-1234789-HpCDF	0.65	0.67	0.68	0.68	0.70	0.72	0.68	3.6	20.0

USEPA
6DFB - Form VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code.	UK00	Case No.:	CORNWALL AVE
TO No.:		SDG No.:	
GC Column.	RTX-DIOXIN2	ID (mm)	25
Instrument ID:	AUTOSPEC1		
Init Calib.Date CSL.	15-Feb-12	Init.Calib.Time CSL	17.54 44
Init.Calib.Date CS1:	15-Feb-12	Init Calib Time CS1	18:48.03
Init Calib Date CS2:	15-Feb-12	Init.Calib.Time CS2.	19 41 15
Init.Calib.Date CS3:	15-Feb-12	Init.Calib.Time CS3	20:34:33
Init.Calib.Date CS4.	15-Feb-12	Init Calib Time CS4	21 27 45
Init Calib Date CS5:	15-Feb-12	Init.Calib.Time CS5	22.21 04

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.77	0.72	0.79	0.75	0.79	0 77		0 65 - 0 89
2378-TCDF	304/306	0.77	0.72	0.78	0.74	0.74	0.76		0.65 - 0 89
12378-PeCDF	340/342	1.67	1.53	1.53	1.52	1.52	1.53		1.32 - 1.78
12378-PeCDD	356/358	1.59	1 44	1.58	1.54	1.52	1 55		1 32 - 1 78
23478-PeCDF	340/342	1.59	1 58	1.52	1.50	1.53	1.52		1 32 - 1 78
123478-HxCDF	374/376	1.20	1.26	1.23	1.20	1.21	1.24		1 05 - 1 43
123678-HxCDF	374/376	1.19	1.19	1.21	1.19	1.18	1.21		1.05 - 1.43
123478-HxCDD	390/392	1.39	1 23	1 23	1.23	1.25	1.24		1 05 - 1 43
123678-HxCDD	390/392	1.22	1 15	1.27	1.22	1.27	1.24		1 05 - 1.43
123789-HxCDD	390/392	1.16	1.19	1.26	1 24	1.25	1.23		1.05 - 1.43
234678-HxCDF	374/376	1.13	1 19	1 22	1.19	1.22	1.22		1.05 - 1.43
123789-HxCDF	374/376	1.25	1.26	1.24	1.18	1 22	1.22		1.05 - 1.43
1234678-HpCDF	408/410	1.09	0 97	0 99	0.99	1.00	1.01		0.89 - 1.21
1234678-HpCDD	424/426	1.01	1 01	1.01	1.03	1.05	1.05		0.89 - 1.21
1234789-HpCDF	408/410	0.89	0.95	0 99	1.01	0.98	1.01		0 89 - 1 21
OCDD	458/460	0.84	0 86	0 91	0.88	0.86	0.89		0 76 - 1 02
OCDF	442/444	0.88	0.85	0 88	0 89	0.88	0 89		0.76 - 1 02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.76	0 77	0 78	0 77	0.78	0 78		0.65 - 0.89
13C-12378-PeCDD	368/370	1 57	1.59	1.62	1 56	1 57	1 57		1 32 - 1 78
13C-123478-HxCDD	402/404	1.26	1 25	1 25	1 26	1 26	1 26		1 05 - 1 43
13C-123678-HxCDD	402/404	1.25	1 21	1 27	1.22	1.24	1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	1 06	1 03	1.03	1.05	1 07	1.04		0 89 - 1.21
13C-OCDD	470/472	0.88	0 88	0 89	0 91	0 90	0.88		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0 80	0 76	0 76	0.77	0.77		0 65 - 0 89
13C-12378-PeCDF	352/354	1.57	1.57	1.56	1.55	1.56	1.56		1 32 - 1 78
13C-23478-PeCDF	352/354	1 57	1 56	1.52	1 57	1 56	1.55		1.32 - 1.78
13C-123478-HxCDF	384/386	0.52	0 52	0.52	0.52	0.52	0.52		0 43 - 0 59
13C-123678-HxCDF	384/386	0 51	0.51	0.52	0 52	0 53	0.52		0 43 - 0.59
13C-234678-HxCDF	384/386	0 52	0 52	0.52	0.52	0 52	0 53		0.43 - 0 59
13C-123789-HxCDF	384/386	0.54	0.53	0.52	0.51	0.52	0.52		0 43 - 0 59
13C-1234678-HpCDF	418/420	0 45	0.45	0 45	0.45	0.46	0 45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.46	0.46	0.46	0.46	0.46	0.45		0 37 - 0 51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.79	0 78	0 79	0 78	0 79	0.79		0 65 - 0.89
13C-123789-HxCDD	402/404	1.20	1.25	1.24	1.23	1.24	1.24		1 05 - 1 43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm).	.25
Instrument ID:	AUTOSPEC1	Lab File ID.	12031402
Date Analysed	14-Mar-12	Time Analysed	11:45:50
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.00	1.03	-3.2		0.83		0.65 - 0.89
2378-TCDF	304/306	0.84	0.85	-1.8		0.74		0.65 - 0.89
12378-PeCDF	340/342	0.86	0.91	-5.3		1.48		1.32 - 1.78
12378-PeCDD	356/358	0.95	0.98	-3.2		1.55		1 32 - 1.78
23478-PeCDF	340/342	0.91	0.93	-1.7		1.50		1.32 - 1.78
123478-HxCDF	374/376	1.08	1.09	-0.6		1.19		1.05 - 1.43
123678-HxCDF	374/376	1.07	1.07	-0.5		1.20		1.05 - 1.43
123478-HxCDD	390/392	0.95	0.97	-1.4		1.22		1.05 - 1.43
123678-HxCDD	390/392	0.87	0.91	-4.8		1.23		1.05 - 1.43
123789-HxCDD	390/392	0.87	0.88	-1.1		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.02	1.08	-5.1		1.18		1.05 - 1.43
123789-HxCDF	374/376	1.01	1.01	0.0		1.20		1.05 - 1.43
1234678-HpCDF	408/410	1.21	1.24	-2.8		1.01		0.89 - 1.21
1234678-HpCDD	424/426	1.00	1.00	-0.6		1.05		0.89 - 1.21
1234789-HpCDF	408/410	1.21	1.24	-2.2		0.99		0.89 - 1.21
OCDD	458/460	0.97	0.98	-1.0		0.89		0.76 - 1.02
OCDF	442/444	1.05	1.12	-6.5		0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.94	0.95	-1.2		0.75		0 65 - 0.89
13C-12378-PeCDD	368/370	0.64	0.72	-12.2		1.59		1.32 - 1.78
13C-123478-HxCDD	402/404	1.03	1.03	0.0		1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.13	1.10	2.7		1.25		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.76	0.76	-0.8		1.03		0.89 - 1.21
13C-OCDD	470/472	0.56	0.61	-7.3		0.90		0.76 - 1.02
13C-2378-TCDF	316/318	1.43	1.45	-1.1		0.75		0.65 - 0.89
13C-12378-PeCDF	352/354	1.00	1.17	-15.2		1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	0.92	1.10	-16.4		1.54		1.32 - 1.78
13C-123478-HxCDF	384/386	1.21	1.27	-4.3		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.35	1.42	-4.9		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.22	1.27	-3.7		0.53		0.43 - 0.59
13C-123789-HxCDF	384/386	0.96	1.03	-6.7		0.52		0.43 - 0 59
13C-1234678-HpCDF	418/420	0.93	1.00	-7.0		0.45		0 37 - 0.51
13C-1234789-HpCDF	418/420	0.64	0.68	-6.8		0.45		0 37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.24		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an astensk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031402
Date Analysed	14-Mar-12	Time Analysed	11:45:50
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	25.57
2378-TCDF	1.00	24.94
12378-PeCDF	1.00	29.00
12378-PeCDD	1.00	30.58
23478-PeCDF	1.00	30.34
123478-HxCDF	1.00	33.95
123678-HxCDF	1.00	34.10
123478-HxCDD	1.00	35.16
123678-HxCDD	1.00	35.30
123789-HxCDD	1.01	35.72
234678-HxCDF	1.00	35.06
123789-HxCDF	1.00	36.18
1234678-HpCDF	1.00	38.23
1234678-HpCDD	1.00	39.89
1234789-HpCDF	1.00	40.71
OCDD	1.00	45.25
OCDF	1.01	45.51

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	25.54
13C-12378-PeCDD	1.23	30.56
13C-123478-HxCDD	0.98	35.15
13C-123678-HxCDD	0.99	35.27
13C-1234678-HpCDD	1.12	39.88
13C-OCDD	1.27	45.23
13C-2378-TCDF	1.01	24.93
13C-12378-PeCDF	1.17	28.98
13C-23478-PeCDF	1.22	30.32
13C-123478-HxCDF	0.95	33.94
13C-123678-HxCDF	0.95	34.08
13C-234678-HxCDF	0.98	35.03
13C-123789-HxCDF	1.01	36.16
13C-1234678-HpCDF	1.07	38.21
13C-1234789-HpCDF	1.14	40.69

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	24.76
13C-123789-HxCDD	0.00	35.70

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031412
Date Analysed	14-Mar-12	Time Analysed	21:06:48
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.00	1.03	-3.5		0.81		0.65 - 0.89
2378-TCDF	304/306	0.83	0.85	-2.6		0.75		0 65 - 0 89
12378-PeCDF	340/342	0.87	0.91	-5.0		1.50		1.32 - 1 78
12378-PeCDD	356/358	0.96	0.98	-2.4		1.60		1.32 - 1.78
23478-PeCDF	340/342	0.91	0.93	-2.7		1.47		1.32 - 1.78
123478-HxCDF	374/376	1.07	1.09	-1.9		1.17		1.05 - 1.43
123678-HxCDF	374/376	1.04	1.07	-2.8		1.18		1 05 - 1.43
123478-HxCDD	390/392	0.96	0.97	-0.4		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.88	0.91	-4.3		1.22		1.05 - 1.43
123789-HxCDD	390/392	0.86	0.88	-2.0		1.23		1.05 - 1.43
234678-HxCDF	374/376	1.04	1.08	-3.1		1.17		1.05 - 1.43
123789-HxCDF	374/376	0.98	1.01	-2.5		1.18		1.05 - 1.43
1234678-HpCDF	408/410	1.20	1.24	-3.3		0.99		0.89 - 1.21
1234678-HpCDD	424/426	0.98	1.00	-2.8		1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.18	1.24	-4.6		0.99		0.89 - 1.21
OCDD	458/460	0.95	0.98	-2.8		0.84		0.76 - 1.02
OCDF	442/444	1.07	1.12	-4.6		0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.95	0.95	-0.4		0.76		0.65 - 0.89
13C-12378-PeCDD	368/370	0.64	0.72	-11.7		1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.01	1.03	-1.4		1.29		1.05 - 1.43
13C-123678-HxCDD	402/404	1.14	1.10	3.9		1.25		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.76	0.76	0.0		1 02		0 89 - 1.21
13C-OCDD	470/472	0.58	0.61	-4.0		0 89		0.76 - 1.02
13C-2378-TCDF	316/318	1.46	1.45	0.6		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.01	1.17	-14.0		1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	0.94	1.10	-14.7		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.20	1.27	-5.2		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.40	1.42	-1.2		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.22	1.27	-4.1		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.98	1.03	-4.4		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.93	1.00	-6.7		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.66	0.68	-4.0		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.24		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an astensk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031412
Date Analysed	14-Mar-12	Time Analysed	21:06:48
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	25.56
2378-TCDF	1.00	24.94
12378-PeCDF	1.00	29.01
12378-PeCDD	1.00	30.58
23478-PeCDF	1.00	30.34
123478-HxCDF	1.00	33.95
123678-HxCDF	1.00	34.10
123478-HxCDD	1.00	35.17
123678-HxCDD	1.00	35.30
123789-HxCDD	1.01	35.72
234678-HxCDF	1.00	35.04
123789-HxCDF	1.00	36.19
1234678-HpCDF	1.00	38.23
1234678-HpCDD	1.00	39.89
1234789-HpCDF	1.00	40.71
OCDD	1.00	45.24
OCDF	1.01	45.50

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	25.54
13C-12378-PeCDD	1.23	30.56
13C-123478-HxCDD	0.98	35.14
13C-123678-HxCDD	0.99	35.28
13C-1234678-HpCDD	1.12	39.88
13C-OCDD	1.27	45.22
13C-2378-TCDF	1.01	24.93
13C-12378-PeCDF	1.17	28.98
13C-23478-PeCDF	1.23	30.32
13C-123478-HxCDF	0.95	33.94
13C-123678-HxCDF	0.95	34.08
13C-234678-HxCDF	0.98	35.03
13C-123789-HxCDF	1.01	36.16
13C-1234678-HpCDF	1.07	38.21
13C-1234789-HpCDF	1.14	40.70

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	24.75
13C-123789-HxCDD	0.00	35.70

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031502
Date Analysed	15-Mar-12	Time Analysed	09:41:53
Init.Calib.Date:	15-FEB-12	Init Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.00	1.03	-3.4		0.80		0.65 - 0.89
2378-TCDF	304/306	0.80	0.85	-6.1		0.74		0.65 - 0.89
12378-PeCDF	340/342	0.90	0.91	-1.5		1.51		1 32 - 1.78
12378-PeCDD	356/358	0.95	0.98	-3.0		1.54		1.32 - 1.78
23478-PeCDF	340/342	0.89	0.93	-3.9		1.48		1.32 - 1.78
123478-HxCDF	374/376	1.06	1.09	-3.1		1.20		1.05 - 1.43
123678-HxCDF	374/376	1.02	1.07	-4.8		1.16		1.05 - 1 43
123478-HxCDD	390/392	0.95	0.97	-1.5		1.24		1.05 - 1.43
123678-HxCDD	390/392	0.87	0.91	-4.6		1.22		1.05 - 1.43
123789-HxCDD	390/392	0.86	0.88	-2.3		1.25		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.08	-4.6		1.19		1.05 - 1.43
123789-HxCDF	374/376	0.95	1.01	-5.4		1.24		1.05 - 1.43
1234678-HpCDF	408/410	1.19	1.24	-4.5		1.01		0.89 - 1.21
1234678-HpCDD	424/426	0.97	1.00	-3.5		1.02		0.89 - 1.21
1234789-HpCDF	408/410	1.17	1.24	-5.1		1.01		0.89 - 1.21
OCDD	458/460	0.98	0.98	-0.2		0.87		0.76 - 1.02
OCDF	442/444	1.06	1.12	-5.9		0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.94	0.95	-1.5		0.79		0.65 - 0.89
13C-12378-PeCDD	368/370	0.63	0.72	-12.7		1.54		1.32 - 1.78
13C-123478-HxCDD	402/404	1.02	1.03	-0.9		1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.13	1.10	3.0		1.22		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.75	0.76	-2.2		1.04		0.89 - 1 21
13C-OCDD	470/472	0.59	0.61	-2.5		0.87		0.76 - 1.02
13C-2378-TCDF	316/318	1.43	1.45	-1.2		0.75		0.65 - 0.89
13C-12378-PeCDF	352/354	0.96	1.17	-18.4		1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	0.93	1.10	-15.4		1.53		1.32 - 1.78
13C-123478-HxCDF	384/386	1.23	1.27	-3.0		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.39	1.42	-2.1		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.21	1.27	-5.0		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.98	1.03	-4.8		0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.88	1.00	-12.2		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.64	0.68	-5 7		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.27		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031502
Date Analysed	15-Mar-12	Time Analysed	09:41:53
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	25.59
2378-TCDF	1.00	24.97
12378-PeCDF	1.00	29.03
12378-PeCDD	1.00	30.61
23478-PeCDF	1.00	30.36
123478-HxCDF	1.00	33.97
123678-HxCDF	1.00	34.12
123478-HxCDD	1.00	35.19
123678-HxCDD	1.00	35.31
123789-HxCDD	1.01	35.75
234678-HxCDF	1.00	35.07
123789-HxCDF	1.00	36.20
1234678-HpCDF	1.00	38.25
1234678-HpCDD	1.00	39.91
1234789-HpCDF	1.00	40.73
OCDD	1.00	45.27
OCDF	1.01	45.53

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	25.57
13C-12378-PeCDD	1.23	30.58
13C-123478-HxCDD	0.98	35.17
13C-123678-HxCDD	0.99	35.30
13C-1234678-HpCDD	1.12	39.90
13C-OCDD	1.27	45.25
13C-2378-TCDF	1.01	24.94
13C-12378-PeCDF	1.17	29.01
13C-23478-PeCDF	1.22	30.34
13C-123478-HxCDF	0.95	33.96
13C-123678-HxCDF	0.95	34.10
13C-234678-HxCDF	0.98	35.06
13C-123789-HxCDF	1.01	36.18
13C-1234678-HpCDF	1.07	38.23
13C-1234789-HpCDF	1.14	40.71

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	24.78
13C-123789-HxCDD	0.00	35.72

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

USEPA
7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031509
Date Analysed	15-Mar-12	Time Analysed	16:00:57
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.04	1.03	0.6		0.75		0.65 - 0.89
2378-TCDF	304/306	0.83	0.85	-3.2		0.72		0.65 - 0.89
12378-PeCDF	340/342	0.87	0.91	-4.8		1.53		1.32 - 1.78
12378-PeCDD	356/358	0.95	0.98	-3.0		1.54		1.32 - 1.78
23478-PeCDF	340/342	0.90	0.93	-3.2		1.50		1.32 - 1.78
123478-HxCDF	374/376	1.06	1.09	-2.6		1.22		1.05 - 1.43
123678-HxCDF	374/376	1.03	1.07	-3.4		1.19		1.05 - 1.43
123478-HxCDD	390/392	0.93	0.97	-4.0		1.25		1.05 - 1.43
123678-HxCDD	390/392	0.92	0.91	0.9		1.22		1.05 - 1.43
123789-HxCDD	390/392	0.86	0.88	-1.4		1.23		1.05 - 1.43
234678-HxCDF	374/376	1.05	1.08	-2.5		1.20		1.05 - 1.43
123789-HxCDF	374/376	0.98	1.01	-2.3		1.23		1.05 - 1.43
1234678-HpCDF	408/410	1.22	1.24	-2.1		1.01		0.89 - 1.21
1234678-HpCDD	424/426	0.98	1.00	-1.9		1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.19	1.24	-3.3		0.97		0.89 - 1.21
OCDD	458/460	0.99	0.98	0.9		0.88		0.76 - 1.02
OCDF	442/444	1.08	1.12	-4.0		0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.93	0.95	-2.4		0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	0.66	0.72	-9.1		1.54		1.32 - 1.78
13C-123478-HxCDD	402/404	1.01	1.03	-2.0		1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.10	1.10	-0.4		1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.77	0.76	1.1		1.06		0.89 - 1.21
13C-OCDD	470/472	0.62	0.61	2.9		0.87		0.76 - 1.02
13C-2378-TCDF	316/318	1.47	1.45	1.2		0.77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.03	1.17	-12.0		1.59		1.32 - 1.78
13C-23478-PeCDF	352/354	0.98	1.10	-11.4		1.59		1.32 - 1.78
13C-123478-HxCDF	384/386	1.16	1.27	-8.2		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.32	1.42	-7.0		0.55		0.43 - 0.59
13C-234678-HxCDF	384/386	1.18	1.27	-6.8		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.97	1.03	-5.3		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.90	1.00	-9.3		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.67	0.68	-2.1		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.22		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate

USEPA
7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	LANDAU
Lab Code:	UK00	Case No.:	CORNWALL AVE.
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12031509
Date Analysed	15-Mar-12	Time Analysed	16:00:57
Init.Calib.Date:	15-FEB-12	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	25.57
2378-TCDF	1.00	24.94
12378-PeCDF	1.00	29.01
12378-PeCDD	1.00	30.58
23478-PeCDF	1.00	30.34
123478-HxCDF	1.00	33.96
123678-HxCDF	1.00	34.10
123478-HxCDD	1.00	35.18
123678-HxCDD	1.00	35.30
123789-HxCDD	1.01	35.72
234678-HxCDF	1.00	35.06
123789-HxCDF	1.00	36.18
1234678-HpCDF	1.00	38.23
1234678-HpCDD	1.00	39.90
1234789-HpCDF	1.00	40.72
OCDD	1.00	45.26
OCDF	1.01	45.52

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	25.54
13C-12378-PeCDD	1.23	30.56
13C-123478-HxCDD	0.98	35.15
13C-123678-HxCDD	0.99	35.29
13C-1234678-HpCDD	1.12	39.88
13C-OCDD	1.27	45.24
13C-2378-TCDF	1.01	24.93
13C-12378-PeCDF	1.17	28.99
13C-23478-PeCDF	1.22	30.32
13C-123478-HxCDF	0.95	33.94
13C-123678-HxCDF	0.95	34.09
13C-234678-HxCDF	0.98	35.03
13C-123789-HxCDF	1.01	36.17
13C-1234678-HpCDF	1.07	38.22
13C-1234789-HpCDF	1.14	40.70

Clean up Standard	RRT#	RT

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	24.76
13C-123789-HxCDD	0.00	35.71

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: UK00, UK01, UK02

SAMPLE RESULTS-CONVENTIONALS
UK00-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: Cornwall Avenue LF/Interim A
Event: 001020.400.470
Date Sampled: 02/01/12
Date Received: 02/02/12

Client ID: CA-LF-IPA1-0201112A
ARI ID: 12-3457 UK00A

Analyte	Date	Method	Units	RL	Sample
pH	03/01/12 030112#1	SW9045	std units	0.01	11.98

RL Analytical reporting limit
U Undetected at reported detection limit

Results reported on a fresh weight basis
pH determined on 1:1 soil:D.I. water extracts.

LAB CONTROL RESULTS-CONVENTIONALS
UK00-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: Cornwall Avenue LF/Interim A
Event: 001020.400.470
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SW9045	ICVL	03/01/12	std units	6.96	7.00	0.04

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

REPLICATE RESULTS-CONVENTIONALS
UK00-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: Cornwall Avenue LF/Interim A
Event: 001020.400.470
Date Sampled: 02/01/12
Date Received: 02/02/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UK00A Client ID: CA-LF-IPA1-0201112A					
pH	03/01/12	std units	11.98	12.04	0.06

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

INORGANICS ANALYSIS DATA SHEET
pH by Method SW9045

ANALYTICAL RESOURCES INCORPORATED

Data Release Authorized:
Reported: 03/02/12
Date Received: 02/15/12
Page 1 of 1

QC Report No: UK01-Landau Associates, Inc.
Project: POB-Cornwall LF Interim
07020.400.480

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	RL	Result
CA-LF-IPA1-021512B UK01A 12-3474	02/15/12	Soil	03/01/12	0.01	11.54
CA-LF-IPA1-021512C UK01B 12-3475	02/15/12	Soil	03/01/12	0.01	12.17

Reported in std units

RL-Analytical reporting limit
U-Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
UK01-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: POB-Cornwall LF Interim
Event: 07020.400.480
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	LCS	Spike Added	Recovery
pH	03/01/12	std units	6.96	7.00	0.04

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

REPLICATE RESULTS-CONVENTIONALS
UK01-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: POB-Cornwall LF Interim
Event: 07020.400.480
Date Sampled: 02/15/12
Date Received: 02/15/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UK01A Client ID: CA-LF-IPA1-021512B					
pH	03/01/12	std units	11.54	11.57	0.03

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

INORGANICS ANALYSIS DATA SHEET
pH by Method SW9045

ANALYTICAL RESOURCES INCORPORATED

Data Release Authorized:
Reported: 03/02/12
Date Received: 02/27/12
Page 1 of 1

QC Report No: UK02-Landau Associates, Inc.
Project: Port Of Bellingham
1020.400.480

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	RL	Result
CA-LF-IPA2-022412D UK02A 12-3476	02/24/12	Soil	03/01/12	0.01	12.18
CA-LF-IPA2-022412E UK02B 12-3477	02/24/12	Soil	03/01/12	0.01	11.85

Reported in std units

RL-Analytical reporting limit
U-Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
UK02-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: Port Of Bellingham
Event: 1020.400.480
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	LCS	Spike Added	Recovery
pH	03/01/12	std units	6.96	7.00	0.04

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

REPLICATE RESULTS-CONVENTIONALS
UK02-Landau Associates, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/02/12

Project: Port Of Bellingham
Event: 1020.400.480
Date Sampled: 02/24/12
Date Received: 02/27/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UK02A Client ID: CA-LF-IPA2-022412D					
pH	03/01/12	std units	12.18	12.14	0.04

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

Total Solids

ARI Job ID: UK00, UK01, UK02

Extractions Total Solids-extts
Data By: Yen Luu
Created: 2/29/12

Worklist: 9909
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UK00A 12-3457 CA-LF-IPA1-0201112A	1.13	12.26	7.59	58.0	NR

Extractions Total Solids-extts
Data By: Yen Luu
Created: 2/29/12

Worklist: 9909
Analyst: YL
Comments:

Oven ID: Ø15

Balance ID: B139298ØØ2

Samples In: Date: 2/29/12 Time: 2Ø:ØØ Temp: 1Ø4 Analyst: XL

Samples Out: Date: 03/01/12 Time: Ø8:15 Temp: 98° Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UK00A 12-3457 CA-LF-IPA1-0201112A	1.13	12.26	7.59		NR

Total Solids Targets-Extractions
Data By: Steve Potter
Created: 3/ 1/12

Worklist: 9966
Analyst: SDP
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	UK00A	10.00	58.0	17.24

Extractions Total Solids-extts
Data By: Yen Luu
Created: 2/29/12

Worklist: 9910
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UK01A 12-3474 CA-LF-IPA1-021512B	1.14	12.68	7.83	58.0	NR
2.	UK01B 12-3475 CA-LF-IPA1-021512C	1.15	12.34	7.84	59.8	NR

Extractions Total Solids-extts
Data By: Yen Luu
Created: 2/29/12

Worklist: 9910
Analyst: YL
Comments:

Oven ID: Ø15

Balance ID: B13929800 2

Samples In: Date: 2/29/12 Time: 20:00 Temp: 104 Analyst: YL

Samples Out: Date: 03/01/12 Time: 08:15 Temp: 98° Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH	
1.	UK01A 12-3474 CA-LF-IPA1-021512B	1.14	12.68 PMF 03/01/12	7.26	7.83		NR
2.	UK01B 12-3475 CA-LF-IPA1-021512C	1.15	12.34	7.84			NR

Total Solids Targets-Extractions
Data By: Steve Potter
Created: 3/ 1/12

Worklist: 9967
Analyst: SDP
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	UK01A	10.00	58.0	17.24
2.	UK01B	10.00	59.8	16.72

Extractions Total Solids-extts
Data By: Yen Luu
Created: 2/29/12

Worklist: 9911
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UK02A 12-3476 CA-LF-IPA2-022412D	1.14	12.23	7.48	57.2	NR
2.	UK02B 12-3477 CA-LF-IPA2-022412E	1.15	12.47	7.73	58.1	NR

Extractions Total Solids-extts
Data By: Yen Luu
Created: 2/29/12

Worklist: 9911
Analyst: YL
Comments:

Oven ID: Ø15

Balance ID: B139298ØØ2

Samples In: Date: 2/29/12 Time: 2Ø:ØØ Temp: 1Ø4 Analyst: YL

Samples Out: Date: 3/1/12 Time: 08:15 Temp: 98 Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	UK02A 12-3476 CA-LF-IPA2-022412D	1.14	12.23	7.48		NR
2.	UK02B 12-3477 CA-LF-IPA2-022412E	1.15	12.47	7.73		NR

Total Solids Targets-Extractions
Data By: Steve Potter
Created: 3/ 1/12

Worklist: 9968
Analyst: SDP
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	UK02A	10.00	57.2	17.48
2.	UK02B	10.00	58.1	17.21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 8, 2007

Shannon Khounnala
Landau Associates, Inc.
130 2nd Avenue S.
Edmonds, WA 98020

RE: Project: Gate 3- POB 053097
ARI Job No: KQ93 (8290 Data)

Data Package amended to Level IV on June 2, 2010

Dear Shannon:

Please find enclosed the original chain of custody documentation and the analytical results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted forty five sediment samples on March 7, and March 8, 2007. There were no discrepancies between the sample containers' labels and the COCs. Thirty seven samples have been placed on hold pending further instructions and immediately frozen to protect the holding times.

The samples were analyzed for PSDDA VOCs, PSDDA PCBs, TBT, PSDDA Pesticides, SIM PNAs, PSDDA SVOA, TOC, TVS, TS, Ammonia, sulfide, Grainsize and Total Metals, as requested on the COC.

On May 16, 2007 at the request of Landau Associates select samples were removed from hold and subcontracted to Frontier Analytical Laboratory for EPA Method 8290. The samples were previously frozen to protect the holding time for the 8290 analysis.

Please reference the Frontier Analytical Laboratory data package for details.

An electronic copy of these reports and the supporting data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Project Manager
kellyb@arilabs.com
206/695-6211

Enclosures
cc: files KQ93

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 8, 2007

Shannon Khounnala
Landau Associates, Inc.
130 2nd Avenue S.
Edmonds, WA 98020

RE: Project: Gate 3- POB 053097
ARI Job No: KQ93 (8290 Data)

Dear Shannon:

Please find enclosed the original chain of custody documentation and the analytical results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted forty five sediment samples on March 7, and March 8, 2007. There were no discrepancies between the sample containers' labels and the COCs. Thirty seven samples have been placed on hold pending further instructions and immediately frozen to protect the holding times.

The samples were analyzed for PSDDA VOCs, PSDDA PCBs, TBT, PSDDA Pesticides, SIM PNAs, PSDDA SVOA, TOC, TVS, TS, Ammonia, sulfide, Grainsize and Total Metals, as requested on the COC.

On May 16, 2007 at the request of Landau Associates select samples were removed from hold and subcontracted to Frontier Analytical Laboratory for EPA Method 8290. The samples were previously frozen to protect the holding time for the 8290 analysis.

Please reference the Frontier Analytical Laboratory data package for details.

An electronic copy of these reports and the supporting data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Project Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: files KQ93

LANDAU ASSOCIATES

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

Chain-of-Custody Record

Date 3/8/07
Page 1 of 1

Project Name Gate 3 - POB Project No. 053097
Project Location/Event POB
Sampler's Name SM + NBM
Project Contact Shannon Khounnela
Send Results To " "

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	PCDD/PCDFs	Organics	VOCs	Bromide/Particles	Metals/Hg	TOC/TVS/TS/NH3	Sulfide	TBT Pore H2O	Archive	BIOASSAY (Archive)	Observations/Comments
Gate 3 - CMP 1	3/8/07	1450	sed	8	X	X		X	X	X		X		X	
Gate 3 - S1 - Z		1430	↓	1									X		
Gate 3 - S2 - Z		1435	↓	1									X		
Gate 3 - S3 - Z		1440	↓	1									X		
Gate 3 - S4 - Z		1445	↓	1									X		
Gate 3 - S1 - A		1455	↓	1									X		
Gate 3 - S2 - A		1500	↓	1									X		
Gate 3 - S3 - A		1505	↓	1									X		
Gate 3 - S4 - A		1510	↓	1									X		
~~Gate 3 - CMP 1 B~~		0	↓										~~X~~	~~X~~	
Gate 3 - Core 1	↓	0945	↓	2			X			X					

Testing Parameters

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion

NWTPH-Dx:
___ run acid wash/silica gel cleanup
___ run samples standardized to _____ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freese upon receipt

___ Dissolved metal water samples field filtered

Other Hold BIOASSAY Analysis until further notice Archive

Hold PCDD (DIOXIN) & archive until further notice

Special Shipment/Handling or Storage Requirements

Method of Shipment Processed at ARI

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name: SACHA MAXWELL	Printed Name: Nicole Arigon	Printed Name	Printed Name
Company: LANDAU ASSOCIATES	Company: ARI	Company	Company
Date: 3/8/07 Time: 1530	Date: 3/8/07 Time: 1530	Date _____ Time _____	Date _____ Time _____

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LANDAU ASSOCIATES

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☐ **Tacoma** (253) 926-2493
☐ **Spokane** (509) 327-9737
☐ **Portland (Tigard)** (503) 443-6010
☐ ____________

Date 3/8/07
Page 1 of 1

Chain-of-Custody Record

Project Name: Gate 3 - POD Project No. 053-097
Project Location/Event: POD
Sampler's Name: SM + NBM
Project Contact: SEK
Send Results To: SEK Shannon Whounela

Turnaround Time
☐ Standard
☐ Accelerated
☐ ____________

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	PCDD/PCDF	Organics	VOCs	Grainsize/Atterberg [?]	Metals/Hg	TOC/TVS/TS/NH3	Sulfide	TBT Pore H2O	Archive	Bioassay (archive)		
Gate 3-CMP-Z	3/8/07	1940	Sed.	8	X	X		X	X	X		X	X	X		
Gate 3-S5-Z	↓	1900	↓	1									X			
Gate 3-S6-Z	↓	1905	↓	1									X			
Gate 3-S7-Z	↓	1910	↓	1									X			
Gate 3-S8-Z	↓	1915	↓	1									X			
Gate 3-S5-A	↓	1920	↓	1									X			
Gate 3-S6-A	↓	1925	↓	1									X			
Gate 3-S7-A	↓	1930	↓	1									X			
Gate 3-S8-A	↓	1935	↓	1									X			
Gate 3-core 5	↓	1620	↓	2			X				X					

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion

NWTPH-Dx:
___ run acid wash/silica gel cleanup
___ run samples standardized to ____________ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freese upon receipt

___ Dissolved metal water samples field filtered

Other: * Archive Bioassay until further notice.

* Archive PCDD (DIOXIN) until further notice.

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: [signature]	Signature	Signature	Signature
Printed Name: SACHA MAXWELL	Printed Name	Printed Name	Printed Name
Company: LANDAU ASSOCIATES	Company	Company	Company
Date 3/8/07 Time 1845	Date ____ Time ____	Date ____ Time ____	Date ____ Time ____

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LANDAU ASSOCIATES

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- ☐ Tacoma (253) 926-2493
- ☐ Spokane (509) 327-9737
- ☐ Portland (Tigard) (503) 443-6010
- ☐ ______

Date 3/9/07

Page 1 of 1

Chain-of-Custody Record

Project Name POB Project No. 053-097

Project Location/Event Gate 3

Sampler's Name SM + NBM

Project Contact SEK

Send Results To Shannon Whounale

Turnaround Time
- ☒ Standard
- ☐ Accelerated
- ☐ ______

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	PCDD/PCDFs	Organics	VOCs	Grainsize/Pesticide	Metals/Hg	TOC/TS/TVS/NH3	Sulfide	TBT Pore H2O	Archive	Bio Assay (Archive)		
Gate 3 - core 9	3/9/07	0835	Sed.	2			X				X					
Gate 3 - CMP 3	3/9/07	1010	↓	8	X	X		X	X	X		X		X		
Gate 3 - ~~core~~ S 9 A	↓	1035	↓	1									X			
Gate 3 - ~~core~~ S 10 A	↓	1040	↓	1									X			
Gate 3 - ~~core~~ S 11 A	↓	1045	↓	1									X			
Gate 3 - ~~core~~ S 12 A	↓	1050	↓	1									X			
Gate 3 - ~~core~~ S 10 Z	↓	1015	↓	1									X			
Gate 3 - ~~core~~ S 11 Z	↓	1020	↓	1									X			
Gate 3 - ~~core~~ S 12 Z	↓	1025	↓	1									X			
Gate 3 - ~~core~~ S 9 Z	↓	1030	↓	1									X			

Observations/Comments

- ___ Allow water samples to settle, collect aliquot from clear portion
- NWTPH-Dx:
  - ___ run acid wash/silica gel cleanup
  - ___ run samples standardized to ______ product
- ___ Analyze for EPH if no specific product identified
- VOC/BTEX/VPH (soil):
  - ___ non-preserved
  - ___ preserved w/methanol
  - ___ preserved w/sodium bisulfate
  - ___ Freese upon receipt
- ___ Dissolved metal water samples field filtered

Other * Hold (Archive) PCDD (Dioxin) until further notice

* Hold (Archive) Bio Assay until further notice.

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name SACHA MAXWELL	Printed Name Nicole Aragon	Printed Name	Printed Name
Company LANDAU ASSOCIATES	Company ARI	Company	Company
Date 3/9/07 Time 1100	Date 3/9/07 Time 1100	Date ____ Time ____	Date ____ Time ____

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LANDAU ASSOCIATES

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☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

Chain-of-Custody Record

Date 3/9/07
Page 1 of 1

Project Name POB Project No. 053-097
Project Location/Event Gate 3
Sampler's Name SM + NDM
Project Contact SEK
Send Results To Shannon Khowaneka

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	PCDD/PCDF	Organics	VOCs	Gasoline/Diesel	Metals/Hg	TOC/TVS/TSS/Alk	Sulfide	TBT	Archive	BSD Assay
Gate3 - Core 13	3/9/07	1200	Sed.	2			X			X				
Gate3 - CMP 4		1330		9	X	X		X	X	X	X		X	
Gate3 - S13-A		1400		1								X		
Gate3 - S14-A		1405		1								X		
Gate3 - S15-A		1410		1								X		
Gate3 - S13B-A		1340		1								X		
Gate3 - S16M-Z		1345		1								X		
Gate3 - S14S-Z		1350		1								X		
Gate3 - S16G-Z		1355		1								X		
Gate3 - S16[illegible]-A		1415		1								X		

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion

NWTPH-Dx:
___ run acid wash/silica gel cleanup
___ run samples standardized to _____ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freese upon receipt

___ Dissolved metal water samples field filtered

Other * Hold (archive) PCDD (Dioxins) until further notice.

* Hold (archive) BioAssay until further notice.

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name SACHA MAXWELL	Printed Name Nicole Aragon	Printed Name	Printed Name
Company LANDAU ASSOCIATES	Company ART	Company	Company
Date 3/9/07 Time 1445	Date 3/9/07 Time 1445	Date _____ Time _____	Date _____ Time _____

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0005

LANDAU ASSOCIATES

- [x] **Seattle (Edmonds)** (425) 778-0907
- [ ] **Tacoma** (253) 926-2493
- [ ] **Spokane** (509) 327-9737
- [ ] **Portland (Tigard)** (503) 443-6010
- [ ] ______

Date 3/9/07
Page 1 of 1

Chain-of-Custody Record

AMB

Project Name Gate 3 Project No. 053-097
Project Location/Event POB
Sampler's Name SM + NDM
Project Contact SEK
Send Results To Shannon Uhlandla

Turnaround Time
- [x] Standard
- [ ] Accelerated
- [ ] ______

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	PCDD/PCDF	Organics	VOCs	Grainsize/Pre-Aide	Metals/TBT	TOC/HA	Sulfide	TBT pore H2O	Archive	Bioassay			Observations/Comments
~~Gate 3 - CMP Hab~~	~~3/9/07~~	~~1615~~	~~sed.~~	~~8~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~		~~X~~		~~X~~			
~~Gate 3 - Core 17~~		~~1515~~		~~2~~			~~X~~				~~X~~						
Gate3 - S17	↓	1530	↓	↓									X				
Gate3 - S18	↓	1535	↓	↓									X				
Gate3 - S19	↓	1540	↓	↓									X				
Gate3 - S20	↓	1545	↓	↓									X				
Gate3 - CMP Hab	3/9/07	1615	↓	1	X												

Observations/Comments

___ Allow water samples to settle, collect aliquot from clear portion

NWTPH-Dx:
___ run acid wash/silica gel cleanup
___ run samples standardized to ______ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freese upon receipt

___ Dissolved metal water samples field filtered

Other * Hold (archive) Dioxin until further notice
~~* Hold (archive) bioassay until further notice~~

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature SACHA MAXWELL	Signature Bob Congleton	Signature	Signature
Printed Name	Printed Name Bob Congleton	Printed Name	Printed Name
Company LANDAU ASSOCIATES	Company ARI	Company	Company
Date 3/9/07 Time 1630	Date 3/9/07 Time 1630	Date ____ Time ____	Date ____ Time ____

0006

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Rev 4/01

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau
COC No: —
Assigned ARI Job No: HQ93

Project Name: Gate 3 POB
Delivered by: Hand
Tracking No:

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
Record cooler temperature (recommended 2.0-6.0 °C for chemistry	AMB °C	

Cooler Accepted by: NA Date: 3/8/07 Time: 1530

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?			
Was sufficient ice used (if appropriate)?		YES	(NO) ☆
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottle arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(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 checklist)		YES	(NO)
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO

Samples Logged by: JDC Completed Date: 3/12/07 Time: 1230

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

Explain discrepancies or negative responses:

☆ - Sample cores processed at ARI by LANDAU — NO ICE USED.

By: Date:

FRONTIER
ANALYTICAL LABORATORY

June 5, 2007

FAL Project ID: 4451

Ms. Kelly Bottem
Analytical Resources Incorporated
4611 South 134th Place
Tukwila, WA 98168-3240

Dear Ms. Bottem,

Enclosed are the results for Frontier Analytical Laboratory project **4451**. This corresponds to ARI Project; **KQ93** and Project ID; Gate 3 - POB. The five soil samples received on 5/17/2007 were extracted and analyzed by EPA Method 8290 for tetra through octa chlorinated dibenzo dioxins and dibenzo furans. All five samples were received after the recommended hold time for EPA Method 8290. You were contacted via telephone and notified us that your client wanted us to continue with the analysis. In addition the 2005 WHO TEF values were used in calculating the TEQ for each sample. Analytical Resources Incorporated requested a turnaround time of fifteen business days for project **4451**.

The following Level I report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains the project-sample tracking log and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and sample photo. The Electronic Data Deliverable (EDD) you requested has been sent to you via email. The enclosed results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full.

If you have any questions regarding project **4451**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Analytical Data

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: 4451

Received on: 05/17/2007 Project Due: 06/08/2007 Storage: R2

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time
4451-001-SA	0	Gate 3 - POB	07-4032-KQ93A	EPA 8290 D/F	Sediment	03/08/2007	02:50 pm
4451-002-SA	0	Gate 3 - POB	07-4034-KQ93C	EPA 8290 D/F	Sediment	03/08/2007	06:40 pm
4451-003-SA	0	Gate 3 - POB	07-4037-KQ93F	EPA 8290 D/F	Sediment	03/09/2007	10:10 am
4451-004-SA	0	Gate 3 - POB	07-4039-KQ93H	EPA 8290 D/F	Sediment	03/09/2007	01:30 pm
4451-005-SA	0	Gate 3 - POB	07-4040-KQ93I	EPA 8290 D/F	Sediment	03/09/2007	04:15 pm

FAL Sample ID	Notes
4451-005-SA	'Bottom of bottle broken during shipping. The integrity of sample was not compromised; analysis will proceed.

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-001-MB
Client ID: Method Blank
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: NA
Amount: 10.00 g

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: pg/g

Acquired: 06-01-2007
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.0754		-	0.0463				
1,2,3,7,8-PeCDD	ND	0.0856		-	0.0277				
1,2,3,4,7,8-HxCDD	ND	0.174		-	0.0904				
1,2,3,6,7,8-HxCDD	ND	0.185		-	0.100	Total TCDD	ND	0.0754	
1,2,3,7,8,9-HxCDD	ND	0.183		-	0.0918	Total PeCDD	ND	0.0856	
1,2,3,4,6,7,8-HpCDD	ND	0.188		-	0.0806	Total HxCDD	ND	0.187	
OCDD	ND	0.550		-	0.191	Total HpCDD	ND	0.188	
2,3,7,8-TCDF	ND	0.0704		-	0.0373				
1,2,3,7,8-PeCDF	ND	0.156		-	0.0383				
2,3,4,7,8-PeCDF	ND	0.165		-	0.0426				
1,2,3,4,7,8-HxCDF	ND	0.0638		-	0.0282				
1,2,3,6,7,8-HxCDF	ND	0.0630		-	0.0285				
2,3,4,6,7,8-HxCDF	ND	0.0720		-	0.0322				
1,2,3,7,8,9-HxCDF	ND	0.105		-	0.0289	Total TCDF	ND	0.0704	
1,2,3,4,6,7,8-HpCDF	ND	0.122		-	0.0383	Total PeCDF	ND	0.165	
1,2,3,4,7,8,9-HpCDF	ND	0.132		-	0.0403	Total HxCDF	ND	0.105	
OCDF	ND	0.444		-	0.104	Total HpCDF	ND	0.132	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	52.0	40.0 - 135	
13C-1,2,3,7,8-PeCDD	44.8	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	61.3	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	70.5	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	46.2	40.0 - 135	
13C-OCDD	41.8	40.0 - 135	
13C-2,3,7,8-TCDF	55.6	40.0 - 135	
13C-1,2,3,7,8-PeCDF	45.3	40.0 - 135	
13C-2,3,4,7,8-PeCDF	46.5	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	67.1	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	76.3	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	66.5	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	57.9	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	50.9	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	60.0	40.0 - 135	
13C-OCDF	41.3	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	52.7	50.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-001-OPR
Client ID: OPR
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: NA
Amount: 10.00 g

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: ng/ml

Acquired: 06-01-2007
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	9.38	7.00 - 13.0	
1,2,3,7,8-PeCDD	48.9	35.0 - 65.0	
1,2,3,4,7,8-HxCDD	49.4	35.0 - 65.0	
1,2,3,6,7,8-HxCDD	50.0	35.0 - 65.0	
1,2,3,7,8,9-HxCDD	44.5	35.0 - 65.0	
1,2,3,4,6,7,8-HpCDD	48.7	35.0 - 65.0	
OCDD	93.3	70.0 - 130	
2,3,7,8-TCDF	9.19	7.00 - 13.0	
1,2,3,7,8-PeCDF	49.7	35.0 - 65.0	
2,3,4,7,8-PeCDF	49.3	35.0 - 65.0	
1,2,3,4,7,8-HxCDF	49.2	35.0 - 65.0	
1,2,3,6,7,8-HxCDF	47.9	35.0 - 65.0	
2,3,4,6,7,8-HxCDF	47.6	35.0 - 65.0	
1,2,3,7,8,9-HxCDF	48.1	35.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	47.4	35.0 - 65.0	
1,2,3,4,7,8,9-HpCDF	48.1	35.0 - 65.0	
OCDF	94.8	70.0 - 130	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	81.1	40.0 - 135	
13C-1,2,3,7,8-PeCDD	73.4	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	96.3	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	109	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	71.5	40.0 - 135	
13C-OCDD	61.4	40.0 - 135	
13C-2,3,7,8-TCDF	88.9	40.0 - 135	
13C-1,2,3,7,8-PeCDF	73.2	40.0 - 135	
13C-2,3,4,7,8-PeCDF	74.9	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	104	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	117	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	101	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	89.9	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	79.4	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	97.2	40.0 - 135	
13C-OCDF	65.6	40.0 - 135	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	79.5	50.0 - 150	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-001-SA
Client ID: 07-4032-KQ93A
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: 05-17-2007
Amount: 10.12 g
% Solids: 53.92

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: pg/g

Acquired: 06-01-2007
2005 WHO TEQ: 10.6

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.270	-	J	0.270	0.0463				
1,2,3,7,8-PeCDD	1.60	-	J	1.60	0.0277				
1,2,3,4,7,8-HxCDD	3.90	-		0.390	0.0904				
1,2,3,6,7,8-HxCDD	14.7	-		1.47	0.100	Total TCDD	51.2	-	
1,2,3,7,8,9-HxCDD	8.05	-		0.805	0.0918	Total PeCDD	41.4	-	
1,2,3,4,6,7,8-HpCDD	349	-		3.49	0.0806	Total HxCDD	212	-	
OCDD	2390	-		0.717	0.191	Total HpCDD	1040	-	
2,3,7,8-TCDF	2.04	-	F	0.204	0.0373				
1,2,3,7,8-PeCDF	1.05	-	J	0.0315	0.0383				
2,3,4,7,8-PeCDF	1.13	-	J	0.339	0.0426				
1,2,3,4,7,8-HxCDF	3.45	-		0.345	0.0282				
1,2,3,6,7,8-HxCDF	1.50	-	J	0.150	0.0285				
2,3,4,6,7,8-HxCDF	2.39	-	J	0.239	0.0322				
1,2,3,7,8,9-HxCDF	1.30	-	J	0.130	0.0289	Total TCDF	14.7	-	D,M
1,2,3,4,6,7,8-HpCDF	34.8	-		0.348	0.0383	Total PeCDF	30.5	-	D,M
1,2,3,4,7,8,9-HpCDF	2.08	-	J	0.0208	0.0403	Total HxCDF	87.3	-	D,M
OCDF	98.0	-		0.0294	0.104	Total HpCDF	131	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	82.9	40.0 - 135	
13C-1,2,3,7,8-PeCDD	63.0	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	90.2	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	107	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	79.2	40.0 - 135	
13C-OCDD	80.8	40.0 - 135	
13C-2,3,7,8-TCDF	88.2	40.0 - 135	
13C-1,2,3,7,8-PeCDF	68.7	40.0 - 135	
13C-2,3,4,7,8-PeCDF	68.4	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	96.8	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	114	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	98.7	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	90.3	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	82.5	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	101	40.0 - 135	
13C-OCDF	76.6	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	78.1	50.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-002-SA
Client ID: 07-4034-KQ93C
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: 05-17-2007
Amount: 10.21 g
% Solids: 54.13

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: pg/g

Acquired: 06-01-2007
2005 WHO TEQ: 6.24

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.178	-	J	0.178	0.0463				
1,2,3,7,8-PeCDD	0.882	-	J	0.882	0.0277				
1,2,3,4,7,8-HxCDD	2.65	-		0.265	0.0904				
1,2,3,6,7,8-HxCDD	8.31	-		0.831	0.100	Total TCDD	50.4	-	
1,2,3,7,8,9-HxCDD	4.36	-		0.436	0.0918	Total PeCDD	36.8	-	
1,2,3,4,6,7,8-HpCDD	205	-		2.05	0.0806	Total HxCDD	128	-	
OCDD	1910	-		0.573	0.191	Total HpCDD	599	-	
2,3,7,8-TCDF	1.52	-	F	0.152	0.0373				
1,2,3,7,8-PeCDF	0.581	-	J	0.0174	0.0383				
2,3,4,7,8-PeCDF	0.493	-	J	0.148	0.0426				
1,2,3,4,7,8-HxCDF	1.99	-	J	0.199	0.0282				
1,2,3,6,7,8-HxCDF	0.951	-	J	0.0951	0.0285				
2,3,4,6,7,8-HxCDF	1.38	-	J	0.138	0.0322				
1,2,3,7,8,9-HxCDF	0.757	-	J	0.0757	0.0289	Total TCDF	9.49	-	D,M
1,2,3,4,6,7,8-HpCDF	17.1	-		0.171	0.0383	Total PeCDF	15.2	-	D,M
1,2,3,4,7,8,9-HpCDF	1.27	-	J	0.0127	0.0403	Total HxCDF	47.0	-	
OCDF	49.6	-		0.0149	0.104	Total HpCDF	67.4	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	83.2	40.0 - 135	
13C-1,2,3,7,8-PeCDD	68.6	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	90.5	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	109	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	80.7	40.0 - 135	
13C-OCDD	87.1	40.0 - 135	
13C-2,3,7,8-TCDF	88.1	40.0 - 135	
13C-1,2,3,7,8-PeCDF	72.0	40.0 - 135	
13C-2,3,4,7,8-PeCDF	72.1	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	102	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	118	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	102	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	89.7	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	87.8	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	104	40.0 - 135	
13C-OCDF	83.8	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	73.8	50.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-003-SA
Client ID: 07-4037-KQ93F
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: 05-17-2007
Amount: 10.21 g
% Solids: 50.50

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: pg/g

Acquired: 06-01-2007
2005 WHO TEQ: 27.3

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.385	-	J	0.385	0.0463				
1,2,3,7,8-PeCDD	3.85	-		3.85	0.0277				
1,2,3,4,7,8-HxCDD	10.6	-		1.06	0.0904				
1,2,3,6,7,8-HxCDD	42.1	-		4.21	0.100	Total TCDD	58.0	-	
1,2,3,7,8,9-HxCDD	23.3	-		2.33	0.0918	Total PeCDD	56.2	-	
1,2,3,4,6,7,8-HpCDD	954	-		9.54	0.0806	Total HxCDD	370	-	
OCDD	6670	-		2.00	0.191	Total HpCDD	2320	-	
2,3,7,8-TCDF	2.79	-	F	0.279	0.0373				
1,2,3,7,8-PeCDF	2.92	-		0.0876	0.0383				
2,3,4,7,8-PeCDF	1.85	-	J	0.555	0.0426				
1,2,3,4,7,8-HxCDF	7.47	-		0.747	0.0282				
1,2,3,6,7,8-HxCDF	3.91	-		0.391	0.0285				
2,3,4,6,7,8-HxCDF	5.54	-		0.554	0.0322				
1,2,3,7,8,9-HxCDF	3.13	-		0.313	0.0289	Total TCDF	18.4	-	D,M
1,2,3,4,6,7,8-HpCDF	87.3	-		0.873	0.0383	Total PeCDF	80.2	-	D,M
1,2,3,4,7,8,9-HpCDF	3.68	-		0.0368	0.0403	Total HxCDF	248	-	D,M
OCDF	181	-		0.0543	0.104	Total HpCDF	291	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	71.4	40.0 - 135	
13C-1,2,3,7,8-PeCDD	54.7	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	76.2	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	92.4	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	70.1	40.0 - 135	
13C-OCDD	85.7	40.0 - 135	
13C-2,3,7,8-TCDF	72.6	40.0 - 135	
13C-1,2,3,7,8-PeCDF	58.2	40.0 - 135	
13C-2,3,4,7,8-PeCDF	59.0	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	84.1	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	97.2	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	82.9	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	73.6	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	71.6	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	88.6	40.0 - 135	
13C-OCDF	76.6	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	67.6	50.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-004-SA
Client ID: 07-4039-KQ93H
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: 05-17-2007
Amount: 10.19 g
% Solids: 50.95

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: pg/g

Acquired: 06-01-2007
2005 WHO TEQ: 47.1

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.684	-		0.684	0.0463				
1,2,3,7,8-PeCDD	7.12	-		7.12	0.0277				
1,2,3,4,7,8-HxCDD	19.3	-		1.93	0.0904				
1,2,3,6,7,8-HxCDD	64.7	-		6.47	0.100	Total TCDD	63.8	-	
1,2,3,7,8,9-HxCDD	41.9	-		4.19	0.0918	Total PeCDD	75.3	-	
1,2,3,4,6,7,8-HpCDD	1670	-		16.7	0.0806	Total HxCDD	688	-	
OCDD	12400	-		3.72	0.191	Total HpCDD	3680	-	
2,3,7,8-TCDF	2.93	-	F	0.293	0.0373				
1,2,3,7,8-PeCDF	3.12	-		0.0936	0.0383				
2,3,4,7,8-PeCDF	3.65	-		1.10	0.0426				
1,2,3,4,7,8-HxCDF	12.5	-		1.25	0.0282				
1,2,3,6,7,8-HxCDF	6.15	-		0.615	0.0285				
2,3,4,6,7,8-HxCDF	9.22	-		0.922	0.0322				
1,2,3,7,8,9-HxCDF	4.62	-		0.462	0.0289	Total TCDF	23.8	-	D,M
1,2,3,4,6,7,8-HpCDF	136	-		1.36	0.0383	Total PeCDF	100	-	D,M
1,2,3,4,7,8,9-HpCDF	6.83	-		0.0683	0.0403	Total HxCDF	332	-	D,M
OCDF	365	-		0.110	0.104	Total HpCDF	480	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	85.2	40.0 - 135	
13C-1,2,3,7,8-PeCDD	69.7	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	87.2	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	106	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	85.4	40.0 - 135	
13C-OCDD	106	40.0 - 135	
13C-2,3,7,8-TCDF	90.1	40.0 - 135	
13C-1,2,3,7,8-PeCDF	72.1	40.0 - 135	
13C-2,3,4,7,8-PeCDF	76.0	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	94.4	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	109	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	96.6	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	86.3	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	82.8	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	99.6	40.0 - 135	
13C-OCDF	90.5	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	81.8	50.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 4451-005-SA
Client ID: 07-4040-KQ93I
Matrix: Sediment
Batch No: X1156

Date Extracted: 05-30-2007
Date Received: 05-17-2007
Amount: 10.09 g
% Solids: 54.86

ICal: PCDDFAL3-4-17-07
GC Column: DB5
Units: pg/g

Acquired: 06-01-2007
2005 WHO TEQ: 2.72

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.146	-	J	0.146	0.0463				
1,2,3,7,8-PeCDD	0.343	-	J	0.343	0.0277				
1,2,3,4,7,8-HxCDD	1.23	-	J	0.123	0.0904				
1,2,3,6,7,8-HxCDD	3.49	-		0.349	0.100	Total TCDD	38.4	-	
1,2,3,7,8,9-HxCDD	1.68	-	J	0.168	0.0918	Total PeCDD	26.0	-	
1,2,3,4,6,7,8-HpCDD	73.6	-		0.736	0.0806	Total HxCDD	69.9	-	
OCDD	656	-		0.197	0.191	Total HpCDD	185	-	
2,3,7,8-TCDF	1.48	-	F	0.148	0.0373				
1,2,3,7,8-PeCDF	0.371	-	J	0.0111	0.0383				
2,3,4,7,8-PeCDF	0.442	-	J	0.133	0.0426				
1,2,3,4,7,8-HxCDF	0.958	-	J	0.0958	0.0282				
1,2,3,6,7,8-HxCDF	0.542	-	J	0.0542	0.0285				
2,3,4,6,7,8-HxCDF	0.681	-	J	0.0681	0.0322				
1,2,3,7,8,9-HxCDF	0.442	-	J	0.0442	0.0289	Total TCDF	8.91	-	D,M
1,2,3,4,6,7,8-HpCDF	8.53	-		0.0853	0.0383	Total PeCDF	8.13	-	D,M
1,2,3,4,7,8,9-HpCDF	0.707	-	J	0.00707	0.0403	Total HxCDF	20.5	-	
OCDF	27.4	-		0.00822	0.104	Total HpCDF	34.1	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	83.7	40.0 - 135	
13C-1,2,3,7,8-PeCDD	70.4	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	91.1	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	107	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	77.0	40.0 - 135	
13C-OCDD	81.6	40.0 - 135	
13C-2,3,7,8-TCDF	88.2	40.0 - 135	
13C-1,2,3,7,8-PeCDF	72.2	40.0 - 135	
13C-2,3,4,7,8-PeCDF	73.7	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	100	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	114	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	100	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	91.3	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	81.9	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	101	40.0 - 135	
13C-OCDF	81.9	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	81.3	50.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 6/4/07

Reviewed By: _____
Date: 6/5/07

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Sample Receipt

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 05/16/07

ANALYTICAL RESOURCES INCORPORATED

4451
0°

ARI Project: KQ93

Laboratory: Frontier Analytical Laboratory
Lab Contact: BRAD SILVERBUSH
Lab Address: 5172 Hillsdale Circle
El Dorado Hills, CA 95762
Phone: 916-934-0900
Fax: 916-934-0999

ARI Client: Landau Associates, Inc.
Project ID: Gate 3 - POB
ARI PM: Kelly BOttem
Phone: 206-695-6211
Fax: 206-695-6201

Analytical Protocol: PSDDA
Special Instructions:

Requested Turn Around: **06/14/07**
Fax Results (Y/N):

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 sucessors, 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	
07-4032-KQ93A	Gate3-CMP1	03/08/07	Sediment	1	PCDD/PCDF	14:50
Special Instructions: None						
07-4034-KQ93C	Gate3-CMP2	03/08/07	Sediment	1	PCDD/PCDF	18:40
Special Instructions: None						
07-4037-KQ93F	Gate3-CMP3	03/09/07	Sediment		PCDD/PCDF	10:10
Special Instructions: None						
07-4039-KQ93H	Gate3-CMP4	03/09/07	Sediment	1	PCDD/PCDF	13:30
Special Instructions: None						
07-4040-KQ93I	Gate3-CMPHab	03/09/07	Sediment	1	PCDD/PCDF	16:15
Special Instructions: None						

Use 2005 TEFs to calculate TEQ. All samples to be analyzed by EPA 8290 DIF, as requested by Kelly to Brad.

Kelly to Kathy - Client authorize FAL to proceed w/ analysis after being informed samples have passed 30day hold time. Client requested 15-TAT. KZ 5/17/07.

Kelly B@arilabs.com

Carrier UPS	Airbill 1Z 832695 13 4490 1237		Date 5/16/7
Relinquished by	Company ARI	Date 5/16/7	Time 1600
Received by	Company FAL	Date 5/17/07	Time 1110

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **4451**

Client:	Analytical Resources Inc. Kelly Bottem
Client Project ID:	Gate 3 - POB
Date Received:	05/17/2007
Time Received:	11:10 am
Received By:	NM
Logged In By:	JN
# of Samples Received:	5
Duplicates:	0
Storage Location:	R2

Method of Delivery:	UPS
Tracking Number:	1Z8326951344901237
Shipping Container Received Intact	Yes
Custody seals(s) present?	Yes
Custody seals(s) intact?	Yes
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	04/07/2007
Adequate Sample Volume	Yes

Anomalies or additional comments:

Use 2005 TEF's to calculate TEQ. Samples past EPA Method 8290 recommended hold time of 30 days - client was informed of this anomoly and authorized FAL to proceed with analysis.

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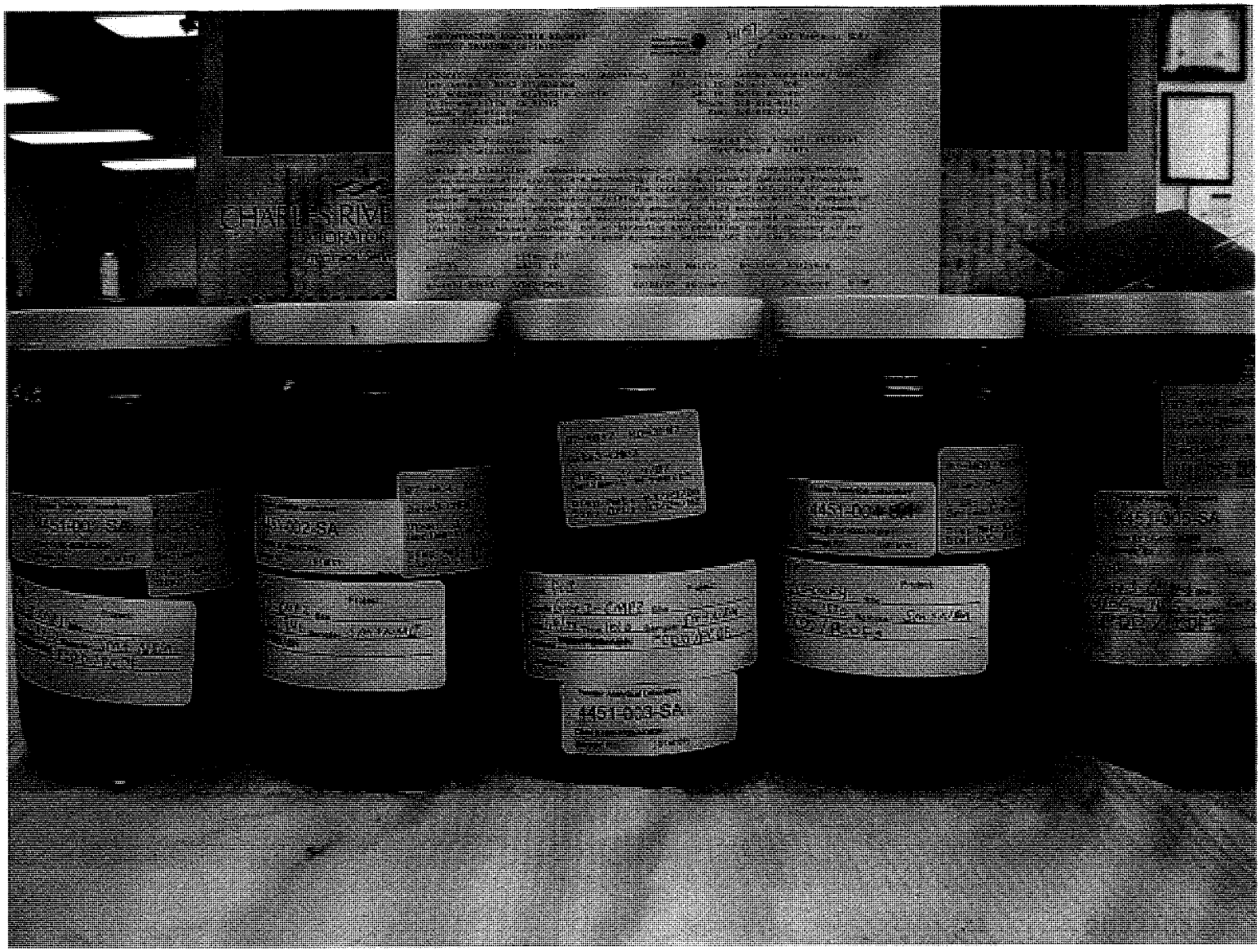

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Instrument Raw Data

Sample Results

FAL ID: 1156-001-0001-MB Filename: 01JUN07M Sam:3 Acquired: 1-JUN-07 11:28:33 ICal: PCDDFAL3-4-17-07
Client ID: Method Blank ConCal: ST060107M1 EndCal: ST060107M2
Results: 1156 GC Column: db5 Amount: 10.00 NATO 1989 Tox: 0.00
WHO 1998 Tox: 0.00

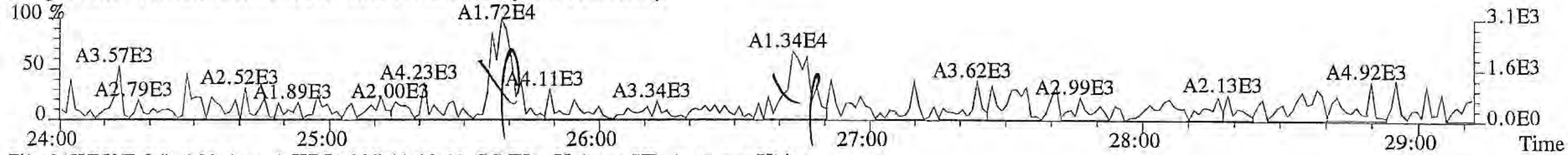
Name	Resp	RA		RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	*	*	n	NotFnd	1.11	*		2.50	928	0.0754	
1,2,3,7,8-PeCDD	*	*	n	NotFnd	1.10	*		2.50	616	0.0856	
1,2,3,4,7,8-HxCDD	*	*	n	NotFnd	0.82	*		2.50	738	0.174	
1,2,3,6,7,8-HxCDD	*	*	n	NotFnd	0.74	*		2.50	738	0.185	
1,2,3,7,8,9-HxCDD	*	*	n	NotFnd	0.80	*		2.50	738	0.183	
1,2,3,4,6,7,8-HpCDD	*	*	n	NotFnd	0.75	*		2.50	518	0.188	
OCDD	*	*	n	NotFnd	0.80	*		2.50	933	0.550	
2,3,7,8-TCDF	*	*	n	NotFnd	0.85	*		2.50	1440	0.0704	
1,2,3,7,8-PeCDF	*	*	n	NotFnd	0.78	*		2.50	1300	0.156	
2,3,4,7,8-PeCDF	*	*	n	NotFnd	0.76	*		2.50	1300	0.165	
1,2,3,4,7,8-HxCDF	*	*	n	NotFnd	1.02	*		2.50	648	0.0638	
1,2,3,6,7,8-HxCDF	*	*	n	NotFnd	0.92	*		2.50	648	0.0630	
2,3,4,6,7,8-HxCDF	*	*	n	NotFnd	0.93	*		2.50	648	0.0720	
1,2,3,7,8,9-HxCDF	*	*	n	NotFnd	0.92	*		2.50	648	0.105	
1,2,3,4,6,7,8-HpCDF	*	*	n	NotFnd	1.10	*		2.50	853	0.122	
1,2,3,4,7,8,9-HpCDF	*	*	n	NotFnd	0.99	*		2.50	853	0.132	
OCDF	*	*	n	NotFnd	0.77	*		2.50	962	0.444	

							Rec
13C-2,3,7,8-TCDD	4.46e+07	0.79	y	27:28	1.03	104	52.0
13C-1,2,3,7,8-PeCDD	4.30e+07	1.57	y	33:16	1.15	89.7	44.8
13C-1,2,3,4,7,8-HxCDD	3.08e+07	1.27	y	38:37	1.34	123	61.3
13C-1,2,3,6,7,8-HxCDD	3.57e+07	1.27	y	38:47	1.35	141	70.5
13C-1,2,3,4,6,7,8-HpCDD	2.40e+07	1.00	y	44:12	1.38	92.4	46.2
13C-OCDD	3.46e+07	0.90	y	49:44	1.10	167	41.8
13C-2,3,7,8-TCDF	9.36e+07	0.80	y	26:44	1.28	111	55.6
13C-1,2,3,7,8-PeCDF	6.57e+07	1.60	y	31:33	1.10	90.7	45.3
13C-2,3,4,7,8-PeCDF	6.55e+07	1.59	y	32:52	1.07	93.1	46.5
13C-1,2,3,4,7,8-HxCDF	3.94e+07	0.52	y	37:14	1.56	134	67.1
13C-1,2,3,6,7,8-HxCDF	4.98e+07	0.50	y	37:26	1.74	153	76.3
13C-2,3,4,6,7,8-HxCDF	4.12e+07	0.50	y	38:22	1.65	133	66.5
13C-1,2,3,7,8,9-HxCDF	3.20e+07	0.51	y	39:48	1.47	116	57.9
13C-1,2,3,4,6,7,8-HpCDF	2.72e+07	0.44	y	42:19	1.42	102	50.9
13C-1,2,3,4,7,8,9-HpCDF	3.02e+07	0.44	y	45:07	1.34	120	60.0
13C-OCDF	4.48e+07	0.88	y	50:06	1.44	165	41.3
37Cl-2,3,7,8-TCDD	1.34e+07			27:30	0.77	42.1	52.7
13C-1,2,3,4-TCDD	8.33e+07	0.79	y	26:54	-	9.81	
13C-1,2,3,4-TCDF	1.31e+08	0.79	y	25:39	-	10.2	
13C-1,2,3,7,8,9-HxCDD	3.76e+07	1.26	y	39:14	-	5.20	

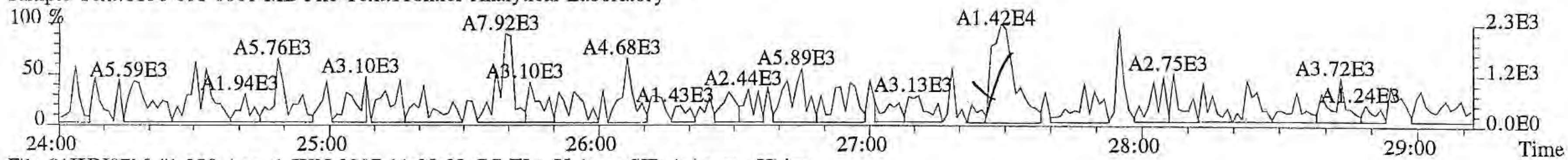
Total Tetra-Dioxins	*	NotFnd	1.11	*	2.50	928	0.0754	0	
Total Penta-Dioxins	*	NotFnd	1.10	*	2.50	616	0.0856	0	
Total Hexa-Dioxins	*	NotFnd	0.79	*	2.50	738	0.187	0	
Total Hepta-Dioxins	*	NotFnd	0.75	*	2.50	518	0.188	0	
Total Tetra-Furans	*	NotFnd	0.85	*	2.50	1440	0.0704	0	
1st Fn. Tot Penta-Furans	*	NotFnd	0.77	*	2.50	1300	0.165	0	PeCDF
Total Penta-Furans	*	NotFnd	0.77	*	2.50	1300	0.165	0	*
Total Hexa-Furans	*	NotFnd	0.95	*	2.50	648	0.105	0	
Total Hepta-Furans	*	NotFnd	1.04	*	2.50	853	0.132	0	

Analyst: _____ Date: 6/4/07

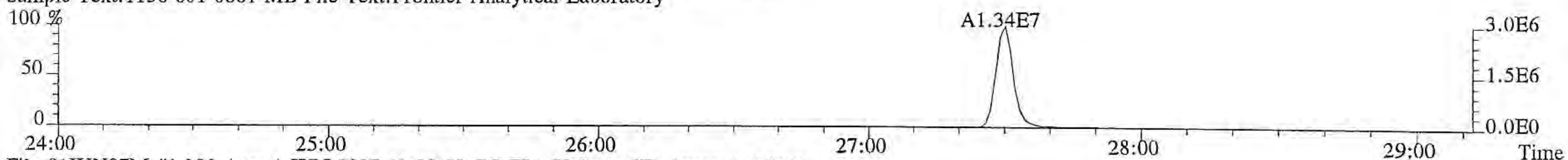
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



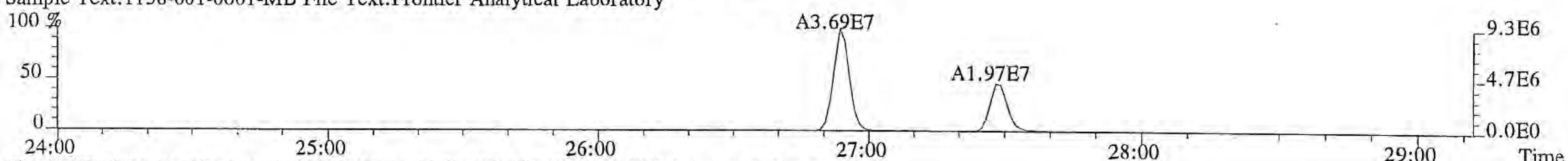
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



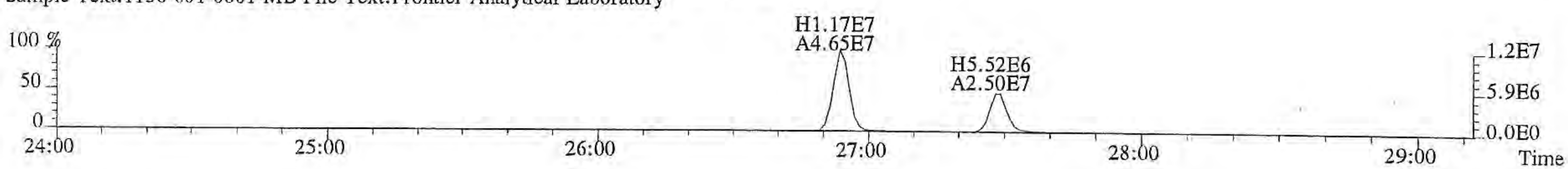
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



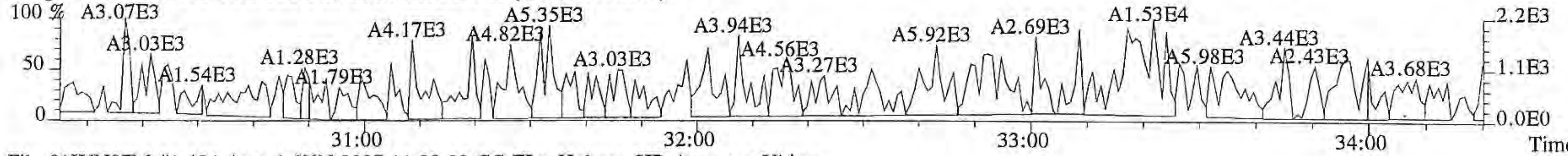
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



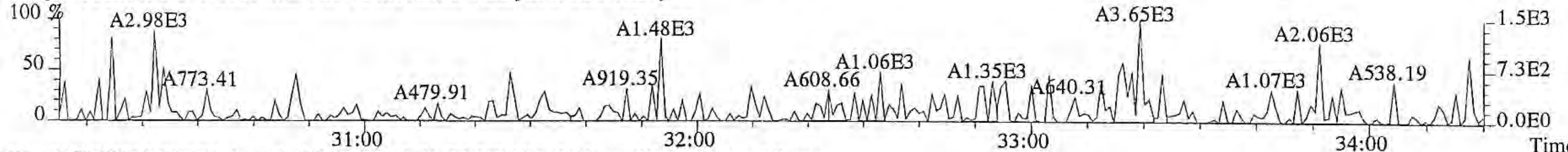
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



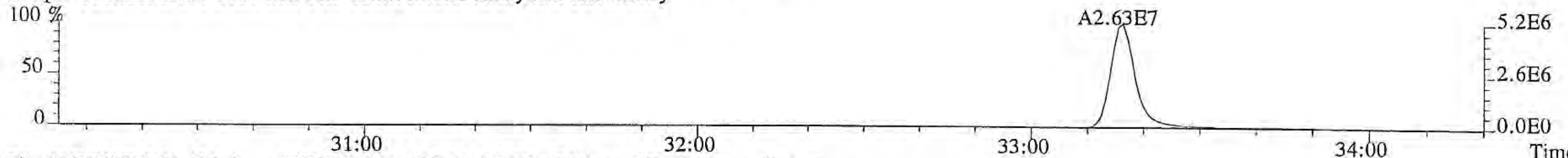
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



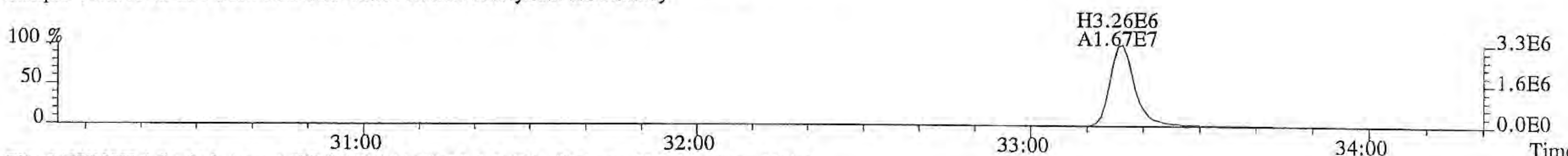
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



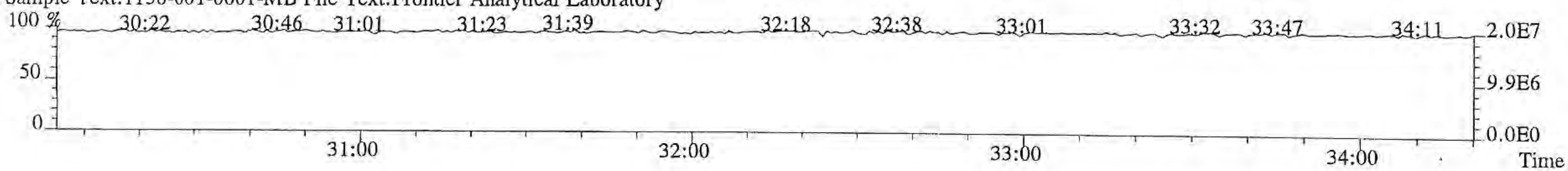
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



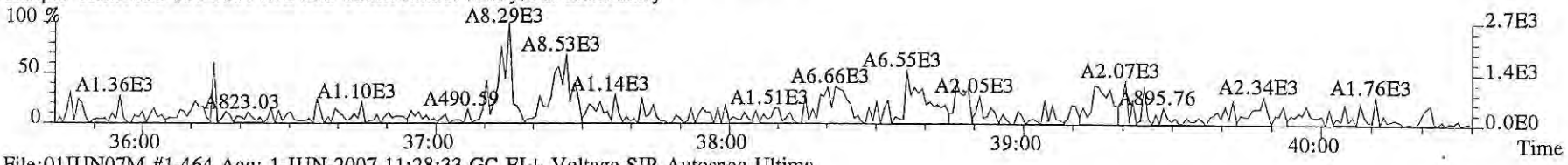
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



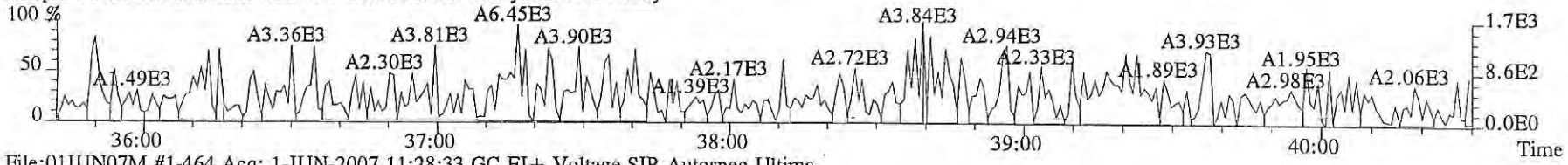
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:3 F:2 Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



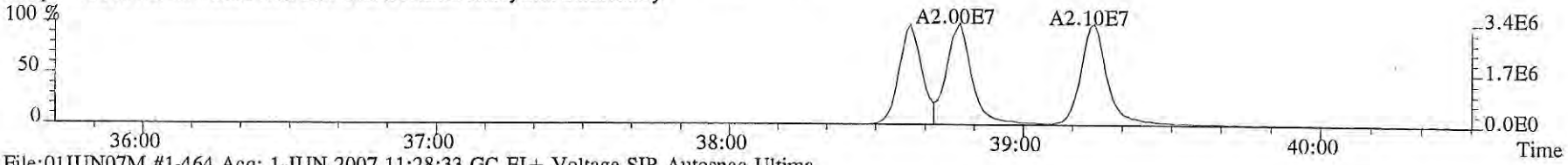
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



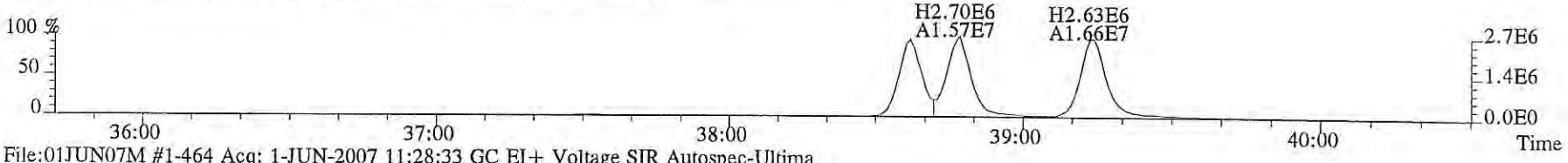
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



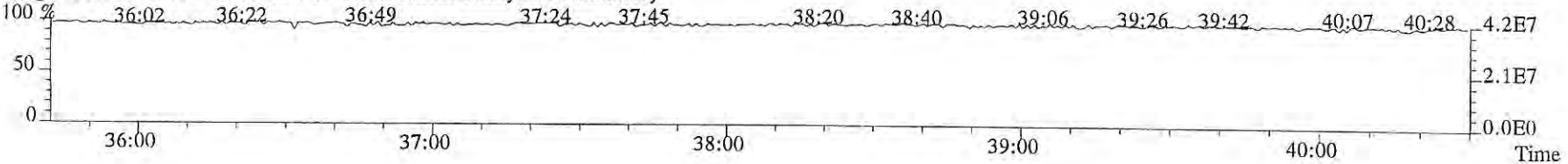
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



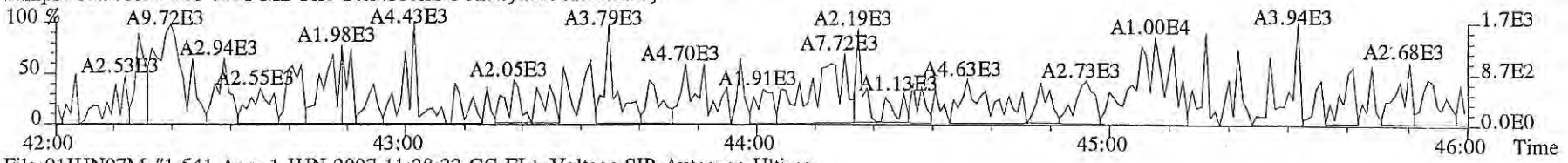
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



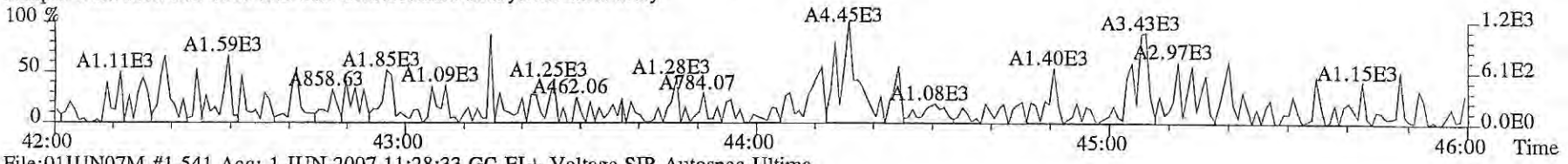
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:3 F:3 Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



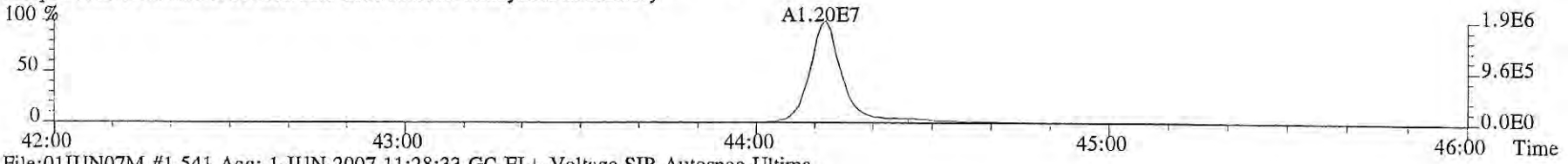
File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



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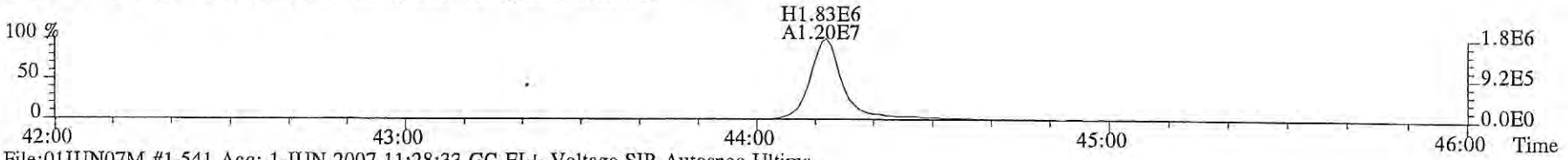
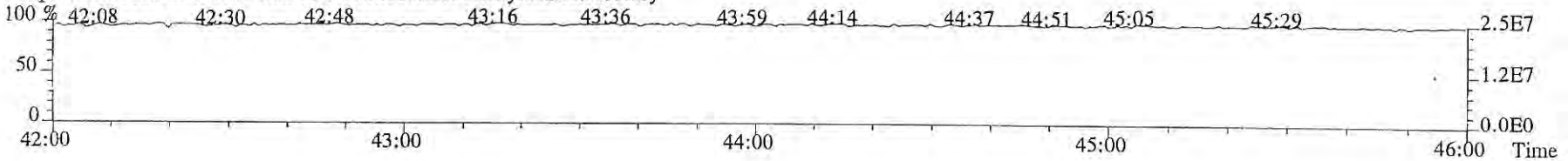
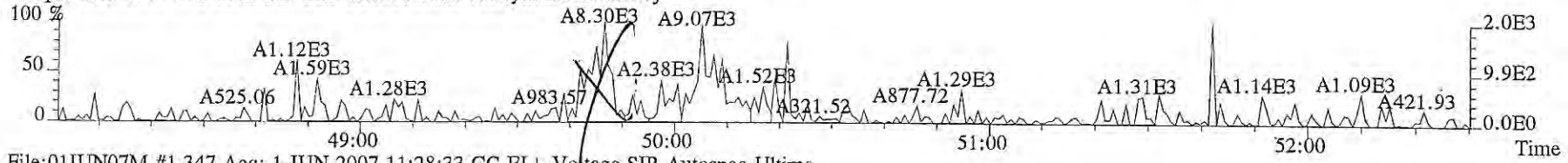
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:3 F:4 Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



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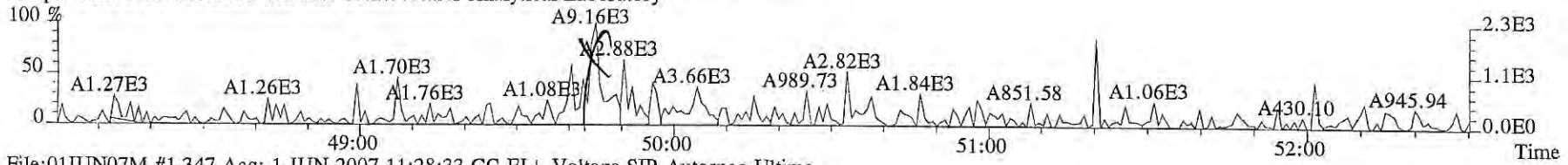
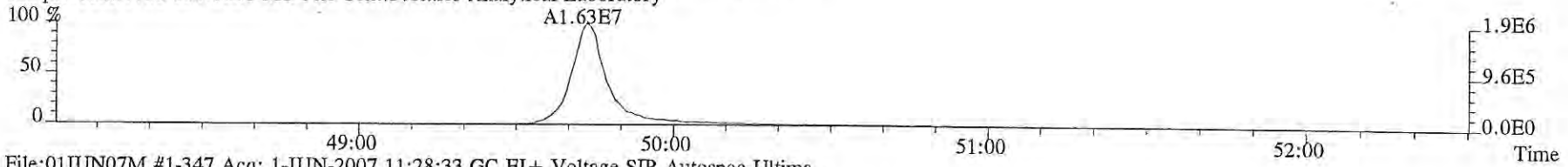
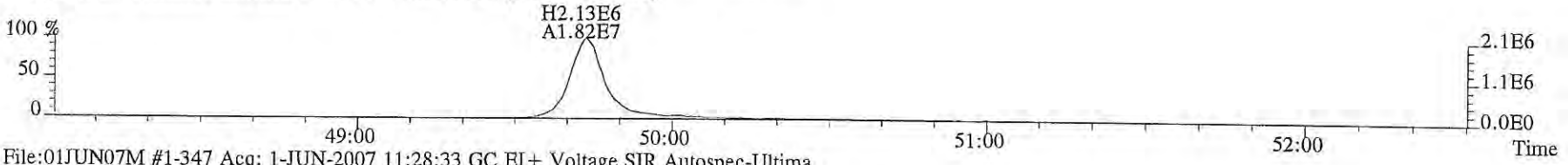
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



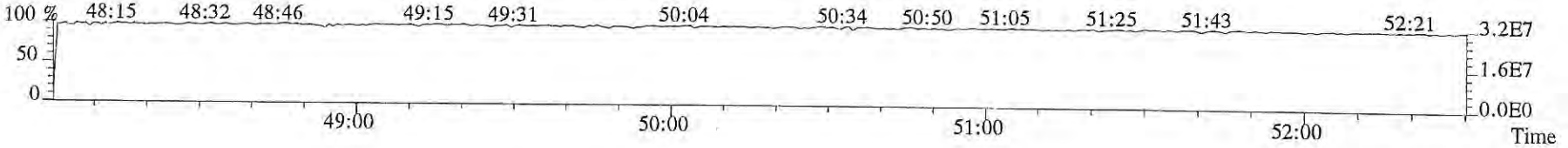
File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



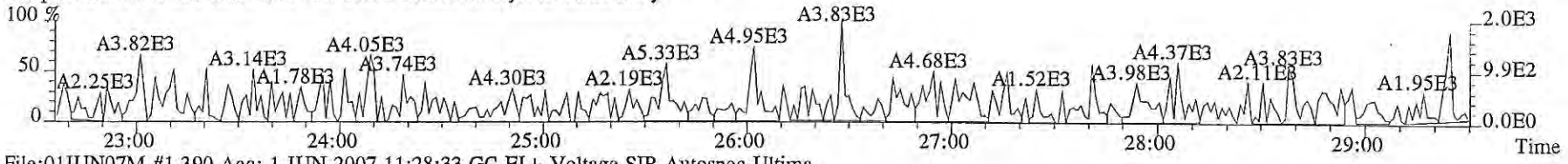
File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



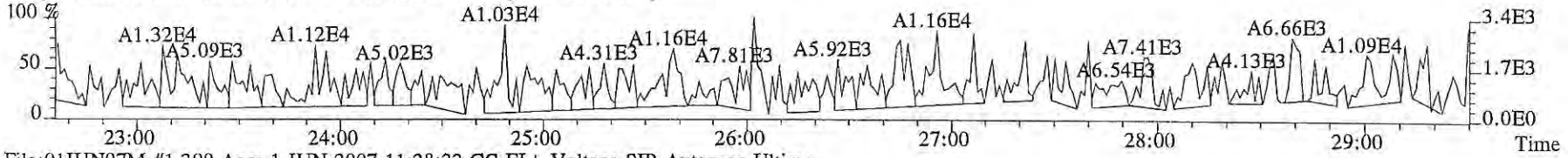
File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:3 F:5 Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



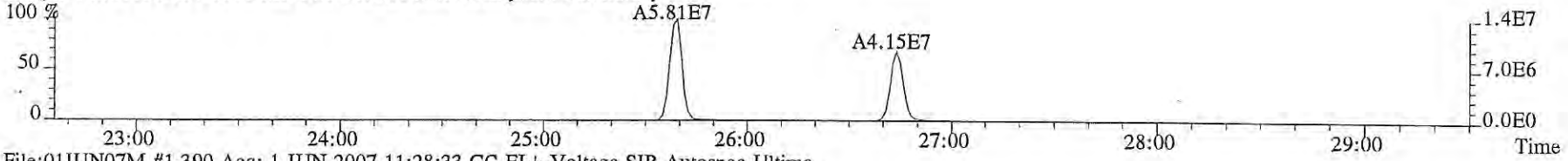
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



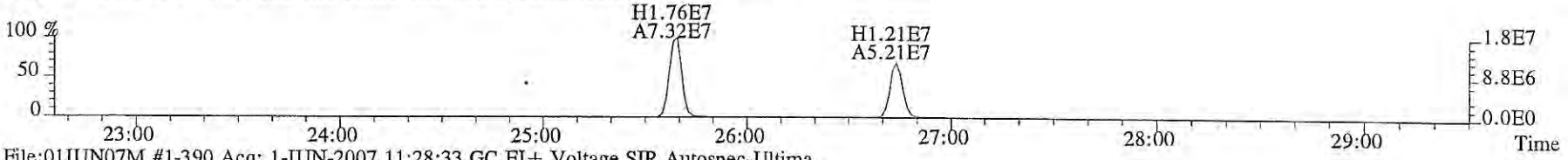
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



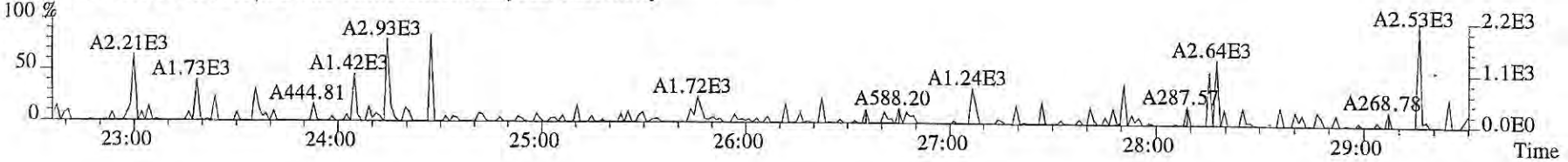
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



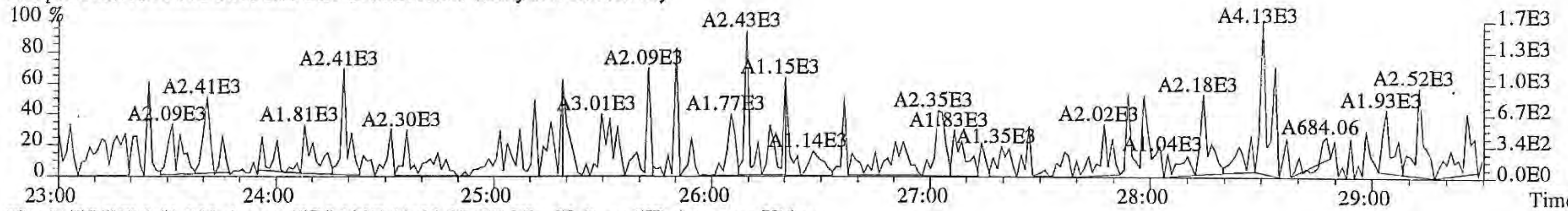
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



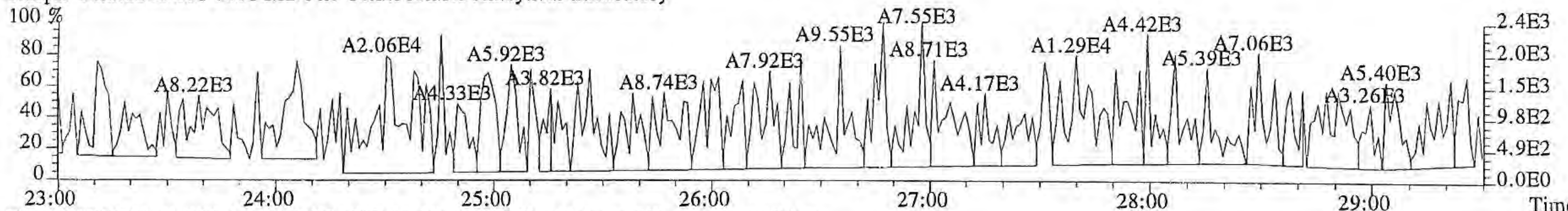
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



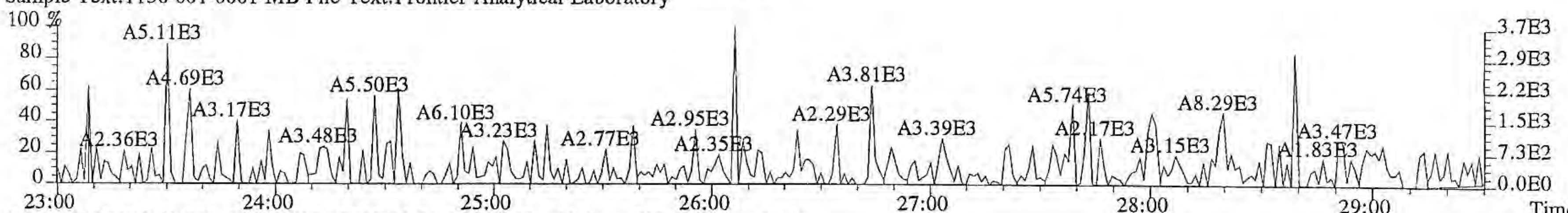
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



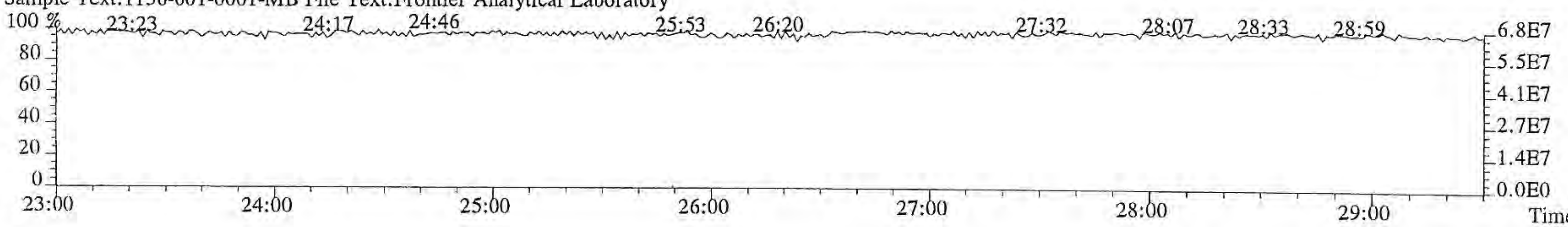
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



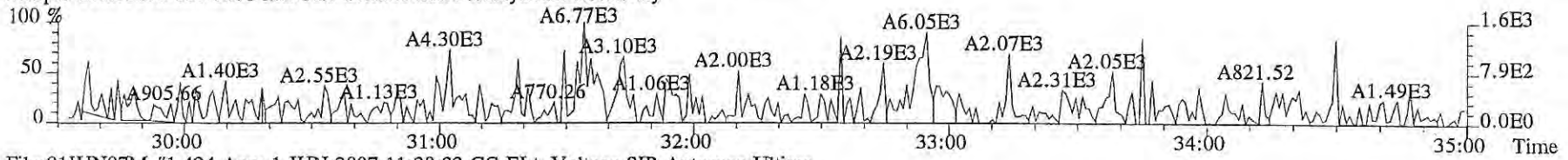
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



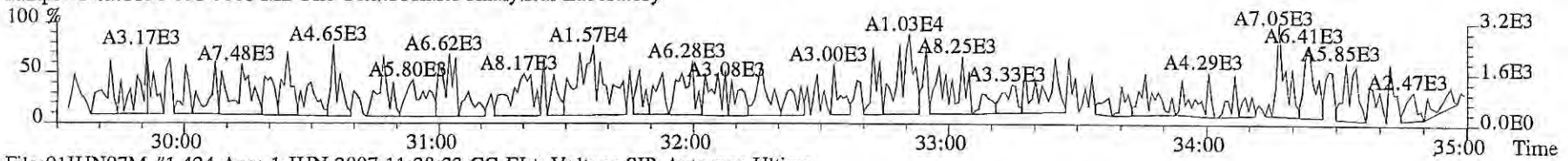
File:01JUN07M #1-390 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:3 Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



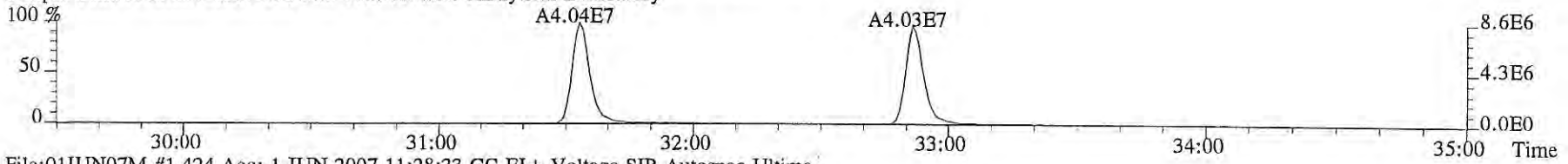
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



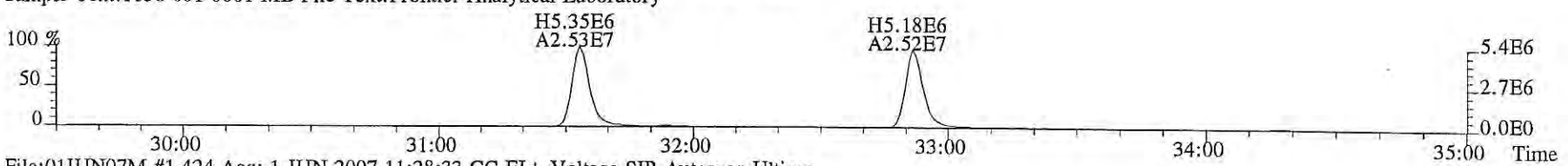
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



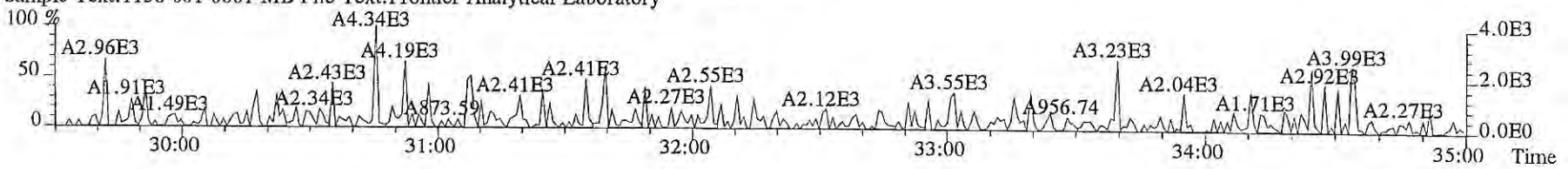
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



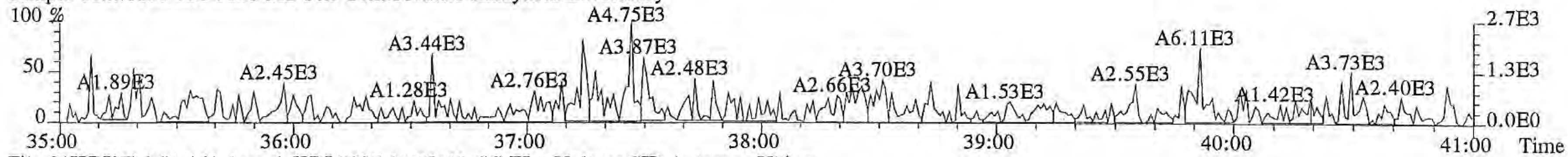
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



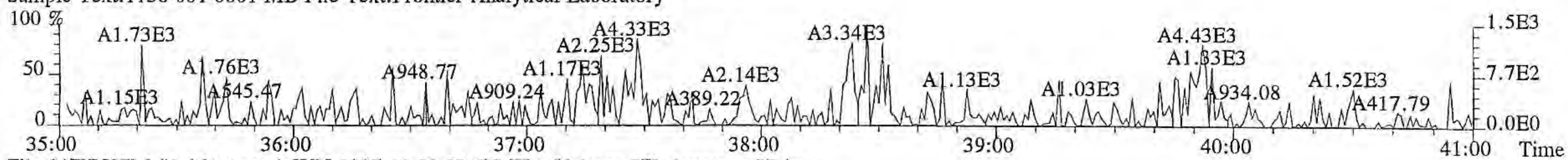
File:01JUN07M #1-424 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



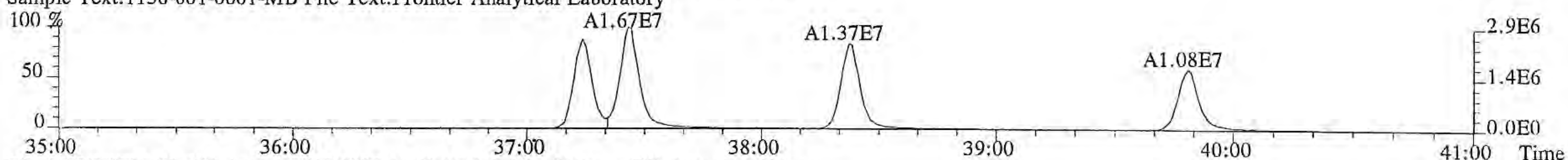
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



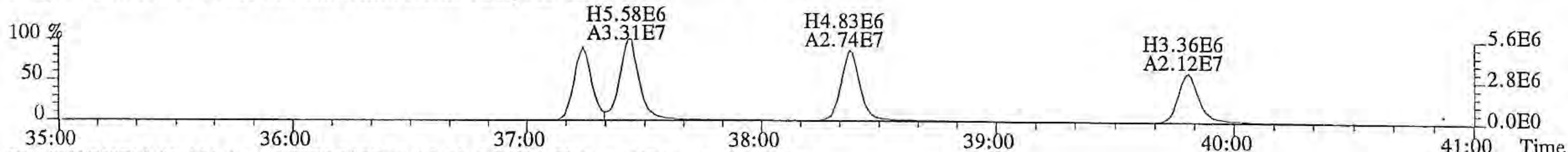
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



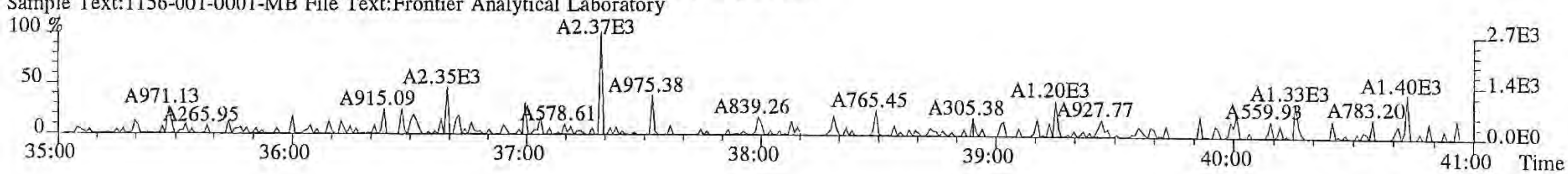
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



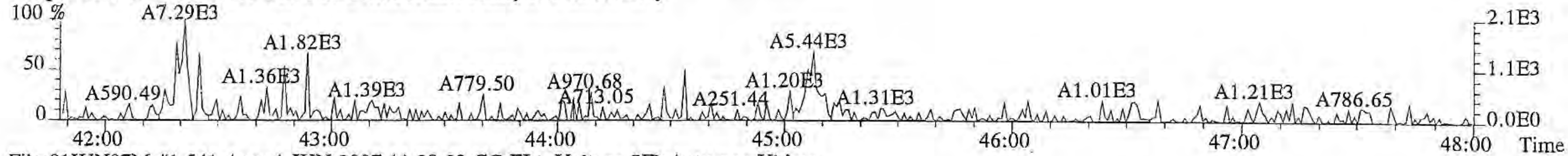
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



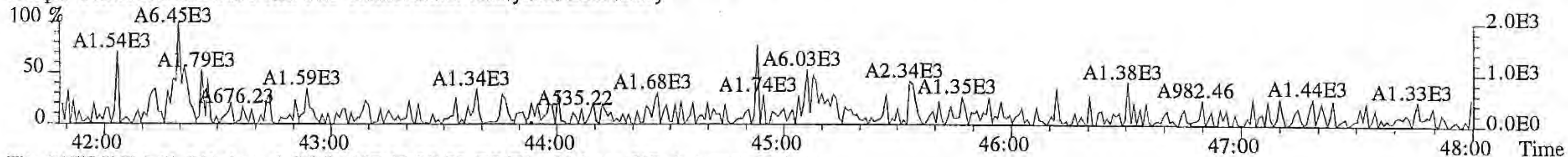
File:01JUN07M #1-464 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



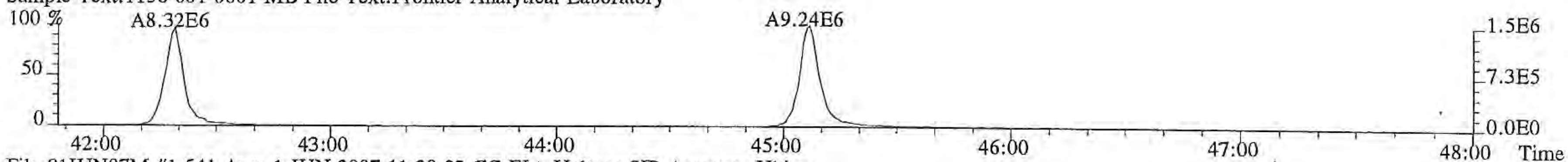
File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



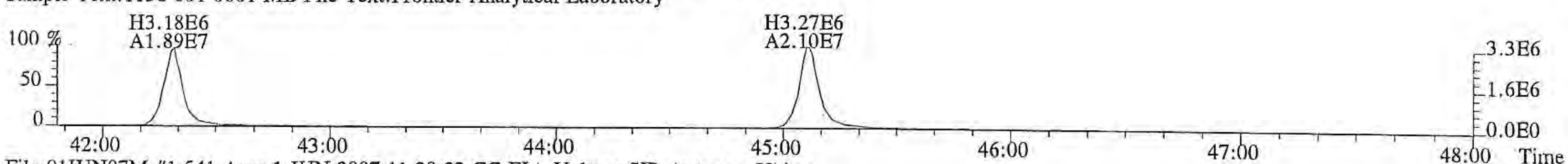
File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



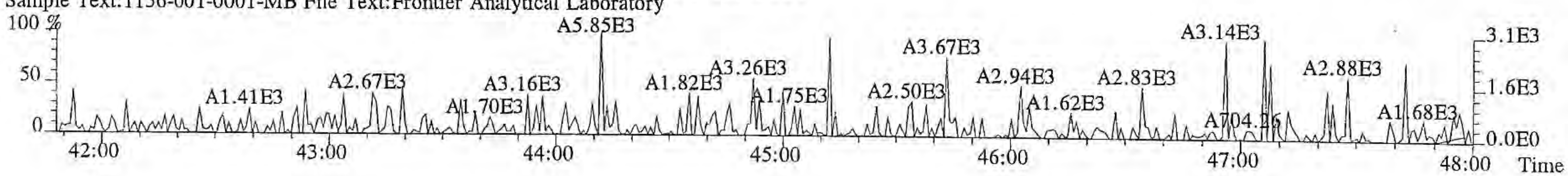
File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



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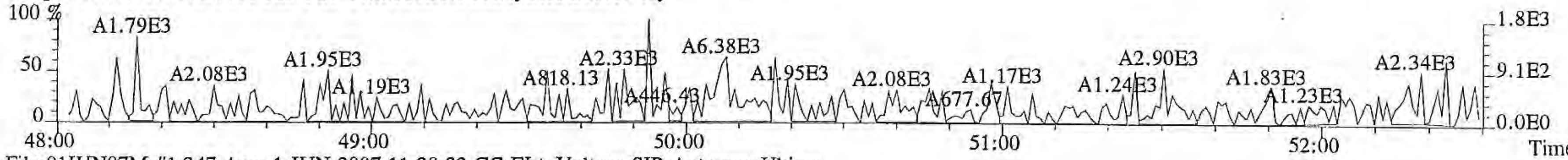
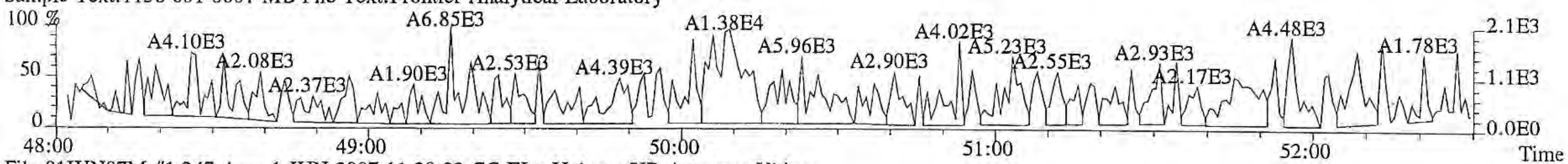
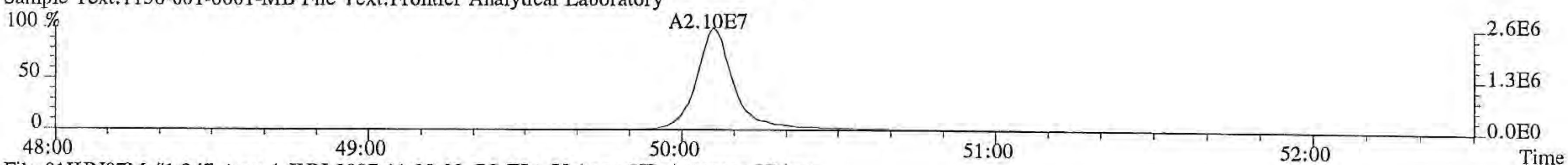
File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



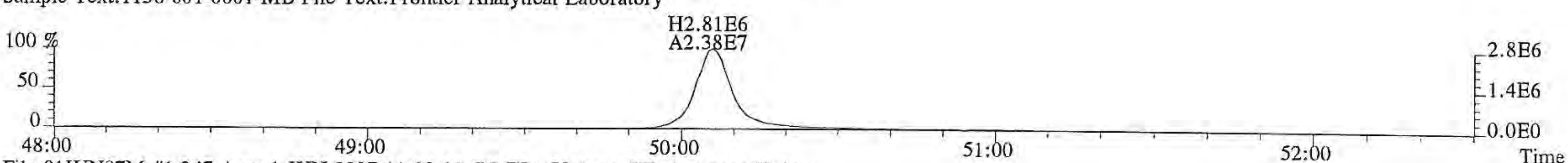
File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



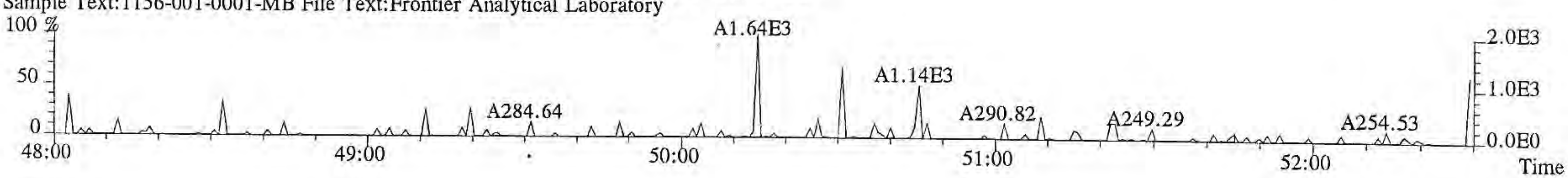
File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



File:01JUN07M #1-347 Acq: 1-JUN-2007 11:28:33 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-MB File Text:Frontier Analytical Laboratory



EPA Method 8290
FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Soil OPR Data Filename: 01JUN07M Sam:2

Ext. Date: 5/30/07 Shift: Day Analysis Date: 1-JUN-07 10:33:13

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
NATIVE ANALYTES			
2,3,7,8-TCDD	10	9.38	7.00 - 13.0
1,2,3,7,8-PeCDD	50	48.9	35.0 - 65.0
1,2,3,4,7,8-HxCDD	50	49.4	35.0 - 65.0
1,2,3,6,7,8-HxCDD	50	50.0	35.0 - 65.0
1,2,3,7,8,9-HxCDD	50	44.5	35.0 - 65.0
1,2,3,4,6,7,8-HpCDD	50	48.7	35.0 - 65.0
OCDD	100	93.3	70.0 - 130
2,3,7,8-TCDF	10	9.19	7.00 - 13.0
1,2,3,7,8-PeCDF	50	49.7	35.0 - 65.0
2,3,4,7,8-PeCDF	50	49.3	35.0 - 65.0
1,2,3,4,7,8-HxCDF	50	49.2	35.0 - 65.0
1,2,3,6,7,8-HxCDF	50	47.9	35.0 - 65.0
2,3,4,6,7,8-HxCDF	50	47.6	35.0 - 65.0
1,2,3,7,8,9-HxCDF	50	48.1	35.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	47.4	35.0 - 65.0
1,2,3,4,7,8,9-HpCDF	50	48.1	35.0 - 65.0
OCDF	100	94.8	70.0 - 130

Analyst: _____ Date: 6/4/07

EPA Method 8290
FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Soil OPR Data Filename: 01JUN07M Sam:2

Ext. Date: 5/30/07 Shift: Day Analysis Date: 1-JUN-07 10:33:13

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	100	81.1	40.0 - 135.0
13C-1,2,3,7,8-PeCDD	100	73.4	40.0 - 135.0
13C-1,2,3,4,7,8-HxCDD	100	96.3	40.0 - 135.0
13C-1,2,3,6,7,8-HxCDD	100	109	40.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDD	100	71.5	40.0 - 135.0
13C-OCDD	200	123	80.0 - 270
13C-2,3,7,8-TCDF	100	88.9	40.0 - 135.0
13C-1,2,3,7,8-PeCDF	100	73.2	40.0 - 135.0
13C-2,3,4,7,8-PeCDF	100	74.9	40.0 - 135.0
13C-1,2,3,4,7,8-HxCDF	100	104	40.0 - 135.0
13C-1,2,3,6,7,8-HxCDF	100	117	40.0 - 135.0
13C-2,3,4,6,7,8-HxCDF	100	101	40.0 - 135.0
13C-1,2,3,7,8,9-HxCDF	100	89.9	40.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	100	79.4	40.0 - 135.0
13C-1,2,3,4,7,8,9-HpCDF	100	97.2	40.0 - 135.0
13C-OCDF	200	131	80.0 - 270
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	31.8	10.0 - 60.0

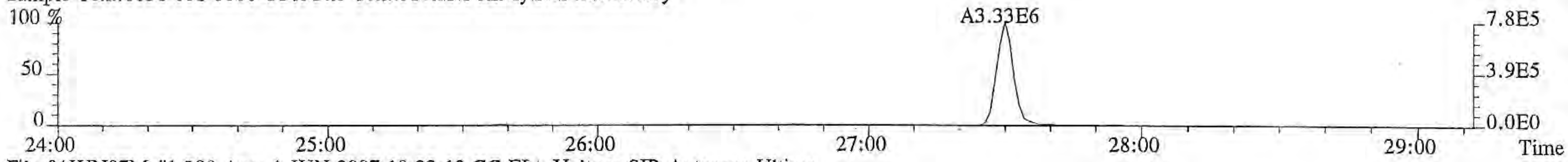
Analyst: _____ Date: 6/4/07

FAL ID: 1156-001-0001-OPR Filename: 01JUN07M Sam:2 Acquired: 1-JUN-07 10:33:13 ICal: PCDDFAL3-4-17-07
Client ID: OPR ConCal: ST060107M1 EndCal: ST060107M2
Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 97.2
WHO 1998 Tox: 121

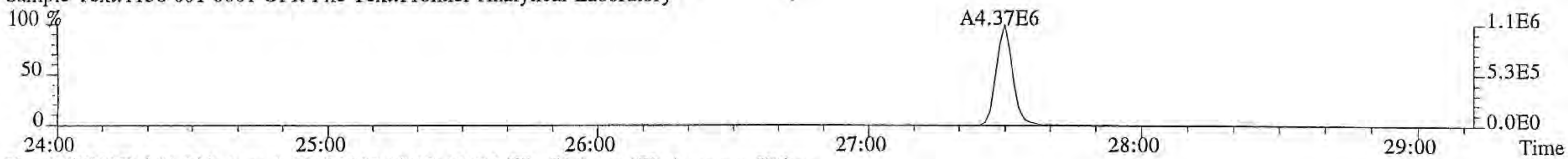
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	7.70e+06	0.76 y	27:30	1.11	9.38		2.50	-	*	
1,2,3,7,8-PeCDD	4.01e+07	1.58 y	33:18	1.10	48.9		2.50	-	*	
1,2,3,4,7,8-HxCDD	2.14e+07	1.26 y	38:38	0.82	49.4		2.50	-	*	
1,2,3,6,7,8-HxCDD	2.24e+07	1.27 y	38:48	0.74	50.0		2.50	-	*	
1,2,3,7,8,9-HxCDD	2.04e+07	1.25 y	39:16	0.80	44.5		2.50	-	*	
1,2,3,4,6,7,8-HpCDD	1.50e+07	1.03 y	44:13	0.75	48.7		2.50	-	*	
OCDD	2.07e+07	0.89 y	49:45	0.80	93.3		2.50	-	*	
2,3,7,8-TCDF	1.19e+07	0.77 y	26:45	0.85	9.19		2.50	-	*	
1,2,3,7,8-PeCDF	4.22e+07	1.61 y	31:35	0.78	49.7		2.50	-	*	
2,3,4,7,8-PeCDF	4.05e+07	1.57 y	32:53	0.76	49.3		2.50	-	*	
1,2,3,4,7,8-HxCDF	3.35e+07	1.26 y	37:16	1.02	49.2		2.50	-	*	
1,2,3,6,7,8-HxCDF	3.72e+07	1.26 y	37:27	0.92	47.9		2.50	-	*	
2,3,4,6,7,8-HxCDF	3.04e+07	1.27 y	38:24	0.93	47.6		2.50	-	*	
1,2,3,7,8,9-HxCDF	2.42e+07	1.27 y	39:50	0.92	48.1		2.50	-	*	
1,2,3,4,6,7,8-HpCDF	2.42e+07	1.03 y	42:19	1.10	47.4		2.50	-	*	
1,2,3,4,7,8,9-HpCDF	2.55e+07	1.03 y	45:08	0.99	48.1		2.50	-	*	
OCDF	2.86e+07	0.91 y	50:07	0.77	94.8		2.50	-	*	
										Rec
13C-2,3,7,8-TCDD	7.37e+07	0.78 y	27:29	1.03	81.1					81.1
13C-1,2,3,7,8-PeCDD	7.45e+07	1.60 y	33:16	1.15	73.4					73.4
13C-1,2,3,4,7,8-HxCDD	5.32e+07	1.23 y	38:37	1.34	96.3					96.3
13C-1,2,3,6,7,8-HxCDD	6.08e+07	1.31 y	38:47	1.35	109					109
13C-1,2,3,4,6,7,8-HpCDD	4.08e+07	1.01 y	44:12	1.38	71.5					71.5
13C-OCDD	5.59e+07	0.90 y	49:44	1.10	123					61.4
13C-2,3,7,8-TCDF	1.54e+08	0.78 y	26:44	1.28	88.9					88.9
13C-1,2,3,7,8-PeCDF	1.09e+08	1.60 y	31:33	1.10	73.2					73.2
13C-2,3,4,7,8-PeCDF	1.08e+08	1.60 y	32:52	1.07	74.9					74.9
13C-1,2,3,4,7,8-HxCDF	6.71e+07	0.52 y	37:14	1.56	104					104
13C-1,2,3,6,7,8-HxCDF	8.42e+07	0.51 y	37:26	1.74	117					117
13C-2,3,4,6,7,8-HxCDF	6.86e+07	0.52 y	38:22	1.65	101					101
13C-1,2,3,7,8,9-HxCDF	5.47e+07	0.50 y	39:49	1.47	89.9					89.9
13C-1,2,3,4,6,7,8-HpCDF	4.66e+07	0.44 y	42:19	1.42	79.4					79.4
13C-1,2,3,4,7,8,9-HpCDF	5.38e+07	0.44 y	45:07	1.34	97.2					97.2
13C-OCDF	7.82e+07	0.90 y	50:06	1.44	131					65.6
37Cl-2,3,7,8-TCDD	2.15e+07		27:30	0.77	31.8					79.5
13C-1,2,3,4-TCDD	8.81e+07	0.79 y	26:53	-	104					
13C-1,2,3,4-TCDF	1.35e+08	0.78 y	25:39	-	104					
13C-1,2,3,7,8,9-HxCDD	4.13e+07	1.26 y	39:14	-	57.1					
							Fac	Noise	DL	#Hom
Total Tetra-Dioxins	7.80e+06		24:13	1.11	9.51		2.50	-	*	9
Total Penta-Dioxins	4.01e+07		33:18	1.10	48.9		2.50	-	*	1
Total Hexa-Dioxins	6.49e+07		38:38	0.79	145		2.50	-	*	10
Total Hepta-Dioxins	1.56e+07		42:50	0.75	50.7		2.50	-	*	22
Total Tetra-Furans	1.24e+07		24:18	0.85	9.54		2.50	-	*	16
1st Fn. Tot Penta-Furans	1.27e+05		22:48	0.77	0.152		2.50	-	*	28 PeCDF
Total Penta-Furans	8.44e+07		30:19	0.77	101		2.50	-	*	10 101
Total Hexa-Furans	1.26e+08		35:36	0.95	194		2.50	-	*	16
Total Hepta-Furans	5.02e+07		42:19	1.04	96.4		2.50	-	*	20

Analyst: _____ Date: 6/4/07

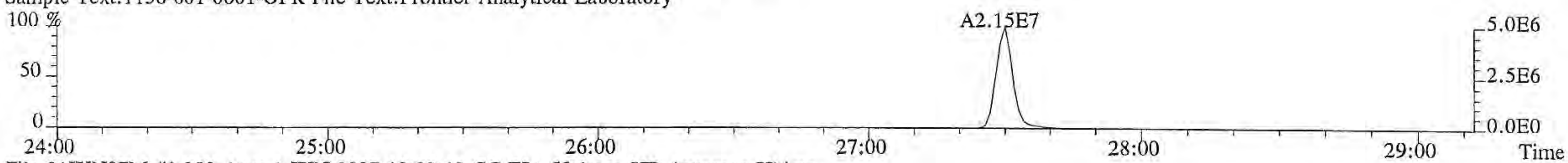
File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



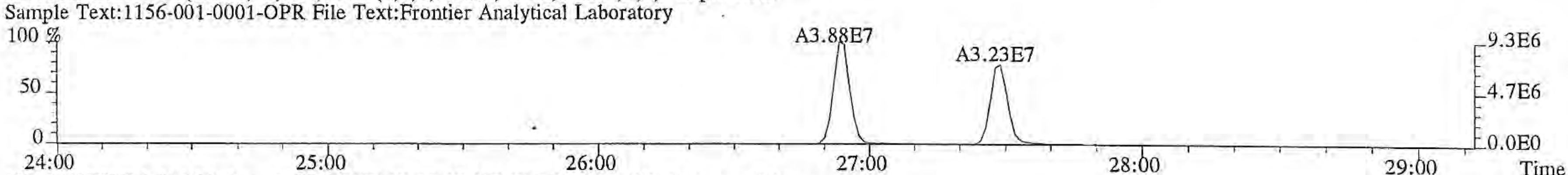
File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



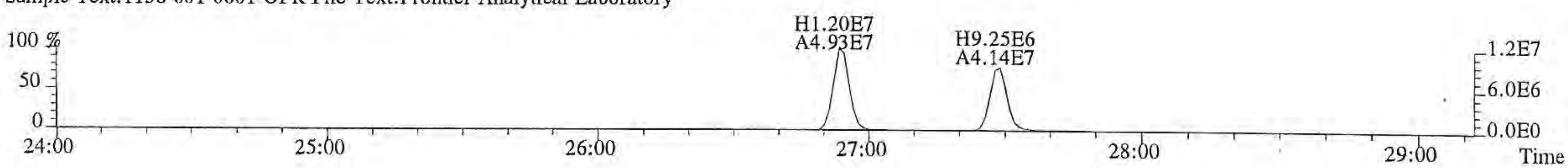
File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



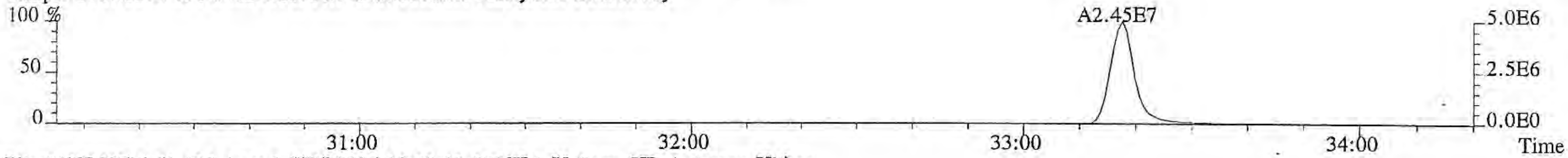
File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



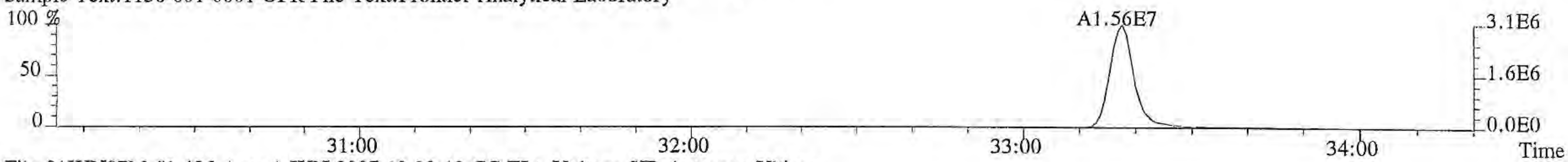
File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



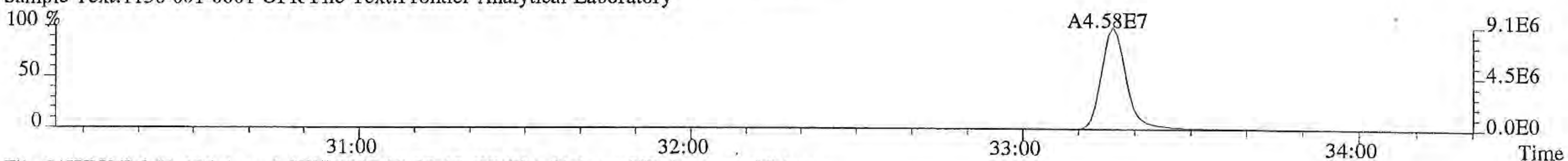
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



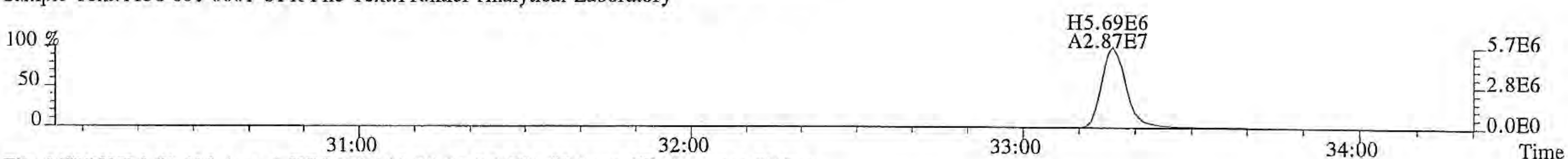
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



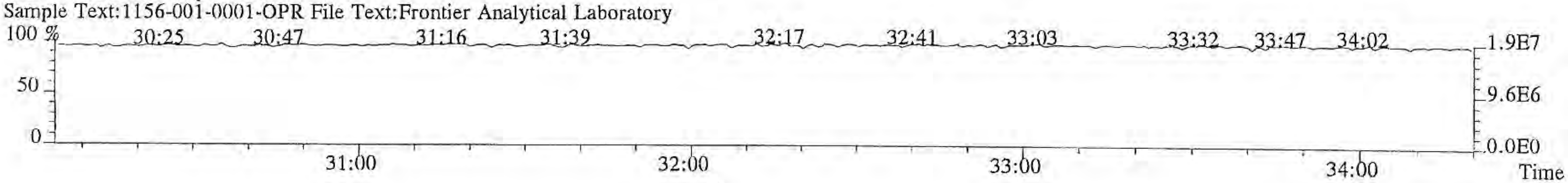
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



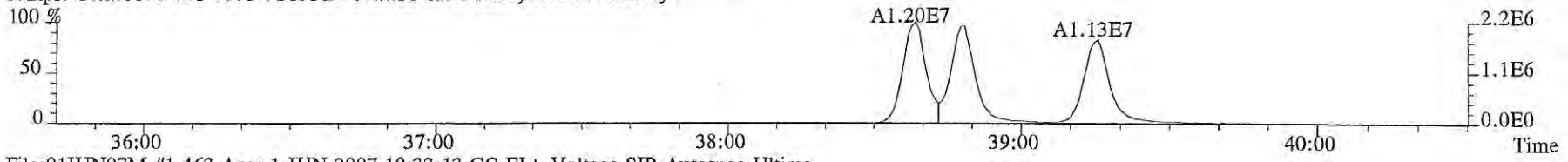
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



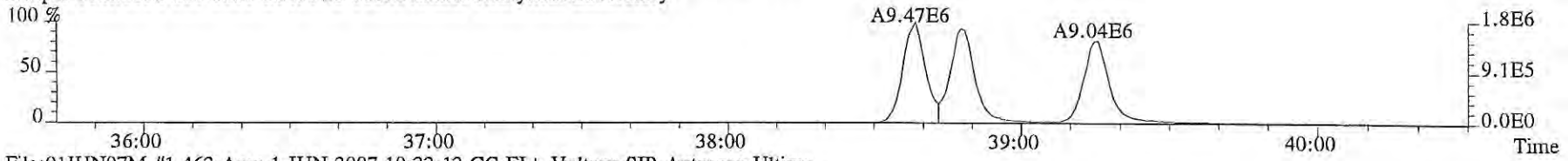
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:2 F:2 Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



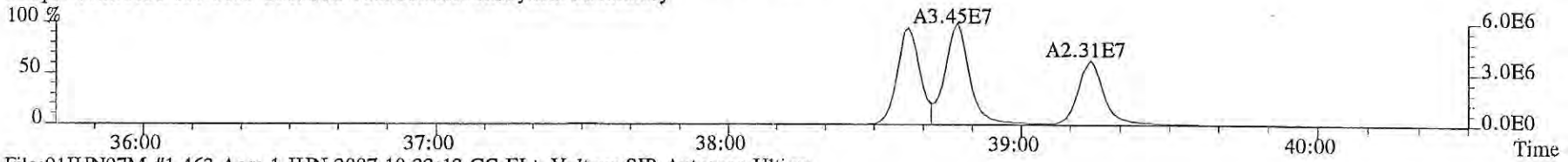
File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



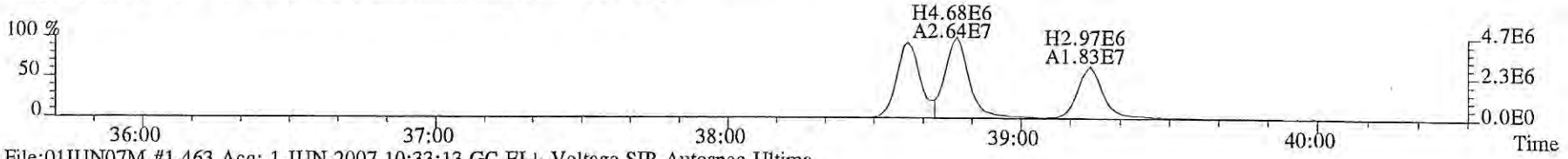
File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



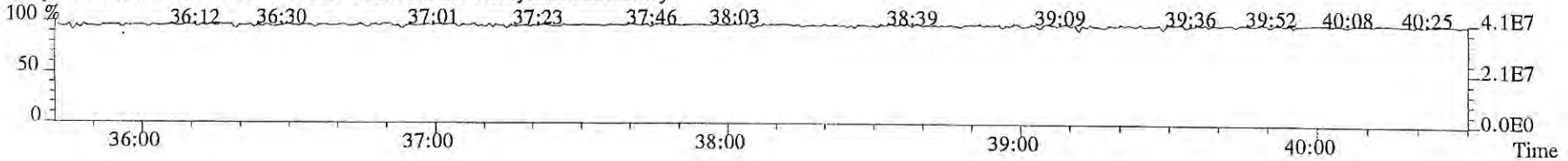
File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



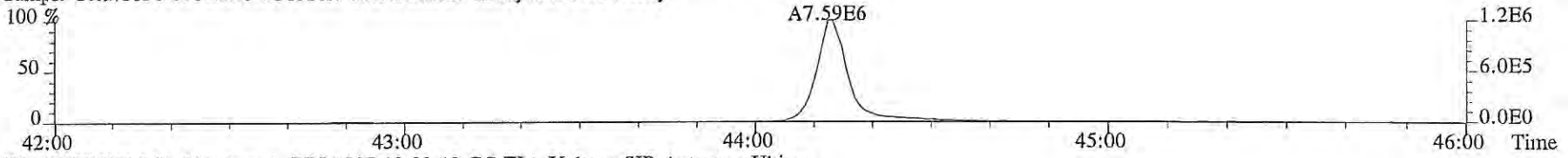
File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



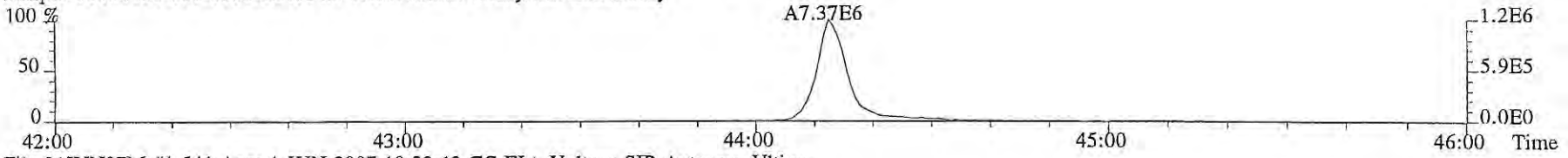
File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:2 F:3 Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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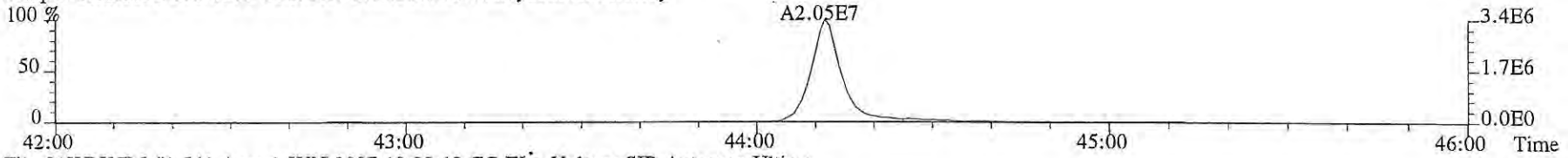
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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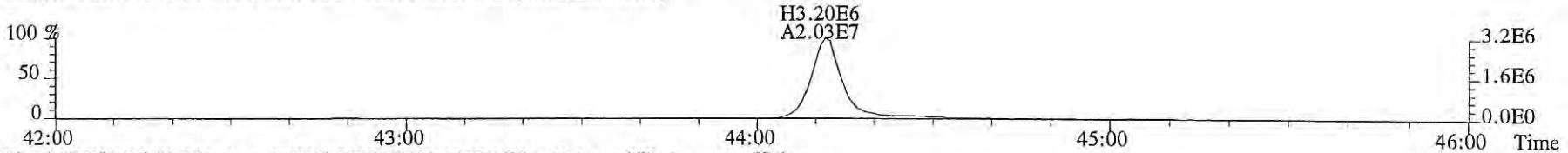
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:2 F:4 Exp:PCDD
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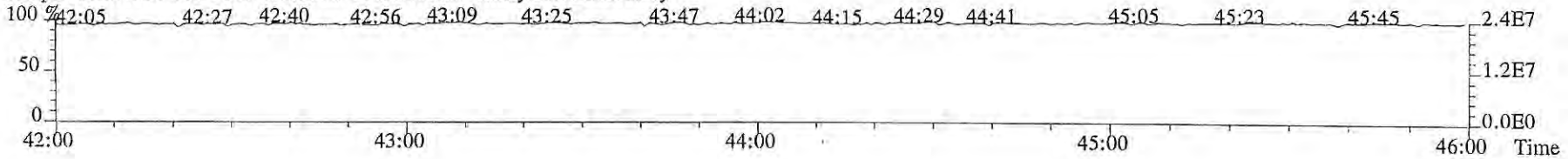

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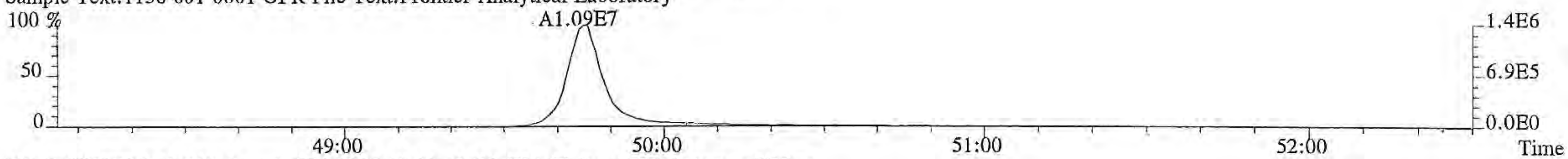
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory

File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory

File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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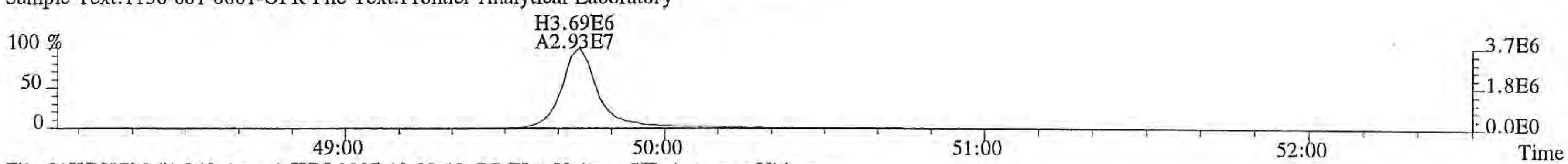

File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:2 F:5 Exp:PCDD
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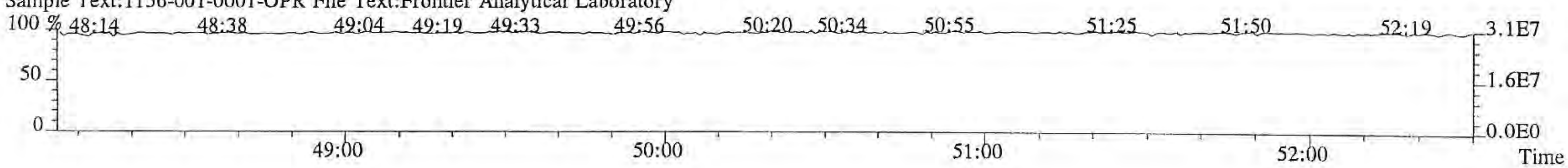

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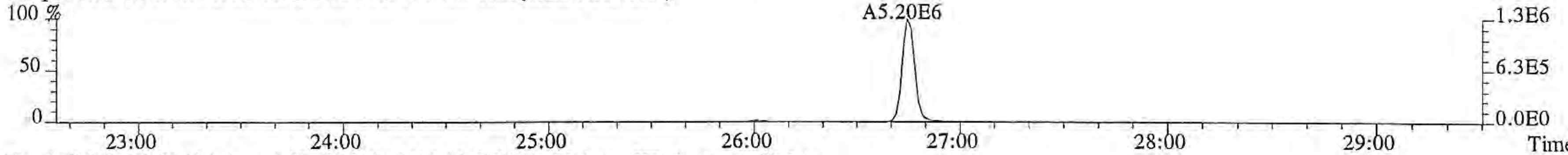
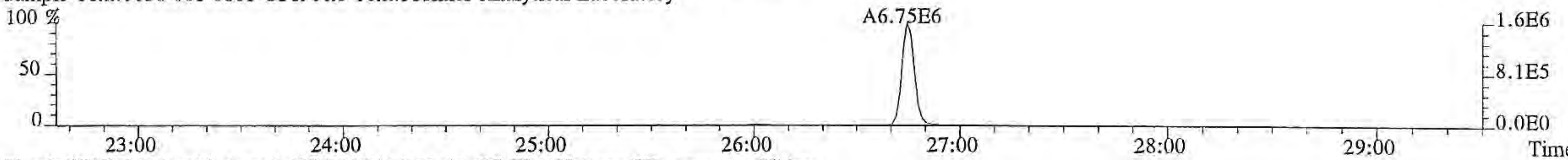
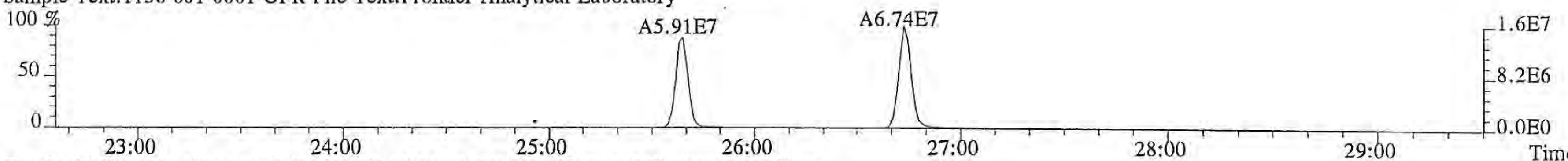
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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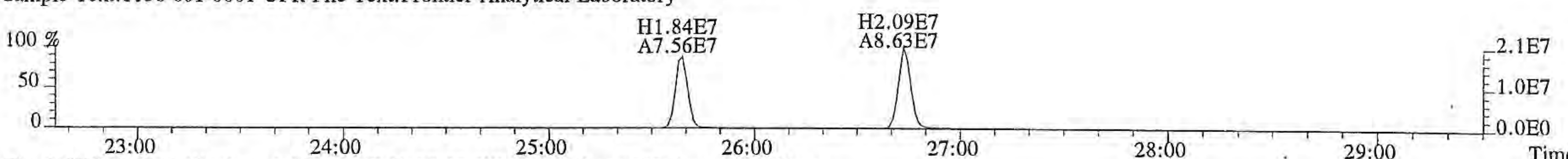
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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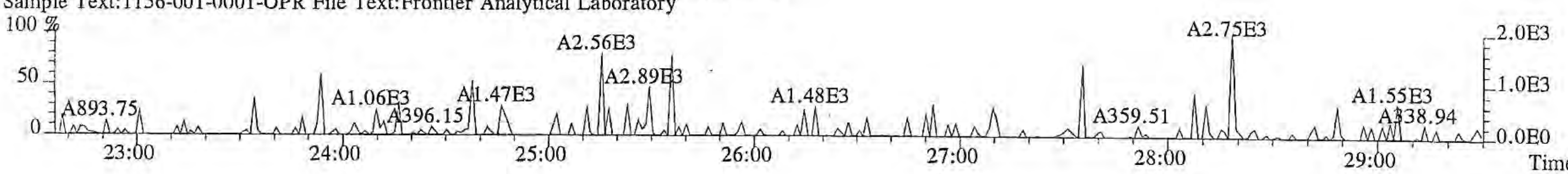
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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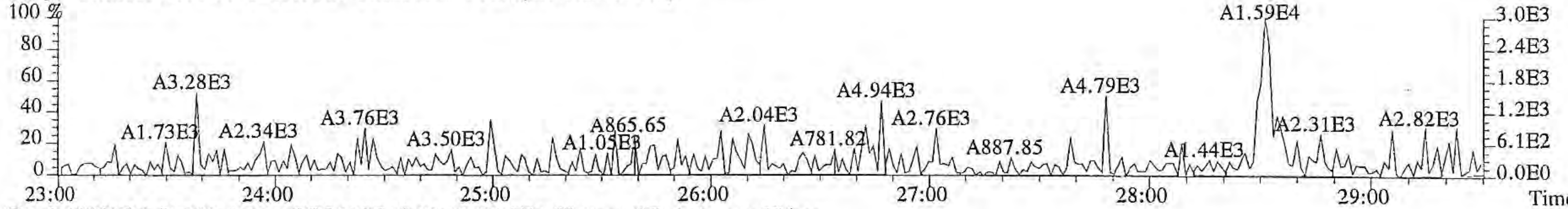
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
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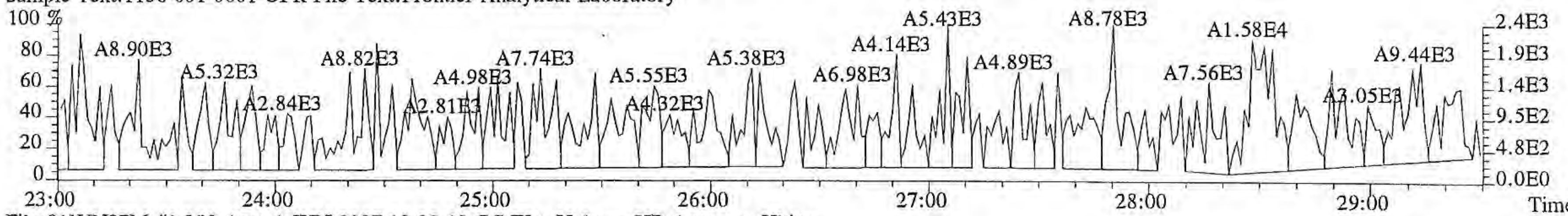
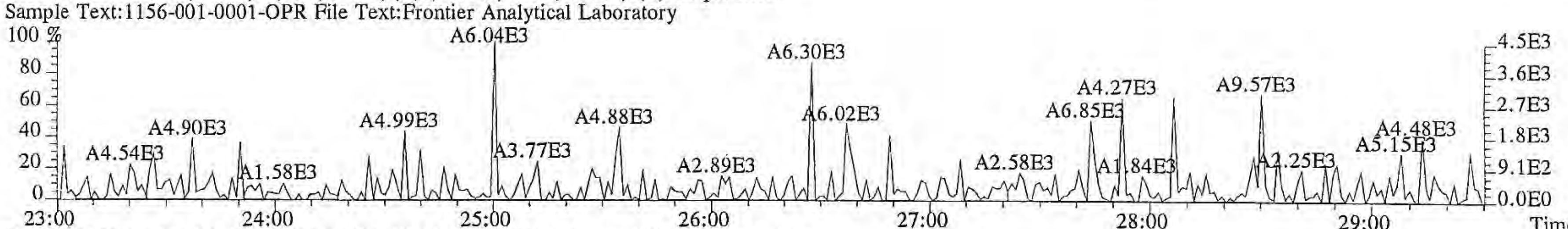
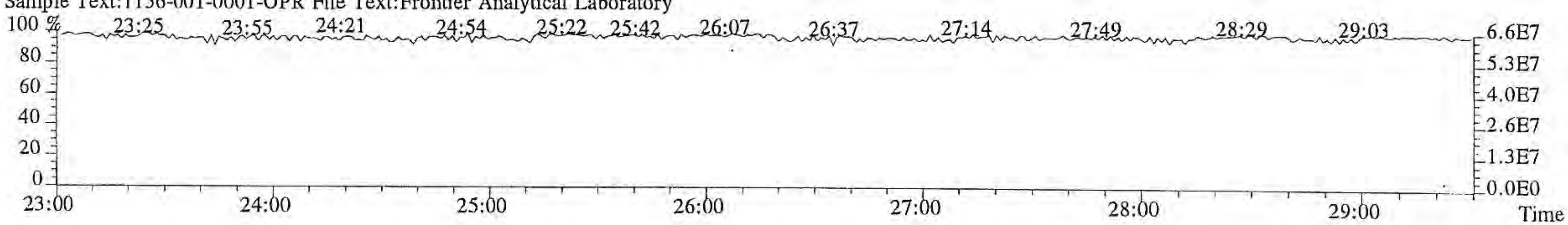
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



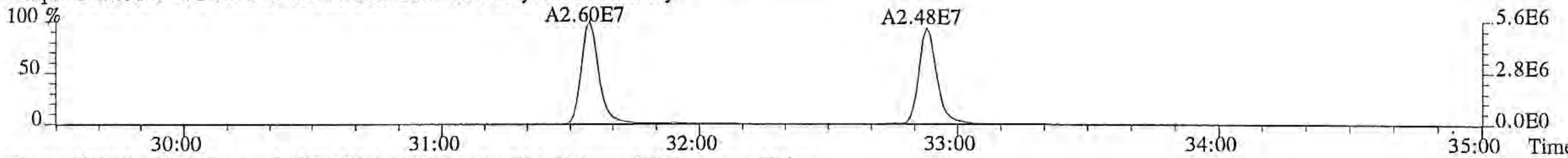
File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-390 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:2 Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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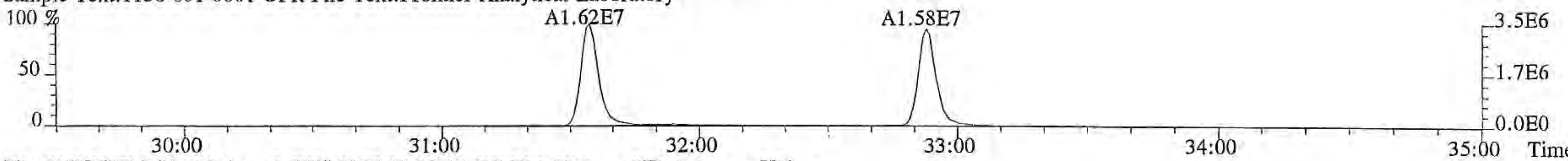
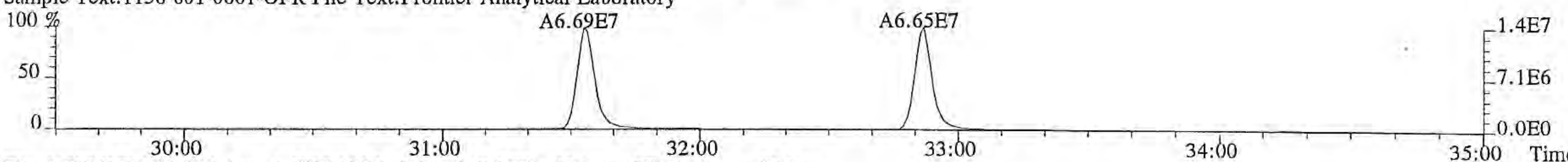
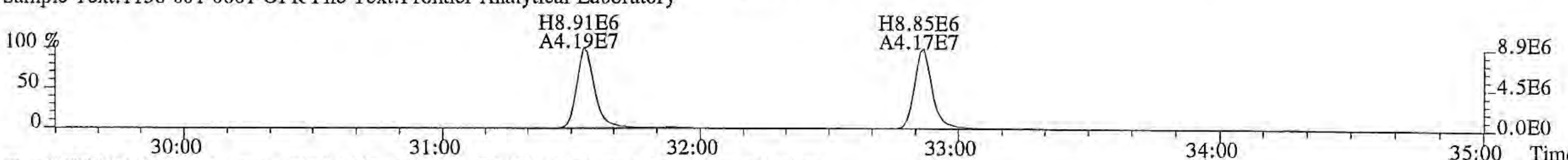
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



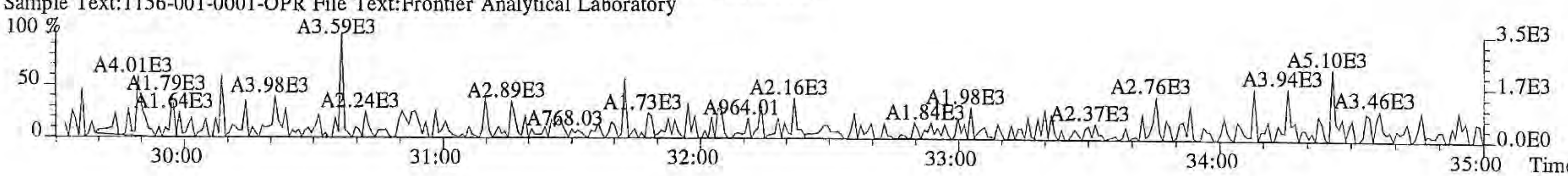
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



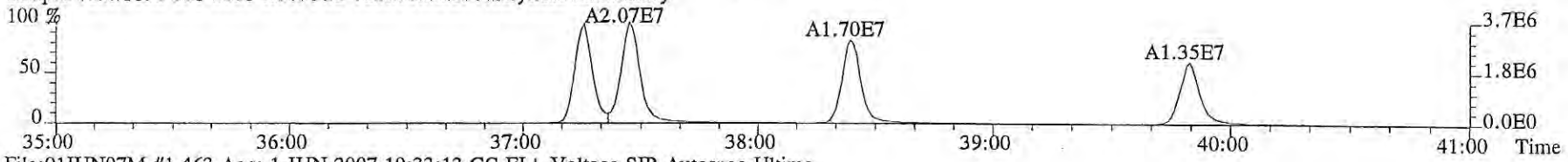
File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-425 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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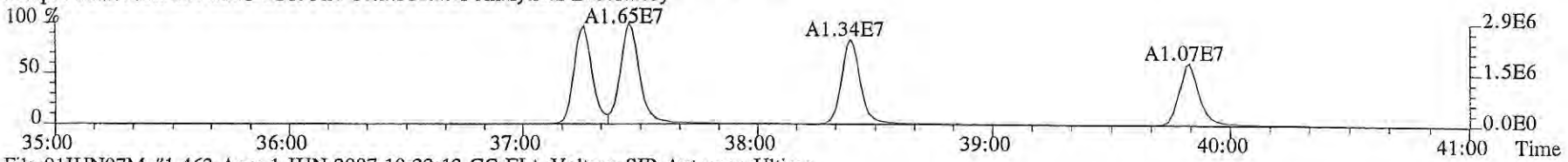
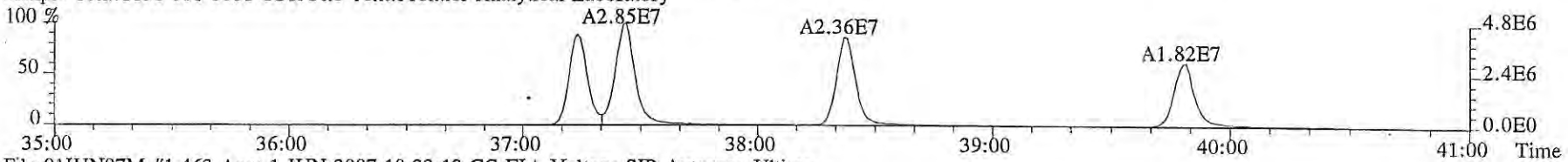
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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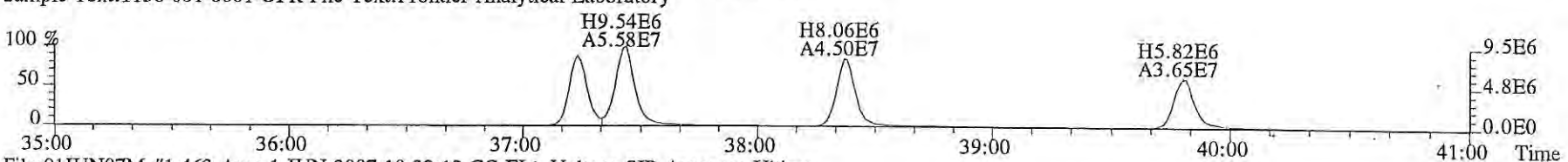
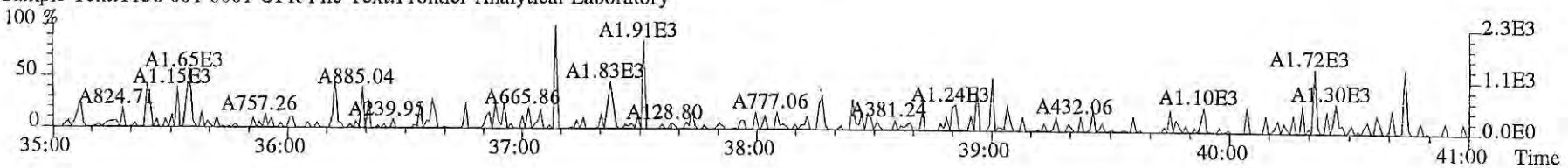
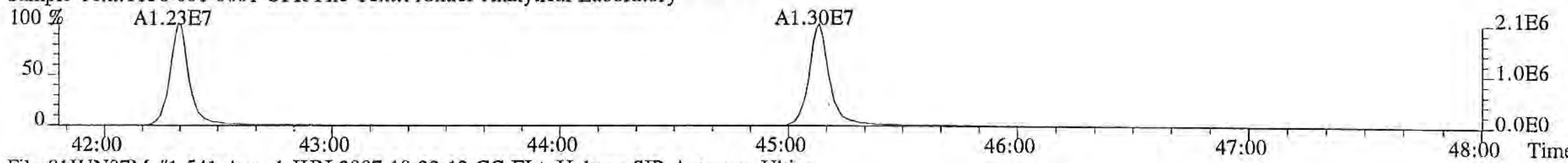


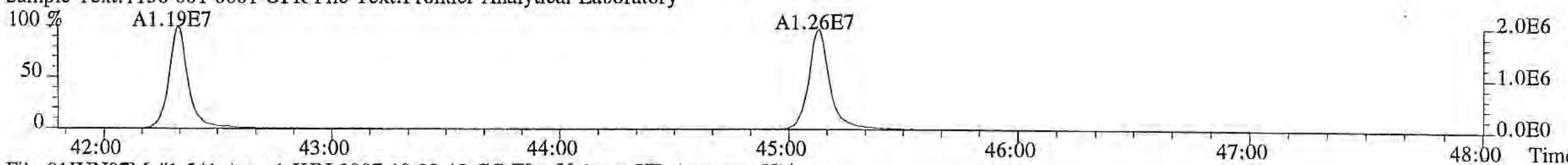
File:01JUN07M #1-463 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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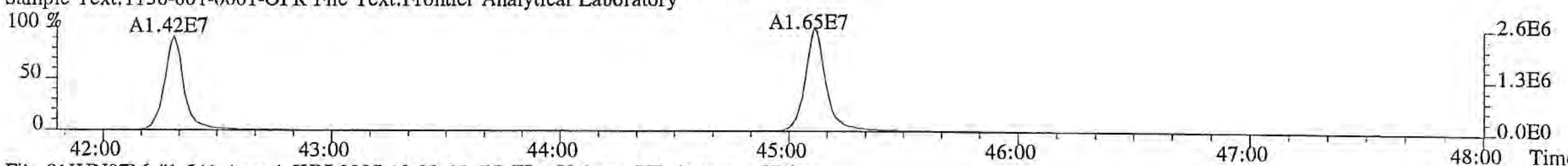
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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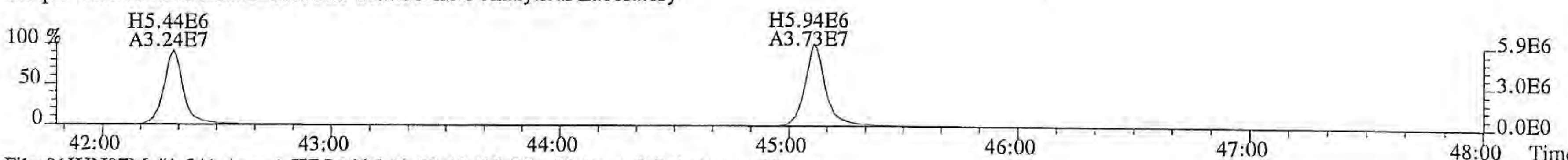
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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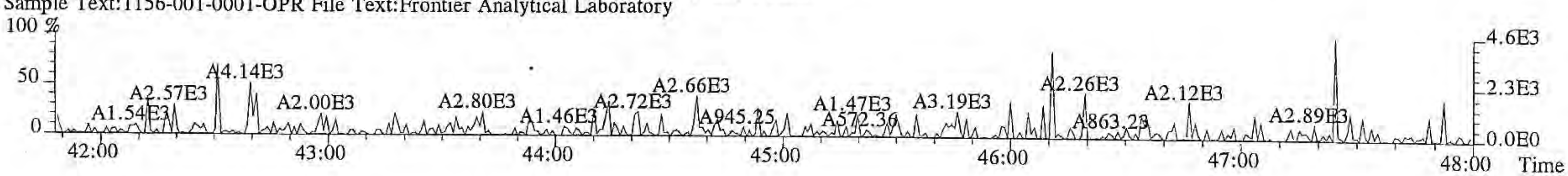
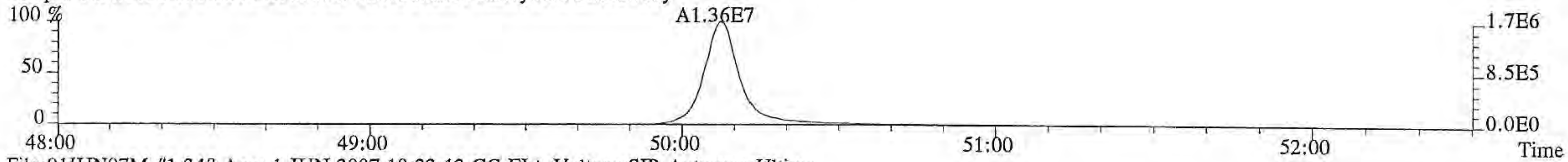


File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



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443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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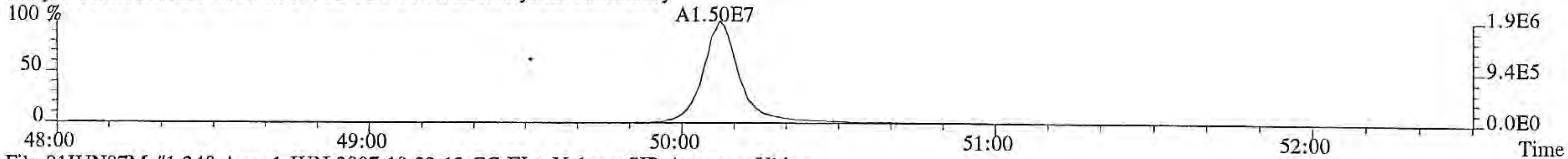
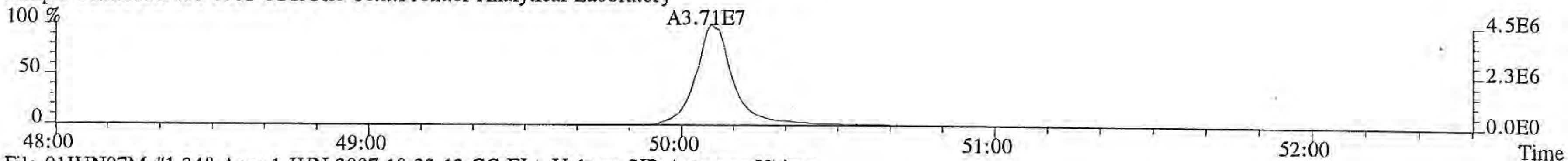
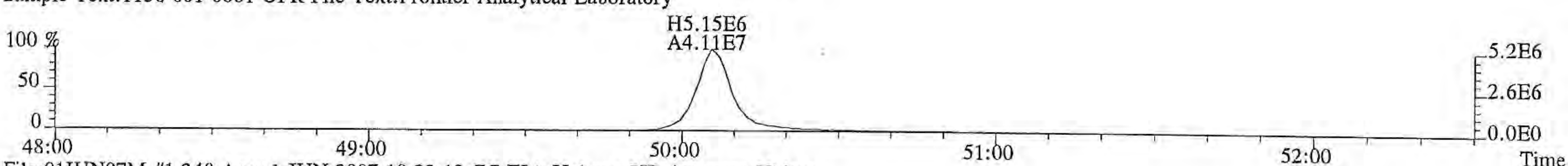


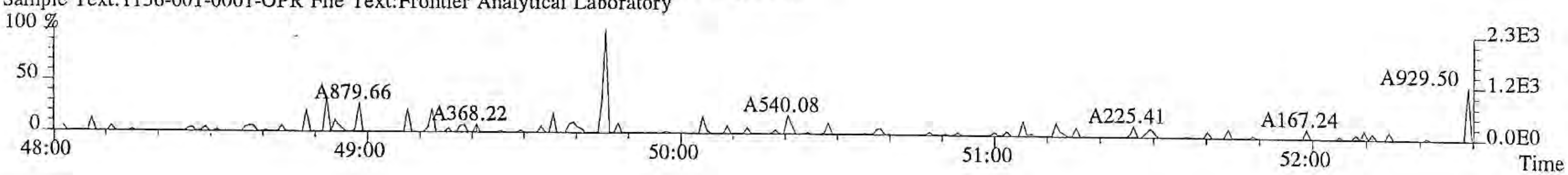
File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



File:01JUN07M #1-348 Acq: 1-JUN-2007 10:33:13 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1156-001-0001-OPR File Text:Frontier Analytical Laboratory



FAL ID: 4451-001-0001-SA Filename: 01JUN07M Sam:12 Acquired: 1-JUN-07 19:46:28 ICal: PCDDFAL3-4-17-07
Client ID: 07-4032-KQ93A ConCal: ST060107M2 EndCal: ST060107M3
Results: 4457 GC Column: DB5 Amount: 10.12 NATO 1989 Tox: 11.8
WHO 1998 Tox: 10.3 WHO 2005 Tox: 10.6

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	1.25e+05	0.75 y	27:30	1.11	0.270	J	2.50	-	*	
1,2,3,7,8-PeCDD	6.22e+05	1.57 y	33:18	1.10	1.60	J	2.50	-	*	
1,2,3,4,7,8-HxCDD	8.02e+05	1.10 y	38:39	0.82	3.90		2.50	-	*	
1,2,3,6,7,8-HxCDD	3.27e+06	1.27 y	38:49	0.74	14.7		2.50	-	*	
1,2,3,7,8,9-HxCDD	1.79e+06	1.16 y	39:15	0.80	8.05		2.50	-	*	
1,2,3,4,6,7,8-HpCDD	6.01e+07	1.03 y	44:13	0.75	349		2.50	-	*	
OCDD	3.53e+08	0.89 y	49:46	0.80	2390		2.50	-	*	
2,3,7,8-TCDF	1.40e+06	0.75 y	26:45	0.85	2.04	F	2.50	-	*	
1,2,3,7,8-PeCDF	4.46e+05	1.59 y	31:35	0.78	1.05	J	2.50	-	*	
2,3,4,7,8-PeCDF	4.52e+05	1.60 y	32:55	0.76	1.13	J	2.50	-	*	
1,2,3,4,7,8-HxCDF	1.11e+06	1.31 y	37:16	1.02	3.45		2.50	-	*	
1,2,3,6,7,8-HxCDF	5.73e+05	1.24 y	37:27	0.92	1.50	J	2.50	-	*	
2,3,4,6,7,8-HxCDF	7.56e+05	1.32 y	38:24	0.93	2.39	J	2.50	-	*	
1,2,3,7,8,9-HxCDF	3.32e+05	1.20 y	39:53	0.92	1.30	J	2.50	-	*	
1,2,3,4,6,7,8-HpCDF	9.35e+06	1.03 y	42:20	1.10	34.8		2.50	-	*	
1,2,3,4,7,8,9-HpCDF	5.78e+05	0.95 y	45:08	0.99	2.08	J	2.50	-	*	
OCDF	1.75e+07	0.88 y	50:08	0.77	98.0		2.50	-	*	
										Rec
13C-2,3,7,8-TCDD	8.20e+07	0.80 y	27:29	1.03	164					82.9
13C-1,2,3,7,8-PeCDD	6.96e+07	1.60 y	33:16	1.15	124					63.0
13C-1,2,3,4,7,8-HxCDD	4.98e+07	1.27 y	38:37	1.34	178					90.2
13C-1,2,3,6,7,8-HxCDD	5.95e+07	1.28 y	38:47	1.35	211					107
13C-1,2,3,4,6,7,8-HpCDD	4.52e+07	1.05 y	44:13	1.38	156					79.2
13C-OCDD	7.34e+07	0.89 y	49:45	1.10	319					80.8
13C-2,3,7,8-TCDF	1.61e+08	0.78 y	26:44	1.28	174					88.2
13C-1,2,3,7,8-PeCDF	1.08e+08	1.59 y	31:33	1.10	136					68.7
13C-2,3,4,7,8-PeCDF	1.04e+08	1.61 y	32:52	1.07	135					68.4
13C-1,2,3,4,7,8-HxCDF	6.23e+07	0.51 y	37:14	1.56	191					96.8
13C-1,2,3,6,7,8-HxCDF	8.18e+07	0.51 y	37:27	1.74	225					114
13C-2,3,4,6,7,8-HxCDF	6.72e+07	0.53 y	38:23	1.65	195					98.7
13C-1,2,3,7,8,9-HxCDF	5.49e+07	0.50 y	39:48	1.47	178					90.3
13C-1,2,3,4,6,7,8-HpCDF	4.84e+07	0.44 y	42:19	1.42	163					82.5
13C-1,2,3,4,7,8,9-HpCDF	5.57e+07	0.43 y	45:07	1.34	199					101
13C-OCDF	9.13e+07	0.91 y	50:07	1.44	303					76.6
37Cl-2,3,7,8-TCDD	2.29e+07		27:30	0.77	61.7					78.1
13C-1,2,3,4-TCDD	9.59e+07	0.80 y	26:55	-	11.2					
13C-1,2,3,4-TCDF	1.42e+08	0.78 y	25:39	-	10.9					
13C-1,2,3,7,8,9-HxCDD	4.13e+07	1.26 y	39:14	-	5.64					
							Fac	Noise	DL	#Hom
Total Tetra-Dioxins	2.37e+07		24:30	1.11	51.2		2.50	-	*	12
Total Penta-Dioxins	1.61e+07		30:20	1.10	41.4		2.50	-	*	10
Total Hexa-Dioxins	4.60e+07		36:12	0.79	212		2.50	-	*	8
Total Hepta-Dioxins	1.79e+08		42:51	0.75	1040		2.50	-	*	2
Total Tetra-Furans	1.01e+07		23:10	0.85	14.7	D,M	2.50	-	*	23
1st Fn. Tot Penta-Furans	7.21e+06		28:33	0.77	17.5	D,M	2.50	-	*	1 PeCDF
Total Penta-Furans	5.39e+06		30:10	0.77	13.0	D,M	2.50	-	*	11 30.5
Total Hexa-Furans	2.78e+07		35:20	0.95	87.3	D,M	2.50	-	*	10
Total Hepta-Furans	3.57e+07		42:20	1.04	131		2.50	-	*	4

OK Dmc

Analyst: _____ Date: 6/4/07

Totals class: Total Tetra-Dioxins Entry #: 38

Run: 16 File: 01JUN07M S: 12 I: 1 F: 1
Acquired: 1-JUN-07 19:46:28

Total Concentration: 51.2 Unnamed Concentration: 50.945

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
24:30	4.90e+06	6.37e+06	0.77	y	1.13e+07	24.4	
24:48	2.93e+06	3.92e+06	0.75	y	6.84e+06	14.8	
25:06	6.22e+04	8.02e+04	0.78	y	1.42e+05	0.308	
25:52	1.81e+05	2.17e+05	0.83	y	3.98e+05	0.861	
26:03	2.86e+05	3.83e+05	0.75	y	6.68e+05	1.45	
26:11	5.34e+04	7.07e+04	0.76	y	1.24e+05	0.269	
26:35	5.62e+04	7.17e+04	0.78	y	1.28e+05	0.277	
26:56	1.33e+06	1.74e+06	0.77	y	3.07e+06	6.64	
27:15	3.41e+05	4.53e+05	0.75	y	7.94e+05	1.72	
27:30	5.33e+04	7.15e+04	0.75	y	1.25e+05	0.270	2,3,7,8-TCDD
27:48	3.53e+04	4.82e+04	0.73	y	8.35e+04	0.181	
28:12	1.63e+04	2.09e+04	0.78	y	3.72e+04	0.0805	

Totals class: Total Penta-Dioxins Entry #: 39

Run: 16 File: 01JUN07M S: 12 I: 1 F: 2
Acquired: 1-JUN-07 19:46:28

Total Concentration: 41.4 Unnamed Concentration: 39.845

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
30:20	2.32e+06	1.47e+06	1.58	y	3.79e+06	9.78	
30:56	1.92e+05	1.29e+05	1.49	y	3.21e+05	0.829	
31:33	2.83e+06	1.73e+06	1.63	y	4.56e+06	11.8	
31:46	3.83e+05	2.44e+05	1.57	y	6.27e+05	1.62	
31:56	2.54e+06	1.60e+06	1.58	y	4.14e+06	10.7	
32:13	3.08e+05	2.02e+05	1.53	y	5.10e+05	1.32	
32:41	7.96e+05	4.77e+05	1.67	y	1.27e+06	3.28	
33:18	3.80e+05	2.42e+05	1.57	y	6.22e+05	1.60	1,2,3,7,8-PeCDD
33:24	6.82e+04	4.74e+04	1.44	y	1.16e+05	0.298	
33:53	6.91e+04	3.93e+04	1.76	y	1.08e+05	0.280	

Totals class: Total Hexa-Dioxins Entry #: 40

Run: 16 File: 01JUN07M S: 12 I: 1 F: 3
Acquired: 1-JUN-07 19:46:28

Total Concentration: 212 Unnamed Concentration: 184.937

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
36:12	1.00e+07	8.02e+06	1.25	y	1.80e+07	83.1	
37:07	6.05e+06	4.84e+06	1.25	y	1.09e+07	50.2	
37:33	5.43e+06	4.34e+06	1.25	y	9.77e+06	45.0	
37:44	6.04e+05	5.42e+05	1.12	y	1.15e+06	5.28	
38:39	4.20e+05	3.82e+05	1.10	y	8.02e+05	3.90	1,2,3,4,7,8-HxCDD
38:49	1.83e+06	1.44e+06	1.27	y	3.27e+06	14.7	1,2,3,6,7,8-HxCDD
39:06	1.71e+05	1.39e+05	1.24	y	3.10e+05	1.43	
39:15	9.60e+05	8.27e+05	1.16	y	1.79e+06	8.05	1,2,3,7,8,9-HxCDD

Totals class: Total Hepta-Dioxins Entry #: 41

Run: 16 File: 01JUN07M S: 12 I: 1 F: 4
Acquired: 1-JUN-07 19:46:28

Total Concentration: 1040 Unnamed Concentration: 688.694

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:51	6.02e+07	5.84e+07	1.03 y	1.19e+08	689	
44:13	3.06e+07	2.96e+07	1.03 y	6.01e+07	349	1,2,3,4,6,7,8-HpCDD

Totals class: Total Tetra-Furans Entry #: 42

Run: 16 File: 01JUN07M S: 12 I: 1 F: 1
Acquired: 1-JUN-07 19:46:28

Total Concentration: 14.7 Unnamed Concentration: 12.642

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
23:10	9.56e+04	1.34e+05	0.71	y	2.30e+05	0.333	
23:31	9.01e+04	1.29e+05	0.70	y	2.19e+05	0.318	
23:55	4.77e+05	6.42e+05	0.74	y	1.12e+06	1.62	
24:18	3.52e+05	4.63e+05	0.76	y	8.15e+05	1.18	
24:32	3.71e+05	4.96e+05	0.75	y	8.67e+05	1.26	
24:51	2.35e+05	3.01e+05	0.78	y	5.35e+05	0.776	
24:56	7.67e+04	1.04e+05	0.74	y	1.80e+05	0.262	
25:05	1.08e+05	1.43e+05	0.76	y	2.51e+05	0.364	
25:26	1.45e+05	2.06e+05	0.70	y	3.51e+05	0.509	
25:33	2.22e+05	3.01e+05	0.74	y	5.23e+05	0.759	
25:40	3.32e+05	4.46e+05	0.75	y	7.79e+05	1.13	
26:02	3.79e+05	4.86e+05	0.78	y	8.66e+05	1.26	
26:15	8.39e+04	1.00e+05	0.84	y	1.84e+05	0.267	
26:23	6.60e+04	9.73e+04	0.68	y	1.63e+05	0.237	
26:39	1.75e+05	2.36e+05	0.74	y	4.10e+05	0.595	
26:45	5.99e+05	8.04e+05	0.75	y	1.40e+06	2.04	2,3,7,8-TCDF
27:05	2.28e+05	3.03e+05	0.75	y	5.31e+05	0.771	
27:17	2.71e+04	3.70e+04	0.73	y	6.41e+04	0.0929	
27:35	1.58e+04	2.16e+04	0.73	y	3.74e+04	0.0543	
27:56	3.11e+04	4.09e+04	0.76	y	7.20e+04	0.104	
28:09	2.39e+04	3.49e+04	0.68	y	5.87e+04	0.0852	
28:34	1.25e+05	1.74e+05	0.72	y	2.99e+05	0.434	
28:40	7.17e+04	8.84e+04	0.81	y	1.60e+05	0.232	

Totals class: 1st Fn. Tot Penta-Furans Entry #: 43

Run: 16 File: 01JUN07M S: 12 I: 1 F: 1
Acquired: 1-JUN-07 19:46:28

Total Concentration: 17.5 Unnamed Concentration: 17.473

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
28:33	4.43e+06	2.78e+06	1.59	y	7.21e+06	17.5	

Totals class: Total Penta-Furans Entry #: 44

Run: 16 File: 01JUN07M S: 12 I: 1 F: 2
Acquired: 1-JUN-07 19:46:28

Total Concentration: 13.0 Unnamed Concentration: 10.865

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
30:10	1.86e+05	1.14e+05	1.63 y	3.01e+05	0.728	
30:20	1.18e+06	7.87e+05	1.50 y	1.96e+06	4.76	
31:01	4.19e+05	2.74e+05	1.53 y	6.94e+05	1.68	
31:20	1.21e+05	7.49e+04	1.62 y	1.96e+05	0.475	
31:35	2.74e+05	1.73e+05	1.59 y	4.46e+05	1.05	1,2,3,7,8-PeCDF
31:48	6.99e+04	4.60e+04	1.52 y	1.16e+05	0.281	
31:54	3.11e+05	1.90e+05	1.63 y	5.02e+05	1.21	
32:06	5.68e+04	4.22e+04	1.35 y	9.90e+04	0.240	
32:44	6.78e+04	5.03e+04	1.35 y	1.18e+05	0.286	
32:55	2.78e+05	1.74e+05	1.60 y	4.52e+05	1.13	2,3,4,7,8-PeCDF
32:56	3.09e+05	1.89e+05	1.63 y	4.98e+05	1.21	

Totals class: Total Hexa-Furans Entry #: 45

Run: 16 File: 01JUN07M S: 12 I: 1 F: 3
Acquired: 1-JUN-07 19:46:28

Total Concentration: 87.3 Unnamed Concentration: 78.629

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
35:20	1.63e+06	1.29e+06	1.26 y	2.91e+06	9.14	
35:35	4.79e+06	3.80e+06	1.26 y	8.59e+06	27.0	
36:10	1.24e+05	8.70e+04	1.42 y	2.11e+05	0.662	
36:29	7.23e+06	5.74e+06	1.26 y	1.30e+07	40.7	
37:05	8.62e+04	6.88e+04	1.25 y	1.55e+05	0.487	
37:16	6.26e+05	4.79e+05	1.31 y	1.11e+06	3.45	1,2,3,4,7,8-HxCDF
37:27	3.17e+05	2.55e+05	1.24 y	5.73e+05	1.50	1,2,3,6,7,8-HxCDF
38:07	1.23e+05	9.72e+04	1.26 y	2.20e+05	0.691	
38:24	4.30e+05	3.26e+05	1.32 y	7.56e+05	2.39	2,3,4,6,7,8-HxCDF
39:53	1.81e+05	1.51e+05	1.20 y	3.32e+05	1.30	1,2,3,7,8,9-HxCDF

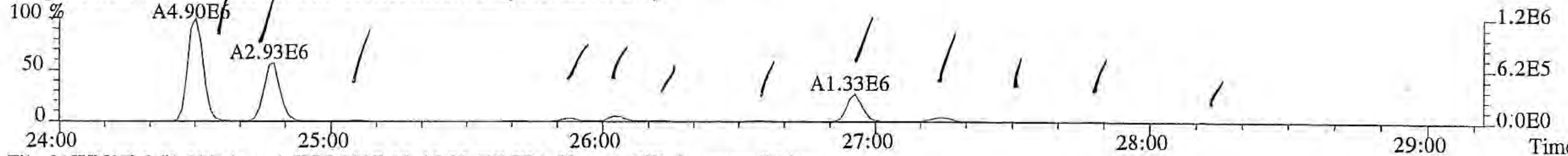
Totals class: Total Hepta-Furans Entry #: 46

Run: 16 File: 01JUN07M S: 12 I: 1 F: 4
Acquired: 1-JUN-07 19:46:28

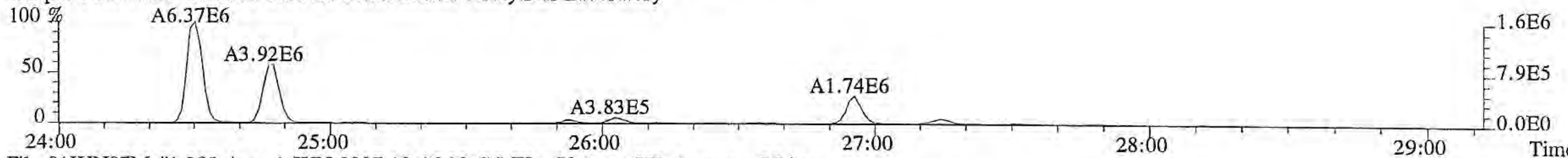
Total Concentration: 131 Unnamed Concentration: 93.716

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
42:20	4.73e+06	4.62e+06	1.03	y	9.35e+06	34.8	1,2,3,4,6,7,8-HpCDF
42:53	2.21e+05	2.14e+05	1.03	y	4.35e+05	1.58	
43:09	1.28e+07	1.25e+07	1.03	y	2.53e+07	92.1	
45:08	2.82e+05	2.96e+05	0.95	y	5.78e+05	2.08	1,2,3,4,7,8,9-HpCDF

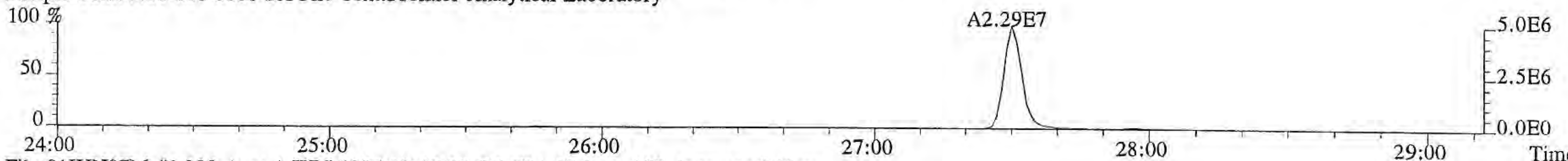
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



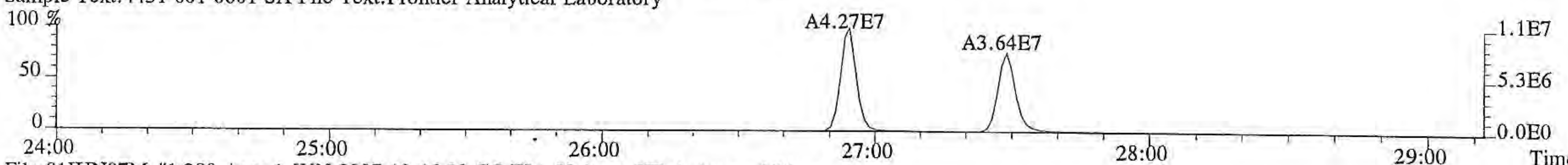
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



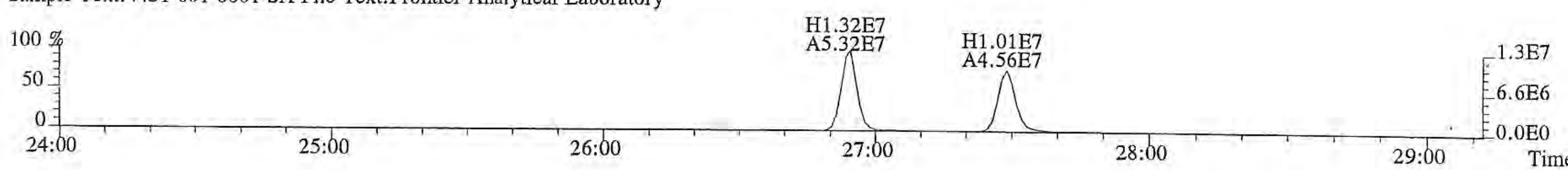
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



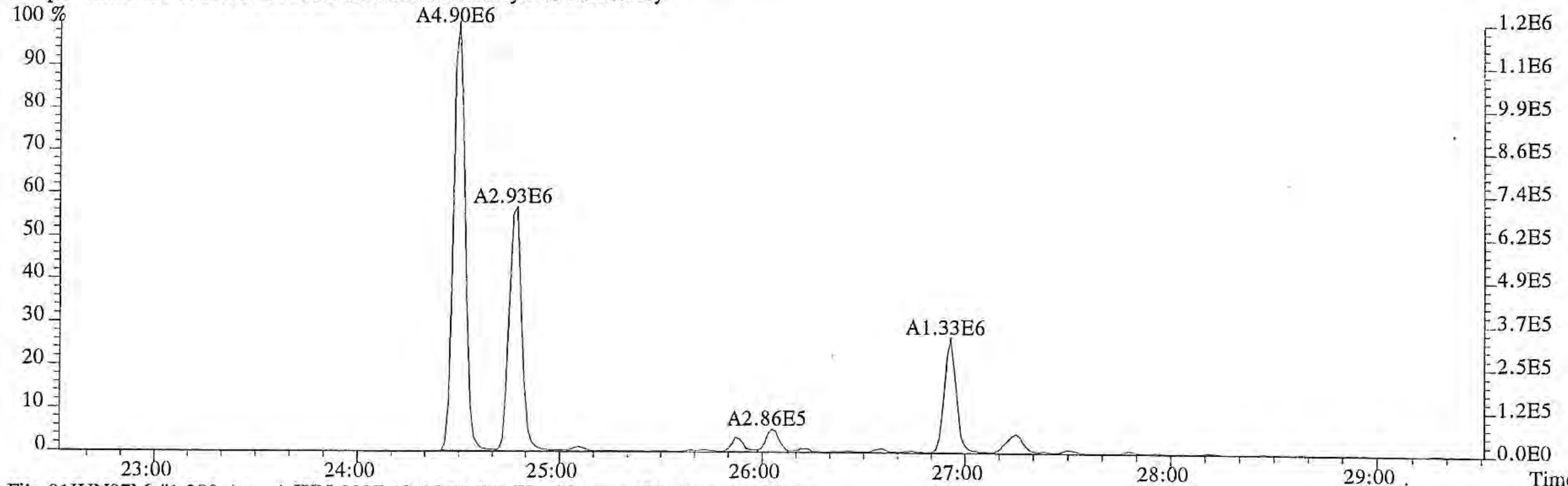
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



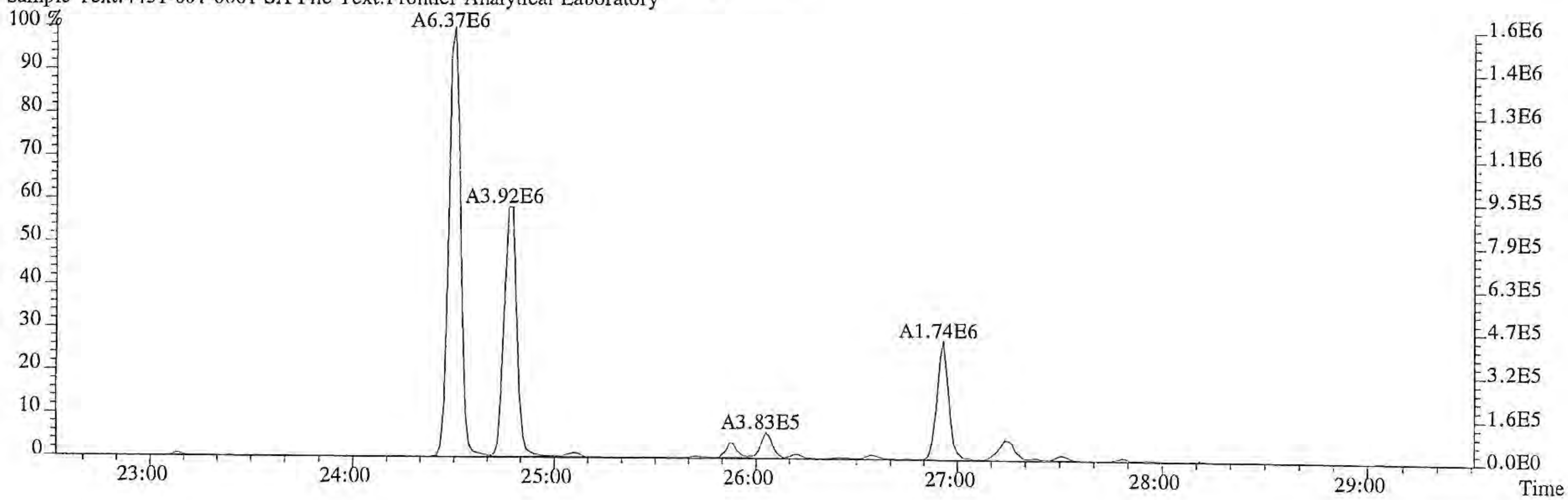
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



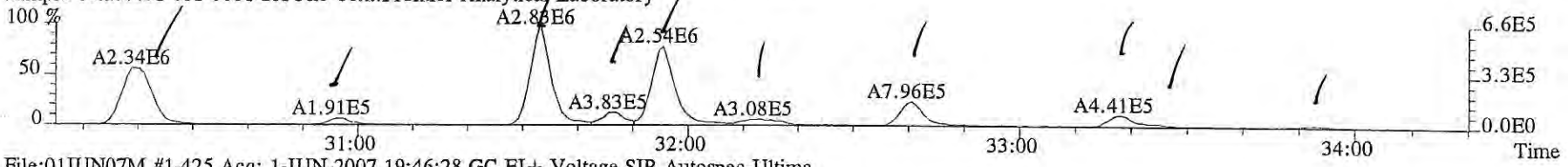
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



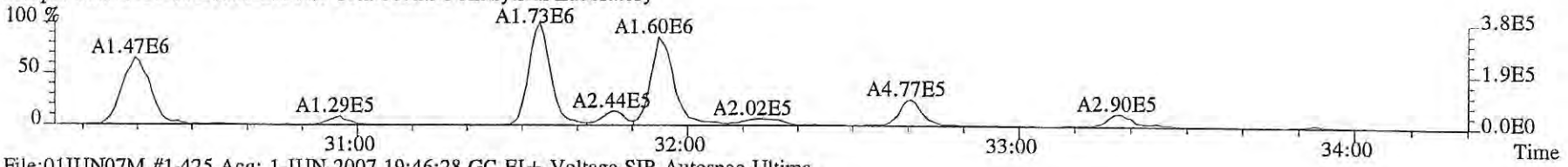
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



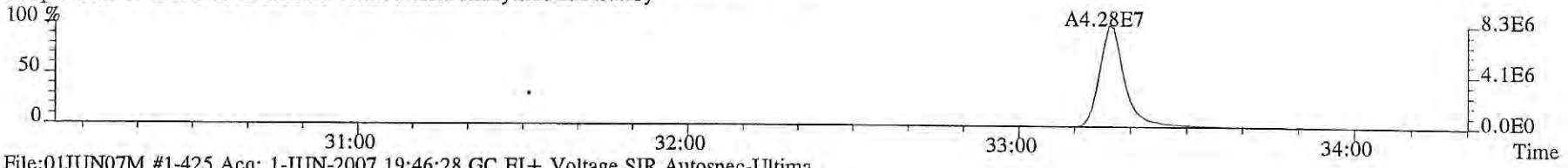
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



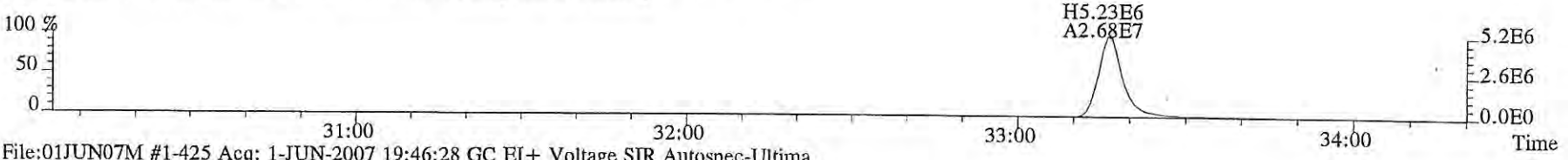
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



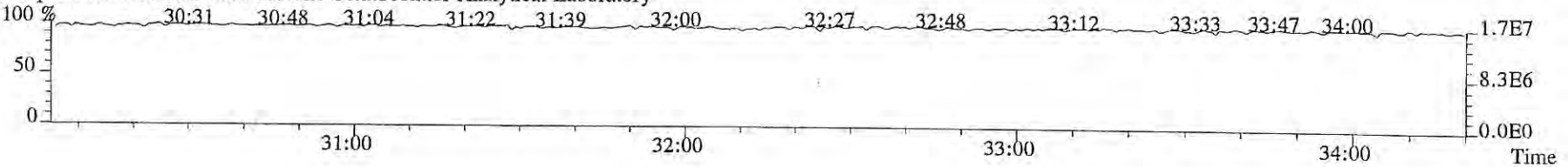
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



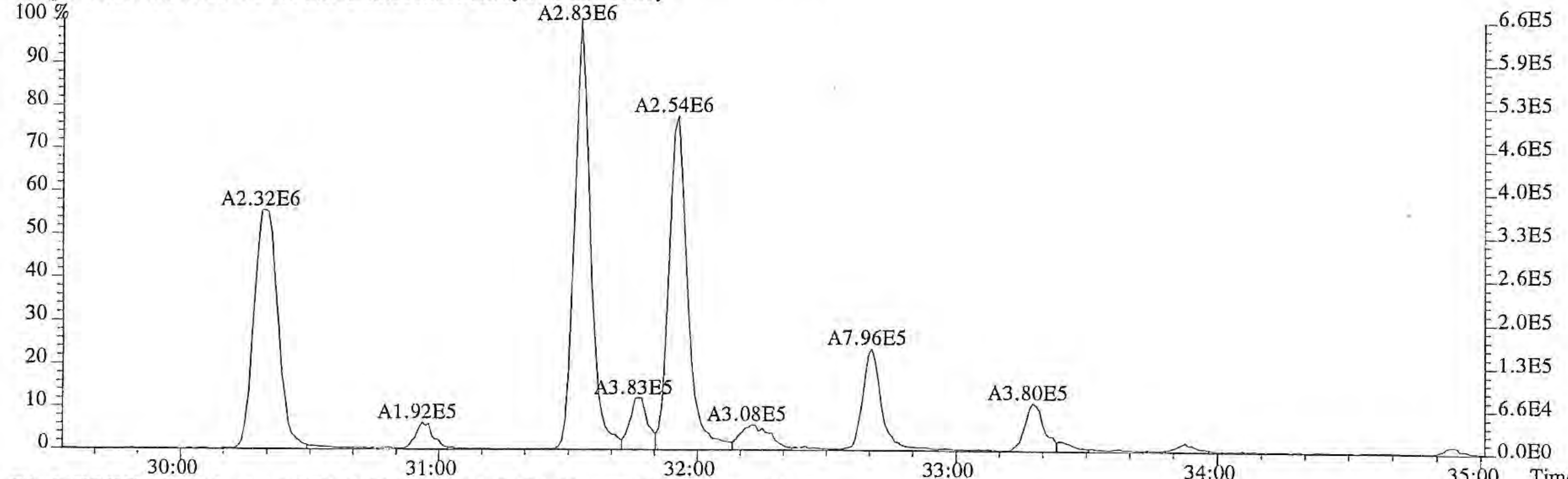
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



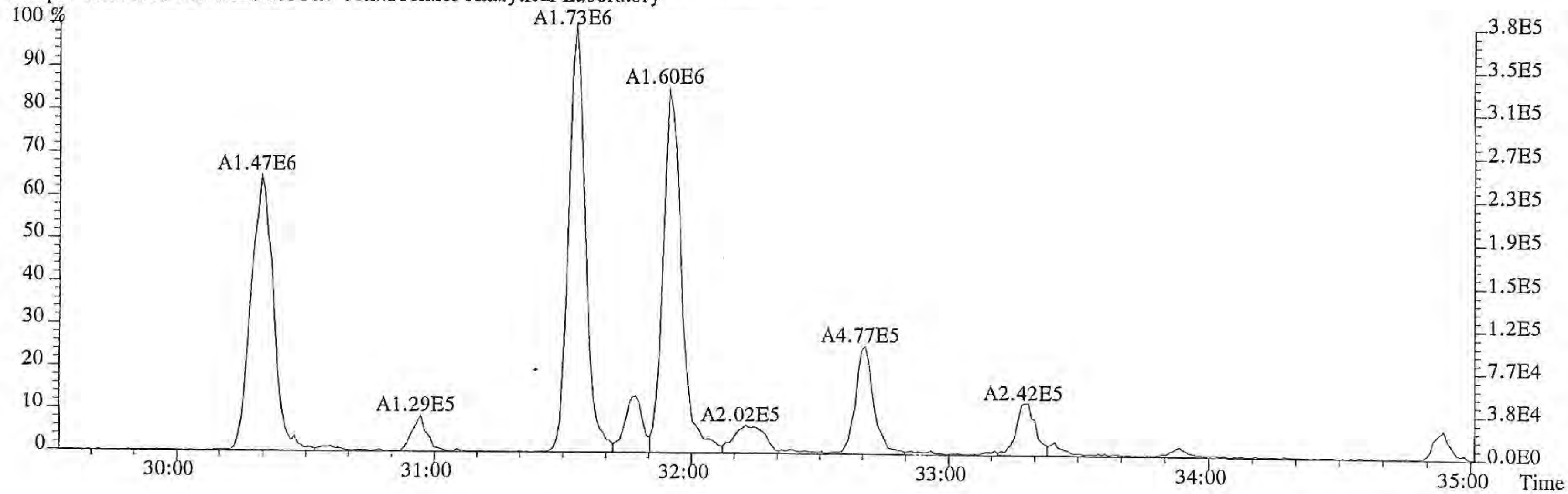
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:12 F:2 Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



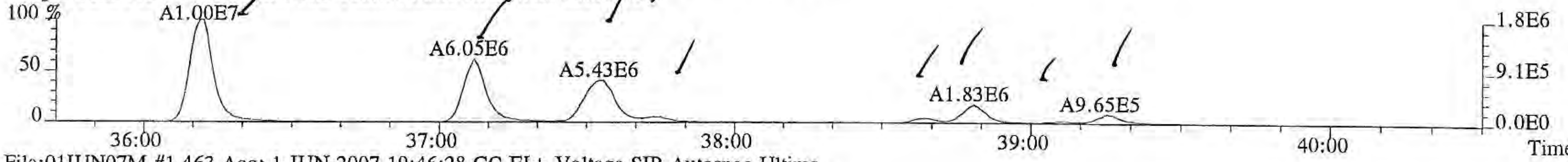
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



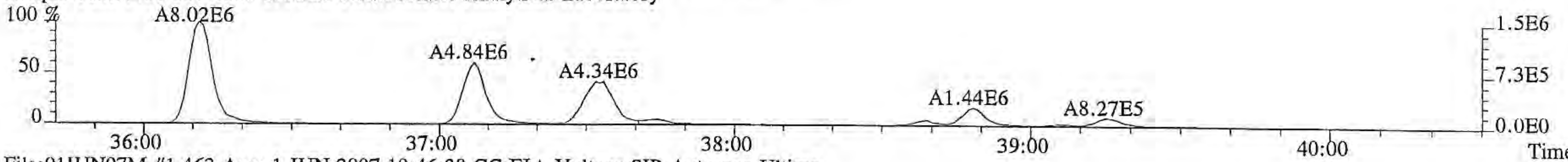
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



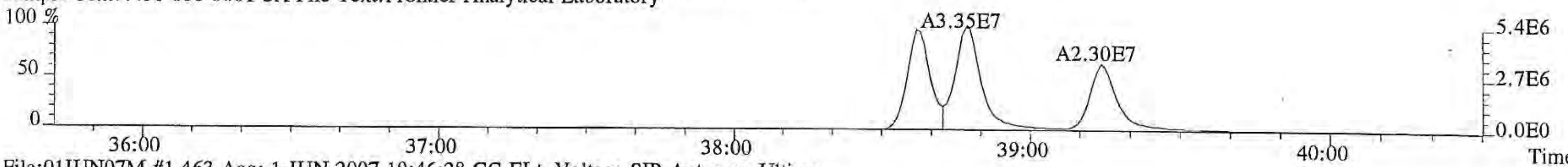
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



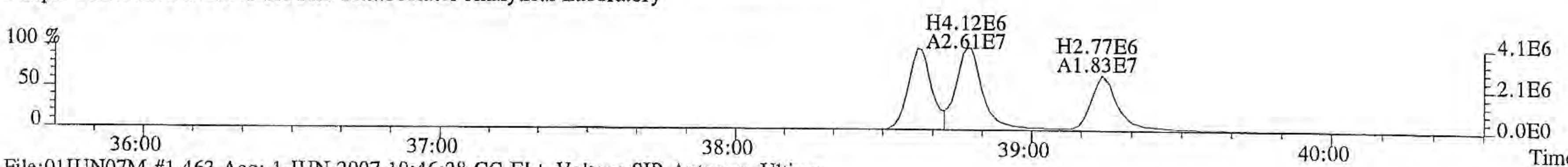
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



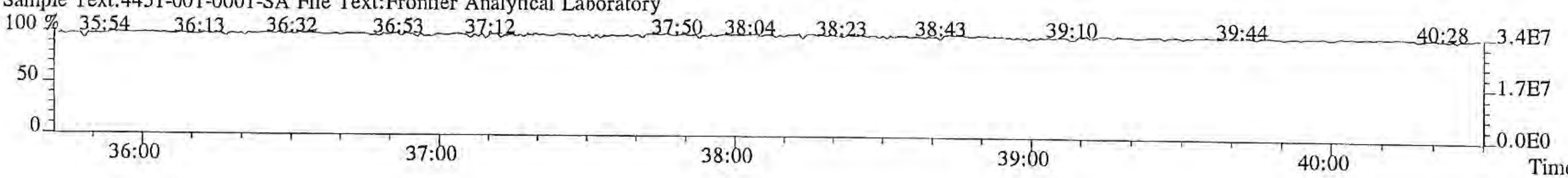
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



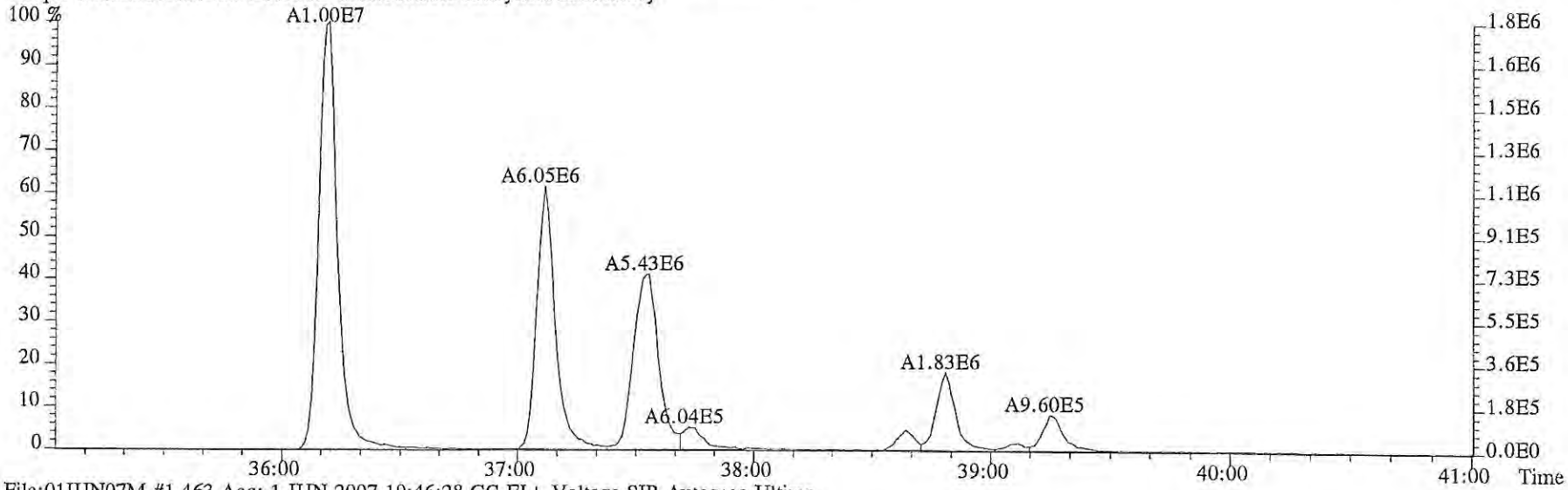
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



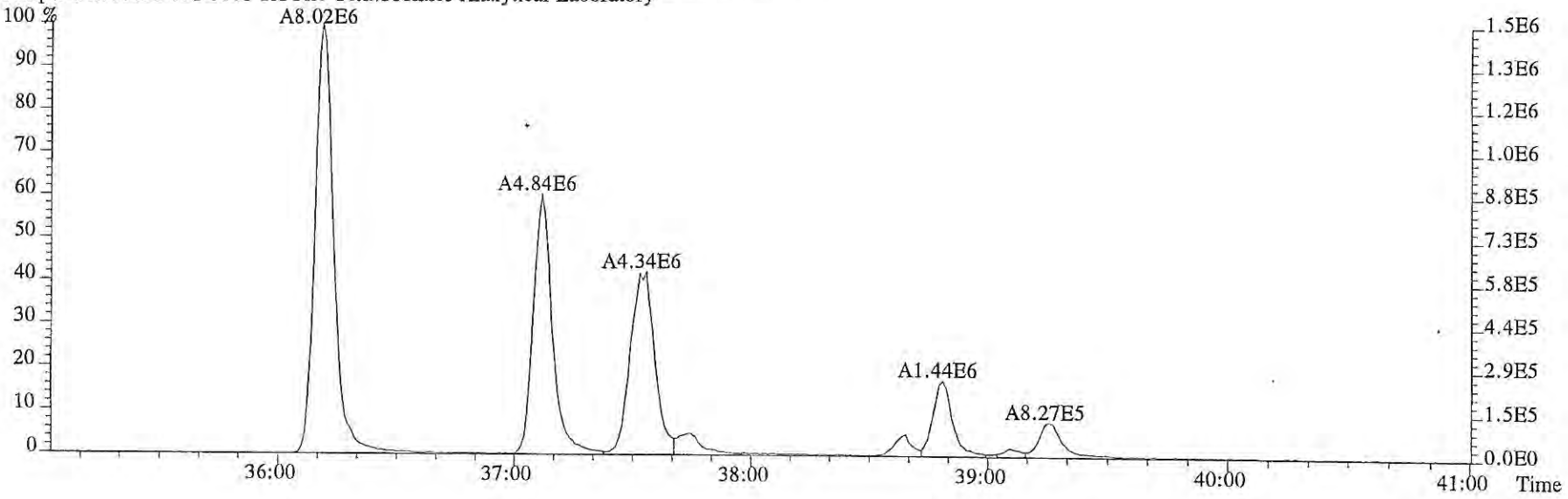
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:12 F:3 Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



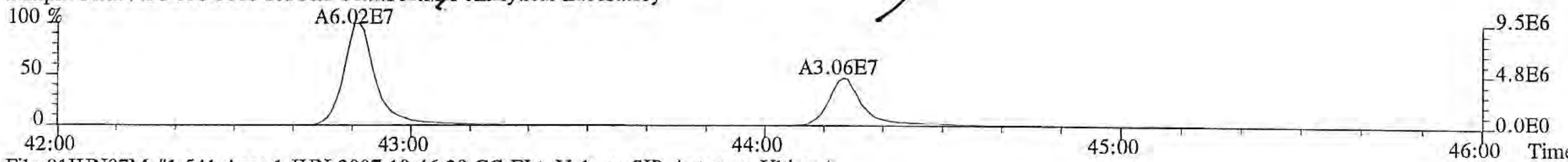
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



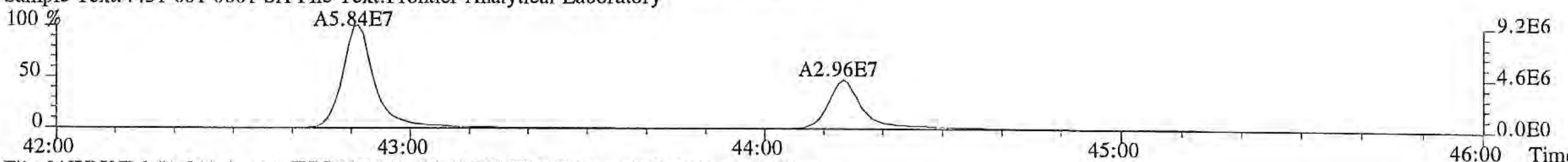
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



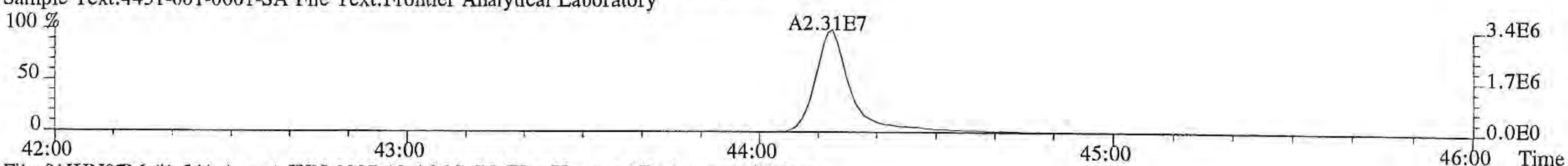
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



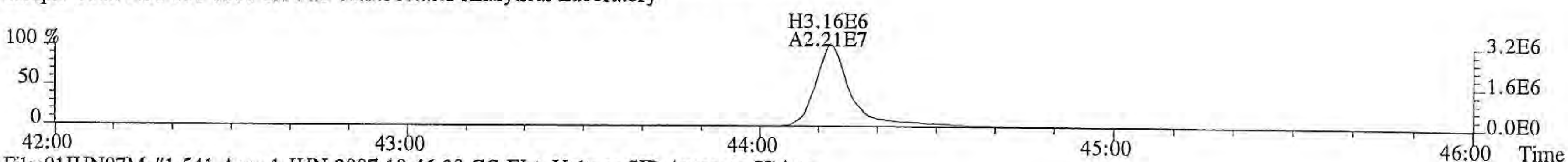
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



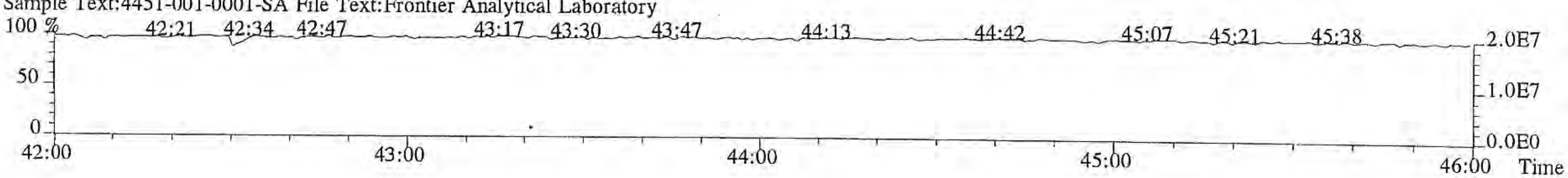
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



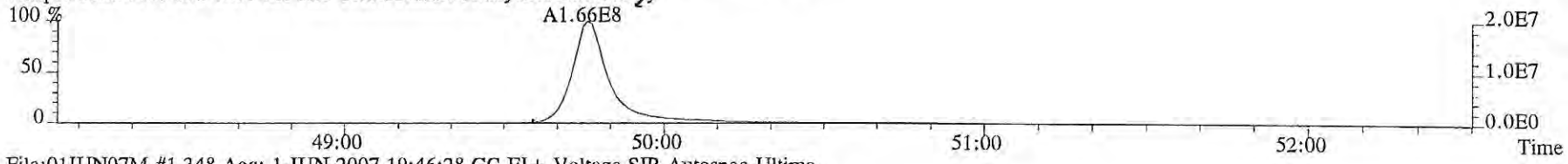
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



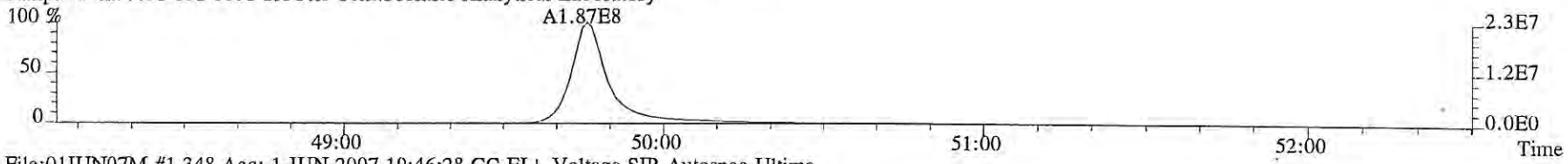
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:12 F:4 Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



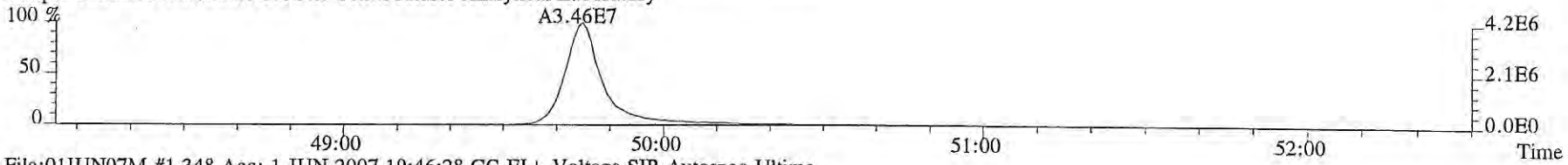
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



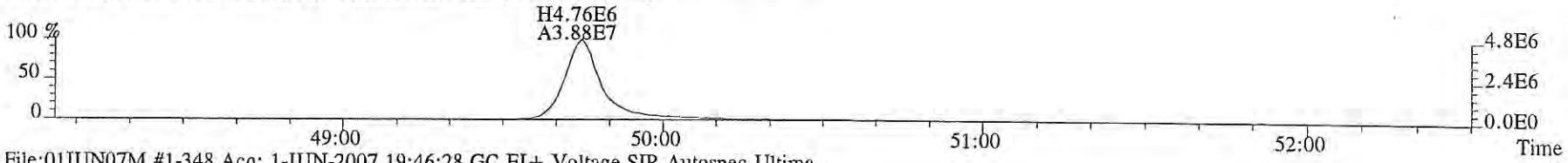
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



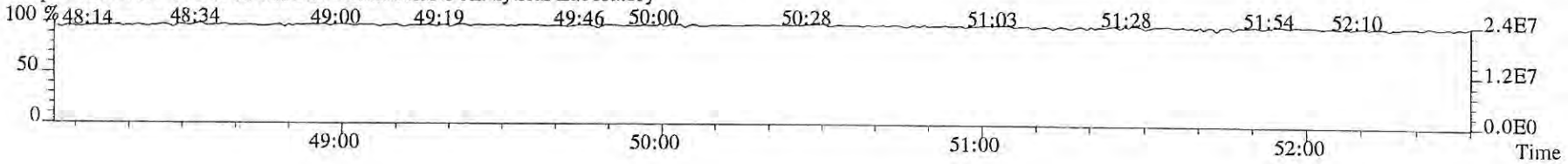
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



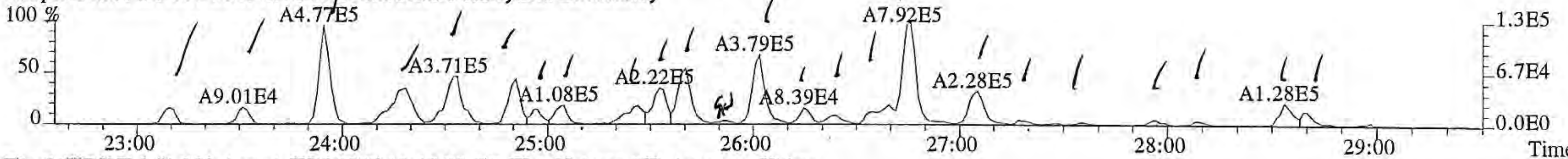
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



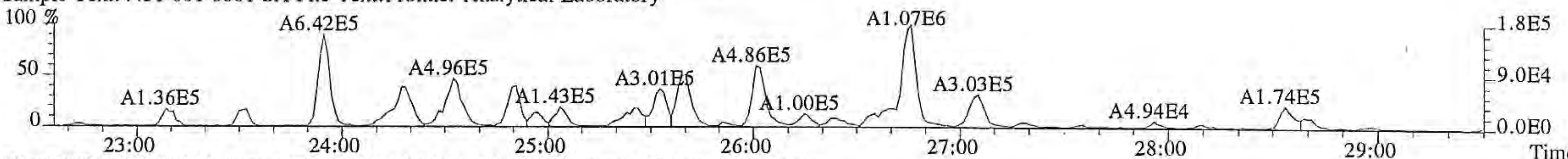
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:12 F:5 Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



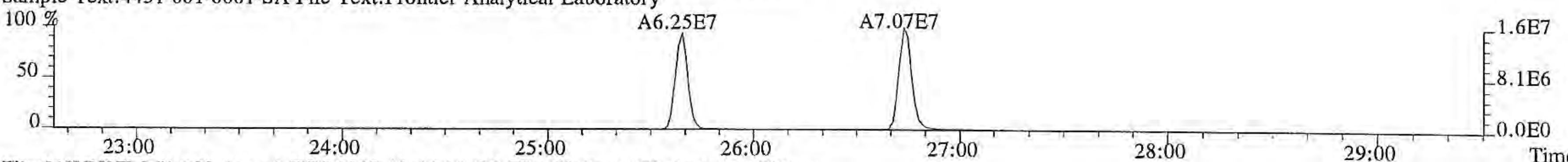
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



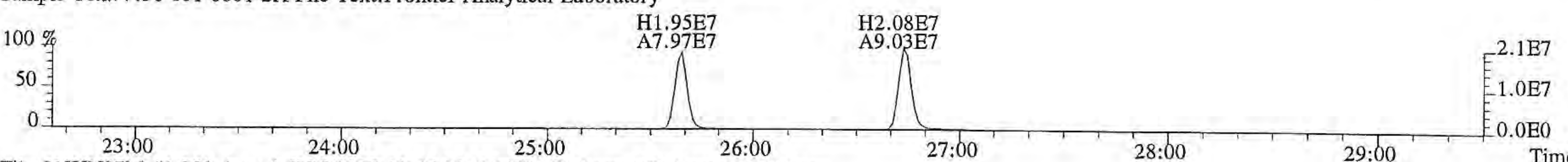
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



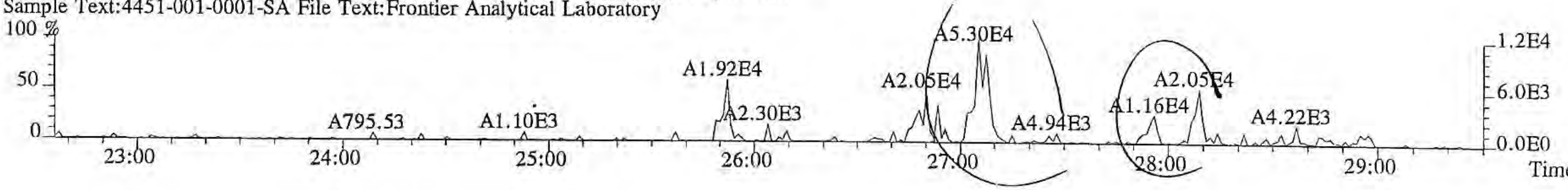
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



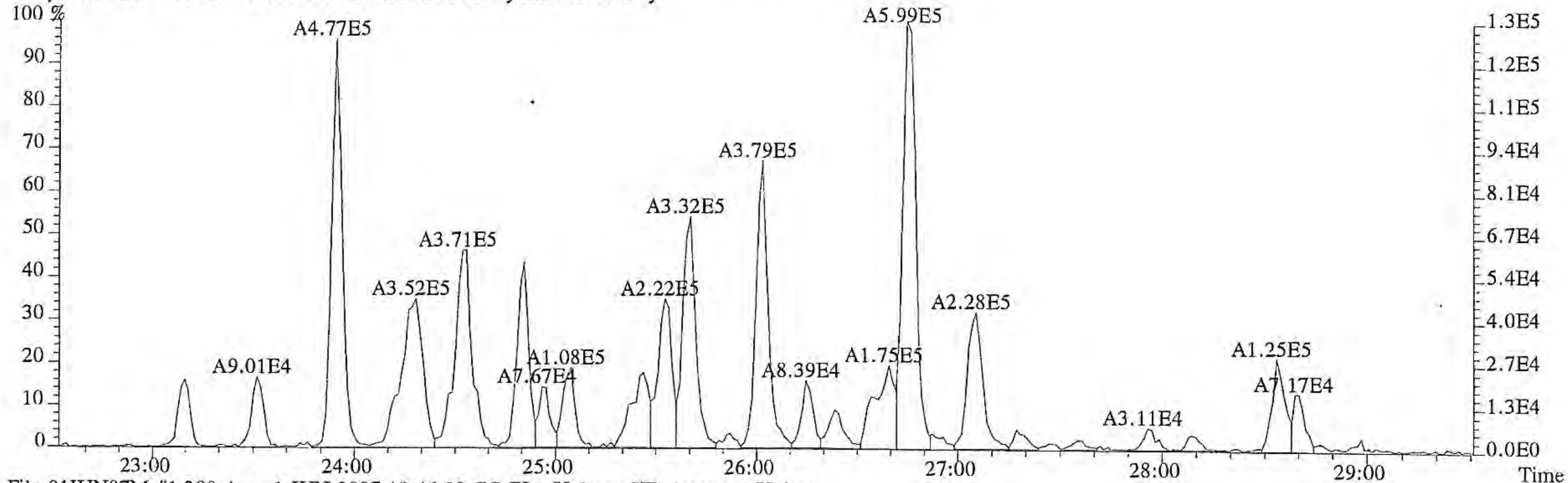
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



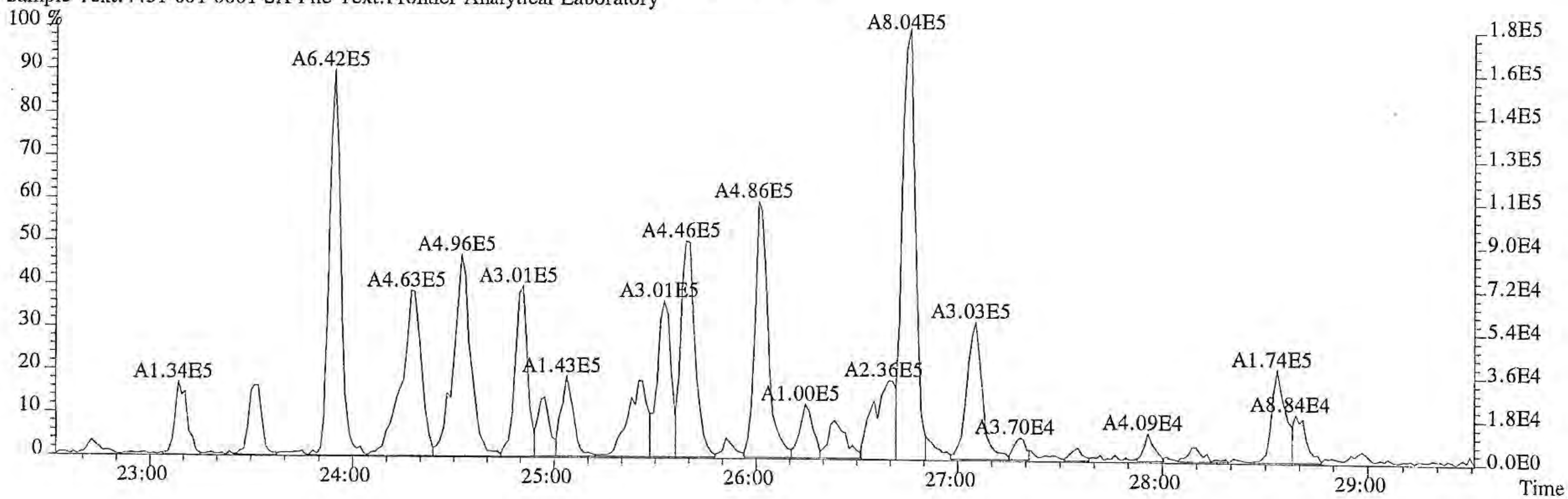
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



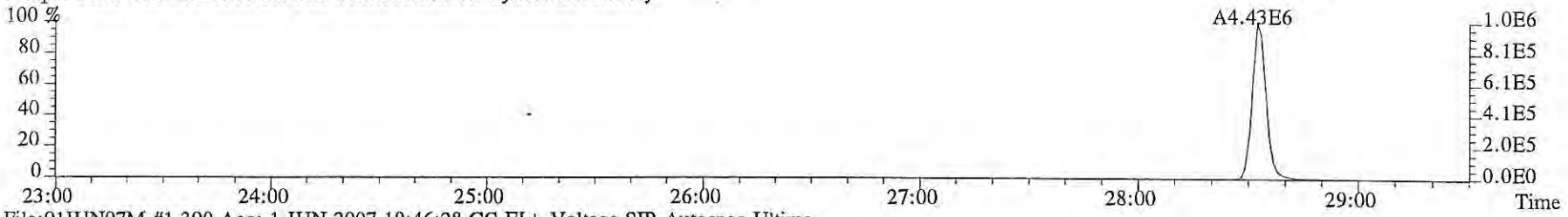
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



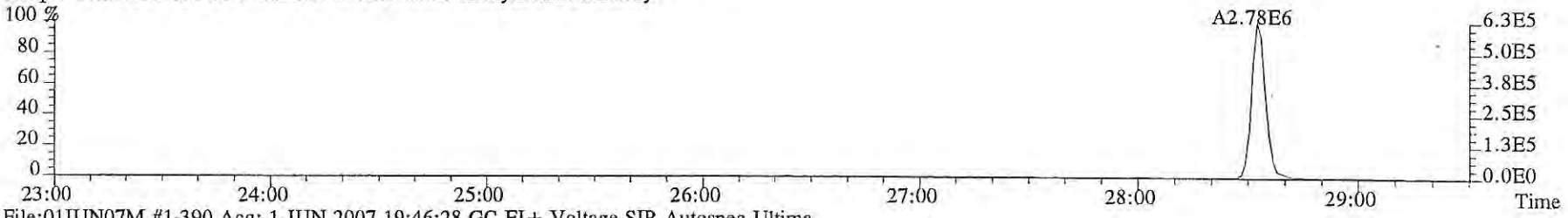
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



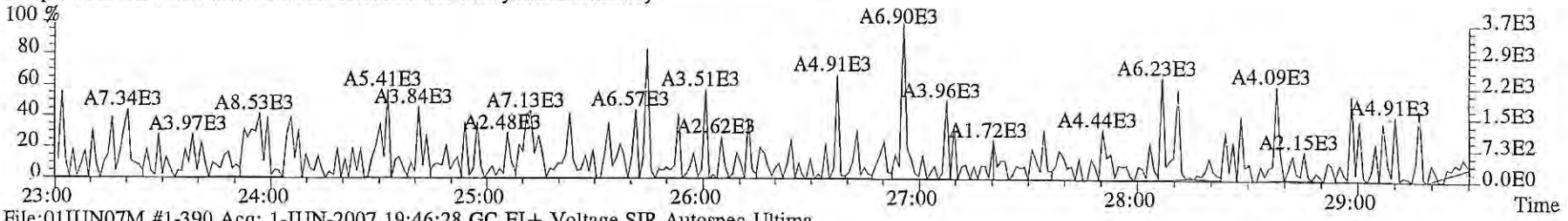
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



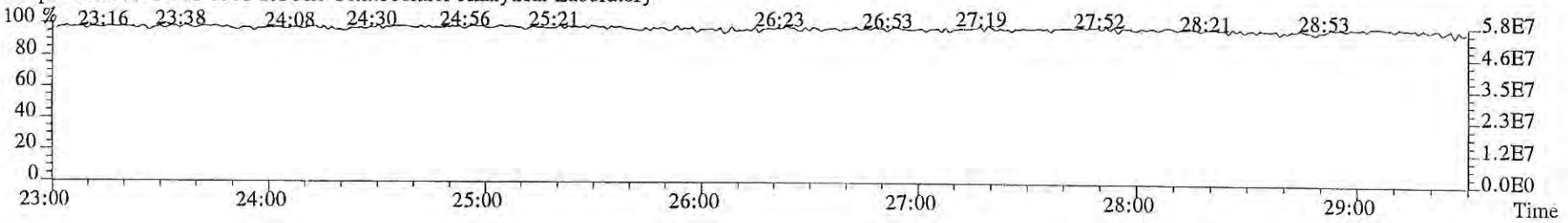
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



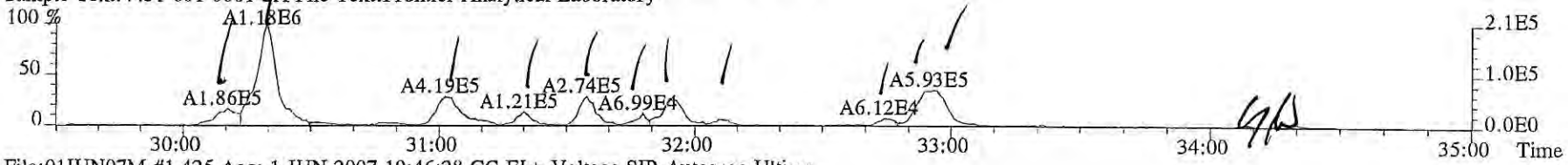
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



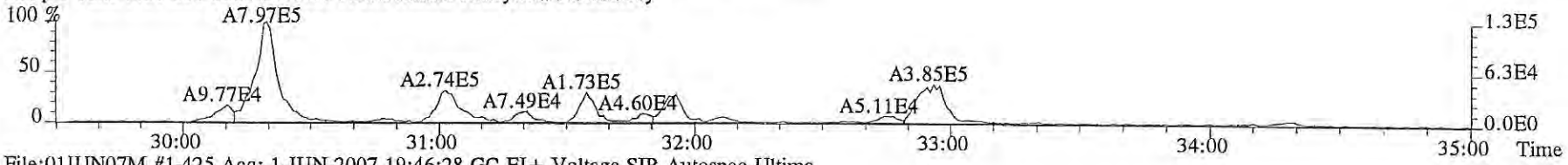
File:01JUN07M #1-390 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:12 Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



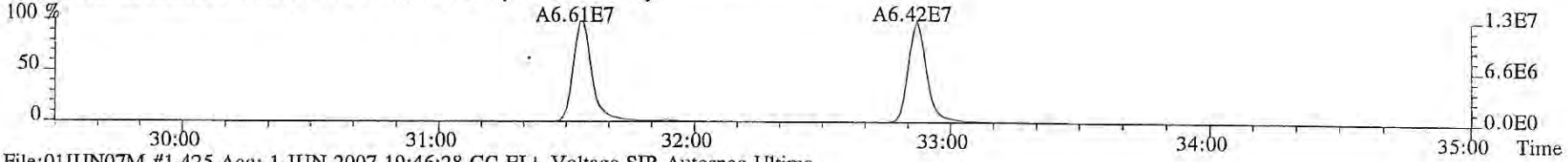
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



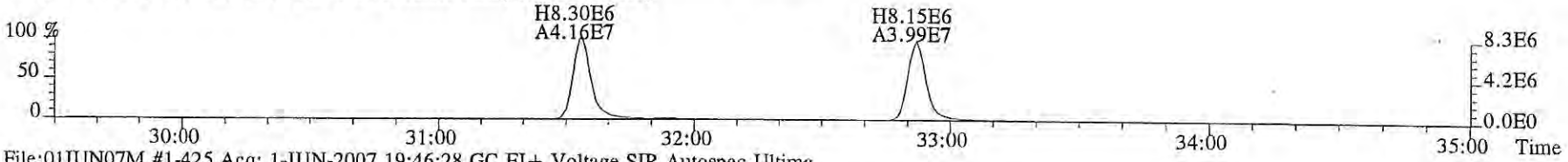
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



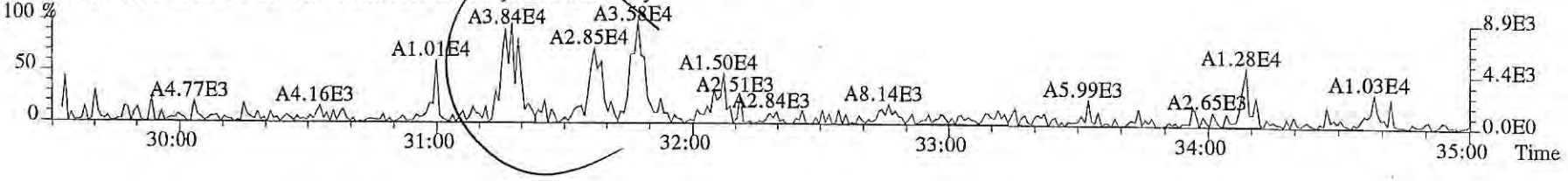
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



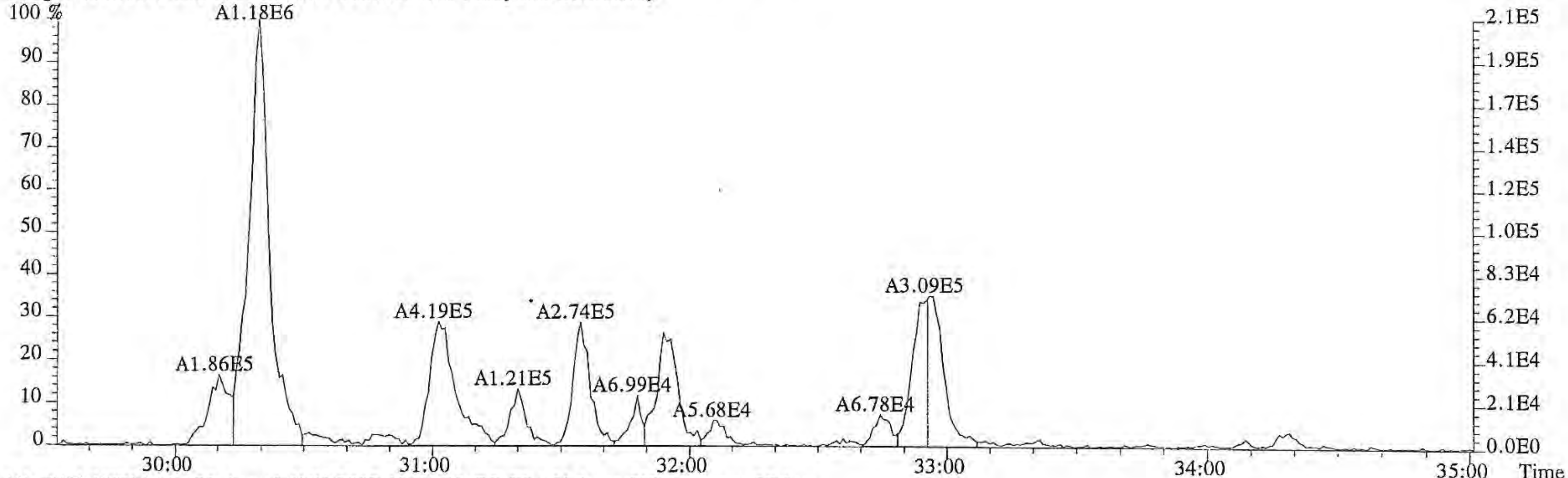
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



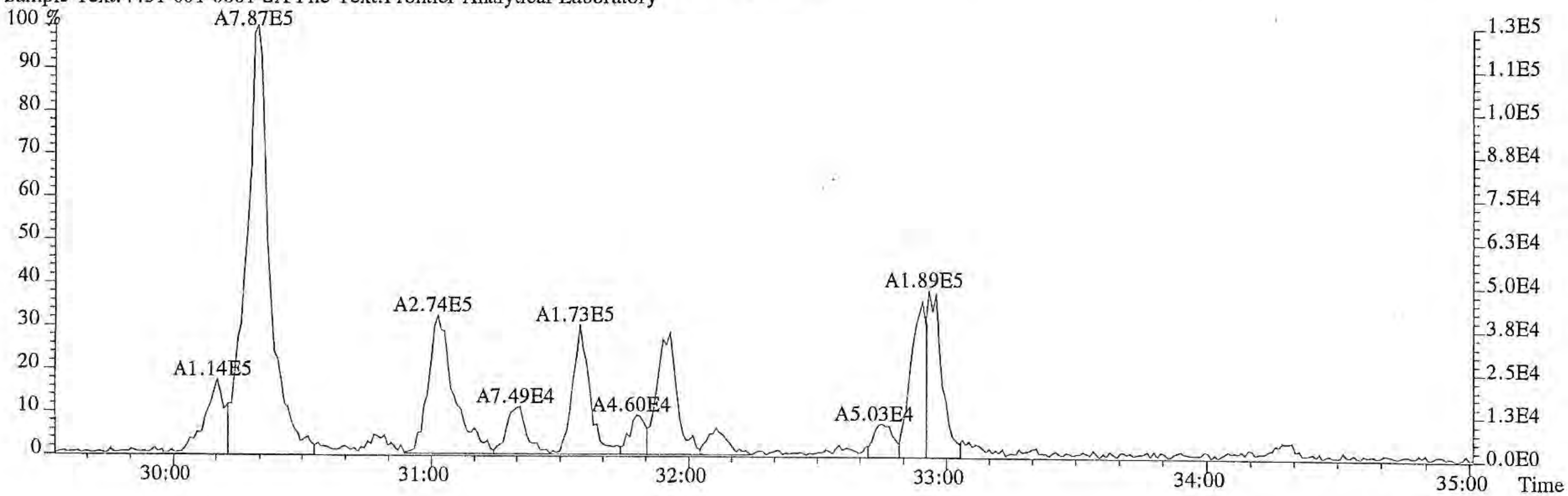
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



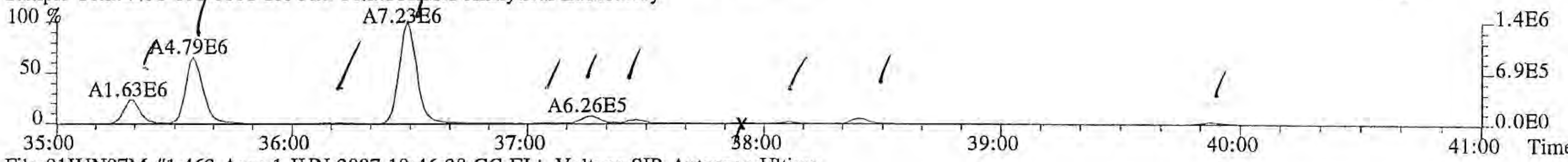
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



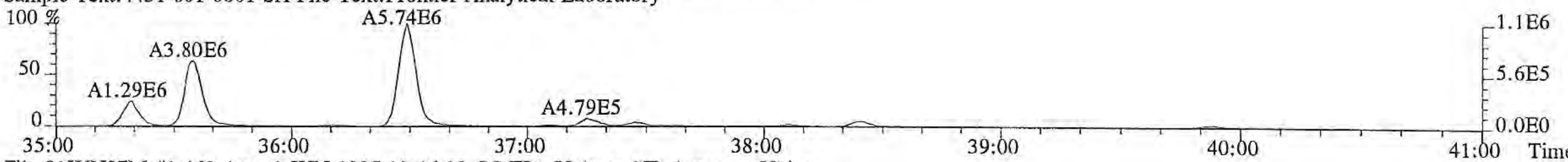
File:01JUN07M #1-425 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



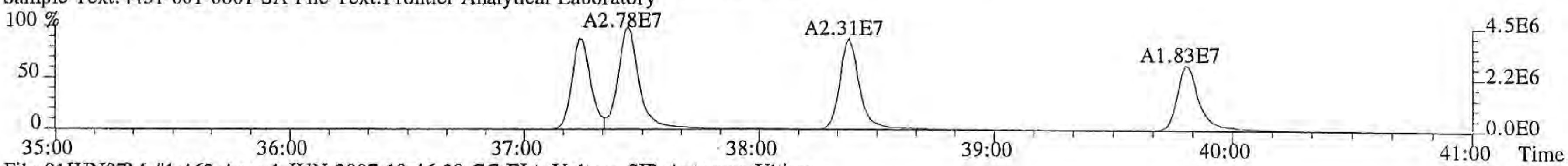
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



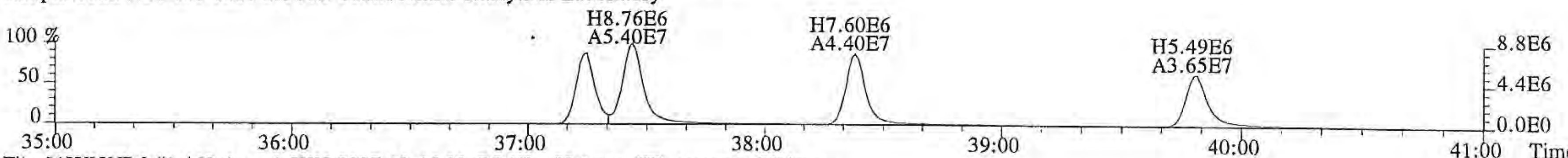
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



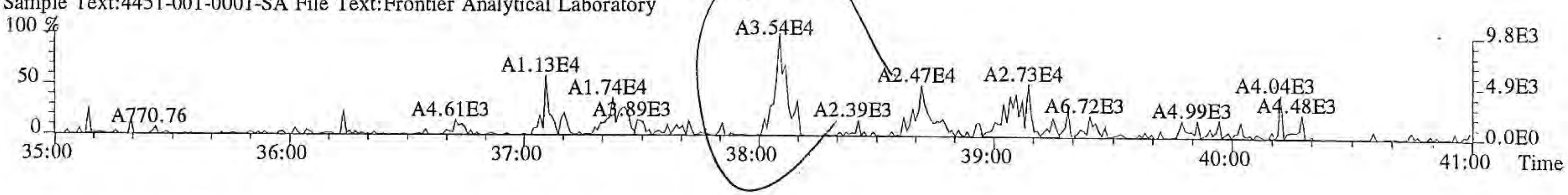
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



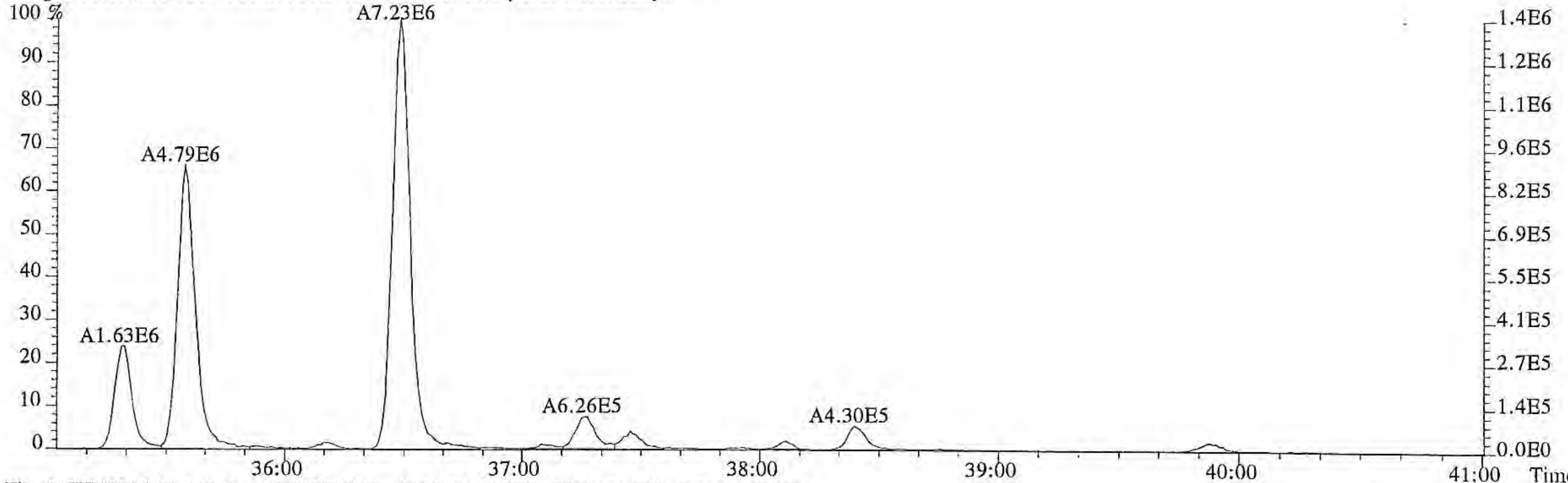
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



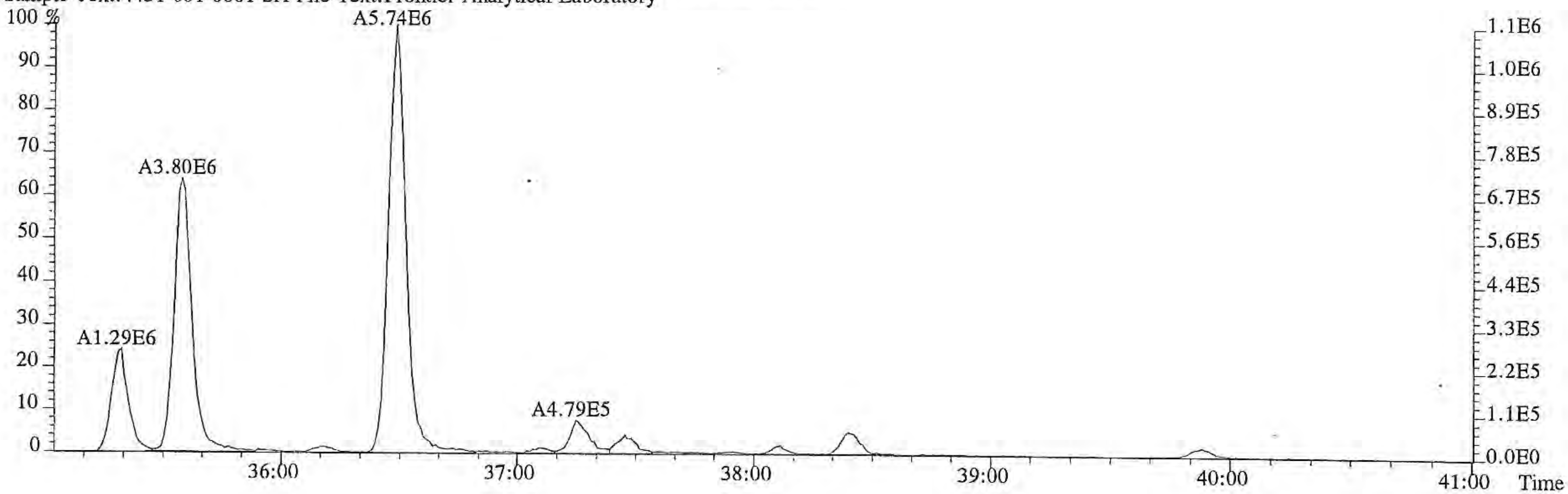
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



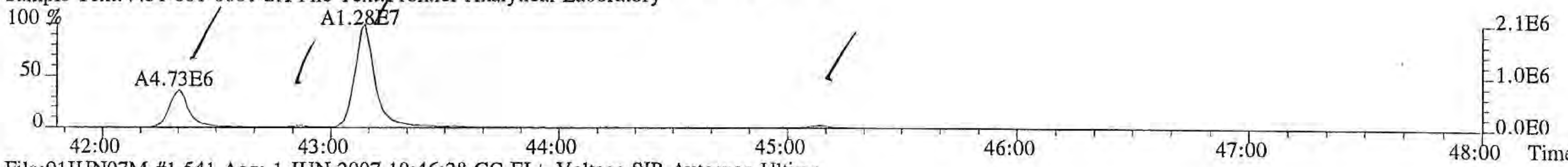
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



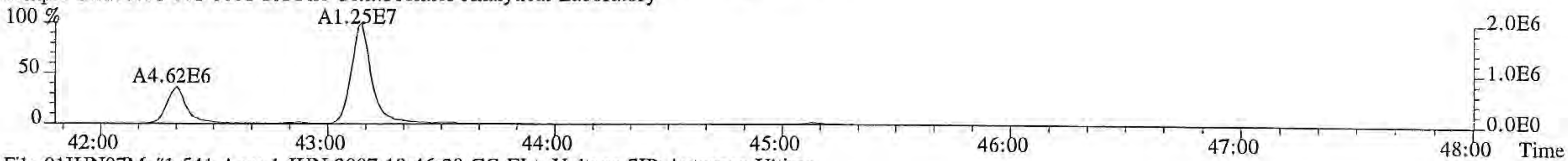
File:01JUN07M #1-463 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



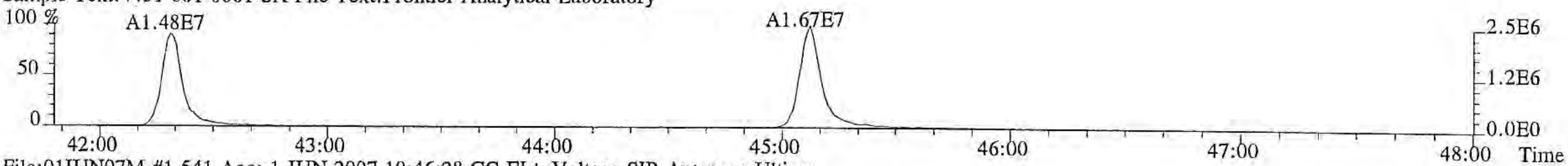
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



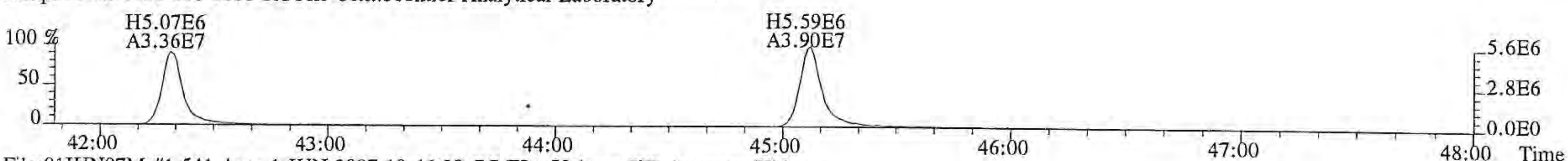
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



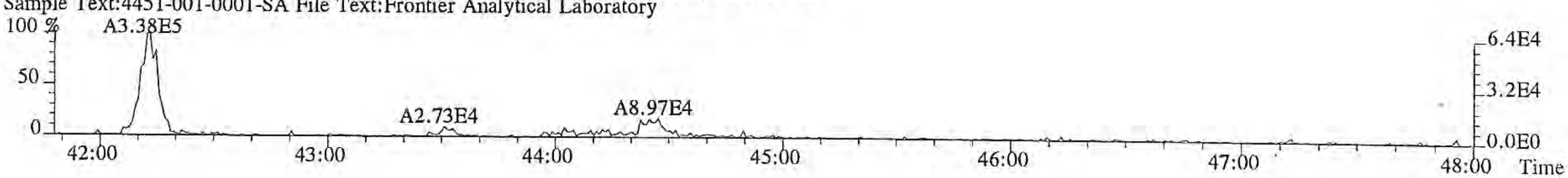
File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



File:01JUN07M #1-541 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory

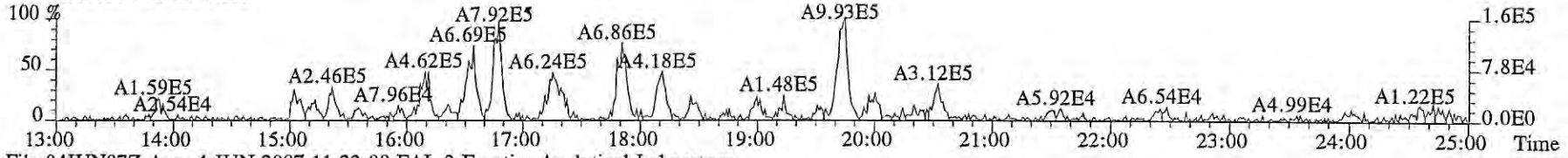


FAL ID: 4451-001-0001-SA Filename: 04JUN07Z Sam:5 Acquired: 4-JUN-07 11:22:09 ICal: tcdffal2-4-27-07
Client ID: 07-4032-KQ93A ConCal: ST060407Z1 EndCal: ST060407Z2
Results: 4444TCDF GC Column: DB225 Amount: 10.12

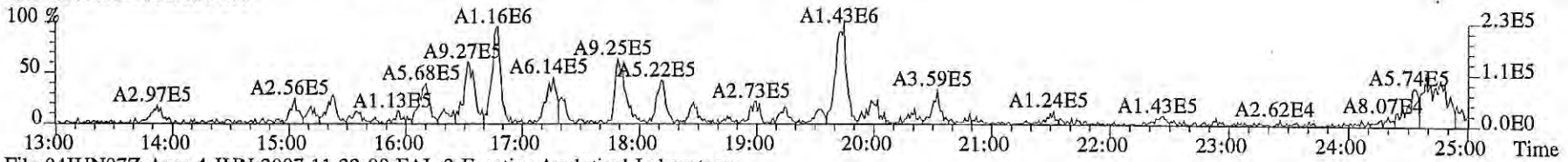
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	2.42e+06	0.69 y	19:45	0.95	2.48		2.50	-	-	1	
13C-2,3,7,8-TCDF	2.02e+08	0.82 y	19:42	1.27	193						97.5
13C-1,2,3,4-TCDF	1.63e+08	0.82 y	17:15	-	4.63						

Analyst: _____ Date: 6/5/07

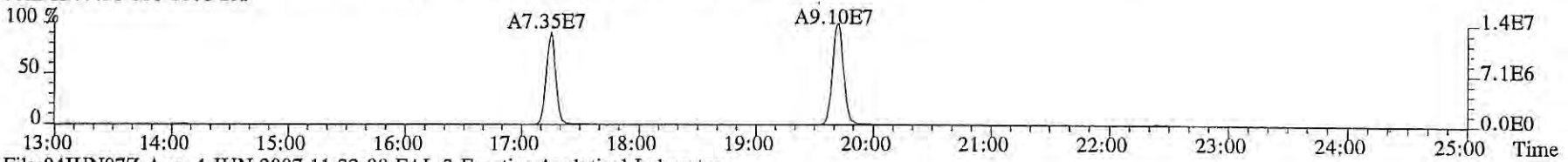
File:04JUN07Z Acq: 4-JUN-2007 11:22:09 FAL-2 Frontier Analytical Laboratory
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
FAL ID:4451-001-0001-SA



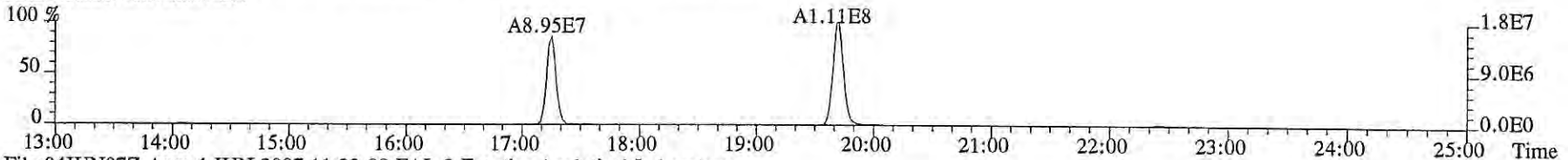
File:04JUN07Z Acq: 4-JUN-2007 11:22:09 FAL-2 Frontier Analytical Laboratory
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
FAL ID:4451-001-0001-SA



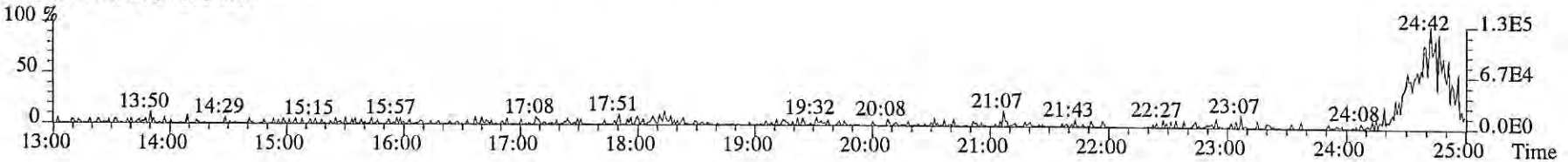
File:04JUN07Z Acq: 4-JUN-2007 11:22:09 FAL-2 Frontier Analytical Laboratory
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
FAL ID:4451-001-0001-SA



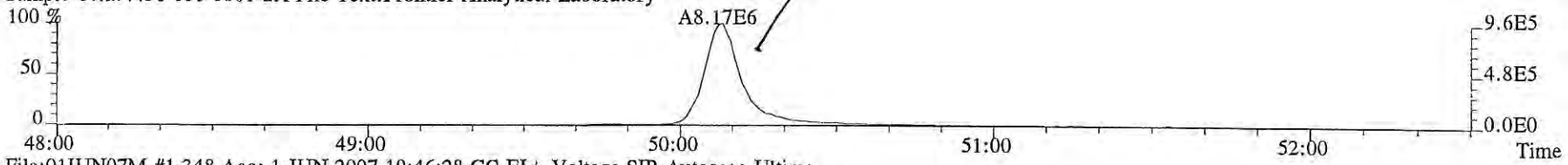
File:04JUN07Z Acq: 4-JUN-2007 11:22:09 FAL-2 Frontier Analytical Laboratory
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
FAL ID:4451-001-0001-SA



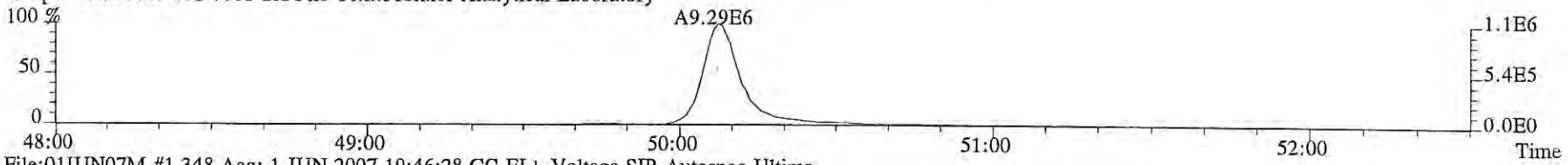
File:04JUN07Z Acq: 4-JUN-2007 11:22:09 FAL-2 Frontier Analytical Laboratory
375.8364 S:5 Exp:TCDF
FAL ID:4451-001-0001-SA



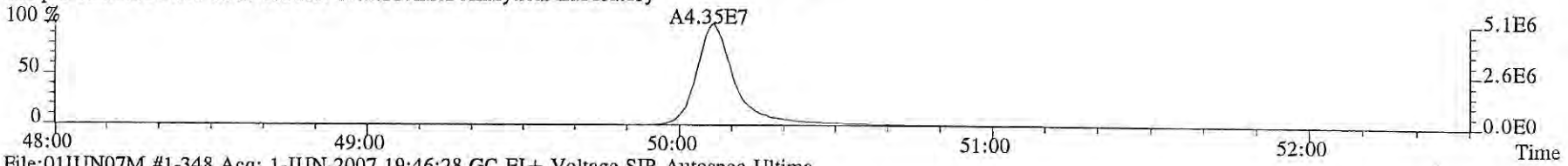
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



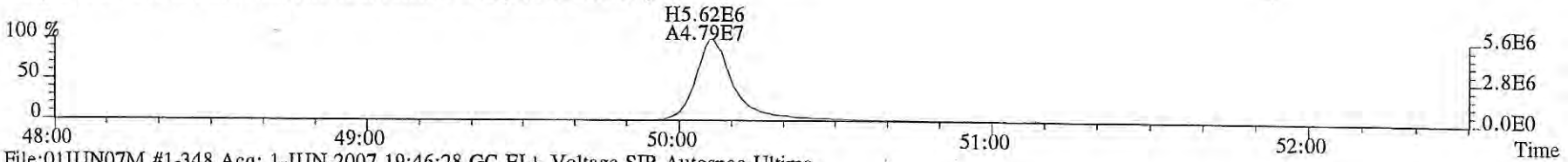
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



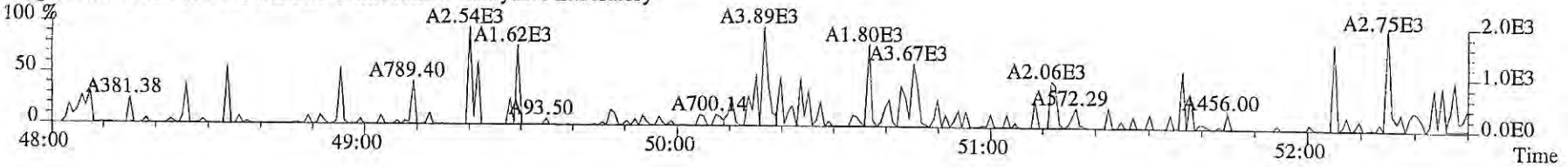
File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



File:01JUN07M #1-348 Acq: 1-JUN-2007 19:46:28 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:4451-001-0001-SA File Text:Frontier Analytical Laboratory



FAL ID: 4451-002-0001-SA Filename: 01JUN07M Sam:13 Acquired: 1-JUN-07 20:41:51 ICal: PCDDFAL3-4-17-07
Client ID: 07-4034-KQ93C ConCal: ST060107M2 EndCal: ST060107M3
Results: 4457 GC Column: DB5 Amount: 10.21 NATO 1989 Tox: 7.28
WHO 1998 Tox: 5.96 WHO 2005 Tox: 6.24

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	8.68e+04	0.69 y	27:31	1.11	0.178	J	2.50	-	*	
1,2,3,7,8-PeCDD	3.92e+05	1.46 y	33:18	1.10	0.882	J	2.50	-	*	
1,2,3,4,7,8-HxCDD	5.88e+05	1.30 y	38:39	0.82	2.65		2.50	-	*	
1,2,3,6,7,8-HxCDD	2.04e+06	1.27 y	38:48	0.74	8.31		2.50	-	*	
1,2,3,7,8,9-HxCDD	1.06e+06	1.27 y	39:15	0.80	4.36		2.50	-	*	
1,2,3,4,6,7,8-HpCDD	3.88e+07	1.03 y	44:14	0.75	205		2.50	-	*	
OCDD	3.27e+08	0.89 y	49:46	0.80	1910		2.50	-	*	
2,3,7,8-TCDF	1.12e+06	0.79 y	26:46	0.85	1.52	F	2.50	-	*	
1,2,3,7,8-PeCDF	2.79e+05	1.48 y	31:34	0.78	0.581	J	2.50	-	*	
2,3,4,7,8-PeCDF	2.24e+05	1.47 y	32:54	0.76	0.493	J	2.50	-	*	
1,2,3,4,7,8-HxCDF	7.26e+05	1.19 y	37:16	1.02	1.99	J	2.50	-	*	
1,2,3,6,7,8-HxCDF	4.05e+05	1.17 y	37:28	0.92	0.951	J	2.50	-	*	
2,3,4,6,7,8-HxCDF	4.83e+05	1.34 y	38:23	0.93	1.38	J	2.50	-	*	
1,2,3,7,8,9-HxCDF	2.07e+05	1.28 y	39:53	0.92	0.757	J	2.50	-	*	
1,2,3,4,6,7,8-HpCDF	5.27e+06	1.03 y	42:20	1.10	17.1		2.50	-	*	
1,2,3,4,7,8,9-HpCDF	3.95e+05	1.12 y	45:09	0.99	1.27	J	2.50	-	*	
OCDF	1.04e+07	0.89 y	50:07	0.77	49.6		2.50	-	*	
										Rec
13C-2,3,7,8-TCDD	8.57e+07	0.79 y	27:29	1.03	163					83.2
13C-1,2,3,7,8-PeCDD	7.90e+07	1.58 y	33:17	1.15	134					68.6
13C-1,2,3,4,7,8-HxCDD	5.33e+07	1.27 y	38:37	1.34	177					90.5
13C-1,2,3,6,7,8-HxCDD	6.51e+07	1.28 y	38:47	1.35	214					109
13C-1,2,3,4,6,7,8-HpCDD	4.92e+07	1.06 y	44:12	1.38	158					80.7
13C-OCDD	8.45e+07	0.89 y	49:45	1.10	341					87.1
13C-2,3,7,8-TCDF	1.72e+08	0.79 y	26:44	1.28	173					88.1
13C-1,2,3,7,8-PeCDF	1.21e+08	1.61 y	31:34	1.10	141					72.0
13C-2,3,4,7,8-PeCDF	1.17e+08	1.62 y	32:53	1.07	141					72.1
13C-1,2,3,4,7,8-HxCDF	7.03e+07	0.51 y	37:14	1.56	200					102
13C-1,2,3,6,7,8-HxCDF	9.05e+07	0.51 y	37:26	1.74	232					118
13C-2,3,4,6,7,8-HxCDF	7.39e+07	0.52 y	38:23	1.65	199					102
13C-1,2,3,7,8,9-HxCDF	5.82e+07	0.51 y	39:49	1.47	176					89.7
13C-1,2,3,4,6,7,8-HpCDF	5.50e+07	0.44 y	42:19	1.42	172					87.8
13C-1,2,3,4,7,8,9-HpCDF	6.17e+07	0.43 y	45:07	1.34	204					104
13C-OCDF	1.07e+08	0.89 y	50:07	1.44	328					83.8
37Cl-2,3,7,8-TCDD	2.26e+07		27:31	0.77	57.8					73.8
13C-1,2,3,4-TCDD	1.00e+08	0.79 y	26:54	-	11.5					
13C-1,2,3,4-TCDF	1.52e+08	0.79 y	25:39	-	11.5					
13C-1,2,3,7,8,9-HxCDD	4.41e+07	1.28 y	39:15	-	5.97					
							Fac	Noise	DL	#Hom
Total Tetra-Dioxins	2.46e+07		24:30	1.11	50.4		2.50	-	*	12
Total Penta-Dioxins	1.64e+07		30:21	1.10	36.8		2.50	-	*	9
Total Hexa-Dioxins	3.05e+07		36:12	0.79	128		2.50	-	*	8
Total Hepta-Dioxins	1.13e+08		42:51	0.75	599		2.50	-	*	2
Total Tetra-Furans	7.04e+06		23:10	0.85	9.49	D,M	2.50	-	*	20
1st Fn. Tot Penta-Furans	3.65e+06		28:33	0.77	7.81	D,M	2.50	-	*	1 PeCDF
Total Penta-Furans	3.45e+06		30:09	0.77	7.37	D,M	2.50	-	*	9 15.2
Total Hexa-Furans	1.66e+07		35:19	0.95	47.0		2.50	-	*	10
Total Hepta-Furans	2.09e+07		42:20	1.04	67.4		2.50	-	*	4

OK DB 6/5/07

Analyst: _____ Date: 6/4/07

Totals class: Total Tetra-Dioxins Entry #: 38

Run: 17 File: 01JUN07M S: 13 I: 1 F: 1
Acquired: 1-JUN-07 20:41:51

Total Concentration: 50.4 Unnamed Concentration: 50.231

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
24:30	5.14e+06	6.70e+06	0.77	y	1.18e+07	24.3	
24:47	3.16e+06	4.12e+06	0.77	y	7.28e+06	14.9	
25:05	4.41e+04	6.23e+04	0.71	y	1.06e+05	0.218	
25:53	1.55e+05	1.86e+05	0.84	y	3.41e+05	0.698	
26:03	2.70e+05	3.60e+05	0.75	y	6.30e+05	1.29	
26:13	3.51e+04	4.85e+04	0.72	y	8.36e+04	0.171	
26:36	3.73e+04	4.67e+04	0.80	y	8.40e+04	0.172	
26:56	1.46e+06	1.86e+06	0.78	y	3.32e+06	6.81	
27:15	2.99e+05	4.10e+05	0.73	y	7.09e+05	1.45	
27:31	3.55e+04	5.13e+04	0.69	y	8.68e+04	0.178	2,3,7,8-TCDD .
27:48	2.10e+04	2.46e+04	0.86	y	4.57e+04	0.0936	
28:13	2.06e+04	2.87e+04	0.72	y	4.93e+04	0.101	

Totals class: Total Penta-Dioxins Entry #: 39

Run: 17 File: 01JUN07M S: 13 I: 1 F: 2
Acquired: 1-JUN-07 20:41:51

Total Concentration: 36.8 Unnamed Concentration: 35.965

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
30:21	2.41e+06	1.49e+06	1.62	y	3.90e+06	8.77	
30:56	1.14e+05	6.78e+04	1.68	y	1.81e+05	0.408	
31:34	3.11e+06	1.93e+06	1.61	y	5.04e+06	11.3	
31:47	2.60e+05	1.66e+05	1.56	y	4.26e+05	0.960	
31:55	2.82e+06	1.76e+06	1.60	y	4.59e+06	10.3	
32:12	2.33e+05	1.60e+05	1.45	y	3.93e+05	0.884	
32:40	8.31e+05	5.39e+05	1.54	y	1.37e+06	3.08	
33:18	2.33e+05	1.59e+05	1.46	y	3.92e+05	0.882	1,2,3,7,8-PeCDD
33:23	5.12e+04	3.83e+04	1.34	y	8.96e+04	0.202	

Totals class: Total Hexa-Dioxins Entry #: 40

Run: 17 File: 01JUN07M S: 13 I: 1 F: 3
Acquired: 1-JUN-07 20:41:51

Total Concentration: 128 Unnamed Concentration: 113.143

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
36:12	4.28e+06	3.38e+06	1.27 y	7.66e+06	32.3	
37:07	6.62e+06	5.21e+06	1.27 y	1.18e+07	49.9	
37:32	3.65e+06	2.84e+06	1.28 y	6.49e+06	27.3	
37:43	3.69e+05	2.73e+05	1.35 y	6.42e+05	2.71	
38:39	3.32e+05	2.56e+05	1.30 y	5.88e+05	2.65	1,2,3,4,7,8-HxCDD
38:48	1.14e+06	8.98e+05	1.27 y	2.04e+06	8.31	1,2,3,6,7,8-HxCDD
39:06	1.29e+05	9.63e+04	1.34 y	2.26e+05	0.952	
39:15	5.91e+05	4.67e+05	1.27 y	1.06e+06	4.36	1,2,3,7,8,9-HxCDD

Totals class: Total Hepta-Dioxins Entry #: 41

Run: 17 File: 01JUN07M S: 13 I: 1 F: 4
Acquired: 1-JUN-07 20:41:51

Total Concentration: 599 Unnamed Concentration: 393.296

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:51	3.78e+07	3.65e+07	1.04 y	7.43e+07	393	
44:14	1.97e+07	1.91e+07	1.03 y	3.88e+07	205	1,2,3,4,6,7,8-HpCDD

Totals class: Total Hepta-Furans Entry #: 46

Run: 17 File: 01JUN07M S: 13 I: 1 F: 4
Acquired: 1-JUN-07 20:41:51

Total Concentration: 67.4 Unnamed Concentration: 48.955

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
42:20	2.68e+06	2.60e+06	1.03	y	5.27e+06	17.1	1,2,3,4,6,7,8-HpCDF
42:51	1.17e+05	1.22e+05	0.95	y	2.39e+05	0.770	
43:09	7.68e+06	7.29e+06	1.05	y	1.50e+07	48.2	
45:09	2.08e+05	1.86e+05	1.12	y	3.95e+05	1.27	1,2,3,4,7,8,9-HpCDF

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 26, 2002

Ms. Shannon Dunn
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall Ave. Landfill; 001020.220
ARI Job No: EQ21

Dear Shannon,

Please find enclosed original chain of custody (COC) and analytical results for the project referenced above. Analytical Resources, Inc. (ARI) accepted four water samples on August 8, 2002. The samples were received in good condition and there were no discrepancies between the COC and containers' labels.

The samples were analyzed for PCBs referencing US EPA method 8082, diesel and motor oil range hydrocarbons referencing WDOE method NWTPH-Dx with acid/si cleanup, total and dissolved metals referencing US EPA methods 6010B and 7421, and general chemistry parameters as referenced specifically on the reports.

No analytical complications were noted. A copy of this report and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Mary Lou Fox

Mary Lou Fox
Project Manager
206-695-6211
marylou@arilabs.com

MLF/mlf
Enclosure
cc: File EQ21

Landau Associates

- [x] Seattle (Edmonds) (425) 778-0907
- [ ] Tacoma (253) 926-2493
- [ ] Spokane (509) 327-9737
- [ ] Portland (Lake Oswego) (503) 443-6010
- [ ] _____

EQ21

Date 8/8/02

Page 1 of 1

Chain-of-Custody Record 02-10451 02-10457

Project Name Cornwall Ave Landfill Project No. C01020.220

Project Location/Event Bellingham

Sampler's Name Ken Reid

Project Contact Shannon Dunn

Send Results To Shannon Dunn

Turnaround Time
- [x] Standard
- [ ] Accelerated
- [ ] _____

Sample I.D.	Date	Time	Matrix	No. of Containers	NW TPH-Dx	PCB	Fecal Coliform	Total Metals	DISS Metals	TOC	Total Cyanide	Ammonia	TSS	Turbidity	Observations/Comments
S-1	8/8/02	1115	water	12	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	
S-2		1215		12	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	
S-3		1245		10		✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW-6		1455		1			X								

Special Shipment/Handling or Storage Requirements on Ice

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Ken Reid	Printed Name ERIC BRANSON	Printed Name	Printed Name
Company Landau Assoc	Company ARI	Company	Company
Date 8/8/02 Time 10:30	Date 8/8/02 Time 0845	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

5.5, 6.5

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: Method Blank

Lab Sample ID: EQ21MB
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 08/16/02

Date extracted: 08/09/02
Date analyzed: 08/15/02 04:02
Instrument ID: ECD3
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value	
12674-11-2	Aroclor 1016	0.050	U
53469-21-9	Aroclor 1242	0.050	U
12672-29-6	Aroclor 1248	0.050	U
11097-69-1	Aroclor 1254	0.050	U
11096-82-5	Aroclor 1260	0.050	U
11104-28-2	Aroclor 1221	0.10	U
11141-16-5	Aroclor 1232	0.050	U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	107%
Tetrachlorometaxylene	86.5%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: S-1

Lab Sample ID: EQ21A
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/16/02

Date extracted: 08/09/02
Date analyzed: 08/15/02 05:44
Instrument ID: ECD3
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	**Aroclor 1242**	**0.14**
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	93.5%
Tetrachlorometaxylene	78.5%

Data Qualifiers

J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
U	Indicates compound was analyzed for, but not detected at the given detection limit.
B	Found in associated method blank
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: S-2

Lab Sample ID: EQ21B
LIMS ID: 02-10452
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/16/02

Date extracted: 08/09/02
Date analyzed: 08/15/02 06:19
Instrument ID: ECD3
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	**Aroclor 1242**	**0.16**
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	88.5%
Tetrachlorometaxylene	74.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: S-3

Lab Sample ID: EQ21C
LIMS ID: 02-10453
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/16/02

Date extracted: 08/09/02
Date analyzed: 08/15/02 06:53
Instrument ID: ECD3
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	84.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Lab Sample ID: EQ21SB
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized:
Reported: 08/16/02

LABORATORY CONTROL SAMPLE RECOVERY
Date extracted: 08/09/02

CONSTITUENT	SPIKE VALUE	SPIKE ADDED	% RECOVERY	RPD
LABORATORY CONTROL SAMPLE				
Aroclor 1242	0.418	0.504	82.9%	
LAB CONTROL DUPLICATE				
Aroclor 1242	0.413	0.504	81.9%	1.2%

Aroclor Surrogate Recoveries

LCS-Decachlorobiphenyl	112%
LCS-Tetrachlorometaxylene	88.5%
LCSD-Decachlorobiphenyl	109%
LCSD-Tetrachlorometaxylene	93.0%

Values reported in ug/L

ANALYTICAL RESOURCES INCORPORATED

WATER AROCLOR SURROGATE SUMMARY

Matrix: Water

QC Report No: EQ21
Project: Cornwall Ave. Landfill
001020.220

LIMS ID	Lab ID	Client ID	TCMX	#	DCBP	#	TOT OUT
02-10451MB	080902MB	Method Blank	86.5%		107%		0
02-10451LCS	080902LCS	Lab Control	88.5%		112%		0
02-10451LCSD	080902LCSD	Lab Control Dup	93.0%		109%		0
02-10451	EQ21A	S-1	78.5%		93.5%		0
02-10452	EQ21B	S-2	74.0%		88.5%		0
02-10453	EQ21C	S-3	84.0%		103%		0

	Control QC LIMITS	Sample QC LIMITS
(TCMX) = Tetrachloro-m-xylene	(48-93)	(50-91)
(DCBP) = Decachlorobiphenyl	(53-126)	(30-128)

\# Column to be used to flag recovery values

* Values outside of required QC limits

D Surrogate Compound diluted out

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD Range C12 to C24 by GC/FID
and Motor Oil
Silica and Acid-Cleaned

LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized:
Reported: 08/21/02

Date Received: 08/09/02

Lab ID	Sample ID	Date Analyzed	Dilution Factor	Diesel Range	*HC ID	Motor Oil Range	Surrogate Recovery
EQ21MB	Method Blank	08/12/02	1:1	0.25 U	---	0.50 U	94.0%
EQ21A	S-1	08/12/02	1:1	0.25 U	---	0.50 U	99.0%
EQ21B	S-2	08/12/02	1:1	0.25 U	---	0.50 U	88.0%

Surrogate is O-Terphenyl.

* ID indicates, in the opinion of the analyst, the petroleum product with the best pattern match. 'NO' indicates that there was not a good match for any of the requested products.
Values reported in ppm (mg/L).
Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the Motor Oil Standard range.

Data Qualifiers

U	Compound not detected at the given detection limit.
E	Value detected above linear range of instrument. Dilution required.
J	Indicates an estimated value below the calculated detection limit.
S	No value reported due to saturation of the detector. Dilution required.
D	Indicates the surrogate was not detected because of dilution of the extract.
E	Indicates a value above the linear range of the detector. Dilution required.
NR	Indicates no recovery due to matrix interference.

TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD Range C12 to C24 by GC/FID
Acid-Cleaned

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: 080902LCS
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized:
Reported: 08/21/02

LABORATORY CONTROL SAMPLE RECOVERY REPORT
Date analyzed: 08/12/02

CONSTITUENT	SPIKE FOUND	SPIKE ADDED	% RECOVERY
Diesel Range Hydrocarbons	2.58	3.00	86.0%

TPHd Surrogate Recovery

LCS o-Terphenyl 90.0%

Values reported in parts per million (mg/L)

ANALYTICAL RESOURCES INCORPORATED

TOTAL ACID & SILICA CLEANED DIESEL HYDROCARBONS SUMMARY

Matrix: Water

QC Report No: EQ21

LIMS ID	Lab ID	Client ID	O-TerPh	TOT OUT
02-10451	080902MB	Method Blank	94%	0
02-10451	080902LCS	Lab Control	90%	0
02-10451	EQ21A	S-1	99%	0
02-10452	EQ21B	S-2	88%	0

	Control QC LIMITS	Sample QC LIMITS
(O-TerP) = O-Terphenyl	(30-150)	(30-150)

\# Column to be used to flag recovery values

* Values outside of required QC limits

D System Monitoring Compound diluted out

FORM-II TPH-D

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ANALYTICAL RESOURCES INCORPORATED

ARI Job: EQ21
Matrix: Water
Project: Cornwall Ave. Landfill
Date Received: 08/09/02
001020.220

ARI ID	Client ID	Sample Amt	Final Vol	Prep Date
02-10451-080902MB1	Method Blank	500 mL	1.00 mL	08/09/02
02-10451-080902LCS1	Lab Control	500 mL	1.00 mL	08/09/02
02-10451-080902LCSD1	Lab Control Dup	500 mL	1.00 mL	08/09/02
02-10451-EQ21A	S-1	500 mL	1.00 mL	08/09/02
02-10452-EQ21B	S-2	500 mL	1.00 mL	08/09/02

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: Method Blank**
TOTAL METALS

Lab Sample ID: EQ21MB
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	08/12/02	6010B	08/15/02	7440-50-8	Copper	0.002	0.002 U
3020A	08/12/02	7421	08/14/02	7439-92-1	Lead	0.001	0.001 U
3010A	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: S-1**
TOTAL METALS

Lab Sample ID: EQ21A
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	08/12/02	6010B	08/15/02	**7440-50-8**	**Copper**	0.004	**0.005**
3020A	08/12/02	7421	08/20/02	7439-92-1	Lead	0.001	0.001 U
3010A	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.01	0.01 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: S-2**
TOTAL METALS

Lab Sample ID: EQ21B
LIMS ID: 02-10452
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	08/12/02	6010B	08/15/02	**7440-50-8**	**Copper**	0.004	**0.007**
3020A	08/12/02	7421	08/14/02	**7439-92-1**	**Lead**	0.001	**0.002**
3010A	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.01	0.01 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: S-3**
TOTAL METALS

Lab Sample ID: EQ21C
LIMS ID: 02-10453
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	08/12/02	6010B	08/15/02	**7440-50-8**	**Copper**	0.004	**0.005**
3020A	08/12/02	7421	08/14/02	**7439-92-1**	**Lead**	0.001	**0.002**
3010A	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.01	0.01 U

U Analyte undetected at given RL

RL Reporting Limit

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: EQ21LCS
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized:
Reported: 08/20/02

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Spike mg/L	Spike Added	% Recovery	Q
Copper	0.476	0.500	95.2%	
Lead	0.106	0.100	106%	
Zinc	0.468	0.500	93.6%	

'Q' codes: N = control limit not met

Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET **Sample No: Method Blank**
DISSOLVED METALS

Lab Sample ID: EQ21MB
LIMS ID: 02-10455
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	08/12/02	6010B	08/15/02	7440-50-8	Copper	0.002	0.002 U
7000A	08/12/02	7421	08/14/02	7439-92-1	Lead	0.001	0.001 U
6010B	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET **Sample No: S-1**
DISSOLVED METALS

Lab Sample ID: EQ21E
LIMS ID: 02-10455
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	08/12/02	6010B	08/15/02	7440-50-8	Copper	0.004	0.004 U
7000A	08/12/02	7421	08/14/02	**7439-92-1**	**Lead**	0.001	**0.001**
6010B	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.01	0.01 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET
DISSOLVED METALS

Sample No: S-2

Lab Sample ID: EQ21F
LIMS ID: 02-10456
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	08/12/02	6010B	08/15/02	**7440-50-8**	**Copper**	0.004	**0.005**
7000A	08/12/02	7421	08/20/02	7439-92-1	Lead	0.001	0.001 U
6010B	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.01	0.01 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET **Sample No: S-3**
DISSOLVED METALS

Lab Sample ID: EQ21G
LIMS ID: 02-10457
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized:
Reported: 08/20/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	08/12/02	6010B	08/15/02	7440-50-8	Copper	0.004	0.004 U
7000A	08/12/02	7421	08/14/02	**7439-92-1**	**Lead**	0.001	**0.002**
6010B	08/12/02	6010B	08/15/02	7440-66-6	Zinc	0.01	0.01 U

U Analyte undetected at given RL

RL Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: EQ21LCS
LIMS ID: 02-10455
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized:
Reported: 08/20/02

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Spike mg/L	Spike Added	% Recovery	Q
Copper	0.492	0.500	98.4%	
Lead	0.020	0.020	100%	
Zinc	0.488	0.500	97.6%	

'Q' codes: N = control limit not met
NA = Not applicable - analyte not spiked

Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

QA Report - Method Blank Analysis

Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Received: NA

Data Release Authorized: asp
Reported: 08/23/02 Amy S. Phillips

METHOD BLANK RESULTS
CONVENTIONALS

Analysis Date & Batch	Constituent	Units	Result
08/09/02 08092#1	Total Suspended Solids	mg/L	< 1.0 U
08/09/02 08092#1	Turbidity	NTU	< 0.05 U
08/16/02 08162#1	Total Cyanide	mg/L	< 0.005 U
08/20/02 08202#1	N-Ammonia	mg-N/L	< 0.010 U
08/14/02 08142#1	Total Organic Carbon	mg/L	< 1.5 U
08/10/02 08102#1	Fecal Coliform	CFU/100 mL	< 1 U

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: S-1

Lab Sample ID: EQ21A
LIMS ID: 02-10451
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized: ajp
Reported: 08/23/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Total Suspended Solids	08/09/02 08092#1	EPA 160.2	1.1	mg/L	6.6
Turbidity	08/09/02 08092#1	EPA 180.1	0.05	NTU	2.4
Total Cyanide	08/16/02 08162#1	EPA 335.2	0.005	mg/L	< 0.005 U
N-Ammonia	08/20/02 08202#1	EPA 350.1M	0.20	mg-N/L	6.9
Total Organic Carbon	08/14/02 08142#1	EPA 415.1	1.5	mg/L	4.6
Fecal Coliform	08/10/02 08102#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EQ21 received 08/09/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: S-2

Lab Sample ID: EQ21B
LIMS ID: 02-10452
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized: asp
Reported: 08/23/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Total Suspended Solids	08/09/02 08092#1	EPA 160.2	1.0	mg/L	6.3
Turbidity	08/09/02 08092#1	EPA 180.1	0.05	NTU	39
Total Cyanide	08/16/02 08162#1	EPA 335.2	0.005	mg/L	< 0.005 U
N-Ammonia	08/20/02 08202#1	EPA 350.1M	0.20	mg-N/L	6.3
Total Organic Carbon	08/14/02 08142#1	EPA 415.1	1.5	mg/L	4.4
Fecal Coliform	08/10/02 08102#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EQ21 received 08/09/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: S-3

Lab Sample ID: EQ21C
LIMS ID: 02-10453
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized: ajp
Reported: 08/23/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Total Suspended Solids	08/09/02 08092#1	EPA 160.2	1.0	mg/L	5.2
Turbidity	08/09/02 08092#1	EPA 180.1	0.05	NTU	2.1
Total Cyanide	08/16/02 08162#1	EPA 335.2	0.005	mg/L	< 0.005 U
N-Ammonia	08/20/02 08202#1	EPA 350.1M	0.10	mg-N/L	1.1
Total Organic Carbon	08/14/02 08142#1	EPA 415.1	1.5	mg/L	< 1.5 U
Fecal Coliform	08/10/02 08102#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EQ21 received 08/09/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: MW-6

Lab Sample ID: EQ21D
LIMS ID: 02-10454
Matrix: Water

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 08/08/02
Date Received: 08/09/02

Data Release Authorized: ALH
Reported: 08/23/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Fecal Coliform	08/10/02 08102#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EQ21 received 08/09/02

MICROBIOLOGICAL BENCHSHEET (Membrane Filtration)

PARAMETER:	FECAL COLIFORM
METHOD:	MF
MEDIA:	MFC BROTH
INCUBATION:	44.5C, 24HR

Ideal ranges for accurate counting
Total Coliform : 20 - 80 Colonies
Fecal Coliform : 20 - 60 Colonies
Fecal Streptococci : 20-100 colonies

Calculations:
Dilution Factor: ***enter as sample volume / final volume (i.e. " =10/100")***
cfu/100 ml = ((count / vol filtered) x 100)/dilution factor
count: if max of all count data < 1, count =1, otherwise count = Σ count data
if Σcount > 200, "count err!" message, remove high counts or overide sum formula as necessary
volume filtered: selected by analyst, sum all volumes having count data (enter "=" then click on the mL filtered row!)
If count = "TNTC" or "CONF", you may manually enter (overide the formulas) in the count or volume column as necessary
Any single count within the ideal range stands by itself, overide formulas for any ideal range count data

DATE SAMPLED:	8.8.02
DATE RC'D:	8.9.02
DATE FILTERED:	8.9.02
ANALYST:	EC

SAMPLE ID	Sampled DATE	Sampled TIME	Filtered DATE	Filtered TIME	Dilution Factor	Count Data mL filtered: 5	95				100	COUNT	Total Volume Filtered	cfu/100mL
BLANK	-	-	8.9.02	10:00	1.00									
EQ21A1	8.8.02	11:15				0	0				0	1	100	< 1
B1		12:15				0	0					1		
C1		12:45				0	0					1		
D1		14:55				0	0					1		
												1		
												1		
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												1		

READ SAT @ 10:00 AM

Zeroed: ✓ 8-10-02 SQ.

✓ [illegible] 8/12/02

ANALYTICAL RESOURCES INCORPORATED

QA Report - Laboratory Control Samples

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Received: NA

Data Release Authorized: asp
Reported: 08/23/02 Amy S. Phillips

LABORATORY CONTROL SAMPLES
CONVENTIONALS

Constituent	Units	Measured Value	True Value	Recovery
Laboratory Control Sample				
Turbidity	NTU	17.3	17.4	99.4%
Date analyzed: 08/09/02 Batch ID: 08092#1				
Laboratory Control Sample				
Total Cyanide	mg/L	0.133	0.150	88.7%
Date analyzed: 08/16/02 Batch ID: 08162#1				

ANALYTICAL RESOURCES INCORPORATED

QA Report - Standard Reference Material Analysis

QC Report No: EQ21-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Received: NA

Data Release Authorized: alp
Reported: 08/23/02 Amy S. Phillips

STANDARD REFERENCE MATERIAL ANALYSIS
CONVENTIONALS

Constituent	Units	Value	True Value	Recovery
ERA 16042				
N-Ammonia	mg-N/L	0.743	0.800	92.9%
Date analyzed: 08/20/02	Batch ID: 08202#1			
ERA #0206-02-02				
Total Organic Carbon	mg/L	19.3	20.0	96.5%
Date analyzed: 08/14/02	Batch ID: 08142#1			

ANALYTICAL RESOURCES INCORPORATED

QA Report - Replicate Analysis

QC Report No: EQ21-Landau Associates, Inc.
Matrix: Water Project: Cornwall Ave. Landfill
001020.220
Date Received: 08/09/02

Data Release Authorized: amp
Reported: 08/23/02 Amy S. Phillips

DUPLICATE ANALYSIS RESULTS
CONVENTIONALS

Constituent	Units	Sample Value	Duplicate Value	RPD
ARI ID: 02-10451, EQ21 A	**Client Sample ID: S-1**			
Turbidity	NTU	2.4	2.2	8.7%
Total Cyanide	mg/L	< 0.005 U	< 0.005 U	NA
N-Ammonia	mg-N/L	6.9	6.8	1.5%
Total Organic Carbon	mg/L	4.6	4.9	6.3%

RPD Limits +/- 20%

ANALYTICAL RESOURCES INCORPORATED

QA Report - Matrix Spike/Matrix Spike Duplicate Analysis

QC Report No: EQ21-Landau Associates, Inc.
Matrix: Water Project: Cornwall Ave. Landfill
001020.220
Date Received: 08/09/02

Data Release Authorized: amp
Reported: 08/23/02 Amy S. Phillips

MATRIX SPIKE QA/QC REPORT
CONVENTIONALS

Constituent	Units	Sample Value	Spike Value	Spike Added	Recovery
ARI ID: 02-10451, EQ21 A Client Sample ID: S-1					
Total Cyanide	mg/L	< 0.005	0.128	0.147	87.1%
N-Ammonia	mg-N/L	6.9	12.9	5.00	120%
Total Organic Carbon	mg/L	4.6	25.6	20.0	105%

MS/MSD Recovery Limits: 75 - 125 %

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 2, 2002

Ms. Shannon Dunn
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall Ave; 001020.200
ARI Job No: EL51

Dear Shannon,

Please find enclosed a carbon copy of the original chain of custody (COC) and analytical results for the project referenced above. Analytical Resources, Inc. (ARI) accepted four seven sediment samples on June 11, 2002. The samples were received in good condition and there were no discrepancies between the COC and containers' labels.

The samples were analyzed for total metals referencing US EPA methods 6010B/7421/7471A, bis(2-ethylhexyl)phthalate referencing US EPA method 8270, PCBs referencing US EPA method 8082, and TOC referencing Plumb, 1981. Pete Rude (Landau Associates) canceled the request for grain size analysis by telephone on 6/12/02. Quality control analyses are included for your review, including batch matrix QC for the bis(2-ethylhexyl)phthalate, PCBs, and total metals analyses. The total metals matrix spike and sample duplicate reported under LIMS ID 02-7482 is applicable to the ICP and lead analyses. The total metals matrix spikes and sample duplicates reported under LIMS IDs 02-7599 and 02-7623 are applicable for the mercury analysis.

Samples **SRI-SED-5**, **SRI-SED-6**, and **SRI-SED-9**, were analyzed and reported at a two times dilution because the initial analyses of these samples without dilution showed surrogate recoveries above the QC limit due to suppression of the internal standard.

No further analytical complications were noted. A copy of this report and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Mary Lou Fox

Mary Lou Fox
Project Manager
206-695-6211
marylou@arilabs.com

MLF/mlf
Enclosure
cc: File EL51

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

Chain-of-Custody Record

3.5

Date _____

Page _____ of _____

Project Name CORNWALL AVE Project No. 001020.200

Project Location/Event SRI-SED

Sampler's Name SMA/NMJ

Project Contact SHANNON DUNN

Send Results To SHANNON DUNN

Testing Parameters

Turnaround Time
☐ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	CuPbAgZn EPA 6010, Hg EPA 7471	BIS(2-ETHYLHEXYL) PHTHALATE EPA 8270	PCBs EPA 8082	GRAIN SIZE PLUMB LAB	TOC EPA 9060	TOTAL SOLIDS PSEP	Hg						Observations/Comments
SRI-SED-1	6-10-02	11:05	SED	6	X	X	X	X	X	X							
SRI-SED-2		11:35		4	X	X	X	X	X	X							
SRI-SED-3		12:10		4	X	X	X	X	X	X	X						
SRI-SED-4		12:25		4	X	X	X	X	X	X							
SRI-SED-5		12:50		4	X	X	X	X	X	X	X						
SRI-SED-6		13:05		4	X	X	X	X	X	X							
SRI-SED-9		11:40		4	X	X	X	X	X	X							

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
SHANNON DUNN	ERIC BRANSON		
Printed Name	Printed Name	Printed Name	Printed Name
LANDAU	AR1		
Company	Company	Company	Company
Date 6-11-02 Time 8:40	Date 6/11/02 Time 1630	Date _____ Time _____	Date _____ Time _____

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51A
LIMS ID: 02-7765
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/02

Sample No: SRI-SED-1

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/24/02 16:57
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1
Percent Moisture: 61.3%
pH: 14.0

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	220

Semivolatiles Surrogate Recovery	
d14-p-Terphenyl	121%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51B
LIMS ID: 02-7766
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/02

Sample No: SRI-SED-2

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/24/02 17:40
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1
Percent Moisture: 61.6%
pH: 12.0

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	160

Semivolatiles Surrogate Recovery	
d14-p-Terphenyl	89.8%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51C
LIMS ID: 02-7767
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/02

Sample No: SRI-SED-3

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/24/02 18:22
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1
Percent Moisture: 59.2%
pH: 7.4

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	160

Semivolatiles Surrogate Recovery	
d14-p-Terphenyl	104%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51D
LIMS ID: 02-7768
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/02

Sample No: SRI-SED-4

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/24/02 19:05
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:1
Percent Moisture: 58.8%
pH: 5.6

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	390

Semivolatiles Surrogate Recovery	
d14-p-Terphenyl	123%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample No: Batch Sample
QC Batch: EL51
Date Received: 06/10/02

Data Release Authorized:
Reported: 07/01/02

MATRIX SPIKE/SPIKE DUPLICATE RECOVERY
Date extracted: 06/17/02
Date analyzed: 06/19/02

CONSTITUENT		SAMPLE VALUE	SPIKE VALUE	SPIKE ADDED	% RECOVERY	RPD
Phenol	<	39.2	542.	735	73.7%	
Pentachlorophenol	<	97.9	590.	735	80.3%	
MATRIX SPIKE DUPLICATE						
Phenol	<	39.2	524.	734	71.4%	3.2%
Pentachlorophenol	<	97.9	533.	734	72.6%	10%

Values reported in ug/kg-dry-weight

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SRI-SED-1

Lab Sample ID: EL51A
LIMS ID: 02-7765
Matrix: Sediment

Data Release Authorized:
Reported: 06/25/02

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 15:21
Instrument ID: ECD1
Sample Amount: 25.5 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 14.

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 61.3%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	**Aroclor 1248**	**130**
11097-69-1	**Aroclor 1254**	**130**
11096-82-5	Aroclor 1260	42 Y
11104-28-2	Aroclor 1221	39 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	86.8%
Tetrachlorometaxylene	64.5%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector. Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SRI-SED-2

Lab Sample ID: EL51B
LIMS ID: 02-7766
Matrix: Sediment

Data Release Authorized: ✓
Reported: 06/25/02

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 15:49
Instrument ID: ECD1
Sample Amount: 25.5 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 12.

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 61.6%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	Aroclor 1248	32 Y
11097-69-1	**Aroclor 1254**	**31**
11096-82-5	Aroclor 1260	20 U
11104-28-2	Aroclor 1221	39 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	79.8%
Tetrachlorometaxylene	70.5%

Data Qualifiers

J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
U	Indicates compound was analyzed for, but not detected at the given detection limit.
B	Found in associated method blank
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.
NV	Indicates no value reportable - see additional analyses.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SRI-SED-3

Lab Sample ID: EL51C
LIMS ID: 02-7767
Matrix: Sediment

Data Release Authorized:
Reported: 06/25/02

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 16:17
Instrument ID: ECD1
Sample Amount: 25.3 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 7.4

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 59.2%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	Aroclor 1248	31 Y
11097-69-1	**Aroclor 1254**	**28**
11096-82-5	Aroclor 1260	20 U
11104-28-2	Aroclor 1221	39 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	78.2%
Tetrachlorometaxylene	72.5%

Data Qualifiers

J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
U	Indicates compound was analyzed for, but not detected at the given detection limit.
B	Found in associated method blank
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.
NV	Indicates no value reportable - see additional analyses.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SRI-SED-4

Lab Sample ID: EL51D
LIMS ID: 02-7768
Matrix: Sediment

Data Release Authorized:
Reported: 06/25/02

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 16:45
Instrument ID: ECD1
Sample Amount: 25.2 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 5.6

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 58.8%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	**Aroclor 1248**	**75**
11097-69-1	**Aroclor 1254**	**84**
11096-82-5	Aroclor 1260	32 Y
11104-28-2	Aroclor 1221	40 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	69.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SRI-SED-3

Lab Sample ID: EL51C
LIMS ID: 02-7767
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 38.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	7440-50-8	Copper	0.5	63.2
3050B	06/13/02	7421	06/18/02	7439-92-1	Lead	1	22
CLP	06/14/02	7471A	06/17/02	7439-97-6	Mercury	0.1	0.4
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.7	0.7 U
3050B	06/13/02	6010B	06/18/02	7440-66-6	Zinc	1	126

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: SRI-SED-4**
TOTAL METALS

Lab Sample ID: EL51D
LIMS ID: 02-7768
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 38.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	7440-50-8	Copper	0.5	104
3050B	06/13/02	7421	06/21/02	7439-92-1	Lead	2	56
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.8	0.8
3050B	06/13/02	6010B	06/18/02	7440-66-6	Zinc	2	215

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SRI-SED-5

Lab Sample ID: EL51E
LIMS ID: 02-7769
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 36.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	7440-50-8	Copper	0.5	69.9
3050B	06/13/02	7421	06/18/02	7439-92-1	Lead	1	33
CLP	06/14/02	7471A	06/17/02	7439-97-6	Mercury	0.1	0.7
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.8	0.8 U
3050B	06/13/02	6010B	06/18/02	7440-66-6	Zinc	2	151

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: SRI-SED-6**
TOTAL METALS

Lab Sample ID: EL51F
LIMS ID: 02-7770
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 37.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	**7440-50-8**	**Copper**	0.5	126
3050B	06/13/02	7421	06/20/02	**7439-92-1**	**Lead**	3	57
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.8	0.8 U
3050B	06/13/02	6010B	06/18/02	**7440-66-6**	**Zinc**	2	175

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: SRI-SED-9**
TOTAL METALS

Lab Sample ID: EL51G
LIMS ID: 02-7771
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 36.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	7440-50-8	Copper	0.5	81.4
3050B	06/13/02	7421	06/20/02	7439-92-1	Lead	1	34
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.8	0.8
3050B	06/13/02	6010B	06/18/02	7440-66-6	Zinc	2	139

U Analyte undetected at given RL

RL Reporting Limit

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: EL51LCS
LIMS ID: 02-7767
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200

Data Release Authorized:
Reported: 06/24/02

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike mg/kg-dry	Spike Added	% Recovery	Q
Copper	6010B	47.7	50.0	95.4%	
Lead	7421	9.6	10.0	96.0%	
Mercury	7471A	1.07	1.00	107%	
Silver	6010B	50.6	50.0	101%	
Zinc	6010B	50.2	50.0	100%	

'Q' codes: N = control limit not met

Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-1

Lab Sample ID: EL51A
LIMS ID: 02-7765
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	38.9
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	3.1

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-2

Lab Sample ID: EL51B
LIMS ID: 02-7766
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	36.9
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	3.1

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-3

Lab Sample ID: EL51C
LIMS ID: 02-7767
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized: MP
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	39.5
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	2.9

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-4

Lab Sample ID: EL51D
LIMS ID: 02-7768
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	38.6
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	3.6

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-5

Lab Sample ID: EL51E
LIMS ID: 02-7769
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized: SRP
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	37.8
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	3.7

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51E
LIMS ID: 02-7769
Matrix: Sediment
Data Release Authorized: JB
Reported: 06/26/02

Sample No: SRI-SED-5

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/25/02 13:43
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:2
Percent Moisture: 62.2%
pH: 12.0

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	290

Semivolatiles Surrogate Recovery	
d14-p-Terphenyl	92.6%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51F
LIMS ID: 02-7770
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/02

Sample No: SRI-SED-6

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/25/02 15:08
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:2
Percent Moisture: 61.4%
pH: 11.0

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	300

Semivolatiles Surrogate Recovery

d14-p-Terphenyl	93.8%

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-6

Lab Sample ID: EL51F
LIMS ID: 02-7770
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized: MB
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	40.1
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	4.2

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: SRI-SED-9

Lab Sample ID: EL51G
LIMS ID: 02-7771
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/21/02 Dr. M.A. Perkins

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	06/12/02 06122#1	EPA 160.3 SM 2540 B		0.01	Percent	37.5
Total Organic Carbon	06/18/02 06182#1	Plumb,1981		0.0050	Percent	2.8

RL Analytical reporting limit
U Undetected at reported detection limit
B Analyte found in method blank above detection

Report for EL51 received 06/11/02

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1
Lab Sample ID: EL51G
LIMS ID: 02-7771
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/02

Sample No: SRI-SED-9

ANALYTICAL RESOURCES INCORPORATED

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/25/02 16:34
Instrument: NT1
GPC Cleanup: NO

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1:2
Percent Moisture: 60.9%
pH: 15.0

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	130

Semivolatiles Surrogate Recovery	
d14-p-Terphenyl	82.9%

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

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: EL51LCS
LIMS ID: 02-7765
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200

Data Release Authorized:
Reported: 06/26/02

LABORATORY CONTROL SAMPLE
Date extracted: 06/18/02
Date analyzed: 06/25/02

CONSTITUENT	SPIKE VALUE	SPIKE ADDED	% RECOVERY
Phenol	475	750	63.3%
2-Chlorophenol	494	750	65.9%
1,4-Dichlorobenzene	293	500	58.6%
N-Nitroso-Di-N-Propylamine	279	500	55.8%
1,2,4-Trichlorobenzene	316	500	63.2%
4-Chloro-3-methylphenol	553	750	73.7%
Acenaphthene	346	500	69.2%
4-Nitrophenol	673	750	89.7%
2,4-Dinitrotoluene	413	500	82.6%
Pentachlorophenol	628	750	83.7%
Pyrene	386	500	77.2%

Lab Control Surrogate Recovery

d14-p-Terphenyl	87.9%

Values reported in ug/kg-dry-weight

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: SRI-SED-9

Lab Sample ID: EL51G
LIMS ID: 02-7771
Matrix: Sediment

Data Release Authorized:
Reported: 06/25/02

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 18:09
Instrument ID: ECD1
Sample Amount: 25.2 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 15.

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 60.9%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	Aroclor 1248	42 Y
11097-69-1	**Aroclor 1254**	62
11096-82-5	Aroclor 1260	20 U
11104-28-2	Aroclor 1221	40 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	66.2%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: SRI-SED-1**
TOTAL METALS

Lab Sample ID: EL51A
LIMS ID: 02-7765
Matrix: Sediment

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 37.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	7440-50-8	Copper	0.5	88.3
3050B	06/13/02	7421	06/18/02	7439-92-1	Lead	3	51
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.8	0.9
3050B	06/13/02	6010B	06/18/02	7440-66-6	Zinc	2	156

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: SRI-SED-2**
TOTAL METALS

Lab Sample ID: EL51B
LIMS ID: 02-7766
Matrix: Sediment

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/24/02

Percent Total Solids: 36.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	06/13/02	6010B	06/18/02	**7440-50-8**	**Copper**	0.5	**68.9**
3050B	06/13/02	7421	06/18/02	**7439-92-1**	**Lead**	1	**30**
3050B	06/13/02	6010B	06/18/02	7440-22-4	Silver	0.8	0.8 U
3050B	06/13/02	6010B	06/18/02	**7440-66-6**	**Zinc**	2	**142**

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SRI-SED-5

Lab Sample ID: EL51E
LIMS ID: 02-7769
Matrix: Sediment

Data Release Authorized:
Reported: 06/25/02

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 17:13
Instrument ID: ECD1
Sample Amount: 25.4 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 12.

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 62.2%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	Aroclor 1248	46 Y
11097-69-1	**Aroclor 1254**	**46**
11096-82-5	Aroclor 1260	21 Y
11104-28-2	Aroclor 1221	39 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	67.8%
Tetrachlorometaxylene	64.5%

Data Qualifiers

J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
U	Indicates compound was analyzed for, but not detected at the given detection limit.
B	Found in associated method blank
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.
NV	Indicates no value reportable - see additional analyses.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: SRI-SED-6

Lab Sample ID: EL51F
LIMS ID: 02-7770
Matrix: Sediment

Data Release Authorized:
Reported: 06/25/02

QC Report No: EL51-Landau Associates, Inc.
Project: Cornwall Ave.
001020.200
Date Sampled: 06/10/02
Date Received: 06/11/02

Date extracted: 06/18/02
Date analyzed: 06/20/02 17:41
Instrument ID: ECD1
Sample Amount: 25.4 g-dry-wt
Final Ext Vol: 5.0 mL
pH: 11.

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 61.4%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	20 U
53469-21-9	Aroclor 1242	20 U
12672-29-6	Aroclor 1248	150 Y
11097-69-1	**Aroclor 1254**	**110**
11096-82-5	Aroclor 1260	32 Y
11104-28-2	Aroclor 1221	39 U
11141-16-5	Aroclor 1232	20 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	84.0%
Tetrachlorometaxylene	70.2%

Data Qualifiers

J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
U	Indicates compound was analyzed for, but not detected at the given detection limit.
B	Found in associated method blank
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.
NV	Indicates no value reportable - see additional analyses.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

QA Report - Standard Reference Material Analysis

QC Report No: EL51-Landau Associates,Inc.
Project: Cornwall Ave.
001020.200
Date Received: NA

Data Release Authorized:
Reported: 06/21/02 Dr. M.A. Perkins

STANDARD REFERENCE MATERIAL ANALYSIS
CONVENTIONALS

Constituent	Units	Value	True Value	Recovery
NIST #8704				
Total Carbon	Percent	3.27	3.35	97.6%

Date analyzed: 06/18/02 Batch ID: 06182#1

ANALYTICAL RESOURCES INCORPORATED

QA Report - Replicate Analysis

QC Report No: EL51-Landau Associates,Inc.
Matrix: Sediment Project: Cornwall Ave.
001020.200
Date Received: 06/11/02

Data Release Authorized:
Reported: 06/21/02 Dr. M.A. Perkins

REPLICATE ANALYSIS RESULTS
CONVENTIONALS

Constituent	Units	Sample Value	Replicate Value(s)	RPD/RSD
ARI ID: 02-7765, EL51 A	**Client Sample ID: SRI-SED-1**			
Total Solids	Percent	38.9	38.1	RPD: 2.1%
Total Organic Carbon	Percent	3.1	3.3 3.8	RSD: 10.6%

RPD Limits +/- 20%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 22, 2002

Mr. Tim Syverson
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall Ave. Landfill; 001020.220
ARI Job No: EN15

Dear Tim,

Please find enclosed original chain of custody (COC) and analytical results for the project referenced above. Analytical Resources, Inc. (ARI) accepted three samples on July 1, 2002. The samples were received in good condition and there were no discrepancies between the COC and containers' labels. The **MW-6-3.0** soil sample and **TP-18** product sample were placed on hold per the client's request. Only the **TP-13** product, floating on top of the water phase of TP-13 was analyzed.

The **TP-13** product sample was analyzed for PAHs referencing US EPA method 8270, diesel and oil range hydrocarbons referencing WDOE method NWTPH-Dx, BTEX compounds referencing US EPA method 8021Bm, and PCBs referencing US EPA method 8082.

No analytical complications were noted. A copy of this report and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Mary Lou Fox

Mary Lou Fox
Project Manager
206-695-6211
marylou@arilabs.com

MLF/mlf
Enclosure
cc: File EN15

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

ENIS

15.0 c

Date 7/1/02

Page 1 of 1

Landau Associates

Chain-of-Custody Record

Project Name Cornwall Ave. Landfill Project No. 000202220

Project Location/Event Bellingham

Sampler's Name KJR (Ken Reid)

Project Contact Tim Syverson

Send Results To " "

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	PAH's	Solvents	BTEX	Lead	HCID	TPH	Specs 8270						Observations/Comments
						8270	8021		610								
TP-13	6/26/02	945	H_2O	5	X				X	X	X						ID floating product on top of H_2O
MW-6-3.0	6/27/02	1445	Soil	1		X	X	X	X								
TP-18	6/26/02	1500	Product	1	X				X	X							ID product

Please cc!
LCS w/ 25

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Ken Reid	Joshua L. Kennerly		
Printed Name	Printed Name	Printed Name	Printed Name
Landau Assoc.	AFI		
Company	Company	Company	Company
Date 7/1/02 Time 1115	Date 7/1/02 Time 14:35	Date _____ Time _____	Date _____ Time _____

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET Sample No: TP-13
PNAs by GC/MS

Lab Sample ID: EN15A
LIMS ID: 02-8726
Matrix: Product
Data Release Authorized:
Reported: 07/18/02

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 06/26/02
Date Received: 07/01/02

Date extracted: 07/08/02
Date analyzed: 07/14/02 23:36
Instrument: FINN4
GPC Cleanup: NO
Alumina: 1:10

Sample Amount: 2.00 g-as-rec
Final Extract Volume: 10. mL
Conc/Dilution Factor: 1:20
Moisture: NA
pH: NA

CAS Number	Analyte	ug/kg
91-20-3	Naphthalene	2,200,000
91-57-6	2-Methylnaphthalene	18,000,000 E
208-96-8	Acenaphthylene	100,000 U
83-32-9	Acenaphthene	670,000
86-73-7	Fluorene	720,000
85-01-8	Phenanthrene	1,900,000
120-12-7	Anthracene	100,000 U
206-44-0	Fluoranthene	100,000 U
129-00-0	Pyrene	120,000
56-55-3	Benzo(a)anthracene	100,000 U
218-01-9	Chrysene	100,000 U
205-99-2	Benzo(b)fluoranthene	100,000 U
207-08-9	Benzo(k)fluoranthene	100,000 U
50-32-8	Benzo(a)pyrene	100,000 U
193-39-5	Indeno(1,2,3-cd)pyrene	100,000 U
53-70-3	Dibenz(a,h)anthracene	100,000 U
191-24-2	Benzo(g,h,i)perylene	100,000 U
132-64-9	Dibenzofuran	280,000

Base/Neutral Surrogate Recovery	
d14-p-Terphenyl	53.6%
d10-Diphenyl	65.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by GC/MS

Sample No: TP-13
DILUTION

Lab Sample ID: EN15ADL
LIMS ID: 02-8726
Matrix: Product
Data Release Authorized:
Reported: 07/18/02

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 06/26/02
Date Received: 07/01/02

Date extracted: 07/08/02
Date analyzed: 07/15/02 0:07
Instrument: FINN4
GPC Cleanup: NO
Alumina: 1:10

Sample Amount: 2.00 g-as-rec
Final Extract Volume: 10. mL
Conc/Dilution Factor: 1:120
Moisture: NA
pH: NA

CAS Number	Analyte	ug/kg
91-20-3	**Naphthalene**	**2,300,000**
91-57-6	**2-Methylnaphthalene**	**17,000,000**
208-96-8	Acenaphthylene	600,000 U
83-32-9	**Acenaphthene**	**680,000**
86-73-7	**Fluorene**	**730,000**
85-01-8	**Phenanthrene**	**1,700,000**
120-12-7	Anthracene	600,000 U
206-44-0	Fluoranthene	600,000 U
129-00-0	Pyrene	600,000 U
56-55-3	Benzo(a)anthracene	600,000 U
218-01-9	Chrysene	600,000 U
205-99-2	Benzo(b)fluoranthene	600,000 U
207-08-9	Benzo(k)fluoranthene	600,000 U
50-32-8	Benzo(a)pyrene	600,000 U
193-39-5	Indeno(1,2,3-cd)pyrene	600,000 U
53-70-3	Dibenz(a,h)anthracene	600,000 U
191-24-2	Benzo(g,h,i)perylene	600,000 U
132-64-9	Dibenzofuran	600,000 U

Base/Neutral Surrogate Recovery	
d14-p-Terphenyl	D
d10-Diphenyl	D

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod

ANALYTICAL RESOURCES INCORPORATED

Sample No: TP-13

Lab Sample ID: EN15A
LIMS ID: 02-8726
Matrix: Product

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill 001020.220
Date Sampled: 06/26/02
Date Received: 07/01/02

Data Release Authorized: VS
Reported: 07/11/02

Date analyzed: 07/02/02

Volume Purged: 5.0 mL
Dilution: 1:100

Reported in ppb (ug/L)

CAS Number	Analyte	Value
71-43-2	Benzene	100 U
108-88-3	Toluene	100 U
100-41-4	Ethylbenzene	3,700
	m,p-Xylene	12,000
95-47-6	o-Xylene	6,700

BETX Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	98.9%

Data Qualifiers

U Indicates compound was analyzed for, but not detected at the given detection limit.
J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
B Found in associated method blank.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: EN15LCS
LIMS ID: 02-8726
Matrix: Product

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized: VS
Reported: 07/11/02

LCS/LCSDUPLICATE ANALYSIS

Date Analyzed: 07/02/02

CONSTITUENT	SPIKE FOUND	SPIKE ADDED	% REC	% RPD
Lab Control Sample				
Benzene	23.5	25.0	94.0%	
Toluene	23.8	25.0	95.2%	
Ethylbenzene	24.4	25.0	97.6%	
m,p-Xylene	48.0	50.0	96.0%	
o-Xylene	24.0	25.0	96.0%	
Lab Control Duplicate				
Benzene	24.8	25.0	99.2%	5.4%
Toluene	25.2	25.0	101%	5.7%
Ethylbenzene	26.1	25.0	104%	6.7%
m,p-Xylene	50.6	50.0	101%	5.3%
o-Xylene	25.1	25.0	100%	4.5%

BETX SURROGATE REC	LCS	LCSD
Trifluorotoluene	97.3%	98.9%
Bromobenzene	99.1%	101%

Values reported in parts per billion (ug/L)

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: TP-13

Lab Sample ID: EN15A
LIMS ID: 02-8726
Matrix: Product

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill 001020.220
Date Sampled: 06/26/02
Date Received: 07/01/02

Data Release Authorized:
Reported: 07/18/02

Date extracted: 07/03/02
Date analyzed: 07/04/02

Sample Amount: 2.00 g-as-rec
Final Ext Vol: 20 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/kg as received (ppb)

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	1,000 U
53469-21-9	Aroclor 1242	1,000 U
12672-29-6	Aroclor 1248	1,000 U
11097-69-1	Aroclor 1254	1,000 U
11096-82-5	Aroclor 1260	1,000 U
11104-28-2	Aroclor 1221	2,000 U
11141-16-5	Aroclor 1232	1,000 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	12.8%
Tetrachlorometaxylene	99.2%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector. Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

TOTAL DIESEL RANGE HYDROCARBONS
WA TPHd Range C12 to C24 by GC/FID

ANALYTICAL RESOURCES INCORPORATED

Lab Sample ID: EN15LCS
LIMS ID: 02-8726
Matrix: Product

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill
001020.220

Data Release Authorized:
Reported: 07/18/02

LABORATORY CONTROL SAMPLE RECOVERY REPORT
Analyzed: 07/09/02

CONSTITUENT	SPIKE FOUND	SPIKE ADDED	% RECOVERY	RPD
Diesel Range Hydrocarbons	126000	150000	84.0%	
Diesel Range Hydrocarbons	127000	150000	84.7%	0.8%

Values reported in ppm (mg/kg) as received.

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Product

QC Report No: EN15-Landau Associates
Project: Cornwall Ave. Landfill
001020.220

Client ID	O-TER	TOT OUT
070302MBS	81.3%	0
070302LCS	70.6%	0
070302LCSD	69.4%	0
TP-13	56.8%	0
TP-13 DL	50.0%	0

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(61-112)	(34-113)

Prep Method: DL
Log Number Range: 02-8726 to 02-8726

FORM-II TPHD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 29, 2002

Ms. Shannon Dunn
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall Ave. Landfill; 001020.220
ARI Job No: EN82

Dear Shannon,

Please find enclosed original chain of custody (COC) and analytical results for the project referenced above. Analytical Resources, Inc. (ARI) accepted three water samples on July 11, 2002. The samples were received in good condition and there were no discrepancies between the COC and containers' labels.

The samples were analyzed for PCBs referencing US EPA method 8082, diesel and motor oil range hydrocarbons referencing WDOE method NWTPH-Dx with acid/si cleanup, total and dissolved metals referencing US EPA methods 6010B and 7421, and general chemistry parameters as referenced specifically on the reports.

In the NWTPH-Dx analysis, the leading continuing calibration (C-Cal) showed motor oil above the QC limit. None of the samples showed any detections in the analysis, so no elevation of sample values could have occurred. No corrective action was necessary.

The conventionals lab supervisor noted that sample **S-1** tested positive for sulfide interference in the total cyanide analysis. The sample was treated to remove the interference, but stilled showed interference in the analysis. The client was consulted and the sample was re-analyzed at a five times dilution, yielding a reporting limit of .025 mg/L. A matrix spike was performed on the sample for this analysis and showed a low recovery of 68.9%. The conventionals lab supervisor also noted that this was most likely due to the high level of sulfide interference. Recovery of cyanide in the laboratory control sample (LCS) for this analysis was good and no further corrective action was taken.

No further analytical complications were noted. A copy of this report and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Mary Lou Fox

Mary Lou Fox
Project Manager
206-695-6211
marylou@arilabs.com

MLF/mlf
Enclosure
cc: File EN82

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

EN82

Landau Associates

Chain-of-Custody Record

Date 7/11/02

Page 1 of 1

5.5, 4.5

Project Name Cornwall Ave Landfill Project No. 001020.220

Project Location/Event Bellingham, WA

Sampler's Name Ken Reid, Nate Joyce

Project Contact Shannon Dunn

Send Results To Shannon Dunn

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	PCB's (8082-Med)	Fecal coliform	Total dissolved solids (SM 2540C)	TOC (415.1)	Total cyanide (335.2)	Ammonia (350.1)	TSS (160.2)	Turbidity (180.1)				Observations/Comments
S-1	7/10/02	1135	H2O	11	X	X	X	X	X	X	X	X	X				METALS FOR S-1 IS UNPRESERVED. PORTION OF SAMPLE NEEDS TO BE FILTERED (0.45 µm). TOTAL DISSOLVED NEEDS TO BE PRESERVED
S-2	"	1210	"	12	A	X	X	X	X	X	X	X	X				
S-3	"	1310	"	12		X	X	X	X	X	X	X	X				
																	* METALS = Cu, Pb, Zn
																	A = ARCHIVE

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Shannon	Signature: Deborah Johnson	Signature:	Signature:
Printed Name: SHANNON DUNN	Printed Name: Deborah Johnson	Printed Name:	Printed Name:
Company: LAI	Company: ARI	Company:	Company:
Date: 7-11-02 Time: 8:45	Date: 7/11/02 Time: 8:45	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: S-1

Lab Sample ID: EN82A
LIMS ID: 02-8999
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/22/02

Date extracted: 07/15/02
Date analyzed: 07/16/02 15:41
Instrument ID: ECD1
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.077 Y
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.19 Y
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	91.5%
Tetrachlorometaxylene	66.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: S-2

Lab Sample ID: EN82B
LIMS ID: 02-9000
Matrix: Water

QC Report No: EN82-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/22/02

Date extracted: 07/15/02
Date analyzed: 07/16/02 16:09
Instrument ID: ECD1
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.082 Y
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.20 Y
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	90.0%
Tetrachlorometaxylene	67.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: S-3

Lab Sample ID: EN82C
LIMS ID: 02-9001
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/22/02

Date extracted: 07/15/02
Date analyzed: 07/16/02 16:37
Instrument ID: ECD1
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.062 Y

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	89.5%
Tetrachlorometaxylene	64.0%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector. Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: Method Blank

Lab Sample ID: EN82MB
LIMS ID: 02-8999
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	07/15/02	6010B	07/17/02	7440-50-8	Copper	0.002	0.002 U
3020A	07/15/02	7421	07/17/02	7439-92-1	Lead	0.001	0.001 U
3010A	07/15/02	6010B	07/17/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: S-1**
TOTAL METALS

Lab Sample ID: EN82A
LIMS ID: 02-8999
Matrix: Water

QC Report No: EN82-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	07/15/02	6010B	07/17/02	7440-50-8	Copper	0.002	0.002 U
3020A	07/15/02	7421	07/17/02	7439-92-1	Lead	0.001	0.001 U
3010A	07/15/02	6010B	07/17/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: S-2

Lab Sample ID: EN82B
LIMS ID: 02-9000
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	07/15/02	6010B	07/17/02	7440-50-8	Copper	0.002	0.002 U
3020A	07/15/02	7421	07/17/02	7439-92-1	Lead	0.001	0.001 U
3010A	07/15/02	6010B	07/17/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET **Sample No: S-3**
TOTAL METALS

Lab Sample ID: EN82C
LIMS ID: 02-9001
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
3010A	07/15/02	6010B	07/17/02	7440-50-8	Copper	0.002	0.002 U
3020A	07/15/02	7421	07/17/02	7439-92-1	Lead	0.001	0.001 U
3010A	07/15/02	6010B	07/17/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET
DISSOLVED METALS

Sample No: Method Blank

Lab Sample ID: EN82MB
LIMS ID: 02-9002
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	07/15/02	6010B	07/15/02	7440-50-8	Copper	0.002	0.002 U
7000A	07/15/02	7421	07/15/02	7439-92-1	Lead	0.001	0.001 U
6010B	07/15/02	6010B	07/15/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET
DISSOLVED METALS

Sample No: Method Blank

Lab Sample ID: EN82MB
LIMS ID: 02-9003
Matrix: Water

QC Report No: EN82-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	07/15/02	6010B	07/15/02	7440-50-8	Copper	0.002	0.002 U
7000A	07/15/02	7421	07/15/02	7439-92-1	Lead	0.001	0.001 U
6010B	07/15/02	6010B	07/15/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET **Sample No: S-1**
DISSOLVED METALS

Lab Sample ID: EN82D
LIMS ID: 02-9002
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	07/15/02	6010B	07/15/02	7440-50-8	Copper	0.002	0.002 U
7000A	07/15/02	7421	07/15/02	7439-92-1	Lead	0.002	0.002 U
6010B	07/15/02	6010B	07/15/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET
DISSOLVED METALS

Sample No: S-2

Lab Sample ID: EN82E
LIMS ID: 02-9003
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	07/15/02	6010B	07/15/02	7440-50-8	Copper	0.002	0.002 U
7000A	07/15/02	7421	07/15/02	7439-92-1	Lead	0.002	0.002 U
6010B	07/15/02	6010B	07/15/02	7440-66-6	Zinc	0.006	0.008

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: S-2

Lab Sample ID: EN82B
LIMS ID: 02-9000
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized: AMP
Reported: 07/25/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Total Suspended Solids	07/12/02 07122#1	EPA 160.2	1.0	mg/L	5.0
Turbidity	07/11/02 07112#1	EPA 180.1	0.05	NTU	12
Total Cyanide	07/22/02 07222#1	EPA 335.2	0.005	mg/L	< 0.005 U
N-Ammonia	07/22/02 07222#2	EPA 350.1M	0.25	mg-N/L	6.4
Total Organic Carbon	07/16/02 07162#1	EPA 415.1	1.5	mg/L	3.4
Fecal Coliform	07/11/02 07112#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EN82 received 07/11/02

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: S-3

Lab Sample ID: EN82C
LIMS ID: 02-9001
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized: amp
Reported: 07/25/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Total Suspended Solids	07/12/02 07122#1	EPA 160.2	1.0	mg/L	4.2
Turbidity	07/11/02 07112#1	EPA 180.1	0.05	NTU	26
Total Cyanide	07/22/02 07222#1	EPA 335.2	0.005	mg/L	0.008
N-Ammonia	07/22/02 07222#2	EPA 350.1M	0.20	mg-N/L	1.3
Total Organic Carbon	07/16/02 07162#1	EPA 415.1	1.5	mg/L	2.1
Fecal Coliform	07/11/02 07112#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EN82 received 07/11/02

ANALYTICAL RESOURCES INCORPORATED

INORGANIC ANALYSIS DATA SHEET **Sample No: S-3**
DISSOLVED METALS

Lab Sample ID: EN82F
LIMS ID: 02-9004
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized:
Reported: 07/18/02

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L
6010B	07/15/02	6010B	07/15/02	7440-50-8	Copper	0.002	0.002 U
7000A	07/15/02	7421	07/15/02	7439-92-1	Lead	0.002	0.002 U
6010B	07/15/02	6010B	07/15/02	7440-66-6	Zinc	0.006	0.006 U

U Analyte undetected at given RL

RL Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

Final Report
Laboratory Analysis of Conventional Parameters

Sample No: S-1

Lab Sample ID: EN82A
LIMS ID: 02-8999
Matrix: Water

QC Report No: EN82-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/10/02
Date Received: 07/11/02

Data Release Authorized: ASP
Reported: 07/25/02 Amy S. Phillips

Analyte	Analysis Date & Batch	Method	RL	Units	Result
Total Suspended Solids	07/12/02 07122#1	EPA 160.2	1.0	mg/L	6.8
Turbidity	07/11/02 07112#1	EPA 180.1	0.05	NTU	3.4
Total Cyanide	07/23/02 07232#1	EPA 335.2	0.025	mg/L	< 0.025 U
N-Ammonia	07/22/02 07222#2	EPA 350.1M	0.25	mg-N/L	8.3
Total Organic Carbon	07/16/02 07162#1	EPA 415.1	1.5	mg/L	5.8
Fecal Coliform	07/11/02 07112#1	SM 9222 D	1	CFU/100 mL	< 1 U

Fecal Coliform analysis performed by membrane filtration technique.

RL Analytical reporting limit
U Undetected at reported detection limit

Report for EN82 received 07/11/02

ANALYTICAL RESOURCES INCORPORATED

QA Report - Laboratory Control Samples

QC Report No: EN82-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Received: NA

Data Release Authorized: ark
Reported: 07/25/02 Amy S. Phillips

LABORATORY CONTROL SAMPLES
CONVENTIONALS

Constituent	Units	Measured Value	True Value	Recovery
Laboratory Control Sample				
Turbidity	NTU	17.3	17.4	99.4%

Date analyzed: 07/11/02 Batch ID: 07112#1

ANALYTICAL RESOURCES INCORPORATED

QA Report - Standard Reference Material Analysis

QC Report No: EN82-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Received: NA

Data Release Authorized: amp
Reported: 07/25/02 Amy S. Phillips

STANDARD REFERENCE MATERIAL ANALYSIS
CONVENTIONALS

Constituent	Units	Value	True Value	Recovery
ERA #05032				
Total Cyanide	mg/L	0.155	0.150	103%
Date analyzed: 07/23/02	Batch ID: 07232#1			
SPEX #20-22AS				
N-Ammonia	mg-N/L	0.832	0.800	104%
Date analyzed: 07/22/02	Batch ID: 07222#2			
ERA #0206-02-02				
Total Organic Carbon	mg/L	20.0	20.0	100%
Date analyzed: 07/16/02	Batch ID: 07162#1			
ERA #05032				
Total Cyanide	mg/L	0.162	0.150	108%
Date analyzed: 07/22/02	Batch ID: 07222#1			

ANALYTICAL RESOURCES INCORPORATED

QA Report - Replicate Analysis

Matrix: Water

QC Report No: EN82-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Received: 07/11/02

Data Release Authorized: QMP
Reported: 07/25/02 Amy S. Phillips

DUPLICATE ANALYSIS RESULTS
CONVENTIONALS

Constituent	Units	Sample Value	Duplicate Value	RPD
ARI ID: 02-8999, EN82 A	**Client Sample ID: S-1**			
Turbidity	NTU	3.4	3.6	5.7%
Total Cyanide	mg/L	< 0.025 U	< 0.025 U	NA
N-Ammonia	mg-N/L	8.3	8.2	1.2%
Total Organic Carbon	mg/L	5.8	5.4	7.1%
ARI ID: 02-9000, EN82 B	**Client Sample ID: S-2**			
Total Cyanide	mg/L	< 0.005 U	< 0.005 U	NA

RPD Limits +/- 20%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 1, 2002

Ms. Shannon Dunn
Landau Associates, Inc.
130 2nd Avenue South
Edmonds, WA 98020

RE: Client Project: Cornwall Ave. Landfill; 001020.220
ARI Job No: EO60

Dear Shannon,

Please find enclosed original chain of custody (COC) and analytical results for the project referenced above. Analytical Resources, Inc. (ARI) accepted ten water samples and a trip blank on July 19, 2002. The samples were received in good condition and there were no discrepancies between the COC and containers' labels. Ken Reid (Landau Associates, Inc.) contacted ARI regarding fecal coliform analyses being requested on the COC, but no fecal coliform analyses being needed.

The samples were analyzed for BTEX referencing US EPA method 8021Bmod, PCBs referencing US EPA method 8082, and diesel and motor oil range hydrocarbons referencing WDOE method NWTPH-Dx with acid/si cleanup.

Recoveries of the tetrachlorometaxylene surrogate were slightly above the QC limit in the PCB analysis of sample MW-9 and the PCB method blank. Because recoveries of the decachlorobiphenyl surrogate were good in these analyses, no corrective action was necessary.

No further analytical complications were noted. A copy of this report and all associated data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Respectfully,

ANALYTICAL RESOURCES, INC.

Mary Lou Fox

Mary Lou Fox
Project Manager
206-695-6211
marylou@arilabs.com

MLF/mlf
Enclosure
cc: File EO60

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ 02-9449 02-9459

E060

Date 7/17/02

Page 1 of 1

Landau Associates

Chain-of-Custody Record 17, 20, 19.5

Project Name Cornwall Ave Landfill Project No. 001020.220

Project Location/Event Bellingham WA

Sampler's Name Ken Reid

Project Contact Shannon Dunn

Send Results To " "

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: PCB's (8082-Low)	NWTPH-Dx	BTEX (8021)	Ecol (Col.) (SM 9222D)	Observations/Comments
MW-1	7/17/02	1135	Water	8	X	X	X	X	
2	7/16/02	1130		3	X			X	
3	7/16/02	1335		8	X	X	X	X	
4	7/17/02	1100		3	X			X	
5	7/16/02	1130		8	X	X	X	X	
6	7/16/02	1030		5		X	X		
7	7/17/02	400		8	X	X	X	X	
8	7/16/02	1235		8	X	X	X	X	
9	7/17/02	1300		8	X	X	X	X	
10	7/17/02	955		8	X	X	X	X	
MW-1 MS/MSD	7/17/02	1135	Water	12	X	X	X		

Special Shipment/Handling or Storage Requirements on ice

Method of Shipment Courier

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Ken Reid	Printed Name Deborah Johnson	Printed Name	Printed Name
Company Landau	Company ARI	Company	Company
Date 7/17/02 Time 1800	Date 7/19/02 Time 1615	Date ____ Time ____	Date ____ Time ____

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-1

Lab Sample ID: EO60A
LIMS ID: 02-9449
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/23/02 22:30
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	99.0%
Tetrachlorometaxylene	73.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-1
MATRIX SPIKE

Lab Sample ID: EO60AMS
LIMS ID: 02-9449
Matrix: Water

QC Report No: EO60-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/23/02 23:05
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	---
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	97.0%
Tetrachlorometaxylene	77.5%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector. Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-1
MATRIX SPIKE DUP

Lab Sample ID: EO60AMSD
LIMS ID: 02-9449
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized: plc
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/23/02 23:39
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	---
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	94.0%
Tetrachlorometaxylene	75.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-2

Lab Sample ID: EO60B
LIMS ID: 02-9450
Matrix: Water

QC Report No: EO60-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/16/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/23/02 20:10
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.12 Y
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	73.0%
Tetrachlorometaxylene	75.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-3

Lab Sample ID: EO60C
LIMS ID: 02-9451
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/16/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 00:14
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.16 Y
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	83.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-4

Lab Sample ID: EO60D
LIMS ID: 02-9452
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 00:49
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	78.5%
Tetrachlorometaxylene	69.5%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector. Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-5

Lab Sample ID: EO60E
LIMS ID: 02-9453
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/16/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 01:24
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.13 Y
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	84.0%
Tetrachlorometaxylene	NR

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-7

Lab Sample ID: EO60G
LIMS ID: 02-9455
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 01:59
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	**Aroclor 1254**	**0.053**
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	99.5%
Tetrachlorometaxylene	79.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-8

Lab Sample ID: EO60H
LIMS ID: 02-9456
Matrix: Water

QC Report No: EO60-Landau Associates,Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/16/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 02:34
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.12 Y
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	68.5%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-9

Lab Sample ID: EO60I
LIMS ID: 02-9457
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 03:09
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.050 U
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	99.5%
Tetrachlorometaxylene	93.5%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-10

Lab Sample ID: EO60J
LIMS ID: 02-9458
Matrix: Water

QC Report No: EO60-Landau Associates, Inc.
Project: Cornwall Ave. Landfill
001020.220
Date Sampled: 07/17/02
Date Received: 07/19/02

Data Release Authorized:
Reported: 07/29/02

Date extracted: 07/22/02
Date analyzed: 07/24/02 03:43
Instrument ID: ECD4
Sample Amount: 1000 mL
Final Ext Vol: 0.50 mL

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1

Reported in Total ug/L

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	0.050 U
53469-21-9	Aroclor 1242	0.080 Y
12672-29-6	Aroclor 1248	0.050 U
11097-69-1	Aroclor 1254	0.050 U
11096-82-5	Aroclor 1260	0.050 U
11104-28-2	Aroclor 1221	0.10 U
11141-16-5	Aroclor 1232	0.050 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	74.0%
Tetrachlorometaxylene	59.0%

Data Qualifiers

J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

Avocet Environmental Testing
1500 North State Street, Suite 200
Bellingham, WA 98225
(360) 734-9033

AVOCET
ENVIRONMENTAL TESTING

Client	**Landau Associates**
Contact Name	Ken Reid
Chain of Custody	3170
Date Sampled	07/16/02
Date Received	07/16/02
Date Analyzed	07/16/02
Date Reported	07/19/02
Project	**Cornwall Avenue Landfill**
Matrix	Surface Water
Analyst	MA

Sample Identification	Log Number	Test Performed	Method	**Sample Result**	Units
MW-2	05788541	Fecal Coliform	sm9222D	**14**	fecal coliform/100ml
MW-3	05788542	Fecal Coliform	sm9222D	**14**	fecal coliform/100ml
MW-5	05788543	Fecal Coliform	sm9222D	**19,000**	fecal coliform/100ml
MW-8	05788544	Fecal Coliform	sm9222D	**<2**	fecal coliform/100ml

< = Less Than

CB
Laboratory Supervisor

LANDAU ASSOCIATES, INC.
Edmonds, WA (206) 778-0907
FAX (206)778-6409

Chain-of-Custody Record

No. 3170

Date 7/16/02

Page 1 of 1

Project Cornwall Ave. Landfill Job No. 001020.220

Client Port of Bellingham

Project Location Bellingham, WA

Sampler's Name Ken Reid

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated

Sample Number	Time ~~Date~~	Date ~~Time~~	Matrix	No. of Containers	Fecal Coliform (SM 9222D)	Observations/Comments
MW-2	1430	7/16/02	H_2O	1	X	0578541
MW-3	1335	↓	↓	1	X	8542
MW-5	1130	↓	↓	1	X	8543
MW-8	1235	↓	↓	1	X	8544

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Printed Name: Ken Reid	Printed Name: Claudette Dolan	Printed Name:	Printed Name:
Company: Landau Assoc	Company: Avocet	Company:	Company:
Date: 7/16/02 Time: 1500	Date: 7/16/02 Time: 1500	Date: Time:	Date: Time:

3/91

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Avocet Environmental Testing
1500 North State Street, Suite 200
Bellingham, WA 98225
(360) 734-9033

AVOCET
ENVIRONMENTAL TESTING

Client	**Landau Associates**
Contact Name	Ken Reid
Chain of Custody	NA
Date Sampled	07/17/02
Date Received	07/17/02
Date Analyzed	07/17/02
Date Reported	07/19/02
Project	**Cornwall Avenue Landfill**
Matrix	Surface Water
Analyst	CB

Sample Identification	Log Number	Test Performed	Method	**Sample Result**	Units
MW-1	05788577	Fecal Coliform	sm9222D	**<1**	fecal coliform/100ml
MW-4	05788578	Fecal Coliform	sm9222D	**820**	fecal coliform/100ml
MW-7	05788579	Fecal Coliform	sm9222D	**<1**	fecal coliform/100ml
MW-9	05788580	Fecal Coliform	sm9222D	**1**	fecal coliform/100ml
MW-10	05788581	Fecal Coliform	sm9222D	**41**	fecal coliform/100ml

< = Less Than

CB
Laboratory Supervisor

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

Chain-of-Custody Record

Date 7/17/02
Page 1 of 1

Project Name Cornwall Ave. Landfill Project No. 001020.220
Project Location/Event Bellingham, WA
Sampler's Name Ken Reid
Project Contact Shannon Dunn
Send Results To Shannon Dunn

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Fecal Coliform (SM 9222D)	Observations/Comments
MW-1	7/17/02	1135	Water	1	X	05708577
MW-4		1100		1	X	0578
MW-7		900		1	X	0579
MW-9		1300		1	X	0580
MW-10		955		1	X	0581

Special Shipment/Handling or Storage Requirements Orjce

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ken Reid	Signature: Emily Fullmer	Signature:	Signature:
Printed Name: Ken Reid	Printed Name: Emily Fullmer	Printed Name:	Printed Name:
Company: Landau	Company: Nwet	Company:	Company:
Date: 7/17/02 Time: 1330	Date: 7/17/02 Time: 1330	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

Landau Associates
Environmental and Geotechnical Services

TECHNICAL MEMORANDUM

TO: Larry Beard, Project Manager, Landau Associates, Inc.

FROM: Shannon Dunn, Landau Associates, Inc.

DATE: August 21, 2002

RE: CORNWALL AVENUE LANDFILL
SUPPLEMENTAL REMEDIAL INVESTIGATION
LABORATORY DATA QUALITY EVALUATION

This memorandum provides the results of a data quality evaluation of 10 groundwater, 6 seep samples, 1 product, and 7 sediment samples collected between June 10 and July 17, 2002. A data quality evaluation was performed for analysis of:

- Total and dissolved metals by U.S. Environmental Protection Agency (EPA) methods 6010 and 7000 series
- Polychlorinated biphenyls (PCBs) by EPA method 8082
- Bis(2-ethylhexyl)phthalate (BEP) by EPA method 8270
- Total organic carbon (TOC) by Plumb and by EPA method 415.1
- Diesel and motor oil range total petroleum hydrocarbon (TPH) by NWTPH-Dx
- Total suspended solids (TSS) by EPA method 160.2
- Turbidity by EPA method 180.1
- Total cyanide by EPA method 335.2
- Ammonia by EPA method 350.1M
- Fecal Coliform by SM9222D
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8021B
- Polycyclic aromatic hydrocarbons (PAHs) by EPA method 8270
- Total solids by EPA method 160.3

The analyses were performed by Analytical Resources, Inc., (ARI) located in Seattle, Washington, except for some of the fecal coliform analyses were performed by Avocet Environmental Testing (Avocet) of Bellingham, Washington. This data quality evaluation covers ARI data packages EL51, EN15, EN82, and EO60 and Avocet data packages 3170. This data quality evaluation was

performed in accordance with the quality assurance procedures described in Appendix A of the *Draft Work Plan Supplemental Remedial Investigation Cornwall Avenue Landfill, Bellingham, Washington* (Landau Associates 2002), and with applicable portions of the EPA *Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review* (1994a,b).

The evaluation considered the following items:

- Chain-of custody records
- Holding times
- Laboratory and method blank results
- Field blank results
- Surrogate recoveries
- Laboratory matrix spikes and matrix spike duplicates (MS/MSD) (including the laboratory control samples)
- MS/MSD and laboratory duplicate relative percent difference (RPD)
- Field duplicate RPDs
- Quantitation limits
- Conclusions and completeness.

Data validation qualifiers were added to the sample results based on the evaluation of the data quality. The absence of a data quality qualifier indicates that the data are acceptable without qualification. Data validation qualifiers are summarized in Table 1.

CHAIN-OF-CUSTODY RECORDS

Chain-of-custody records accompanied each data package. The laboratory received all the samples in good condition and all analyses requested were performed.

HOLDING TIMES

For all the samples, the time between sample collection, extraction, and analysis was determined to be within EPA and method-specified holding times. No qualification of the data was required.

LABORATORY AND METHOD BLANKS

Method blanks were analyzed with each batch of samples and for each analysis. No contamination was detected in any of the method blanks. No qualification of the data was necessary.

FIELD BLANKS

One field blank, a trip blank, was analyzed with the groundwater samples. No contamination was detected in the trip blank. No qualification of the data was required.

SURROGATE SPIKE RECOVERIES

Surrogate spikes were run for BEP, PAHs, PCBs, diesel and motor oil TPH, and BTEX. All of the surrogate recoveries were within laboratory control limits with the following exceptions:

- The percent recoveries of the surrogates associated with the diesel and motor oil range TPH analysis of the diluted sample TP-13 were below the laboratory control limits as a result of sample dilution. No qualifiers were assigned as TPH surrogate recoveries in the original sample were within control limits.
- There was no calculated recovery of the tetrachloro-m-xylene surrogate in sample MW-5 and of the decachlorobiphenyl surrogate in samples MW-3 and MW-8 for the PCB analysis as a result of matrix interference. No qualifiers were assigned as the remaining surrogate recoveries in these samples were within laboratory control limits.
- The tetrachloro-m-xylene surrogate recovery for PCB analysis in sample MW-9 was above laboratory control limits. No qualifiers were assigned as the remaining surrogate recovery was within laboratory control limits.

LABORATORY CONTROL SAMPLE (BLANK SPIKE) RESULTS

Laboratory control samples were performed for all analyses except total solids, TSS, and fecal coliform. All recoveries were within the specified control limits. No qualification of the data was necessary.

MATRIX SPIKE/ MATRIX SPIKE DUPLICATE SAMPLES

Matrix spike and matrix spike duplicate (MS/MSD) samples were performed with each organic analysis and an MS was performed with each inorganic analysis for the following analyses: all sediment analyses except for total solids; total cyanide, ammonia, and TOC for the seep samples; and BTEX, PCBs, and diesel and motor oil range TPH for the groundwater samples. All of the MS/MSDs were performed on project samples except for BEP, PCBs, and total metals MS/MSDs for sediment samples. Recoveries for the MS/MSDs were within the current laboratory control limits, except as indicated in Table 1 and as discussed below:

- MS recoveries for total cyanide in the seep sample were below laboratory control limtis. Sample S-1 sampled July 10, 2002, on was qualified as estimated (UJ).

RELATIVE PERCENT DIFFERENCES

Laboratory duplicate and MS/MSD RPDs were within the current laboratory control limits. No qualification of the data was required.

FIELD DUPLICATES

One field duplicate sediment sample was collected and analyzed for. Field duplicate RPDs were within project control limits (50%), except as indicated in Table 1 and as discussed below:

- Field duplicate RPD for Aroclor 1254 was above project control limits. Sediment samples SRI-SED-2 and SRI-SED-9 was qualified as estimated (J) for Aroclor 1254.

REPORTING LIMITS

Laboratory reporting limits were within project specified limits with the following exceptions:

- Reporting limits for PCBs were above project specified reporting limits in some samples
- Lead, silver, and zinc reporting limits were above project specified reporting limits in some samples
- Total cyanide reporting limits were above project specified reporting limits in one seep sample
- Fecal coliform reporting limits were above project specified reporting limits in one groundwater sample

OVERALL DATA QUALITY AND COMPLETENESS

Data precision was evaluated through laboratory duplicates, matrix spike duplicates, and field duplicates. Data accuracy was evaluated through laboratory control samples, surrogate spikes, and matrix spikes. Based on this data quality evaluation, all of the data were determined to be acceptable and no data was rejected. The completeness for this data is 100 percent.

REFERENCES

EPA. 1994a. *Contract Laboratory Program National Functional Guidelines for Organic Data Review.* U.S. Environmental Protection Agency.

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