TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046716

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: FISH
Pace Project No.: 4046716

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4046716001	EWL T-12-F-COMPOSITE	Tissue	01/05/11 14:45	06/07/11 10:00
4047603001	EWL-T-02-F-COMPOSITE_BLU	Tissue	12/21/10 11:04	06/28/11 10:15
4047603002	EWL-T-02-F-COMPOSITE_SHA	Tissue	01/05/11 12:30	06/28/11 10:15
4047603003	EWL-T-05-F-COMPOSITE_SHA	Tissue	01/05/11 13:20	06/28/11 10:15

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4046716
Client: URS CORPORATION
Project Name: EAST WHITE LAKE
Project Number: K1013947

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike (LCS):** All in-house accuracy criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS; the "L0" data qualifier applied to summary. The recovery of TPH (C08-C40) was above control criteria in the LCS due to large lipid peak eluting around C34 and the summary was reported with the "2q" data qualifier.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** Sample EWL-T-02-F-COMPOSITE_BLU was designated as the matrix spike / matrix spike duplicate for this SDG. The in-house accuracy criteria were met for TPH (C10-C28). The in-house precision criteria were not met for TPH (C10-C28). The "D6" data qualifier was applied. The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used and "M0" and "D6" data qualifiers applied. The recovery of TPH (C08-C40) was outside control criteria in the MSD due to large lipid peak in the sample eluting around C34 and the "1q" data qualifier was applied.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** All samples were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

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SAMPLE ANALYTE COUNT

Project: FISH
Pace Project No.: 4046716

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4046716001	EWL T-12-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4047603001	EWL-T-02-F-COMPOSITE_BLU	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4047603002	EWL-T-02-F-COMPOSITE_SHA	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4047603003	EWL-T-05-F-COMPOSITE_SHA	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

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QUALIFIERS

Project: FISH
Pace Project No.: 4046716

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6157

[1]	The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

1q	Analyte recovery in the Matrix Spike Duplicate (MSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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CERTIFICATIONS

Project: FISH
Pace Project No.: 4046716

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

TN

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1013947

Project Manager: ~~Lynda Huckestein~~ David Lingle

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1013947-016	EWL T-03-F-COMPOSITE	1	Animal Tissue	1/5/11	1330	Gulf Coast Analytica	✓	13 • 013
K1013947-017	EWL T-04-F-COMPOSITE	1	Animal Tissue	1/5/11	1340	Gulf Coast Analytica	✓	14 • 014
K1013947-019	EWL T-06-F-COMPOSITE	1	Animal Tissue	1/5/11	1350	Gulf Coast Analytica	✓	15 • 015
K1013947-020	EWL T-07-F-COMPOSITE	1	Animal Tissue	1/5/11	1510	Gulf Coast Analytica	✓	16 • 016
K1013947-021	EWL T-08-F-COMPOSITE	1	Animal Tissue	1/5/11	1505	Gulf Coast Analytica	✓	17 • 017
K1013947-022	EWL T-09-F-COMPOSITE	1	Animal Tissue	1/5/11	1455	Gulf Coast Analytica	✓	18 • 018
K1013947-023	EWL T-10-F-COMPOSITE	1	Animal Tissue	1/5/11	1355	Gulf Coast Analytica	✓	19 • 019
K1013947-024	EWL T-11-F-COMPOSITE	1	Animal Tissue	1/5/11	1405	Gulf Coast Analytica	✓	20 • 020
K1013947-025	EWL T-12-F-COMPOSITE	1	Animal Tissue	1/5/11	1445	Gulf Coast Analytica	✓	21 • 001
K1013947-026	EWL T-02-F-COMPOSITE	Ø	Animal Tissue	1/5/11	1230	Gulf Coast Analytica	~~1~~ 1/19/11	
K1013947-027	EWL T-05-F-COMPOSITE	Ø	Animal Tissue	1/5/11	1320	Gulf Coast Analytica	~~1~~ 1/19/11	

Test Comments

4046716

Special Instructions/Comments

~~Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com~~

East White Lake Fish Tissue Homogenized @ CAS/Kelso.

Turnaround Requirements

____ RUSH (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

____ STANDARD

Requested FAX Date: ________

Requested Report Date: 02/03/11

Report Requirements

____ I. Results Only

____ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD N

Invoice Information

PO# K1013947

Bill to

Relinquished By: [signature] CAS 1/19/11 1200 FedEx 6/3/11 10:00

Received By: [signature] 1-20-11 1030 [illegible] A. Bielenberg - PACE 6/3/11 10:00

Airbill Number: Rel By: BGM 6/6/11 150

Pag

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Sample Condition Upon Receipt

Client Name: URS Project # 4046716

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used VB Type of Ice: Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature ≤0°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 06/7/11
Initials:

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 6/8/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046716

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SURROGATE RECOVERY SUMMARY

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT / 11766
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046716001		EWL T-12-F-COMPOSITE	4	0	S4										
4047603001		EWL-T-02-F-COMPOSITE_BLU	4	0	S4										
475612	BLANK		1	67											
4047603002		EWL-T-02-F-COMPOSITE_SHA	6	0	S4										
4047603003		EWL-T-05-F-COMPOSITE_SHA	9	0	S4										
475613	LCS		1	79											
475614	MS		4	0	S4										
475615	MSD		4	0	S4										
		QC Limits:		50-150											
		Sample Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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LAB CONTROL SAMPLE RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11766 **LCS Prepared:** 07/10/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:**

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	61			50-150		66.7	40.8		mg/kg	07/14/11			
TPH (C08-C16)	36			50-150		66.7	23.9		mg/kg	07/14/11		L0	
TPH (C08-C40)	175			50-150		66.7	116		mg/kg	07/14/11		2q	
TPH (C16-C28)	28			50-150		66.7	18.7		mg/kg	07/14/11		L0	
TPH - Diesel (C10-C28)	59			50-150		66.7	39.3		mg/kg	07/14/11			

Type	Sample
LCS	475613

REPORT OF LABORATORY ANALYSIS

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MATRIX SPIKE SAMPLE RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11766
Method(s): EPA 3541 / EPA 8015B Modified

MS Prepared: 07/10/11
MSD Prepared: 07/10/11

Analyte	Units	Sample Conc	Spike Conc MS	Spike Conc MSD	Result MS	Result MSD	Dilution MS	Dilution MSD	% Recovery MS	% Recovery MSD	QC Limits %Recovery	QC Limits RPD	Max RPD	Analyzed Date MS	Analyzed Date MSD	Qualifier(s) MS	Qualifier(s) MSD
Diesel Range Organics (C8-C28)	mg/kg	25.9J	66.7	66.7	83.6	64.0	4	4	87	57	50-150	27	20	07/14/11	07/14/11		D6
TPH (C08-C16)	mg/kg	<13.3	66.7	66.7	17.3J	<13.3	4	4	26	17	50-150		20	07/14/11	07/14/11	M0	M0
TPH (C08-C40)	mg/kg	284	66.7	66.7	318	258	4	4	50	-39	50-150	21	20	07/14/11	07/14/11		1q,D6
TPH (C16-C28)	mg/kg	19.0J	66.7	66.7	56.1	40.9	4	4	56	33	50-150	31	20	07/14/11	07/14/11		D6,M0
TPH - Diesel (C10-C28)	mg/kg	24.4J	66.7	66.7	81.6	62.4	4	4	86	57	50-150	27	20	07/14/11	07/14/11		D6

Type	Sample	Client Sample ID
MS	475614	EWL-T-02-F-COMPOSITE_BLU
MSD	475615	EWL-T-02-F-COMPOSITE_BLU

REPORT OF LABORATORY ANALYSIS

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DUPLICATE RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11767 **Prepared:**
Method(s): Pace Lipid

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Lipid	4	20	1.8	1.9	%	07/12/11	

Type	Sample	Client Sample ID
DUP	475617	EWL-T-02-F-COMPOSITE_BLU

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FISH
Pace Project No.: 4046716

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046716001	EWL T-12-F-COMPOSITE	EPA 3541	OEXT/11766	EPA 8015B Modified	GCSV/6157
4047603001	EWL-T-02-F-COMPOSITE_BLU	EPA 3541	OEXT/11766	EPA 8015B Modified	GCSV/6157
4047603002	EWL-T-02-F-COMPOSITE_SHA	EPA 3541	OEXT/11766	EPA 8015B Modified	GCSV/6157
4047603003	EWL-T-05-F-COMPOSITE_SHA	EPA 3541	OEXT/11766	EPA 8015B Modified	GCSV/6157
4046716001	EWL T-12-F-COMPOSITE	Pace Lipid	OEXT/11767		
4047603001	EWL-T-02-F-COMPOSITE_BLU	Pace Lipid	OEXT/11767		
4047603002	EWL-T-02-F-COMPOSITE_SHA	Pace Lipid	OEXT/11767		
4047603003	EWL-T-05-F-COMPOSITE_SHA	Pace Lipid	OEXT/11767		

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046716

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01		2000 2860-31	07/06/11	1106	2.18	
02		1000 2860-31	07/06/11	1116	2.18	
03		500 2860-31-	07/06/11	1128	2.18	
04		250 2860-30-	07/06/11	1141	2.18	
05		100 2860-30-	07/06/11	1153	2.18	
06		50 2860-30-1	07/06/11	1205	2.18	
07		IC500 2860-3	07/06/11	1217	2.18	
08		CC500 2860-3	07/14/11	0950	2.20*	
09	MBLCS	475613	07/14/11	1002	2.20*	
10	MB	475612	07/14/11	1014	2.20*	
11	EWL-T-02-F-C	475614	07/14/11	1446	2.20*	
12	EWL-T-02-F-C	475615	07/14/11	1456	2.20*	

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046716

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	RT	#
01	EWL-T-02-F-C	4047603001	07/14/11	1508	2.20*			
02	EWL-T-02-F-C	4047603002	07/14/11	1520	2.20*			
03	EWL-T-05-F-C	4047603003	07/14/11	1532	2.20*			
04	EWL T-12-F-C	4046716001	07/14/11	1544	2.20*			
05		CC500 2860-3	07/14/11	1632	2.20*			
06								
07								
08								
09								
10								
11								
12								

QC LIMITS

S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046716

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-02-F-COMPOSITE_BLU TX
Lab ID: 4047603001
Collected: 12/21/10 11:04
Received: 06/28/11 10:15

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**25.9J**	mg/kg	26.7	13.3	4	07/10/11 12:00	07/14/11 15:08	
	TPH (C08-C16)	**<13.3**	mg/kg	26.7	13.3	4	07/10/11 12:00	07/14/11 15:08	
	TPH (C16-C28)	**19.0J**	mg/kg	26.7	13.3	4	07/10/11 12:00	07/14/11 15:08	
	TPH (C08-C40)	**284**	mg/kg	26.7	13.3	4	07/10/11 12:00	07/14/11 15:08	3q
	TPH - Diesel (C10-C28)	**24.4J**	mg/kg	26.7	13.3	4	07/10/11 12:00	07/14/11 15:08	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/10/11 12:00	07/14/11 15:08	S4

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical®
www.pacelabs.com

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1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-02-F-COMPOSITE_BLU TX
Lab ID: 4047603001
Collected: 12/21/10 11:04
Received: 06/28/11 10:15

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**1.8**	%			1		07/12/11 09:22	

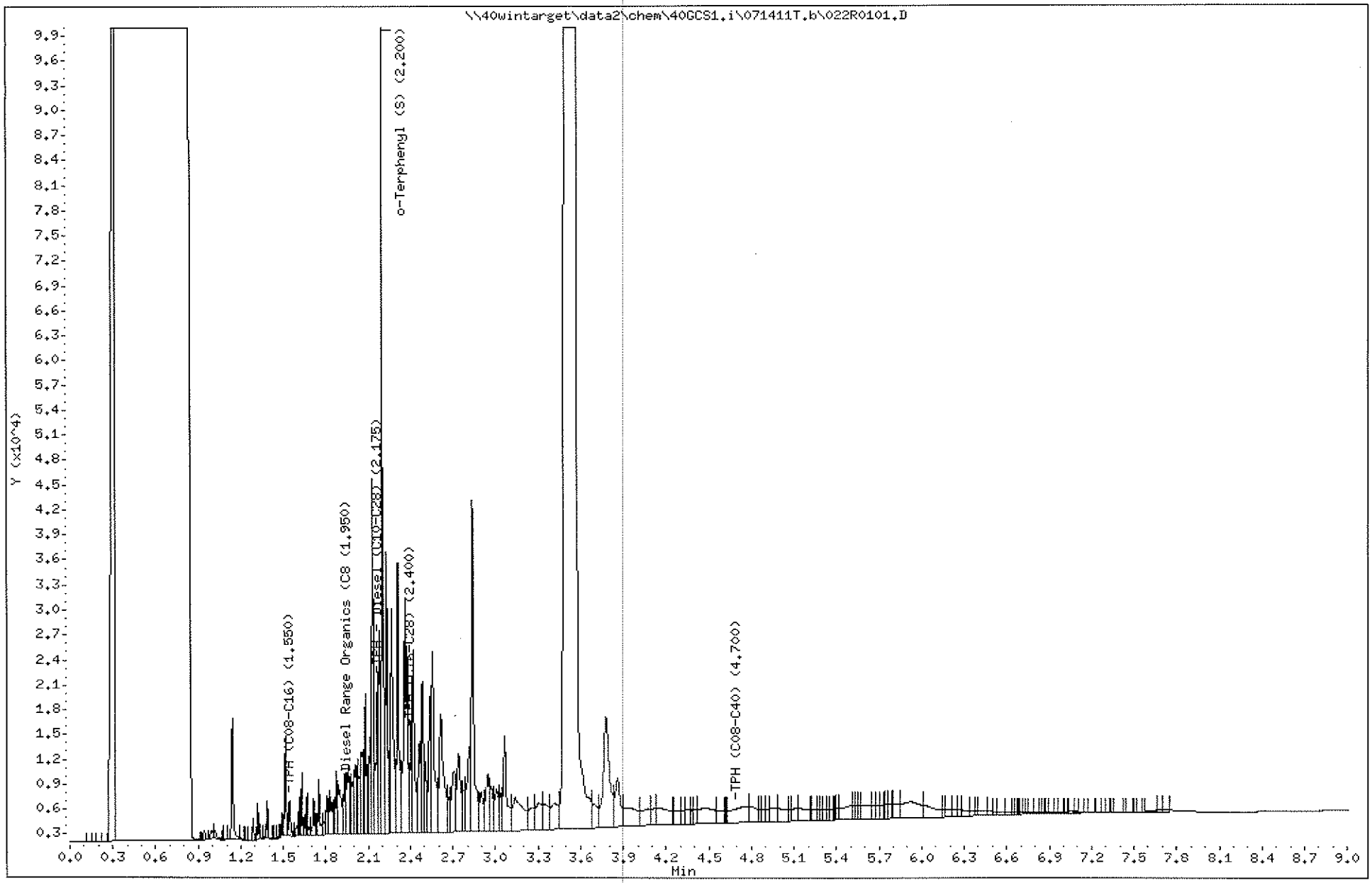
Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\022R0101.D
Date : 14-JUL-2011 15:08
Client ID: EWL-T-02-F-COMPOSIT
Sample Info: 404760300lX4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\022R0101.D
Lab Smp Id: 4047603001 Client Smp ID: EWL-T-02-F-COMPOSIT
Inj Date : 14-JUL-2011 15:08
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4047603001X4
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 15-May-2012 12:45 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 22
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.350			4126832	1064.64	283.90
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.950-2.850			567299	71.2215	18.99(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			660588	97.2571	25.93(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			640069	91.5305	24.40
$	15 o-Terphenyl (S)	2.200	2.196	0.004	57155	11.4610	0.76

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-02-F-COMPOSITE_SHA TX
Lab ID: 4047603002
Collected: 01/05/11 12:30
Received: 06/28/11 10:15

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**91.7**	mg/kg	40.0	20.0	6	07/10/11 12:00	07/14/11 15:20	
	TPH (C08-C16)	**<20.0**	mg/kg	40.0	20.0	6	07/10/11 12:00	07/14/11 15:20	
	TPH (C16-C28)	**87.2**	mg/kg	40.0	20.0	6	07/10/11 12:00	07/14/11 15:20	
	TPH (C08-C40)	**432**	mg/kg	40.0	20.0	6	07/10/11 12:00	07/14/11 15:20	3q
	TPH - Diesel (C10-C28)	**90.2**	mg/kg	40.0	20.0	6	07/10/11 12:00	07/14/11 15:20	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		6	07/10/11 12:00	07/14/11 15:20	S4

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-02-F-COMPOSITE_SHA TX
Lab ID: 4047603002
Collected: 01/05/11 12:30
Received: 06/28/11 10:15

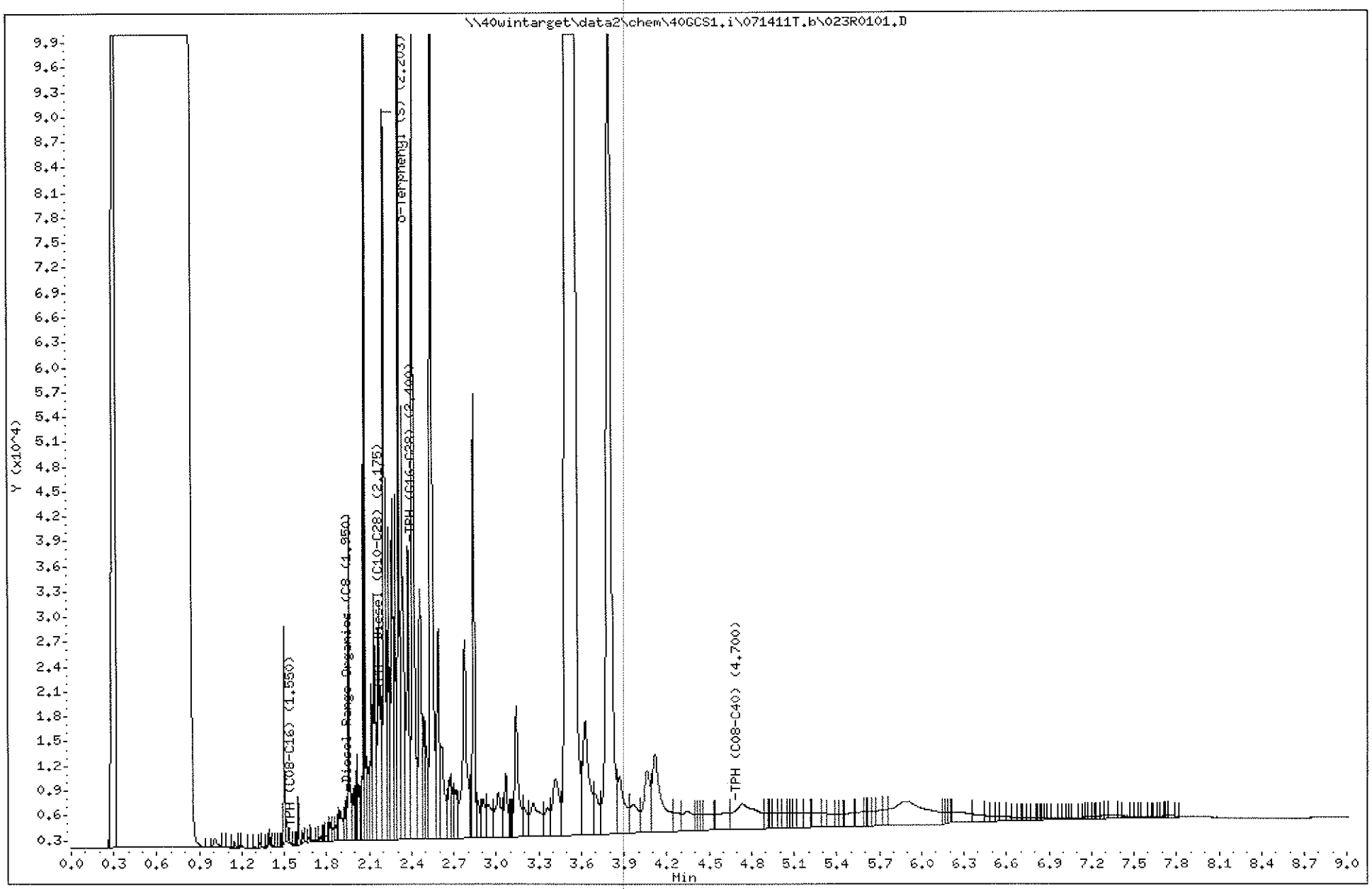
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.80**	%			1		07/12/11 09:23	

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\023R0101.D
Date : 14-JUL-2011 15:20
Client ID: EWL-T-02-F-COMPOSIT
Sample Info: 4047603002X6
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\023R0101.D
Lab Smp Id: 4047603002 Client Smp ID: EWL-T-02-F-COMPOSIT
Inj Date : 14-JUL-2011 15:20
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4047603002X6
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 15-May-2012 12:45 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 23
Dil Factor: 6.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	6.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.350			4177683	1078.83	431.53
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.950-2.850			1093175	217.986	87.19
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			1133221	229.162	91.66
S	8 TPH - Diesel (C10-C28)	1.500-2.850			1120238	225.539	90.21
$	15 o-Terphenyl (S)	2.203	2.196	0.007	89743	17.9958	1.19

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-05-F-COMPOSITE_SHA TX
Lab ID: 4047603003
Collected: 01/05/11 13:20
Received: 06/28/11 10:15

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**111**	mg/kg	60.0	30.0	9	07/10/11 12:00	07/14/11 15:32	
	TPH (C08-C16)	**<30.0**	mg/kg	60.0	30.0	9	07/10/11 12:00	07/14/11 15:32	
	TPH (C16-C28)	**106**	mg/kg	60.0	30.0	9	07/10/11 12:00	07/14/11 15:32	
	TPH (C08-C40)	**559**	mg/kg	60.0	30.0	9	07/10/11 12:00	07/14/11 15:32	3q
	TPH - Diesel (C10-C28)	**110**	mg/kg	60.0	30.0	9	07/10/11 12:00	07/14/11 15:32	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		9	07/10/11 12:00	07/14/11 15:32	S4

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-05-F-COMPOSITE_SHA TX
Lab ID: 4047603003
Collected: 01/05/11 13:20
Received: 06/28/11 10:15

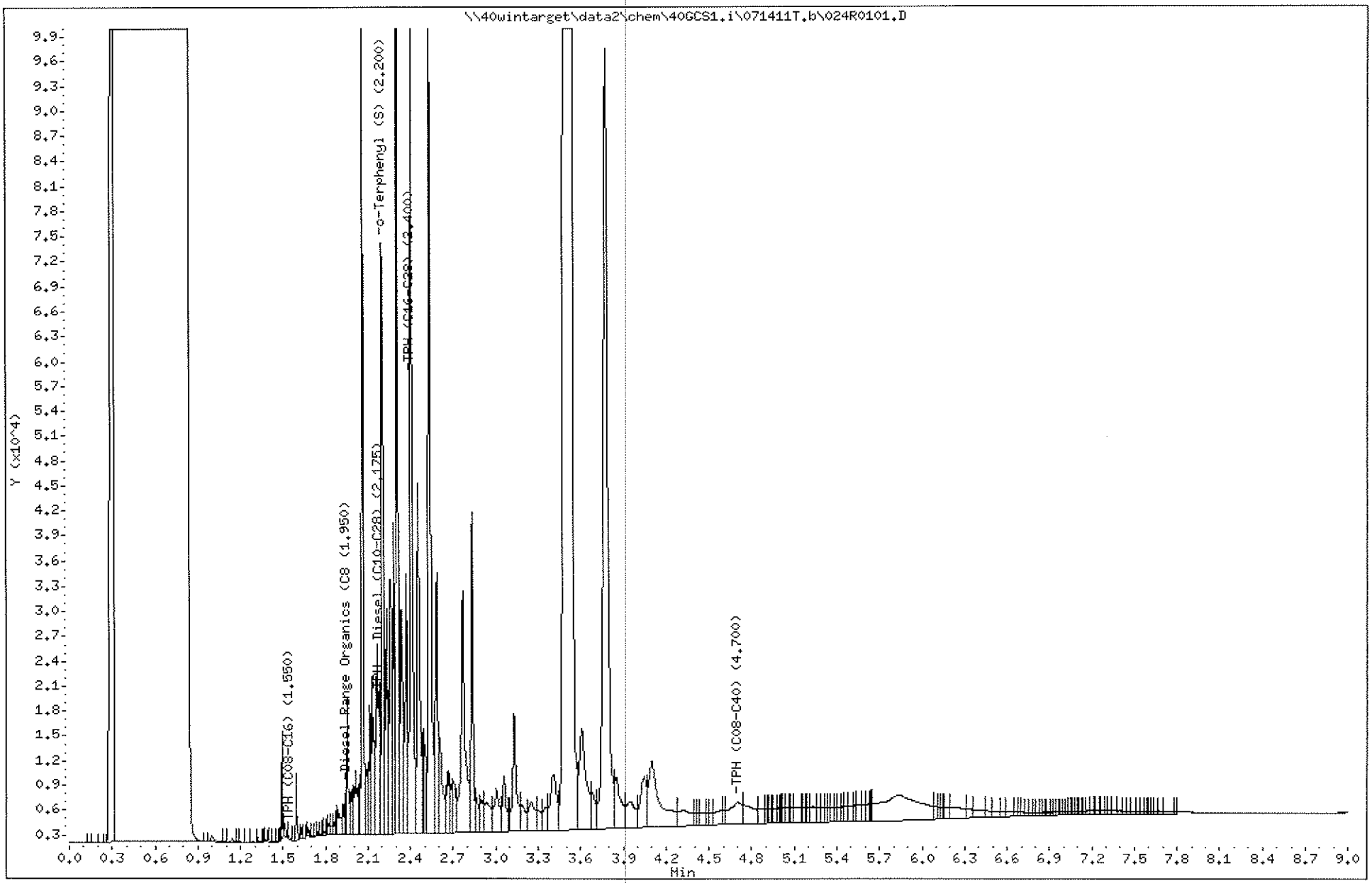
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.90**	%			1		07/12/11 09:23	

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\024R0101.D
Date : 14-JUL-2011 15:32
Client ID: EWL-T-05-F-COMPOSIT
Sample Info: 4047603003X9
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\024R0101.D
Lab Smp Id: 4047603003 Client Smp ID: EWL-T-05-F-COMPOSIT
Inj Date : 14-JUL-2011 15:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4047603003X9
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 15-May-2012 12:45 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 24
Dil Factor: 9.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	9.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.350			3651248	931.908	559.14
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.950-2.850			946727	177.114	106.26
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			977884	185.810	111.48
S	8 TPH - Diesel (C10-C28)	1.500-2.850			970227	183.673	110.20
$	15 o-Terphenyl (S)	2.200	2.196	0.004	75072	15.0539	1.00

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-12-F-COMPOSITE TX
Lab ID: 4046716001
Collected: 01/05/11 14:45
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**30.7J**	mg/kg	45.5	22.7	4	07/10/11 12:00	07/14/11 15:44	
	TPH (C08-C16)	**<22.7**	mg/kg	45.5	22.7	4	07/10/11 12:00	07/14/11 15:44	
	TPH (C16-C28)	**26.0J**	mg/kg	45.5	22.7	4	07/10/11 12:00	07/14/11 15:44	
	TPH (C08-C40)	**385**	mg/kg	45.5	22.7	4	07/10/11 12:00	07/14/11 15:44	3q
	TPH - Diesel (C10-C28)	**29.0J**	mg/kg	45.5	22.7	4	07/10/11 12:00	07/14/11 15:44	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/10/11 12:00	07/14/11 15:44	S4

Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046716

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-12-F-COMPOSITE TX
Lab ID: 4046716001
Collected: 01/05/11 14:45
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.77**	%			1		07/12/11 09:22	

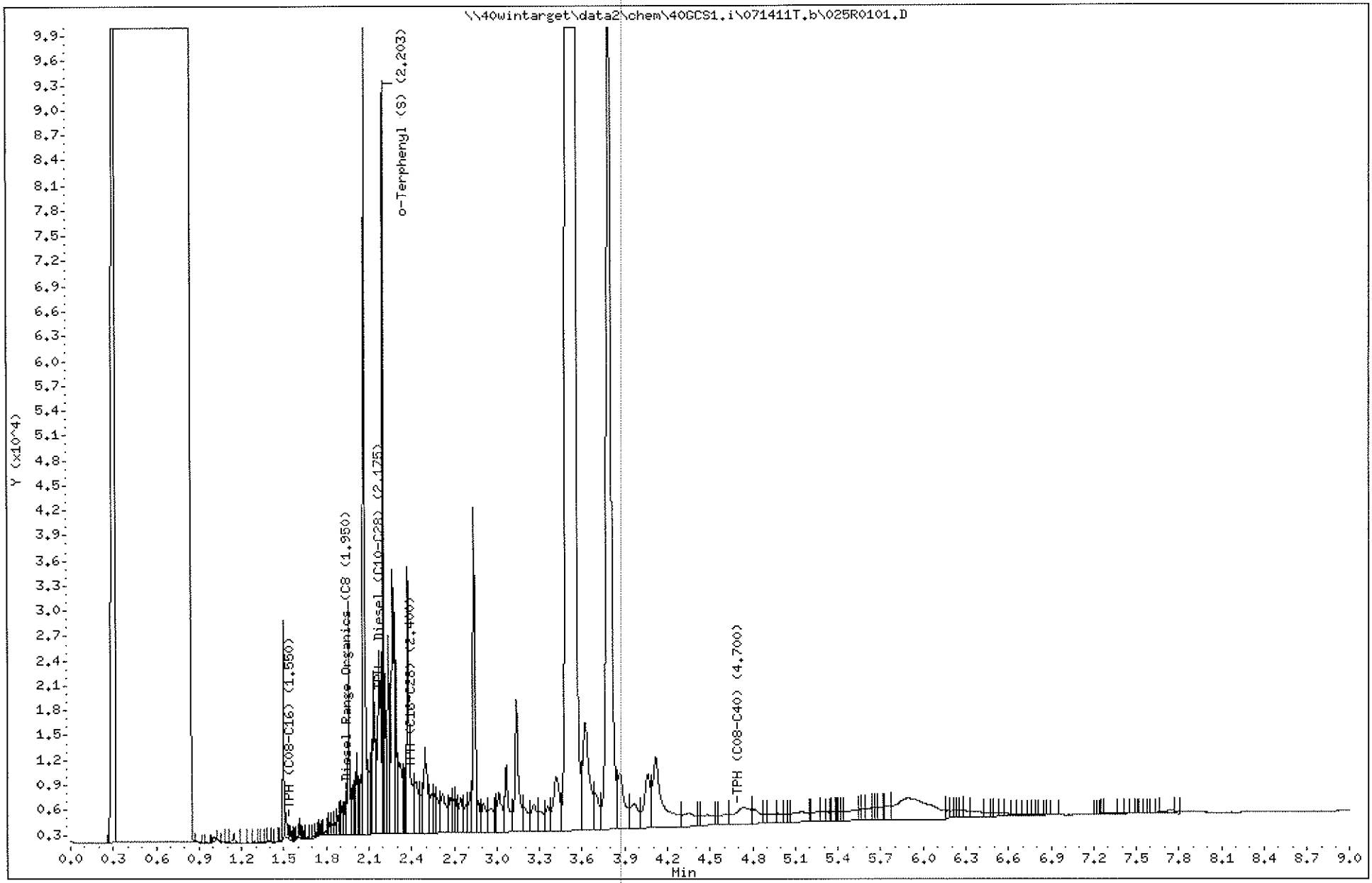
Date: 06/04/2012 07:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\025R0101.D
Date : 14-JUL-2011 15:44
Client ID: EWL T-12-F-COMPOSIT
Sample Info: 4046716001X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\025R0101.D
Lab Smp Id: 4046716001 Client Smp ID: EWL T-12-F-COMPOSIT
Inj Date : 14-JUL-2011 15:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046716001X4
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 15-May-2012 12:45 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 25
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.792	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.350			3345016	846.443	385.09
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.950-2.850			516677	57.0936	25.97(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			553763	67.4438	30.68(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			540877	63.8475	29.04
$ 15 o-Terphenyl (S)	2.203	2.196	0.007	45856	9.19530	1.04

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046716

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:05 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	2 Diesel Range Organics (C8-C28	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	3 High End Organics (C8-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	4 TPH (C08-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	5 TPH (C08-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	6 TPH (C10-C12)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	7 TPH (C10-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	8 TPH - Diesel (C10-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	9 TPH (C10-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	10 TPH (C12-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	11 Biota (C12-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	12 TPH (C16-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	13 TPH (C16-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	14 TPH (C20-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:05 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
$ 15 o-Terphenyl (S)	0.00025	0.00023	0.00019	0.00022	0.00018	0.00014	AVRG		0.00020		20.31495	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

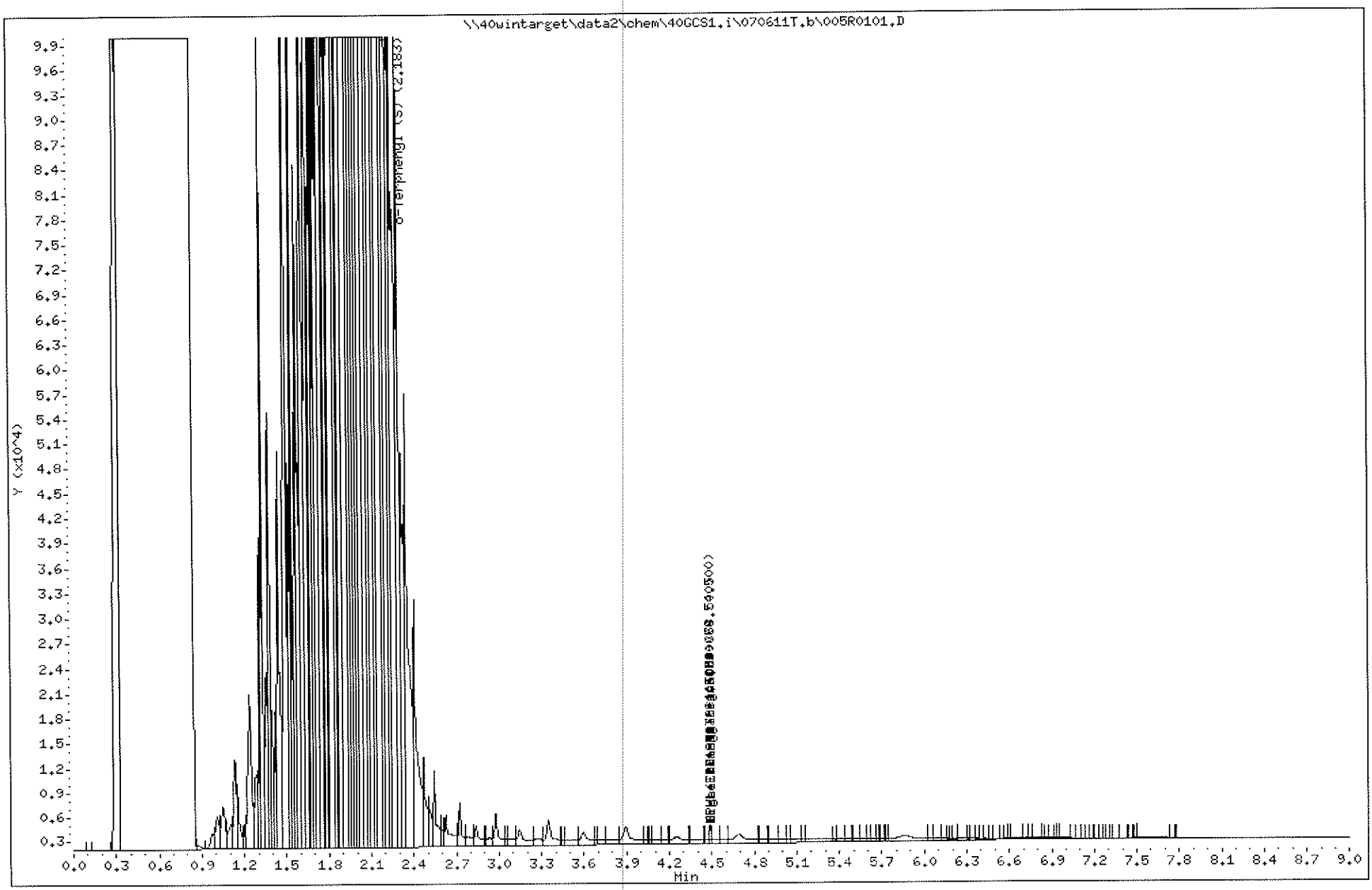
Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:05 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Date : 06-JUL-2011 11:06
Client ID:
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01
Inj Date : 06-JUL-2011 11:06
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:06 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			7455627	2000.00	1993.65(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	3 High End Organics (C8-C34)	1.050-7.950			7455627	2000.00	1993.65
S	4 TPH (C08-C36)	1.050-7.950			7455627	2000.00	1993.65
S	5 TPH (C08-C40)	1.050-7.950			7455627	2000.00	1993.65
S	6 TPH (C10-C12)	1.050-7.950			7455627	2000.00	1993.65
S	7 TPH (C10-C20)	1.050-7.950			7455627	2000.00	1993.65
S	8 TPH - Diesel (C10-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	9 TPH (C10-C40)	1.050-7.950			7455627	2000.00	1993.65
S	10 TPH (C12-C20)	1.050-7.950			7455627	2000.00	1993.65
S	11 Biota (C12-C36)	1.050-7.950			7455627	2000.00	1993.65
S	12 TPH (C16-C28)	1.970-2.800			7455627	2000.00	1993.65(T)
S	13 TPH (C16-C40)	1.050-7.950			7455627	2000.00	1993.65
S	14 TPH (C20-C34)	1.050-7.950			7455627	2000.00	1993.65
$	15 o-Terphenyl (S)	2.183	2.183	0.000	359479	50.0000	72.08

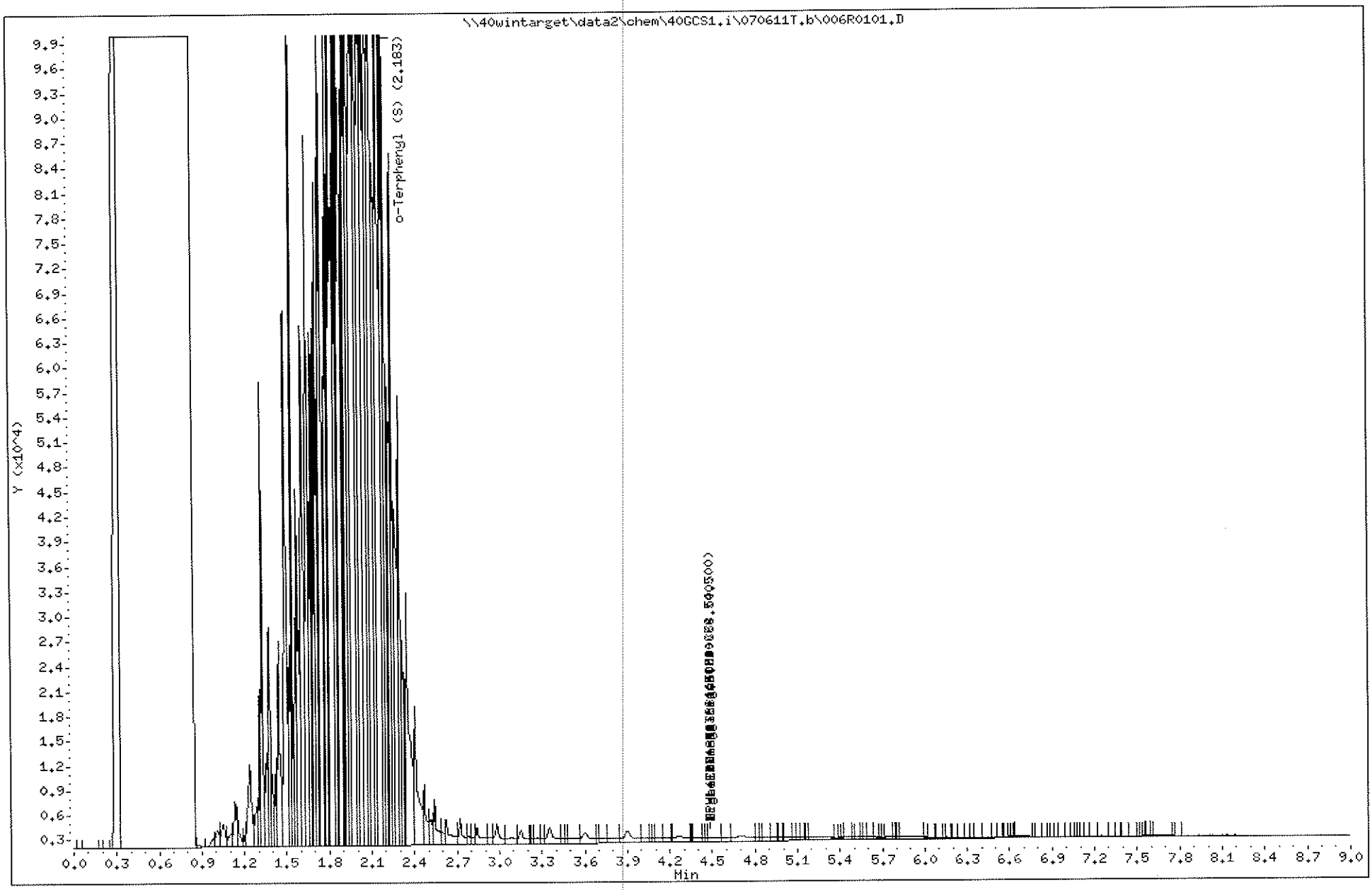
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Date : 06-JUL-2011 11:16
Client ID:
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02
Inj Date : 06-JUL-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:16 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-2.020			3937229	1000.00	1011.72(T)
S 2	Diesel Range Organics (C8-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S 3	High End Organics (C8-C34)	1.050-7.950			3937229	1000.00	1011.72
S 4	TPH (C08-C36)	1.050-7.950			3937229	1000.00	1011.72
S 5	TPH (C08-C40)	1.050-7.950			3937229	1000.00	1011.72
S 6	TPH (C10-C12)	1.050-7.950			3937229	1000.00	1011.72
S 7	TPH (C10-C20)	1.050-7.950			3937229	1000.00	1011.72
S 8	TPH - Diesel (C10-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S 9	TPH (C10-C40)	1.050-7.950			3937229	1000.00	1011.72
S 10	TPH (C12-C20)	1.050-7.950			3937229	1000.00	1011.72
S 11	Biota (C12-C36)	1.050-7.950			3937229	1000.00	1011.72
S 12	TPH (C16-C28)	1.970-2.800			3937229	1000.00	1011.72(T)
S 13	TPH (C16-C40)	1.050-7.950			3937229	1000.00	1011.72
S 14	TPH (C20-C34)	1.050-7.950			3937229	1000.00	1011.72
$ 15	o-Terphenyl (S)	2.183	2.183	0.000	281119	50.0000	56.37

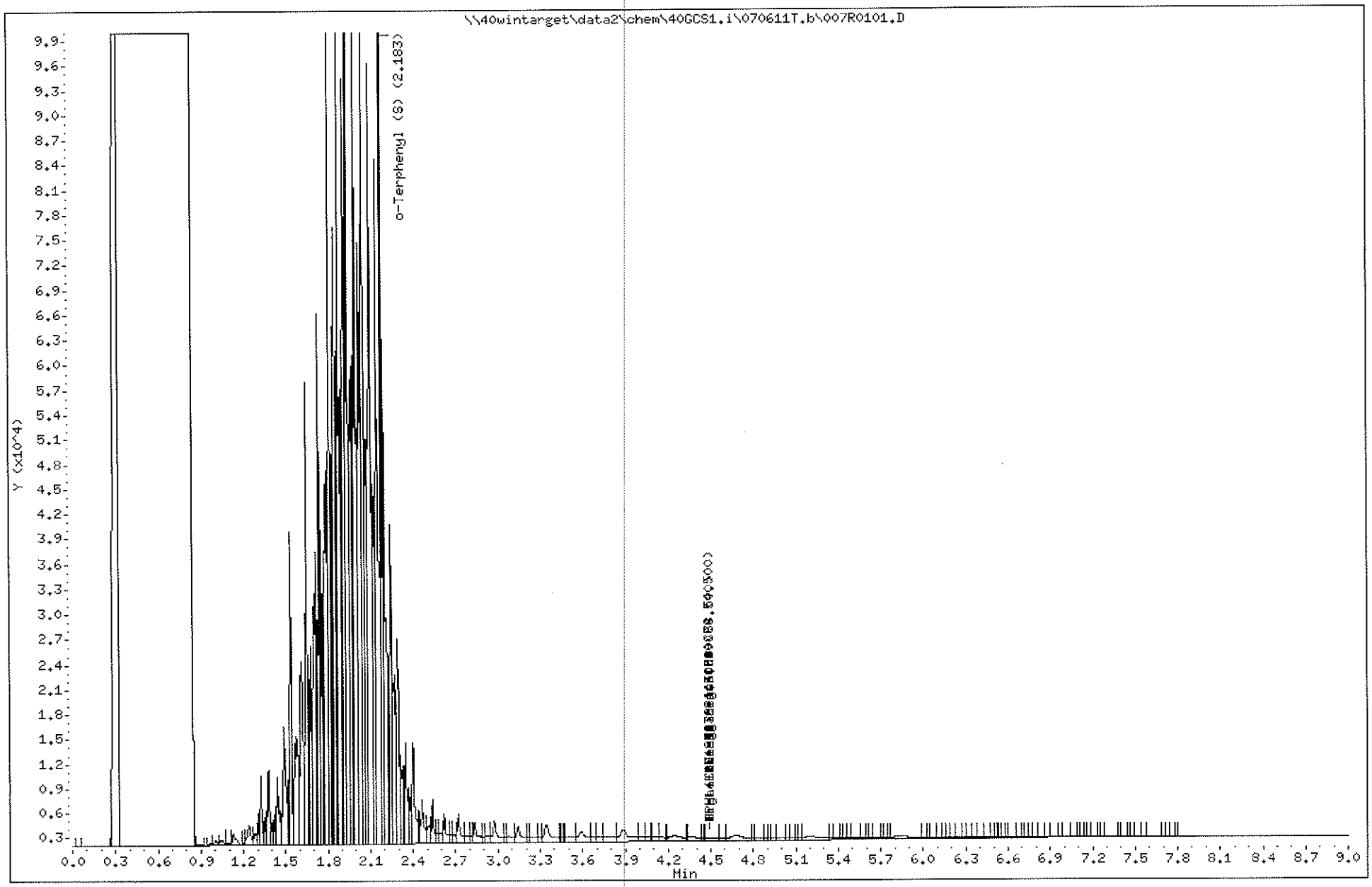
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Date : 06-JUL-2011 11:28
Client ID:
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Lab Smp Id: 500 2860-31-14
Inj Date : 06-JUL-2011 11:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:28 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-2.020			2026692	500.000	478.51(T)
S 2	Diesel Range Organics (C8-C28)	1.500-2.800			2026692	500.000	478.51(T)
S 3	High End Organics (C8-C34)	1.050-7.950			2026692	500.000	478.51
S 4	TPH (C08-C36)	1.050-7.950			2026692	500.000	478.51
S 5	TPH (C08-C40)	1.050-7.950			2026692	500.000	478.51
S 6	TPH (C10-C12)	1.050-7.950			2026692	500.000	478.51
S 7	TPH (C10-C20)	1.050-7.950			2026692	500.000	478.51
S 8	TPH - Diesel (C10-C28)	1.500-2.800			2026692	500.000	478.51(T)
S 9	TPH (C10-C40)	1.050-7.950			2026692	500.000	478.51
S 10	TPH (C12-C20)	1.050-7.950			2026692	500.000	478.51
S 11	Biota (C12-C36)	1.050-7.950			2026692	500.000	478.51
S 12	TPH (C16-C28)	1.970-2.800			2026692	500.000	478.51(T)
S 13	TPH (C16-C40)	1.050-7.950			2026692	500.000	478.51
S 14	TPH (C20-C34)	1.050-7.950			2026692	500.000	478.51
$ 15	o-Terphenyl (S)	2.183	2.183	0.000	228999	50.0000	45.92

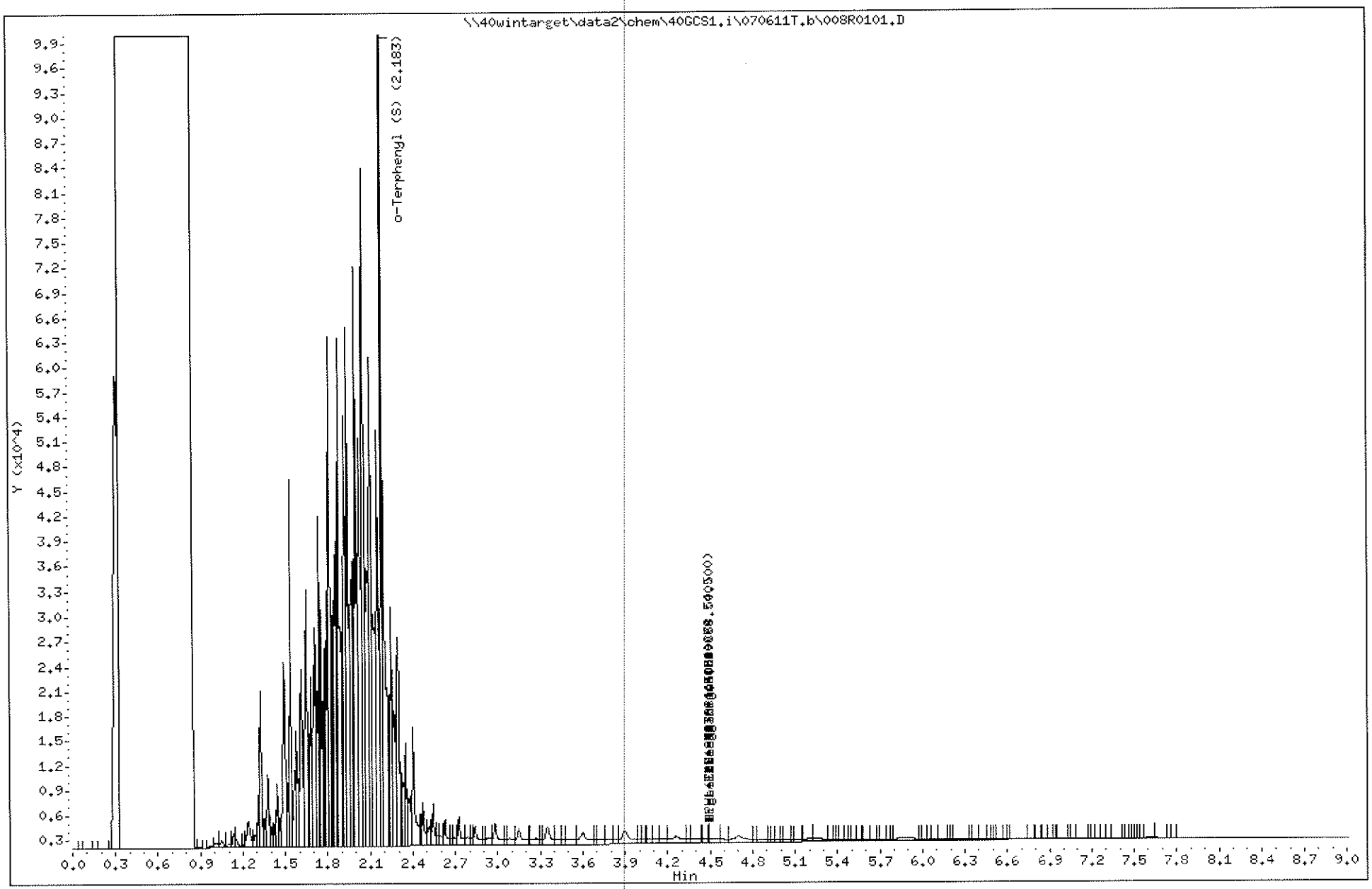
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Date : 06-JUL-2011 11:41
Client ID:
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Lab Smp Id: 250 2860-30-13
Inj Date : 06-JUL-2011 11:41
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:41 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			1423911	250.000	310.28(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	3 High End Organics (C8-C34)	1.050-7.950			1423911	250.000	310.28
S	4 TPH (C08-C36)	1.050-7.950			1423911	250.000	310.28
S	5 TPH (C08-C40)	1.050-7.950			1423911	250.000	310.28
S	6 TPH (C10-C12)	1.050-7.950			1423911	250.000	310.28
S	7 TPH (C10-C20)	1.050-7.950			1423911	250.000	310.28
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	9 TPH (C10-C40)	1.050-7.950			1423911	250.000	310.28
S	10 TPH (C12-C20)	1.050-7.950			1423911	250.000	310.28
S	11 Biota (C12-C36)	1.050-7.950			1423911	250.000	310.28
S	12 TPH (C16-C28)	1.970-2.800			1423911	250.000	310.28(T)
S	13 TPH (C16-C40)	1.050-7.950			1423911	250.000	310.28
S	14 TPH (C20-C34)	1.050-7.950			1423911	250.000	310.28
$	15 o-Terphenyl (S)	2.183	2.183	0.000	269129	50.0000	53.96

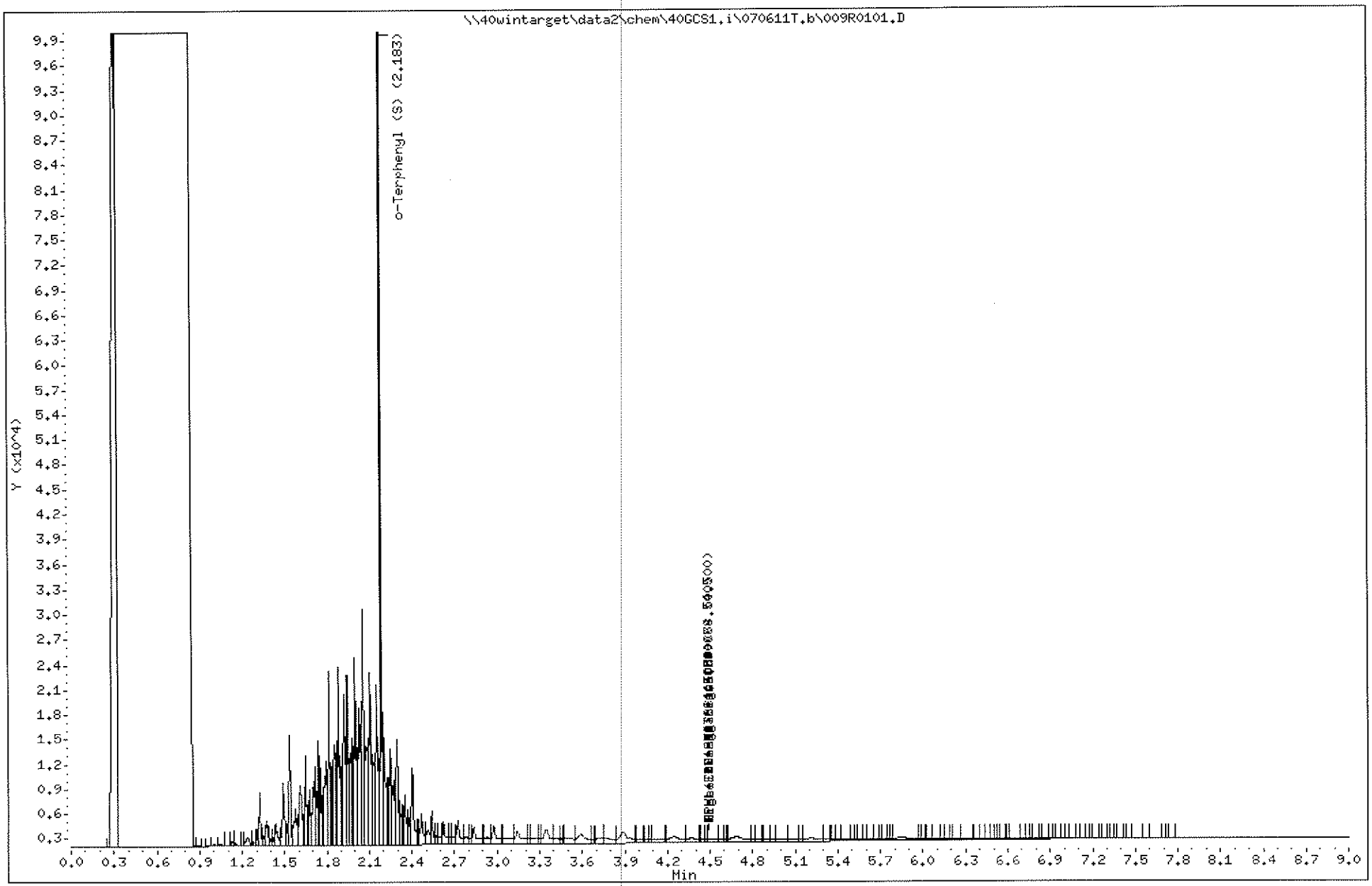
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Date : 06-JUL-2011 11:53
Client ID:
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Lab Smp Id: 100 2860-30-14
Inj Date : 06-JUL-2011 11:53
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:53 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			587718	100.000	76.92(Ta)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			587718	100.000	76.92(Ta)
S	3 High End Organics (C8-C34)	1.050-7.950			587718	100.000	76.92(a)
S	4 TPH (C08-C36)	1.050-7.950			587718	100.000	76.92(a)
S	5 TPH (C08-C40)	1.050-7.950			587718	100.000	76.92(a)
S	6 TPH (C10-C12)	1.050-7.950			587718	100.000	76.92(a)
S	7 TPH (C10-C20)	1.050-7.950			587718	100.000	76.92(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.800			587718	100.000	76.92(T)
S	9 TPH (C10-C40)	1.050-7.950			587718	100.000	76.92(a)
S	10 TPH (C12-C20)	1.050-7.950			587718	100.000	76.92(a)
S	11 Biota (C12-C36)	1.050-7.950			587718	100.000	76.92(a)
S	12 TPH (C16-C28)	1.970-2.800			587718	100.000	76.92(Ta)
S	13 TPH (C16-C40)	1.050-7.950			587718	100.000	76.92(a)
S	14 TPH (C20-C34)	1.050-7.950			587718	100.000	76.92(a)
$	15 o-Terphenyl (S)	2.183	2.183	0.000	216228	50.0000	43.35

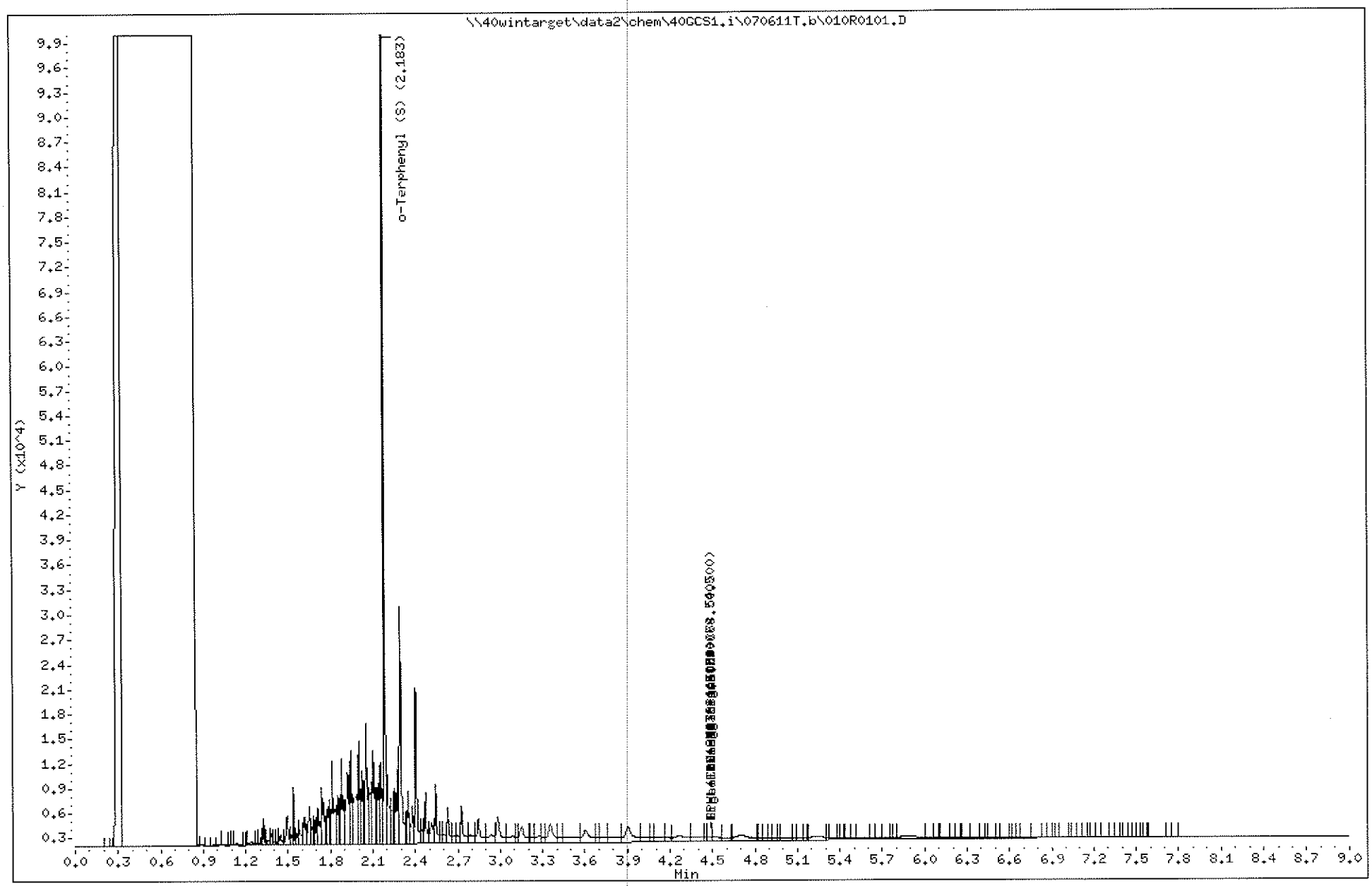
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Date : 06-JUL-2011 12:05
Client ID:
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Lab Smp Id: 50 2860-30-15
Inj Date : 06-JUL-2011 12:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			415643	50.0000	28.89(Ta)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			415643	50.0000	28.89(Ta)
S	3 High End Organics (C8-C34)	1.050-7.950			415643	50.0000	28.89(a)
S	4 TPH (C08-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	5 TPH (C08-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	6 TPH (C10-C12)	1.050-7.950			415643	50.0000	28.89(a)
S	7 TPH (C10-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.800			415643	50.0000	28.89(T)
S	9 TPH (C10-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	10 TPH (C12-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	11 Biota (C12-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	12 TPH (C16-C28)	1.970-2.800			415643	50.0000	28.89(Ta)
S	13 TPH (C16-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	14 TPH (C20-C34)	1.050-7.950			415643	50.0000	28.89(a)
$	15 o-Terphenyl (S)	2.183	2.183	0.000	199331	50.0000	39.97

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

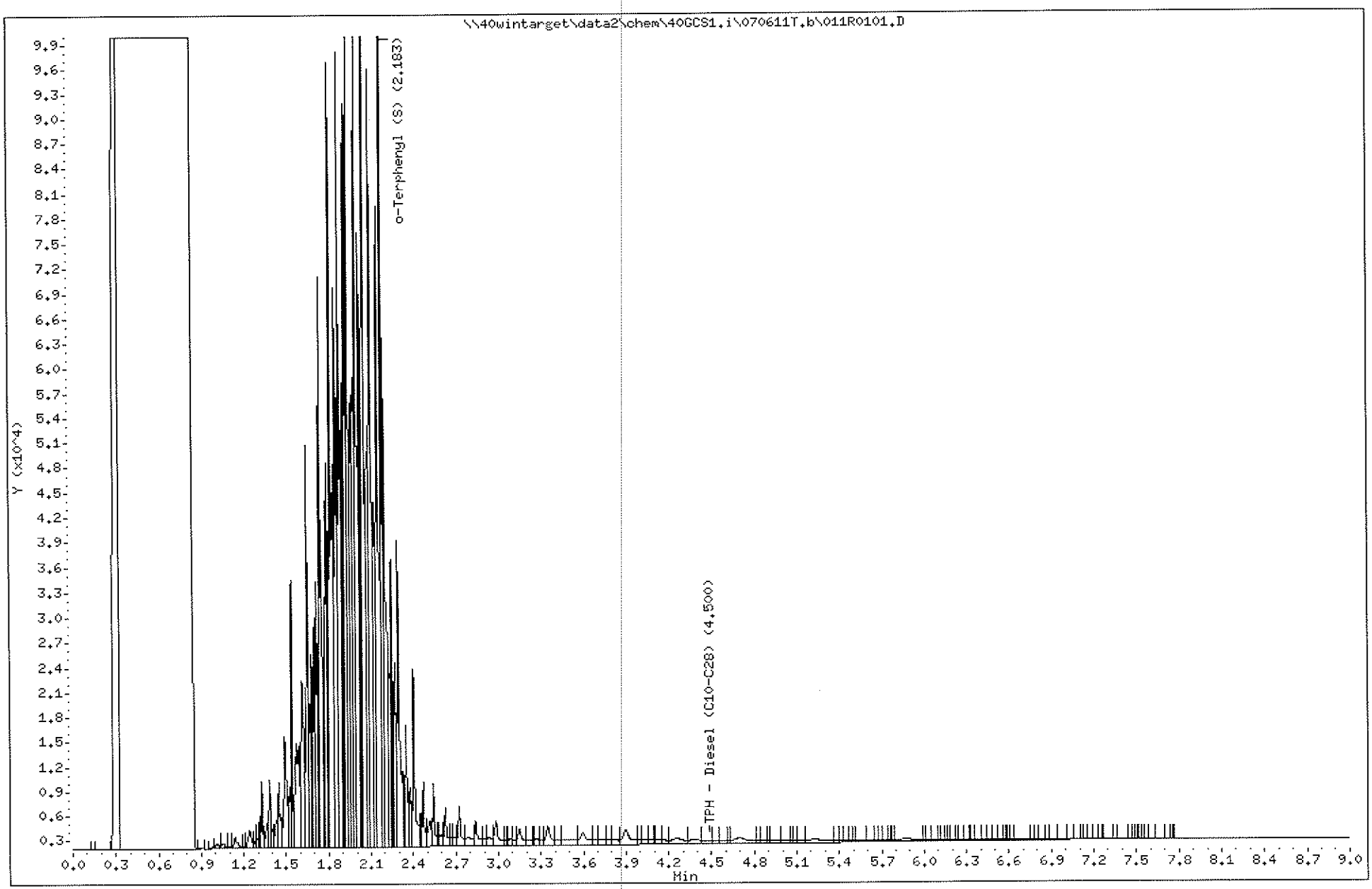
Instrument ID: 40GCS1.i Injection Date: 06-JUL-2011 12:17
Lab File ID: 011R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: WATER Init. Cal. Times: 11:06 12:05
Lab Sample ID: IC500 2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	467	0.00025	0.000	-6.54470	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	11.33103	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Date : 06-JUL-2011 12:17
Client ID:
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16
Inj Date : 06-JUL-2011 12:17
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:05 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1986415	500.000	467.27(T)
$ 15 o-Terphenyl (S)	2.183	2.183	0.000	223967	50.0000	44.91

QC Flag Legend

T - Target compound detected outside RT window.

Pace Analytical Services, Inc

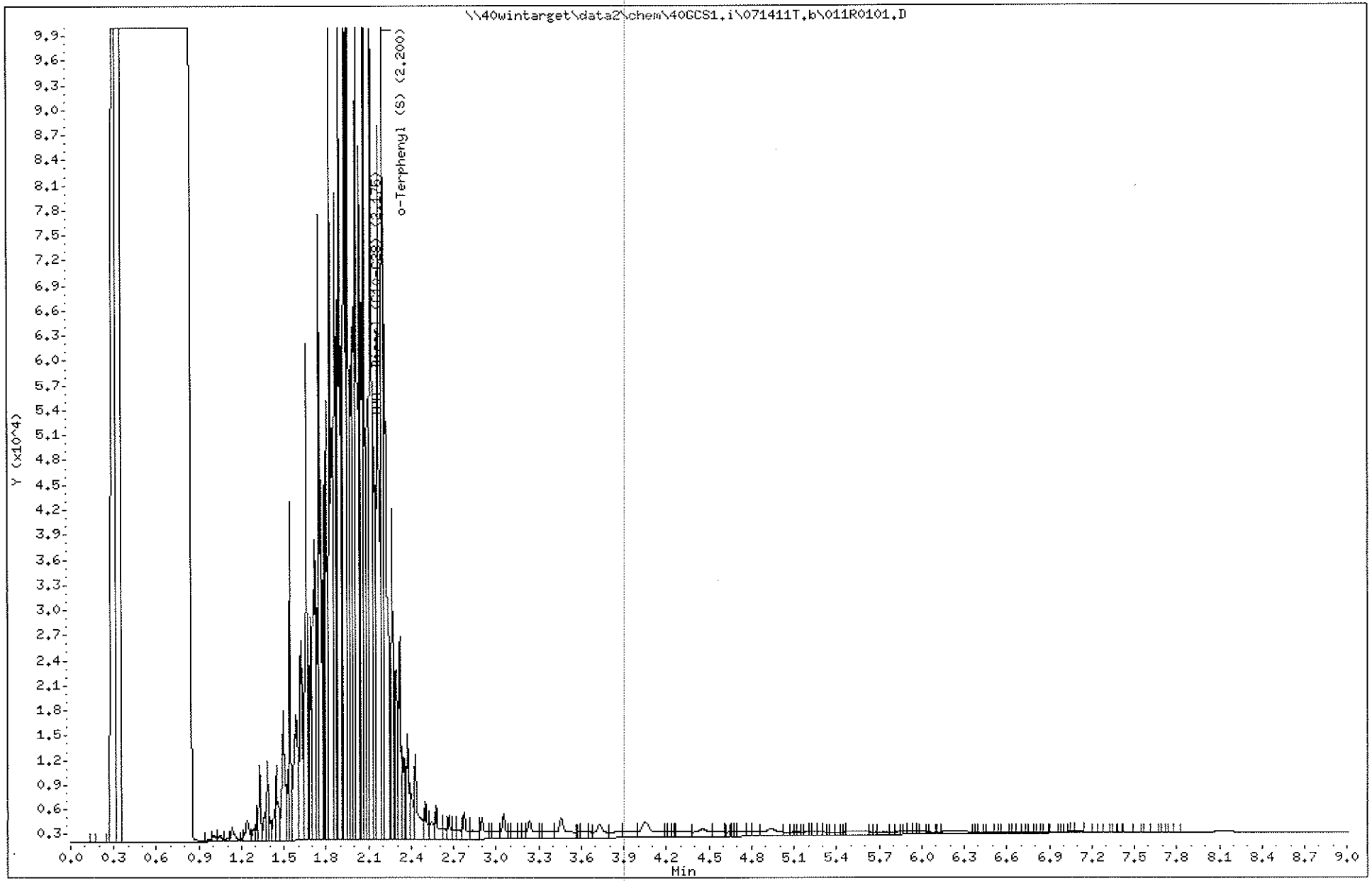
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 14-JUL-2011 09:50
Lab File ID: 011R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	481	0.00025	0.000	-3.77879	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	-2.07603	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\011R0101.D
Date : 14-JUL-2011 09:50
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\011R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 14-JUL-2011 09:50
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 08-May-2012 07:00 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500	2.850		2035968	500.000	481.10
$ 15 o-Terphenyl (S)	2.200	2.196	0.004	254631	50.0000	51.06

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

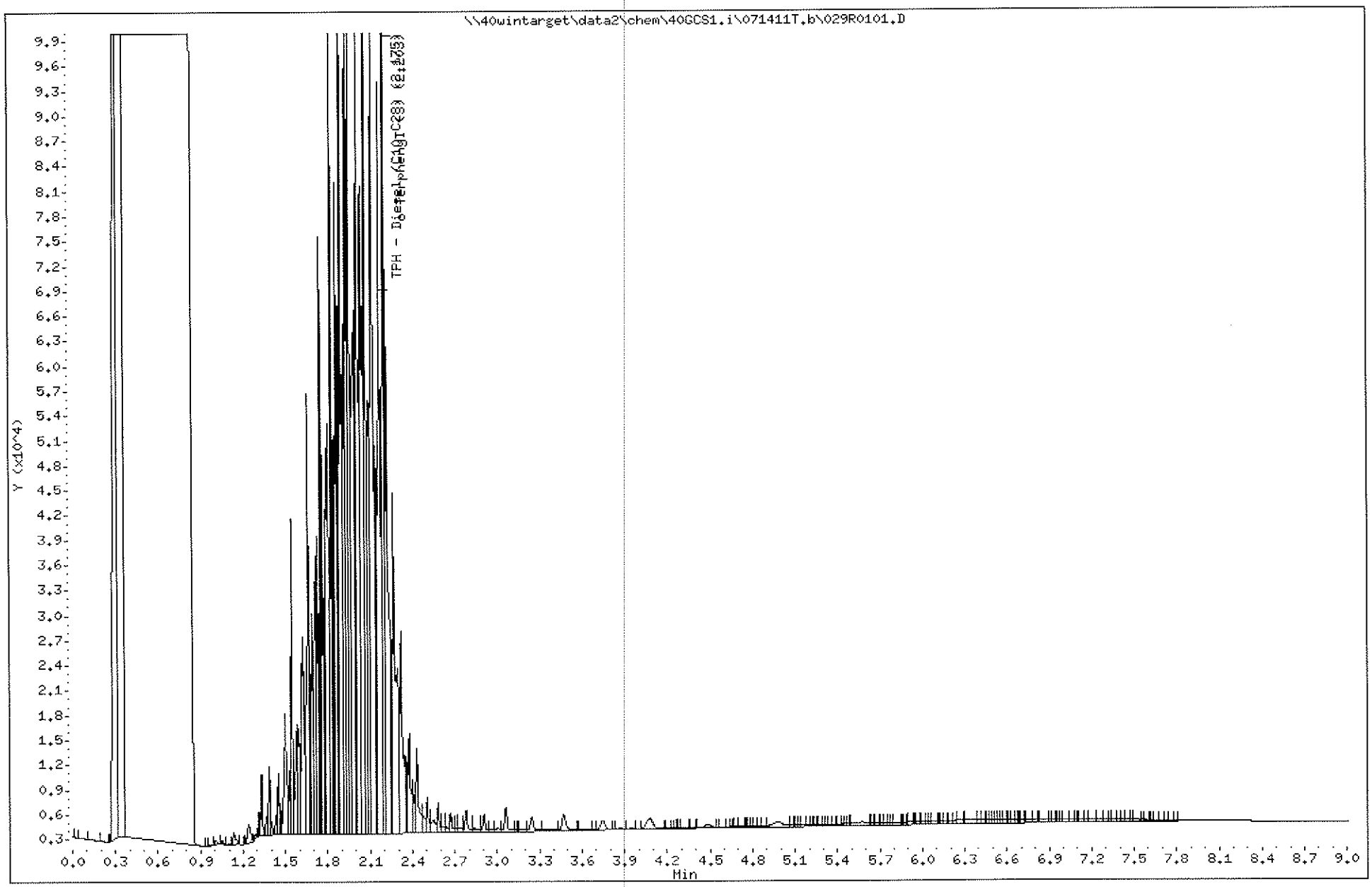
Instrument ID: 40GCS1.i Injection Date: 14-JUL-2011 16:32
Lab File ID: 029R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m

			CCAL	MIN		MAX	
COMPOUND	RRF / AMOUNT	RF500	RRF500	RRF	%D / %DRIFT	%D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	468	0.00025	0.000	-6.34532	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	-2.67611	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\029R0101.D
Date : 14-JUL-2011 16:32
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\029R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 14-JUL-2011 16:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 08-May-2012 07:00 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500	2.850		1989987	500.000	468.27
$ 15 o-Terphenyl (S)	2.203	2.196	0.007	256201	50.0000	51.37

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046716

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11766 **Prepared:** 07/10/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4046716001, 4047603001, 4047603002, 4047603003

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	07/14/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	07/14/11	
	TPH (C08-C40)	77.3	mg/kg	6.7	3.3	07/14/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	07/14/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	07/14/11	

Type	Sample	Matrix
BLANK	475612	Tissue

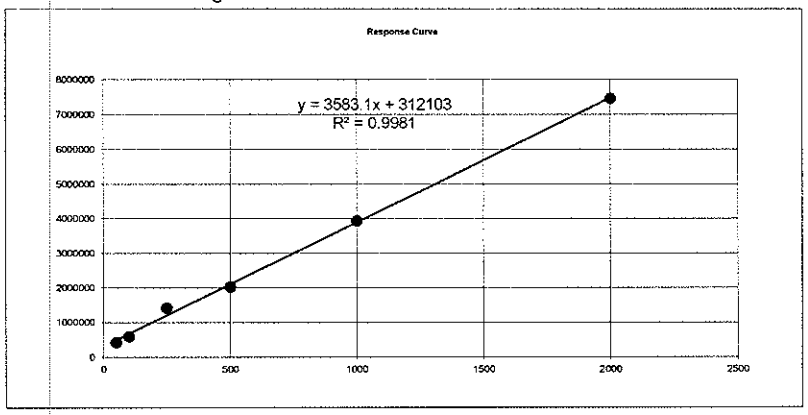
REPORT OF LABORATORY ANALYSIS

SampleID: 475612 File: 13R0101.D TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.957	113471	
2.070	100833	
2.130	63324	
2.837	184454	

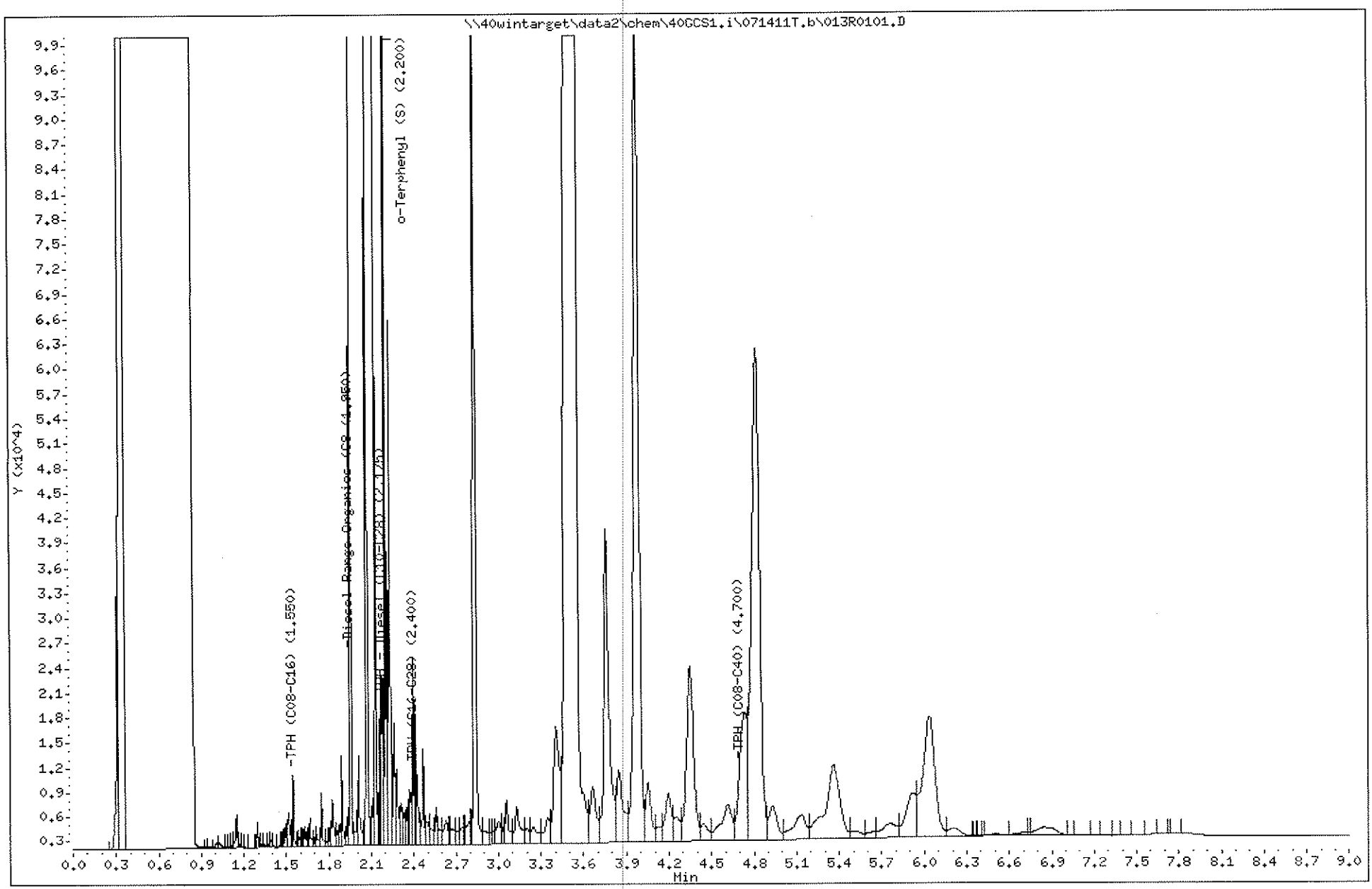
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	183008	113471	-67.6968
Diesel Range Organics (	737114	462082	-10.3461
TPH - Diesel (C10-C28)	727093	462082	-13.1428
TPH (C16-C28)	680711	462082	-26.0874
TPH (C08-C40)	4927299	462082	1159.075

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\013R0101.D
Date : 14-JUL-2011 10:14
Client ID: MB
Sample Info: 475612
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\013R0101.D
Lab Smp Id: 475612 Client Smp ID: MB
Inj Date : 14-JUL-2011 10:14
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 475612
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 14-May-2012 09:23 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 13 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.350			4927298	1288.04	85.86
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.950-2.850			680711	102.873	6.85
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			737113	118.614	7.90
S	8 TPH - Diesel (C10-C28)	1.500-2.850			727092	115.817	7.72
$	15 o-Terphenyl (S)	2.200	2.196	0.004	167955	33.6793	2.24

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\013R0101.D
Lab Smp Id: 475612 Client Smp ID: MB
Inj Date : 14-JUL-2011 10:14
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 475612
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 14-May-2012 09:23 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 13 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.317	34743	40136	1.155	0.00		
0.360	161464926	85044613	0.527	28.56		
0.373	398661304	85251013	0.214	70.15		
0.933	93	70	0.752	0.00		
0.953	243	201	0.826	0.00		
1.007	751	555	0.739	0.00		
1.030	669	523	0.782	0.00		
1.550	183008	375963	2.054	0.03	S	1 TPH (C08-C16)
1.950	737114	1162419	1.577	0.13	S	2 Diesel Range Organi
1.070	18	28	1.530			
1.100	64	84	1.302			
1.120	144	193	1.337			
1.147	3367	4086	1.213			
1.170	216	341	1.582			
1.183	126	189	1.498			
1.203	67	122	1.826			
1.240	45	55	1.209			
1.293	1802	3135	1.740			
1.323	247	423	1.713			
1.347	273	423	1.549			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.370	159	305	1.913			
1.390	735	877	1.194			
1.410	162	215	1.327			
1.447	156	222	1.419			
1.460	187	356	1.908			
1.477	271	494	1.826			
1.493	1981	2802	1.414			
2.175	727093	1148069	1.579	0.12	S	8 TPH - Diesel (C10-C
1.517	4098	4104	1.002			
1.537	1514	3295	2.176			
1.547	6143	8748	1.424			
1.580	265	442	1.666			
1.593	933	1179	1.263			
1.610	520	1020	1.960			
1.620	424	847	1.998			
1.633	1892	2496	1.319			
1.653	970	1631	1.682			
1.667	2487	3407	1.370			
1.703	778	1251	1.609			
1.713	1587	1421	0.895			
1.750	3837	6471	1.686			
1.787	430	580	1.349			
1.807	1707	2221	1.301			
1.827	5931	5755	0.970			
1.860	1448	1824	1.260			
1.880	2095	2772	1.323			
1.893	6398	10952	1.712			
1.933	2923	4665	1.596			
1.957	113471	277698	2.447			
2.003	5566	7959	1.430			
2.013	7569	10875	1.437			
2.050	1740	2816	1.619			
2.070	100833	176148	1.747			
2.097	2284	3532	1.547			
2.113	4550	5859	1.288			
2.130	63324	141125	2.229			
2.153	3664	7931	2.164			
2.163	11430	20502	1.794			
2.177	17613	20571	1.168			
2.233	38803	63208	1.629			
2.263	13498	14733	1.091			
2.280	9198	9170	0.997			
2.310	5673	5051	0.890			
2.330	4150	3996	0.963			
2.353	3834	4546	1.186			
2.370	4157	6477	1.558			
2.380	4081	6419	1.573			
2.393	13111	22729	1.734			
2.410	10126	17502	1.728			
2.427	7724	8542	1.106			
2.467	8636	11646	1.349			
2.490	4942	2763	0.559			
2.523	3310	1999	0.604			
2.560	4444	4637	1.043			
2.577	3514	1972	0.561			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.630	5249	2921	0.557				
2.653	1789	1809	1.011				
2.670	3928	1892	0.482				
2.717	2221	1614	0.727				
2.743	3393	2110	0.622				
2.757	1188	1985	1.671				
2.793	5094	2681	0.526				
2.803	2152	2720	1.264				
2.837	184454	204850	1.111				
2.200	167956	403736	2.404	0.02	$	15	o-Terphenyl (S)
2.400	680711	1082988	1.591	0.12	S	12	TPH (C16-C28)
4.700	4927299	2476957	0.503	0.87	S	5	TPH (C08-C40)
2.897	4766	1613	0.338				
2.947	1098	1387	1.263				
2.963	1742	1492	0.857				
3.003	5958	2759	0.463				
3.023	2316	2147	0.927				
3.057	9604	5305	0.552				
3.130	11864	4512	0.380				
3.200	4053	1863	0.460				
3.247	7137	2026	0.284				
3.347	8974	3068	0.342				
3.407	38571	14155	0.367				
3.553	2978107	953415	0.320				
3.667	21340	6795	0.318				
3.763	93259	37702	0.404				
3.850	29820	8817	0.296				
3.983	263631	104551	0.397				
4.053	19241	7200	0.374				
4.130	5242	1836	0.350				
4.197	18835	5799	0.308				
4.253	8732	2957	0.339				
4.350	74731	21198	0.284				
4.447	7813	2103	0.269				
4.617	23930	4390	0.183				
4.733	57816	15525	0.269				
4.823	236057	59080	0.250				
4.933	16756	4104	0.245				
5.137	19771	2967	0.150				
5.363	65082	8964	0.138				
5.507	4621	891	0.193				
5.650	2967	753	0.254				
5.760	12530	1699	0.136				
5.927	25778	5358	0.208				
6.040	88928	14535	0.163				
6.213	6107	1028	0.168				
6.343	29	74	2.596				
6.357	69	73	1.064				
6.373	76	79	1.042				
6.400	110	80	0.730				
6.420	91	79	0.864				
6.500	1311	186	0.142				
6.597	34	87	2.551				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.733	1867	371	0.199		
6.750	375	379	1.010		
6.847	8536	935	0.110		
7.063	42	9	0.216		
7.267	12	7	0.603		
7.427	44	17	0.390		
7.637	65	20	0.310		
7.660	130	39	0.301		
7.810	224	109	0.486		
	565257984	173217804		100.000	

Total unknown % area = 98.71

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Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11767 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4046716001, 4047603001, 4047603002, 4047603003

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.43	%			07/12/11	

Type	Sample	Matrix
BLANK	475616	Tissue

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11766
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/10/11
LCSD Prepared:

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	61			50-150		66.7	40.8		mg/kg	07/14/11			
TPH (C08-C16)	36			50-150		66.7	23.9		mg/kg	07/14/11		L0	
TPH (C08-C40)	175			50-150		66.7	116		mg/kg	07/14/11		2q	
TPH (C16-C28)	28			50-150		66.7	18.7		mg/kg	07/14/11		L0	
TPH - Diesel (C10-C28)	59			50-150		66.7	39.3		mg/kg	07/14/11			

Type	Sample
LCS	475613

REPORT OF LABORATORY ANALYSIS

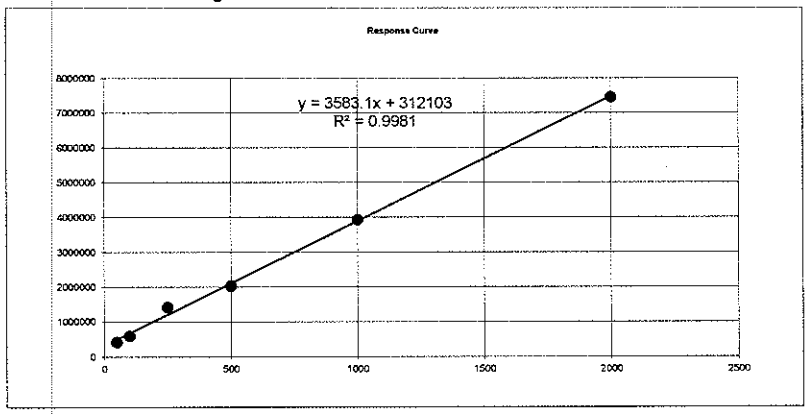
SampleID: 475613 File: 12R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.957	262476	
2.067	273210	
2.130	161754	
2.833	176113	

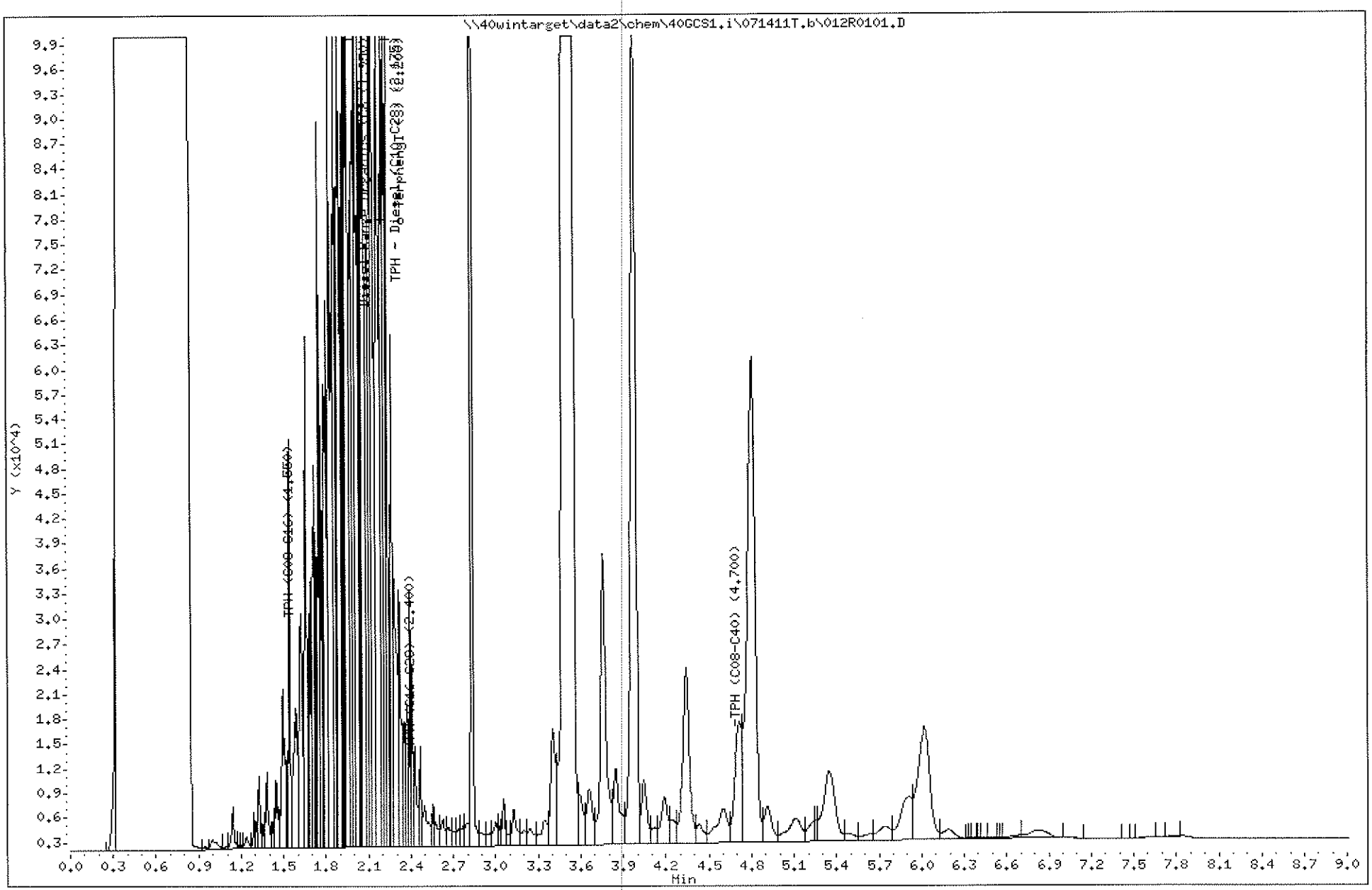
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	1859660	262476	358.6477
Diesel Range Organics (	3380462	873553	612.539
TPH - Diesel (C10-C28)	3298016	873553	589.5295
TPH (C16-C28)	2188941	873553	280.0024
TPH (C08-C40)	7439172	873553	1745.267

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\012R0101.D
Date : 14-JUL-2011 10:02
Client ID: MBLCS
Sample Info: 475613
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\012R0101.D
Lab Smp Id: 475613 Client Smp ID: MBLCS
Inj Date : 14-JUL-2011 10:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 475613
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 14-May-2012 09:23 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 12 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.350			7439171	1989.06	132.60
S	1 TPH (C08-C16)	1.050-2.049			1859660	431.901	28.79
S	12 TPH (C16-C28)	1.950-2.850			2188941	523.799	34.91
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			3380462	856.335	57.08
S	8 TPH - Diesel (C10-C28)	1.500-2.850			3298015	833.325	55.55
$	15 o-Terphenyl (S)	2.200	2.196	0.004	196924	39.4883	2.63

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\012R0101.D
Lab Smp Id: 475613 Client Smp ID: MBLCS
Inj Date : 14-JUL-2011 10:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 475613
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 14-May-2012 09:23 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 12 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.317	39163	42819	1.093	0.00		
0.357	559866478	87539922	0.156	96.79		
0.943	752	349	0.464	0.00		
0.997	3144	1035	0.329	0.00		
1.550	1859660	2293740	1.233	0.32	S	1 TPH (C08-C16)
1.950	3380462	4045966	1.197	0.59	S	2 Diesel Range Organi
1.093	403	286	0.710			
1.140	6287	4976	0.792			
1.177	332	433	1.306			
1.200	261	353	1.355			
1.237	2384	1330	0.558			
1.290	3157	4403	1.395			
1.307	2272	3244	1.428			
1.323	7201	8700	1.208			
1.360	2835	2972	1.048			
1.380	11329	9245	0.816			
1.427	2787	3444	1.236			
1.443	11615	8297	0.714			
1.493	31585	19272	0.610			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.175	3298016	3979011	1.206	0.58	S	8 TPH - Diesel (C10-C
1.523	3943	10163	2.577			
1.543	37091	49086	1.323			
1.573	33575	15071	0.449			
1.620	45082	28289	0.627			
1.660	56623	61556	1.087			
1.677	13408	24796	1.849			
1.687	23940	32071	1.340			
1.710	37577	38507	1.025			
1.723	28405	45925	1.617			
1.737	18129	34880	1.924			
1.747	48882	87226	1.784			
1.760	48495	57382	1.183			
1.780	27521	40505	1.472			
1.807	80755	65760	0.814			
1.823	160477	139383	0.869			
1.860	89145	98349	1.103			
1.880	42772	79382	1.856			
1.893	120136	152755	1.272			
1.913	40937	76896	1.878			
1.923	45674	88159	1.930			
1.933	106508	140969	1.324			
1.957	262476	392341	1.495			
1.987	90531	82445	0.911			
1.997	83277	88437	1.062			
2.013	158893	184866	1.163			
2.040	72962	111586	1.529			
2.053	49792	86898	1.745			
2.067	273210	361270	1.322			
2.093	56944	72512	1.273			
2.117	133031	144593	1.087			
2.130	161754	242958	1.502			
2.167	193629	132610	0.685			
2.217	95472	102883	1.078			
2.233	69284	111899	1.615			
2.257	34740	37155	1.070			
2.267	36737	61574	1.676			
2.280	59098	32956	0.558			
2.317	40620	30927	0.761			
2.350	13518	15123	1.119			
2.370	16736	17314	1.035			
2.393	20035	30657	1.530			
2.410	13923	21833	1.568			
2.427	16024	12228	0.763			
2.467	10001	12209	1.221			
2.497	12335	4997	0.405			
2.557	5326	5138	0.965			
2.577	5188	2952	0.569			
2.627	6888	3313	0.481			
2.663	5265	2331	0.443			
2.700	2798	1759	0.629			
2.740	3562	2105	0.591			
2.770	3503	2365	0.675			
2.800	5277	2807	0.532			
2.833	176113	196860	1.118			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.200	196925	444521	2.257	0.03	$ 15 o-Terphenyl (S)
2.400	2188941	2611901	1.193	0.38	S 12 TPH (C16-C28)
4.700	7439172	5363583	0.721	1.31	S 5 TPH (C08-C40)
2.893	4731	1667	0.352		
2.960	3111	1498	0.482		
3.000	5563	2808	0.505		
3.020	2465	2304	0.935		
3.057	8204	5669	0.691		
3.087	1997	1457	0.729		
3.127	10627	4339	0.408		
3.197	4624	1819	0.393		
3.240	6335	2080	0.328		
3.343	9589	3037	0.317		
3.400	33247	14104	0.424		
3.547	2894695	953108	0.329		
3.590	12837	6066	0.473		
3.660	19471	6660	0.342		
3.757	92031	34906	0.379		
3.843	29351	9093	0.310		
3.977	246983	102663	0.416		
4.043	20501	7743	0.378		
4.117	5350	1893	0.354		
4.190	17981	5607	0.312		
4.240	8428	2822	0.335		
4.340	70027	21187	0.303		
4.433	8104	2270	0.280		
4.600	23012	4019	0.175		
4.717	50887	14603	0.287		
4.807	224218	58285	0.260		
4.910	17071	4238	0.248		
5.110	19085	2767	0.145		
5.243	8321	2508	0.301		
5.257	2029	2550	1.257		
5.343	50206	8477	0.169		
5.483	4638	933	0.201		
5.650	3857	737	0.191		
5.747	10201	1601	0.157		
5.907	28711	5114	0.178		
6.017	81566	13672	0.168		
6.190	6506	1115	0.171		
6.320	64	62	0.970		
6.343	81	60	0.744		
6.373	122	59	0.482		
6.393	47	63	1.352		
6.410	72	82	1.136		
6.460	344	147	0.428		
6.477	502	152	0.303		
6.537	95	75	0.793		
6.563	45	60	1.325		
6.697	1518	326	0.215		
6.813	8372	905	0.108		
7.023	187	36	0.192		
7.430	19	10	0.521		
7.627	232	41	0.177		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.800	449	120	0.267		
	567545633	93392229		100.000	

Total unknown % area = 96.79

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

MATRIX SPIKE SAMPLE RESULTS

Project: FISH
Pace Project No.: 4046716

QB Batch: OEXT/11766
Method(s): EPA 3541 / EPA 8015B Modified

MS Prepared: 07/10/11
MSD Prepared: 07/10/11

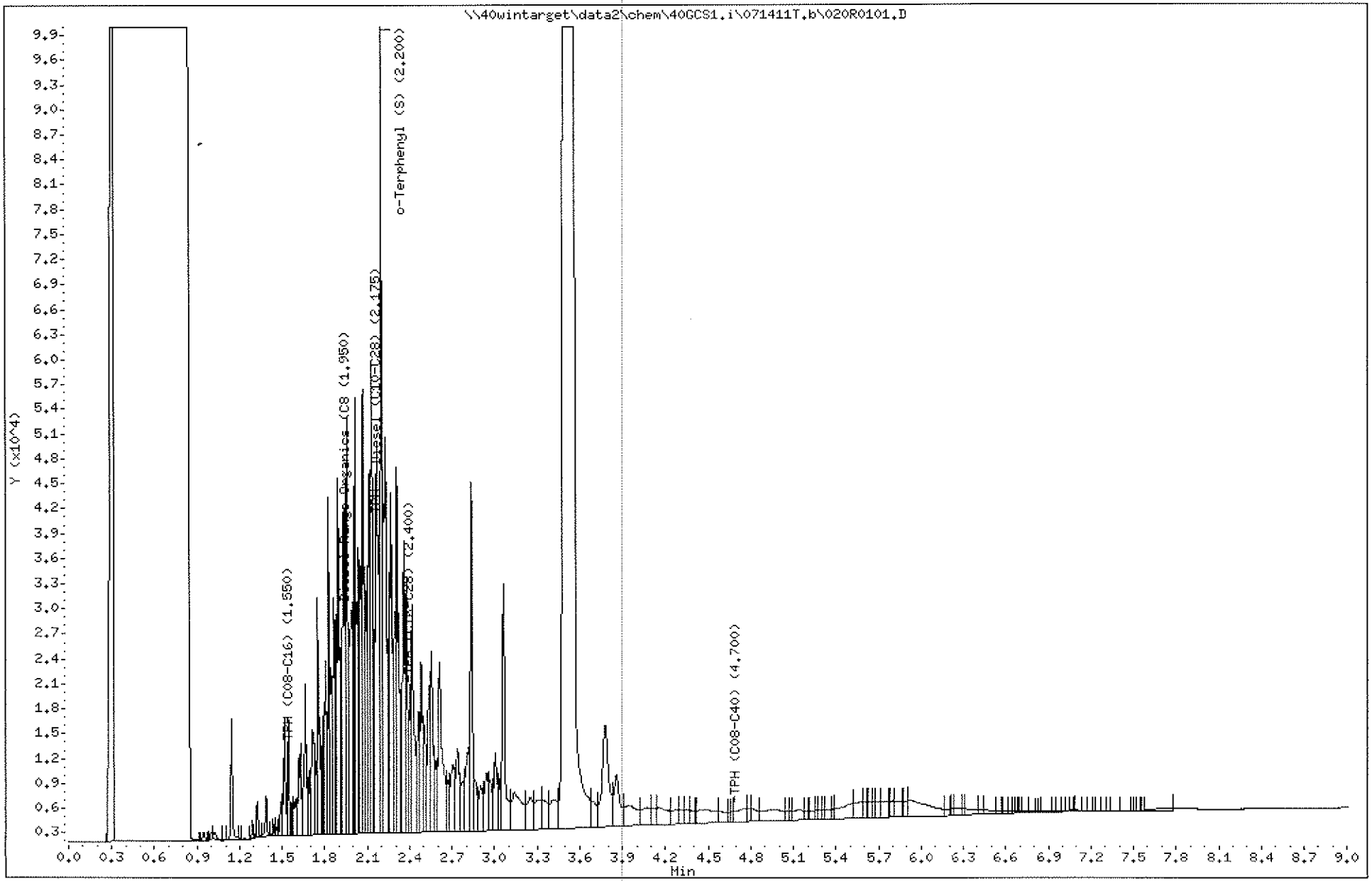
Analyte	Units	Sample Conc	Spike Conc MS	Spike Conc MSD	Result MS	Result MSD	Dilution MS	Dilution MSD	% Recovery MS	% Recovery MSD	QC Limits %Recovery	QC Limits RPD	Max RPD	Analyzed Date MS	Analyzed Date MSD	Qualifier(s) MS	Qualifier(s) MSD
Diesel Range Organics (C8-C28)	mg/kg	25.9J	66.7	66.7	83.6	64.0	4	4	87	57	50-150	27	20	07/14/11	07/14/11		D6
TPH (C08-C16)	mg/kg	<13.3	66.7	66.7	17.3J	<13.3	4	4	26	17	50-150		20	07/14/11	07/14/11	M0	M0
TPH (C08-C40)	mg/kg	284	66.7	66.7	318	258	4	4	50	-39	50-150	21	20	07/14/11	07/14/11		1q,D6
TPH (C16-C28)	mg/kg	19.0J	66.7	66.7	56.1	40.9	4	4	56	33	50-150	31	20	07/14/11	07/14/11		D6,M0
TPH - Diesel (C10-C28)	mg/kg	24.4J	66.7	66.7	81.6	62.4	4	4	86	57	50-150	27	20	07/14/11	07/14/11		D6

Type	Sample	Client Sample ID
MS	475614	EWL-T-02-F-COMPOSITE_BLU
MSD	475615	EWL-T-02-F-COMPOSITE_BLU

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\020R0101.D
Date : 14-JUL-2011 14:46
Client ID: EWL-T-02-F-COMPOSIT
Sample Info: 475614X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\020R0101.D
Lab Smp Id: 475614 Client Smp ID: EWL-T-02-F-COMPOSIT
Inj Date : 14-JUL-2011 14:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 475614X4
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 08-May-2012 07:00 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 20 QC Sample: MS
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

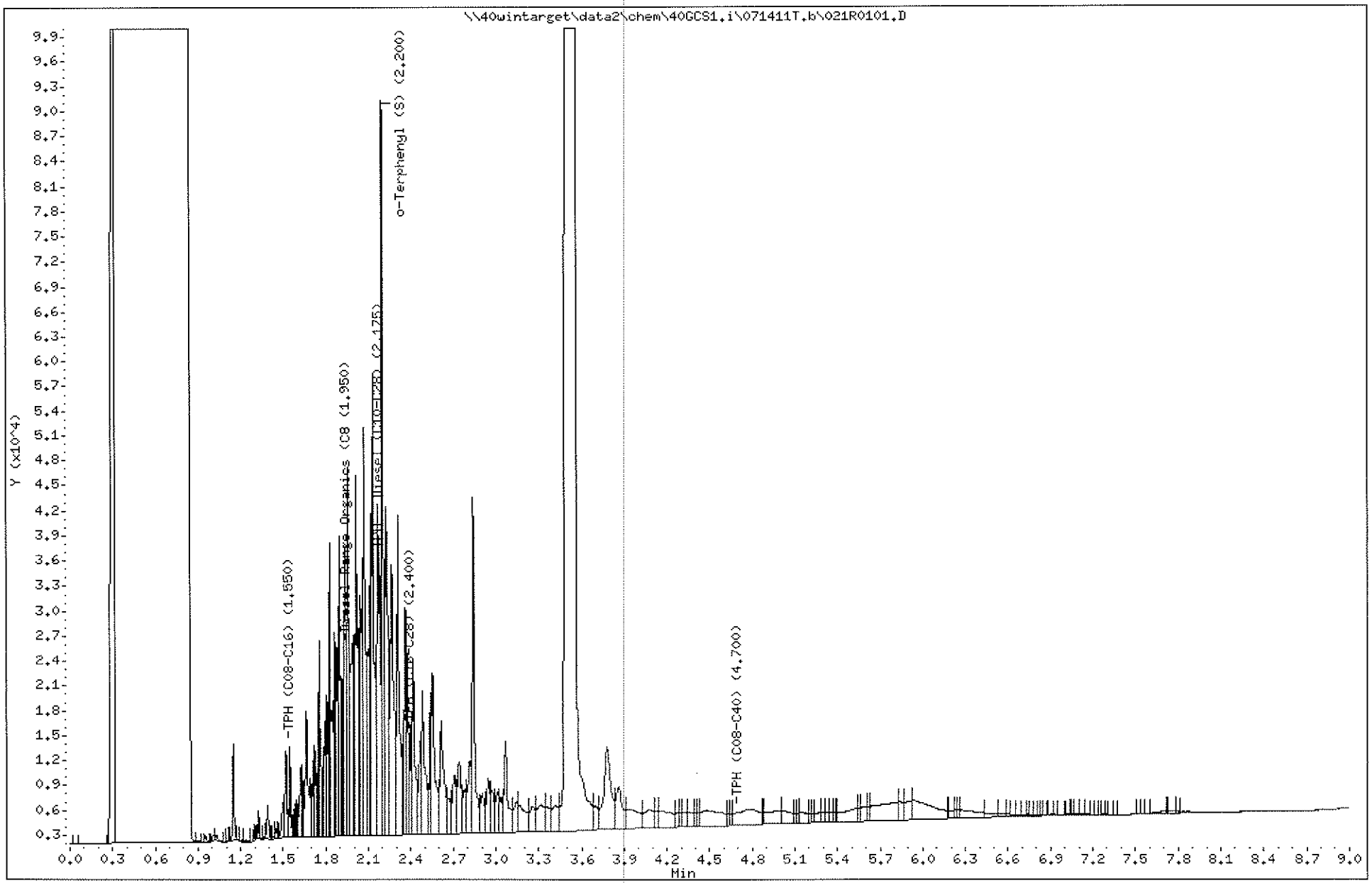
						CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.350			4578908	1190.80	317.54
S	1 TPH (C08-C16)	1.050-2.049			543943	64.7031	17.25(a)
S	12 TPH (C16-C28)	1.950-2.850			1066062	210.419	56.11
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			1435517	313.529	83.60
S	8 TPH - Diesel (C10-C28)	1.500-2.850			1408292	305.931	81.58
$	15 o-Terphenyl (S)	2.200	2.196	0.004	85035	17.0517	1.13

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\071411T.b\021R0101.D
Date : 14-JUL-2011 14:56
Client ID: EWL-T-02-F-COMPOSIT
Sample Info: 475615X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071411T.b\021R0101.D
Lab Smp Id: 475615 Client Smp ID: EWL-T-02-F-COMPOSIT
Inj Date : 14-JUL-2011 14:56
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 475615X4
Misc Info : 6157
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071411T.b\TPH.m
Meth Date : 08-May-2012 07:00 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 21 QC Sample: MSD
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.350			3775158	966.489	257.73
S 1 TPH (C08-C16)	1.050-2.049			461854	41.7933	11.14(a)
S 12 TPH (C16-C28)	1.950-2.850			861322	153.279	40.87
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			1171482	239.840	63.95
S 8 TPH - Diesel (C10-C28)	1.500-2.850			1150993	234.122	62.43
$ 15 o-Terphenyl (S)	2.200	2.196	0.004	58326	11.6959	0.77

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

06 Jul 11 04:13 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	PRIME				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	WINDOW CHECK				TPHMACHB	1
1	5	2000 2860-31-01				TPHMACHB	1
1	6	1000 2860-31-02				TPHMACHB	1
1	7	500 2860-31-14				TPHMACHB	1
1	8	250 2860-30-13				TPHMACHB	1
1	9	100 2860-30-14				TPHMACHB	1
1	10	50 2860-30-15				TPHMACHB	1
1	11	IC500 2860-30-16-DK				TPHMACHB	1
1	12	463500RSX2				TPHMACHB	1
1	13	463499				TPHMACHB	1
1	14	463501RSX2				TPHMACHB	1
1	15	4046758001RSX2				TPHMACHB	1
1	16	4046758002RSX3	TPH·B GCSV 60027 HBN 74586			TPHMACHB	1
1	17	4046758003RSX4				TPHMACHB	1
1	18	4046758004RSX4				TPHMACHB	1
1	19	4046758005RSX3				TPHMACHB	1
1	20	4046758006RSX5				TPHMACHB	1
1	21	4046758007RSX2				TPHMACHB	1
1	22	4046758008RSX2				TPHMACHB	1
1	23	4046758009RSX3				TPHMACHB	1
1	24	463500X2				TPHMACHB	1
1	25	463501X2				TPHMACHB	1
1	26	4046758001X2				TPHMACHB	1
1	27	4046758002X3				TPHMACHB	1
1	28	4046758003X4				TPHMACHB	1
1	29	4046758004X4				TPHMACHB	1
1	30	4046758005X3				TPHMACHB	1
1	31	4046758006X5				TPHMACHB	1
1	32	4046758007X2				TPHMACHB	1
1	33	4046758008X2				TPHMACHB	1
1	34	4046758009X3				TPHMACHB	1
1	35	BLANK				TPHMACHB	1
1	36	BLANK				TPHMACHB	1
1	37	BLANK				TPHMACHB	1
1	38	CC500 2860-31-14-PA				TPHMACHB	1
1	39	463496RSX3				TPHMACHB	1
1	40	463495				TPHMACHB	1
1	41	463497				TPHMACHB	1
1	42	463498				TPHMACHB	1
1	43	4046733013	TPH·B GCSV 60002 HBN 74185			TPHMACHB	1
1	44	4046733001				TPHMACHB	1
1	45	4046733002				TPHMACHB	1
1	46	4046733003				TPHMACHB	1
1	47	4046733004				TPHMACHB	1
1	48	4046733005				TPHMACHB	1
1	49	4046733006				TPHMACHB	1
1	50	4046733007				TPHMACHB	1
1	51	4046733008				TPHMACHB	1

KHB 7/7/11

Continued on Page 58

Read and Understood By

K H Burns 7/7/11
Signed Date

Signed 7/7/11
Date

06 Jul 11 04:13 PM
Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4046733009				TPHMACHB	1
1	53	4046733010				TPHMACHB	1
1	54	4046733011				TPHMACHB	1
1	55	4046733012				TPHMACHB	1
1	56	4046733016				TPHMACHB	1
1	57	4046733017				TPHMACHB	1
1	58	4046733018				TPHMACHB	1
1	59	4046733019				TPHMACHB	1
1	60	BLANK				TPHMACHB	1
1	61	BLANK				TPHMACHB	1
1	62	BLANK				TPHMACHB	1
1	63	CC500 2860-31-14AA				TPHMACHB	1
REAR 1							

KHB 7/7/11

KHB 7/7/11

Continued on Page —

Read and Understood By

KHB Burns — Signed — 7/7/11 — Date

Signed — 7/7/11 — Date

14 Jul 11 05:02 PM
Sequence: C:\HPCHEM\1\SEQUENCE\071411.SEQ

page 1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	CC500 2860-31-14 -OK				TPHMACHB	1
1	5	4047838001X20				TPHMACHB	1
1	6	4047838002X8				TPHMACHB	1
1	7	4047838003X6				TPHMACHB	1
1	8	4047838006X10				TPHMACHB	1
1	9	4047838009X8				TPHMACHB	1
1	10	BLANK				TPHMACHB	1
1	11	CC500 2860-31-14-OK				TPHMACHB	1
1	12	475613				TPHMACHB	1
1	13	475612				TPHMACHB	1
1	14	475614 RSV4				TPHMACHB	1
1	15	475615 RSV4				TPHMACHB	1
1	16	4047603001 RSV4				TPHMACHB	1
1	17	4047603002 RSV6				TPHMACHB	1
1	18	4047603003 RSV9				TPHMACHB	1
1	19	4046716001 RSV4				TPHMACHB	1
1	20	475614X4				TPHMACHB	1
1	21	475615X4				TPHMACHB	1
1	22	4047603001X4				TPHMACHB	1
1	23	4047603002X6				TPHMACHB	1
1	24	4047603003X9				TPHMACHB	1
1	25	4046716001X4				TPHMACHB	1
1	26	BLANK				TPHMACHB	1
1	27	BLANK				TPHMACHB	1
1	28	BLANK				TPHMACHB	1
1	29	CC500 2860-31-14-OK				TPHMACHB	1
REAR							
1							

TPH.S
GCSV 6112
HBN 75685

TPH.B
GCSV
6157
HBN
76237

KHB 7/15/11

KHB 7/15/11

Continued on Page —

Read and Understood By

Kris H Burns — Signed — 7/15/11 — Date

Signed — Date 7/15/11

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 75889 TPH-B

Prep Method	EPA 3541	Analysis Method	TPH-B	Extracted By	BLM	Extracted By Date	07/10/2011
Spiked By	BLM	Spiked By Date	07/10/2011	Conc. Temp #1	98.5	Conc. Temp #2	98.5
Methylene Chloride	11278	Sodium Sulfate	7513	Florisil 3620B	5238	3620B Date/Initials	7/13/11 BLM
Batch Notes		Reviewed By	DAL	Reviewed By Date	07/13/2011		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**475612**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**475613**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	MS	**475614**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	MSD	**475615**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4046716001**	8.792	1	0.5			6045 (.5)
8015 T_P	PS	**4047603001**	15	1	0.5	PAR		6045 (.5)
8015 T_P	PS	**4047603002**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4047603003**	15	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Wed, 13 Jul 2011 15:11:24 -0500

Pace Analytical Services					Instrument ID:	40BALC				
LIPID					Analyst:	BLM				

11767

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
475616		0.9534	0.9697	15.0000	4.0000	1.0000	0.4347	07/12/2011 09:22:43		
4046716001		0.9364	0.9534	8.7920	4.0000	1.0000	0.7734	07/12/2011 09:22:50		
4047603001		0.9643	1.0331	15.0000	4.0000	1.0000	1.8347	07/12/2011 09:22:56		
475617		0.9665	1.0378	15.0000	4.0000	1.0000	1.9013	07/12/2011 09:23:02	4047603001	3.56887937
4047603002		0.9654	0.9954	15.0000	4.0000	1.0000	0.8000	07/12/2011 09:23:10		
4047603003		0.9570	0.9909	15.0000	4.0000	1.0000	0.9040	07/12/2011 09:23:16		

Approved by CAH 7/12/11

PROJECT ______ Notebook No. ______

Continued From Page ______

9/28/10
2860-16-01 500 ul of 4000 ppm SV IS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11

9/30/10
2860-16-02 500 ul of 4000 ppm SV IS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR

10/4/10
2860-16-03 500 ul of 4000 ppm SV IS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10
2860-16-04 50 ul of 4000 ppm SVIS (2713-90G) up to 100 ml CH_2Cl_2 20 ppm WPAH IS RDW 10/6/10 Exp 10/6/11

10/06/10
2860-16-05 500 ul of 4000 ppm SV IS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11

10-7-10
2860-16-06 250 uls of 2860-09-04 diluted to 1.0 ml w nanopure H_2O SHI 50 ppm
2860-16-07 2500 ul of 10,000 mg/L O-terphenyl (2713-86) diluted to 250 ml with CH_2Cl_2 (2712-62) = 100 ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10-12-10

* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR

10/8/10
2860-16-08 500 ul of 4000 ppm SV IS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000 ul of 5000 ug/ml B/N Surr (2713-51C) +
2860-16-09 5000 ul of 7500 ug/ml Acid Surr (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50 ug/ml ~~B/N~~ SKW Surr. 8270 SKW Ran on Inst. by 10MSS1 File# 1012T008

10/13/10
2860-16-10 500 ul of 4000 ppm SV IS (2713-90I) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11

2860-16-11 ~~20~~ 40 ul (RDW 10/13/10) of 5000 ppm N-NDMA (2713-11B) up to 1.0 ml CH_2Cl_2 200 ppm MDL STD Ex 7/13/11 RDW 10/13/10

~~10/18/10~~ ~~500~~ (ARO 10/18/10)

Continued on Page

Read and Understood By

[signature] 10/18/10 Valerie M Ringquin 10/18/2010

Signed Date Signed Date

11/24/10

2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH_2Cl_2 2000ppm SPAH IS FE 11/24/10 KM 11/24

11/29/10 CH_2Cl_2 changed at 8:00 to lot 2712-73 vmr

11/30/10

2860-22-02 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40MSS4 120105.d

12/1/2010

2860-22-06 1 ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on inst by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%

12-2-10

2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Acetone/MeOH 50%

" " -08 25uls of 2860-10-11 " " " " 500ppm

12/03/10

2860-22-09 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 50ul of 4000ppm SVIS (2945-06D) up to 10.0ml CH_2Cl_2 20ppm w/ PAH-IS Ft 12/3/11 KM 12/6

2860-22-11 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10

2860-22-12 400ul of 16,000 ppm EROTO (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renquin — Signed — 12/7/10 — Date

Signed — 12/8-2/10 — Date

PROJECT Continued From Page

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MeOH spike) → 1.0mL [Final] = 500 ug/mL ex 7-9-11 DRL

2/24/11 changed CH_2Cl_2 @ 10:00AM to NewLOT (2712-085) KPM

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVIS (~~2945-03~~ 2945-03C 4/6/11 KPM) diluted to 100mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SVIS KPM Exp 8/25/11 KPM
Ran on instr by RJN file # 40mss4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) up to 1.0mL CH_2Cl_2 2000ppm SPAH IS Ex 2/28/12 RJN 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) up to 1.0mL CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RJN 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100ul of 5000ppm B/N SS (2945-20H) up to 10.0mL CH_2Cl_2 50ppm PAH Ex 7/13/11 RJN 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) up to 1.0mL CH_2Cl_2 25ppm PAH CAL Ex 7/13/11 RJN 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0mL	.05
12	0.200	1.0mL	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7uL of 150ppm B/N SS (2860-27-01) up to 1.0mL CH_2Cl_2 / 2ppm PAH 2nd Source Ex 9/2/11 RJN 3/2/11

2860-29-14 500uL of 4000 ppm SVIS (2945-17G) diluted to 1.0mL w/ CH_2Cl_2 = 2000 ppm SPAH IS ~~AVG~~ exp 2/28/12

3/3/2011

2860-29-15 2500uL of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50mL with CH_2Cl_2 = 1000ppm Ranon inst by ~~DAT~~ file # GC (VMR) Exp 3/3/2012 VMR

VMR 3/3/2011 OK to use per GC Ranon inst 3/8/11 VMR

40GCSF.i / 0307116.b - File 01 of 1001. Read and Understood By Recovery = 106% GC 3/9/11

Continued on Page

Valerie M Renquin 3/3/2011 Signed Date

Signed Date 3/7/11

3-4-11

2860-30-01 50 uL of 2380-100-01 (TPH @ 2000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5-6-11 DAR

TPH ICAL

2860-30-02 500 uL of 2713-46D (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3-4-12 DAR

2860-30-03 500 uL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 uL = 500 ug/mL
2860-30-05 125 uL = 250 ug/mL
2860-30-06 50 uL = 100 ug/mL
2860-30-07 25 uL = 50 ug/mL

→ Use only 1.0 mL of 2860-30-02

All standards + 5 uL ~~2945-13B~~ 2713-99D (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All standard Exp 2-22-12 DAR

TPH ICV

2860-30-08 10 uL of ~~2945-23A~~ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 uL ~~2945-13B~~ 2713-99D (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2-22-12 DAR

2860-30-09 25 uls of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JHI

3-7-11

2860-30-10 1.0 mL of 2860-30-02 + 5 uL 2713-99D (o-terp @ 10,000 ug/mL) = 2000 ug/mL + 50 ug/mL
2860-30-11 500 uL of → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 uL = 500 ug/mL
2860-30-13 125 uL = 250 ug/mL
2860-30-14 50 uL = 100 ug/mL
2860-30-15 25 uL = 50 ug/mL

→ Plus 5 uL 2713-99D (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3-4-11~~ DAR 5-6-11 GC

2860-30-16 10 uL of 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 uL 2713-99D (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3-4-11~~ DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

[signature] 3-7-11 Valerie M Renquin 3/24/11
Signed Date Signed Date

PROJECT

3.7.11

2860-31-01 100 µL of 2713-460D (#2 Diesel Fuel @20,000 µg/mL) → 1.9 mL CH_2Cl_2 + 5 µL 2713-990 (o-terp @10,000 µg/mL)
[Final] = 2000 + 50 µg/mL Exp 3.4.12 DAR

2860-31-02 50 µL of 2713-460D (#2 Diesel Fuel @20,000 µg/mL) →
1.0 mL CH_2Cl_2 + 5 µL 2713-990 (o-terp @10,000 µg/mL)
[Final] = 1000 + 50 µg/mL Exp 3.4.12 DAR

2860-31-03 25 µL of 2860-10-19 diluted to 1.0 mL w 50/50 MeOH/H_2O SHI 500 ppm ✓

2860-31-04 300 µL of 4000 ppm SVIS (2945-17J) diluted to
1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 µL of 2860-10-11 diluted to 1.0 mL w 50/50 MeOH H_2O SHI 1000 ppm

-06	25 µL of 2860-31-05 diluted to 1.0 mL w	25 ppm SHI
-07	100	100
-08	250	250
-09	500	500
-10	750	750 SHI

3.14.11

2860-31-11 1.0 mL of 100 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 µL 2713-28E (#2 Diesel @20,000 µg/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 µg/mL EXP 1-10-12 DAR

3/15/11

2860-31-13 500 µL of 4000 ppm SVIS (2945-17J) up to 1.0 mL CH_2Cl_2 2000 ppm 1X HHS-IS Ex 3/15/12 RW 3/16/11

3.17.11 TPH CCV

2860-31-14 100 µL of 2945-23B (Diesel Fuel #2 @50,000 µg/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 µg/mL + 50 µL 2713-990 (o-terphenyl @10,000 µg/mL)
[Final] = 50 µg/mL Exp 3.4.12 DAR

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Signed Valerie M Pangilinan Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046733

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4046733

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4046733001	EWL-TR-01-C-MEAT	Tissue	12/15/10 11:26	06/08/11 10:00
4046733002	EWL-T-01A-C-MEAT	Tissue	12/15/10 12:37	06/08/11 10:00
4046733003	EWL-TR-02-C-MEAT	Tissue	01/03/11 10:16	06/08/11 10:00
4046733004	EWL-TR-03-C-MEAT	Tissue	01/03/11 10:36	06/08/11 10:00
4046733005	EWL-TR-03A-C-MEAT	Tissue	12/14/10 00:00	06/08/11 10:00
4046733006	EWL-TR-04-C-MEAT	Tissue	01/03/11 11:50	06/08/11 10:00
4046733007	EWL-TR-05-C-MEAT	Tissue	12/14/10 00:00	06/08/11 10:00
4046733008	EWL-TR-06-C-MEAT	Tissue	12/14/10 00:00	06/08/11 10:00
4046733009	EWL-TR-07-C-MEAT	Tissue	12/14/10 00:00	06/08/11 10:00
4046733010	EWL-TR-08-C-MEAT	Tissue	12/14/10 00:00	06/08/11 10:00
4046733011	EWL-TR-09-C-MEAT	Tissue	12/14/10 00:00	06/08/11 10:00
4046733012	EWL-T-01-C-MEAT	Tissue	12/20/10 12:36	06/08/11 10:00
4046733013	EWL-T-02-C-MEAT	Tissue	12/21/10 11:04	06/08/11 10:00
4046733016	EWL-T-04-C-MEAT	Tissue	12/20/10 12:22	06/08/11 10:00
4046733017	EWL-T-05-C-MEAT	Tissue	12/21/10 10:33	06/08/11 10:00
4046733018	EWL-T-06-C-MEAT	Tissue	12/16/10 12:15	06/08/11 10:00
4046733019	EWL-T-08-C-MEAT	Tissue	01/03/11 11:05	06/08/11 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4046733
Client: URS CORPORATION
Project Name: EAST WHITE LAKE
Project Number: K1100344

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.

B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.

C. **Surrogates:** All in-house acceptance criteria were met. The recovery of the LCS was below control criteria and the "S0" applied. Surrogate recoveries that were below control criteria with no sample mass available for re-extraction were reported with the "4q" data qualifier. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.

D. **Spikes:**
   1. **Lab Control Spike (LCS):** All in-house accuracy criteria were not met for TPH (C10-C28) and samples reported with the "L2" data qualifier. The recovery of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS; the "L0" data qualifier applied to summary. The recovery of TPH (C08-C40) was above control criteria in the LCS due to large lipid peak eluting around C34 and the summary was reported with the "2q" data qualifier.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** Sample EWL-T-02-C-MEAT was designated as the matrix spike / matrix spike duplicate for this SDG. The in-house accuracy and precision criteria were met for TPH (C10-C28). The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used and "M0" and "D6" data qualifiers applied. The recovery of TPH (C08-C40) was outside control criteria in the MSD due to large lipid peak in the sample eluting around C34 and the "1q" data qualifier was applied.

E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** None required for this SDG.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 05/29/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4046733

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4046733001	EWL-TR-01-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733002	EWL-T-01A-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733003	EWL-TR-02-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733004	EWL-TR-03-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733005	EWL-TR-03A-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733006	EWL-TR-04-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733007	EWL-TR-05-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733008	EWL-TR-06-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733009	EWL-TR-07-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733010	EWL-TR-08-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733011	EWL-TR-09-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733012	EWL-T-01-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733013	EWL-T-02-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733016	EWL-T-04-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733017	EWL-T-05-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733018	EWL-T-06-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046733019	EWL-T-08-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4046733

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6002

[1]	The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

1q	Analyte recovery in the Matrix Spike (MS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
4q	Surrogate recovery outside of the laboratory control limits. Insufficient sample volume received to re-extract and re-analyze. Results reported and flagged accordingly.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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CERTIFICATIONS

Project: CRABS
Pace Project No.: 4046733

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

4046733

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Coutact: Lynda Huckestein

Project Number: K1100344
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100344-001	EWL-TR-01-C-MEAT	1	Animal Tissue	12/15/10	1126	Gulf Coast Analytica	X	1 - 001
K1100344-002	EWL-TR-01A-C-MEAT	1	Animal Tissue	12/15/10	1237	Gulf Coast Analytica	X	2 - 002
K1100344-003	EWL-TR-02-C-MEAT	1	Animal Tissue	1/3/11	1016	Gulf Coast Analytica	X	3 - 003
K1100344-004	EWL-TR-03-C-MEAT	1	Animal Tissue	1/3/11	1036	Gulf Coast Analytica	X	4 - 004
K1100344-005	EWL-TR-03A-C-MEAT	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	5 - 005
K1100344-006	EWL-TR-04-C-MEAT	1	Animal Tissue	1/3/11	1150	Gulf Coast Analytica	X	6 - 006
K1100344-007	EWL-TR-05-C-MEAT	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	7 - 007
K1100344-008	EWL-TR-06-C-MEAT	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	8 - 008
K1100344-009	EWL-TR-07-C-MEAT	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	9 - 009
K1100344-010	EWL-TR-08-C-MEAT	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	10 - 010
K1100344-011	EWL-TR-09-C-MEAT	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	11 - 011
K1100344-012	EWL-T-01-C-MEAT	1	Animal Tissue	12/20/10	1236	Gulf Coast Analytica	X	12 - 012

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____ RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ STANDARD
Requested FAX Date: ____________
Requested Report Date: 01/24/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100344
Bill to

Relinquished By: [signature] CAS 1/17/11 1200 / Fedex 6/7/11 10:00
Received By: [signature] 1-18-11 1015 20°C / Rel: GOS 1-18-11 1015 / [signature] 6/7/11 10:0
Airbill Number: Rel By: BGM 6/1

4RS/2207/2110119 24/1-2 7-11

4046733

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100344
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100344-013	EWL-T-02-C-MEAT	3	Animal Tissue	12/21/10	1104	Gulf Coast Analytica	X	13, 22, 23 013/014/015
K1100344-014	EWL-T-03-C-MEAT	Ø	Animal Tissue	1/3/11	1133	Gulf Coast Analytica		
K1100344-015	EWL-T-04-C-MEAT	1	Animal Tissue	12/20/10	1222	Gulf Coast Analytica	X	14 • 016
K1100344-016	EWL-T-05-C-MEAT	1	Animal Tissue	12/21/10	1033	Gulf Coast Analytica	X	15 • 017
K1100344-017	EWL-T-06-C-MEAT	1	Animal Tissue	12/16/10	1215	Gulf Coast Analytica	X	16 • 018
K1100344-018	EWL-T-07-C-MEAT	Ø	Animal Tissue	1/3/11	1105	Gulf Coast Analytica		
K1100344-019	EWL-T-08-C-MEAT	1	Animal Tissue	1/3/11	1105	Gulf Coast Analytica	X	17 • 019
K1100344-020	EWL-T-09-C-MEAT	Ø	Animal Tissue	1/10/11	1147	Gulf Coast Analytica		
K1100344-021	EWL-T-10-C-MEAT	Ø	Animal Tissue	1/3/11	1123	Gulf Coast Analytica		
K1100344-022	EWL-T-11-C-MEAT	1 MAT	Animal Tissue	12/21/10	1053	Gulf Coast Analytica	X	18 • Ø
K1100344-023	EWL-T-12-C-MEAT	1	Animal Tissue	1/3/11	1100	Gulf Coast Analytica	X	19 •
K1100344-024	EWL-BR-C-MEAT	1	Animal Tissue	12/27/10	1230	Gulf Coast Analytica	X	20 •

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 01/24/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100344
Bill to

Relinquished By: [signature] 1/17/11 1200 CAS
Fedex 1/18/11 10:00
Received By: [signature] 1-18-11 1015 20.5
Rec: UPS 1-18-11 1015
Airbill Number: Rel By: Bgm 6/6/11 1500
[signature] 6/7/11 10:00

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: URS Project # 40146733

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used: IR Type of Ice: Wet Blue (Dry) None ☐ Samples on ice, cooling process has begun

Cooler Temperature: ≤ 0°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 06/7/11
Initials:

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: TW Date: 6/9/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046733

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT / 11370
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046733001		EWL-TR-01-C-MEAT	1	62											
463495	BLANK		1	62											
4046733002		EWL-T-01A-C-MEAT	1	9	4q										
463496	LCS		3	0	S0										
4046733003		EWL-TR-02-C-MEAT	1	11	4q										
463497	MS		2	0	S4										
4046733004		EWL-TR-03-C-MEAT	1	15	4q										
463498	MSD		1	76											
4046733005		EWL-TR-03A-C-MEAT	1	67											
4046733006		EWL-TR-04-C-MEAT	1	54											
4046733007		EWL-TR-05-C-MEAT	1	66											
4046733008		EWL-TR-06-C-MEAT	1	68											
4046733009		EWL-TR-07-C-MEAT	1	61											
4046733010		EWL-TR-08-C-MEAT	1	64											
4046733011		EWL-TR-09-C-MEAT	1	62											
4046733012		EWL-T-01-C-MEAT	1	63											
4046733013	OQS	EWL-T-02-C-MEAT	1	61											
4046733016		EWL-T-04-C-MEAT	1	64											
4046733017		EWL-T-05-C-MEAT	1	53											
4046733018		EWL-T-06-C-MEAT	1	47	4q										
4046733019		EWL-T-08-C-MEAT	1	38	4q										
			QC Limits:	50-150											

Sur 1: o-Terphenyl (S)

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11370 **LCS Prepared:** 06/15/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:**

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	52			50-150		66.7	34.8		mg/kg	07/07/11			
TPH (C08-C16)	0			50-150		66.7	<10		mg/kg	07/07/11		L0	
TPH (C08-C40)	289			50-150		66.7	192		mg/kg	07/07/11		2q	
TPH (C16-C28)	12			50-150		66.7	<10		mg/kg	07/07/11		L0	
TPH - Diesel (C10-C28)	49			50-150		66.7	32.6		mg/kg	07/07/11		L0	

Type	Sample
LCS	463496

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

MATRIX SPIKE SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11370
Method(s): EPA 3541 / EPA 8015B Modified

MS Prepared: 06/15/11
MSD Prepared: 06/15/11

Analyte	Units	Sample Conc	Spike Conc MS	Spike Conc MSD	Result MS	Result MSD	Dilution MS	Dilution MSD	% Recovery MS	% Recovery MSD	QC Limits %Recovery	QC Limits RPD	Max RPD	Analyzed Date MS	Analyzed Date MSD	Qualifier(s) MS	Qualifier(s) MSD
Diesel Range Organics (C8-C28)	mg/kg	<5.0	97	94.3	54.1	54.4	2	1	56	58	50-150	1	20	07/07/11	07/07/11		
TPH (C08-C16)	mg/kg	<5.0	97	94.3	21.2	24.8	2	1	22	26	50-150	16	20	07/07/11	07/07/11	M0	M0
TPH (C08-C40)	mg/kg	142	97	94.3	181	146	2	1	40	4	50-150	22	20	07/07/11	07/07/11	1q	1q,D6
TPH (C16-C28)	mg/kg	<5.0	97	94.3	22.9	27.1	2	1	24	29	50-150	17	20	07/07/11	07/07/11	M0	M0
TPH - Diesel (C10-C28)	mg/kg	<5.0	97	94.3	51.4	51.6	2	1	53	55	50-150	1	20	07/07/11	07/07/11		

Type	Sample	Client Sample ID
MS	463497	EWL-T-02-C-MEAT
MSD	463498	EWL-T-02-C-MEAT

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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DUPLICATE RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11382 **Prepared:**
Method(s): Pace Lipid

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Lipid	6	20	0.20	0.22	%	06/16/11	

Type	Sample	Client Sample ID
DUP	463916	EWL-T-02-C-MEAT

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4046733

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046733001	EWL-TR-01-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733002	EWL-T-01A-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733003	EWL-TR-02-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733004	EWL-TR-03-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733005	EWL-TR-03A-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733006	EWL-TR-04-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733007	EWL-TR-05-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733008	EWL-TR-06-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733009	EWL-TR-07-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733010	EWL-TR-08-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733011	EWL-TR-09-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733012	EWL-T-01-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733013	EWL-T-02-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733016	EWL-T-04-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733017	EWL-T-05-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733018	EWL-T-06-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733019	EWL-T-08-C-MEAT	EPA 3541	OEXT/11370	EPA 8015B Modified	GCSV/6002
4046733001	EWL-TR-01-C-MEAT	Pace Lipid	OEXT/11382		
4046733002	EWL-T-01A-C-MEAT	Pace Lipid	OEXT/11382		
4046733003	EWL-TR-02-C-MEAT	Pace Lipid	OEXT/11382		
4046733004	EWL-TR-03-C-MEAT	Pace Lipid	OEXT/11382		
4046733005	EWL-TR-03A-C-MEAT	Pace Lipid	OEXT/11382		
4046733006	EWL-TR-04-C-MEAT	Pace Lipid	OEXT/11382		
4046733007	EWL-TR-05-C-MEAT	Pace Lipid	OEXT/11382		
4046733008	EWL-TR-06-C-MEAT	Pace Lipid	OEXT/11382		
4046733009	EWL-TR-07-C-MEAT	Pace Lipid	OEXT/11382		
4046733010	EWL-TR-08-C-MEAT	Pace Lipid	OEXT/11382		
4046733011	EWL-TR-09-C-MEAT	Pace Lipid	OEXT/11382		
4046733012	EWL-T-01-C-MEAT	Pace Lipid	OEXT/11382		
4046733013	EWL-T-02-C-MEAT	Pace Lipid	OEXT/11382		
4046733016	EWL-T-04-C-MEAT	Pace Lipid	OEXT/11382		
4046733017	EWL-T-05-C-MEAT	Pace Lipid	OEXT/11382		
4046733018	EWL-T-06-C-MEAT	Pace Lipid	OEXT/11382		
4046733019	EWL-T-08-C-MEAT	Pace Lipid	OEXT/11382		

8D

SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046733

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01		2000 2860-31-01	07/06/11	1106	2.18	
02		1000 2860-31-02	07/06/11	1116	2.18	
03		500 2860-31-14	07/06/11	1128	2.18	
04		250 2860-30-13	07/06/11	1141	2.18	
05		100 2860-30-14	07/06/11	1153	2.18	
06		50 2860-30-15	07/06/11	1205	2.18	
07		IC500 2860-30-16	07/06/11	1217	2.18	
08		CC500 2860-31-14	07/07/11	0955	2.19	
09	MBLCS	463496	07/07/11	1025	2.19	
10	MB	463495	07/07/11	1037	2.19	
11	EWL-T-02-C-MEATMSD	463498	07/07/11	1101	2.19	
12	EWL-T-02-C-MEAT	4046733013	07/07/11	1113	2.19	
13	EWL-TR-01-C-MEAT	4046733001	07/07/11	1125	2.19	
14	EWL-T-01A-C-MEAT	4046733002	07/07/11	1137	2.19	
15	EWL-TR-02-C-MEAT	4046733003	07/07/11	1149	2.19	
16	EWL-TR-03-C-MEAT	4046733004	07/07/11	1202	2.19	
17	EWL-TR-03A-C-MEAT	4046733005	07/07/11	1214	2.19	
18	EWL-TR-04-C-MEAT	4046733006	07/07/11	1226	2.19	
19	EWL-TR-05-C-MEAT	4046733007	07/07/11	1238	2.19	
20	EWL-TR-06-C-MEAT	4046733008	07/07/11	1250	2.19	
21	EWL-TR-07-C-MEAT	4046733009	07/07/11	1302	2.19	
22	EWL-TR-08-C-MEAT	4046733010	07/07/11	1314	2.19	
23	EWL-TR-09-C-MEAT	4046733011	07/07/11	1326	2.19	
24	EWL-T-01-C-MEAT	4046733012	07/07/11	1339	2.19	
25	EWL-T-04-C-MEAT	4046733016	07/07/11	1351	2.19	
26	EWL-T-05-C-MEAT	4046733017	07/07/11	1403	2.19	
27	EWL-T-06-C-MEAT	4046733018	07/07/11	1415	2.19	
28	EWL-T-08-C-MEAT	4046733019	07/07/11	1427	2.19	
29	EWL-T-02-C-MEATMS	463497	07/07/11	1439	2.19	
30		CC500 2860-31-14	07/07/11	1527	2.19	
31						
32						

QC LIMITS

S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046733

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-01-C-MEAT TX
Lab ID: 4046733001
Collected: 12/15/10 11:26
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<8.7**	mg/kg	17.4	8.7	1	06/15/11 11:44	07/07/11 11:25	
	TPH (C08-C16)	**<8.7**	mg/kg	17.4	8.7	1	06/15/11 11:44	07/07/11 11:25	
	TPH (C16-C28)	**<8.7**	mg/kg	17.4	8.7	1	06/15/11 11:44	07/07/11 11:25	
	TPH (C08-C40)	**200**	mg/kg	17.4	8.7	1	06/15/11 11:44	07/07/11 11:25	3q
	TPH - Diesel (C10-C28)	**<8.7**	mg/kg	17.4	8.7	1	06/15/11 11:44	07/07/11 11:25	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**62**	%.	50-150		1	06/15/11 11:44	07/07/11 11:25	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-01-C-MEAT TX
Lab ID: 4046733001
Collected: 12/15/10 11:26
Received: 06/08/11 10:00

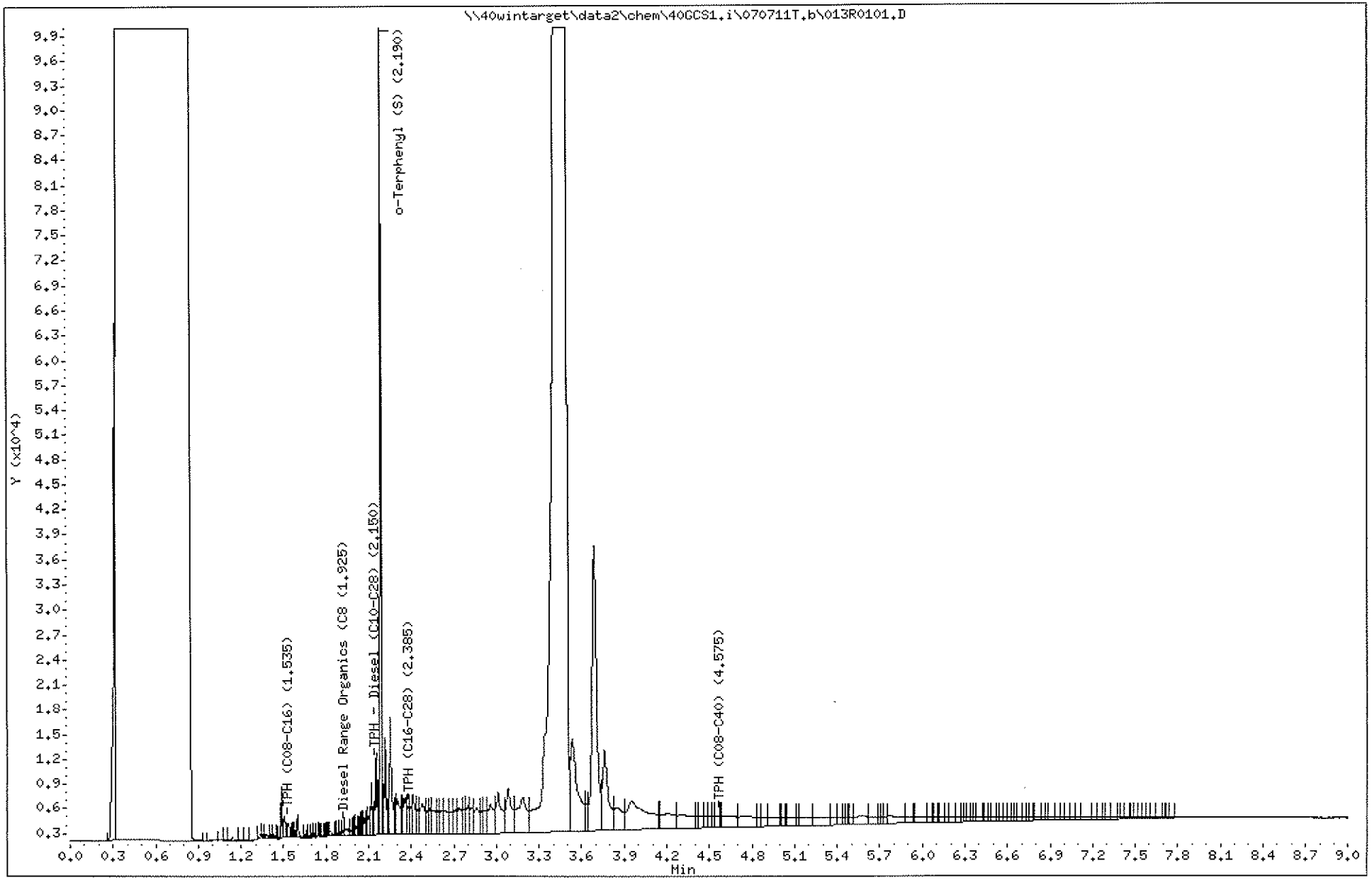
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.32**	%			1		06/16/11 06:33	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\013R0101.D
Date : 07-JUL-2011 11:25
Client ID: EWL-TR-01-C-MEAT
Sample Info: 4046733001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\013R0101.D
Lab Smp Id: 4046733001 Client Smp ID: EWL-TR-01-C-MEAT
Inj Date : 07-JUL-2011 11:25
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733001
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	5.740	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			4415304	1145.14	199.50
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	153682	30.8172	5.36

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-01A-C-MEAT TX
Lab ID: 4046733002
Collected: 12/15/10 12:37
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<4.5**	mg/kg	9.0	4.5	1	06/15/11 11:44	07/07/11 11:37	
	TPH (C08-C16)	**<4.5**	mg/kg	9.0	4.5	1	06/15/11 11:44	07/07/11 11:37	
	TPH (C16-C28)	**<4.5**	mg/kg	9.0	4.5	1	06/15/11 11:44	07/07/11 11:37	
	TPH (C08-C40)	**13.1**	mg/kg	9.0	4.5	1	06/15/11 11:44	07/07/11 11:37	3q
	TPH - Diesel (C10-C28)	**<4.5**	mg/kg	9.0	4.5	1	06/15/11 11:44	07/07/11 11:37	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**9**	%.	50-150		1	06/15/11 11:44	07/07/11 11:37	4q

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-01A-C-MEAT TX
Lab ID: 4046733002
Collected: 12/15/10 12:37
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.025**	%			1		06/16/11 06:33	

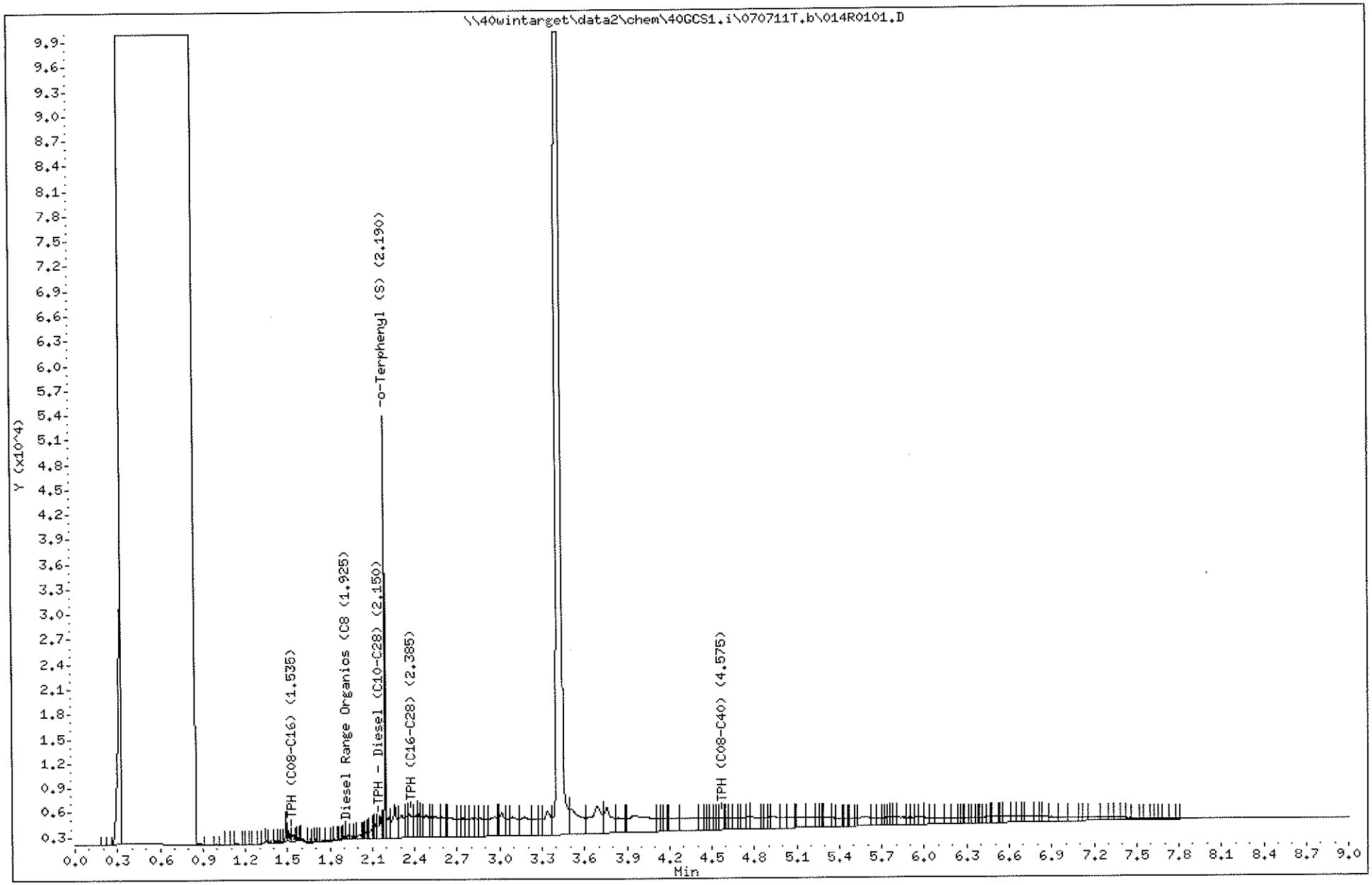
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\014R0101.D
Date : 07-JUL-2011 11:37
Client ID: EWL-T-01A-C-MEAT
Sample Info: 4046733002
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\014R0101.D
Lab Smp Id: 4046733002 Client Smp ID: EWL-T-01A-C-MEAT
Inj Date : 07-JUL-2011 11:37
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733002
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	11.150	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			835566	146.091	13.10
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	21748	4.36103	0.39(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-02-C-MEAT TX
Lab ID: 4046733003
Collected: 01/03/11 10:16
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<4.7**	mg/kg	9.4	4.7	1	06/15/11 11:44	07/07/11 11:49	
	TPH (C08-C16)	**<4.7**	mg/kg	9.4	4.7	1	06/15/11 11:44	07/07/11 11:49	
	TPH (C16-C28)	**<4.7**	mg/kg	9.4	4.7	1	06/15/11 11:44	07/07/11 11:49	
	TPH (C08-C40)	**20.1**	mg/kg	9.4	4.7	1	06/15/11 11:44	07/07/11 11:49	3q
	TPH - Diesel (C10-C28)	**<4.7**	mg/kg	9.4	4.7	1	06/15/11 11:44	07/07/11 11:49	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**11**	%.	50-150		1	06/15/11 11:44	07/07/11 11:49	4q

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-02-C-MEAT TX
Lab ID: 4046733003
Collected: 01/03/11 10:16
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.023**	%			1		06/16/11 06:33	

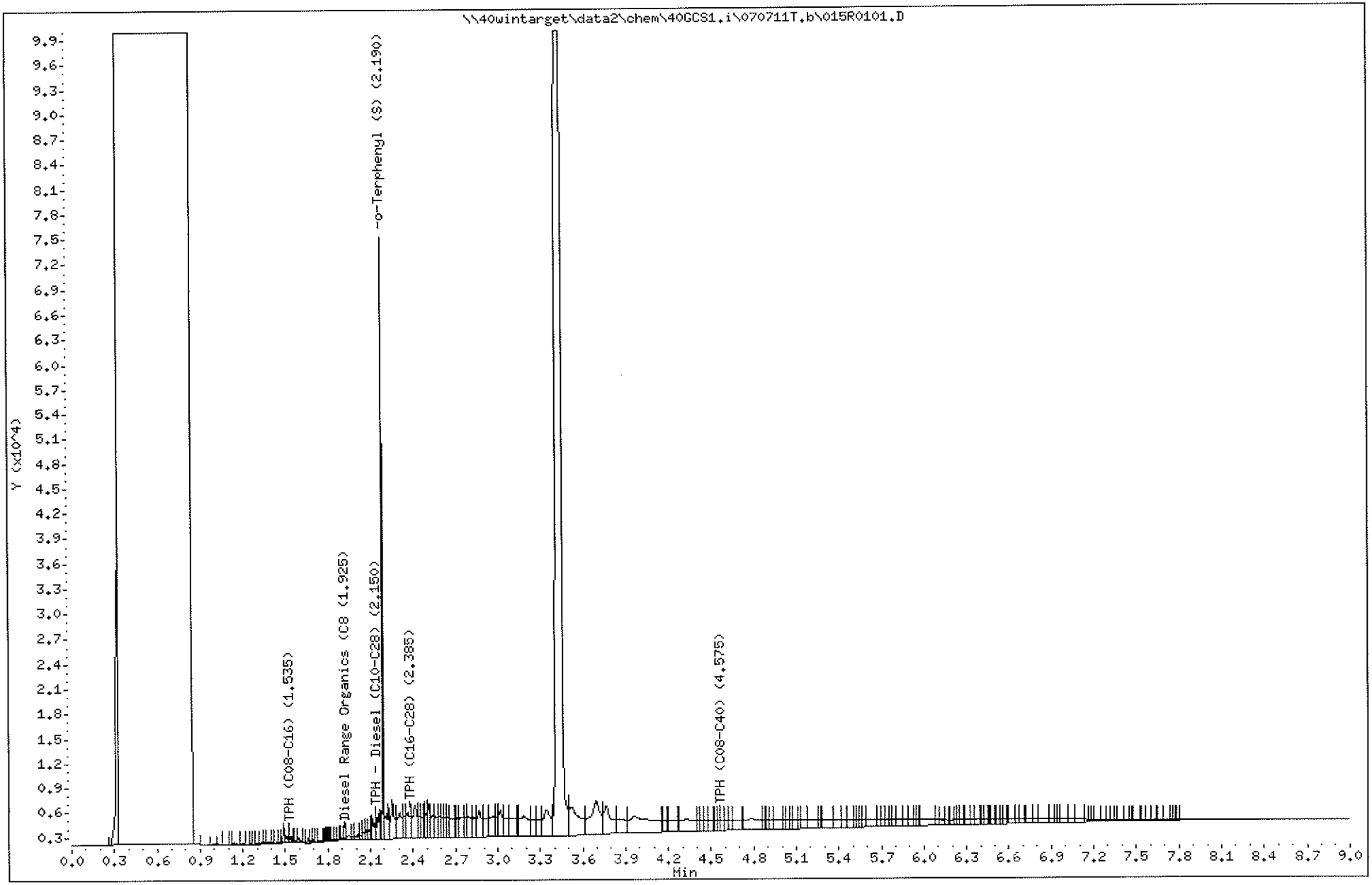
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\015R0101.D
Date : 07-JUL-2011 11:49
Client ID: EWL-TR-02-C-MEAT
Sample Info: 4046733003
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\015R0101.D
Lab Smp Id: 4046733003 Client Smp ID: EWL-TR-02-C-MEAT
Inj Date : 07-JUL-2011 11:49
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733003
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			1074574	212.795	20.07
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	28550	5.72500	0.54

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-03-C-MEAT TX
Lab ID: 4046733004
Collected: 01/03/11 10:36
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<4.9	mg/kg	9.9	4.9	1	06/15/11 11:44	07/07/11 12:02	
	TPH (C08-C16)	<4.9	mg/kg	9.9	4.9	1	06/15/11 11:44	07/07/11 12:02	
	TPH (C16-C28)	<4.9	mg/kg	9.9	4.9	1	06/15/11 11:44	07/07/11 12:02	
	TPH (C08-C40)	51.6	mg/kg	9.9	4.9	1	06/15/11 11:44	07/07/11 12:02	3q
	TPH - Diesel (C10-C28)	<4.9	mg/kg	9.9	4.9	1	06/15/11 11:44	07/07/11 12:02	L2
Surrogates									
84-15-1	o-Terphenyl (S)	15	%.	50-150		1	06/15/11 11:44	07/07/11 12:02	4q

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-03-C-MEAT TX
Lab ID: 4046733004
Collected: 01/03/11 10:36
Received: 06/08/11 10:00

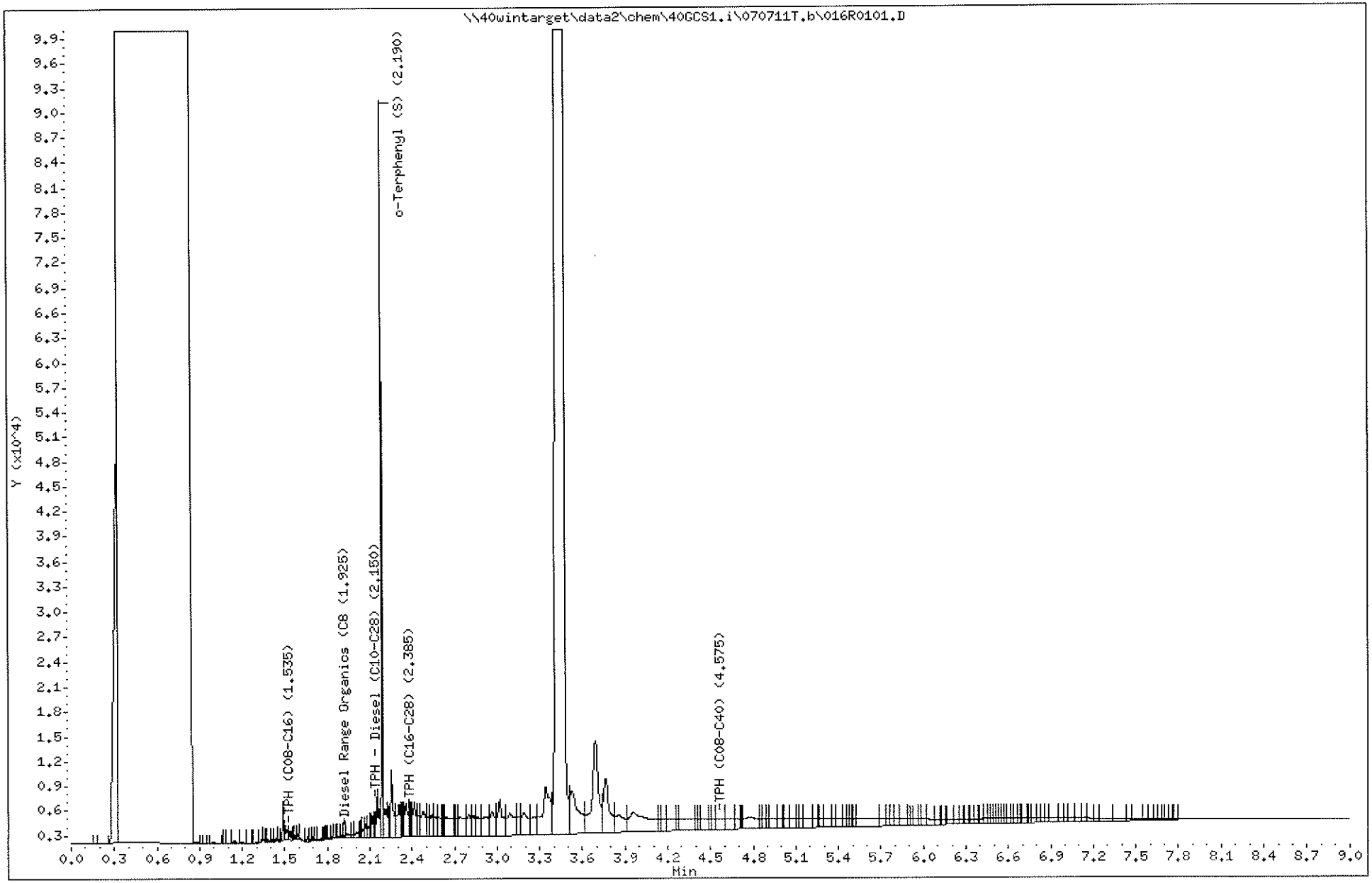
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.071**	%			1		06/16/11 06:33	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\016R0101.D
Date : 07-JUL-2011 12:02
Client ID: EWL-TR-03-C-MEAT
Sample Info: 4046733004
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\016R0101.D
Lab Smp Id: 4046733004 Client Smp ID: EWL-TR-03-C-MEAT
Inj Date : 07-JUL-2011 12:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733004
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.130	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.100			2185947	522.963	51.62
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	37153	7.45013	0.73

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-03A-C-MEAT TX
Lab ID: 4046733005
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<5.2	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 12:14	
	TPH (C08-C16)	<5.2	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 12:14	
	TPH (C16-C28)	<5.2	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 12:14	
	TPH (C08-C40)	154	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 12:14	3q
	TPH - Diesel (C10-C28)	<5.2	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 12:14	L2
Surrogates									
84-15-1	o-Terphenyl (S)	67	%.	50-150		1	06/15/11 11:44	07/07/11 12:14	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-03A-C-MEAT TX
Lab ID: 4046733005
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.22**	%			1		06/16/11 06:33	

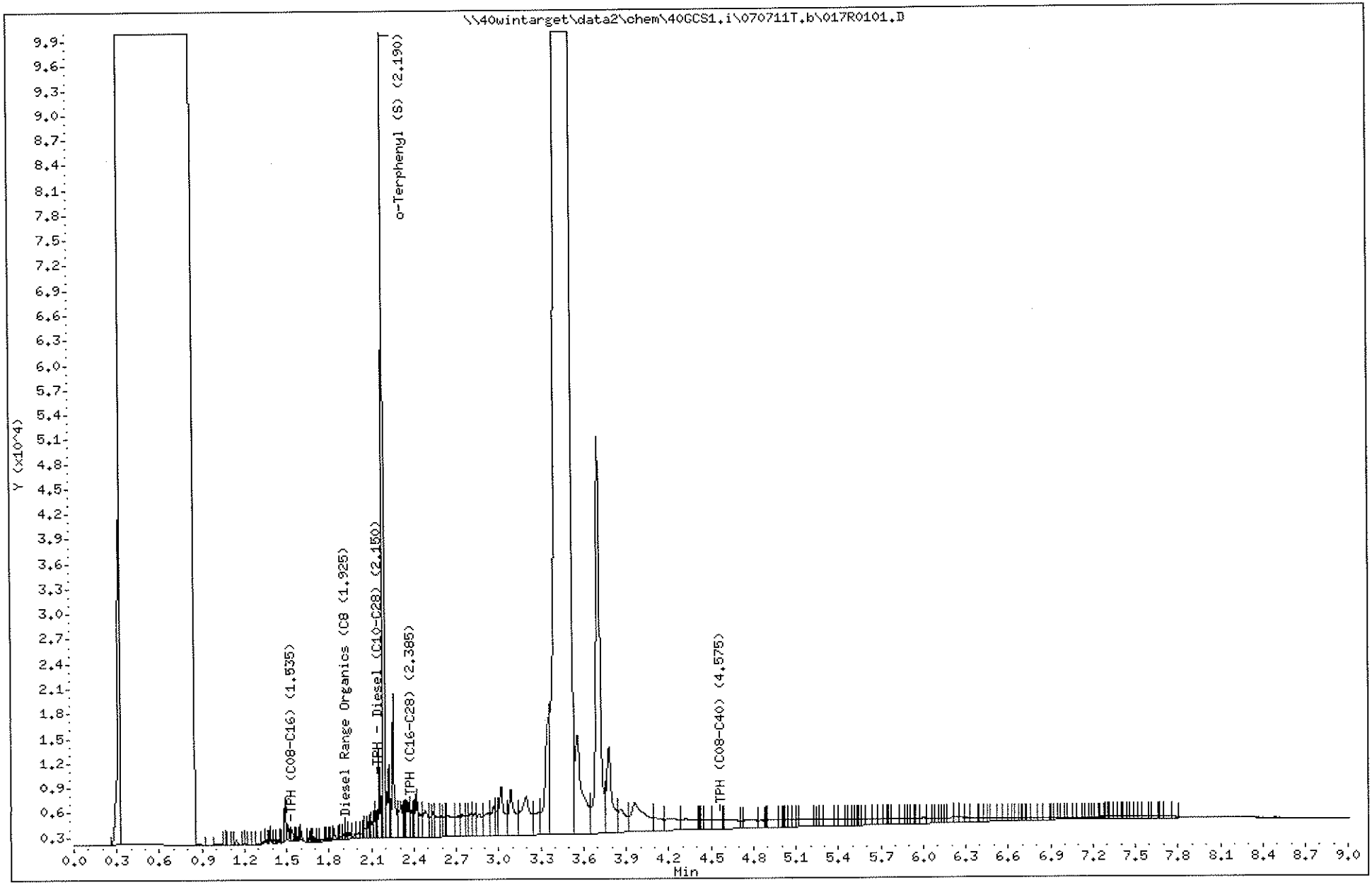
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\017R0101.D
Date : 07-JUL-2011 12:14
Client ID: EWL-TR-03A-C-MEAT
Sample Info: 4046733005
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\017R0101.D
Lab Smp Id: 4046733005 Client Smp ID: EWL-TR-03A-C-MEAT
Inj Date : 07-JUL-2011 12:14
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733005
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.570	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			5582440	1470.88	153.69
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	167053	33.4984	3.50

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-04-C-MEAT TX
Lab ID: 4046733006
Collected: 01/03/11 11:50
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<4.6**	mg/kg	9.2	4.6	1	06/15/11 11:44	07/07/11 12:26	
	TPH (C08-C16)	**<4.6**	mg/kg	9.2	4.6	1	06/15/11 11:44	07/07/11 12:26	
	TPH (C16-C28)	**<4.6**	mg/kg	9.2	4.6	1	06/15/11 11:44	07/07/11 12:26	
	TPH (C08-C40)	**95.4**	mg/kg	9.2	4.6	1	06/15/11 11:44	07/07/11 12:26	3q
	TPH - Diesel (C10-C28)	**<4.6**	mg/kg	9.2	4.6	1	06/15/11 11:44	07/07/11 12:26	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**54**	%.	50-150		1	06/15/11 11:44	07/07/11 12:26	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-04-C-MEAT TX
Lab ID: 4046733006
Collected: 01/03/11 11:50
Received: 06/08/11 10:00

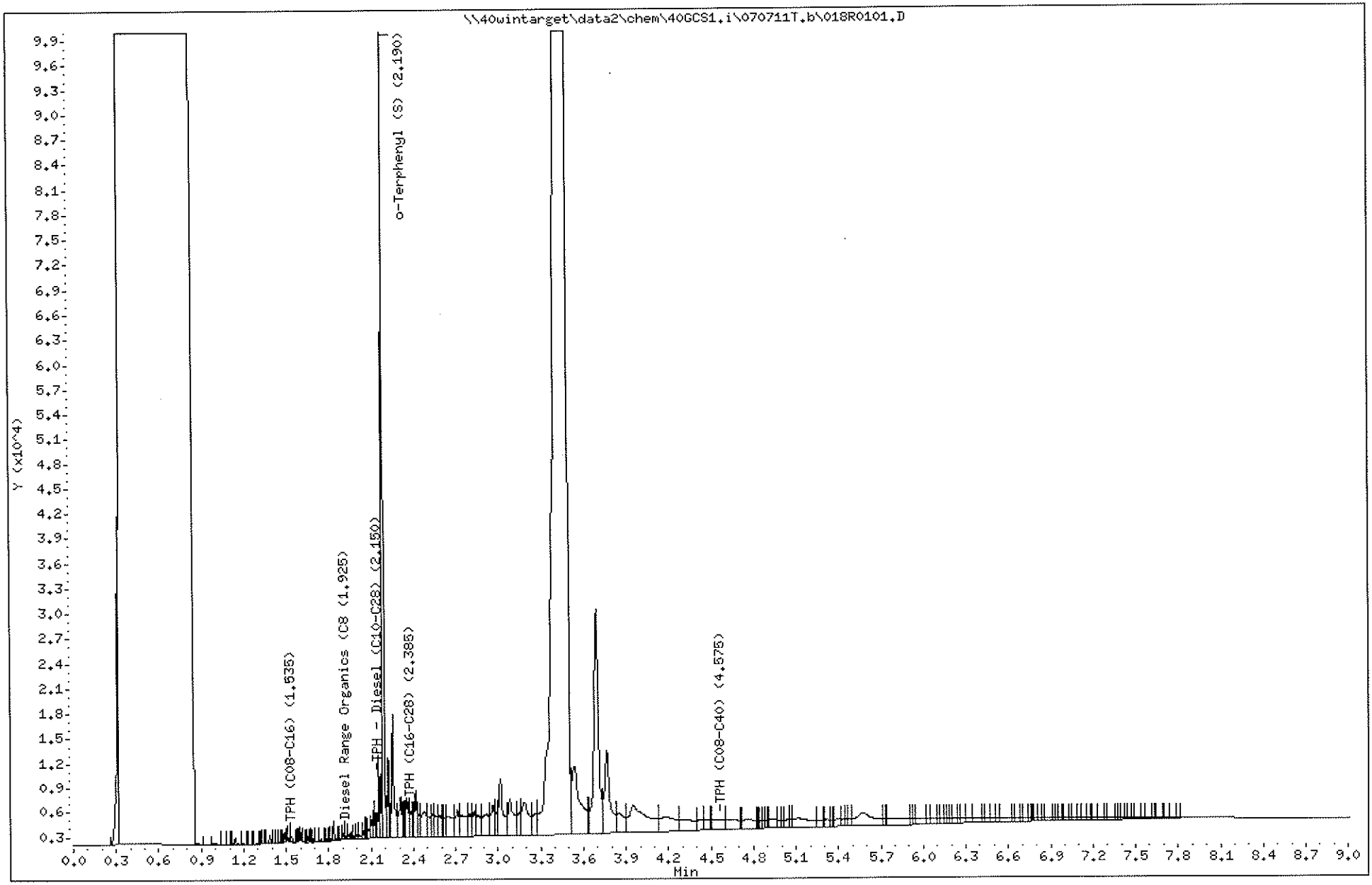
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.18**	%			1		06/16/11 06:34	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\018R0101.D
Date : 07-JUL-2011 12:26
Client ID: EWL-TR-04-C-MEAT
Sample Info: 4046733006
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\018R0101.D
Lab Smp Id: 4046733006 Client Smp ID: EWL-TR-04-C-MEAT
Inj Date : 07-JUL-2011 12:26
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733006
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.860	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			4025553	1036.37	95.43
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	135218	27.1147	2.49

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-05-C-MEAT TX
Lab ID: 4046733007
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<4.8	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 12:38	
	TPH (C08-C16)	<4.8	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 12:38	
	TPH (C16-C28)	<4.8	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 12:38	
	TPH (C08-C40)	122	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 12:38	3q,L1
	TPH - Diesel (C10-C28)	<4.8	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 12:38	L2
Surrogates									
84-15-1	o-Terphenyl (S)	66	%.	50-150		1	06/15/11 11:44	07/07/11 12:38	

Date: 05/14/2012 05:14 PM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-05-C-MEAT TX
Lab ID: 4046733007
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.17**	%			1		06/16/11 06:34	

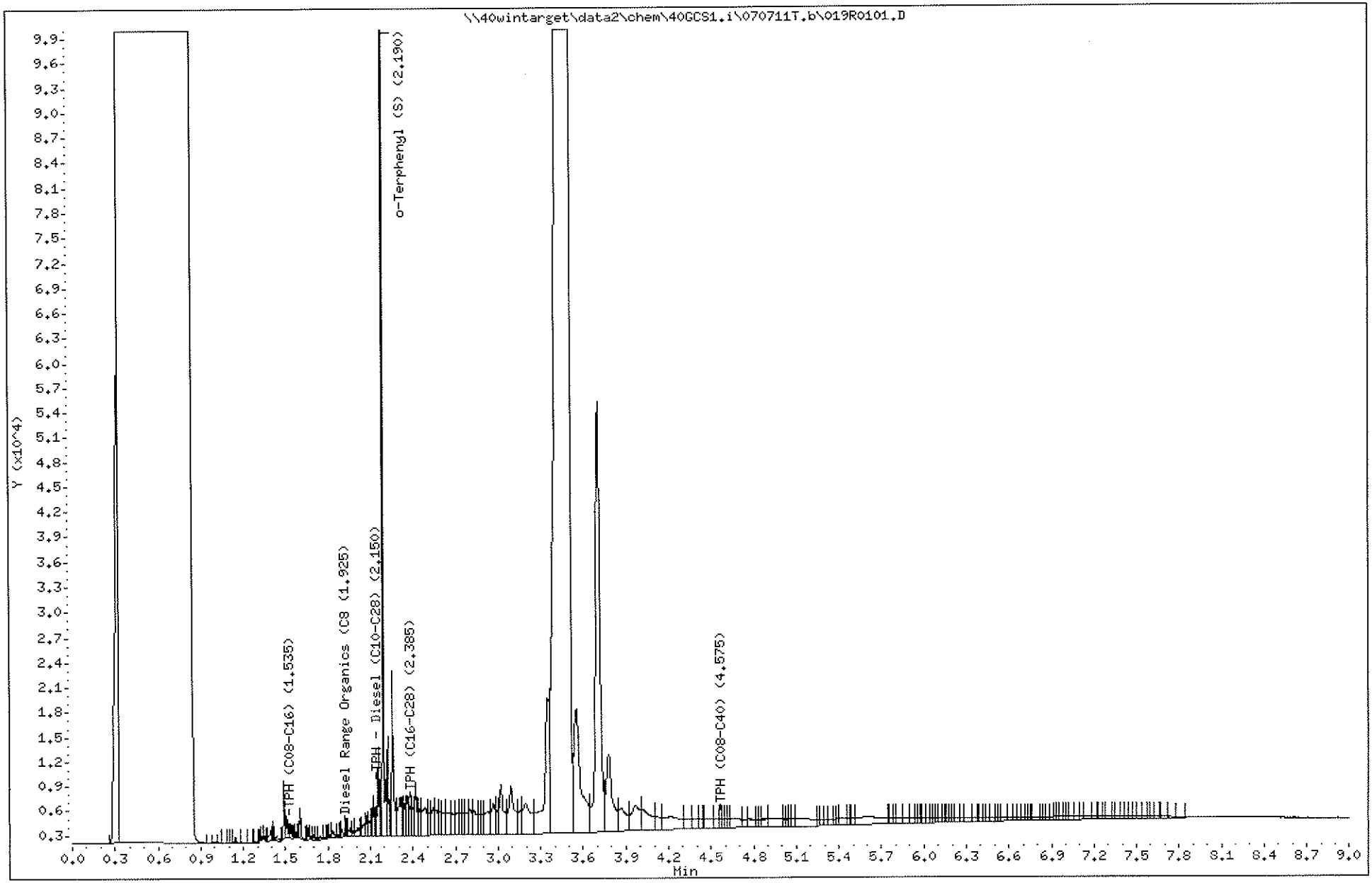
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\019R0101.D
Date : 07-JUL-2011 12:38
Client ID: EWL-TR-05-C-MEAT
Sample Info: 4046733007
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\019R0101.D
Lab Smp Id: 4046733007 Client Smp ID: EWL-TR-05-C-MEAT
Inj Date : 07-JUL-2011 12:38
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733007
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.370	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			4845216	1265.13	121.99
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	165056	33.0979	3.19

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-06-C-MEAT TX
Lab ID: 4046733008
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<7.4**	mg/kg	14.8	7.4	1	06/15/11 11:44	07/07/11 12:50	
	TPH (C08-C16)	**<7.4**	mg/kg	14.8	7.4	1	06/15/11 11:44	07/07/11 12:50	
	TPH (C16-C28)	**<7.4**	mg/kg	14.8	7.4	1	06/15/11 11:44	07/07/11 12:50	
	TPH (C08-C40)	**128**	mg/kg	14.8	7.4	1	06/15/11 11:44	07/07/11 12:50	3q
	TPH - Diesel (C10-C28)	**<7.4**	mg/kg	14.8	7.4	1	06/15/11 11:44	07/07/11 12:50	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**68**	%.	50-150		1	06/15/11 11:44	07/07/11 12:50	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-06-C-MEAT TX
Lab ID: 4046733008
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

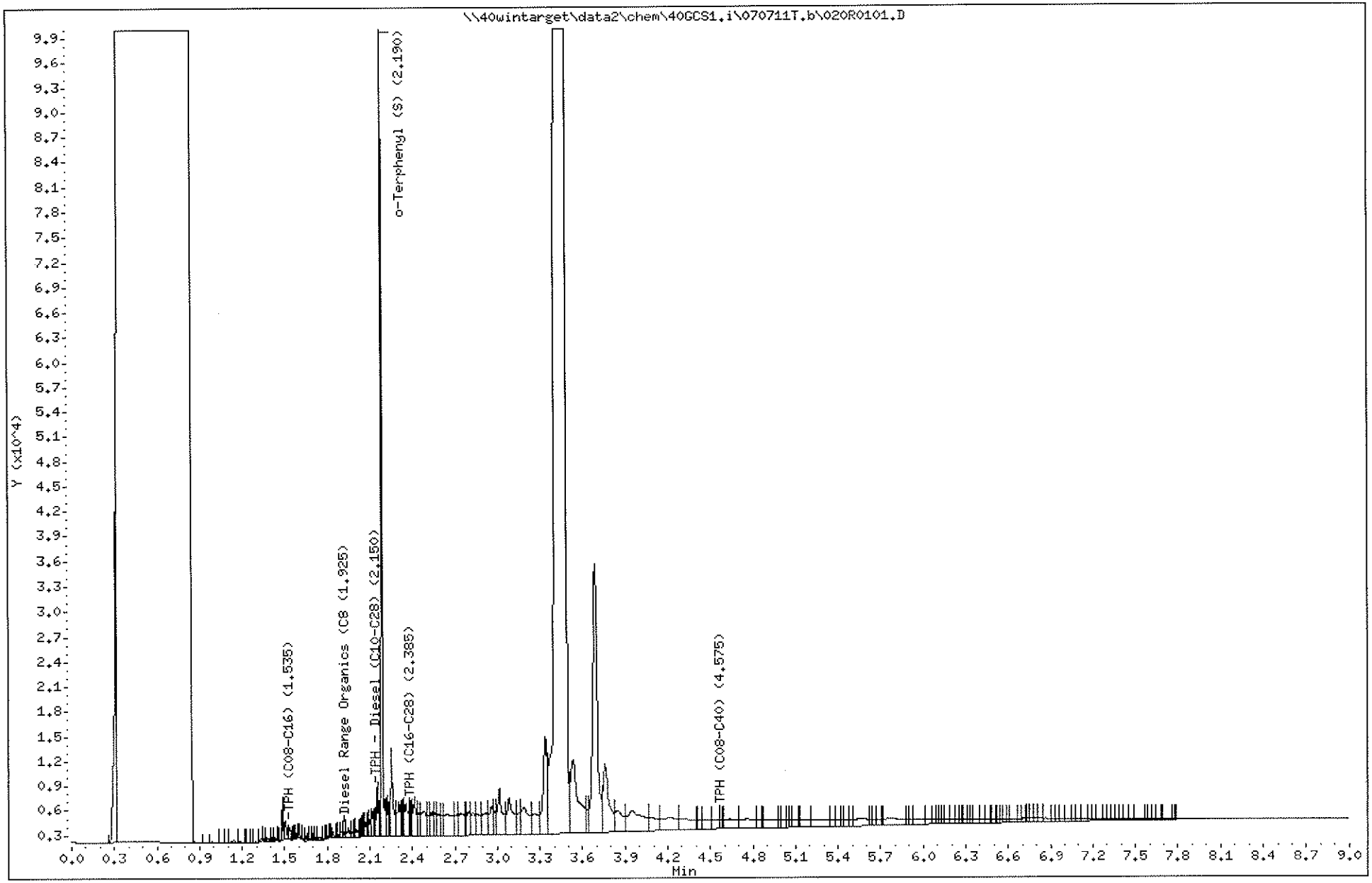
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.17**	%			1		06/16/11 06:34	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\020R0101.D
Date : 07-JUL-2011 12:50
Client ID: EWL-TR-06-C-MEAT
Sample Info: 4046733008
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\020R0101.D
Lab Smp Id: 4046733008 Client Smp ID: EWL-TR-06-C-MEAT
Inj Date : 07-JUL-2011 12:50
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733008
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	6.780	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			3420476	867.502	127.95
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	169930	34.0753	5.02

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-07-C-MEAT TX
Lab ID: 4046733009
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<4.8**	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 13:02	
	TPH (C08-C16)	**<4.8**	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 13:02	
	TPH (C16-C28)	**<4.8**	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 13:02	
	TPH (C08-C40)	**72.6**	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 13:02	3q
	TPH - Diesel (C10-C28)	**<4.8**	mg/kg	9.6	4.8	1	06/15/11 11:44	07/07/11 13:02	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	06/15/11 11:44	07/07/11 13:02	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-07-C-MEAT TX
Lab ID: 4046733009
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.15**	%			1		06/16/11 06:34	

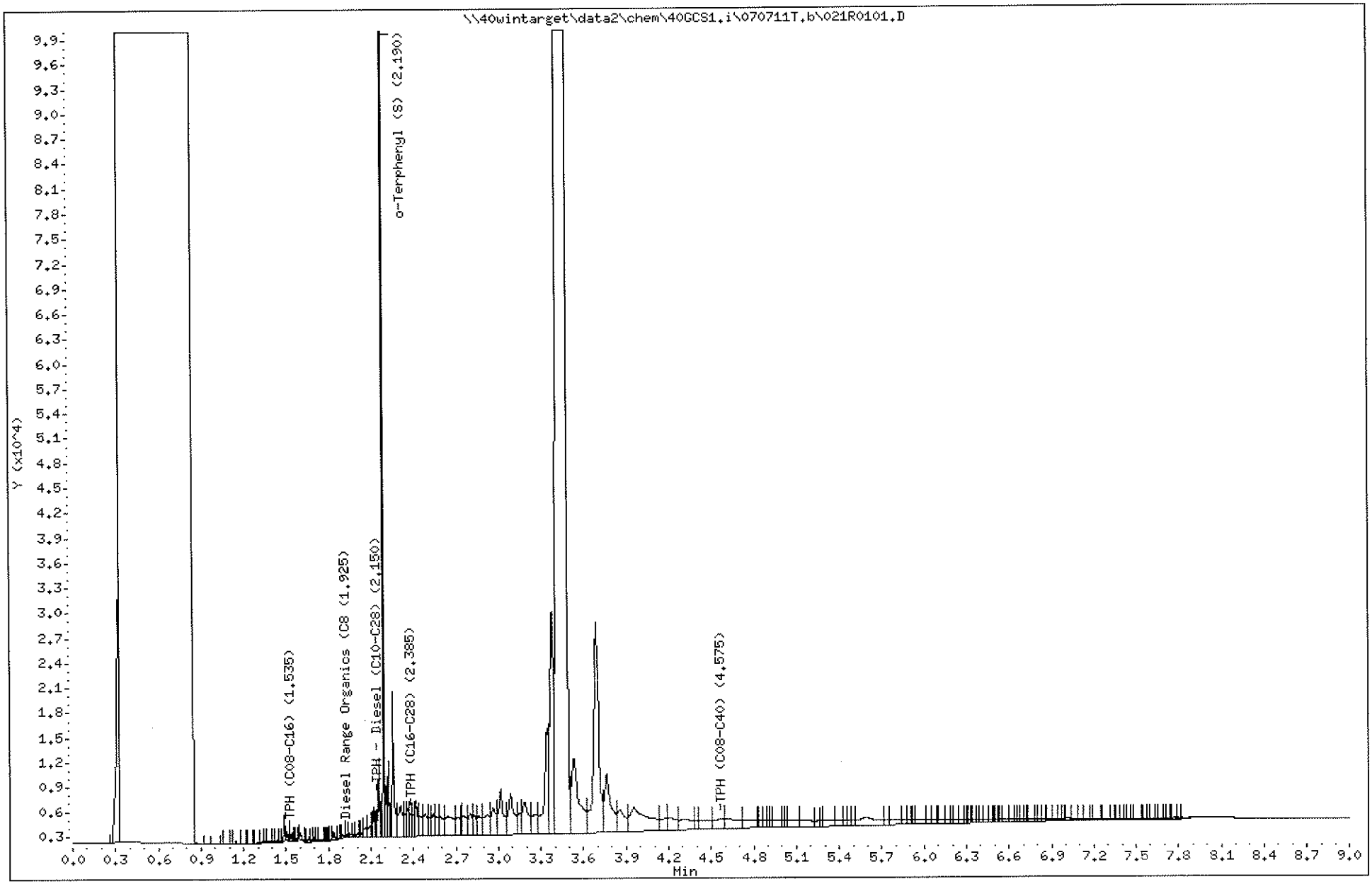
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\021R0101.D
Date : 07-JUL-2011 13:02
Client ID: EWL-TR-07-C-MEAT
Sample Info: 4046733009
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\021R0101.D
Lab Smp Id: 4046733009 Client Smp ID: EWL-TR-07-C-MEAT
Inj Date : 07-JUL-2011 13:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733009
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.410	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.100			3020514	755.879	72.61
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	152043	30.4885	2.92

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-08-C-MEAT TX
Lab ID: 4046733010
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<5.0**	mg/kg	10	5.0	1	06/15/11 11:44	07/07/11 13:14	
	TPH (C08-C16)	**<5.0**	mg/kg	10	5.0	1	06/15/11 11:44	07/07/11 13:14	
	TPH (C16-C28)	**<5.0**	mg/kg	10	5.0	1	06/15/11 11:44	07/07/11 13:14	
	TPH (C08-C40)	**142**	mg/kg	10	5.0	1	06/15/11 11:44	07/07/11 13:14	3q
	TPH - Diesel (C10-C28)	**<5.0**	mg/kg	10	5.0	1	06/15/11 11:44	07/07/11 13:14	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**64**	%.	50-150		1	06/15/11 11:44	07/07/11 13:14	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-08-C-MEAT TX
Lab ID: 4046733010
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.20**	%			1		06/16/11 06:34	

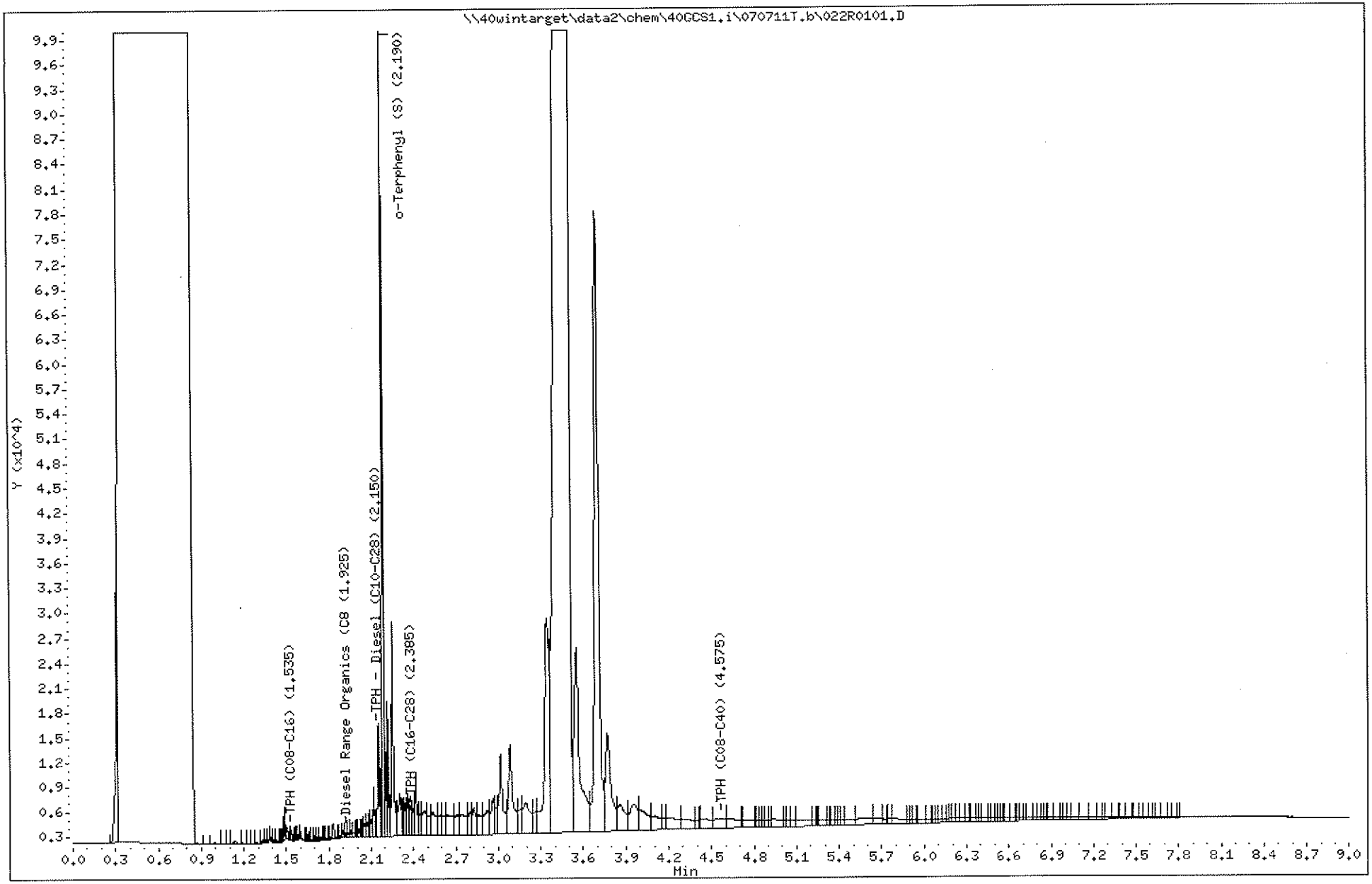
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\022R0101.D
Date : 07-JUL-2011 13:14
Client ID: EWL-TR-08-C-MEAT
Sample Info: 4046733010
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\022R0101.D
Lab Smp Id: 4046733010 Client Smp ID: EWL-TR-08-C-MEAT
Inj Date : 07-JUL-2011 13:14
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733010
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.010	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			5422766	1426.31	142.48
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	159939	32.0719	3.20

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-09-C-MEAT TX
Lab ID: 4046733011
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<5.2**	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 13:26	
	TPH (C08-C16)	**<5.2**	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 13:26	
	TPH (C16-C28)	**<5.2**	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 13:26	
	TPH (C08-C40)	**166**	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 13:26	3q
	TPH - Diesel (C10-C28)	**<5.2**	mg/kg	10.5	5.2	1	06/15/11 11:44	07/07/11 13:26	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**62**	%.	50-150		1	06/15/11 11:44	07/07/11 13:26	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-09-C-MEAT TX
Lab ID: 4046733011
Collected: 12/14/10 00:00
Received: 06/08/11 10:00

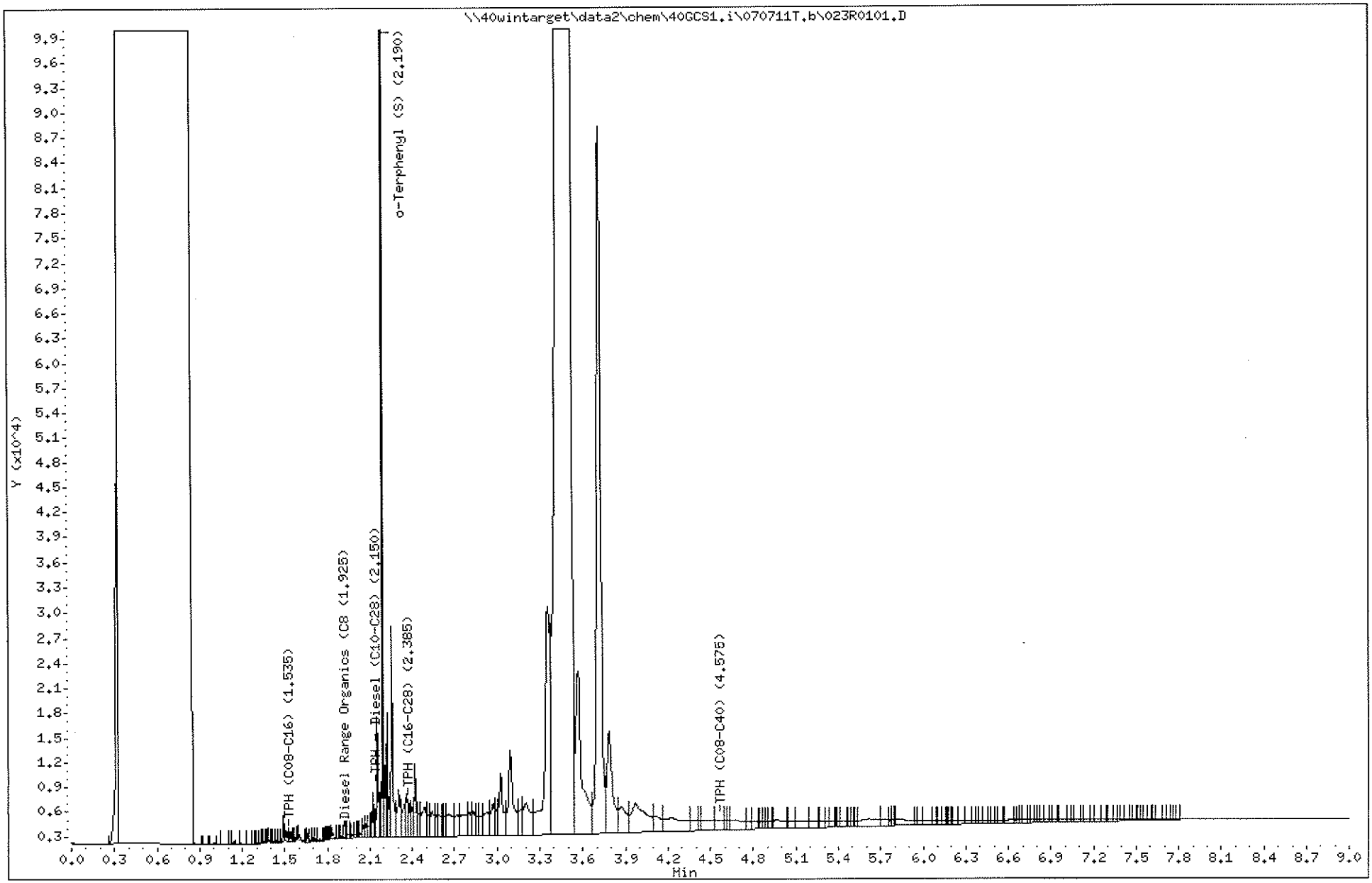
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.19**	%			1		06/16/11 06:34	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\023R0101.D
Date : 07-JUL-2011 13:26
Client ID: EWL-TR-09-C-MEAT
Sample Info: 4046733011
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\023R0101.D
Lab Smp Id: 4046733011 Client Smp ID: EWL-TR-09-C-MEAT
Inj Date : 07-JUL-2011 13:26
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733011
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.540	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			5978293	1581.35	165.76
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	154415	30.9642	3.24

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-01-C-MEAT TX
Lab ID: 4046733012
Collected: 12/20/10 12:36
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<9.4	mg/kg	18.9	9.4	1	06/15/11 11:44	07/07/11 13:39	
	TPH (C08-C16)	<9.4	mg/kg	18.9	9.4	1	06/15/11 11:44	07/07/11 13:39	
	TPH (C16-C28)	<9.4	mg/kg	18.9	9.4	1	06/15/11 11:44	07/07/11 13:39	
	TPH (C08-C40)	159	mg/kg	18.9	9.4	1	06/15/11 11:44	07/07/11 13:39	3q
	TPH - Diesel (C10-C28)	<9.4	mg/kg	18.9	9.4	1	06/15/11 11:44	07/07/11 13:39	L2
Surrogates									
84-15-1	o-Terphenyl (S)	63	%.	50-150		1	06/15/11 11:44	07/07/11 13:39	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-01-C-MEAT TX
Lab ID: 4046733012
Collected: 12/20/10 12:36
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.29**	%			1		06/16/11 06:34	

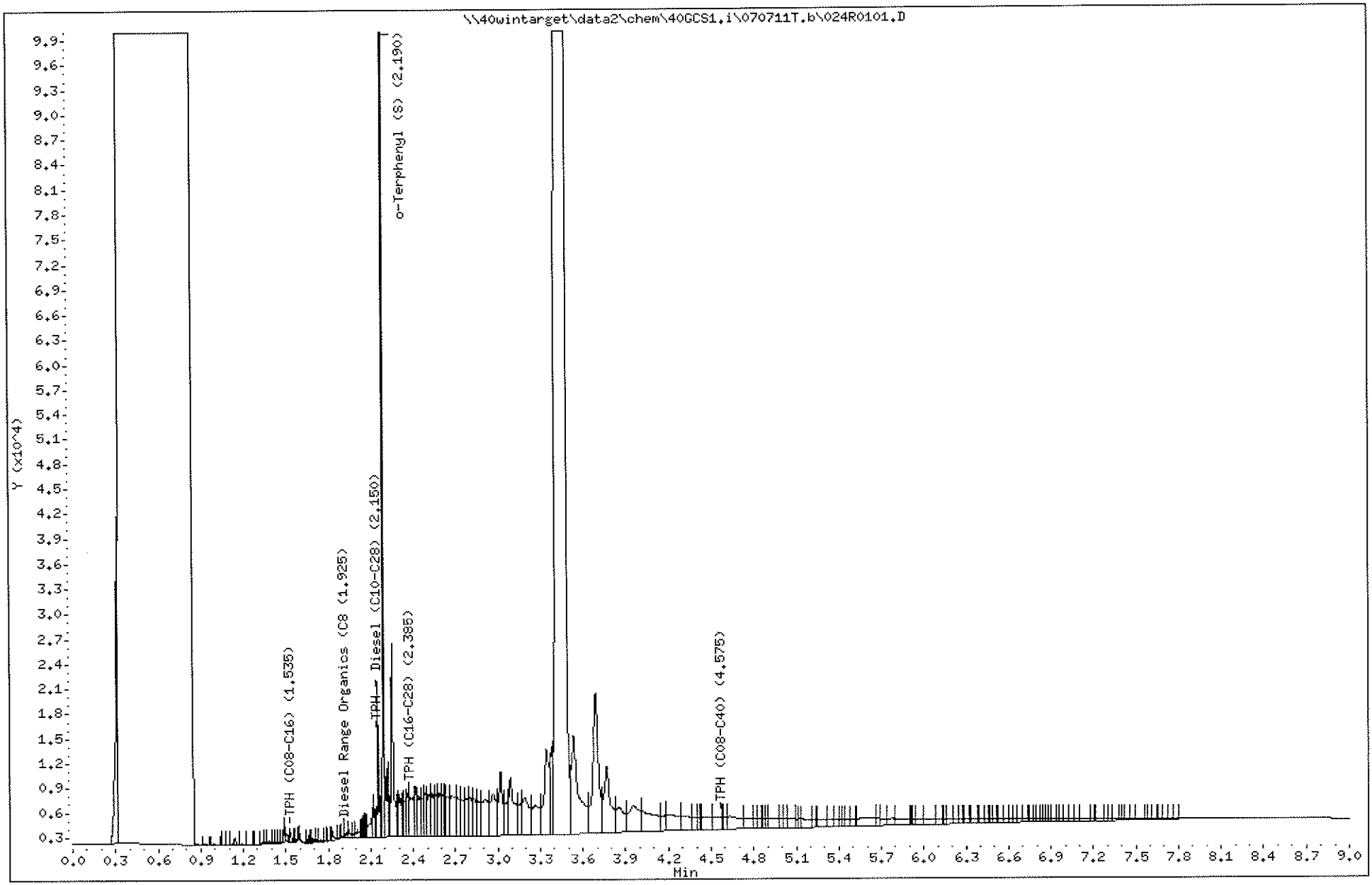
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\024R0101.D
Date : 07-JUL-2011 13:39
Client ID: EWL-T-01-C-MEAT
Sample Info: 4046733012
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\024R0101.D
Lab Smp Id: 4046733012 Client Smp ID: EWL-T-01-C-MEAT
Inj Date : 07-JUL-2011 13:39
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733012
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	5.300	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S 5 TPH (C08-C40)		1.050-8.100			3336388	844.035	159.25
S 1 TPH (C08-C16)		Compound Not Detected.					
S 12 TPH (C16-C28)		Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)		Compound Not Detected.					
S 8 TPH - Diesel (C10-C28)		Compound Not Detected.					
$ 15 o-Terphenyl (S)		2.190	2.183	0.007	158013	31.6856	5.97

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-02-C-MEAT TX
Lab ID: 4046733013
Collected: 12/21/10 11:04
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<5.0**	mg/kg	10.0	5.0	1	06/15/11 11:44	07/07/11 11:13	
	TPH (C08-C16)	**<5.0**	mg/kg	10.0	5.0	1	06/15/11 11:44	07/07/11 11:13	M0
	TPH (C16-C28)	**<5.0**	mg/kg	10.0	5.0	1	06/15/11 11:44	07/07/11 11:13	M0
	TPH (C08-C40)	**142**	mg/kg	10.0	5.0	1	06/15/11 11:44	07/07/11 11:13	3q,L0,M0
	TPH - Diesel (C10-C28)	**<5.0**	mg/kg	10.0	5.0	1	06/15/11 11:44	07/07/11 11:13	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	06/15/11 11:44	07/07/11 11:13	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-02-C-MEAT TX
Lab ID: 4046733013
Collected: 12/21/10 11:04
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.20**	%			1		06/16/11 06:34	

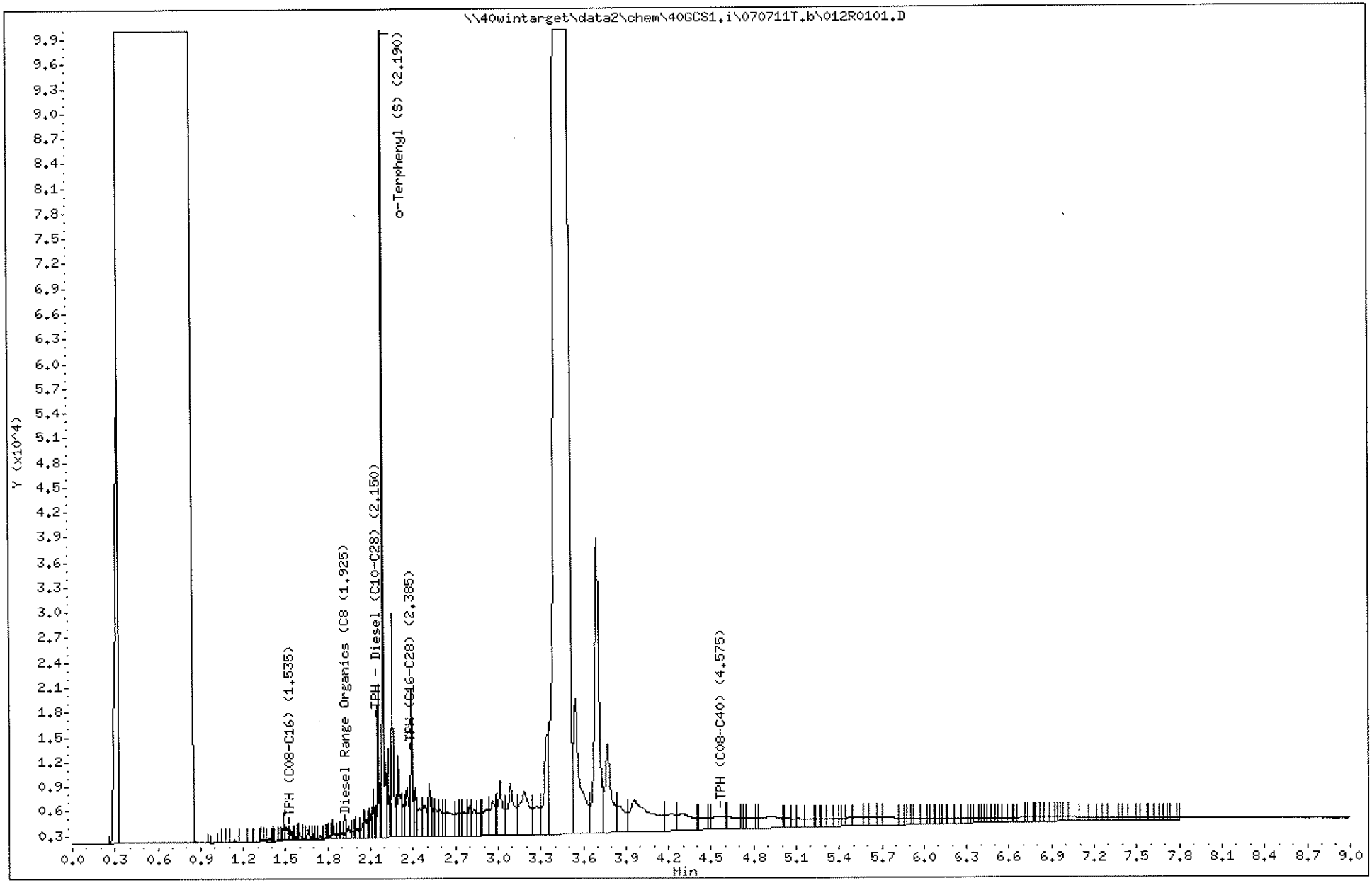
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\012R0101.D
Date : 07-JUL-2011 11:13
Client ID: EWL-T-02-C-MEAT
Sample Info: 4046733013
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\012R0101.D
Lab Smp Id: 4046733013 Client Smp ID: EWL-T-02-C-MEAT
Inj Date : 07-JUL-2011 11:13
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733013
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.980	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.100			5398899	1419.65	142.24
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	152123	30.5045	3.05

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-04-C-MEAT TX
Lab ID: 4046733016
Collected: 12/20/10 12:22
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<5.5**	mg/kg	11.0	5.5	1	06/15/11 11:44	07/07/11 13:51	
	TPH (C08-C16)	**<5.5**	mg/kg	11.0	5.5	1	06/15/11 11:44	07/07/11 13:51	
	TPH (C16-C28)	**<5.5**	mg/kg	11.0	5.5	1	06/15/11 11:44	07/07/11 13:51	
	TPH (C08-C40)	**110**	mg/kg	11.0	5.5	1	06/15/11 11:44	07/07/11 13:51	3q
	TPH - Diesel (C10-C28)	**<5.5**	mg/kg	11.0	5.5	1	06/15/11 11:44	07/07/11 13:51	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**64**	%.	50-150		1	06/15/11 11:44	07/07/11 13:51	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-04-C-MEAT TX
Lab ID: 4046733016
Collected: 12/20/10 12:22
Received: 06/08/11 10:00

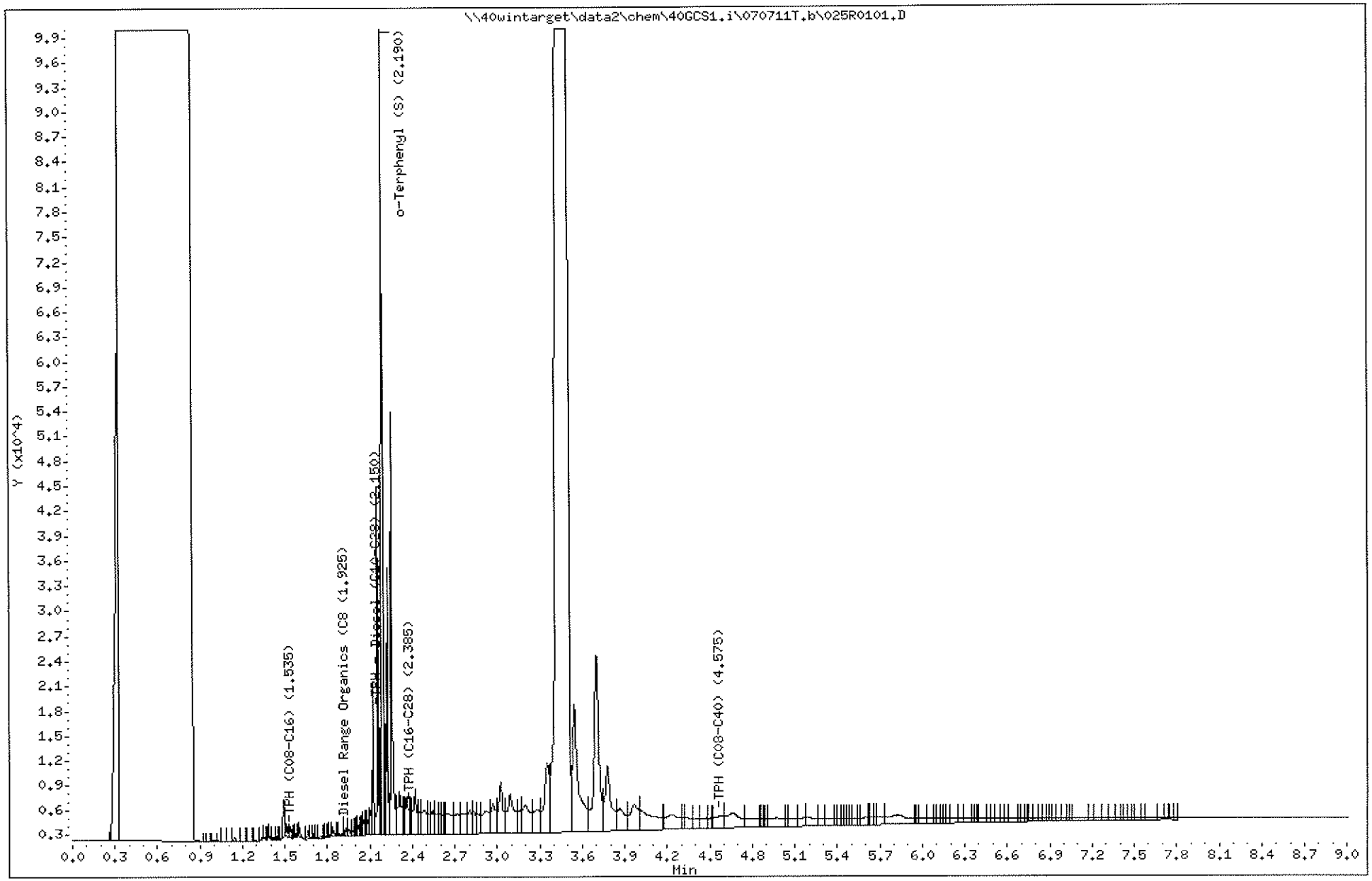
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.097**	%			1		06/16/11 06:35	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\025R0101.D
Date : 07-JUL-2011 13:51
Client ID: EWL-T-04-C-MEAT
Sample Info: 4046733016
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\025R0101.D
Lab Smp Id: 4046733016 Client Smp ID: EWL-T-04-C-MEAT
Inj Date : 07-JUL-2011 13:51
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733016
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.080	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.100			3895220	999.997	110.13
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	160409	32.1661	3.54

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-05-C-MEAT TX
Lab ID: 4046733017
Collected: 12/21/10 10:33
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<5.1**	mg/kg	10.2	5.1	1	06/15/11 11:44	07/07/11 14:03	
	TPH (C08-C16)	**<5.1**	mg/kg	10.2	5.1	1	06/15/11 11:44	07/07/11 14:03	
	TPH (C16-C28)	**<5.1**	mg/kg	10.2	5.1	1	06/15/11 11:44	07/07/11 14:03	
	TPH (C08-C40)	**121**	mg/kg	10.2	5.1	1	06/15/11 11:44	07/07/11 14:03	3q
	TPH - Diesel (C10-C28)	**<5.1**	mg/kg	10.2	5.1	1	06/15/11 11:44	07/07/11 14:03	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**53**	%.	50-150		1	06/15/11 11:44	07/07/11 14:03	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-05-C-MEAT TX
Lab ID: 4046733017
Collected: 12/21/10 10:33
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.15**	%			1		06/16/11 06:35	

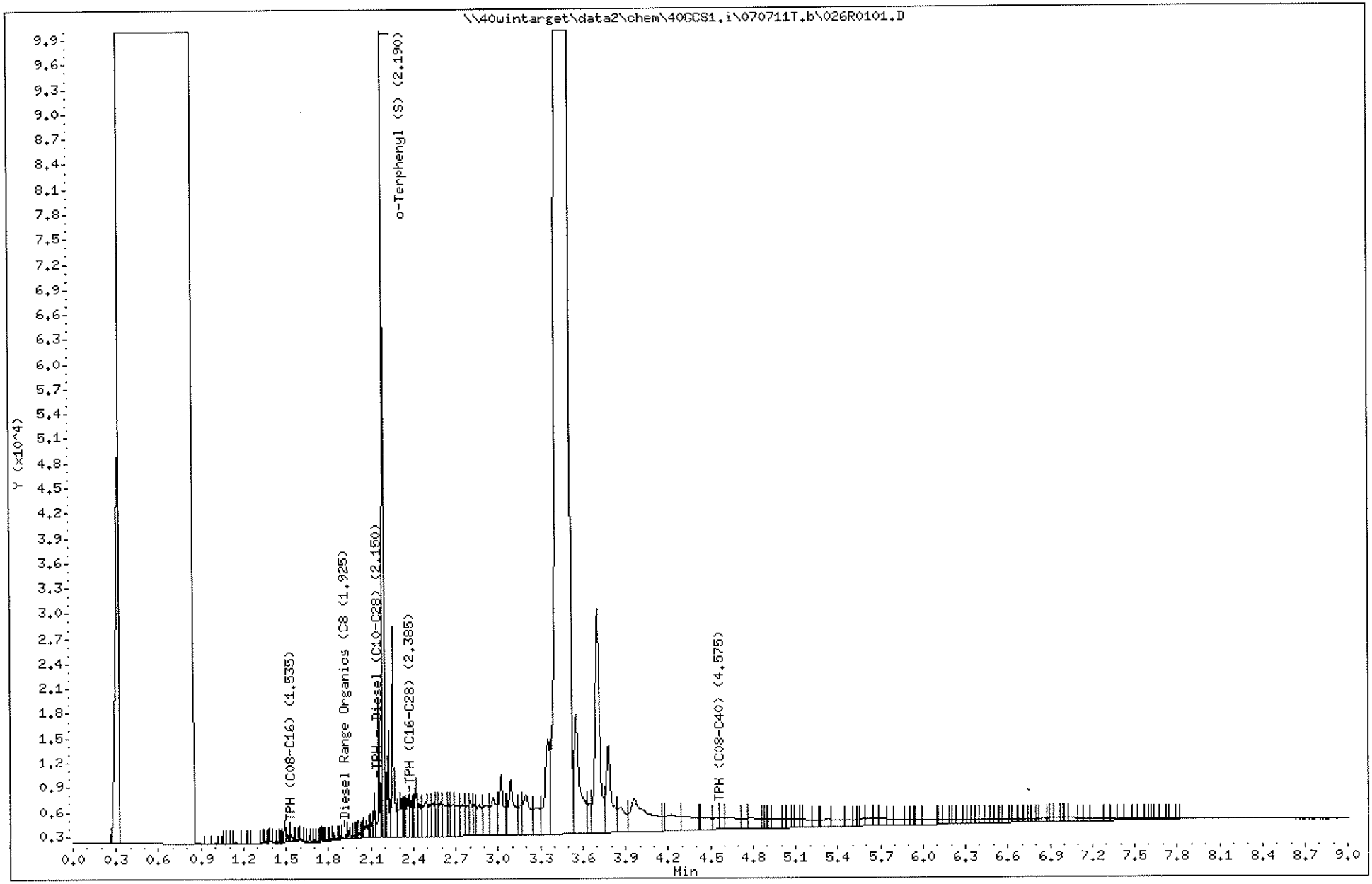
Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\026R0101.D
Date : 07-JUL-2011 14:03
Client ID: EWL-T-05-C-HEAT
Sample Info: 4046733017
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\026R0101.D
Lab Smp Id: 4046733017 Client Smp ID: EWL-T-05-C-MEAT
Inj Date : 07-JUL-2011 14:03
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733017
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.850	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			4576805	1190.22	120.83
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	132844	26.6386	2.70

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-06-C-MEAT TX
Lab ID: 4046733018
Collected: 12/16/10 12:15
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<8.0	mg/kg	16.1	8.0	1	06/15/11 11:44	07/07/11 14:15	
	TPH (C08-C16)	<8.0	mg/kg	16.1	8.0	1	06/15/11 11:44	07/07/11 14:15	
	TPH (C16-C28)	<8.0	mg/kg	16.1	8.0	1	06/15/11 11:44	07/07/11 14:15	
	TPH (C08-C40)	49.1	mg/kg	16.1	8.0	1	06/15/11 11:44	07/07/11 14:15	3q
	TPH - Diesel (C10-C28)	<8.0	mg/kg	16.1	8.0	1	06/15/11 11:44	07/07/11 14:15	L2
Surrogates									
84-15-1	o-Terphenyl (S)	47	%.	50-150		1	06/15/11 11:44	07/07/11 14:15	4q

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-06-C-MEAT TX
Lab ID: 4046733018
Collected: 12/16/10 12:15
Received: 06/08/11 10:00

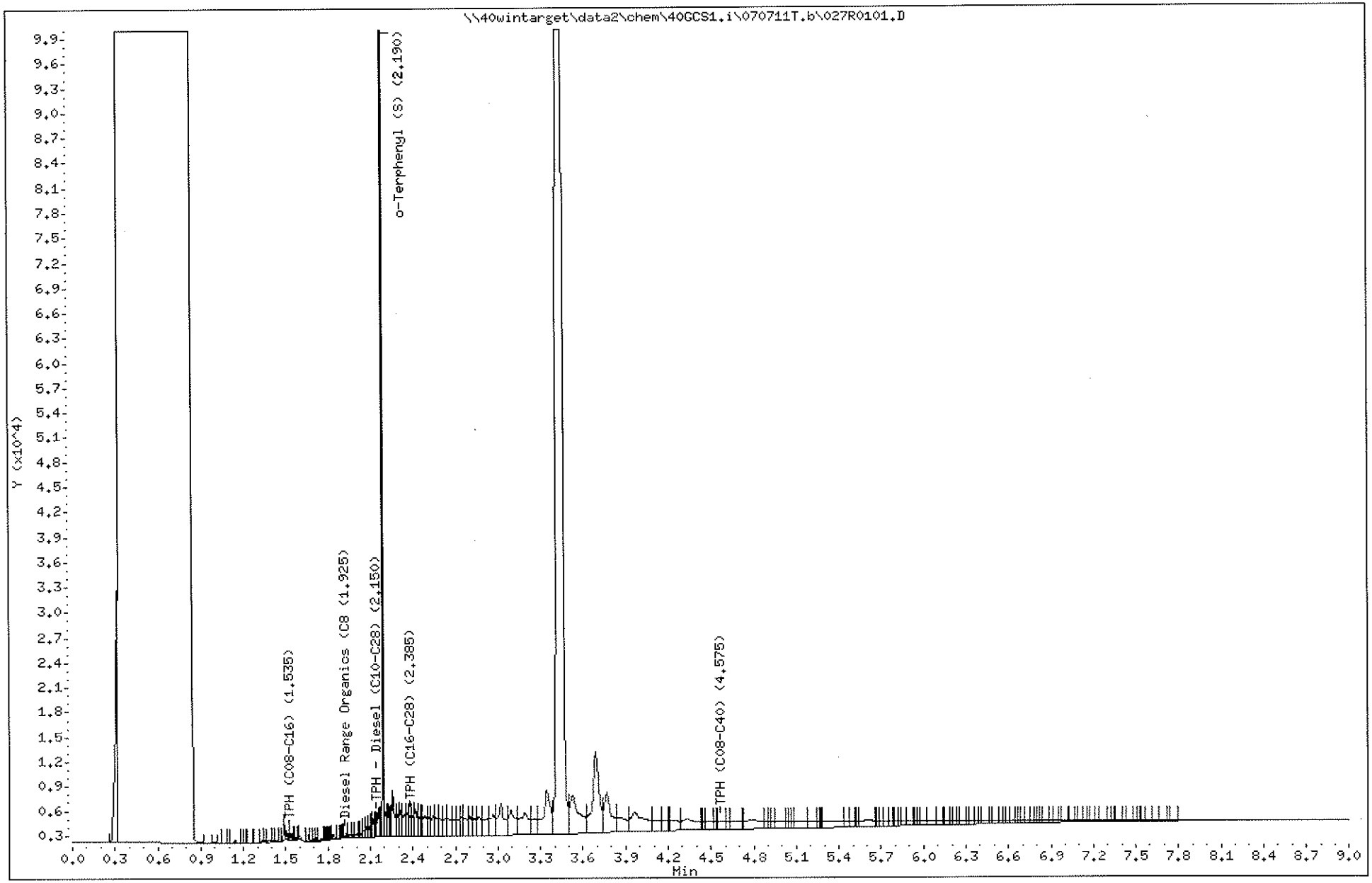
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.097**	%			1		06/16/11 06:35	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\027R0101.D
Date : 07-JUL-2011 14:15
Client ID: EWL-T-06-C-HEAT
Sample Info: 4046733018
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\027R0101.D
Lab Smp Id: 4046733018 Client Smp ID: EWL-T-06-C-MEAT
Inj Date : 07-JUL-2011 14:15
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733018
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	6.210	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			1404923	304.990	49.11
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	117768	23.6155	3.80

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-08-C-MEAT TX
Lab ID: 4046733019
Collected: 01/03/11 11:05
Received: 06/08/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<5.0**	mg/kg	9.9	5.0	1	06/15/11 11:44	07/07/11 14:27	
	TPH (C08-C16)	**<5.0**	mg/kg	9.9	5.0	1	06/15/11 11:44	07/07/11 14:27	
	TPH (C16-C28)	**<5.0**	mg/kg	9.9	5.0	1	06/15/11 11:44	07/07/11 14:27	
	TPH (C08-C40)	**51.3**	mg/kg	9.9	5.0	1	06/15/11 11:44	07/07/11 14:27	3q
	TPH - Diesel (C10-C28)	**<5.0**	mg/kg	9.9	5.0	1	06/15/11 11:44	07/07/11 14:27	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**38**	%.	50-150		1	06/15/11 11:44	07/07/11 14:27	4q

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046733

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-08-C-MEAT TX
Lab ID: 4046733019
Collected: 01/03/11 11:05
Received: 06/08/11 10:00

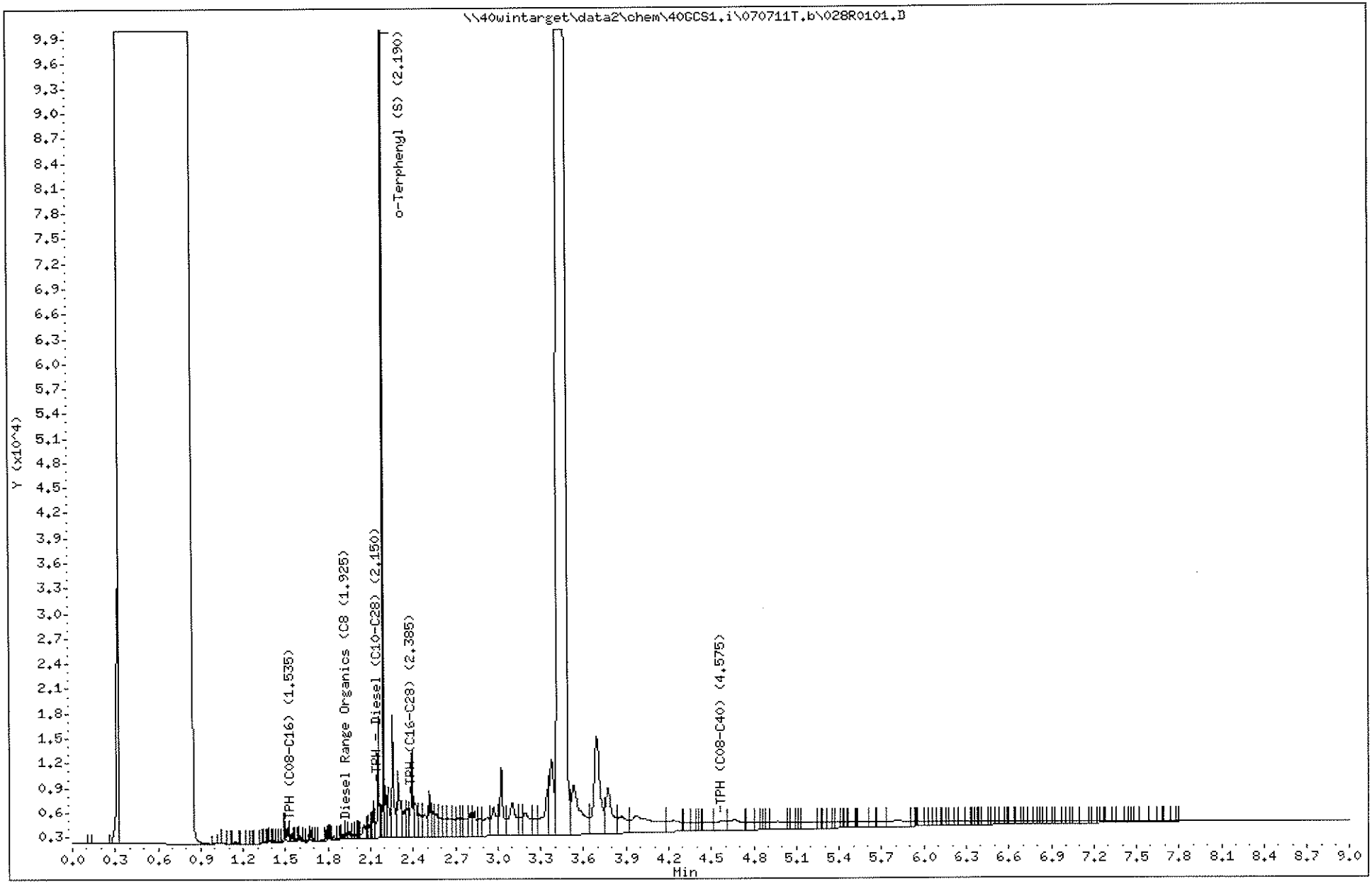
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.087**	%			1		06/16/11 06:35	

Date: 05/14/2012 05:14 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\028R0101.D
Date : 07-JUL-2011 14:27
Client ID: EWL-T-08-C-MEAT
Sample Info: 4046733019
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\028R0101.D
Lab Smp Id: 4046733019 Client Smp ID: EWL-T-08-C-MEAT
Inj Date : 07-JUL-2011 14:27
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046733019
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.090	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			2167949	517.940	51.33
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.190	2.183	0.007	95227	19.0954	1.89

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046733

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 kburns

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	2 Diesel Range Organics (C8-C28	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	3 High End Organics (C8-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	4 TPH (C08-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	5 TPH (C08-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	6 TPH (C10-C12)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	7 TPH (C10-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	8 TPH - Diesel (C10-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	9 TPH (C10-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	10 TPH (C12-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	11 Biota (C12-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	12 TPH (C16-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	13 TPH (C16-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	14 TPH (C20-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 kburns

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 o-Terphenyl (S)	0.00025	0.00023	0.00019	0.00022	0.00018	0.00014	AVRG		0.00020		20.31495	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

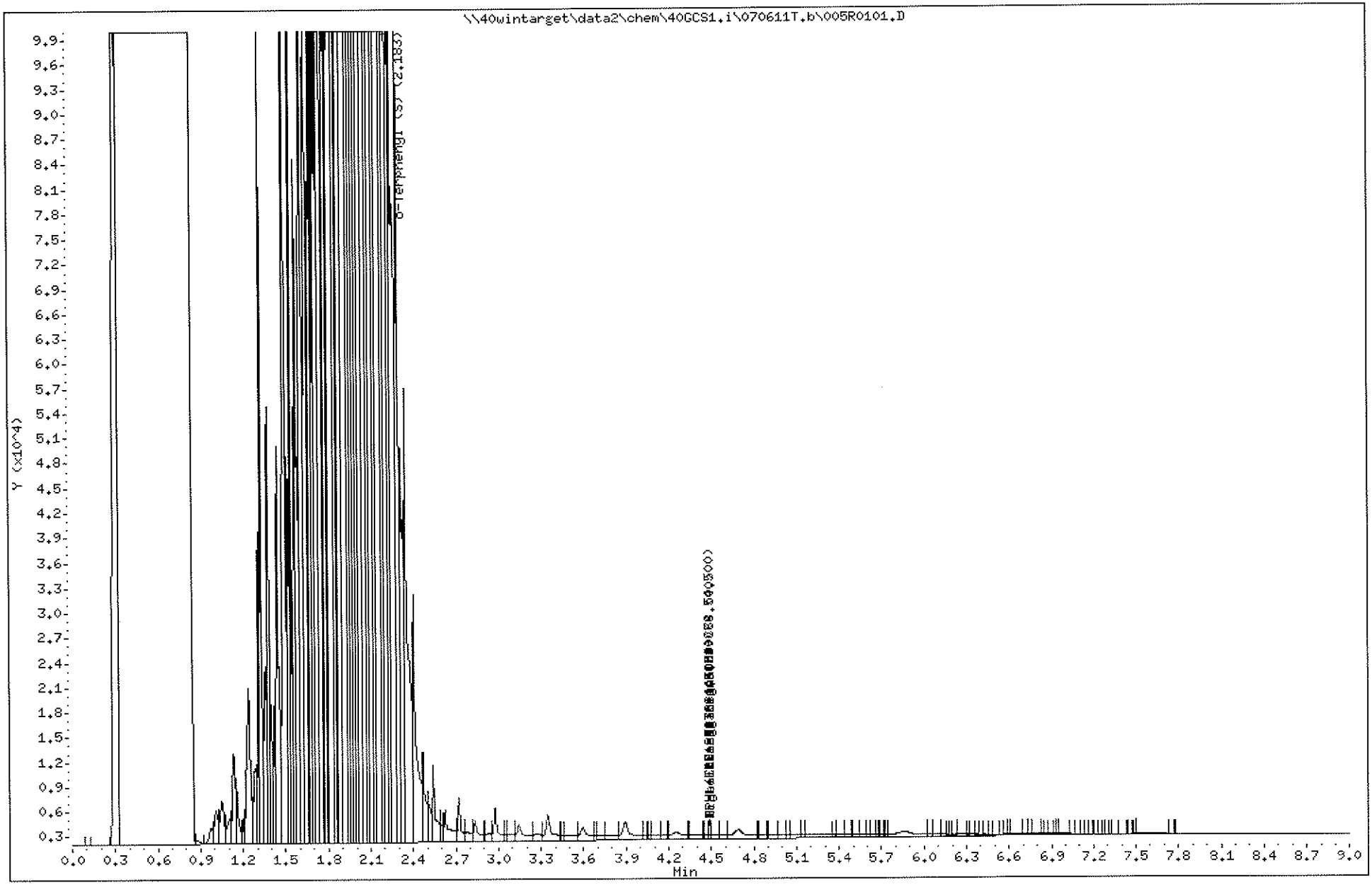
Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 kburns

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Date : 06-JUL-2011 11:06
Client ID:
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01
Inj Date : 06-JUL-2011 11:06
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:06 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

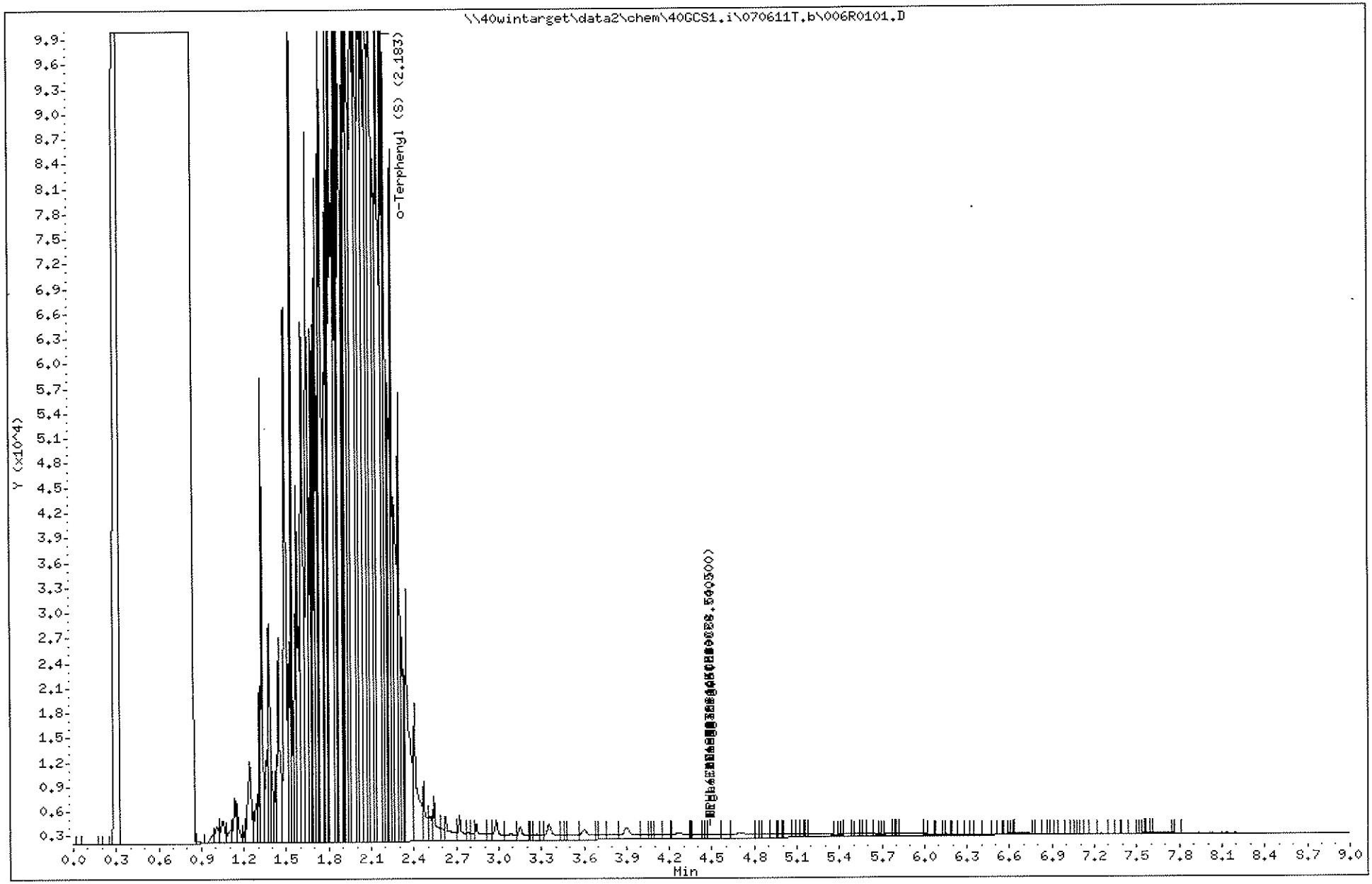
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			7455627	2000.00	1993.65(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	3 High End Organics (C8-C34)	1.050-7.950			7455627	2000.00	1993.65
S	4 TPH (C08-C36)	1.050-7.950			7455627	2000.00	1993.65
S	5 TPH (C08-C40)	1.050-7.950			7455627	2000.00	1993.65
S	6 TPH (C10-C12)	1.050-7.950			7455627	2000.00	1993.65
S	7 TPH (C10-C20)	1.050-7.950			7455627	2000.00	1993.65
S	8 TPH - Diesel (C10-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	9 TPH (C10-C40)	1.050-7.950			7455627	2000.00	1993.65
S	10 TPH (C12-C20)	1.050-7.950			7455627	2000.00	1993.65
S	11 Biota (C12-C36)	1.050-7.950			7455627	2000.00	1993.65
S	12 TPH (C16-C28)	1.970-2.800			7455627	2000.00	1993.65(T)
S	13 TPH (C16-C40)	1.050-7.950			7455627	2000.00	1993.65
S	14 TPH (C20-C34)	1.050-7.950			7455627	2000.00	1993.65
$	15 o-Terphenyl (S)	2.183	2.183	0.000	359479	50.0000	72.08

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Date : 06-JUL-2011 11:16
Client ID:
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02
Inj Date : 06-JUL-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:16 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-2.020			3937229	1000.00	1011.72(T)
S 2	Diesel Range Organics (C8-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S 3	High End Organics (C8-C34)	1.050-7.950			3937229	1000.00	1011.72
S 4	TPH (C08-C36)	1.050-7.950			3937229	1000.00	1011.72
S 5	TPH (C08-C40)	1.050-7.950			3937229	1000.00	1011.72
S 6	TPH (C10-C12)	1.050-7.950			3937229	1000.00	1011.72
S 7	TPH (C10-C20)	1.050-7.950			3937229	1000.00	1011.72
S 8	TPH - Diesel (C10-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S 9	TPH (C10-C40)	1.050-7.950			3937229	1000.00	1011.72
S 10	TPH (C12-C20)	1.050-7.950			3937229	1000.00	1011.72
S 11	Biota (C12-C36)	1.050-7.950			3937229	1000.00	1011.72
S 12	TPH (C16-C28)	1.970-2.800			3937229	1000.00	1011.72(T)
S 13	TPH (C16-C40)	1.050-7.950			3937229	1000.00	1011.72
S 14	TPH (C20-C34)	1.050-7.950			3937229	1000.00	1011.72
$ 15	o-Terphenyl (S)	2.183	2.183	0.000	281119	50.0000	56.37

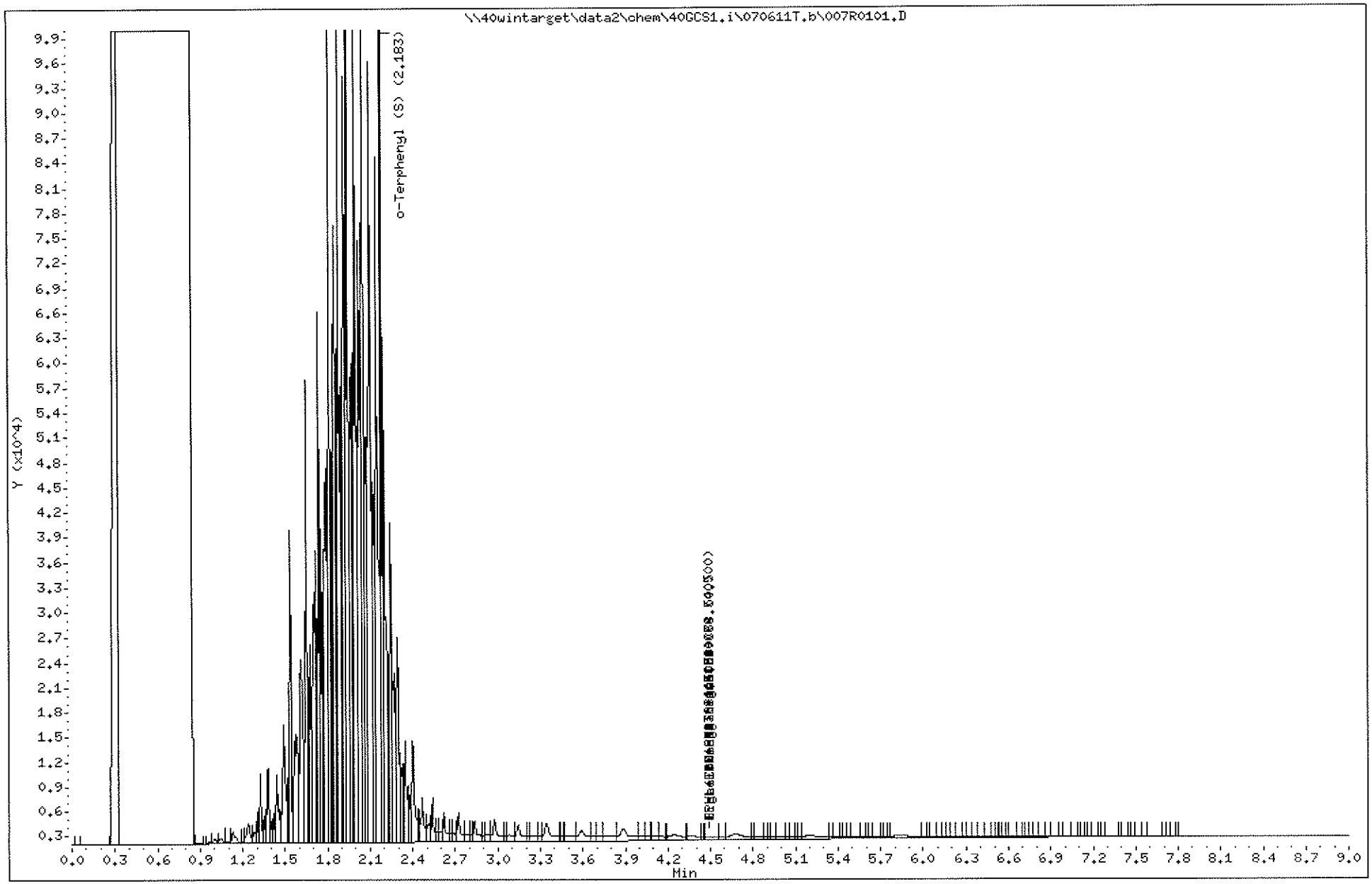
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Date : 06-JUL-2011 11:28
Client ID:
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Lab Smp Id: 500 2860-31-14
Inj Date : 06-JUL-2011 11:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:28 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			2026692	500.000	478.51(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			2026692	500.000	478.51(T)
S	3 High End Organics (C8-C34)	1.050-7.950			2026692	500.000	478.51
S	4 TPH (C08-C36)	1.050-7.950			2026692	500.000	478.51
S	5 TPH (C08-C40)	1.050-7.950			2026692	500.000	478.51
S	6 TPH (C10-C12)	1.050-7.950			2026692	500.000	478.51
S	7 TPH (C10-C20)	1.050-7.950			2026692	500.000	478.51
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2026692	500.000	478.51(T)
S	9 TPH (C10-C40)	1.050-7.950			2026692	500.000	478.51
S	10 TPH (C12-C20)	1.050-7.950			2026692	500.000	478.51
S	11 Biota (C12-C36)	1.050-7.950			2026692	500.000	478.51
S	12 TPH (C16-C28)	1.970-2.800			2026692	500.000	478.51(T)
S	13 TPH (C16-C40)	1.050-7.950			2026692	500.000	478.51
S	14 TPH (C20-C34)	1.050-7.950			2026692	500.000	478.51
$	15 o-Terphenyl (S)	2.183	2.183	0.000	228999	50.0000	45.92

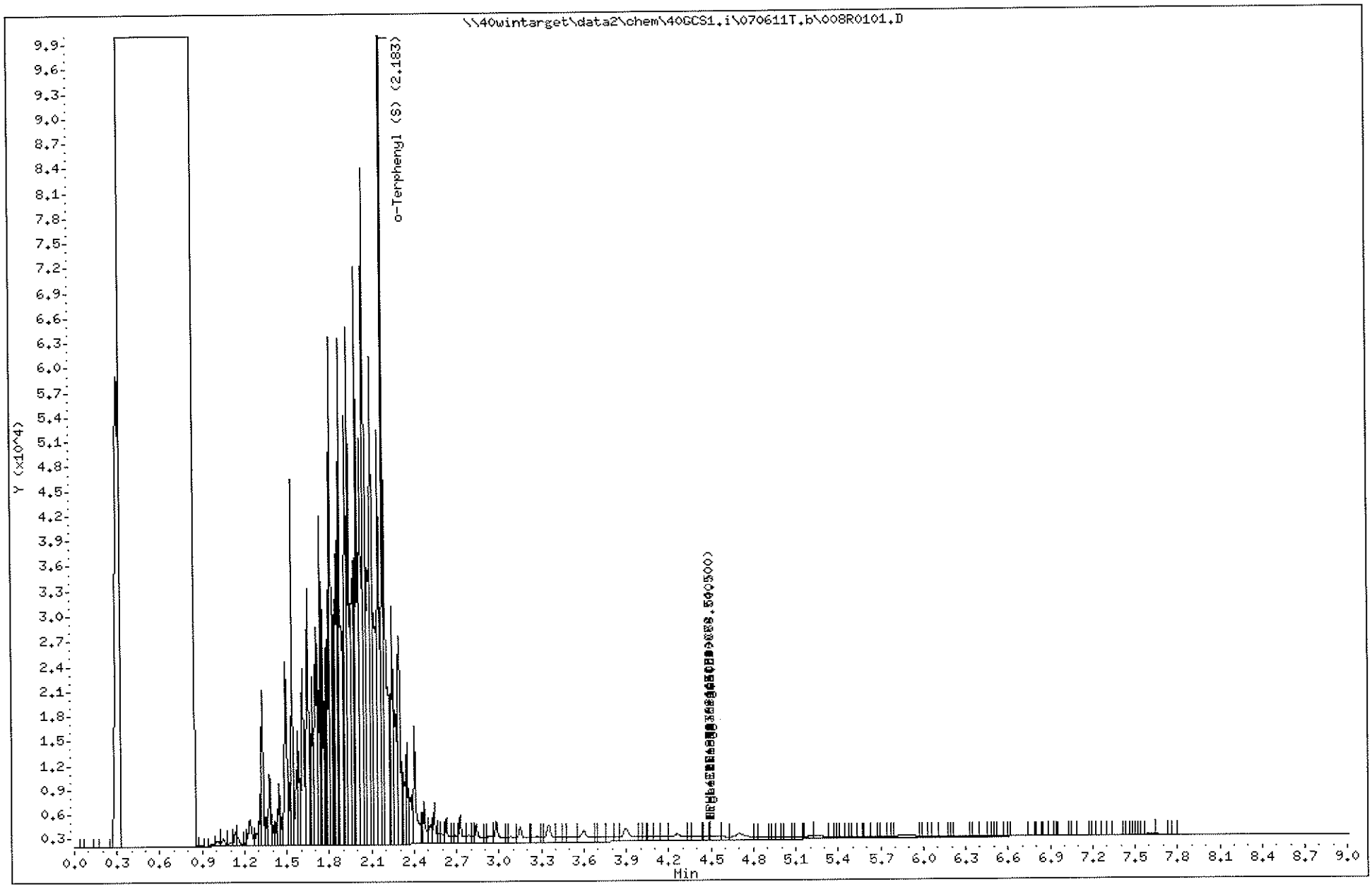
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Date : 06-JUL-2011 11:41
Client ID:
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Lab Smp Id: 250 2860-30-13
Inj Date : 06-JUL-2011 11:41
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:41 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			1423911	250.000	310.28(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	3 High End Organics (C8-C34)	1.050-7.950			1423911	250.000	310.28
S	4 TPH (C08-C36)	1.050-7.950			1423911	250.000	310.28
S	5 TPH (C08-C40)	1.050-7.950			1423911	250.000	310.28
S	6 TPH (C10-C12)	1.050-7.950			1423911	250.000	310.28
S	7 TPH (C10-C20)	1.050-7.950			1423911	250.000	310.28
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	9 TPH (C10-C40)	1.050-7.950			1423911	250.000	310.28
S	10 TPH (C12-C20)	1.050-7.950			1423911	250.000	310.28
S	11 Biota (C12-C36)	1.050-7.950			1423911	250.000	310.28
S	12 TPH (C16-C28)	1.970-2.800			1423911	250.000	310.28(T)
S	13 TPH (C16-C40)	1.050-7.950			1423911	250.000	310.28
S	14 TPH (C20-C34)	1.050-7.950			1423911	250.000	310.28
$	15 o-Terphenyl (S)	2.183	2.183	0.000	269129	50.0000	53.96

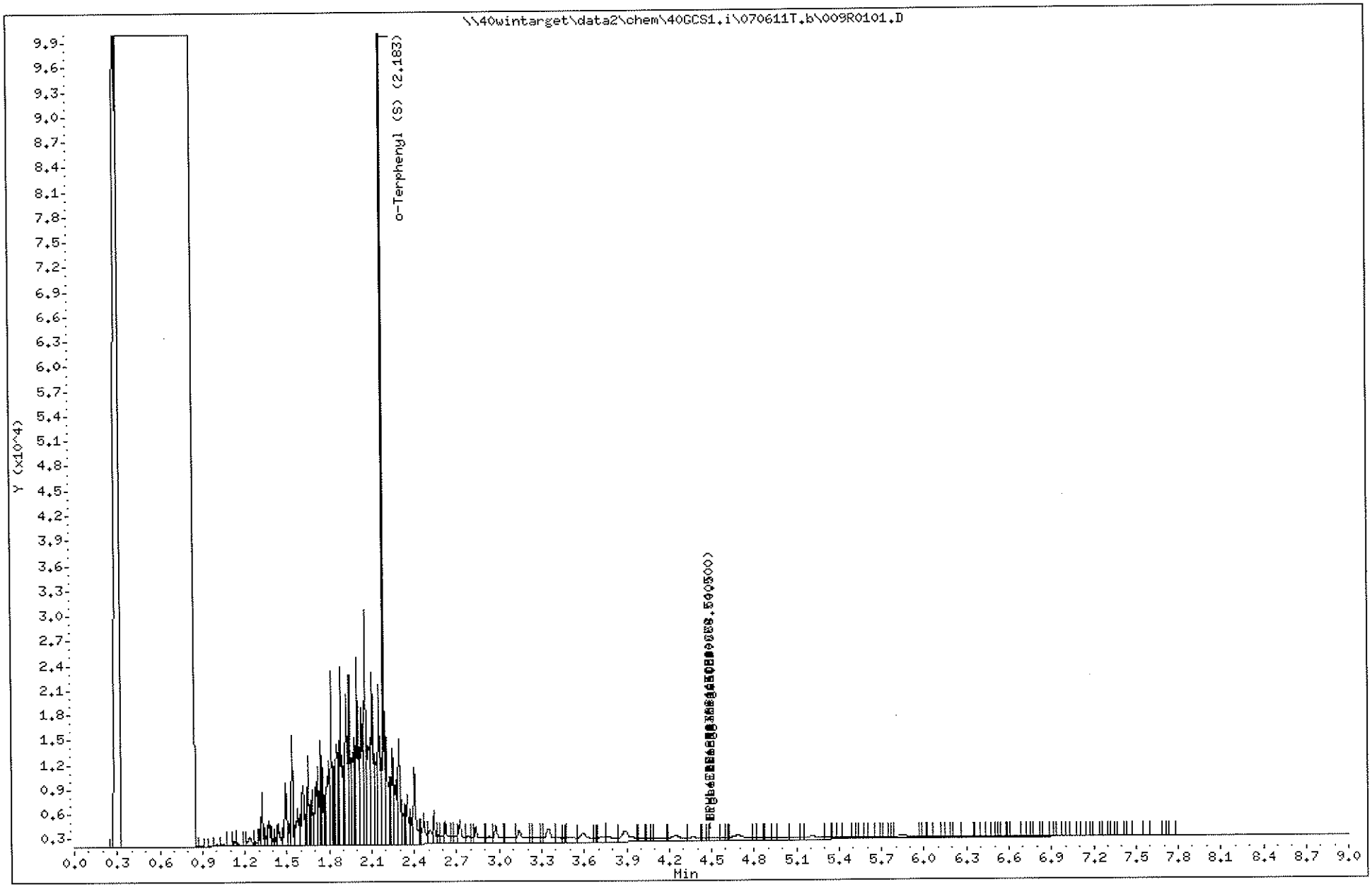
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Date : 06-JUL-2011 11:53
Client ID:
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Lab Smp Id: 100 2860-30-14
Inj Date : 06-JUL-2011 11:53
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:53 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			587718	100.000	76.92(Ta)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			587718	100.000	76.92(Ta)
S	3 High End Organics (C8-C34)	1.050-7.950			587718	100.000	76.92(a)
S	4 TPH (C08-C36)	1.050-7.950			587718	100.000	76.92(a)
S	5 TPH (C08-C40)	1.050-7.950			587718	100.000	76.92(a)
S	6 TPH (C10-C12)	1.050-7.950			587718	100.000	76.92(a)
S	7 TPH (C10-C20)	1.050-7.950			587718	100.000	76.92(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.800			587718	100.000	76.92(T)
S	9 TPH (C10-C40)	1.050-7.950			587718	100.000	76.92(a)
S	10 TPH (C12-C20)	1.050-7.950			587718	100.000	76.92(a)
S	11 Biota (C12-C36)	1.050-7.950			587718	100.000	76.92(a)
S	12 TPH (C16-C28)	1.970-2.800			587718	100.000	76.92(Ta)
S	13 TPH (C16-C40)	1.050-7.950			587718	100.000	76.92(a)
S	14 TPH (C20-C34)	1.050-7.950			587718	100.000	76.92(a)
$	15 o-Terphenyl (S)	2.183	2.183	0.000	216228	50.0000	43.35

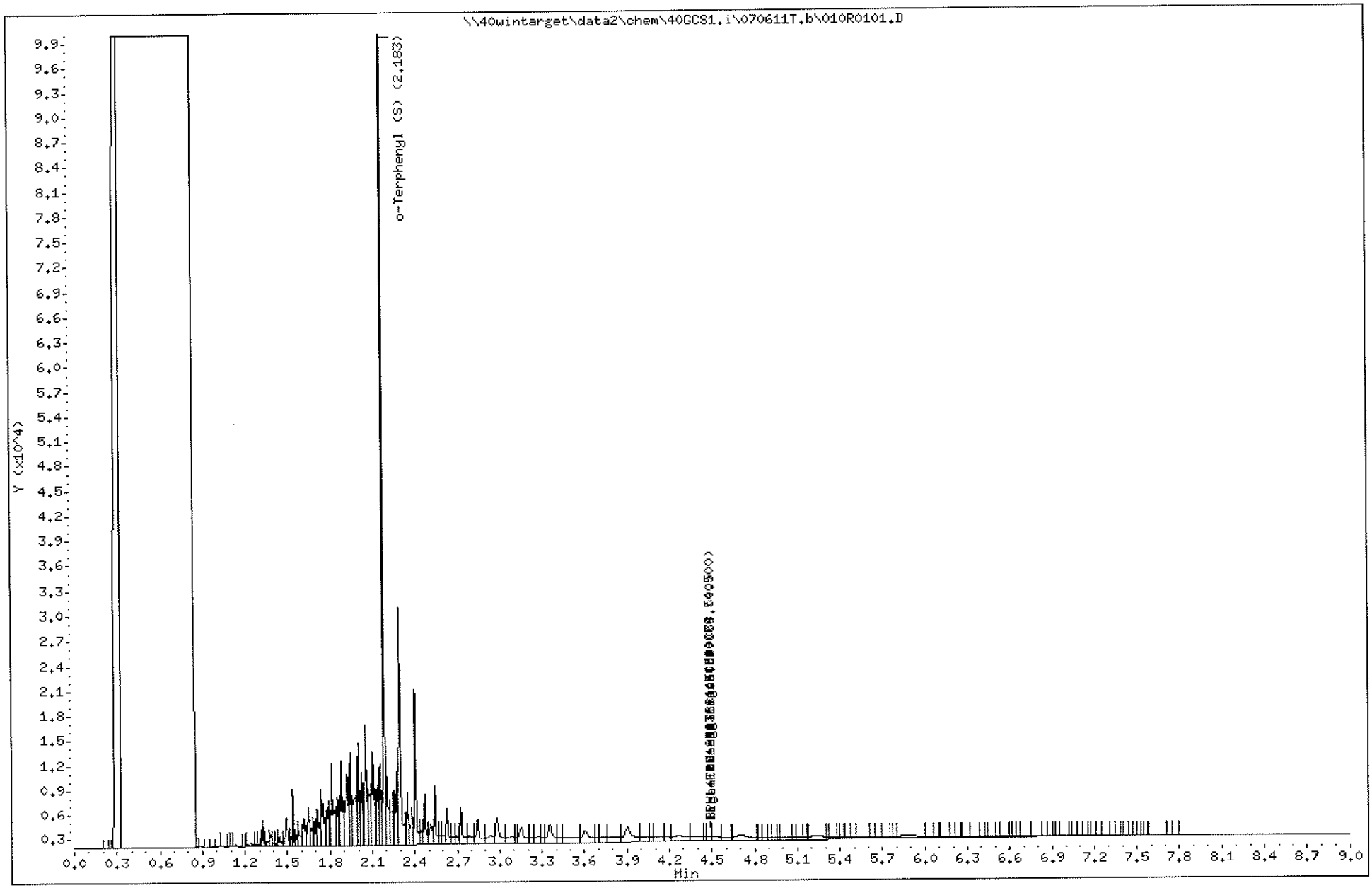
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Date : 06-JUL-2011 12:05
Client ID:
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Lab Smp Id: 50 2860-30-15
Inj Date : 06-JUL-2011 12:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			415643	50.0000	28.89(Ta)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			415643	50.0000	28.89(Ta)
S	3 High End Organics (C8-C34)	1.050-7.950			415643	50.0000	28.89(a)
S	4 TPH (C08-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	5 TPH (C08-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	6 TPH (C10-C12)	1.050-7.950			415643	50.0000	28.89(a)
S	7 TPH (C10-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.800			415643	50.0000	28.89(T)
S	9 TPH (C10-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	10 TPH (C12-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	11 Biota (C12-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	12 TPH (C16-C28)	1.970-2.800			415643	50.0000	28.89(Ta)
S	13 TPH (C16-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	14 TPH (C20-C34)	1.050-7.950			415643	50.0000	28.89(a)
$	15 o-Terphenyl (S)	2.183	2.183	0.000	199331	50.0000	39.97

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

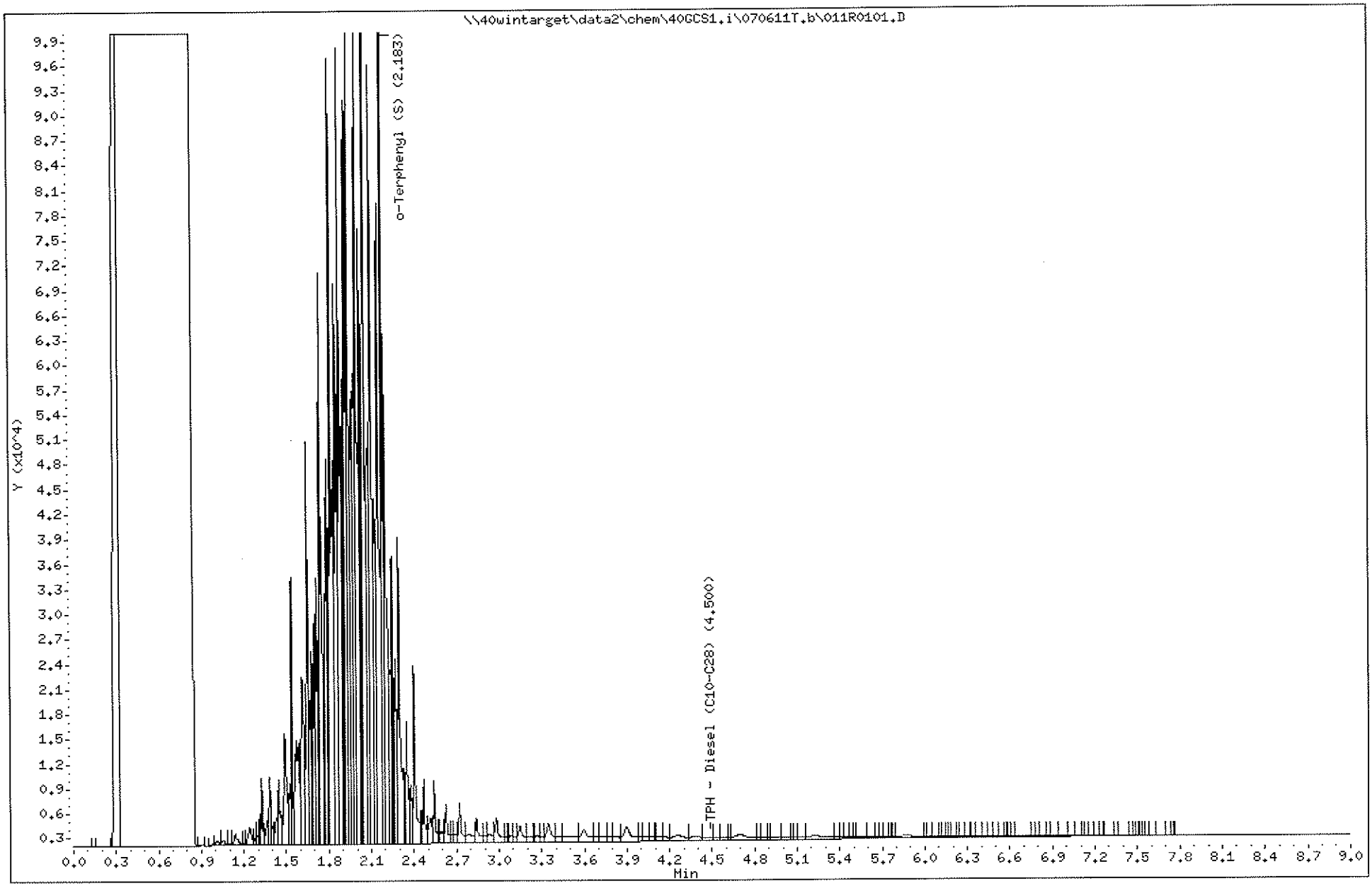
Instrument ID: 40GCS1.i Injection Date: 06-JUL-2011 12:17
Lab File ID: 011R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: WATER Init. Cal. Times: 11:06 12:05
Lab Sample ID: IC500 2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	467	0.00025	0.000	-6.54470	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	11.33103	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Date : 06-JUL-2011 12:17
Client ID:
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16
Inj Date : 06-JUL-2011 12:17
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1986415	500.000	467.27(T)
$ 15 o-Terphenyl (S)	2.183	2.183	0.000	223967	50.0000	44.91

QC Flag Legend

T - Target compound detected outside RT window.

Pace Analytical Services, Inc

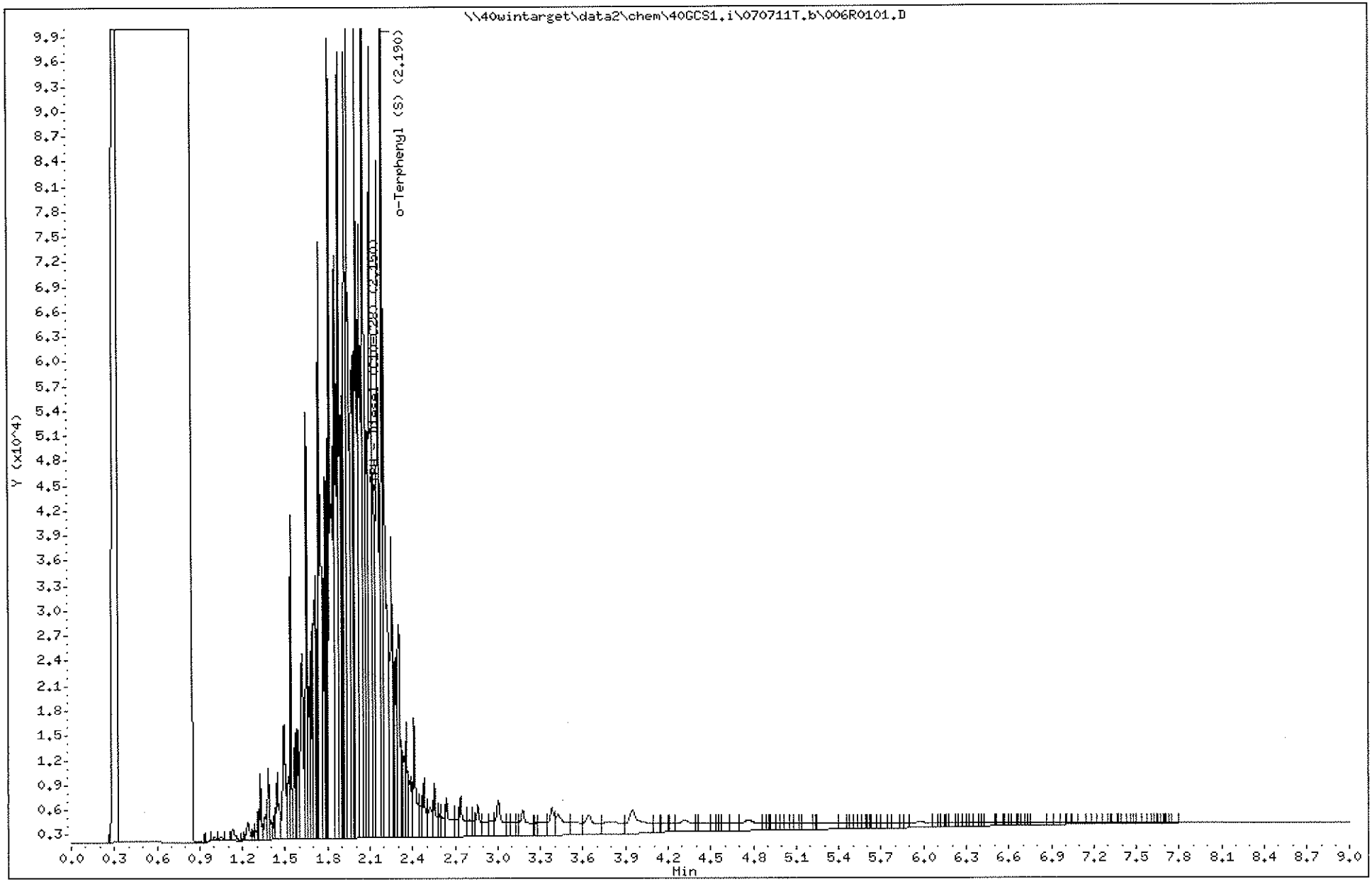
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 07-JUL-2011 09:55
Lab File ID: 006R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	444	0.00026	0.000	-11.19410	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	8.42256	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\006R0101.D
Date : 07-JUL-2011 09:55
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\006R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 07-JUL-2011 09:55
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1903118	500.000	444.02
$ 15 o-Terphenyl (S)	2.190	2.183	0.007	229975	50.0000	46.11

Pace Analytical Services, Inc

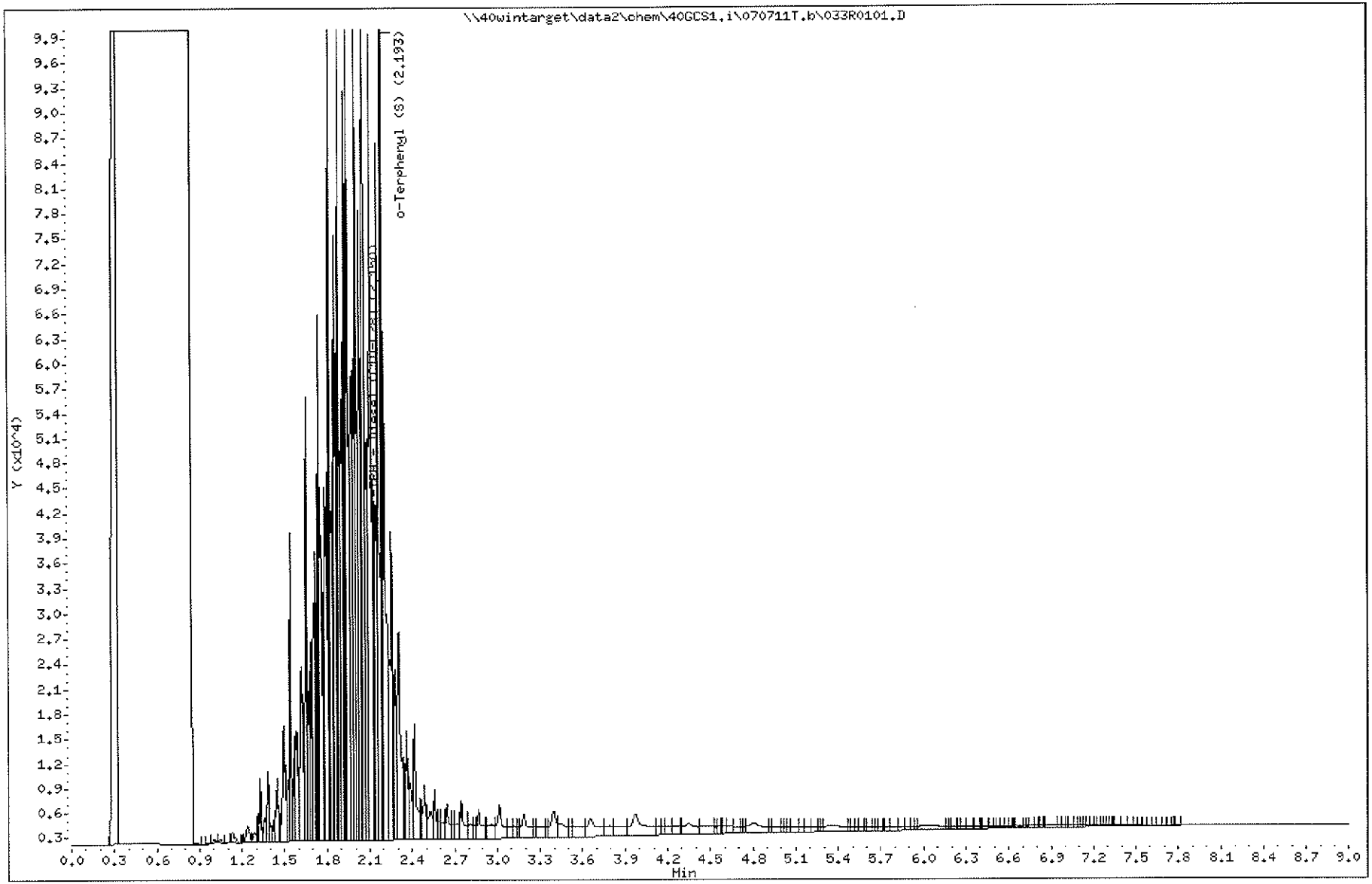
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 07-JUL-2011 15:27
Lab File ID: 033R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	434	0.00030	0.000	-13.20000	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00023	0.00023	0.000	13.00000	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\033R0101.D
Date : 07-JUL-2011 15:27
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\033R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 07-JUL-2011 15:27
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 07-Jul-2011 15:42 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1867272	500.000	434.02
$ 15 o-Terphenyl (S)	2.193	2.183	0.010	221583	50.0000	44.43

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046733

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11370 **Prepared:** 06/15/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4046733001, 4046733002, 4046733003, 4046733004, 4046733005, 4046733006, 4046733007, 4046733008, 4046733009, 4046733010, 4046733011, 4046733012, 4046733013, 4046733016, 4046733017, 4046733018, 4046733019

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	07/07/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	07/07/11	
	TPH (C08-C40)	121	mg/kg	6.7	3.3	07/07/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	07/07/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	07/07/11	

Type	Sample	Matrix
BLANK	463495	Tissue

REPORT OF LABORATORY ANALYSIS

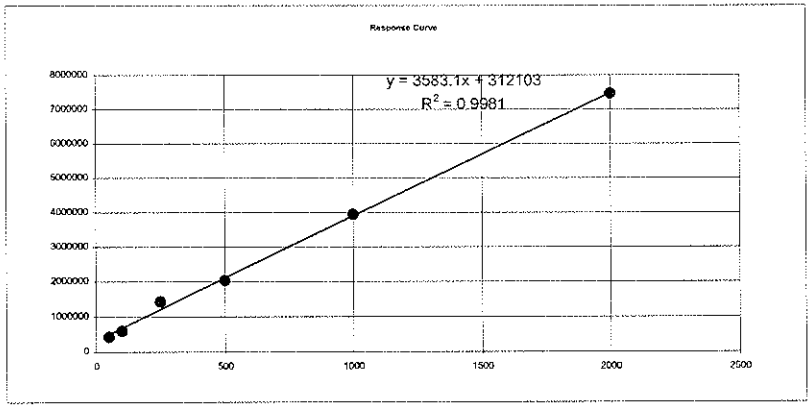
SampleID: 463495 File: 09R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



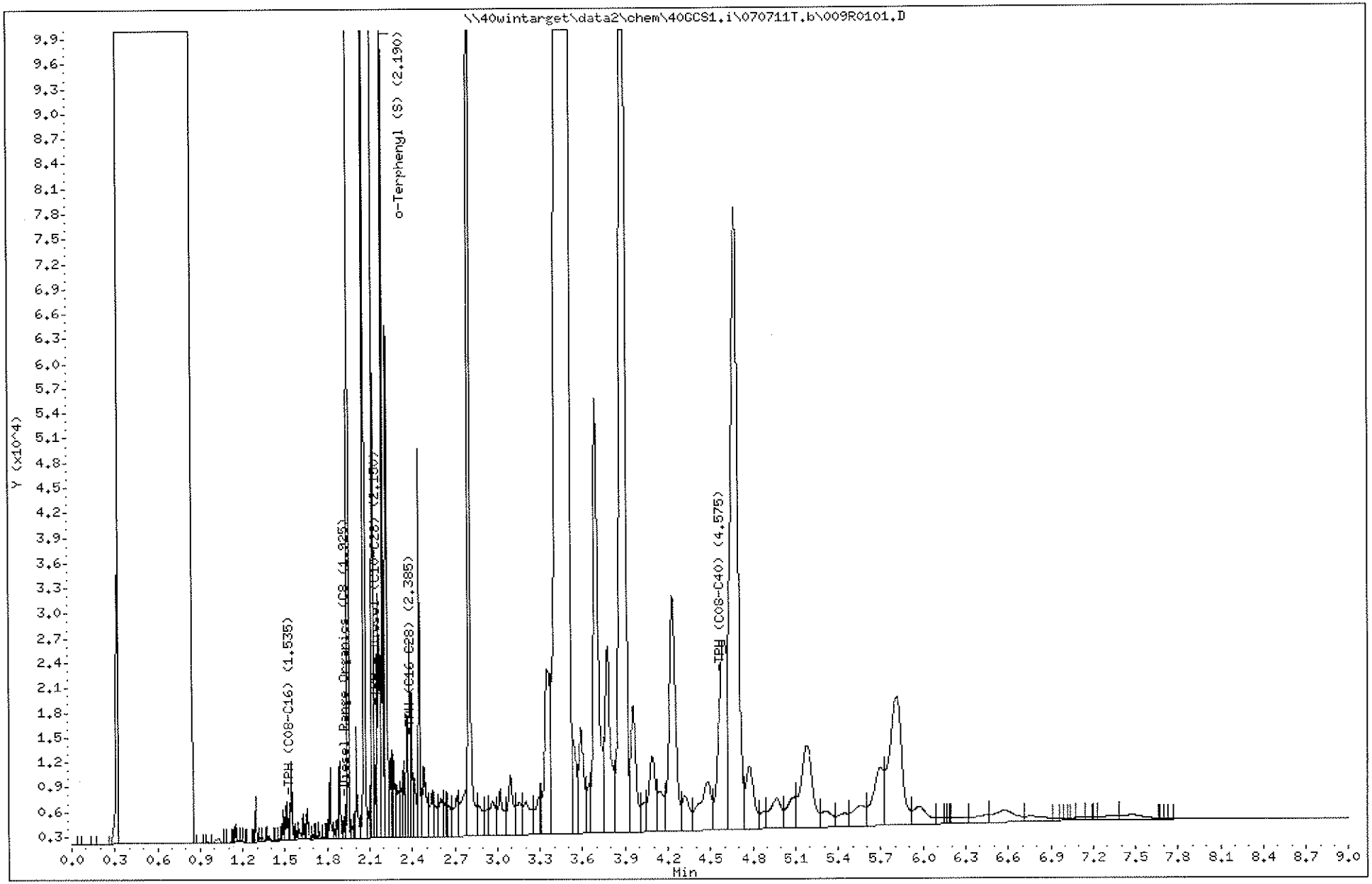
Retention Time	Peak Area	Compound Name
1.947	155696	
2.060	100134	
2.120	98811	
2.800	211660	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	214434	155696	-70.7107
Diesel Range Organics (	925071	566301	13.024
TPH - Diesel (C10-C28)	916604	566301	10.66098
TPH (C16-C28)	721741	410605	-0.26997
TPH (C08-C40)	7391526	566301	1817.719

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\009R0101.D
Date : 07-JUL-2011 10:37
Client ID: MB
Sample Info: 463495
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\009R0101.D
Lab Smp Id: 463495 Client Smp ID: MB
Inj Date : 07-JUL-2011 10:37
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463495
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 14-May-2012 09:07 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.100			7391525	1975.77	131.71
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.800			721741	114.324	7.62
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			925070	171.070	11.40
S	8 TPH - Diesel (C10-C28)	1.500-2.800			916604	168.708	11.24
$	15 o-Terphenyl (S)	2.190	2.183	0.007	153583	30.7973	2.05

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\009R0101.D
Lab Smp Id: 463495 Client Smp ID: MB
Inj Date : 07-JUL-2011 10:37
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463495
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 14-May-2012 09:07 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.050	12	9	0.769	0.00		
0.150	13	10	0.794	0.00		
0.317	29465	32466	1.102	0.00		
0.367	548038696	86059316	0.157	98.18		
0.883	73	58	0.792	0.00		
0.953	167	160	0.956	0.00		
1.030	1049	497	0.474	0.00		
1.535	214434	521012	2.430	0.03	S	1 TPH (C08-C16)
1.925	925071	1481012	1.601	0.16	S	2 Diesel Range Organi
1.070	13	22	1.692			
1.120	102	97	0.955			
1.147	1364	2144	1.572			
1.170	74	185	2.487			
1.183	71	131	1.837			
1.203	60	112	1.864			
1.240	48	69	1.444			
1.290	3063	5595	1.827			
1.323	258	499	1.937			
1.343	267	406	1.519			
1.370	86	207	2.410			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.387	557	562	1.009			
1.437	51	136	2.646			
1.457	121	292	2.419			
1.470	257	480	1.868			
1.490	2075	3617	1.743			
2.150	916604	1466458	1.600	0.16	S	8 TPH - Diesel (C10-C
1.513	3607	4552	1.262			
1.533	2241	4371	1.950			
1.543	5606	9509	1.696			
1.573	95	267	2.822			
1.590	855	1195	1.397			
1.603	728	1180	1.622			
1.627	1649	2966	1.798			
1.650	1107	2537	2.292			
1.660	2600	3751	1.443			
1.697	330	537	1.628			
1.710	382	753	1.971			
1.727	273	402	1.471			
1.743	660	834	1.264			
1.777	129	244	1.896			
1.787	195	272	1.398			
1.800	937	2013	2.149			
1.820	6451	8577	1.330			
1.850	786	1094	1.392			
1.873	1542	2249	1.459			
1.887	6595	9404	1.426			
1.923	2401	4034	1.680			
1.947	155696	428559	2.753			
1.977	1288	1494	1.160			
1.990	1436	2278	1.586			
2.003	8380	13386	1.597			
2.060	100134	179112	1.789			
2.087	2496	3132	1.255			
2.103	3662	6359	1.736			
2.120	98811	250018	2.530			
2.143	4852	8834	1.821			
2.153	35628	29480	0.827			
2.213	50262	47216	0.939			
2.247	7150	9525	1.332			
2.257	5601	10107	1.805			
2.267	11922	10067	0.844			
2.293	7648	6252	0.817			
2.317	6578	5886	0.895			
2.337	6676	9197	1.378			
2.363	12449	14829	1.191			
2.380	14043	23747	1.691			
2.393	11146	17359	1.557			
2.410	9983	7749	0.776			
2.447	28795	46642	1.620			
2.477	18468	8571	0.464			
2.537	7554	5512	0.730			
2.553	7197	3889	0.540			
2.603	7929	4510	0.569			
2.620	4685	4106	0.876			
2.640	3692	3796	1.028			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.657	6196	3683	0.594			
2.710	9986	4853	0.486			
2.777	15434	5476	0.355			
2.800	211660	230093	1.087			
2.190	153584	374922	2.441	0.02	$ 15	o-Terphenyl (S)
2.385	721741	977158	1.354	0.12	S 12	TPH (C16-C28)
4.575	7391526	3379015	0.457	1.33	S 5	TPH (C08-C40)
2.867	9675	3591	0.371			
2.927	4274	3117	0.729			
2.963	13265	4108	0.310			
3.017	13188	5505	0.417			
3.090	17973	7145	0.398			
3.153	11447	3855	0.337			
3.200	15463	3972	0.257			
3.293	10180	4529	0.445			
3.307	3553	4457	1.254			
3.350	51134	19892	0.389			
3.510	4689705	1329502	0.283			
3.540	18920	11297	0.597			
3.590	32879	12680	0.386			
3.647	10018	5921	0.591			
3.693	123664	52320	0.423			
3.777	63197	22504	0.356			
3.897	416462	166080	0.399			
3.957	39999	15246	0.381			
4.037	8135	3520	0.433			
4.090	29794	9123	0.306			
4.143	13890	4888	0.352			
4.233	90226	28374	0.314			
4.320	15384	4206	0.273			
4.480	34615	5839	0.169			
4.593	88160	22872	0.259			
4.680	272419	74719	0.274			
4.773	30903	7551	0.244			
4.883	5576	2102	0.377			
4.967	19943	3653	0.183			
5.097	16505	3740	0.227			
5.183	56700	9898	0.175			
5.310	11484	1987	0.173			
5.447	7974	1608	0.202			
5.563	16188	2477	0.153			
5.697	38232	7057	0.185			
5.813	95074	15461	0.163			
5.973	15212	2160	0.142			
6.130	2329	730	0.313			
6.160	987	708	0.717			
6.180	703	707	1.005			
6.193	423	711	1.681			
6.233	5475	765	0.140			
6.457	6750	900	0.133			
6.570	15191	1420	0.093			
6.763	5915	639	0.108			
6.930	1020	351	0.344			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.967	598	309	0.517		
6.997	505	288	0.570		
7.040	331	277	0.838		
7.073	565	296	0.524		
7.110	1156	315	0.273		
7.157	962	298	0.310		
7.203	158	265	1.679		
7.227	378	281	0.744		
7.333	3839	501	0.131		
7.473	6734	616	0.091		
7.667	123	163	1.324		
7.693	206	156	0.757		
7.713	296	167	0.564		
7.743	402	184	0.458		
	555614584	89846453		100.000	

Total unknown % area = 98.18

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11382 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4046733001, 4046733002, 4046733003, 4046733004, 4046733005, 4046733006, 4046733007, 4046733008, 4046733009, 4046733010, 4046733011, 4046733012, 4046733013, 4046733016, 4046733017, 4046733018, 4046733019

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.53	%			06/16/11	

Type	Sample	Matrix
BLANK	463915	Tissue

REPORT OF LABORATORY ANALYSIS

REVISED

MAY 2 9 2012

J. Duranceau

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11370 **LCS Prepared:** 06/15/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:**

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	52			50-150		66.7	34.8		mg/kg	07/07/11			
TPH (C08-C16)	13			50-150		66.7	<10		mg/kg	07/07/11		L0	
TPH (C08-C40)	289			50-150		66.7	192		mg/kg	07/07/11		2q	
TPH (C16-C28)	20			50-150		66.7	13.6J		mg/kg	07/07/11		L0	
TPH - Diesel (C10-C28)	49			50-150		66.7	32.6		mg/kg	07/07/11		L0	

Type	Sample
LCS	463496

REPORT OF LABORATORY ANALYSIS

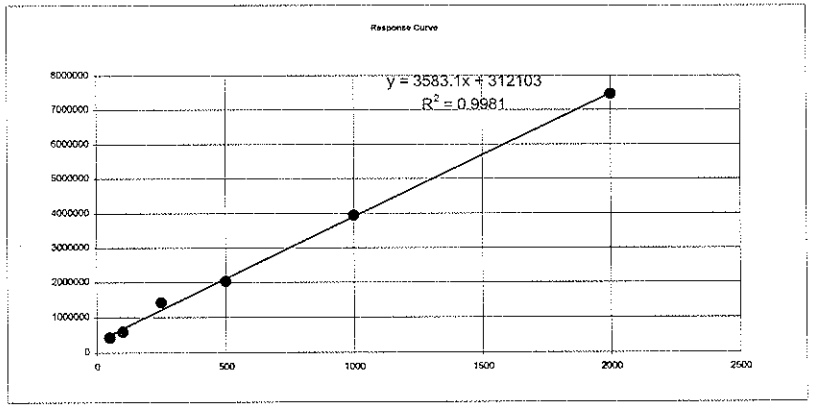
SampleID: 463496 File: 08R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



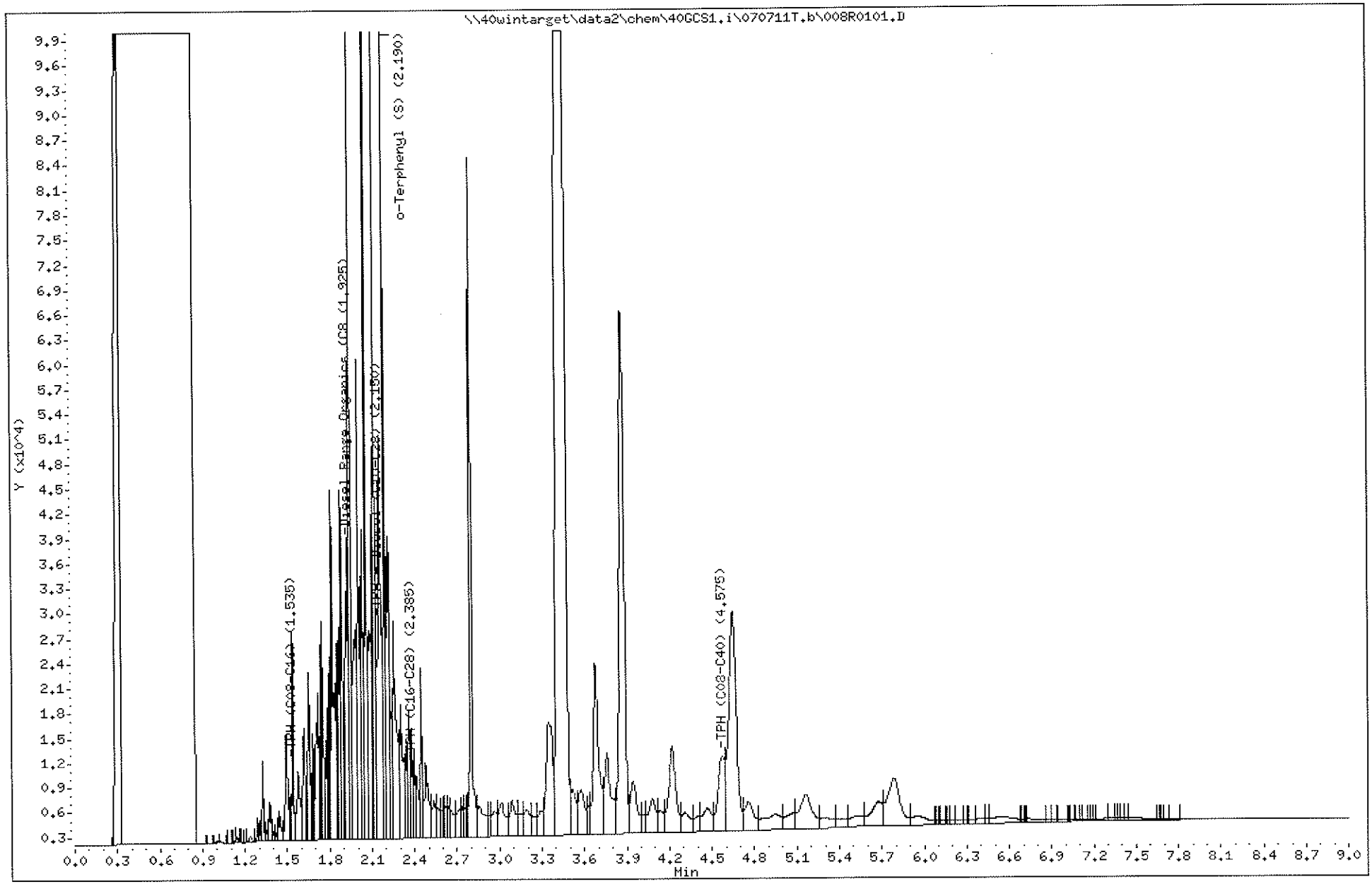
Retention Time	Peak Area	Compound Name
1.947	97492	
2.060	88127	
2.120	58962	
2.800	80622	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	570235	97492	44.83224
Diesel Range Organics (	1260965	325203	174.0542
TPH - Diesel (C10-C28)	1221656	325203	163.0837
TPH (C16-C28)	783035	227711	67.87942
TPH (C08-C40)	4083136	325203	961.6819

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\008R0101.D
Date : 07-JUL-2011 10:25
Client ID: MBLCS
Sample Info: 463496X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\008R0101.D
Lab Smp Id: 463496 Client Smp ID: MBLCS
Inj Date : 07-JUL-2011 10:25
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463496X3
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 14-May-2012 09:07 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.100			4083136	1052.44	210.48
S	1 TPH (C08-C16)	1.050-2.020			570234	72.0406	14.40(a)
S	12 TPH (C16-C28)	1.970-2.800			783035	131.430	26.28
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			1260965	264.814	52.96
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1221655	253.843	50.76
$	16 o-Terphenyl (S)	2.190	2.183	0.007	68268	13.6895	0.91

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\008R0101.D
Lab Smp Id: 463496 Client Smp ID: MBLCS
Inj Date : 07-JUL-2011 10:25
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463496X3
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 14-May-2012 09:07 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.313	211488	106016	0.501	0.03		
0.357	547342040	87287618	0.159	98.54		
0.950	52	47	0.900	0.00		
1.000	229	203	0.885	0.00		
1.023	168	109	0.651	0.00		
1.535	570235	743877	1.305	0.10	S	1 TPH (C08-C16)
1.925	1260965	1433243	1.137	0.22	S	2 Diesel Range Organi
1.097	21	24	1.121			
1.130	95	152	1.593			
1.143	442	612	1.385			
1.167	38	93	2.467			
1.180	14	33	2.426			
1.200	31	74	2.418			
1.237	1116	748	0.670			
1.290	1651	2805	1.699			
1.307	1541	2510	1.629			
1.323	6652	9771	1.469			
1.357	1070	1283	1.199			
1.373	4470	4579	1.024			
1.397	1015	1124	1.108			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.427	914	1141	1.249			
1.443	4104	3627	0.884			
1.493	16136	12882	0.798			
2.150	1221656	1391785	1.139	0.22	S	8 TPH - Diesel (C10-C
1.520	3376	5023	1.488			
1.537	16154	25114	1.555			
1.577	13505	8304	0.615			
1.610	16956	11922	0.703			
1.640	4128	9299	2.253			
1.653	16306	20300	1.245			
1.673	4602	8147	1.770			
1.683	7868	12868	1.635			
1.707	22592	14136	0.626			
1.730	7934	12577	1.585			
1.743	11737	26285	2.240			
1.753	16940	20792	1.227			
1.777	7976	12039	1.509			
1.787	8718	16041	1.840			
1.800	16046	22099	1.377			
1.817	47711	42089	0.882			
1.857	19973	24088	1.206			
1.870	16316	25710	1.576			
1.883	34649	41983	1.212			
1.907	10450	17962	1.719			
1.927	37190	36370	0.978			
1.947	97492	206238	2.115			
1.987	49194	25305	0.514			
2.003	43111	57728	1.339			
2.030	42180	37196	0.882			
2.060	88127	121901	1.383			
2.083	33761	25018	0.741			
2.107	34088	47064	1.381			
2.120	58962	107354	1.821			
2.157	74273	48504	0.653			
2.207	54270	33919	0.625			
2.243	15515	16504	1.064			
2.253	43112	26166	0.607			
2.303	24404	16187	0.663			
2.337	9219	10463	1.135			
2.363	15921	15484	0.973			
2.380	10131	13398	1.323			
2.393	8386	10888	1.298			
2.413	10960	7430	0.678			
2.447	15483	20646	1.333			
2.477	18341	9057	0.494			
2.537	6916	4439	0.642			
2.553	6970	3893	0.559			
2.593	3281	3356	1.023			
2.607	3472	3551	1.023			
2.620	3573	3765	1.054			
2.640	4171	3711	0.890			
2.657	7056	3191	0.452			
2.710	6219	3480	0.560			
2.737	4882	3790	0.776			
2.757	3507	3544	1.010			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.773	2931	3803	1.298				
2.800	80622	81664	1.013				
2.190	68269	128906	1.888	0.01	$	15	o-Terphenyl (S)
2.385	783035	772399	0.986	0.14	S	12	TPH (C16-C28)
4.575	4083136	2520998	0.617	0.74	S	5	TPH (C08-C40)
2.857	13116	3721	0.284				
2.930	3091	2581	0.835				
2.963	8940	3080	0.345				
3.013	13009	4039	0.310				
3.087	11741	4247	0.362				
3.150	6275	2653	0.423				
3.190	10471	3169	0.303				
3.233	4664	2377	0.510				
3.290	8237	2990	0.363				
3.347	45684	13798	0.302				
3.470	1993483	827595	0.415				
3.517	12394	5435	0.439				
3.573	16931	5495	0.325				
3.633	5330	3501	0.657				
3.677	55517	20640	0.372				
3.760	31437	9756	0.310				
3.870	148010	62737	0.424				
3.943	20133	6334	0.315				
4.020	4711	2180	0.463				
4.077	14538	4084	0.281				
4.130	7425	2604	0.351				
4.220	36938	10450	0.283				
4.310	9467	2352	0.248				
4.407	5926	1891	0.319				
4.467	12380	2767	0.224				
4.577	32347	9035	0.279				
4.650	99171	26387	0.266				
4.757	15904	3439	0.216				
4.943	15935	1863	0.117				
5.073	8809	1907	0.216				
5.160	26045	4073	0.156				
5.293	7257	1254	0.173				
5.423	5153	1019	0.198				
5.543	8698	1311	0.151				
5.673	16048	2938	0.183				
5.783	37521	5813	0.155				
5.953	9193	1123	0.122				
6.077	232	582	2.510				
6.093	579	583	1.006				
6.110	581	584	1.005				
6.133	1263	578	0.458				
6.157	340	567	1.667				
6.177	678	567	0.836				
6.207	1143	580	0.507				
6.230	2132	577	0.271				
6.283	834	529	0.634				
6.307	206	516	2.505				
6.357	1573	542	0.345				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.413	2186	600	0.275		
6.440	1183	594	0.502		
6.543	8179	761	0.093		
6.680	343	431	1.257		
6.697	338	427	1.263		
6.707	257	431	1.679		
6.720	433	436	1.007		
6.740	2930	437	0.149		
6.863	786	316	0.402		
6.903	651	278	0.427		
6.940	104	261	2.514		
6.973	995	251	0.252		
7.020	187	234	1.255		
7.030	140	237	1.692		
7.050	431	244	0.567		
7.070	145	246	1.700		
7.083	343	249	0.726		
7.100	294	249	0.848		
7.127	618	245	0.396		
7.167	136	228	1.678		
7.187	272	228	0.840		
7.213	372	238	0.639		
7.300	1443	311	0.216		
7.313	863	316	0.366		
7.353	296	301	1.017		
7.383	354	302	0.853		
7.413	560	324	0.578		
7.437	474	350	0.739		
7.450	3370	357	0.106		
7.657	192	186	0.970		
7.667	111	188	1.701		
7.690	274	204	0.745		
7.720	470	225	0.478		
7.737	955	227	0.238		
	551705382	90043897		100.000	

Total unknown % area = 98.57

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

MATRIX SPIKE SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046733

QB Batch: OEXT/11370
Method(s): EPA 3541 / EPA 8015B Modified

MS Prepared: 06/15/11
MSD Prepared: 06/15/11

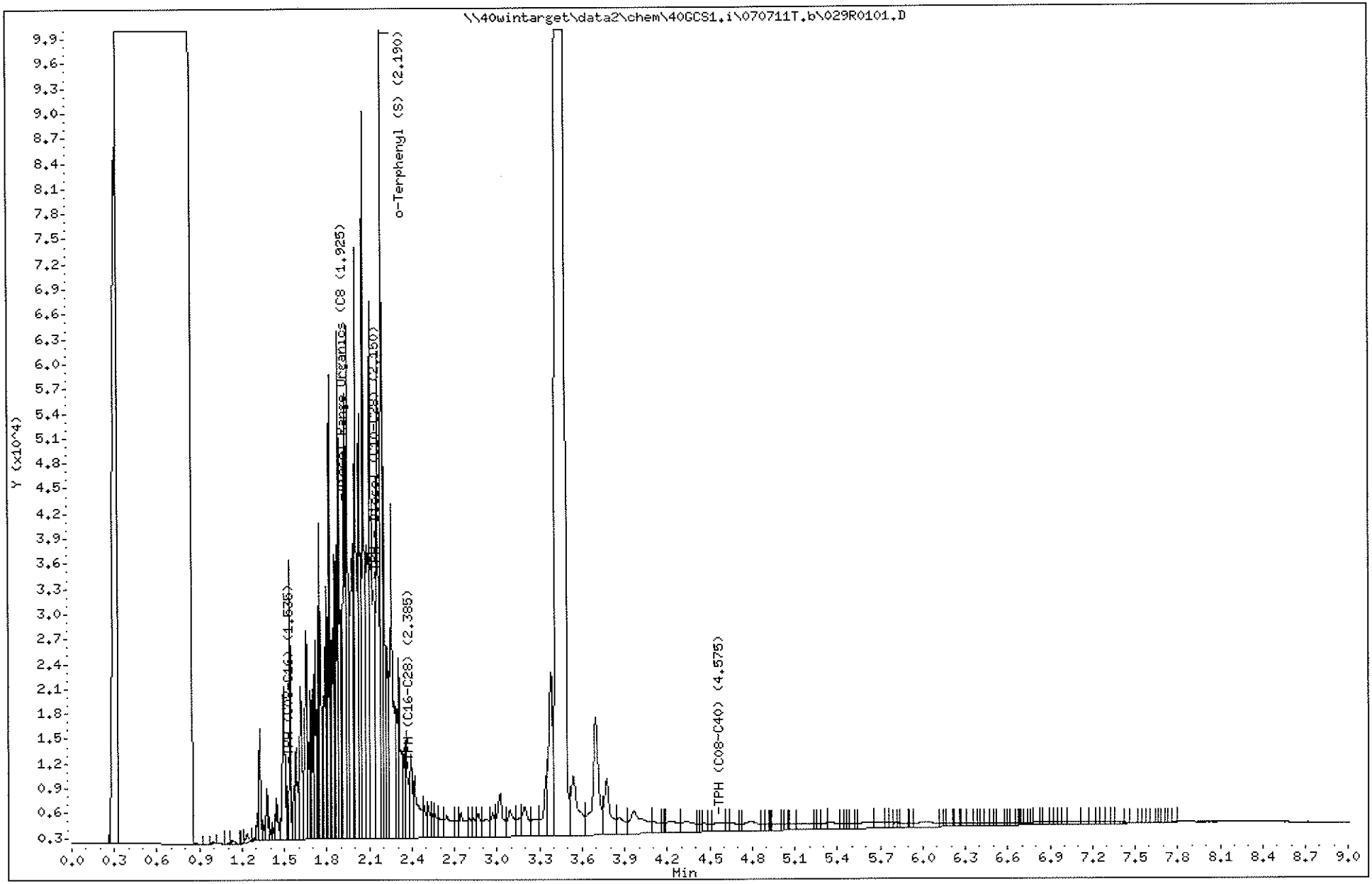
Analyte	Units	Sample Conc	Spike Conc MS	Spike Conc MSD	Result MS	Result MSD	Dilution MS	Dilution MSD	% Recovery MS	% Recovery MSD	QC Limits %Recovery	QC Limits RPD	Max RPD	Analyzed Date MS	Analyzed Date MSD	Qualifier(s) MS	Qualifier(s) MSD
Diesel Range Organics (C8-C28)	mg/kg	<5.0	97	94.3	54.1	54.4	2	1	56	58	50-150	1	20	07/07/11	07/07/11		
TPH (C08-C16)	mg/kg	<5.0	97	94.3	21.2	24.8	2	1	22	26	50-150	16	20	07/07/11	07/07/11	M0	M0
TPH (C08-C40)	mg/kg	142	97	94.3	181	146	2	1	40	4	50-150	22	20	07/07/11	07/07/11	1q	1q,D6
TPH (C16-C28)	mg/kg	<5.0	97	94.3	22.9	27.1	2	1	24	29	50-150	17	20	07/07/11	07/07/11	M0	M0
TPH - Diesel (C10-C28)	mg/kg	<5.0	97	94.3	51.4	51.6	2	1	53	55	50-150	1	20	07/07/11	07/07/11		

Type	Sample	Client Sample ID
MS	463497	EWL-T-02-C-MEAT
MSD	463498	EWL-T-02-C-MEAT

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\029R0101.D
Date : 07-JUL-2011 14:39
Client ID: EWL-T-02-C-MEATMS
Sample Info: 463497X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\029R0101.D
Lab Smp Id: 463497 Client Smp ID: EWL-T-02-C-MEATMS
Inj Date : 07-JUL-2011 14:39
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463497X2
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 29 QC Sample: MS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

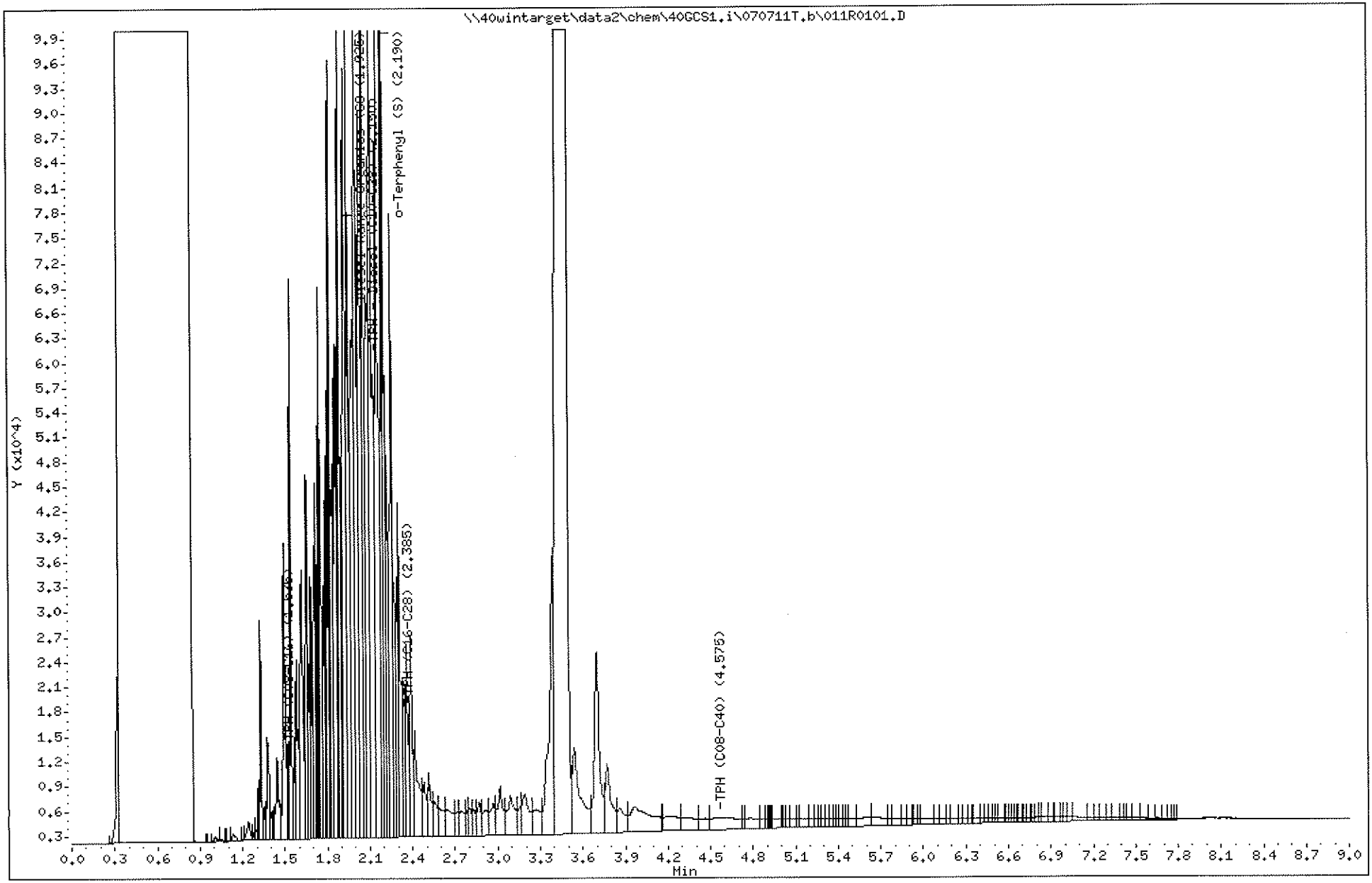
Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.310	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.100			3656704	933.430	181.07
S 1 TPH (C08-C16)	1.050-2.020			703174	109.142	21.17
S 12 TPH (C16-C28)	1.970-2.800			735888	118.272	22.94
S 2 Diesel Range Organics (C8-C28)	1.050-2.800			1311838	279.012	54.12
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1260718	264.745	51.35
$ 15 o-Terphenyl (S)	2.190	2.183	0.007	99427	19.9377	1.93

Data File: \\40wintarget\data2\chem\40GCS1.i\070711T.b\011R0101.D
Date : 07-JUL-2011 11:01
Client ID: EWL-T-02-C-MEATMSD
Sample Info: 463498
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070711T.b\011R0101.D
Lab Smp Id: 463498 Client Smp ID: EWL-T-02-C-MEATMSD
Inj Date : 07-JUL-2011 11:01
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463498
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070711T.b\TPH.m
Meth Date : 09-May-2012 10:03 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.600	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.100			5851099	1545.85	145.83
S	1 TPH (C08-C16)	1.050-2.020			1253447	262.716	24.78
S	12 TPH (C16-C28)	1.970-2.800			1342251	287.500	27.12
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			2378575	576.723	54.40
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2273574	547.418	51.64
$	15 o-Terphenyl (S)	2.190	2.183	0.007	189029	37.9051	3.57

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Sequence: C:\HPCHEM\1\SEQUENCE\070711.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	CC500 2860-31-14-FA					TPHMACHB	1
1	5	BLANK					TPHMACHB	1
1	6	CC500 2860-31-14-OC					TPHMACHB	1
1	7	463496					TPHMACHB	1
1	8	463496X3					TPHMACHB	1
1	9	463495					TPHMACHB	1
1	10	463497RSX2					TPHMACHB	1
1	11	463498					TPHMACHB	1
1	12	4046733013					TPHMACHB	1
1	13	4046733001					TPHMACHB	1
1	14	4046733002					TPHMACHB	1
1	15	4046733003					TPHMACHB	1
1	16	4046733004					TPHMACHB	1
1	17	4046733005					TPHMACHB	1
1	18	4046733006					TPHMACHB	1
1	19	4046733007					TPHMACHB	1
1	20	4046733008					TPHMACHB	1
1	21	4046733009					TPHMACHB	1
1	22	4046733010					TPHMACHB	1
1	23	4046733011					TPHMACHB	1
1	24	4046733012					TPHMACHB	1
1	25	4046733016					TPHMACHB	1
1	26	4046733017					TPHMACHB	1
1	27	4046733018					TPHMACHB	1
1	28	4046733019					TPHMACHB	1
1	29	463497X2					TPHMACHB	1
1	30	BLANK					TPHMACHB	1
1	31	BLANK					TPHMACHB	1
1	32	BLANK					TPHMACHB	1
1	33	CC500 2860-31-14-OK					TPHMACHB	1
REAR								
1								

TPH-B
GCSV
6002
HBN
74185

KHB 7/7/11

KHB 7/7/11

Continued on Page

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D S H Burns 7/7/11
Signed Date

Signed 7/7/11
Date

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Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	PRIME					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	WINDOW CHECK					TPHMACHB	1
1	5	2000 2860-31-01					TPHMACHB	1
1	6	1000 2860-31-02					TPHMACHB	1
1	7	500 2860-31-14					TPHMACHB	1
1	8	250 2860-30-13					TPHMACHB	1
1	9	100 2860-30-14					TPHMACHB	1
1	10	50 2860-30-15					TPHMACHB	1
1	11	IC500 2860-30-16-DK					TPHMACHB	1
1	12	463500RSX2					TPHMACHB	1
1	13	463499					TPHMACHB	1
1	14	463501RSX2					TPHMACHB	1
1	15	4046758001RSX2					TPHMACHB	1
1	16	4046758002RSX3					TPHMACHB	1
1	17	4046758003RSX4					TPHMACHB	1
1	18	4046758004RSX4					TPHMACHB	1
1	19	4046758005RSX3					TPHMACHB	1
1	20	4046758006 RSX5					TPHMACHB	1
1	21	4046758007RSX2					TPHMACHB	1
1	22	4046758008RSX2					TPHMACHB	1
1	23	4046758009 RSX3					TPHMACHB	1
1	24	463500X2					TPHMACHB	1
1	25	463501X2					TPHMACHB	1
1	26	4046758001X2					TPHMACHB	1
1	27	4046758002X3					TPHMACHB	1
1	28	4046758003X4					TPHMACHB	1
1	29	4046758004X4					TPHMACHB	1
1	30	4046758005X3					TPHMACHB	1
1	31	4046758006X5					TPHMACHB	1
1	32	4046758007X2					TPHMACHB	1
1	33	4046758008X2					TPHMACHB	1
1	34	4046758009X3					TPHMACHB	1
1	35	BLANK					TPHMACHB	1
1	36	BLANK					TPHMACHB	1
1	37	BLANK					TPHMACHB	1
1	38	CC500 2860-31-14-PA					TPHMACHB	1
1	39	463496RSX3					TPHMACHB	1
1	40	463495					TPHMACHB	1
1	41	463497					TPHMACHB	1
1	42	463498					TPHMACHB	1
1	43	4046733013					TPHMACHB	1
1	44	4046733001					TPHMACHB	1
1	45	4046733002					TPHMACHB	1
1	46	4046733003					TPHMACHB	1
1	47	4046733004					TPHMACHB	1
1	48	4046733005					TPHMACHB	1
1	49	4046733006					TPHMACHB	1
1	50	4046733007					TPHMACHB	1
1	51	4046733008					TPHMACHB	1

TPH·B GCSV 60027 HBN 74586

TPH·B GCSV 60002 HBN 74185

KHB 7/7/11

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Signed Date

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Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

page 2

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4046733009				TPHMACHB	1
1	53	4046733010				TPHMACHB	1
1	54	4046733011				TPHMACHB	1
1	55	4046733012				TPHMACHB	1
1	56	4046733016				TPHMACHB	1
1	57	4046733017				TPHMACHB	1
1	58	4046733018				TPHMACHB	1
1	59	4046733019				TPHMACHB	1
1	60	BLANK				TPHMACHB	1
1	61	BLANK				TPHMACHB	1
1	62	BLANK				TPHMACHB	1
1	63	CC500 2860-31-14				TPHMACHB	1
REAR 1							

KHB 7/7/11

KHB 7/7/11

Continued on Page

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Signed Date

Signed Date 7/7/11

Pace Analytical

Logbook #: 3064

BIOTA EXTRACTION METHOD: SW-846 3541

ANALYTICAL METHOD: SW-846 8081A or 8082

Project: URS
Analysis: TPH-B
Extraction Batch ID: 11370 HBN: 739I7
~~SDG~~: GCSV 6002 HBN: 74185

Weighed by: BLM Date: 6-15-11 Balance ID: 40 BALD
Spiked by: ↓ Date: ↓ Witnessed by: —
Extracted by: ↓ Date: ↓ Soxtherms On: 7:45
Reviewed by: [signature] Date: 6/17/11 Soxtherms Off: 9:45

Sample Number	QC	Weight (g)	Surrogate Amt. (µL)	Spike 1 Amt. (µL)	Spike 2 Amt. (µL)	Initial Concentration Date & Solvent CH_2Cl_2	Effective Final Volume (mL)	GPC Cleanup 3640A Volume (Y / N)	Florisil Cleanup 3620B Volume (Y N)	Silica Gel Cleanup 3630C Volume (Y / N)	Acid Cleanup 3665A Volume (Y / N)	Final Concentration Date & Solvent CH_2Cl_2	Volume Delivered (mL)
463495	MB	15.0	500	—	T	6-15-11	1.0		2.0mL			6-17-11	0.5
463496	LCS	↓		1000									
463497	MS	10.31		1000									
463498	MSD	10.60		1000									
40466733-001	—	5.74		—									
-002		11.15											
-003		10.60											
-004		10.13											
-005		9.57											
-006		10.86											
-007		10.37											
-008		6.78											
-009		10.41											
-010		10.01											
-011		9.54											
-012		5.30											
-013	PAC	9.98											
-016	T	9.08											
-017		9.85											
-018		6.21											
-019		10.09	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
						6-17-11 BLM							

Na_2SO_4 Lot No.: 2056-29-22
Extraction Solvent: CH_2Cl_2

Surrogate: Oterphenyl @ 100 ppm
Logbook/Page 2860-16-07
Spike 1: TPH @ 1000 ppm
Logbook/Page 2860-29-15
Spike 2: —
Logbook/Page —

MeCl2 Lot No.: 8423
Hexane Lot No.: —
Pet. Ether Lot No.: —

GPC Date/Initials: —
GPC Validation Date: —
Florisil Date/Initials: 6-17-11 BLM
Florisil Lot No.: 105390
Silica Gel Date/Initials:
Silica Gel Batch No.:
Acid Date/Initials:
Acid Lot No.:

Lipids Batch ID: 11382
Dry Weight Batch ID: —
Prep WS# 11370

Conc Temp #1 98.5°
Conc Temp #2 98.5°
Conc Temp #3 —

Comments: 463495 was brought almost dry on initial blowdown

Pace Analytical Services					Instrument ID:	40BALC				
LIPID					Analyst:	BLM	11382			
Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
463915		0.9442	0.9642	15.0000	4.0000	1.0000	0.5333	06/16/2011 06:33:22		
4046733001		0.9416	0.9462	5.7400	4.0000	1.0000	0.3206	06/16/2011 06:33:29		
4046733002		0.9458	0.9465	11.1500	4.0000	1.0000	0.0251	06/16/2011 06:33:36		
4046733003		0.9476	0.9482	10.6000	4.0000	1.0000	0.0226	06/16/2011 06:33:43		
4046733004		0.9409	0.9427	10.1300	4.0000	1.0000	0.0711	06/16/2011 06:33:50		
4046733005		0.9449	0.9502	9.5700	4.0000	1.0000	0.2215	06/16/2011 06:33:56		
4046733006		0.9425	0.9474	10.8600	4.0000	1.0000	0.1805	06/16/2011 06:34:02		
4046733007		0.9466	0.9511	10.3700	4.0000	1.0000	0.1736	06/16/2011 06:34:08		
4046733008		0.9474	0.9503	6.7800	4.0000	1.0000	0.1711	06/16/2011 06:34:15		
4046733009		0.9479	0.9518	10.4100	4.0000	1.0000	0.1499	06/16/2011 06:34:24		
4046733010		0.9417	0.9468	10.0100	4.0000	1.0000	0.2038	06/16/2011 06:34:31		
4046733011		0.9408	0.9454	9.5400	4.0000	1.0000	0.1929	06/16/2011 06:34:38		
4046733012		0.9427	0.9466	5.3000	4.0000	1.0000	0.2943	06/16/2011 06:34:44		
4046733013		0.9393	0.9444	9.9800	4.0000	1.0000	0.2044	06/16/2011 06:34:51		
463916		0.9398	0.9454	10.3100	4.0000	1.0000	0.2173	06/16/2011 06:34:57	4046733013	6.09759470
4046733016		0.9383	0.9405	9.0800	4.0000	1.0000	0.0969	06/16/2011 06:35:03		
4046733017		0.9386	0.9424	9.8500	4.0000	1.0000	0.1543	06/16/2011 06:35:10		
4046733018		0.9404	0.9419	6.2100	4.0000	1.0000	0.0966	06/16/2011 06:35:20		
4046733019		0.9482	0.9504	10.0900	4.0000	1.0000	0.0872	06/16/2011 06:35:27		

✓ GC
6/16/11

9/28/10
2860-16-01 500µl of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/25/11

9/30/10
2860-16-02 500µl of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR

10/4/10
2860-16-03 500µl of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10
2860-16-04 50ml of 4000ppm SVIS (2713-90G) upto 100ml CH_2Cl_2 20ppm SPAH IS RON 10/6/11

10/06/10
2860-16-05 500µl of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11

10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w Nanopure H_2O SPAH 50 ppm

2860-16-07 2500ul of 10,000mg/L Otenphenyl (2713-86) diluted to 250ml with CH_2Cl_2 (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406081: V101106.b\033R0101.D 88% Grad OR 10-12-10

* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR

10/8/10
2860-16-08 500µl of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50 ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by JONES1 File # 1012008

10/13/10 500µl of 4000 ppm SVIS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11

RON 10/14/10
2860-16-11 40ml of 5000 ppm N-NDPA (2713-11B) upto 1.0ml CH_2Cl_2 200ppm NDPA STD Exp 7/13/11 RON 10/13/10

10/18/10 ARO 10/18/10 500

Continued on Page

Read and Understood By

Signed _____ Date 10/18/10

Valerie M Ringuin Signed 10/18/2010 Date

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH_2Cl_2 2000ppm S-PAH IS Exp 11/22/11 RJN 11/24
* 11/29/10 CH_2Cl_2 changed at 8:00 to lot 2712-73 VMR
11/30/10
2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm Chk

2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40MSS4 1201105.d
12/1/2010
2860-22-06 1ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on unit by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%
12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 H_2O/meoH 50
⊥ ⊥ -08 25uls of 2860-10-11 ⊥ ⊥ ⊥ ⊥ 500ppm
12/03/10
2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 50ul of 4000ppm SVIS (2945-06C) up to 1.0ml CH_2Cl_2 200ppm W-PAH-IS Exp 12/3/11 RJN 12/6

2860-22-11 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11
12/7/10
2860-22-12 400ul of 16,000 ppm ERO?O (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page
Read and Understood By

Valerie M Renquin — Signed — 12/7/10 — Date
[signature] — Signed — 12/22/10 — Date

2/21/11
2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MeOH spike)
→ 1.0mL [Final] = 500 ug/mL Ex 7-19-11 DRR

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPN

2/25/11
2860-29-02 3.0mL of 5000ppm B/N SUIT (~~2945-03~~ 2945-03C KPN 4/21/11) diluted to 100mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SUIT KPN Exp 8/25/11 KPN
Ran on instr by RJN file # 40MSS4 0225I128.D

2860-29-03 500ul of 4000ppm SUIS (2945-17F) up to 1.0ml CH_2Cl_2 2000ppm SPAHIS Ex 2/23/12 RON 2/25/11

3/2/11
2860-29-04 250ul of 4000ppm SUIS (2945-17G) up to 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RON 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100ul of 5000ppm B/N SS (2945-20A) up to 10.0mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RON 3/2/11

Ex 7/3/11 RON 3/2/11

2860-29-06	0.500 ul of 50ppm PAH (2860-29-05) up to 1.0ml CH_2Cl_2		25ppm PAH CAL
07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 50ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) up to 1.0ml CH_2Cl_2
1ppm PAH 2nd Source Ex 9/2/11 RON 3/2/11

2860-29-14 500ul of 4000 ppm SUIS (2945-17G) diluted to 1.0ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ~~AKO~~ exp 2/28/12

3/3/2011
2860-29-15 2500ul of 20,000mg/L #2diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Ran on inst by ~~DAE~~ GC file # (VMR)
Exp 3/3/2012 VMR

Z VMR 3/3/2011 OK to use per GC Ran on inst 3/8/11 VMR

→ 40GCSF.i / 0307116.b - File 010F1001.

Continued on Page

Read and Understood By Recovery = 106% GC 3/9/11

Signed	Date	Signed	Date
Valerie M Renquin	3/3/2011	[signature]	3/7/11

3-4-11

2860-30-01 50 mL @ 2380-100-01 (TPH @ 20000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5.6.11 DAR
TPH ICAL

2860-30-02 500 mL @ 2713-460 (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3.4.12 DAR

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 mL = 500 ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ Use only 1.0 mL @ 2860-30-02 2713-990
All standards + 5 mL 2945-138 (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All Standard Exp 2.22.12 DAR

TPH ICV

2860-30-08 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2945-138 2713-990 (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2.22.12 DAR

2860-30-09 25 uL of 2860-10-11 diluted to 1.0 mL w 50/50 H_2O/MeOH JHS

3.7.11

2860-30-10 1.0 mL @ 2860-30-02 + 5 mL 2713-990 (o-terp @ 10,000 ug/mL) = 2000 ug/mL + 50 ug/mL
2860-30-11 500 mL @ → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 mL = 500 ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3.4.11~~ DAR
5-6-11 GC

2860-30-16 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3.4.11~~ DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

Signed _____ Date 3.7.11
Signed Valerium Renquin Date 3/24/11

PROJECT
3.7.11

2860-31-01 100 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH2Cl2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL EXP 3.4.12 DAR

2860-31-02 50 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH2Cl2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL EXP 3.4.12 DAR

2860-31-03 25 uls of 2860-10-19 diluted to 1.0 ml w/ 50/50 MeOH/H2O SHI 500 ppm

2860-31-04 500 ul of 4000 ppm SVIS (2945-17I) diluted to 1.0 ml w/ CH2Cl2 = 2000 ppm PAH IS - ARO exp 3/10/12

2860-31-05 500 uls of 2860-10-11 diluted to 10.0 ml w/ 50/50 MeOH H2O JHI 1000 PPM
-06 25 uls of 2860-31-05 diluted to 1.0 ml w/ 25 PPM SHI
-07 100 | | | | | 100
-08 250 | | | | | 250
-09 500 | | | | | 500
-10 750 | | | | | 750 JHI

3.14.11
2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH2Cl2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH2Cl2
[Final] = 500 ug/mL EXP 1-10-12 DAR

3/15/11
2860-31-13 500 ul of 4000 ppm SVIS (2945-17J) up to 1.0 ml CH2Cl2 2000 ppm AHS-IS Ex 3/15/12 RW 3/15/11

3/17/11 TPH CCV
2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH2Cl2
[Final] = 500 ug/mL + 50 uL 2713-99D (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DAR

Continued on Page

Read and Understood By

[signature] Signed 3/17/11 Date Valerie M Penguin Signed 3/24/11 Date

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046737

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4046737

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4046737001	EWL-T-11-C-MEAT	Tissue	12/21/10 10:53	06/07/11 10:00
4046737002	EWL-T-12-C-MEAT	Tissue	01/03/11 11:00	06/07/11 10:00
4046737003	EWL-BR-C-MEAT	Tissue	12/27/10 12:30	06/07/11 10:00
4046737004	EWL-NO-C-MEAT	Tissue		06/07/11 10:00
4046737005	EWL-T-03-C-MEAT	Tissue	01/03/11 11:33	06/07/11 10:00
4046737006	EWL-T-07-C-MEAT	Tissue	01/03/11 11:05	06/07/11 10:00
4046737007	EWL-T-09-C-MEAT	Tissue	01/10/11 11:47	06/07/11 10:00
4046737008	EWL-T-10-C-MEAT	Tissue	01/03/11 11:23	06/07/11 10:00
4046737009	EWL-LC-C-MEAT	Tissue	01/04/11 15:30	06/07/11 10:00
4046737010	EWL-T-03-C-DUP-MEAT	Tissue	01/03/11 11:33	06/07/11 10:00
4046737011	EWL-T-10-C-DUP-MEAT	Tissue	01/03/11 11:23	06/07/11 10:00
4046737012	EWL-LC-C-DUP-MEAT	Tissue	01/04/11 15:30	06/07/11 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4046737
Client: URS CORPORATION
Project Name: EAST WHITE LAKE
Project Number: K1100344

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. The blank result was reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met for TPH (C10-C28). The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD; the "L0" data qualifier applied to the summary. The recovery of TPH (C08-C40) was above control criteria in the LCS and LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifier. The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** None required for this SDG.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4046737

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4046737001	EWL-T-11-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737002	EWL-T-12-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737003	EWL-BR-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737004	EWL-NO-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737005	EWL-T-03-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737006	EWL-T-07-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737007	EWL-T-09-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737008	EWL-T-10-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737009	EWL-LC-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737010	EWL-T-03-C-DUP-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737011	EWL-T-10-C-DUP-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1
4046737012	EWL-LC-C-DUP-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	JLH	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4046737

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/5983

[1]	The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: CRABS
Pace Project No.: 4046737

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100344
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100344-013	EWL-T-02-C-MEAT	3	Animal Tissue	12/21/10	1104	Gulf Coast Analytica	X	13, 22, 23 013/014/015
K1100344-014	EWL-T-03-C-MEAT	Ø	Animal Tissue	1/3/11	1133	Gulf Coast Analytica		
K1100344-015	EWL-T-04-C-MEAT	1	Animal Tissue	12/20/10	1222	Gulf Coast Analytica	X	14. 016
K1100344-016	EWL-T-05-C-MEAT	1	Animal Tissue	12/21/10	1033	Gulf Coast Analytica	X	15. 017
K1100344-017	EWL-T-06-C-MEAT	1	Animal Tissue	12/16/10	1215	Gulf Coast Analytica	X	16. 018
K1100344-018	EWL-T-07-C-MEAT	Ø	Animal Tissue	1/3/11	1105	Gulf Coast Analytica		
K1100344-019	EWL-T-08-C-MEAT	1	Animal Tissue	1/3/11	1105	Gulf Coast Analytica	X	17. 019
K1100344-020	EWL-T-09-C-MEAT	Ø	Animal Tissue	1/10/11	1147	Gulf Coast Analytica		
K1100344-021	EWL-T-10-C-MEAT	Ø	Animal Tissue	1/3/11	1123	Gulf Coast Analytica		
K1100344-022	EWL-T-11-C-MEAT	1	Animal Tissue	12/21/10	1053	Gulf Coast Analytica	X	18. 001
K1100344-023	EWL-T-12-C-MEAT	1	Animal Tissue	1/3/11	1100	Gulf Coast Analytica	X	19. 002
K1100344-024	EWL-BR-C-MEAT	1	Animal Tissue	12/27/10	1230	Gulf Coast Analytica	X	20. 003

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____STANDARD
Requested FAX Date: ________
Requested Report Date: 01/24/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100344
Bill to

Relinquished By: 1/17/11 1200 CAS
Received By: 1-18-11 1015
Airbill Number: Rel By:
Rec'd UPS 1-18-11 1015
6/7/11

UPS / 2207 / 211011929 / 127-11

4046-131

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100344
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None
K1100344-025	EWL-LC-C-MEAT	Ø	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	
K1100344-026	EWL-NO-C-MEAT	1	Animal Tissue		.	Gulf Coast Analytica	X
K1100344-027	EWL-T-03-C-DUP-MEAT	Ø	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	
K1100344-028	EWL-T-10-C-DUP-MEAT	Ø	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	
K1100344-029	EWL-LC-C-DUP-MEAT	Ø	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	

2. 004

Test Comments
Relinquish - None K1100344-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29 Ship sample to GCAL in Baton Rouge, LA

Folder Comments:
Report tissues on a wet weight basis.

-013=MS/MSD on this sample.

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____STANDARD
Requested FAX Date: ________
Requested Report Date: 01/24/11

Report Requirements
____I. Results Only
____II. Results + QC Summaries
____III. Results + QC and Calibration Summaries
____IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100344
Bill to

Relinquished By: [signature] CAS 1/17/11 1200 / FedEx 6/7/11 10:00
Received By: [signature] 1-18-11 1015 20°c / Rel: UPS 1-18-11 1018
Airbill Number: Rel By: BJM 6/6/11 1505 / [signature] 6/7/11

Pag

URS/2207/211011924/1-25-11

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

40467357

CAS Contact: Lynda Huckestein

Project Number: K1100344
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100344-013	EWL-T-02-C-MEAT	Ø	Animal Tissue	12/21/10	1104	Gulf Coast Analytica		
K1100344-014	EWL-T-03-C-MEAT	1	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	X	24 • 005
K1100344-015	EWL-T-04-C-MEAT	Ø	Animal Tissue	12/20/10	1222	Gulf Coast Analytica		
K1100344-016	EWL-T-05-C-MEAT	Ø	Animal Tissue	12/21/10	1033	Gulf Coast Analytica		
K1100344-017	EWL-T-06-C-MEAT	Ø	Animal Tissue	12/16/10	1215	Gulf Coast Analytica		
K1100344-018	EWL-T-07-C-MEAT	1	Animal Tissue	1/3/11	1105	Gulf Coast Analytica	X	25 • 006
K1100344-019	EWL-T-08-C-MEAT	Ø	Animal Tissue	1/3/11	1105	Gulf Coast Analytica		
K1100344-020	EWL-T-09-C-MEAT	1	Animal Tissue	1/10/11	1147	Gulf Coast Analytica	X	26 • 007
K1100344-021	EWL-T-10-C-MEAT	1	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	X	27 • 008
K1100344-022	EWL-T-11-C-MEAT	Ø	Animal Tissue	12/21/10	1053	Gulf Coast Analytica		
K1100344-023	EWL-T-12-C-MEAT	Ø	Animal Tissue	1/3/11	1100	Gulf Coast Analytica		
K1100344-024	EWL-BR-C-MEAT	Ø	Animal Tissue	12/27/10	1230	Gulf Coast Analytica		

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____**STANDARD**
Requested FAX Date: _____
Requested Report Date: 01/24/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO#
K1100344
Bill to

Relinquished By: Agnell CAS 1/18/11 0930
Fedex 6/7/11 10:00

Received By: AC 1-19-11 958 CO
Rec. 1-19-11 958

Airbill Number: Rec By: BJM 6/6/11 1505
L. Ballesteros 6/7/11 10:00

4046101

CAS Contact: Lynda Huckestein

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

Project Number: K1100344
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100344-025	EWL-LC-C-MEAT	1	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	X	28 • 009
K1100344-026	EWL-NO-C-MEAT	0	Animal Tissue			Gulf Coast Analytica	X 1/18/11	
K1100344-027	EWL-T-03-C-DUP-MEAT	1	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	X	29 • 010
K1100344-028	EWL-T-10-C-DUP-MEAT	1	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	X	30 • 011
K1100344-029	EWL-LC-C-DUP-MEAT	1	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	X	31 • 012

Test Comments
Relinquish - None K1100344-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29 Ship sample to GCAL in Baton Rouge, LA

Folder Comments:
Report tissues on a wet weight basis.

-013=MS/MSD on this sample.

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com	___ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ___ STANDARD Requested FAX Date: ______ Requested Report Date: 01/24/11	___ I. Results Only ___ II. Results + QC Summaries ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD N	PO# K1100344 Bill to

Relinquished By: [signature] CAS 1/18/11 0930 / FedEx 6/7/11 10:00

Received By: [signature] 1-19-11 958 [signature] ; [signature] : UPS 1-19-11 958

Airbill Number: Rel By: BJM 6/6/11 1505 / [signature] 6/7/11 10:00

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Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

4046737

Client Name: URS Project # 4046716 TJ 6/9/11

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used VB Type of Ice: Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature ≤0°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: CB 6/7/11
Initials:

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 6/8/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

H0H6737

GCAL

SAMPLE RECEIVING CHECKLIST

Workorder: 211011929

Client: URS Corporation

Received by: Raborn, Michelle

Received Date/Time: 1/19/2011 9:58:00 AM

Samples Received via: UPS

Number of Coolers Received: 2

Cooler tracking numbers(s): 1Z 973 659 01 6443 1658 1Z 973 659 01 6650 3024

Cooler temperature(s): Both coolers were < 0°c

Were all coolers received at a temperature of 0 - 6° C?	☐ Yes	☐ No	☑ N/A
Were all custody seals intact?	☑ Yes	☐ No	☐ N/A
Were all samples recevied in proper containers?	☑ Yes	☐ No	☐ N/A
Were all samples properly preserved?	☑ Yes	☐ No	☐ N/A
Was preservative added to any container at the lab?	☐ Yes	☑ No	☐ N/A
Were all containers received in good condition?	☑ Yes	☐ No	☐ N/A
Were all VOA vials received with no head space?	☐ Yes	☐ No	☑ N/A
Do all sample labels match the Chain of Custody?	☑ Yes	☐ No	☐ N/A
Was the client notified about any discrepancies?	☐ Yes	☐ No	☐ N/A

Notes/Comments: _____

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046737

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4046737

QB Batch: OEXT / 11356
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046737001		EWL-T-11-C-MEAT	1	69											
463065	BLANK		1	70											
4046737002		EWL-T-12-C-MEAT	1	56											
4046737003		EWL-BR-C-MEAT	1	62											
463066	LCS		2	0	S4										
4046737004		EWL-NO-C-MEAT	1	65											
4046737005		EWL-T-03-C-MEAT	1	60											
463067	LCSD		2	0	S4										
4046737006		EWL-T-07-C-MEAT	1	60											
4046737007		EWL-T-09-C-MEAT	1	65											
4046737008		EWL-T-10-C-MEAT	1	65											
4046737009		EWL-LC-C-MEAT	1	68											
4046737010		EWL-T-03-C-DUP-MEAT	1	65											
4046737011		EWL-T-10-C-DUP-MEAT	1	62											
4046737012		EWL-LC-C-DUP-MEAT	1	58											
			QC Limits:	50-150											
			Sample Limits:	50-150											

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046737

QB Batch: OEXT/11356
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 06/14/11
LCSD Prepared: 06/14/11

Analyte	LCS % Rec	LCSD % Rec	QC Limits RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	63	57	10	50-150	20	66.7	42.3	38.1	mg/kg	06/21/11	06/21/11		
TPH (C08-C16)	34	26	24	50-150	20	66.7	22.4	17.5	mg/kg	06/21/11	06/21/11	L0	L0
TPH (C08-C40)	234	221	6	50-150	20	66.7	156	147	mg/kg	06/21/11	06/21/11	1q	2q
TPH (C16-C28)	27	24	14	50-150	20	66.7	18.0	15.7	mg/kg	06/21/11	06/21/11	L0	L0
TPH - Diesel (C10-C28)	59	53	10	50-150	20	66.7	39.4	35.6	mg/kg	06/21/11	06/21/11		

Type	Sample
LCS	463066
LCSD	463067

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4046737

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046737001	EWL-T-11-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737002	EWL-T-12-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737003	EWL-BR-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737004	EWL-NO-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737005	EWL-T-03-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737006	EWL-T-07-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737007	EWL-T-09-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737008	EWL-T-10-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737009	EWL-LC-C-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737010	EWL-T-03-C-DUP-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737011	EWL-T-10-C-DUP-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737012	EWL-LC-C-DUP-MEAT	EPA 3541	OEXT/11356	EPA 8015B Modified	GCSV/5983
4046737001	EWL-T-11-C-MEAT	Pace Lipid	OEXT/11359		
4046737002	EWL-T-12-C-MEAT	Pace Lipid	OEXT/11359		
4046737003	EWL-BR-C-MEAT	Pace Lipid	OEXT/11359		
4046737004	EWL-NO-C-MEAT	Pace Lipid	OEXT/11359		
4046737005	EWL-T-03-C-MEAT	Pace Lipid	OEXT/11359		
4046737006	EWL-T-07-C-MEAT	Pace Lipid	OEXT/11359		
4046737007	EWL-T-09-C-MEAT	Pace Lipid	OEXT/11359		
4046737008	EWL-T-10-C-MEAT	Pace Lipid	OEXT/11359		
4046737009	EWL-LC-C-MEAT	Pace Lipid	OEXT/11359		
4046737010	EWL-T-03-C-DUP-MEAT	Pace Lipid	OEXT/11359		
4046737011	EWL-T-10-C-DUP-MEAT	Pace Lipid	OEXT/11359		
4046737012	EWL-LC-C-DUP-MEAT	Pace Lipid	OEXT/11359		

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046737

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 06/13/11 06/13/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.17

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-31-01	2000 2860-31-01	06/13/11	1401	2.17	
02	1000 2860-31-02	1000 2860-31-02	06/13/11	1412	2.17	
03	500 2860-31-14	500 2860-31-14	06/13/11	1424	2.17	
04	250 2860-30-13	250 2860-30-13	06/13/11	1436	2.17	
05	100 2860-30-14	100 2860-30-14	06/13/11	1448	2.17	
06	50 2860-30-15	50 2860-30-15	06/13/11	1459	2.17	
07	IC2860-30-16	IC2860-30-16	06/13/11	1511	2.17	
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046737

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 05/10/11 06/13/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01		CC500 2860-31-14	06/21/11	0813	2.18	
02	MB	463065	06/21/11	0902	2.18	
03	EWL-T-11-C-MEAT	4046737001	06/21/11	0926	2.18	
04	EWL-T-12-C-MEAT	4046737002	06/21/11	0938	2.18	
05	EWL-BR-C-MEAT	4046737003	06/21/11	0950	2.18	
06	EWL-NO-C-MEAT	4046737004	06/21/11	1002	2.18	
07	EWL-T-03-C-MEAT	4046737005	06/21/11	1014	2.18	
08	EWL-T-07-C-MEAT	4046737006	06/21/11	1026	2.18	
09	EWL-T-09-C-MEAT	4046737007	06/21/11	1038	2.18	
10	EWL-T-10-C-MEAT	4046737008	06/21/11	1050	2.18	
11	EWL-LC-C-MEAT	4046737009	06/21/11	1102	2.18	
12	EWL-T-03-C-DUP-MEAT	4046737010	06/21/11	1114	2.18	
13	EWL-T-10-C-DUP-MEAT	4046737011	06/21/11	1126	2.18	
14	EWL-LC-C-DUP-MEAT	4046737012	06/21/11	1138	2.18	
15		CC500 2860-31-14	06/21/11	1240	2.18	
16	MBLCS	463066	06/21/11	1333	2.18	
17	MBLCSD	463067	06/21/11	1343	2.18	
18		CC500 2860-31-14	06/21/11	1419	2.18	
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046737

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-11-C-MEAT TX
Lab ID: 4046737001
Collected: 12/21/10 10:53
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<12.9**	mg/kg	25.9	12.9	1	06/14/11 10:32	06/21/11 09:26	
	TPH (C08-C16)	**<12.9**	mg/kg	25.9	12.9	1	06/14/11 10:32	06/21/11 09:26	
	TPH (C16-C28)	**<12.9**	mg/kg	25.9	12.9	1	06/14/11 10:32	06/21/11 09:26	
	TPH (C08-C40)	**226**	mg/kg	25.9	12.9	1	06/14/11 10:32	06/21/11 09:26	
	TPH - Diesel (C10-C28)	**<12.9**	mg/kg	25.9	12.9	1	06/14/11 10:32	06/21/11 09:26	
Surrogates									
84-15-1	o-Terphenyl (S)	**69**	%.	50-150		1	06/14/11 10:32	06/21/11 09:26	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-11-C-MEAT TX
Lab ID: 4046737001
Collected: 12/21/10 10:53
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.41**	%			1		06/15/11 06:32	

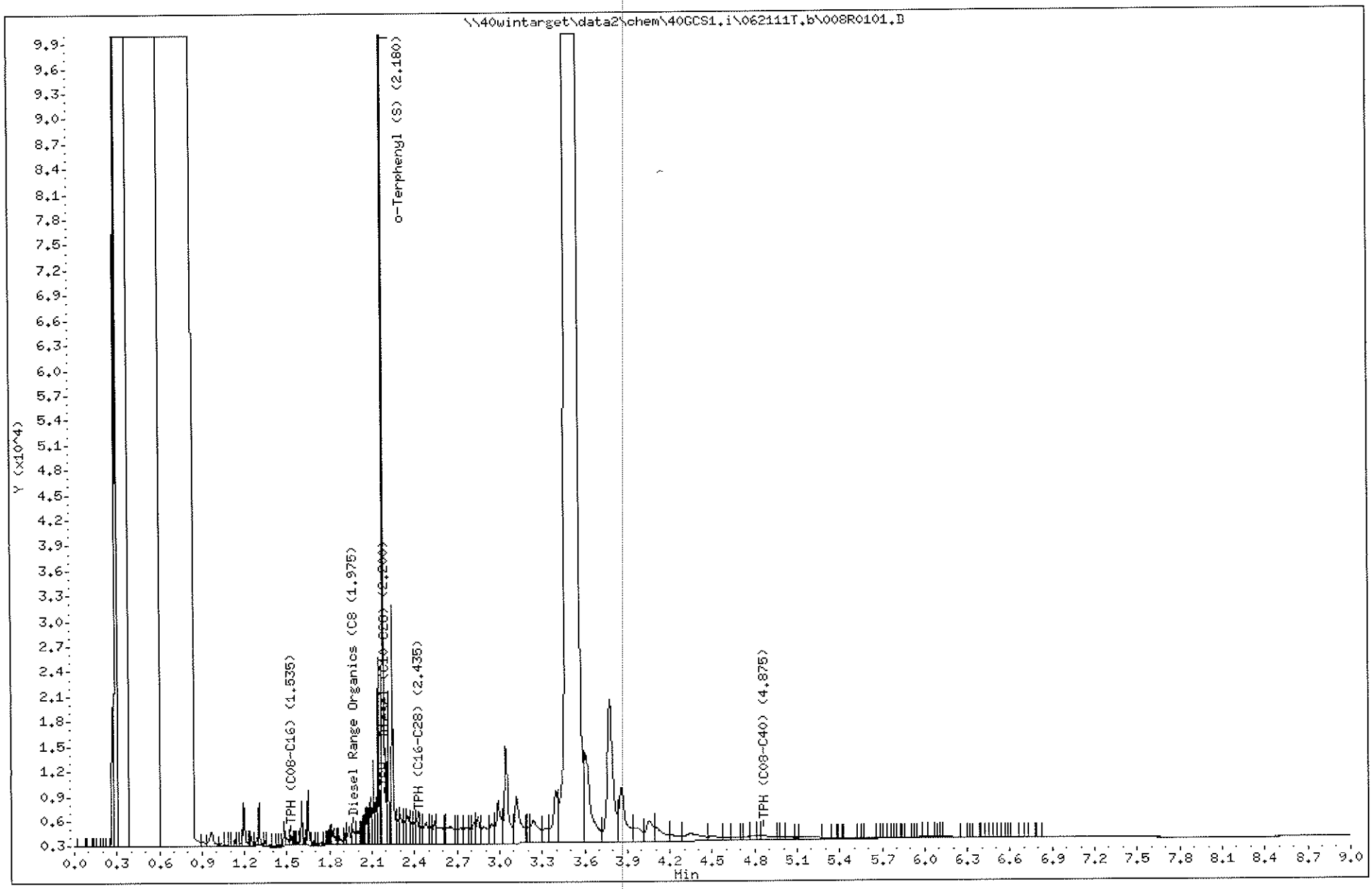
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\008R0101.D
Date : 21-JUN-2011 09:26
Client ID: EWL-T-11-C-MEAT
Sample Info: 4046737001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\008R0101.D
Lab Smp Id: 4046737001 Client Smp ID: EWL-T-11-C-MEAT
Inj Date : 21-JUN-2011 09:26
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737001
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.870	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			3410771	875.314	226.17
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	174880	34.4393	8.89(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-12-C-MEAT TX
Lab ID: 4046737002
Collected: 01/03/11 11:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<4.4	mg/kg	8.9	4.4	1	06/14/11 10:32	06/21/11 09:38	
	TPH (C08-C16)	<4.4	mg/kg	8.9	4.4	1	06/14/11 10:32	06/21/11 09:38	
	TPH (C16-C28)	<4.4	mg/kg	8.9	4.4	1	06/14/11 10:32	06/21/11 09:38	
	TPH (C08-C40)	79.2	mg/kg	8.9	4.4	1	06/14/11 10:32	06/21/11 09:38	
	TPH - Diesel (C10-C28)	<4.4	mg/kg	8.9	4.4	1	06/14/11 10:32	06/21/11 09:38	
Surrogates									
84-15-1	o-Terphenyl (S)	56	%.	50-150		1	06/14/11 10:32	06/21/11 09:38	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-12-C-MEAT TX
Lab ID: 4046737002
Collected: 01/03/11 11:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.078**	%			1		06/15/11 06:32	

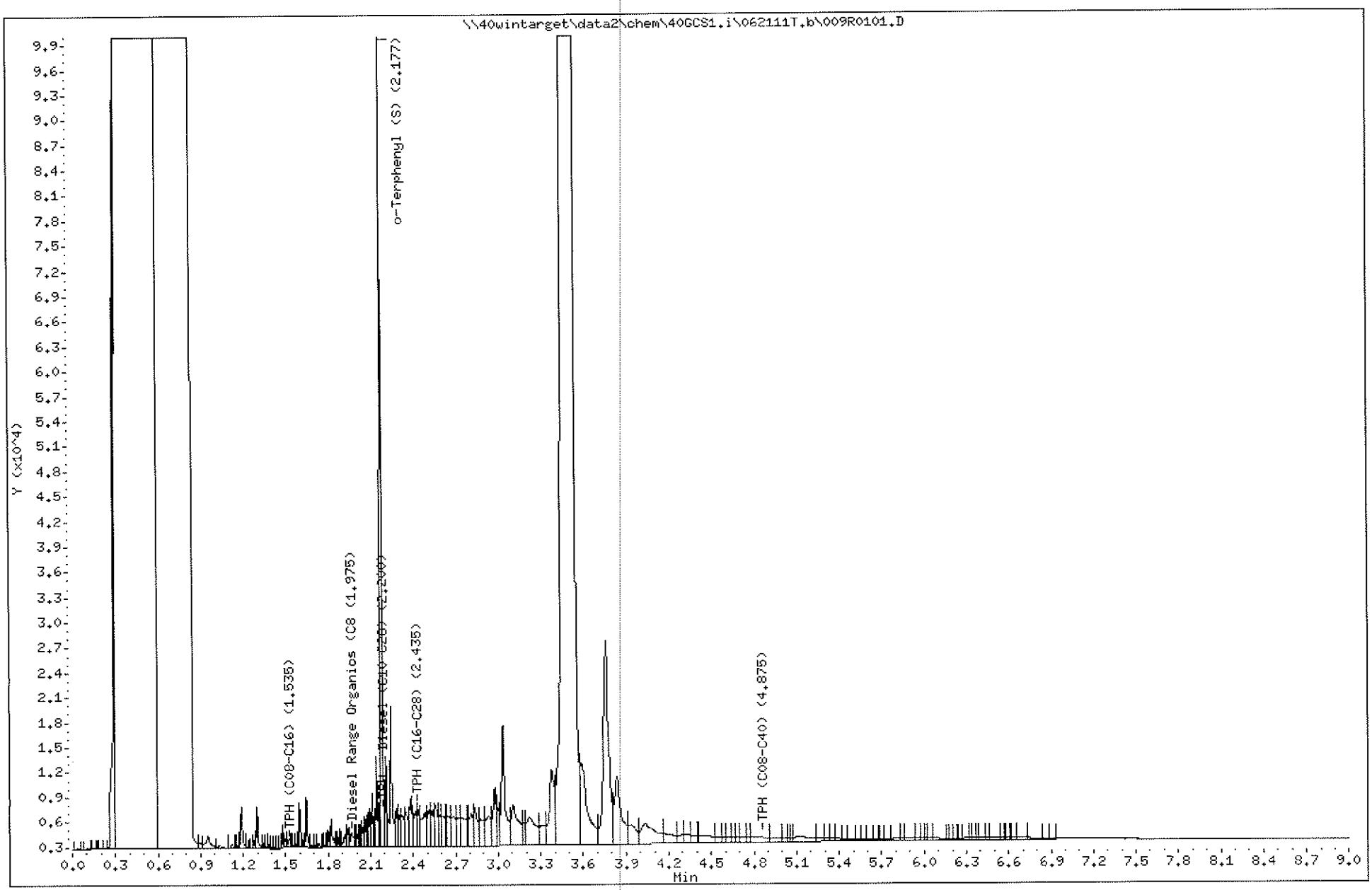
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\009R0101.D
Date : 21-JUN-2011 09:38
Client ID: EWL-T-12-C-MEAT
Sample Info: 4046737002
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\009R0101.D
Lab Smp Id: 4046737002 Client Smp ID: EWL-T-12-C-MEAT
Inj Date : 21-JUN-2011 09:38
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737002
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	11.240	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			3464470	890.304	79.20
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	142026	27.9693	2.48(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-BR-C-MEAT TX
Lab ID: 4046737003
Collected: 12/27/10 12:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<9.6**	mg/kg	19.2	9.6	1	06/14/11 10:32	06/21/11 09:50	
	TPH (C08-C16)	**<9.6**	mg/kg	19.2	9.6	1	06/14/11 10:32	06/21/11 09:50	
	TPH (C16-C28)	**<9.6**	mg/kg	19.2	9.6	1	06/14/11 10:32	06/21/11 09:50	
	TPH (C08-C40)	**135**	mg/kg	19.2	9.6	1	06/14/11 10:32	06/21/11 09:50	
	TPH - Diesel (C10-C28)	**<9.6**	mg/kg	19.2	9.6	1	06/14/11 10:32	06/21/11 09:50	
Surrogates									
84-15-1	o-Terphenyl (S)	**62**	%.	50-150		1	06/14/11 10:32	06/21/11 09:50	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-BR-C-MEAT TX
Lab ID: 4046737003
Collected: 12/27/10 12:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.40**	%			1		06/15/11 06:32	

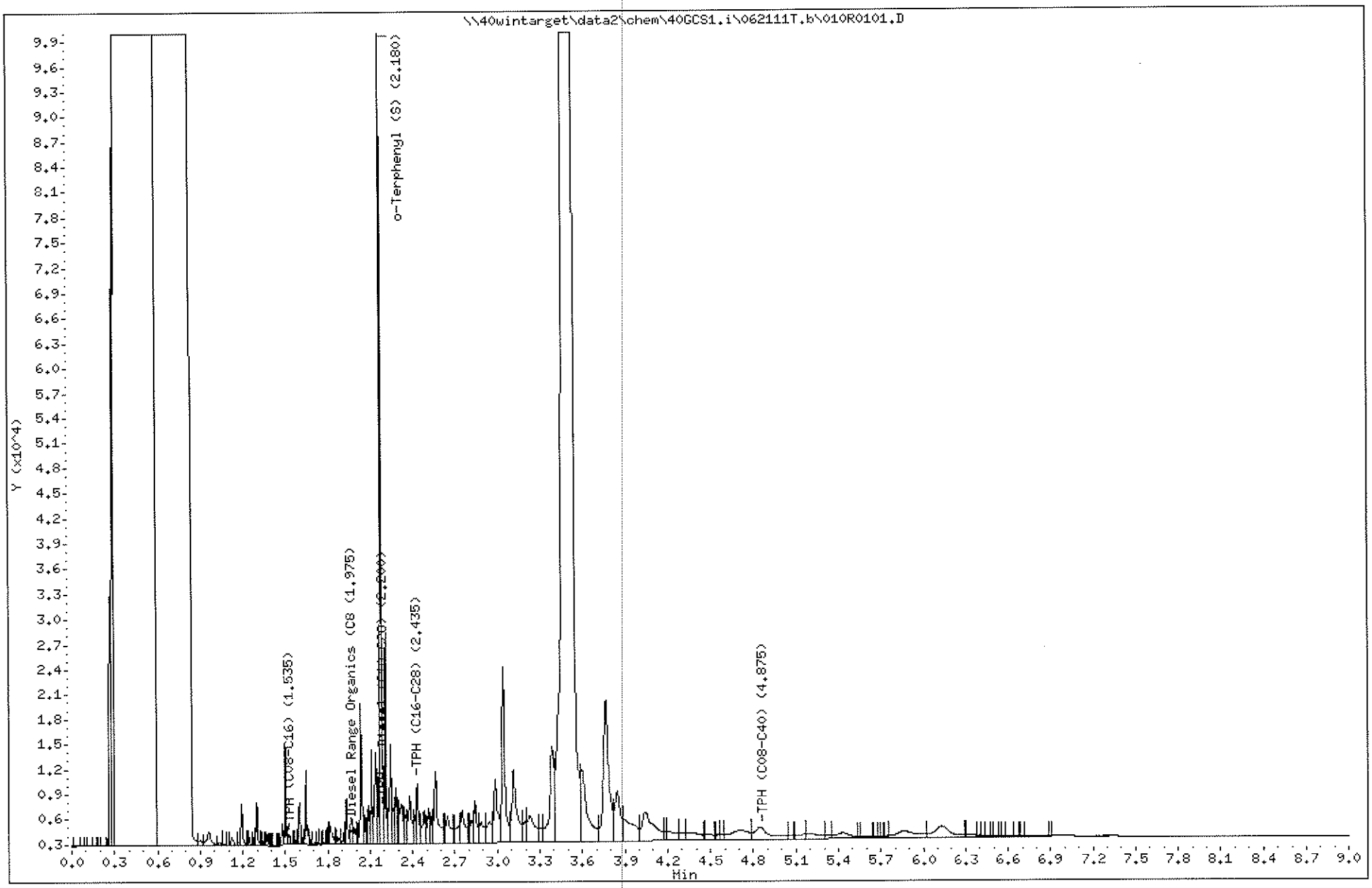
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\010R0101.D
Date : 21-JUN-2011 09:50
Client ID: EWL-BR-C-MEAT
Sample Info: 4046737003
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\010R0101.D
Lab Smp Id: 4046737003 Client Smp ID: EWL-BR-C-MEAT
Inj Date : 21-JUN-2011 09:50
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737003
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	5.210	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			2802242	705.451	135.40
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	157194	30.9564	5.94(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-NO-C-MEAT TX
Lab ID: 4046737004
Collected:
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<14.4**	mg/kg	28.8	14.4	1	06/14/11 10:32	06/21/11 10:02	
	TPH (C08-C16)	**<14.4**	mg/kg	28.8	14.4	1	06/14/11 10:32	06/21/11 10:02	
	TPH (C16-C28)	**<14.4**	mg/kg	28.8	14.4	1	06/14/11 10:32	06/21/11 10:02	
	TPH (C08-C40)	**192**	mg/kg	28.8	14.4	1	06/14/11 10:32	06/21/11 10:02	
	TPH - Diesel (C10-C28)	**<14.4**	mg/kg	28.8	14.4	1	06/14/11 10:32	06/21/11 10:02	
Surrogates									
84-15-1	o-Terphenyl (S)	**65**	%.	50-150		1	06/14/11 10:32	06/21/11 10:02	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-NO-C-MEAT TX
Lab ID: 4046737004
Collected:
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.25**	%			1		06/15/11 06:32	

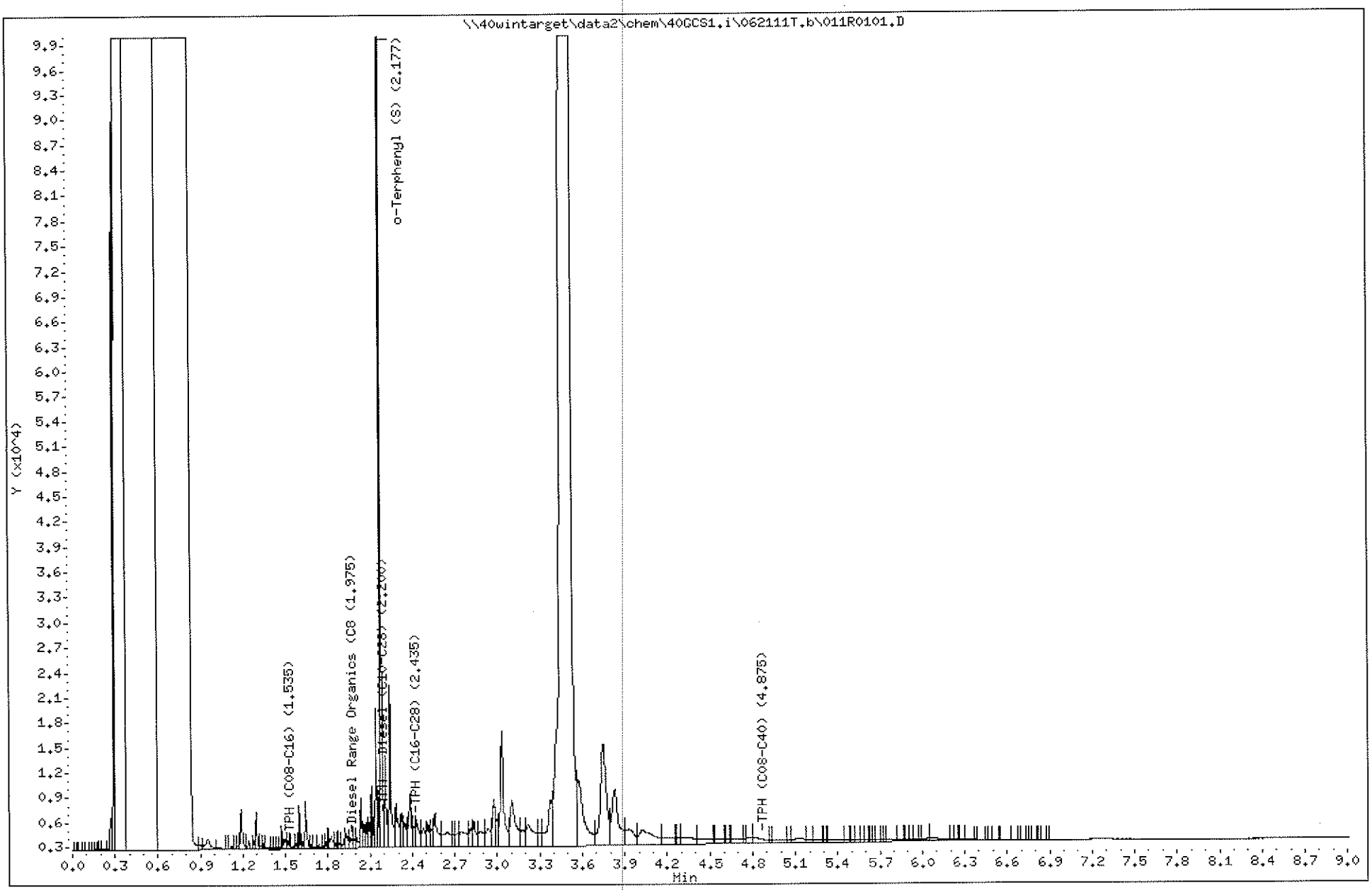
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\011R0101.D
Date : 21-JUN-2011 10:02
Client ID: EWL-NO-C-MEAT
Sample Info: 4046737004
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\011R0101.D
Lab Smp Id: 4046737004 Client Smp ID: EWL-NO-C-MEAT
Inj Date : 21-JUN-2011 10:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737004
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.480	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050	-8.699		2672430	669.216	192.30
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	164765	32.4473	9.32(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-MEAT TX
Lab ID: 4046737005
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<15.3**	mg/kg	30.7	15.3	1	06/14/11 10:32	06/21/11 10:14	
	TPH (C08-C16)	**<15.3**	mg/kg	30.7	15.3	1	06/14/11 10:32	06/21/11 10:14	
	TPH (C16-C28)	**<15.3**	mg/kg	30.7	15.3	1	06/14/11 10:32	06/21/11 10:14	
	TPH (C08-C40)	**111**	mg/kg	30.7	15.3	1	06/14/11 10:32	06/21/11 10:14	
	TPH - Diesel (C10-C28)	**<15.3**	mg/kg	30.7	15.3	1	06/14/11 10:32	06/21/11 10:14	
Surrogates									
84-15-1	o-Terphenyl (S)	**60**	%.	50-150		1	06/14/11 10:32	06/21/11 10:14	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-MEAT TX
Lab ID: 4046737005
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.15**	%			1		06/15/11 06:32	

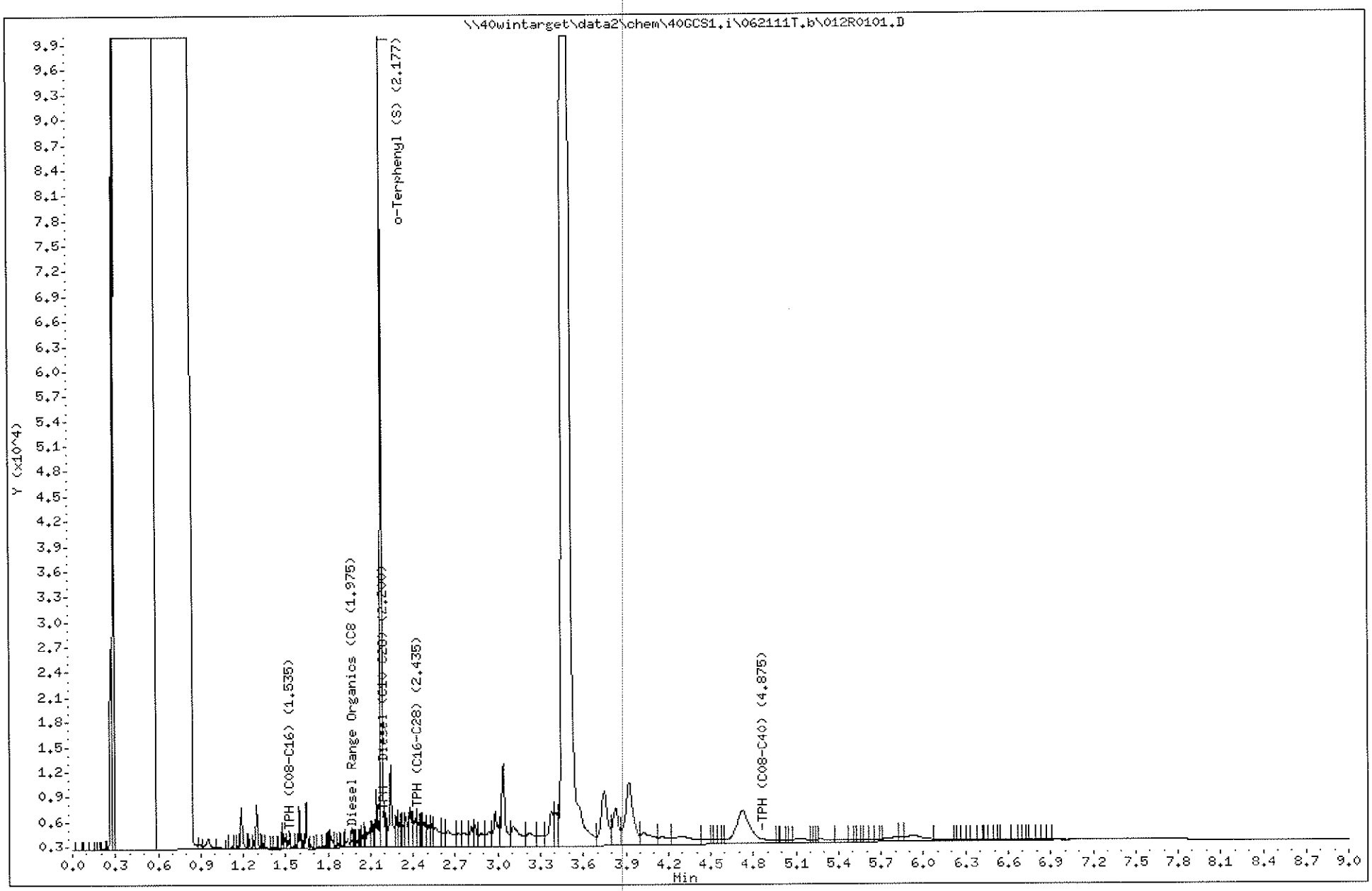
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\012R0101.D
Date : 21-JUN-2011 10:14
Client ID: EWL-T-03-C-MEAT
Sample Info: 4046737005
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\012R0101.D
Lab Smp Id: 4046737005 Client Smp ID: EWL-T-03-C-MEAT
Inj Date : 21-JUN-2011 10:14
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737005
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.260	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-8.699			1571211	361.824	110.98
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	152368	30.0060	9.20(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-07-C-MEAT TX
Lab ID: 4046737006
Collected: 01/03/11 11:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<6.5**	mg/kg	13.0	6.5	1	06/14/11 10:32	06/21/11 10:26	
	TPH (C08-C16)	**<6.5**	mg/kg	13.0	6.5	1	06/14/11 10:32	06/21/11 10:26	
	TPH (C16-C28)	**<6.5**	mg/kg	13.0	6.5	1	06/14/11 10:32	06/21/11 10:26	
	TPH (C08-C40)	**133**	mg/kg	13.0	6.5	1	06/14/11 10:32	06/21/11 10:26	
	TPH - Diesel (C10-C28)	**<6.5**	mg/kg	13.0	6.5	1	06/14/11 10:32	06/21/11 10:26	
Surrogates									
84-15-1	o-Terphenyl (S)	**60**	%.	50-150		1	06/14/11 10:32	06/21/11 10:26	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-07-C-MEAT TX
Lab ID: 4046737006
Collected: 01/03/11 11:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.17**	%			1		06/15/11 06:33	

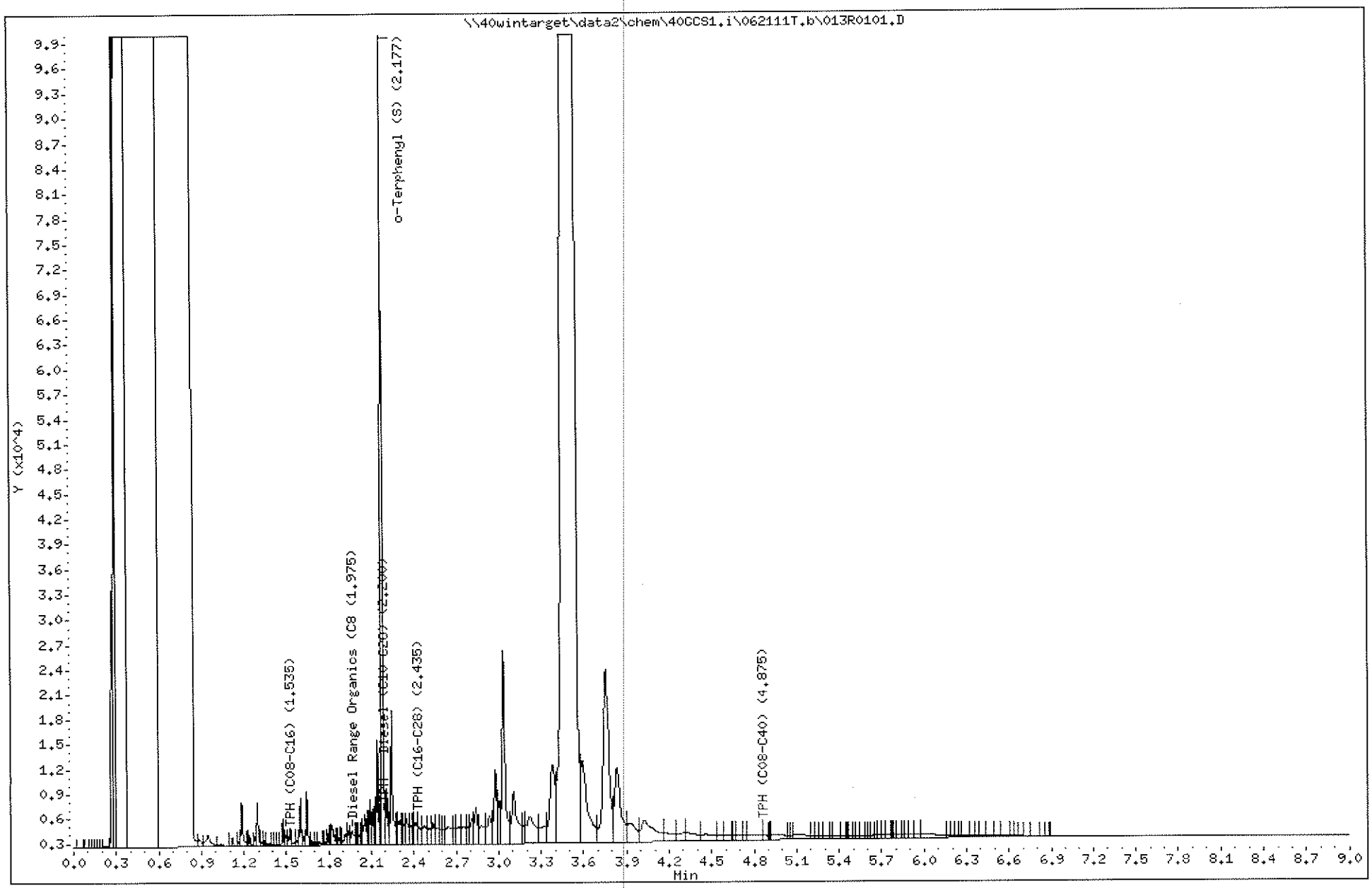
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\013R0101.D
Date : 21-JUN-2011 10:26
Client ID: EWL-T-07-C-MEAT
Sample Info: 4046737006
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\013R0101.D
Lab Smp Id: 4046737006 Client Smp ID: EWL-T-07-C-MEAT
Inj Date : 21-JUN-2011 10:26
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737006
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	7.720	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			3944060	1024.18	132.66
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	153036	30.1375	3.90(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Sample: EWL-T-09-C-MEAT TX
Lab ID: 4046737007
Collected: 01/10/11 11:47
Received: 06/07/11 10:00

Results reported on a "wet-weight" basis

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<6.7**	mg/kg	13.3	6.7	1	06/14/11 10:32	06/21/11 10:38	
	TPH (C08-C16)	**<6.7**	mg/kg	13.3	6.7	1	06/14/11 10:32	06/21/11 10:38	
	TPH (C16-C28)	**<6.7**	mg/kg	13.3	6.7	1	06/14/11 10:32	06/21/11 10:38	
	TPH (C08-C40)	**164**	mg/kg	13.3	6.7	1	06/14/11 10:32	06/21/11 10:38	
	TPH - Diesel (C10-C28)	**<6.7**	mg/kg	13.3	6.7	1	06/14/11 10:32	06/21/11 10:38	
Surrogates									
84-15-1	o-Terphenyl (S)	**65**	%.	50-150		1	06/14/11 10:32	06/21/11 10:38	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-09-C-MEAT TX
Lab ID: 4046737007
Collected: 01/10/11 11:47
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.26**	%			1		06/15/11 06:33	

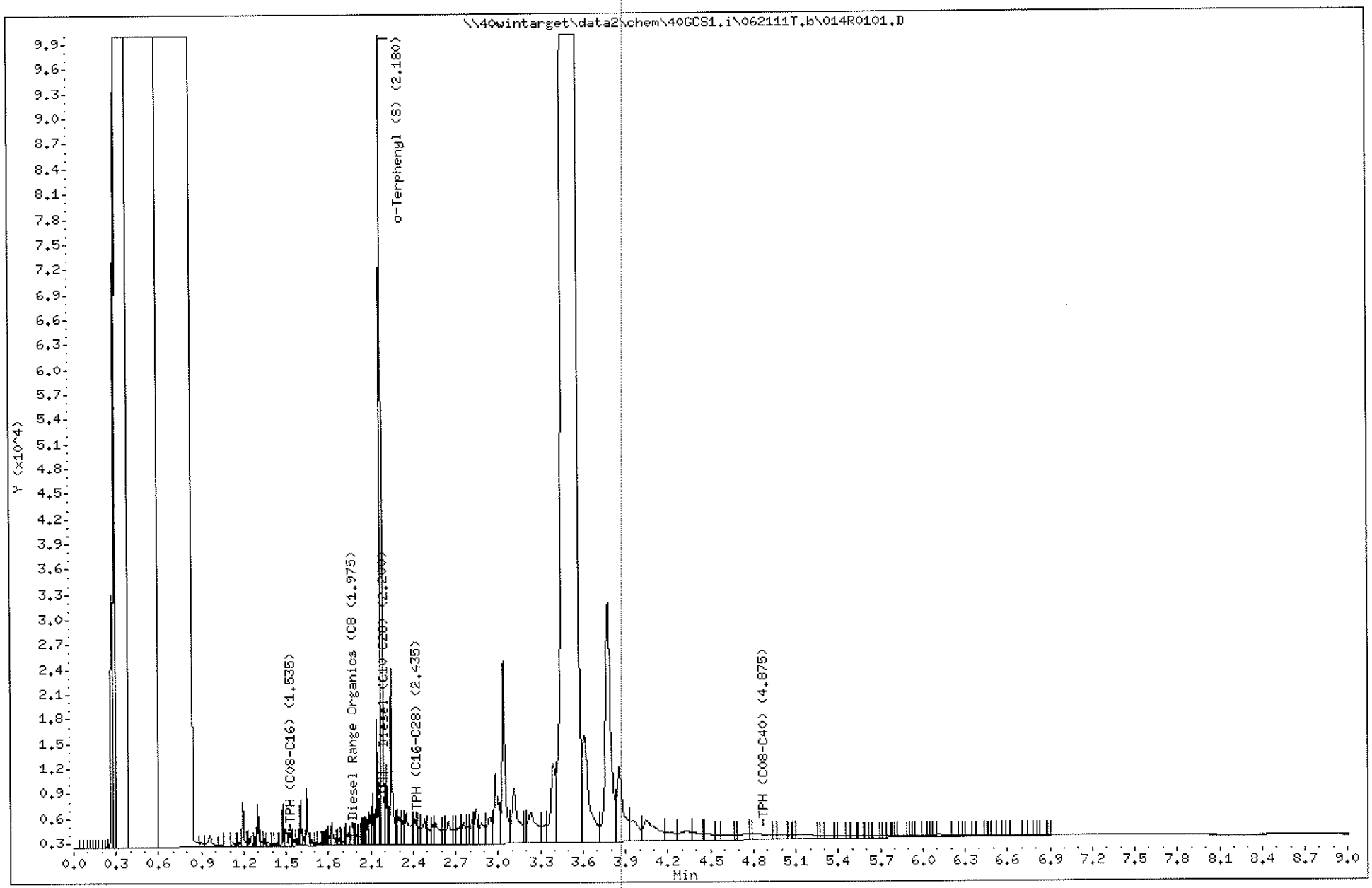
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\014R0101.D
Date : 21-JUN-2011 10:38
Client ID: EWL-T-09-C-MEAT
Sample Info: 4046737007
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\014R0101.D
Lab Smp Id: 4046737007 Client Smp ID: EWL-T-09-C-MEAT
Inj Date : 21-JUN-2011 10:38
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737007
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	7.500	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			4682234	1230.23	164.03
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	165130	32.5192	4.33(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-MEAT TX
Lab ID: 4046737008
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<14.4**	mg/kg	28.9	14.4	1	06/14/11 10:32	06/21/11 10:50	
	TPH (C08-C16)	**<14.4**	mg/kg	28.9	14.4	1	06/14/11 10:32	06/21/11 10:50	
	TPH (C16-C28)	**<14.4**	mg/kg	28.9	14.4	1	06/14/11 10:32	06/21/11 10:50	
	TPH (C08-C40)	**152**	mg/kg	28.9	14.4	1	06/14/11 10:32	06/21/11 10:50	
	TPH - Diesel (C10-C28)	**<14.4**	mg/kg	28.9	14.4	1	06/14/11 10:32	06/21/11 10:50	
Surrogates									
84-15-1	o-Terphenyl (S)	**65**	%.	50-150		1	06/14/11 10:32	06/21/11 10:50	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-MEAT TX
Lab ID: 4046737008
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

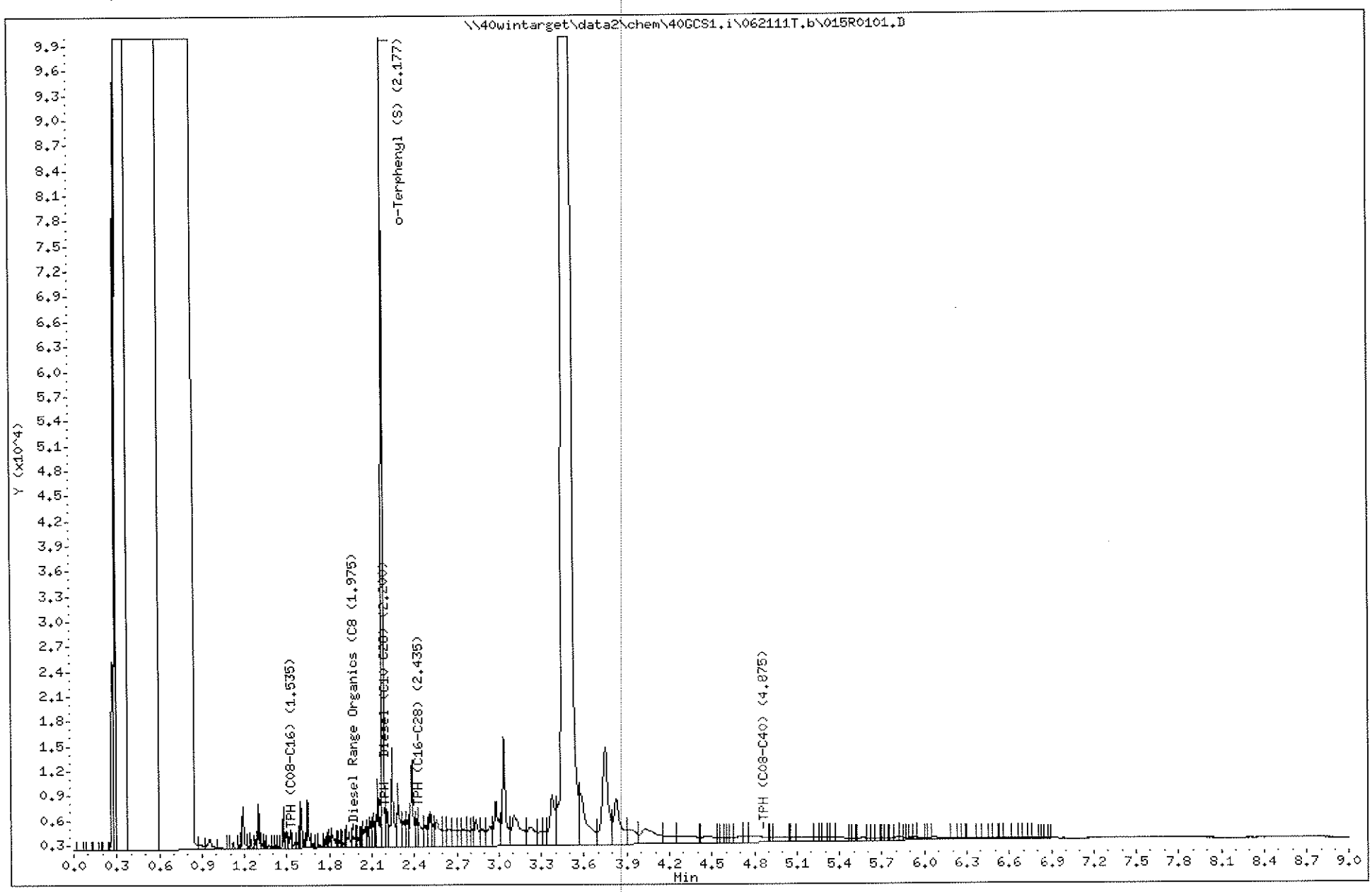
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.15**	%			1		06/15/11 06:33	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\015R0101.D
Date : 21-JUN-2011 10:50
Client ID: EWL-T-10-C-MEAT
Sample Info: 4046737008
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\015R0101.D
Lab Smp Id: 4046737008 Client Smp ID: EWL-T-10-C-MEAT
Inj Date : 21-JUN-2011 10:50
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737008
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.460	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			2162544	526.887	152.27
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	165210	32.5350	9.40(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-MEAT TX
Lab ID: 4046737009
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<15.1**	mg/kg	30.2	15.1	1	06/14/11 10:32	06/21/11 11:02	
	TPH (C08-C16)	**<15.1**	mg/kg	30.2	15.1	1	06/14/11 10:32	06/21/11 11:02	
	TPH (C16-C28)	**<15.1**	mg/kg	30.2	15.1	1	06/14/11 10:32	06/21/11 11:02	
	TPH (C08-C40)	**261**	mg/kg	30.2	15.1	1	06/14/11 10:32	06/21/11 11:02	
	TPH - Diesel (C10-C28)	**<15.1**	mg/kg	30.2	15.1	1	06/14/11 10:32	06/21/11 11:02	
Surrogates									
84-15-1	o-Terphenyl (S)	**68**	%.	50-150		1	06/14/11 10:32	06/21/11 11:02	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-MEAT TX
Lab ID: 4046737009
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.64**	%			1		06/15/11 06:33	

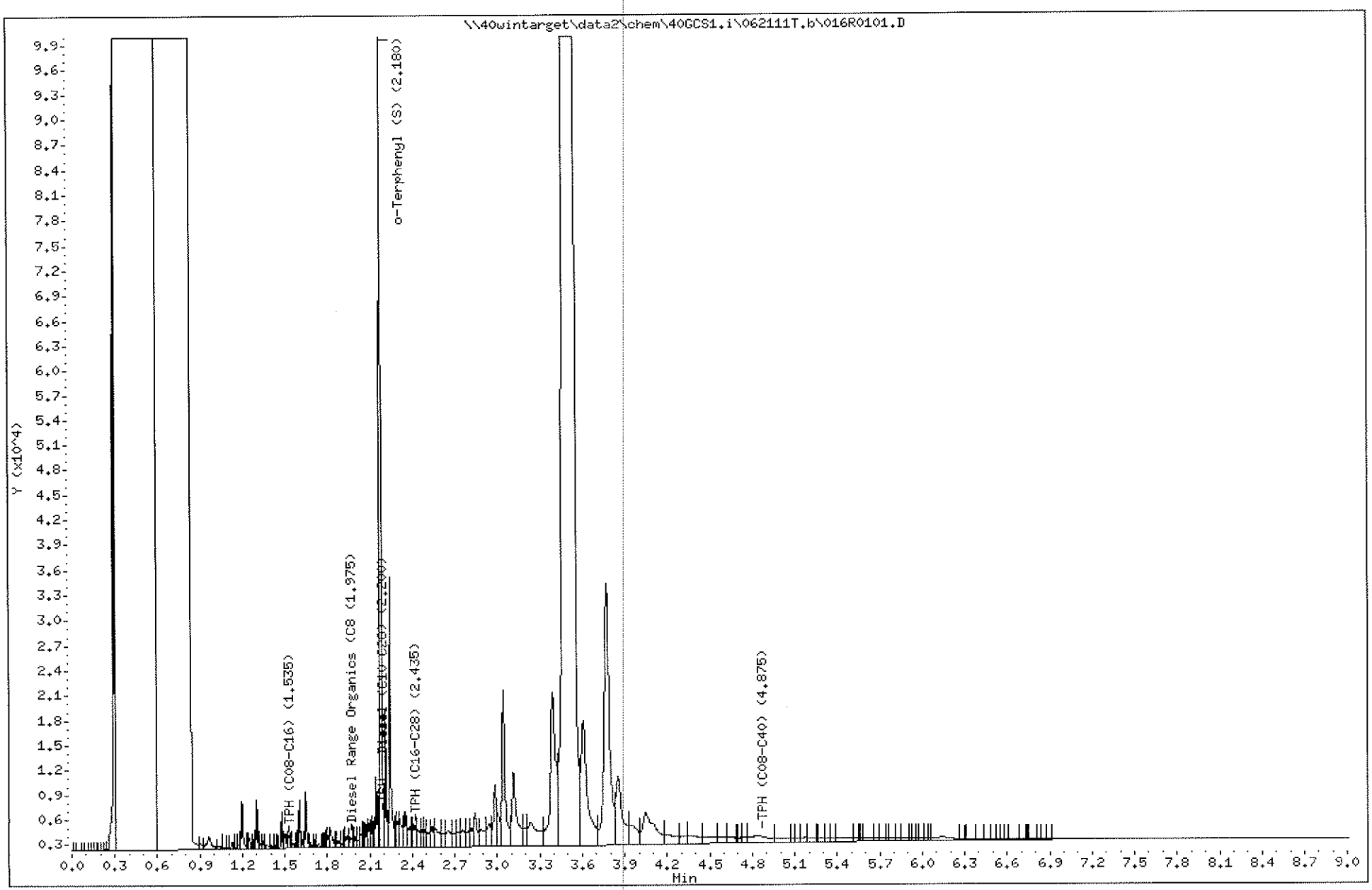
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\016R0101.D
Date : 21-JUN-2011 11:02
Client ID: EWL-LC-C-MEAT
Sample Info: 4046737009
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\016R0101.D
Lab Smp Id: 4046737009 Client Smp ID: EWL-LC-C-MEAT
Inj Date : 21-JUN-2011 11:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737009
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.310	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			3364489	862.395	260.54
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	173121	34.0929	10.29(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-DUP-MEAT TX
Lab ID: 4046737010
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<12.4**	mg/kg	24.9	12.4	1	06/14/11 10:32	06/21/11 11:14	
	TPH (C08-C16)	**<12.4**	mg/kg	24.9	12.4	1	06/14/11 10:32	06/21/11 11:14	
	TPH (C16-C28)	**<12.4**	mg/kg	24.9	12.4	1	06/14/11 10:32	06/21/11 11:14	
	TPH (C08-C40)	**105**	mg/kg	24.9	12.4	1	06/14/11 10:32	06/21/11 11:14	
	TPH - Diesel (C10-C28)	**<12.4**	mg/kg	24.9	12.4	1	06/14/11 10:32	06/21/11 11:14	
Surrogates									
84-15-1	o-Terphenyl (S)	**65**	%.	50-150		1	06/14/11 10:32	06/21/11 11:14	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-DUP-MEAT TX
Lab ID: 4046737010
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.27**	%			1		06/15/11 06:33	

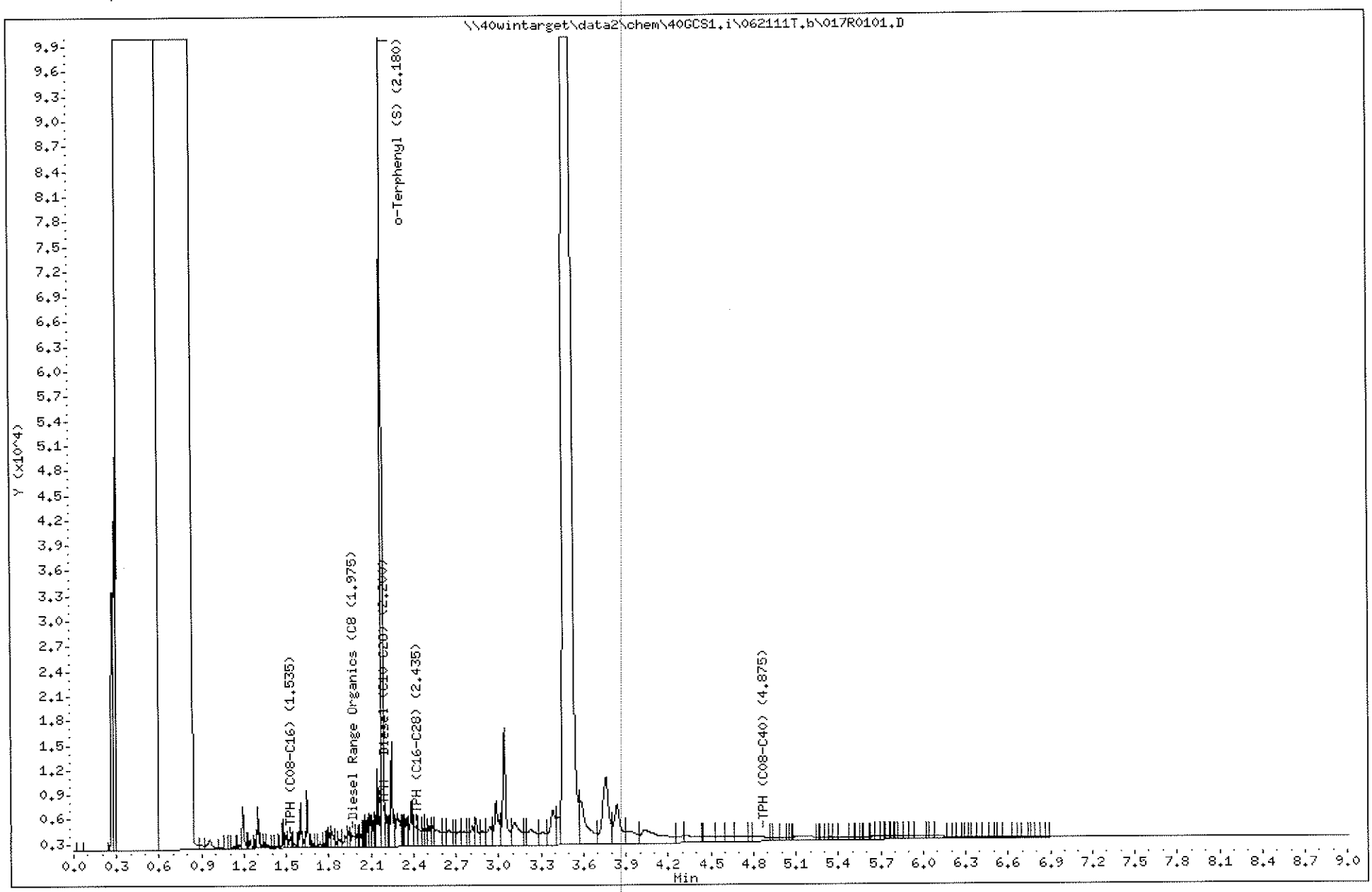
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\017R0101.D
Date : 21-JUN-2011 11:14
Client ID: EWL-T-03-C-DUP-MEAT
Sample Info: 4046737010
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\017R0101.D
Lab Smp Id: 4046737010 Client Smp ID: EWL-T-03-C-DUP-MEAT
Inj Date : 21-JUN-2011 11:14
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737010
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.020	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			1791837	423.409	105.32
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	165334	32.5594	8.09(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-DUP-MEAT TX
Lab ID: 4046737011
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<10.7**	mg/kg	21.4	10.7	1	06/14/11 10:32	06/21/11 11:26	
	TPH (C08-C16)	**<10.7**	mg/kg	21.4	10.7	1	06/14/11 10:32	06/21/11 11:26	
	TPH (C16-C28)	**<10.7**	mg/kg	21.4	10.7	1	06/14/11 10:32	06/21/11 11:26	
	TPH (C08-C40)	**127**	mg/kg	21.4	10.7	1	06/14/11 10:32	06/21/11 11:26	
	TPH - Diesel (C10-C28)	**<10.7**	mg/kg	21.4	10.7	1	06/14/11 10:32	06/21/11 11:26	
Surrogates									
84-15-1	o-Terphenyl (S)	**62**	%.	50-150		1	06/14/11 10:32	06/21/11 11:26	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-DUP-MEAT TX
Lab ID: 4046737011
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.24**	%			1		06/15/11 06:33	

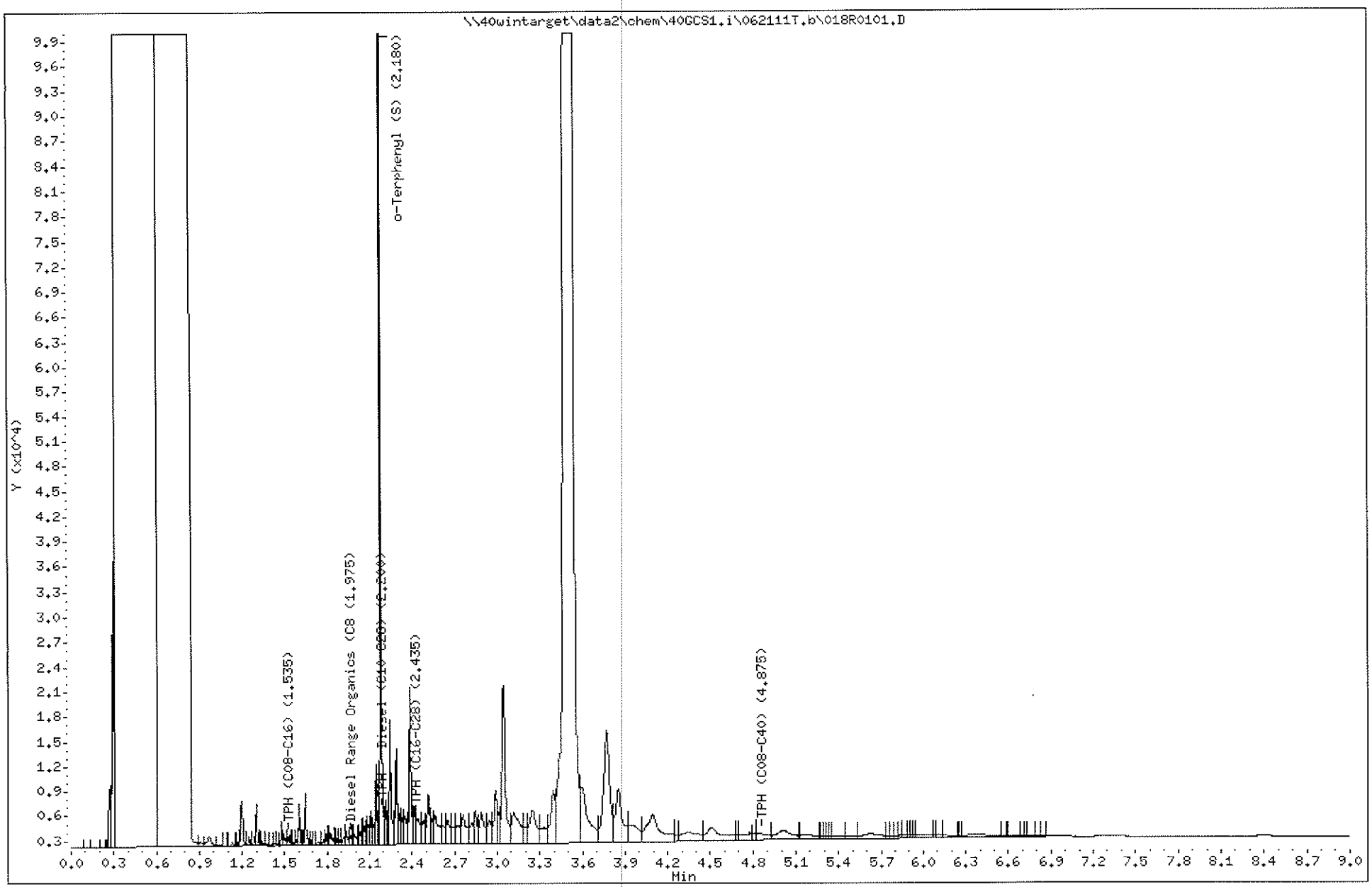
Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\018R0101.D
Date : 21-JUN-2011 11:26
Client ID: EWL-T-10-C-DUP-HEAT
Sample Info: 4046737011
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\018R0101.D
Lab Smp Id: 4046737011 Client Smp ID: EWL-T-10-C-DUP-MEAT
Inj Date : 21-JUN-2011 11:26
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737011
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.670	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			2406630	595.021	127.41
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	158407	31.1953	6.67(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-DUP-MEAT TX
Lab ID: 4046737012
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<17.3**	mg/kg	34.6	17.3	1	06/14/11 10:32	06/21/11 11:38	
	TPH (C08-C16)	**<17.3**	mg/kg	34.6	17.3	1	06/14/11 10:32	06/21/11 11:38	
	TPH (C16-C28)	**<17.3**	mg/kg	34.6	17.3	1	06/14/11 10:32	06/21/11 11:38	
	TPH (C08-C40)	**179**	mg/kg	34.6	17.3	1	06/14/11 10:32	06/21/11 11:38	
	TPH - Diesel (C10-C28)	**<17.3**	mg/kg	34.6	17.3	1	06/14/11 10:32	06/21/11 11:38	
Surrogates									
84-15-1	o-Terphenyl (S)	**58**	%.	50-150		1	06/14/11 10:32	06/21/11 11:38	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046737

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-DUP-MEAT TX
Lab ID: 4046737012
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

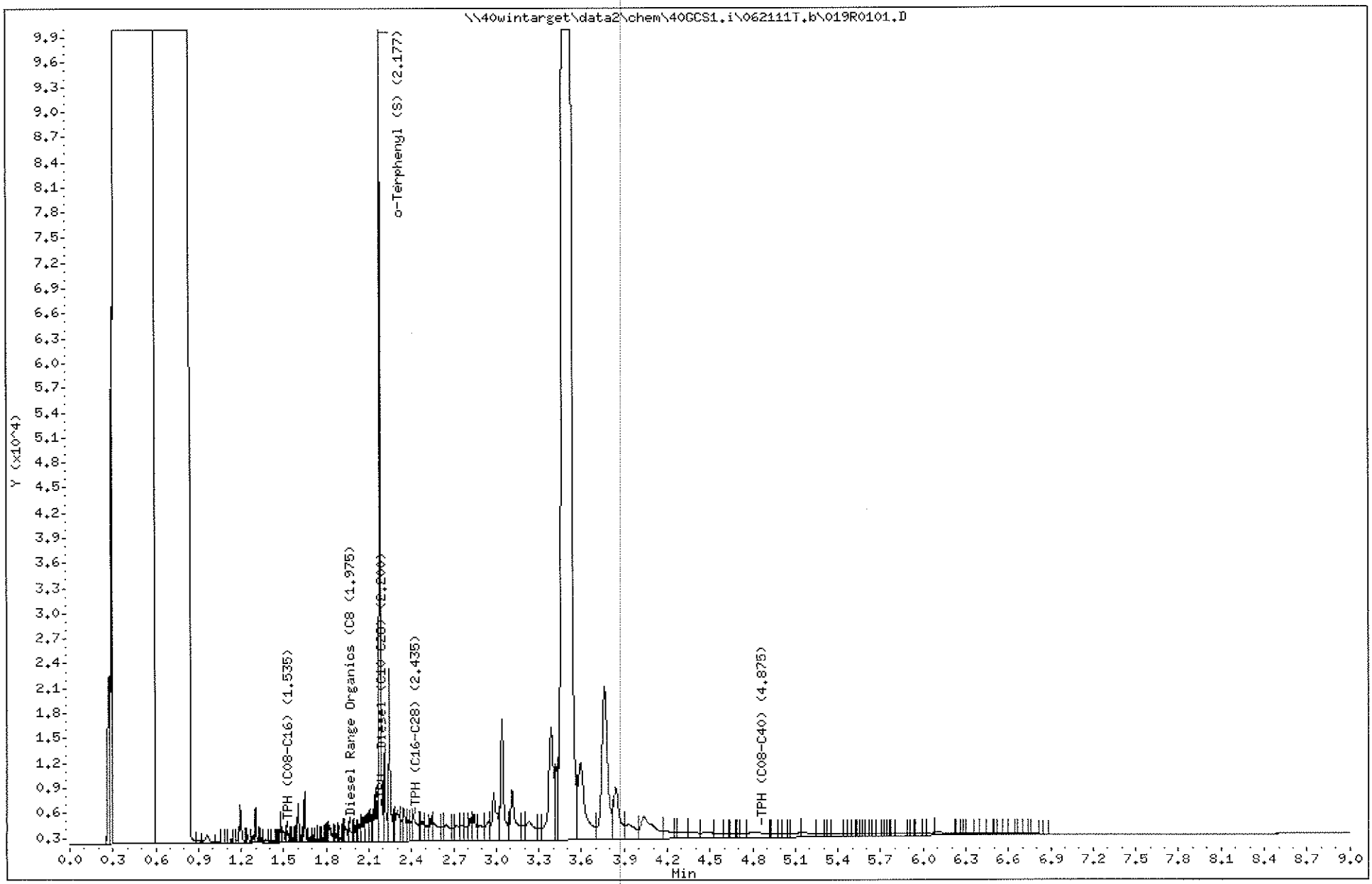
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.79	%			1		06/15/11 06:33	

Date: 06/04/2012 07:18 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\019R0101.D
Date : 21-JUN-2011 11:38
Client ID: EWL-LC-C-DUP-MEAT
Sample Info: 4046737012
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\019R0101.D
Lab Smp Id: 4046737012 Client Smp ID: EWL-LC-C-DUP-MEAT
Inj Date : 21-JUN-2011 11:38
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046737012
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	2.890	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050	-8.699		2129882	517.770	179.15
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	Compound Not Detected.					
S 2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S 1 TPH - Diesel (C10-C28)	Compound Not Detected.					
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	147151	28.9786	10.02(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046737

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAY-2011 07:51
End Cal Date : 13-JUN-2011 14:59
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Last Edit : 02-Aug-2011 08:42 dlipsky

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\060811B.b\009R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\060811B.b\008R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\060811B.b\007R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\060811B.b\006R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\060811B.b\005R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\060811B.b\004R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
S	1 TPH - Diesel (C10-C28)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	38 TPH (C16-C28)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	2 Diesel Range Organics (C8-C28	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	3 TPH (C10-C12)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	4 High End Organics (C8-C34)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	5 TPH (C12-C20)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	6 TPH (C10-C40)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	7 TPH (C08-C40)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	8 TPH (C08-C36)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	9 TPH (C10-C20)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	10 TPH (C20-C34)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	35 TPH (C08-C16)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	36 TPH (C16-C40)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	37 Biota (C12-C36)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAY-2011 07:51
End Cal Date : 13-JUN-2011 14:59
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Last Edit : 02-Aug-2011 08:42 dlipsky

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
11 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
12 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
13 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
14 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
16 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 o-Terphenyl (S)	0.00024	0.00024	0.00022	0.00018	0.00017	0.00014	AVRG		0.00020		20.83320	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

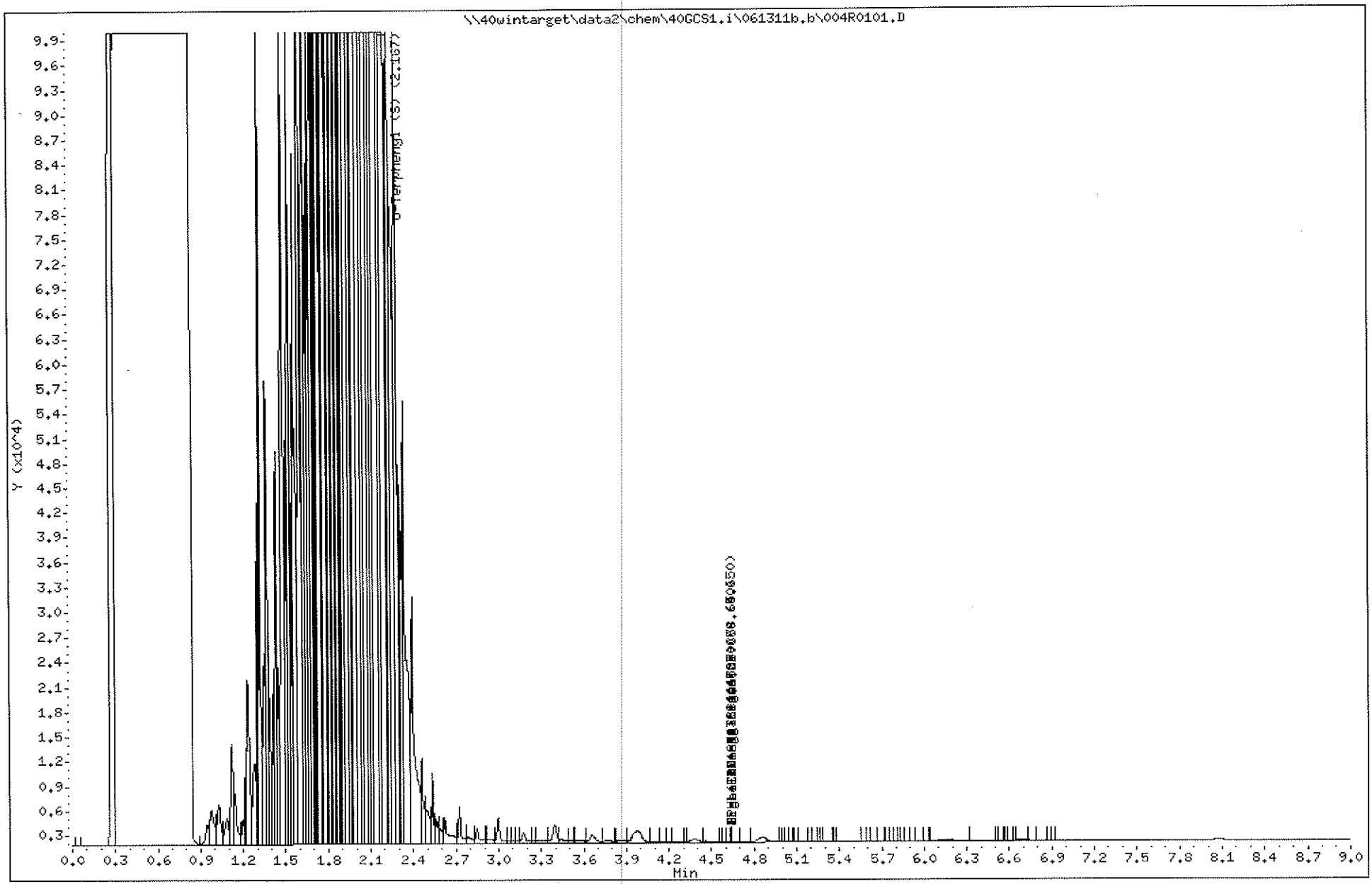
Start Cal Date : 10-MAY-2011 07:51
End Cal Date : 13-JUN-2011 14:59
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Last Edit : 02-Aug-2011 08:42 dlipsky

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\004R0101.D
Date : 13-JUN-2011 14:01
Client ID:
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\004R0101.D
Lab Smp Id: 2000 2860-31-01
Inj Date : 13-JUN-2011 14:01
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:04 Cal File: 004R0101.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH - Diesel (C10-C28)	1.450-2.800			7370986	2000.00	1968.62
S 38 TPH (C16-C28)	1.000-8.300			7370986	2000.00	1968.62(A)
S 37 Biota (C12-C36)	1.000-8.300			7370986	2000.00	1968.62(A)
S 35 TPH (C08-C16)	1.000-8.300			7370986	2000.00	1968.62(A)
S 36 TPH (C16-C40)	1.000-8.300			7370986	2000.00	1968.62(A)
S 2 Diesel Range Organics (C8-C28)	1.000-8.300			7370986	2000.00	1968.62
S 4 High End Organics (C8-C34)	1.000-8.300			7370986	2000.00	1968.62
S 3 TPH (C10-C12)	1.000-8.300			7370986	2000.00	1968.62
S 5 TPH (C12-C20)	1.000-8.300			7370986	2000.00	1968.62
S 6 TPH (C10-C40)	1.000-8.300			7370986	2000.00	1968.62
S 7 TPH (C08-C40)	1.000-8.300			7370986	2000.00	1968.62
S 8 TPH (C08-C36)	1.000-8.300			7370986	2000.00	1968.62
S 9 TPH (C10-C20)	1.000-8.300			7370986	2000.00	1968.62
S 10 TPH (C20-C34)	1.000-8.300			7370986	2000.00	1968.62
$ 28 o-Terphenyl (S)	2.166	2.166	0.000	360507	50.0000	69.87

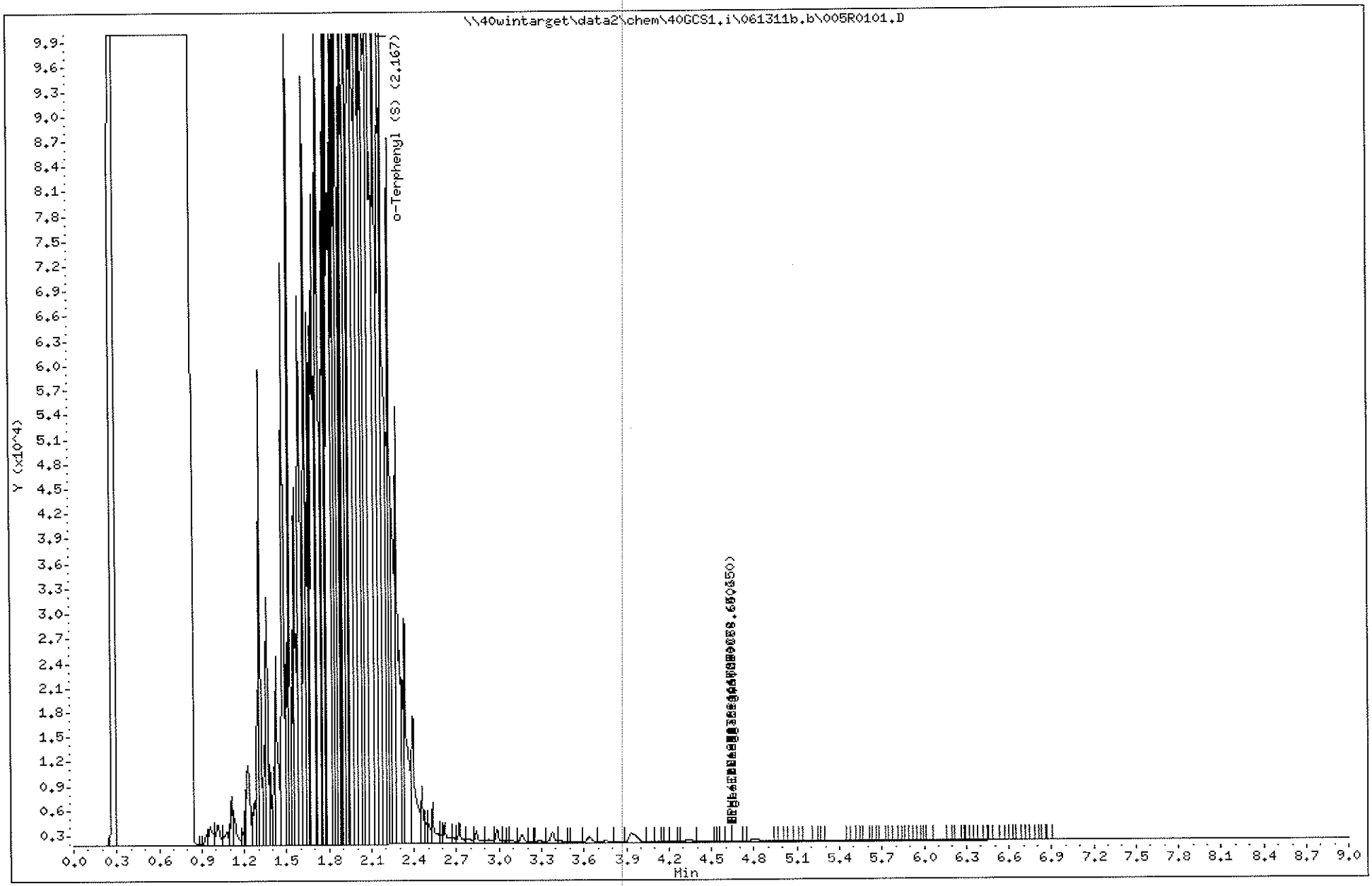
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\005R0101.D
Date : 13-JUN-2011 14:12
Client ID:
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\005R0101.D
Lab Smp Id: 1000 2860-31-02
Inj Date : 13-JUN-2011 14:12
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:16 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH - Diesel (C10-C28)	1.450-2.800			3863352	1000.00	996.05
S 38 TPH (C16-C28)	1.000-8.300			3863352	1000.00	996.05(A)
S 37 Biota (C12-C36)	1.000-8.300			3863352	1000.00	996.05(A)
S 35 TPH (C08-C16)	1.000-8.300			3863352	1000.00	996.05(A)
S 36 TPH (C16-C40)	1.000-8.300			3863352	1000.00	996.05(A)
S 2 Diesel Range Organics (C8-C28)	1.000-8.300			3863352	1000.00	996.05
S 4 High End Organics (C8-C34)	1.000-8.300			3863352	1000.00	996.05
S 3 TPH (C10-C12)	1.000-8.300			3863352	1000.00	996.05
S 5 TPH (C12-C20)	1.000-8.300			3863352	1000.00	996.05
S 6 TPH (C10-C40)	1.000-8.300			3863352	1000.00	996.05
S 7 TPH (C08-C40)	1.000-8.300			3863352	1000.00	996.05
S 8 TPH (C08-C36)	1.000-8.300			3863352	1000.00	996.05
S 9 TPH (C10-C20)	1.000-8.300			3863352	1000.00	996.05
S 10 TPH (C20-C34)	1.000-8.300			3863352	1000.00	996.05
$ 28 o-Terphenyl (S)	2.166	2.166	0.000	296541	50.0000	57.76

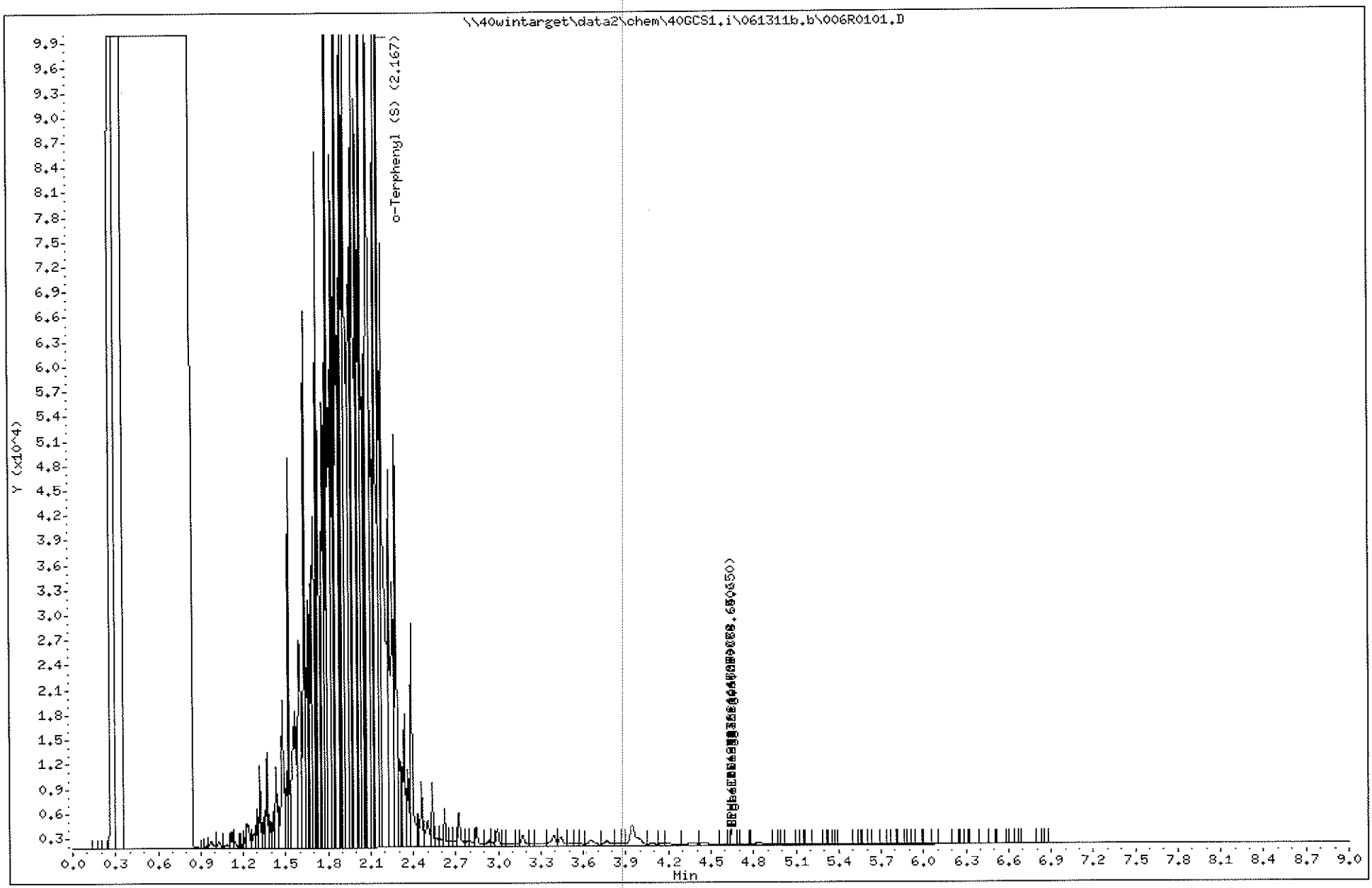
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\006R0101.D
Date : 13-JUN-2011 14:24
Client ID:
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\006R0101.D
Lab Smp Id: 500 2860-31-14
Inj Date : 13-JUN-2011 14:24
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:28 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			2374006	500.000	581.00
S	38 TPH (C16-C28)	1.000-8.300			2374006	500.000	581.00(A)
S	37 Biota (C12-C36)	1.000-8.300			2374006	500.000	581.00(A)
S	35 TPH (C08-C16)	1.000-8.300			2374006	500.000	581.00(A)
S	36 TPH (C16-C40)	1.000-8.300			2374006	500.000	581.00(A)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			2374006	500.000	581.00
S	4 High End Organics (C8-C34)	1.000-8.300			2374006	500.000	581.00
S	3 TPH (C10-C12)	1.000-8.300			2374006	500.000	581.00
S	5 TPH (C12-C20)	1.000-8.300			2374006	500.000	581.00
S	6 TPH (C10-C40)	1.000-8.300			2374006	500.000	581.00
S	7 TPH (C08-C40)	1.000-8.300			2374006	500.000	581.00
S	8 TPH (C08-C36)	1.000-8.300			2374006	500.000	581.00
S	9 TPH (C10-C20)	1.000-8.300			2374006	500.000	581.00
S	10 TPH (C20-C34)	1.000-8.300			2374006	500.000	581.00
$	28 o-Terphenyl (S)	2.166	2.166	0.000	278476	50.0000	54.43

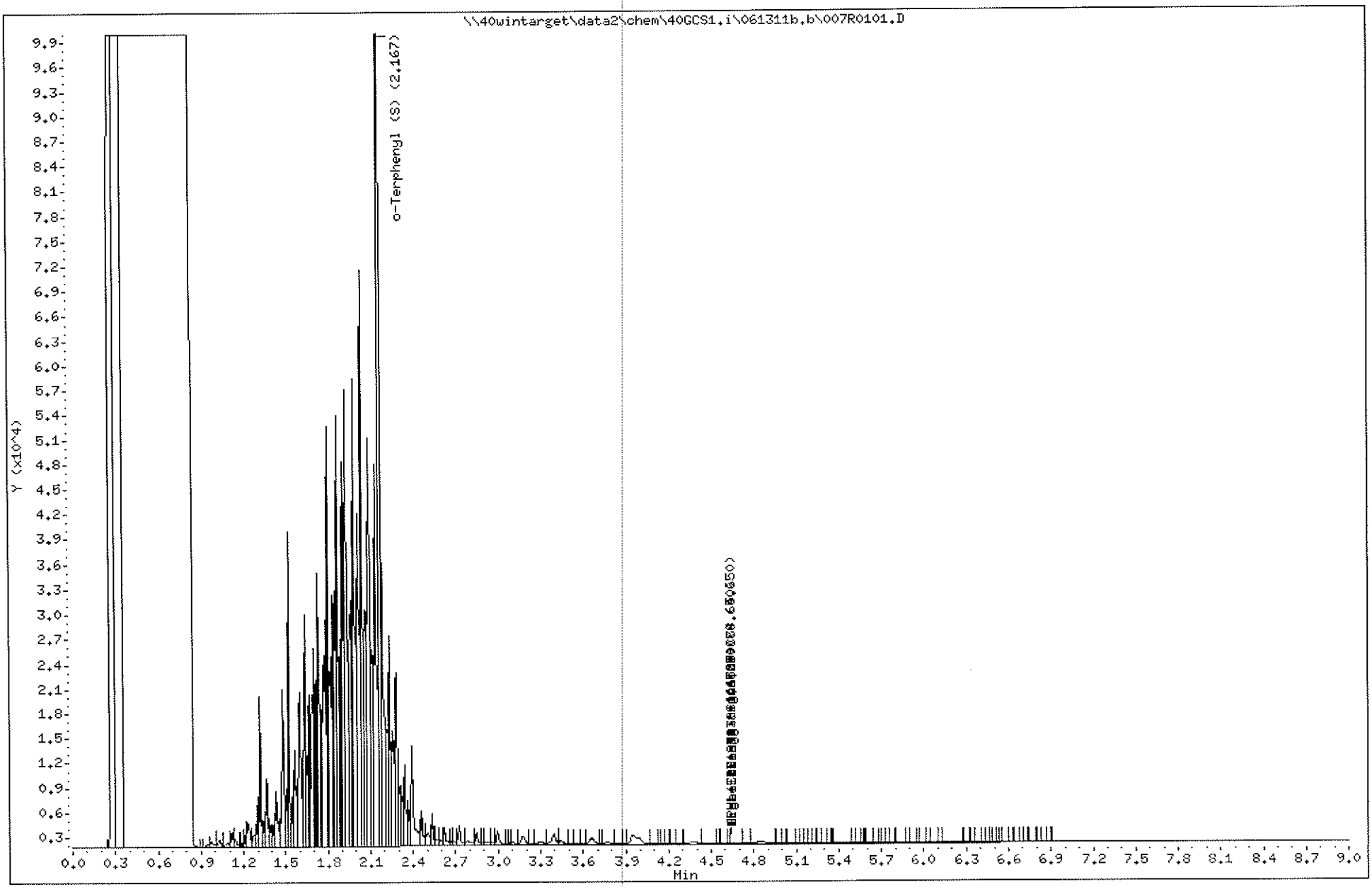
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\007R0101.D
Date : 13-JUN-2011 14:36
Client ID:
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\007R0101.D
Lab Smp Id: 250 2860-30-13
Inj Date : 13-JUN-2011 14:36
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:40 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			1155694	250.000	239.71
S	38 TPH (C16-C28)	1.000-8.300			1155694	250.000	239.71(A)
S	37 Biota (C12-C36)	1.000-8.300			1155694	250.000	239.71(A)
S	35 TPH (C08-C16)	1.000-8.300			1155694	250.000	239.71(A)
S	36 TPH (C16-C40)	1.000-8.300			1155694	250.000	239.71(A)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			1155694	250.000	239.71
S	4 High End Organics (C8-C34)	1.000-8.300			1155694	250.000	239.71
S	3 TPH (C10-C12)	1.000-8.300			1155694	250.000	239.71
S	5 TPH (C12-C20)	1.000-8.300			1155694	250.000	239.71
S	6 TPH (C10-C40)	1.000-8.300			1155694	250.000	239.71
S	7 TPH (C08-C40)	1.000-8.300			1155694	250.000	239.71
S	8 TPH (C08-C36)	1.000-8.300			1155694	250.000	239.71
S	9 TPH (C10-C20)	1.000-8.300			1155694	250.000	239.71
S	10 TPH (C20-C34)	1.000-8.300			1155694	250.000	239.71
$	28 o-Terphenyl (S)	2.166	2.166	0.000	230305	50.0000	45.06

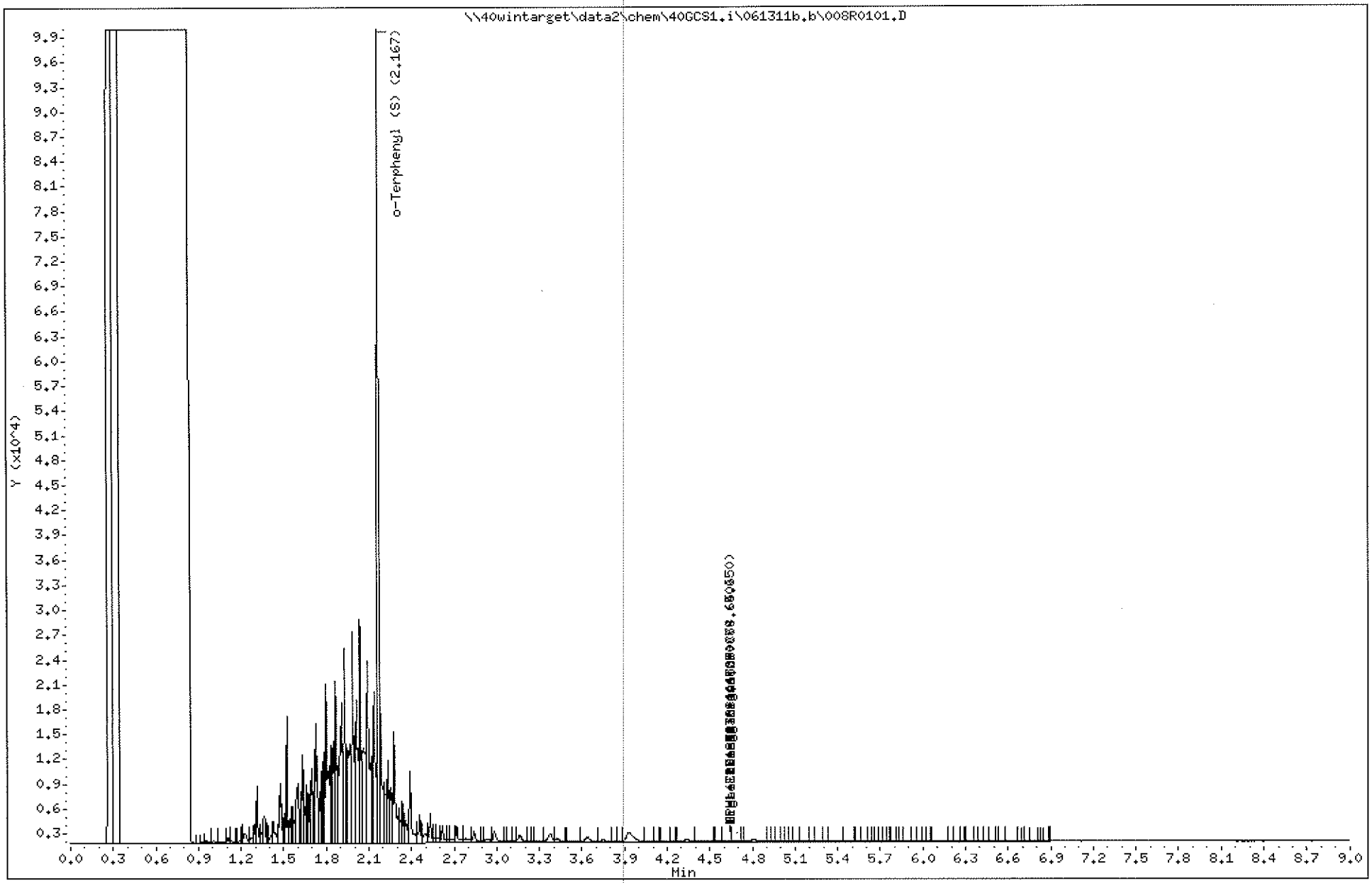
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\008R0101.D
Date : 13-JUN-2011 14:48
Client ID:
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\008R0101.D
Lab Smp Id: 100 2860-30-14
Inj Date : 13-JUN-2011 14:48
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:52 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH - Diesel (C10-C28)	1.450-2.800			499076	100.000	60.24
S 38 TPH (C16-C28)	1.000-8.300			499076	100.000	60.24(aA)
S 37 Biota (C12-C36)	1.000-8.300			499076	100.000	60.24(aA)
S 35 TPH (C08-C16)	1.000-8.300			499076	100.000	60.24(aA)
S 36 TPH (C16-C40)	1.000-8.300			499076	100.000	60.24(aA)
S 2 Diesel Range Organics (C8-C28)	1.000-8.300			499076	100.000	60.24(a)
S 4 High End Organics (C8-C34)	1.000-8.300			499076	100.000	60.24(a)
S 3 TPH (C10-C12)	1.000-8.300			499076	100.000	60.24
S 5 TPH (C12-C20)	1.000-8.300			499076	100.000	60.24
S 6 TPH (C10-C40)	1.000-8.300			499076	100.000	60.24
S 7 TPH (C08-C40)	1.000-8.300			499076	100.000	60.24
S 8 TPH (C08-C36)	1.000-8.300			499076	100.000	60.24
S 9 TPH (C10-C20)	1.000-8.300			499076	100.000	60.24
S 10 TPH (C20-C34)	1.000-8.300			499076	100.000	60.24
$ 28 o-Terphenyl (S)	2.166	2.166	0.000	210741	50.0000	41.35

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

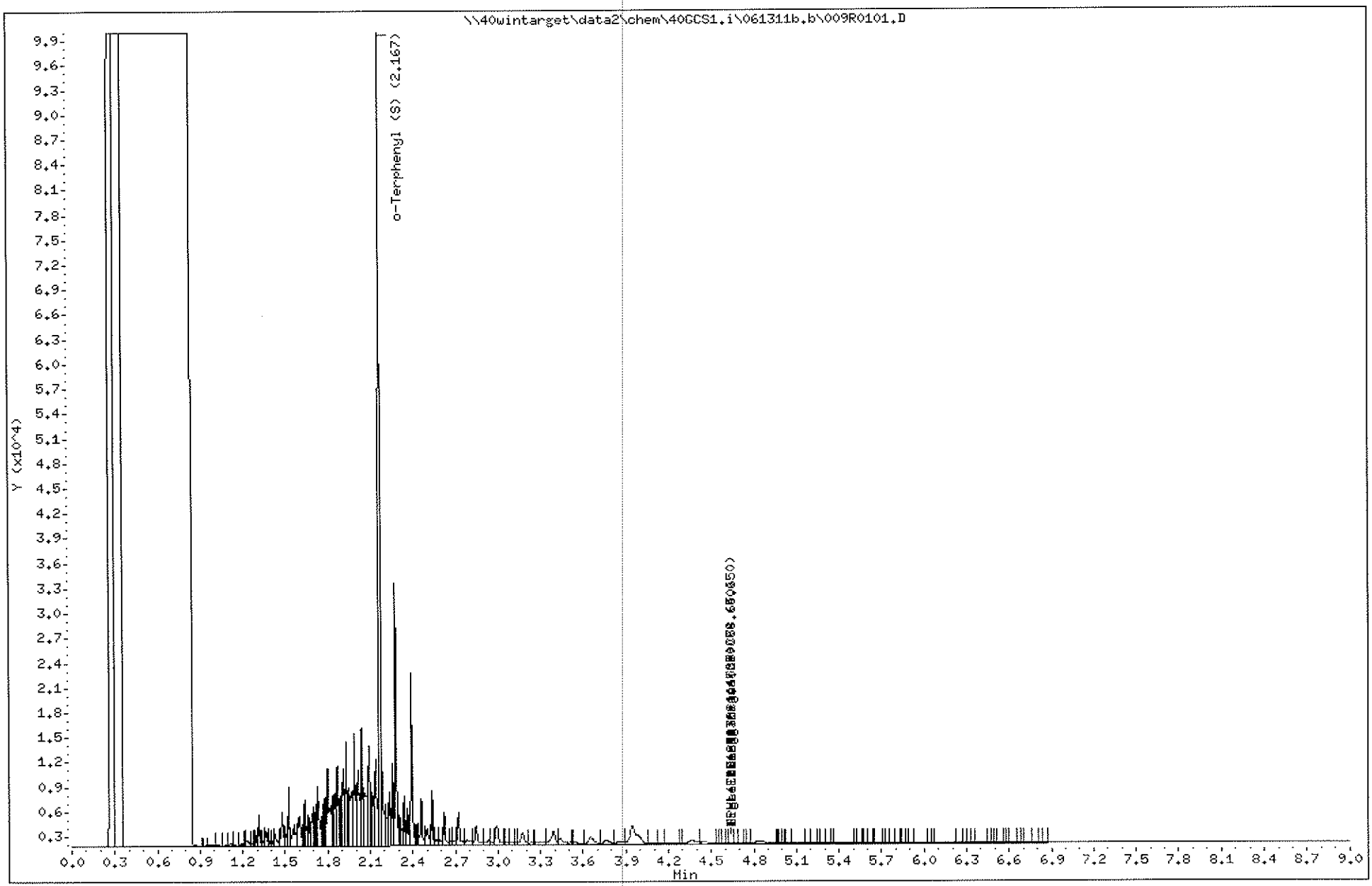
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\009R0101.D
Date : 13-JUN-2011 14:59
Client ID:
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\009R0101.D
Lab Smp Id: 50 2860-30-15
Inj Date : 13-JUN-2011 14:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 1 TPH - Diesel (C10-C28)	1.450	2.800		358429	50.0000	23.29
S 38 TPH (C16-C28)	1.000	8.300		358429	50.0000	23.29(aA)
S 37 Biota (C12-C36)	1.000	8.300		358429	50.0000	23.29(aA)
S 35 TPH (C08-C16)	1.000	8.300		358429	50.0000	23.29(aA)
S 36 TPH (C16-C40)	1.000	8.300		358429	50.0000	23.29(aA)
S 2 Diesel Range Organics (C8-C28)	1.000	8.300		358429	50.0000	23.29(a)
S 4 High End Organics (C8-C34)	1.000	8.300		358429	50.0000	23.29(a)
S 3 TPH (C10-C12)	1.000	8.300		358429	50.0000	23.29
S 5 TPH (C12-C20)	1.000	8.300		358429	50.0000	23.29
S 6 TPH (C10-C40)	1.000	8.300		358429	50.0000	23.29
S 7 TPH (C08-C40)	1.000	8.300		358429	50.0000	23.29
S 8 TPH (C08-C36)	1.000	8.300		358429	50.0000	23.29
S 9 TPH (C10-C20)	1.000	8.300		358429	50.0000	23.29
S 10 TPH (C20-C34)	1.000	8.300		358429	50.0000	23.29
$ 28 o-Terphenyl (S)	2.166	2.166	0.000	208011	50.0000	40.96

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

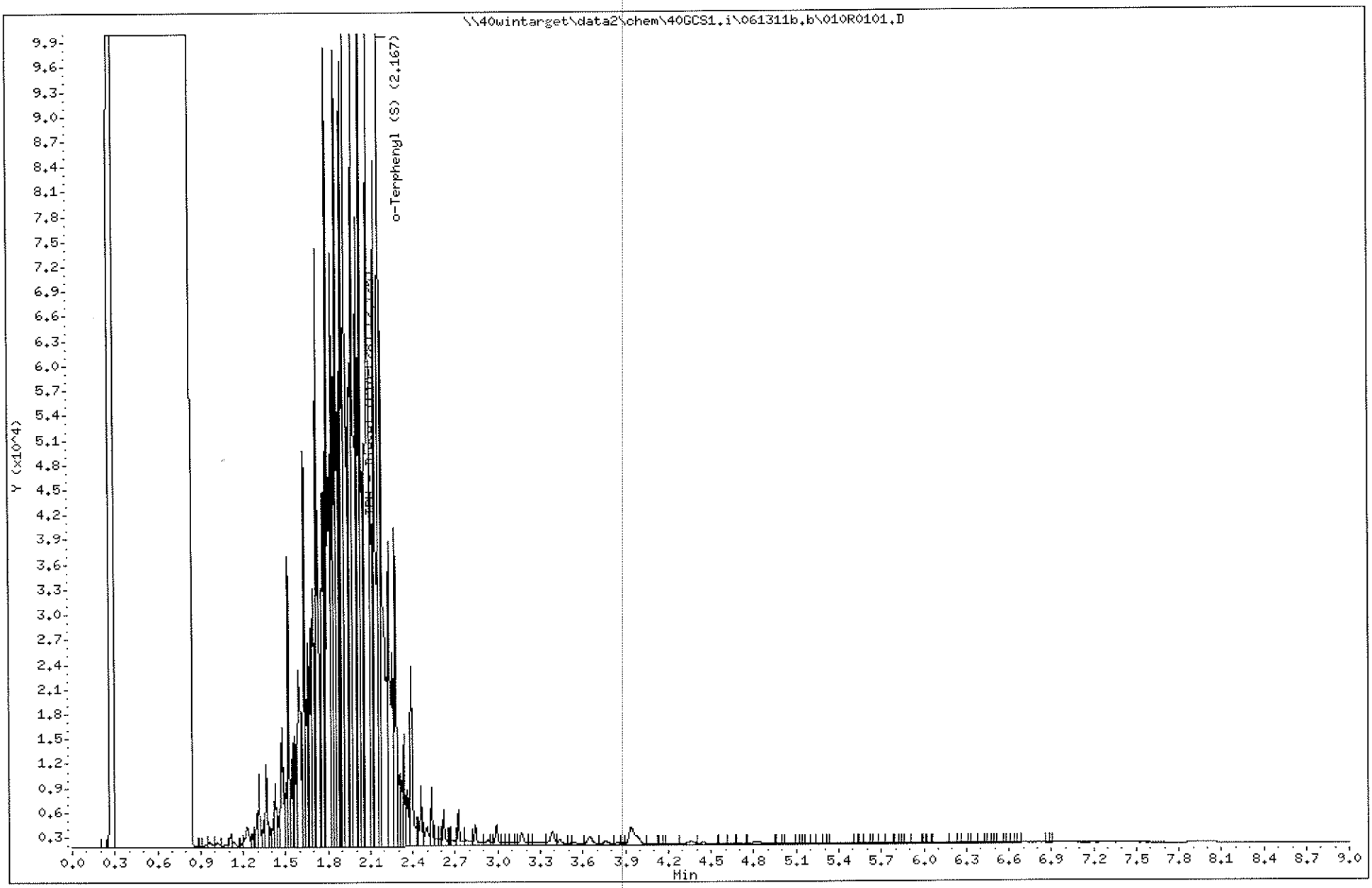
Instrument ID: 40GCS1.i Injection Date: 13-JUN-2011 15:11
Lab File ID: 010R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: WATER Init. Cal. Times: 07:51 14:59
Lab Sample ID: IC2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 1 TPH - Diesel (C10-C28)	500	440	0.00027	0.000	-12.05069	15.00000	Linear
$ 28 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.97336	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\010R0101.D
Date : 13-JUN-2011 15:11
Client ID:
Sample Info: IC2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\010R0101.D
Lab Smp Id: IC2860-30-16
Inj Date : 13-JUN-2011 15:11
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC2860-30-16
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 1 TPH - Diesel (C10-C28)	1.450-2.800			1850365	500.000	439.74
$ 28 o-Terphenyl (S)	2.166	2.166	0.000	228790	50.0000	45.05

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

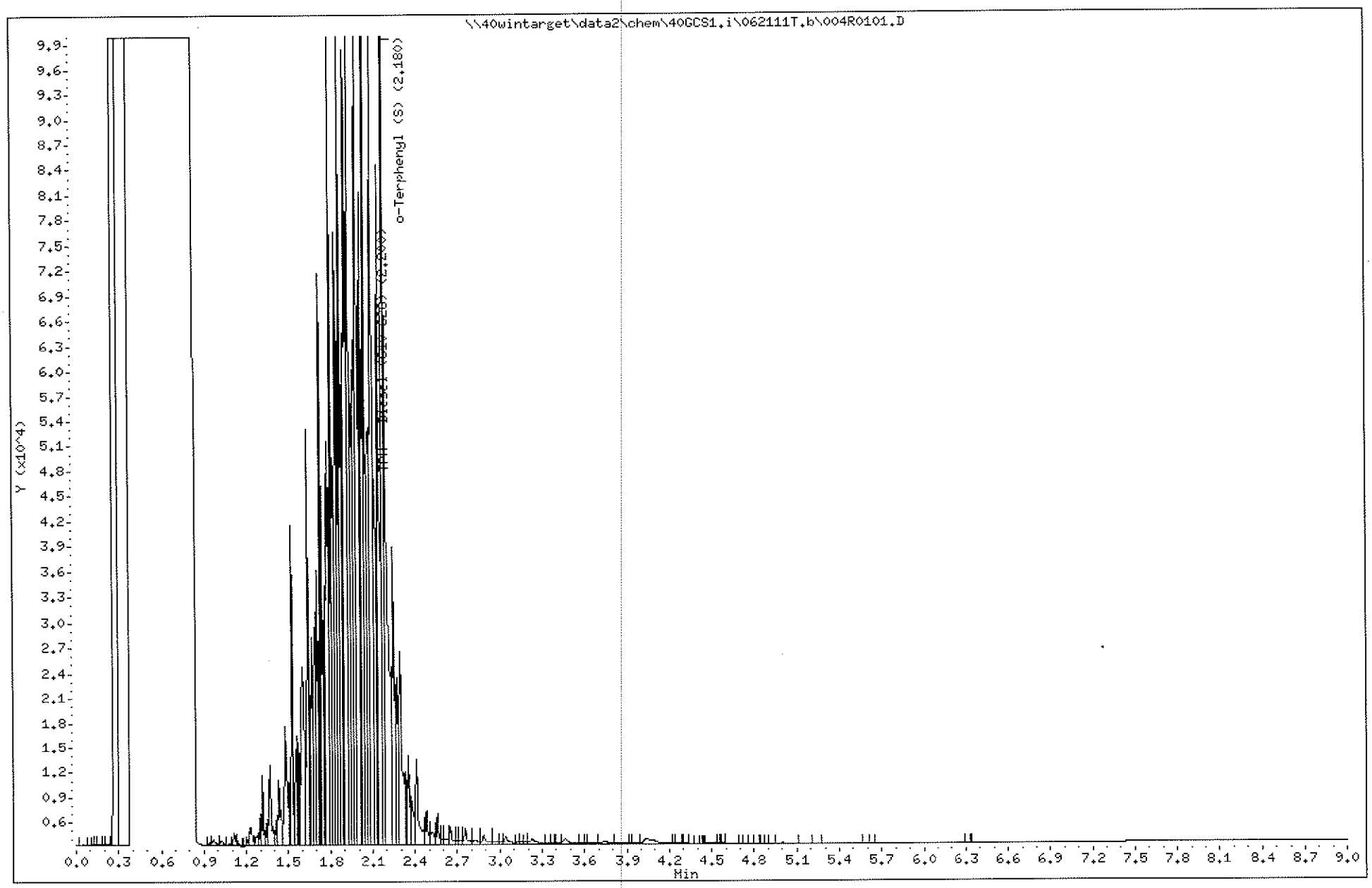
Instrument ID: 40GCS1.i Injection Date: 21-JUN-2011 08:13
Lab File ID: 004R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: SOIL Init. Cal. Times: 07:51 14:59
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 1 TPH - Diesel (C10-C28)	500	440	0.00027	0.000	-11.90637	15.00000	Linear
$ 28 o-Terphenyl (S)	0.00020	0.00021	0.00021	0.000	5.14074	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\004R0101.D
Date : 21-JUN-2011 08:13
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\004R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 21-JUN-2011 08:13
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1852950	500.000	440.46
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	241482	50.0000	47.55

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CONTINUING CALIBRATION COMPOUNDS

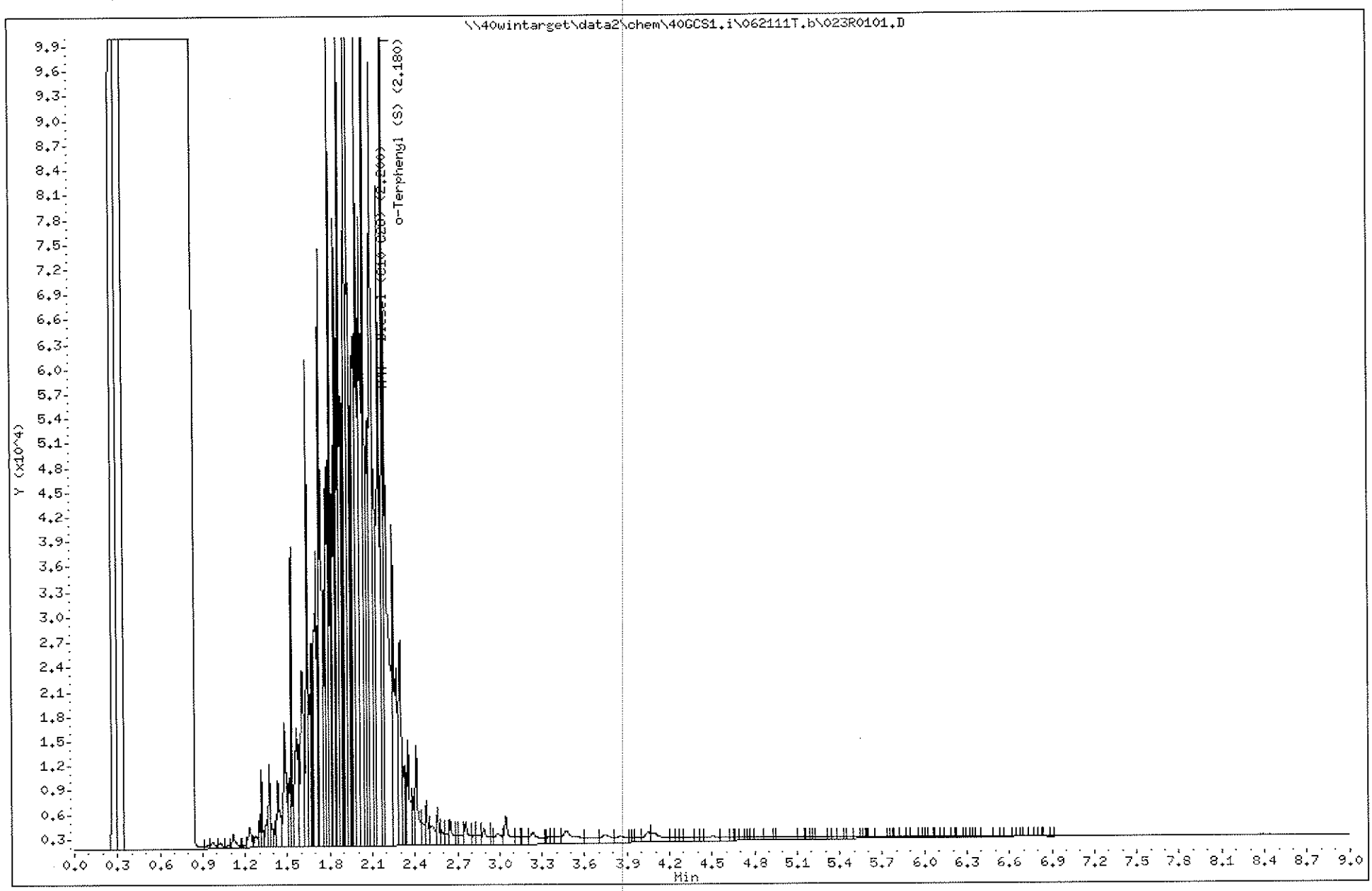
Instrument ID: 40GCS1.i Injection Date: 21-JUN-2011 12:40
Lab File ID: 023R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: SOIL Init. Cal. Times: 07:51 14:59
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 1 TPH - Diesel (C10-C28)	500	472	0.00025	0.000	-5.54634	15.00000	Linear
$ 28 o-Terphenyl (S)	0.00020	0.00021	0.00021	0.000	4.88665	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\023R0101.D
Date : 21-JUN-2011 12:40
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\023R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 21-JUN-2011 12:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1966873	500.000	472.26
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	242067	50.0000	47.67

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

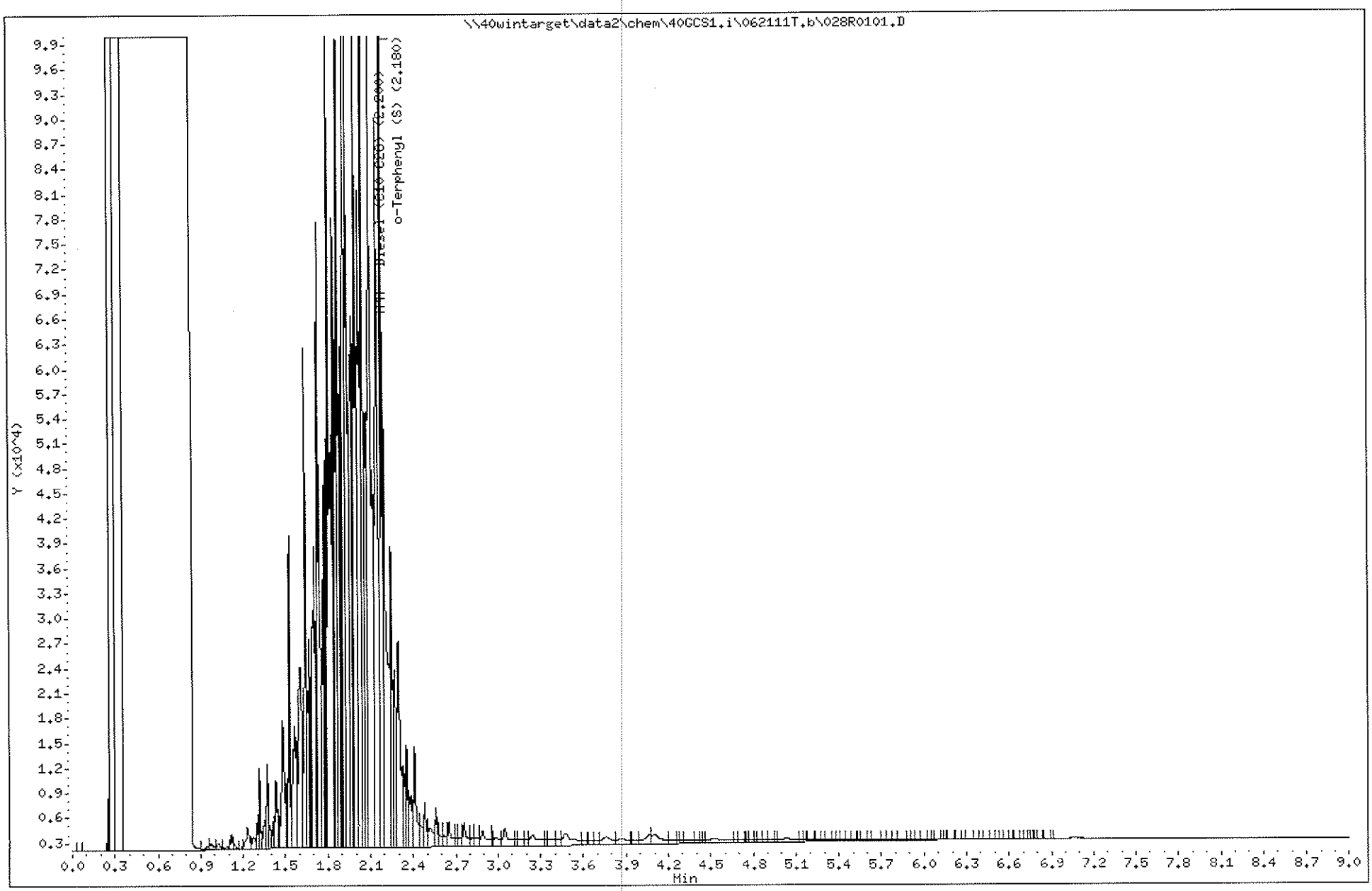
Instrument ID: 40GCS1.i Injection Date: 21-JUN-2011 14:19
Lab File ID: 028R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: SOIL Init. Cal. Times: 07:51 14:59
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 1 TPH - Diesel (C10-C28)	500	477	0.00025	0.000	-4.59777	15.00000	Linear
$ 28 o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	-0.09642	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\028R0101.D
Date : 21-JUN-2011 14:19
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\028R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 21-JUN-2011 14:19
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 08-May-2012 07:12 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1983864	500.000	477.01
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	254141	50.0000	50.04

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046737

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046737

QB Batch: OEXT/11356 **Prepared:** 06/14/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4046737001, 4046737002, 4046737003, 4046737004, 4046737005, 4046737006, 4046737007, 4046737008, 4046737009, 4046737010, 4046737011, 4046737012

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	06/21/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	06/21/11	
	TPH (C08-C40)	112	mg/kg	6.7	3.3	06/21/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	06/21/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	06/21/11	

Type	Sample	Matrix
BLANK	463065	Tissue

REPORT OF LABORATORY ANALYSIS

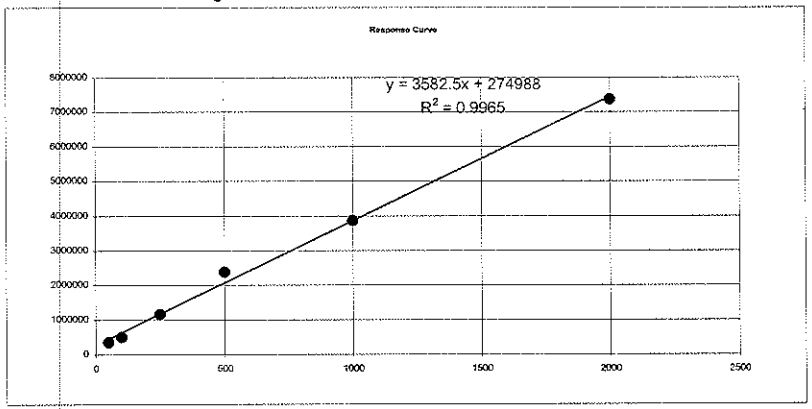
SampleID: 463065 File: 06R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	358429
100	499076
250	1155694
500	2374006
1000	3863352
2000	7370986

slope	3582.464731
intercept	274988.4247
correlation	0.998232777
R2	0.996468676



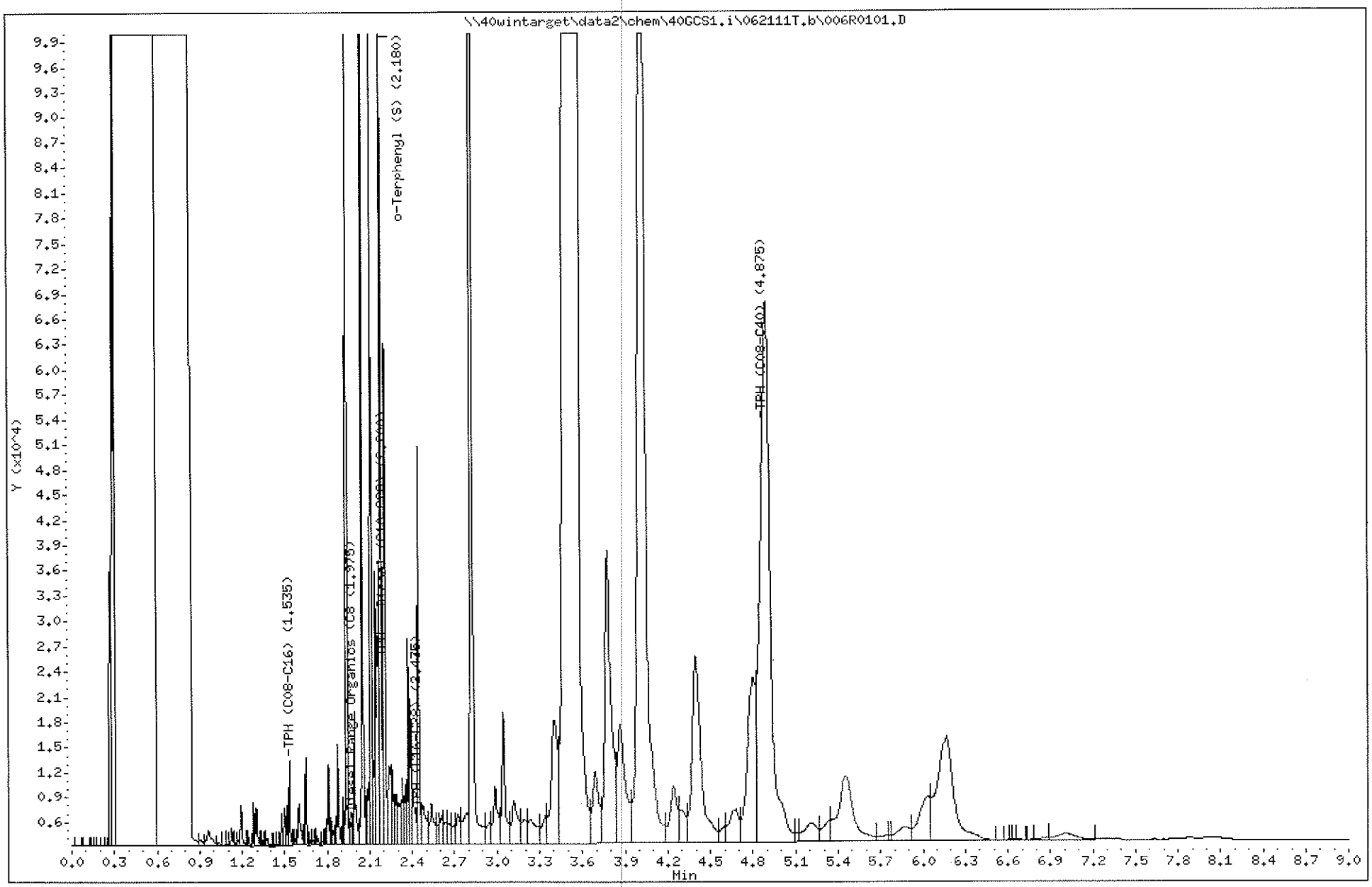
Retention Time	Peak Area	Compound Name
1.937	181855	
2.050	117029	
2.110	97627	
2.820	234029	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	264159	181855	-53.7854
Diesel Range Organics (	992910	630540	24.39146
TPH - Diesel (C10-C28)	975744	630540	19.59979
TPH (C16-C28)	740610	448685	4.727628
TPH (C08-C40)	6904337	630540	1674.492

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\006R0101.D
Date : 21-JUN-2011 09:02
Client ID: MB
Sample Info: 463065
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\006R0101.D
Lab Smp Id: 463065 Client Smp ID: MB
Inj Date : 21-JUN-2011 09:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463065
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 14-May-2012 09:13 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			6904337	1850.50	123.36
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	1.970-2.900			740610	129.972	8.66(A)
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			992909	200.399	13.35
S 1 TPH - Diesel (C10-C28)	1.500-2.900			975743	195.607	13.04
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	176805	34.8184	2.32(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\006R0101.D
Lab Smp Id: 463065 Client Smp ID: MB
Inj Date : 21-JUN-2011 09:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463065
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 14-May-2012 09:13 kburns Quant Type: AREA%
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.040	40	25	0.631	0.00		
0.117	49	43	0.881	0.00		
0.133	40	46	1.150	0.00		
0.150	49	53	1.075	0.00		
0.167	51	58	1.135	0.00		
0.183	108	62	0.576	0.00		
0.217	106	72	0.679	0.00		
0.243	73	76	1.035	0.00		
0.253	278	865	3.106	0.00		
0.277	32434	32897	1.014	0.00		
0.293	85107	105581	1.241	0.01		
0.323	560185718	90159482	0.161	96.74		
0.610	8882711	1707222	0.192	1.54		
0.907	1142	600	0.526	0.00		
0.963	4121	1697	0.412	0.00		
1.033	406	234	0.576	0.00		
1.535	264159	609695	2.308	0.04	S	35 TPH (C08-C16)
1.975	992910	1547875	1.559	0.17	S	2 Diesel Range Organi
1.073	66	67	1.021			
1.093	119	146	1.224			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
1.127	1597	2155	1.349		
1.150	164	336	2.055		
1.170	448	623	1.391		
1.193	4171	4806	1.152		
1.230	96	168	1.748		
1.247	583	980	1.680		
1.280	2671	5209	1.950		
1.297	3280	4554	1.388		
1.330	293	505	1.724		
1.343	246	559	2.275		
1.357	167	397	2.383		
1.373	847	838	0.989		
1.427	101	196	1.944		
1.443	151	316	2.098		
1.477	2167	3910	1.805		
2.180	176805	349098	1.974	0.03	$ 28 o-Terphenyl (S)
2.200	975744	1522110	1.560	0.16	S 1 TPH - Diesel (C10-C
1.500	3385	4398	1.299		
1.520	2431	4729	1.945		
1.530	5771	10227	1.772		
1.560	280	385	1.374		
1.577	482	750	1.555		
1.600	5057	4955	0.980		
1.637	1386	3179	2.293		
1.647	6539	10486	1.604		
1.683	371	552	1.486		
1.697	328	592	1.803		
1.713	315	410	1.302		
1.730	944	1020	1.081		
1.763	229	386	1.686		
1.777	248	478	1.931		
1.787	1152	2076	1.801		
1.807	7386	9733	1.318		
1.827	1344	2406	1.790		
1.840	1313	1762	1.342		
1.857	1565	2619	1.674		
1.873	7426	12172	1.639		
1.903	593	1306	2.202		
1.913	2584	5665	2.193		
1.937	181855	482038	2.651		
1.963	2151	2597	1.208		
1.980	2053	3081	1.501		
1.993	9806	15928	1.624		
2.050	117029	200491	1.713		
2.077	3934	6687	1.700		
2.093	6477	7453	1.151		
2.110	97627	243205	2.491		
2.133	7280	10074	1.384		
2.143	39024	32564	0.834		
2.203	50326	45079	0.896		
2.237	12249	9470	0.773		
2.257	11060	9687	0.876		
2.287	5180	6103	1.178		
2.307	8267	5060	0.612		
2.330	5788	8053	1.391		

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.357	8534	7844	0.919			
2.373	14915	24509	1.643			
2.390	10857	17506	1.612			
2.407	8573	6459	0.753			
2.447	30392	47383	1.559			
2.477	11238	4735	0.421			
2.537	8819	4940	0.560			
2.577	3132	2290	0.731			
2.610	5574	3344	0.600			
2.637	3043	2577	0.847			
2.650	5220	2598	0.498			
2.697	3036	2216	0.730			
2.723	6889	3642	0.529			
2.787	10261	3779	0.368			
2.820	234029	220432	0.942			
2.435	740610	957189	1.292	0.12	S	38 TPH (C16-C28)
4.875	6904337	3063654	0.444	1.19	S	7 TPH (C08-C40)
2.943	5417	2576	0.476			
2.987	15026	6982	0.465			
3.043	26135	15696	0.601			
3.117	16218	5255	0.324			
3.190	7672	2952	0.385			
3.237	12364	2942	0.238			
3.343	7349	3355	0.457			
3.403	44647	14748	0.330			
3.573	4298800	1096301	0.255			
3.690	27100	8649	0.319			
3.780	108710	34827	0.320			
3.867	54318	14205	0.262			
4.030	486510	148654	0.306			
4.240	24535	6775	0.276			
4.293	11659	3948	0.339			
4.397	100528	22359	0.222			
4.603	5048	1950	0.386			
4.677	19245	3950	0.205			
4.803	77513	19677	0.254			
4.897	323470	64359	0.199			
5.117	1871	1071	0.572			
5.207	14804	2236	0.151			
5.340	8690	2533	0.291			
5.457	59850	7843	0.131			
5.753	2794	661	0.237			
5.770	664	670	1.009			
5.863	10644	1675	0.157			
6.037	29028	5374	0.185			
6.167	102554	12430	0.121			
6.563	29	5	0.174			
6.607	26	24	0.934			
6.623	29	30	1.038			
6.643	47	29	0.613			
6.673	82	42	0.515			
6.777	43	39	0.897			
6.880	992	243	0.245			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.017	7019	714	0.102		
	576273576	95421765		100.000	

Total unknown % area = 98.29

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046737

QB Batch: OEXT/11359 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4046737001, 4046737002, 4046737003, 4046737004, 4046737005, 4046737006, 4046737007, 4046737008, 4046737009, 4046737010, 4046737011, 4046737012

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.51	%			06/15/11	

Type	Sample	Matrix
BLANK	463175	Tissue

REPORT OF LABORATORY ANALYSIS

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LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046737

QB Batch: OEXT/11356 **LCS Prepared:** 06/14/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 06/14/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	63	57	10	50-150	20	66.7	42.3	38.1	mg/kg	06/21/11	06/21/11		
TPH (C08-C16)	34	26	24	50-150	20	66.7	22.4	17.5	mg/kg	06/21/11	06/21/11	L0	L0
TPH (C08-C40)	234	221	6	50-150	20	66.7	156	147	mg/kg	06/21/11	06/21/11	1q	2q
TPH (C16-C28)	27	24	14	50-150	20	66.7	18.0	15.7	mg/kg	06/21/11	06/21/11	L0	L0
TPH - Diesel (C10-C28)	59	53	10	50-150	20	66.7	39.4	35.6	mg/kg	06/21/11	06/21/11		

Type	Sample
LCS	463066
LCSD	463067

REPORT OF LABORATORY ANALYSIS

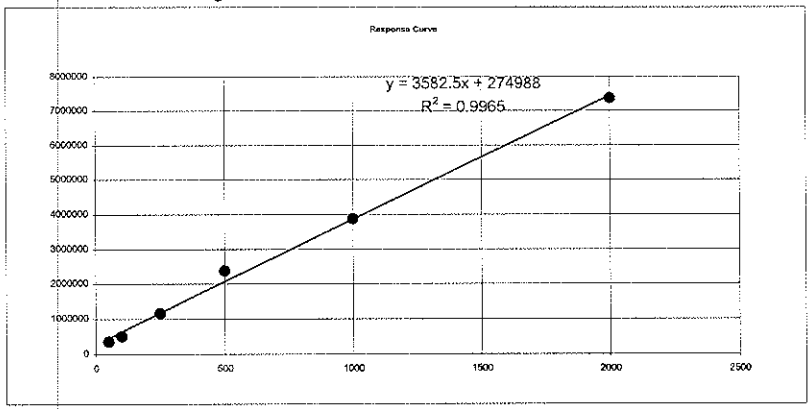
SampleID: 463066 File: 24R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	358429
100	499076
250	1155694
500	2374006
1000	3863352
2000	7370986

slope	3582.464731
intercept	274988.4247
correlation	0.998232777
R2	0.996468676



Retention Time	Peak Area	Compound Name
1.937	151162	
2.050	135498	
2.110	97675	
2.820	108377	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	1027985	151162	167.9946
Diesel Range Organics (	1903308	492712	316.9906
TPH - Diesel (C10-C28)	1825643	492712	295.3114
TPH (C16-C28)	1100960	341550	135.2202
TPH (C08-C40)	4959916	492712	1170.204

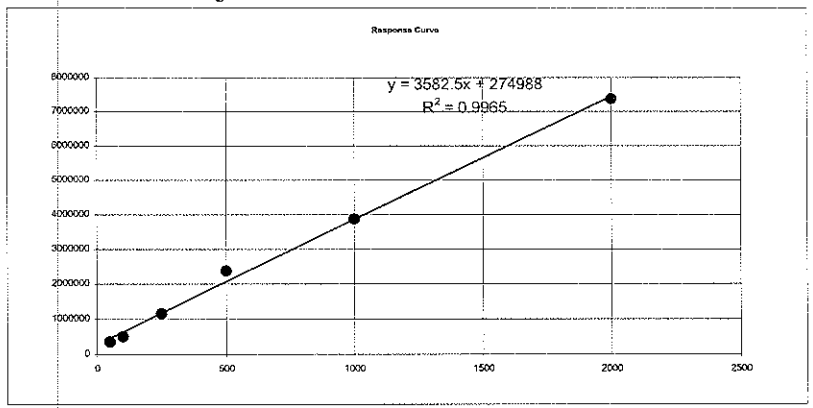
SampleID: 463067 File: 25R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	358429
100	499076
250	1155694
500	2374006
1000	3863352
2000	7370986

slope	3582.464731
intercept	274988.4247
correlation	0.998232777
R2	0.996468676



Retention Time	Peak Area	Compound Name
1.937	135932	
2.050	125250	
2.113	112222	
2.823	99380	

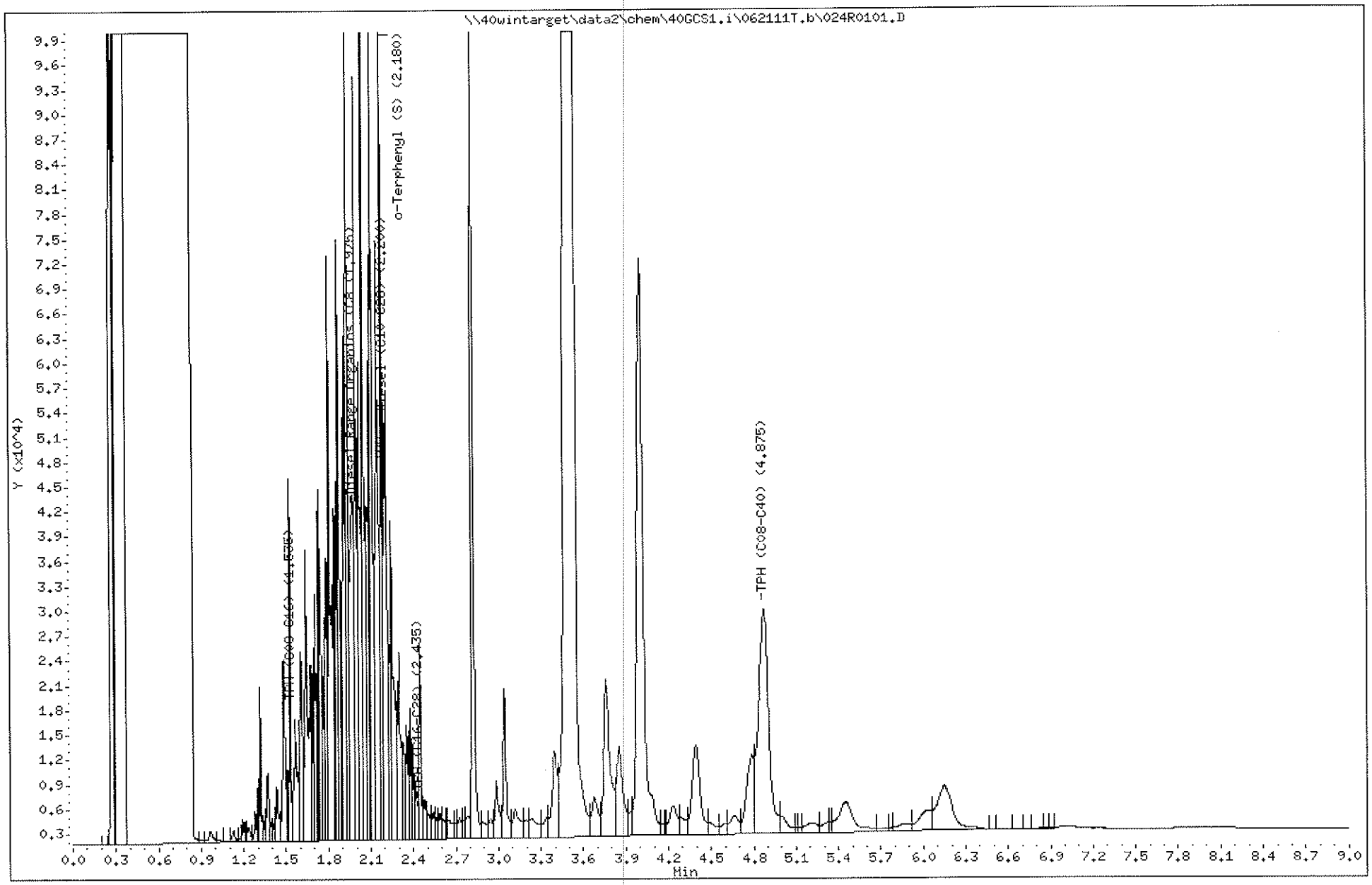
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	882054	135932	131.511
Diesel Range Organics (	1771991	472784	285.8977
TPH - Diesel (C10-C28)	1704119	472784	266.9521
TPH (C16-C28)	1032784	336852	117.5011
TPH (C08-C40)	4708027	472784	1105.455

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\024R0101.D
Date : 21-JUN-2011 13:33
Client ID: MBLCS
Sample Info: 463066X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\024R0101.D
Lab Smp Id: 463066 Client Smp ID: MBLCS
Inj Date : 21-JUN-2011 13:33
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463066X2
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 01-Jun-2012 10:59 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 24 QC Sample: LCS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			4959916	1307.74	174.36
S 35 TPH (C08-C16)	1.050-2.020			1027985	210.190	28.02
S 38 TPH (C16-C28)	1.970-2.900			1100959	230.559	30.74
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			1903308	454.525	60.60
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1825643	432.846	57.71
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	113766	22.4041	1.49(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\024R0101.D
Lab Smp Id: 463066 Client Smp ID: MBLCS
Inj Date : 21-JUN-2011 13:33
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463066X2
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 01-Jun-2012 10:59 kburns Quant Type: AREA%
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 24 QC Sample: LCS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.217	11	10	0.917	0.00		
0.270	138003	103505	0.750	0.02		
0.293	71228	106567	1.496	0.01		
0.323	353471062	91709523	0.259	60.83		
0.380	213190346	62103171	0.291	37.27		
0.900	749	396	0.529	0.00		
0.967	2812	1283	0.456	0.00		
1.020	431	227	0.526	0.00		
1.535	1027985	1232673	1.199	0.17	S	35 TPH (C08-C16)
1.975	1903308	2110186	1.109	0.33	S	2 Diesel Range Organi
1.090	263	145	0.552			
1.127	1894	1299	0.686			
1.170	285	370	1.299			
1.193	2309	2644	1.145			
1.213	698	961	1.377			
1.230	2701	1665	0.616			
1.280	2848	3724	1.308			
1.300	4434	7576	1.708			
1.317	11764	18844	1.602			
1.350	2723	2721	0.999			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.367	8298	8257	0.995			
1.390	1896	2294	1.210			
1.417	2535	2500	0.986			
1.433	7889	6519	0.826			
1.483	27128	22058	0.813			
2.180	113767	208564	1.833	0.01	$	28 o-Terphenyl (S)
2.200	1825643	2028609	1.111	0.31	S	1 TPH - Diesel (C10-C
1.510	5869	8741	1.489			
1.527	26090	43844	1.681			
1.567	24218	14777	0.610			
1.603	30022	22967	0.765			
1.643	55716	35250	0.633			
1.693	22375	23512	1.051			
1.707	17627	29906	1.697			
1.720	10453	20394	1.951			
1.733	22567	42376	1.878			
1.743	28220	35370	1.253			
1.763	13930	19964	1.433			
1.787	41652	34166	0.820			
1.807	79469	70784	0.891			
1.843	33266	40006	1.203			
1.860	26789	43428	1.621			
1.873	56841	72731	1.280			
1.893	17183	29762	1.732			
1.913	61235	60970	0.996			
1.937	151162	310279	2.053			
1.977	80436	41729	0.519			
1.993	76819	92292	1.201			
2.020	68382	57848	0.846			
2.050	135498	187392	1.383			
2.073	47111	40376	0.857			
2.097	54630	70864	1.297			
2.110	97675	141814	1.452			
2.147	109324	72511	0.663			
2.197	76014	52803	0.695			
2.237	26639	23670	0.889			
2.247	58594	38495	0.657			
2.297	31456	22726	0.722			
2.330	12312	11582	0.941			
2.353	14661	13718	0.936			
2.373	11248	15991	1.422			
2.390	10347	12131	1.172			
2.410	9847	7275	0.739			
2.447	17487	23589	1.349			
2.480	7623	4770	0.626			
2.503	4421	3038	0.687			
2.537	4358	3302	0.758			
2.557	2780	2558	0.920			
2.587	4017	3124	0.778			
2.610	3568	2378	0.667			
2.637	2078	2108	1.015			
2.650	5189	2270	0.437			
2.697	1810	1824	1.008			
2.723	5451	2481	0.455			
2.757	2633	2311	0.878			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.780	5105	2738	0.536			
2.820	108377	107716	0.994			
2.887	5071	1958	0.386			
2.435	1100960	1069382	0.971	0.19	S	38 TPH (C16-C28)
4.875	4959916	3103476	0.626	0.86	S	7 TPH (C08-C40)
2.943	4790	2341	0.489			
2.987	13233	6872	0.519			
3.043	27508	18216	0.662			
3.117	11539	3394	0.294			
3.190	4843	2131	0.440			
3.230	9903	2350	0.237			
3.340	6228	2378	0.382			
3.393	27098	10470	0.386			
3.537	2245516	756395	0.337			
3.677	15013	4746	0.316			
3.760	58784	19090	0.325			
3.853	34315	10750	0.313			
3.937	4005	2988	0.746			
4.010	218965	69756	0.319			
4.157	1623	1363	0.840			
4.177	1060	1329	1.254			
4.233	13569	3509	0.259			
4.287	6545	2093	0.320			
4.390	43934	10889	0.248			
4.483	5393	1471	0.273			
4.600	3861	1223	0.317			
4.663	9925	2181	0.220			
4.787	31811	9635	0.303			
4.877	140750	27211	0.193			
4.990	7834	2096	0.268			
5.103	778	657	0.845			
5.127	1502	698	0.465			
5.213	7152	1189	0.166			
5.327	3864	1287	0.333			
5.343	1547	1293	0.836			
5.457	28752	3667	0.128			
5.743	1946	389	0.200			
5.777	531	389	0.732			
5.873	5155	814	0.158			
6.047	14377	2414	0.168			
6.143	42522	5394	0.127			
6.473	23	20	0.862			
6.643	49	18	0.370			
6.840	80	37	0.461			
6.870	132	60	0.455			
6.920	152	87	0.574			
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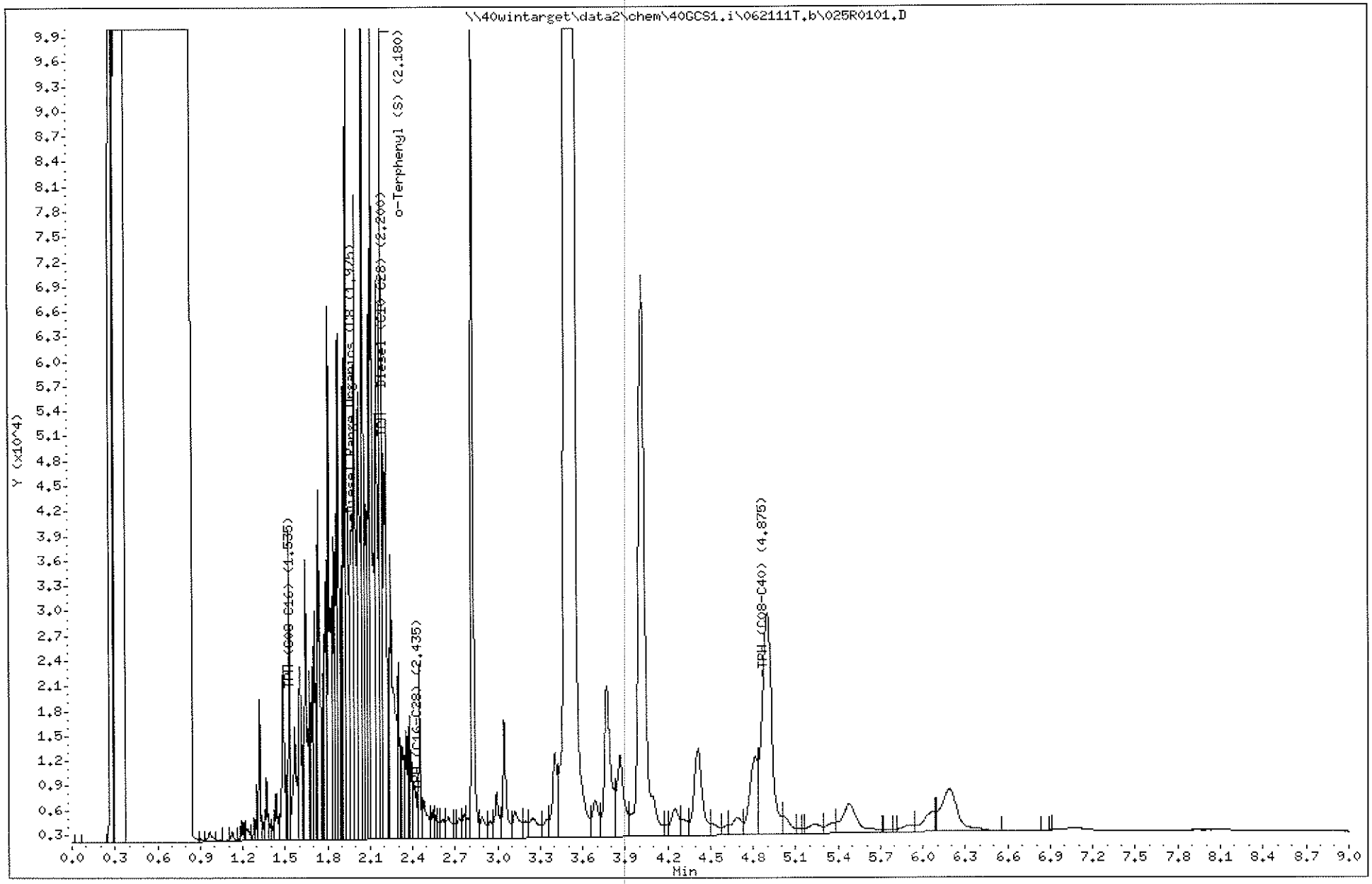
Total unknown % area = 98.13

Data File: \\40wintarget\data2\chem\40GCS1.i\062111T.b\025R0101.D
Date : 21-JUN-2011 13:43
Client ID: MBLCSD
Sample Info: 463067X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\025R0101.D
Lab Smp Id: 463067 Client Smp ID: MBLCSD
Inj Date : 21-JUN-2011 13:43
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463067X2
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 01-Jun-2012 10:59 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 25 QC Sample: LCSD
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-8.699			4708027	1237.43	164.99
S 35 TPH (C08-C16)	1.050-2.020			882053	169.454	22.59
S 38 TPH (C16-C28)	1.970-2.900			1032784	211.529	28.20
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			1771990	417.869	55.71
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1704118	398.924	53.18
$ 28 o-Terphenyl (S)	2.180	2.180	0.000	107540	21.1780	1.41(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062111T.b\025R0101.D
Lab Smp Id: 463067 Client Smp ID: MBLCSD
Inj Date : 21-JUN-2011 13:43
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463067X2
Misc Info : 5983
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062111T.b\TPH.m
Meth Date : 01-Jun-2012 10:59 kburns Quant Type: AREA%
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 25 QC Sample: LCSD
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	17	13	0.765	0.00		
0.273	166493	126178	0.758	0.02		
0.293	86870	126609	1.457	0.01		
0.323	364293107	90358665	0.248	62.61		
0.383	204302004	60722216	0.297	35.61		
0.900	535	310	0.579	0.00		
0.967	2128	1057	0.497	0.00		
1.023	304	162	0.533	0.00		
1.535	882054	1100913	1.248	0.15	S	35 TPH (C08-C16)
1.975	1771991	1974655	1.114	0.30	S	2 Diesel Range Organi
1.087	108	69	0.638			
1.127	1329	1027	0.773			
1.170	157	221	1.405			
1.193	1876	2357	1.257			
1.213	558	783	1.402			
1.230	2273	1409	0.620			
1.280	2167	2745	1.267			
1.300	3906	6811	1.744			
1.317	10603	16993	1.603			
1.350	2337	2354	1.007			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.367	7400	7534	1.018			
1.390	1816	1973	1.087			
1.420	1925	2142	1.113			
1.433	6926	5627	0.812			
1.483	24491	21007	0.858			
2.180	107540	222309	2.067	0.01	$	28 o-Terphenyl (S)
2.200	1704119	1901603	1.116	0.29	S	1 TPH - Diesel (C10-C
1.510	5245	7884	1.503			
1.527	23969	37104	1.548			
1.567	21830	13563	0.621			
1.600	27633	20625	0.746			
1.630	6506	13902	2.137			
1.643	34400	33689	0.979			
1.673	12174	20368	1.673			
1.693	18417	20857	1.133			
1.707	16338	27571	1.688			
1.720	12075	18910	1.566			
1.733	44254	41933	0.948			
1.767	12528	18667	1.490			
1.777	13573	24683	1.819			
1.790	24867	33652	1.353			
1.807	73921	64168	0.868			
1.843	30690	36355	1.185			
1.860	25082	39151	1.561			
1.877	52856	60813	1.151			
1.897	15973	27421	1.717			
1.907	19343	36025	1.862			
1.917	43729	57894	1.324			
1.937	135932	256093	1.884			
1.977	70274	39188	0.558			
1.993	72573	77345	1.066			
2.023	64819	53732	0.829			
2.050	125250	170005	1.357			
2.077	38118	40359	1.059			
2.100	57866	71018	1.227			
2.113	112222	131585	1.173			
2.150	84141	67181	0.798			
2.200	75547	46428	0.615			
2.237	20787	22271	1.071			
2.247	61495	34199	0.556			
2.300	17824	21236	1.191			
2.320	8472	11256	1.329			
2.333	9882	10973	1.110			
2.353	14020	13025	0.929			
2.377	10423	14810	1.421			
2.393	9537	10672	1.119			
2.413	10408	6949	0.668			
2.447	16234	21001	1.294			
2.480	10848	4577	0.422			
2.540	4761	3425	0.719			
2.560	2865	2777	0.969			
2.580	2413	2054	0.851			
2.613	4272	2356	0.551			
2.653	7869	2628	0.334			
2.700	1768	1774	1.003			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.727	4627	2503	0.541			
2.760	4875	2923	0.600			
2.790	3315	2418	0.729			
2.823	99380	97075	0.977			
2.890	5902	2532	0.429			
2.435	1032784	990275	0.959	0.18	S	38 TPH (C16-C28)
4.875	4708027	2943183	0.625	0.82	S	7 TPH (C08-C40)
2.947	4390	2073	0.472			
2.990	11243	5586	0.497			
3.047	22886	14268	0.623			
3.123	11371	3221	0.283			
3.197	4188	1986	0.474			
3.250	11079	2361	0.213			
3.350	5872	2249	0.383			
3.403	25004	10184	0.407			
3.547	2161969	748649	0.346			
3.690	14114	4369	0.310			
3.770	56306	18110	0.322			
3.863	33143	9789	0.295			
4.020	213469	67328	0.315			
4.190	2273	1273	0.560			
4.250	12414	3180	0.256			
4.300	6254	1964	0.314			
4.413	42915	10438	0.243			
4.513	5019	1407	0.280			
4.623	3428	1160	0.338			
4.687	9944	2019	0.203			
4.813	33982	9311	0.274			
4.900	131355	26553	0.202			
5.017	7570	2085	0.275			
5.137	1388	653	0.470			
5.157	639	641	1.003			
5.230	7176	1118	0.156			
5.380	5686	1284	0.226			
5.480	27628	3506	0.127			
5.713	189	309	1.632			
5.770	1314	366	0.278			
5.813	735	371	0.505			
5.903	4565	777	0.170			
6.070	12950	2375	0.183			
6.090	1397	2334	1.671			
6.187	42060	5119	0.122			
6.887	61	43	0.701			
6.903	58	69	1.196			
	573667026	154500702		100.000		

Total unknown % area = 98.25

PROJECT H0GCS1 6/13/11 B

Notebook No. 3111
Continued From Page —

13 Jun 11 03:38 PM
Sequence: C:\HPCHEM\1\SEQUENCE\061311B.SEQ

page 1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	2000 2860-31-01					TPHMACHB	1
1	5	1000 2860-31-02					TPHMACHB	1
1	6	500 2860-31-14					TPHMACHB	1
1	7	250 2860-30-13					TPHMACHB	1
1	8	100 2860-30-14					TPHMACHB	1
1	9	50 2860-30-15					TPHMACHB	1
1	10	IC2860-30-16					TPHMACHB	1
REAR								
1								

KHB 6/16/11

KHB 6/16/11

Continued on Page —

Read and Understood By

Kris H Burns — Signed — 6/16/11 — Date

[signature] — Signed — 6/16/11 — Date

21 Jun 11 01:30 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\062111.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	CC500 2860-31-14-DK				TPHMACHB	1
1	5	463066RSX2				TPHMACHB	1
1	6	463065				TPHMACHB	1
1	7	463067RSX2				TPHMACHB	1
1	8	4046737001				TPHMACHB	1
1	9	4046737002				TPHMACHB	1
1	10	4046737003				TPHMACHB	1
1	11	4046737004				TPHMACHB	1
1	12	4046737005				TPHMACHB	1
1	13	4046737006				TPHMACHB	1
1	14	4046737007				TPHMACHB	1
1	15	4046737008				TPHMACHB	1
1	16	4046737009				TPHMACHB	1
1	17	4046737010				TPHMACHB	1
1	18	4046737011				TPHMACHB	1
1	19	4046737012				TPHMACHB	1
1	20	BLANK				TPHMACHB	1
1	21	BLANK				TPHMACHB	1
1	22	BLANK				TPHMACHB	1
1	23	CC500 2860-31-14-DK				TPHMACHB	1
1	24	463066X2				TPHMACHB	1
1	25	463067X2				TPHMACHB	1
1	26	BLANK				TPHMACHB	1
1	27	BLANK				TPHMACHB	1
1	28	CC500 2860-31-14-DK				TPHMACHB	1
REAR							
1							

KHB 6/22/11

TPH-B
GC8V #5983
HGN #73958

40TPH BIOTA.SUB

KHB 6/22/11

Continued on Page —

Read and Understood By

Kathleen H. Burns 6/22/11
Signed Date

Glen A. Cole 6/22/11
Signed Date

Pace Analytical

Logbook #: 3064

BIOTA EXTRACTION METHOD: SW-846 3541

ANALYTICAL METHOD: SW-846 8081A or 8082

Project: URS

Analysis: TPH-B

Extraction Batch ID: 11356 HBN:73846

~~SDG~~: GCSV: 5983 HBN:73958

Weighed by: BLM

Spiked by: ↓

Extracted by: ↓

Reviewed by:

Date: 6-14-11 Balance ID: 40 BALD

Date: — Witnessed by: —

Date: ↓ Soxtherms On: 10:30

Date: 6-15-11 Soxtherms Off: 12:30

Sample Number	QC	Weight (g)	Surrogate Amt. (µL)	Spike 1 Amt. (µL)	Spike 2 Amt. (µL)	Initial Concentration Date & Solvent CH_2Cl_2	Effective Final Volume (mL)	GPC Cleanup 3640A Volume (Y / N)	Florisil Cleanup 3620B Volume (Y / N)	Silica Gel Cleanup 3630C Volume (Y / N)	Acid Cleanup 3665A Volume (Y / N)	Final Concentration Date & Solvent CH_2Cl_2	Volume Delivered (mL)
4630665	MB	15.0	500	—	⊥	6-14-11	1.0		2 ml			6-15-11	0.5
4630666	LCS	↓	↓	1000	⊥	↓	↓	↓	↓	↓	↓	↓	↓
4630667	LCSD	↓	↓	1000	⊥	↓	↓	↓	↓	↓	↓	↓	↓
40446737-001	⊥	3.87	↓	↓	⊥	↓	↓	↓	↓	↓	↓	↓	↓
-002		11.24											
-003		5.21											
-004		3.48											
-005		3.26											
-006		7.72											
-007		7.50											
-008		3.46											
-009		3.31											
-010		4.62											
-011		4.67											
-012	⊥	2.89	↓	⊥	⊥	↓	↓	↓	↓	↓	↓	↓	↓

6-15-11 BLM

Na_2SO_4 Lot No.: 2056-30-01

Extraction Solvent: CH_2Cl_2

Surrogate: Octaphenyl @ 100 ppm

Logbook/Page 2860-16-07

Spike 1: TPH @ 1000 ppm

Logbook/Page 2860-29-15

Spike 2: —

Logbook/Page —

MeCl2 Lot No.: 8423

Hexane Lot No.: —

Pet. Ether Lot No.: —

GPC Date/Initials: —

GPC Validation Date: —

Florisil Date/Initials: 6-15-11 BLM

Florisil Lot No.: 105390

Silica Gel Date/Initials:

Silica Gel Batch No.:

Acid Date/Initials:

Acid Lot No.:

Lipids Batch ID: 11359

Dry Weight Batch ID: —

Prep WS# 11356

Conc Temp #1 98.5°

Conc Temp #2 98.5°

Conc Temp #3 —

Comments:

Pace Analytical Services

LIPID

Instrument ID: 40BALC

Analyst: JLH

11359

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
463175		0.9412	0.9604	15.0000	4.0000	1.0000	0.5120	06/15/2011 06:32:22		
4046737001		0.9428	0.9468	3.8700	4.0000	1.0000	0.4134	06/15/2011 06:32:29		
4046737002		0.9418	0.9440	11.2400	4.0000	1.0000	0.0783	06/15/2011 06:32:36		
4046737003		0.9466	0.9518	5.2100	4.0000	1.0000	0.3992	06/15/2011 06:32:43		
4046737004		0.9449	0.9471	3.4800	4.0000	1.0000	0.2529	06/15/2011 06:32:49		
4046737005		0.9446	0.9458	3.2600	4.0000	1.0000	0.1472	06/15/2011 06:32:57		
4046737006		0.9476	0.9508	7.7200	4.0000	1.0000	0.1658	06/15/2011 06:33:04		
4046737007		0.9492	0.9540	7.5000	4.0000	1.0000	0.2560	06/15/2011 06:33:10		
4046737008		0.9450	0.9463	3.4600	4.0000	1.0000	0.1503	06/15/2011 06:33:17		
4046737009		0.9468	0.9521	3.3100	4.0000	1.0000	0.6405	06/15/2011 06:33:23		
4046737010		0.9467	0.9494	4.0200	4.0000	1.0000	0.2687	06/15/2011 06:33:30		
4046737011		0.9454	0.9482	4.6700	4.0000	1.0000	0.2398	06/15/2011 06:33:37		
4046737012		0.9435	0.9492	2.8900	4.0000	1.0000	0.7889	06/15/2011 06:33:43		

✓GC
6/16/11

9/28/10
2860-16-01 500ul of 4000ppm SVIS(2713-90D) diluted to 1.0ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/23/11

9/30/10
2860-16-02 500ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 ChzClz changed at 13:50 to lot 2712-62 VMR

10/4/10
2860-16-03 500ul of 4000ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/30/11

10/6/10
2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 10.0ml CH_2Cl_2 20ppm WYPAH IS RON 10/6/10 Ex 10/6/11

10/06/10
2860-16-05 500ul of 4000ppm SVIS (2713-90G) diluted to 1.0ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 10/6/11

10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w Nanopure H_2O SH I 50 ppm
2860-16-07 2500ul of 10,000mg/L Oterphenyl (2713-86) diluted to 250ml with ChzClz (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\0338O101.D 88% Good DR 10/12/10

* 10/8/10 ChzClz changed at 11:30 to lot 2712-64 VMR

10/8/10
2860-16-08 500ul of 4000 ppm SVIS (2713-90H) diluted to 1.0ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10
2860-16-09 5000ul of 5000ug/ml B/N Surr (2713-51C) + 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml Ch_2Cl_2 (2712-64) = 75/50ug/ml ~~B/N~~ Surr. 8270
SKW Ran on Inst. by SKW MSS1 File # 1012T008

10/13/10
2860-16-10 500ul of 4000 ppm SVIS (2713-90I) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 10/11/11

2860-16-11 ~~20~~ 40ul of 5000ppm N-NDPA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm MDL STD Ex 7/3/11 RON 10/13/10 (RON 10/14/10)

~~10/18/10 500~~ ARO 10/18/10

Continued on Page

Read and Understood By

[signature] 10/18/10 Valerie M Ringquin 10/18/2010
Signed Date Signed Date

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH_2Cl_2 2000ppm S-PAH IS Exp 11/22/11 RM 11/24
* 11/29/10 CH_2Cl_2 Changed at 8:00 to lot 2712-73 VMR
11/30/10
2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11
2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk
2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/1
2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d
12/1/2010
2860-22-06 1ml of 50,000 ug/ml #2 diesel (2713-45C) + 1ml of 50,000 ug/ml #2 die (2713-45A) diluted to 100ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/ VMR Ran on inst by DAL file # 40ssSL.i\120210T.b\010R0101.D 88.8
12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Acetone/ 5
" " -08 25uls of 2860-10-11 " " " " 500 ppm
12/03/10
2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12
12/6/10
2860-22-10 50ul of 4000ppm SVIS (2945-06C) up to 10.0ml CH_2Cl_2 200ppm W PAH IS Ex 12/31/11 RM 12/
2860-22-11 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11
12/7/10
2860-22-12 400ul of 16,000 ppm EPA 610 (2713-42A) diluted to 2.0 ml wit CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date
Signed — 12/22/10 — Date

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MeOH spike) → 1.0 mL [Final] = 500 ng/mL GC 7-19-11 DR

2/24/11 changed CH_2Cl_2 @ 10:00AM to New Lot (2712-085) KAA

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVI (2945-03C KAA) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SVI KAA Exp 8/25/11 KAA
Raman instr by RJN file # 10mss4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RAW 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) upto 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RAW 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100 ul of 5000ppm B/N SS (2945-20A) upto 10.0mls CH_2Cl_2 50ppm PAH Ex 7/13/11 RAW 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) upto 1.0ml CH_2Cl_2 25ppm PAH CAL Ex 7/13/11 RAW 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 67ul of 150ppm B/N SS (2860-27-01) upto 1.0ml CH_2Cl_2 10ppm PAH 2nd Source Ex 9/2/11 RAW 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - RAW exp 2/28/12

3/3/2011

2860-29-15 2500ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Raman inst by ~~DAT~~ file # GC (VMR) Exp 3/3/2012 VMR

Z VMR 3/3/2011 OK to use per GC Raman inst 3/8/11 VMR

Continued on Page

→ 406CSF.i / 0307116.6 - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Valerie M Renquin 3/3/2011 Signed Date

Signed Date 3/7/11

3-4-11

2860-30-01 50 mL of 2380-100-01 (TPH @ 20000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5-6-11 DAT
TPH ICAL

2860-30-02 500 mL of 2713-490 (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3-4-12 DAT

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 mL = 500 ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ Use only 1.0 mL of 2860-30-02 2713-990
All Standards + 5 mL ~~2945-135~~ (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All Standard Exp 2-22-12 DAT

TPH ICV

2860-30-08 10 mL of ~~2945-23A~~ 2713-990 (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2945-135 (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2-22-12 DAT

2860-30-09 25 uL of 2860-10-11 diluted to 1.0 mL w 50/50 H_2O/MeOH JHI

3-7-11

2860-30-10 1.0 mL of 2860-30-02 + 5 mL 2713-990 (o-terp @ 10,000 ug/mL) = 2000 ug/mL 50 ug/mL
2860-30-11 500 mL of → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 mL = 500 ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3-11~~ DAT 5-6-11 GC

2860-30-16 10 mL of 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3-4-11~~ DAT 3/4/12 GC

DAT 3-7-11

Continued on Page

Read and Understood By

Signed 3-7-11 Date — Signed Valerie M Renquin 3/24/11 Date

3.7.11

2860-31-01 100 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DRZ

2860-31-02 50 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DRZ

2860-31-03 25 uL of 2860-10-19 diluted to 1.0 mL w 50/50 MeOH/H_2O SHI 500 ppm ✓

2860-31-04 300 uL of 4000 ppm SVIS (2945-17I) diluted to
1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 u/s of 2860-10-11 diluted to 10.0 mL w 50/50 MeOH H_2O SHI 1000 ppm
-06 25 uL of 2860-31-05 diluted to 1.0 mL w 25 ppm STD
-07 100 100
-08 250 250
-09 500 500
-10 750 750
SHI

3.14.11

2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm Exp 12/1/11 DRZ

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL Exp 1-10-12 DRZ

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) upto 1.0 mL CH_2Cl_2 2000 ppm 4 PAH-S-IS Exp 3/15/12 RM 3/16/11

3/17/11 TPH CCV

2860-31-14 100 uL of 2945-233 (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-990 (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL Exp 3.4.12 DRZ

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Signed Valerie M Ringuin Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046750

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: FISH
Pace Project No.: 4046750

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4046750001	EWL TR-01-F-COMPOSITE	Tissue	12/15/10 11:26	06/07/11 10:00
4046750002	EWL BAIT-F-COMPOSITE	Tissue	12/14/10 00:00	06/07/11 10:00
4046750003	EWL TR-02-F-COMPOSITE	Tissue	12/21/10 13:15	06/07/11 10:00
4046750004	EWL TR-03-F-COMPOSITE	Tissue	12/21/10 14:00	06/07/11 10:00
4046750005	EWL TR-04-F-COMPOSITE	Tissue	12/21/10 14:20	06/07/11 10:00
4046750006	EWL TR-04A-F-COMPOSITE	Tissue	12/21/10 14:20	06/07/11 10:00
4046750007	EWL TR-05-F-COMPOSITE	Tissue	01/04/11 09:30	06/07/11 10:00
4046750008	EWL TR-06-F-COMPOSITE	Tissue	01/04/11 09:45	06/07/11 10:00
4046750009	EWL TR-07-F-COMPOSITE	Tissue	01/04/11 10:50	06/07/11 10:00
4046750010	EWL TR-08-F-COMPOSITE	Tissue	01/04/11 10:05	06/07/11 10:00
4046750011	EWL TR-09-F-COMPOSITE	Tissue	01/04/11 10:28	06/07/11 10:00
4046750012	EWL T-01-F-COMPOSITE	Tissue	01/05/11 12:30	06/07/11 10:00
4046750013	EWL T-03-F-COMPOSITE	Tissue	01/05/11 13:30	06/07/11 10:00
4046750014	EWL T-04-F-COMPOSITE	Tissue	01/05/11 13:40	06/07/11 10:00
4046750015	EWL T-06-F-COMPOSITE	Tissue	01/05/11 13:50	06/07/11 10:00
4046750016	EWL T-07-F-COMPOSITE	Tissue	01/05/11 15:10	06/07/11 10:00
4046750017	EWL T-08-F-COMPOSITE	Tissue	01/05/11 15:05	06/07/11 10:00
4046750018	EWL T-09-F-COMPOSITE	Tissue	01/05/11 14:55	06/07/11 10:00
4046750019	EWL T-10-F-COMPOSITE	Tissue	01/05/11 13:55	06/07/11 10:00
4046750020	EWL T-11-F-COMPOSITE	Tissue	01/05/11 14:05	06/07/11 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4046750
Client: URS CORPORATION
Project Name: EAST WHITE LAKE
Project Number: K1013947

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. The blank result was reported with the "2q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. Surrogate recoveries for samples EWL TR-04-F-COMPOSITE and EWL TR-09-F-COMPOSITE were below control criteria with no sample mass available for re-extraction were reported with the "3q" data qualifier. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house precision criteria were met for TPH (C10-C28). All in-house accuracy criteria were not met for TPH (C10-C28) and samples reported with the "L2" data qualifier. The recoveries of TPH (C08-C16), TPH (C8-C28) and TPH (C16-C28) were below control criteria in the LCS/LCSD; the "L0" data qualifier applied to the summary. The recovery of TPH (C08-C40) was above control criteria in the LCS and LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" data qualifier. The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** All samples, except EWL BAIT-F-COMPOSITE, EWL TR-04-F-COMPOSITE and EWL TR-09-F-COMPOSITE were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 05/15/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: FISH
Pace Project No.: 4046750

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4046750001	EWL TR-01-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750002	EWL BAIT-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750003	EWL TR-02-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750004	EWL TR-03-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750005	EWL TR-04-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750006	EWL TR-04A-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750007	EWL TR-05-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750008	EWL TR-06-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750009	EWL TR-07-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750010	EWL TR-08-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750011	EWL TR-09-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750012	EWL T-01-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750013	EWL T-03-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750014	EWL T-04-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750015	EWL T-06-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750016	EWL T-07-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750017	EWL T-08-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750018	EWL T-09-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046750019	EWL T-10-F-COMPOSITE	EPA 8015B Modified	KHB	6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: FISH
Pace Project No.: 4046750

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		Pace Lipid	BLM	1
4046750020	EWL T-11-F-COMPOSITE	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: FISH
Pace Project No.: 4046750

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6202

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
[1]	Method Blank, LCS and LCSD were diluted and reported due to C8-C40 being over the calibration range due to lipid interference.
[2]	The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.
[3]	Re-extraction or re-analysis could not be performed due to insufficient sample amount.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34.
2q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
3q	Surrogate recovery outside laboratory control limits. Insufficient sample volume to re-extract.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: FISH
Pace Project No.: 4046750

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

425/2207 /21102022/1-3H1

4046750

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1013947
Project Manager: Lynda ~~Huckestein~~ Lowe David Lingle/URS

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None TPH	
K1013947-001	EWL TR-01-F-COMPOSITE	1	Animal Tissue	12/15/10	1126	Gulf Coast Analytica	✓	1 • 001
K1013947-002	EWL Bait-F-COMPOSITE	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	✓	2 • 002
K1013947-003	EWL TR-02-F-COMPOSITE	1	Animal Tissue	12/21/10	1315	Gulf Coast Analytica	✓	3 • 003
K1013947-004	EWL TR-03-F-COMPOSITE	1	Animal Tissue	12/21/10	1400	Gulf Coast Analytica	✓	4 • 004
K1013947-005	EWL TR-04-F-COMPOSITE	1	Animal Tissue	12/21/10	1420	Gulf Coast Analytica	✓	5 • 005
K1013947-006	EWL TR-04A-F-COMPOSITE	1	Animal Tissue	12/21/10	1420	Gulf Coast Analytica	✓	6 • 006
K1013947-009	EWL TR-05-F-COMPOSITE	1	Animal Tissue	1/4/11	0930	Gulf Coast Analytica	✓	7 • 007
K1013947-010	EWL TR-06-F-COMPOSITE	1	Animal Tissue	1/4/11	0945	Gulf Coast Analytica	✓	8 • 008
K1013947-011	EWL TR-07-F-COMPOSITE	1	Animal Tissue	1/4/11	1050	Gulf Coast Analytica	✓	9 • 009
K1013947-012	EWL TR-08-F-COMPOSITE	1	Animal Tissue	1/4/11	1005	Gulf Coast Analytica	✓	10 • 010
K1013947-013	EWL TR-09-F-COMPOSITE	1	Animal Tissue	1/4/11	1028	Gulf Coast Analytica	✓	11 • 011
K1013947-014	EWL T-01-F-COMPOSITE	1	Animal Tissue	1/5/11	1230	Gulf Coast Analytica	✓	12 • 012

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com Cas

East White Lake Fish Tissue
Homogenized at CAS/Kelso.

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

____ **STANDARD**

Requested FAX Date: _____

Requested Report Date: 02/03/11

Report Requirements

____ I. Results Only

____ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y
EDD N

Invoice Information

PO# K1013947

Bill to

Relinquished By: [signature] CAS 1/19/11 1200
Friday 6/7/11 10:00

Received By: [signature] 1-20-11 1030 2.0°C
UPS 1-20-11 1030

Airbill Number: Rel By: Bjm 6/6/11 1500
[signature] 6/7/11 10:00

4046750

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1013947
Project Manager: ~~Lynda Huckestein~~ David Lingle

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1013947-016	EWL T-03-F-COMPOSITE	1	Animal Tissue	1/5/11	1330	Gulf Coast Analytica	✓	13 • 013
K1013947-017	EWL T-04-F-COMPOSITE	1	Animal Tissue	1/5/11	1340	Gulf Coast Analytica	✓	14 • 014
K1013947-019	EWL T-06-F-COMPOSITE	1	Animal Tissue	1/5/11	1350	Gulf Coast Analytica	✓	15 • 015
K1013947-020	EWL T-07-F-COMPOSITE	1	Animal Tissue	1/5/11	1510	Gulf Coast Analytica	✓	16 • 016
K1013947-021	EWL T-08-F-COMPOSITE	1	Animal Tissue	1/5/11	1505	Gulf Coast Analytica	✓	17 • 017
K1013947-022	EWL T-09-F-COMPOSITE	1	Animal Tissue	1/5/11	1455	Gulf Coast Analytica	✓	18 • 018
K1013947-023	EWL T-10-F-COMPOSITE	1	Animal Tissue	1/5/11	1355	Gulf Coast Analytica	✓	19 • 019
K1013947-024	EWL T-11-F-COMPOSITE	1	Animal Tissue	1/5/11	1405	Gulf Coast Analytica	✓	20 • 020
K1013947-025	EWL T-12-F-COMPOSITE	1	Animal Tissue	1/5/11	1445	Gulf Coast Analytica	✓	21 •
K1013947-026	EWL T-02-F-COMPOSITE	Ø	Animal Tissue	1/5/11	1230	Gulf Coast Analytica	= 1/19/11	
K1013947-027	EWL T-05-F-COMPOSITE	Ø	Animal Tissue	1/5/11	1320	Gulf Coast Analytica	= 1/19/11	

Test Comments

Special Instructions/~~Comments~~
Please provide the ~~electronic~~ (PDF and EDD) report to the following e-mail address:
kelso_data@~~cas~~lab.com

East White Lake Fish Tissue
Homogenized @ CAS/Kelso.

Turnaround Requirements
____ RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ STANDARD
Requested FAX Date: ________
Requested Report Date: 02/03/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1013947
Bill to

Relinquished By: [signature] CAS 1/19/11 1200 — FedEx 6/7/11 10:00
Received By: [signature] 1-20-11 1030 — 1-20-11 1030 A. Bilen... - PACO 6/7/11 10:00
Airbill Number: Rel By: BGM 6/6/11 1505

Pag

4046750

GCAL

SAMPLE RECEIVING CHECKLIST

Workorder: 211012022

Client: URS Corporation

Received by: Raborn, Michelle

Received Date/Time: 1/20/2011 10:30:00 AM

Samples Received via: UPS

Number of Coolers Received: 1

Cooler tracking numbers(s): 1Z973G590164048255

Cooler temperature(s): 2.0°C samples on dry ice

Were all coolers received at a temperature of 0 - 6° C?	☐ Yes	☑ No	☐ N/A
Were all custody seals intact?	☑ Yes	☐ No	☐ N/A
Were all samples recevied in proper containers?	☑ Yes	☐ No	☐ N/A
Were all samples properly preserved?	☑ Yes	☐ No	☐ N/A
Was preservative added to any container at the lab?	☐ Yes	☑ No	☐ N/A
Were all containers received in good condition?	☑ Yes	☐ No	☐ N/A
Were all VOA vials received with no head space?	☐ Yes	☐ No	☑ N/A
Do all sample labels match the Chain of Custody?	☑ Yes	☐ No	☐ N/A
Was the client notified about any discrepancies?	☐ Yes	☐ No	☐ N/A

Notes/Comments:

Columbia Analytical Services, Inc.

Service Request Number(s): **K1013947**
Analysis for: Clemson

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1013947-001		5.116		79.042		Fish
K1013947-002		5.050		79.194		Bait
K1013947-003		5.383		79.217		Fish
K1013947-004		5.052		79.703		Fish
K1013947-005		5.017		79.358		Fish
K1013947-006		5.562		79.298		Fish
K1013947-009		5.489		78.312		Fish
K1013947-010		5.487		79.963		Fish
K1013947-011		5.002		78.929		Fish
K1013947-012		5.249	SC 1/19/11	~~2~~ 79.415		Fish
K1013947-013		5.271		78.427		Fish
K1013947-014		5.251		79.210		Fish
K1013947-016		5.209		79.012		Fish
K1013947-017		5.668		79.478		Fish
K1013947-019		5.179		78.933		Fish
K1013947-020		5.298		79.401		Fish
K1013947-021		5.159		79.157		Fish
K1013947-022		5.034		78.367		Fish
K1013947-023		5.157		79.587		Fish
K1013947-024		5.047		78.755		Fish
K1013947-025		5.103		79.600		Fish

Comments: Please weigh approximately 5 g into a 2 oz Jar

Balance ID: Z18 Date Balance Checked: 1/19/11

Analyst: SC Date: 1/19/11

Reviewed: Date:

R:\ICP\misc\digforms\K1013947

Columbia Analytical Services, Inc.

Service Request Number(s):	**K1013947**
Analysis for:	GCAL

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1013947-001		15.264		111.749		Fish
K1013947-002		15.464		111.646		Bait
K1013947-003		15.335		111.843		Fish
K1013947-004		15.062		111.731		Fish
K1013947-005		15.119		112.186		Fish
K1013947-006		15.102		111.799		Fish
K1013947-009		15.058		111.800		Fish
K1013947-010		15.399		112.159		Fish
K1013947-011		15.337		111.925		Fish
K1013947-012		15.023		112.200		Fish
K1013947-013		15.619		110.329		Fish
K1013947-014		15.203		111.998		Fish
K1013947-016		15.174		113.558		Fish
K1013947-017		15.325		111.811		Fish
K1013947-019		15.009		111.908		Fish
K1013947-020		15.316		111.744		Fish
K1013947-021		15.053		112.029		Fish
K1013947-022		15.205		111.472		Fish
K1013947-023		15.355		111.873		Fish
K1013947-024		15.181		114.037		Fish
K1013947-025		15.234		112.150		Fish

Comments: Please weigh approximately 15 g into a 4 oz Jar

Balance ID: 218 Date Balance Checked: 1/19/11

Analyst: Date: 1/19/11

Reviewed: Date:

R:\ICP\misc\digforms\K1013947

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: URS Project # 4046750

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used VB Type of Ice: Wet Blue (Dry) None ☐ Samples on ice, cooling process has begun

Cooler Temperature ≤0°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: VB 6/7/11
Initials: _____

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] (TA) **Date:** 6/8/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046750

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: FISH
Pace Project No.: 4046750

QB Batch: OEXT / 11869
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046750001		EWL TR-01-F-COMPOSITE	4	0	S4										
478711	BLANK		2	0	S4										
4046750002		EWL BAIT-F-COMPOSITE	1	67											
478712	LCS		3	0	S4										
4046750003		EWL TR-02-F-COMPOSITE	3	0	S4										
478713	LCSD		4	0	S4										
4046750004		EWL TR-03-F-COMPOSITE	5	0	S4										
4046750005		EWL TR-04-F-COMPOSITE	1	0											
4046750006		EWL TR-04A-F-COMPOSITE	4	0	S4										
4046750007		EWL TR-05-F-COMPOSITE	8	0	S4										
4046750008		EWL TR-06-F-COMPOSITE	4	0	S4										
4046750009		EWL TR-07-F-COMPOSITE	5	0	S4										
4046750010		EWL TR-08-F-COMPOSITE	5	0	S4										
4046750011		EWL TR-09-F-COMPOSITE	1	7	3q										
4046750012		EWL T-01-F-COMPOSITE	4	0	S4										
4046750013		EWL T-03-F-COMPOSITE	4	0	S4										
4046750014		EWL T-04-F-COMPOSITE	3	0	S4										
4046750015		EWL T-06-F-COMPOSITE	2	0	S4										
4046750016		EWL T-07-F-COMPOSITE	3	0	S4										
4046750017		EWL T-08-F-COMPOSITE	4	0	S4										
4046750018		EWL T-09-F-COMPOSITE	3	0	S4										
4046750019		EWL T-10-F-COMPOSITE	4	0	S4										
4046750020		EWL T-11-F-COMPOSITE	4	0	S4										
		QC Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: FISH
Pace Project No.: 4046750

QB Batch: OEXT/11869 **LCS Prepared:** 07/18/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/18/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	51	43	17	50-150	20	66.7	34.0	28.7	mg/kg	07/22/11	07/22/11		L0
TPH (C08-C16)	18	10		50-150	20	66.7	12.2J	<13.3	mg/kg	07/22/11	07/22/11	L0	L0
TPH (C08-C40)	282	327	15	50-150	20	66.7	188	218	mg/kg	07/22/11	07/22/11	1q	1q
TPH (C16-C28)	10	2		50-150	20	66.7	<10	<13.3	mg/kg	07/22/11	07/22/11	L0	L0
TPH - Diesel (C10-C28)	49	40	20	50-150	20	66.7	32.8	26.9	mg/kg	07/22/11	07/22/11	L0	L0

Type	Sample
LCS	478712
LCSD	478713

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FISH
Pace Project No.: 4046750

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046750001	EWL TR-01-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750002	EWL BAIT-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750003	EWL TR-02-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750004	EWL TR-03-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750005	EWL TR-04-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750006	EWL TR-04A-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750007	EWL TR-05-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750008	EWL TR-06-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750009	EWL TR-07-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750010	EWL TR-08-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750011	EWL TR-09-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750012	EWL T-01-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750013	EWL T-03-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750014	EWL T-04-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750015	EWL T-06-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750016	EWL T-07-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750017	EWL T-08-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750018	EWL T-09-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750019	EWL T-10-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750020	EWL T-11-F-COMPOSITE	EPA 3541	OEXT/11869	EPA 8015B Modified	GCSV/6202
4046750001	EWL TR-01-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750002	EWL BAIT-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750003	EWL TR-02-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750004	EWL TR-03-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750005	EWL TR-04-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750006	EWL TR-04A-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750007	EWL TR-05-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750008	EWL TR-06-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750009	EWL TR-07-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750010	EWL TR-08-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750011	EWL TR-09-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750012	EWL T-01-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750013	EWL T-03-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750014	EWL T-04-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750015	EWL T-06-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750016	EWL T-07-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750017	EWL T-08-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750018	EWL T-09-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750019	EWL T-10-F-COMPOSITE	Pace Lipid	OEXT/11876		
4046750020	EWL T-11-F-COMPOSITE	Pace Lipid	OEXT/11876		

REPORT OF LABORATORY ANALYSIS

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046750

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	RT	#
01		2000 2860-31	07/06/11	1106	2.18			
02		1000 2860-31	07/06/11	1116	2.18			
03		500 2860-31-	07/06/11	1128	2.18			
04		250 2860-30-	07/06/11	1141	2.18			
05		100 2860-30-	07/06/11	1153	2.18			
06		50 2860-30-1	07/06/11	1205	2.18			
07		IC500 2860-3	07/06/11	1217	2.18			
08		CC500 2860-3	07/21/11	0727	2.21*			
09	EWL BAIT-F-C	4046750002	07/21/11	0922	2.21*			
10	EWL TR-04-F-	4046750005	07/21/11	0958				
11	EWL TR-09-F-	4046750011	07/21/11	1110	2.19			
12		CC500 2860-3	07/21/11	1440				

QC LIMITS
(+/- 0.01 MINUTES)

S1 = o-Terphenyl (S)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046750

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	RT	#
01		CC500 2860-3	07/22/11	0750	2.21*			
02	MBLCS	478712	07/22/11	0844	2.21*			
03	MB	478711	07/22/11	0854	2.21*			
04	MBLCSD	478713	07/22/11	0910	2.21*			
05	EWL TR-01-F-	4046750001	07/22/11	0922	2.21*			
06	EWL TR-02-F-	4046750003	07/22/11	0934	2.21*			
07	EWL TR-03-F-	4046750004	07/22/11	0946	2.21*			
08	EWL TR-04A-F	4046750006	07/22/11	0958	2.21*			
09	EWL TR-05-F-	4046750007	07/22/11	1010	2.21*			
10	EWL TR-06-F-	4046750008	07/22/11	1022	2.21*			
11	EWL TR-07-F-	4046750009	07/22/11	1034	2.21*			
12	EWL TR-08-F-	4046750010	07/22/11	1046	2.21*			

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046750

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	EWL T-01-F-C	4046750012	07/22/11	1058	2.21*	
02	EWL T-03-F-C	4046750013	07/22/11	1110	2.21*	
03	EWL T-04-F-C	4046750014	07/22/11	1122	2.21*	
04	EWL T-06-F-C	4046750015	07/22/11	1134	2.21*	
05	EWL T-07-F-C	4046750016	07/22/11	1146	2.21*	
06	EWL T-08-F-C	4046750017	07/22/11	1158	2.21*	
07	EWL T-09-F-C	4046750018	07/22/11	1210	2.21*	
08	EWL T-10-F-C	4046750019	07/22/11	1222	2.21*	
09	EWL T-11-F-C	4046750020	07/22/11	1234	2.21*	
10		CC500 2860-3	07/22/11	1403	2.21*	
11						
12						

QC LIMITS

S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046750

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-01-F-COMPOSITE TX
Lab ID: 4046750001
Collected: 12/15/10 11:26
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<23.7**	mg/kg	47.4	23.7	4	07/18/11 12:00	07/22/11 09:22	
	TPH (C08-C16)	**<23.7**	mg/kg	47.4	23.7	4	07/18/11 12:00	07/22/11 09:22	
	TPH (C16-C28)	**<23.7**	mg/kg	47.4	23.7	4	07/18/11 12:00	07/22/11 09:22	
	TPH (C08-C40)	**513**	mg/kg	47.4	23.7	4	07/18/11 12:00	07/22/11 09:22	2q
	TPH - Diesel (C10-C28)	**<23.7**	mg/kg	47.4	23.7	4	07/18/11 12:00	07/22/11 09:22	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 09:22	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-01-F-COMPOSITE TX
Lab ID: 4046750001
Collected: 12/15/10 11:26
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**3.0**	%			1		07/19/11 11:14	

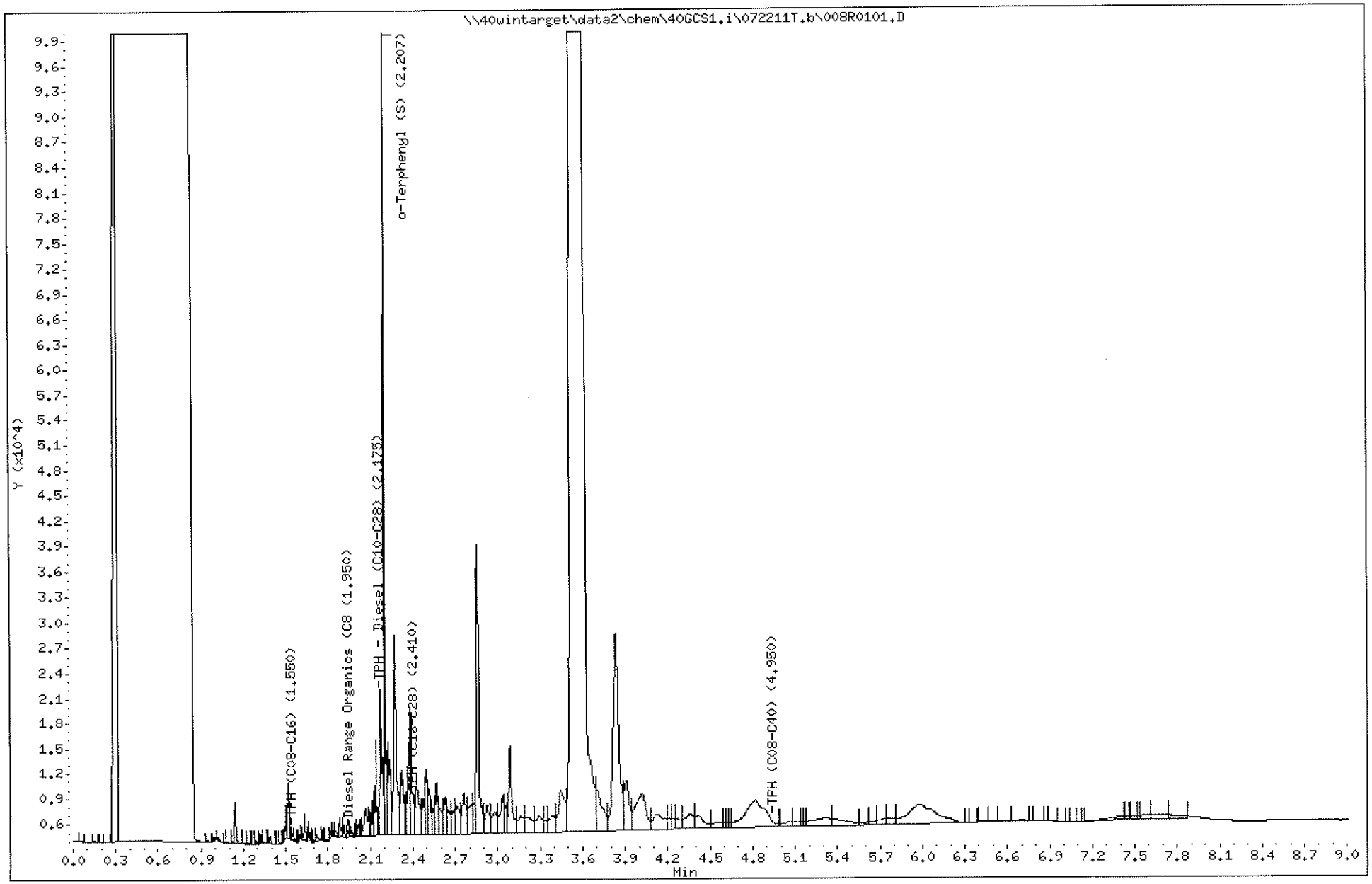
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\008R0101.D
Date : 22-JUL-2011 09:22
Client ID: EWL TR-01-F-COMPOSI
Sample Info: 4046750001X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\008R0101.D
Lab Smp Id: 4046750001 Client Smp ID: EWL TR-01-F-COMPOSI
Inj Date : 22-JUL-2011 09:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750001X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 8
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.439	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			4189738	1082.19	512.94
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	Compound Not Detected.					
S	8 TPH - Diesel (C10-C28)	Compound Not Detected.					
$	15 o-Terphenyl (S)	2.206	2.210	-0.004	44394	8.90213	1.05

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL BAIT-F-COMPOSITE TX
Lab ID: 4046750002
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**16.3**	mg/kg	10.6	5.3	1	07/18/11 12:00	07/21/11 09:22	
	TPH (C08-C16)	**<5.3**	mg/kg	10.6	5.3	1	07/18/11 12:00	07/21/11 09:22	
	TPH (C16-C28)	**11.8**	mg/kg	10.6	5.3	1	07/18/11 12:00	07/21/11 09:22	
	TPH (C08-C40)	**196**	mg/kg	10.6	5.3	1	07/18/11 12:00	07/21/11 09:22	2q
	TPH - Diesel (C10-C28)	**15.4**	mg/kg	10.6	5.3	1	07/18/11 12:00	07/21/11 09:22	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**67**	%.	50-150		1	07/18/11 12:00	07/21/11 09:22	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL BAIT-F-COMPOSITE TX
Lab ID: 4046750002
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

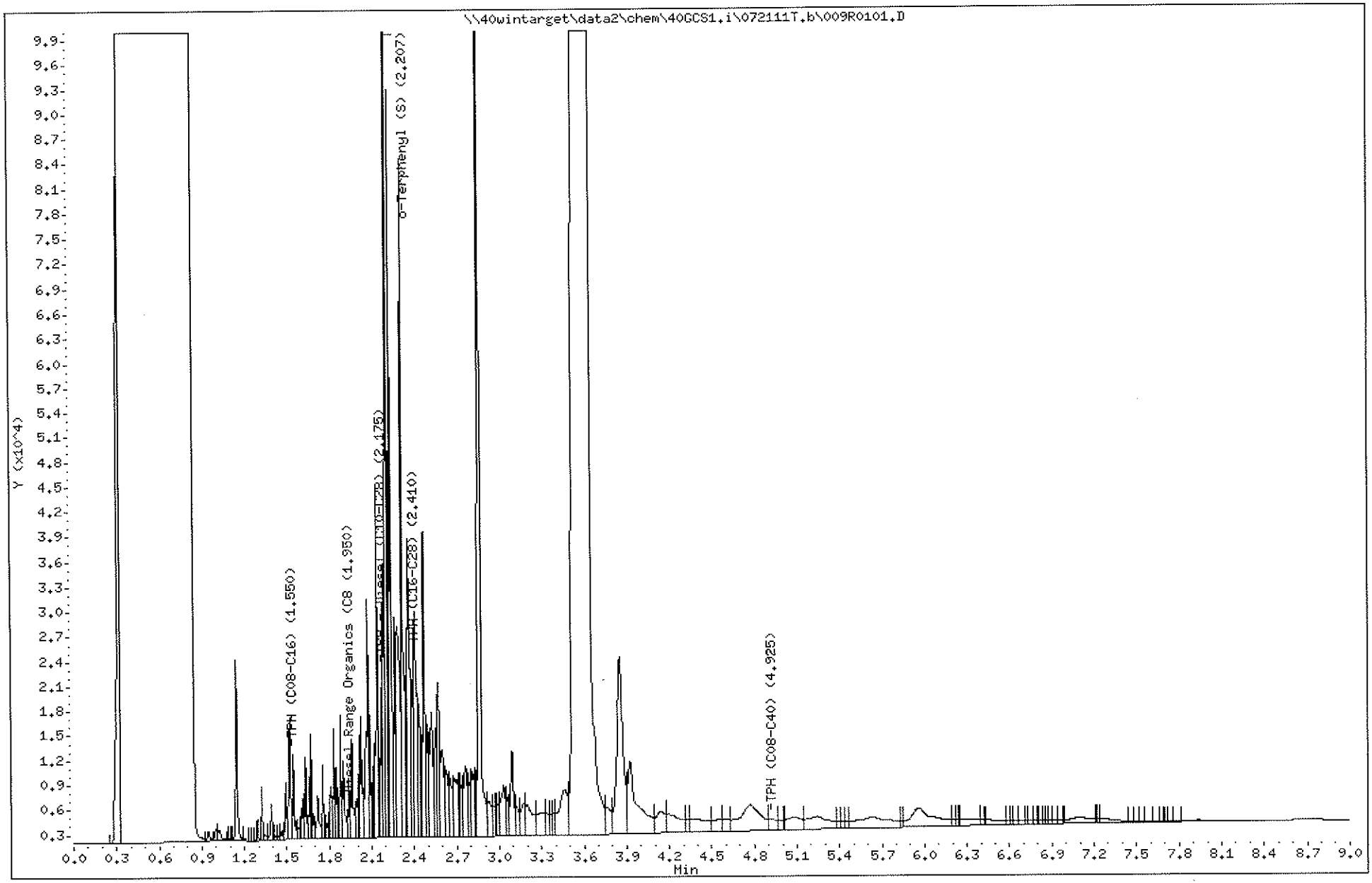
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	1.7	%			1		07/19/11 11:14	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072111T.b\009R0101.D
Date : 21-JUL-2011 09:22
Client ID: EWL BAIT-F-COMPOSIT
Sample Info: 4046750002
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072111T.b\009R0101.D
Lab Smp Id: 4046750002 Client Smp ID: EWL BAIT-F-COMPOSIT
Inj Date : 21-JUL-2011 09:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750002
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m
Meth Date : 23-May-2012 13:17 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.440	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.800			6952969	1853.37	196.33
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			712758	111.817	11.84
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			864850	154.264	16.34
S	8 TPH - Diesel (C10-C28)	1.500-2.850			831396	144.927	15.35
$	15 o-Terphenyl (S)	2.206	2.196	0.010	168051	33.6985	3.56

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-02-F-COMPOSITE TX
Lab ID: 4046750003
Collected: 12/21/10 13:15
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**67.6**	mg/kg	34.7	17.3	3	07/18/11 12:00	07/22/11 09:34	
	TPH (C08-C16)	**<17.3**	mg/kg	34.7	17.3	3	07/18/11 12:00	07/22/11 09:34	
	TPH (C16-C28)	**61.1**	mg/kg	34.7	17.3	3	07/18/11 12:00	07/22/11 09:34	
	TPH (C08-C40)	**415**	mg/kg	34.7	17.3	3	07/18/11 12:00	07/22/11 09:34	2q
	TPH - Diesel (C10-C28)	**67.0**	mg/kg	34.7	17.3	3	07/18/11 12:00	07/22/11 09:34	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/18/11 12:00	07/22/11 09:34	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-02-F-COMPOSITE TX
Lab ID: 4046750003
Collected: 12/21/10 13:15
Received: 06/07/11 10:00

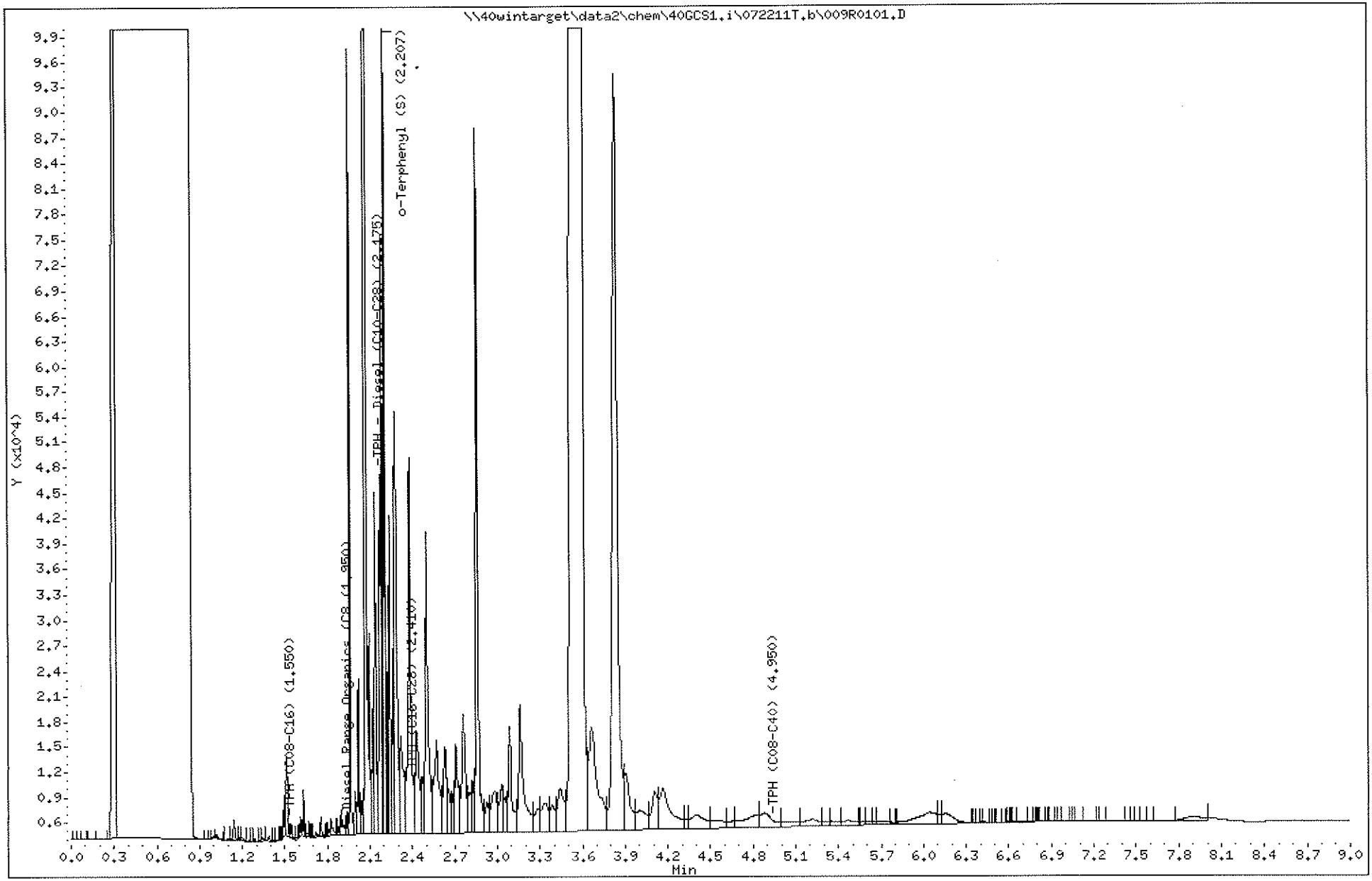
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**2.3**	%			1		07/19/11 11:14	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\009R0101.D
Date : 22-JUL-2011 09:34
Client ID: EWL TR-02-F-COMPOSI
Sample Info: 4046750003X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\009R0101.D
Lab Smp Id: 4046750003 Client Smp ID: EWL TR-02-F-COMPOSI
Inj Date : 22-JUL-2011 09:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750003X3
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 9
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.659	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			4609015	1199.21	415.47
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			944161	176.398	61.11
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			1010948	195.038	67.57
S 8 TPH - Diesel (C10-C28)	1.500-2.850			1004743	193.306	66.97
$ 15 o-Terphenyl (S)	2.206	2.210	-0.004	61895	12.4115	1.43

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-03-F-COMPOSITE TX
Lab ID: 4046750004
Collected: 12/21/10 14:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<28.2**	mg/kg	56.5	28.2	5	07/18/11 12:00	07/22/11 09:46	
	TPH (C08-C16)	**<28.2**	mg/kg	56.5	28.2	5	07/18/11 12:00	07/22/11 09:46	
	TPH (C16-C28)	**<28.2**	mg/kg	56.5	28.2	5	07/18/11 12:00	07/22/11 09:46	
	TPH (C08-C40)	**518**	mg/kg	56.5	28.2	5	07/18/11 12:00	07/22/11 09:46	2q
	TPH - Diesel (C10-C28)	**<28.2**	mg/kg	56.5	28.2	5	07/18/11 12:00	07/22/11 09:46	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	07/18/11 12:00	07/22/11 09:46	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-03-F-COMPOSITE TX
Lab ID: 4046750004
Collected: 12/21/10 14:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.98**	%			1		07/19/11 11:14	

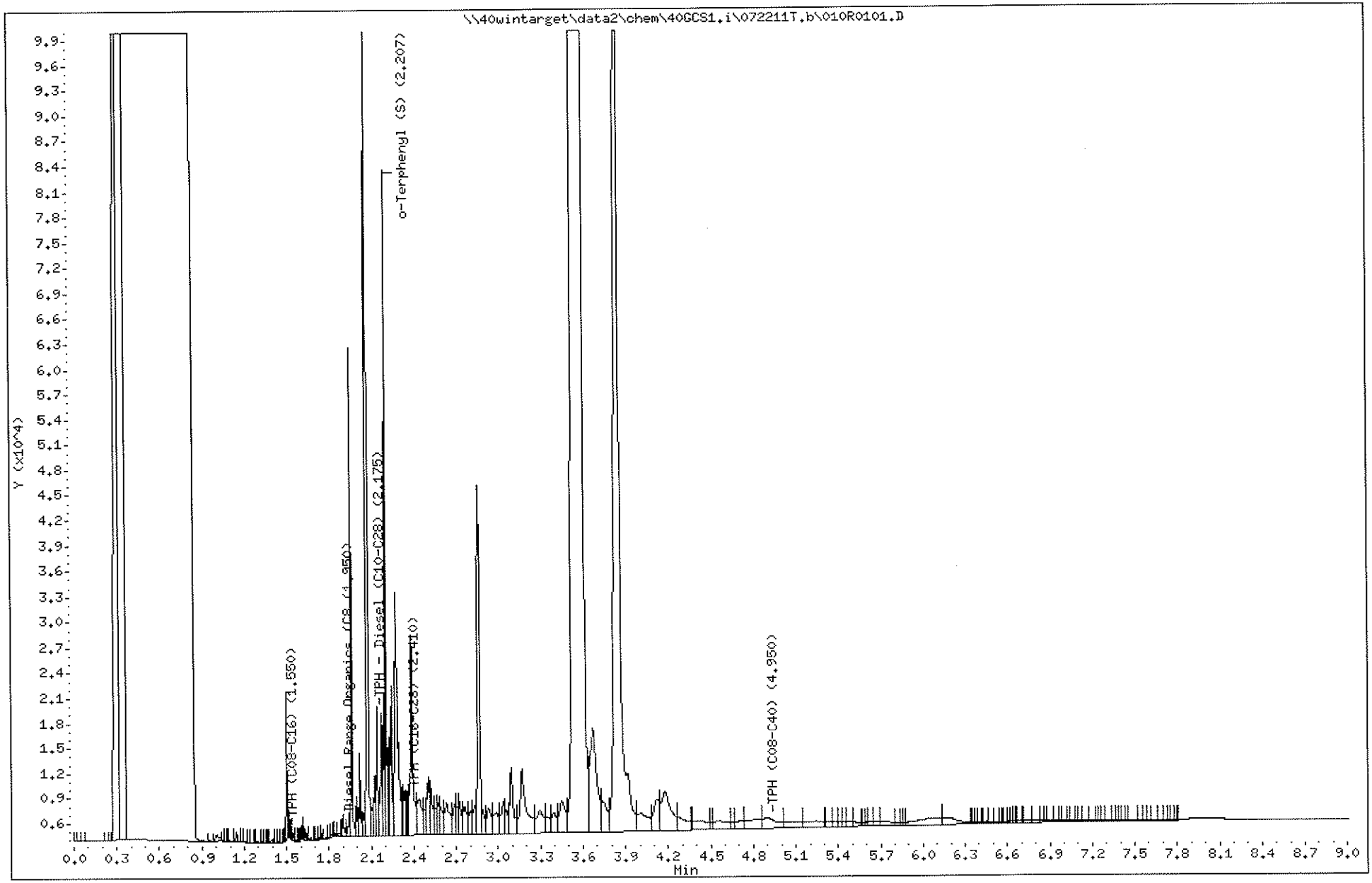
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\010R0101.D
Date : 22-JUL-2011 09:46
Client ID: EWL TR-03-F-COMPOSI
Sample Info: 4046750004X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\010R0101.D
Lab Smp Id: 4046750004 Client Smp ID: EWL TR-03-F-COMPOSI
Inj Date : 22-JUL-2011 09:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750004X5
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 10
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.859	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3600174	917.654	517.92
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			382356	19.6065	11.06(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			429555	32.7791	18.50(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			419778	30.0505	16.96
$	15 o-Terphenyl (S)	2.206	2.210	-0.004	35414	7.10141	0.80

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-04-F-COMPOSITE TX
Lab ID: 4046750005
Collected: 12/21/10 14:20
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**29.9**	mg/kg	11.5	5.7	1	07/18/11 12:00	07/21/11 09:58	
	TPH (C08-C16)	**<5.7**	mg/kg	11.5	5.7	1	07/18/11 12:00	07/21/11 09:58	
	TPH (C16-C28)	**24.7**	mg/kg	11.5	5.7	1	07/18/11 12:00	07/21/11 09:58	
	TPH (C08-C40)	**227**	mg/kg	11.5	5.7	1	07/18/11 12:00	07/21/11 09:58	2q
	TPH - Diesel (C10-C28)	**29.2**	mg/kg	11.5	5.7	1	07/18/11 12:00	07/21/11 09:58	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		1	07/18/11 12:00	07/21/11 09:58	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-04-F-COMPOSITE TX
Lab ID: 4046750005
Collected: 12/21/10 14:20
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.65**	%			1		07/19/11 11:14	

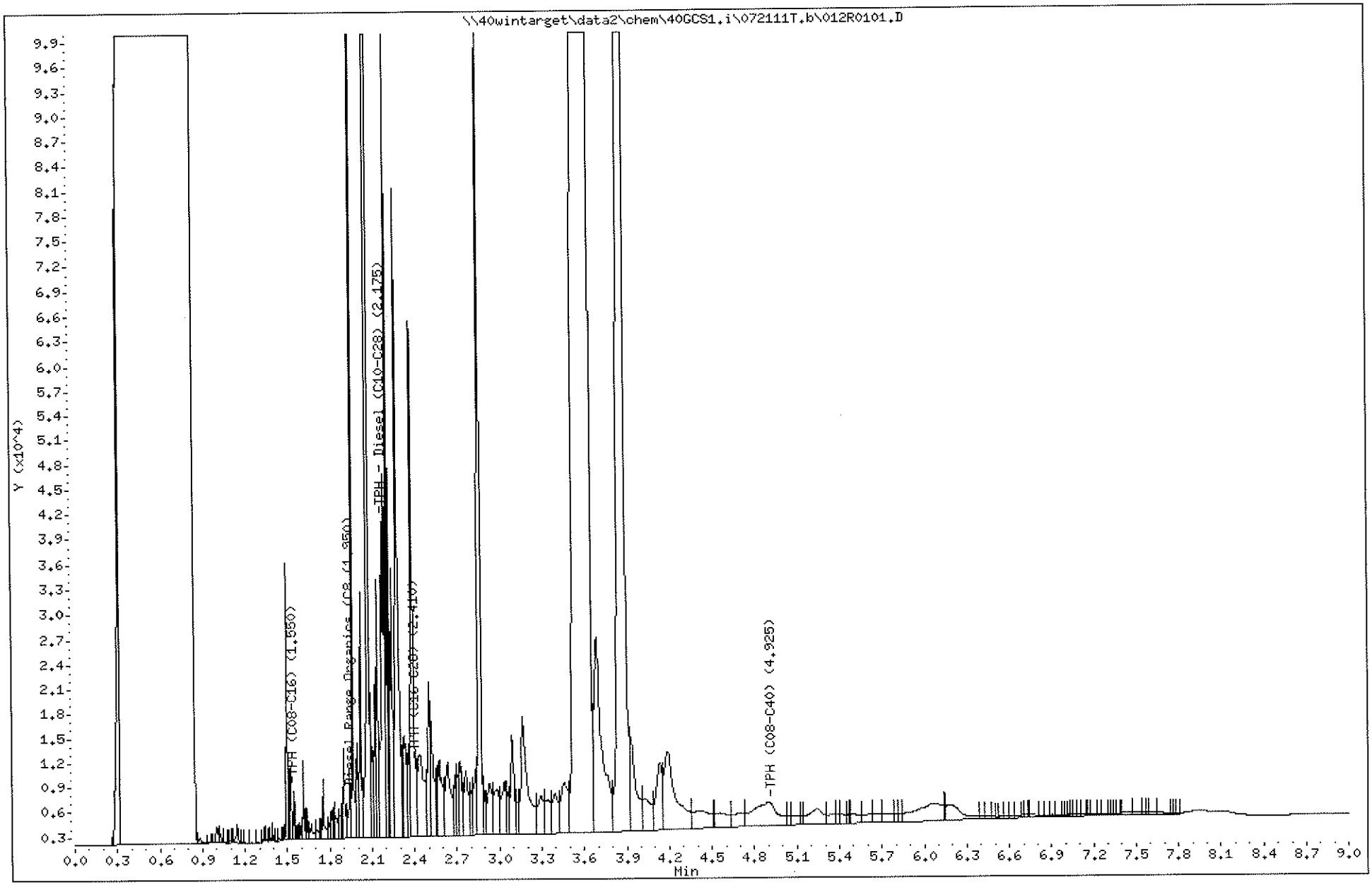
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072111T.b\012R0101.D
Date : 21-JUL-2011 09:58
Client ID: EWL TR-04-F-COMPOSI
Sample Info: 4046750005
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072111T.b\012R0101.D
Lab Smp Id: 4046750005 Client Smp ID: EWL TR-04-F-COMPOSI
Inj Date : 21-JUL-2011 09:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750005
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m
Meth Date : 23-May-2012 13:17 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.687	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.800			7366982	1968.92	226.65
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			1079530	214.178	24.65
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			1241533	259.391	29.85
S	8 TPH - Diesel (C10-C28)	1.500-2.850			1220768	253.595	29.19
$	15 o-Terphenyl (S)	Compound Not Detected.					

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-04A-F-COMPOSITE TX
Lab ID: 4046750006
Collected: 12/21/10 14:20
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<21.2**	mg/kg	42.4	21.2	4	07/18/11 12:00	07/22/11 09:58	
	TPH (C08-C16)	**<21.2**	mg/kg	42.4	21.2	4	07/18/11 12:00	07/22/11 09:58	
	TPH (C16-C28)	**<21.2**	mg/kg	42.4	21.2	4	07/18/11 12:00	07/22/11 09:58	
	TPH (C08-C40)	**431**	mg/kg	42.4	21.2	4	07/18/11 12:00	07/22/11 09:58	2q
	TPH - Diesel (C10-C28)	**<21.2**	mg/kg	42.4	21.2	4	07/18/11 12:00	07/22/11 09:58	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 09:58	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-04A-F-COMPOSITE TX
Lab ID: 4046750006
Collected: 12/21/10 14:20
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**1.9**	%			1		07/19/11 11:15	

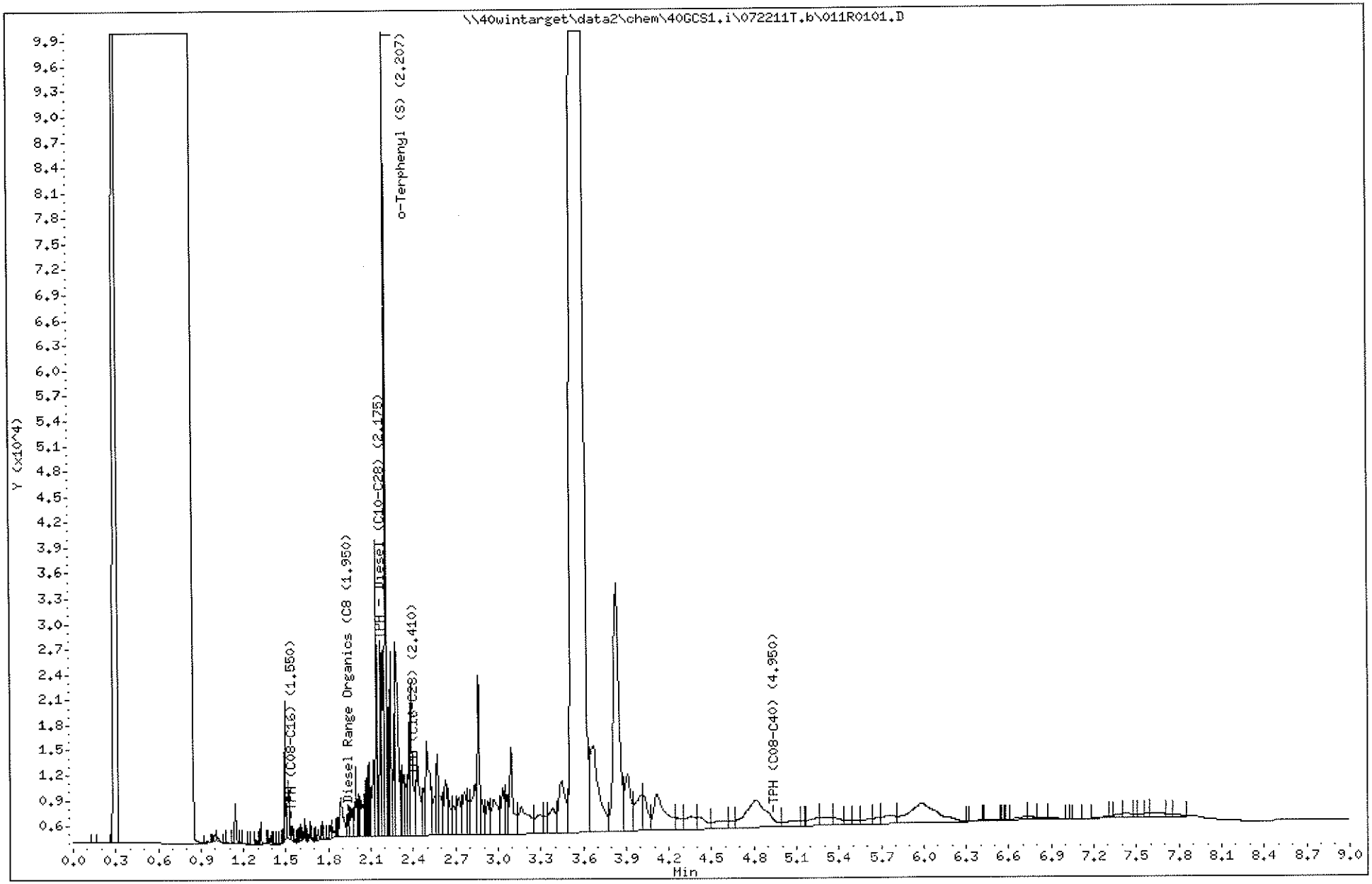
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\011R0101.D
Date : 22-JUL-2011 09:58
Client ID: EWL TR-04A-F-COMPOS
Sample Info: 4046750006X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\011R0101.D
Lab Smp Id: 4046750006 Client Smp ID: EWL TR-04A-F-COMPOS
Inj Date : 22-JUL-2011 09:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750006X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.442	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3955856	1016.92	430.80
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			349578	10.4586	4.43(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			394086	22.8802	9.69(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			379496	18.8083	7.96
$ 15 o-Terphenyl (S)	2.206	2.210	-0.004	47936	9.61239	1.01

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-05-F-COMPOSITE TX
Lab ID: 4046750007
Collected: 01/04/11 09:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<44.9**	mg/kg	89.9	44.9	8	07/18/11 12:00	07/22/11 10:10	
	TPH (C08-C16)	**<44.9**	mg/kg	89.9	44.9	8	07/18/11 12:00	07/22/11 10:10	
	TPH (C16-C28)	**<44.9**	mg/kg	89.9	44.9	8	07/18/11 12:00	07/22/11 10:10	
	TPH (C08-C40)	**852**	mg/kg	89.9	44.9	8	07/18/11 12:00	07/22/11 10:10	2q
	TPH - Diesel (C10-C28)	**<44.9**	mg/kg	89.9	44.9	8	07/18/11 12:00	07/22/11 10:10	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		8	07/18/11 12:00	07/22/11 10:10	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-05-F-COMPOSITE TX
Lab ID: 4046750007
Collected: 01/04/11 09:30
Received: 06/07/11 10:00

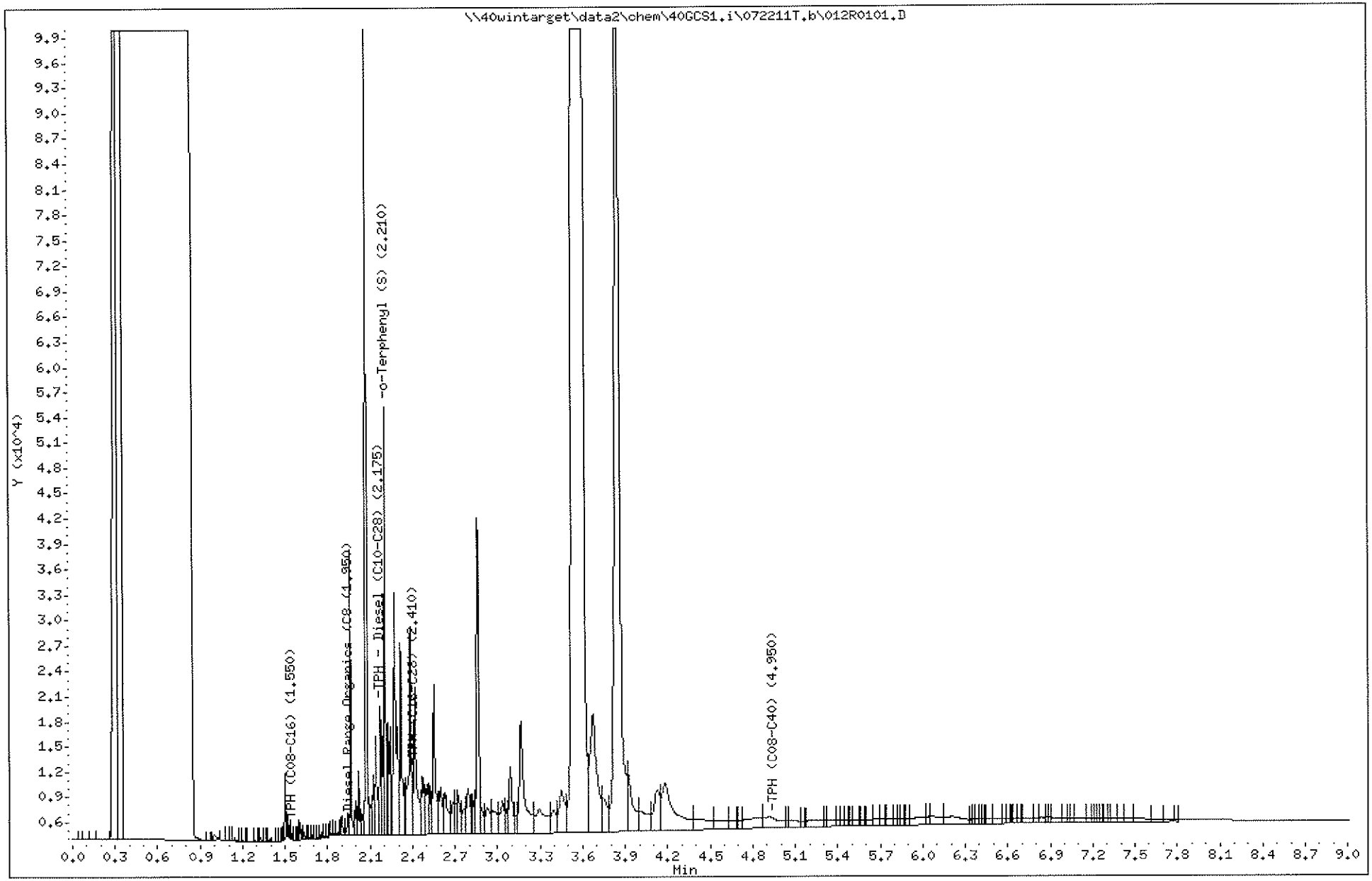
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	1.3	%			1		07/19/11 11:15	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\012R0101.D
Date : 22-JUL-2011 10:10
Client ID: EWL TR-05-F-COMPOSI
Sample Info: 4046750007X8
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\012R0101.D
Lab Smp Id: 4046750007 Client Smp ID: EWL TR-05-F-COMPOSI
Inj Date : 22-JUL-2011 10:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750007X8
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 12
Dil Factor: 8.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	8.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.899	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3708607	947.916	852.15
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			381645	19.4081	17.44(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			410507	27.4631	24.68(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			406053	26.2200	23.57
$	15 o-Terphenyl (S)	2.210	2.210	0.000	26211	5.25598	0.59

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-06-F-COMPOSITE TX
Lab ID: 4046750008
Collected: 01/04/11 09:45
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<21.1**	mg/kg	42.3	21.1	4	07/18/11 12:00	07/22/11 10:22	
	TPH (C08-C16)	**<21.1**	mg/kg	42.3	21.1	4	07/18/11 12:00	07/22/11 10:22	
	TPH (C16-C28)	**<21.1**	mg/kg	42.3	21.1	4	07/18/11 12:00	07/22/11 10:22	
	TPH (C08-C40)	**442**	mg/kg	42.3	21.1	4	07/18/11 12:00	07/22/11 10:22	2q
	TPH - Diesel (C10-C28)	**<21.1**	mg/kg	42.3	21.1	4	07/18/11 12:00	07/22/11 10:22	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 10:22	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-06-F-COMPOSITE TX
Lab ID: 4046750008
Collected: 01/04/11 09:45
Received: 06/07/11 10:00

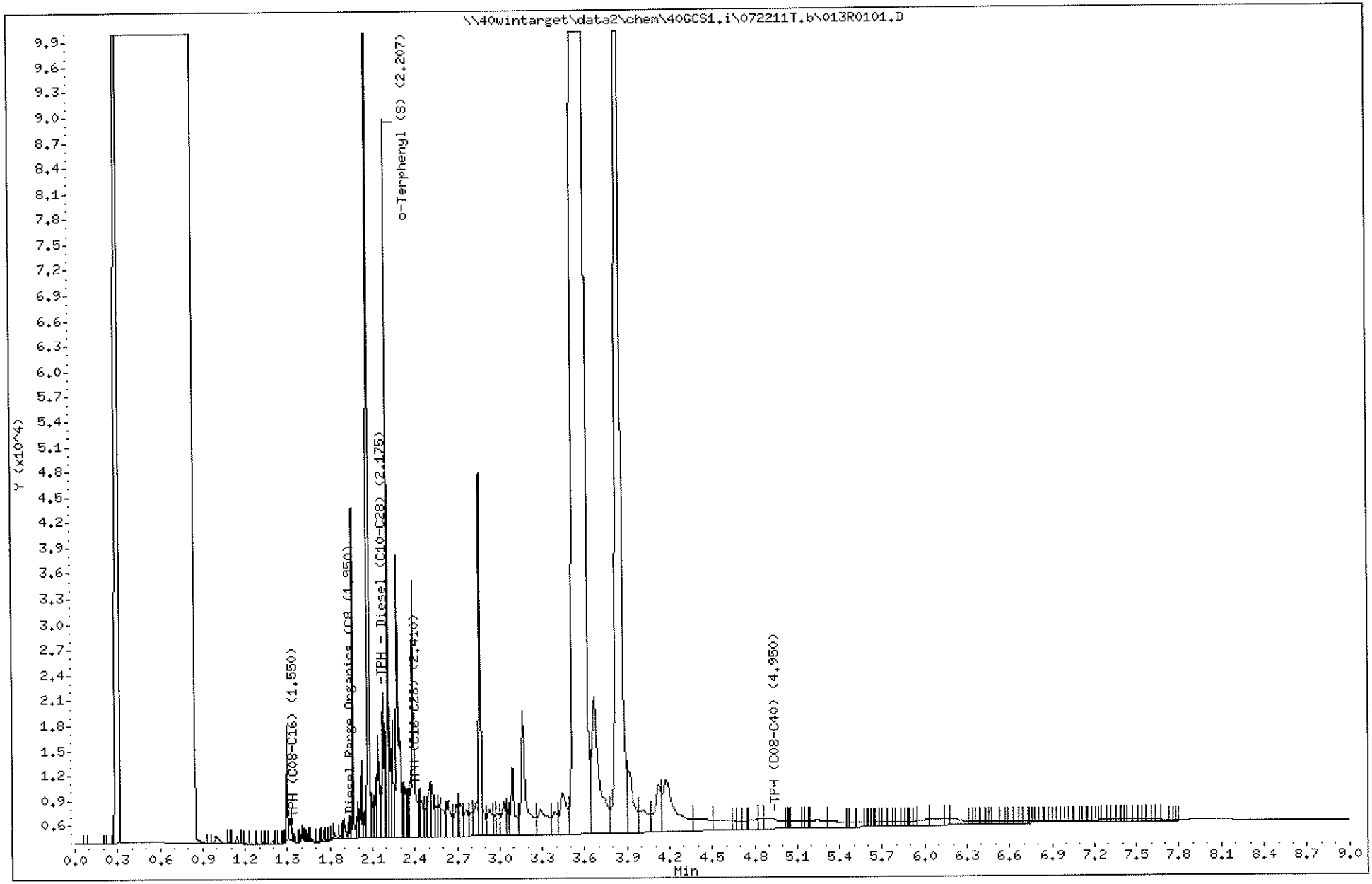
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.97**	%			1		07/19/11 11:15	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\013R0101.D
Date : 22-JUL-2011 10:22
Client ID: EWL TR-06-F-COMPOSI
Sample Info: 4046750008X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\013R0101.D
Lab Smp Id: 4046750008 Client Smp ID: EWL TR-06-F-COMPOSI
Inj Date : 22-JUL-2011 10:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750008X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 13
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.457	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			4057784	1045.37	442.15
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			376905	18.0852	7.64(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			416098	29.0234	12.27(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			407242	26.5518	11.23
$ 15 o-Terphenyl (S)	2.206	2.210	-0.004	39053	7.83112	0.82

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-07-F-COMPOSITE TX
Lab ID: 4046750009
Collected: 01/04/11 10:50
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<27.1	mg/kg	54.2	27.1	5	07/18/11 12:00	07/22/11 10:34	
	TPH (C08-C16)	<27.1	mg/kg	54.2	27.1	5	07/18/11 12:00	07/22/11 10:34	
	TPH (C16-C28)	<27.1	mg/kg	54.2	27.1	5	07/18/11 12:00	07/22/11 10:34	
	TPH (C08-C40)	483	mg/kg	54.2	27.1	5	07/18/11 12:00	07/22/11 10:34	2q
	TPH - Diesel (C10-C28)	<27.1	mg/kg	54.2	27.1	5	07/18/11 12:00	07/22/11 10:34	L2
Surrogates									
84-15-1	o-Terphenyl (S)	0	%.	50-150		5	07/18/11 12:00	07/22/11 10:34	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-07-F-COMPOSITE TX
Lab ID: 4046750009
Collected: 01/04/11 10:50
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.77	%			1		07/19/11 11:15	

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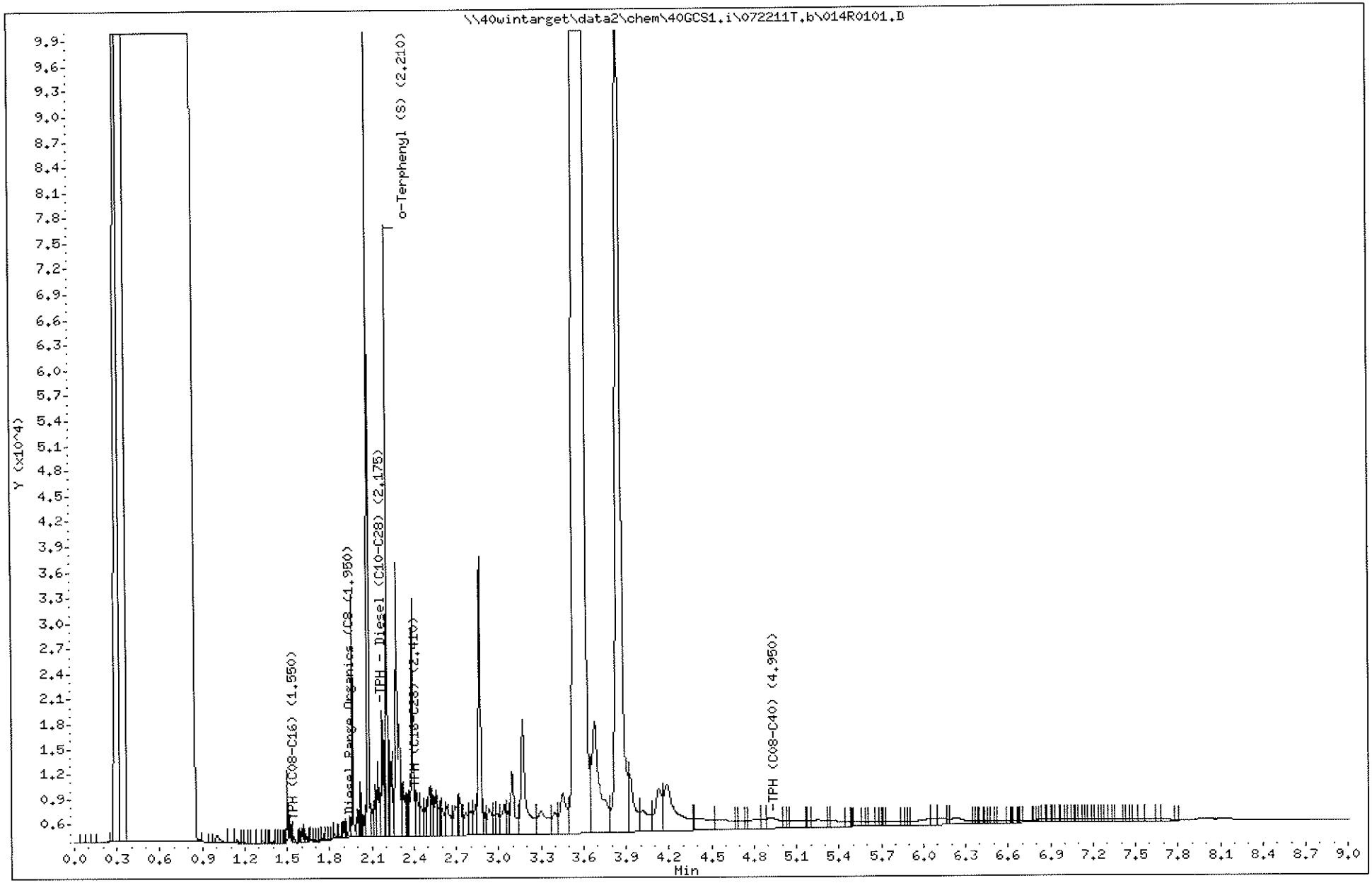
REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\014R0101.D
Date : 22-JUL-2011 10:34
Client ID: EWL TR-07-F-COMPOSI
Sample Info: 4046750009X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\014R0101.D
Lab Smp Id: 4046750009 Client Smp ID: EWL TR-07-F-COMPOSI
Inj Date : 22-JUL-2011 10:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750009X5
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 14
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.226	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3506403	891.483	483.13
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	Compound Not Detected.					
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			329898	4.96624	2.69(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			324985	3.59509	1.94
$	15 o-Terphenyl (S)	2.210	2.210	0.000	30634	6.14290	0.66

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-08-F-COMPOSITE TX
Lab ID: 4046750010
Collected: 01/04/11 10:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<28.5**	mg/kg	57.0	28.5	5	07/18/11 12:00	07/22/11 10:46	
	TPH (C08-C16)	**<28.5**	mg/kg	57.0	28.5	5	07/18/11 12:00	07/22/11 10:46	
	TPH (C16-C28)	**<28.5**	mg/kg	57.0	28.5	5	07/18/11 12:00	07/22/11 10:46	
	TPH (C08-C40)	**482**	mg/kg	57.0	28.5	5	07/18/11 12:00	07/22/11 10:46	2q
	TPH - Diesel (C10-C28)	**<28.5**	mg/kg	57.0	28.5	5	07/18/11 12:00	07/22/11 10:46	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	07/18/11 12:00	07/22/11 10:46	S4

Date: 05/14/2012 05:12 PM

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-08-F-COMPOSITE TX
Lab ID: 4046750010
Collected: 01/04/11 10:05
Received: 06/07/11 10:00

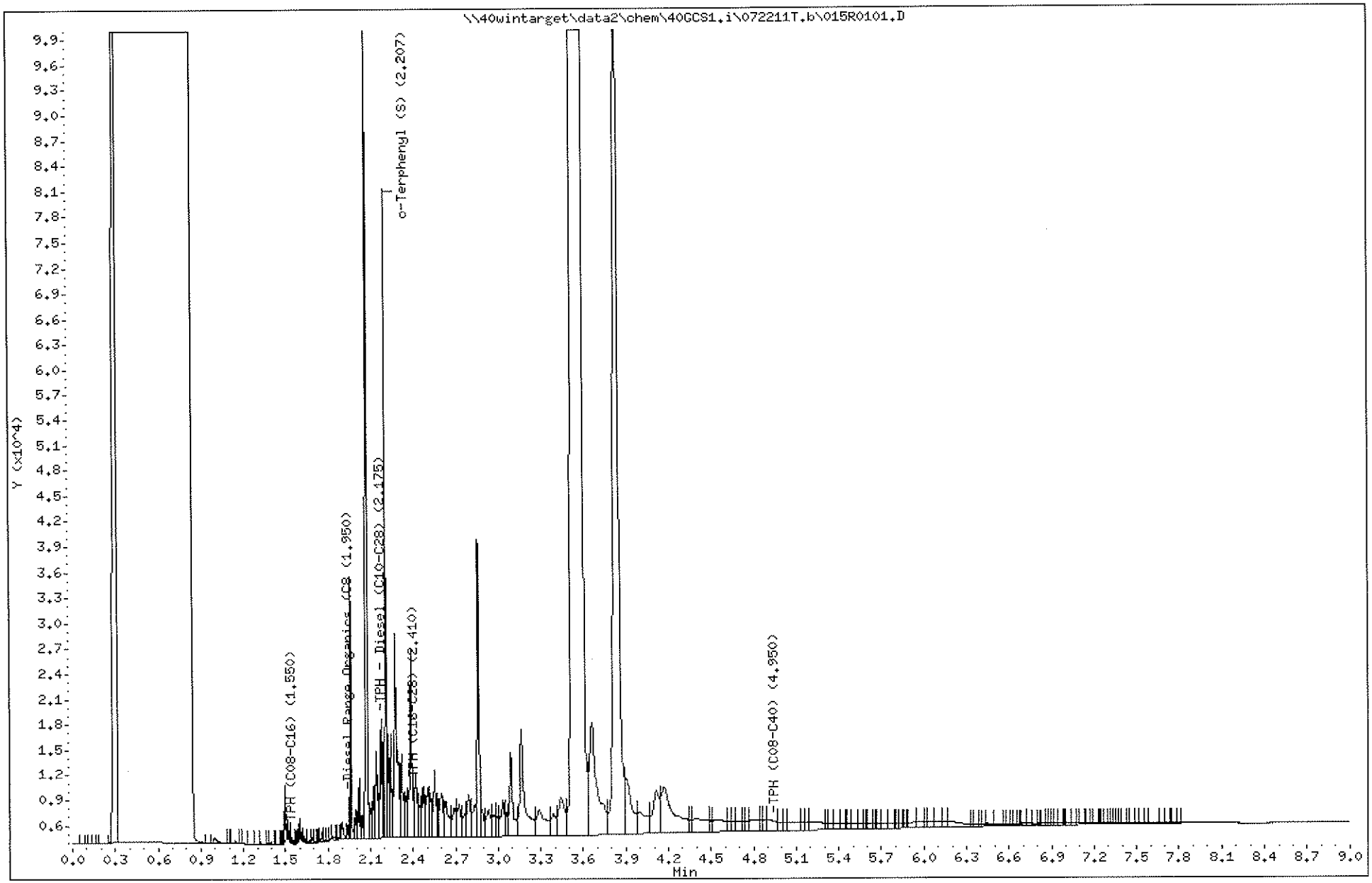
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.76**	%			1		07/19/11 11:15	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\015R0101.D
Date : 22-JUL-2011 10:46
Client ID: EWL TR-08-F-COMPOSI
Sample Info: 4046750010X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\015R0101.D
Lab Smp Id: 4046750010 Client Smp ID: EWL TR-08-F-COMPOSI
Inj Date : 22-JUL-2011 10:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750010X5
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 15
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.771	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3344374	846.264	482.42
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			323983	3.31545	1.89(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			351481	10.9897	6.26(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			347370	9.84242	5.61
$	15 o-Terphenyl (S)	2.206	2.210	-0.004	34022	6.82228	0.77

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-09-F-COMPOSITE TX
Lab ID: 4046750011
Collected: 01/04/11 10:28
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**19.0**	mg/kg	11.2	5.6	1	07/18/11 12:00	07/21/11 11:10	
	TPH (C08-C16)	**<5.6**	mg/kg	11.2	5.6	1	07/18/11 12:00	07/21/11 11:10	
	TPH (C16-C28)	**16.0**	mg/kg	11.2	5.6	1	07/18/11 12:00	07/21/11 11:10	
	TPH (C08-C40)	**217**	mg/kg	11.2	5.6	1	07/18/11 12:00	07/21/11 11:10	2q
	TPH - Diesel (C10-C28)	**18.4**	mg/kg	11.2	5.6	1	07/18/11 12:00	07/21/11 11:10	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**7**	%.	50-150		1	07/18/11 12:00	07/21/11 11:10	3q

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-09-F-COMPOSITE TX
Lab ID: 4046750011
Collected: 01/04/11 10:28
Received: 06/07/11 10:00

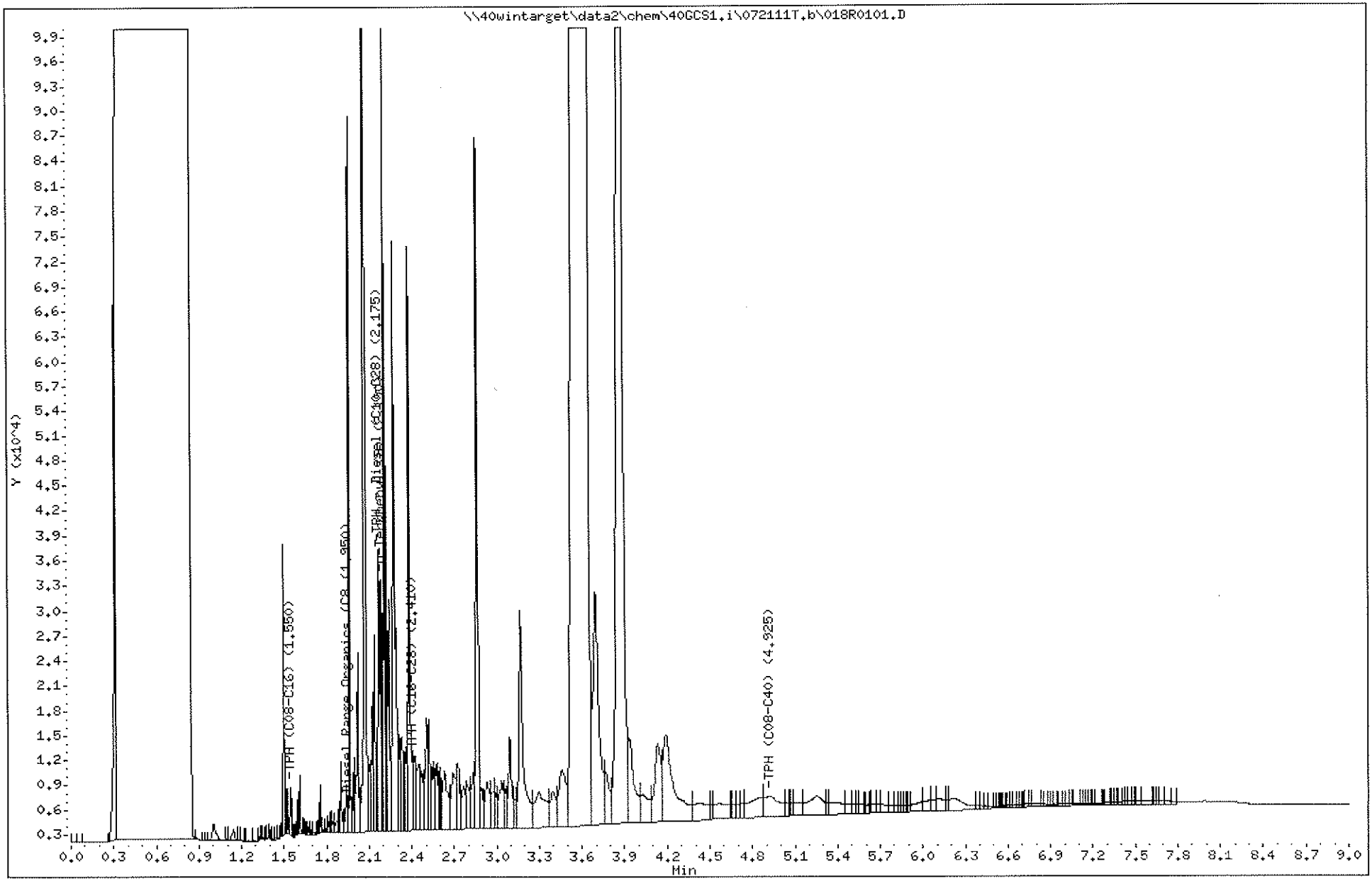
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.31**	%			1		07/19/11 11:15	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072111T.b\018R0101.D
Date : 21-JUL-2011 11:10
Client ID: EWL TR-09-F-COMPOSI
Sample Info: 4046750011
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072111T.b\018R0101.D
Lab Smp Id: 4046750011 Client Smp ID: EWL TR-09-F-COMPOSI
Inj Date : 21-JUL-2011 11:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750011
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m
Meth Date : 23-May-2012 13:17 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.953	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.800			7285680	1946.23	217.38
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			826439	143.544	16.03
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			921869	170.177	19.00
S 8 TPH - Diesel (C10-C28)	1.500-2.850			902553	164.786	18.40
$ 15 o-Terphenyl (S)	2.190	2.196	-0.006	18340	3.67764	0.41(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-01-F-COMPOSITE TX
Lab ID: 4046750012
Collected: 01/05/11 12:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**29.7J**	mg/kg	48.2	24.1	4	07/18/11 12:00	07/22/11 10:58	
	TPH (C08-C16)	**<24.1**	mg/kg	48.2	24.1	4	07/18/11 12:00	07/22/11 10:58	
	TPH (C16-C28)	**<24.1**	mg/kg	48.2	24.1	4	07/18/11 12:00	07/22/11 10:58	
	TPH (C08-C40)	**432**	mg/kg	48.2	24.1	4	07/18/11 12:00	07/22/11 10:58	2q
	TPH - Diesel (C10-C28)	**28.3J**	mg/kg	48.2	24.1	4	07/18/11 12:00	07/22/11 10:58	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 10:58	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-01-F-COMPOSITE TX
Lab ID: 4046750012
Collected: 01/05/11 12:30
Received: 06/07/11 10:00

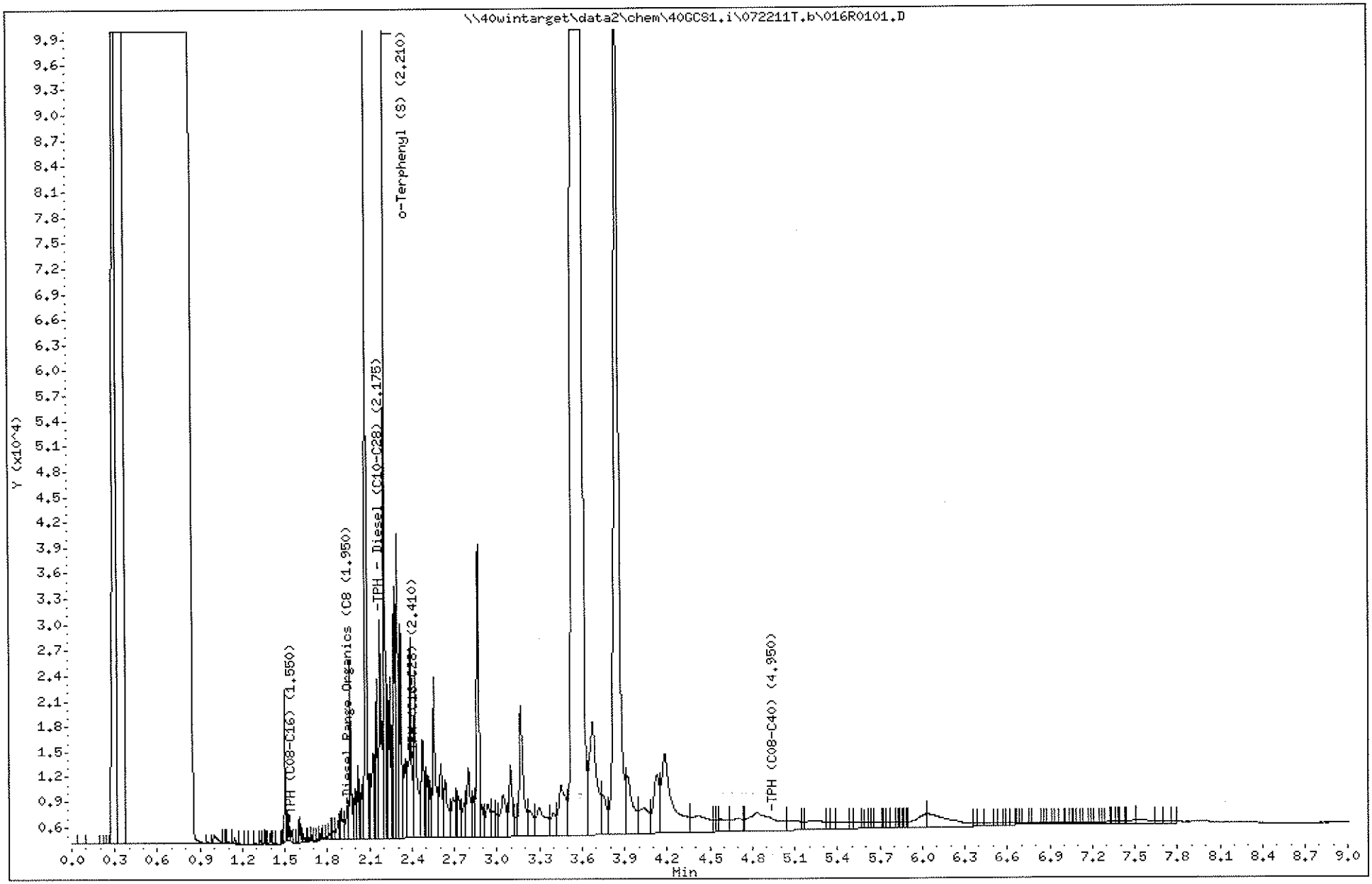
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**1.1**	%			1		07/19/11 11:15	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\016R0101.D
Date : 22-JUL-2011 10:58
Client ID: EWL T-01-F-COMPOSIT
Sample Info: 4046750012X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\016R0101.D
Lab Smp Id: 4046750012 Client Smp ID: EWL T-01-F-COMPOSIT
Inj Date : 22-JUL-2011 10:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750012X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 16
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.302	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3527962	897.500	432.42
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			486022	48.5382	23.38(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			532792	61.5911	29.67(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			522249	58.6487	28.25
$ 15 o-Terphenyl (S)	2.210	2.210	0.000	48221	9.66954	1.16

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-03-F-COMPOSITE TX
Lab ID: 4046750013
Collected: 01/05/11 13:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**34.4J**	mg/kg	45.7	22.8	4	07/18/11 12:00	07/22/11 11:10	
	TPH (C08-C16)	**<22.8**	mg/kg	45.7	22.8	4	07/18/11 12:00	07/22/11 11:10	
	TPH (C16-C28)	**27.2J**	mg/kg	45.7	22.8	4	07/18/11 12:00	07/22/11 11:10	
	TPH (C08-C40)	**426**	mg/kg	45.7	22.8	4	07/18/11 12:00	07/22/11 11:10	2q
	TPH - Diesel (C10-C28)	**32.8J**	mg/kg	45.7	22.8	4	07/18/11 12:00	07/22/11 11:10	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 11:10	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-03-F-COMPOSITE TX
Lab ID: 4046750013
Collected: 01/05/11 13:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**1.3**	%			1		07/19/11 11:15	

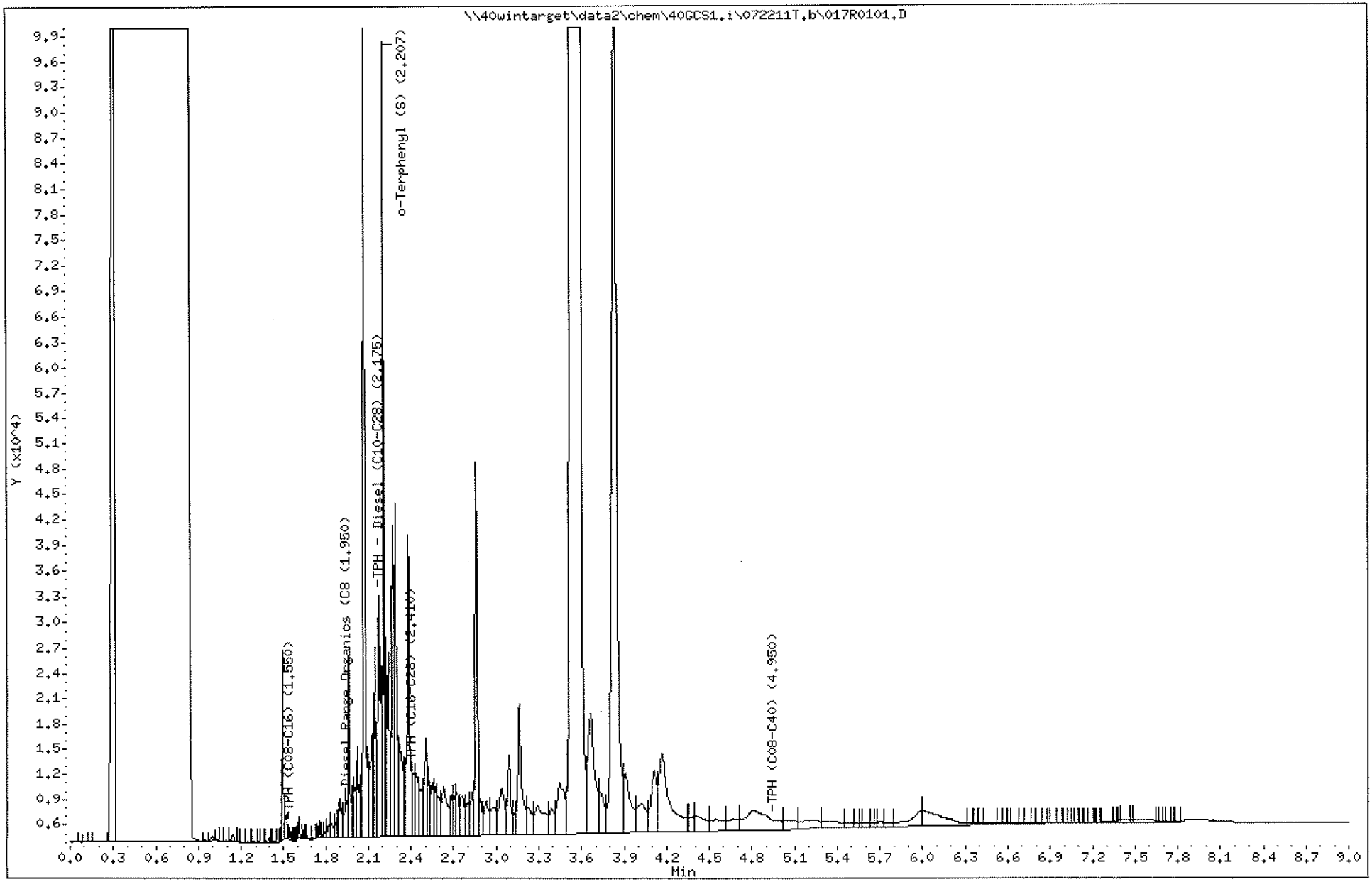
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\017R0101.D
Date : 22-JUL-2011 11:10
Client ID: EWL T-03-F-COMPOSIT
Sample Info: 4046750013X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\017R0101.D
Lab Smp Id: 4046750013 Client Smp ID: EWL T-03-F-COMPOSIT
Inj Date : 22-JUL-2011 11:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750013X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 17
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.756	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3655840	933.189	426.30
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			525373	59.5205	27.19(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			581987	75.3207	34.40(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			569463	71.8254	32.81
$ 15 o-Terphenyl (S)	2.206	2.210	-0.004	48124	9.65009	1.10

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-04-F-COMPOSITE TX
Lab ID: 4046750014
Collected: 01/05/11 13:40
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**46.6**	mg/kg	34.5	17.2	3	07/18/11 12:00	07/22/11 11:22	
	TPH (C08-C16)	**<17.2**	mg/kg	34.5	17.2	3	07/18/11 12:00	07/22/11 11:22	
	TPH (C16-C28)	**40.3**	mg/kg	34.5	17.2	3	07/18/11 12:00	07/22/11 11:22	
	TPH (C08-C40)	**347**	mg/kg	34.5	17.2	3	07/18/11 12:00	07/22/11 11:22	2q
	TPH - Diesel (C10-C28)	**45.4**	mg/kg	34.5	17.2	3	07/18/11 12:00	07/22/11 11:22	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/18/11 12:00	07/22/11 11:22	S4

Date: 05/14/2012 05:12 PM

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-04-F-COMPOSITE TX
Lab ID: 4046750014
Collected: 01/05/11 13:40
Received: 06/07/11 10:00

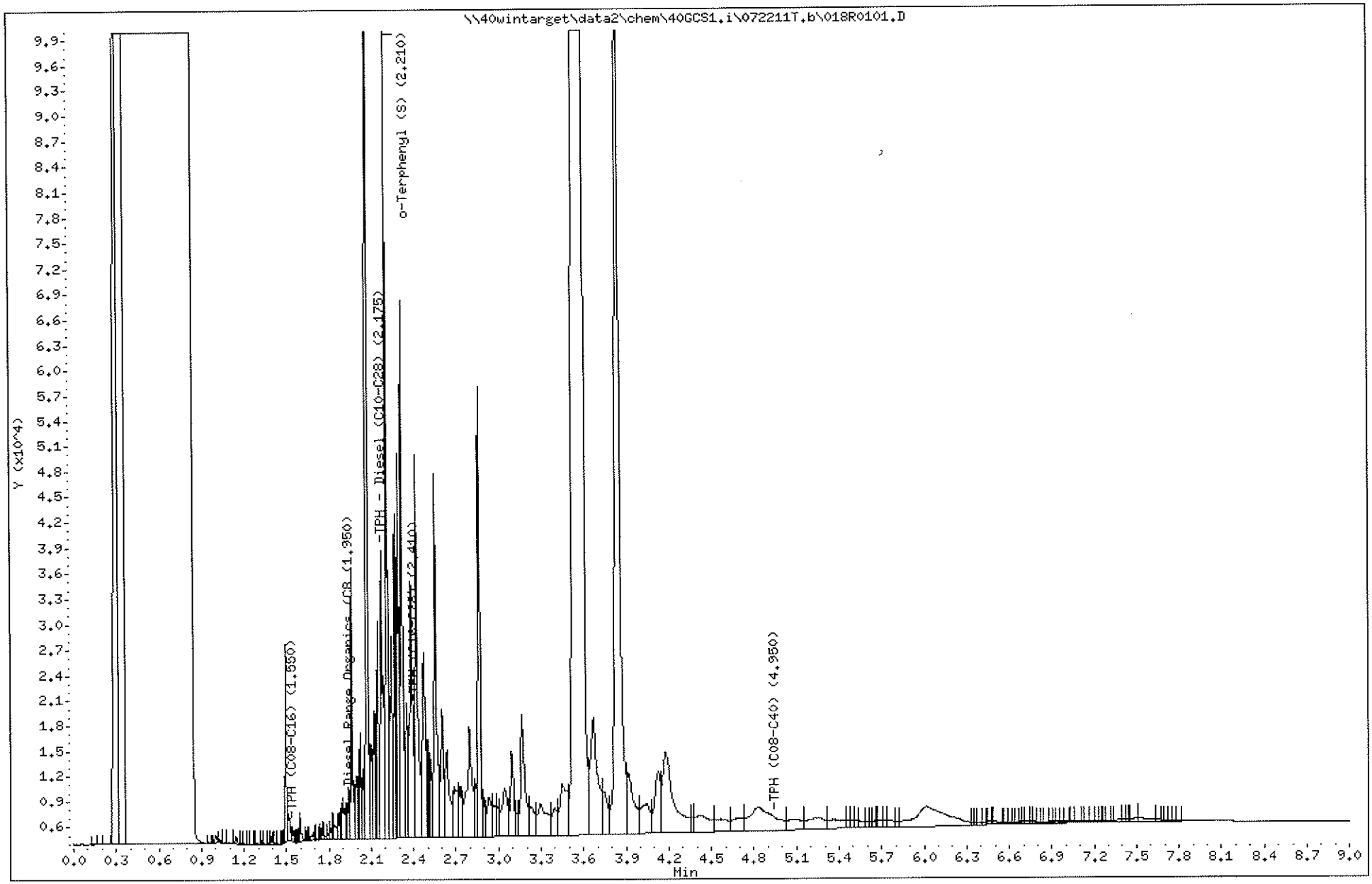
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.80**	%			1		07/19/11 11:16	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\018R0101.D
Date : 22-JUL-2011 11:22
Client ID: EWL T-04-F-COMPOSIT
Sample Info: 4046750014X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\018R0101.D
Lab Smp Id: 4046750014 Client Smp ID: EWL T-04-F-COMPOSIT
Inj Date : 22-JUL-2011 11:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750014X3
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 18
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.692	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3918199	1006.41	347.35
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			730806	116.854	40.33
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			796188	135.101	46.62
S	8 TPH - Diesel (C10-C28)	1.500-2.850			783163	131.466	45.37
$	15 o-Terphenyl (S)	2.210	2.210	0.000	90645	18.1766	2.09

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-06-F-COMPOSITE TX
Lab ID: 4046750015
Collected: 01/05/11 13:50
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**20.5J**	mg/kg	21.3	10.6	2	07/18/11 12:00	07/22/11 11:34	
	TPH (C08-C16)	**<10.6**	mg/kg	21.3	10.6	2	07/18/11 12:00	07/22/11 11:34	
	TPH (C16-C28)	**16.5J**	mg/kg	21.3	10.6	2	07/18/11 12:00	07/22/11 11:34	
	TPH (C08-C40)	**246**	mg/kg	21.3	10.6	2	07/18/11 12:00	07/22/11 11:34	2q
	TPH - Diesel (C10-C28)	**19.6J**	mg/kg	21.3	10.6	2	07/18/11 12:00	07/22/11 11:34	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	07/18/11 12:00	07/22/11 11:34	S4

Date: 05/14/2012 05:12 PM

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Pace Analytical®
www.pacelabs.com

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-06-F-COMPOSITE TX
Lab ID: 4046750015
Collected: 01/05/11 13:50
Received: 06/07/11 10:00

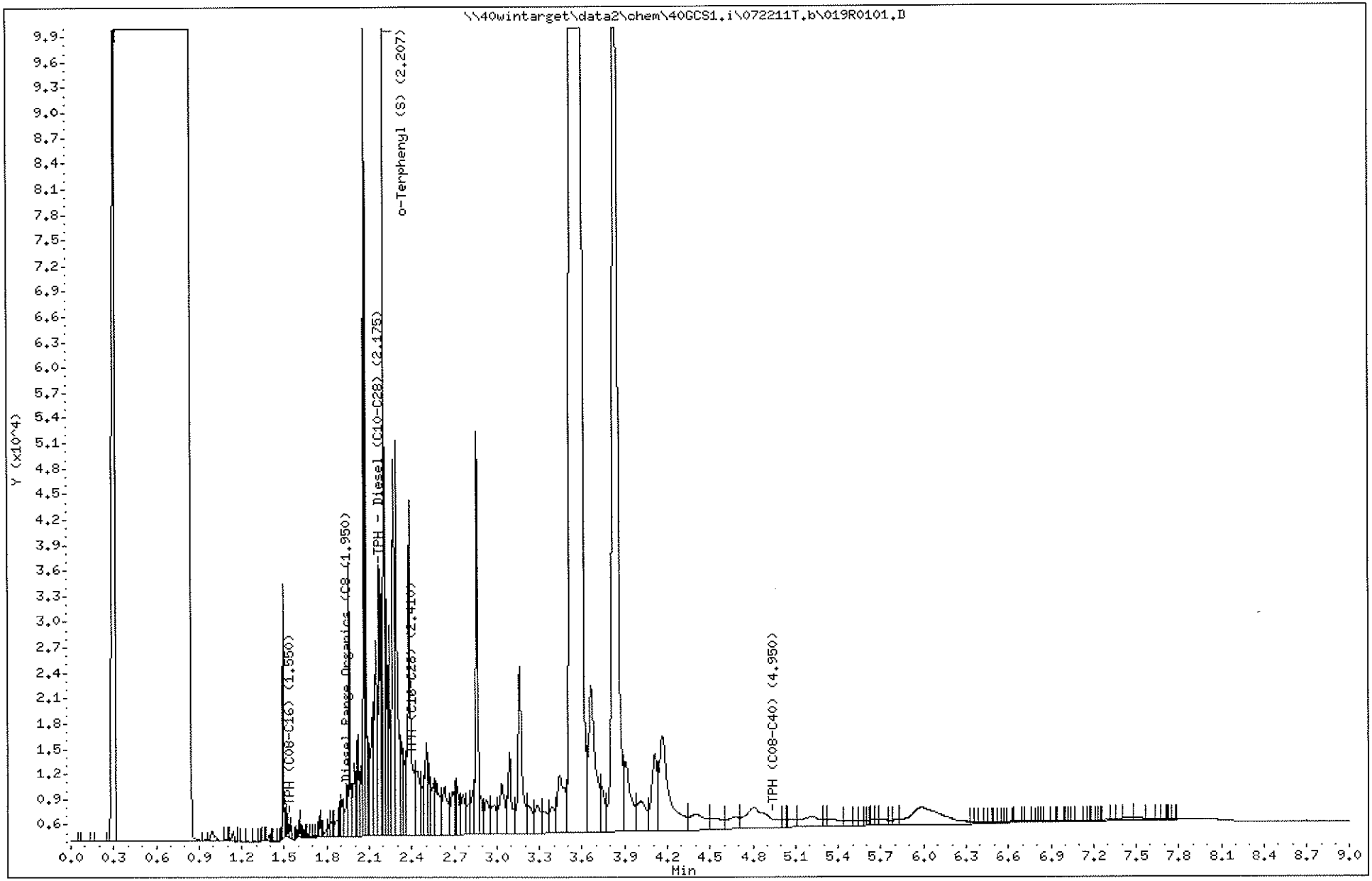
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.42**	%			1		07/19/11 11:16	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\019R0101.D
Date : 22-JUL-2011 11:34
Client ID: EWL T-06-F-COMPOSIT
Sample Info: 4046750015X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\019R0101.D
Lab Smp Id: 4046750015 Client Smp ID: EWL T-06-F-COMPOSIT
Inj Date : 22-JUL-2011 11:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750015X2
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 19
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.398	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			4445630	1153.61	245.50
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			590087	77.5813	16.51(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			656773	96.1924	20.47(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			641375	91.8950	19.55
$	15 o-Terphenyl (S)	2.206	2.210	-0.004	59606	11.9525	1.27

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-07-F-COMPOSITE TX
Lab ID: 4046750016
Collected: 01/05/11 15:10
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**32.5J**	mg/kg	32.7	16.4	3	07/18/11 12:00	07/22/11 11:46	
	TPH (C08-C16)	**<16.4**	mg/kg	32.7	16.4	3	07/18/11 12:00	07/22/11 11:46	
	TPH (C16-C28)	**26.9J**	mg/kg	32.7	16.4	3	07/18/11 12:00	07/22/11 11:46	
	TPH (C08-C40)	**331**	mg/kg	32.7	16.4	3	07/18/11 12:00	07/22/11 11:46	2q
	TPH - Diesel (C10-C28)	**31.6J**	mg/kg	32.7	16.4	3	07/18/11 12:00	07/22/11 11:46	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/18/11 12:00	07/22/11 11:46	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-07-F-COMPOSITE TX
Lab ID: 4046750016
Collected: 01/05/11 15:10
Received: 06/07/11 10:00

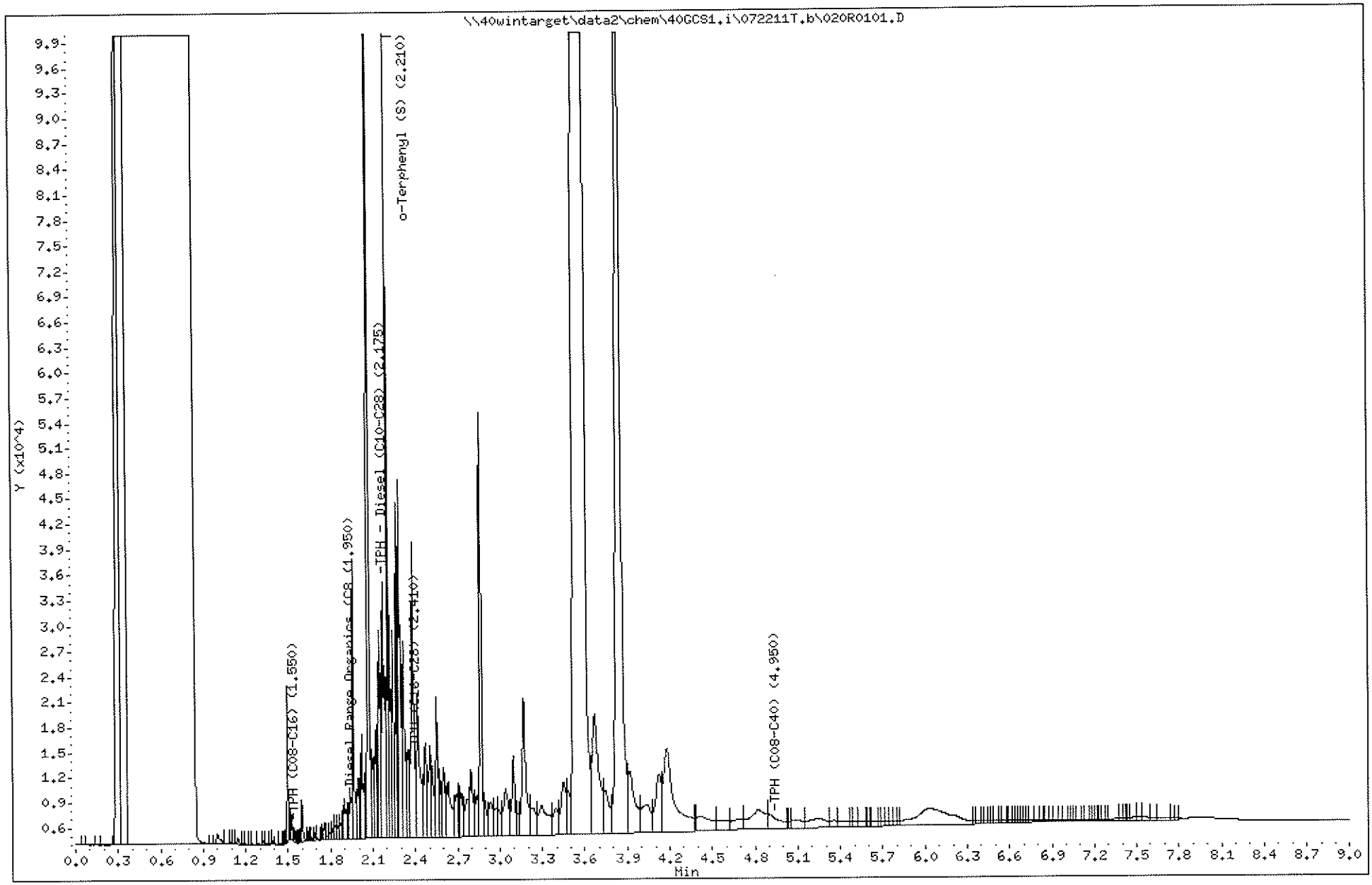
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.71**	%			1		07/19/11 11:16	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\020R0101.D
Date : 22-JUL-2011 11:46
Client ID: EWL T-07-F-COMPOSIT
Sample Info: 4046750016X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\020R0101.D
Lab Smp Id: 4046750016 Client Smp ID: EWL T-07-F-COMPOSIT
Inj Date : 22-JUL-2011 11:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750016X3
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 20
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.165	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3930473	1009.84	330.55
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			606121	82.0561	26.85(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			667916	99.3022	32.50(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			657776	96.4723	31.57
$	15 o-Terphenyl (S)	2.210	2.210	0.000	61773	12.3871	1.35

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-08-F-COMPOSITE TX
Lab ID: 4046750017
Collected: 01/05/11 15:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**26.6J**	mg/kg	46.5	23.2	4	07/18/11 12:00	07/22/11 11:58	
	TPH (C08-C16)	**<23.2**	mg/kg	46.5	23.2	4	07/18/11 12:00	07/22/11 11:58	
	TPH (C16-C28)	**<23.2**	mg/kg	46.5	23.2	4	07/18/11 12:00	07/22/11 11:58	
	TPH (C08-C40)	**435**	mg/kg	46.5	23.2	4	07/18/11 12:00	07/22/11 11:58	2q
	TPH - Diesel (C10-C28)	**25.7J**	mg/kg	46.5	23.2	4	07/18/11 12:00	07/22/11 11:58	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 11:58	S4

Date: 05/14/2012 05:12 PM

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-08-F-COMPOSITE TX
Lab ID: 4046750017
Collected: 01/05/11 15:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.73**	%			1		07/19/11 11:16	

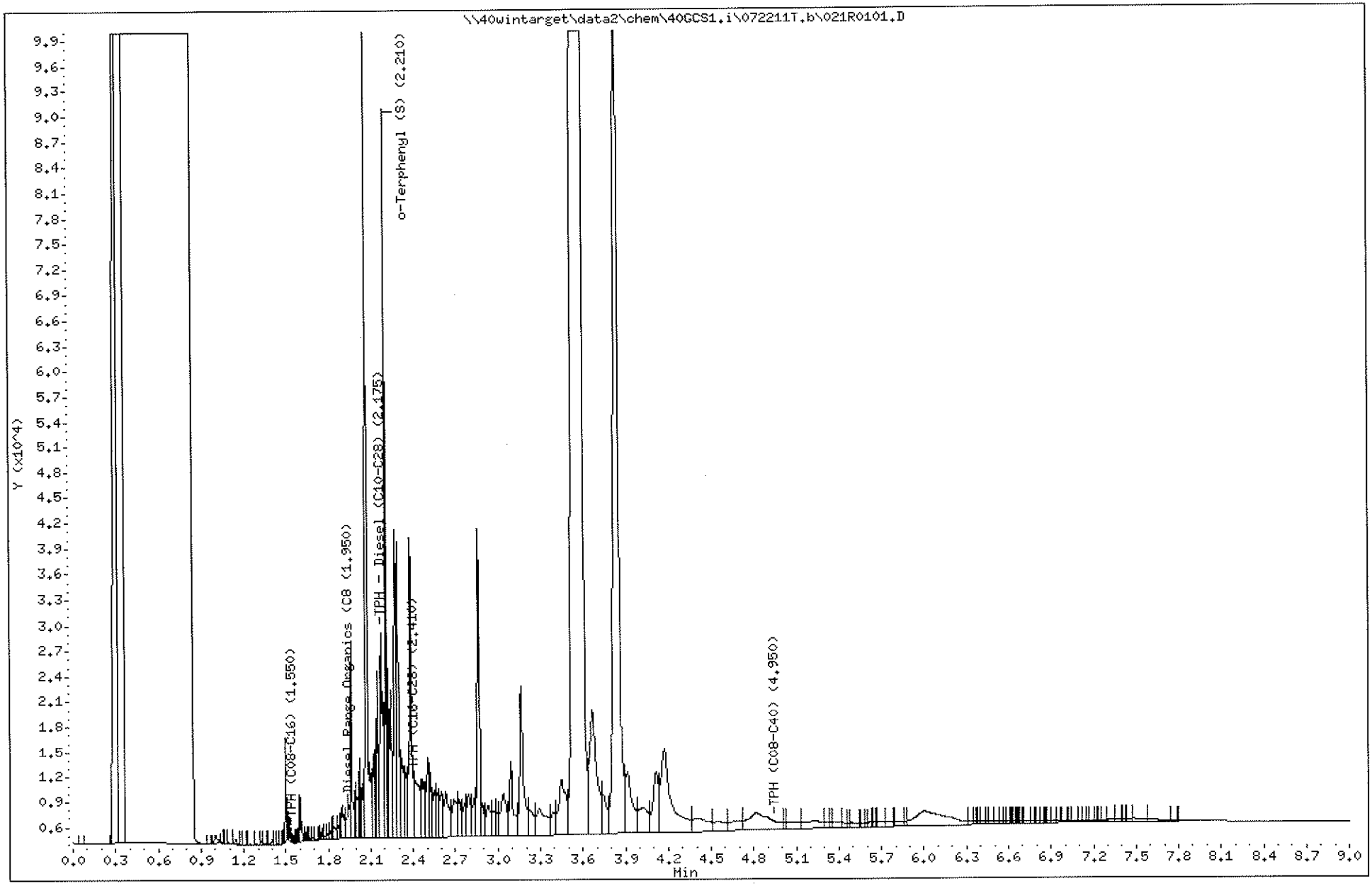
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\021R0101.D
Date : 22-JUL-2011 11:58
Client ID: EWL T-08-F-COMPOSIT
Sample Info: 4046750017X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\021R0101.D
Lab Smp Id: 4046750017 Client Smp ID: EWL T-08-F-COMPOSIT
Inj Date : 22-JUL-2011 11:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750017X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 21
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.610	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			3670828	937.372	435.48
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.970-2.850			469090	43.8127	20.35(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			517546	57.3361	26.63(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.850			510374	55.3345	25.70
$	15 o-Terphenyl (S)	2.210	2.210	0.000	43578	8.73850	1.01

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Sample: EWL T-09-F-COMPOSITE TX
Lab ID: 4046750018
Collected: 01/05/11 14:55
Received: 06/07/11 10:00

Results reported on a "wet-weight" basis

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**30.1J**	mg/kg	35.2	17.6	3	07/18/11 12:00	07/22/11 12:10	
	TPH (C08-C16)	**<17.6**	mg/kg	35.2	17.6	3	07/18/11 12:00	07/22/11 12:10	
	TPH (C16-C28)	**24.2J**	mg/kg	35.2	17.6	3	07/18/11 12:00	07/22/11 12:10	
	TPH (C08-C40)	**336**	mg/kg	35.2	17.6	3	07/18/11 12:00	07/22/11 12:10	2q
	TPH - Diesel (C10-C28)	**29.2J**	mg/kg	35.2	17.6	3	07/18/11 12:00	07/22/11 12:10	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/18/11 12:00	07/22/11 12:10	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-09-F-COMPOSITE TX
Lab ID: 4046750018
Collected: 01/05/11 14:55
Received: 06/07/11 10:00

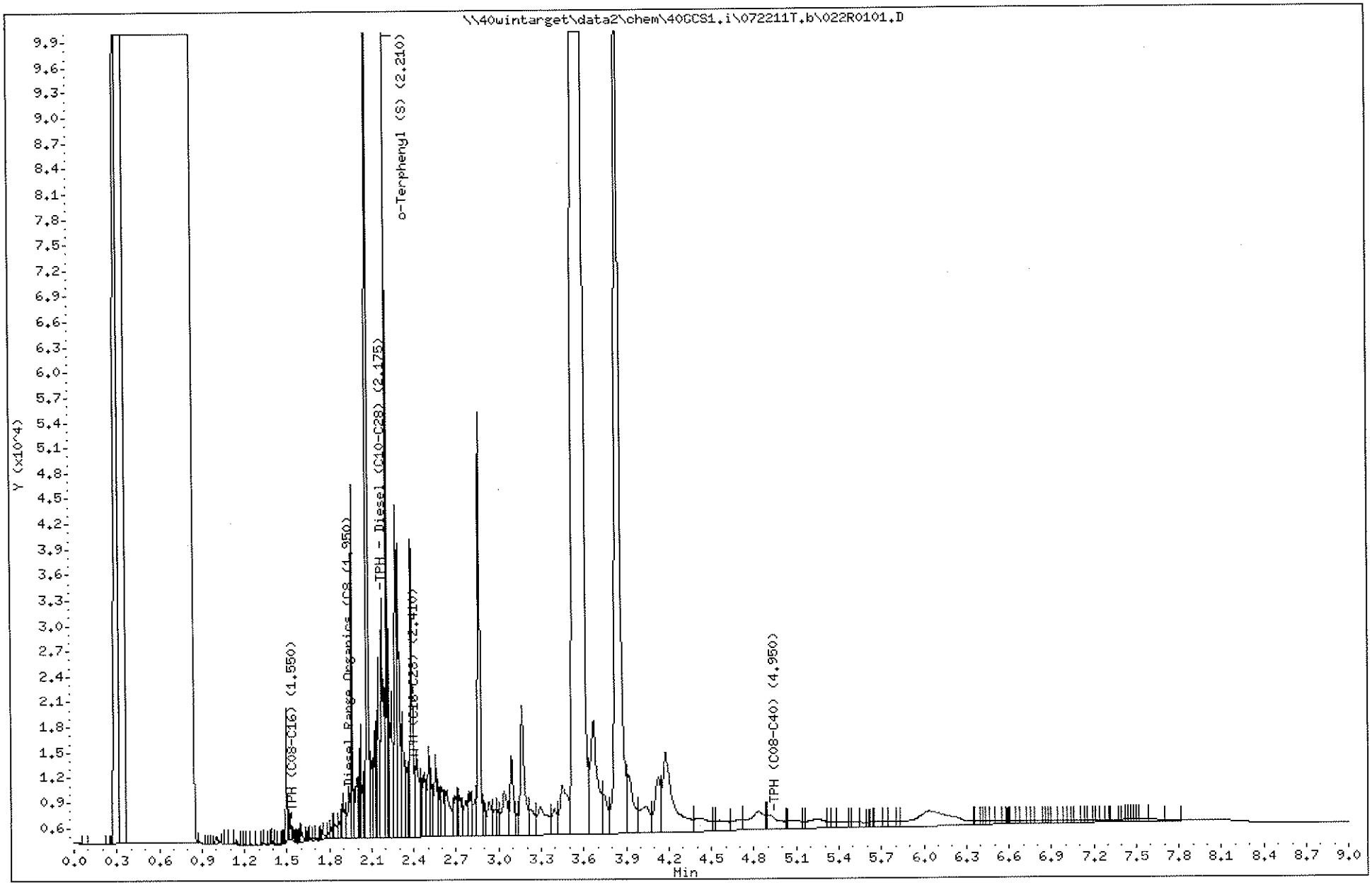
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.71**	%			1		07/19/11 11:16	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\022R0101.D
Date : 22-JUL-2011 12:10
Client ID: EWL T-09-F-COMPOSIT
Sample Info: 4046750018X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\022R0101.D
Lab Smp Id: 4046750018 Client Smp ID: EWL T-09-F-COMPOSIT
Inj Date : 22-JUL-2011 12:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750018X3
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 22
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.526	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3729809	953.833	335.62
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			558917	68.8822	24.23(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			618121	85.4052	30.05(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			609641	83.0385	29.21
$ 15 o-Terphenyl (S)	2.210	2.210	0.000	57206	11.4713	1.34

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-10-F-COMPOSITE TX
Lab ID: 4046750019
Collected: 01/05/11 13:55
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**32.6J**	mg/kg	43.7	21.8	4	07/18/11 12:00	07/22/11 12:22	
	TPH (C08-C16)	**<21.8**	mg/kg	43.7	21.8	4	07/18/11 12:00	07/22/11 12:22	
	TPH (C16-C28)	**26.5J**	mg/kg	43.7	21.8	4	07/18/11 12:00	07/22/11 12:22	
	TPH (C08-C40)	**460**	mg/kg	43.7	21.8	4	07/18/11 12:00	07/22/11 12:22	2q
	TPH - Diesel (C10-C28)	**31.4J**	mg/kg	43.7	21.8	4	07/18/11 12:00	07/22/11 12:22	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 12:22	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-10-F-COMPOSITE TX
Lab ID: 4046750019
Collected: 01/05/11 13:55
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	1.1	%			1		07/19/11 11:16	

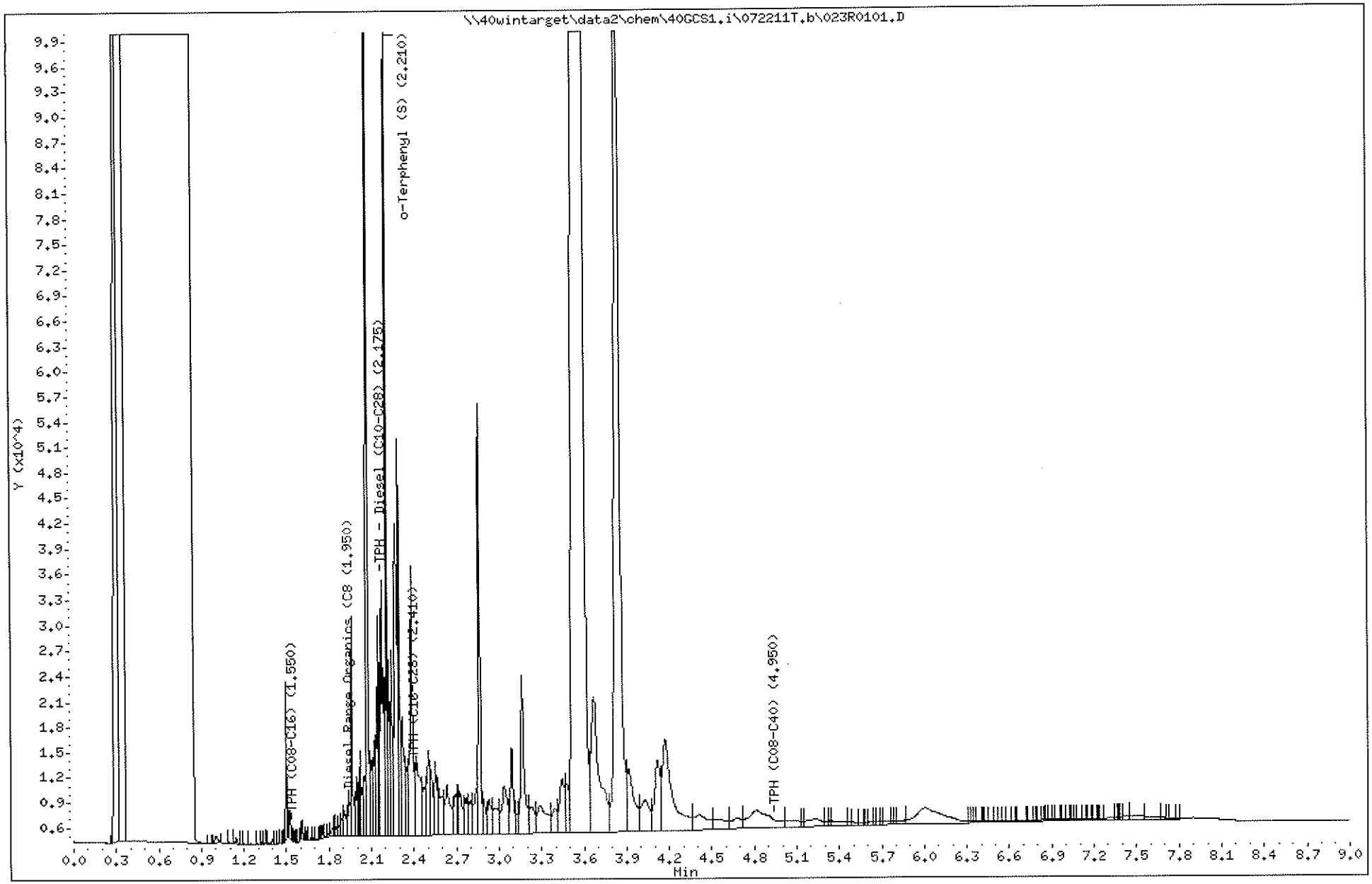
Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\023R0101.D
Date : 22-JUL-2011 12:22
Client ID: EWL T-10-F-COMPOSIT
Sample Info: 4046750019X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\023R0101.D
Lab Smp Id: 4046750019 Client Smp ID: EWL T-10-F-COMPOSIT
Inj Date : 22-JUL-2011 12:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750019X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 23
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.158	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			4085548	1053.11	459.97
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			529179	60.5827	26.46(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			579446	74.6115	32.58(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			569338	71.7905	31.35
$ 15 o-Terphenyl (S)	2.210	2.210	0.000	49611	9.94827	1.08

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-11-F-COMPOSITE TX
Lab ID: 4046750020
Collected: 01/05/11 14:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**27.7J**	mg/kg	48.5	24.2	4	07/18/11 12:00	07/22/11 12:34	
	TPH (C08-C16)	**<24.2**	mg/kg	48.5	24.2	4	07/18/11 12:00	07/22/11 12:34	
	TPH (C16-C28)	**<24.2**	mg/kg	48.5	24.2	4	07/18/11 12:00	07/22/11 12:34	
	TPH (C08-C40)	**441**	mg/kg	48.5	24.2	4	07/18/11 12:00	07/22/11 12:34	2q
	TPH - Diesel (C10-C28)	**26.2J**	mg/kg	48.5	24.2	4	07/18/11 12:00	07/22/11 12:34	L2
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/18/11 12:00	07/22/11 12:34	S4

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: FISH
Pace Project No.: 4046750

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-11-F-COMPOSITE TX
Lab ID: 4046750020
Collected: 01/05/11 14:05
Received: 06/07/11 10:00

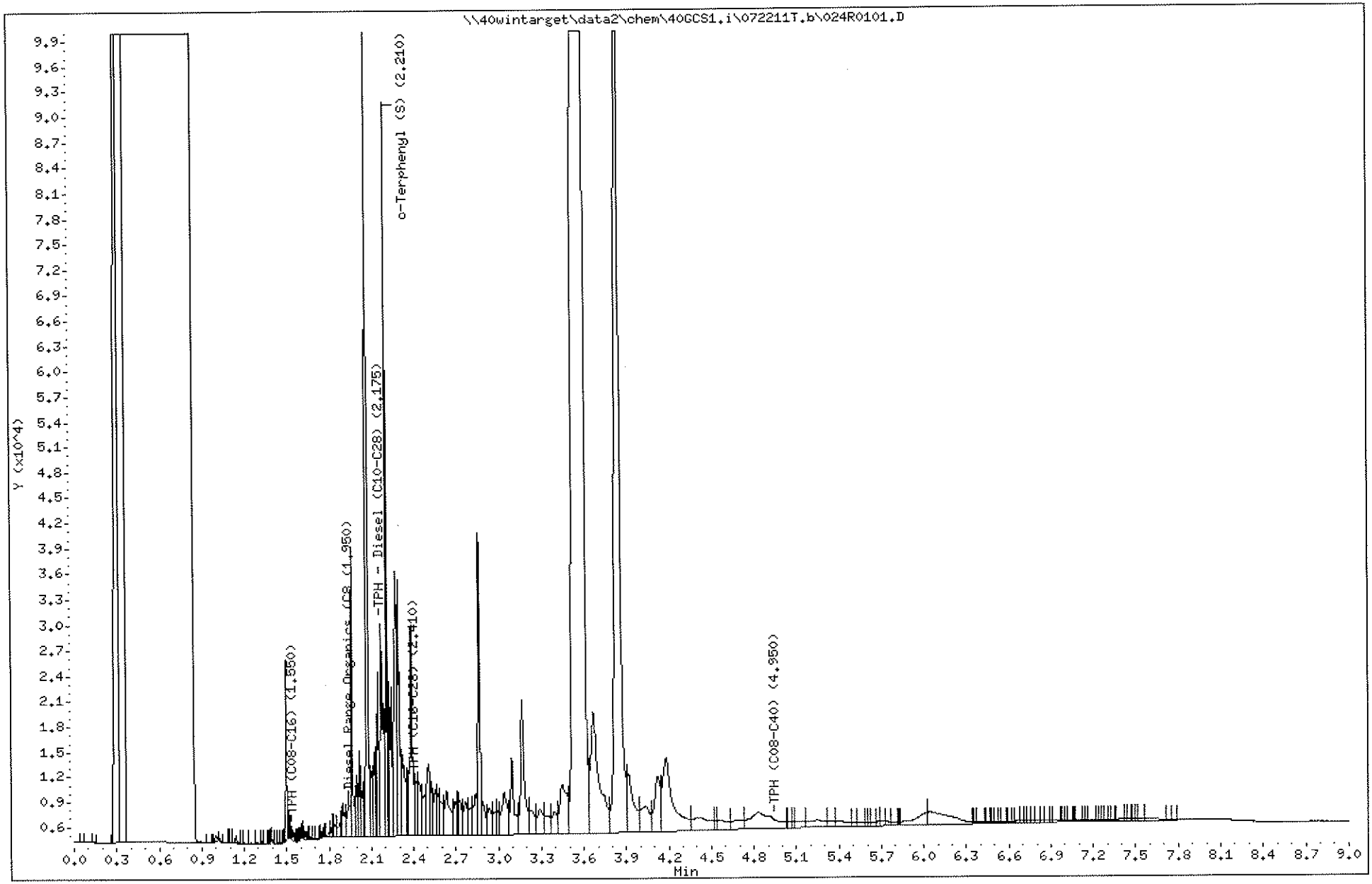
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	1.1	%			1		07/19/11 11:16	

Date: 05/14/2012 05:12 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\024R0101.D
Date : 22-JUL-2011 12:34
Client ID: EWL T-11-F-COMPOSIT
Sample Info: 4046750020X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\024R0101.D
Lab Smp Id: 4046750020 Client Smp ID: EWL T-11-F-COMPOSIT
Inj Date : 22-JUL-2011 12:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046750020X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 24
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.254	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3576227	910.970	441.46
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			462205	41.8912	20.30(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			516748	57.1134	27.67(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			505907	54.0878	26.21
$ 15 o-Terphenyl (S)	2.210	2.210	0.000	42233	8.46880	1.02

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046750

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	2 Diesel Range Organics (C8-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	3 High End Organics (C8-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	4 TPH (C08-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	5 TPH (C08-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	6 TPH (C10-C12)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	7 TPH (C10-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	8 TPH - Diesel (C10-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	9 TPH (C10-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	10 TPH (C12-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	11 Biota (C12-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	12 TPH (C16-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	13 TPH (C16-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	14 TPH (C20-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812

1033 of 1742

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 o-Terphenyl (S)	0.00025	0.00023	0.00019	0.00022	0.00018	0.00014	AVRG		0.00020		20.31495	<-

Pace Analytical Services, Inc

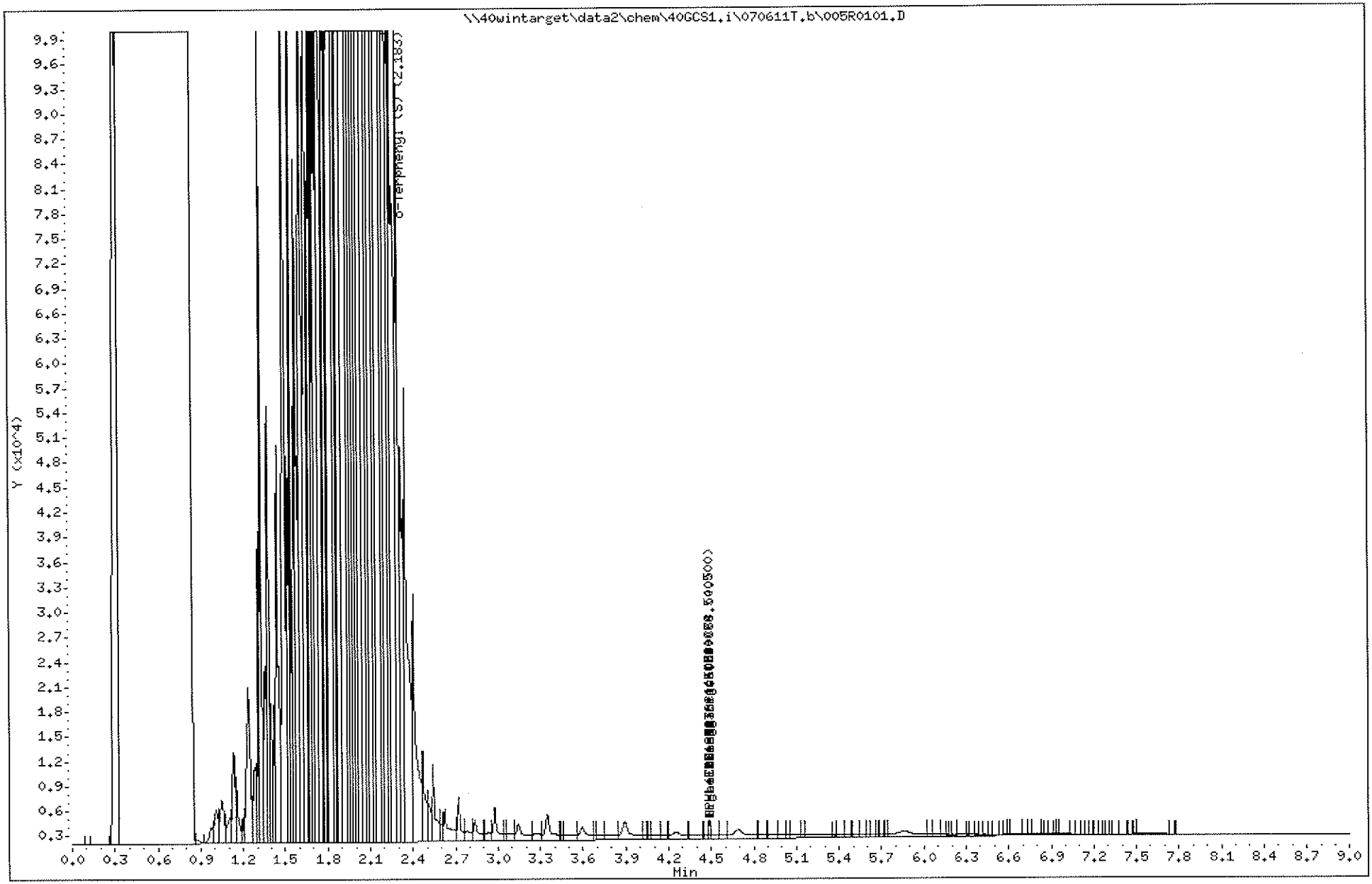
INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Date : 06-JUL-2011 11:06
Client ID:
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01
Inj Date : 06-JUL-2011 11:06
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:06 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			7455627	2000.00	1993.65(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	3 High End Organics (C8-C34)	1.050-7.950			7455627	2000.00	1993.65
S	4 TPH (C08-C36)	1.050-7.950			7455627	2000.00	1993.65
S	5 TPH (C08-C40)	1.050-7.950			7455627	2000.00	1993.65
S	6 TPH (C10-C12)	1.050-7.950			7455627	2000.00	1993.65
S	7 TPH (C10-C20)	1.050-7.950			7455627	2000.00	1993.65
S	8 TPH - Diesel (C10-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	9 TPH (C10-C40)	1.050-7.950			7455627	2000.00	1993.65
S	10 TPH (C12-C20)	1.050-7.950			7455627	2000.00	1993.65
S	11 Biota (C12-C36)	1.050-7.950			7455627	2000.00	1993.65
S	12 TPH (C16-C28)	1.970-2.800			7455627	2000.00	1993.65(T)
S	13 TPH (C16-C40)	1.050-7.950			7455627	2000.00	1993.65
S	14 TPH (C20-C34)	1.050-7.950			7455627	2000.00	1993.65
$	15 o-Terphenyl (S)	2.183	2.183	0.000	359479	50.0000	72.08

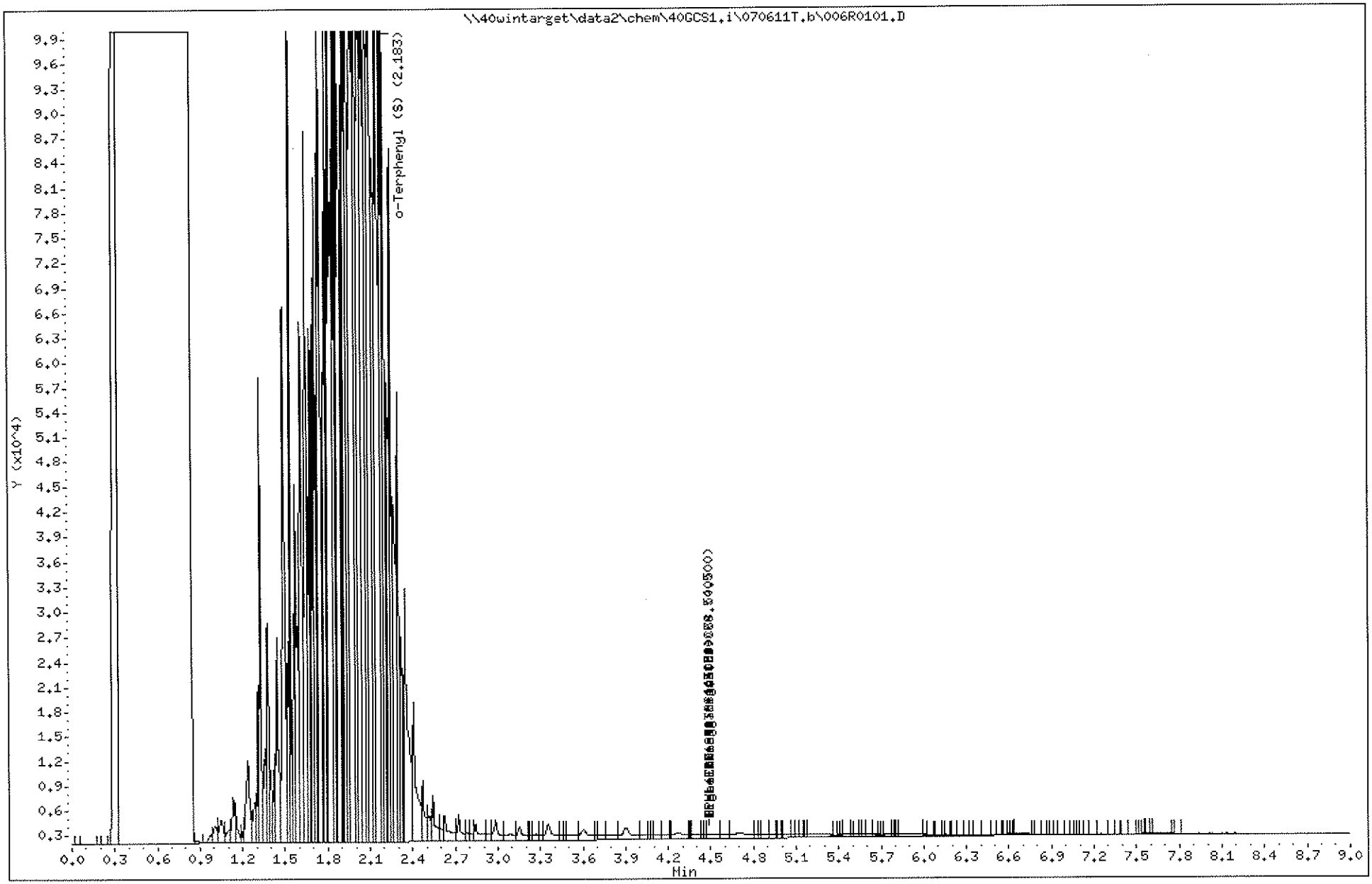
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Date : 06-JUL-2011 11:16
Client ID:
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02
Inj Date : 06-JUL-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:16 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

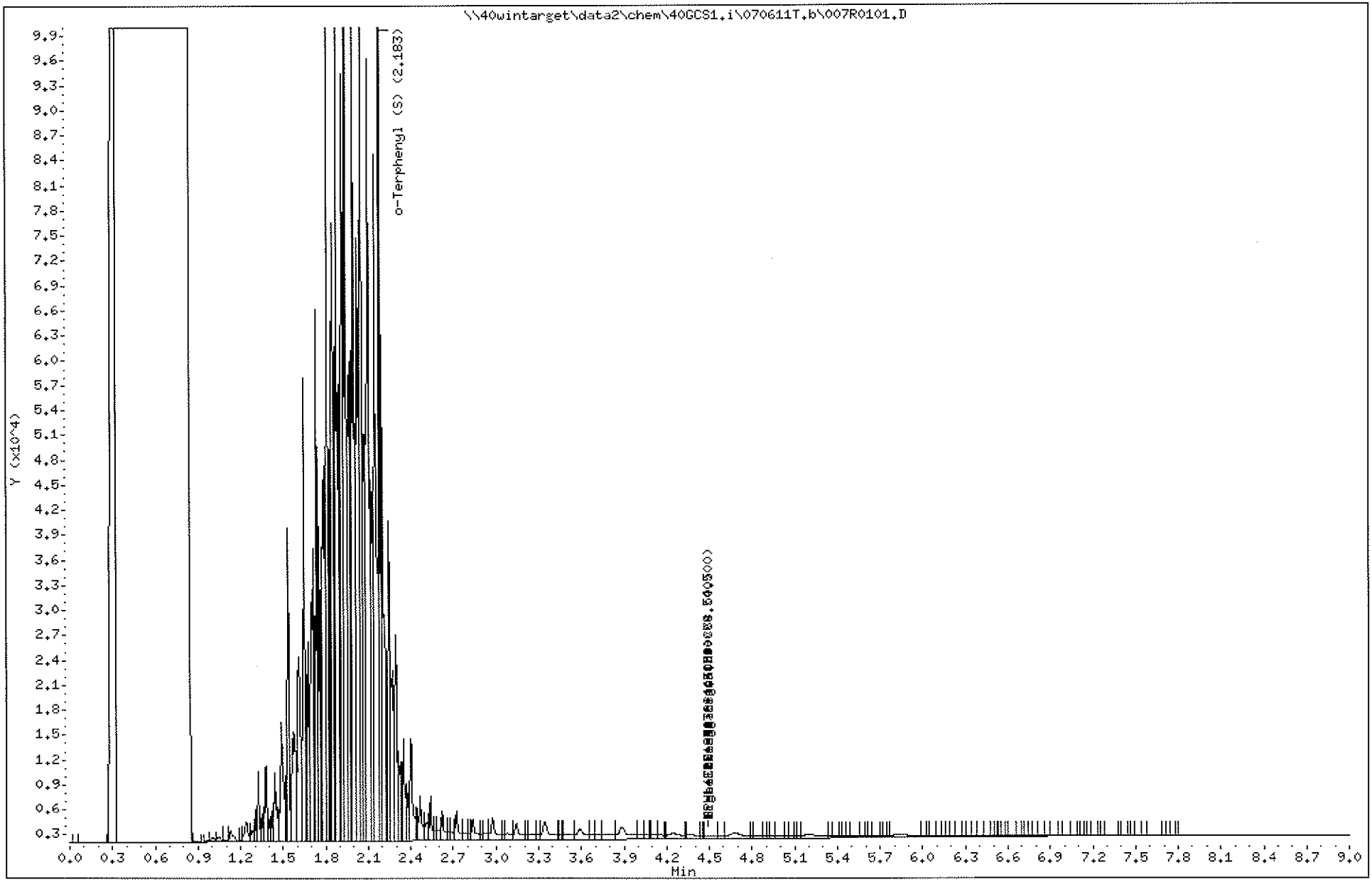
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			3937229	1000.00	1011.72(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S	3 High End Organics (C8-C34)	1.050-7.950			3937229	1000.00	1011.72
S	4 TPH (C08-C36)	1.050-7.950			3937229	1000.00	1011.72
S	5 TPH (C08-C40)	1.050-7.950			3937229	1000.00	1011.72
S	6 TPH (C10-C12)	1.050-7.950			3937229	1000.00	1011.72
S	7 TPH (C10-C20)	1.050-7.950			3937229	1000.00	1011.72
S	8 TPH - Diesel (C10-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S	9 TPH (C10-C40)	1.050-7.950			3937229	1000.00	1011.72
S	10 TPH (C12-C20)	1.050-7.950			3937229	1000.00	1011.72
S	11 Biota (C12-C36)	1.050-7.950			3937229	1000.00	1011.72
S	12 TPH (C16-C28)	1.970-2.800			3937229	1000.00	1011.72(T)
S	13 TPH (C16-C40)	1.050-7.950			3937229	1000.00	1011.72
S	14 TPH (C20-C34)	1.050-7.950			3937229	1000.00	1011.72
$	15 o-Terphenyl (S)	2.183	2.183	0.000	281119	50.0000	56.37

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Date : 06-JUL-2011 11:28
Client ID:
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Lab Smp Id: 500 2860-31-14
Inj Date : 06-JUL-2011 11:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:28 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			2026692	500.000	478.51(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			2026692	500.000	478.51(T)
S	3 High End Organics (C8-C34)	1.050-7.950			2026692	500.000	478.51
S	4 TPH (C08-C36)	1.050-7.950			2026692	500.000	478.51
S	5 TPH (C08-C40)	1.050-7.950			2026692	500.000	478.51
S	6 TPH (C10-C12)	1.050-7.950			2026692	500.000	478.51
S	7 TPH (C10-C20)	1.050-7.950			2026692	500.000	478.51
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2026692	500.000	478.51(T)
S	9 TPH (C10-C40)	1.050-7.950			2026692	500.000	478.51
S	10 TPH (C12-C20)	1.050-7.950			2026692	500.000	478.51
S	11 Biota (C12-C36)	1.050-7.950			2026692	500.000	478.51
S	12 TPH (C16-C28)	1.970-2.800			2026692	500.000	478.51(T)
S	13 TPH (C16-C40)	1.050-7.950			2026692	500.000	478.51
S	14 TPH (C20-C34)	1.050-7.950			2026692	500.000	478.51
$	15 o-Terphenyl (S)	2.183	2.183	0.000	228999	50.0000	45.92

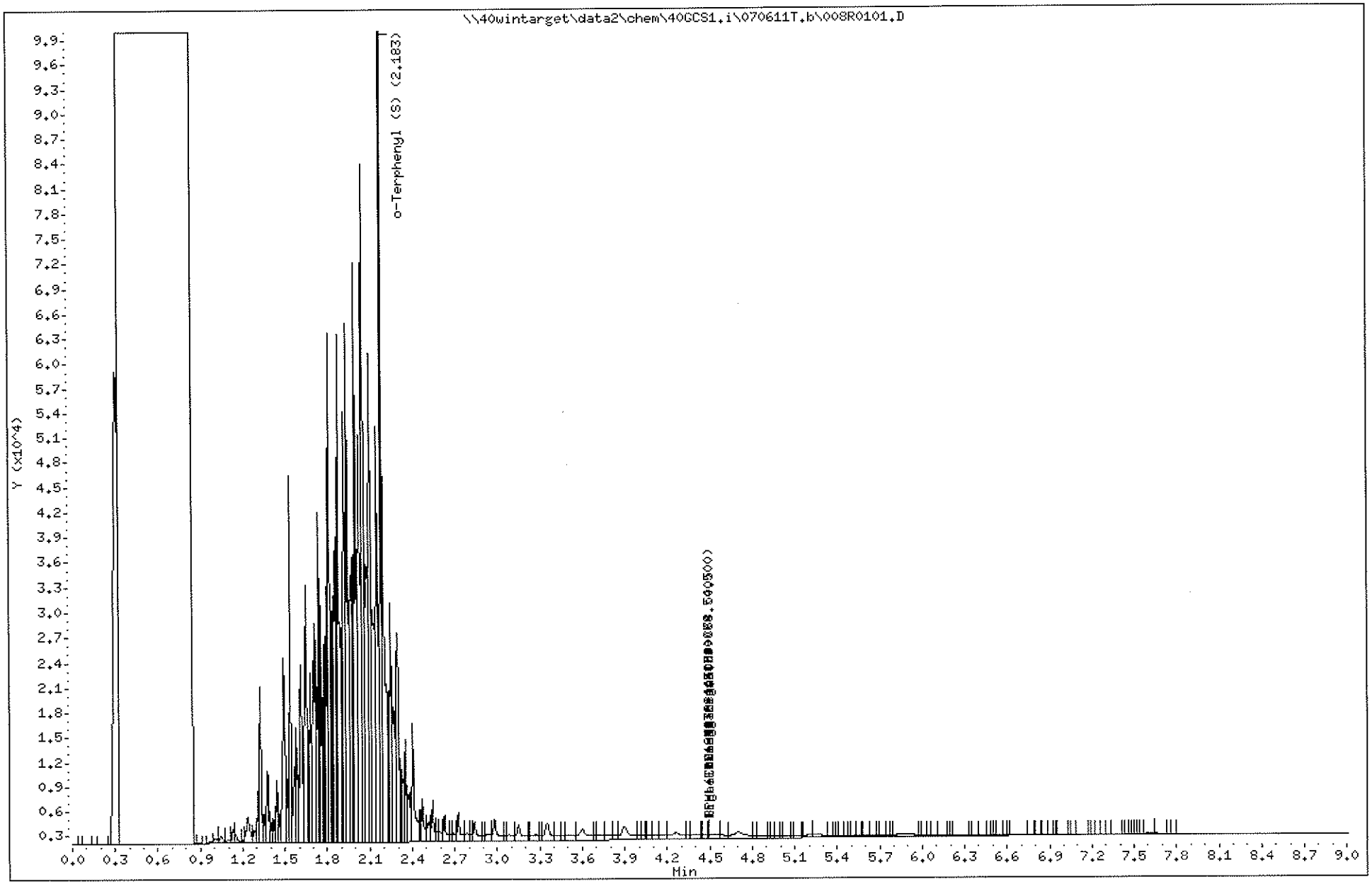
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Date : 06-JUL-2011 11:41
Client ID:
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Lab Smp Id: 250 2860-30-13
Inj Date : 06-JUL-2011 11:41
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:41 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			1423911	250.000	310.28(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	3 High End Organics (C8-C34)	1.050-7.950			1423911	250.000	310.28
S	4 TPH (C08-C36)	1.050-7.950			1423911	250.000	310.28
S	5 TPH (C08-C40)	1.050-7.950			1423911	250.000	310.28
S	6 TPH (C10-C12)	1.050-7.950			1423911	250.000	310.28
S	7 TPH (C10-C20)	1.050-7.950			1423911	250.000	310.28
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	9 TPH (C10-C40)	1.050-7.950			1423911	250.000	310.28
S	10 TPH (C12-C20)	1.050-7.950			1423911	250.000	310.28
S	11 Biota (C12-C36)	1.050-7.950			1423911	250.000	310.28
S	12 TPH (C16-C28)	1.970-2.800			1423911	250.000	310.28(T)
S	13 TPH (C16-C40)	1.050-7.950			1423911	250.000	310.28
S	14 TPH (C20-C34)	1.050-7.950			1423911	250.000	310.28
$	15 o-Terphenyl (S)	2.183	2.183	0.000	269129	50.0000	53.96

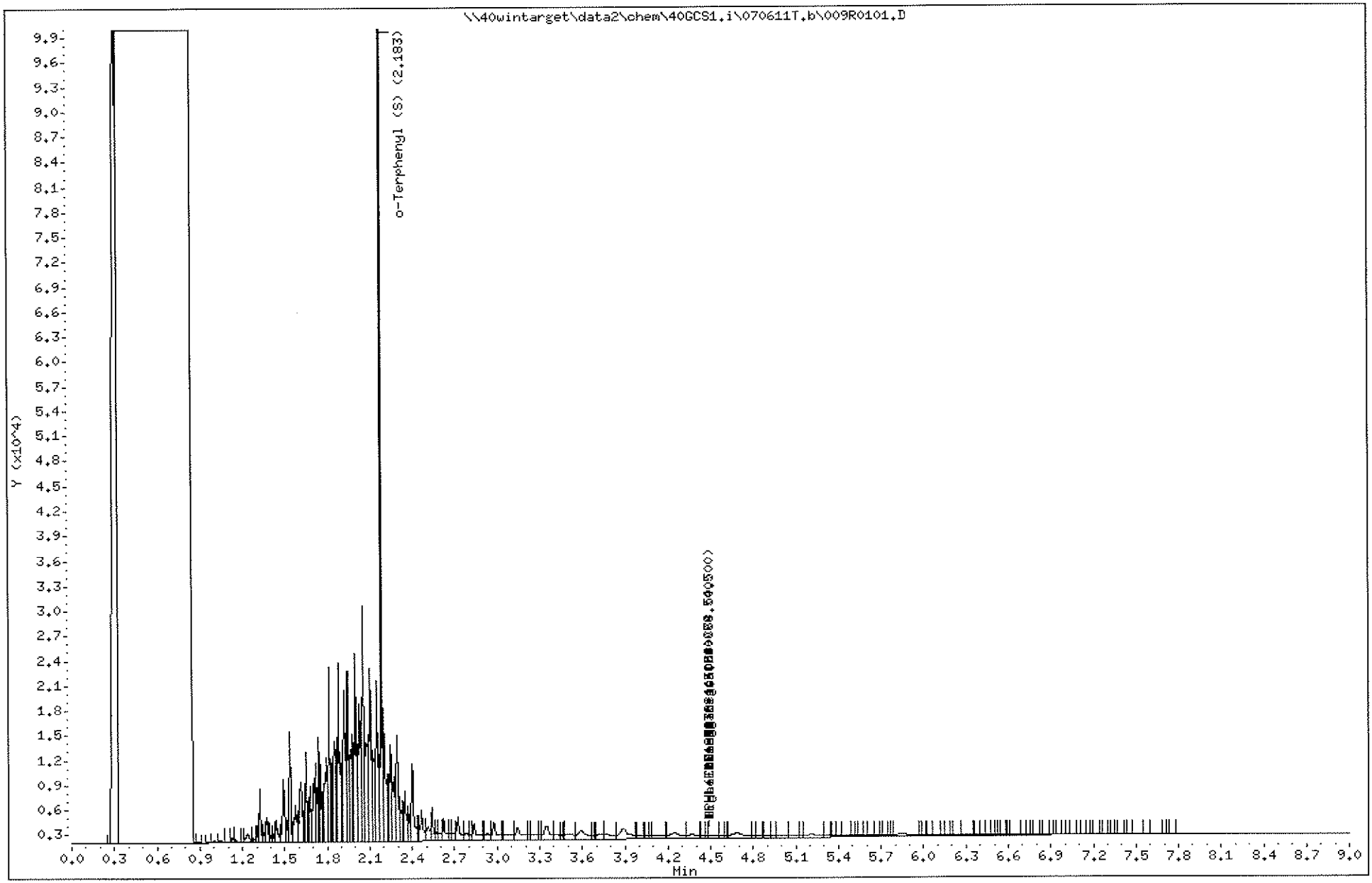
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Date : 06-JUL-2011 11:53
Client ID:
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Lab Smp Id: 100 2860-30-14
Inj Date : 06-JUL-2011 11:53
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 11:53 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-2.020			587718	100.000	76.92(Ta)
S 2	Diesel Range Organics (C8-C28)	1.500-2.800			587718	100.000	76.92(Ta)
S 3	High End Organics (C8-C34)	1.050-7.950			587718	100.000	76.92(a)
S 4	TPH (C08-C36)	1.050-7.950			587718	100.000	76.92(a)
S 5	TPH (C08-C40)	1.050-7.950			587718	100.000	76.92(a)
S 6	TPH (C10-C12)	1.050-7.950			587718	100.000	76.92(a)
S 7	TPH (C10-C20)	1.050-7.950			587718	100.000	76.92(a)
S 8	TPH - Diesel (C10-C28)	1.500-2.800			587718	100.000	76.92(T)
S 9	TPH (C10-C40)	1.050-7.950			587718	100.000	76.92(a)
S 10	TPH (C12-C20)	1.050-7.950			587718	100.000	76.92(a)
S 11	Biota (C12-C36)	1.050-7.950			587718	100.000	76.92(a)
S 12	TPH (C16-C28)	1.970-2.800			587718	100.000	76.92(Ta)
S 13	TPH (C16-C40)	1.050-7.950			587718	100.000	76.92(a)
S 14	TPH (C20-C34)	1.050-7.950			587718	100.000	76.92(a)
$ 15	o-Terphenyl (S)	2.183	2.183	0.000	216228	50.0000	43.35

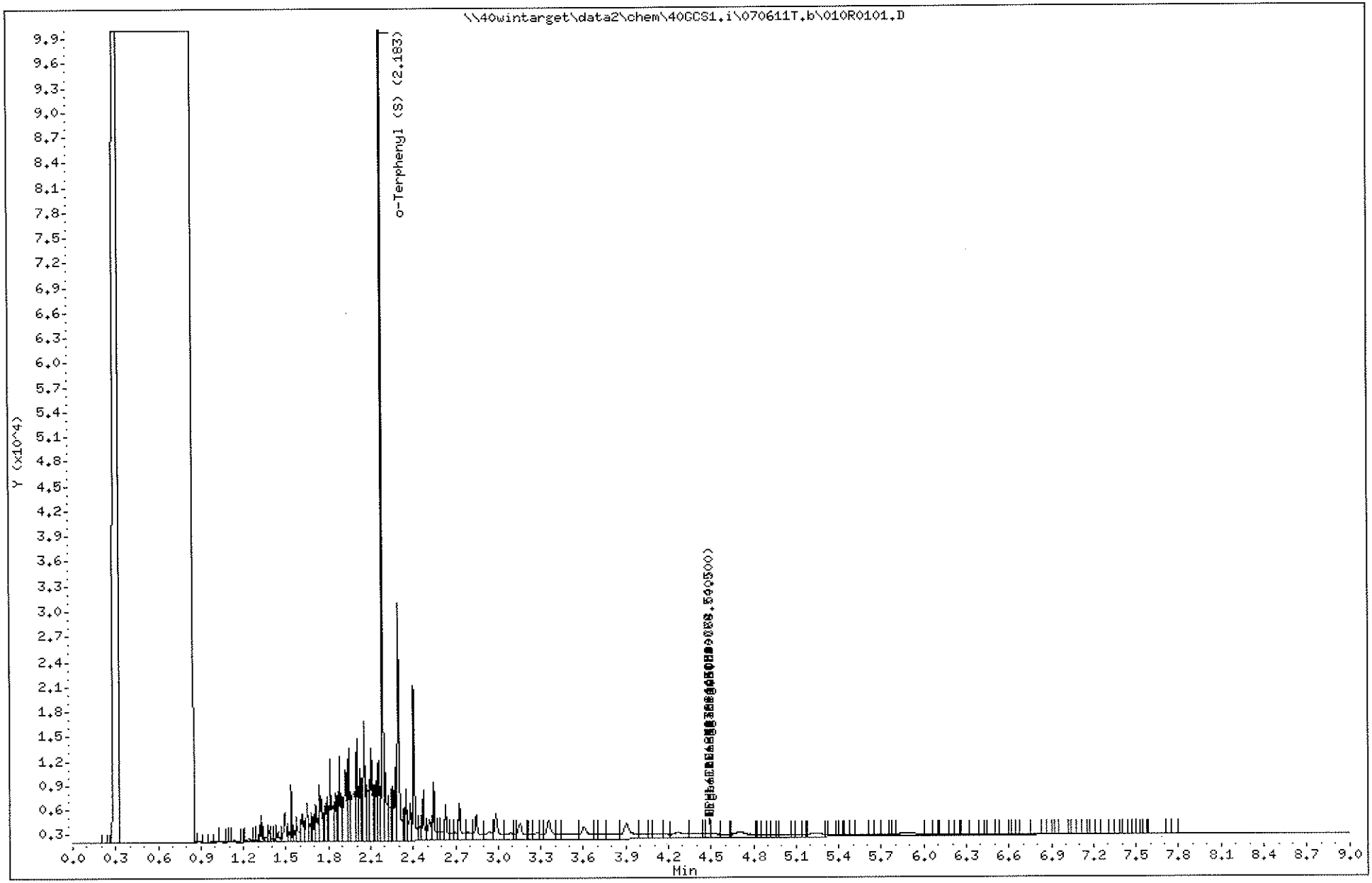
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Date : 06-JUL-2011 12:05
Client ID:
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Lab Smp Id: 50 2860-30-15
Inj Date : 06-JUL-2011 12:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			415643	50.0000	28.89(Ta)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			415643	50.0000	28.89(Ta)
S	3 High End Organics (C8-C34)	1.050-7.950			415643	50.0000	28.89(a)
S	4 TPH (C08-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	5 TPH (C08-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	6 TPH (C10-C12)	1.050-7.950			415643	50.0000	28.89(a)
S	7 TPH (C10-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.800			415643	50.0000	28.89(T)
S	9 TPH (C10-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	10 TPH (C12-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	11 Biota (C12-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	12 TPH (C16-C28)	1.970-2.800			415643	50.0000	28.89(Ta)
S	13 TPH (C16-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	14 TPH (C20-C34)	1.050-7.950			415643	50.0000	28.89(a)
$	15 o-Terphenyl (S)	2.183	2.183	0.000	199331	50.0000	39.97

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

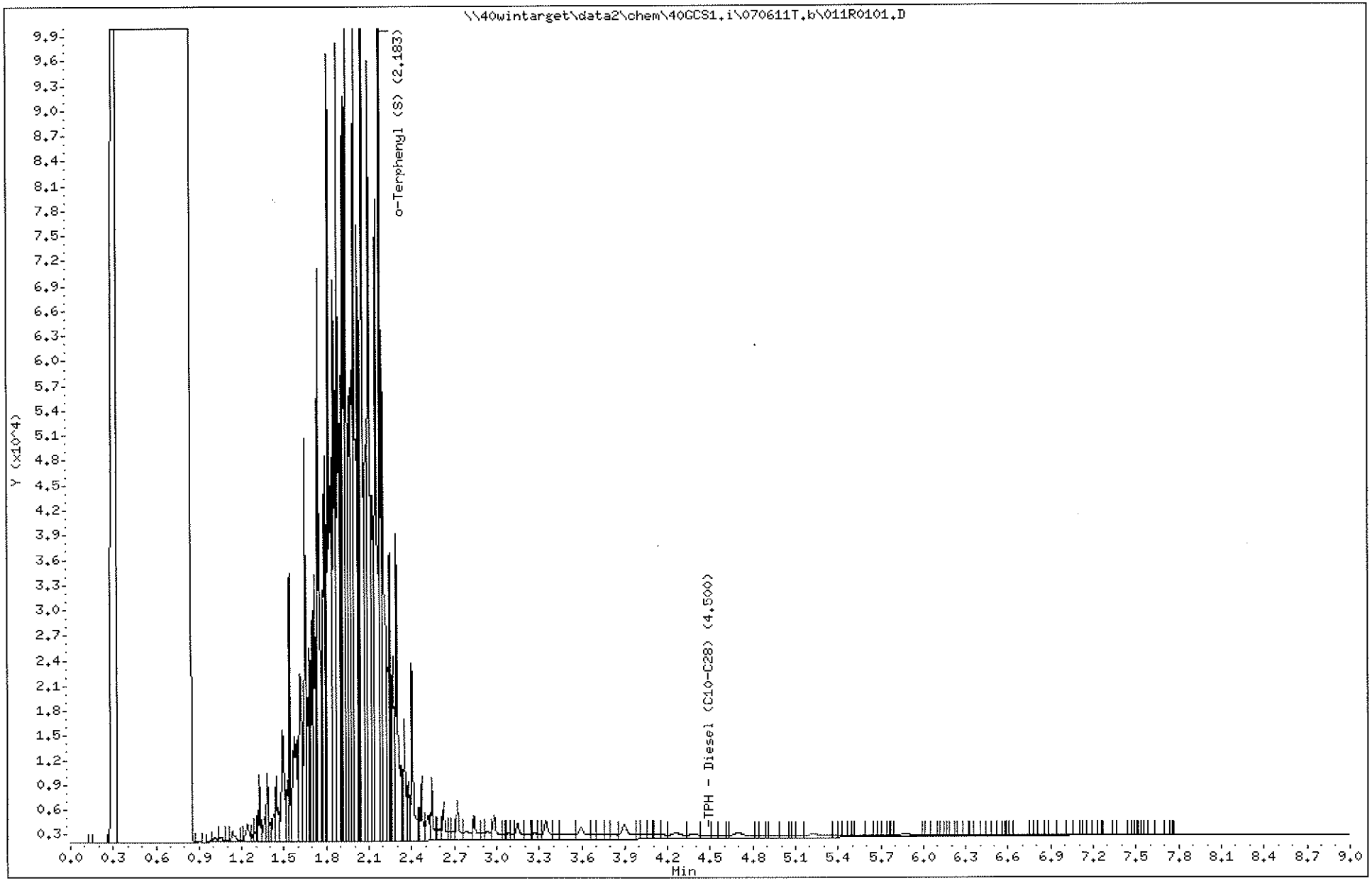
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 06-JUL-2011 12:17
Lab File ID: 011R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: WATER Init. Cal. Times: 11:06 12:05
Lab Sample ID: IC500 2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	467	0.00025	0.000	-6.54470	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	11.33103	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Date : 06-JUL-2011 12:17
Client ID:
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16
Inj Date : 06-JUL-2011 12:17
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1986415	500.000	467.27(T)
$ 15 o-Terphenyl (S)	2.183	2.183	0.000	223967	50.0000	44.91

QC Flag Legend

T - Target compound detected outside RT window.

Pace Analytical Services, Inc

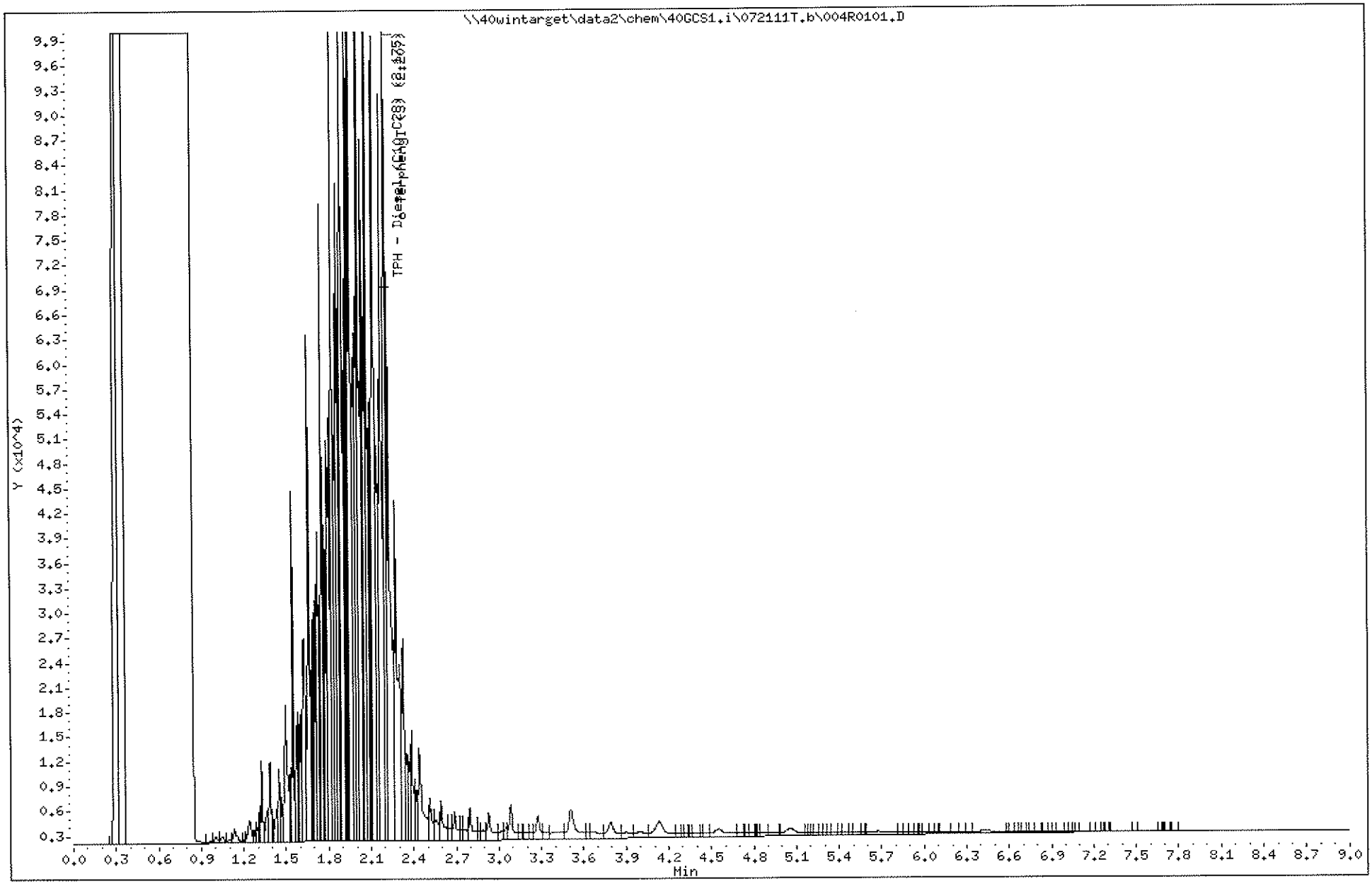
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 21-JUL-2011 07:27
Lab File ID: 004R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	495	0.00024	0.000	-0.92050	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	-2.27828	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\072111T.b\004R0101.D
Date : 21-JUL-2011 07:27
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072111T.b\004R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 21-JUL-2011 07:27
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m
Meth Date : 23-May-2012 13:17 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500	2.850		2087176	500.000	495.39
$ 15 o-Terphenyl (S)	2.206	2.196	0.010	255158	50.0000	51.16

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

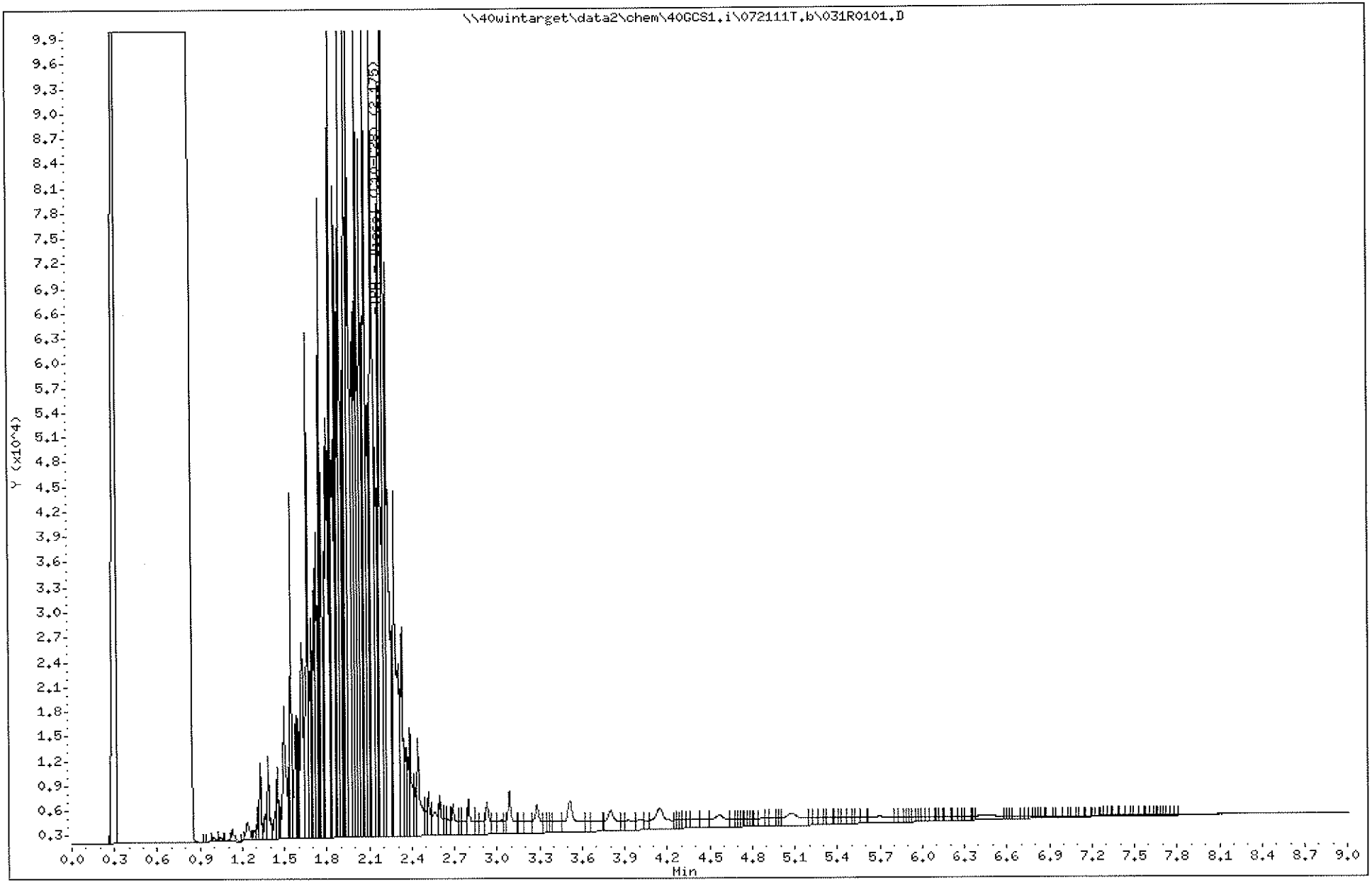
Instrument ID: 40GCS1.i Injection Date: 21-JUL-2011 14:40
Lab File ID: 031R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
S 8 TPH - Diesel (C10-C28)	500	561	0.00022	0.000	12.27104	15.00000	Linear	
$ 15 o-Terphenyl (S)	0.00020	++++	0.00000	0.000	++++	50.00000	Averaged	<-

Data File: \\40wintarget\data2\chem\40GCS1.i\072111T.b\031R0101.D
Date : 21-JUL-2011 14:40
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072111T.b\031R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 21-JUL-2011 14:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072111T.b\TPH.m
Meth Date : 23-May-2012 13:17 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			2323511	500.000	561.35
$ 15 o-Terphenyl (S)	Compound Not Detected.					

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

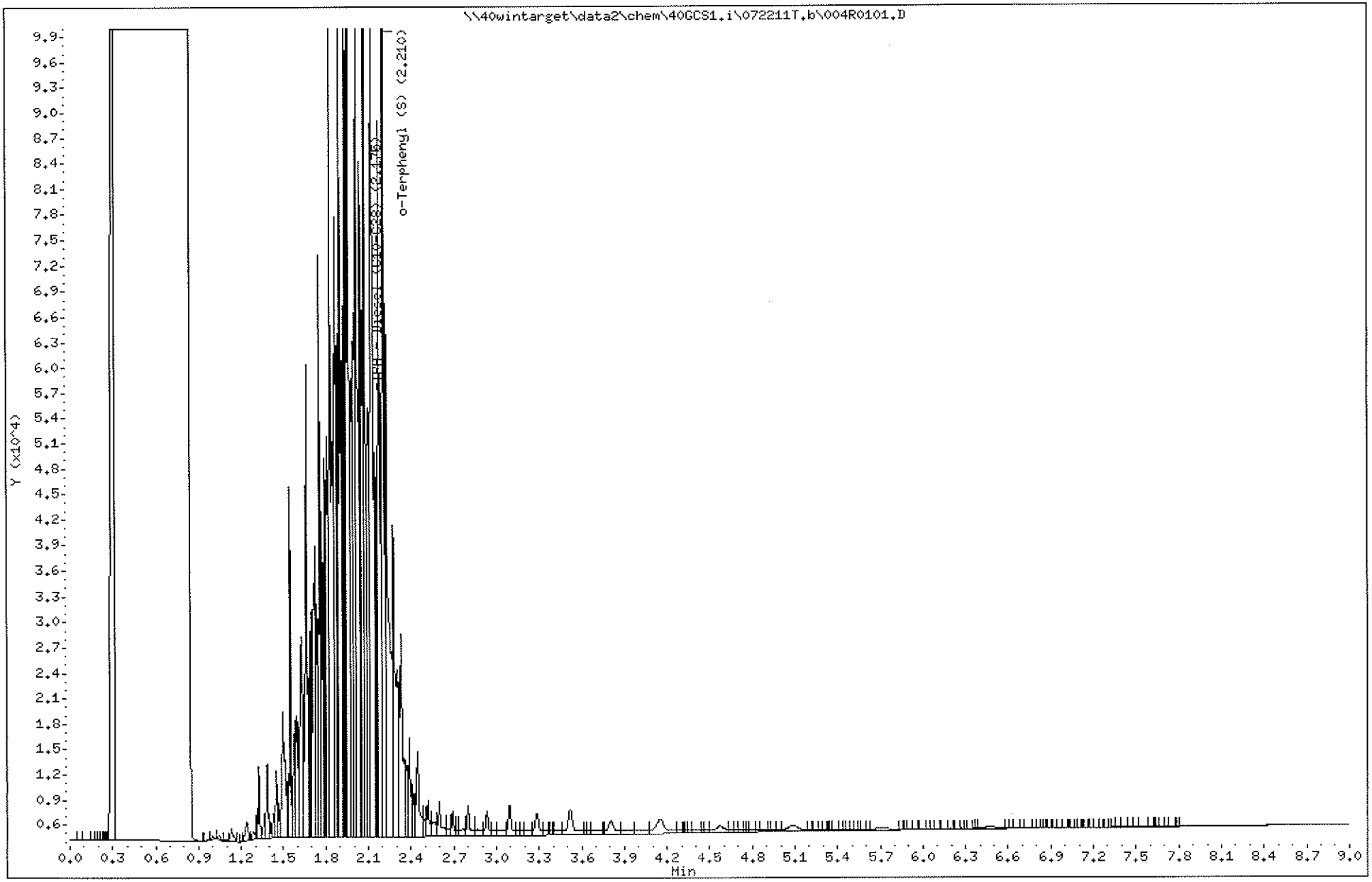
Instrument ID: 40GCS1.i Injection Date: 22-JUL-2011 07:50
Lab File ID: 004R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	460	0.00026	0.000	-8.06917	15.00000	Linear
$ 1S o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	0.11394	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\004R0101.D
Date : 22-JUL-2011 07:50
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\004R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 22-JUL-2011 07:50
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			1959103	500.000	459.65
$ 15 o-Terphenyl (S)	2.210	2.210	0.000	249061	50.0000	49.94

Pace Analytical Services, Inc

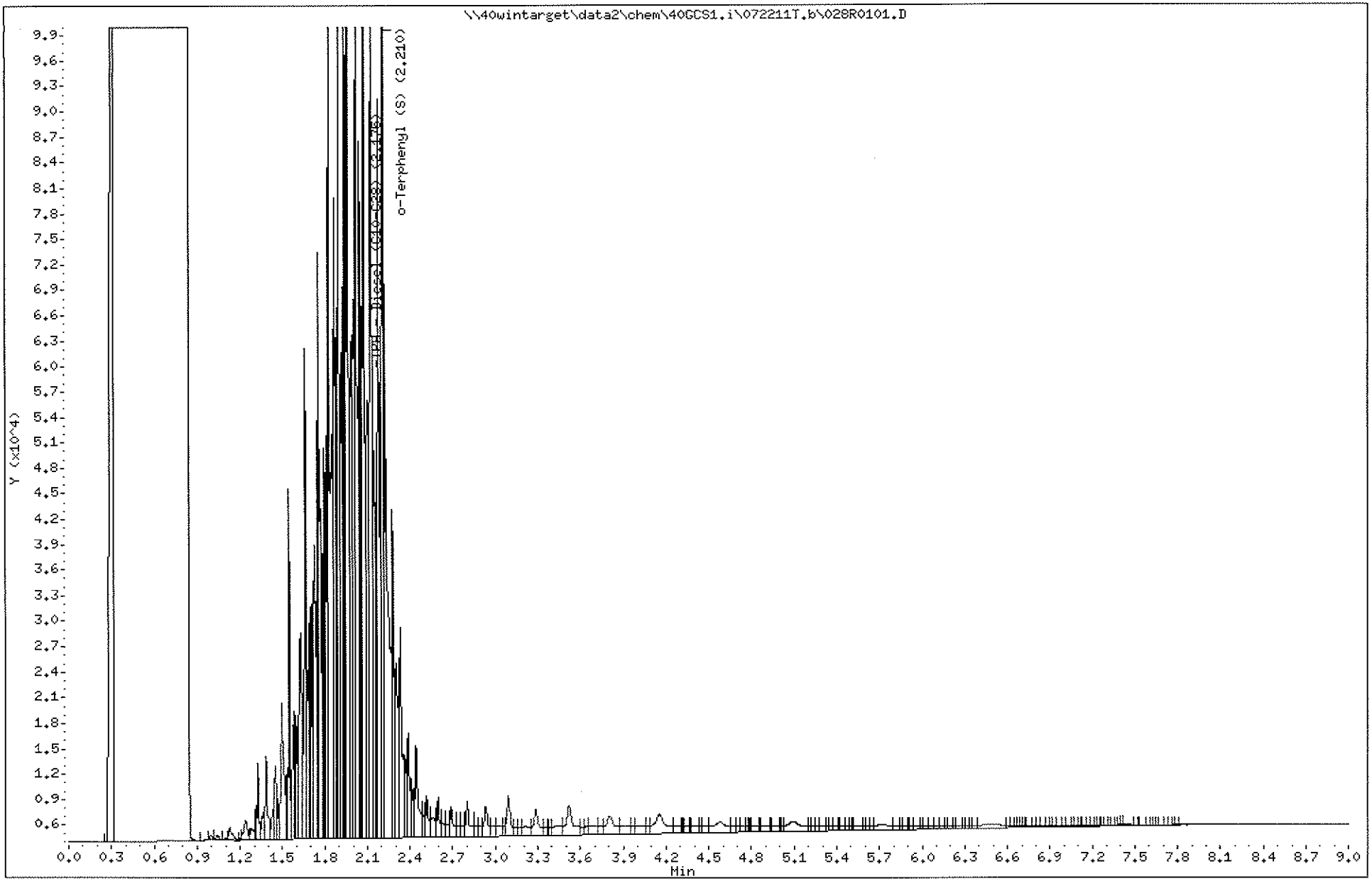
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 22-JUL-2011 14:03
Lab File ID: 028R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m

			CCAL	MIN		MAX	
COMPOUND	RRF / AMOUNT	RF500	RRF500	RRF	%D / %DRIFT	%D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	475	0.00025	0.000	-5.07598	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00019	0.00019	0.000	-3.04848	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\028R0101.D
Date : 22-JUL-2011 14:03
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\028R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 22-JUL-2011 14:03
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 08-May-2012 07:25 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500	2.850		2012728	500.000	474.62
$ 15 o-Terphenyl (S)	2.210	2.210	0.000	257185	50.0000	51.57

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046750

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: FISH
Pace Project No.: 4046750

QB Batch: OEXT/11869 **Prepared:** 07/18/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4046750001, 4046750002, 4046750003, 4046750004, 4046750005, 4046750006, 4046750007, 4046750008, 4046750009, 4046750010, 4046750011, 4046750012, 4046750013, 4046750014, 4046750015, 4046750016, 4046750017, 4046750018, 4046750019, 4046750020

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<6.7	mg/kg	13.3	6.7	07/22/11	
	TPH (C08-C16)	<6.7	mg/kg	13.3	6.7	07/22/11	
	TPH (C08-C40)	121	mg/kg	13.3	6.7	07/22/11	2q
	TPH (C16-C28)	<6.7	mg/kg	13.3	6.7	07/22/11	
	TPH - Diesel (C10-C28)	<6.7	mg/kg	13.3	6.7	07/22/11	

Type	Sample	Matrix
BLANK	478711	Tissue

REPORT OF LABORATORY ANALYSIS

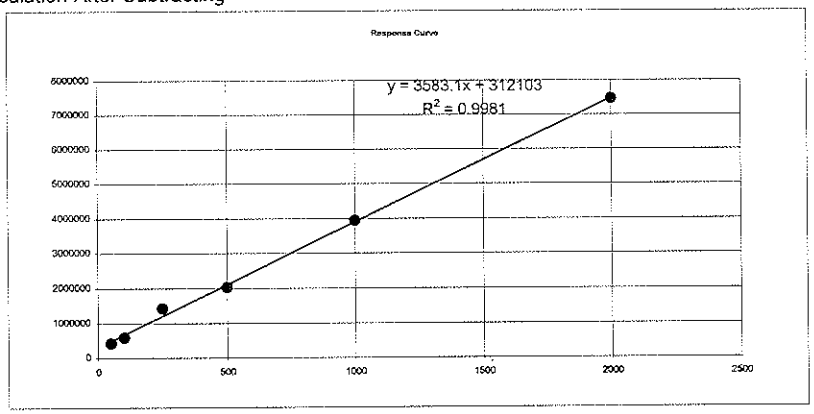
SampleID: 478711 File: 06R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.963	75313	
2.077	66792	
2.140	45581	
2.863	115272	

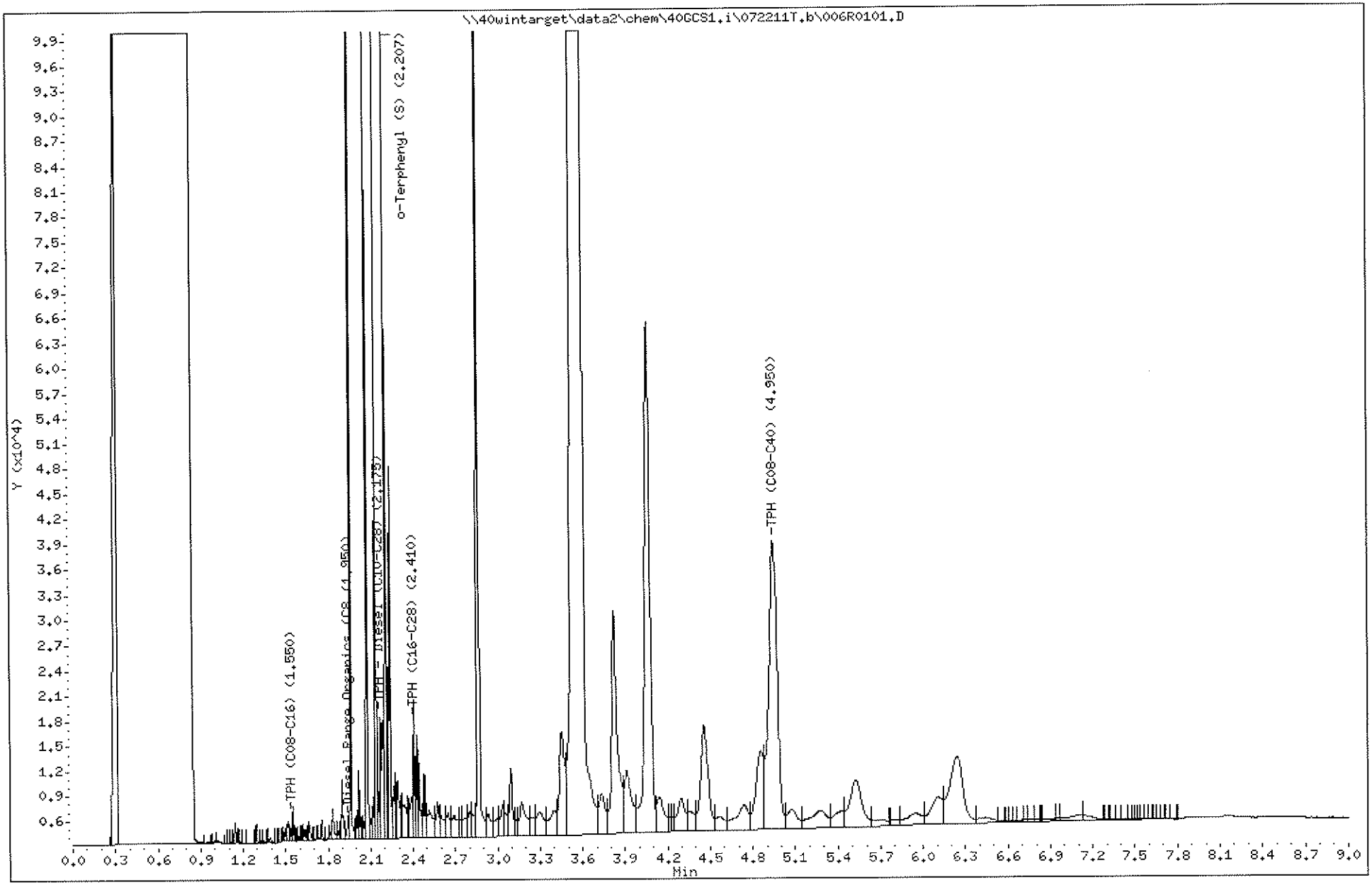
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	110913	75313	-77.1681
Diesel Range Organics (	415541	187686	-23.5125
TPH - Diesel (C10-C28)	410692	187686	-24.8658
TPH (C16-C28)	313000	187686	-52.1302
TPH (C08-C40)	3872737	302958	909.1708

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\006R0101.D
Date : 22-JUL-2011 08:54
Client ID: MB
Sample Info: 478711X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\006R0101.D
Lab Smp Id: 478711 Client Smp ID: MB
Inj Date : 22-JUL-2011 08:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 478711X2
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 14-May-2012 09:10 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3872737	993.722	132.49
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.970-2.850			313000	0.25025	0.03(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			415540	28.8677	3.84(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.850			410691	27.5144	3.66
$ 15 o-Terphenyl (S)	2.206	2.210	-0.004	81283	16.2993	1.08

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\006R0101.D
Lab Smp Id: 478711 Client Smp ID: MB
Inj Date : 22-JUL-2011 08:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 478711X2
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 14-May-2012 09:10 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.317	177651	114220	0.643	0.03		
0.367	574876651	88033376	0.153	99.10		
0.947	261	174	0.666	0.00		
1.000	193	172	0.889	0.00		
1.023	297	246	0.828	0.00		
1.550	110913	227637	2.052	0.01	S	1 TPH (C08-C16)
1.950	415541	664226	1.598	0.07	S	2 Diesel Range Organi
1.093	24	34	1.393			
1.117	19	35	1.852			
1.143	1571	2354	1.499			
1.167	46	114	2.489			
1.180	32	57	1.804			
1.203	62	89	1.433			
1.240	51	60	1.181			
1.293	1370	2240	1.635			
1.323	132	271	2.047			
1.347	140	212	1.512			
1.373	40	77	1.949			
1.390	378	496	1.313			
1.443	20	55	2.806			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.460	51	119	2.338			
1.477	44	121	2.750			
1.497	870	1537	1.767			
2.175	410692	656355	1.598	0.07	S	8 TPH - Diesel (C10-C
1.520	1995	2262	1.134			
1.540	861	1510	1.754			
1.550	2373	4018	1.693			
1.567	116	252	2.182			
1.580	42	134	3.168			
1.597	268	515	1.922			
1.610	269	608	2.264			
1.623	176	386	2.188			
1.633	731	1196	1.635			
1.657	397	769	1.939			
1.670	1121	1696	1.513			
1.707	76	133	1.762			
1.720	174	340	1.953			
1.737	156	210	1.348			
1.753	1289	2389	1.854			
1.797	118	145	1.225			
1.813	553	879	1.588			
1.833	3374	3642	1.080			
1.867	747	1016	1.359			
1.887	826	1436	1.739			
1.900	4976	7147	1.436			
1.940	1742	2762	1.586			
1.963	75313	172300	2.288			
1.993	1082	1348	1.245			
2.010	1888	3339	1.768			
2.020	4773	8241	1.727			
2.043	629	1093	1.737			
2.057	1257	2027	1.613			
2.077	66792	118291	1.771			
2.103	1173	2320	1.978			
2.123	4596	4965	1.080			
2.140	45581	112341	2.465			
2.163	3584	5676	1.584			
2.173	20532	14642	0.713			
2.223	10454	20585	1.969			
2.243	27842	44229	1.589			
2.267	4648	6314	1.359			
2.277	5014	6892	1.375			
2.290	8013	6926	0.864			
2.320	4023	4489	1.116			
2.333	6567	4043	0.616			
2.363	3916	5149	1.315			
2.390	5751	4952	0.861			
2.407	10458	16645	1.592			
2.423	7706	12351	1.603			
2.440	10037	10543	1.050			
2.480	6354	7606	1.197			
2.517	9809	3225	0.329			
2.577	5245	4238	0.808			
2.597	5454	2617	0.480			
2.650	5772	2845	0.493			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.690	8371	2652	0.317				
2.737	2020	2031	1.005				
2.767	4362	2289	0.525				
2.800	5209	3070	0.589				
2.823	4089	2636	0.645				
2.207	81284	182100	2.240	0.01	$	15	o-Terphenyl (S)
2.410	313000	450610	1.440	0.05	S	12	TPH (C16-C28)
4.950	3872737	1877121	0.485	0.66	S	5	TPH (C08-C40)
2.863	115272	119933	1.040				
2.930	6478	2683	0.414				
2.993	4727	2140	0.453				
3.033	7209	3819	0.530				
3.057	3606	2817	0.781				
3.093	12625	8237	0.652				
3.127	2675	1951	0.729				
3.167	13217	4018	0.304				
3.247	5002	2134	0.427				
3.297	10890	2777	0.255				
3.393	10333	2951	0.286				
3.453	31129	12393	0.398				
3.600	2464153	837885	0.340				
3.733	15710	4894	0.312				
3.823	75688	26530	0.351				
3.913	26606	7595	0.285				
4.067	166060	60752	0.366				
4.143	15488	4257	0.275				
4.207	2742	1725	0.629				
4.237	2019	1693	0.839				
4.293	14456	3936	0.272				
4.353	7842	2328	0.297				
4.457	47978	12634	0.263				
4.563	7591	1612	0.212				
4.737	18449	3035	0.165				
4.857	37028	9493	0.256				
4.947	143846	34221	0.238				
5.070	11707	2271	0.194				
5.277	17262	2024	0.117				
5.420	9824	1918	0.195				
5.523	34377	5620	0.163				
5.677	5161	793	0.154				
5.763	349	579	1.660				
5.830	2613	653	0.250				
5.947	10315	1371	0.133				
6.103	19540	3296	0.169				
6.240	54149	8184	0.151				
6.433	4829	656	0.136				
6.537	585	245	0.419				
6.577	85	216	2.538				
6.600	298	215	0.721				
6.627	342	216	0.631				
6.657	386	218	0.564				
6.707	681	246	0.361				
6.723	355	260	0.732				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.750	775	268	0.346		
6.793	489	230	0.470		
6.823	209	212	1.016		
6.843	126	214	1.704		
6.937	1482	338	0.228		
6.960	559	358	0.641		
7.100	4790	684	0.143		
7.130	3436	672	0.196		
7.280	89	147	1.644		
7.307	256	148	0.578		
7.323	113	146	1.289		
7.340	322	151	0.468		
7.367	278	145	0.522		
7.403	324	133	0.410		
7.447	172	101	0.588		
7.480	128	95	0.741		
7.507	105	90	0.855		
7.530	101	88	0.869		
7.557	131	83	0.636		
7.573	112	85	0.761		
7.597	144	83	0.574		
7.623	50	86	1.710		
7.647	121	90	0.746		
7.673	161	111	0.691		
7.700	190	127	0.670		
7.713	104	135	1.293		
7.740	231	148	0.642		
7.757	409	152	0.372		
7.800	116	151	1.301		
	579009074	90207409		100.000	

Total unknown % area = 99.13

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: FISH
Pace Project No.: 4046750

QB Batch: OEXT/11876 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4046750001, 4046750002, 4046750003, 4046750004, 4046750005, 4046750006, 4046750007, 4046750008, 4046750009, 4046750010, 4046750011, 4046750012, 4046750013, 4046750014, 4046750015, 4046750016, 4046750017, 4046750018, 4046750019, 4046750020

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.48	%			07/19/11	

Type	Sample	Matrix
BLANK	478853	Tissue

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: FISH
Pace Project No.: 4046750

QB Batch: OEXT/11869
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/18/11
LCSD Prepared: 07/18/11

Analyte	LCS % Rec	LCSD % Rec	QC Limits RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	51	43	17	50-150	20	66.7	34.0	28.7	mg/kg	07/22/11	07/22/11		L0
TPH (C08-C16)	18	10		50-150	20	66.7	12.2J	<13.3	mg/kg	07/22/11	07/22/11	L0	L0
TPH (C08-C40)	282	327	15	50-150	20	66.7	188	218	mg/kg	07/22/11	07/22/11	1q	1q
TPH (C16-C28)	10	2		50-150	20	66.7	<10	<13.3	mg/kg	07/22/11	07/22/11	L0	L0
TPH - Diesel (C10-C28)	49	40	20	50-150	20	66.7	32.8	26.9	mg/kg	07/22/11	07/22/11	L0	L0

Type	Sample
LCS	478712
LCSD	478713

REPORT OF LABORATORY ANALYSIS

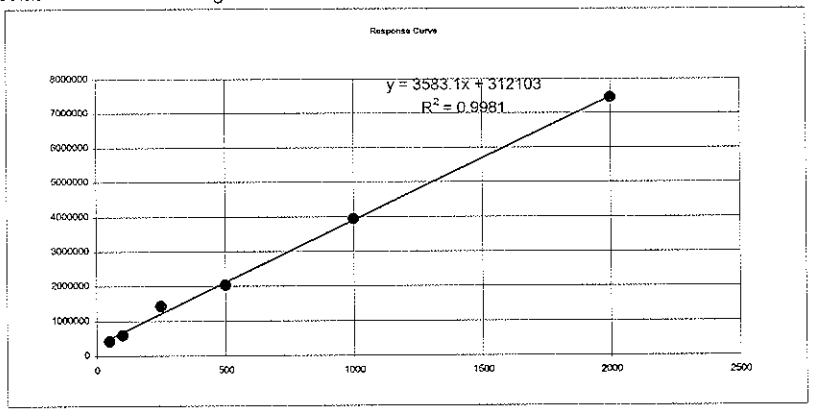
SampleID: 478712 File: 05R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.960	94354	
2.077	103212	
2.140	65053	
2.863	95563	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	625537	94354	61.14201
Diesel Range Organics (	1183745	262619	169.9695
TPH - Diesel (C10-C28)	1162209	262619	163.9592
TPH (C16-C28)	697088	262619	34.15051
TPH (C08-C40)	4036801	358182	939.5465

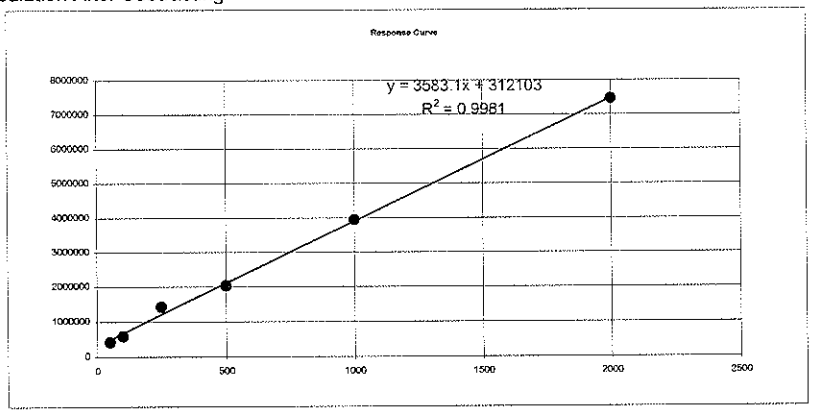
SampleID: 478713 File: 07R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



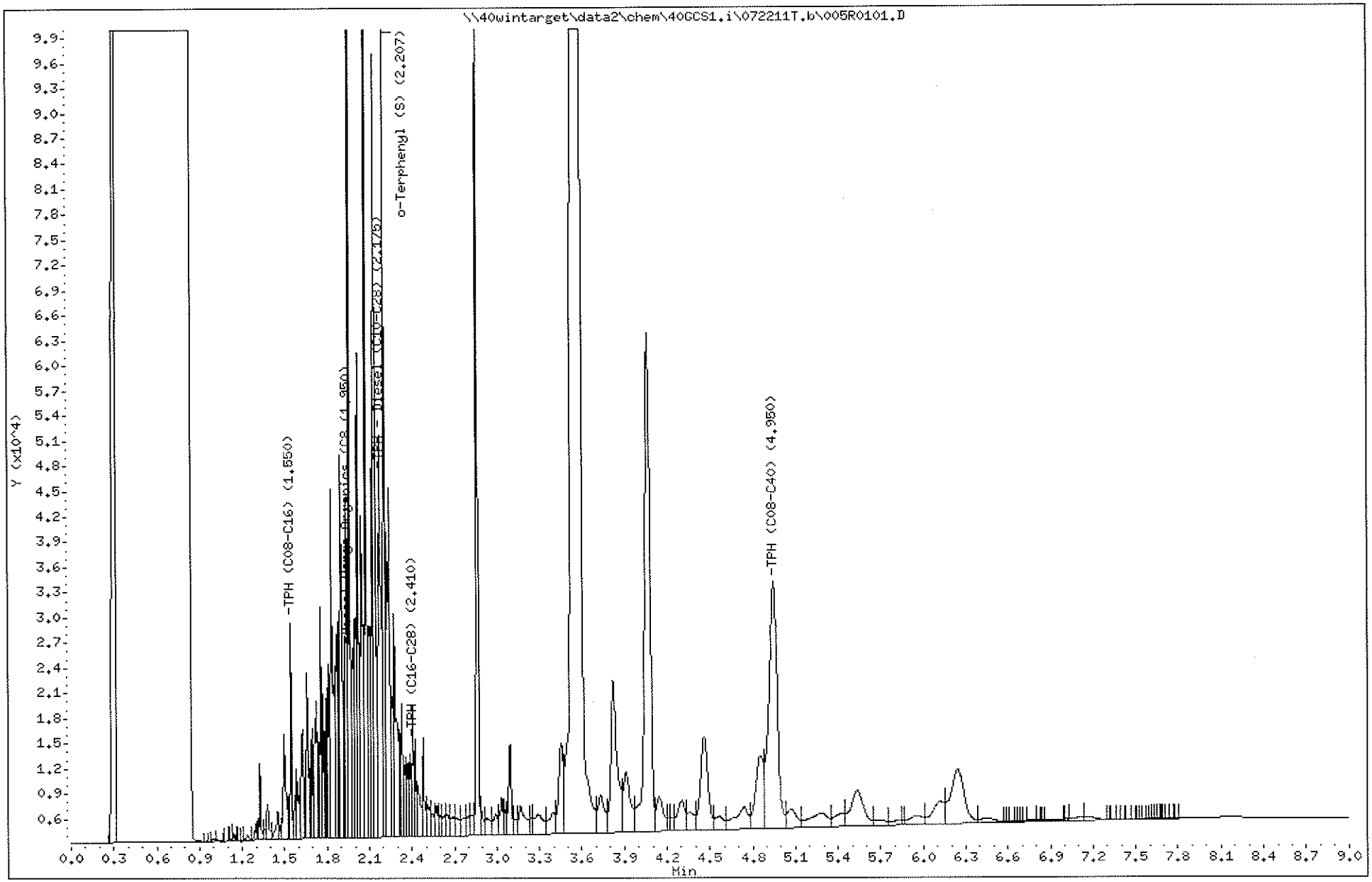
Retention Time	Peak Area	Compound Name
1.960	69773	
2.073	72631	
2.140	50868	
2.860	72332	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	474454	69773	25.8371
Diesel Range Organics (	890857	193272	107.5824
TPH - Diesel (C10-C28)	866418	193272	100.7619
TPH (C16-C28)	524693	193272	5.391283
TPH (C08-C40)	3508812	265604	818.0295

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\005R0101.D
Date : 22-JUL-2011 08:44
Client ID: MBLCS
Sample Info: 478712X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\005R0101.D
Lab Smp Id: 478712 Client Smp ID: MBLCS
Inj Date : 22-JUL-2011 08:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 478712X3
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 14-May-2012 09:10 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.850			4036801	1039.51	207.90
S	1 TPH (C08-C16)	1.050-2.049			625536	87.4746	17.49(a)
S	12 TPH (C16-C28)	1.970-2.850			697087	107.443	21.48
S	2 Diesel Range Organics (C8-C28)	1.050-2.850			1183744	243.262	48.65
S	8 TPH - Diesel (C10-C28)	1.500-2.850			1162208	237.252	47.45
$	15 o-Terphenyl (S)	2.206	2.210	-0.004	73498	14.7382	0.98

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\005R0101.D
Lab Smp Id: 478712 Client Smp ID: MBLCS
Inj Date : 22-JUL-2011 08:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 478712X3
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 14-May-2012 09:10 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.313	221767	128000	0.577	0.03		
0.367	574041752	88431560	0.154	98.65		
0.950	90	60	0.664	0.00		
0.997	270	222	0.823	0.00		
1.023	144	119	0.825	0.00		
1.550	625537	774894	1.239	0.10	S	1 TPH (C08-C16)
1.950	1183745	1346790	1.138	0.20	S	2 Diesel Range Organi
1.097	36	40	1.124			
1.130	138	205	1.489			
1.143	537	734	1.368			
1.167	33	84	2.523			
1.180	28	52	1.857			
1.200	50	101	2.020			
1.240	1026	680	0.663			
1.293	1210	1915	1.583			
1.310	1468	2340	1.594			
1.327	6084	8942	1.470			
1.360	944	1123	1.189			
1.377	5150	4019	0.780			
1.447	3584	3220	0.899			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.463	1249	1537	1.230			
2.175	1162209	1321798	1.137	0.20	S	8 TPH - Diesel (C10-C
1.500	15374	12541	0.816			
1.527	3211	4597	1.432			
1.547	16364	25576	1.563			
1.577	4155	5119	1.232			
1.587	9435	8223	0.872			
1.627	16604	12935	0.779			
1.650	4313	9175	2.127			
1.663	16230	19748	1.217			
1.683	4690	8369	1.784			
1.693	8967	13026	1.453			
1.717	21456	14151	0.660			
1.740	8143	12041	1.479			
1.753	14821	27516	1.857			
1.767	16385	20324	1.240			
1.787	6362	12663	1.990			
1.797	11305	16597	1.468			
1.810	16395	20590	1.256			
1.830	49340	41438	0.840			
1.867	20484	24143	1.179			
1.883	16984	25584	1.506			
1.900	36357	45526	1.252			
1.920	10769	18565	1.724			
1.940	42622	40248	0.944			
1.960	94354	164729	1.746			
1.993	26673	24443	0.916			
2.003	19947	26138	1.310			
2.020	48957	57683	1.178			
2.047	43303	38214	0.882			
2.077	103212	153557	1.488			
2.100	33839	25129	0.743			
2.127	33891	45091	1.330			
2.140	65053	93129	1.432			
2.177	72840	47697	0.655			
2.227	61080	36261	0.594			
2.267	18428	16600	0.901			
2.277	34417	26598	0.773			
2.317	10849	11110	1.024			
2.330	13381	15716	1.174			
2.350	6398	8499	1.328			
2.363	7994	9432	1.180			
2.383	10656	9819	0.921			
2.407	11024	15449	1.401			
2.423	7960	11504	1.445			
2.440	10022	6152	0.614			
2.480	10041	11661	1.161			
2.517	6421	3760	0.586			
2.540	3488	2607	0.748			
2.573	5067	3621	0.715			
2.593	2767	2475	0.894			
2.627	3586	2431	0.678			
2.650	4576	2511	0.549			
2.690	4184	2212	0.529			
2.717	5158	2100	0.407			

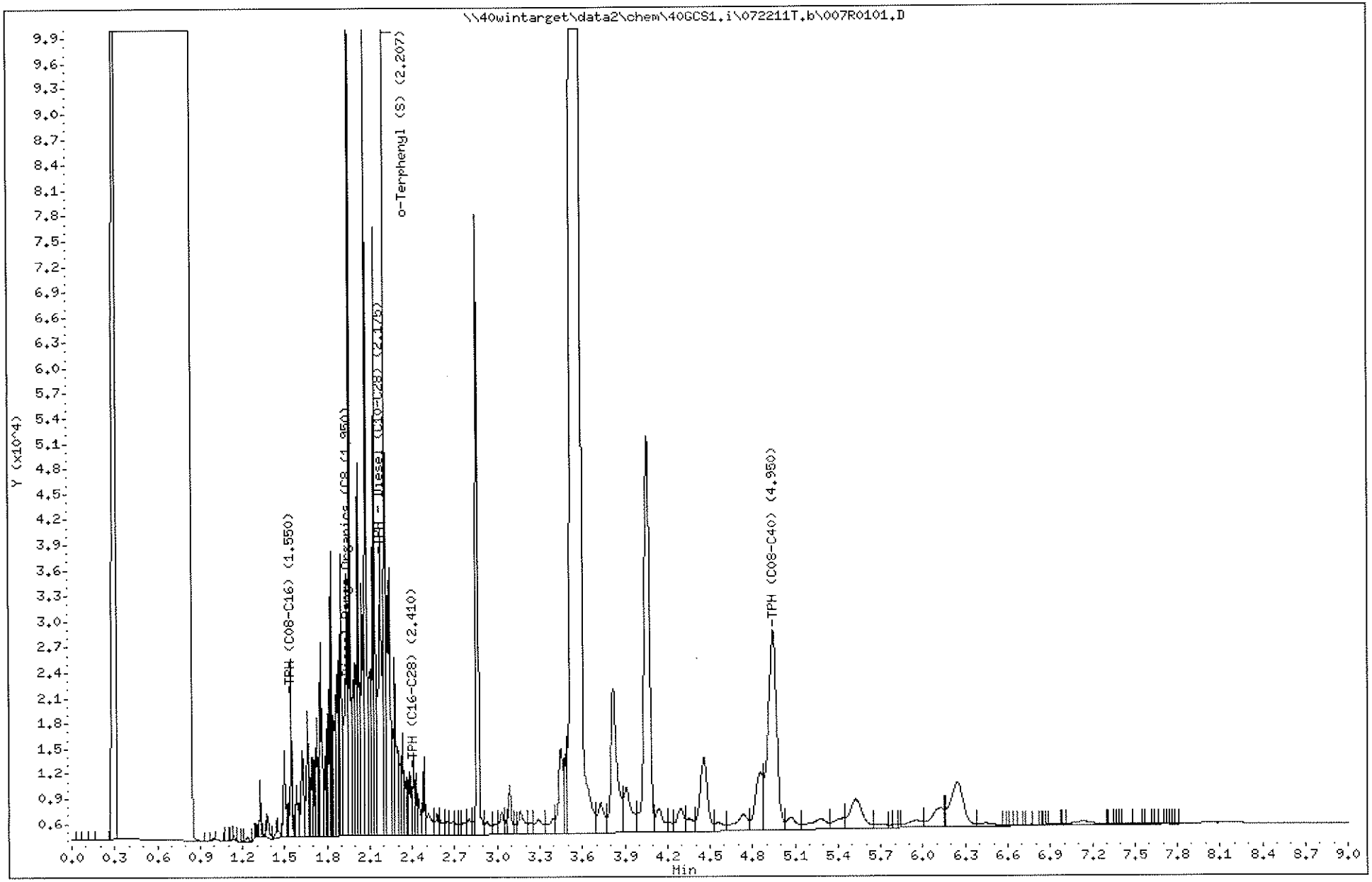
RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.767	3954	2092	0.529			
2.800	3792	2269	0.598			
2.820	4133	2414	0.584			
2.207	73498	151749	2.065	0.01	$	15 o-Terphenyl (S)
2.410	697088	718374	1.031	0.12	S	12 TPH (C16-C28)
4.950	4036801	2409505	0.597	0.69	S	5 TPH (C08-C40)
2.863	95563	101991	1.067			
2.890	4275	3208	0.750			
2.933	5430	1971	0.363			
2.993	5232	2448	0.468			
3.033	7670	4329	0.564			
3.057	3242	2975	0.918			
3.093	15183	10715	0.706			
3.127	2848	1829	0.642			
3.167	11505	3414	0.297			
3.243	2975	1899	0.638			
3.293	10553	2333	0.221			
3.393	9022	2560	0.284			
3.453	24098	10785	0.448			
3.590	1989579	729423	0.367			
3.730	14597	4458	0.305			
3.820	57653	18158	0.315			
3.910	23762	7217	0.304			
4.067	158690	59271	0.374			
4.143	13915	4084	0.293			
4.213	1777	1479	0.832			
4.233	3015	1536	0.509			
4.303	13048	3558	0.273			
4.360	7054	2109	0.299			
4.460	41459	11024	0.266			
4.563	6885	1547	0.225			
4.740	16802	2592	0.154			
4.853	32668	8698	0.266			
4.947	123288	29346	0.238			
5.073	10951	2247	0.205			
5.287	15205	1696	0.112			
5.430	7670	1594	0.208			
5.537	28388	4299	0.151			
5.687	3921	686	0.175			
5.843	2854	537	0.188			
5.867	638	536	0.840			
5.950	6872	1012	0.147			
6.117	16048	2682	0.167			
6.247	42835	6419	0.150			
6.447	3928	547	0.139			
6.567	54	138	2.546			
6.580	134	136	1.018			
6.603	161	140	0.871			
6.630	298	140	0.469			
6.653	130	132	1.013			
6.677	152	130	0.854			
6.703	215	143	0.664			
6.730	236	155	0.656			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.760	556	160	0.288		
6.800	274	146	0.533		
6.830	49	123	2.536		
6.850	142	122	0.858		
6.983	1303	221	0.170		
7.000	221	223	1.008		
7.023	311	225	0.723		
7.130	2168	459	0.212		
7.140	2819	466	0.165		
7.310	105	81	0.772		
7.327	78	86	1.105		
7.357	150	91	0.607		
7.373	179	96	0.535		
7.403	163	97	0.595		
7.430	49	83	1.680		
7.443	172	85	0.493		
7.480	98	78	0.794		
7.500	39	66	1.705		
7.517	93	72	0.772		
7.537	94	70	0.742		
7.570	101	78	0.769		
7.583	98	72	0.732		
7.610	75	78	1.040		
7.627	74	77	1.041		
7.647	90	79	0.882		
7.660	81	88	1.088		
7.677	72	94	1.298		
7.687	83	108	1.303		
7.710	132	116	0.881		
7.723	171	124	0.724		
7.753	235	141	0.599		
7.773	106	138	1.307		
7.787	198	146	0.737		
	578374322	91121215		100.000	

Total unknown % area = 98.68

Data File: \\40wintarget\data2\chem\40GCS1.i\072211T.b\007R0101.D
Date : 22-JUL-2011 09:10
Client ID: MBLCSD
Sample Info: 478713X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\007R0101.D
Lab Smp Id: 478713 Client Smp ID: MBLCSD
Inj Date : 22-JUL-2011 09:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 478713X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 14-May-2012 09:10 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 7 QC Sample: LCSD
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-8.850			3508811	892.156	237.90
S 1 TPH (C08-C16)	1.050-2.049			474453	45.3095	12.08(a)
S 12 TPH (C16-C28)	1.970-2.850			524693	59.3307	15.82(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.850			890857	161.522	43.07
S 8 TPH - Diesel (C10-C28)	1.500-2.850			866417	154.701	41.25
$ 15 o-Terphenyl (S)	2.206	2.210	-0.004	58345	11.6997	0.77

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\072211T.b\007R0101.D
Lab Smp Id: 478713 Client Smp ID: MBLCSD
Inj Date : 22-JUL-2011 09:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 478713X4
Misc Info : 6202
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\072211T.b\TPH.m
Meth Date : 14-May-2012 09:10 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 7 QC Sample: LCSD
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.040	17	16	0.920	0.00		
0.133	28	15	0.528	0.00		
0.313	236117	131322	0.556	0.04		
0.367	571526523	87530000	0.153	98.88		
0.947	35	31	0.876	0.00		
0.993	174	161	0.923	0.00		
1.020	114	80	0.703	0.00		
1.550	474454	605284	1.276	0.08	S	1 TPH (C08-C16)
1.950	890857	1019311	1.144	0.15	S	2 Diesel Range Organi
1.097	21	21	1.019			
1.127	33	50	1.524			
1.140	324	469	1.450			
1.163	51	89	1.749			
1.200	36	70	1.944			
1.237	878	577	0.657			
1.290	792	1805	2.278			
1.307	720	1418	1.970			
1.323	4136	6837	1.653			
1.360	339	481	1.417			
1.377	3095	2761	0.892			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.447	2540	2391	0.941			
1.497	11475	10302	0.898			
2.175	866418	992040	1.145	0.15	S	8 TPH - Diesel (C10-C
1.523	1711	3117	1.821			
1.543	12833	21091	1.643			
1.567	1094	2185	1.997			
1.583	8021	6106	0.761			
1.623	12545	10245	0.817			
1.663	14185	14983	1.056			
1.680	4361	6658	1.527			
1.693	6924	9453	1.365			
1.713	9114	10639	1.167			
1.727	8232	14197	1.725			
1.740	5985	9492	1.586			
1.753	22900	22995	1.004			
1.787	5980	9595	1.604			
1.797	6496	12866	1.980			
1.810	14638	17481	1.194			
1.830	20043	33611	1.677			
1.843	7963	13593	1.707			
1.853	10135	13806	1.362			
1.867	16045	19322	1.204			
1.883	13128	20968	1.597			
1.897	28113	33371	1.187			
1.940	41505	31110	0.750			
1.960	69773	127638	1.829			
1.993	20829	19012	0.913			
2.003	15475	20449	1.321			
2.020	38170	44177	1.157			
2.047	33816	29853	0.883			
2.073	72631	98109	1.351			
2.100	26349	19624	0.745			
2.127	26203	35180	1.343			
2.140	50868	72064	1.417			
2.177	55809	36105	0.647			
2.227	46867	28499	0.608			
2.267	14254	12844	0.901			
2.277	26925	21128	0.785			
2.317	8363	8555	1.023			
2.330	10260	12250	1.194			
2.350	4861	6489	1.335			
2.363	5921	6936	1.171			
2.383	8151	7549	0.926			
2.407	7363	9867	1.340			
2.423	5255	7466	1.421			
2.440	7063	4344	0.615			
2.480	7131	9383	1.316			
2.513	6880	2636	0.383			
2.573	3684	2493	0.677			
2.593	3621	1793	0.495			
2.647	2950	1640	0.556			
2.687	3395	1616	0.476			
2.707	2044	1337	0.654			
2.740	1221	1226	1.004			
2.767	2959	1465	0.495			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.797	3495	1846	0.528			
2.830	1879	1583	0.842			
2.207	58345	122879	2.106	0.01	$	15 o-Terphenyl (S)
2.410	524693	527518	1.005	0.09	S	12 TPH (C16-C28)
4.950	3508812	1993490	0.568	0.60	S	5 TPH (C08-C40)
2.860	72332	73385	1.015			
2.930	4289	1583	0.369			
2.990	2583	1259	0.487			
3.033	4906	2590	0.528			
3.053	1861	1701	0.914			
3.090	8388	5922	0.706			
3.120	1813	1167	0.644			
3.163	8010	2796	0.349			
3.240	3018	1281	0.425			
3.290	7067	1740	0.246			
3.403	5726	1803	0.315			
3.450	22663	10182	0.449			
3.493	14088	10075	0.715			
3.587	1933262	712109	0.368			
3.730	11368	3590	0.316			
3.820	51790	17232	0.333			
3.910	20168	5449	0.270			
4.060	124993	46750	0.374			
4.137	9832	2725	0.277			
4.213	2469	1050	0.425			
4.290	9785	2646	0.270			
4.350	5040	1524	0.302			
4.453	32616	8742	0.268			
4.560	4242	993	0.234			
4.737	11784	1933	0.164			
4.853	25894	6869	0.265			
4.943	100238	23698	0.236			
5.073	7112	1413	0.199			
5.283	9958	1212	0.122			
5.447	6575	1248	0.190			
5.527	21858	3469	0.159			
5.687	2752	468	0.170			
5.780	540	349	0.646			
5.817	820	394	0.480			
5.840	632	401	0.634			
5.943	5998	797	0.133			
6.117	13093	2281	0.174			
6.157	1255	2097	1.671			
6.240	34460	5373	0.156			
6.437	2840	370	0.130			
6.580	184	105	0.572			
6.600	126	107	0.850			
6.633	162	102	0.628			
6.647	203	105	0.518			
6.707	252	111	0.440			
6.723	118	124	1.049			
6.750	387	135	0.349			
6.783	298	123	0.412			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.833	72	91	1.271		
6.850	90	93	1.037		
6.863	73	94	1.288		
6.883	123	110	0.896		
6.967	740	190	0.257		
6.980	153	196	1.281		
7.007	311	196	0.630		
7.127	4540	412	0.091		
7.303	46	73	1.597		
7.317	195	76	0.390		
7.353	62	81	1.298		
7.370	128	83	0.648		
7.397	91	77	0.847		
7.417	326	80	0.245		
7.497	210	64	0.304		
7.570	66	49	0.746		
7.593	125	50	0.401		
7.630	42	45	1.077		
7.653	74	52	0.700		
7.690	117	60	0.514		
7.720	96	77	0.804		
7.733	111	82	0.742		
7.750	84	85	1.010		
7.770	107	90	0.842		
7.790	130	95	0.729		
	575330166	89777994		100.000	

Total unknown % area = 98.92

PROJECT 40GCS1 070611T

06 Jul 11 04:13 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	PRIME					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	WINDOW CHECK					TPHMACHB	1
1	5	2000 2860-31-01					TPHMACHB	1
1	6	1000 2860-31-02					TPHMACHB	1
1	7	500 2860-31-14					TPHMACHB	1
1	8	250 2860-30-13					TPHMACHB	1
1	9	100 2860-30-14					TPHMACHB	1
1	10	50 2860-30-15					TPHMACHB	1
1	11	IC500 2860-30-16-OK					TPHMACHB	1
1	12	463500RSX2					TPHMACHB	1
1	13	463499					TPHMACHB	1
1	14	463501RSX2					TPHMACHB	1
1	15	4046758001RSX2					TPHMACHB	1
1	16	4046758002RSX3					TPHMACHB	1
1	17	4046758003RSX4					TPHMACHB	1
1	18	4046758004RSX4					TPHMACHB	1
1	19	4046758005RSX3					TPHMACHB	1
1	20	4046758006RSX5					TPHMACHB	1
1	21	4046758007RSX2					TPHMACHB	1
1	22	4046758008RSX2					TPHMACHB	1
1	23	4046758009RSX3					TPHMACHB	1
1	24	463500X2					TPHMACHB	1
1	25	463501X2					TPHMACHB	1
1	26	4046758001X2					TPHMACHB	1
1	27	4046758002X3					TPHMACHB	1
1	28	4046758003X4					TPHMACHB	1
1	29	4046758004X4					TPHMACHB	1
1	30	4046758005X3					TPHMACHB	1
1	31	4046758006X5					TPHMACHB	1
1	32	4046758007X2					TPHMACHB	1
1	33	4046758008X2					TPHMACHB	1
1	34	4046758009X3					TPHMACHB	1
1	35	BLANK					TPHMACHB	1
1	36	BLANK					TPHMACHB	1
1	37	BLANK					TPHMACHB	1
1	38	CC500 2860-31-14-FA					TPHMACHB	1
1	39	463496RSX3					TPHMACHB	1
1	40	463495					TPHMACHB	1
1	41	463497					TPHMACHB	1
1	42	463498					TPHMACHB	1
1	43	4046733013					TPHMACHB	1
1	44	4046733001					TPHMACHB	1
1	45	4046733002					TPHMACHB	1
1	46	4046733003					TPHMACHB	1
1	47	4046733004					TPHMACHB	1
1	48	4046733005					TPHMACHB	1
1	49	4046733006					TPHMACHB	1
1	50	4046733007					TPHMACHB	1
1	51	4046733008					TPHMACHB	1

Handwritten notes (rows 15–23): TPH-B GCSV 6027 HBN 74586

Handwritten notes (rows 43–51): TPH-B GCSV 6002 HBN 74185

KHB 7/7/11

Continued on Page 58

Read and Understood By

Kris H Burns 7/7/11 [signature] 7/7/11

Signed Date Signed Date

06 Jul 11 04:13 PM
Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4046733009				TPHMACHB	1
1	53	4046733010				TPHMACHB	1
1	54	4046733011				TPHMACHB	1
1	55	4046733012				TPHMACHB	1
1	56	4046733016				TPHMACHB	1
1	57	4046733017				TPHMACHB	1
1	58	4046733018				TPHMACHB	1
1	59	4046733019				TPHMACHB	1
1	60	BLANK				TPHMACHB	1
1	61	BLANK				TPHMACHB	1
1	62	BLANK				TPHMACHB	1
1	63	CC500 2860-31-14 AA				TPHMACHB	1
REAR 1							

KHB 7/7/11

KHB 7/7/11

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Read and Understood By

K B Burns — Signed — 7/7/11 — Date

Signed — 7/7/11 — Date

21 Jul 11 08:35 AM
Sequence: C:\HPCHEM\1\SEQUENCE\072111.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	CC500 2860-31-14-OK				TPHMACHB	1
1	5	478712 RSX3				TPHMACHB	1
1	6	478711 RSX2				TPHMACHB	1
1	7	478713 RSX4				TPHMACHB	1
1	8	4046750001 RSX4				TPHMACHB	1
1	9	4046750002				TPHMACHB	1
1	10	4046750003 RSX3				TPHMACHB	1
1	11	4046750004 RSX5				TPHMACHB	1
1	12	4046750005				TPHMACHB	1
1	13	4046750006 RSX4				TPHMACHB	1
1	14	4046750007 RSX8				TPHMACHB	1
1	15	4046750008 RSX4				TPHMACHB	1
1	16	4046750009 RSX5				TPHMACHB	1
1	17	4046750010 RSX5				TPHMACHB	1
1	18	4046750011				TPHMACHB	1
1	19	4046750012 RSX4				TPHMACHB	1
1	20	4046750013 RSX4				TPHMACHB	1
1	21	4046750014 RSX3				TPHMACHB	1
1	22	4046750015 RSX2				TPHMACHB	1
1	23	4046750016 RSX3				TPHMACHB	1
1	24	4046750017 RSX4				TPHMACHB	1
1	25	4046750018 RSX3				TPHMACHB	1
1	26	4046750019 RSX4				TPHMACHB	1
1	27	4046750020 RSX4				TPHMACHB	1
1	28	BLANK				TPHMACHB	1
1	29	BLANK				TPHMACHB	1
1	30	BLANK				TPHMACHB	1
1	31	CC500 2860-31-14-OK				TPHMACHB	1
REAR							
1							

TPH.B
GCSV
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716781

7/26/11
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Signed [signature] Date 7/26/11

Signed Kris H Burns Date 8/26/11

22 Jul 11 01:25 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\072211.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	CC500 2860-31-14 ok					TPHMACHB	1
1	5	478712X3					TPHMACHB	1
1	6	478711X2					TPHMACHB	1
1	7	478713X4					TPHMACHB	1
1	8	4046750001X4					TPHMACHB	1
1	9	4046750003X3					TPHMACHB	1
1	10	4046750004X5					TPHMACHB	1
1	11	4046750006X4					TPHMACHB	1
1	12	4046750007X8					TPHMACHB	1
1	13	4046750008X4					TPHMACHB	1
1	14	4046750009X5					TPHMACHB	1
1	15	4046750010X5					TPHMACHB	1
1	16	4046750012X4					TPHMACHB	1
1	17	4046750013X4					TPHMACHB	1
1	18	4046750014X3					TPHMACHB	1
1	19	4046750015X2					TPHMACHB	1
1	20	4046750016X3					TPHMACHB	1
1	21	4046750017X4					TPHMACHB	1
1	22	4046750018X3					TPHMACHB	1
1	23	4046750019X4					TPHMACHB	1
1	24	4046750020X4					TPHMACHB	1
1	25	BLANK					TPHMACHB	1
1	26	BLANK					TPHMACHB	1
1	27	BLANK					TPHMACHB	1
1	28	CC500 2860-31-14 ok					TPHMACHB	1
REAR								
1								

TPH.B
GCSV
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HBN
76781

7/26/11
DAZ

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[signature] 7/26/11 [signature] 7-26-11
Signed Date Signed Date

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 76464 TPH-B

Prep Method	EPA 3541
Spiked By	BLM
Methylene Chloride	12054
Batch Notes	

Analysis Method	TPH-B
Spiked By Date	07/18/2011
Sodium Sulfate	7513
Reviewed By	DAL

Extracted By	BLM
Conc. Temp #1	98.5
Florisil 3620B	5238
Reviewed By Date	07/20/2011

Extracted By Date	07/18/2011
Conc. Temp #2	98.5
3620B Date/Initials	7/20/11 BLM

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**478711**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**478712**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**478713**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4046750001**	8.439	1	0.5			6045 (.5)
8015 T_P	PS	**4046750002**	9.44	1	0.5			6045 (.5)
8015 T_P	PS	**4046750003**	8.659	1	0.5			6045 (.5)
8015 T_P	PS	**4046750004**	8.859	1	0.5			6045 (.5)
8015 T_P	PS	**4046750005**	8.687	1	0.5			6045 (.5)
8015 T_P	PS	**4046750006**	9.442	1	0.5			6045 (.5)
8015 T_P	PS	**4046750007**	8.899	1	0.5			6045 (.5)
8015 T_P	PS	**4046750008**	9.457	1	0.5			6045 (.5)
8015 T_P	PS	**4046750009**	9.226	1	0.5			6045 (.5)
8015 T_P	PS	**4046750010**	8.771	1	0.5			6045 (.5)
8015 T_P	PS	**4046750011**	8.953	1	0.5			6045 (.5)
8015 T_P	PS	**4046750012**	8.302	1	0.5			6045 (.5)
8015 T_P	PS	**4046750013**	8.756	1	0.5			6045 (.5)
8015 T_P	PS	**4046750014**	8.692	1	0.5			6045 (.5)
8015 T_P	PS	**4046750015**	9.398	1	0.5			6045 (.5)
8015 T_P	PS	**4046750016**	9.165	1	0.5			6045 (.5)
8015 T_P	PS	**4046750017**	8.61	1	0.5			6045 (.5)
8015 T_P	PS	**4046750018**	8.526	1	0.5			6045 (.5)
8015 T_P	PS	**4046750019**	9.158	1	0.5			6045 (.5)

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	PS	**4046750020**	8.254	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL **6045: TPH Biota Surr Spk @ 100 ug/mL**

Wed, 20 Jul 2011 14:39:27 -0500

Pace Analytical Services					Instrument ID:	40BALC			
LIPID					Analyst:	BLM			

11876 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
478853		0.9403	0.9582	15.0000	4.0000	1.0000	0.4773	07/19/2011 11:14:27		
4046750001		0.9378	1.0019	8.4390	4.0000	1.0000	3.0383	07/19/2011 11:14:33		
4046750002		0.9348	0.9747	9.4400	4.0000	1.0000	1.6907	07/19/2011 11:14:39		
4046750003		0.9312	0.9819	8.6590	4.0000	1.0000	2.3421	07/19/2011 11:14:46		
4046750004		0.9280	0.9497	8.8590	4.0000	1.0000	0.9798	07/19/2011 11:14:52		
4046750005		0.9290	0.9431	8.6870	4.0000	1.0000	0.6492	07/19/2011 11:14:58		
4046750006		0.9307	0.9748	9.4420	4.0000	1.0000	1.8682	07/19/2011 11:15:05		
4046750007		0.9344	0.9634	8.8990	4.0000	1.0000	1.3035	07/19/2011 11:15:12		
4046750008		0.9383	0.9613	9.4570	4.0000	1.0000	0.9728	07/19/2011 11:15:18		
4046750009		0.9400	0.9578	9.2260	4.0000	1.0000	0.7717	07/19/2011 11:15:24		
4046750010		0.9392	0.9559	8.7710	4.0000	1.0000	0.7616	07/19/2011 11:15:33		
4046750011		0.9418	0.9488	8.9530	4.0000	1.0000	0.3127	07/19/2011 11:15:40		
4046750012		0.9389	0.9615	8.3020	4.0000	1.0000	1.0889	07/19/2011 11:15:46		
4046750013		0.9388	0.9665	8.7560	4.0000	1.0000	1.2654	07/19/2011 11:15:54		
4046750014		0.9404	0.9578	8.6920	4.0000	1.0000	0.8007	07/19/2011 11:16:01		
4046750015		0.9432	0.9530	9.3980	4.0000	1.0000	0.4171	07/19/2011 11:16:08		
4046750016		0.9419	0.9582	9.1650	4.0000	1.0000	0.7114	07/19/2011 11:16:14		
4046750017		0.9398	0.9556	8.6100	4.0000	1.0000	0.7340	07/19/2011 11:16:21		
4046750018		0.9421	0.9573	8.5260	4.0000	1.0000	0.7131	07/19/2011 11:16:28		
4046750019		0.9364	0.9607	9.1580	4.0000	1.0000	1.0614	07/19/2011 11:16:34		
4046750020		0.9374	0.9593	8.2540	4.0000	1.0000	1.0613	07/19/2011 11:16:40		

Approved by CMH 7/20/11

PROJECT ____ Notebook No. ____
Continued From Page ____

9/28/10
2860-16-01 500ul of 4000ppm SVIS (2713-90D) diluted to 1.0ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/28/11

9/30/10
2860-16-02 500ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR

10/4/10
2860-16-03 500ul of 4000ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10
2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 1.0ml CH_2Cl_2 200ppm WYR# IS RON 10/6/10 Exp 10/6/11

10/06/10
2860-16-05 500ul of 4000ppm SVIS (2713-90G) diluted to 1.0ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 10/6/11

10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w nanopure H_2O SHI 50 ppm
2860-16-07 2500ul of 10,000mg/L Oterphenyl (2713-86) diluted to 250ml with CH_2Cl_2 (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CS1:\101106.b\033R0101.D 88% Good DR 10-7-10

* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR

10/8/10
2860-16-08 500ul of 4000 ppm SVIS (2713-90H) diluted to 1.0ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by 40MSS1 File# 1012T008

10/13/10 500ul of 4000 ppm SVIS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 10/11/11

RON 10/14/10
2860-16-11 ~~20~~ 40ul of 5000ppm N-NDPA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm MDL STD Ex 7/3/11 RON 10/13/10

~~10/18/10 500~~ ARO 10/18/10

Continued on Page ____

Read and Understood By

[signature] 10/18/10 — Signed / Date
Valerie M Ringuin 10/18/2010 — Signed / Date

Notebook No.
Continued From Page

11/24/10

2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH2Cl2 2000ppm S-PAH IS Exp 11/24/11 RJN 11/24

* 11/29/10 CH2Cl2 changed at 8:00 to lot 2712-73 VMR

11/30/10

2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm Chk

2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40MSS4 1201105.d

12/1/2010

2860-22-06 1ml of 50,000 ug/ml #2 diesel (2713-45C) + 1ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100ml with CH2Cl2 (2713-73) = 1000ppm Expires 12/1 VMR Ran on unit by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%

12-2-10

2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 H2O/meoH 50
⊥ ⊥ -08 25uls of 2860-10-11 ⊥ ⊥ ⊥ ⊥ 500ppm

12/03/10

2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 500ul of 4000ppm SVIS (2945-06C) up to 1.0ml CH2Cl2 2000ppm w/PAH IS Exp 12/3/11 RJN 12/6

2860-22-11 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10

2860-22-12 400ul of 16,000 ppm ERO70 (2713-42A) diluted to 2.0 ml with CH2Cl2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renquin 12/7/10 [signature] 12/22/10

Signed Date Signed Date

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H2O, MEOH spike) → 1.0mL [Final] = 500 ug/mL GC 7-19-11 DR

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPT

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVI (~~2945-03~~ 2945-038 4/27/11 KPT) diluted to 100mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SVI KPT Exp 8/25/11 KPT
Raman instr by RJN file # 40mss4 02251128.D

2860-29-03 500uL of 4000ppm SVIS (2945-17F) upto 1.0mL CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RON 2/25/11

3/2/11

2860-29-04 250uL of 4000ppm SVIS (2945-17G) upto 1.0mL CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RON 3/2/11

2860-29-05 250uL of 2000ppm PAH (2575-60C) + 100uL of 5000ppm B/N SS (2945-20A) upto 10.0mL CH_2Cl_2 50ppm PAH Ex 7/13/11 RON 3/2/11

2860-29-06 0.500mL of 50ppm PAH (2860-29-05) upto 1.0mL CH_2Cl_2 25ppm PAH CAL Ex 7/13/11 RON 3/2/11

07	0.200
08	0.100
09	0.020
10	0.010
11	0.010
12	0.200

10.0mL → 10
1.0mL → 5, 1, .5, .05, 10ppm Check

2860-29-13 20uL of 500ppm 2nd Source (2945-08D) + 6.7uL of 150ppm B/N SS (2860-27-01) upto 1.0mL CH_2Cl_2 10ppm PAH 2nd Source Ex 9/2/11 RON 3/2/11

2860-29-14 500uL of 4000 ppm SVIS (2945-17G) diluted to 1.0mL w/ CH_2Cl_2 = 2000 ppm SPAH IS - ~~MeOH~~ exp 2/28/12

3/3/2011

2860-29-15 2500uL of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50mL with CH_2Cl_2 = 1000ppm Raman inst by ~~GC~~ file H GC (VMR) Exp 3/3/2012 VMR

Z VMR 3/3/2011 OK to use per GC raman inst 3/8/11 VMR

→ 40GCSF.i / 0307116.b - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Continued on Page

Valerie M Renquin 3/3/2011 Signed Date

Signed 3/7/11 Date

3-4-11

2860-30-01 50 uL of 2380-100-01 (TPH @ 2000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5-6-11 DAR

TPH ICAL

2860-30-02 500 uL of 2713-46D (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3-4-12 DAR

2860-30-03 500 uL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 uL = 500 ug/mL
2860-30-05 125 uL = 250 ug/mL
2860-30-06 50 uL = 100 ug/mL
2860-30-07 25 uL = 50 ug/mL

→ Use only 1.0 mL of 2860-30-02
All standards + 5 uL ~~2945-13B~~ 2713-99D (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All standard Exp 2-22-12 DAR

TPH ICV

2860-30-08 10 uL of ~~2945-23A~~ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 uL ~~2945-13B~~ 2713-99D (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2-22-12 DAR

2860-30-09 25 uLs of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JAI

3-7-11

2860-30-10 1.0 mL of 2860-30-02 + 5 uL 2713-99D (o-terp @ 10,000 ug/mL) = 2000 ug/mL + 50 ug/mL
2860-30-11 500 uL of → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 uL = 500 ug/mL
2860-30-13 125 uL = 250 ug/mL
2860-30-14 50 uL = 100 ug/mL
2860-30-15 25 uL = 50 ug/mL
→ Plus 5 uL 2713-99D (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3-4-11~~ DAR 5-6-11 GC

2860-30-16 10 uL of 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 uL 2713-99D (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3-4-11~~ DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

[signature] 3-7-11 | Valerie M Renquin 3/24/11
Signed | Date | Signed | Date

3.7.11

2860-31-01 100 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-02 50 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-03 25 ul of 2860-10-19 diluted to 1.0 ml → 50/50 MeOH/H_2O 500 ppm SHI

2860-31-04 300 ul of 4000 ppm SVIS (2945-17H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 uls of 2860-10-11 diluted to 10.0 ml w 50/50 MeOH H_2O 1000 ppm SHI

-06	25 ul	25 ppm SHI
-07	100	100
-08	250	250
-09	500	500
-10	750	750 SHI

3.14.11

2860-31-11 1.0 mL of 100 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL Exp 1-10-12 DAR

3/15/11

2860-31-13 500 ul of 4000 ppm SVIS (2945-17J) up to 1.0 ml CH_2Cl_2 2000 ppm PAH-S-IS Exp 3/15/12 RW 3/16/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-09D (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DAR

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Signed Valerie M Pangelinan Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046755

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4046755

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4046755001	EWL-T-01A-C-HEPATOPANCREAS	Tissue	12/15/10 12:37	06/07/11 10:00
4046755002	EWL-TR-02-C-HEPATOPANCREAS	Tissue	01/03/11 10:16	06/07/11 10:00
4046755003	EWL-TR-03-C-HEPATOPANCREAS	Tissue	01/03/11 10:36	06/07/11 10:00
4046755004	EWL-TR-03A-C-HEPATOPANCREAS	Tissue	12/14/10 00:00	06/07/11 10:00
4046755005	EWL-TR-04-C-HEPATOPANCREAS	Tissue	01/03/11 11:50	06/07/11 10:00
4046755006	EWL-TR-05-C-HEPATOPANCREAS	Tissue	12/14/10 00:00	06/07/11 10:00
4046755007	EWL-TR-06-C-HEPATOPANCREAS	Tissue	12/14/10 00:00	06/07/11 10:00
4046755008	EWL-TR-07-C-HEPATOPANCREAS	Tissue	12/14/10 00:00	06/07/11 10:00
4046755009	EWL-TR-08-C-HEPATOPANCREAS	Tissue	12/14/10 00:00	06/07/11 10:00
4046755010	EWL-TR-09-C-HEPATOPANCREAS	Tissue	12/14/10 00:00	06/07/11 10:00
4046755011	EWL-T-01-C-HEPATOPANCREAS	Tissue	12/20/10 12:36	06/07/11 10:00
4046755012	EWL-T-02-C-HEPATOPANCREAS	Tissue	12/21/10 11:04	06/07/11 10:00
4046755014	EWL-T-04-C-HEPATOPANCREAS	Tissue	12/20/10 12:22	06/07/11 10:00
4046755015	EWL-T-05-C-HEPATOPANCREAS	Tissue	12/21/10 10:33	06/07/11 10:00
4046755016	EWL-T-06-C-HEPATOPANCREAS	Tissue	12/16/10 12:15	06/07/11 10:00
4046755017	EWL-T-08-C-HEPATOPANCREAS	Tissue	01/03/11 11:05	06/07/11 10:00
4046755018	EWL-T-11-C-HEPATOPANCREAS	Tissue	12/21/10 10:53	06/07/11 10:00
4046755019	EWL-T-12-C-HEPATOPANCREAS	Tissue	01/03/11 11:00	06/07/11 10:00
4046755020	EWL-BR-C-HEPATOPANCREAS	Tissue	12/27/10 12:30	06/07/11 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4046755
Client: URS CORPORATION
Project Name: EAST WHITE LAKE
Project Number: K1100325

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.

B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. The blank result was reported with the "3q" data qualifier.

C. **Surrogates:** All in-house acceptance criteria were met. Surrogate recovery for sample EWL-T-04-C-HEPATOPANCREAS was below control criteria with no sample mass available for re-extraction and reported with the "5q" data qualifier. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.

D. **Spikes:**
   1. **Lab Control Spike (LCS):** All in-house accuracy criteria were met for TPH (C10-C28). The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS; the "L0" data qualifier applied to the summary. The recovery of TPH (C08-C40) was above control criteria in the LCS due to large lipid peak eluting around C34 and the summary was reported with the "2q" data qualifier. The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** Sample EWL-T-02-C-HEPATOPANCREAS was designated as the matrix spike / matrix spike duplicate for this SDG. The in-house accuracy criteria were met for the MSD for TPH (C10-C28). The in-house precision criteria were not met for TPH (C10-C28). The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used and "M0" and "D6" data qualifiers applied. The recoveries of TPH (C08-C40) were outside control criteria in the MS/MSD due to large lipid peak eluting around C34 and the "1q" data qualifier was applied

E. **Samples:** Sample analyses proceeded normally.

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F. **Dilutions:** All samples, except EWL-T-04-C-HEPATOPANCREAS, were diluted to bring the TPH (C08-C40) values within the range of calibration.

G. **Reanalysis:** None required for this SDG.

H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4046755

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4046755001	EWL-T-01A-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755002	EWL-TR-02-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755003	EWL-TR-03-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755004	EWL-TR-03A-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755005	EWL-TR-04-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755006	EWL-TR-05-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755007	EWL-TR-06-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755008	EWL-TR-07-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755009	EWL-TR-08-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755010	EWL-TR-09-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755011	EWL-T-01-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755012	EWL-T-02-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755014	EWL-T-04-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755015	EWL-T-05-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755016	EWL-T-06-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755017	EWL-T-08-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755018	EWL-T-11-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755019	EWL-T-12-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046755020	EWL-BR-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4046755

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4046755

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6035

[1]	The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

1q	Analyte recovery in the Matrix Spike (MS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
4q	RPD failed due to sample matrix. The failure was confirmed on 6/17/2011.
5q	Surrogate recovery outside laboratory control limits. Insufficient sample volume left to re-extract.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: CRABS
Pace Project No.: 4046755

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

URS/2207/21101933/1-27-11

4046755

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100325
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100325-001	EWL-TR-01-C-HEPATOPANC	1	Animal Tissue	12/15/10	1126	Gulf Coast Analytica	X	1 ✱
K1100325-002	EWL-TR-01A-C-HEPATOPAN	1	Animal Tissue	12/15/10	1237	Gulf Coast Analytica	X	2 . 001
K1100325-003	EWL-TR-02-C-HEPATOPANC	1	Animal Tissue	1/3/11	1016	Gulf Coast Analytica	X	3 . 002
K1100325-004	EWL-TR-03-C-HEPATOPANC	1	Animal Tissue	1/3/11	1036	Gulf Coast Analytica	X	4 . 003
K1100325-005	EWL-TR-03A-C-HEPATOPAN	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	5 . 004
K1100325-006	EWL-TR-04-C-HEPATOPANC	1	Animal Tissue	1/3/11	1150	Gulf Coast Analytica	X	6 . 005
K1100325-007	EWL-TR-05-C-HEPATOPANC	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	7 . 006
K1100325-008	EWL-TR-06-C-HEPATOPANC	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	8 . 007
K1100325-009	EWL-TR-07-C-HEPATOPANC	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	9 . 008
K1100325-010	EWL-TR-08-C-HEPATOPANC	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	10 . 009
K1100325-011	EWL-TR-09-C-HEPATOPANC	1	Animal Tissue	12/14/10	0000	Gulf Coast Analytica	X	11 . 010
K1100325-012	EWL-T-01-C-HEPATOPANCRE	1	Animal Tissue	12/20/10	1236	Gulf Coast Analytica	X	12 . 011

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 01/23/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100325
Bill to

Relinquished By: [signature] CAS 1/17/11 1200 Received By: [signature] 1/18-11 1015
FedEx 1/7/11 10:00 Fed: UPS 1/18-11 1015
Airbill Number: Rel by: [signature] 1/6/11 3:05 pm
[signature] 1/7/11 10:00

425/2267 /211011933/1-27-11

4046785

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100325
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None
K1100325-013	EWL-T-02-C-HEPATOPANCRE	3	Animal Tissue	12/21/10	1104	Gulf Coast Analytica	X
K1100325-014	EWL-T-03-C-HEPATOPANCRE	Ø	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	
K1100325-015	EWL-T-04-C-HEPATOPANCRE	1	Animal Tissue	12/20/10	1222	Gulf Coast Analytica	X
K1100325-016	EWL-T-05-C-HEPATOPANCRE	1	Animal Tissue	12/21/10	1033	Gulf Coast Analytica	X
K1100325-017	EWL-T-06-C-HEPATOPANCRE	1	Animal Tissue	12/16/10	1215	Gulf Coast Analytica	X
K1100325-018	EWL-T-07-C-HEPATOPANCRE	Ø	Animal Tissue	1/3/11	1105	Gulf Coast Analytica	
K1100325-019	EWL-T-08-C-HEPATOPANCRE	1	Animal Tissue	1/3/11	1105	Gulf Coast Analytica	X
K1100325-020	EWL-T-09-C-HEPATOPANCRE	Ø	Animal Tissue	1/10/11	1147	Gulf Coast Analytica	
K1100325-021	EWL-T-10-C-HEPATOPANCRE	Ø	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	
K1100325-022	EWL-T-11-C-HEPATOPANCRE	1	Animal Tissue	12/21/10	1053	Gulf Coast Analytica	X
K1100325-023	EWL-T-12-C-HEPATOPANCRE	1	Animal Tissue	1/3/11	1100	Gulf Coast Analytica	X
K1100325-024	EWL-BR-C-HEPATOPANCRE	1	Animal Tissue	12/27/10	1230	Gulf Coast Analytica	X

Handwritten beside rows: 13 1415 012/013; 16 014; 17 015; 18 016; 19 017; 20 018; 21 019; 22 020

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____ RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ STANDARD
Requested FAX Date: ________
Requested Report Date: 01/23/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100325
Bill to

Relinquished By: [signature] CAS 1/17/11 1200 / FedEx 6/7/11 10:00
Received By: [signature] 1-18-11 1015 2°C / Rel: URS 1-18-11 1015 / J. Bukeulee 6/7/11 10:00
Airbill Number: Rel by: BGM 6/6/11 1505

Pag

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: WRS Project # 4046755

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used VB Type of Ice: Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature ≤ 0°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: VB 6/7/11
Initials: _____

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 6/8/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046755

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT / 11361
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046755001		EWL-T-01A-C-HEPATOPANCREAS	4	0	S4										
463194	BLANK		1	73											
4046755002		EWL-TR-02-C-HEPATOPANCREAS	4	0	S4										
4046755003		EWL-TR-03-C-HEPATOPANCREAS	6	0	S4										
463195	LCS		2	0	S4										
4046755004		EWL-TR-03A-C-HEPATOPANCREAS	6	0	S4										
4046755005		EWL-TR-04-C-HEPATOPANCREAS	5	0	S4										
463196	MS		3	0	S4										
4046755006		EWL-TR-05-C-HEPATOPANCREAS	10	0	S4										
463197	MSD		3	0	S4										
4046755007		EWL-TR-06-C-HEPATOPANCREAS	2	0	S4										
4046755008		EWL-TR-07-C-HEPATOPANCREAS	6	0	S4										
4046755009		EWL-TR-08-C-HEPATOPANCREAS	5	0	S4										
4046755010		EWL-TR-09-C-HEPATOPANCREAS	7	0	S4										
4046755011		EWL-T-01-C-HEPATOPANCREAS	2	0	S4										
4046755012	OQS	EWL-T-02-C-HEPATOPANCREAS	4	0	S4										
4046755014		EWL-T-04-C-HEPATOPANCREAS	1	10	5q										
4046755015		EWL-T-05-C-HEPATOPANCREAS	4	0	S4										
4046755016		EWL-T-06-C-HEPATOPANCREAS	3	0	S4										

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT / 11361
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046755017		EWL-T-08-C-HEPATOPANCREAS	5	0	S4										
4046755018		EWL-T-11-C-HEPATOPANCREAS	5	0	S4										
4046755019		EWL-T-12-C-HEPATOPANCREAS	6	0	S4										
4046755020		EWL-BR-C-HEPATOPANCREAS	2	0	S4										
		QC Limits:		50-150											
		Sample Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11361 **LCS Prepared:** 06/14/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:**

Analyte	LCS % Rec	LCSD % Rec	QC Limits RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	64			50-150		66.7	42.7		mg/kg	06/28/11			
TPH (C08-C16)	35			50-150		66.7	23.5		mg/kg	06/28/11		L0	
TPH (C08-C40)	202			50-150		66.7	135		mg/kg	06/28/11		2q	
TPH (C16-C28)	26			50-150		66.7	17.6		mg/kg	06/28/11		L0	
TPH - Diesel (C10-C28)	59			50-150		66.7	39.6		mg/kg	06/28/11			

Type	Sample
LCS	463195

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

MATRIX SPIKE SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11361
Method(s): EPA 3541 / EPA 8015B Modified

MS Prepared: 06/14/11
MSD Prepared: 06/14/11

Analyte	Units	Sample Conc	Spike Conc MS	Spike Conc MSD	Result MS	Result MSD	Dilution MS	Dilution MSD	% Recovery MS	% Recovery MSD	QC Limits %Recovery	QC Limits RPD	Max RPD	Analyzed Date MS	Analyzed Date MSD	Qualifier(s) MS	Qualifier(s) MSD
Diesel Range Organics (C8-C28)	mg/kg	116	149	463	436	650	3	3	215	115	50-150	39	20	06/28/11	06/28/11	M1	D6
TPH (C08-C16)	mg/kg	<22.2	149	463	173	280	3	3	116	60	50-150	47	20	06/28/11	06/28/11		D6
TPH (C08-C40)	mg/kg	486	149	463	718	1260	3	3	156	166	50-150	55	20	06/28/11	06/28/11	1q	1q,D6
TPH (C16-C28)	mg/kg	90.8	149	463	273	359	3	3	123	58	50-150	27	20	06/28/11	06/28/11		D6
TPH - Diesel (C10-C28)	mg/kg	112	149	463	402	609	3	3	195	107	50-150	41	20	06/28/11	06/28/11	M1	D6

Type	Sample	Client Sample ID
MS	463196	EWL-T-02-C-HEPATOPANCREAS
MSD	463197	EWL-T-02-C-HEPATOPANCREAS

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4046755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046755001	EWL-T-01A-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755002	EWL-TR-02-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755003	EWL-TR-03-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755004	EWL-TR-03A-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755005	EWL-TR-04-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755006	EWL-TR-05-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755007	EWL-TR-06-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755008	EWL-TR-07-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755009	EWL-TR-08-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755010	EWL-TR-09-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755011	EWL-T-01-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755012	EWL-T-02-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755014	EWL-T-04-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755015	EWL-T-05-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755016	EWL-T-06-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755017	EWL-T-08-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755018	EWL-T-11-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755019	EWL-T-12-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755020	EWL-BR-C-HEPATOPANCREAS	EPA 3541	OEXT/11361	EPA 8015B Modified	GCSV/6035
4046755001	EWL-T-01A-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755002	EWL-TR-02-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755003	EWL-TR-03-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755004	EWL-TR-03A-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755005	EWL-TR-04-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755006	EWL-TR-05-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755007	EWL-TR-06-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755008	EWL-TR-07-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755009	EWL-TR-08-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755010	EWL-TR-09-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755011	EWL-T-01-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755012	EWL-T-02-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755014	EWL-T-04-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755015	EWL-T-05-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755016	EWL-T-06-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4046755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046755017	EWL-T-08-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755018	EWL-T-11-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755019	EWL-T-12-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		
4046755020	EWL-BR-C-HEPATOPANCREAS	Pace Lipid	OEXT/11365		

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)459-2436

DUPLICATE RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11365 **Prepared:**
Method(s): Pace Lipid

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Lipid	45	20	8.8	5.6	%	06/15/11	4q

Type	Sample	Client Sample ID
DUP	463254	EWL-T-02-C-HEPATOPANCREAS

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046755

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 06/13/11 06/13/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.17

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	RT	#
01	2000 2860-31-01	2000 2860-31-01	06/13/11	1401	2.17			
02	1000 2860-31-02	1000 2860-31-02	06/13/11	1412	2.17			
03	500 2860-31-14	500 2860-31-14	06/13/11	1424	2.17			
04	250 2860-30-13	250 2860-30-13	06/13/11	1436	2.17			
05	100 2860-30-14	100 2860-30-14	06/13/11	1448	2.17			
06	50 2860-30-15	50 2860-30-15	06/13/11	1459	2.17			
07	IC2860-30-16	IC2860-30-16	06/13/11	1511	2.17			
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046755

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 05/10/11 06/13/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01		CC500 2860-31-14	06/28/11	0912	2.19	
02	MBLCS	463195	06/28/11	0947	2.19	
03	MB	463194	06/28/11	0959	2.19	
04	EWL-T-02-C-HEPATOPA	463196	06/28/11	1023	2.19	
05	EWL-T-02-C-HEPATOPA	463197	06/28/11	1046	2.19	
06	EWL-T-02-C-HEPATOPA	4046755012	06/28/11	1110	2.17	
07	EWL-T-01A-C-HEPATOP	4046755001	06/28/11	1134	2.17	
08	EWL-TR-02-C-HEPATOP	4046755002	06/28/11	1158	2.17	
09	EWL-TR-03-C-HEPATOP	4046755003	06/28/11	1222	2.17	
10	EWL-TR-03A-C-HEPATO	4046755004	06/28/11	1246	2.17	
11	EWL-TR-04-C-HEPATOP	4046755005	06/28/11	1310	2.17	
12	EWL-TR-06-C-HEPATOP	4046755007	06/28/11	1358	2.18	
13	EWL-TR-07-C-HEPATOP	4046755008	06/28/11	1422	2.18	
14	EWL-TR-08-C-HEPATOP	4046755009	06/28/11	1446	2.18	
15	EWL-TR-09-C-HEPATOP	4046755010	06/28/11	1510		
16	EWL-T-01-C-HEPATOPA	4046755011	06/28/11	1534	2.18	
17	EWL-T-04-C-HEPATOPA	4046755014	06/28/11	1546	2.18	
18	EWL-T-05-C-HEPATOPA	4046755015	06/28/11	1610	2.18	
19	EWL-T-06-C-HEPATOPA	4046755016	06/28/11	1634	2.18	
20	EWL-T-08-C-HEPATOPA	4046755017	06/28/11	1657	2.18	
21	EWL-T-11-C-HEPATOPA	4046755018	06/28/11	1721	2.18	
22	EWL-T-12-C-HEPATOPA	4046755019	06/28/11	1745	2.18	
23	EWL-BR-C-HEPATOPANC	4046755020	06/28/11	1809	2.18	
24	EWL-TR-05-C-HEPATOP	4046755006	06/28/11	1821	2.18	
25		CC500 2860-31-14	06/28/11	1909	2.20*	
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046755

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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-01A-C-HEPATOPANCREAS TX
Lab ID: 4046755001
Collected: 12/15/10 12:37
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**69.3**	mg/kg	43.2	21.6	4	06/14/11 12:00	06/28/11 11:34	
	TPH (C08-C16)	**<21.6**	mg/kg	43.2	21.6	4	06/14/11 12:00	06/28/11 11:34	
	TPH (C16-C28)	**59.4**	mg/kg	43.2	21.6	4	06/14/11 12:00	06/28/11 11:34	
	TPH (C08-C40)	**466**	mg/kg	43.2	21.6	4	06/14/11 12:00	06/28/11 11:34	3q
	TPH - Diesel (C10-C28)	**67.3**	mg/kg	43.2	21.6	4	06/14/11 12:00	06/28/11 11:34	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	06/14/11 12:00	06/28/11 11:34	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-01A-C-HEPATOPANCREAS TX
Lab ID: 4046755001
Collected: 12/15/10 12:37
Received: 06/07/11 10:00

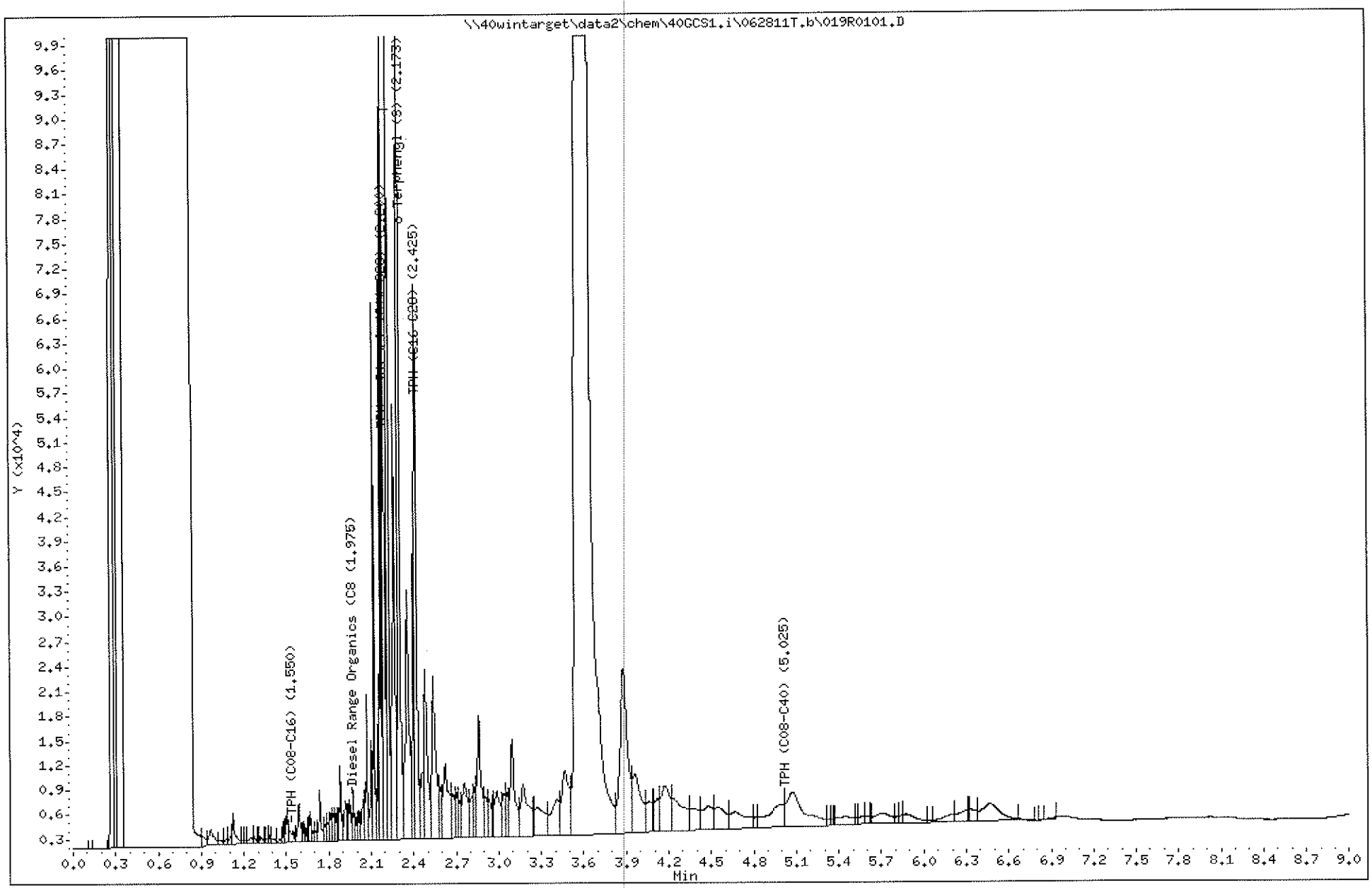
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	3.9	%			1		06/15/11 06:34	

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\019R0101.D
Date : 28-JUN-2011 11:34
Client ID: EWL-T-01A-C-HEPATOP
Sample Info: 4046755001X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\019R0101.D
Lab Smp Id: 4046755001 Client Smp ID: EWL-T-01A-C-HEPATOP
Inj Date : 28-JUN-2011 11:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755001X4
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 19
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.260	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			4142586	1079.59	466.34
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	1.950-2.900			767720	137.540	59.41
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			849644	160.408	69.29
S 1 TPH - Diesel (C10-C28)	1.500-2.900			833391	155.871	67.33
$ 28 o-Terphenyl (S)	2.173	2.180	-0.007	49997	9.84596	1.06

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-02-C-HEPATOPANCREAS TX
Lab ID: 4046755002
Collected: 01/03/11 10:16
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**215**	mg/kg	44.2	22.1	4	06/14/11 12:00	06/28/11 11:58	
	TPH (C08-C16)	**61.1**	mg/kg	44.2	22.1	4	06/14/11 12:00	06/28/11 11:58	
	TPH (C16-C28)	**143**	mg/kg	44.2	22.1	4	06/14/11 12:00	06/28/11 11:58	
	TPH (C08-C40)	**569**	mg/kg	44.2	22.1	4	06/14/11 12:00	06/28/11 11:58	3q
	TPH - Diesel (C10-C28)	**197**	mg/kg	44.2	22.1	4	06/14/11 12:00	06/28/11 11:58	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	06/14/11 12:00	06/28/11 11:58	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-02-C-HEPATOPANCREAS TX
Lab ID: 4046755002
Collected: 01/03/11 10:16
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**6.9**	%			1		06/15/11 06:35	

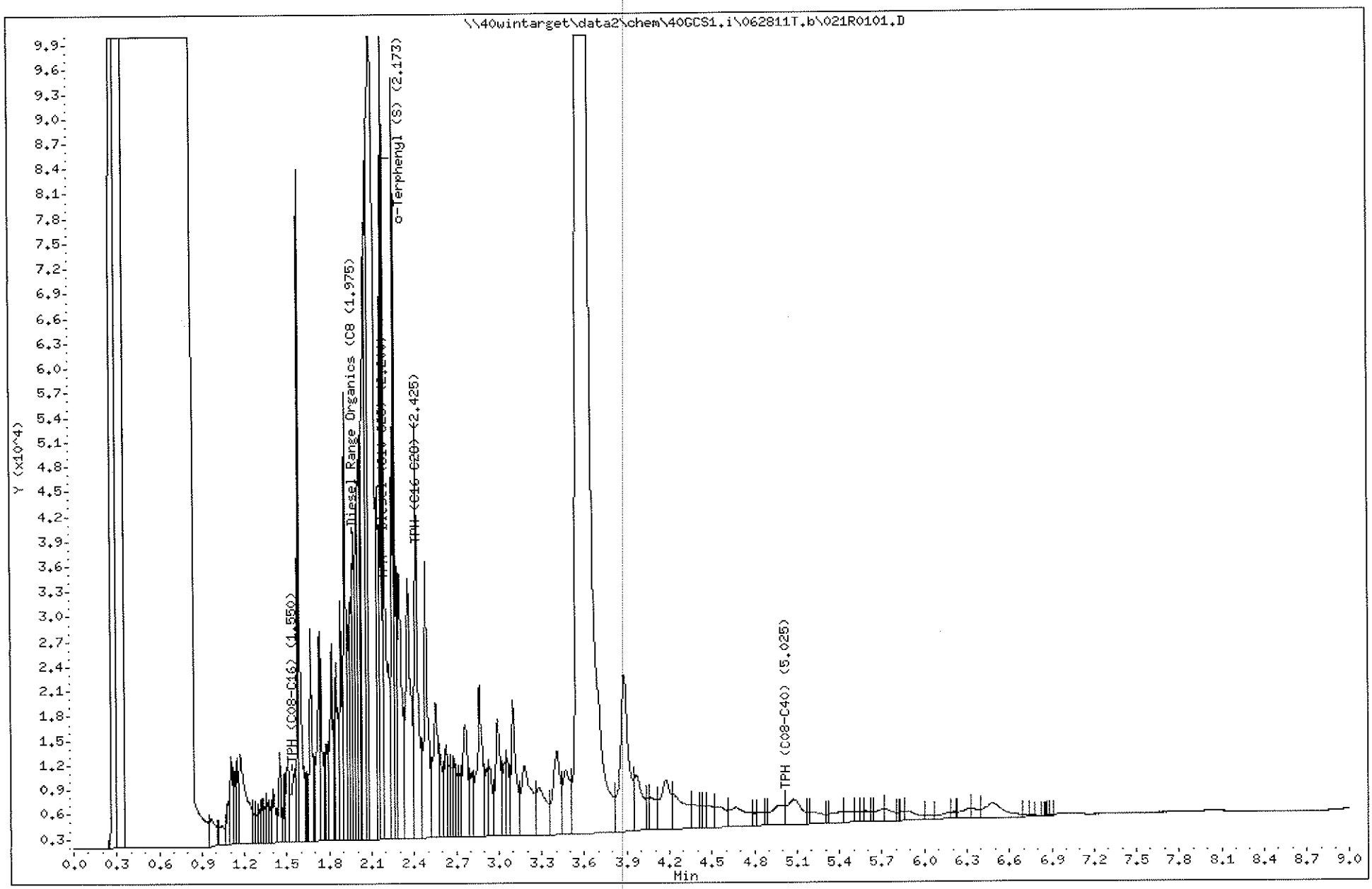
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\021R0101.D
Date : 28-JUN-2011 11:58
Client ID: EWL-TR-02-C-HEPATOP
Sample Info: 4046755002X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\021R0101.D
Lab Smp Id: 4046755002 Client Smp ID: EWL-TR-02-C-HEPATOP
Inj Date : 28-JUN-2011 11:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755002X4
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 21
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.050	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4888938	1287.93	569.24
S	35 TPH (C08-C16)	1.050-2.049			770462	138.305	61.12
S	38 TPH (C16-C28)	1.950-2.900			1433787	323.464	142.96
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			2015889	485.951	214.78
S	1 TPH - Diesel (C10-C28)	1.500-2.900			1874306	446.429	197.31
$	28 o-Terphenyl (S)	2.173	2.180	-0.007	63857	12.5754	1.38

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-03-C-HEPATOPANCREAS TX
Lab ID: 4046755003
Collected: 01/03/11 10:36
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**156**	mg/kg	68.8	34.3	6	06/14/11 12:00	06/28/11 12:22	
	TPH (C08-C16)	**<34.3**	mg/kg	68.8	34.3	6	06/14/11 12:00	06/28/11 12:22	
	TPH (C16-C28)	**145**	mg/kg	68.8	34.3	6	06/14/11 12:00	06/28/11 12:22	
	TPH (C08-C40)	**751**	mg/kg	68.8	34.3	6	06/14/11 12:00	06/28/11 12:22	3q
	TPH - Diesel (C10-C28)	**154**	mg/kg	68.8	34.3	6	06/14/11 12:00	06/28/11 12:22	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		6	06/14/11 12:00	06/28/11 12:22	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-03-C-HEPATOPANCREAS TX
Lab ID: 4046755003
Collected: 01/03/11 10:36
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**9.3**	%			1		06/15/11 06:35	

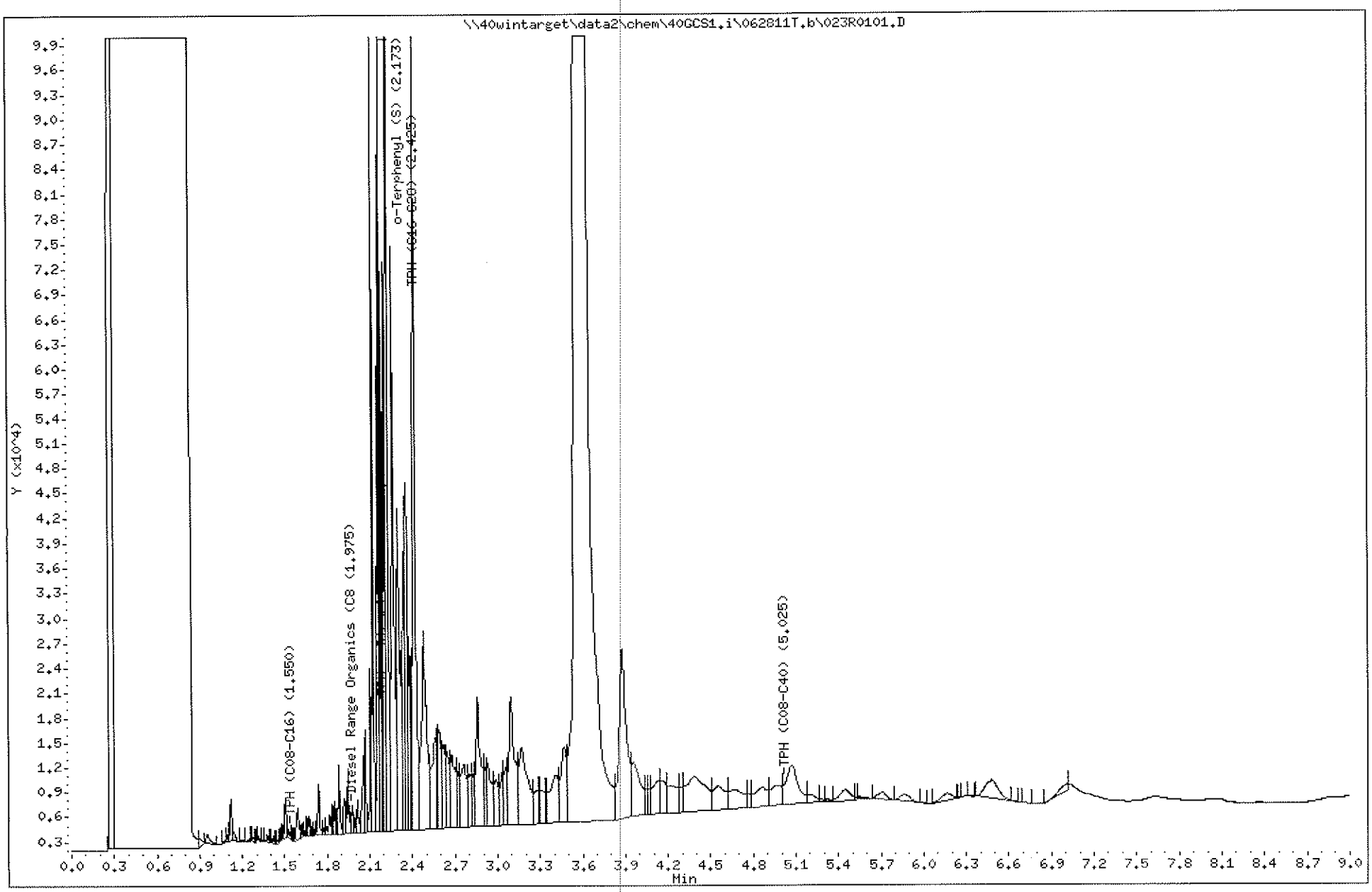
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\023R0101.D
Date : 28-JUN-2011 12:22
Client ID: EWL-TR-03-C-HEPATOP
Sample Info: 4046755003X6
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\023R0101.D
Lab Smp Id: 4046755003 Client Smp ID: EWL-TR-03-C-HEPATOP
Inj Date : 28-JUN-2011 12:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755003X6
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 23
Dil Factor: 6.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	6.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.730	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4187371	1092.09	750.57
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	1.950-2.900			1032957	211.577	145.41
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			1086040	226.395	155.59
S	1 TPH - Diesel (C10-C28)	1.500-2.900			1076541	223.743	153.77
$	28 o-Terphenyl (S)	2.173	2.180	-0.007	63587	12.5223	1.43

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-03A-C-HEPATOPANCREAS TX
Lab ID: 4046755004
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**443**	mg/kg	64.1	32.0	6	06/14/11 12:00	06/28/11 12:46	
	TPH (C08-C16)	**135**	mg/kg	64.1	32.0	6	06/14/11 12:00	06/28/11 12:46	
	TPH (C16-C28)	**305**	mg/kg	64.1	32.0	6	06/14/11 12:00	06/28/11 12:46	
	TPH (C08-C40)	**799**	mg/kg	64.1	32.0	6	06/14/11 12:00	06/28/11 12:46	3q
	TPH - Diesel (C10-C28)	**414**	mg/kg	64.1	32.0	6	06/14/11 12:00	06/28/11 12:46	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		6	06/14/11 12:00	06/28/11 12:46	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-03A-C-HEPATOPANCREAS TX
Lab ID: 4046755004
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**15.3**	%			1		06/15/11 06:35	

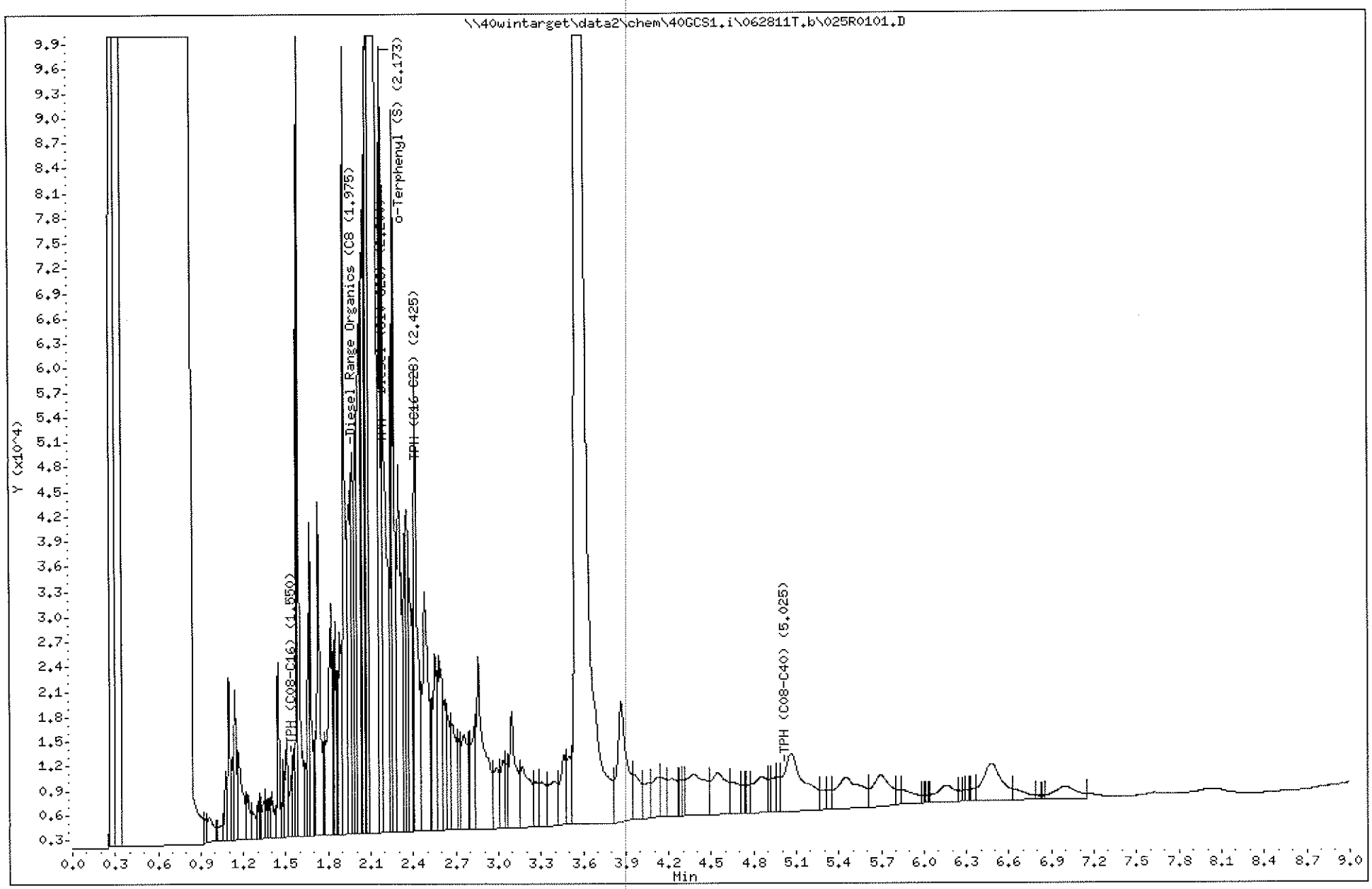
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\025R0101.D
Date : 28-JUN-2011 12:46
Client ID: EWL-TR-03A-C-HEPATO
Sample Info: 4046755004X6
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\025R0101.D
Lab Smp Id: 4046755004 Client Smp ID: EWL-TR-03A-C-HEPATO
Inj Date : 28-JUN-2011 12:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755004X6
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 25
Dil Factor: 6.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	6.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.370	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			4742347	1247.01	798.51
S 35 TPH (C08-C16)	1.050-2.049			1028283	210.273	134.64
S 38 TPH (C16-C28)	1.950-2.900			1984083	477.072	305.48
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			2753920	691.963	443.09
S 1 TPH - Diesel (C10-C28)	1.500-2.900			2590150	646.248	413.81
$ 28 o-Terphenyl (S)	2.173	2.180	-0.007	89723	17.6692	1.88

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-04-C-HEPATOPANCREAS TX
Lab ID: 4046755005
Collected: 01/03/11 11:50
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**352**	mg/kg	57.6	28.8	5	06/14/11 12:00	06/28/11 13:10	
	TPH (C08-C16)	**91.6**	mg/kg	57.6	28.8	5	06/14/11 12:00	06/28/11 13:10	
	TPH (C16-C28)	**262**	mg/kg	57.6	28.8	5	06/14/11 12:00	06/28/11 13:10	
	TPH (C08-C40)	**762**	mg/kg	57.6	28.8	5	06/14/11 12:00	06/28/11 13:10	3q
	TPH - Diesel (C10-C28)	**331**	mg/kg	57.6	28.8	5	06/14/11 12:00	06/28/11 13:10	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	06/14/11 12:00	06/28/11 13:10	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-04-C-HEPATOPANCREAS TX
Lab ID: 4046755005
Collected: 01/03/11 11:50
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**14.0**	%			1		06/15/11 06:35	

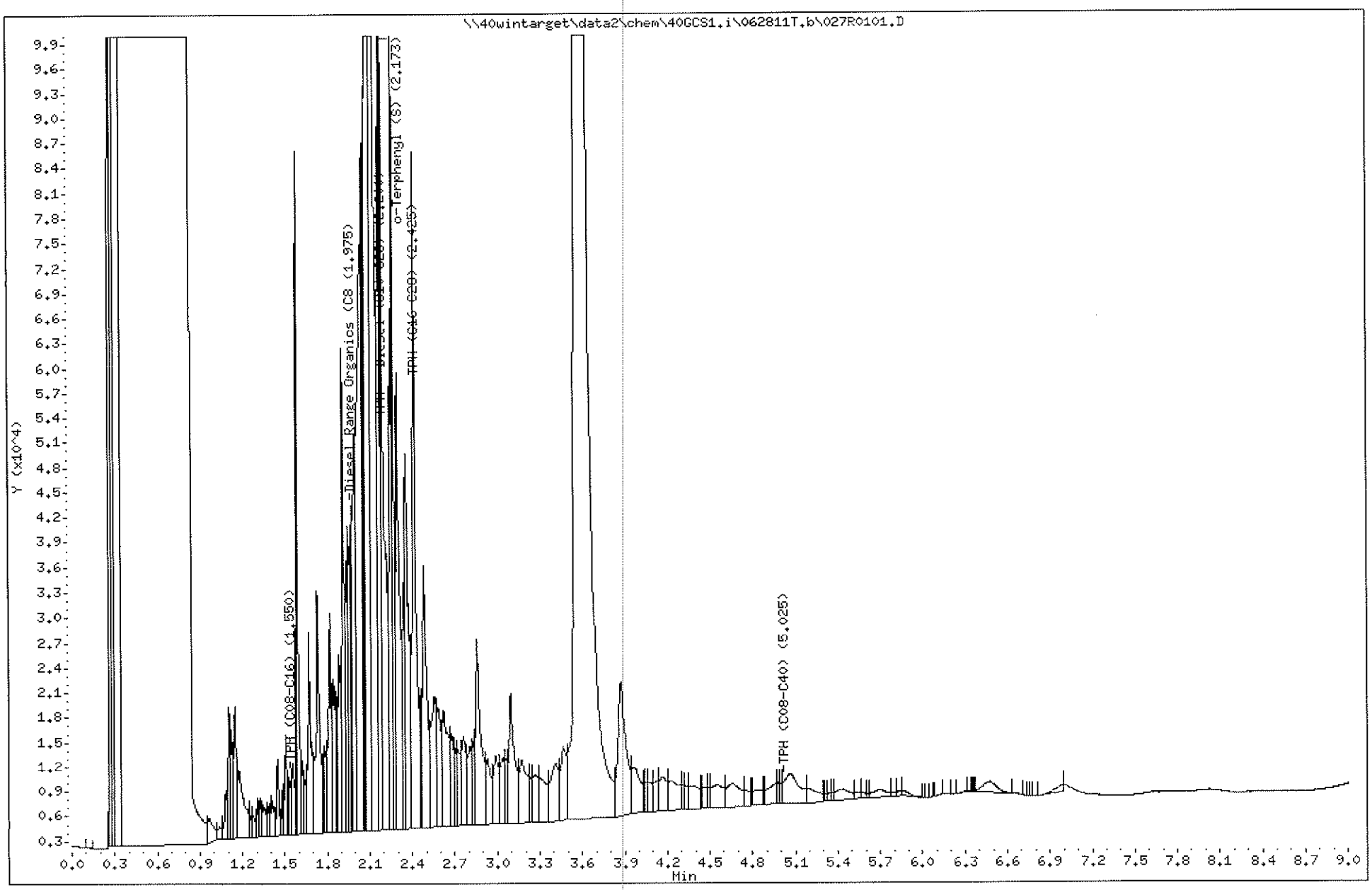
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\027R0101.D
Date : 28-JUN-2011 13:10
Client ID: EWL-TR-04-C-HEPATOP
Sample Info: 4046755005X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\027R0101.D
Lab Smp Id: 4046755005 Client Smp ID: EWL-TR-04-C-HEPATOP
Inj Date : 28-JUN-2011 13:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755005X5
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 27
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.680	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			5013944	1322.82	761.99
S	35 TPH (C08-C16)	1.050-2.049			844431	158.953	91.56
S	38 TPH (C16-C28)	1.950-2.900			1904479	454.852	262.01
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			2465453	611.441	352.21
S	1 TPH - Diesel (C10-C28)	1.500-2.900			2335099	575.054	331.25
$	28 o-Terphenyl (S)	2.173	2.180	-0.007	99678	19.6297	2.26

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1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-05-C-HEPATOPANCREAS TX
Lab ID: 4046755006
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**122**	mg/kg	108	53.9	10	06/14/11 12:00	06/28/11 18:21	
	TPH (C08-C16)	**<53.9**	mg/kg	108	53.9	10	06/14/11 12:00	06/28/11 18:21	
	TPH (C16-C28)	**82.0J**	mg/kg	108	53.9	10	06/14/11 12:00	06/28/11 18:21	
	TPH (C08-C40)	**545**	mg/kg	108	53.9	10	06/14/11 12:00	06/28/11 18:21	3q
	TPH - Diesel (C10-C28)	**119**	mg/kg	108	53.9	10	06/14/11 12:00	06/28/11 18:21	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		10	06/14/11 12:00	06/28/11 18:21	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-05-C-HEPATOPANCREAS TX
Lab ID: 4046755006
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

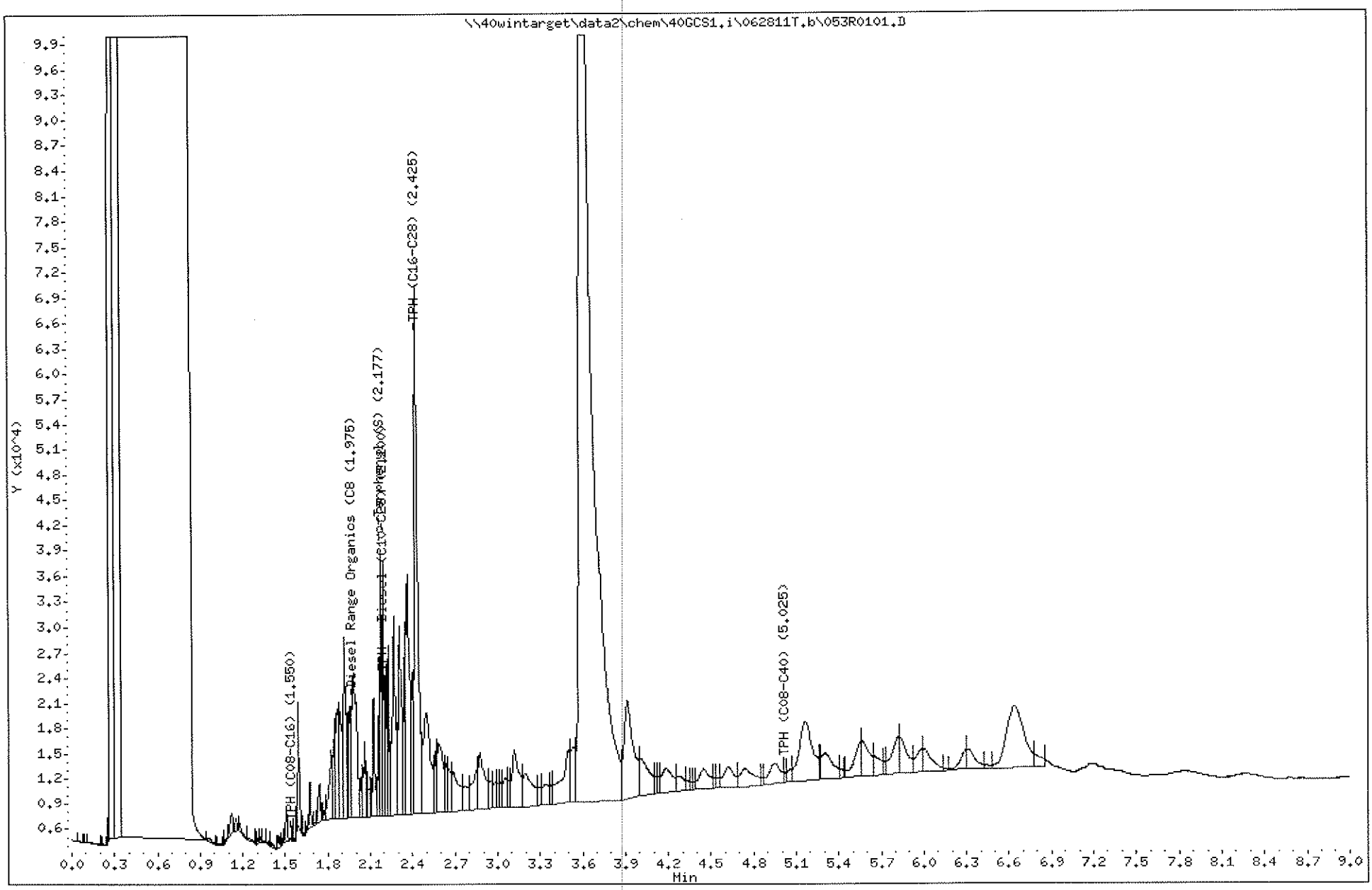
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**11.2**	%			1		06/15/11 06:35	

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\053R0101.D
Date : 28-JUN-2011 18:21
Client ID: EWL-TR-05-C-HEPATOP
Sample Info: 4046755006X10
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\053R0101.D
Lab Smp Id: 4046755006 Client Smp ID: EWL-TR-05-C-HEPATOP
Inj Date : 28-JUN-2011 18:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755006X10
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 53
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	10.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.260	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			2083048	504.697	545.02
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	1.950-2.900			547080	75.9509	82.02(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			680795	113.276	122.32
S 1 TPH - Diesel (C10-C28)	1.500-2.900			670964	110.532	119.36
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	24463	4.81752	0.52(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-06-C-HEPATOPANCREAS TX
Lab ID: 4046755007
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**171**	mg/kg	43.5	21.7	2	06/14/11 12:00	06/28/11 13:58	
	TPH (C08-C16)	**<21.7**	mg/kg	43.5	21.7	2	06/14/11 12:00	06/28/11 13:58	
	TPH (C16-C28)	**144**	mg/kg	43.5	21.7	2	06/14/11 12:00	06/28/11 13:58	
	TPH (C08-C40)	**612**	mg/kg	43.5	21.7	2	06/14/11 12:00	06/28/11 13:58	3q
	TPH - Diesel (C10-C28)	**163**	mg/kg	43.5	21.7	2	06/14/11 12:00	06/28/11 13:58	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	06/14/11 12:00	06/28/11 13:58	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-06-C-HEPATOPANCREAS TX
Lab ID: 4046755007
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

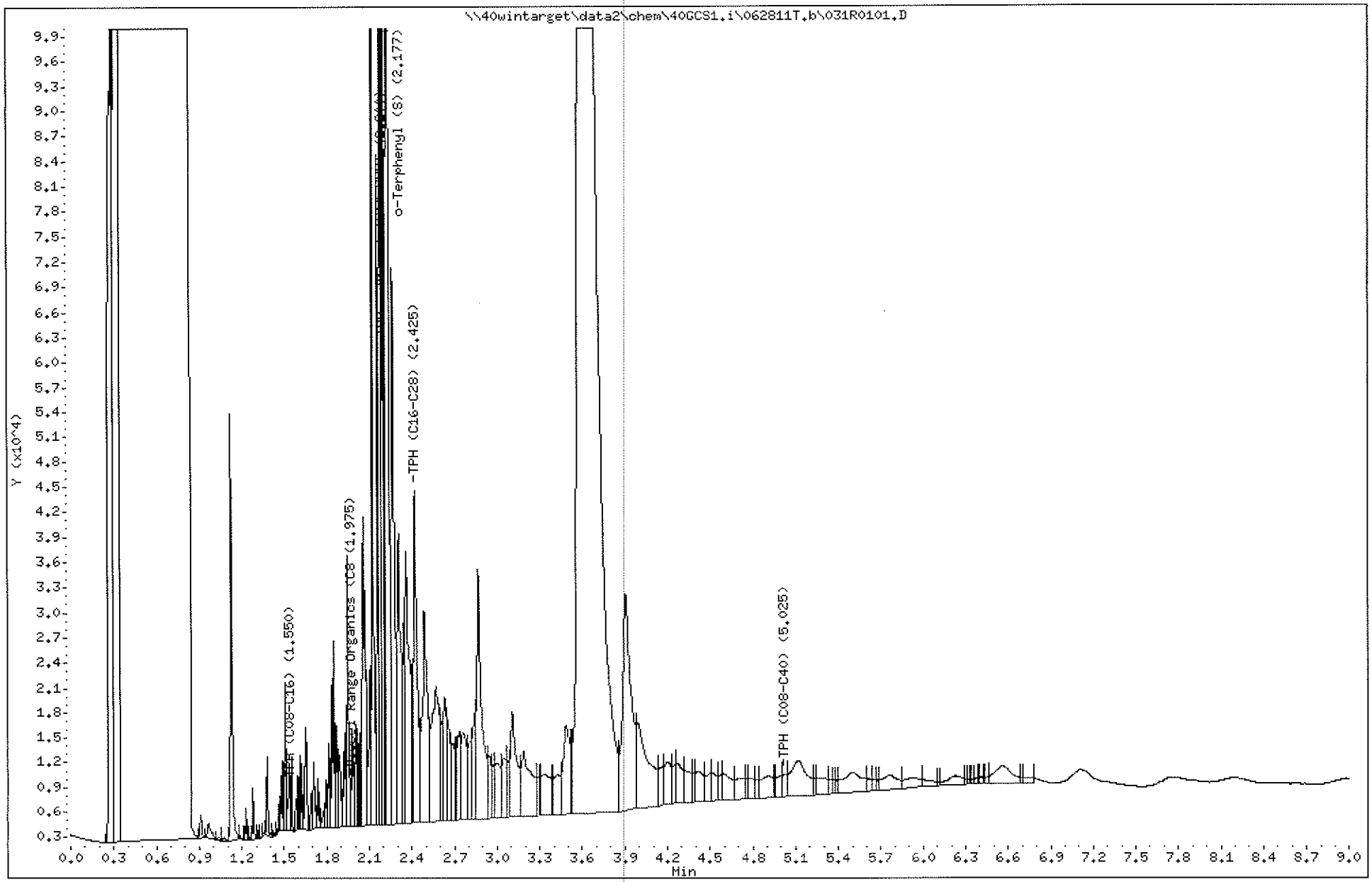
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	7.4	%			1		06/15/11 06:35	

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\031R0101.D
Date : 28-JUN-2011 13:58
Client ID: EWL-TR-06-C-HEPATOP
Sample Info: 4046755007X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\031R0101.D
Lab Smp Id: 4046755007 Client Smp ID: EWL-TR-06-C-HEPATOP
Inj Date : 28-JUN-2011 13:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755007X2
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 31
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.600	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			5315429	1406.98	611.72
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	1.950-2.900			1464864	332.139	144.40
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			1680956	392.458	170.63
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1619369	375.267	163.15
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	89592	17.6434	3.83

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-07-C-HEPATOPANCREAS TX
Lab ID: 4046755008
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**395**	mg/kg	77.4	38.6	6	06/14/11 12:00	06/28/11 14:22	
	TPH (C08-C16)	**85.5**	mg/kg	77.4	38.6	6	06/14/11 12:00	06/28/11 14:22	
	TPH (C16-C28)	**302**	mg/kg	77.4	38.6	6	06/14/11 12:00	06/28/11 14:22	
	TPH (C08-C40)	**1010**	mg/kg	77.4	38.6	6	06/14/11 12:00	06/28/11 14:22	3q
	TPH - Diesel (C10-C28)	**378**	mg/kg	77.4	38.6	6	06/14/11 12:00	06/28/11 14:22	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		6	06/14/11 12:00	06/28/11 14:22	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-07-C-HEPATOPANCREAS TX
Lab ID: 4046755008
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**7.1**	%			1		06/15/11 06:35	

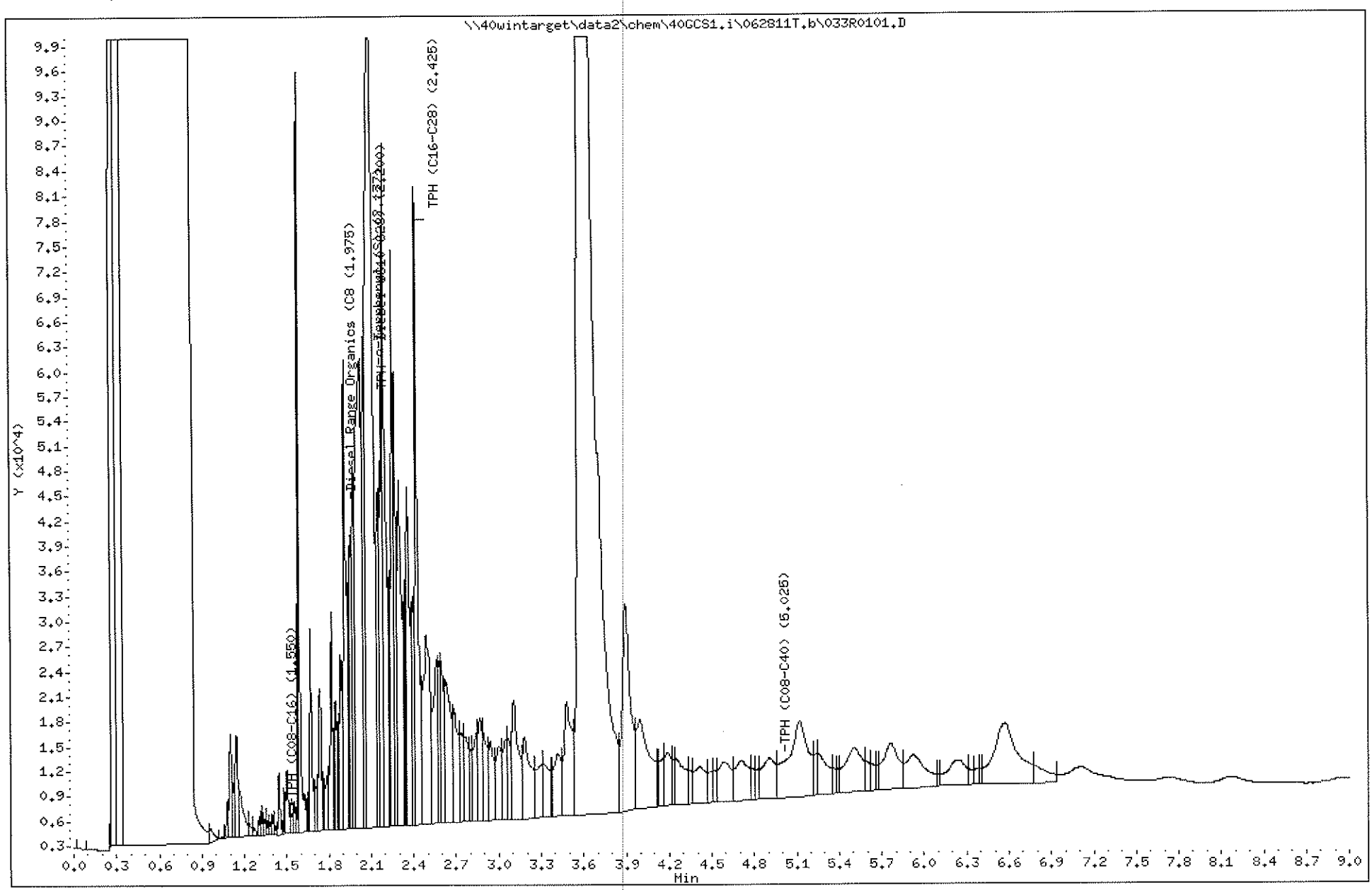
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\033R0101.D
Date : 28-JUN-2011 14:22
Client ID: EWL-TR-07-C-HEPATOP
Sample Info: 4046755008X6
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\033R0101.D
Lab Smp Id: 4046755008 Client Smp ID: EWL-TR-07-C-HEPATOP
Inj Date : 28-JUN-2011 14:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755008X6
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 33
Dil Factor: 6.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	6.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	7.760	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4938956	1301.89	1006.61
S	35 TPH (C08-C16)	1.050-2.049			671254	110.613	85.52
S	38 TPH (C16-C28)	1.950-2.900			1675120	390.829	302.18
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			2105829	511.056	395.14
S	1 TPH - Diesel (C10-C28)	1.500-2.900			2028669	489.518	378.49
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	52067	10.2536	1.32

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-08-C-HEPATOPANCREAS TX
Lab ID: 4046755009
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**441**	mg/kg	48.3	24.1	5	06/14/11 12:00	06/28/11 14:46	
	TPH (C08-C16)	**188**	mg/kg	48.3	24.1	5	06/14/11 12:00	06/28/11 14:46	
	TPH (C16-C28)	**254**	mg/kg	48.3	24.1	5	06/14/11 12:00	06/28/11 14:46	
	TPH (C08-C40)	**756**	mg/kg	48.3	24.1	5	06/14/11 12:00	06/28/11 14:46	3q
	TPH - Diesel (C10-C28)	**398**	mg/kg	48.3	24.1	5	06/14/11 12:00	06/28/11 14:46	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	06/14/11 12:00	06/28/11 14:46	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-08-C-HEPATOPANCREAS TX
Lab ID: 4046755009
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**12.9**	%			1		06/15/11 06:35	

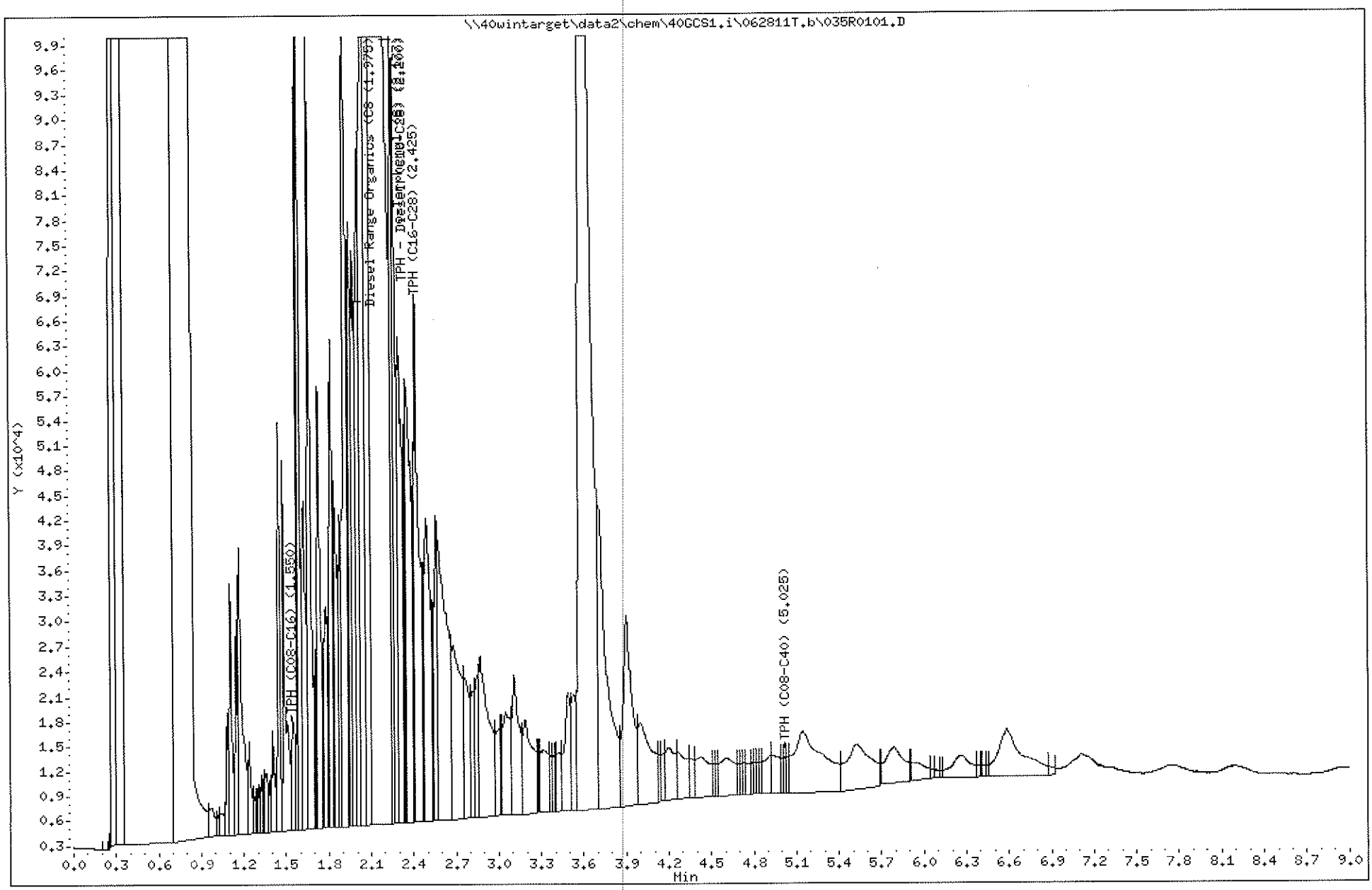
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\035R0101.D
Date : 28-JUN-2011 14:46
Client ID: EWL-TR-08-C-HEPATOP
Sample Info: 4046755009X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\035R0101.D
Lab Smp Id: 4046755009 Client Smp ID: EWL-TR-08-C-HEPATOP
Inj Date : 28-JUN-2011 14:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755009X5
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 35
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.350	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			5880008	1564.57	755.83
S	35 TPH (C08-C16)	1.050-2.049			1672603	390.127	188.46
S	38 TPH (C16-C28)	1.950-2.900			2155789	525.002	253.62
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			3548779	913.837	441.46
S	1 TPH - Diesel (C10-C28)	1.500-2.900			3222954	822.888	397.53
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	1544375	304.135	29.38(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-09-C-HEPATOPANCREAS TX
Lab ID: 4046755010
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**522**	mg/kg	64.8	32.4	7	06/14/11 12:00	06/28/11 15:10	
	TPH (C08-C16)	**100**	mg/kg	64.8	32.4	7	06/14/11 12:00	06/28/11 15:10	
	TPH (C16-C28)	**393**	mg/kg	64.8	32.4	7	06/14/11 12:00	06/28/11 15:10	
	TPH (C08-C40)	**890**	mg/kg	64.8	32.4	7	06/14/11 12:00	06/28/11 15:10	3q
	TPH - Diesel (C10-C28)	**500**	mg/kg	64.8	32.4	7	06/14/11 12:00	06/28/11 15:10	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		7	06/14/11 12:00	06/28/11 15:10	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-09-C-HEPATOPANCREAS TX
Lab ID: 4046755010
Collected: 12/14/10 00:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**17.2**	%			1		06/15/11 06:36	

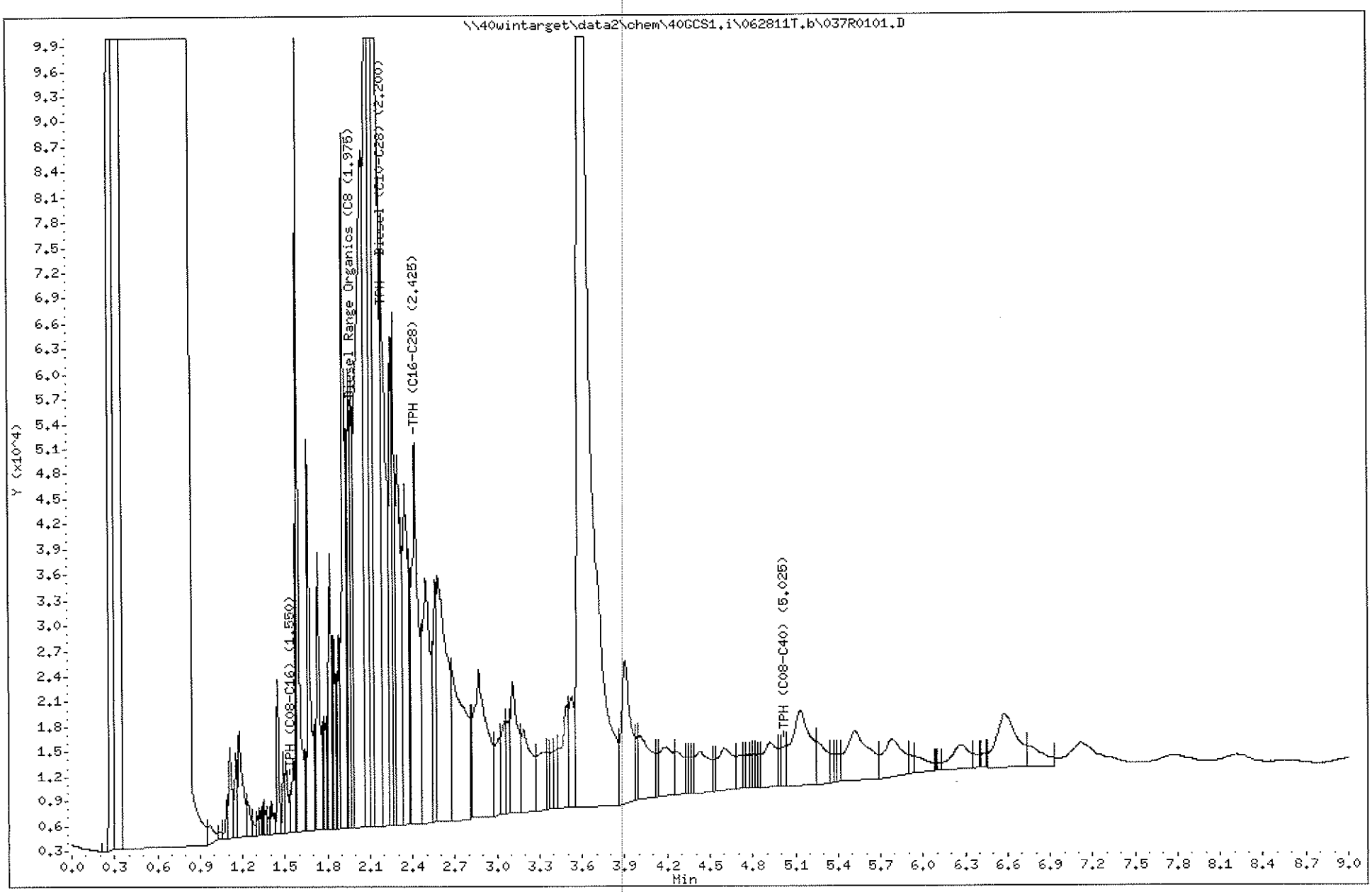
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\037R0101.D
Date : 28-JUN-2011 15:10
Client ID: EWL-TR-09-C-HEPATOP
Sample Info: 4046755010X7
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\037R0101.D
Lab Smp Id: 4046755010 Client Smp ID: EWL-TR-09-C-HEPATOP
Inj Date : 28-JUN-2011 15:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755010X7
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 37
Dil Factor: 7.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	7.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	10.800	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			5195156	1373.40	890.16
S	35 TPH (C08-C16)	1.050-2.049			828035	154.376	100.05
S	38 TPH (C16-C28)	1.950-2.900			2448723	606.771	393.27
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			3158052	804.771	521.61
S	1 TPH - Diesel (C10-C28)	1.500-2.900			3039047	771.552	500.08
$	28 o-Terphenyl (S)	Compound Not Detected.					

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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-01-C-HEPATOPANCREAS TX
Lab ID: 4046755011
Collected: 12/20/10 12:36
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**249**	mg/kg	33.5	16.7	2	06/14/11 12:00	06/28/11 15:34	
	TPH (C08-C16)	**70.3**	mg/kg	33.5	16.7	2	06/14/11 12:00	06/28/11 15:34	
	TPH (C16-C28)	**167**	mg/kg	33.5	16.7	2	06/14/11 12:00	06/28/11 15:34	
	TPH (C08-C40)	**499**	mg/kg	33.5	16.7	2	06/14/11 12:00	06/28/11 15:34	3q
	TPH - Diesel (C10-C28)	**233**	mg/kg	33.5	16.7	2	06/14/11 12:00	06/28/11 15:34	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	06/14/11 12:00	06/28/11 15:34	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-01-C-HEPATOPANCREAS TX
Lab ID: 4046755011
Collected: 12/20/10 12:36
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	3.2	%			1		06/15/11 06:36	

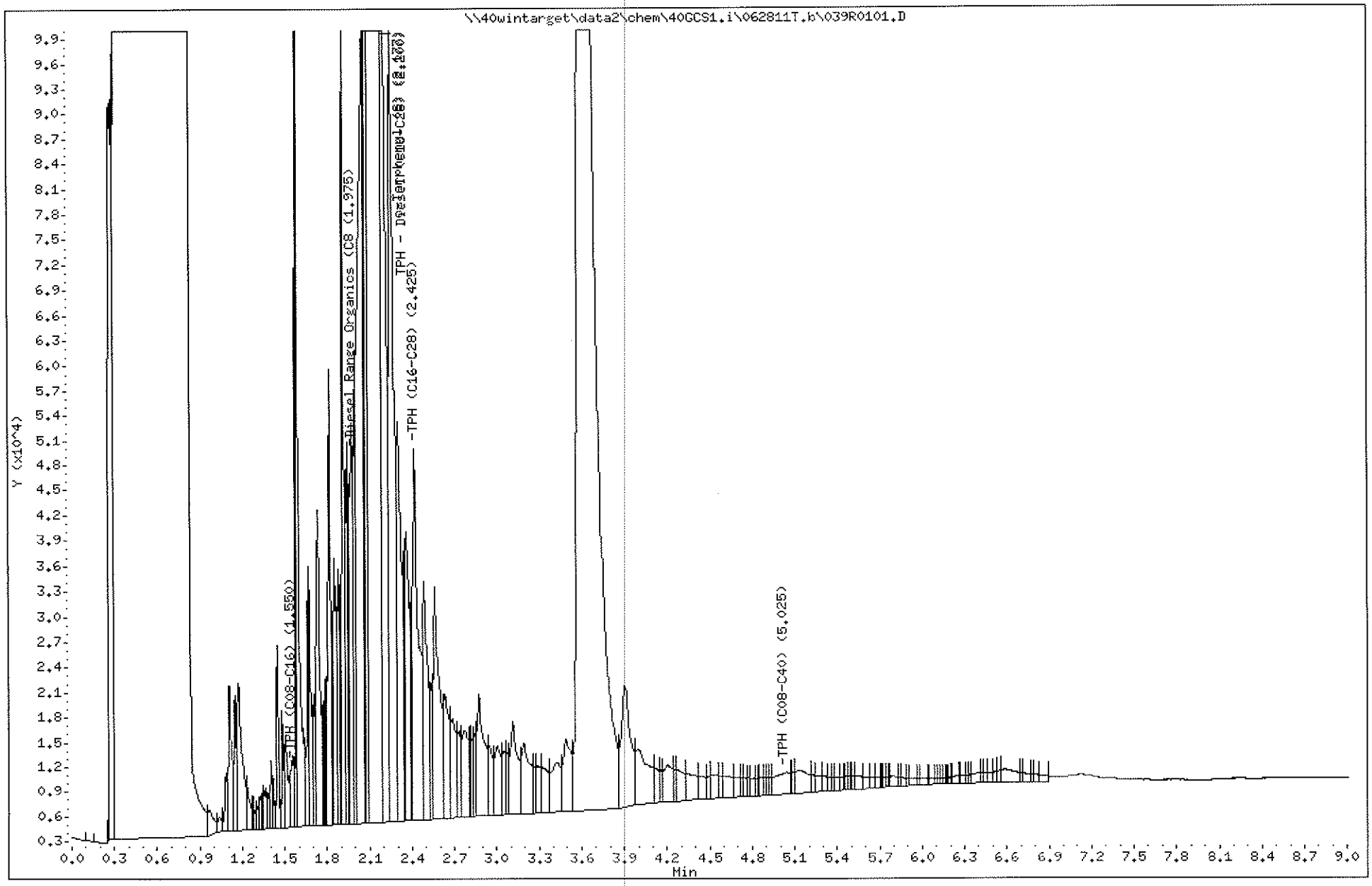
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\039R0101.D
Date : 28-JUN-2011 15:34
Client ID: EWL-T-01-C-HEPATOPA
Sample Info: 4046755011X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\039R0101.D
Lab Smp Id: 4046755011 Client Smp ID: EWL-T-01-C-HEPATOPA
Inj Date : 28-JUN-2011 15:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755011X2
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 39
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	5.970	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			5610184	1489.25	498.91
S 35 TPH (C08-C16)	1.050-2.049			1026463	209.765	70.27
S 38 TPH (C16-C28)	1.950-2.900			2057478	497.560	166.68
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			2942811	744.689	249.47
S 1 TPH - Diesel (C10-C28)	1.500-2.900			2771028	696.738	233.41
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	1090092	214.673	35.95(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-02-C-HEPATOPANCREAS TX
Lab ID: 4046755012
Collected: 12/21/10 11:04
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**116**	mg/kg	44.6	22.2	4	06/14/11 12:00	06/28/11 11:10	D6,M1
	TPH (C08-C16)	**<22.2**	mg/kg	44.6	22.2	4	06/14/11 12:00	06/28/11 11:10	D6
	TPH (C16-C28)	**90.8**	mg/kg	44.6	22.2	4	06/14/11 12:00	06/28/11 11:10	D6
	TPH (C08-C40)	**486**	mg/kg	44.6	22.2	4	06/14/11 12:00	06/28/11 11:10	3q,D6,M0
	TPH - Diesel (C10-C28)	**112**	mg/kg	44.6	22.2	4	06/14/11 12:00	06/28/11 11:10	D6,M1
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	06/14/11 12:00	06/28/11 11:10	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-02-C-HEPATOPANCREAS TX
Lab ID: 4046755012
Collected: 12/21/10 11:04
Received: 06/07/11 10:00

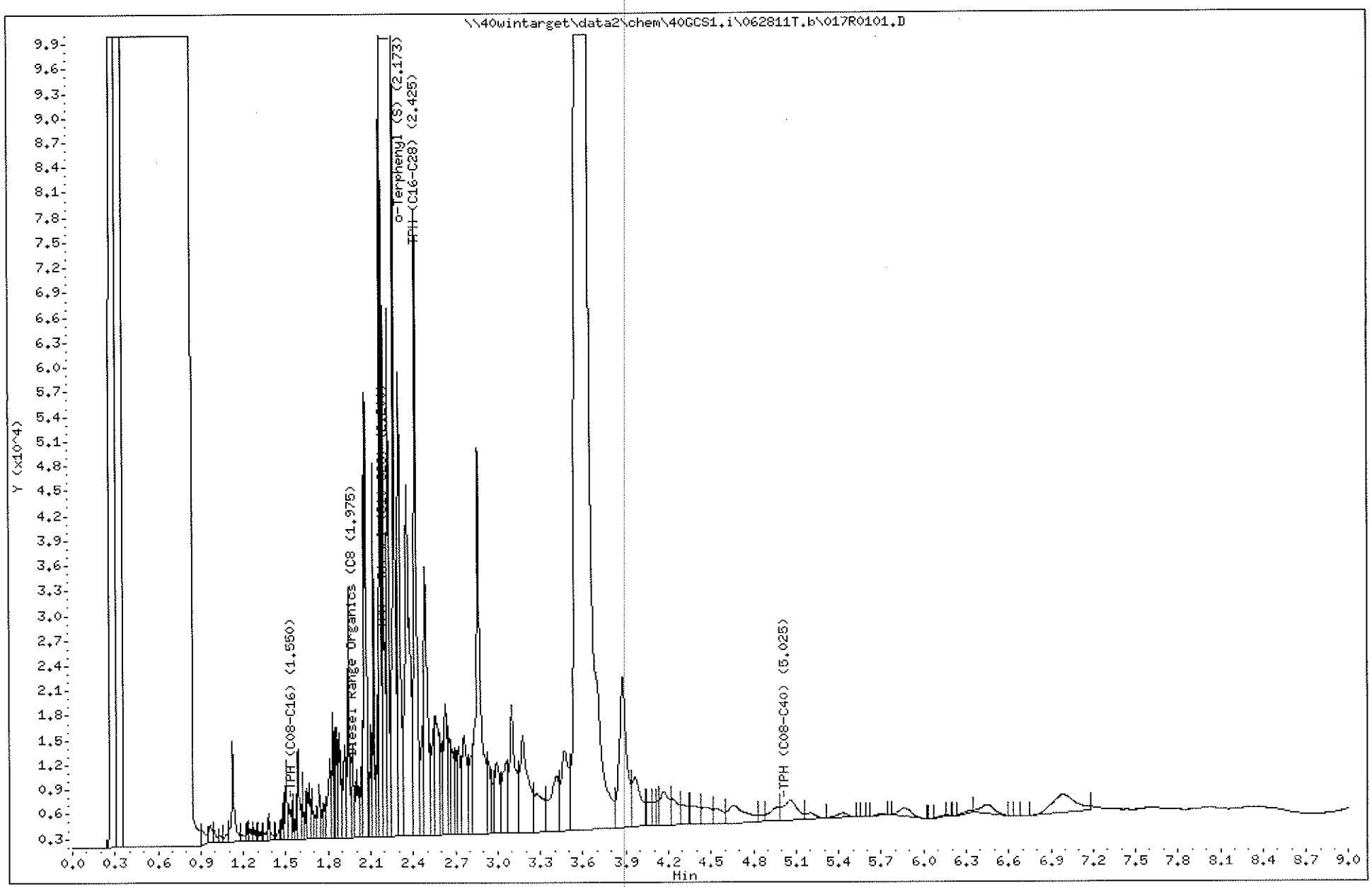
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**8.8**	%			1		06/15/11 06:37	

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\017R0101.D
Date : 28-JUN-2011 11:10
Client ID: EWL-T-02-C-HEPATOPA
Sample Info: 4046755012X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\017R0101.D
Lab Smp Id: 4046755012 Client Smp ID: EWL-T-02-C-HEPATOPA
Inj Date : 28-JUN-2011 11:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755012X4
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 17
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.980	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4185191	1091.48	486.18
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	1.950-2.900			1004988	203.770	90.76
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			1210961	261.265	116.37
S	1 TPH - Diesel (C10-C28)	1.500-2.900			1175181	251.277	111.92
$	28 o-Terphenyl (S)	2.173	2.180	-0.007	88495	17.4274	1.94

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-04-C-HEPATOPANCREAS TX
Lab ID: 4046755014
Collected: 12/20/10 12:22
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**11.2J**	mg/kg	11.7	5.8	1	06/14/11 12:00	06/28/11 15:46	
	TPH (C08-C16)	**<5.8**	mg/kg	11.7	5.8	1	06/14/11 12:00	06/28/11 15:46	
	TPH (C16-C28)	**9.9J**	mg/kg	11.7	5.8	1	06/14/11 12:00	06/28/11 15:46	
	TPH (C08-C40)	**46.6**	mg/kg	11.7	5.8	1	06/14/11 12:00	06/28/11 15:46	3q
	TPH - Diesel (C10-C28)	**10.8J**	mg/kg	11.7	5.8	1	06/14/11 12:00	06/28/11 15:46	
Surrogates									
84-15-1	o-Terphenyl (S)	**10**	%.	50-150		1	06/14/11 12:00	06/28/11 15:46	5q

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-04-C-HEPATOPANCREAS TX
Lab ID: 4046755014
Collected: 12/20/10 12:22
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	4.0	%			1		06/15/11 06:37	

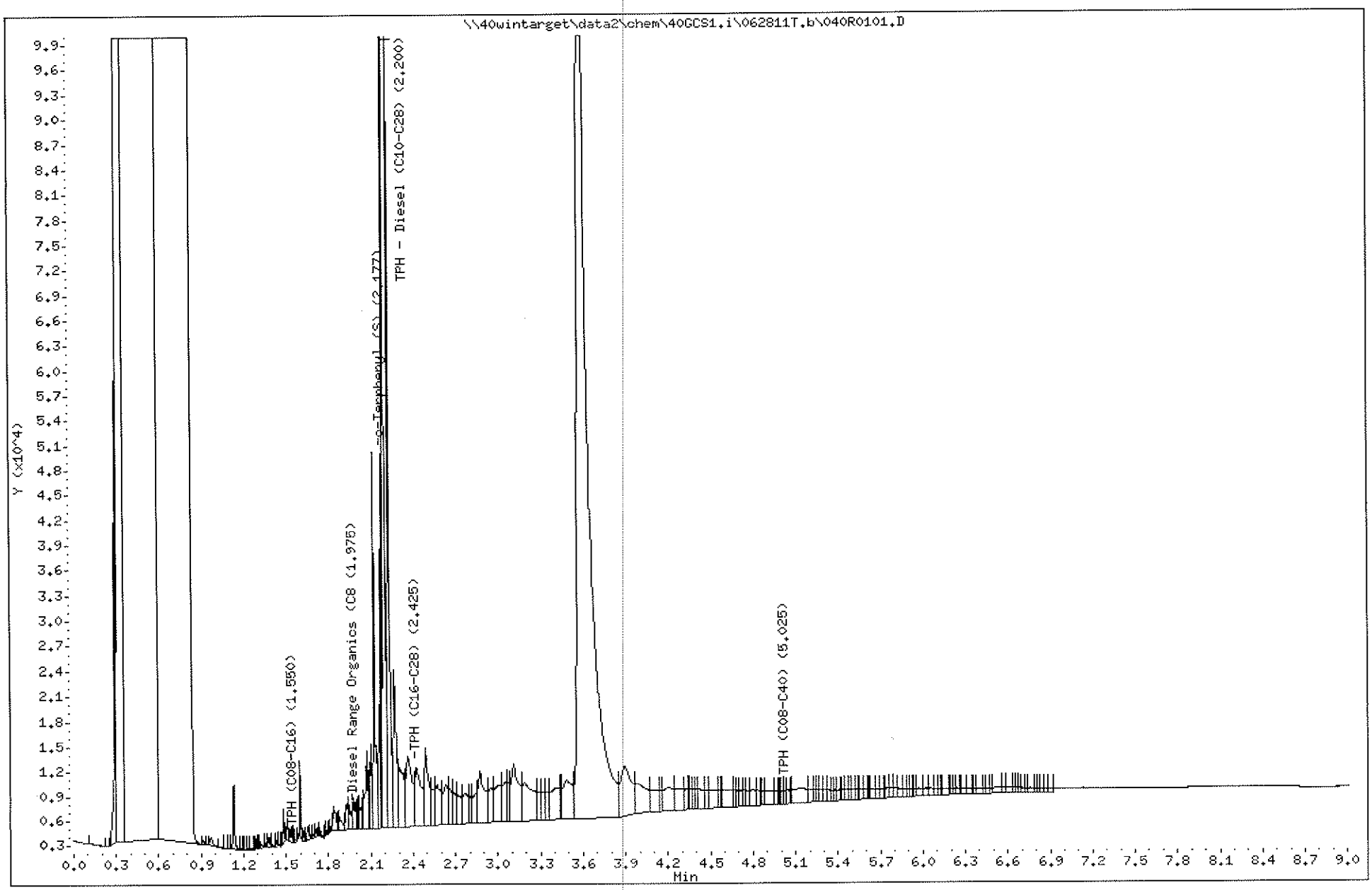
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\040R0101.D
Date : 28-JUN-2011 15:46
Client ID: EWL-T-04-C-HEPATOPA
Sample Info: 4046755014
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\040R0101.D
Lab Smp Id: 4046755014 Client Smp ID: EWL-T-04-C-HEPATOPA
Inj Date : 28-JUN-2011 15:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755014
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 40
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.570	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			1704402	399.003	46.55
S 35 TPH (C08-C16)	Compound Not Detected.					
S 38 TPH (C16-C28)	1.950-2.900			579892	85.1100	9.93(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			618512	95.8903	11.18(a)
S 1 TPH - Diesel (C10-C28)	1.500-2.900			606197	92.4527	10.78
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	24526	4.82993	0.56(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-05-C-HEPATOPANCREAS TX
Lab ID: 4046755015
Collected: 12/21/10 10:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**939**	mg/kg	272	136	4	06/14/11 12:00	06/28/11 16:10	
	TPH (C08-C16)	**<136**	mg/kg	272	136	4	06/14/11 12:00	06/28/11 16:10	
	TPH (C16-C28)	**856**	mg/kg	272	136	4	06/14/11 12:00	06/28/11 16:10	
	TPH (C08-C40)	**3290**	mg/kg	272	136	4	06/14/11 12:00	06/28/11 16:10	3q
	TPH - Diesel (C10-C28)	**925**	mg/kg	272	136	4	06/14/11 12:00	06/28/11 16:10	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	06/14/11 12:00	06/28/11 16:10	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-05-C-HEPATOPANCREAS TX
Lab ID: 4046755015
Collected: 12/21/10 10:33
Received: 06/07/11 10:00

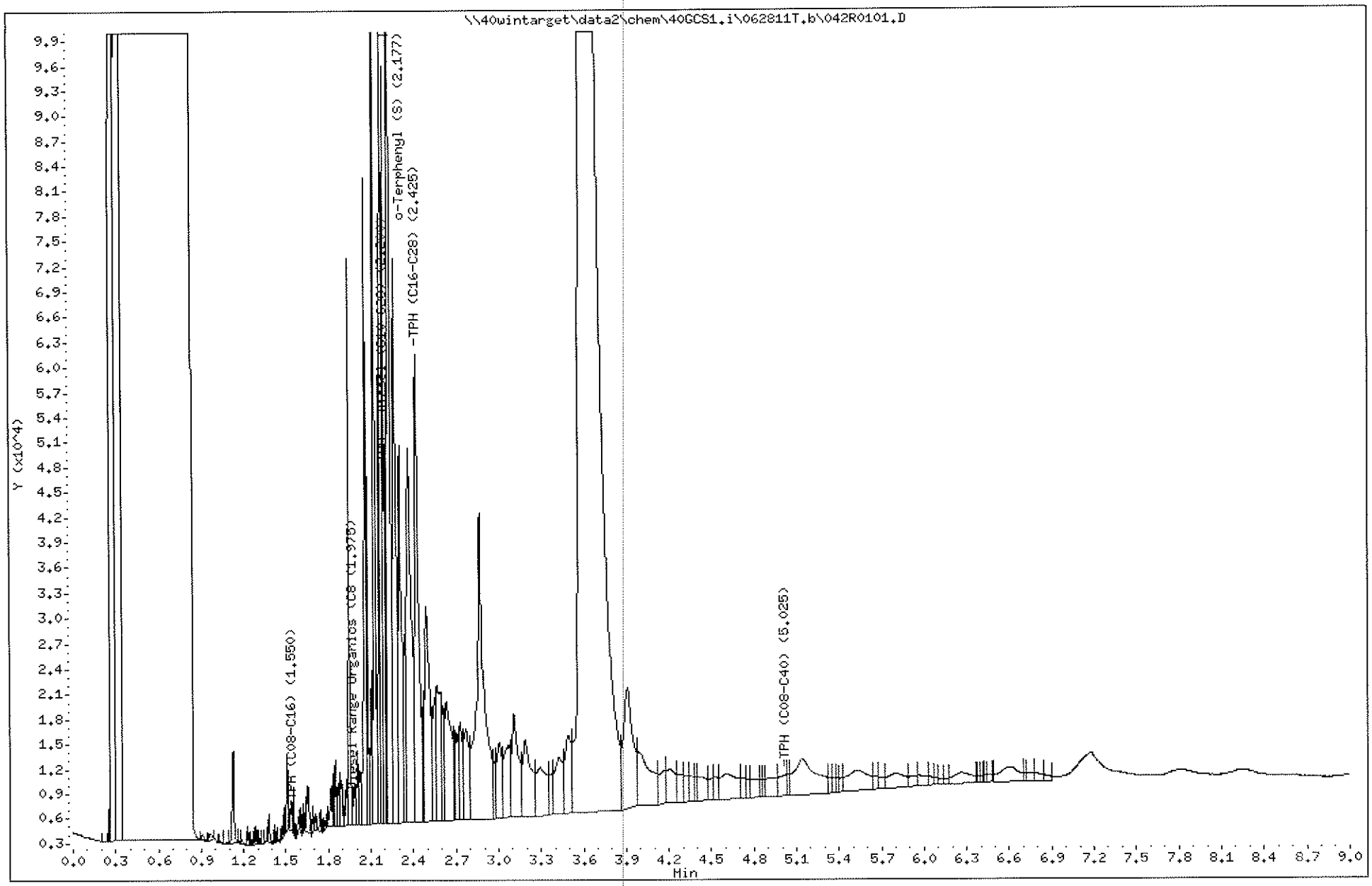
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**30.6**	%			1		06/15/11 06:37	

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\042R0101.D
Date : 28-JUN-2011 16:10
Client ID: EWL-T-05-C-HEPATOPA
Sample Info: 4046755015X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\042R0101.D
Lab Smp Id: 4046755015 Client Smp ID: EWL-T-05-C-HEPATOPA
Inj Date : 28-JUN-2011 16:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755015X4
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 42
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	1.470	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4607325	1209.32	3290.65
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	1.950-2.900			1401632	314.488	855.75
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			1511819	345.246	939.44
S	1 TPH - Diesel (C10-C28)	1.500-2.900			1492850	339.951	925.03
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	122922	24.2072	16.46

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-06-C-HEPATOPANCREAS TX
Lab ID: 4046755016
Collected: 12/16/10 12:15
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**180**	mg/kg	68.4	34.1	3	06/14/11 12:00	06/28/11 16:34	
	TPH (C08-C16)	**<34.1**	mg/kg	68.4	34.1	3	06/14/11 12:00	06/28/11 16:34	
	TPH (C16-C28)	**174**	mg/kg	68.4	34.1	3	06/14/11 12:00	06/28/11 16:34	
	TPH (C08-C40)	**812**	mg/kg	68.4	34.1	3	06/14/11 12:00	06/28/11 16:34	3q
	TPH - Diesel (C10-C28)	**178**	mg/kg	68.4	34.1	3	06/14/11 12:00	06/28/11 16:34	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	06/14/11 12:00	06/28/11 16:34	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-06-C-HEPATOPANCREAS TX
Lab ID: 4046755016
Collected: 12/16/10 12:15
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**10.5**	%			1		06/15/11 06:37	

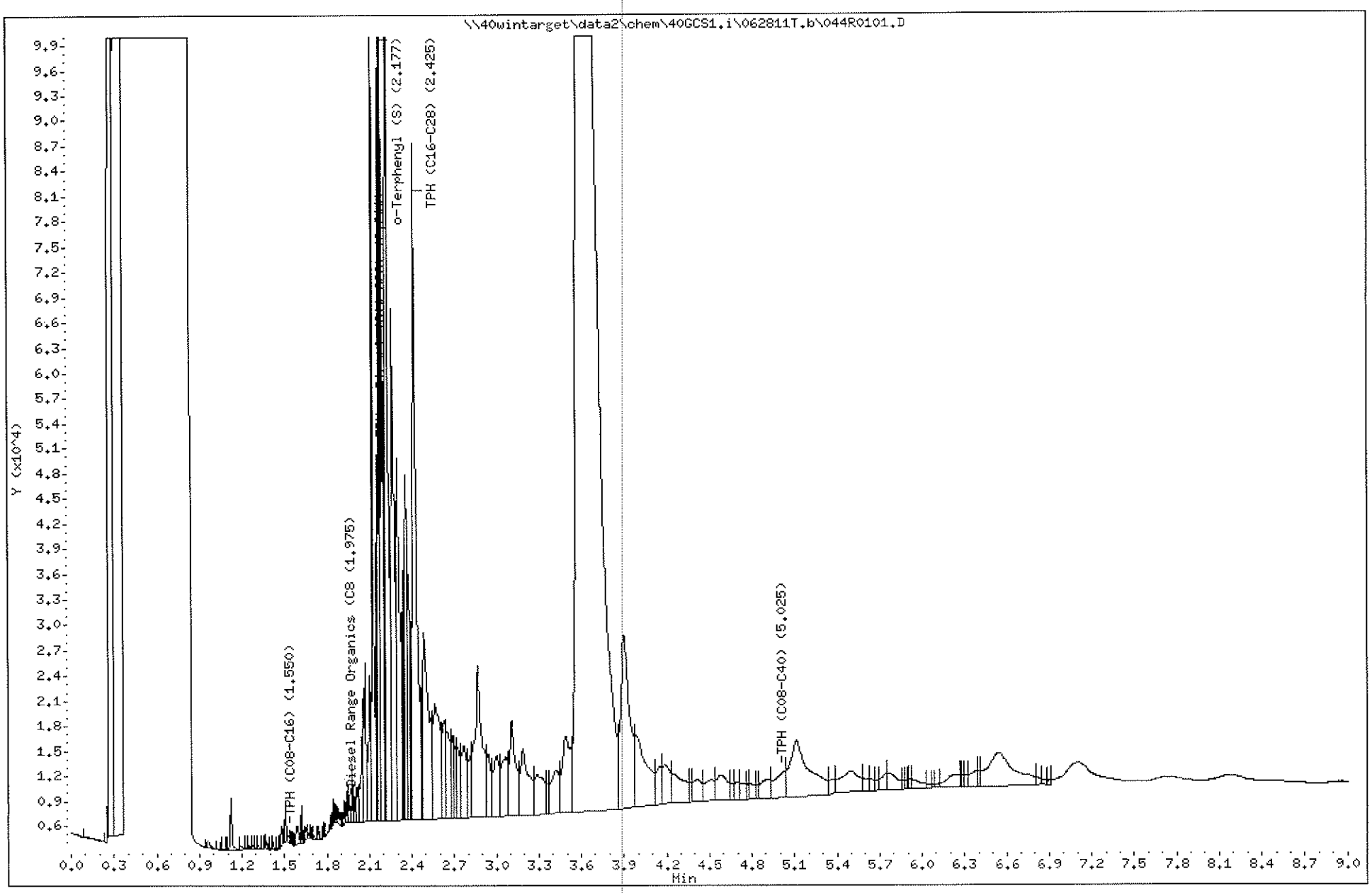
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\044R0101.D
Date : 28-JUN-2011 16:34
Client ID: EWL-T-06-C-HEPATOPA
Sample Info: 4046755016X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\044R0101.D
Lab Smp Id: 4046755016 Client Smp ID: EWL-T-06-C-HEPATOPA
Inj Date : 28-JUN-2011 16:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755016X3
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 44
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.390	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4533395	1188.68	812.31
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	1.950-2.900			1185964	254.287	173.77
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			1219571	263.668	180.18
S	1 TPH - Diesel (C10-C28)	1.500-2.900			1209667	260.904	178.29
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	73538	14.4819	3.29

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-08-C-HEPATOPANCREAS TX
Lab ID: 4046755017
Collected: 01/03/11 11:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**415**	mg/kg	66.4	33.2	5	06/14/11 12:00	06/28/11 16:57	
	TPH (C08-C16)	**90.0**	mg/kg	66.4	33.2	5	06/14/11 12:00	06/28/11 16:57	
	TPH (C16-C28)	**300**	mg/kg	66.4	33.2	5	06/14/11 12:00	06/28/11 16:57	
	TPH (C08-C40)	**741**	mg/kg	66.4	33.2	5	06/14/11 12:00	06/28/11 16:57	3q
	TPH - Diesel (C10-C28)	**394**	mg/kg	66.4	33.2	5	06/14/11 12:00	06/28/11 16:57	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	06/14/11 12:00	06/28/11 16:57	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-08-C-HEPATOPANCREAS TX
Lab ID: 4046755017
Collected: 01/03/11 11:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**7.0**	%			1		06/15/11 06:37	

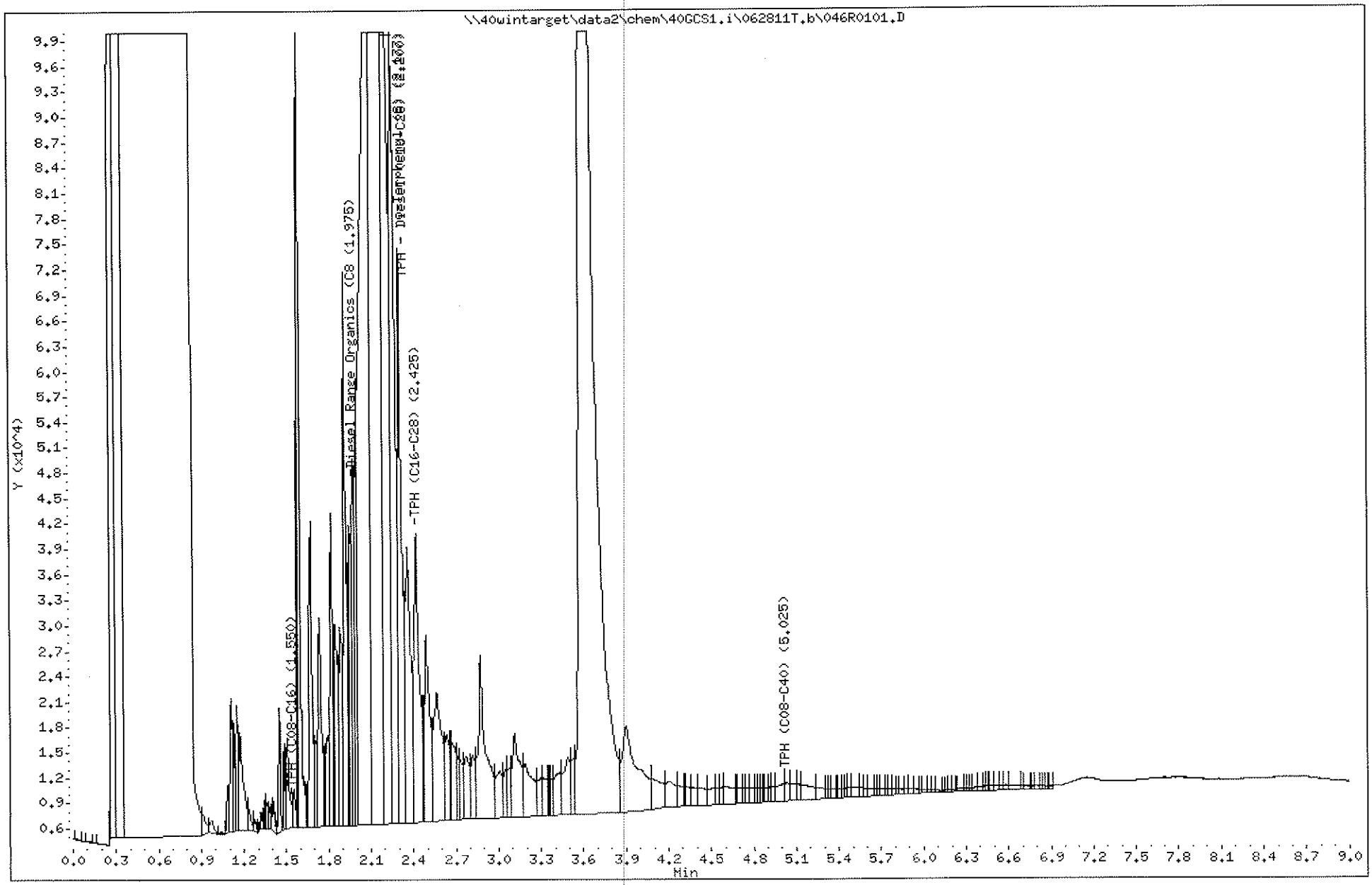
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\046R0101.D
Date : 28-JUN-2011 16:57
Client ID: EWL-T-08-C-HEPATOPA
Sample Info: 4046755017X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\046R0101.D
Lab Smp Id: 4046755017 Client Smp ID: EWL-T-08-C-HEPATOPA
Inj Date : 28-JUN-2011 16:57
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755017X5
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 46
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	7.530	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			4274260	1116.35	741.26
S 35 TPH (C08-C16)	1.050-2.049			760323	135.475	89.95
S 38 TPH (C16-C28)	1.950-2.900			1890908	451.064	299.51
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			2514861	625.232	415.16
S 1 TPH - Diesel (C10-C28)	1.500-2.900			2400638	593.348	393.98
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	1041193	205.043	27.23(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-11-C-HEPATOPANCREAS TX
Lab ID: 4046755018
Collected: 12/21/10 10:53
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**567**	mg/kg	106	52.8	5	06/14/11 12:00	06/28/11 17:21	
	TPH (C08-C16)	**111**	mg/kg	106	52.8	5	06/14/11 12:00	06/28/11 17:21	
	TPH (C16-C28)	**443**	mg/kg	106	52.8	5	06/14/11 12:00	06/28/11 17:21	
	TPH (C08-C40)	**1100**	mg/kg	106	52.8	5	06/14/11 12:00	06/28/11 17:21	3q
	TPH - Diesel (C10-C28)	**549**	mg/kg	106	52.8	5	06/14/11 12:00	06/28/11 17:21	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	06/14/11 12:00	06/28/11 17:21	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-11-C-HEPATOPANCREAS TX
Lab ID: 4046755018
Collected: 12/21/10 10:53
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**11.1**	%			1		06/15/11 06:37	

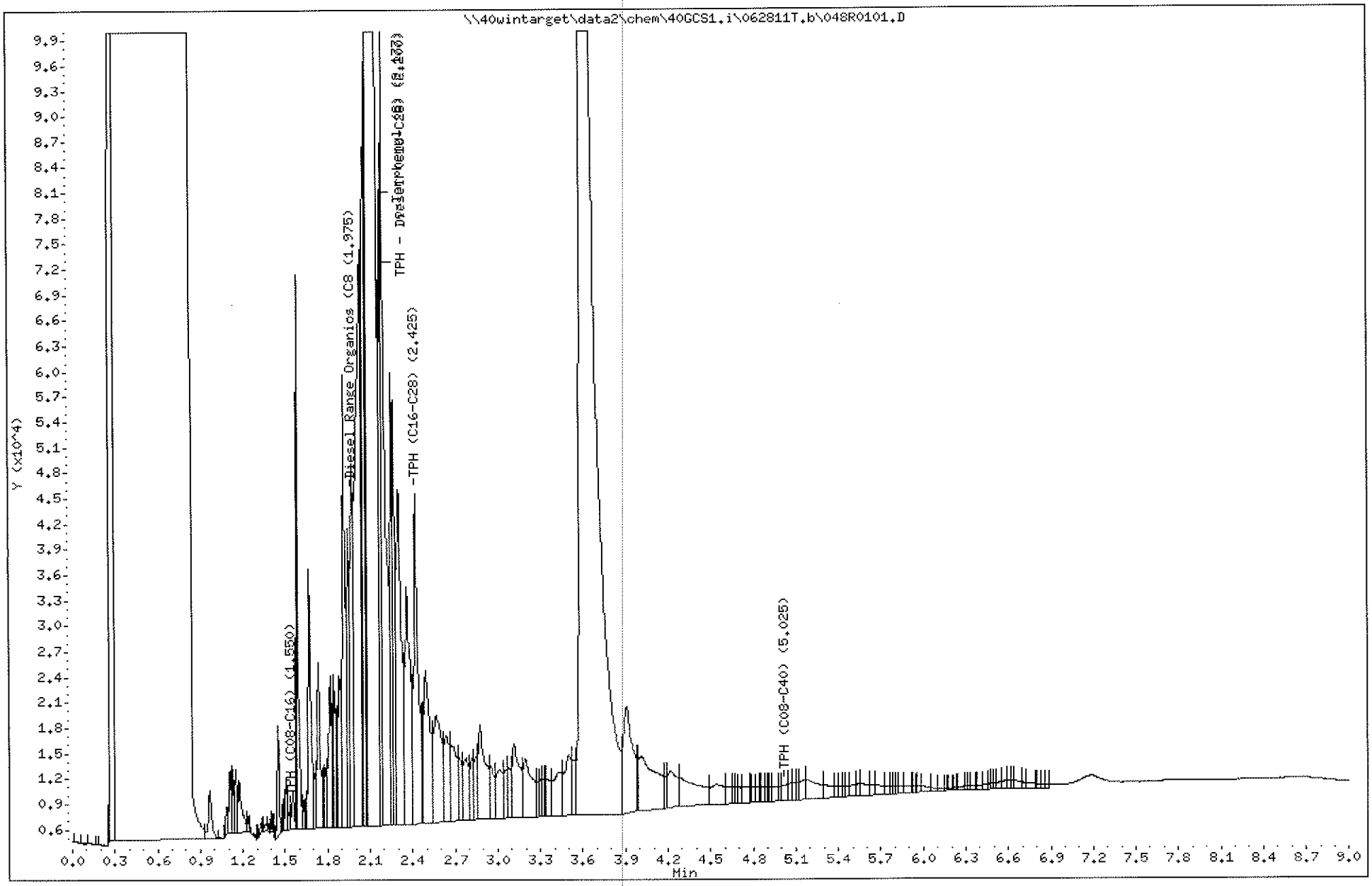
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\048R0101.D
Date : 28-JUN-2011 17:21
Client ID: EWL-T-11-C-HEPATOPA
Sample Info: 4046755018X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\048R0101.D
Lab Smp Id: 4046755018 Client Smp ID: EWL-T-11-C-HEPATOPA
Inj Date : 28-JUN-2011 17:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755018X5
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 48
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.730	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			3997864	1039.19	1098.51
S	35 TPH (C08-C16)	1.050-2.049			652066	105.256	111.26
S	38 TPH (C16-C28)	1.950-2.900			1776738	419.195	443.12
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			2195084	535.971	566.56
S	1 TPH - Diesel (C10-C28)	1.500-2.900			2135575	519.359	549.00
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	85958	16.9278	3.57

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-12-C-HEPATOPANCREAS TX
Lab ID: 4046755019
Collected: 01/03/11 11:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**339**	mg/kg	68.3	34.1	6	06/14/11 12:00	06/28/11 17:45	
	TPH (C08-C16)	**60.6J**	mg/kg	68.3	34.1	6	06/14/11 12:00	06/28/11 17:45	
	TPH (C16-C28)	**277**	mg/kg	68.3	34.1	6	06/14/11 12:00	06/28/11 17:45	
	TPH (C08-C40)	**685**	mg/kg	68.3	34.1	6	06/14/11 12:00	06/28/11 17:45	3q
	TPH - Diesel (C10-C28)	**331**	mg/kg	68.3	34.1	6	06/14/11 12:00	06/28/11 17:45	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		6	06/14/11 12:00	06/28/11 17:45	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-12-C-HEPATOPANCREAS TX
Lab ID: 4046755019
Collected: 01/03/11 11:00
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**12.5**	%			1		06/15/11 06:37	

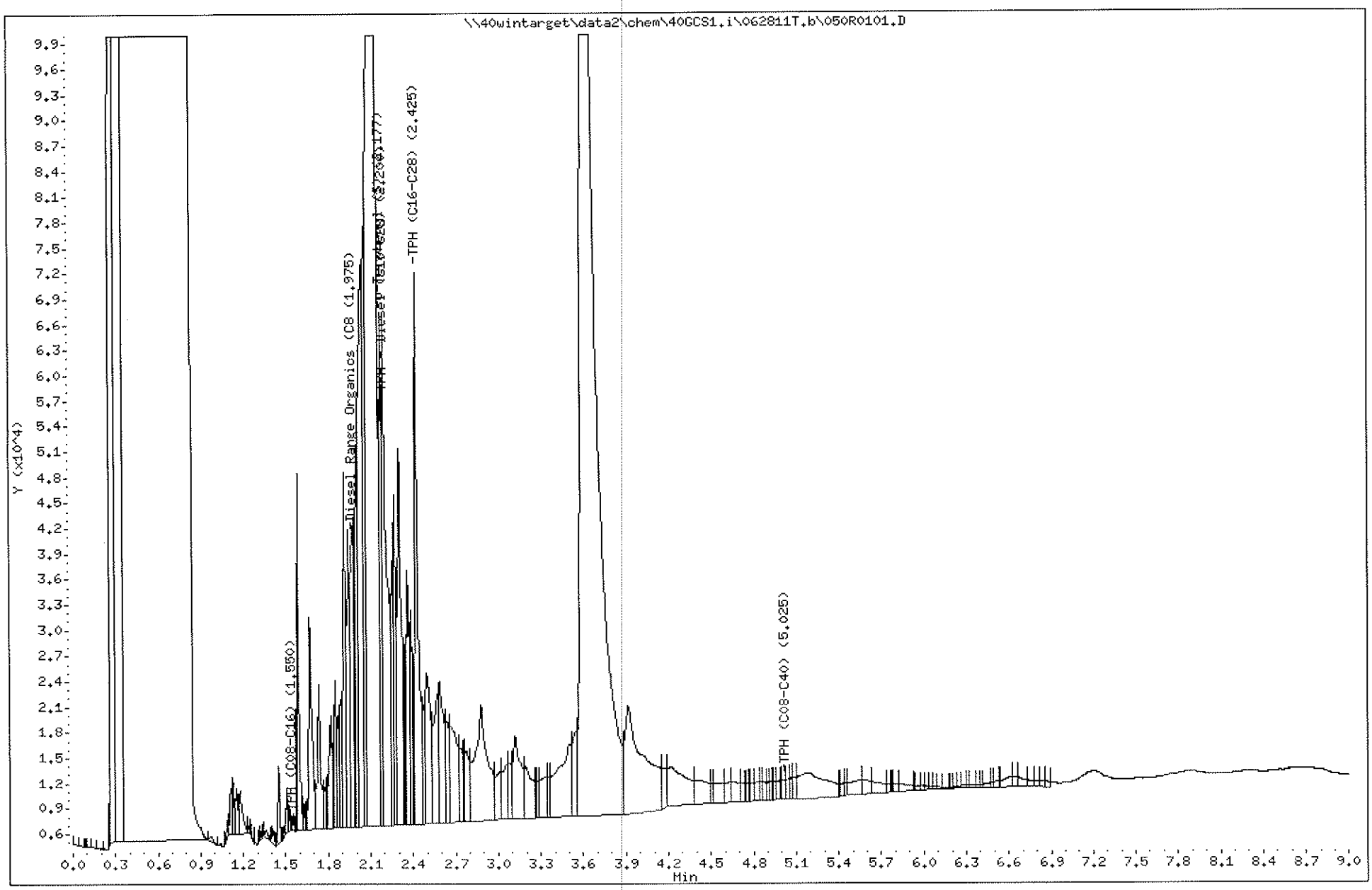
Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\050R0101.D
Date : 28-JUN-2011 17:45
Client ID: EWL-T-12-C-HEPATOPA
Sample Info: 4046755019X6
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\050R0101.D
Lab Smp Id: 4046755019 Client Smp ID: EWL-T-12-C-HEPATOPA
Inj Date : 28-JUN-2011 17:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755019X6
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 50
Dil Factor: 6.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	6.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.790	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds	RT	EXP RT	DLT RT	RESPONSE		
S 7 TPH (C08-C40)	1.050-9.000			3870393	1003.61	685.05
S 35 TPH (C08-C16)	1.050-2.049			593193	88.8228	60.62(a)
S 38 TPH (C16-C28)	1.950-2.900			1729203	405.926	277.08
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			2054032	496.598	338.97
S 1 TPH - Diesel (C10-C28)	1.500-2.900			2011103	484.615	330.79
$ 28 o-Terphenyl (S)	2.176	2.180	-0.004	68698	13.5288	1.53

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-BR-C-HEPATOPANCREAS TX
Lab ID: 4046755020
Collected: 12/27/10 12:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**248**	mg/kg	47.5	23.7	2	06/14/11 12:00	06/28/11 18:09	
	TPH (C08-C16)	**<23.7**	mg/kg	47.5	23.7	2	06/14/11 12:00	06/28/11 18:09	
	TPH (C16-C28)	**241**	mg/kg	47.5	23.7	2	06/14/11 12:00	06/28/11 18:09	
	TPH (C08-C40)	**618**	mg/kg	47.5	23.7	2	06/14/11 12:00	06/28/11 18:09	3q
	TPH - Diesel (C10-C28)	**245**	mg/kg	47.5	23.7	2	06/14/11 12:00	06/28/11 18:09	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	06/14/11 12:00	06/28/11 18:09	S4

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046755

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-BR-C-HEPATOPANCREAS TX
Lab ID: 4046755020
Collected: 12/27/10 12:30
Received: 06/07/11 10:00

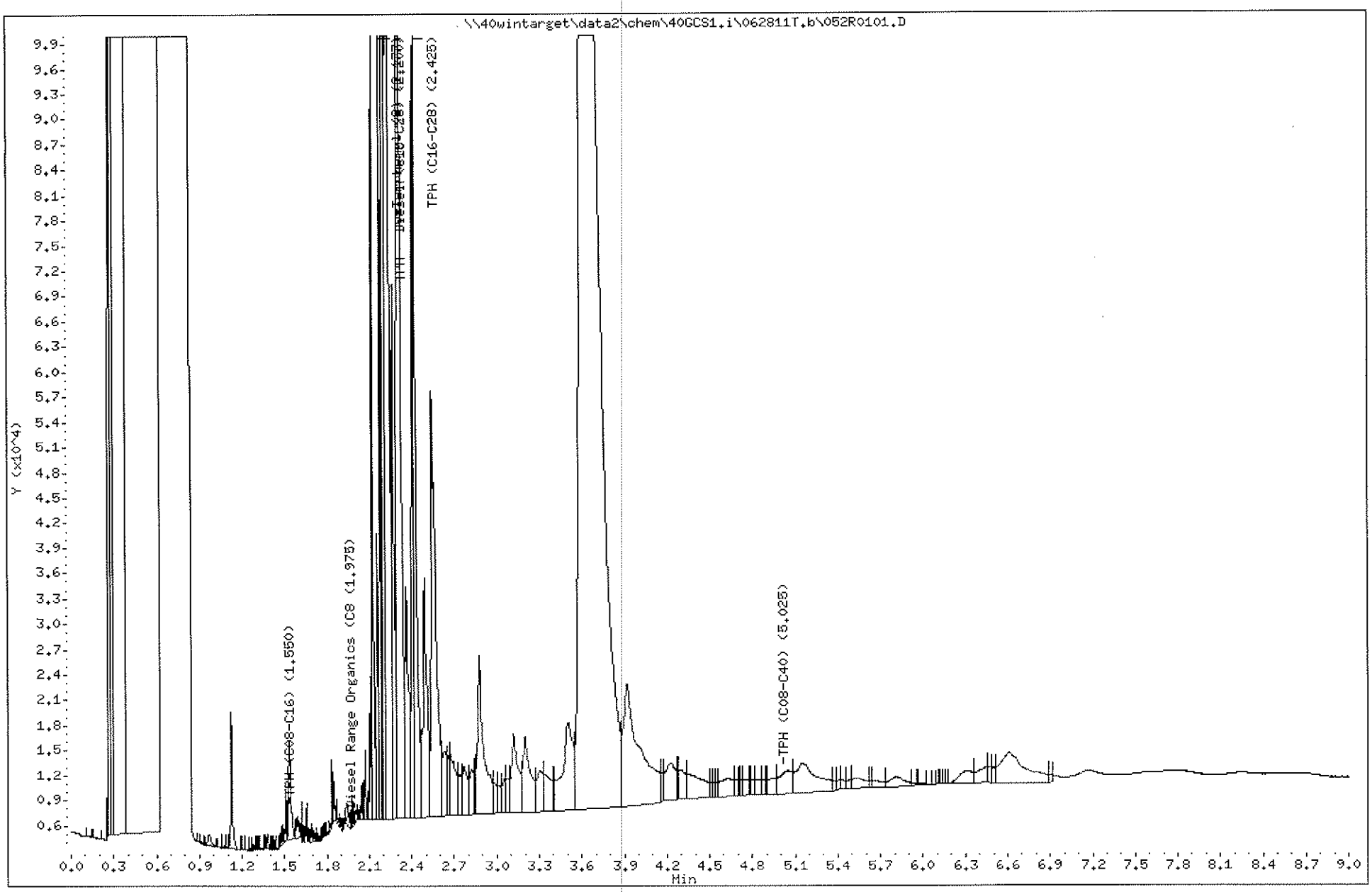
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**7.9**	%			1		06/15/11 06:38	

Date: 06/04/2012 09:08 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\052R0101.D
Date : 28-JUN-2011 18:09
Client ID: EWL-BR-C-HEPATOPANC
Sample Info: 4046755020X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\052R0101.D
Lab Smp Id: 4046755020 Client Smp ID: EWL-BR-C-HEPATOPANC
Inj Date : 28-JUN-2011 18:09
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046755020X2
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 52
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.210	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4936726	1301.27	618.17
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	1.950-2.900			2088912	506.334	240.53
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			2142547	521.306	247.65
S	1 TPH - Diesel (C10-C28)	1.500-2.900			2124723	516.330	245.28
$	28 o-Terphenyl (S)	2.176	2.180	-0.004	67763	13.3446	3.16

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046755

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAY-2011 07:51
End Cal Date : 13-JUN-2011 14:59
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Last Edit : 18-May-2012 13:24 kburns

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\060811B.b\009R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\060811B.b\008R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\060811B.b\007R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\060811B.b\006R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\060811B.b\005R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\060811B.b\004R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH - Diesel (C10-C28)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	38 TPH (C16-C28)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	2 Diesel Range Organics (C8-C28	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	3 TPH (C10-C12)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	4 High End Organics (C8-C34)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	5 TPH (C12-C20)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	6 TPH (C10-C40)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	7 TPH (C08-C40)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	8 TPH (C08-C36)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	9 TPH (C10-C20)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	10 TPH (C20-C34)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	35 TPH (C08-C16)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	36 TPH (C16-C40)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647
S	37 Biota (C12-C36)	358429	499076	1155694	2374006	3863352	7370986	LINR	-76.75956	0.00028		0.99647

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 10-MAY-2011 07:51
End Cal Date : 13-JUN-2011 14:59
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Last Edit : 18-May-2012 13:24 kburns

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
11 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
12 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
13 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
14 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
16 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 o-Terphenyl (S)	0.00024	0.00024	0.00022	0.00018	0.00017	0.00014	AVRG		0.00020		20.83320	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

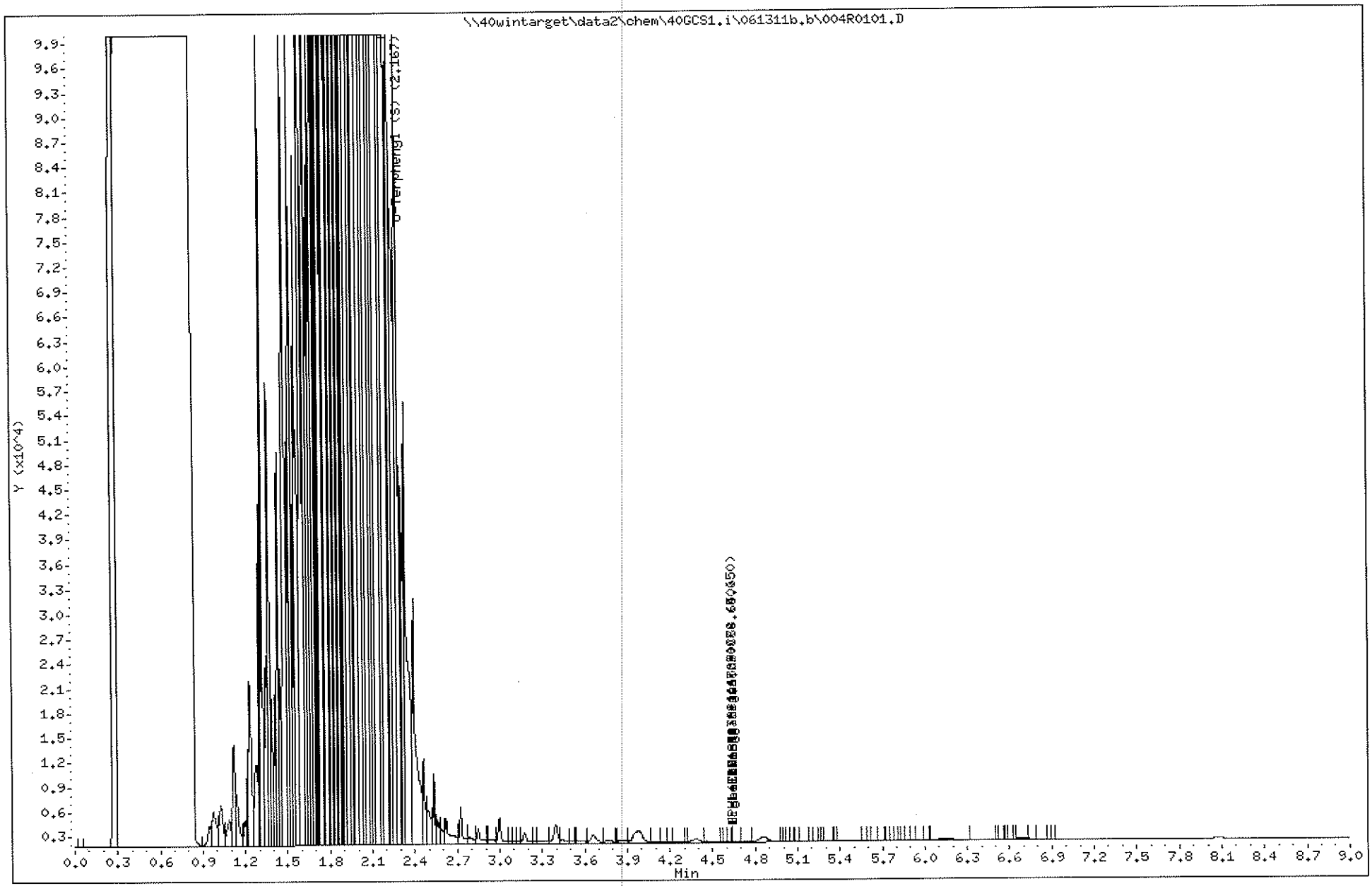
Start Cal Date : 10-MAY-2011 07:51
End Cal Date : 13-JUN-2011 14:59
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Last Edit : 18-May-2012 13:24 kburns

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\004R0101.D
Date : 13-JUN-2011 14:01
Client ID:
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\004R0101.D
Lab Smp Id: 2000 2860-31-01
Inj Date : 13-JUN-2011 14:01
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:04 Cal File: 004R0101.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			7370986	2000.00	1968.62
S	38 TPH (C16-C28)	1.000-8.300			7370986	2000.00	1968.62(A)
S	37 Biota (C12-C36)	1.000-8.300			7370986	2000.00	1968.62(A)
S	35 TPH (C08-C16)	1.000-8.300			7370986	2000.00	1968.62(A)
S	36 TPH (C16-C40)	1.000-8.300			7370986	2000.00	1968.62(A)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			7370986	2000.00	1968.62
S	4 High End Organics (C8-C34)	1.000-8.300			7370986	2000.00	1968.62
S	3 TPH (C10-C12)	1.000-8.300			7370986	2000.00	1968.62
S	5 TPH (C12-C20)	1.000-8.300			7370986	2000.00	1968.62
S	6 TPH (C10-C40)	1.000-8.300			7370986	2000.00	1968.62
S	7 TPH (C08-C40)	1.000-8.300			7370986	2000.00	1968.62
S	8 TPH (C08-C36)	1.000-8.300			7370986	2000.00	1968.62
S	9 TPH (C10-C20)	1.000-8.300			7370986	2000.00	1968.62
S	10 TPH (C20-C34)	1.000-8.300			7370986	2000.00	1968.62
$	28 o-Terphenyl (S)	2.166	2.166	0.000	360507	50.0000	69.87

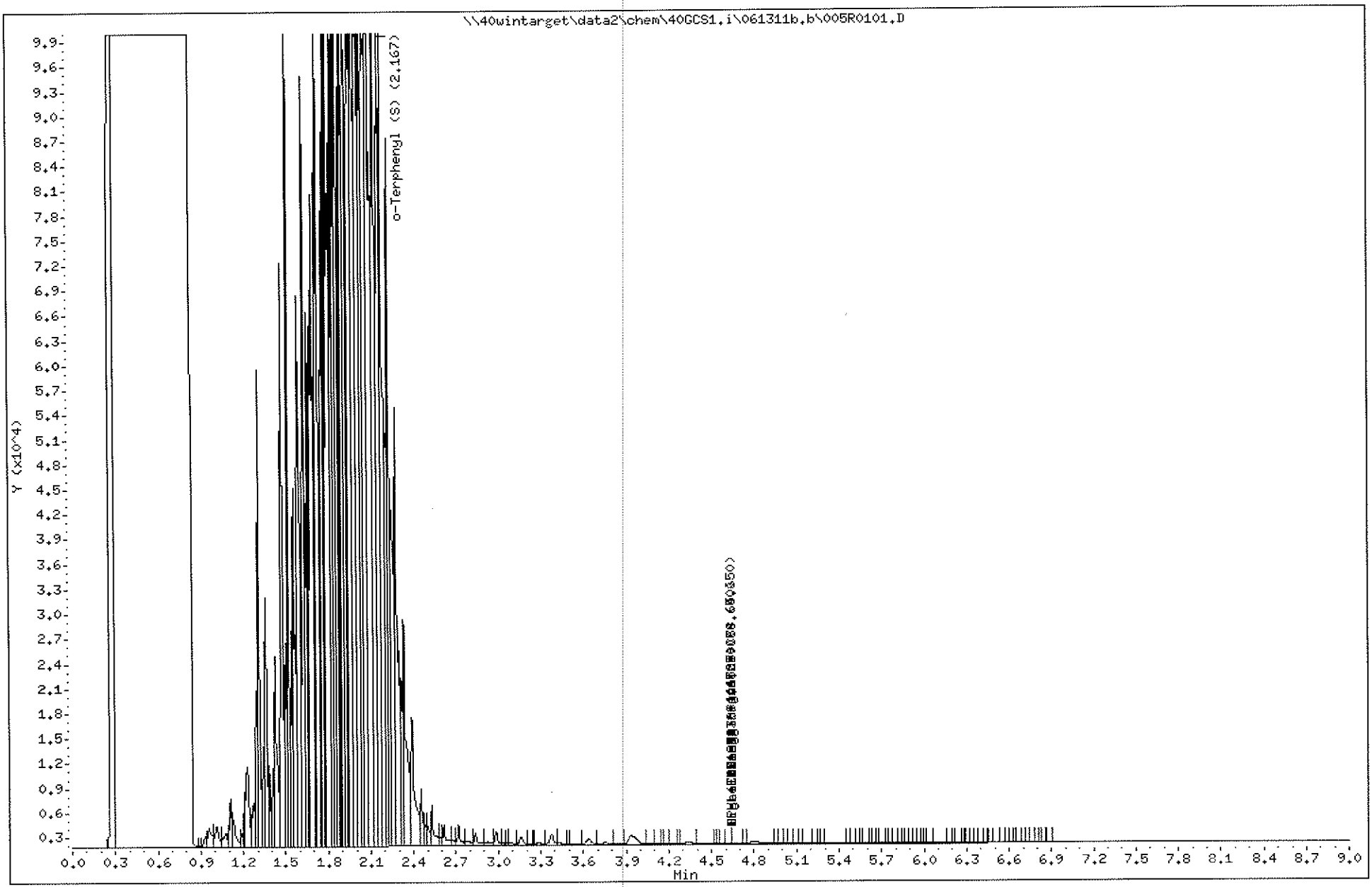
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\005R0101.D
Date : 13-JUN-2011 14:12
Client ID:
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\005R0101.D
Lab Smp Id: 1000 2860-31-02
Inj Date : 13-JUN-2011 14:12
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:16 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			3863352	1000.00	996.05
S	38 TPH (C16-C28)	1.000-8.300			3863352	1000.00	996.05(A)
S	37 Biota (C12-C36)	1.000-8.300			3863352	1000.00	996.05(A)
S	35 TPH (C08-C16)	1.000-8.300			3863352	1000.00	996.05(A)
S	36 TPH (C16-C40)	1.000-8.300			3863352	1000.00	996.05(A)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			3863352	1000.00	996.05
S	4 High End Organics (C8-C34)	1.000-8.300			3863352	1000.00	996.05
S	3 TPH (C10-C12)	1.000-8.300			3863352	1000.00	996.05
S	5 TPH (C12-C20)	1.000-8.300			3863352	1000.00	996.05
S	6 TPH (C10-C40)	1.000-8.300			3863352	1000.00	996.05
S	7 TPH (C08-C40)	1.000-8.300			3863352	1000.00	996.05
S	8 TPH (C08-C36)	1.000-8.300			3863352	1000.00	996.05
S	9 TPH (C10-C20)	1.000-8.300			3863352	1000.00	996.05
S	10 TPH (C20-C34)	1.000-8.300			3863352	1000.00	996.05
$	28 o-Terphenyl (S)	2.166	2.166	0.000	296541	50.0000	57.76

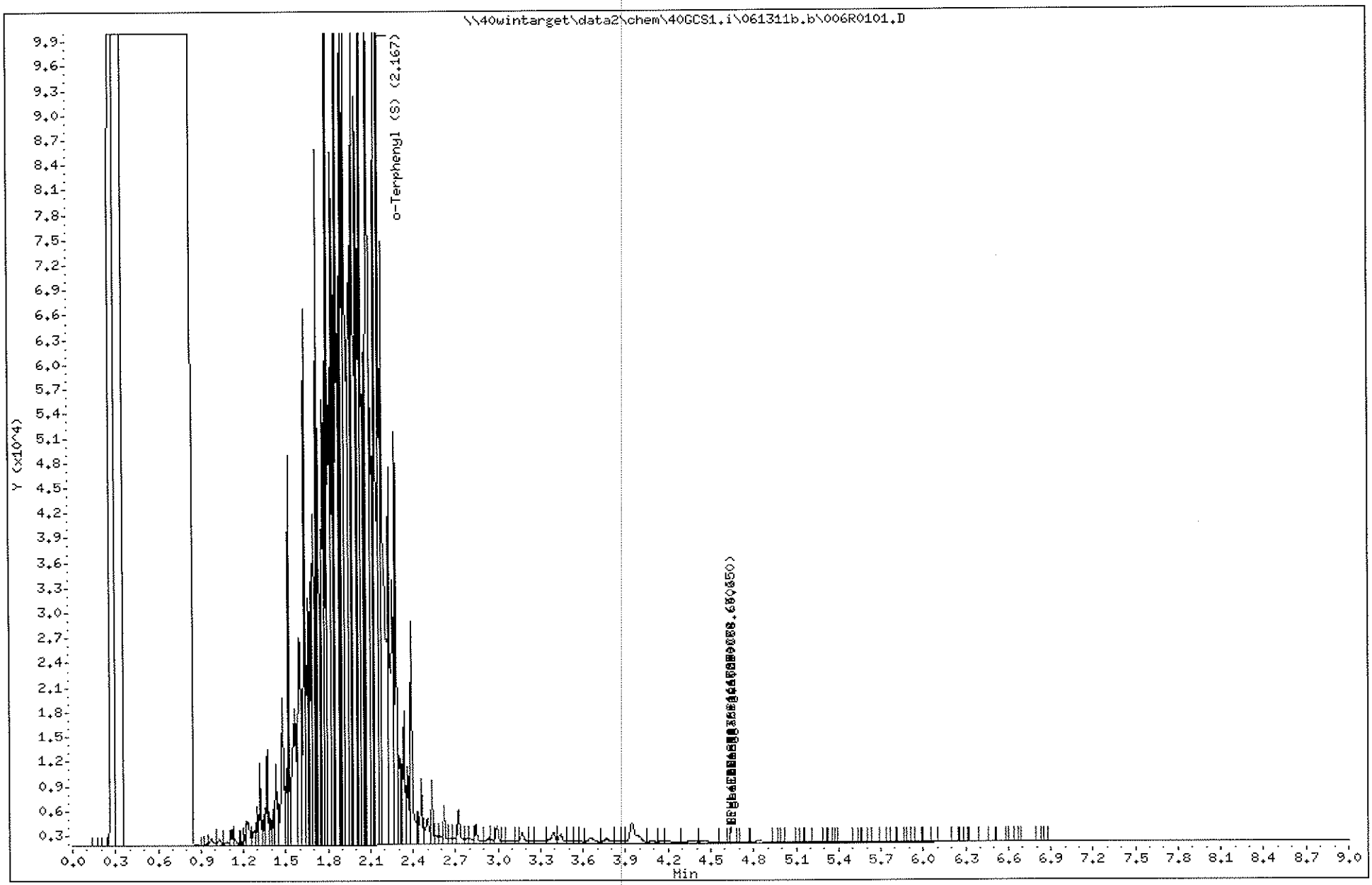
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\006R0101.D
Date : 13-JUN-2011 14:24
Client ID:
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\006R0101.D
Lab Smp Id: 500 2860-31-14
Inj Date : 13-JUN-2011 14:24
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:28 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			2374006	500.000	581.00
S	38 TPH (C16-C28)	1.000-8.300			2374006	500.000	581.00(A)
S	37 Biota (C12-C36)	1.000-8.300			2374006	500.000	581.00(A)
S	35 TPH (C08-C16)	1.000-8.300			2374006	500.000	581.00(A)
S	36 TPH (C16-C40)	1.000-8.300			2374006	500.000	581.00(A)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			2374006	500.000	581.00
S	4 High End Organics (C8-C34)	1.000-8.300			2374006	500.000	581.00
S	3 TPH (C10-C12)	1.000-8.300			2374006	500.000	581.00
S	5 TPH (C12-C20)	1.000-8.300			2374006	500.000	581.00
S	6 TPH (C10-C40)	1.000-8.300			2374006	500.000	581.00
S	7 TPH (C08-C40)	1.000-8.300			2374006	500.000	581.00
S	8 TPH (C08-C36)	1.000-8.300			2374006	500.000	581.00
S	9 TPH (C10-C20)	1.000-8.300			2374006	500.000	581.00
S	10 TPH (C20-C34)	1.000-8.300			2374006	500.000	581.00
$	28 o-Terphenyl (S)	2.166	2.166	0.000	278476	50.0000	54.43

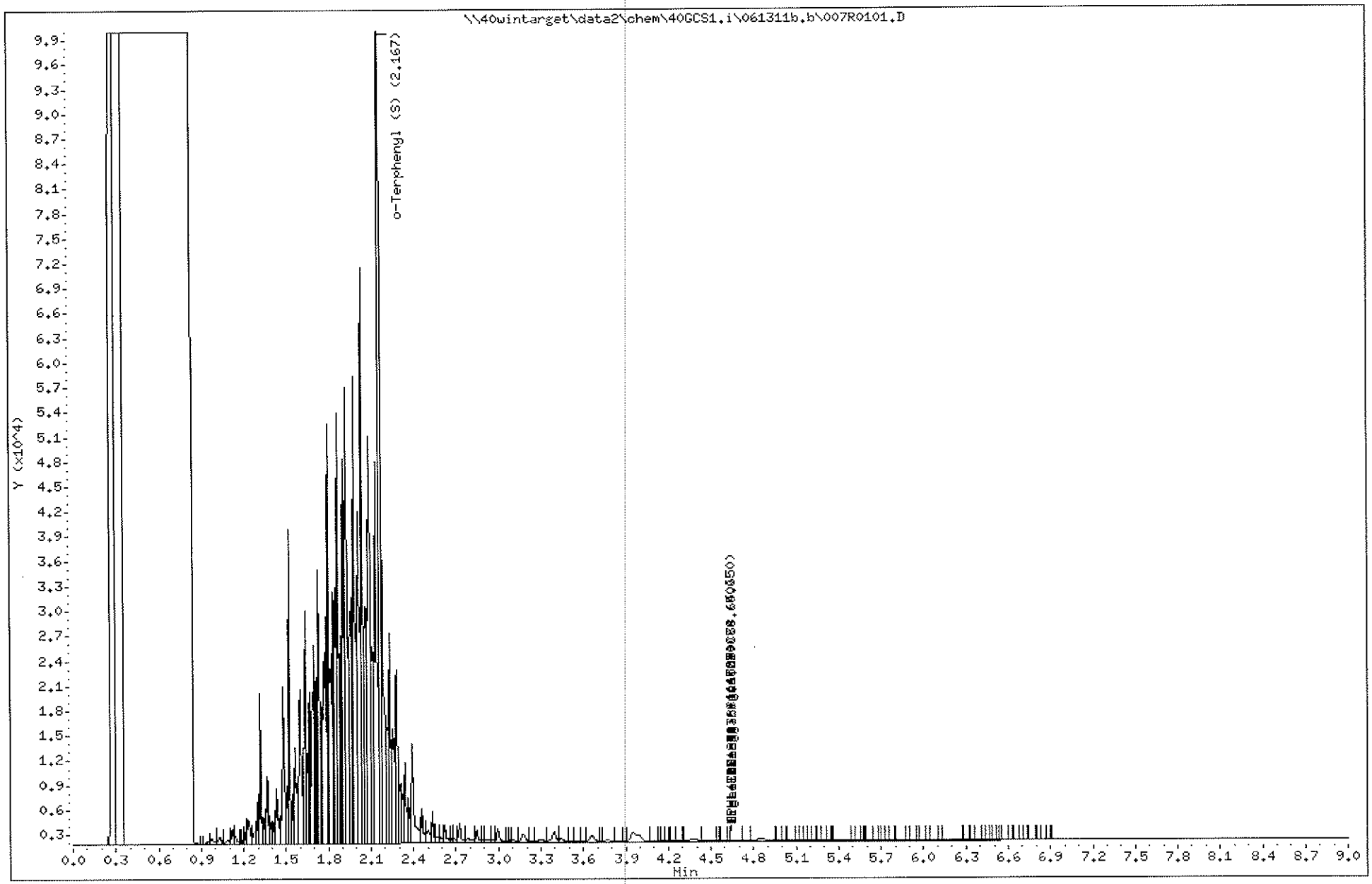
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\007R0101.D
Date : 13-JUN-2011 14:36
Client ID:
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\007R0101.D
Lab Smp Id: 250 2860-30-13
Inj Date : 13-JUN-2011 14:36
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:40 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			1155694	250.000	239.71
S	38 TPH (C16-C28)	1.000-8.300			1155694	250.000	239.71(A)
S	37 Biota (C12-C36)	1.000-8.300			1155694	250.000	239.71(A)
S	35 TPH (C08-C16)	1.000-8.300			1155694	250.000	239.71(A)
S	36 TPH (C16-C40)	1.000-8.300			1155694	250.000	239.71(A)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			1155694	250.000	239.71
S	4 High End Organics (C8-C34)	1.000-8.300			1155694	250.000	239.71
S	3 TPH (C10-C12)	1.000-8.300			1155694	250.000	239.71
S	5 TPH (C12-C20)	1.000-8.300			1155694	250.000	239.71
S	6 TPH (C10-C40)	1.000-8.300			1155694	250.000	239.71
S	7 TPH (C08-C40)	1.000-8.300			1155694	250.000	239.71
S	8 TPH (C08-C36)	1.000-8.300			1155694	250.000	239.71
S	9 TPH (C10-C20)	1.000-8.300			1155694	250.000	239.71
S	10 TPH (C20-C34)	1.000-8.300			1155694	250.000	239.71
$	28 o-Terphenyl (S)	2.166	2.166	0.000	230305	50.0000	45.06

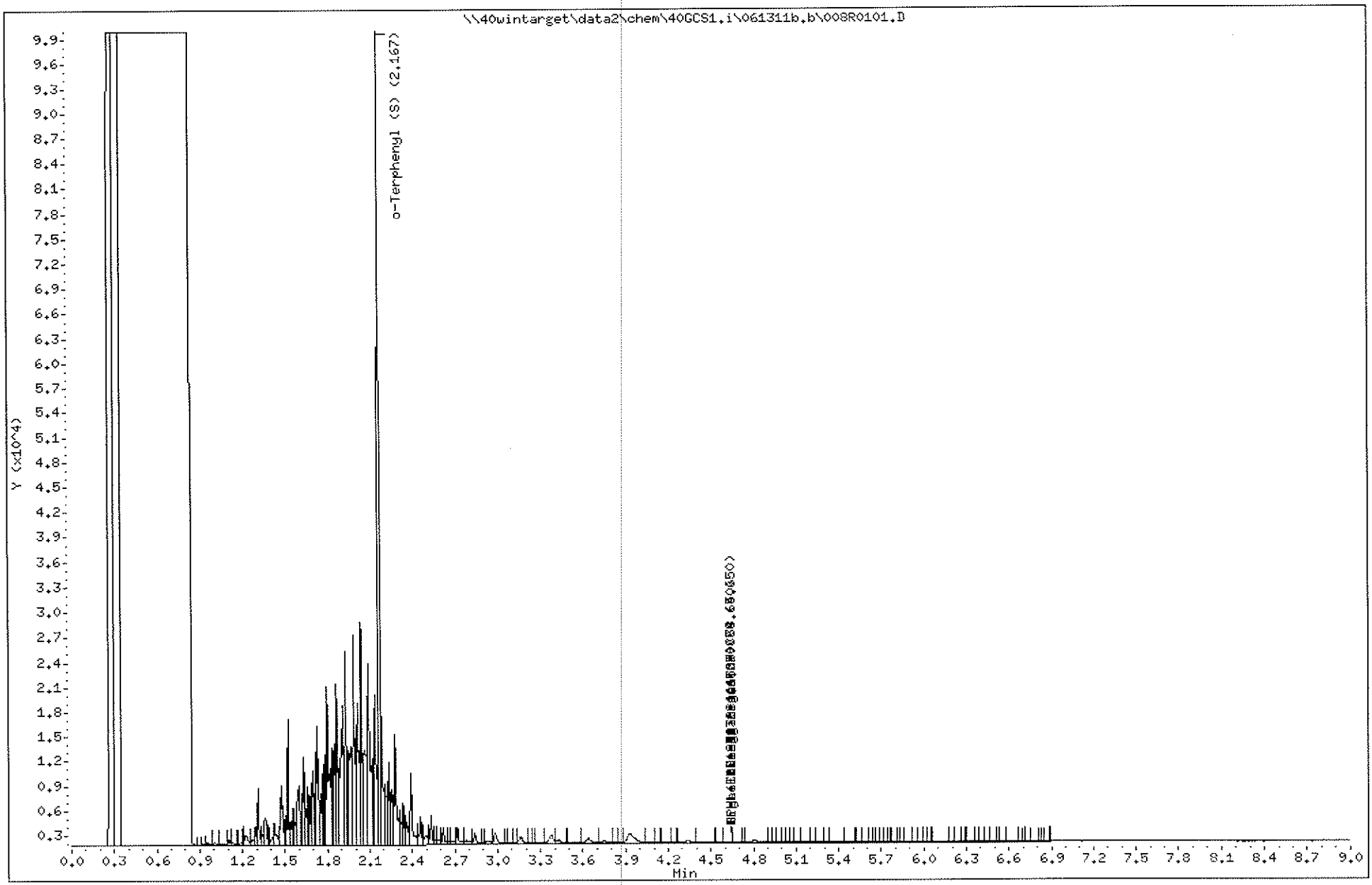
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\008R0101.D
Date : 13-JUN-2011 14:48
Client ID:
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\008R0101.D
Lab Smp Id: 100 2860-30-14
Inj Date : 13-JUN-2011 14:48
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 14:52 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450-2.800			499076	100.000	60.24
S	38 TPH (C16-C28)	1.000-8.300			499076	100.000	60.24(aA)
S	37 Biota (C12-C36)	1.000-8.300			499076	100.000	60.24(aA)
S	35 TPH (C08-C16)	1.000-8.300			499076	100.000	60.24(aA)
S	36 TPH (C16-C40)	1.000-8.300			499076	100.000	60.24(aA)
S	2 Diesel Range Organics (C8-C28)	1.000-8.300			499076	100.000	60.24(a)
S	4 High End Organics (C8-C34)	1.000-8.300			499076	100.000	60.24(a)
S	3 TPH (C10-C12)	1.000-8.300			499076	100.000	60.24
S	5 TPH (C12-C20)	1.000-8.300			499076	100.000	60.24
S	6 TPH (C10-C40)	1.000-8.300			499076	100.000	60.24
S	7 TPH (C08-C40)	1.000-8.300			499076	100.000	60.24
S	8 TPH (C08-C36)	1.000-8.300			499076	100.000	60.24
S	9 TPH (C10-C20)	1.000-8.300			499076	100.000	60.24
S	10 TPH (C20-C34)	1.000-8.300			499076	100.000	60.24
$	28 o-Terphenyl (S)	2.166	2.166	0.000	210741	50.0000	41.35

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

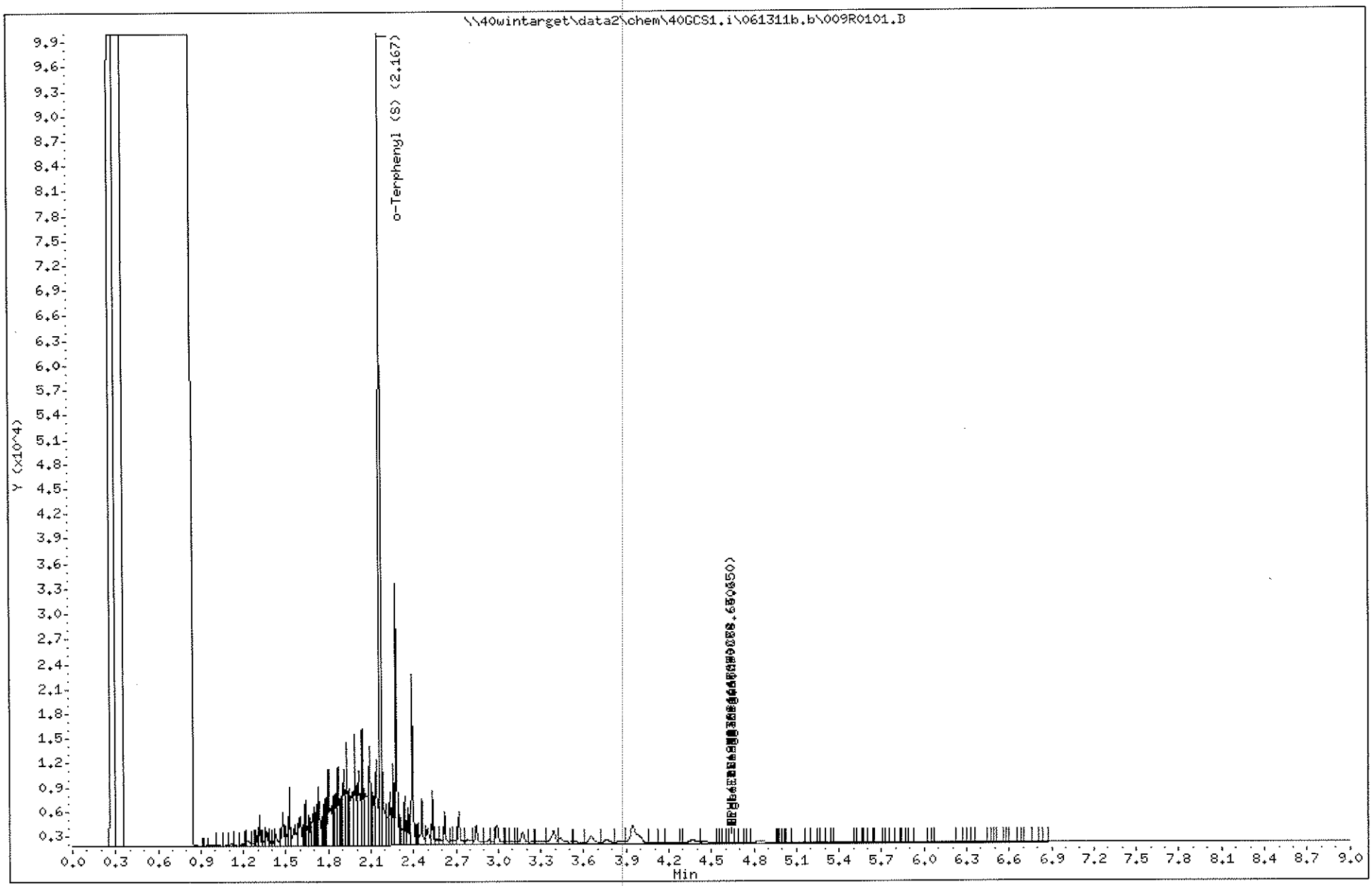
QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\009R0101.D
Date : 13-JUN-2011 14:59
Client ID:
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\009R0101.D
Lab Smp Id: 50 2860-30-15
Inj Date : 13-JUN-2011 14:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH - Diesel (C10-C28)	1.450	2.800		358429	50.0000	23.29
S	38 TPH (C16-C28)	1.000	8.300		358429	50.0000	23.29(aA)
S	37 Biota (C12-C36)	1.000	8.300		358429	50.0000	23.29(aA)
S	35 TPH (C08-C16)	1.000	8.300		358429	50.0000	23.29(aA)
S	36 TPH (C16-C40)	1.000	8.300		358429	50.0000	23.29(aA)
S	2 Diesel Range Organics (C8-C28)	1.000	8.300		358429	50.0000	23.29(a)
S	4 High End Organics (C8-C34)	1.000	8.300		358429	50.0000	23.29(a)
S	3 TPH (C10-C12)	1.000	8.300		358429	50.0000	23.29
S	5 TPH (C12-C20)	1.000	8.300		358429	50.0000	23.29
S	6 TPH (C10-C40)	1.000	8.300		358429	50.0000	23.29
S	7 TPH (C08-C40)	1.000	8.300		358429	50.0000	23.29
S	8 TPH (C08-C36)	1.000	8.300		358429	50.0000	23.29
S	9 TPH (C10-C20)	1.000	8.300		358429	50.0000	23.29
S	10 TPH (C20-C34)	1.000	8.300		358429	50.0000	23.29
$	28 o-Terphenyl (S)	2.166	2.166	0.000	208011	50.0000	40.96

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

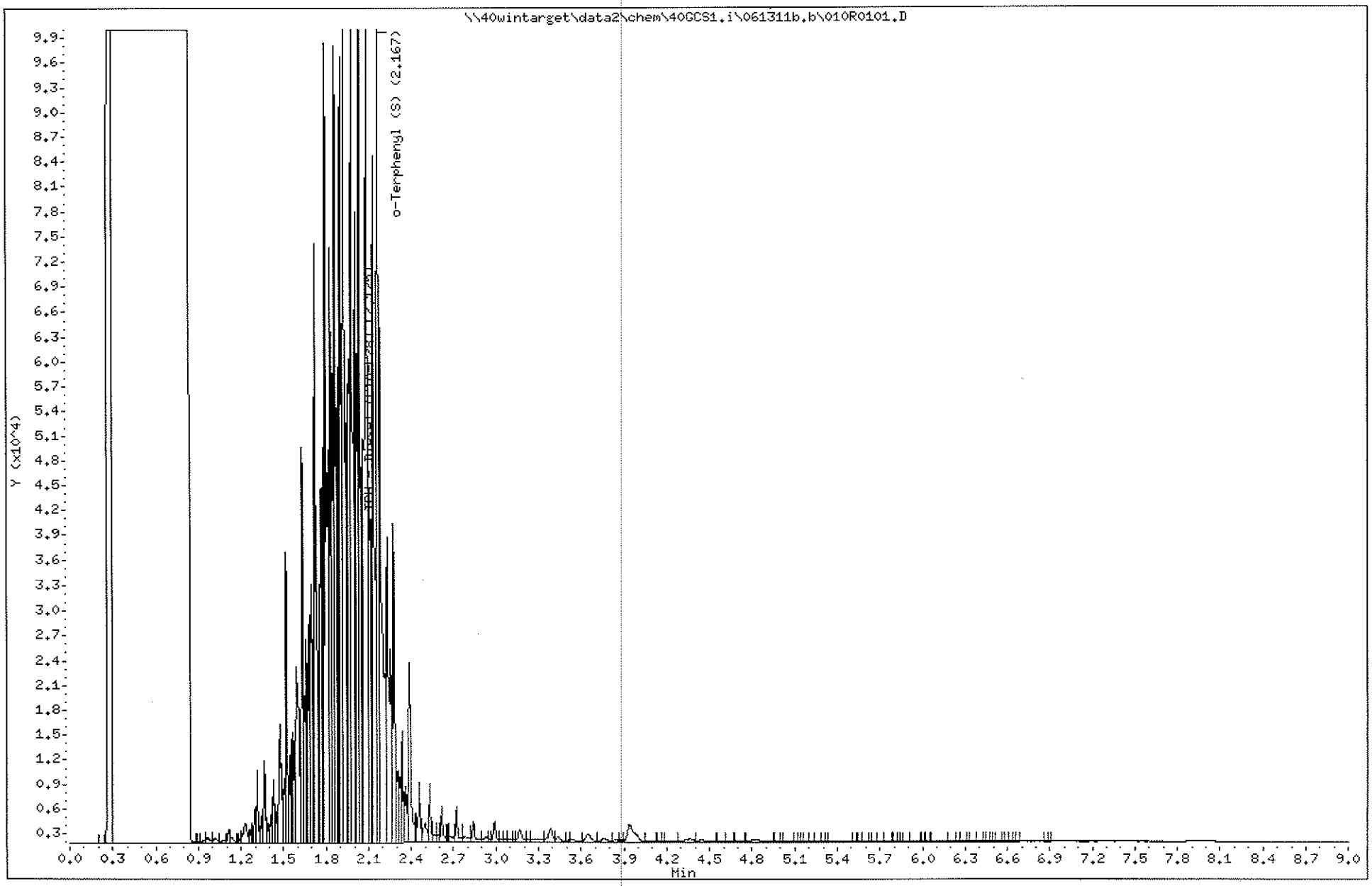
Instrument ID: 40GCS1.i Injection Date: 13-JUN-2011 15:11
Lab File ID: 010R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: WATER Init. Cal. Times: 07:51 14:59
Lab Sample ID: IC2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 1 TPH - Diesel (C10-C28)	500	440	0.00027	0.000	-12.05069	15.00000	Linear
$ 28 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.97336	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\061311b.b\010R0101.D
Date : 13-JUN-2011 15:11
Client ID:
Sample Info: IC2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\061311b.b\010R0101.D
Lab Smp Id: IC2860-30-16
Inj Date : 13-JUN-2011 15:11
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC2860-30-16
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\061311b.b\TPH.m
Meth Date : 18-May-2012 13:24 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 1 TPH - Diesel (C10-C28)	1.450-2.800			1850365	500.000	439.74
$ 28 o-Terphenyl (S)	2.166	2.166	0.000	228790	50.0000	45.05

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

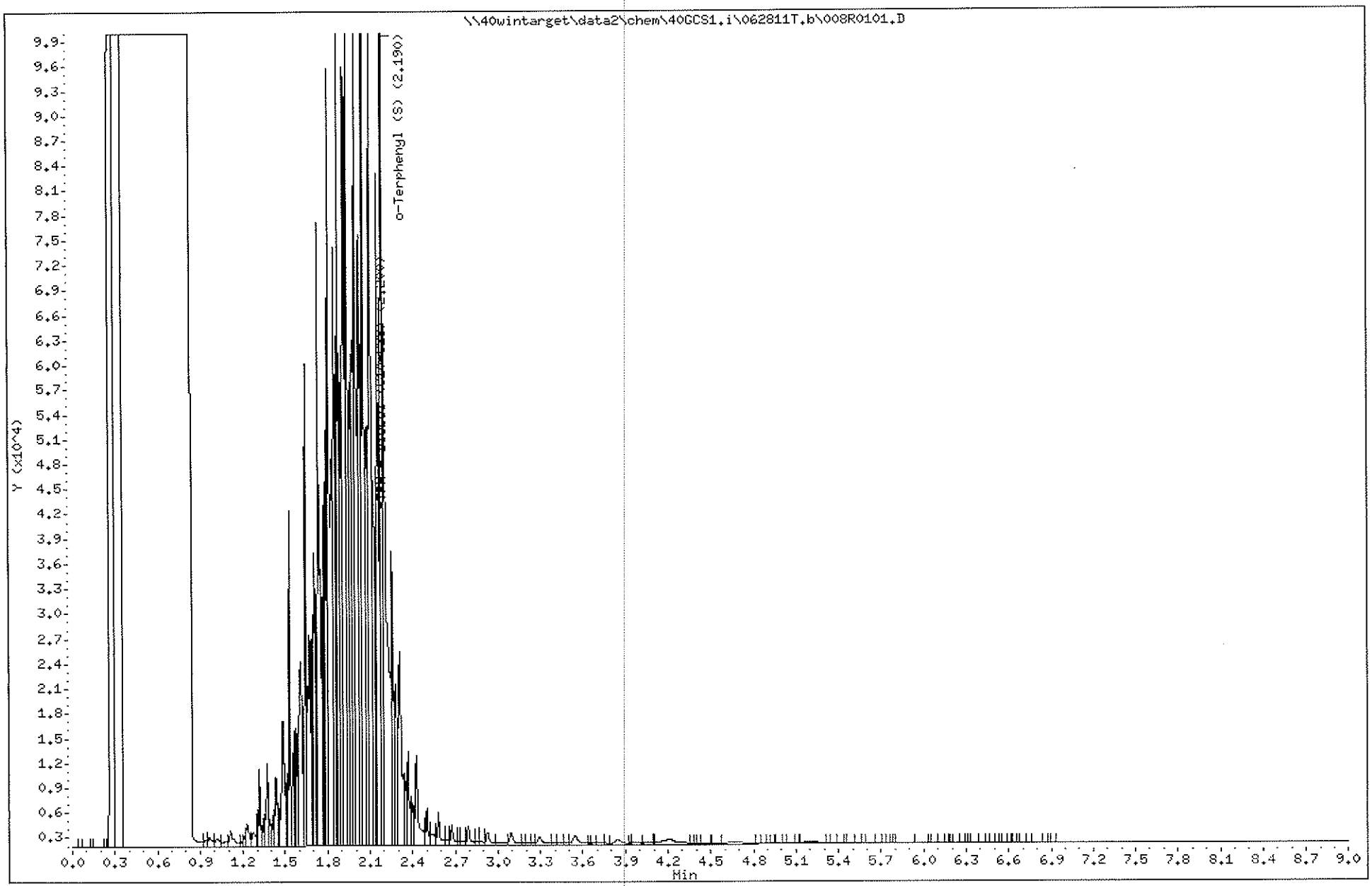
Instrument ID: 40GCS1.i Injection Date: 28-JUN-2011 09:12
Lab File ID: 008R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: SOIL Init. Cal. Times: 07:51 14:59
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 1 TPH - Diesel (C10-C28)	500	460	0.00026	0.000	-7.90516	15.00000	Linear
$ 28 o-Terphenyl (S)	0.00020	0.00021	0.00021	0.000	4.35038	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\008R0101.D
Date : 28-JUN-2011 09:12
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\008R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 28-JUN-2011 09:12
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1924621	500.000	460.47
$ 28 o-Terphenyl (S)	2.190	2.180	0.010	243311	50.0000	47.91

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

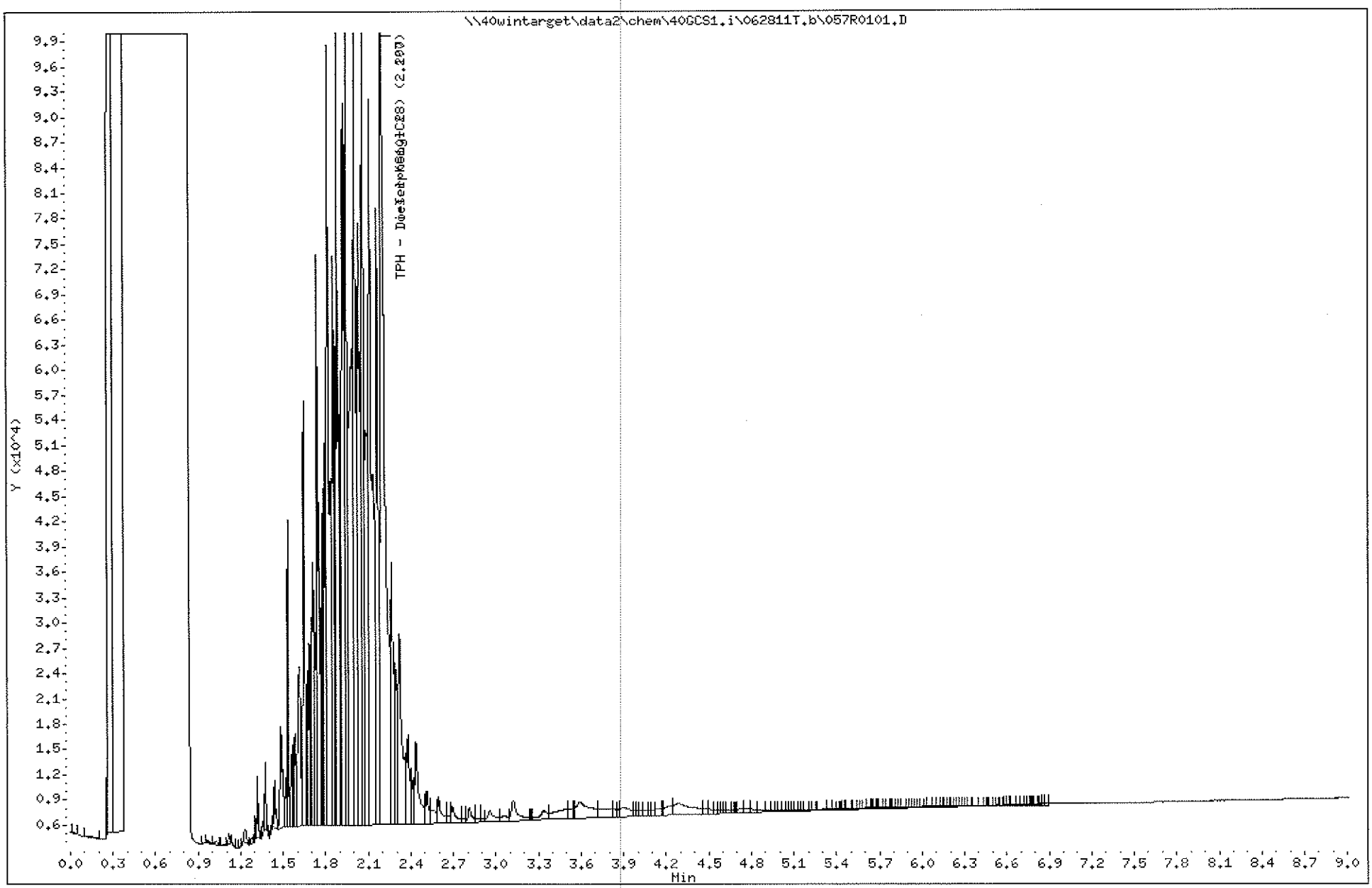
Instrument ID: 40GCS1.i Injection Date: 28-JUN-2011 19:09
Lab File ID: 057R0101.D Init. Cal. Date(s): 10-MAY-2011 13-JUN-2011
Analysis Type: SOIL Init. Cal. Times: 07:51 14:59
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
S 1 TPH - Diesel (C10-C28)	500	412	0.00029	0.000	-17.62327	15.00000	Linear	<-
$ 28 o-Terphenyl (S)	0.00020	0.00015	0.00015	0.000	-23.57274	50.00000	Averaged	

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\057R0101.D
Date : 28-JUN-2011 19:09
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\057R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 28-JUN-2011 19:09
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 57 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1750547	500.000	411.88
$ 28 o-Terphenyl (S)	2.196	2.180	0.016	332206	50.0000	65.42(T)

QC Flag Legend

T - Target compound detected outside RT window.

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046755

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11361 **Prepared:** 06/14/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4046755001, 4046755002, 4046755003, 4046755004, 4046755005, 4046755006, 4046755007, 4046755008, 4046755009, 4046755010, 4046755011, 4046755012, 4046755014, 4046755015, 4046755016, 4046755017, 4046755018, 4046755019, 4046755020

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	06/28/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	06/28/11	
	TPH (C08-C40)	116	mg/kg	6.7	3.3	06/28/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	06/28/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	06/28/11	

Type	Sample	Matrix
BLANK	463194	Tissue

REPORT OF LABORATORY ANALYSIS

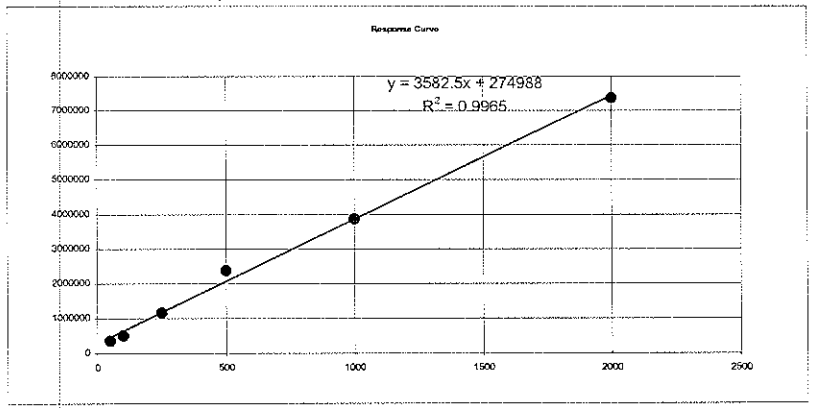
SampleID: 463194 File: 11R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	358429
100	499076
250	1155694
500	2374006
1000	3863352
2000	7370986

slope	3582.464731
intercept	274988.4247
correlation	0.998232777
R2	0.996468676



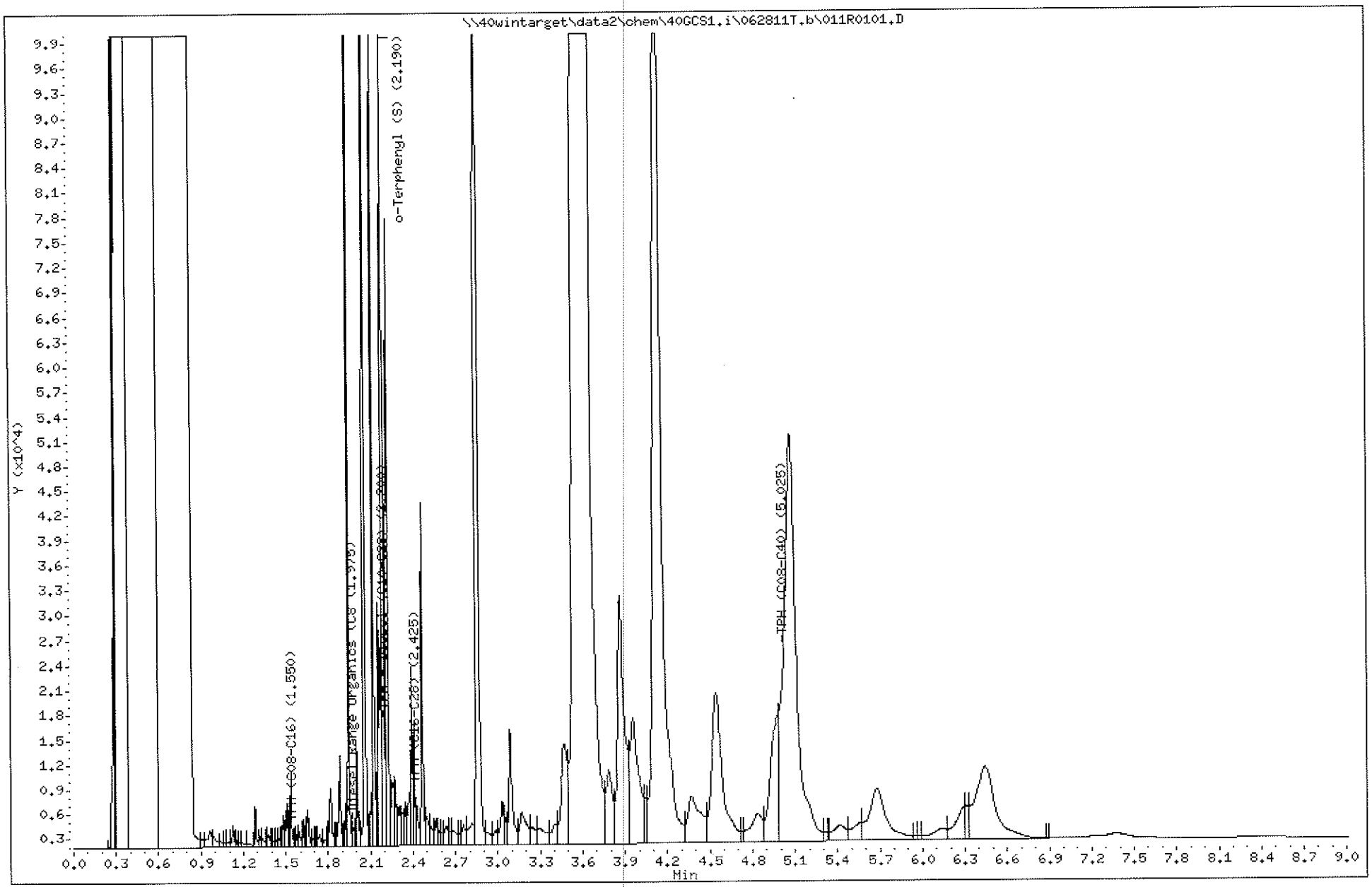
Retention Time	Peak Area	Compound Name
1.943	176926	
2.057	111020	
2.120	108707	
2.857	212938	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	265837	176926	-51.9412
Diesel Range Organics (	944618	609591	16.75901
TPH - Diesel (C10-C28)	922271	609591	10.52113
TPH (C16-C28)	691717	432665	-4.44846
TPH (C08-C40)	7095850	609591	1733.798

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\011R0101.D
Date : 28-JUN-2011 09:59
Client ID: MB
Sample Info: 463194
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\011R0101.D
Lab Smp Id: 463194 Client Smp ID: MB
Inj Date : 28-JUN-2011 09:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463194
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 14-May-2012 09:02 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	7 TPH (C08-C40)	1.050-9.000			7095849	1903.96	126.93
S	35 TPH (C08-C16)	Compound Not Detected.					
S	38 TPH (C16-C28)	1.950-2.900			691717	116.325	7.75
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			944618	186.919	12.46
S	1 TPH - Diesel (C10-C28)	1.500-2.900			922270	180.681	12.04
$	28 o-Terphenyl (S)	2.190	2.180	0.010	185050	36.4421	2.42

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\011R0101.D
Lab Smp Id: 463194 Client Smp ID: MB
Inj Date : 28-JUN-2011 09:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463194
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 14-May-2012 09:02 kburns Quant Type: AREA%
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.253	74	217	2.932	0.00		
0.283	22238	40181	1.807	0.00		
0.293	82812	169659	2.049	0.01		
0.330	372554141	89640596	0.241	63.05		
0.387	198428471	67581629	0.341	33.81		
0.607	8503240	1711536	0.201	1.44		
0.910	1553	1025	0.660	0.00		
0.963	4445	1963	0.442	0.00		
0.987	2420	1303	0.538	0.00		
1.033	1167	659	0.565	0.00		
1.550	265837	587457	2.210	0.04	S	35 TPH (C08-C16)
1.975	944618	1503014	1.591	0.16	S	2 Diesel Range Organi
1.073	581	506	0.871			
1.090	866	624	0.721			
1.127	2718	2678	0.985			
1.150	734	817	1.113			
1.167	700	604	0.862			
1.190	756	524	0.693			
1.230	896	414	0.462			
1.280	3679	4982	1.354			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.313	1166	1414	1.213			
1.333	1178	1004	0.852			
1.357	652	983	1.508			
1.377	1797	1550	0.862			
1.397	438	774	1.767			
1.407	714	763	1.068			
1.433	989	747	0.756			
1.447	899	1030	1.145			
1.463	605	1078	1.782			
1.480	2979	3852	1.293			
2.190	185050	375306	2.028	0.03	$	28 o-Terphenyl (S)
2.200	922271	1478670	1.603	0.15	S	1 TPH - Diesel (C10-C
1.503	4942	5014	1.015			
1.523	2234	4543	2.033			
1.537	6171	9063	1.469			
1.563	466	847	1.818			
1.580	1499	1744	1.163			
1.593	1577	1739	1.102			
1.620	2312	3246	1.404			
1.640	1931	3106	1.609			
1.653	3451	4499	1.304			
1.690	922	900	0.976			
1.703	743	1055	1.420			
1.720	672	939	1.398			
1.737	2008	1405	0.700			
1.773	1151	798	0.693			
1.797	1154	1943	1.684			
1.817	7311	7071	0.967			
1.847	1596	1908	1.195			
1.880	10046	11061	1.101			
1.910	815	1604	1.969			
1.920	2628	5252	1.999			
1.943	176926	477807	2.701			
1.973	1954	2197	1.125			
1.990	1361	2480	1.822			
2.000	9621	12892	1.340			
2.057	111020	187100	1.685			
2.087	2338	3416	1.461			
2.103	4443	6484	1.460			
2.120	108707	260110	2.393			
2.143	4408	9050	2.053			
2.153	37246	29303	0.787			
2.223	57265	75666	1.321			
2.247	9818	8025	0.817			
2.270	9839	8530	0.867			
2.300	5684	4933	0.868			
2.323	5191	4101	0.790			
2.343	3989	5274	1.322			
2.373	7404	6503	0.878			
2.390	12333	21565	1.749			
2.407	10468	14822	1.416			
2.423	6777	5627	0.830			
2.463	27115	41320	1.524			
2.497	5987	3527	0.589			
2.523	3344	2425	0.725			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.560	4121	3307	0.802			
2.580	1743	1901	1.090			
2.603	2162	1617	0.748			
2.633	4303	2409	0.560			
2.660	1719	1754	1.020			
2.677	4492	1823	0.406			
2.727	1701	1450	0.853			
2.757	4982	2480	0.498			
2.813	7247	2623	0.362			
2.857	212938	198412	0.932			
2.425	691717	933126	1.349	0.11	S	38 TPH (C16-C28)
5.025	7095850	2929896	0.413	1.20	S	7 TPH (C08-C40)
2.927	3844	1534	0.399			
2.983	3267	1775	0.543			
3.027	8806	5275	0.599			
3.050	3620	3327	0.919			
3.087	24272	13979	0.576			
3.167	13462	3912	0.291			
3.240	5529	2092	0.378			
3.290	8852	1970	0.223			
3.400	6952	2482	0.357			
3.467	40048	12235	0.306			
3.653	4649951	1077368	0.232			
3.787	28311	8915	0.315			
3.867	101993	29838	0.293			
3.957	66998	15269	0.228			
4.043	6565	5572	0.849			
4.140	459641	117146	0.255			
4.370	37122	5698	0.153			
4.543	96946	18131	0.187			
4.720	1245	1257	1.010			
4.840	20816	3389	0.163			
4.973	55243	15318	0.277			
5.070	306769	48976	0.160			
5.307	1691	1093	0.647			
5.333	404	1012	2.507			
5.413	11933	1836	0.154			
5.567	9868	2144	0.217			
5.680	53632	6251	0.117			
5.960	861	438	0.509			
5.980	722	462	0.640			
6.137	9518	1311	0.138			
6.297	17582	3946	0.224			
6.313	6373	4027	0.632			
6.443	88303	8833	0.100			
6.893	90	71	0.785			
	586881460	162453970		100.000		

Total unknown % area = 98.31

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METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11365 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4046755001, 4046755002, 4046755003, 4046755004, 4046755005, 4046755006, 4046755007, 4046755008, 4046755009, 4046755010, 4046755011, 4046755012, 4046755014, 4046755015, 4046755016, 4046755017, 4046755018, 4046755019, 4046755020

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.50	%			06/15/11	

Type	Sample	Matrix
BLANK	463253	Tissue

REPORT OF LABORATORY ANALYSIS

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REVISED
JUN 14 2012
J. Duranceau

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Green Bay, WI 54302
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LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11361 **LCS Prepared:** 06/14/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:**

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	64			50-150		66.7	42.7		mg/kg	06/28/11			
TPH (C08-C16)	35			50-150		66.7	23.5		mg/kg	06/28/11		L0	
TPH (C08-C40)	202			50-150		66.7	135		mg/kg	06/28/11		2q	
TPH (C16-C28)	26			50-150		66.7	17.6		mg/kg	06/28/11		L0	
TPH - Diesel (C10-C28)	59			50-150		66.7	39.6		mg/kg	06/28/11			

Type	Sample
LCS	463195

REPORT OF LABORATORY ANALYSIS

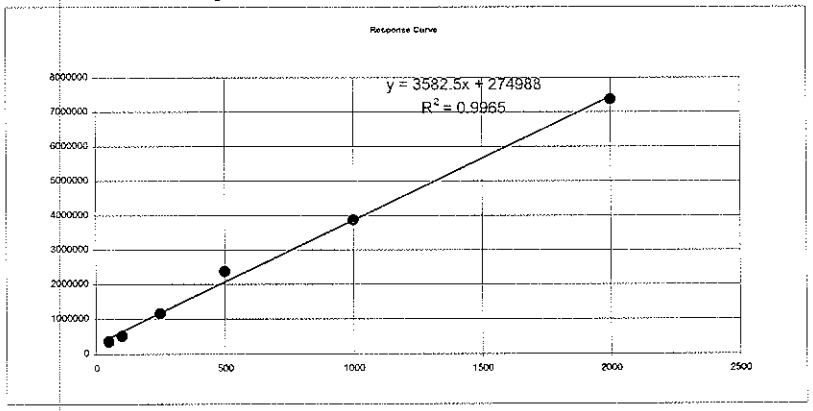
SampleID: 463195 File: 10R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	358429
100	499076
250	1155694
500	2374006
1000	3863352
2000	7370986

slope	3582.464731
intercept	274988.4247
correlation	0.998232777
R2	0.996468676



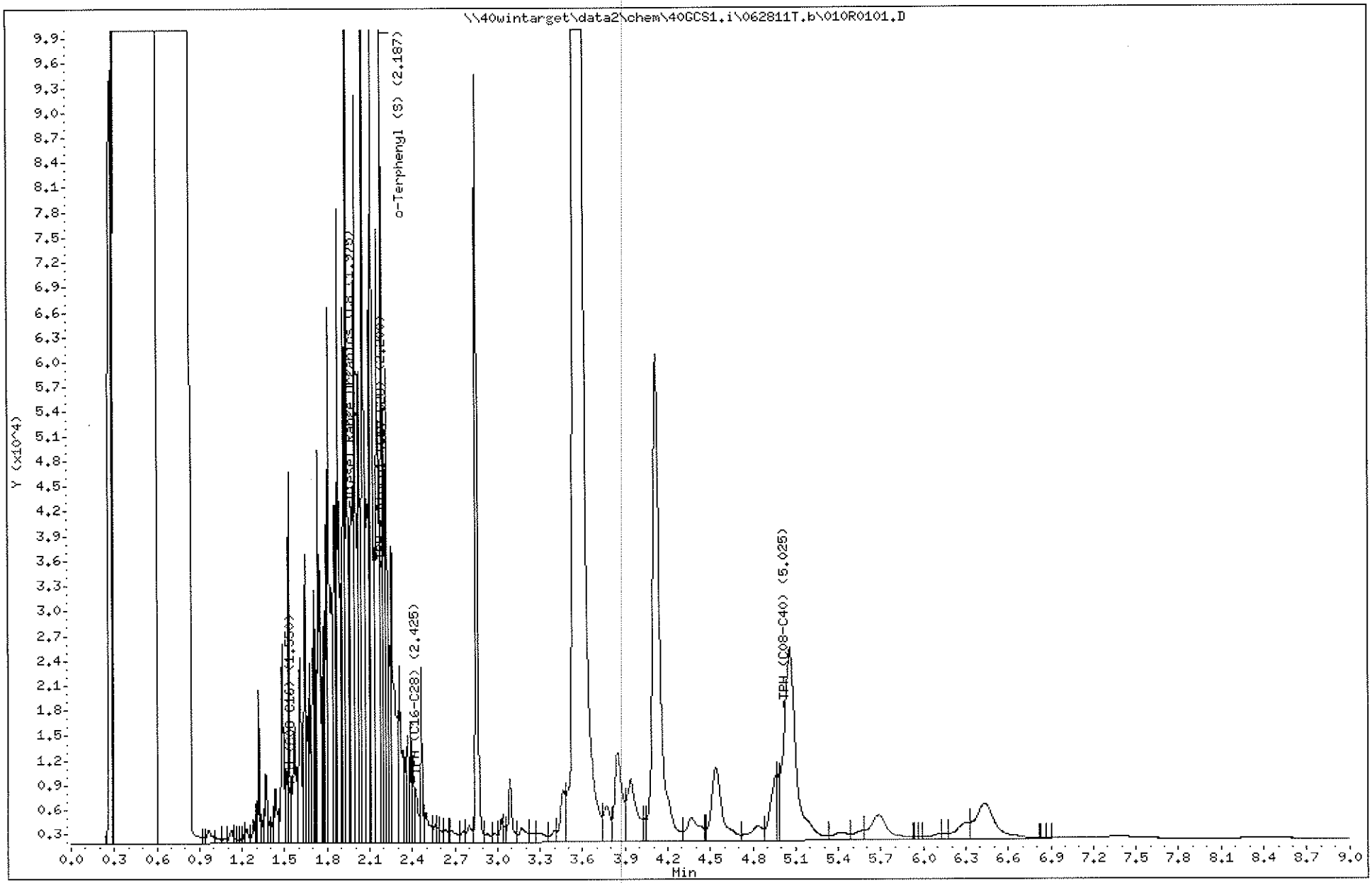
Retention Time	Peak Area	Compound Name
1.943	150010	
2.057	135685	
2.120	106143	
2.857	101520	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	1056119	150010	176.1694
Diesel Range Organics (	1915541	493358	320.2249
TPH - Diesel (C10-C28)	1832641	493358	297.0844
TPH (C16-C28)	1091621	343348	132.1114
TPH (C08-C40)	4395249	493358	1012.404

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\010R0101.D
Date : 28-JUN-2011 09:47
Client ID: MBLCS
Sample Info: 463195X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\010R0101.D
Lab Smp Id: 463195 Client Smp ID: MBLCS
Inj Date : 28-JUN-2011 09:47
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463195X2
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 14-May-2012 09:02 kburns Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 10 QC Sample: LCS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	7 TPH (C08-C40)	1.050-9.000			4395249	1150.12	153.34
S	35 TPH (C08-C16)	1.050-2.049			1056119	218.043	29.07
S	38 TPH (C16-C28)	1.950-2.900			1091620	227.952	30.39
S	2 Diesel Range Organics (C8-C28)	1.050-2.900			1915541	457.940	61.05
S	1 TPH - Diesel (C10-C28)	1.500-2.900			1832640	434.799	57.97
$	28 o-Terphenyl (S)	2.186	2.180	0.006	115848	22.8141	1.52

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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\010R0101.D
Lab Smp Id: 463195 Client Smp ID: MBLCS
Inj Date : 28-JUN-2011 09:47
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463195X2
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 14-May-2012 09:02 kburns Quant Type: AREA%
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 10 QC Sample: LCS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.277	122770	92012	0.749	0.02		
0.293	69792	99432	1.425	0.01		
0.327	563674655	89676791	0.159	96.79		
0.607	8115991	1493261	0.184	1.40		
0.940	940	822	0.875	0.00		
0.963	4035	1568	0.389	0.00		
1.017	1505	669	0.445	0.00		
1.550	1056119	1294677	1.226	0.18	S	35 TPH (C08-C16)
1.975	1915541	2201991	1.150	0.33	S	2 Diesel Range Organi
1.087	1293	536	0.415			
1.123	2669	1623	0.608			
1.150	515	588	1.141			
1.167	508	466	0.918			
1.193	576	561	0.974			
1.213	787	1019	1.295			
1.230	2873	1740	0.606			
1.280	2873	2885	1.004			
1.300	3387	5151	1.521			
1.317	12065	18504	1.534			
1.350	3079	3044	0.989			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.363	8855	8514	0.961			
1.390	2377	2762	1.162			
1.417	3201	2921	0.913			
1.433	8975	6630	0.739			
1.483	28868	24103	0.835			
2.187	115848	201071	1.736	0.02	$	28 o-Terphenyl (S)
2.200	1832641	2120944	1.157	0.31	S	1 TPH - Diesel (C10-C
1.510	6283	8940	1.423			
1.530	26045	44603	1.713			
1.570	23958	14085	0.588			
1.607	30682	22414	0.731			
1.647	30825	34676	1.125			
1.663	10596	15342	1.448			
1.677	16240	21803	1.343			
1.697	20773	23530	1.133			
1.710	18215	30467	1.673			
1.723	13575	20979	1.545			
1.737	49248	47261	0.960			
1.770	13912	21387	1.537			
1.780	14809	28028	1.893			
1.793	27885	38396	1.377			
1.813	80611	64492	0.800			
1.850	39508	40686	1.030			
1.867	27647	43539	1.575			
1.880	59121	76412	1.292			
1.900	12069	31210	2.586			
1.920	69008	64549	0.935			
1.943	150010	295942	1.973			
1.963	20304	35041	1.726			
1.983	62480	42950	0.687			
2.000	78947	90108	1.141			
2.030	70468	56790	0.806			
2.057	135685	184603	1.361			
2.080	55977	41404	0.740			
2.107	56087	75637	1.349			
2.120	106143	156115	1.471			
2.157	103272	73844	0.715			
2.207	43447	52259	1.203			
2.223	44172	57095	1.293			
2.247	17902	23768	1.328			
2.257	61471	35698	0.581			
2.310	31780	21389	0.673			
2.343	9568	10492	1.097			
2.367	13610	12904	0.948			
2.390	11612	14647	1.261			
2.407	7841	10469	1.335			
2.427	9584	6492	0.677			
2.463	16300	21124	1.296			
2.500	9050	3542	0.391			
2.560	3365	2282	0.678			
2.580	1935	1795	0.928			
2.603	1671	1439	0.861			
2.633	3527	1669	0.473			
2.660	1069	1353	1.266			
2.677	4630	1470	0.317			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.757	2586	1378	0.533			
2.800	5618	2012	0.358			
2.857	101520	92434	0.910			
2.425	1091621	1132203	1.037	0.18	S	38 TPH (C16-C28)
5.025	4395249	2954138	0.672	0.76	S	7 TPH (C08-C40)
2.927	2801	1089	0.389			
2.983	2072	1081	0.522			
3.027	5006	2888	0.577			
3.050	2085	1901	0.912			
3.087	13672	7629	0.558			
3.170	6573	1733	0.264			
3.240	3170	1119	0.353			
3.303	4864	1091	0.224			
3.400	3681	1357	0.369			
3.460	14908	6364	0.427			
3.600	1766908	574243	0.325			
3.770	13471	4290	0.318			
3.847	38465	10800	0.281			
3.937	35738	7618	0.213			
4.040	4317	2746	0.636			
4.120	211865	58622	0.277			
4.363	17453	2811	0.161			
4.463	1184	1480	1.251			
4.540	47249	8855	0.187			
4.833	11532	1744	0.151			
4.960	21808	7844	0.360			
4.970	9407	7948	0.845			
5.063	141399	23235	0.164			
5.427	7125	951	0.133			
5.570	4934	1114	0.226			
5.683	26508	2991	0.113			
5.933	102	256	2.512			
5.960	453	259	0.572			
5.983	479	271	0.566			
6.120	3303	671	0.203			
6.143	1985	683	0.344			
6.303	12374	2021	0.163			
6.423	42555	4285	0.101			
6.820	57	63	1.103			
6.837	99	48	0.483			
6.887	106	46	0.433			
	576500785	94519764		100.000		

Total unknown % area = 98.22

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MATRIX SPIKE SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046755

QB Batch: OEXT/11361
Method(s): EPA 3541 / EPA 8015B Modified

MS Prepared: 06/14/11
MSD Prepared: 06/14/11

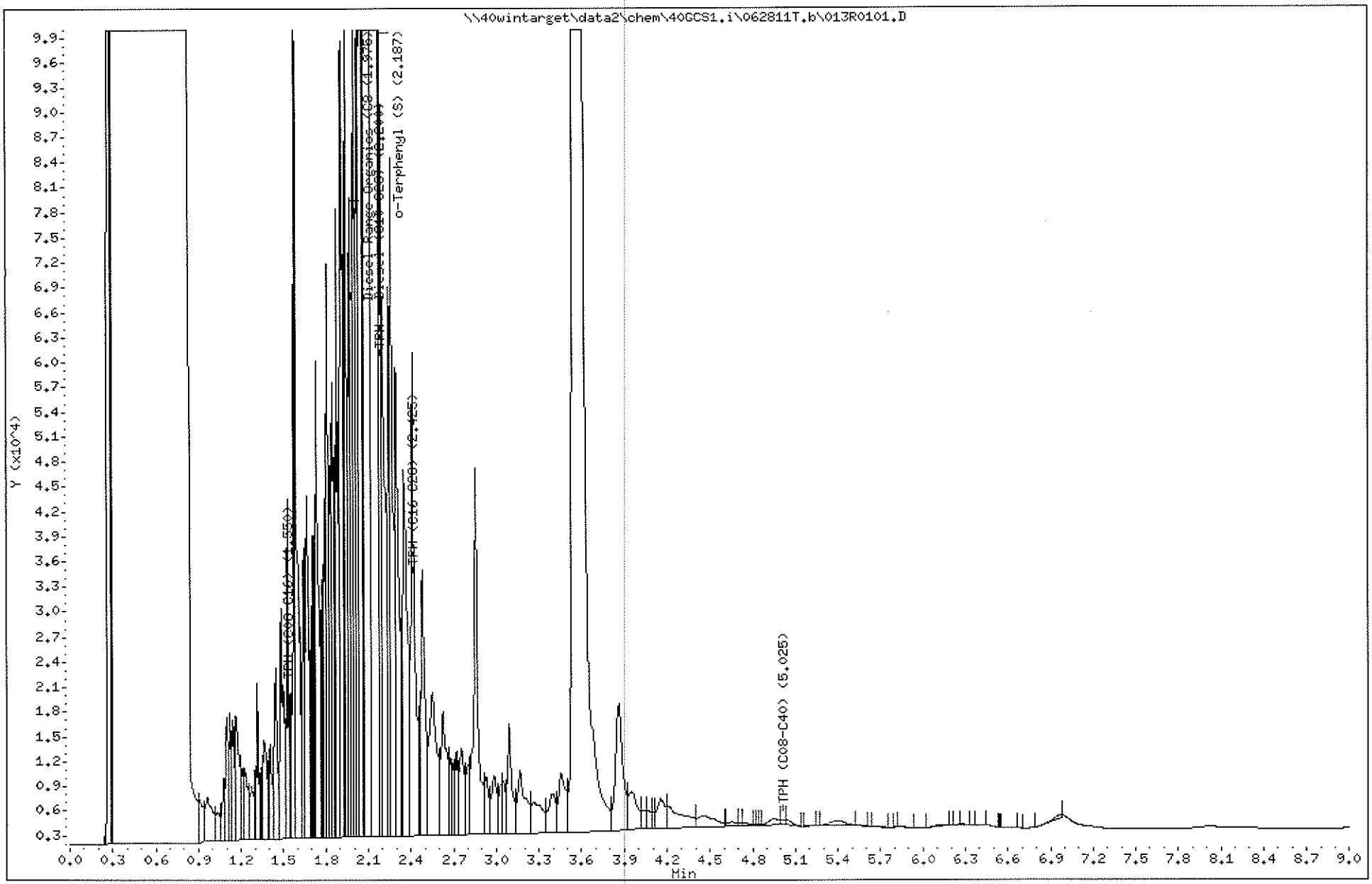
Analyte	Units	Sample Conc	Spike Conc MS	Spike Conc MSD	Result MS	Result MSD	Dilution MS	Dilution MSD	% Recovery MS	% Recovery MSD	QC Limits %Recovery	RPD	Max RPD	Analyzed Date MS	Analyzed Date MSD	Qualifier(s) MS	Qualifier(s) MSD
Diesel Range Organics (C8-C28)	mg/kg	116	149	463	436	650	3	3	215	115	50-150	39	20	06/28/11	06/28/11	M1	D6
TPH (C08-C16)	mg/kg	<22.2	149	463	173	280	3	3	116	60	50-150	47	20	06/28/11	06/28/11		D6
TPH (C08-C40)	mg/kg	486	149	463	718	1260	3	3	156	166	50-150	55	20	06/28/11	06/28/11	1q	1q,D6
TPH (C16-C28)	mg/kg	90.8	149	463	273	359	3	3	123	58	50-150	27	20	06/28/11	06/28/11		D6
TPH - Diesel (C10-C28)	mg/kg	112	149	463	402	609	3	3	195	107	50-150	41	20	06/28/11	06/28/11	M1	D6

Type	Sample	Client Sample ID
MS	463196	EWL-T-02-C-HEPATOPANCREAS
MSD	463197	EWL-T-02-C-HEPATOPANCREAS

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\013R0101.D
Date : 28-JUN-2011 10:23
Client ID: EWL-T-02-C-HEPATOPA
Sample Info: 463196X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\013R0101.D
Lab Smp Id: 463196 Client Smp ID: EWL-T-02-C-HEPATOPA
Inj Date : 28-JUN-2011 10:23
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463196X3
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 13 QC Sample: MS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	6.730	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

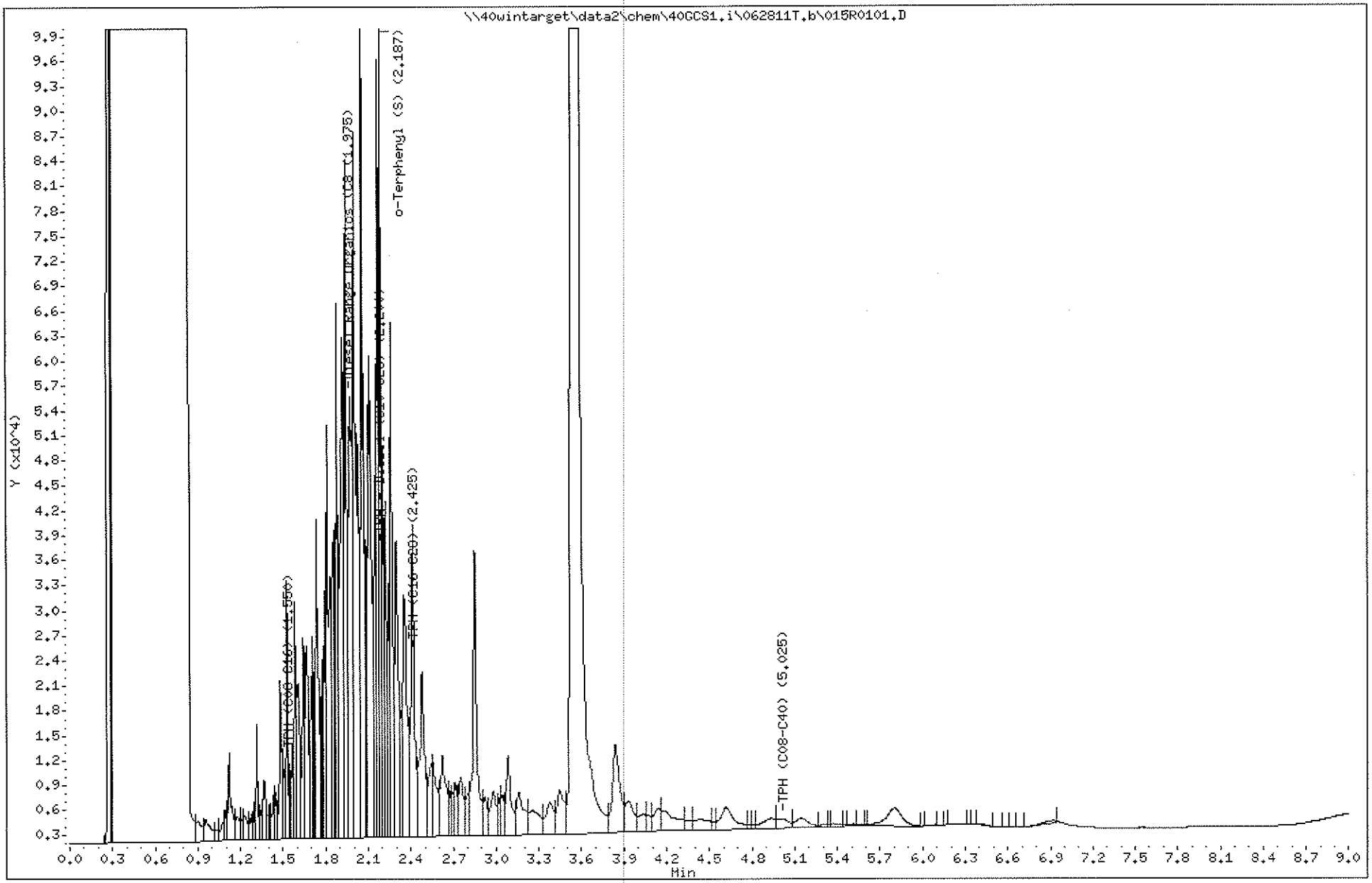
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			6041988	1609.79	717.58
S 35 TPH (C08-C16)	1.050-2.049			1662913	387.422	172.69
S 38 TPH (C16-C28)	1.950-2.900			2472594	613.434	273.44
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			3779050	978.115	436.00
S 1 TPH - Diesel (C10-C28)	1.500-2.900			3503010	901.062	401.66(R)
$ 28 o-Terphenyl (S)	2.186	2.180	0.006	117743	23.1873	3.44

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\40wintarget\data2\chem\40GCS1.i\062811T.b\015R0101.D
Date : 28-JUN-2011 10:46
Client ID: EWL-T-02-C-HEPATOPA
Sample Info: 463197X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\062811T.b\015R0101.D
Lab Smp Id: 463197 Client Smp ID: EWL-T-02-C-HEPATOPA
Inj Date : 28-JUN-2011 10:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463197X3
Misc Info : 6035
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\062811T.b\TPH.m
Meth Date : 09-May-2012 10:27 40GCS1.i Quant Type: ESTD
Cal Date : 08-JUN-2011 15:04 Cal File: 009R0101.D
Als bottle: 15 QC Sample: MSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	2.160	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 7 TPH (C08-C40)	1.050-9.000			3515402	904.521	1256.27
S 35 TPH (C08-C16)	1.050-2.049			996978	201.534	279.90
S 38 TPH (C16-C28)	1.950-2.900			1200298	258.289	358.73
S 2 Diesel Range Organics (C8-C28)	1.050-2.900			1952428	468.236	650.32
S 1 TPH - Diesel (C10-C28)	1.500-2.900			1846095	438.555	609.10
$ 28 o-Terphenyl (S)	2.186	2.180	0.006	89617	17.6484	8.17

PROJECT H0GCS1 6/13/11 B

Notebook No. 3111

Continued From Page —

13 Jun 11 03:38 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\061311B.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	2000 2860-31-01					TPHMACHB	1
1	5	1000 2860-31-02					TPHMACHB	1
1	6	500 2860-31-14					TPHMACHB	1
1	7	250 2860-30-13					TPHMACHB	1
1	8	100 2860-30-14					TPHMACHB	1
1	9	50 2860-30-15					TPHMACHB	1
1	10	IC2860-30-16					TPHMACHB	1
REAR								
1								

KHB 6/16/11

KHB 6/16/11

Continued on Page —

Read and Understood By

Signed: Kris H Burns Date: 6/16/11

Signed: [signature] Date: 6/16/11

56 PROJECT 40GCSI 062811T

Notebook No. [illegible]

Continued From Page

29 Jun 11 02:36 PM

Sequence: C:\HPCHEM\1\SEQUENCE\062811.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	CC500 2860-31-14-OK					TPHMACHB	1
1	5	4047229017X5	TPH.S				TPHMACHB	1
1	6	4047229026X7	GCSV 6025	HBN 74525			TPHMACHB	1
1	7	BLANK					TPHMACHB	1
1	8	CC500 2860-31-14-OK					TPHMACHB	1
1	9	463195					TPHMACHB	1
1	10	463195X2					TPHMACHB	1
1	11	463194					TPHMACHB	1
1	12	463196					TPHMACHB	1
1	13	463196X3					TPHMACHB	1
1	14	463197					TPHMACHB	1
1	15	463197X3					TPHMACHB	1
1	16	4046755012					TPHMACHB	1
1	17	4046755012X4					TPHMACHB	1
1	18	4046755001					TPHMACHB	1
1	19	4046755001X4					TPHMACHB	1
1	20	4046755002					TPHMACHB	1
1	21	4046755002X4					TPHMACHB	1
1	22	4046755003	TPH.B				TPHMACHB	1
1	23	4046755003X6					TPHMACHB	1
1	24	4046755004	GCSV				TPHMACHB	1
1	25	4046755004X6					TPHMACHB	1
1	26	4046755005					TPHMACHB	1
1	27	406755005X5	6035				TPHMACHB	1
1	28	4046755006					TPHMACHB	1
1	29	4046755006X5 RSX10	HBN				TPHMACHB	1
1	30	4046755007					TPHMACHB	1
1	31	4046755007X2	74632				TPHMACHB	1
1	32	4046755008					TPHMACHB	1
1	33	4046755008X6					TPHMACHB	1
1	34	4046755009					TPHMACHB	1
1	35	4046755009X5					TPHMACHB	1
1	36	4046755010					TPHMACHB	1
1	37	4046755010X7					TPHMACHB	1
1	38	4046755011					TPHMACHB	1
1	39	4046755011X2					TPHMACHB	1
1	40	4046755014					TPHMACHB	1
1	41	4046755015					TPHMACHB	1
1	42	4046755015X4					TPHMACHB	1
1	43	4046755016					TPHMACHB	1
1	44	4046755016X3					TPHMACHB	1
1	45	4046755017					TPHMACHB	1
1	46	4046755017X5					TPHMACHB	1
1	47	4046755018					TPHMACHB	1
1	48	4046755018X5					TPHMACHB	1
1	49	4046755019					TPHMACHB	1
1	50	4046755019X6					TPHMACHB	1
1	51	4046755020					TPHMACHB	1
1	52	4046755020X2					TPHMACHB	1
1	53	4046755006X10					TPHMACHB	1
1	54	BLANK					TPHMACHB	1
1	55	BLANK					TPHMACHB	1
1	56	BLANK					TPHMACHB	1
1	57	CC500 2860-31-14-OK					TPHMACHB	1

KHB 6/29/11

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Read and Understood By

Signed: [signature] Date: 6/29/11

Signed: [signature] Date: 6/29/11

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 73862 TPH-B

Prep Method	EPA 3541	Analysis Method	TPH-B	Extracted By	BLM	Extracted By Date	06/14/2011
Spiked By	BLM	Spiked By Date	06/14/2011	Witnessed By		Conc. Temp #1	98.5
Conc. Temp #2	98.5	Methylene Chloride	8423	Sodium Sulfate	6311	Florisil 3620B	5238
3620B Date/Initials		Batch Notes	Sample Matrix very dense	Reviewed By		Reviewed By Date	

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**463194**	15	1	0.5			5651 (.5)
8015 T_P	LCS	**463195**	15	1	0.5		10277 (1)	5651 (.5)
8015 T_P	MS	**463196**	6.73	1	0.5		10277 (1)	5651 (.5)
8015 T_P	MSD	**463197**	2.16	1	0.5		10277 (1)	5651 (.5)
8015 T_P	OQS	**4046755012**	8.98	1	0.5			5651 (.5)
8015 T_P	PS	**4046755001**	9.26	1	0.5			5651 (.5)
8015 T_P	PS	**4046755002**	9.05	1	0.5			5651 (.5)
8015 T_P	PS	**4046755003**	8.73	1	0.5			5651 (.5)
8015 T_P	PS	**4046755004**	9.37	1	0.5			5651 (.5)
8015 T_P	PS	**4046755005**	8.68	1	0.5			5651 (.5)
8015 T_P	PS	**4046755006**	9.26	1	0.5			5651 (.5)
8015 T_P	PS	**4046755007**	4.6	1	0.5			5651 (.5)
8015 T_P	PS	**4046755008**	7.76	1	0.5			5651 (.5)
8015 T_P	PS	**4046755009**	10.35	1	0.5			5651 (.5)
8015 T_P	PS	**4046755010**	10.8	1	0.5			5651 (.5)
8015 T_P	PS	**4046755011**	5.97	1	0.5			5651 (.5)
8015 T_P	PS	**4046755014**	8.57	1	0.5			5651 (.5)
8015 T_P	PS	**4046755015**	1.47	1	0.5			5651 (.5)
8015 T_P	PS	**4046755016**	4.39	1	0.5			5651 (.5)
8015 T_P	PS	**4046755017**	7.53	1	0.5			5651 (.5)
8015 T_P	PS	**4046755018**	4.73	1	0.5			5651 (.5)
8015 T_P	PS	**4046755019**	8.79	1	0.5			5651 (.5)

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	PS	**4046755020**	4.21	1	0.5			5651 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL **5651: TPH Biota Surr @ 100 ug/mL**

Thu, 23 Jun 2011 06:41:40 -0500

Pace Analytical Services

LIPID

Instrument ID: 40BALC

Analyst: BLM

11365

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
463253		0.9353	0.9542	15.0000	4.0000	1.0000	0.5040	06/15/2011 06:34:51		
4046755001		0.9372	1.0282	9.2600	4.0000	1.0000	3.9309	06/15/2011 06:34:59		
4046755002		0.9382	1.0952	9.0500	4.0000	1.0000	6.9392	06/15/2011 06:35:05		
4046755003		0.9357	1.1389	8.7300	4.0000	1.0000	9.3104	06/15/2011 06:35:12		
4046755004		0.9366	1.2958	9.3700	4.0000	1.0000	15.3340	06/15/2011 06:35:20		
4046755005		0.9387	1.2428	8.6800	4.0000	1.0000	14.0138	06/15/2011 06:35:28		
4046755006		0.9407	1.1996	9.2600	4.0000	1.0000	11.1836	06/15/2011 06:35:36		
4046755007		0.9420	1.0268	4.6000	4.0000	1.0000	7.3739	06/15/2011 06:35:43		
4046755008		0.9358	1.0738	7.7600	4.0000	1.0000	7.1134	06/15/2011 06:35:50		
4046755009		0.9346	1.2685	10.3500	4.0000	1.0000	12.9043	06/15/2011 06:35:57		
4046755010		0.9341	1.3998	10.8000	4.0000	1.0000	17.2481	06/15/2011 06:36:05		
4046755011		0.9308	0.9793	5.9700	4.0000	1.0000	3.2496	06/15/2011 06:36:11		
4046755012		0.9302	1.1286	8.9800	4.0000	1.0000	8.8374	06/15/2011 06:37:05		
★ 463254		0.9329	1.0265	6.7300	4.0000	1.0000	5.5632	06/15/2011 06:36:48	4046755012	45.4741331
4046755014		0.9341	1.0196	8.5700	4.0000	1.0000	3.9907	06/15/2011 06:37:23		
4046755015		0.9450	1.0574	1.4700	4.0000	1.0000	30.5850	06/15/2011 06:37:29		
4046755016		0.9389	1.0541	4.3900	4.0000	1.0000	10.4966	06/15/2011 06:37:37		
4046755017		0.9374	1.0689	7.5300	4.0000	1.0000	6.9854	06/15/2011 06:37:45		
4046755018		0.9429	1.0738	4.7300	4.0000	1.0000	11.0698	06/15/2011 06:37:52		
4046755019		0.9414	1.2164	8.7900	4.0000	1.0000	12.5142	06/15/2011 06:37:58		
4046755020		0.9421	1.0256	4.2100	4.0000	1.0000	7.9335	06/15/2011 06:38:06		

★ Failed due to sample matrix. Confirmed on 6/17/11. Confirmation data attached.

GC
6/17/11

Pace Analytical Services					Instrument ID:	40BALC				
LIPID					Analyst:	BLM				

11365 RE

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
4046755012		0.9473	1.1390	8.9800	4.0000	1.0000	8.5390	06/17/2011 11:53:46		
463254 MS		0.9453	1.0316	6.7300	4.0000	1.0000	5.1293	06/17/2011 11:53:53	4046755012	

PROJECT ____________ Notebook No. ________

Continued From Page ________

9/28/10

2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11

9/30/10

2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR

10/4/10

2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10

2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 1.0ml CH_2Cl_2 200ppm WPAH IS RON 10/6/10 Exp 10/6/11

10/06/10

2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11

10-7-10

2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w nanopure H_2O SHI 50 ppm

2860-16-07 2500ul of 10,000mg/L O-terphenyl (2713-86) diluted to 250ml with CH_2Cl_2 (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10/12/10

* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR

10/8/10

2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +

2860-16-09 5000ul of 7500ug/ml Acid Surr (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50ug/ml ~~BN~~ SVOA Surr. 8270 SKW Ran on Inst. by 10MSS1 File# 1012T008

10/13/10

2860-16-10 500 ul of 4000 ppm SVIS (2713-90I) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11

2860-16-11 ~~20~~ 40ul (RON 10/13/10) of 5000ppm N-NDMA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm MDL STD Ex 7/13/11 RON 10/13/10

~~10/18/10~~ ~~500~~ ARO 10/18/10

Continued on Page

Read and Understood By

[signature] 10/18/10 Valerie M Renquin 10/18/2010

Signed Date Signed Date

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS EF 11/24/10 RW 11/24
11/29/10 Ch2Cl2 changed at 8:00 to lot 2712-73 vmr
11/30/10
2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11
2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk
2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11
2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d
12/1/2010
2860-22-06 1 ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with Ch2Cl2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on inst by DAL file # 40ccs1.i\120210T.b\010R0101.D 88.8%
12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Azobenzene 50%
" " -08 25uls of 2860-10-11 " " " " 500ppm
12/03/10
2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12
12/6/10
2860-22-10 50ul of 4000ppm SVIS (2945-06C) upto 10.0ml CH_2Cl_2 20ppm SPAH-IS EF 12/8/10 RW 12/8/10
2860-22-11 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11
12/7/10
2860-22-12 400ul of 16,000 ppm ERDO (2713-42A) diluted to 2.0 ml with Ch2Cl2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date
Signed — 12/22/10 — Date

PROJECT Continued From Page

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MeOH spike)
→ 1.0 mL [Final] = 500 ug/mL GC 7-19-11 DMR

2/24/11 changed CH_2Cl_2 @ 10:00AM to New Lot. (2712-085) KPM

2/25/11

2860-29-02 3.0 mL of 5000 ppm B/N SVIS (2945-03C) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150 ppm B/N SVIS KPM Exp 8/25/11 KPM
Ran on instr by RJW File # 40mss4 022511r28.D

2860-29-03 500 ul of 4000 ppm SVIS (2945-17F) up to 1.0 ml CH_2Cl_2 2000 ppm SPAH IS Ex 2/28/12 RJW 2/25/11

3/2/11

2860-29-04 250 ul of 4000 ppm SVIS (2945-17G) up to 1.0 ml CH_2Cl_2 1000 ppm PAH-IS Ex 2/28/12 RJW 3/2/11

2860-29-05 250 ul of 2000 ppm PAH (2575-60C) + 100 ul of 5000 ppm B/N SS (2945-20K) up to 10.0 ml CH_2Cl_2 50 ppm PAH Ex 7/13/11 RJW 3/2/11

2860-29-06 0.500 ml of 50 ppm PAH (2860-29-05) up to 1.0 ml CH_2Cl_2 25 ppm PAH CAL Ex 7/13/11 RJW 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0 ml	.05
12	0.200	1.0 ml	10 ppm Check

2860-29-13 20 ml of 500 ppm 2nd Source (2945-08D) + 6.7 ml of 150 ppm B/N SS (2860-27-01) up to 1.0 ml CH_2Cl_2 1 ppm PAH 2nd Source Ex 9/2/11 RJW 3/2/11

2860-29-14 500 ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ~~AKO~~ exp 2/28/12

3/3/2011

2860-29-15 2500 ul of 20,000 mg/L #2 diesel (2713-46A, B, C) diluted to 50 ml with CH_2Cl_2 = 1000 ppm Ranon inst by ~~DAE~~ file # GC (VMR) Exp 3/3/2012 VMR

Z VMR 3/3/2011 OK to use per GC Ranon inst 3/8/11 VMR

Continued on Page

→ 40GCSF.i / 0307116.b - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Valerie M Renquin 3/3/2011 Signed Date

Signed Date 3/7/11

3-4-11

2860-30-01 50 mL @ 2380-100-01 (TPH @ 20000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5-6-11 DAR

TPH ICAL

2860-30-02 500 mL @ 2713-490 (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3-4-12 DAR

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 mL = 500 ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ Use only 1.0 mL of 2860-30-02-990
All Standards + 5 mL 2945-135 (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All Standard Exp 2-22-12 DAR

TPH ICV

2860-30-08 10 mL @ ~~2945-23A~~ 2713-990 (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2945-135 (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2-22-12 DAR

2860-30-09 25 uL of 2860-10-11 diluted to 1.0 mL w 50/50 H_2O/MeOH JHH

3-7-11

2860-30-10 1.0 mL of 2860-30-02 + 5 uL 2713-990 (o-terp @ 10,000 ug/mL) = 2000 ug/mL : 50 ug/mL
2860-30-11 500 mL @ → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 mL = 500 ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3-4-11~~ DAR 5-6-11 GC

2860-30-16 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3-4-11~~ DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

Signed _____ Date 3.7.11 Signed Valerium Renquin Date 3/24/11

PROJECT

3.7.11

2860-31-01 100 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-990 (oterp @10,000 ug/mL)
[Final] = 2000 ± 50 ug/mL Exp 3.4.12 DAR

2860-31-02 50 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-990 (oterp @10,000 ug/mL)
[Final] = 1000 ± 50 ug/mL Exp 3.4.12 DAR

2860-31-03 25 uL of 2860-10-19 diluted to 1.0 mL w/ 50/50 MeOH/H_2O SHI 500 ppm

2860-31-04 300 uL of 4000 ppm SVIS (2945-17J) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 uls of 2860-10-11 diluted to 1.0 ml w 50/50 MeOH H_2O SHI 1000 ppm

-06	25 uls of 2860-31-05 diluted to 1.0 ml w	25 ppm SHI
-07	100	100
-08	250	250
-09	500	500
-10	750	750

3.14.11

2860-31-11 1.0 mL of 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL Exp 1-10-12 DAR

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) upto 1.0 ml CH_2Cl_2 2000 ppm 1X HHS-IS Ex 3/15/12 RW 3/16/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-990 (oterpenyl @10,000 ug/mL)
[Final] = 50 ug/mL Exp 3.4.12 DAR

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Signed Valerie M Ringuin Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046758

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4046758

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4046758001	EWL-NO-C-HEPATOPANCREAS	Tissue		06/07/11 10:00
4046758002	EWL-T-03-C-HEPATOPANCREAS	Tissue	01/03/11 11:33	06/07/11 10:00
4046758003	EWL-T-07-C-HEPATOPANCREAS	Tissue	01/03/11 11:05	06/07/11 10:00
4046758004	EWL-T-09-C-HEPATOPANCREAS	Tissue	01/10/11 11:47	06/07/11 10:00
4046758005	EWL-T-10-C-HEPATOPANCREAS	Tissue	01/03/11 11:23	06/07/11 10:00
4046758006	EWL-LC-C-HEPATOPANCREAS	Tissue	01/04/11 15:30	06/07/11 10:00
4046758007	EWL-T-03-C-DUP HEPATOPANCREAS	Tissue	01/03/11 11:33	06/07/11 10:00
4046758008	EWL-T-10-C-DUP HEPATOPANCREAS	Tissue	01/03/11 11:23	06/07/11 10:00
4046758009	EWL-LC-C-DUP HEPATOPANCREAS	Tissue	01/04/11 15:30	06/07/11 10:00

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4046758
Client: URS CORPORATION
Project Name: EAST WHITE LAKE
Project Number: K1100325

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.

B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. The blank result was reported with the "3q" data qualifier.

C. **Surrogates:** All in-house acceptance criteria were met. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.

D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met for TPH (C10-C28). The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD; the "L0" data qualifier applied to the summary. The recoveries of TPH (C08-C40) were above control criteria in the LCS and LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifier. The default spike range of the standard used for QC evaluation was C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.

E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** All samples were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4046758

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4046758001	EWL-NO-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758002	EWL-T-03-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758003	EWL-T-07-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758004	EWL-T-09-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758005	EWL-T-10-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758006	EWL-LC-C-HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758007	EWL-T-03-C-DUP HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758008	EWL-T-10-C-DUP HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4046758009	EWL-LC-C-DUP HEPATOPANCREAS	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4046758

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6027

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
[1]	The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: CRABS
Pace Project No.: 4046758

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

URS/22071210011933/1-27-11

4046758

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100325
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None
K1100325-025	EWL-LC-C-HEPATOPANCREA	Ø	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	
K1100325-026	EWL-NO-C-HEPATOPANCRE	1	Animal Tissue			Gulf Coast Analytica	X
K1100325-027	EWL-T-03-C-DUP	Ø	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	
K1100325-028	EWL-T-10-C-DUP	Ø	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	
K1100325-029	EWL-LC-C-DUP	Ø	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	

23 - 001

Test Comments

Relinquish - None

K1100325-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29

Ship sample to GCAL in Baton Rouge, LA

Folder Comments:

Report tissues on a wet weight basis.

-013=MS/MSD on this sample.

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com	____RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ____STANDARD Requested FAX Date: _____ Requested Report Date: 01/23/11	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD N	PO# K1100325 Bill to

Relinquished By: [signature] CAS 1/17/11 1200 Received By: [signature] 1/18/11 1015 Airbill Number: Rel By: BQm 6/6/11 1505

Fedex 6/3/11 10:00 URS 1-18-11 1015 L. Beckendorf 6/3/11 10:00

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425/2207/211011933/1-25-4

4046758

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100325
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100325-013	EWL-T-02-C-HEPATOPANCRE	Ø	Animal Tissue	12/21/10	1104	Gulf Coast Analytica		
K1100325-014	EWL-T-03-C-HEPATOPANCRE	1	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	X	24 002
K1100325-015	EWL-T-04-C-HEPATOPANCRE	Ø	Animal Tissue	12/20/10	1222	Gulf Coast Analytica		
K1100325-016	EWL-T-05-C-HEPATOPANCRE	Ø	Animal Tissue	12/21/10	1033	Gulf Coast Analytica		
K1100325-017	EWL-T-06-C-HEPATOPANCRE	Ø	Animal Tissue	12/16/10	1215	Gulf Coast Analytica		
K1100325-018	EWL-T-07-C-HEPATOPANCRE	1	Animal Tissue	1/3/11	1105	Gulf Coast Analytica	X	25 003
K1100325-019	EWL-T-08-C-HEPATOPANCRE	Ø	Animal Tissue	1/3/11	1105	Gulf Coast Analytica		
K1100325-020	EWL-T-09-C-HEPATOPANCRE	1	Animal Tissue	1/10/11	1147	Gulf Coast Analytica	X	26 004
K1100325-021	EWL-T-10-C-HEPATOPANCRE	1	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	X	27 005
K1100325-022	EWL-T-11-C-HEPATOPANCRE	Ø	Animal Tissue	12/21/10	1053	Gulf Coast Analytica		
K1100325-023	EWL-T-12-C-HEPATOPANCRE	Ø	Animal Tissue	1/3/11	1100	Gulf Coast Analytica		
K1100325-024	EWL-BR-C-HEPATOPANCRE	Ø	Animal Tissue	12/27/10	1230	Gulf Coast Analytica		

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____ RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ STANDARD
Requested FAX Date: ______
Requested Report Date: 01/23/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1100325
Bill to

Relinquished By: [signature] CAS 1/18/11 0930 Received By: [signature] 1-15-11 555 ≤0°
Fedex 6/7/11 10:00 Rec UPS. 958 [signature] 6/9/11 10:00

Airbill Number: Rel By: PGM 6/6/11 1505

Pag

WRS/2207/211011933/H2854

4046758

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1100325
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None	
K1100325-025	EWL-LC-C-HEPATOPANCREA	1	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	V	28 • 006
K1100325-026	EWL-NO-C-HEPATOPANCRE	Ø	Animal Tissue			Gulf Coast Analytica		
K1100325-027	EWL-T-03-C-DUP	1	Animal Tissue	1/3/11	1133	Gulf Coast Analytica	X	29 • 007
K1100325-028	EWL-T-10-C-DUP	1	Animal Tissue	1/3/11	1123	Gulf Coast Analytica	V	30 • 008
K1100325-029	EWL-LC-C-DUP	1	Animal Tissue	1/4/11	1530	Gulf Coast Analytica	V	31 • 009

Test Comments

Relinquish - None

K1100325-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29

Ship sample to GCAL in Baton Rouge, LA

Folder Comments:

Report tissues on a wet weight basis.

-013=MS/MSD on this sample.

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com	____RUSH (Surcharges Apply) **PLEASE CIRCLE WORK DAYS** 1 2 3 4 5 ____ **STANDARD** Requested FAX Date: _____ Requested Report Date: 01/23/11	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD N	PO# K1100325 Bill to

Relinquished By: [illegible] CAS 1/18/11 0930 Received By: [illegible] 1-19-11 958 CO Airbill Number: Rel by: BGM 6/6/11 1505

Fedex 6/7/11 10:00 rel: CAS 1-19-11 958 [illegible] 6/7/11 10:00

HOH67~~66~~
758
6/8/11

GCAL

SAMPLE RECEIVING CHECKLIST

Workorder: 211011933

Client: URS Corporation

Received by: Raborn, Michelle

Received Date/Time: 1/19/2011 9:58:00 AM

Samples Received via: UPS

Number of Coolers Received: 2

Cooler tracking numbers(s): 1Z 973 659 01 6680 1046 1Z 973 659 01 6656 3074

Cooler temperature(s): both cooler were < 0c

Were all coolers received at a temperature of 0 - 6° C?	~~Yes~~	No	N/A
Were all custody seals intact?	Yes	No	N/A
~~Were all samples recevied in proper containers?~~	~~Yes~~	~~No~~	~~N/A~~
Were all samples properly preserved?	Yes	No	N/A
Was preservative added to any container at the lab?	No	Yes	N/A
Were all containers received in good condition?	Yes	No	N/A
Were all VOA vials received with no head space?	No	No	~~N/A~~
Do all sample labels match the Chain of Custody?	~~Yes~~	No	N/A
Was the client notified about any discrepancies?	No	No	N/A

Notes/Comments:

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

758

Client Name: URS Project # ~~WO46766~~

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____ 6/8/11

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used VB Type of Ice: Wet Blue (Dry) None ☐ Samples on ice, cooling process has begun

Cooler Temperature ≤0°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents: Date: VB 6/7/11 Initials: _____

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: JRTD Date: 6/8/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046758

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4046758

QB Batch: OEXT / 11371
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4046758001		EWL-NO-C-HEPATOPANCREAS	2	0	S4										
4046758002		EWL-T-03-C-HEPATOPANCREAS	3	0	S4										
463499	BLANK		2	0	S0										
4046758003		EWL-T-07-C-HEPATOPANCREAS	4	0	S4										
463500	LCS		2	0	S4										
4046758004		EWL-T-09-C-HEPATOPANCREAS	4	0	S4										
4046758005		EWL-T-10-C-HEPATOPANCREAS	3	0	S4										
463501	LCSD		2	0	S4										
4046758006		EWL-LC-C-HEPATOPANCREAS	5	0	S4										
4046758007		EWL-T-03-C-DUP HEPATOPANCREAS	2	0	S4										
4046758008		EWL-T-10-C-DUP HEPATOPANCREAS	2	0	S4										
4046758009		EWL-LC-C-DUP HEPATOPANCREAS	3	0	S4										

QC Limits: 50-150
Sample Limits: 50-150

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

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LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046758

QB Batch: OEXT/11371
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 06/15/11
LCSD Prepared: 06/15/11

Analyte	LCS % Rec	LCSD % Rec	QC Limits RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	65	63	4	50-150	20	66.7	43.5	41.7	mg/kg	07/13/11	07/13/11		
TPH (C08-C16)	35	33	6	50-150	20	66.7	23.4	22.1	mg/kg	07/13/11	07/13/11	L0	L0
TPH (C08-C40)	246	217	13	50-150	20	66.7	164	144	mg/kg	07/13/11	07/13/11	1q	2q
TPH (C16-C28)	26	25	4	50-150	20	66.7	17.6	16.8	mg/kg	07/13/11	07/13/11	L0	L0
TPH - Diesel (C10-C28)	61	59	4	50-150	20	66.7	40.6	39.0	mg/kg	07/13/11	07/13/11		

Type	Sample
LCS	463500
LCSD	463501

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4046758

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4046758001	EWL-NO-C-HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758002	EWL-T-03-C-HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758003	EWL-T-07-C-HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758004	EWL-T-09-C-HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758005	EWL-T-10-C-HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758006	EWL-LC-C-HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758007	EWL-T-03-C-DUP HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758008	EWL-T-10-C-DUP HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758009	EWL-LC-C-DUP HEPATOPANCREAS	EPA 3541	OEXT/11371	EPA 8015B Modified	GCSV/6027
4046758001	EWL-NO-C-HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758002	EWL-T-03-C-HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758003	EWL-T-07-C-HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758004	EWL-T-09-C-HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758005	EWL-T-10-C-HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758006	EWL-LC-C-HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758007	EWL-T-03-C-DUP HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758008	EWL-T-10-C-DUP HEPATOPANCREAS	Pace Lipid	OEXT/11383		
4046758009	EWL-LC-C-DUP HEPATOPANCREAS	Pace Lipid	OEXT/11383		

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4046758

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 07/06/11 07/06/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01		2000 2860-31-01	07/06/11	1106	2.18	
02		1000 2860-31-02	07/06/11	1116	2.18	
03		500 2860-31-14	07/06/11	1128	2.18	
04		250 2860-30-13	07/06/11	1141	2.18	
05		100 2860-30-14	07/06/11	1153	2.18	
06		50 2860-30-15	07/06/11	1205	2.18	
07		IC500 2860-30-16	07/06/11	1217	2.18	
08		CC500 2860-31-14	07/13/11	0802	2.20*	
09	MBLCS	463500	07/13/11	0845	2.20*	
10	MBLCSD	463501	07/13/11	0921	2.20*	
11	EWL-NO-C-HEPATOPANC	4046758001	07/13/11	0945	2.20*	
12	EWL-T-03-C-HEPATOPA	4046758002	07/13/11	1009	2.20*	
13	EWL-T-07-C-HEPATOPA	4046758003	07/13/11	1033	2.20*	
14	EWL-T-09-C-HEPATOPA	4046758004	07/13/11	1058	2.20*	
15	EWL-T-10-C-HEPATOPA	4046758005	07/13/11	1122	2.20*	
16	EWL-LC-C-HEPATOPANC	4046758006	07/13/11	1146	2.20*	
17	EWL-T-03-C-DUP HEPA	4046758007	07/13/11	1210	2.20*	
18	EWL-T-10-C-DUP HEPA	4046758008	07/13/11	1234	2.20*	
19	EWL-LC-C-DUP HEPATO	4046758009	07/13/11	1258	2.20*	
20	MB	463499	07/13/11	1310	2.20*	
21		CC500 2860-31-14	07/13/11	1358	2.20*	
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046758

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Results reported on a "wet-weight" basis

Sample: EWL-NO-C-HEPATOPANCREAS TX
Lab ID: 4046758001
Collected:
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**463**	mg/kg	41.7	20.8	2	06/15/11 12:00	07/13/11 09:45	
	TPH (C08-C16)	**197**	mg/kg	41.7	20.8	2	06/15/11 12:00	07/13/11 09:45	
	TPH (C16-C28)	**298**	mg/kg	41.7	20.8	2	06/15/11 12:00	07/13/11 09:45	
	TPH (C08-C40)	**729**	mg/kg	41.7	20.8	2	06/15/11 12:00	07/13/11 09:45	3q
	TPH - Diesel (C10-C28)	**419**	mg/kg	41.7	20.8	2	06/15/11 12:00	07/13/11 09:45	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	06/15/11 12:00	07/13/11 09:45	S4

Date: 06/04/2012 08:49 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-NO-C-HEPATOPANCREAS TX
Lab ID: 4046758001
Collected:
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**9.4**	%			1		06/16/11 06:36	

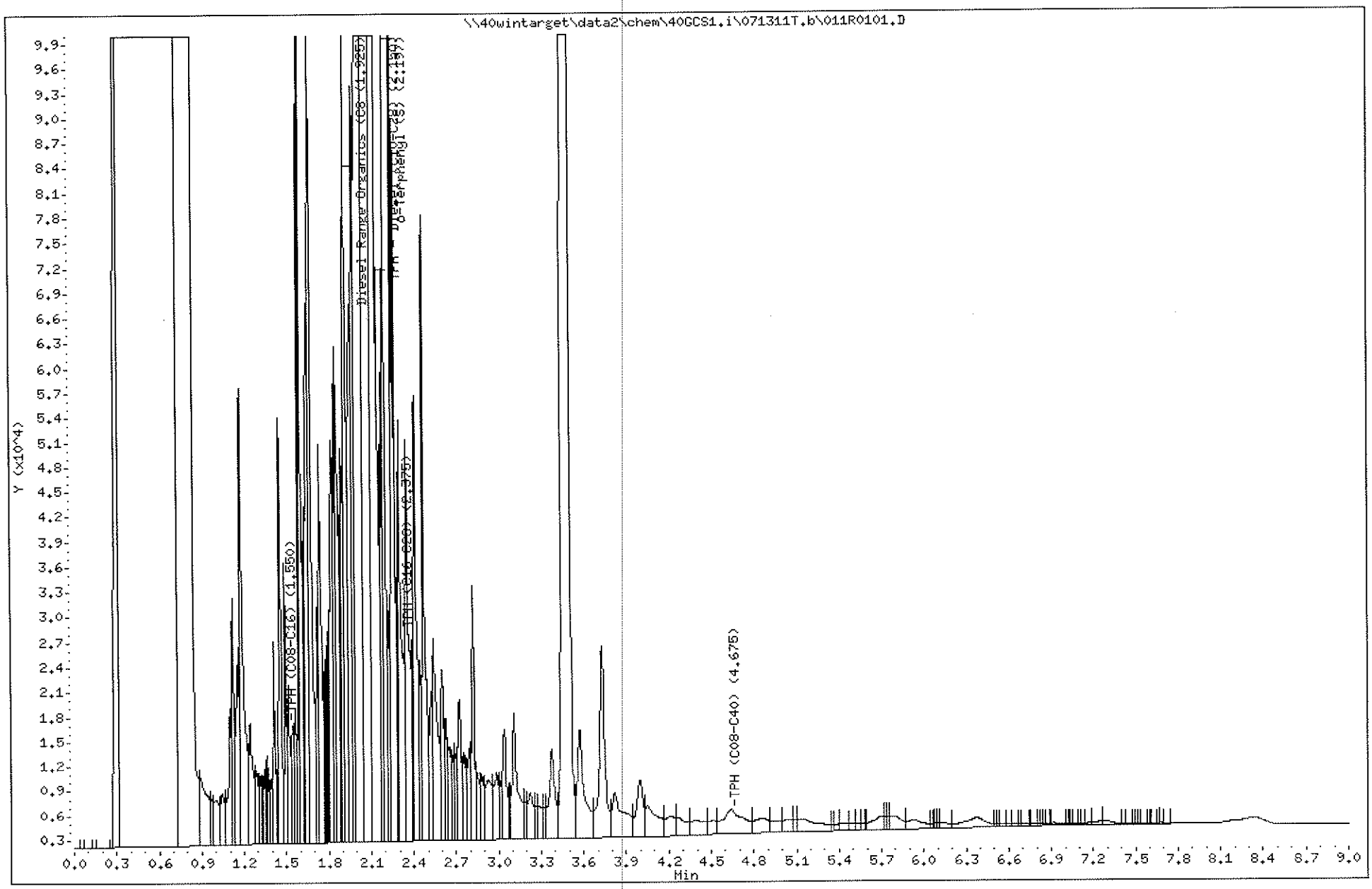
Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\011R0101.D
Date : 13-JUL-2011 09:45
Client ID: EWL-NO-C-HEPATOPANC
Sample Info: 4046758001X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\011R0101.D
Lab Smp Id: 4046758001 Client Smp ID: EWL-NO-C-HEPATOPANC
Inj Date : 13-JUL-2011 09:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758001X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.800	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			6581599	1749.73	729.05
S	1 TPH (C08-C16)	1.050-2.049			2004407	472.298	196.79
S	12 TPH (C16-C28)	1.950-2.800			2870751	714.082	297.53
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			4293805	1111.24	463.01
S	8 TPH - Diesel (C10-C28)	1.500-2.800			3911270	1004.48	418.53
$	15 o-Terphenyl (S)	2.196	2.196	0.000	118633	23.7889	4.95

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-HEPATOPANCREAS TX
Lab ID: 4046758002
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**314**	mg/kg	63.7	31.8	3	06/15/11 12:00	07/13/11 10:09	
	TPH (C08-C16)	**190**	mg/kg	63.7	31.8	3	06/15/11 12:00	07/13/11 10:09	
	TPH (C16-C28)	**184**	mg/kg	63.7	31.8	3	06/15/11 12:00	07/13/11 10:09	
	TPH (C08-C40)	**762**	mg/kg	63.7	31.8	3	06/15/11 12:00	07/13/11 10:09	3q
	TPH - Diesel (C10-C28)	**283**	mg/kg	63.7	31.8	3	06/15/11 12:00	07/13/11 10:09	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	06/15/11 12:00	07/13/11 10:09	S4

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-HEPATOPANCREAS TX
Lab ID: 4046758002
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

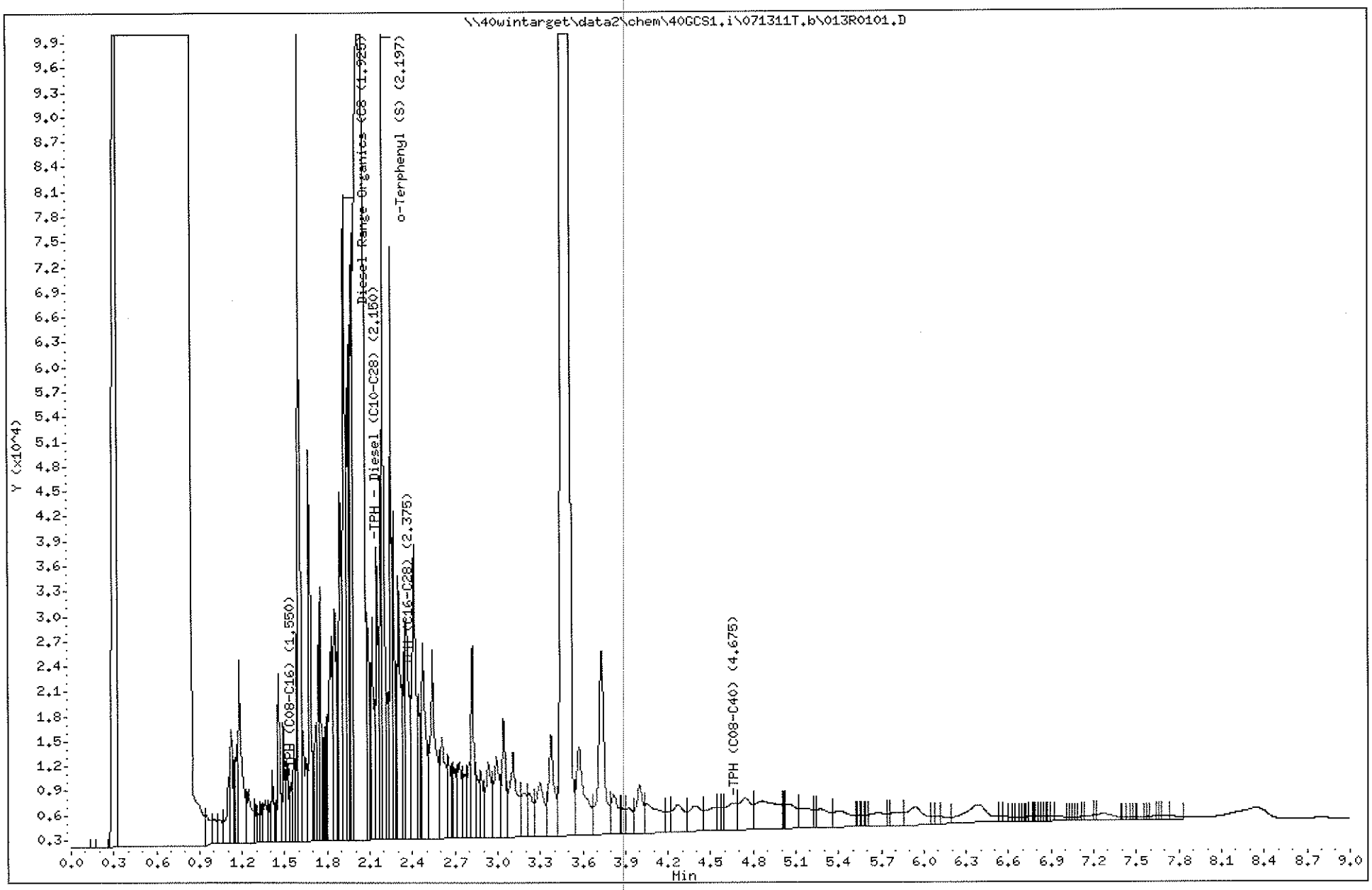
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**8.6**	%			1		06/16/11 06:37	

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\013R0101.D
Date : 13-JUL-2011 10:09
Client ID: EWL-T-03-C-HEPATOPA
Sample Info: 4046758002X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\013R0101.D
Lab Smp Id: 4046758002 Client Smp ID: EWL-T-03-C-HEPATOPA
Inj Date : 13-JUL-2011 10:09
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758002X3
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 13
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.710	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			4597560	1196.01	761.78
S	1 TPH (C08-C16)	1.050-2.049			1380923	298.292	189.99
S	12 TPH (C16-C28)	1.950-2.800			1347647	289.005	184.07
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			2081217	493.734	314.48
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1905307	444.640	283.21
$	15 o-Terphenyl (S)	2.196	2.196	0.000	81399	16.3226	3.46

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-07-C-HEPATOPANCREAS TX
Lab ID: 4046758003
Collected: 01/03/11 11:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**153**	mg/kg	43.1	21.5	4	06/15/11 12:00	07/13/11 10:33	
	TPH (C08-C16)	**47.1**	mg/kg	43.1	21.5	4	06/15/11 12:00	07/13/11 10:33	
	TPH (C16-C28)	**101**	mg/kg	43.1	21.5	4	06/15/11 12:00	07/13/11 10:33	
	TPH (C08-C40)	**512**	mg/kg	43.1	21.5	4	06/15/11 12:00	07/13/11 10:33	3q
	TPH - Diesel (C10-C28)	**143**	mg/kg	43.1	21.5	4	06/15/11 12:00	07/13/11 10:33	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	06/15/11 12:00	07/13/11 10:33	S4

Date: 06/04/2012 08:49 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-07-C-HEPATOPANCREAS TX
Lab ID: 4046758003
Collected: 01/03/11 11:05
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**7.3**	%			1		06/16/11 06:37	

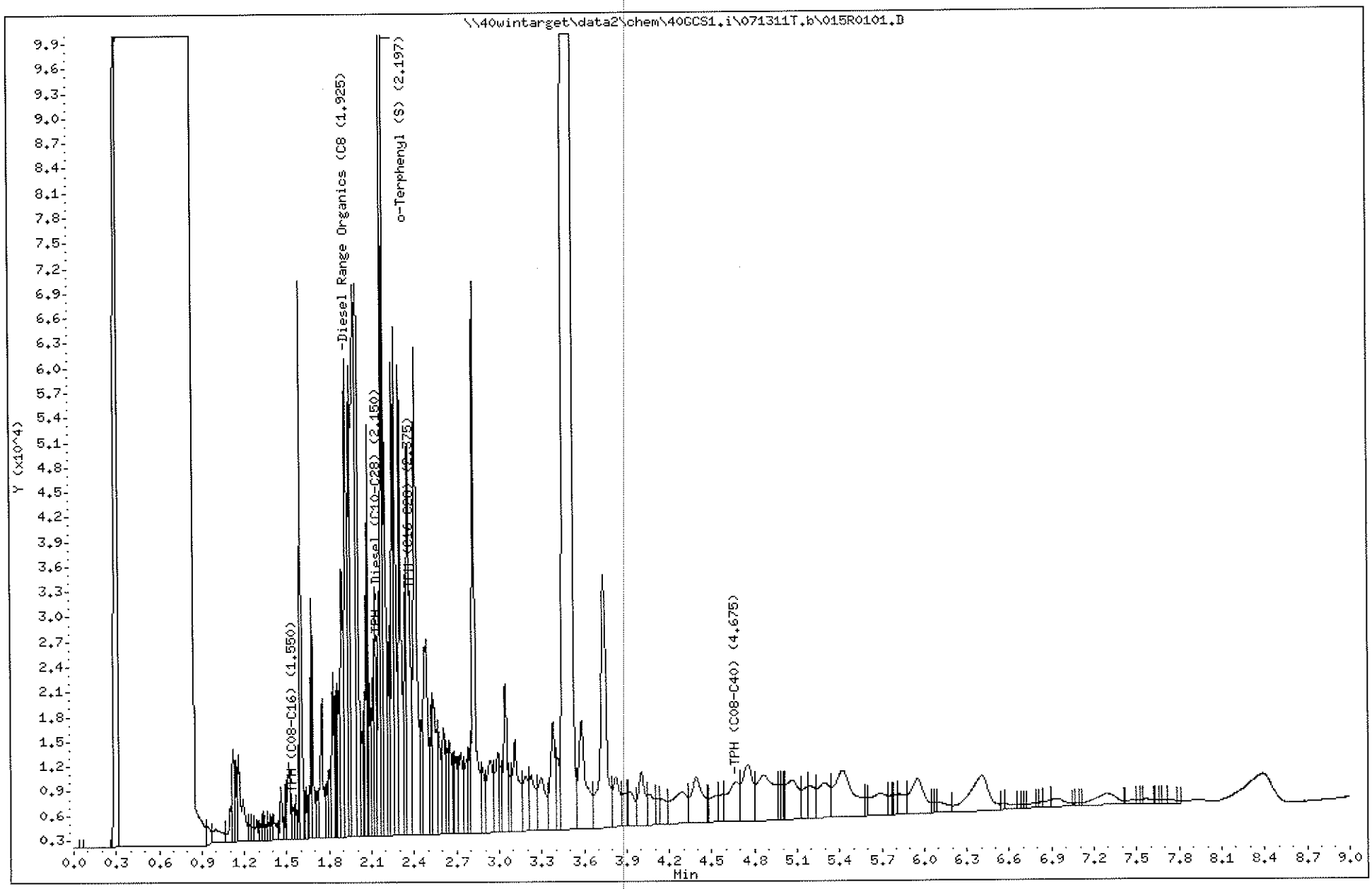
Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\015R0101.D
Date : 13-JUL-2011 10:33
Client ID: EWL-T-07-C-HEPATOPA
Sample Info: 4046758003X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\015R0101.D
Lab Smp Id: 4046758003 Client Smp ID: EWL-T-07-C-HEPATOPA
Inj Date : 13-JUL-2011 10:33
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758003X4
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 15
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.280	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			4569645	1188.22	512.16
S	1 TPH (C08-C16)	1.050-2.049			704041	109.384	47.14
S	12 TPH (C16-C28)	1.950-2.800			1154624	235.136	101.35
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			1580348	353.949	152.56
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1498406	331.080	142.70
$	15 o-Terphenyl (S)	2.196	2.196	0.000	74620	14.9632	1.61

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-09-C-HEPATOPANCREAS TX
Lab ID: 4046758004
Collected: 01/10/11 11:47
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**217**	mg/kg	108	54.0	4	06/15/11 12:00	07/13/11 10:58	
	TPH (C08-C16)	**<54.0**	mg/kg	108	54.0	4	06/15/11 12:00	07/13/11 10:58	
	TPH (C16-C28)	**209**	mg/kg	108	54.0	4	06/15/11 12:00	07/13/11 10:58	
	TPH (C08-C40)	**1210**	mg/kg	108	54.0	4	06/15/11 12:00	07/13/11 10:58	3q
	TPH - Diesel (C10-C28)	**215**	mg/kg	108	54.0	4	06/15/11 12:00	07/13/11 10:58	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	06/15/11 12:00	07/13/11 10:58	S4

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-09-C-HEPATOPANCREAS TX
Lab ID: 4046758004
Collected: 01/10/11 11:47
Received: 06/07/11 10:00

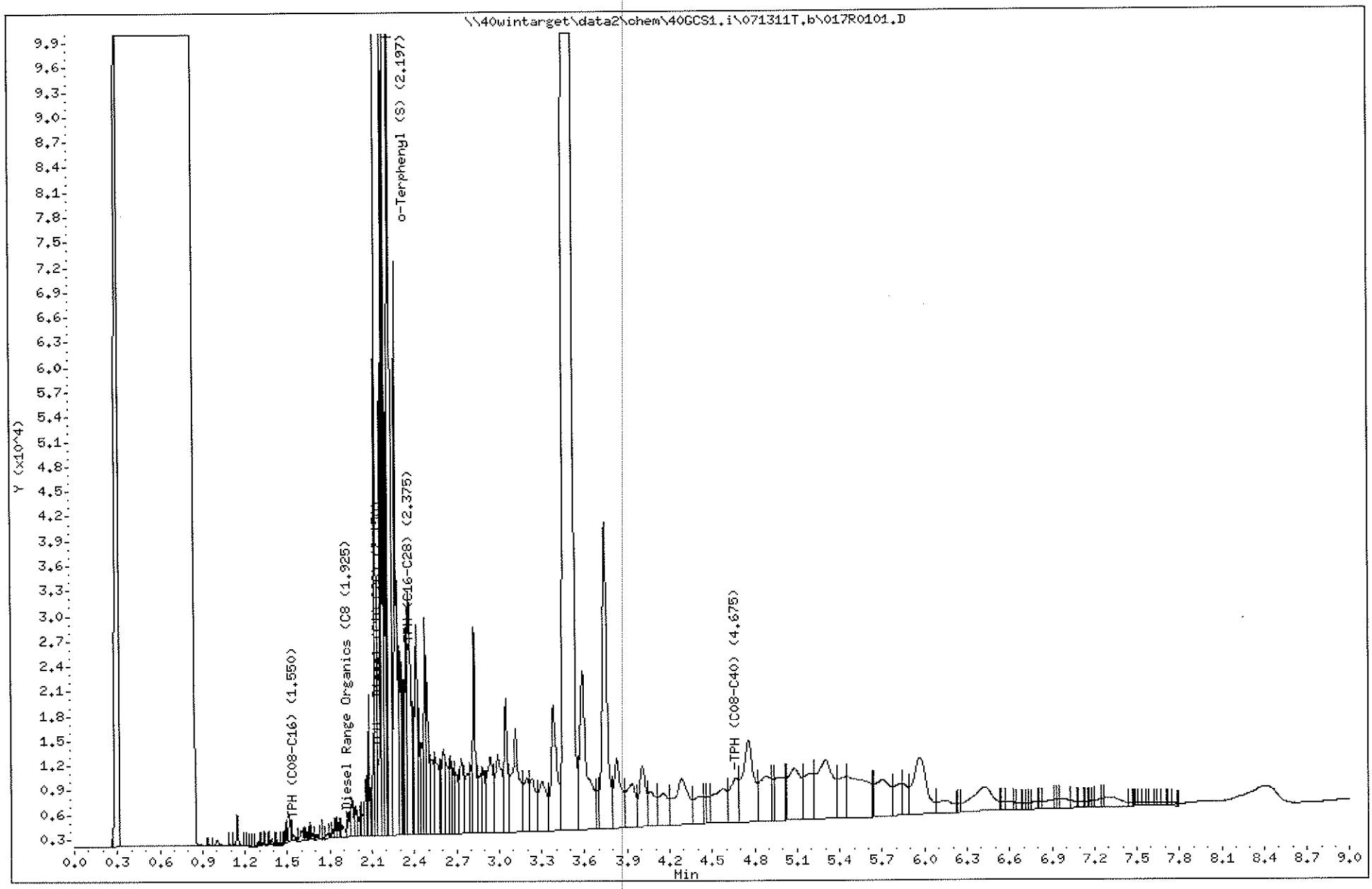
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**14.4**	%			1		06/16/11 06:37	

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\017R0101.D
Date : 13-JUL-2011 10:58
Client ID: EWL-T-09-C-HEPATOPA
Sample Info: 404675004X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\017R0101.D
Lab Smp Id: 4046758004 Client Smp ID: EWL-T-09-C-HEPATOPA
Inj Date : 13-JUL-2011 10:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758004X4
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 17
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.700	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			4327915	1120.76	1211.62
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.950-2.800			1006024	193.663	209.36
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			1030995	200.632	216.89
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1024491	198.817	214.93
$	15 o-Terphenyl (S)	2.196	2.196	0.000	48444	9.71426	2.62

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-HEPATOPANCREAS TX
Lab ID: 4046758005
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**494**	mg/kg	68.2	34.1	3	06/15/11 12:00	07/13/11 11:22	
	TPH (C08-C16)	**148**	mg/kg	68.2	34.1	3	06/15/11 12:00	07/13/11 11:22	
	TPH (C16-C28)	**345**	mg/kg	68.2	34.1	3	06/15/11 12:00	07/13/11 11:22	
	TPH (C08-C40)	**985**	mg/kg	68.2	34.1	3	06/15/11 12:00	07/13/11 11:22	3q
	TPH - Diesel (C10-C28)	**459**	mg/kg	68.2	34.1	3	06/15/11 12:00	07/13/11 11:22	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	06/15/11 12:00	07/13/11 11:22	S4

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-HEPATOPANCREAS TX
Lab ID: 4046758005
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

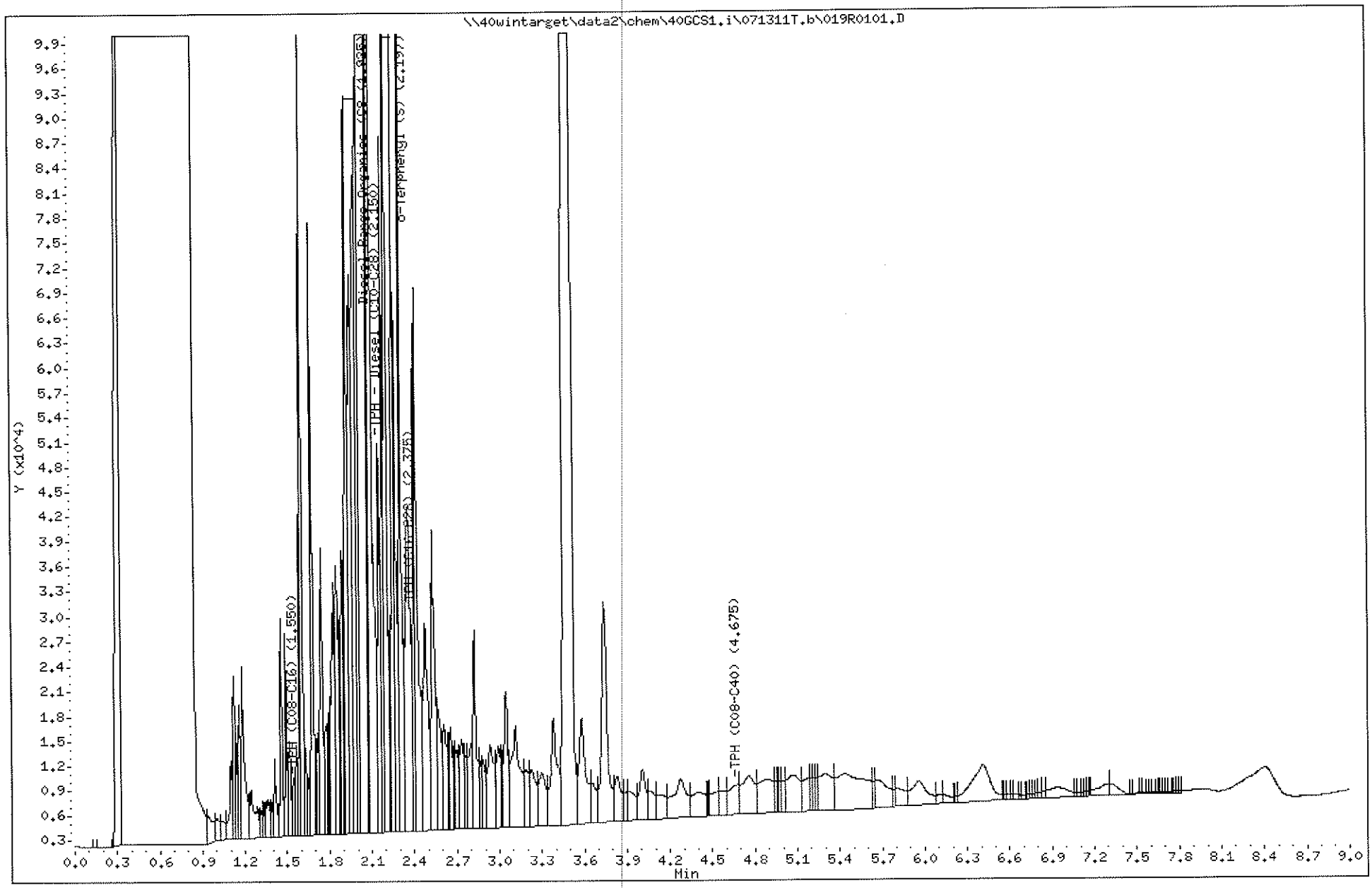
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**11.2**	%			1		06/16/11 06:37	

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\019R0101.D
Date : 13-JUL-2011 11:22
Client ID: EWL-T-10-C-HEPATOPA
Sample Info: 4046758005X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\019R0101.D
Lab Smp Id: 4046758005 Client Smp ID: EWL-T-10-C-HEPATOPA
Inj Date : 13-JUL-2011 11:22
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758005X3
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 19
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.400	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			5487444	1444.36	984.79
S	1 TPH (C08-C16)	1.050-2.049			1087577	216.424	147.56
S	12 TPH (C16-C28)	1.950-2.800			2125572	506.113	345.07
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			2906121	723.953	493.60
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2723904	673.099	458.93
$	15 o-Terphenyl (S)	2.196	2.196	0.000	142878	28.6507	6.51

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-HEPATOPANCREAS TX
Lab ID: 4046758006
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**682**	mg/kg	119	59.5	5	06/15/11 12:00	07/13/11 11:46	
	TPH (C08-C16)	**354**	mg/kg	119	59.5	5	06/15/11 12:00	07/13/11 11:46	
	TPH (C16-C28)	**410**	mg/kg	119	59.5	5	06/15/11 12:00	07/13/11 11:46	
	TPH (C08-C40)	**1400**	mg/kg	119	59.5	5	06/15/11 12:00	07/13/11 11:46	3q
	TPH - Diesel (C10-C28)	**619**	mg/kg	119	59.5	5	06/15/11 12:00	07/13/11 11:46	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	06/15/11 12:00	07/13/11 11:46	S4

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-HEPATOPANCREAS TX
Lab ID: 4046758006
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**9.9**	%			1		06/16/11 06:37	

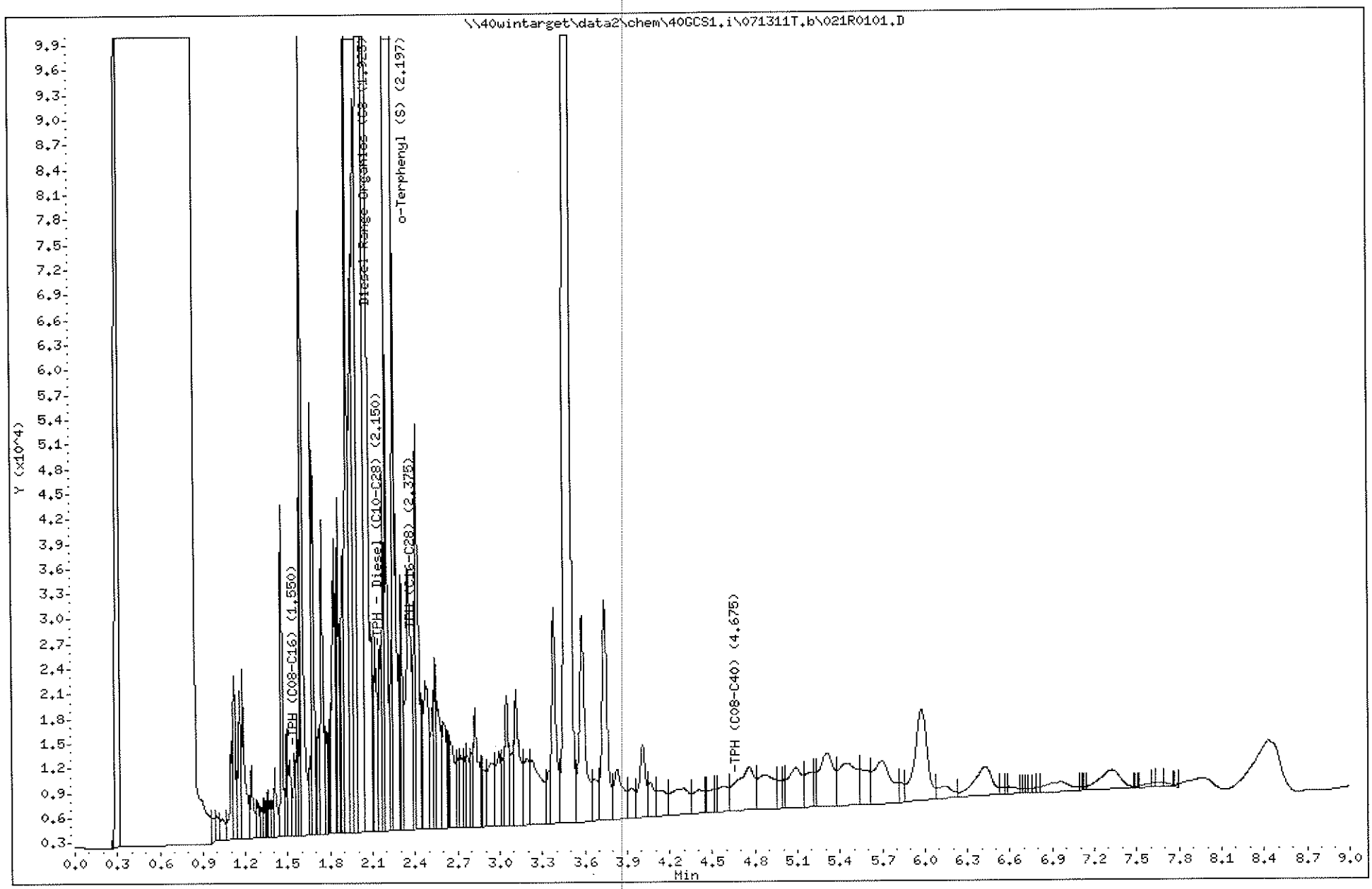
Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\021R0101.D
Date : 13-JUL-2011 11:46
Client ID: EWL-LC-C-HEPATOPANC
Sample Info: 4046758006X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\021R0101.D
Lab Smp Id: 4046758006 Client Smp ID: EWL-LC-C-HEPATOPANC
Inj Date : 13-JUL-2011 11:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758006X5
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 21
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	4.200	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.300			4533381	1178.10	1402.49
S	1 TPH (C08-C16)	1.050-2.049			1377130	297.234	353.84
S	12 TPH (C16-C28)	1.950-2.800			1546339	344.458	410.06
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			2364594	572.821	681.92
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2174212	519.688	618.67
$	15 o-Terphenyl (S)	2.196	2.196	0.000	76741	15.3885	3.66

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-DUP HEPATOPANCREAS TX
Lab ID: 4046758007
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**557**	mg/kg	58.2	29.0	2	06/15/11 12:00	07/13/11 12:10	
	TPH (C08-C16)	**294**	mg/kg	58.2	29.0	2	06/15/11 12:00	07/13/11 12:10	
	TPH (C16-C28)	**299**	mg/kg	58.2	29.0	2	06/15/11 12:00	07/13/11 12:10	
	TPH (C08-C40)	**977**	mg/kg	58.2	29.0	2	06/15/11 12:00	07/13/11 12:10	3q
	TPH - Diesel (C10-C28)	**483**	mg/kg	58.2	29.0	2	06/15/11 12:00	07/13/11 12:10	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	06/15/11 12:00	07/13/11 12:10	S4

Date: 06/04/2012 08:49 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-03-C-DUP HEPATOPANCREAS TX
Lab ID: 4046758007
Collected: 01/03/11 11:33
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	7.2	%			1		06/16/11 06:37	

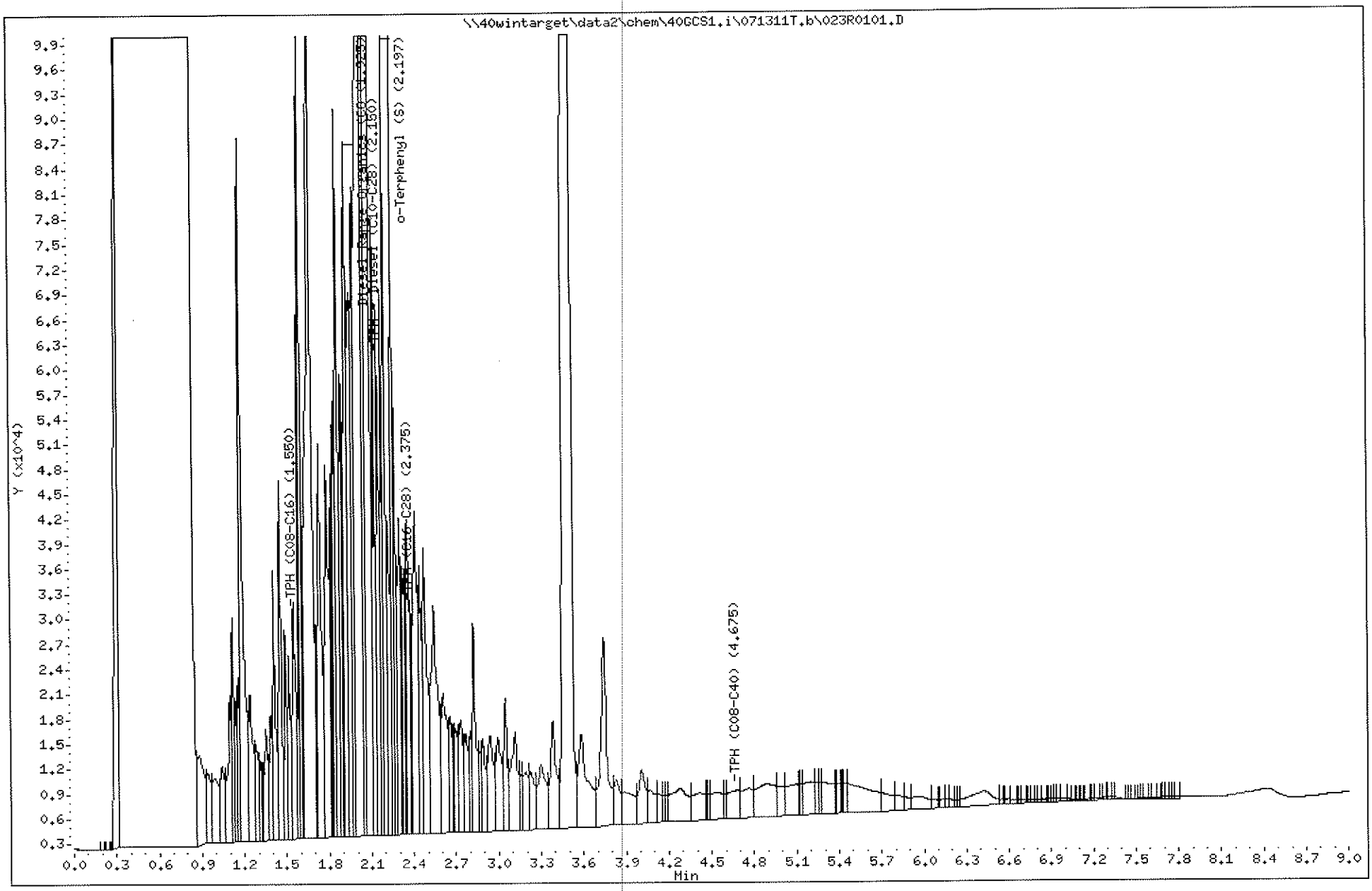
Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\023R0101.D
Date : 13-JUL-2011 12:10
Client ID: EWL-T-03-C-DUP HEPA
Sample Info: 4046758007X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\023R0101.D
Lab Smp Id: 4046758007 Client Smp ID: EWL-T-03-C-DUP HEPA
Inj Date : 13-JUL-2011 12:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758007X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 23
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.440	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			6330564	1679.67	976.55
S	1 TPH (C08-C16)	1.050-2.049			2123021	505.401	293.83
S	12 TPH (C16-C28)	1.950-2.800			2152893	513.738	298.68
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			3745827	958.303	557.15
S	8 TPH - Diesel (C10-C28)	1.500-2.800			3288411	830.645	482.93
$	15 o-Terphenyl (S)	2.196	2.196	0.000	135677	27.2067	7.90

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-DUP HEPATOPANCREAS TX
Lab ID: 4046758008
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**421**	mg/kg	51.8	25.9	2	06/15/11 12:00	07/13/11 12:34	
	TPH (C08-C16)	**136**	mg/kg	51.8	25.9	2	06/15/11 12:00	07/13/11 12:34	
	TPH (C16-C28)	**282**	mg/kg	51.8	25.9	2	06/15/11 12:00	07/13/11 12:34	
	TPH (C08-C40)	**767**	mg/kg	51.8	25.9	2	06/15/11 12:00	07/13/11 12:34	3q
	TPH - Diesel (C10-C28)	**387**	mg/kg	51.8	25.9	2	06/15/11 12:00	07/13/11 12:34	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	06/15/11 12:00	07/13/11 12:34	S4

Date: 06/04/2012 08:49 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-DUP HEPATOPANCREAS TX
Lab ID: 4046758008
Collected: 01/03/11 11:23
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**11.3**	%			1		06/16/11 06:37	

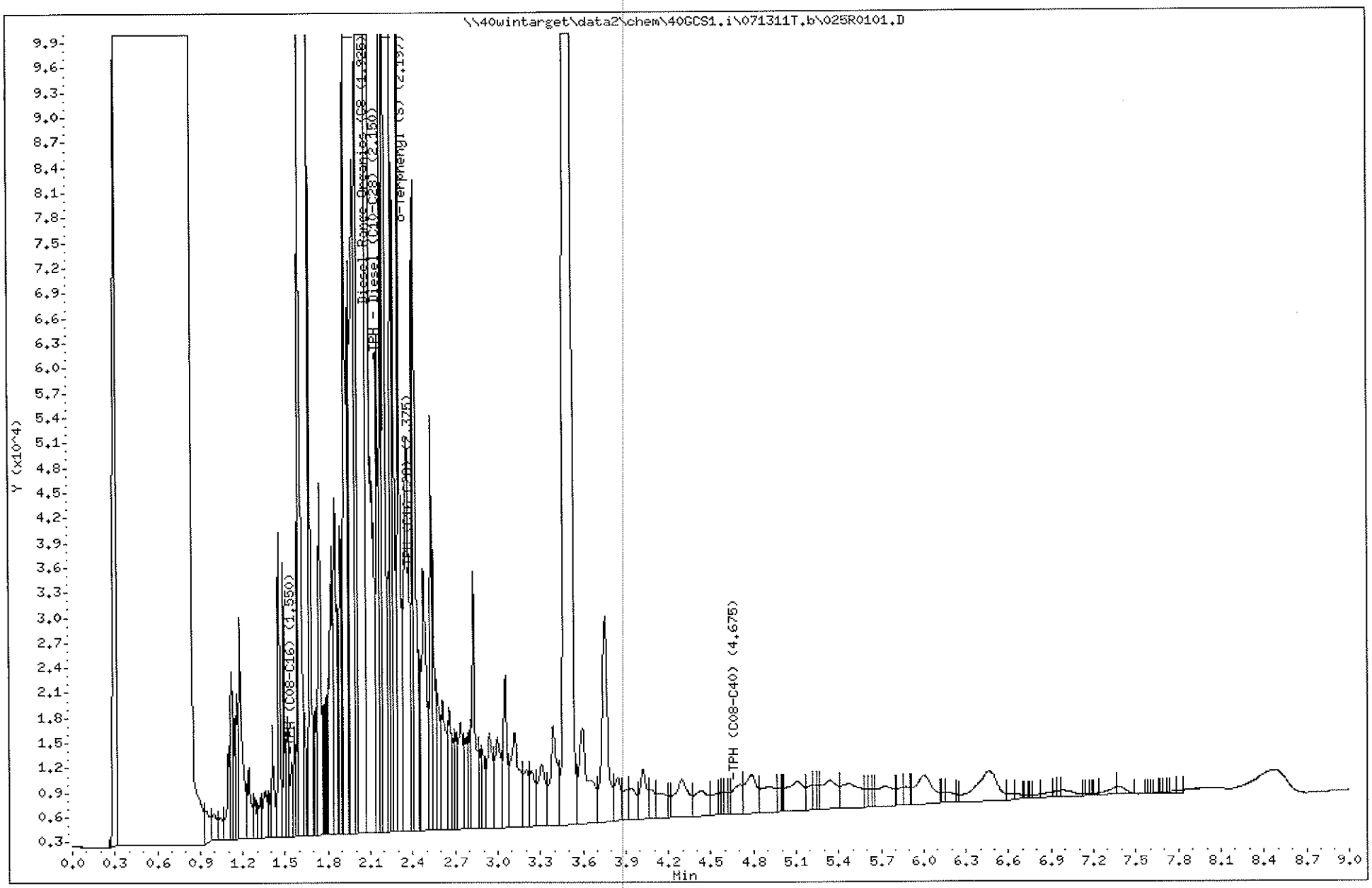
Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\025R0101.D
Date : 13-JUL-2011 12:34
Client ID: EWL-T-10-C-DUP HEPA
Sample Info: 4046758008X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\025R0101.D
Lab Smp Id: 4046758008 Client Smp ID: EWL-T-10-C-DUP HEPA
Inj Date : 13-JUL-2011 12:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758008X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 25
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.860	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-8.300			5614024	1479.69	766.67
S	1 TPH (C08-C16)	1.050-2.049			1254606	263.039	136.28
S	12 TPH (C16-C28)	1.950-2.800			2264305	544.832	282.29
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			3222735	812.316	420.88
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2991226	747.705	387.41
$	15 o-Terphenyl (S)	2.196	2.196	0.000	180441	36.1830	9.37

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www.pacelabs.com

REVISED

JUN 14 2012

J. Duranceau

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-DUP HEPATOPANCREAS TX
Lab ID: 4046758009
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**458**	mg/kg	76.6	38.2	3	06/15/11 12:00	07/13/11 12:58	
	TPH (C08-C16)	**267**	mg/kg	76.6	38.2	3	06/15/11 12:00	07/13/11 12:58	
	TPH (C16-C28)	**292**	mg/kg	76.6	38.2	3	06/15/11 12:00	07/13/11 12:58	
	TPH (C08-C40)	**896**	mg/kg	76.6	38.2	3	06/15/11 12:00	07/13/11 12:58	3q
	TPH - Diesel (C10-C28)	**424**	mg/kg	76.6	38.2	3	06/15/11 12:00	07/13/11 12:58	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	06/15/11 12:00	07/13/11 12:58	S4

Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4046758

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-DUP HEPATOPANCREAS TX
Lab ID: 4046758009
Collected: 01/04/11 15:30
Received: 06/07/11 10:00

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**10.4**	%			1		06/16/11 06:37	

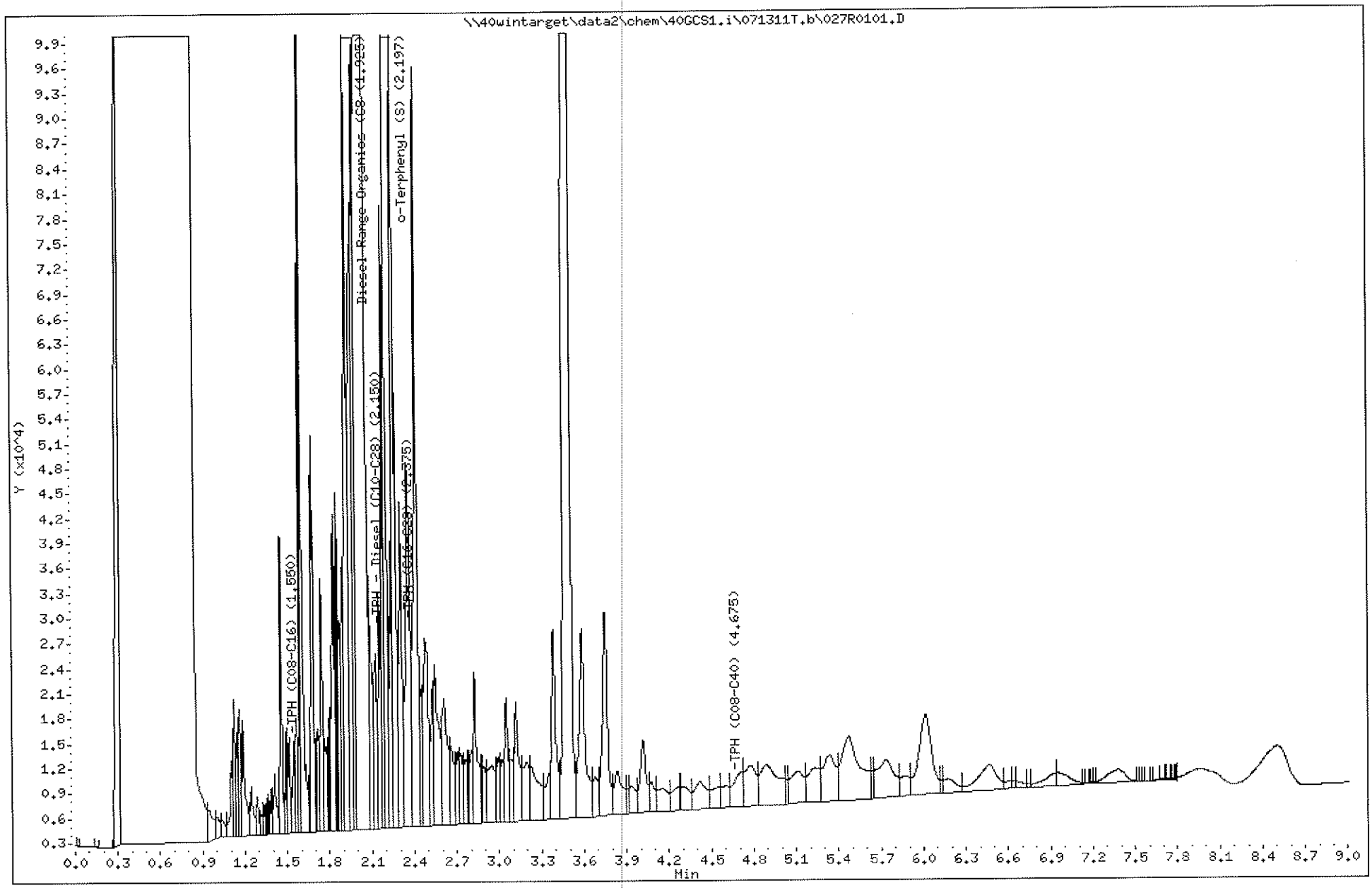
Date: 06/04/2012 08:49 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\027R0101.D
Date : 13-JUL-2011 12:58
Client ID: EWL-LC-C-DUP HEPATO
Sample Info: 4046758009X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\027R0101.D
Lab Smp Id: 4046758009 Client Smp ID: EWL-LC-C-DUP HEPATO
Inj Date : 13-JUL-2011 12:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4046758009X3
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 27
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	3.920	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-8.300			4505575	1170.34	895.66
S	1 TPH (C08-C16)	1.050-2.049			1560988	348.546	266.74
S	12 TPH (C16-C28)	1.950-2.800			1679501	381.621	292.05
S	2 Diesel Range Organics (C8-C28)	1.050-2.800			2457878	598.855	458.30
S	8 TPH - Diesel (C10-C28)	1.500-2.800			2298083	554.259	424.17
$	15 o-Terphenyl (S)	2.196	2.196	0.000	96071	19.2647	4.91

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046758

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 kburns

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	2 Diesel Range Organics (C8-C28	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	3 High End Organics (C8-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	4 TPH (C08-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	5 TPH (C08-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	6 TPH (C10-C12)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	7 TPH (C10-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	8 TPH - Diesel (C10-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	9 TPH (C10-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	10 TPH (C12-C20)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	11 Biota (C12-C36)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	12 TPH (C16-C28)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	13 TPH (C16-C40)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812
S	14 TPH (C20-C34)	415643	587718	1423911	2026692	3937229	7455627	LINR	-87.10359	0.00028		0.99812

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 kburns

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 o-Terphenyl (S)	0.00025	0.00023	0.00019	0.00022	0.00018	0.00014	AVRG		0.00020		20.31495	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

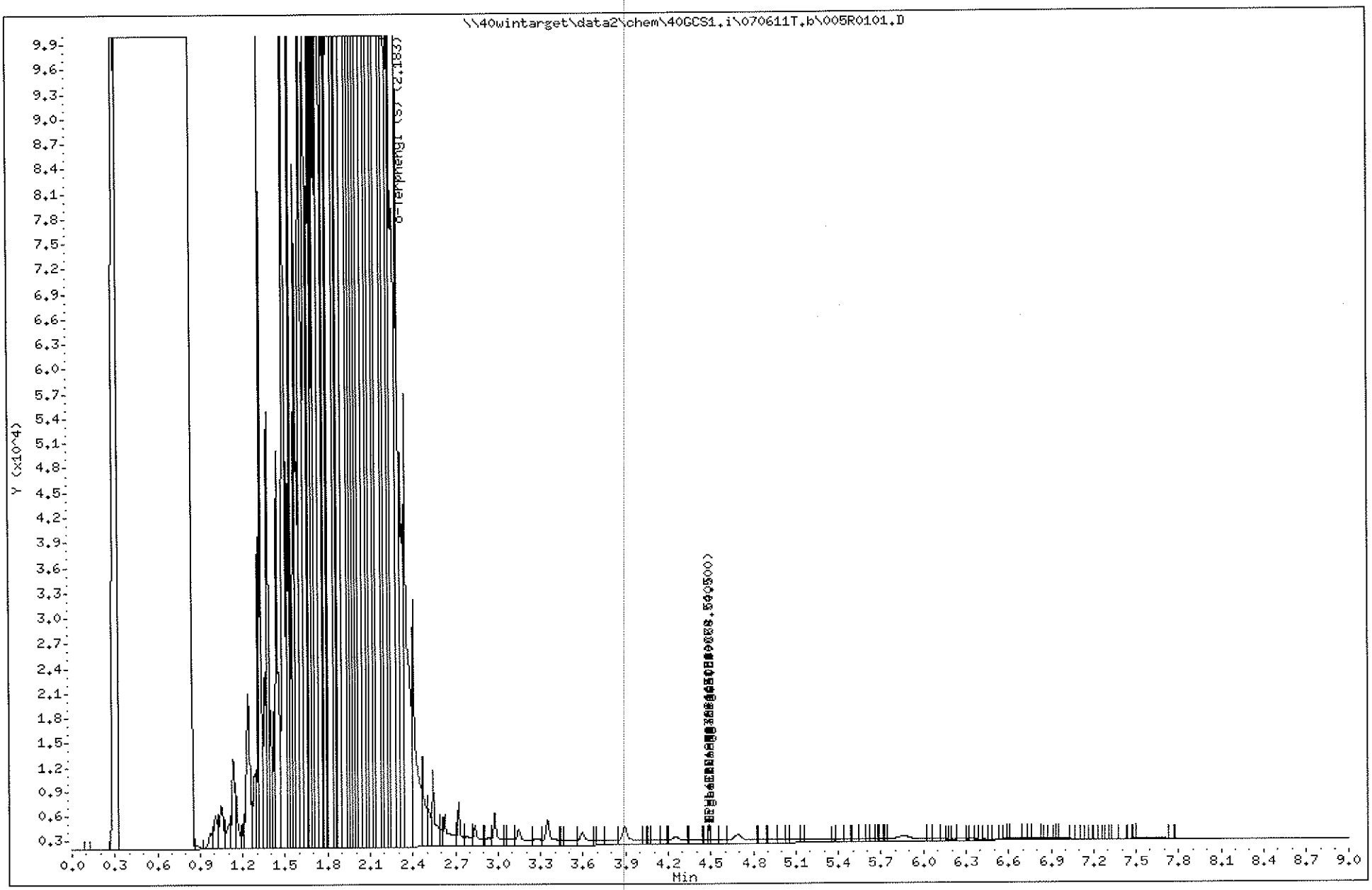
Start Cal Date : 06-JUL-2011 11:06
End Cal Date : 06-JUL-2011 12:05
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Last Edit : 08-May-2012 07:26 kburns

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Date : 06-JUL-2011 11:06
Client ID:
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01
Inj Date : 06-JUL-2011 11:06
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:06 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			7455627	2000.00	1993.65(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	3 High End Organics (C8-C34)	1.050-7.950			7455627	2000.00	1993.65
S	4 TPH (C08-C36)	1.050-7.950			7455627	2000.00	1993.65
S	5 TPH (C08-C40)	1.050-7.950			7455627	2000.00	1993.65
S	6 TPH (C10-C12)	1.050-7.950			7455627	2000.00	1993.65
S	7 TPH (C10-C20)	1.050-7.950			7455627	2000.00	1993.65
S	8 TPH - Diesel (C10-C28)	1.500-2.800			7455627	2000.00	1993.65(T)
S	9 TPH (C10-C40)	1.050-7.950			7455627	2000.00	1993.65
S	10 TPH (C12-C20)	1.050-7.950			7455627	2000.00	1993.65
S	11 Biota (C12-C36)	1.050-7.950			7455627	2000.00	1993.65
S	12 TPH (C16-C28)	1.970-2.800			7455627	2000.00	1993.65(T)
S	13 TPH (C16-C40)	1.050-7.950			7455627	2000.00	1993.65
S	14 TPH (C20-C34)	1.050-7.950			7455627	2000.00	1993.65
$	15 o-Terphenyl (S)	2.183	2.183	0.000	359479	50.0000	72.08

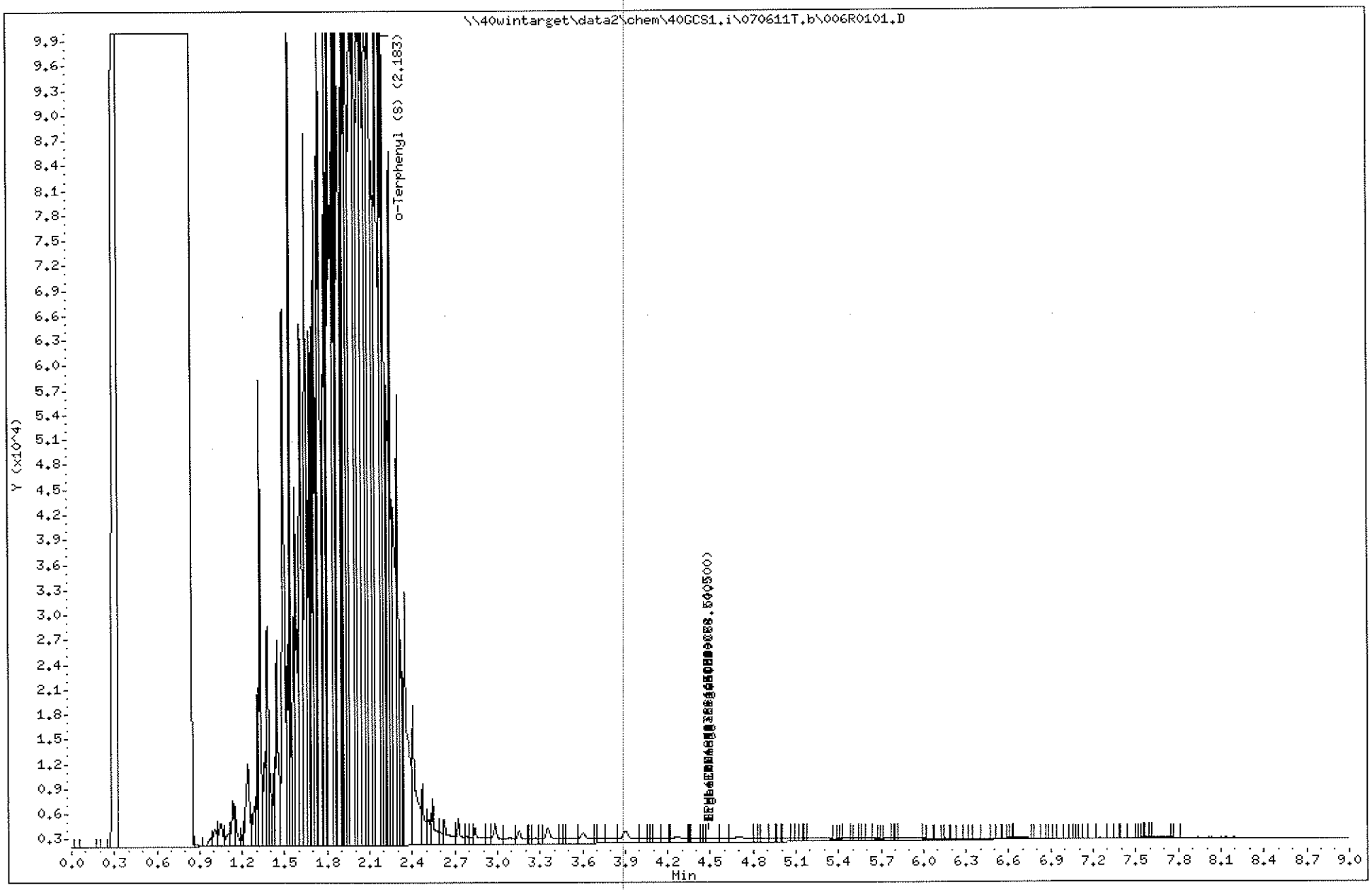
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Date : 06-JUL-2011 11:16
Client ID:
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02
Inj Date : 06-JUL-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:16 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			3937229	1000.00	1011.72(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S	3 High End Organics (C8-C34)	1.050-7.950			3937229	1000.00	1011.72
S	4 TPH (C08-C36)	1.050-7.950			3937229	1000.00	1011.72
S	5 TPH (C08-C40)	1.050-7.950			3937229	1000.00	1011.72
S	6 TPH (C10-C12)	1.050-7.950			3937229	1000.00	1011.72
S	7 TPH (C10-C20)	1.050-7.950			3937229	1000.00	1011.72
S	8 TPH - Diesel (C10-C28)	1.500-2.800			3937229	1000.00	1011.72(T)
S	9 TPH (C10-C40)	1.050-7.950			3937229	1000.00	1011.72
S	10 TPH (C12-C20)	1.050-7.950			3937229	1000.00	1011.72
S	11 Biota (C12-C36)	1.050-7.950			3937229	1000.00	1011.72
S	12 TPH (C16-C28)	1.970-2.800			3937229	1000.00	1011.72(T)
S	13 TPH (C16-C40)	1.050-7.950			3937229	1000.00	1011.72
S	14 TPH (C20-C34)	1.050-7.950			3937229	1000.00	1011.72
$	15 o-Terphenyl (S)	2.183	2.183	0.000	281119	50.0000	56.37

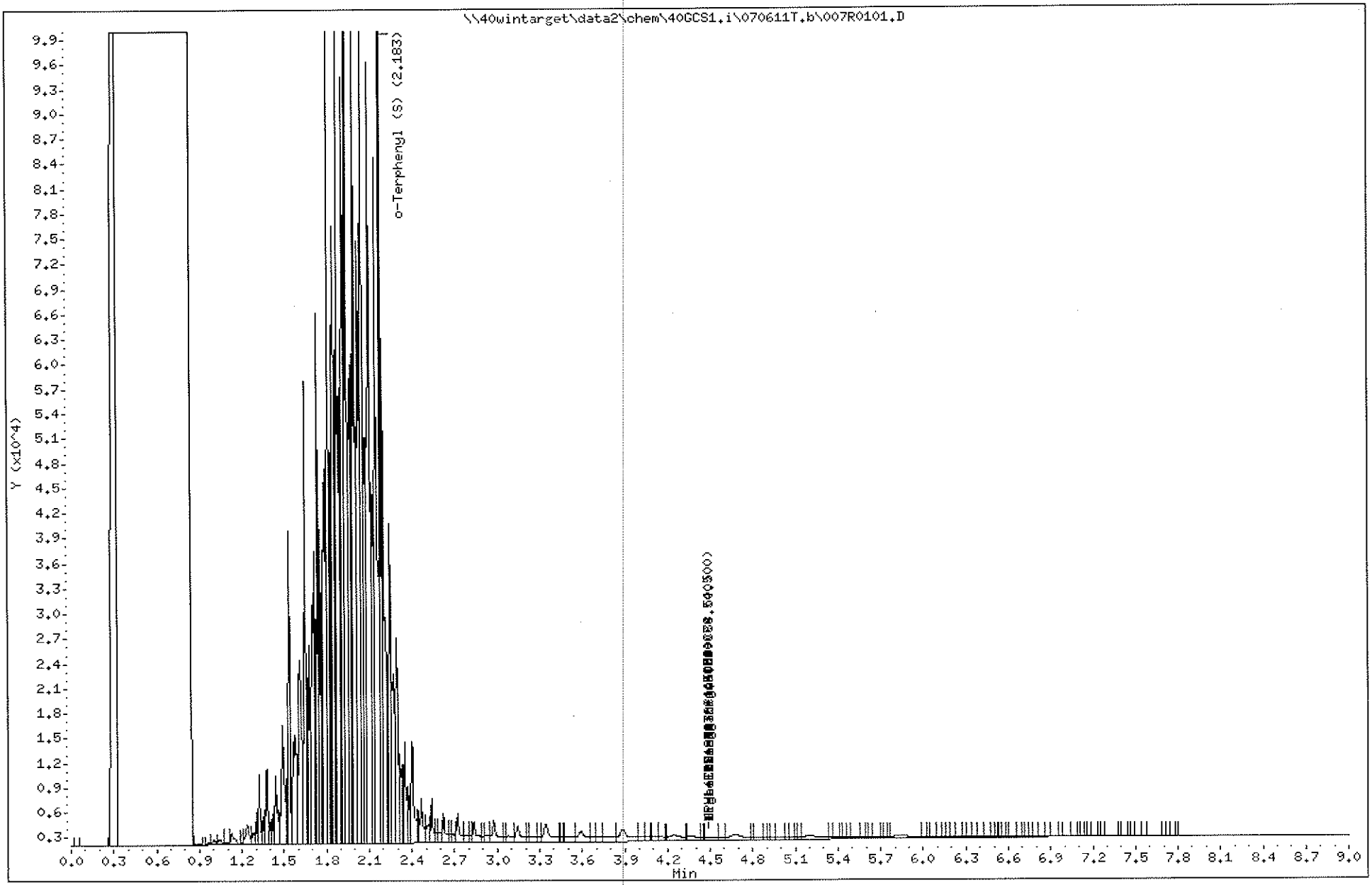
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Date : 06-JUL-2011 11:28
Client ID:
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\007R0101.D
Lab Smp Id: 500 2860-31-14
Inj Date : 06-JUL-2011 11:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:28 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-2.020			2026692	500.000	478.51(T)
S 2	Diesel Range Organics (C8-C28)	1.500-2.800			2026692	500.000	478.51(T)
S 3	High End Organics (C8-C34)	1.050-7.950			2026692	500.000	478.51
S 4	TPH (C08-C36)	1.050-7.950			2026692	500.000	478.51
S 5	TPH (C08-C40)	1.050-7.950			2026692	500.000	478.51
S 6	TPH (C10-C12)	1.050-7.950			2026692	500.000	478.51
S 7	TPH (C10-C20)	1.050-7.950			2026692	500.000	478.51
S 8	TPH - Diesel (C10-C28)	1.500-2.800			2026692	500.000	478.51(T)
S 9	TPH (C10-C40)	1.050-7.950			2026692	500.000	478.51
S 10	TPH (C12-C20)	1.050-7.950			2026692	500.000	478.51
S 11	Biota (C12-C36)	1.050-7.950			2026692	500.000	478.51
S 12	TPH (C16-C28)	1.970-2.800			2026692	500.000	478.51(T)
S 13	TPH (C16-C40)	1.050-7.950			2026692	500.000	478.51
S 14	TPH (C20-C34)	1.050-7.950			2026692	500.000	478.51
$ 15	o-Terphenyl (S)	2.183	2.183	0.000	228999	50.0000	45.92

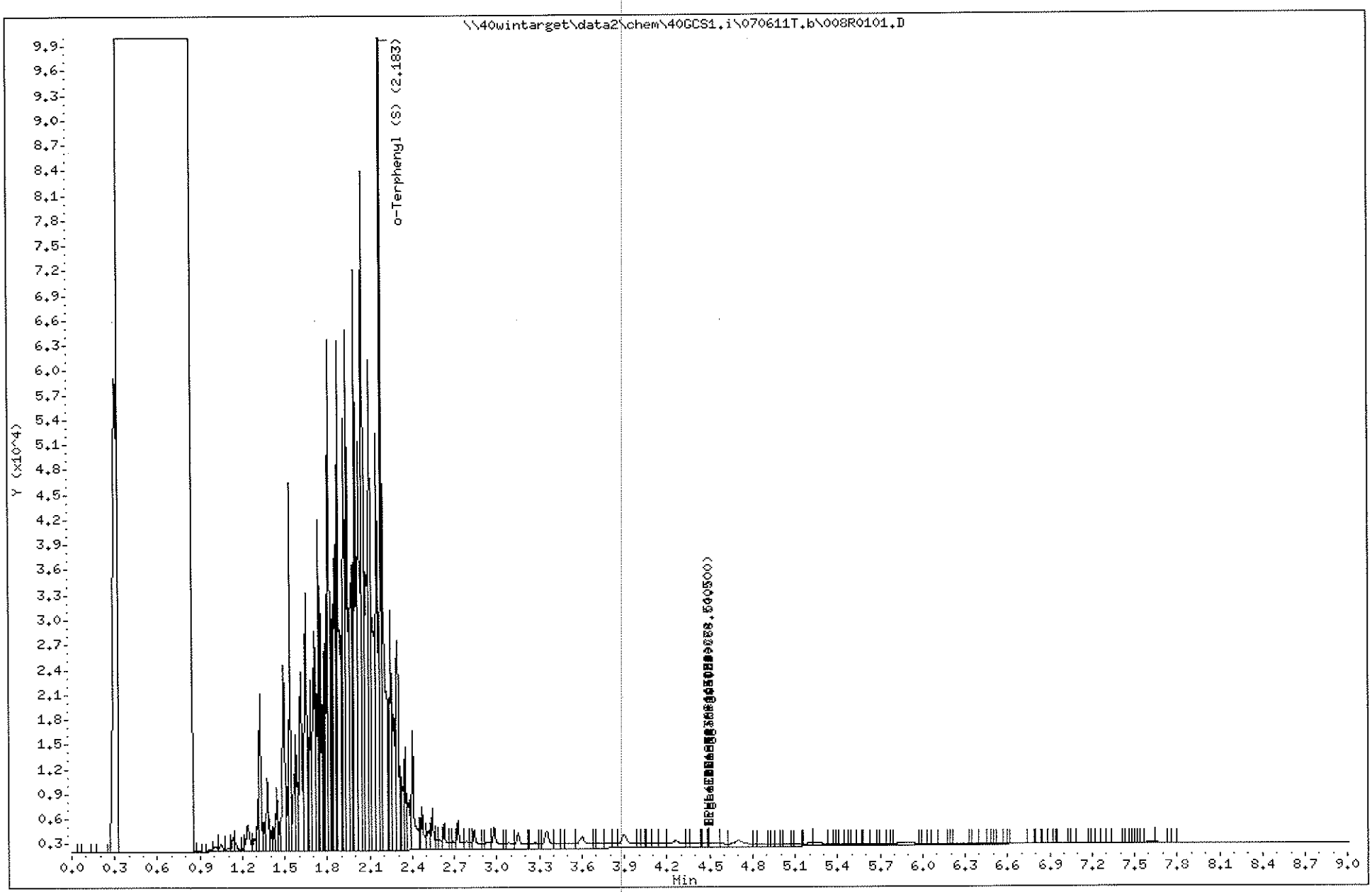
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Date : 06-JUL-2011 11:41
Client ID:
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\008R0101.D
Lab Smp Id: 250 2860-30-13
Inj Date : 06-JUL-2011 11:41
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:41 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			1423911	250.000	310.28(T)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	3 High End Organics (C8-C34)	1.050-7.950			1423911	250.000	310.28
S	4 TPH (C08-C36)	1.050-7.950			1423911	250.000	310.28
S	5 TPH (C08-C40)	1.050-7.950			1423911	250.000	310.28
S	6 TPH (C10-C12)	1.050-7.950			1423911	250.000	310.28
S	7 TPH (C10-C20)	1.050-7.950			1423911	250.000	310.28
S	8 TPH - Diesel (C10-C28)	1.500-2.800			1423911	250.000	310.28(T)
S	9 TPH (C10-C40)	1.050-7.950			1423911	250.000	310.28
S	10 TPH (C12-C20)	1.050-7.950			1423911	250.000	310.28
S	11 Biota (C12-C36)	1.050-7.950			1423911	250.000	310.28
S	12 TPH (C16-C28)	1.970-2.800			1423911	250.000	310.28(T)
S	13 TPH (C16-C40)	1.050-7.950			1423911	250.000	310.28
S	14 TPH (C20-C34)	1.050-7.950			1423911	250.000	310.28
$	15 o-Terphenyl (S)	2.183	2.183	0.000	269129	50.0000	53.96

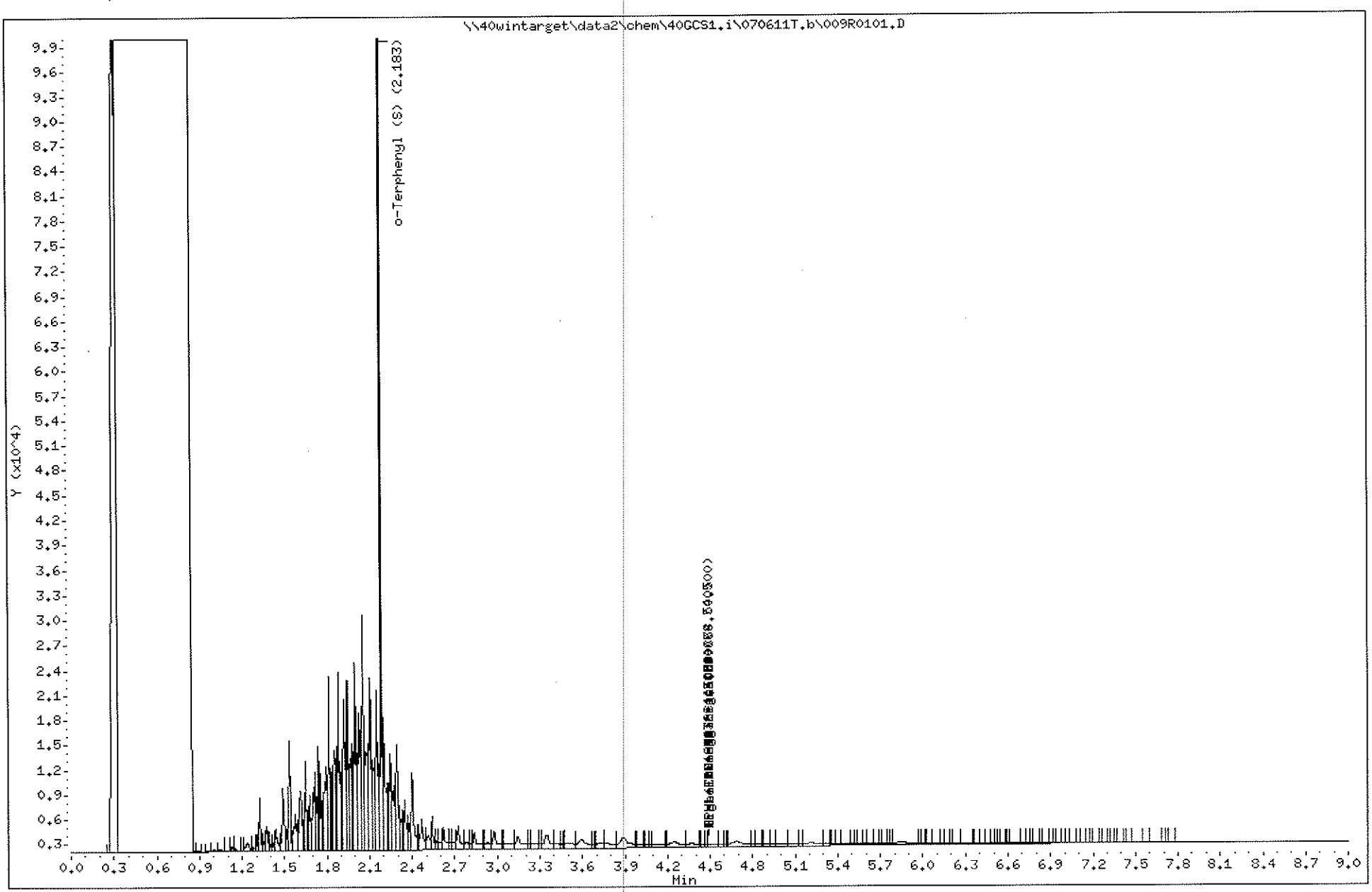
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Date : 06-JUL-2011 11:53
Client ID:
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\009R0101.D
Lab Smp Id: 100 2860-30-14
Inj Date : 06-JUL-2011 11:53
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 11:53 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-2.020			587718	100.000	76.92(Ta)
S 2	Diesel Range Organics (C8-C28)	1.500-2.800			587718	100.000	76.92(Ta)
S 3	High End Organics (C8-C34)	1.050-7.950			587718	100.000	76.92(a)
S 4	TPH (C08-C36)	1.050-7.950			587718	100.000	76.92(a)
S 5	TPH (C08-C40)	1.050-7.950			587718	100.000	76.92(a)
S 6	TPH (C10-C12)	1.050-7.950			587718	100.000	76.92(a)
S 7	TPH (C10-C20)	1.050-7.950			587718	100.000	76.92(a)
S 8	TPH - Diesel (C10-C28)	1.500-2.800			587718	100.000	76.92(T)
S 9	TPH (C10-C40)	1.050-7.950			587718	100.000	76.92(a)
S 10	TPH (C12-C20)	1.050-7.950			587718	100.000	76.92(a)
S 11	Biota (C12-C36)	1.050-7.950			587718	100.000	76.92(a)
S 12	TPH (C16-C28)	1.970-2.800			587718	100.000	76.92(Ta)
S 13	TPH (C16-C40)	1.050-7.950			587718	100.000	76.92(a)
S 14	TPH (C20-C34)	1.050-7.950			587718	100.000	76.92(a)
$ 15	o-Terphenyl (S)	2.183	2.183	0.000	216228	50.0000	43.35

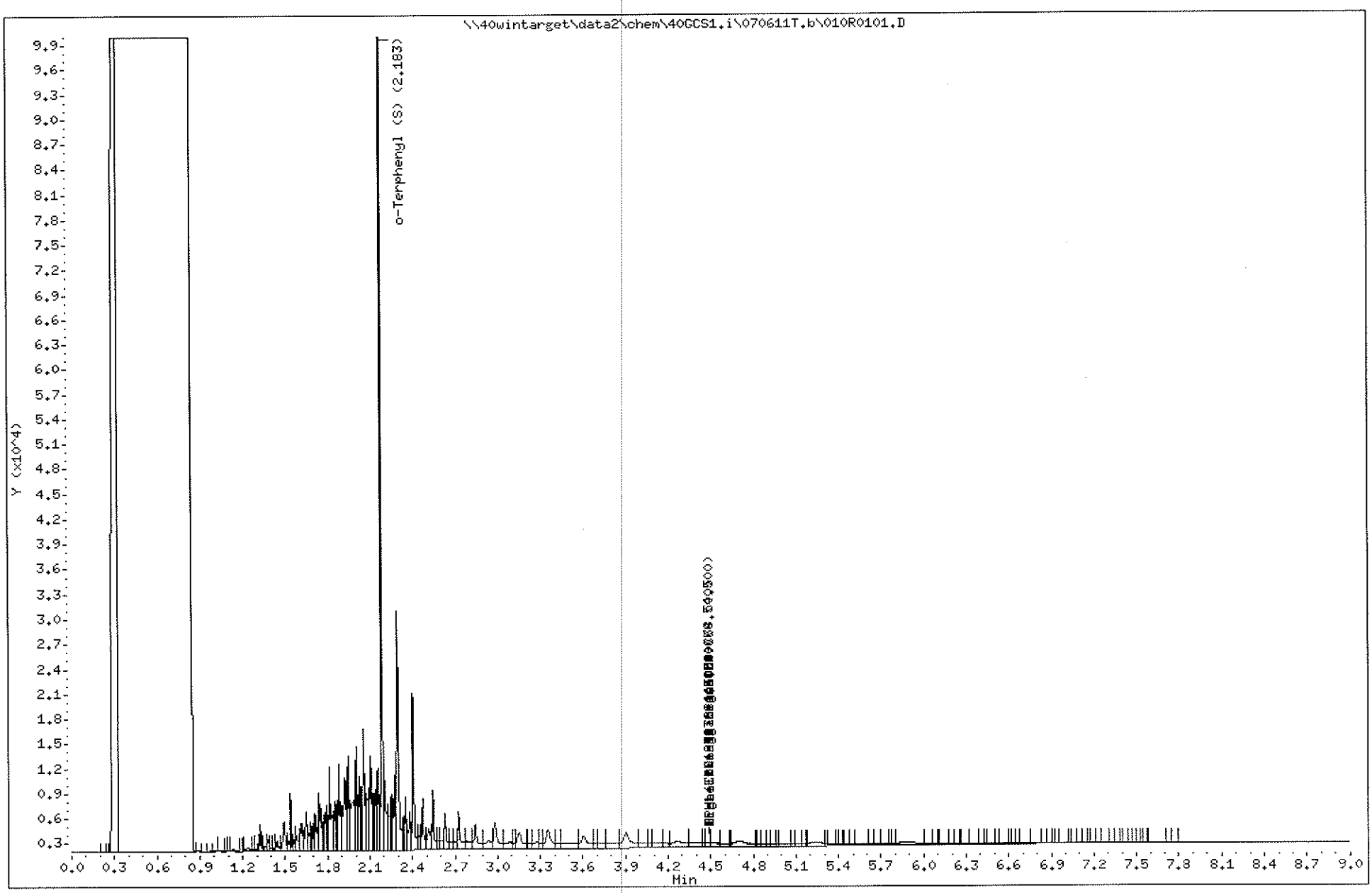
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Date : 06-JUL-2011 12:05
Client ID:
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\010R0101.D
Lab Smp Id: 50 2860-30-15
Inj Date : 06-JUL-2011 12:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-2.020			415643	50.0000	28.89(Ta)
S	2 Diesel Range Organics (C8-C28)	1.500-2.800			415643	50.0000	28.89(Ta)
S	3 High End Organics (C8-C34)	1.050-7.950			415643	50.0000	28.89(a)
S	4 TPH (C08-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	5 TPH (C08-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	6 TPH (C10-C12)	1.050-7.950			415643	50.0000	28.89(a)
S	7 TPH (C10-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.800			415643	50.0000	28.89(T)
S	9 TPH (C10-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	10 TPH (C12-C20)	1.050-7.950			415643	50.0000	28.89(a)
S	11 Biota (C12-C36)	1.050-7.950			415643	50.0000	28.89(a)
S	12 TPH (C16-C28)	1.970-2.800			415643	50.0000	28.89(Ta)
S	13 TPH (C16-C40)	1.050-7.950			415643	50.0000	28.89(a)
S	14 TPH (C20-C34)	1.050-7.950			415643	50.0000	28.89(a)
$	15 o-Terphenyl (S)	2.183	2.183	0.000	199331	50.0000	39.97

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

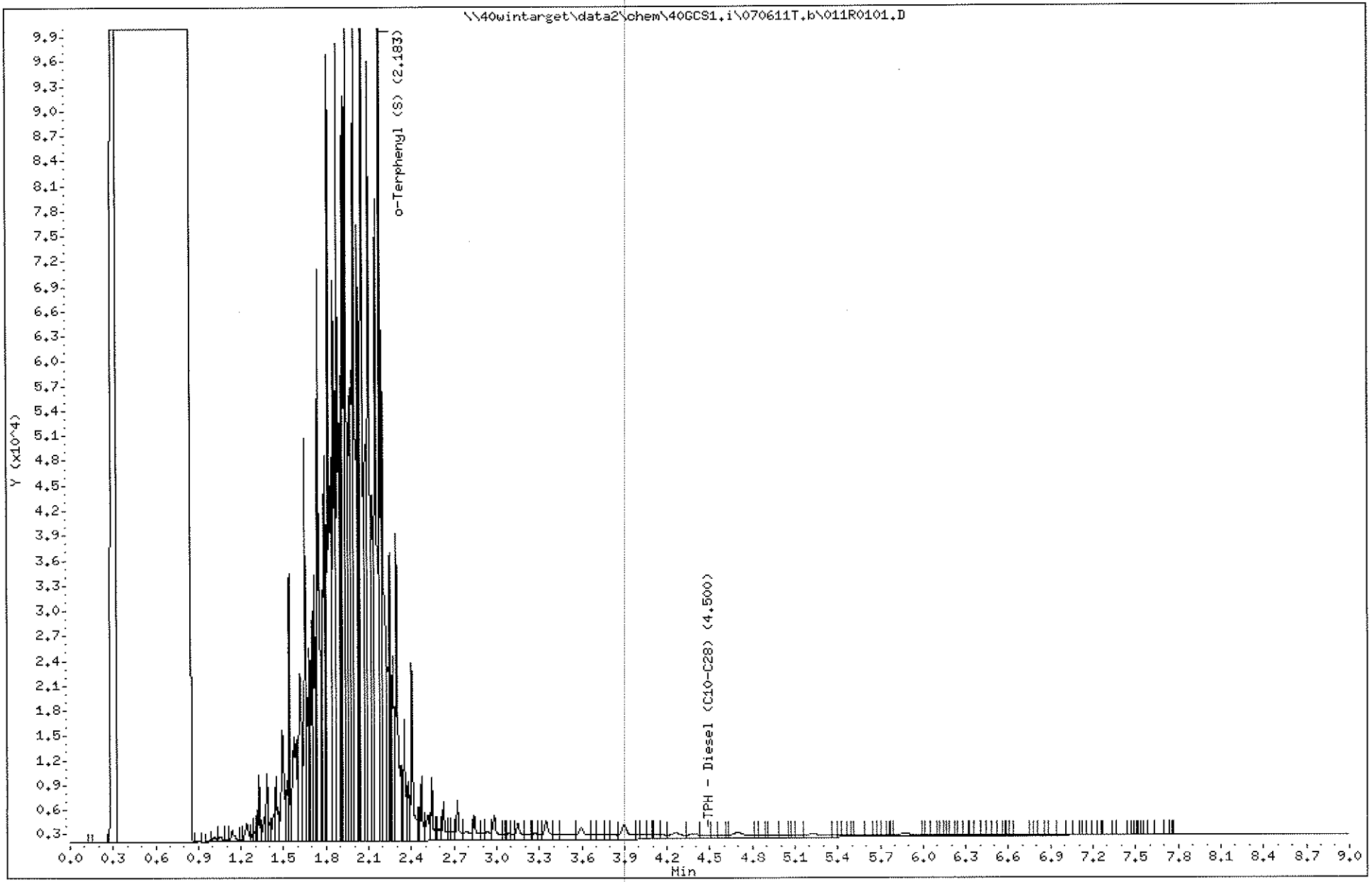
Instrument ID: 40GCS1.i Injection Date: 06-JUL-2011 12:17
Lab File ID: 011R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: WATER Init. Cal. Times: 11:06 12:05
Lab Sample ID: IC500 2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	467	0.00025	0.000	-6.54470	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	11.33103	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Date : 06-JUL-2011 12:17
Client ID:
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\070611T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16
Inj Date : 06-JUL-2011 12:17
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6002
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\070611T.b\TPH.m
Meth Date : 08-May-2012 07:26 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1986415	500.000	467.27(T)
$ 15 o-Terphenyl (S)	2.183	2.183	0.000	223967	50.0000	44.91

QC Flag Legend

T - Target compound detected outside RT window.

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i
Lab File ID: 004R0101.D
Analysis Type: SOIL
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m

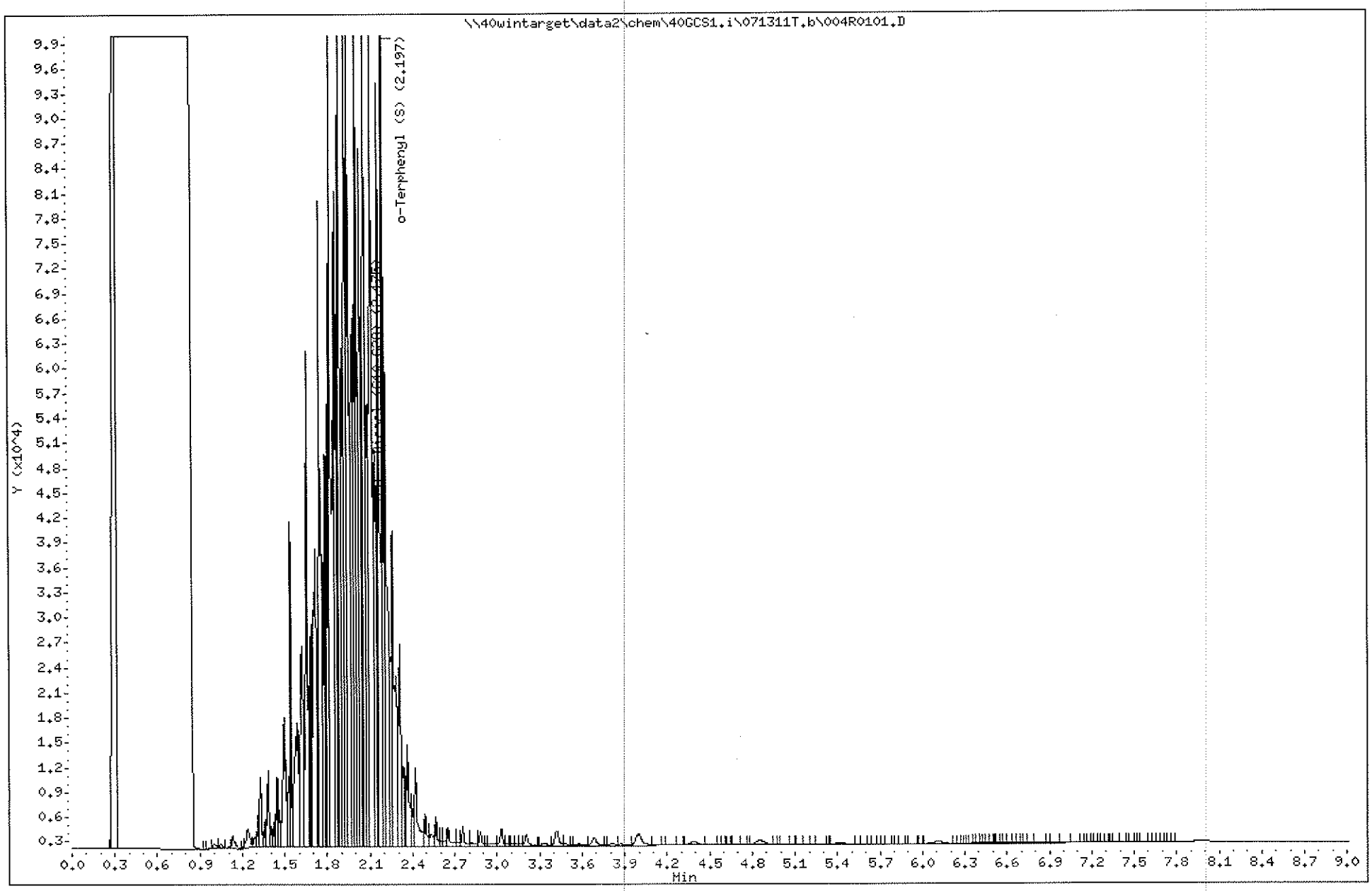
Injection Date: 13-JUL-2011 08:02
Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Init. Cal. Times: 11:06 12:05

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	476	0.00025	0.000	-4.78166	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	-2.67231	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\004R0101.D
Date : 13-JUL-2011 08:02
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\004R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 13-JUL-2011 08:02
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6112
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			2018001	500.000	476.09
$ 15 o-Terphenyl (S)	2.196	2.196	0.000	256191	50.0000	51.37

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

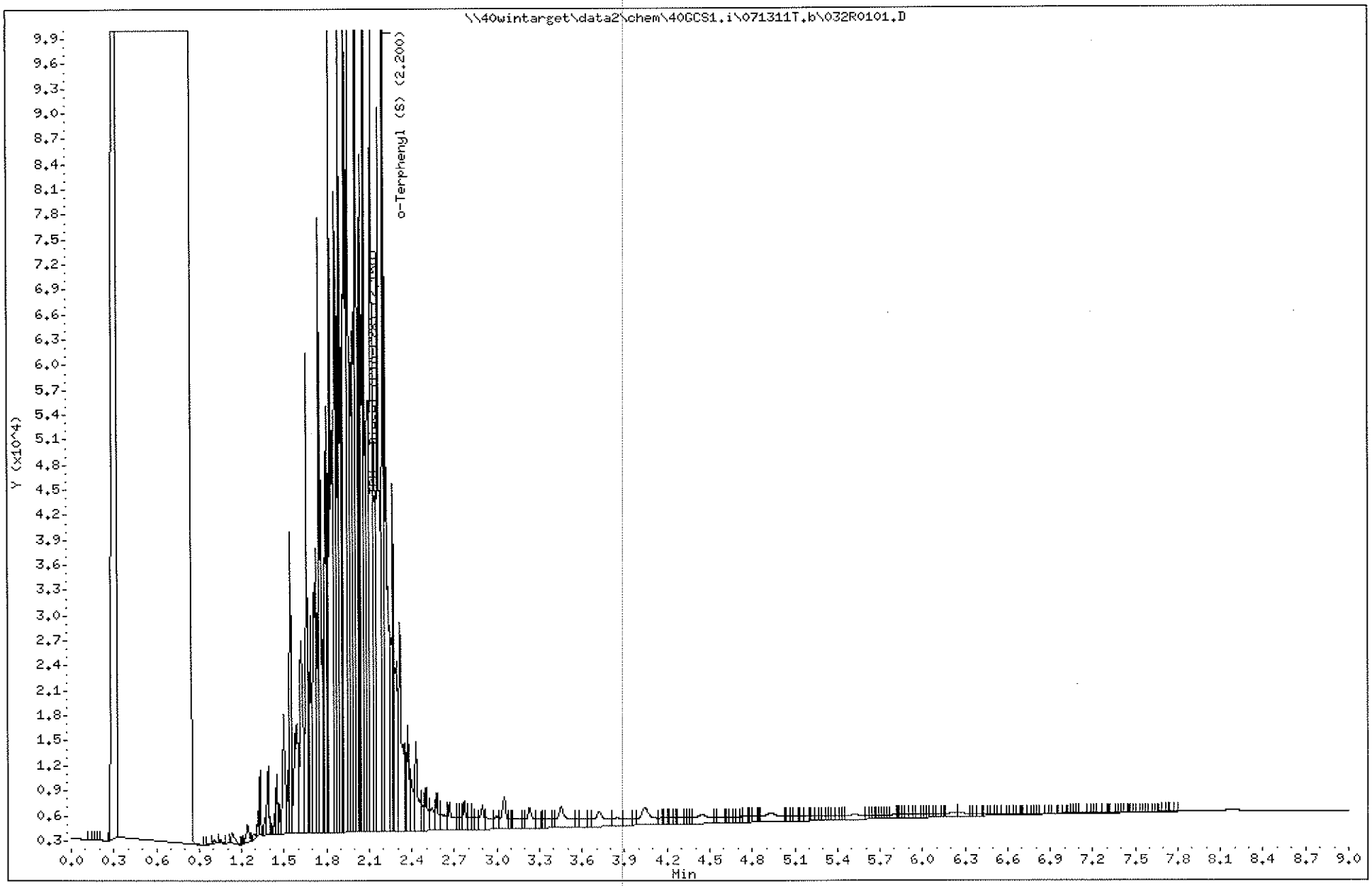
Instrument ID: 40GCS1.i Injection Date: 13-JUL-2011 13:58
Lab File ID: 032R0101.D Init. Cal. Date(s): 06-JUL-2011 06-JUL-2011
Analysis Type: SOIL Init. Cal. Times: 11:06 12:05
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m

			CCAL	MIN		MAX	
COMPOUND	RRF / AMOUNT	RF500	RRF500	RRF	%D / %DRIFT	%D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	469	0.00025	0.000	-6.10156	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00020	0.00020	0.000	-0.94045	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\032R0101.D
Date : 13-JUL-2011 13:58
Client ID:
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\032R0101.D
Lab Smp Id: CC500 2860-31-14
Inj Date : 13-JUL-2011 13:58
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 09-May-2012 10:45 40GCS1.i Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 32 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1994354	500.000	469.49
$ 15 o-Terphenyl (S)	2.200	2.196	0.004	251712	50.0000	50.47

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE
SDG: 4046758

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046758

QB Batch: OEXT/11371 **Prepared:** 06/15/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4046758001, 4046758002, 4046758003, 4046758004, 4046758005, 4046758006, 4046758007, 4046758008, 4046758009

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<6.7	mg/kg	13.3	6.7	07/13/11	
	TPH (C08-C16)	<6.7	mg/kg	13.3	6.7	07/13/11	
	TPH (C08-C40)	139	mg/kg	13.3	6.7	07/13/11	3q
	TPH (C16-C28)	<6.7	mg/kg	13.3	6.7	07/13/11	
	TPH - Diesel (C10-C28)	<6.7	mg/kg	13.3	6.7	07/13/11	

Type	Sample	Matrix
BLANK	463499	Tissue

REPORT OF LABORATORY ANALYSIS

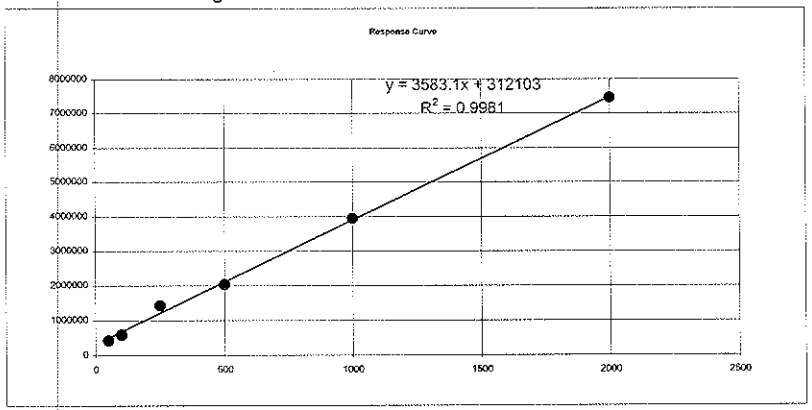
SampleID: 463499 File: 28R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.957	84408	
2.070	53880	
2.130	47006	
2.833	115664	

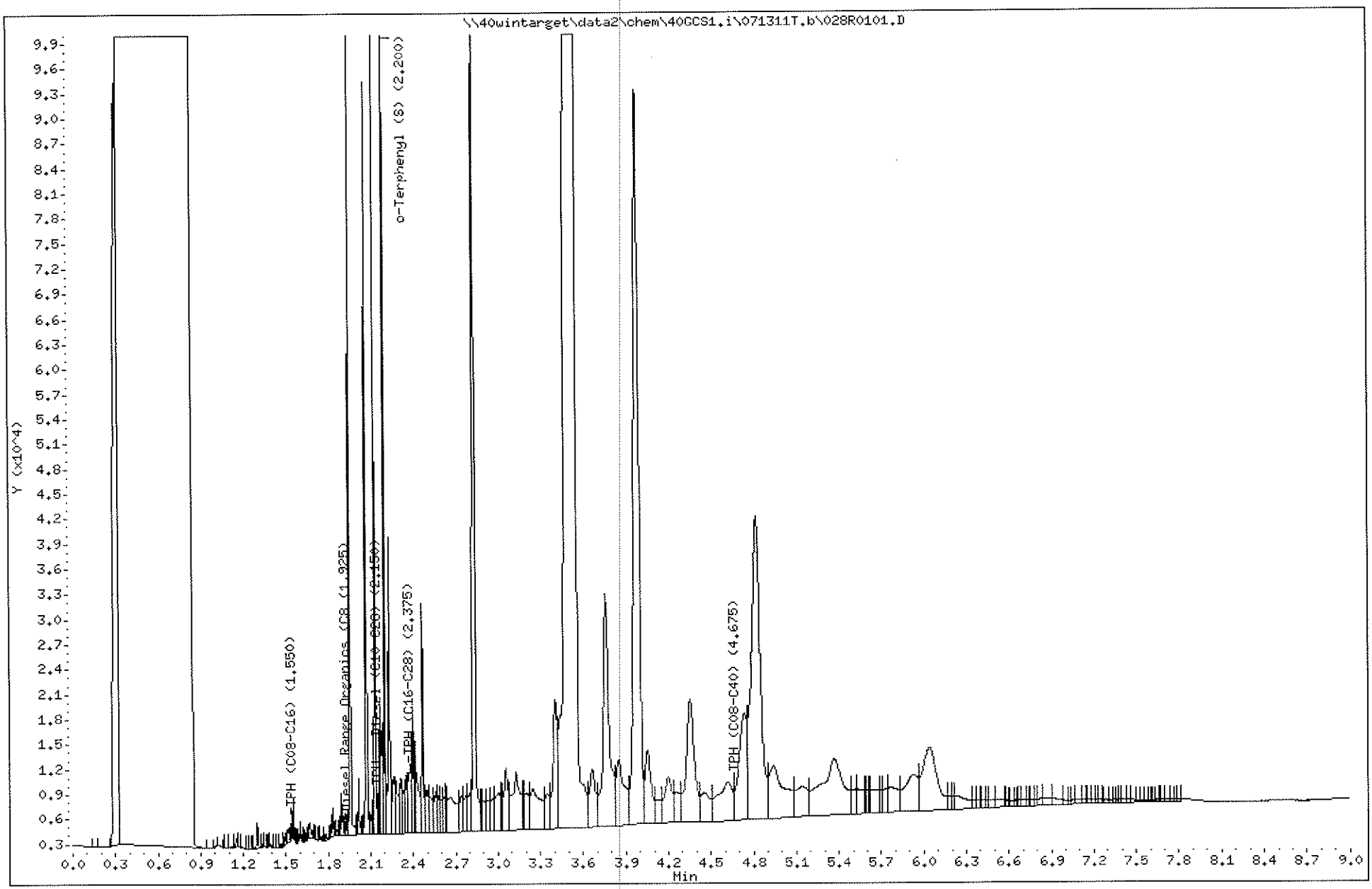
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	112125	84408	-79.3682
Diesel Range Organics (	438894	185294	-16.3274
TPH - Diesel (C10-C28)	434092	185294	-17.6676
TPH (C16-C28)	416297	185294	-22.6339
TPH (C08-C40)	4361873	300958	1046.24

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\028R0101.D
Date : 13-JUL-2011 13:10
Client ID: MB
Sample Info: 463499X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\028R0101.D
Lab Smp Id: 463499 Client Smp ID: MB
Inj Date : 13-JUL-2011 13:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463499X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 14-May-2012 09:21 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 28 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.300			4361872	1130.23	150.69
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.950-2.800			416296	29.0787	3.87(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.800			438894	35.3855	4.71(a)
S 8 TPH - Diesel (C10-C28)	1.500-2.800			434091	34.0450	4.53
$ 15 o-Terphenyl (S)	2.200	2.196	0.004	84254	16.8951	1.12

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\028R0101.D
Lab Smp Id: 463499 Client Smp ID: MB
Inj Date : 13-JUL-2011 13:10
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463499X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 14-May-2012 09:21 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 28 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.140	17	13	0.769	0.00		
0.317	172402	91341	0.530	0.03		
0.373	560032964	86210751	0.154	98.97		
0.957	69	60	0.867	0.00		
1.013	134	119	0.887	0.00		
1.033	214	192	0.899	0.00		
1.550	112125	240063	2.141	0.01	S	1 TPH (C08-C16)
1.925	438894	650277	1.482	0.07	S	2 Diesel Range Organi
1.073	29	29	0.986			
1.120	92	80	0.870			
1.150	618	1024	1.656			
1.170	74	152	2.065			
1.187	165	110	0.665			
1.250	24	29	1.203			
1.297	1810	3019	1.668			
1.330	261	468	1.794			
1.347	120	183	1.531			
1.373	66	183	2.773			
1.393	280	384	1.370			
1.413	75	102	1.353			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.443	27	63	2.299			
1.463	310	414	1.336			
1.493	851	1510	1.775			
2.150	434092	642527	1.480	0.07	S	8 TPH - Diesel (C10-C
1.520	1178	1648	1.399			
1.537	753	1915	2.542			
1.550	2321	4982	2.147			
1.567	112	254	2.268			
1.593	209	521	2.492			
1.603	599	970	1.618			
1.633	828	1386	1.674			
1.657	249	679	2.724			
1.667	1455	1818	1.249			
1.700	313	654	2.092			
1.717	47	117	2.468			
1.733	17	73	4.371			
1.750	297	504	1.699			
1.780	679	760	1.120			
1.810	203	448	2.203			
1.830	2302	3475	1.510			
1.847	40	124	3.085			
1.860	459	662	1.443			
1.880	365	838	2.298			
1.893	3452	5129	1.486			
1.933	1917	3121	1.628			
1.957	84408	193239	2.289			
2.000	588	1198	2.038			
2.013	4059	6830	1.683			
2.043	473	968	2.047			
2.070	53880	90243	1.675			
2.097	1783	2300	1.290			
2.113	2527	4097	1.621			
2.130	47006	111842	2.379			
2.153	3384	5943	1.756			
2.163	8902	16236	1.824			
2.177	11930	11880	0.996			
2.227	28352	21917	0.773			
2.263	9050	6903	0.763			
2.280	7360	6265	0.851			
2.310	8706	6583	0.756			
2.330	5981	5210	0.871			
2.350	6135	6966	1.135			
2.380	11049	8168	0.739			
2.393	10115	15150	1.498			
2.410	8795	12141	1.380			
2.427	10300	7265	0.705			
2.467	19485	27439	1.408			
2.500	9886	5131	0.519			
2.523	6363	4227	0.664			
2.560	6811	4854	0.713			
2.577	4110	4307	1.048			
2.597	3848	3881	1.009			
2.620	4815	4186	0.869			
2.630	4116	4316	1.049			
2.667	17914	4241	0.237			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.743	7662	4291	0.560			
2.773	6503	4232	0.651			
2.200	84255	216659	2.571	0.01	$	15 o-Terphenyl (S)
2.375	416297	612449	1.471	0.07	S	12 TPH (C16-C28)
4.675	4361873	2025656	0.464	0.77	S	5 TPH (C08-C40)
2.807	8794	4754	0.541			
2.833	115664	118684	1.026			
2.880	2025	3377	1.667			
2.897	6347	3637	0.573			
2.927	5698	3620	0.635			
2.967	6625	3804	0.574			
3.003	11708	4588	0.392			
3.023	4102	4165	1.015			
3.057	15081	7483	0.496			
3.130	26254	6957	0.265			
3.183	4230	4236	1.001			
3.203	9366	4372	0.467			
3.247	24174	4946	0.205			
3.347	10990	4165	0.379			
3.407	35781	15479	0.433			
3.547	2533530	866533	0.342			
3.667	21628	6997	0.324			
3.763	83680	27781	0.332			
3.853	30706	7899	0.257			
3.983	224007	88069	0.393			
4.053	26896	8882	0.330			
4.127	7802	2828	0.362			
4.203	21203	5527	0.261			
4.257	10612	3660	0.345			
4.353	60958	14792	0.243			
4.450	15587	3516	0.226			
4.617	33072	4648	0.141			
4.737	49207	12851	0.261			
4.823	162218	36102	0.223			
4.940	48863	6304	0.129			
5.140	22209	3656	0.165			
5.363	73102	6714	0.092			
5.517	7587	2965	0.391			
5.530	10307	2957	0.287			
5.590	1657	2768	1.670			
5.603	2214	2776	1.254			
5.617	2222	2788	1.255			
5.640	11828	2848	0.241			
5.700	2218	2775	1.251			
5.740	6797	2909	0.428			
5.767	15456	3004	0.194			
5.923	28882	4483	0.155			
6.040	55669	7668	0.138			
6.187	2203	1598	0.725			
6.210	2604	1655	0.636			
6.223	9555	1644	0.172			
6.343	1686	1066	0.632			
6.380	1875	1048	0.559			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.403	828	1036	1.252		
6.413	1444	1046	0.724		
6.440	1209	1016	0.840		
6.467	2935	1000	0.341		
6.510	3439	966	0.281		
6.570	494	826	1.672		
6.580	969	839	0.865		
6.600	614	774	1.261		
6.613	1361	765	0.562		
6.647	752	758	1.009		
6.660	450	757	1.683		
6.677	908	770	0.848		
6.717	1845	784	0.425		
6.733	616	775	1.259		
6.747	614	769	1.253		
6.767	1223	776	0.635		
6.783	916	774	0.845		
6.830	1758	842	0.479		
6.867	3502	894	0.255		
6.907	3268	832	0.255		
6.983	1354	566	0.418		
7.030	491	496	1.010		
7.067	998	510	0.511		
7.083	1323	530	0.401		
7.123	790	502	0.635		
7.150	369	463	1.255		
7.160	827	468	0.566		
7.193	623	452	0.725		
7.213	599	434	0.724		
7.237	660	422	0.640		
7.260	313	401	1.282		
7.280	776	396	0.511		
7.320	663	382	0.576		
7.343	438	375	0.856		
7.367	356	360	1.011		
7.383	434	367	0.846		
7.407	877	375	0.428		
7.433	567	362	0.638		
7.463	796	352	0.442		
7.503	523	305	0.583		
7.547	450	268	0.596		
7.567	326	243	0.746		
7.583	94	237	2.529		
7.593	193	244	1.268		
7.610	199	252	1.264		
7.627	387	294	0.760		
7.650	368	318	0.865		
7.670	324	332	1.024		
7.693	608	347	0.571		
7.713	666	354	0.532		
7.743	579	327	0.565		
7.777	384	328	0.855		
7.797	604	340	0.563		
	564651927	88544791		100.000	

Total unknown % area = 99.00

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4046758

QB Batch: OEXT/11383 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4046758001, 4046758002, 4046758003, 4046758004, 4046758005, 4046758006, 4046758007, 4046758008, 4046758009

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.53	%			06/16/11	

Type	Sample	Matrix
BLANK	463917	Tissue

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REVISED

JUN 0 4 2012

J. Durancear

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4046758

QB Batch: OEXT/11371
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 06/15/11
LCSD Prepared: 06/15/11

Analyte	LCS % Rec	LCSD % Rec	QC Limits RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	65	63	4	50-150	20	66.7	43.5	41.7	mg/kg	07/13/11	07/13/11		
TPH (C08-C16)	35	33	6	50-150	20	66.7	23.4	22.1	mg/kg	07/13/11	07/13/11	L0	L0
TPH (C08-C40)	246	217	13	50-150	20	66.7	164	144	mg/kg	07/13/11	07/13/11	1q	2q
TPH (C16-C28)	26	25	4	50-150	20	66.7	17.6	16.8	mg/kg	07/13/11	07/13/11	L0	L0
TPH - Diesel (C10-C28)	61	59	4	50-150	20	66.7	40.6	39.0	mg/kg	07/13/11	07/13/11		

Type	Sample
LCS	463500
LCSD	463501

REPORT OF LABORATORY ANALYSIS

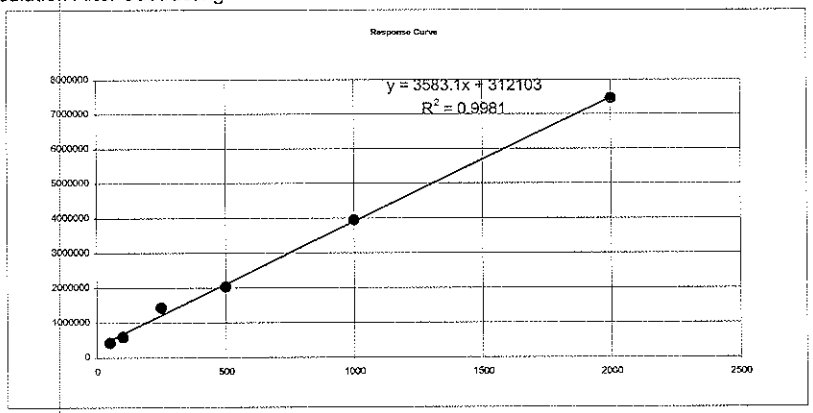
SampleID: 463500 File: 06R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.953	155743	
2.067	134931	
2.130	86657	
2.823	95938	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	1095921	155743	175.2867
Diesel Range Organics (	1859330	377331	326.5012
TPH - Diesel (C10-C28)	1779774	377331	304.2982
TPH (C16-C28)	1161158	377331	131.6514
TPH (C08-C40)	5198410	473269	1231.616

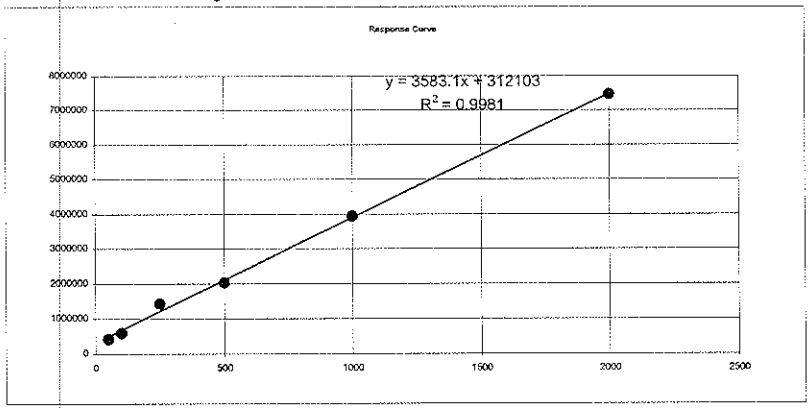
SampleID: 463501 File: 09R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	415643
100	587718
250	1423911
500	2026692
1000	3937229
2000	7455627

slope	3583.128208
intercept	312103.3315
correlation	0.999060104
R2	0.998121091



Retention Time	Peak Area	Compound Name
1.953	151267	
2.067	131428	
2.127	92391	
2.820	102191	

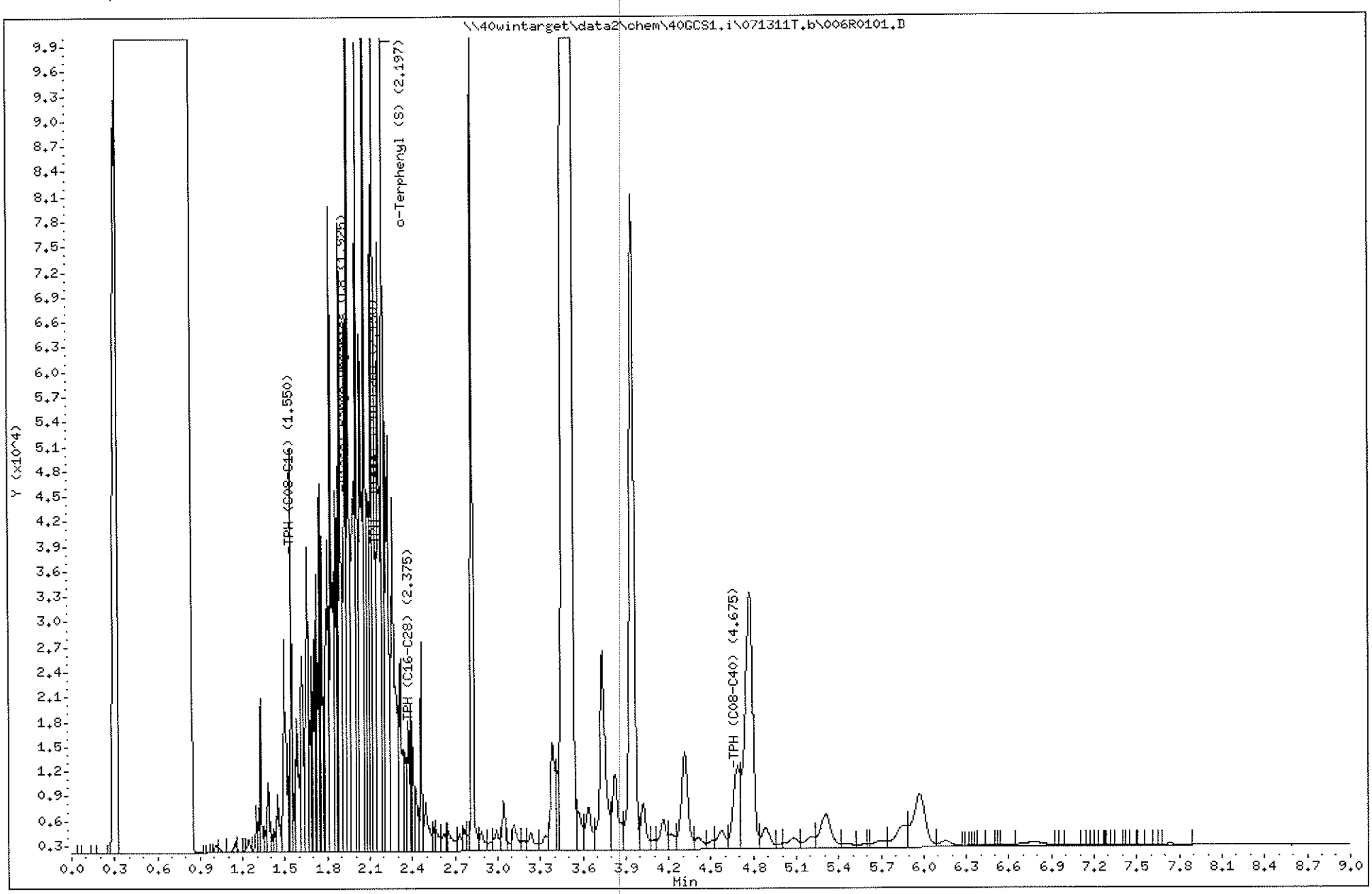
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	1056136	151267	165.4324
Diesel Range Organics (	1808897	375086	313.0526
TPH - Diesel (C10-C28)	1735677	375086	292.618
TPH (C16-C28)	1138756	375086	126.0258
TPH (C08-C40)	4669320	477277	1082.836

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\006R0101.D
Date : 13-JUL-2011 08:45
Client ID: MBLCS
Sample Info: 463500X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\006R0101.D
Lab Smp Id: 463500 Client Smp ID: MBLCS
Inj Date : 13-JUL-2011 08:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463500X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 14-May-2012 09:21 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 6 QC Sample: LCS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.300			5198410	1363.70	181.82
S 1 TPH (C08-C16)	1.050-2.049			1095921	218.752	29.16
S 12 TPH (C16-C28)	1.950-2.800			1161157	236.959	31.59
S 2 Diesel Range Organics (C8-C28)	1.050-2.800			1859329	431.809	57.57
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1779774	409.606	54.61
$ 15 o-Terphenyl (S)	2.196	2.196	0.000	121001	24.2638	1.61

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\006R0101.D
Lab Smp Id: 463500 Client Smp ID: MBLCS
Inj Date : 13-JUL-2011 08:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463500X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 14-May-2012 09:21 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 6 QC Sample: LCS
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.050	12	13	1.066	0.00		
0.150	16	15	0.926	0.00		
0.317	164062	90482	0.552	0.02		
0.373	563430606	86151880	0.153	98.03		
0.957	57	60	1.054	0.00		
0.983	22	25	1.147	0.00		
1.010	1263	945	0.748	0.00		
1.030	963	622	0.646	0.00		
1.550	1095921	1311090	1.196	0.19	S	1 TPH (C08-C16)
1.925	1859330	2036868	1.095	0.32	S	2 Diesel Range Organi
1.150	1749	1299	0.743			
1.170	300	346	1.154			
1.207	134	205	1.528			
1.240	2518	1514	0.601			
1.293	3710	5695	1.535			
1.313	3489	5230	1.499			
1.330	12749	18559	1.456			
1.363	2718	2719	1.000			
1.380	8797	8463	0.962			
1.403	2263	2445	1.080			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.433	2313	2674	1.156			
1.447	8375	6975	0.833			
1.497	30439	25699	0.844			
2.150	1779774	1955045	1.098	0.31	S	8 TPH - Diesel (C10-C
1.527	6362	9280	1.459			
1.543	28055	48429	1.726			
1.573	7957	9669	1.215			
1.583	18432	16177	0.878			
1.623	31550	23586	0.748			
1.660	32721	36532	1.116			
1.677	13787	15874	1.151			
1.690	14403	23581	1.637			
1.710	22554	25539	1.132			
1.723	19116	33372	1.746			
1.737	11374	22761	2.001			
1.750	24599	44181	1.796			
1.760	30343	37942	1.250			
1.780	15124	21861	1.445			
1.807	45302	37336	0.824			
1.823	85851	77490	0.903			
1.860	36096	43308	1.200			
1.877	29122	46273	1.589			
1.890	61440	74634	1.215			
1.933	84429	63984	0.758			
1.953	155743	313742	2.014			
1.993	86456	44443	0.514			
2.010	74546	97134	1.303			
2.037	81003	62139	0.767			
2.067	134931	199806	1.481			
2.090	57476	42902	0.746			
2.117	55552	73695	1.327			
2.130	86657	104087	1.201			
2.167	112110	73256	0.653			
2.217	78127	51700	0.662			
2.263	87496	42446	0.485			
2.317	34908	23294	0.667			
2.347	11000	11990	1.090			
2.370	16871	15651	0.928			
2.390	11618	17634	1.518			
2.407	8884	12541	1.412			
2.427	9864	7553	0.766			
2.460	17716	25160	1.420			
2.493	11687	5772	0.494			
2.553	3664	2888	0.788			
2.570	4209	2574	0.612			
2.623	3594	2078	0.578			
2.640	1358	1740	1.281			
2.657	6124	2335	0.381			
2.733	3153	1997	0.633			
2.763	4527	2727	0.602			
2.797	1883	1952	1.037			
2.197	121001	258397	2.135	0.02	$	15 o-Terphenyl (S)
2.375	1161158	1243236	1.071	0.20	S	12 TPH (C16-C28)

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
4.675	5198410	3275664	0.630	0.91	S	5 TPH (C08-C40)
2.823	95938	106211	1.107			
2.887	4810	2324	0.483			
2.950	2022	1086	0.537			
2.990	5895	2445	0.415			
3.043	8511	5909	0.694			
3.073	1509	984	0.652			
3.117	7236	3181	0.440			
3.187	2672	1198	0.448			
3.230	6527	2128	0.326			
3.333	5039	1757	0.349			
3.387	28469	12952	0.455			
3.420	11275	9537	0.846			
3.523	2478583	872660	0.352			
3.570	10295	4609	0.448			
3.637	14759	5116	0.347			
3.737	65186	24028	0.369			
3.823	26174	9018	0.345			
3.950	186702	78672	0.421			
4.023	15048	5531	0.368			
4.097	3179	1198	0.377			
4.167	11427	3515	0.308			
4.217	5417	1836	0.339			
4.313	39546	11693	0.296			
4.410	5463	1407	0.258			
4.513	2940	1038	0.353			
4.577	8922	2174	0.244			
4.687	33770	9992	0.296			
4.773	120390	30707	0.255			
4.887	10406	2483	0.239			
4.997	1410	606	0.430			
5.083	7101	1252	0.176			
5.217	6166	1346	0.218			
5.307	22915	4024	0.176			
5.457	2959	552	0.187			
5.583	1626	426	0.262			
5.603	417	422	1.011			
5.703	5327	830	0.156			
5.850	14152	2552	0.180			
5.970	39081	6374	0.163			
6.153	4528	668	0.148			
6.287	126	126	0.997			
6.303	225	128	0.568			
6.323	149	126	0.845			
6.343	97	124	1.273			
6.373	172	127	0.736			
6.430	491	154	0.314			
6.450	599	162	0.271			
6.507	130	133	1.025			
6.533	157	136	0.864			
6.643	1290	249	0.193			
6.780	5237	485	0.093			
6.943	263	149	0.566			
6.963	404	160	0.396			
6.993	865	158	0.183			
7.117	170	86	0.505			

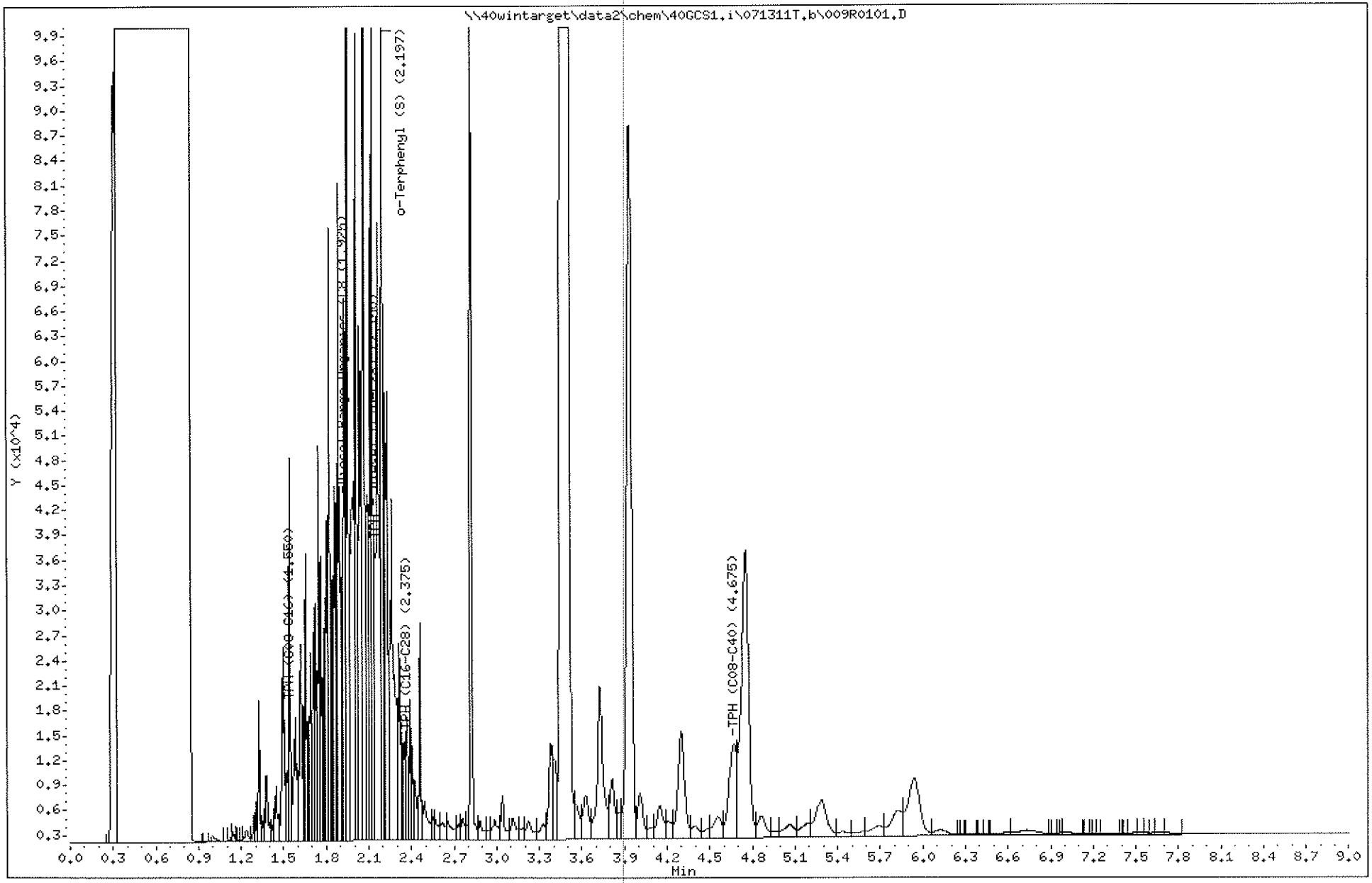
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.147	91	69	0.754		
7.173	112	65	0.578		
7.203	114	63	0.552		
7.247	114	60	0.524		
7.270	35	60	1.719		
7.283	48	63	1.302		
7.313	120	75	0.627		
7.337	115	89	0.772		
7.350	305	95	0.312		
7.410	91	79	0.866		
7.443	121	78	0.643		
7.490	246	107	0.435		
7.500	66	115	1.742		
7.547	378	156	0.413		
7.560	602	163	0.271		
7.623	294	150	0.510		
7.673	274	162	0.592		
7.737	1784	203	0.114		
	568916412	89778103		100.000	

Total unknown % area = 98.05

Data File: \\40wintarget\data2\chem\40GCS1.i\071311T.b\009R0101.D
Date : 13-JUL-2011 09:21
Client ID: MBLCSD
Sample Info: 463501X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\009R0101.D
Lab Smp Id: 463501 Client Smp ID: MBLCSD
Inj Date : 13-JUL-2011 09:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463501X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 14-May-2012 09:21 kburns Quant Type: ESTD
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 9 QC Sample: LCSD
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-8.300			4669320	1216.04	162.13
S 1 TPH (C08-C16)	1.050-2.049			1056136	207.649	27.68
S 12 TPH (C16-C28)	1.950-2.800			1138755	230.707	30.76
S 2 Diesel Range Organics (C8-C28)	1.050-2.800			1808896	417.733	55.69
S 8 TPH - Diesel (C10-C28)	1.500-2.800			1735676	397.299	52.97
$ 15 o-Terphenyl (S)	2.196	2.196	0.000	116775	23.4164	1.56

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\071311T.b\009R0101.D
Lab Smp Id: 463501 Client Smp ID: MBLCSD
Inj Date : 13-JUL-2011 09:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 463501X2
Misc Info : 6027
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\071311T.b\TPH.m
Meth Date : 14-May-2012 09:21 kburns Quant Type: AREA%
Cal Date : 06-JUL-2011 12:05 Cal File: 010R0101.D
Als bottle: 9 QC Sample: LCSD
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.313	174463	92559	0.531	0.03		
0.360	558846290	87758872	0.157	98.13		
0.950	49	47	0.953	0.00		
0.997	1634	674	0.413	0.00		
1.550	1056136	1371709	1.299	0.18	S	1 TPH (C08-C16)
1.925	1808897	2175241	1.203	0.32	S	2 Diesel Range Organi
1.097	77	72	0.940			
1.130	459	555	1.208			
1.143	1006	1119	1.113			
1.167	122	194	1.594			
1.180	66	108	1.644			
1.200	108	192	1.786			
1.237	2326	1359	0.584			
1.290	2397	3514	1.466			
1.307	2988	4686	1.568			
1.323	12329	16870	1.368			
1.360	2137	2595	1.214			
1.373	10568	7867	0.744			
1.427	1894	2326	1.228			
1.443	8321	6471	0.778			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.493	28424	23292	0.819			
2.150	1735677	2104021	1.212	0.30	S	8 TPH - Diesel (C10-C
1.523	5974	8497	1.422			
1.540	26981	45995	1.705			
1.580	24606	14961	0.608			
1.613	29617	20426	0.690			
1.643	7153	16138	2.256			
1.657	28482	34426	1.209			
1.677	8132	14976	1.842			
1.687	15823	22545	1.425			
1.710	22623	24996	1.105			
1.723	28744	28535	0.993			
1.747	24848	47404	1.908			
1.760	27812	34084	1.226			
1.780	11010	21940	1.993			
1.790	19822	29110	1.469			
1.803	27363	38396	1.403			
1.823	43209	73428	1.699			
1.837	17249	29627	1.718			
1.847	22503	31709	1.409			
1.860	35134	42445	1.208			
1.877	27956	45321	1.621			
1.890	59803	78990	1.321			
1.910	18077	31543	1.745			
1.930	64001	65137	1.018			
1.953	151267	298073	1.971			
1.993	83863	43090	0.514			
2.010	72359	96920	1.339			
2.037	78506	61777	0.787			
2.067	131428	189752	1.444			
2.090	55683	41500	0.745			
2.113	54879	73409	1.338			
2.127	92391	130830	1.416			
2.163	109864	74171	0.675			
2.213	33828	53695	1.587			
2.230	45205	53982	1.194			
2.263	83656	40998	0.490			
2.313	22603	23664	1.047			
2.333	9160	12216	1.334			
2.347	12496	11809	0.945			
2.367	13695	14867	1.086			
2.390	11496	16996	1.478			
2.403	9929	11408	1.149			
2.423	9429	7132	0.756			
2.460	17191	26134	1.520			
2.493	10829	4620	0.427			
2.550	3321	2863	0.862			
2.567	4382	2523	0.576			
2.620	5229	2214	0.423			
2.657	6532	2289	0.350			
2.730	3216	1935	0.602			
2.760	4824	2635	0.546			
2.793	1496	1890	1.264			
2.197	116776	250771	2.147	0.02	$	15 o-Terphenyl (S)

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.375	1138756	1303392	1.145	0.20	S 12 TPH (C16-C28)
4.675	4669320	3351270	0.718	0.82	S 5 TPH (C08-C40)
2.820	102191	112033	1.096		
2.883	5257	2337	0.445		
2.947	2305	1214	0.527		
2.987	6103	2383	0.390		
3.040	9577	5179	0.541		
3.113	6730	2666	0.396		
3.183	3286	1373	0.418		
3.223	6997	2207	0.315		
3.327	4940	1844	0.373		
3.380	21836	11537	0.528		
3.403	15598	9695	0.622		
3.510	1948455	793078	0.407		
3.557	9000	4212	0.468		
3.627	14821	5211	0.352		
3.723	53354	18398	0.345		
3.813	18109	7258	0.401		
3.860	6306	3229	0.512		
3.940	200284	85643	0.428		
4.010	14724	5484	0.372		
4.090	3246	1299	0.400		
4.147	13034	3896	0.299		
4.207	6653	2109	0.317		
4.300	42960	12920	0.301		
4.393	5664	1513	0.267		
4.497	3333	1185	0.356		
4.557	10612	2554	0.241		
4.670	42577	11269	0.265		
4.753	129890	34367	0.265		
4.863	10768	2555	0.237		
4.973	2161	767	0.355		
5.063	8554	1500	0.175		
5.207	7689	1669	0.217		
5.287	25523	4440	0.174		
5.437	3353	605	0.180		
5.583	2624	563	0.215		
5.693	7823	1251	0.160		
5.823	17947	3040	0.169		
5.940	41489	6968	0.168		
6.127	4662	679	0.146		
6.257	202	169	0.837		
6.283	339	174	0.513		
6.297	69	173	2.518		
6.373	846	205	0.242		
6.383	123	208	1.691		
6.400	451	212	0.470		
6.427	476	198	0.416		
6.470	68	173	2.529		
6.610	1966	298	0.152		
6.733	6056	575	0.095		
6.903	206	173	0.838		
6.937	365	194	0.532		
6.957	237	205	0.864		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.977	250	213	0.852		
6.993	1689	226	0.134		
7.130	89	148	1.670		
7.157	310	143	0.461		
7.187	169	145	0.858		
7.213	231	149	0.646		
7.243	275	160	0.582		
7.260	1232	163	0.132		
7.400	145	122	0.844		
7.413	71	121	1.711		
7.440	207	140	0.675		
7.503	666	192	0.288		
7.527	504	199	0.395		
7.560	422	184	0.436		
7.627	379	180	0.475		
7.677	902	231	0.256		
7.703	1045	226	0.216		
	563808532	91454193		100.000	

Total unknown % area = 98.16

page 1

06 Jul 11 04:13 PM
Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT						TPHMACHB	1
1	1	PRIME				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	WINDOW CHECK				TPHMACHB	1
1	5	2000 2860-31-01				TPHMACHB	1
1	6	1000 2860-31-02				TPHMACHB	1
1	7	500 2860-31-14				TPHMACHB	1
1	8	250 2860-30-13				TPHMACHB	1
1	9	100 2860-30-14				TPHMACHB	1
1	10	50 2860-30-15				TPHMACHB	1
1	11	IC500 2860-30-16-DK				TPHMACHB	1
1	12	463500RSX2				TPHMACHB	1
1	13	463499				TPHMACHB	1
1	14	463501RSX2				TPHMACHB	1
1	15	4046758001RSX2				TPHMACHB	1
1	16	4046758002RSX3				TPHMACHB	1
1	17	4046758003RSX4				TPHMACHB	1
1	18	4046758004RSX4				TPHMACHB	1
1	19	4046758005RSX3				TPHMACHB	1
1	20	4046758006RSX5				TPHMACHB	1
1	21	4046758007RSX2				TPHMACHB	1
1	22	4046758008RSX2				TPHMACHB	1
1	23	4046758009RSX3				TPHMACHB	1
1	24	463500X2				TPHMACHB	1
1	25	463501X2				TPHMACHB	1
1	26	4046758001X2				TPHMACHB	1
1	27	4046758002X3				TPHMACHB	1
1	28	4046758003X4				TPHMACHB	1
1	29	4046758004X4				TPHMACHB	1
1	30	4046758005X3				TPHMACHB	1
1	31	4046758006X5				TPHMACHB	1
1	32	4046758007X2				TPHMACHB	1
1	33	4046758008X2				TPHMACHB	1
1	34	4046758009X3				TPHMACHB	1
1	35	BLANK				TPHMACHB	1
1	36	BLANK				TPHMACHB	1
1	37	BLANK				TPHMACHB	1
1	38	CC500 2860-31-14-PA				TPHMACHB	1
1	39	463496RSX3				TPHMACHB	1
1	40	463495				TPHMACHB	1
1	41	463497				TPHMACHB	1
1	42	463498				TPHMACHB	1
1	43	4046733013				TPHMACHB	1
1	44	4046733001				TPHMACHB	1
1	45	4046733002				TPHMACHB	1
1	46	4046733003				TPHMACHB	1
1	47	4046733004				TPHMACHB	1
1	48	4046733005				TPHMACHB	1
1	49	4046733006				TPHMACHB	1
1	50	4046733007				TPHMACHB	1
1	51	4046733008				TPHMACHB	1

TPH·B
GCSV
60027
HBN
74586

TPH·B
GCSV
60002
HBN
74185

KHB 7/7/11

Continued on Page 58

Read and Understood By

K H Burns 7/7/11
Signed Date

Signed 7/7/11
Date

06 Jul 11 04:13 PM
Sequence: C:\HPCHEM\1\SEQUENCE\070611.SEQ

page 2

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4046733009				TPHMACHB	1
1	53	4046733010				TPHMACHB	1
1	54	4046733011				TPHMACHB	1
1	55	4046733012				TPHMACHB	1
1	56	4046733016				TPHMACHB	1
1	57	4046733017				TPHMACHB	1
1	58	4046733018				TPHMACHB	1
1	59	4046733019				TPHMACHB	1
1	60	BLANK				TPHMACHB	1
1	61	BLANK				TPHMACHB	1
1	62	BLANK				TPHMACHB	1
1	63	CC500 2860-31-14 AA				TPHMACHB	1
REAR 1							

KHB 7/7/11

KHB 7/7/11

Continued on Page —

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Signed	Date	Signed	Date
K H Burns	7/7/11		7/7/11

14 Jul 11 07:36 AM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\071311.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	CC500 2860-31-14-OK					TPHMACHB	1
1	5	463500					TPHMACHB	1
1	6	463500X2					TPHMACHB	1
1	7	463499					TPHMACHB	1
1	8	463501					TPHMACHB	1
1	9	463501X2					TPHMACHB	1
1	10	4046758001					TPHMACHB	1
1	11	4046758001X2					TPHMACHB	1
1	12	4046758002					TPHMACHB	1
1	13	4046758002X3					TPHMACHB	1
1	14	4046758003					TPHMACHB	1
1	15	4046758003X4					TPHMACHB	1
1	16	4046758004					TPHMACHB	1
1	17	4046758004X4					TPHMACHB	1
1	18	4046758005					TPHMACHB	1
1	19	4046758005X3					TPHMACHB	1
1	20	4046758006					TPHMACHB	1
1	21	4046758006X5					TPHMACHB	1
1	22	4046758007					TPHMACHB	1
1	23	4046758007X2					TPHMACHB	1
1	24	4046758008					TPHMACHB	1
1	25	4046758008X2					TPHMACHB	1
1	26	4046758009					TPHMACHB	1
1	27	4046758009X3					TPHMACHB	1
1	28	463499X2					TPHMACHB	1
1	29	BLANK					TPHMACHB	1
1	30	BLANK					TPHMACHB	1
1	31	BLANK					TPHMACHB	1
1	32	CC500 2860-31-14-OK					TPHMACHB	1
1	33	4047906001 RSX150					TPHMACHB	1
1	34	4047906002 RSX60					TPHMACHB	1
1	35	4047906003X20 RSX15=300					TPHMACHB	1
1	36	4047906004X50 RSX6=300					TPHMACHB	1
1	37	4047906005X50 RSX4=200					TPHMACHB	1
1	38	4047906006X10 RSX15=150					TPHMACHB	1
1	39	4047906001X150					TPHMACHB	1
1	40	4047906002X60					TPHMACHB	1
1	41	4047906003X300					TPHMACHB	1
1	42	4047906004X300					TPHMACHB	1
1	43	4047906005X200					TPHMACHB	1
1	44	4047906006X150					TPHMACHB	1
1	45	BLANK					TPHMACHB	1
1	46	CC500 2860-31-14-OK					TPHMACHB	1
1	47	4047838001 RSX20					TPHMACHB	1
1	48	4047838002 RSX2					TPHMACHB	1
1	49	4047838003 RSX6					TPHMACHB	1
1	50	4047838004					TPHMACHB	1
1	51	4047838005					TPHMACHB	1

TPH.B
GCSV
6027
HBN
74586

TPH.S
GCSV
6112
HBN
75685

7/15/11 TPHB

Continued on Page 63

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Kyss H Burns — Signed — 7/15/11 — Date

Signed — 7/15/11 — Date

PROJECT 40GCS1 071311T Con't

14 Jul 11 07:36 AM page 2
Sequence: C:\HPCHEM\1\SEQUENCE\071311.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4047838006 RSx10					TPHMACHB	1
1	53	4047838007					TPHMACHB	1
1	54	4047838008					TPHMACHB	1
1	55	4047838009 RSx8					TPHMACHB	1
1	56	BLANK					TPHMACHB	1
1	57	BLANK					TPHMACHB	1
1	58	CC500 2860-31-14 ok					TPHMACHB	1
REAR 1								

TPH-S
GCSV 6112
HBN 75685

KHB 7/15/11

KHB 7/15/11

Continued on Page —

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Kris H Burns 7/15/11 [signature] 7/15/11

Signed Date Signed Date

Pace Analytical Prep Log Report

Batch Information: OEXT 73918 TPH-B

Prep Method	EPA 3541	Analysis Method	SW846 8015	Extracted By	BLM	Extracted By Date	06/15/2011
Spiked By	BLM	Spiked By Date	06/15/2011	Witnessed By	-	Conc. Temp #1	98.5
Conc. Temp #2	98.5	Methylene Chloride	10334	Sodium Sulfate	7513	Florsil 3620B	5238
3620B Date/Initials	6/16/11 BLM	Batch Notes		Reviewed By		Reviewed By Date	

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**463499**	15	1	1			5651 (.5)
8015 T_P	LCS	**463500**	15	1	1		10277 (1)	5651 (.5)
8015 T_P	LCSD	**463501**	15	1	1		10277 (1)	5651 (.5)
8015 T_P	PS	**4046758001**	4.8	1	1			5651 (.5)
8015 T_P	PS	**4046758002**	4.71	1	1			5651 (.5)
8015 T_P	PS	**4046758003**	9.28	1	1			5651 (.5)
8015 T_P	PS	**4046758004**	3.7	1	1			5651 (.5)
8015 T_P	PS	**4046758005**	4.4	1	1	1*		5651 (.5)
8015 T_P	PS	**4046758006**	4.2	1	1			5651 (.5)
8015 T_P	PS	**4046758007**	3.44	1	1			5651 (.5)
8015 T_P	PS	**4046758008**	3.86	1	1			5651 (.5)
8015 T_P	PS	**4046758009**	3.92	1	1			5651 (.5)

Sample Notes:

1*: Sample went dry during extraction

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

5651: TPH Biota Surr @ 100 ug/mL

Wed, 22 Jun 2011 16:42:09 -0500

Pace Analytical Services					Instrument ID:	40BALC				
LIPID					Analyst:	BLM	11383			
Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
463917		0.9482	0.9682	15.0000	4.0000	1.0000	0.5333	06/16/2011 06:36:53		
4046758001		0.9480	1.0605	4.8000	4.0000	1.0000	9.3750	06/16/2011 06:36:59		
4046758002		0.9494	1.0509	4.7100	4.0000	1.0000	8.6200	06/16/2011 06:37:06		
4046758003		0.9476	1.1167	9.2800	4.0000	1.0000	7.2888	06/16/2011 06:37:12		
4046758004		0.9461	1.0796	3.7000	4.0000	1.0000	14.4324	06/16/2011 06:37:19		
4046758005		0.9469	1.0703	4.4000	4.0000	1.0000	11.2182	06/16/2011 06:37:25		
4046758006		0.9475	1.0512	4.2000	4.0000	1.0000	9.8762	06/16/2011 06:37:32		
4046758007		0.9489	1.0107	3.4400	4.0000	1.0000	7.1860	06/16/2011 06:37:39		
4046758008		0.9451	1.0538	3.8600	4.0000	1.0000	11.2642	06/16/2011 06:37:46		
4046758009		0.9411	1.0430	3.9200	4.0000	1.0000	10.3980	06/16/2011 06:37:53		

✓GC
6/16/11

PROJECT ______ Notebook No. ______

Continued From Page ______

9/28/10

2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11

9/30/10

2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR

10/4/10

2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10

2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 100ml CH_2Cl_2 20ppm WPAH IS RDN 10/6/10 Exp 10/6/11

10/06/10

2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11

10-7-10

2860-16-06 250uls of 2860-09-04 diluted to 1.0 ml w nanopure H_2O SHE 50 ppm

2860-16-07 2500ul of 10,000 mg/L Oterphenyl (2713-86) diluted to 250 ml with CH_2Cl_2 (2712-62) = 100 ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CS1:\101106.b\033R0101.D 88% Good DR 10/4/10

* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR

10/8/10

2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10

2860-16-09 5000ul of 5000ug/ml B/N Surr (2713-51C) + 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50ug/ml ~~BN~~ SBN Surr. 8270 SKW Ran on Inst. by MSS1 File# 1012 T008

10/13/10

2860-16-10 500 ul of 4000 ppm SVIS (2713-90I) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11

2860-16-11 ~~10~~ 40ul of 5000ppm N-NDPA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm NDL STD Ex 7/13/11 RDN 10/13/10 (RDN 10/14/10)

~~10/18/10 500~~ ARO 10/18/10

Continued on Page

Read and Understood By

Signed [signature] Date 10/18/10 Signed Valerie M Ringquin Date 10/18/2010

11/24/10

2860-22-01 500ul of 4000ppm SVIS (2945-06A) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Exp 11/22/11 RM 11/24

11/29/10 CH_2Cl_2 Changed at 8:00 to lot 2712-73 vmr

11/30/10

2860-22-02 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d

12/1/2010

2860-22-06 1ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1
VMR Ran on inst by OAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%

12-2-10

2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Hexane/DCM 50%

" -08 25uls of 2860-10-11 " " " " 500 ppm

12/03/10

2860-22-09 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 50ul of 4000ppm SVIS (2945-06D) upto 10.0ml CH_2Cl_2 20ppm w PAH-IS Ft 12/3/11 RM 12/6

2860-22-11 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10

2860-22-12 400ul of 16,000 ppm EROD (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Ruquin — Signed — 12/7/10 — Date

Signed — 12/22/10 — Date

PROJECT
2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H2O, MeOH spike) → 1.0 mL [Final] = 500 ug/mL Ex 7-19-11 DAR

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPH

2/25/11

2860-29-02 3.0 mL of 5000ppm B/N SUR (~~2945-03~~ 2945-03C KAT 4/11/11) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SUR KPH Exp 8/25/11 KAT
Ran on instr by RJN file # 40MSS4 0225112S.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) up to 1.0 ml CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RON 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) up to 1.0 ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RON 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100 ul of 5000ppm B/N SS (2945-20A) up to 10.0 mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RON 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) up to 1.0 ml CH_2Cl_2 25ppm PAH CAL Ex 7/3/11 RON 3/2/11

2860-29-06	0.500		1.0 ml	25ppm
07	0.200			10
08	0.100			5
09	0.020			1
10	0.010			.5
11	0.010		10.0 ml	.05
12	0.200		1.0 ml	10ppm Check

2860-29-13 20ul of 50ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) up to 1.0 ml CH_2Cl_2 1ppm PAH 2nd Source Ex 9/2/11 RON 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 2/28/12

3/3/2011

2860-29-15 2500 uL of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50 mL with CH_2Cl_2 = 1000ppm Ran on inst by ~~DAE~~ GC file # Exp 3/3/2012 VMR (VMR)

Z VMR 3/3/2011 OK to use per GC Ran on inst 3/8/11 VMR → 40GCSF.i / 0307116.b - File 010F1001. Recovery = 106% GC 3/9/11

Continued on Page

Read and Understood By

Valerie M Renquin	3/3/2011	[signature]	3/7/11
Signed	Date	Signed	Date

3-4-11

2860-30-01 50 mL @ 2380-100 01 (TPH @ 20000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5-6-11 DAT

TPH ICAL

2860-30-02 500 uL @ 2713-490 (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3.4.12 DAT

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 mL = 500 ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ use only 1.0 mL @ 2860-30-02 2713-990
All standards + 5 mL 2945-135 (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All Standard Exp 2.22.12 DAT

TPH ICV

2860-30-08 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2945-135 2713-990 (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2.22.12 DAT

2860-30-09 25 uL of 2860-10-11 diluted to 1.0 mL w 50/50 H_2O/MeOH JHH

3.7.11

2860-30-10 1.0 mL @ 2860-30-02 + 5 mL 2713-990 (o-terp @ 10,000 ug/mL) = 2000 ug/mL 50 ug/mL
2860-30-11 500 mL @ → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 mL = 500 ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3-4-11~~ DAT 5-6-11 GC

2860-30-16 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3-4-11~~ DAT 3/4/12 GC

Date 3-7-11

Continued on Page

Read and Understood By

Signed _____ Date 3.7.11 — Signed Valerium Penguin Date 3/24/11

PROJECT

3.7.11

2860-31-01 100 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-02 50 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-03 25 ul of 2860-10-19 diluted to 10 ml w 50/50 MeOH/H_2O SHE 500 ppm

2860-31-04 500 ul of 4000 ppm SVIS (2945-17J) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 uls of 2860-10-11 diluted to 10.0 ml w 50/50 MeOH H_2O SHE 1000 ppm
-06 25 uls of 2860-31-05 diluted to 1.0 ml w 25 ppm SHE
-07 100 100
-08 250 250
-09 500 500
-10 750 750 SHE

3.14.11

2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm Exp 12/1/11 DAR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL Exp 1-10-12 DAR

3/15/11

2860-31-13 500 ul of 4000 ppm SVIS (2945-17J) up to 1.0 ml CH_2Cl_2 2000 ppm 1X H-S-IS Ex 3/15/12 RW 3/16/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-233 (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-990 (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL Exp 3.4.12 DAR

Continued on Page

Read and Understood By

Signed 3/17/11 Date

Valerie M Pangelinan Signed 3/24/11 Date

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048240

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048240

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048240001	EWL-T-05-C-WHOLE BODY	Tissue	12/21/10 10:33	07/13/11 09:30
4048240002	EWL-T-07-C-WHOLE BODY	Tissue	01/03/11 11:05	07/13/11 09:30
4048240003	EWL-T-08-C-WHOLE BODY	Tissue	01/03/11 11:05	07/13/11 09:30
4048240004	EWL-T-10-C-WHOLE BODY	Tissue	01/03/11 11:23	07/13/11 09:30
4048240005	EWL-T-12-C-WHOLE BODY	Tissue	01/03/11 11:00	07/13/11 09:30
4048240006	EWL-LC-C-WHOLE BODY	Tissue	01/04/11 15:30	07/13/11 09:30

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048240
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1106146

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD; the "L0" data qualifier applied to the summary. The recoveries of TPH (C08-C40) were above control criteria in the LCS and LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifier.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** EWL-T-07-C-WHOLE BODY, EWL-T-12-C-WHOLE BODY and EWL-LC-C-WHOLE BODY were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048240

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048240001	EWL-T-05-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048240002	EWL-T-07-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048240003	EWL-T-08-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048240004	EWL-T-10-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
		ASTM D2974-87	JAL	1
4048240005	EWL-T-12-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048240006	EWL-LC-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
		ASTM D2974-87	JAL	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4048240

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 4048240

[1]	Sample mass not available to do re-analyses.

BATCH QUALIFIERS

Batch: GCSV/6256

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048240

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

1404824.0

Project Number: K1106146

Project Manager: ~~Lynda Huckestein~~ David Lingle / URS

	Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None TPL
001	K1106146-017	EWL-T-05-C-Whole Body	1	Animal Tissue	12/21/10	1033	Pace PA	✓
002	K1106146-034	EWL-T-07-C-Whole Body	1	Animal Tissue	1/3/11	1105	Pace PA	✓
003	K1106146-051	EWL-T-08-C-Whole Body	1	Animal Tissue	1/3/11	1105	Pace PA	✓
004	K1106146-064	EWL-T-10-C-Whole Body	1	Animal Tissue	1/3/11	1123	Pace PA	✓
005	K1106146-081	EWL-T-12-C-Whole Body	1	Animal Tissue	1/3/11	1100	Pace PA	✓
006	K1106146-094	EWL-LC-2-C-Whole Body	1	Animal Tissue	1/4/11	1530	Pace PA	✓

1-2oz CG

Test Comments

Relinquish - None K1106146-017,34,51,81 Ship to Pace: Green Bay, WI

Relinquish - None K1106146-064,94 Ship to Pace: Green Bay,WI. Client specified QC (Field Duplicate) on this sample.

Folder Comments:

Report tissues on a wet weight basis.

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com

Contact David Lingle / URS
East White Lake project

Turnaround Requirements

____RUSH (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

___ STANDARD

Requested FAX Date: _____

Requested Report Date: 06/14/11

Report Requirements

___ I. Results Only

___ II. Results + QC Summaries

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD N

Invoice Information

PO# K1106146

Bill to

Relinquished By: [signature] 7/12/11 1200 Rec: Fedex

Received By: [signature] 7/13/11 930

Airbill Number: _____

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Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Project # 4048240

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used JB Type of Ice: Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature <0°C Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7-13-11
Initials: G

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: TW **Date:** 7/13/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048240

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SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048240

QB Batch: OEXT / 12023
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048240001		EWL-T-05-C-WHOLE BODY	1	70											
482788	BLANK		2	0	S4										
4048240002		EWL-T-07-C-WHOLE BODY	2	0	S4										
4048240003		EWL-T-08-C-WHOLE BODY	1	75											
4048240004		EWL-T-10-C-WHOLE BODY	1	61											
482789	LCS		3	0	S4										
4048240005		EWL-T-12-C-WHOLE BODY	2	0	S4										
482790	LCSD		3	0	S4										
4048240006		EWL-LC-C-WHOLE BODY	3	0	S4										
		QC Limits:		50-150											
		Sample Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

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LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048240

QB Batch: OEXT/12023
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	68	59	14	50-150	20	66.7	45.2	39.3	mg/kg	08/03/11	08/03/11		
TPH (C08-C16)	29	26		50-150	20	66.7	19.6J	17.6J	mg/kg	08/03/11	08/03/11	L0	L0
TPH (C08-C40)	274	262	4	50-150	20	66.7	182	175	mg/kg	08/03/11	08/03/11	1q	2q
TPH (C16-C28)	33	27		50-150	20	66.7	22.2	18.1J	mg/kg	08/03/11	08/03/11	L0	L0
TPH - Diesel (C10-C28)	64	56	14	50-150	20	66.7	42.8	37.4	mg/kg	08/03/11	08/03/11		

Type	Sample
LCS	482789
LCSD	482790

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048240

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048240001	EWL-T-05-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048240002	EWL-T-07-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048240003	EWL-T-08-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048240004	EWL-T-10-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048240005	EWL-T-12-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048240006	EWL-LC-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048240001	EWL-T-05-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048240002	EWL-T-07-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048240003	EWL-T-08-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048240004	EWL-T-10-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048240005	EWL-T-12-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048240006	EWL-LC-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048240004	EWL-T-10-C-WHOLE BODY	ASTM D2974-87	PMST/6456		
4048240006	EWL-LC-C-WHOLE BODY	ASTM D2974-87	PMST/6456		

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DUPLICATE RESULTS

Project: CRABS
Pace Project No.: 4048240

QB Batch: PMST/6456 **Prepared:**
Method(s): ASTM D2974-87

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Percent Moisture	1	10	70.9	70.5	%	12/02/11	

Type	Sample	Client Sample ID
DUP	540622	EWL-T-10-C-WHOLE BODY

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048240

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/03/11 08/03/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.14

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-31-01	2000 2860-31-01	08/03/11	0835	2.14	
02	1000 2860-31-02	1000 2860-31-02	08/03/11	0845	2.14	
03	500 2860-31-14	500 2860-31-14	08/03/11	0857	2.14	
04	250 2860-30-13	250 2860-30-13	08/03/11	0909	2.14	
05	100 2860-30-14	100 2860-30-14	08/03/11	0921	2.14	
06	50 2860-30-15	50 2860-30-15	08/03/11	0933	2.14	
07	IC500 2860-30-16	IC500 2860-30-16	08/03/11	0945	2.14	
08	EWL-T-05-C-WHOLE BO	4048240001	08/03/11	1044	2.14	
09	EWL-T-08-C-WHOLE BO	4048240003	08/03/11	1108	2.14	
10	EWL-T-10-C-WHOLE BO	4048240004	08/03/11	1120	2.14	
11	MBLCS	482789	08/03/11	1432	2.14	
12	MB	482788	08/03/11	1442	2.14	
13	MBLCSD	482790	08/03/11	1454	2.14	
14	EWL-T-07-C-WHOLE BO	4048240002	08/03/11	1506	2.14	
15	EWL-T-12-C-WHOLE BO	4048240005	08/03/11	1518	2.14	
16	EWL-LC-C-WHOLE BODY	4048240006	08/03/11	1530	2.14	
17	CC500 2860-31-14	CC500 2860-31-14	08/03/11	1642	2.14	
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048240

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-05-C-WHOLE BODY TX
Lab ID: 4048240001
Collected: 12/21/10 10:33
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**5.6J**	mg/kg	6.9	3.5	1	07/28/11 12:00	08/03/11 10:44	
	TPH (C08-C16)	**<3.5**	mg/kg	6.9	3.5	1	07/28/11 12:00	08/03/11 10:44	
	TPH (C16-C28)	**4.2J**	mg/kg	6.9	3.5	1	07/28/11 12:00	08/03/11 10:44	
	TPH (C08-C40)	**95.5**	mg/kg	6.9	3.5	1	07/28/11 12:00	08/03/11 10:44	3q
	TPH - Diesel (C10-C28)	**5.2J**	mg/kg	6.9	3.5	1	07/28/11 12:00	08/03/11 10:44	
Surrogates									
84-15-1	o-Terphenyl (S)	**70**	%.	50-150		1	07/28/11 12:00	08/03/11 10:44	

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-05-C-WHOLE BODY TX
Lab ID: 4048240001
Collected: 12/21/10 10:33
Received: 07/13/11 09:30

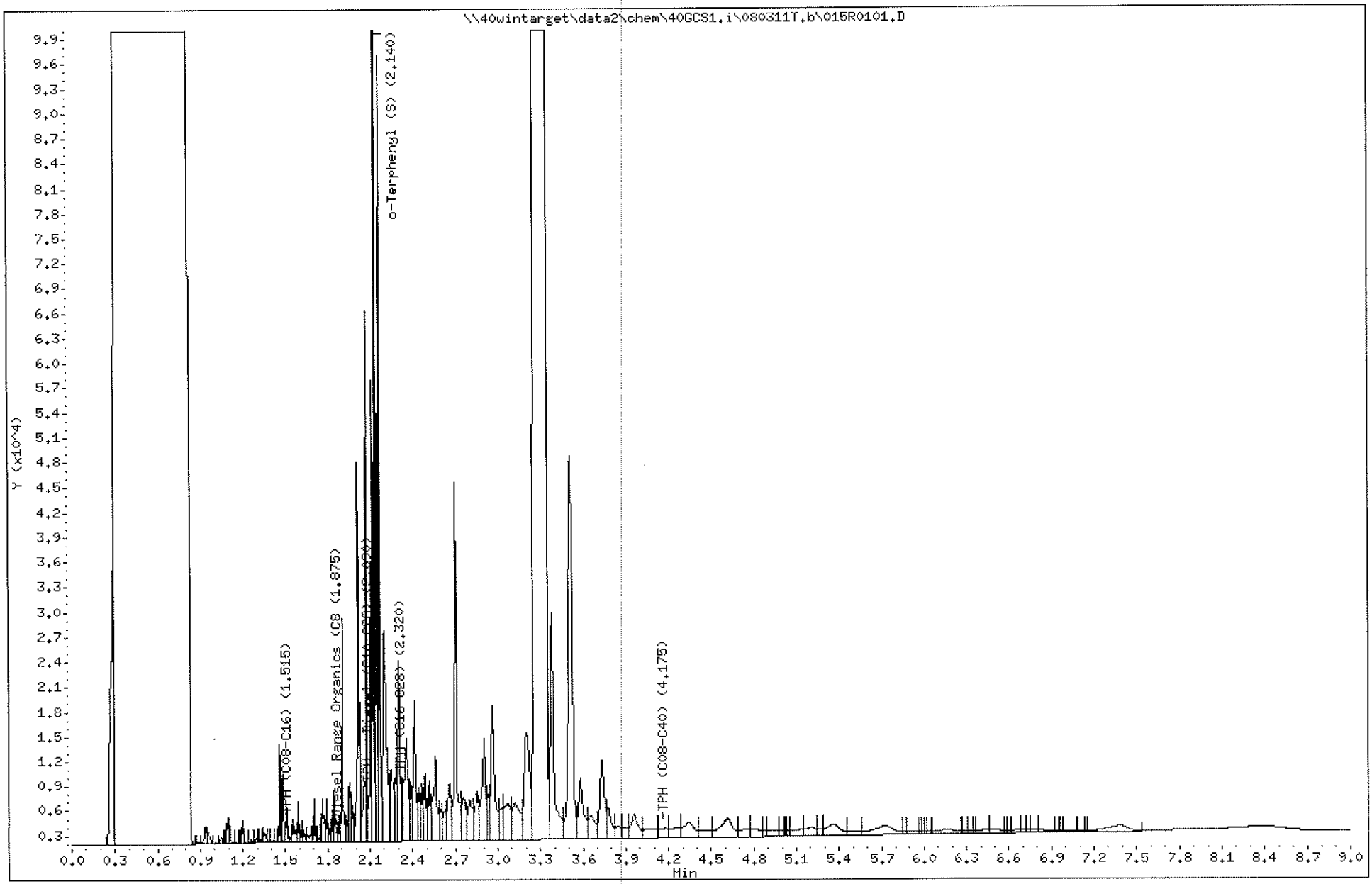
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.37**	%			1		07/29/11 06:57	

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\015R0101.D
Date : 03-AUG-2011 10:44
Client ID: EWL-T-05-C-WHOLE BO
Sample Info: 4048240001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\015R0101.D
Lab Smp Id: 4048240001 Client Smp ID: EWL-T-05-C-WHOLE BO
Inj Date : 03-AUG-2011 10:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048240001
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.406	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			5462955	1376.16	95.52
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.700			398801	60.0103	4.16(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			476119	80.1049	5.56(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			457523	75.2719	5.22
$ 15 o-Terphenyl (S)	2.140	2.140	0.000	177600	35.0748	2.43

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-07-C-WHOLE BODY TX
Lab ID: 4048240002
Collected: 01/03/11 11:05
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<7.0**	mg/kg	14.0	7.0	2	07/28/11 12:00	08/03/11 15:06	
	TPH (C08-C16)	**<7.0**	mg/kg	14.0	7.0	2	07/28/11 12:00	08/03/11 15:06	
	TPH (C16-C28)	**<7.0**	mg/kg	14.0	7.0	2	07/28/11 12:00	08/03/11 15:06	
	TPH (C08-C40)	**140**	mg/kg	14.0	7.0	2	07/28/11 12:00	08/03/11 15:06	3q
	TPH - Diesel (C10-C28)	**<7.0**	mg/kg	14.0	7.0	2	07/28/11 12:00	08/03/11 15:06	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	07/28/11 12:00	08/03/11 15:06	S4

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-07-C-WHOLE BODY TX
Lab ID: 4048240002
Collected: 01/03/11 11:05
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.32	%			1		07/29/11 06:57	

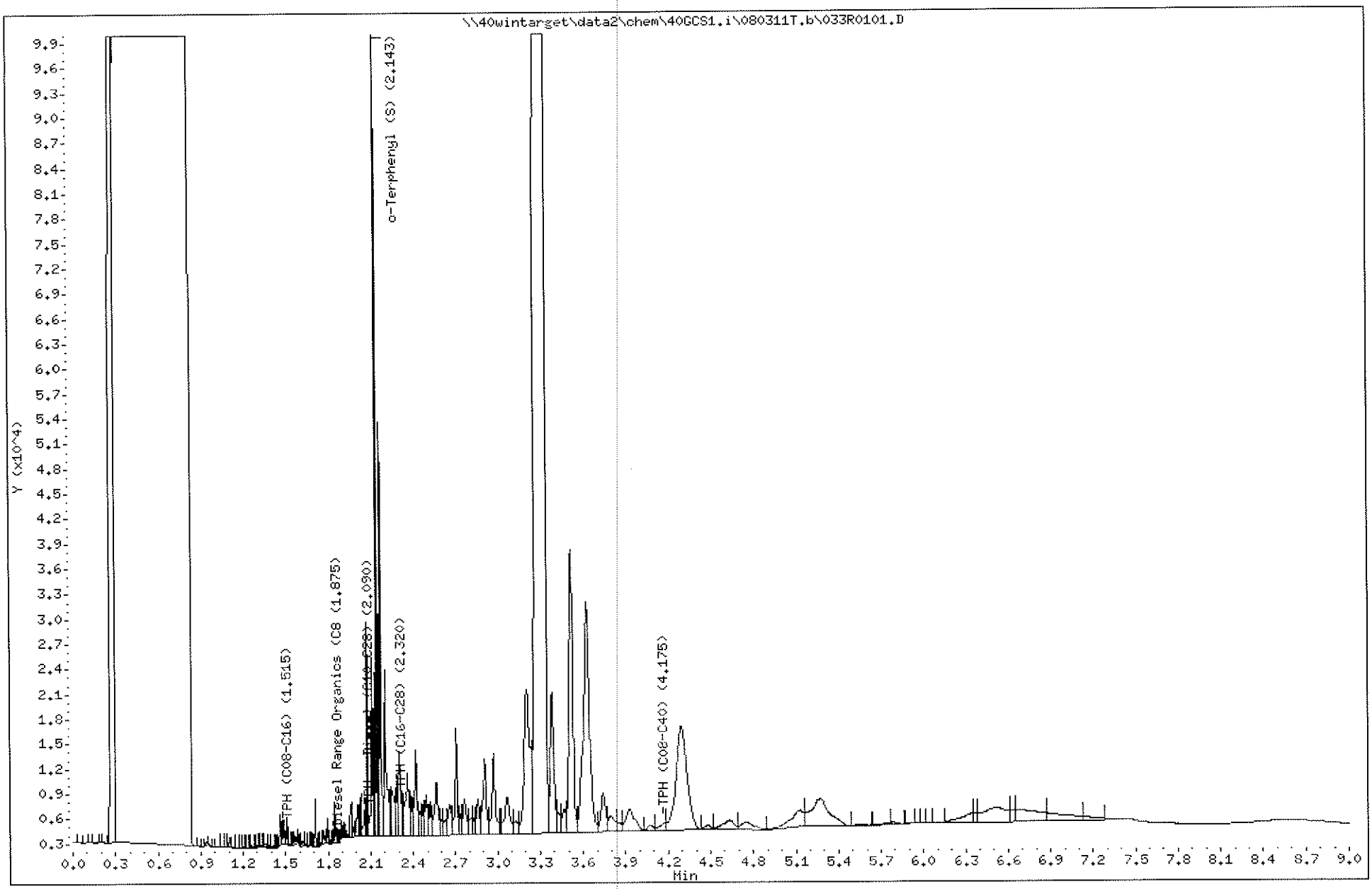
Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\033R0101.D
Date : 03-AUG-2011 15:06
Client ID: EWL-T-07-C-WHOLE BO
Sample Info: 4048240002X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\033R0101.D
Lab Smp Id: 4048240002 Client Smp ID: EWL-T-07-C-WHOLE BO
Inj Date : 03-AUG-2011 15:06
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048240002X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 33
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.319	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			4025143	1002.48	140.02
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.700			207720	10.3493	1.44(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			230046	16.1517	2.25(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			222872	14.2872	1.99
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	79874	15.7746	1.10(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-08-C-WHOLE BODY TX
Lab ID: 4048240003
Collected: 01/03/11 11:05
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**5.3J**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 11:08	
	TPH (C08-C16)	**<3.5**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 11:08	
	TPH (C16-C28)	**4.1J**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 11:08	
	TPH (C08-C40)	**125**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 11:08	3q
	TPH - Diesel (C10-C28)	**5.1J**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 11:08	
Surrogates									
84-15-1	o-Terphenyl (S)	**75**	%.	50-150		1	07/28/11 12:00	08/03/11 11:08	

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

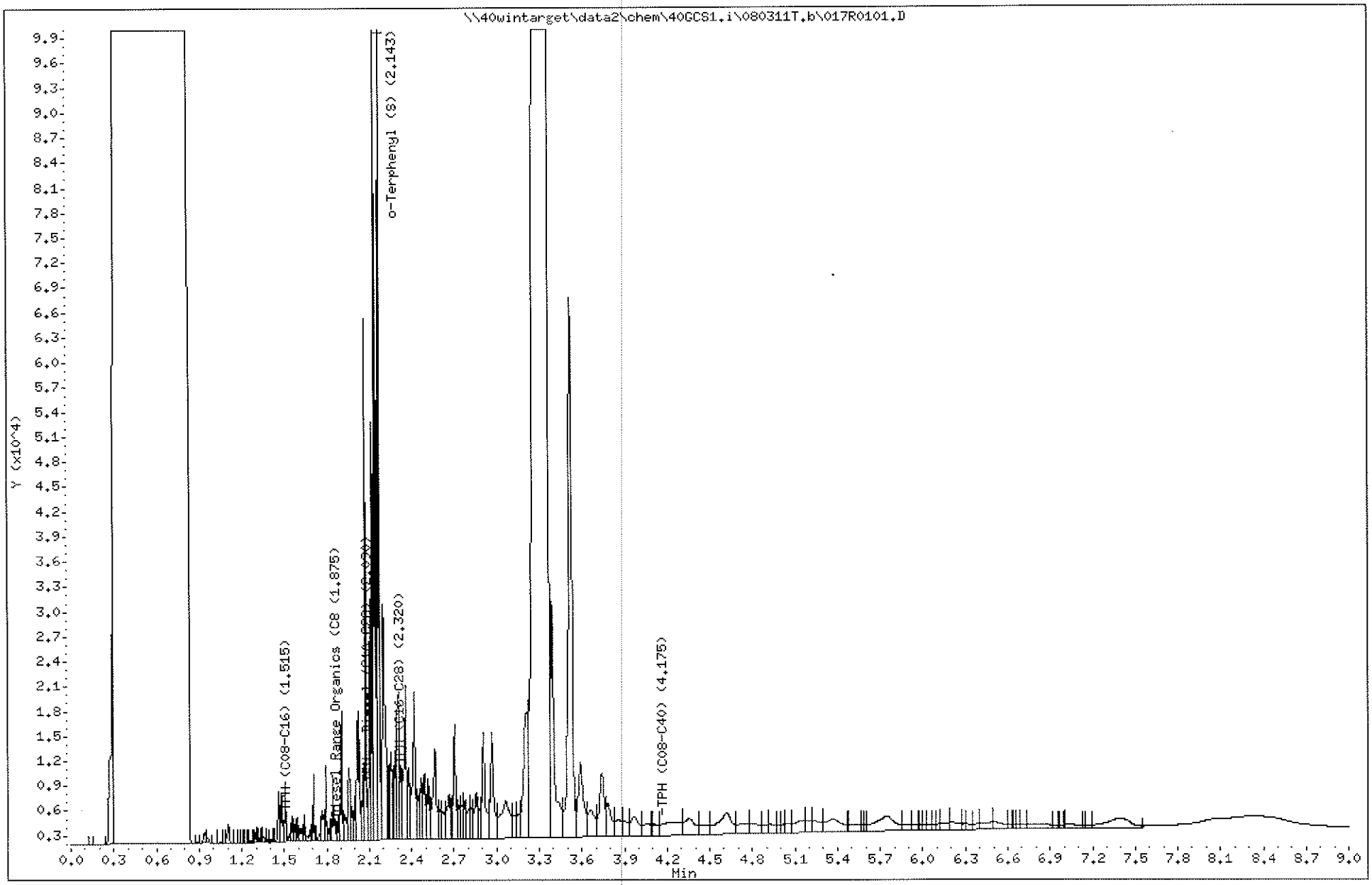
Sample: EWL-T-08-C-WHOLE BODY TX
Lab ID: 4048240003
Collected: 01/03/11 11:05
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.31**	%			1		07/29/11 06:57	

Date: 06/04/2012 11:59 AM

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\017R0101.D
Date : 03-AUG-2011 11:08
Client ID: EWL-T-08-C-WHOLE BO
Sample Info: 4048240003
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\017R0101.D
Lab Smp Id: 4048240003 Client Smp ID: EWL-T-08-C-WHOLE BO
Inj Date : 03-AUG-2011 11:08
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048240003
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.332	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			7086403	1798.09	125.45
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.700			393906	58.7381	4.09(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			459626	75.8184	5.29(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			450612	73.4757	5.12
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	190098	37.5430	2.61

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-WHOLE BODY TX
Lab ID: 4048240004
Collected: 01/03/11 11:23
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**3.4J**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/03/11 11:20	
	TPH (C08-C16)	**<3.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/03/11 11:20	
	TPH (C16-C28)	**<3.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/03/11 11:20	
	TPH (C08-C40)	**108**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/03/11 11:20	3q
	TPH - Diesel (C10-C28)	**<3.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/03/11 11:20	
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	07/28/11 12:00	08/03/11 11:20	

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-WHOLE BODY TX
Lab ID: 4048240004
Collected: 01/03/11 11:23
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.19**	%			1		07/29/11 06:57	

Date: 06/04/2012 11:59 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Percent Moisture
Prep/Method: ASTM D2974-87
Results reported on a "wet-weight" basis

Sample: EWL-T-10-C-WHOLE BODY TX
Lab ID: 4048240004
Collected: 01/03/11 11:23
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Percent Moisture	**70.9**	%	0.10	0.10	1		12/02/11 06:26	

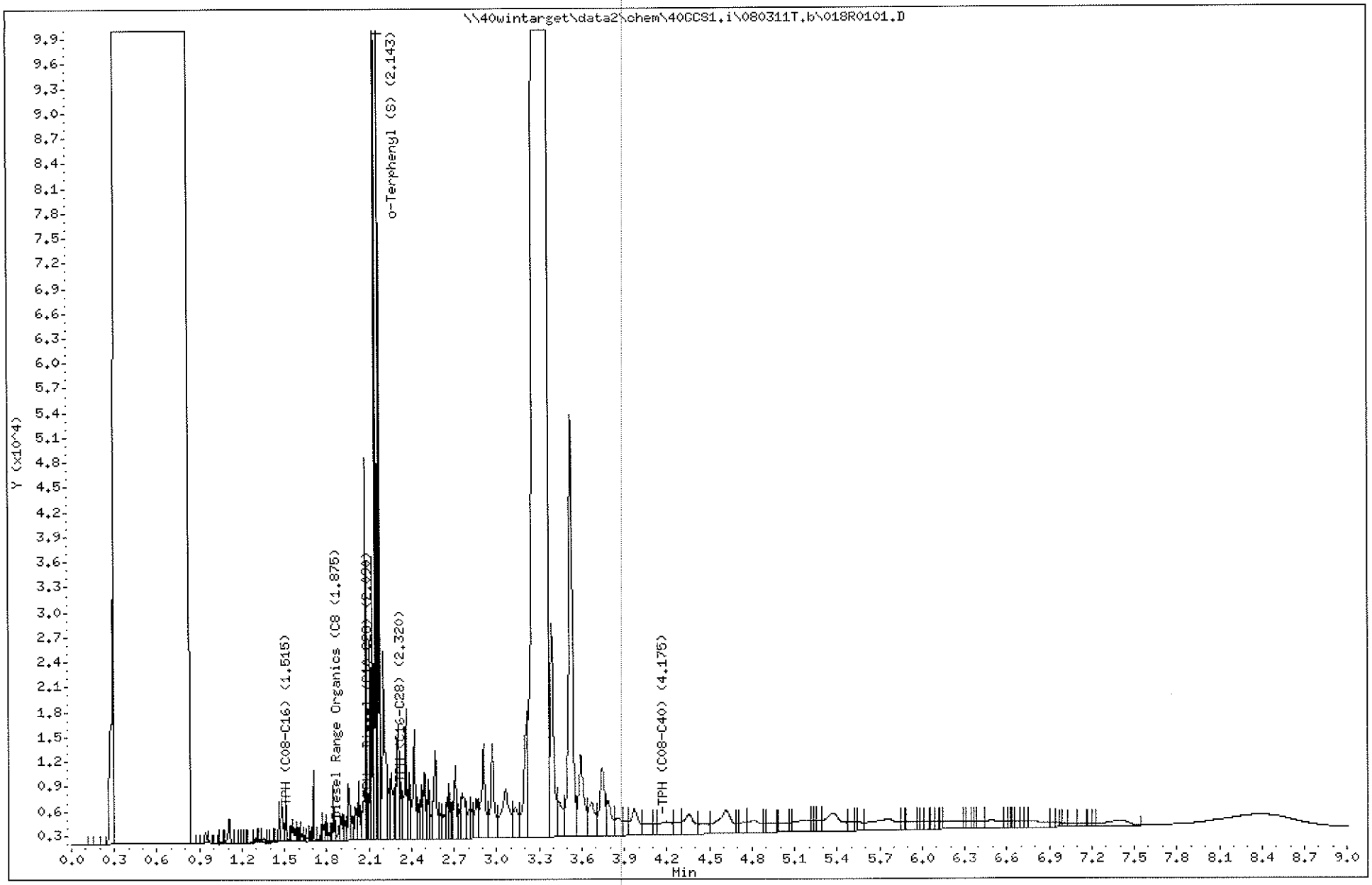
Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\018R0101.D
Date : 03-AUG-2011 11:20
Client ID: EWL-T-10-C-WHOLE BO
Sample Info: 4048240004
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\018R0101.D
Lab Smp Id: 4048240004 Client Smp ID: EWL-T-10-C-WHOLE BO
Inj Date : 03-AUG-2011 11:20
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048240004
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-7.300			6380849	1614.72	107.64
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			323022	40.3157	2.68(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			365956	51.4741	3.43(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			358074	49.4256	3.29
$	15 o-Terphenyl (S)	2.143	2.140	0.003	155303	30.6713	2.04

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-12-C-WHOLE BODY TX
Lab ID: 4048240005
Collected: 01/03/11 11:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<6.8**	mg/kg	13.6	6.8	2	07/28/11 12:00	08/03/11 15:18	
	TPH (C08-C16)	**<6.8**	mg/kg	13.6	6.8	2	07/28/11 12:00	08/03/11 15:18	
	TPH (C16-C28)	**<6.8**	mg/kg	13.6	6.8	2	07/28/11 12:00	08/03/11 15:18	
	TPH (C08-C40)	**133**	mg/kg	13.6	6.8	2	07/28/11 12:00	08/03/11 15:18	3q
	TPH - Diesel (C10-C28)	**<6.8**	mg/kg	13.6	6.8	2	07/28/11 12:00	08/03/11 15:18	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	07/28/11 12:00	08/03/11 15:18	S4

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-12-C-WHOLE BODY TX
Lab ID: 4048240005
Collected: 01/03/11 11:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.31**	%			1		07/29/11 06:57	

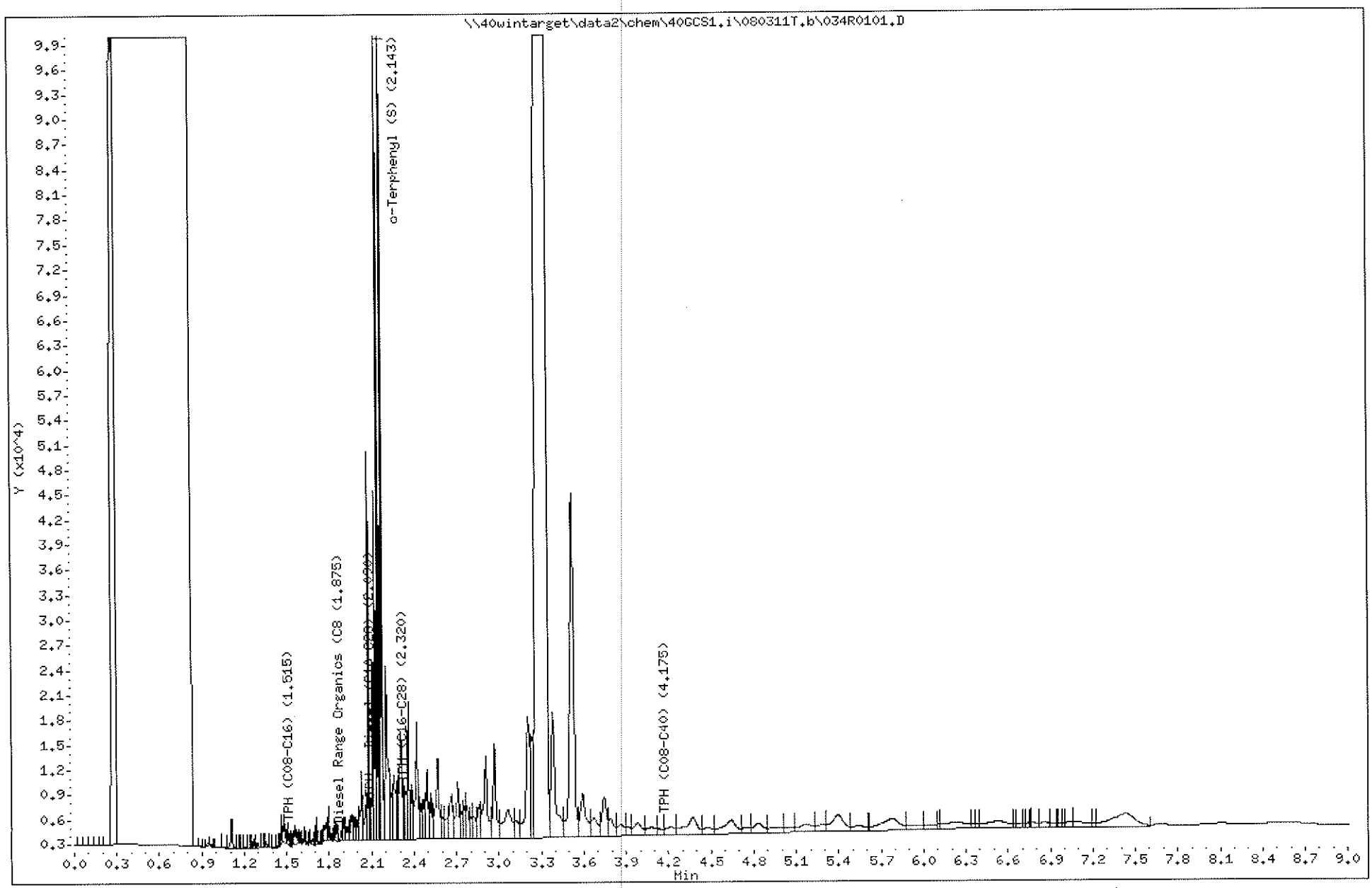
Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\034R0101.D
Date : 03-AUG-2011 15:18
Client ID: EWL-T-12-C-WHOLE BO
Sample Info: 404824000SX2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\034R0101.D
Lab Smp Id: 4048240005 Client Smp ID: EWL-T-12-C-WHOLE BO
Inj Date : 03-AUG-2011 15:18
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048240005X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 34
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.736	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			3939185	980.139	133.02
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			313363	37.8054	5.13(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			341908	45.2241	6.13(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			334938	43.4126	5.89
$	15 o-Terphenyl (S)	2.143	2.140	0.003	84113	16.6117	1.12(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-WHOLE BODY TX
Lab ID: 4048240006
Collected: 01/04/11 15:30
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<10**	mg/kg	20.0	10	3	07/28/11 12:00	08/03/11 15:30	
	TPH (C08-C16)	**<10**	mg/kg	20.0	10	3	07/28/11 12:00	08/03/11 15:30	
	TPH (C16-C28)	**<10**	mg/kg	20.0	10	3	07/28/11 12:00	08/03/11 15:30	
	TPH (C08-C40)	**194**	mg/kg	20.0	10	3	07/28/11 12:00	08/03/11 15:30	3q
	TPH - Diesel (C10-C28)	**<10**	mg/kg	20.0	10	3	07/28/11 12:00	08/03/11 15:30	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/28/11 12:00	08/03/11 15:30	S4

Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-WHOLE BODY TX
Lab ID: 4048240006
Collected: 01/04/11 15:30
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.58**	%			1		07/29/11 06:58	

Date: 06/04/2012 11:59 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048240

Matrix: Tissue
% Moisture:
Acode: Percent Moisture
Prep/Method: ASTM D2974-87
Results reported on a "wet-weight" basis

Sample: EWL-LC-C-WHOLE BODY TX
Lab ID: 4048240006
Collected: 01/04/11 15:30
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Quai
	Percent Moisture	**72.6**	%	0.10	0.10	1		12/02/11 06:26	

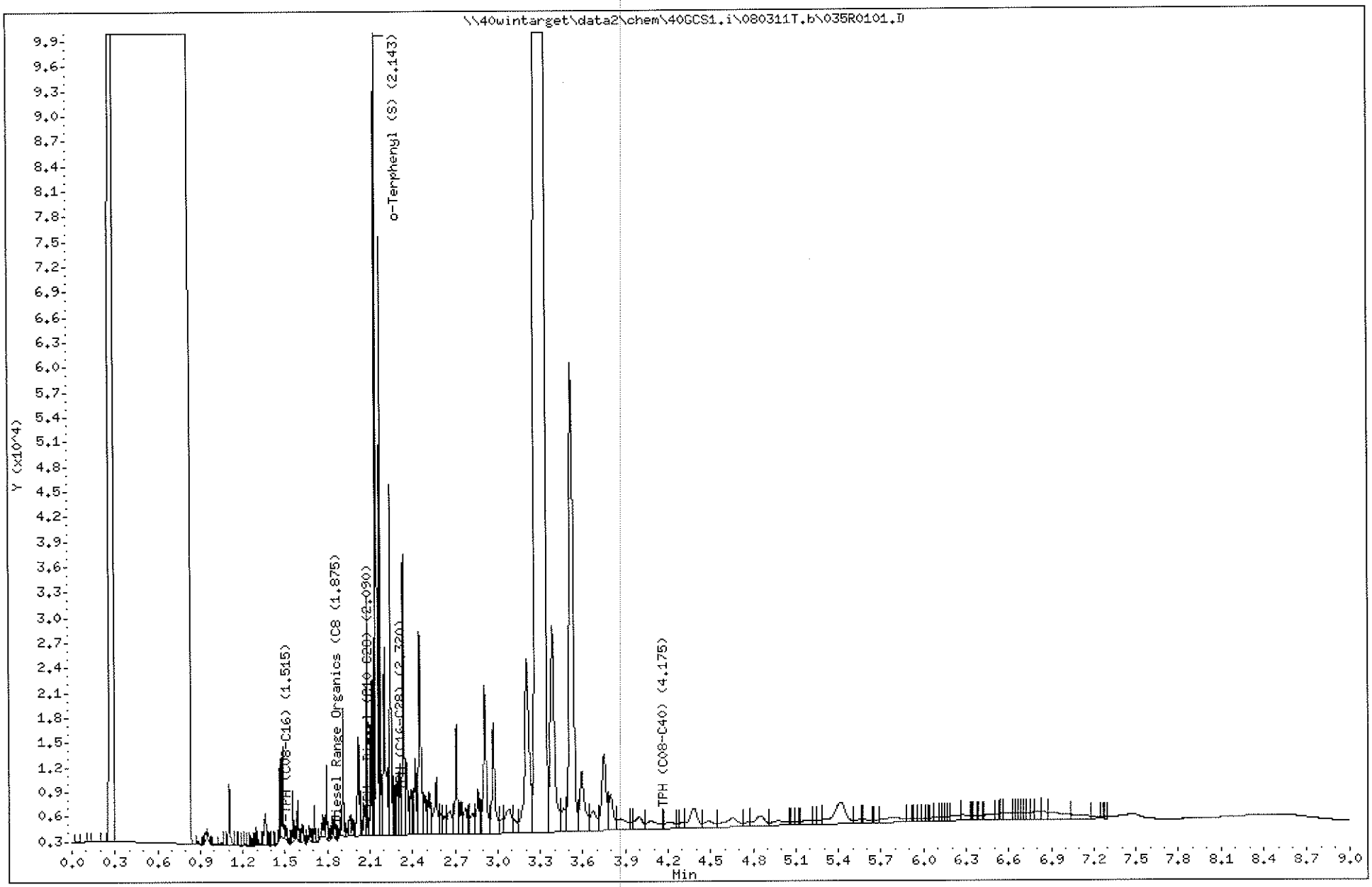
Date: 06/04/2012 11:59 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\035R0101.D
Date : 03-AUG-2011 15:30
Client ID: EWL-LC-C-WHOLE BODY
Sample Info: 4048240006X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\035R0101.D
Lab Smp Id: 4048240006 Client Smp ID: EWL-LC-C-WHOLE BODY
Inj Date : 03-AUG-2011 15:30
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048240006X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 35
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			3905823	971.468	194.29
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.700			267058	25.7709	5.15(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			319274	39.3416	7.86(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			303211	35.1669	7.03
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	80418	15.8820	1.05(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048240

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:00 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	2 Diesel Range Organics (C8-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	3 High End Organics (C8-C34)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	4 TPH (C08-C36)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	5 TPH (C08-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	6 TPH (C10-C12)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	7 TPH (C10-C20)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	8 TPH - Diesel (C10-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	9 TPH (C10-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	10 TPH (C12-C20)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	11 TPH (C12-C36)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	12 TPH (C16-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	13 TPH (C16-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	14 TPH (C20-C34)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:00 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 o-Terphenyl (S)	0.00025	0.00022	0.00018	0.00023	0.00017	0.00014	AVRG		0.00020		20.84467	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

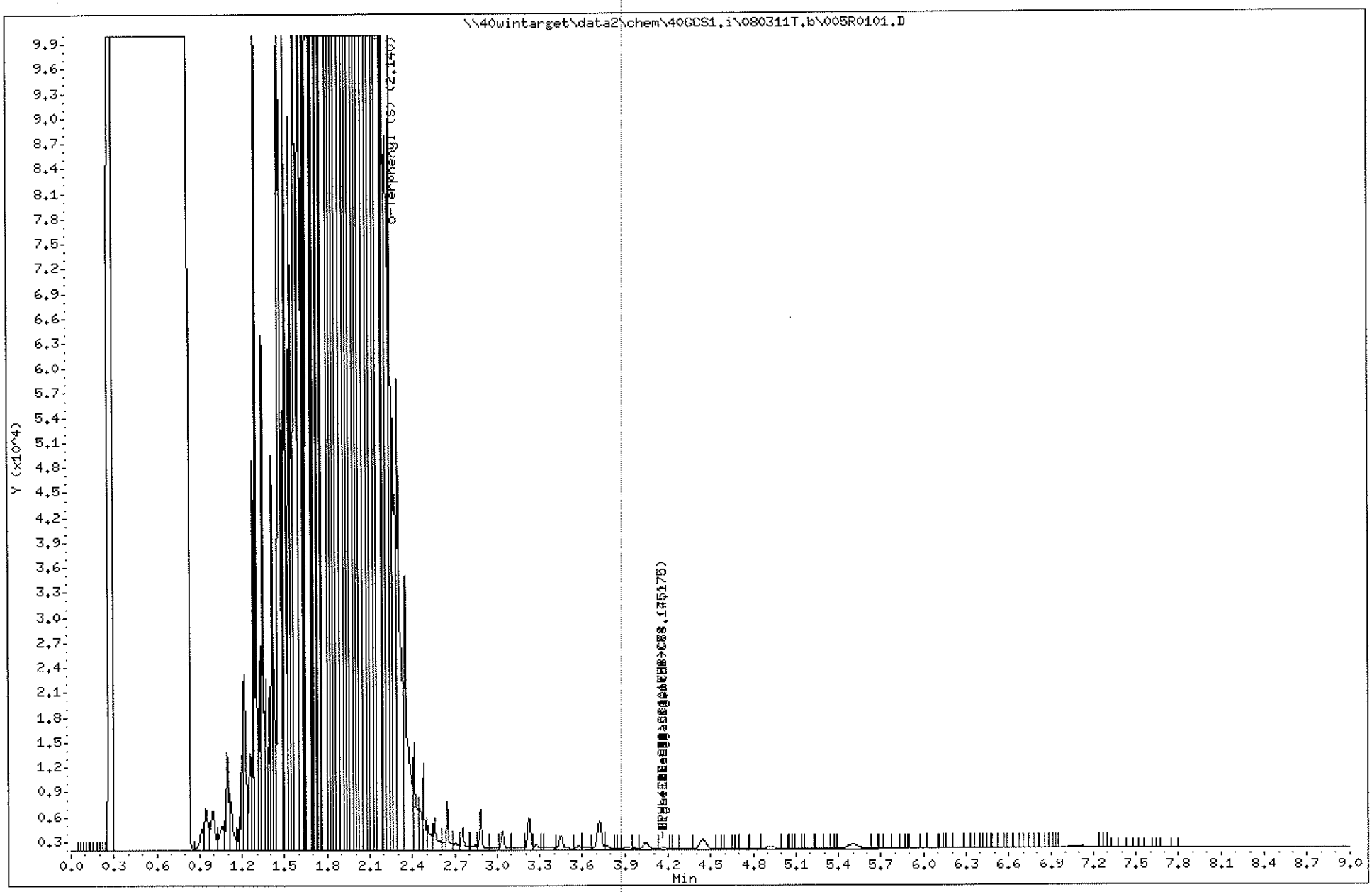
Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:00 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D
Date : 03-AUG-2011 08:35
Client ID: 2000 2860-31-01
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01 Client Smp ID: 2000 2860-31-01
Inj Date : 03-AUG-2011 08:35
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:35 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050	1.980		7907189	2000.00	2011.40(TA)
S	11 TPH (C12-C36)	1.050	7.300		7907189	2000.00	2011.40(A)
S	2 Diesel Range Organics (C8-C28)	1.050	2.700		7907189	2000.00	2011.40(TA)
S	3 High End Organics (C8-C34)	1.050	7.300		7907189	2000.00	2011.40(A)
S	4 TPH (C08-C36)	1.050	7.300		7907189	2000.00	2011.40(A)
S	5 TPH (C08-C40)	1.050	7.300		7907189	2000.00	2011.40(A)
S	6 TPH (C10-C12)	1.050	7.300		7907189	2000.00	2011.40(A)
S	7 TPH (C10-C20)	1.050	7.300		7907189	2000.00	2011.40(A)
S	8 TPH - Diesel (C10-C28)	1.480	2.700		7907189	2000.00	2011.40(TA)
S	9 TPH (C10-C40)	1.050	7.300		7907189	2000.00	2011.40(A)
S	10 TPH (C12-C20)	1.050	7.300		7907189	2000.00	2011.40(A)
S	12 TPH (C16-C28)	1.050	1.980		7907189	2000.00	2011.40(TA)
S	13 TPH (C16-C40)	1.050	7.300		7907189	2000.00	2011.40(A)
S	14 TPH (C20-C34)	1.050	7.300		7907189	2000.00	2011.40(A)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	360822	50.0000	71.25

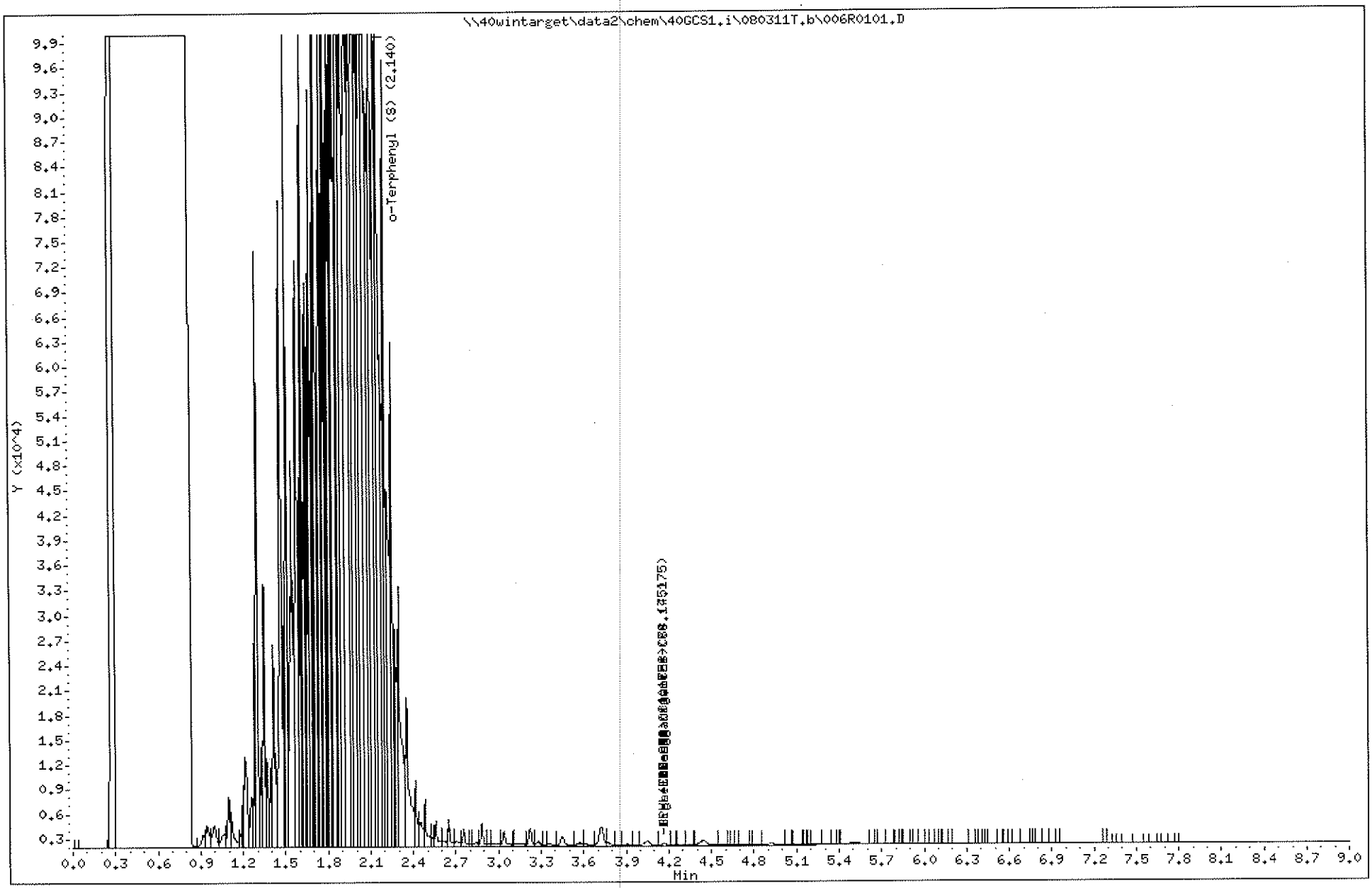
QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Date : 03-AUG-2011 08:45
Client ID: 1000 2860-31-02
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02 Client Smp ID: 1000 2860-31-02
Inj Date : 03-AUG-2011 08:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:45 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050	1.980		4009201	1000.00	998.33(T)
S 11 TPH (C12-C36)	1.050	7.300		4009201	1000.00	998.33
S 2 Diesel Range Organics (C8-C28)	1.050	2.700		4009201	1000.00	998.33(T)
S 3 High End Organics (C8-C34)	1.050	7.300		4009201	1000.00	998.33
S 4 TPH (C08-C36)	1.050	7.300		4009201	1000.00	998.33
S 5 TPH (C08-C40)	1.050	7.300		4009201	1000.00	998.33
S 6 TPH (C10-C12)	1.050	7.300		4009201	1000.00	998.33
S 7 TPH (C10-C20)	1.050	7.300		4009201	1000.00	998.33
S 8 TPH - Diesel (C10-C28)	1.480	2.700		4009201	1000.00	998.33(T)
S 9 TPH (C10-C40)	1.050	7.300		4009201	1000.00	998.33
S 10 TPH (C12-C20)	1.050	7.300		4009201	1000.00	998.33
S 12 TPH (C16-C28)	1.050	1.980		4009201	1000.00	998.33(T)
S 13 TPH (C16-C40)	1.050	7.300		4009201	1000.00	998.33
S 14 TPH (C20-C34)	1.050	7.300		4009201	1000.00	998.33
$ 15 o-Terphenyl (S)	2.140	2.140	0.000	293346	50.0000	57.93

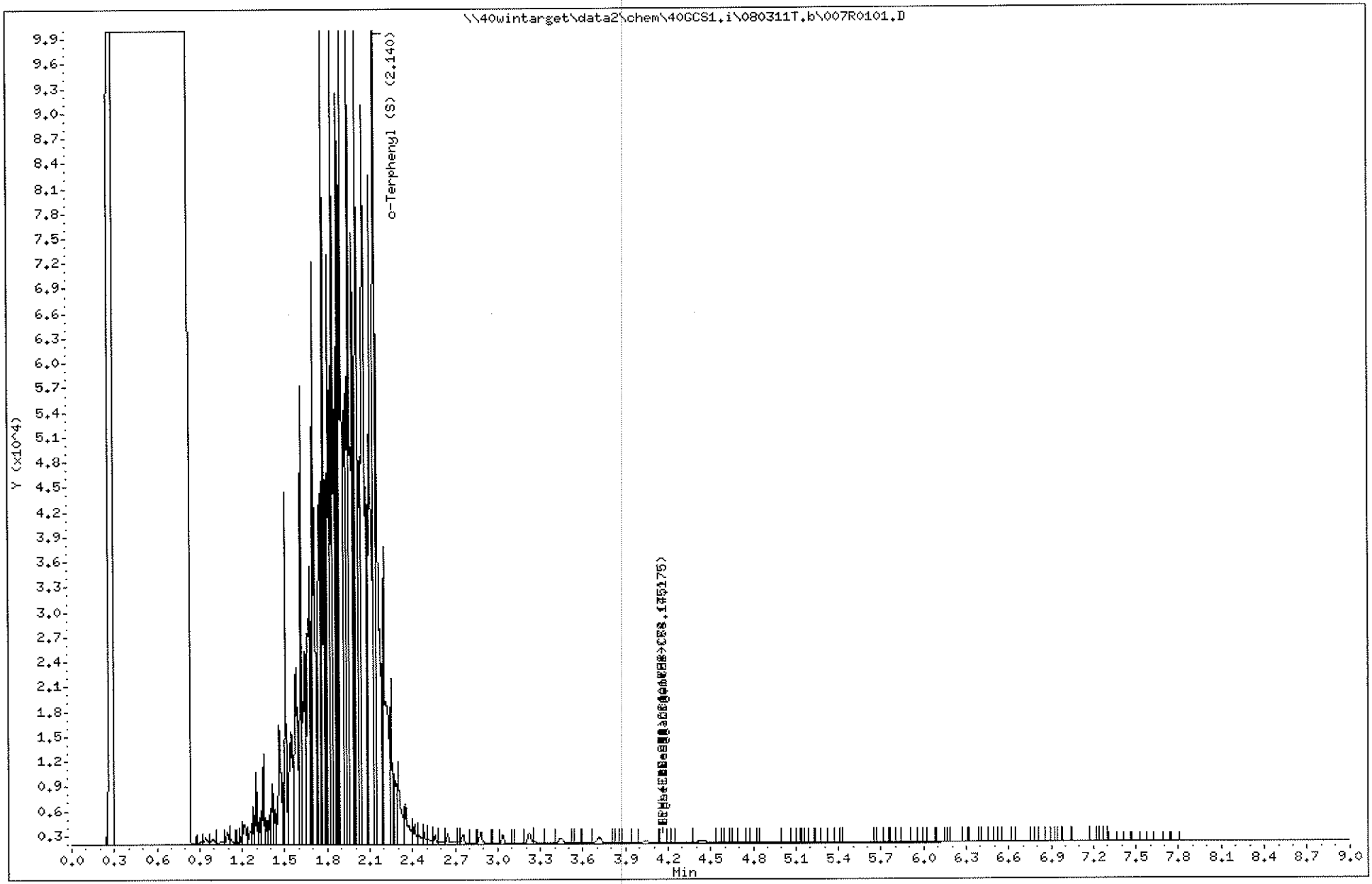
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Date : 03-AUG-2011 08:57
Client ID: 500 2860-31-14
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Lab Smp Id: 500 2860-31-14 Client Smp ID: 500 2860-31-14
Inj Date : 03-AUG-2011 08:57
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:57 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050	1.980		1794982	500.000	422.87(T)
S 11 TPH (C12-C36)	1.050	7.300		1794982	500.000	422.87
S 2 Diesel Range Organics (C8-C28)	1.050	2.700		1794982	500.000	422.87(T)
S 3 High End Organics (C8-C34)	1.050	7.300		1794982	500.000	422.87
S 4 TPH (C08-C36)	1.050	7.300		1794982	500.000	422.87
S 5 TPH (C08-C40)	1.050	7.300		1794982	500.000	422.87
S 6 TPH (C10-C12)	1.050	7.300		1794982	500.000	422.87
S 7 TPH (C10-C20)	1.050	7.300		1794982	500.000	422.87
S 8 TPH - Diesel (C10-C28)	1.480	2.700		1794982	500.000	422.87(T)
S 9 TPH (C10-C40)	1.050	7.300		1794982	500.000	422.87
S 10 TPH (C12-C20)	1.050	7.300		1794982	500.000	422.87
S 12 TPH (C16-C28)	1.050	1.980		1794982	500.000	422.87(T)
S 13 TPH (C16-C40)	1.050	7.300		1794982	500.000	422.87
S 14 TPH (C20-C34)	1.050	7.300		1794982	500.000	422.87
$ 15 o-Terphenyl (S)	2.140	2.140	0.000	217195	50.0000	42.89

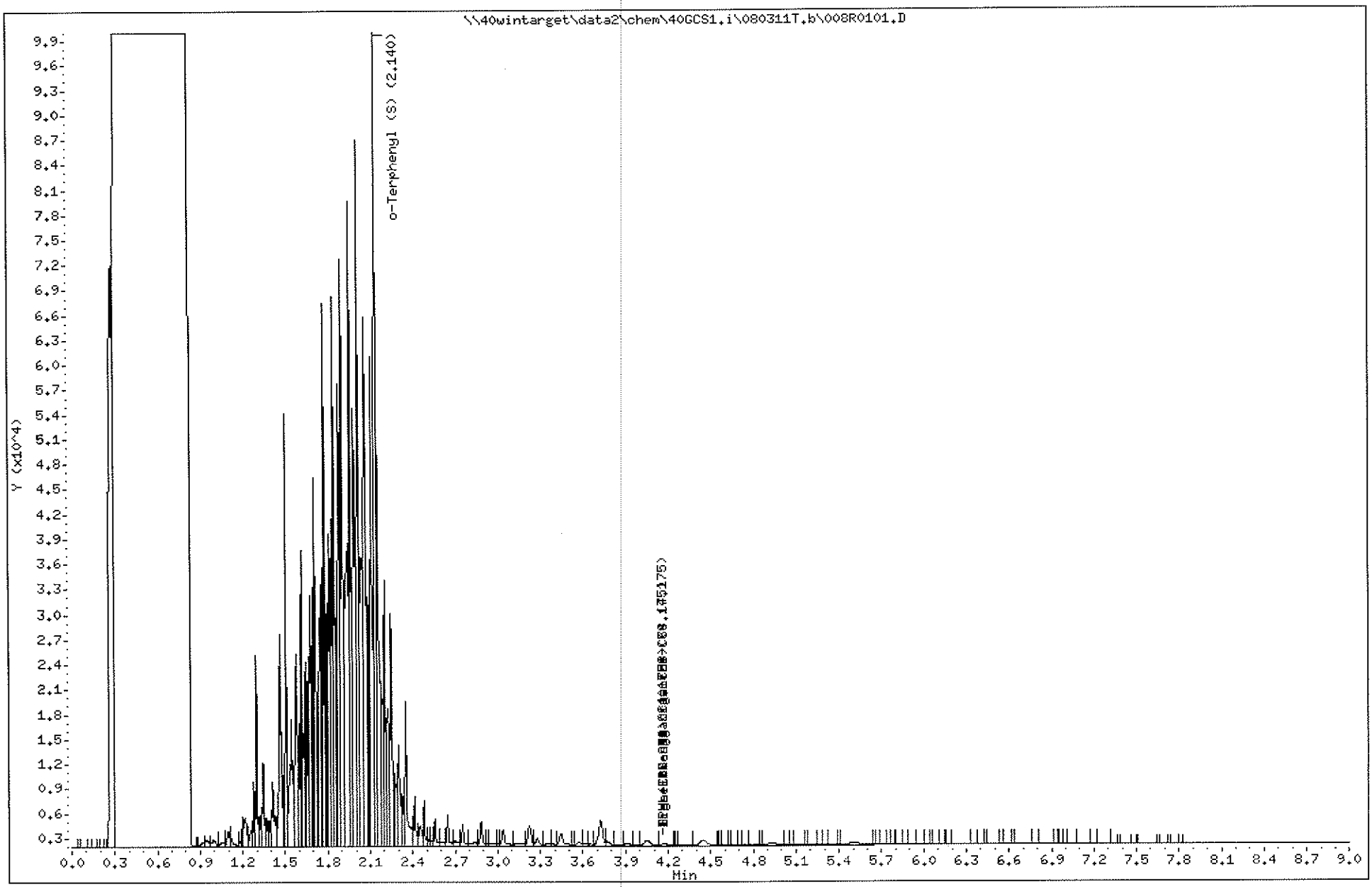
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Date : 03-AUG-2011 09:09
Client ID: 250 2860-30-13
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Lab Smp Id: 250 2860-30-13 Client Smp ID: 250 2860-30-13
Inj Date : 03-AUG-2011 09:09
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:09 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

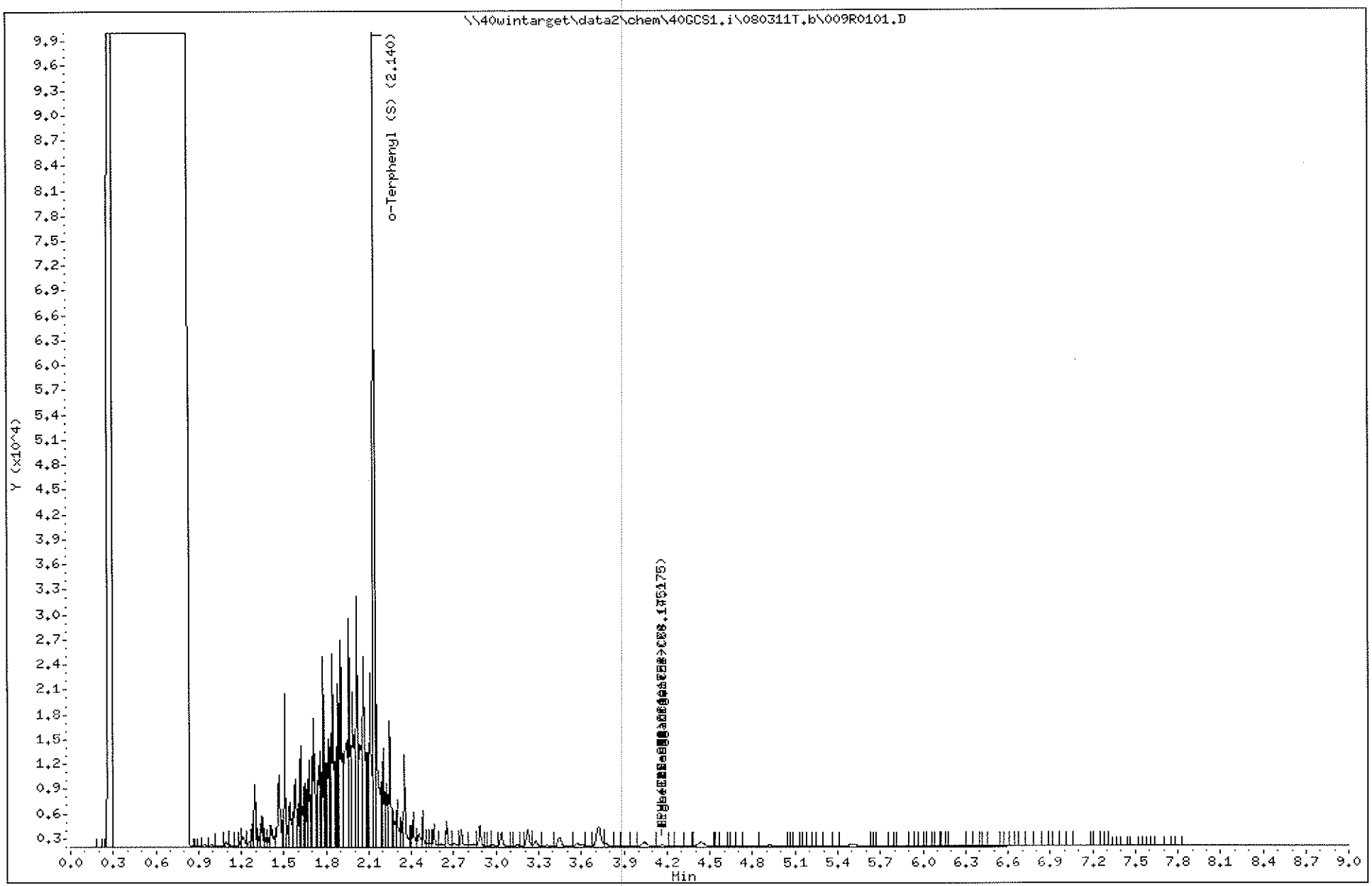
						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			1402797	250.000	320.94(T)
S	11 TPH (C12-C36)	1.050-7.300			1402797	250.000	320.94
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			1402797	250.000	320.94(T)
S	3 High End Organics (C8-C34)	1.050-7.300			1402797	250.000	320.94
S	4 TPH (C08-C36)	1.050-7.300			1402797	250.000	320.94
S	5 TPH (C08-C40)	1.050-7.300			1402797	250.000	320.94
S	6 TPH (C10-C12)	1.050-7.300			1402797	250.000	320.94
S	7 TPH (C10-C20)	1.050-7.300			1402797	250.000	320.94
S	8 TPH - Diesel (C10-C28)	1.480-2.700			1402797	250.000	320.94(T)
S	9 TPH (C10-C40)	1.050-7.300			1402797	250.000	320.94
S	10 TPH (C12-C20)	1.050-7.300			1402797	250.000	320.94
S	12 TPH (C16-C28)	1.050-1.980			1402797	250.000	320.94(T)
S	13 TPH (C16-C40)	1.050-7.300			1402797	250.000	320.94
S	14 TPH (C20-C34)	1.050-7.300			1402797	250.000	320.94
$	15 o-Terphenyl (S)	2.140	2.140	0.000	279515	50.0000	55.20

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Date : 03-AUG-2011 09:21
Client ID: 100 2860-30-14
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Lab Smp Id: 100 2860-30-14 Client Smp ID: 100 2860-30-14
Inj Date : 03-AUG-2011 09:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:21 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			542086	100.000	97.24(Ta)
S	11 TPH (C12-C36)	1.050-7.300			542086	100.000	97.24(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			542086	100.000	97.24(Ta)
S	3 High End Organics (C8-C34)	1.050-7.300			542086	100.000	97.24(a)
S	4 TPH (C08-C36)	1.050-7.300			542086	100.000	97.24(a)
S	5 TPH (C08-C40)	1.050-7.300			542086	100.000	97.24(a)
S	6 TPH (C10-C12)	1.050-7.300			542086	100.000	97.24(a)
S	7 TPH (C10-C20)	1.050-7.300			542086	100.000	97.24(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			542086	100.000	97.24(T)
S	9 TPH (C10-C40)	1.050-7.300			542086	100.000	97.24(a)
S	10 TPH (C12-C20)	1.050-7.300			542086	100.000	97.24(a)
S	12 TPH (C16-C28)	1.050-1.980			542086	100.000	97.24(Ta)
S	13 TPH (C16-C40)	1.050-7.300			542086	100.000	97.24(a)
S	14 TPH (C20-C34)	1.050-7.300			542086	100.000	97.24(a)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	225457	50.0000	44.52

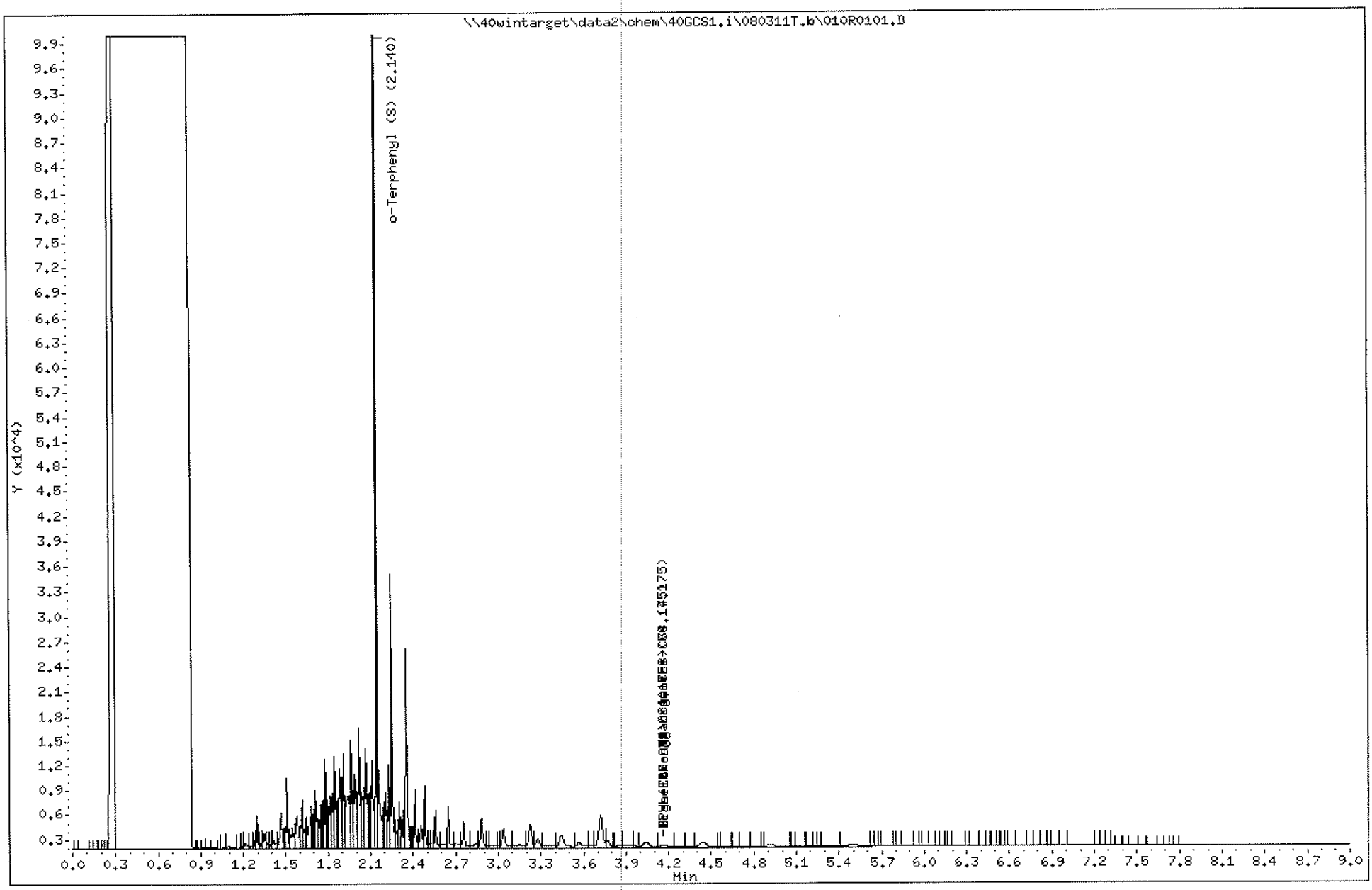
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Date : 03-AUG-2011 09:33
Client ID: 50 2860-30-15
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Lab Smp Id: 50 2860-30-15 Client Smp ID: 50 2860-30-15
Inj Date : 03-AUG-2011 09:33
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			357190	50.0000	49.19(Ta)
S	11 TPH (C12-C36)	1.050-7.300			357190	50.0000	49.19(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			357190	50.0000	49.19(Ta)
S	3 High End Organics (C8-C34)	1.050-7.300			357190	50.0000	49.19(a)
S	4 TPH (C08-C36)	1.050-7.300			357190	50.0000	49.19(a)
S	5 TPH (C08-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	6 TPH (C10-C12)	1.050-7.300			357190	50.0000	49.19(a)
S	7 TPH (C10-C20)	1.050-7.300			357190	50.0000	49.19(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			357190	50.0000	49.19(T)
S	9 TPH (C10-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	10 TPH (C12-C20)	1.050-7.300			357190	50.0000	49.19(a)
S	12 TPH (C16-C28)	1.050-1.980			357190	50.0000	49.19(Ta)
S	13 TPH (C16-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	14 TPH (C20-C34)	1.050-7.300			357190	50.0000	49.19(a)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	204017	50.0000	40.29

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i
Lab File ID: 011R0101.D
Analysis Type: WATER
Lab Sample ID: IC500 2860-30-16
Method: \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m

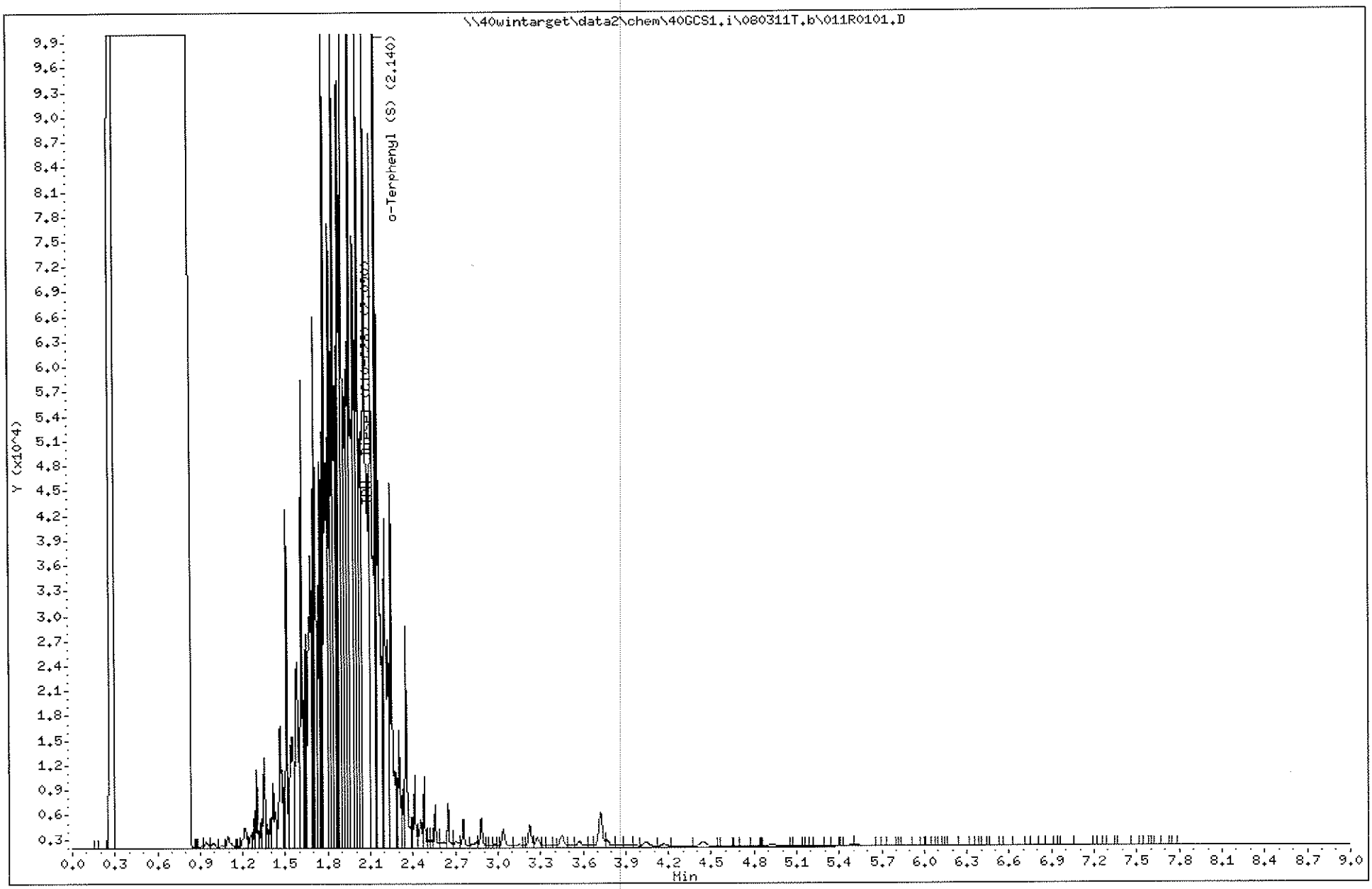
Injection Date: 03-AUG-2011 09:45
Init. Cal. Date(s): 03-AUG-2011 03-AUG-2011
Init. Cal. Times: 08:35 09:33
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	447	0.00026	0.000	-10.57179	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.97091	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\011R0101.D
Date : 03-AUG-2011 09:45
Client ID: IC500 2860-30-16
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16 Client Smp ID: IC500 2860-30-16
Inj Date : 03-AUG-2011 09:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1888366	500.000	447.14
$ 15 o-Terphenyl (S)	2.140	2.140	0.000	228144	50.0000	45.05

Pace Analytical Services, Inc

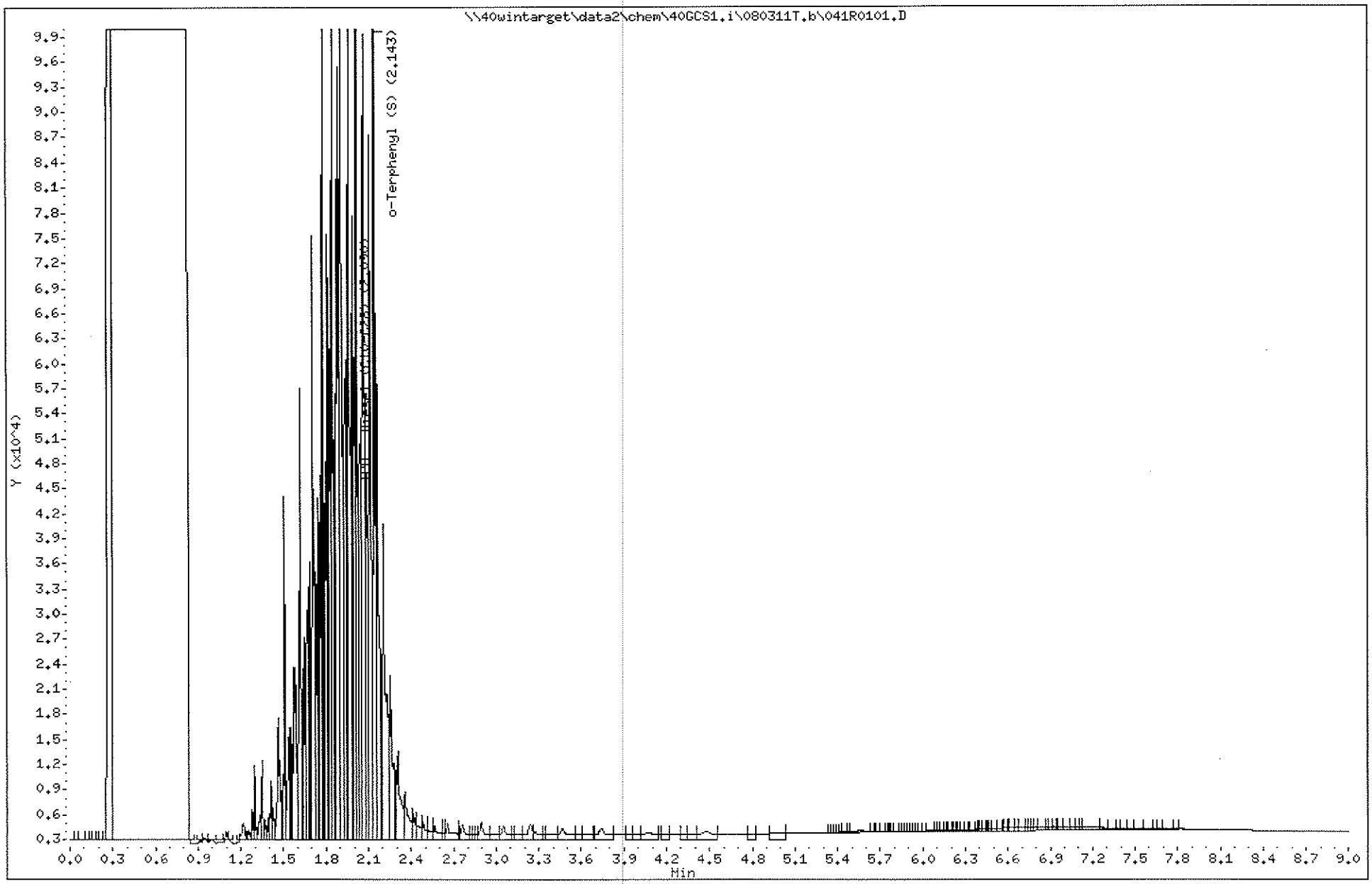
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 03-AUG-2011 16:42
Lab File ID: 041R0101.D Init. Cal. Date(s): 03-AUG-2011 03-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 08:35 09:33
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	469	0.00025	0.000	-6.17478	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.20336	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\041R0101.D
Date : 03-AUG-2011 16:42
Client ID: CC500 2860-31-14
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\041R0101.D
Lab Smp Id: CC500 2860-31-14 Client Smp ID: CC500 2860-31-14
Inj Date : 03-AUG-2011 16:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:00 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 41 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1972958	500.000	469.12
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	229733	50.0000	45.37(M)

QC Flag Legend

M - Compound response manually integrated.

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048240

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048240

QB Batch: OEXT/12034 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048240001, 4048240002, 4048240003, 4048240004, 4048240005, 4048240006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.53	%			07/29/11	

Type	Sample	Matrix
BLANK	483066	Tissue

REPORT OF LABORATORY ANALYSIS

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REVISED
JUN 0 4 2012
J. Durancseau

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048240

QB Batch: OEXT/12023 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048240001, 4048240002, 4048240003, 4048240004, 4048240005, 4048240006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH (C08-C16)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH (C08-C40)	135	mg/kg	13.3	6.7	08/03/11	3q
	TPH (C16-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH - Diesel (C10-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	

Type	Sample	Matrix
BLANK	482788	Tissue

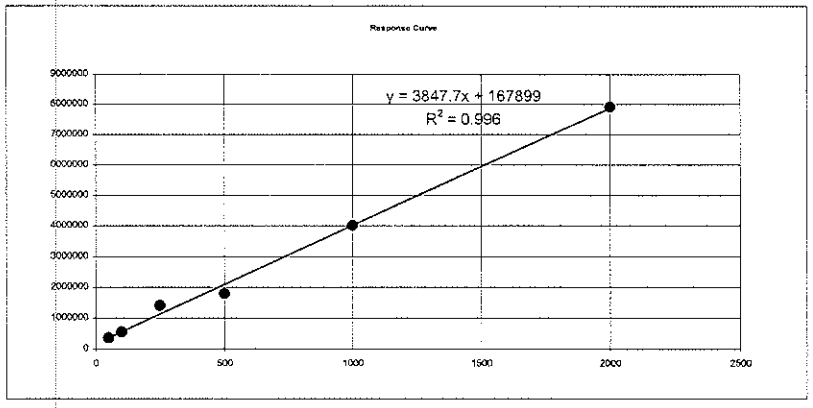
REPORT OF LABORATORY ANALYSIS

SampleID: 482788 File: 31R0101.D TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	88740	
2.017	80868	
2.077	45255	
2.710	113262	

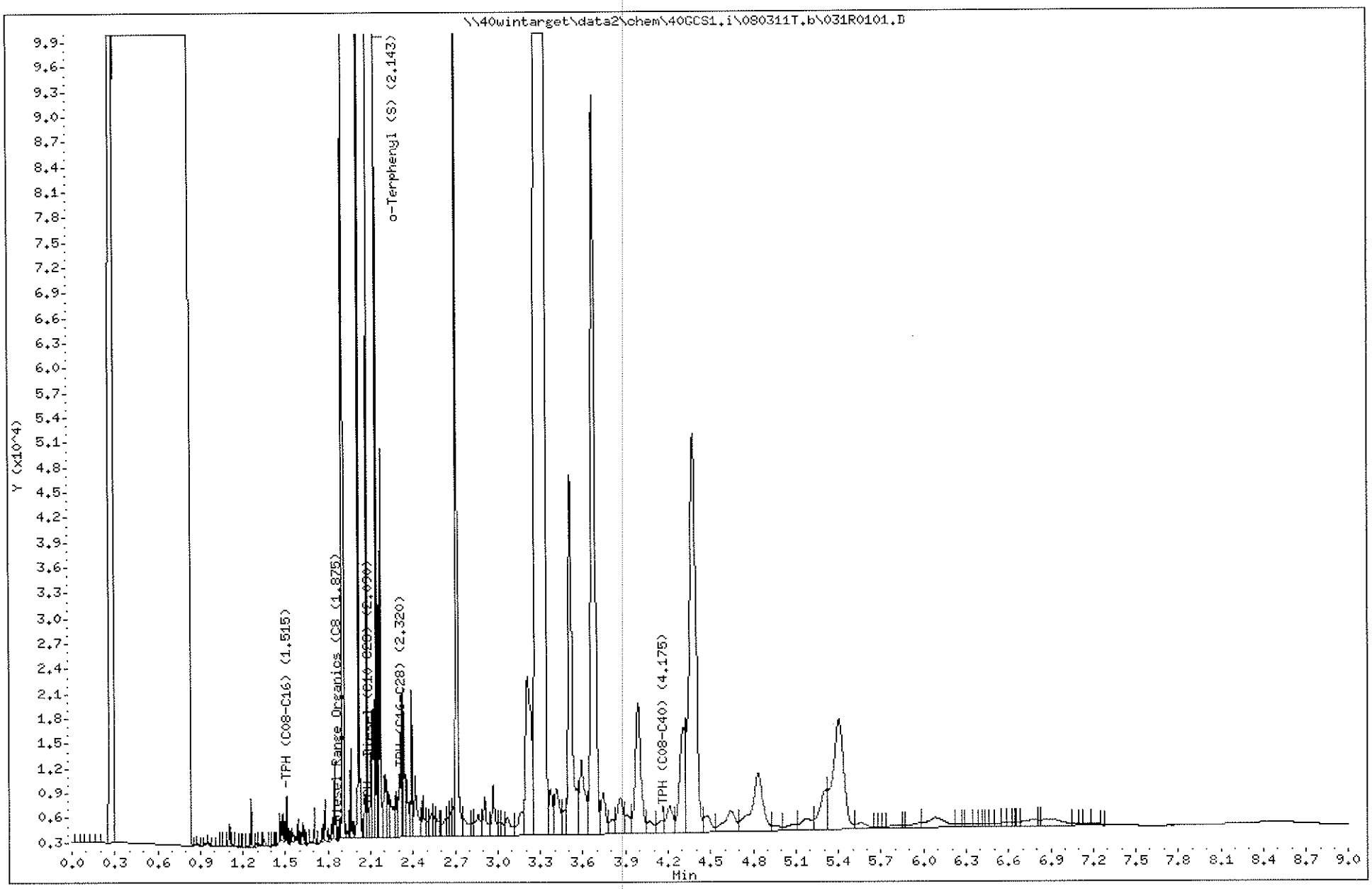
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	129097	88740	-33.1475
Diesel Range Organics (	442943	214863	15.64075
TPH - Diesel (C10-C28)	434755	214863	13.51273
TPH (C16-C28)	321252	126123	7.076949
TPH (C08-C40)	4400136	328125	1014.66

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Date : 03-AUG-2011 14:42
Client ID: MB
Sample Info: 482788X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Lab Smp Id: 482788 Client Smp ID: MB
Inj Date : 03-AUG-2011 14:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482788X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 31 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			4400136	1099.94	146.65
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.700			321252	39.8557	5.31(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			442943	71.4826	9.53(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			434754	69.3543	9.24
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	83667	16.5236	1.10(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Lab Smp Id: 482788 Client Smp ID: MB
Inj Date : 03-AUG-2011 14:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482788X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 31 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	29	20	0.690	0.00		
0.100	24	21	0.864	0.00		
0.167	12	15	1.250	0.00		
0.283	230423	108751	0.472	0.04		
0.317	557764994	94462710	0.169	98.96		
0.887	190	224	1.179	0.00		
0.940	167	170	1.017	0.00		
0.960	236	250	1.058	0.00		
1.027	39	49	1.247	0.00		
1.515	129097	331584	2.568	0.02	S	1 TPH (C08-C16)
1.875	442943	825658	1.864	0.07	S	2 Diesel Range Organi
1.050	15	23	1.575			
1.070	49	73	1.478			
1.107	2008	2609	1.300			
1.133	122	223	1.835			
1.153	102	162	1.582			
1.177	93	135	1.458			
1.197	11	27	2.455			
1.210	22	55	2.511			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.227	141	216	1.534			
1.260	2722	5918	2.174			
1.290	221	406	1.834			
1.313	301	404	1.340			
1.337	54	188	3.481			
1.353	581	792	1.364			
1.407	88	175	1.995			
1.427	90	204	2.257			
1.460	1569	3385	2.157			
2.090	434755	810663	1.865	0.07	S	8 TPH - Diesel (C10-C
1.483	2362	3364	1.424			
1.500	681	2169	3.186			
1.513	3336	5518	1.654			
1.540	70	215	3.080			
1.553	1120	1141	1.019			
1.590	1110	2694	2.426			
1.613	1881	1293	0.687			
1.663	82	112	1.373			
1.673	372	563	1.515			
1.707	1760	4348	2.470			
1.750	101	225	2.223			
1.760	939	2129	2.266			
1.780	3373	4925	1.460			
1.813	359	761	2.122			
1.830	923	2014	2.181			
1.847	4702	9243	1.966			
1.887	1175	2583	2.198			
1.907	88592	257725	2.909			
1.937	566	870	1.537			
1.953	1957	3843	1.964			
1.963	5449	10854	1.992			
2.017	80644	147162	1.825			
2.047	724	1391	1.922			
2.063	3604	5163	1.433			
2.077	45167	122765	2.718			
2.110	10599	15070	1.422			
2.120	13138	15571	1.185			
2.157	11182	27927	2.497			
2.167	29095	25617	0.880			
2.197	9859	7377	0.748			
2.217	6856	6923	1.010			
2.243	7435	4485	0.603			
2.273	1329	3514	2.643			
2.287	4169	5405	1.296			
2.310	9528	12553	1.317			
2.327	10546	18004	1.707			
2.340	7788	15180	1.949			
2.353	8258	7547	0.914			
2.390	10616	17701	1.667			
2.417	11406	7416	0.650			
2.470	6233	4980	0.799			
2.500	2217	1929	0.870			
2.533	3718	2828	0.761			
2.547	2303	2506	1.088			
2.563	4109	2181	0.531			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.600	933	1566	1.679				
2.630	4124	2229	0.540				
2.657	2825	2579	0.913				
2.673	2834	2957	1.044				
2.687	2608	3548	1.360				
2.143	83668	232005	2.773	0.01	$	15	o-Terphenyl (S)
2.320	321252	508771	1.584	0.05	S	12	TPH (C16-C28)
4.175	4400136	2432976	0.553	0.78	S	5	TPH (C08-C40)
2.710	112942	141392	1.252				
2.760	5881	2117	0.360				
2.810	595	1491	2.507				
2.823	1531	1575	1.029				
2.860	6555	2661	0.406				
2.910	8395	4678	0.557				
2.970	9327	6121	0.656				
3.013	2122	1576	0.743				
3.030	1992	1511	0.759				
3.070	5994	2306	0.385				
3.167	7593	2882	0.380				
3.210	52555	19153	0.364				
3.337	2927775	1124827	0.384				
3.373	9023	5560	0.616				
3.417	13916	5620	0.404				
3.470	4437	2951	0.665				
3.513	85924	43080	0.501				
3.590	23501	8971	0.382				
3.680	177083	88476	0.500				
3.743	11648	5068	0.435				
3.803	4336	1714	0.395				
3.863	12455	4369	0.351				
3.913	5422	2271	0.419				
3.990	44796	15768	0.352				
4.073	4399	1451	0.330				
4.150	4790	1471	0.307				
4.210	10658	3292	0.309				
4.313	35435	12748	0.360				
4.380	156347	47737	0.305				
4.477	7054	1971	0.279				
4.643	13789	2563	0.186				
4.840	40217	7014	0.174				
4.967	2462	596	0.242				
5.083	3329	668	0.201				
5.183	7185	1293	0.180				
5.313	18966	4790	0.253				
5.407	70127	13290	0.190				
5.557	3756	725	0.193				
5.673	312	181	0.580				
5.697	300	196	0.653				
5.733	421	221	0.525				
5.807	1931	315	0.163				
5.863	200	254	1.269				
5.980	2712	572	0.211				
6.083	10617	1160	0.109				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.257	1098	373	0.340		
6.280	506	364	0.719		
6.303	1129	366	0.324		
6.370	800	340	0.425		
6.397	662	336	0.508		
6.430	258	326	1.264		
6.443	583	326	0.560		
6.480	780	330	0.423		
6.550	1053	378	0.359		
6.580	801	418	0.522		
6.620	926	437	0.472		
6.630	521	445	0.854		
6.653	349	445	1.275		
6.680	750	490	0.654		
6.773	4998	706	0.141		
6.817	661	670	1.013		
6.897	7504	777	0.104		
7.057	709	275	0.388		
7.113	482	249	0.517		
7.133	801	252	0.315		
7.187	745	209	0.280		
7.257	272	160	0.589		
	562479919	97237191		100.000	

Total unknown % area = 99.00

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048240

QB Batch: OEXT/12034 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048240001, 4048240002, 4048240003, 4048240004, 4048240005, 4048240006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.53	%			07/29/11	

Type	Sample	Matrix
BLANK	483066	Tissue

REPORT OF LABORATORY ANALYSIS

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www.pacelabs.com

REVISED

JUN 0 4 2012

J. Duranceau

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048240

QB Batch: OEXT/12023
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	68	59	14	50-150	20	66.7	45.2	39.3	mg/kg	08/03/11	08/03/11		
TPH (C08-C16)	29	26		50-150	20	66.7	19.6J	17.6J	mg/kg	08/03/11	08/03/11	L0	L0
TPH (C08-C40)	274	262	4	50-150	20	66.7	182	175	mg/kg	08/03/11	08/03/11	1q	2q
TPH (C16-C28)	33	27		50-150	20	66.7	22.2	18.1J	mg/kg	08/03/11	08/03/11	L0	L0
TPH - Diesel (C10-C28)	64	56	14	50-150	20	66.7	42.8	37.4	mg/kg	08/03/11	08/03/11		

Type	Sample
LCS	482789
LCSD	482790

REPORT OF LABORATORY ANALYSIS

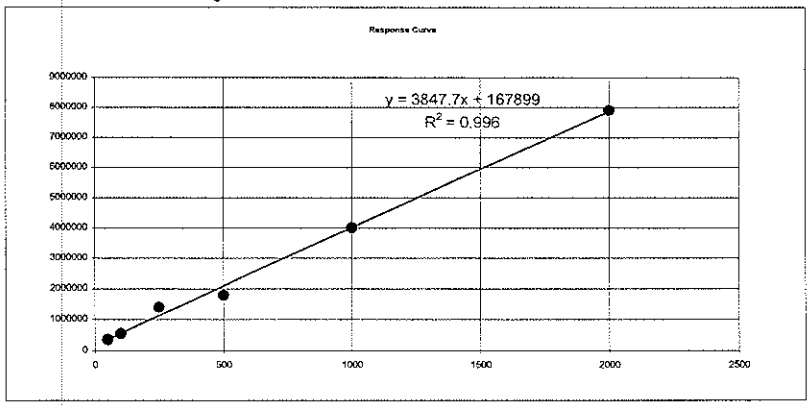
SampleID: 482789 File: 30R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	92085	
2.017	98503	
2.077	59685	
2.713	76809	

358

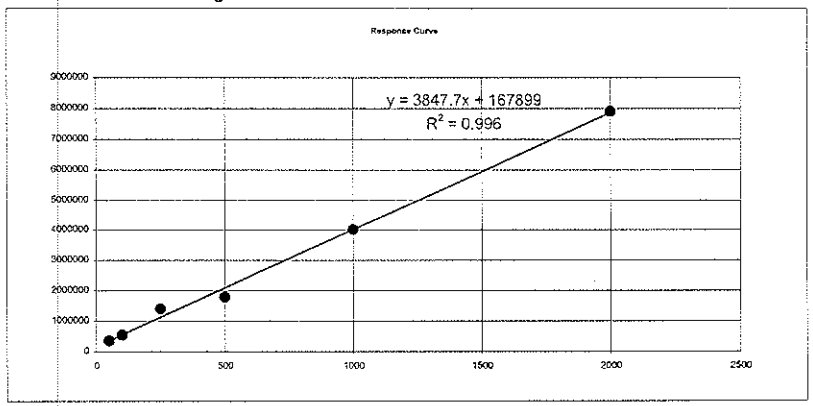
Test Name	Total Area	Area	Conc
TPH (C08-C16)	637306	92085	98.06416
Diesel Range Organics (	1287435	250273	225.9173
TPH - Diesel (C10-C28)	1242182	250273	214.1562
TPH (C16-C28)	754062	158188	111.2286
TPH (C08-C40)	4005649	327082	912.4056

SampleID: 482790 File: 32R0101.D TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



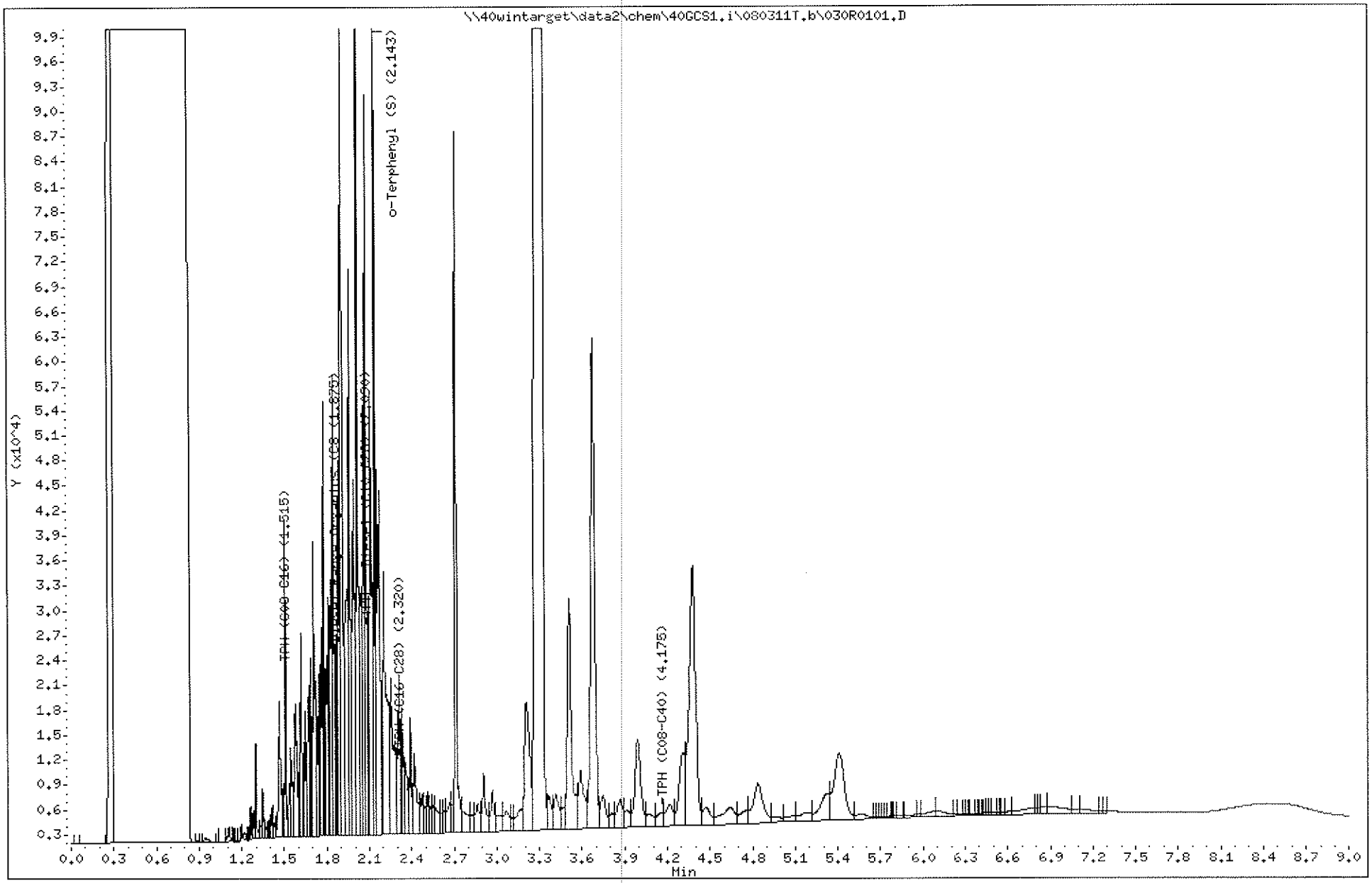
Retention Time	Peak Area	Compound Name
1.907	87750	
2.017	93204	
2.077	55921	
2.713	73046	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	594167	87750	87.97919
Diesel Range Organics (	1159991	236875	196.2773
TPH - Diesel (C10-C28)	1124286	236875	186.9977
TPH (C16-C28)	664642	149125	90.34424
TPH (C08-C40)	3839232	309921	873.6147

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Date : 03-AUG-2011 14:32
Client ID: MBLCS
Sample Info: 482789X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Lab Smp Id: 482789 Client Smp ID: MBLCS
Inj Date : 03-AUG-2011 14:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482789X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 30 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			4005649	997.413	199.48
S 1 TPH (C08-C16)	1.050-1.980			637305	121.996	24.39
S 12 TPH (C16-C28)	1.940-2.700			754062	152.341	30.46
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			1287434	290.962	58.19
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1242181	279.201	55.84(R)
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	79533	15.7072	1.04(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Lab Smp Id: 482789 Client Smp ID: MBLCS
Inj Date : 03-AUG-2011 14:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482789X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 30 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	11	10	0.926	0.00		
0.283	270294	144952	0.536	0.04		
0.313	556264609	94883731	0.171	98.56		
0.890	114	135	1.181	0.00		
0.947	1128	519	0.460	0.00		
1.515	637306	911851	1.431	0.11	S	1 TPH (C08-C16)
1.875	1287435	1566127	1.216	0.22	S	2 Diesel Range Organi
1.073	84	44	0.523			
1.110	1578	1642	1.040			
1.137	65	141	2.156			
1.157	64	100	1.558			
1.180	67	119	1.779			
1.200	113	221	1.957			
1.213	905	766	0.847			
1.263	2225	3897	1.752			
1.283	1743	3250	1.865			
1.300	7056	11369	1.611			
1.333	1381	1518	1.099			
1.347	4906	5940	1.211			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.370	908	1323	1.457			
1.387	249	516	2.074			
1.397	763	1153	1.511			
1.417	2913	3868	1.328			
1.430	1357	1767	1.303			
1.467	18876	16288	0.863			
2.090	1242182	1512205	1.217	0.22	S	8 TPH - Diesel (C10-C
1.493	3915	5923	1.513			
1.510	18335	38205	2.084			
1.537	4596	6372	1.386			
1.547	9908	10779	1.088			
1.577	21243	14797	0.697			
1.607	4443	10141	2.283			
1.620	15648	24516	1.567			
1.637	8589	9686	1.128			
1.650	8948	15157	1.694			
1.670	14134	16691	1.181			
1.683	12120	21549	1.778			
1.697	7230	14420	1.995			
1.707	34386	35511	1.033			
1.740	9233	14409	1.561			
1.750	14040	19439	1.385			
1.763	15567	25107	1.613			
1.780	28755	52194	1.815			
1.793	11666	20189	1.731			
1.803	15135	21836	1.443			
1.817	23516	28596	1.216			
1.833	18672	30238	1.619			
1.847	36157	55370	1.531			
1.867	12010	21384	1.781			
1.877	14429	27399	1.899			
1.887	33540	45013	1.342			
1.907	91907	176624	1.922			
1.940	54003	28369	0.525			
1.963	49930	68015	1.362			
1.990	48612	42819	0.881			
2.017	98317	132892	1.352			
2.043	27906	29143	1.044			
2.067	45240	54841	1.212			
2.077	59542	88949	1.494			
2.097	14836	24902	1.678			
2.113	66323	53431	0.806			
2.160	65461	43793	0.669			
2.197	18041	19693	1.092			
2.207	48098	31700	0.659			
2.257	35848	18766	0.523			
2.310	17820	18688	1.049			
2.327	10880	15161	1.393			
2.340	9325	12141	1.302			
2.357	11099	8574	0.773			
2.390	12822	13961	1.089			
2.417	16201	9784	0.604			
2.470	5338	4720	0.884			
2.487	5066	3474	0.686			
2.517	4563	5071	1.111			

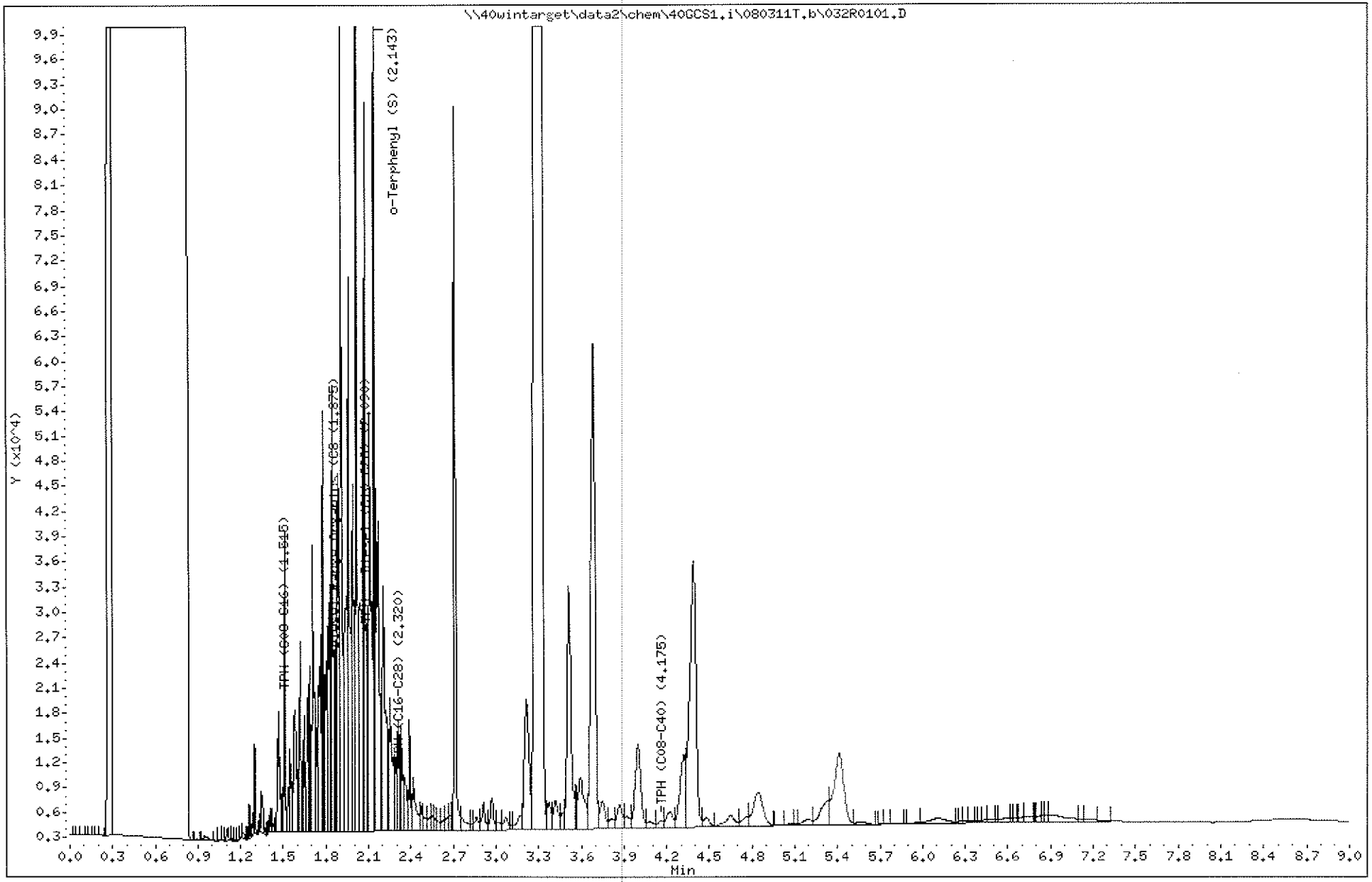
RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.533	2468	3182	1.289				
2.550	3810	3432	0.901				
2.567	5920	3047	0.515				
2.600	2374	2386	1.005				
2.630	4048	2674	0.661				
2.667	7497	3665	0.489				
2.687	2673	3387	1.267				
2.143	79533	188794	2.374	0.01	$	15	o-Terphenyl (S)
2.320	754062	750660	0.995	0.13	S	12	TPH (C16-C28)
4.175	4005649	2807441	0.701	0.71	S	5	TPH (C08-C40)
2.713	76278	84282	1.105				
2.760	8172	2583	0.316				
2.827	2887	2110	0.731				
2.863	8010	3387	0.423				
2.910	11414	7069	0.619				
2.970	8712	4971	0.571				
3.013	5321	1958	0.368				
3.070	6383	2465	0.386				
3.103	2215	1593	0.719				
3.170	7476	2602	0.348				
3.210	39239	15497	0.395				
3.323	1948860	900538	0.462				
3.370	7995	4090	0.512				
3.417	10946	4338	0.396				
3.467	3961	2627	0.663				
3.510	59725	27697	0.464				
3.590	19027	6984	0.367				
3.680	116133	58834	0.507				
3.750	9858	3976	0.403				
3.810	4367	1734	0.397				
3.867	9754	3372	0.346				
3.917	5331	2044	0.383				
3.990	31911	10609	0.332				
4.073	4939	1547	0.313				
4.157	5431	1624	0.299				
4.217	9377	2570	0.274				
4.310	26190	8694	0.332				
4.380	102073	31189	0.306				
4.473	8033	2099	0.261				
4.647	13582	2005	0.148				
4.760	6242	1588	0.254				
4.837	23763	4758	0.200				
4.953	2985	682	0.228				
5.093	3001	642	0.214				
5.177	5702	981	0.172				
5.327	15003	3175	0.212				
5.410	41088	8032	0.195				
5.563	3455	608	0.176				
5.660	284	208	0.733				
5.687	247	209	0.848				
5.703	214	223	1.041				
5.717	219	220	1.007				
5.737	311	228	0.734				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.770	365	238	0.652		
5.783	194	255	1.311		
5.793	151	254	1.678		
5.803	205	259	1.265		
5.823	679	260	0.383		
5.867	173	217	1.254		
5.957	1451	339	0.234		
5.973	425	366	0.861		
6.090	3302	667	0.202		
6.100	3318	675	0.203		
6.243	421	236	0.560		
6.277	516	251	0.486		
6.293	296	251	0.849		
6.310	197	251	1.275		
6.323	145	246	1.695		
6.347	537	254	0.473		
6.377	291	250	0.858		
6.393	200	255	1.274		
6.407	308	264	0.859		
6.423	154	259	1.680		
6.440	261	265	1.016		
6.457	321	278	0.866		
6.483	387	282	0.729		
6.517	568	302	0.531		
6.530	305	311	1.018		
6.547	254	327	1.289		
6.577	622	366	0.589		
6.623	1097	427	0.389		
6.783	5745	764	0.133		
6.800	767	772	1.007		
6.820	949	800	0.843		
6.867	2742	904	0.330		
6.900	7780	920	0.118		
7.057	2172	609	0.280		
7.113	3533	535	0.151		
7.243	759	393	0.517		
7.277	512	370	0.722		
	560621339	98025582		100.000	

Total unknown % area = 98.60

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Date : 03-AUG-2011 14:54
Client ID: HBLCSD
Sample Info: 482790X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Lab Smp Id: 482790 Client Smp ID: MBLCSD
Inj Date : 03-AUG-2011 14:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482790X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 32 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			3839232	954.162	190.83
S	1 TPH (C08-C16)	1.050-1.980			594167	110.785	22.15
S	12 TPH (C16-C28)	1.940-2.700			664641	129.101	25.82
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			1159990	257.840	51.56
S	8 TPH - Diesel (C10-C28)	1.480-2.700			1124286	248.560	49.71(R)
$	15 o-Terphenyl (S)	2.143	2.140	0.003	75904	14.9905	0.99(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Lab Smp Id: 482790 Client Smp ID: MBLCSD
Inj Date : 03-AUG-2011 14:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482790X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 32 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	14	24	1.678	0.00		
0.043	25	31	1.250	0.00		
0.110	16	16	1.013	0.00		
0.133	10	15	1.500	0.00		
0.173	10	9	0.891	0.00		
0.200	34	9	0.263	0.00		
0.283	268820	130100	0.484	0.04		
0.317	547977154	93525145	0.171	98.63		
0.890	103	124	1.206	0.00		
0.947	979	501	0.512	0.00		
1.515	594167	843778	1.420	0.10	S	1 TPH (C08-C16)
1.875	1159991	1457539	1.257	0.21	S	2 Diesel Range Organi
1.053	19	28	1.481			
1.073	28	42	1.522			
1.110	1332	1445	1.085			
1.137	76	148	1.958			
1.157	59	92	1.554			
1.180	58	107	1.842			
1.200	65	144	2.202			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.217	723	641	0.886			
1.260	2140	3995	1.866			
1.283	1274	2583	2.027			
1.297	5849	10699	1.829			
1.333	509	809	1.588			
1.347	3938	5088	1.292			
1.370	423	796	1.882			
1.387	29	103	3.576			
1.397	198	523	2.643			
1.417	2039	2906	1.425			
1.430	587	985	1.678			
1.467	16358	14581	0.891			
2.090	1124286	1411824	1.256	0.20	S	8 TPH - Diesel (C10-C
1.493	2454	5017	2.044			
1.510	17335	35977	2.075			
1.537	3982	5508	1.383			
1.547	8641	10014	1.159			
1.577	19524	14167	0.726			
1.607	4222	9729	2.304			
1.620	14777	22910	1.550			
1.637	6174	9135	1.480			
1.647	9769	14031	1.436			
1.670	13412	16174	1.206			
1.683	11380	19998	1.757			
1.697	6695	12869	1.922			
1.707	32459	34304	1.057			
1.740	8612	13484	1.566			
1.750	27967	18125	0.648			
1.780	27695	50360	1.818			
1.793	10917	18937	1.735			
1.803	14267	20507	1.437			
1.817	22451	27401	1.220			
1.833	17791	29065	1.634			
1.847	34619	53376	1.542			
1.867	11308	20133	1.780			
1.877	13688	26181	1.913			
1.887	31882	42785	1.342			
1.907	87623	173253	1.977			
1.947	50866	28299	0.556			
1.963	47953	66324	1.383			
1.990	46743	41514	0.888			
2.017	93071	127964	1.375			
2.043	37084	27388	0.739			
2.067	32090	51076	1.592			
2.077	55819	87115	1.561			
2.097	13903	23272	1.674			
2.113	61630	50200	0.815			
2.160	59268	41034	0.692			
2.197	16029	17597	1.098			
2.207	34034	29378	0.863			
2.240	9361	11893	1.270			
2.253	20758	16068	0.774			
2.287	7783	8712	1.119			
2.310	12271	13253	1.080			
2.327	8689	12733	1.465			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.340	7150	9972	1.395				
2.357	7840	6488	0.828				
2.390	9754	13499	1.384				
2.417	11003	6360	0.578				
2.470	2728	2955	1.083				
2.487	3188	1891	0.593				
2.537	2801	1758	0.628				
2.550	1665	1864	1.120				
2.567	1423	1550	1.089				
2.583	2211	1258	0.569				
2.630	2133	1348	0.632				
2.657	2036	1624	0.798				
2.673	1756	1828	1.041				
2.690	1603	2169	1.353				
2.143	75905	182252	2.401	0.01	$	15	o-Terphenyl (S)
2.320	664642	708384	1.066	0.12	S	12	TPH (C16-C28)
4.175	3839232	2680738	0.698	0.69	S	5	TPH (C08-C40)
2.713	72668	86523	1.191				
2.760	4018	1411	0.351				
2.830	1011	856	0.847				
2.863	3410	1628	0.477				
2.910	5469	3302	0.604				
2.970	5570	3842	0.690				
3.013	2130	882	0.414				
3.070	3117	1502	0.482				
3.110	571	577	1.011				
3.170	4153	1698	0.409				
3.210	35566	15807	0.444				
3.327	2015326	903758	0.448				
3.370	5919	3213	0.543				
3.420	8171	3351	0.410				
3.470	2819	2004	0.711				
3.513	54391	29056	0.534				
3.560	3683	3753	1.019				
3.593	17552	6231	0.355				
3.683	119522	58007	0.485				
3.747	7934	3293	0.415				
3.813	2843	1145	0.403				
3.870	7609	2765	0.363				
3.920	3870	1425	0.368				
3.997	28798	10092	0.350				
4.077	2405	768	0.319				
4.160	2469	861	0.349				
4.220	6169	1954	0.317				
4.320	23229	8712	0.375				
4.387	102046	31813	0.312				
4.480	3457	1153	0.334				
4.650	6325	1269	0.201				
4.763	3441	1108	0.322				
4.843	19606	4067	0.207				
4.953	78	128	1.647				
4.970	421	128	0.304				
5.083	545	219	0.402				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.100	387	223	0.577		
5.190	3092	686	0.222		
5.333	11196	2890	0.258		
5.410	42383	8620	0.203		
5.570	1433	296	0.207		
5.710	29	16	0.552		
5.817	140	43	0.307		
5.983	491	173	0.352		
6.113	5071	583	0.115		
6.250	194	172	0.887		
6.280	341	202	0.592		
6.313	431	230	0.534		
6.367	783	262	0.334		
6.377	157	264	1.685		
6.407	491	284	0.579		
6.447	715	312	0.437		
6.503	1131	355	0.314		
6.527	509	378	0.742		
6.610	2193	499	0.228		
6.630	703	507	0.721		
6.657	725	531	0.732		
6.673	539	544	1.009		
6.703	1023	593	0.579		
6.770	2635	713	0.271		
6.780	577	726	1.259		
6.797	584	734	1.258		
6.833	1617	741	0.458		
6.853	896	757	0.845		
6.883	1394	792	0.568		
6.900	7382	816	0.111		
7.097	950	387	0.407		
7.140	1648	340	0.206		
7.233	1096	229	0.209		
	552162301	96518964		100.000	

Total unknown % area = 98.67

03 Aug 11 05:04 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080311.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	CC500 2860-31-14				TPHMACHB	1
1	5	2000 2860-31-01				TPHMACHB	1
1	6	1000 2860-31-02				TPHMACHB	1
1	7	500 2860-31-14				TPHMACHB	1
1	8	250 2860-30-13				TPHMACHB	1
1	9	100 2860-30-14				TPHMACHB	1
1	10	50 2860-30-15				TPHMACHB	1
1	11	IC500 2860-30-16-OC				TPHMACHB	1
1	12	482789 RSx3				TPHMACHB	1
1	13	482788 RSx2				TPHMACHB	1
1	14	482790 RSx3				TPHMACHB	1
1	15	4048240001				TPHMACHB	1
1	16	4048240002 RSx2				TPHMACHB	1
1	17	4048240003				TPHMACHB	1
1	18	4048240004	TPH-D			TPHMACHB	1
1	19	4048240005 RSx2	GCSV			TPHMACHB	1
1	20	4048240006 RSx3	62560			TPHMACHB	1
1	21	4048241001	HBN			TPHMACHB	1
1	22	4048241002	77475			TPHMACHB	1
1	23	4048241003				TPHMACHB	1
1	24	4048241004				TPHMACHB	1
1	25	4048241005				TPHMACHB	1
1	26	4048241006 RSx2				TPHMACHB	1
1	27	4048241007				TPHMACHB	1
1	28	4048241008 RSx2				TPHMACHB	1
1	29	4048243001				TPHMACHB	1
1	30	482789X3				TPHMACHB	1
1	31	482788X2				TPHMACHB	1
1	32	482790X3				TPHMACHB	1
1	33	4048240002X2				TPHMACHB	1
1	34	4048240005X2				TPHMACHB	1
1	35	4048240006X3				TPHMACHB	1
1	36	4048241006X2				TPHMACHB	1
1	37	4048241008X2				TPHMACHB	1
1	38	BLANK				TPHMACHB	1
1	39	BLANK				TPHMACHB	1
1	40	BLANK				TPHMACHB	1
1	41	CC500 2860-31-14-OC				TPHMACHB	1
1	42	484444				TPHMACHB	1
1	43	484443				TPHMACHB	1
1	44	484445X5	TPH-S			TPHMACHB	1
1	45	484446X7	GCSV			TPHMACHB	1
1	46	4048810002X6	62666			TPHMACHB	1
1	47	4048810001X100	HBN			TPHMACHB	1
1	48	4048810003X50	77574			TPHMACHB	1
1	49	4048810004				TPHMACHB	1
1	50	4048810005				TPHMACHB	1
1	51	4048810006X300				TPHMACHB	1

KMB 8/4/11

Continued on Page 78

Read and Understood By

Kyle H Burner 8/4/11 8/4/11
Signed Date Signed Date

PROJECT 40GCS1 080311T Con't

Notebook No. 3111
Continued From Page 77

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Sequence: C:\HPCHEM\1\SEQUENCE\080311.SEQ

page 2

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4048810007					TPHMACHB	1
1	53	4048810008					TPHMACHB	1
1	54	4048810009					TPHMACHB	1
1	55	4048810011					TPHMACHB	1
1	56	4048941001					TPHMACHB	1
1	57	4048941002					TPHMACHB	1
1	58	4048941003					TPHMACHB	1
1	59	4048941004					TPHMACHB	1
1	60	4048941005					TPHMACHB	1
1	61	4048941006					TPHMACHB	1
1	62	4048941007					TPHMACHB	1
1	63	4048941008					TPHMACHB	1
1	64	4048942001					TPHMACHB	1
1	65	BLANK					TPHMACHB	1
1	66	CC500 2860-31-14-~~α~~					TPHMACHB	1
REAR 1								

11118843

TPH·S
GCSV
62666
HBN
77574

KHB 8/4/11

Continued on Page —

Read and Understood By

Kyle H Burns	8/4/11	[signature]	8/4/11
Signed	Date	Signed	Date

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 77364 TPH-B

Prep Method	EPA 3541
Spiked By	BLM
Methylene Chloride	12455
Batch Notes	

Analysis Method	TPH-B
Spiked By Date	07/28/2011
Sodium Sulfate	7513
Reviewed By	JLH

Extracted By	BLM
Conc. Temp #1	98.5
Florisil 3620B	5238
Reviewed By Date	07/29/2011

Extracted By Date	07/28/2011
Conc. Temp #2	98.5
3620B Date/Initials	7/29/11 BLM

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**482788**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**482789**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**482790**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048240001**	14.406	1	0.5			6045 (.5)
8015 T_P	PS	**4048240002**	14.319	1	0.5			6045 (.5)
8015 T_P	PS	**4048240003**	14.332	1	0.5			6045 (.5)
8015 T_P	PS	**4048240004**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048240005**	14.736	1	0.5			6045 (.5)
8015 T_P	PS	**4048240006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048241001**	14.649	1	0.5			6045 (.5)
8015 T_P	PS	**4048241002**	14.389	1	0.5			6045 (.5)
8015 T_P	PS	**4048241003**	14.638	1	0.5			6045 (.5)
8015 T_P	PS	**4048241004**	14.111	1	0.5			6045 (.5)
8015 T_P	PS	**4048241005**	13.928	1	0.5			6045 (.5)
8015 T_P	PS	**4048241006**	13.985	1	0.5			6045 (.5)
8015 T_P	PS	**4048241007**	13.84	1	0.5			6045 (.5)
8015 T_P	PS	**4048241008**	13.776	1	0.5			6045 (.5)
8015 T_P	PS	**4048243001**	13.6	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Fri, 29 Jul 2011 10:23:57 -0500

Pace Analytical Services					Instrument ID:	40BALC			
LIPID					Analyst:	BLM			

12034 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483066		0.9535	0.9733	15.0000	4.0000	1.0000	0.5280	07/29/2011 06:57:24		
4048240001		0.9551	0.9685	14.4060	4.0000	1.0000	0.3721	07/29/2011 06:57:30		
4048240002		0.9522	0.9636	14.3190	4.0000	1.0000	0.3185	07/29/2011 06:57:36		
4048240003		0.9506	0.9618	14.3320	4.0000	1.0000	0.3126	07/29/2011 06:57:43		
4048240004		0.9492	0.9563	15.0000	4.0000	1.0000	0.1893	07/29/2011 06:57:52		
4048240005		0.9478	0.9591	14.7360	4.0000	1.0000	0.3067	07/29/2011 06:57:59		
4048240006		0.9457	0.9676	15.0000	4.0000	1.0000	0.5840	07/29/2011 06:58:05		
4048241001		0.9460	0.9511	14.6490	4.0000	1.0000	0.1393	07/29/2011 06:58:11		
4048241002		0.9467	0.9665	14.3890	4.0000	1.0000	0.5504	07/29/2011 06:58:17		
4048241003		0.9472	0.9729	14.6380	4.0000	1.0000	0.7023	07/29/2011 06:58:24		
4048241004		0.9457	0.9582	14.1110	4.0000	1.0000	0.3543	07/29/2011 06:58:30		
4048241005		0.9504	0.9565	13.9280	4.0000	1.0000	0.1752	07/29/2011 06:58:36		
4048241006		0.9520	0.9711	13.9850	4.0000	1.0000	0.5463	07/29/2011 06:58:43		
4048241007		0.9543	0.9672	13.8400	4.0000	1.0000	0.3728	07/29/2011 06:58:50		
4048241008		0.9553	0.9714	13.7760	4.0000	1.0000	0.4675	07/29/2011 06:58:57		
4048243001		0.9558	0.9653	13.6000	4.0000	1.0000	0.2794	07/29/2011 06:59:04		

Approved by AH 7/29/11

Pace Analytical Services, Inc.	Instrument	Queue	Batch	Date/Time In	Temp In	Date/Time Out	Temp Out
	40BALC	PMST	6456	12-1-11 2:30	104°	12-2-11 6:00	104°

9.5.

% Moisture	Tray #	Tare Weight	Wet Weight	Dry Weight	% MST	% Solids	Date / Time	Parent Sample ID	%RPD
4048240004	1	0.9355	3.8808	1.7925	70.9028	29.10	12/02/2011 06:26		
540622	2	0.9318	3.7654	1.7688	70.4616	29.54	12/02/2011 06:26	4048240004	0.62
4048240006	3	0.9343	4.4296	1.8933	72.5632	27.44	12/02/2011 06:26		
4048242002	4	0.9321	3.522	1.6288	73.0993	26.90	12/02/2011 06:26		
4048244006	5	0.9351	4.9864	2.0901	71.4906	28.51	12/02/2011 06:26		

Approved by CAH 12/6/11

Time Acceptance Limits:	>= 8 hours; if less, dry to constant weight.	Instrument:	400VN7/ 400VNH/ 400VNA (circle one)
Temperature Acceptance Limits:	103 - 105C	Method:	ASTM D2974-87

PROJECT ____ Notebook No. ____
Continued From Page ____

9/28/10
2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11
9/30/10
2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11
* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR
10/4/10
2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11
10/6/10
2860-16-04 50 ul of 4000 ppm SVIS (2713-90G) up to 10 ml CH_2Cl_2 20 ppm WPAH IS RON 10/6/10 Ex 10/6/11
10/06/10
2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11
10-7-10
2860-16-06 250 uls of 2860-09-04 diluted to 1.0 ml w Nanopure H_2O SHI 50 ppm
2860-16-07 2500 ul of 10,000 mg/L O terphenyl (2713-86) diluted to 250 ml with CH_2Cl_2 (2712-62) = 100 ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10/12/10
* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR
10/8/10
2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000 ul of 5000 ug/ml B/N Surr (2713-51C) +
2860-16-09 5000 ul of 7500 ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50 ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by YOMSSI File # 1012T008
10/13/10 500 ul of 4000 ppm SVIS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11
2860-16-11 ~~20~~ 40 ul of 5000 ppm N-NDMA (2713-11B) up to 1.0 ml CH_2Cl_2 200 ppm NDL STD Ex 7/13/11 RON 10/13/10 (RON 10/13/10)

~~10/18/10~~ ARO 10/18/10

Continued on Page ____

Read and Understood By

[signature] Signed 10/18/10 Date Valerie M Renquin Signed 10/18/2010 Date

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) w/to 1.0ml CH_2Cl_2 2000ppm SPAH IS Exp 11/24/11 RM 11/24
11/29/10 CH_2Cl_2 Changed at 8:00 to lot 2712-73 VMR

11/30/10
2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d

12/1/2010
2860-22-06 1 ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on inst by DAL file # 40GCSL.i\120210T.b\010R0101.D 88.8%

12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Acetone/ 50%
" " -08 25uls of 2860-10-11 " " " " 500 ppm

12/03/10
2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10
2860-22-10 50ul of 4000ppm SVIS (2945-06C) upto 10.0ml CH_2Cl_2 20ppm W PAH-IS Ex 12/31/11 RM 12/1

2860-22-11 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10
2860-22-12 400ul of 16,000 ppm ERO70 (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date

Signed — 12/2/10 — Date

PROJECT Continued From Page

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MEOH spike) → 1.0 mL [Final] = 500 ug/mL GC 7-19-11 DRL

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPN

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVIS (2945-03C) diluted to 100 mL w/ ch_2Cl_2 (2712-085) = 150ppm B/N SVIS KPN Exp 8/25/11 KPN Raman instr by RJN file # 40mss4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RAW 3/2/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) upto 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RAW 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100 ul of 5000ppm B/N SVSS (2945-20H) upto 10.0mls CH_2Cl_2 50ppm PAH Ex 7/13/11 RAW 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) upto 1.0ml CH_2Cl_2 25ppm PAH CAL Ex 7/13/11 RAW 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) upto 1.0ml CH_2Cl_2 / 2ppm PAH 2nd Source Ex 9/2/11 RAW 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - AKO exp 2/28/12

3/3/2011

2860-29-15 2500ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Raman inst by ~~DAT~~ GC (VMR) file # 40GCSF.i / 0307116.b - File 010F1001. Exp 3/3/2012 VMR

Z VMR 3/3/2011 OK to use per GC Raman inst 3/8/11 VMR Recovery = 106% GC 3/9/11

Continued on Page

Read and Understood By

Valerie M Renquin 3/3/2011 Signed Date

Signed 3/7/11 Date

PROJECT

Notebook No. _____

Continued From Page _____

3-4-11

2860-30-01 50 mL of 2380-100-01 (TPH @ 2000ug/mL) → 1.0mL CH_2Cl_2
[Final] = 100ug/mL Exp 5-6-11 DAR
TPH ICAL

2860-30-02 500 mL of 2713-460 (#2 Diesel Fuel @ 20,000ug/mL) → 5.0mL CH_2Cl_2
[Final] = 2000ug/mL Exp 3.4.12 DAR

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000ug/mL
2860-30-04 250 mL = 500ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ Use only 1.0 mL of 2860-30-02 2713-990
All Standards + 5 mL ~~2945-135~~ (o-terphenyl @ 10,000ug/mL)
[Final] = 50 ug/mL All Standard Exp 2.22.12 DAR

TPH ICV

2860-30-08 10 mL of ~~2945-23A~~ 2713-990 (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5mL 2945-135 (o-terphenyl @ 10,000ug/mL)
[Final] = 500 ug/mL + 50ug/mL Exp 2.22.12 DAR

2860-30-09 25uL of 2860-10-11 diluted to 1.0 mL w 50/50 H_2O/MeOH JHF

3.7.11

2860-30-10 1.0mL of 2860-30-02 + 5 mL 2713-990 (o-terp @ 10,000ug/mL) = 2000ug/mL + 50ug/mL
2860-30-11 500 mL of → 1.0mL CH_2Cl_2 [Final] = 1000ug/mL
2860-30-12 250 mL = 500ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 50ug/mL Exp ~~3-4-11~~ DAR 5-6-11 GC

2860-30-16 10 mL of 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 500ug/mL + 50ug/mL
Exp ~~3-4-11~~ DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

Signed _____ Date 3.7.11

Signed Valerie M Renquin Date 3/24/11

3.7.11

2860-31-01 100 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL DCM CH_2Cl_2 + 5 uL 2713-99D (oterp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DMR

2860-31-02 50 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-99D (oterp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DMR

2860-31-03 25 uL of 2860-10-19 diluted to 1.0 mL w 50/50 MeOH/H_2O JHI 500 ppm ✓

2860-31-04 300 uL of 4000 ppm SVIS (2945-17J) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 uL of 2860-10-11 diluted to 100 mL w 50/50 MeOH H_2O JHI 1000 ppm
-06 25 uL of 2860-31-05 diluted to 1.0 mL w 250 ppm ✓
-07 100 100
-08 250 250
-09 500 500
-10 750 750 JHI

3.14.11

2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DMR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL EXP 1-10-12 DMR

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) up to 1.0 mL CH_2Cl_2 2000 ppm PAH-IS Ex 3/15/12 RW 3/16/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-99D (oterphenyl @10,000 ug/mL)
[Final] = 50 ug/mL Exp 3.4.12 DMR

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11 Signed Valerie M Pangelinan Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC	**Volume of Standard:** 250 mL	**Lot ID:** OEXT
Created: 04/01/2011 15:07	**Manufacturer:** N/A	**Part ID:** N/A
Expires: 10/18/2011	**Manufacturer Lot ID:** N/A	**Standard ID:** 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC	**Volume of Standard:** 1 mL	**Lot ID:** TPH Diesel Biota Surr SPK
Created: 12/01/2010 00:00	**Manufacturer:** N/A	**Part ID:** N/A
Expires: 07/16/2020	**Manufacturer Lot ID:** N/A	**Standard ID:** 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

Pace Analytical®
www.pacelabs.com

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048241

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048241

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048241001	EWL-DES-C-WHOLE BODY	Tissue	06/20/11 00:00	07/13/11 09:30
4048241002	EWL-HOU-C-WHOLE BODY	Tissue	06/20/11 18:18	07/13/11 09:30
4048241003	EWL-BIL-C-WHOLE BODY	Tissue	06/09/11 12:00	07/13/11 09:30
4048241004	EWL-T-01A-C-WHOLE BODY	Tissue	12/15/10 12:37	07/13/11 09:30
4048241005	EWL-TR-01-C-WHOLE BODY	Tissue	12/15/10 11:26	07/13/11 09:30
4048241006	EWL-TR-02-C-WHOLE BODY	Tissue	01/03/11 10:16	07/13/11 09:30
4048241007	EWL-TR-03A-C-WHOLE BODY	Tissue	12/14/10 00:00	07/13/11 09:30
4048241008	EWL-TR-03-C-WHOLE BODY	Tissue	01/03/11 10:36	07/13/11 09:30

REPORT OF LABORATORY ANALYSIS

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048241
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1106118

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** A ll in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD; the "L0" data qualifier applied to the summary. The recoveries of TPH (C08-C40) were above control criteria in the LCS and LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifier.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** EWL-TR-02-C-WHOLE BODY and EWL-TR-03-C-WHOLE BODY were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048241

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048241001	EWL-DES-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241002	EWL-HOU-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241003	EWL-BIL-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241004	EWL-T-01A-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241005	EWL-TR-01-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241006	EWL-TR-02-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241007	EWL-TR-03A-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048241008	EWL-TR-03-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4048241

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6256

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048241

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

4048241

Project Number: K1106118

Project Manager: ~~Lynda Huckestein~~ David Lyle / URS

	Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None (TP4)
01	K1106118-013	EWL-DES-C-Whole Body	1	Animal Tissue	6/20/11		Pace PA	✓
02	K1106118-026	EWL-HOU-C-Whole Body	1	Animal Tissue	6/20/11	1815	Pace PA	✓
03	K1106118-039	EWL-BIL-C-Whole Body	1	Animal Tissue	6/9/11	1200	Pace PA	✓
04	K1106118-060	EWL-TR-01A-C-Whole Body	1	Animal Tissue	12/15/10	1237	Pace PA	✓
05	K1106118-073	EWL-TR-01-C-Whole Body	1	Animal Tissue	12/15/10	1126	Pace PA	✓
06	K1106118-090	EWL-TR-02-C-Whole Body	1	Animal Tissue	1/3/11	1016	Pace PA	✓
07	K1106118-107	EWL-TR-03A-C-Whole Body	1	Animal Tissue	12/14/10	0000	Pace PA	✓
08	K1106118-120	EWL-TR-03-1-C-Whole Body	1	Animal Tissue	1/3/11	1036	Pace PA	✓

1-202 CG ↓

Test Comments

Relinquish - None   K1106118-013,26,39,60,73,90,107,120   Ship to Pace.

Folder Comments:

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com

Contact David Lyle / URS
East White Lake Project

Turnaround Requirements

____ RUSH (Surcharges Apply)

PLEASE CIRCLE WORK DAYS 1 2 3 4 5

____ STANDARD

Requested FAX Date: ________

Requested Report Date: 06/13/11

Report Requirements

____ I. Results Only

____ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD N

Invoice Information

PO# K1106118

Bill to

Relinquished By: 7/12/11 1200   Rec: FedEx   Received By: 7/13/11 930   Airbill Number:

Pag

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Project # 4048241

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used JB Type of Ice: Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature <0°C Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7-13-11
Initials: C

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: TN **Date:** 7/13/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048241

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048241

QB Batch: OEXT / 12023
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048241001		EWL-DES-C-WHOLE BODY	1	76											
482788	BLANK		2	0	S4										
4048241002		EWL-HOU-C-WHOLE BODY	1	61											
4048241003		EWL-BIL-C-WHOLE BODY	1	64											
4048241004		EWL-T-01A-C-WHOLE BODY	1	72											
482789	LCS		3	0	S4										
4048241005		EWL-TR-01-C-WHOLE BODY	1	61											
482790	LCSD		3	0	S4										
4048241006		EWL-TR-02-C-WHOLE BODY	2	0	S4										
4048241007		EWL-TR-03A-C-WHOLE BODY	1	65											
4048241008		EWL-TR-03-C-WHOLE BODY	2	0	S4										
		QC Limits:		50-150											
		Sample Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048241

QB Batch: OEXT/12023
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	68	59	14	50-150	20	66.7	45.2	39.3	mg/kg	08/03/11	08/03/11		
TPH (C08-C16)	29	26		50-150	20	66.7	19.6J	17.6J	mg/kg	08/03/11	08/03/11	L0	L0
TPH (C08-C40)	274	262	4	50-150	20	66.7	182	175	mg/kg	08/03/11	08/03/11	1q	2q
TPH (C16-C28)	33	27		50-150	20	66.7	22.2	18.1J	mg/kg	08/03/11	08/03/11	L0	L0
TPH - Diesel (C10-C28)	64	56	14	50-150	20	66.7	42.8	37.4	mg/kg	08/03/11	08/03/11		

Type	Sample
LCS	482789
LCSD	482790

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048241

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048241001	EWL-DES-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241002	EWL-HOU-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241003	EWL-BIL-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241004	EWL-T-01A-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241005	EWL-TR-01-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241006	EWL-TR-02-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241007	EWL-TR-03A-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241008	EWL-TR-03-C-WHOLE BODY	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048241001	EWL-DES-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241002	EWL-HOU-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241003	EWL-BIL-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241004	EWL-T-01A-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241005	EWL-TR-01-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241006	EWL-TR-02-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241007	EWL-TR-03A-C-WHOLE BODY	Pace Lipid	OEXT/12034		
4048241008	EWL-TR-03-C-WHOLE BODY	Pace Lipid	OEXT/12034		

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048241

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/03/11 08/03/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.14

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-31-01	2000 2860-31-01	08/03/11	0835	2.14	
02	1000 2860-31-02	1000 2860-31-02	08/03/11	0845	2.14	
03	500 2860-31-14	500 2860-31-14	08/03/11	0857	2.14	
04	250 2860-30-13	250 2860-30-13	08/03/11	0909	2.14	
05	100 2860-30-14	100 2860-30-14	08/03/11	0921	2.14	
06	50 2860-30-15	50 2860-30-15	08/03/11	0933	2.14	
07	IC500 2860-30-16	IC500 2860-30-16	08/03/11	0945	2.14	
08	EWL-DES-C-WHOLE BOD	4048241001	08/03/11	1155	2.14	
09	EWL-HOU-C-WHOLE BOD	4048241002	08/03/11	1207	2.14	
10	EWL-BIL-C-WHOLE BOD	4048241003	08/03/11	1219	2.14	
11	EWL-TR-01A-C-WHOLE	4048241004	08/03/11	1231	2.14	
12	EWL-TR-01-C-WHOLE B	4048241005	08/03/11	1243	2.14	
13	EWL-TR-03A-C-WHOLE	4048241007	08/03/11	1307	2.14	
14	MBLCS	482789	08/03/11	1432	2.14	
15	MB	482788	08/03/11	1442	2.14	
16	MBLCSD	482790	08/03/11	1454	2.14	
17	EWL-TR-02-C-WHOLE B	4048241006	08/03/11	1542	2.14	
18	EWL-TR-03-C-WHOLE B	4048241008	08/03/11	1554	2.14	
19	CC500 2860-31-14	CC500 2860-31-14	08/03/11	1642	2.14	
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048241

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-DES-C-WHOLE BODY TX
Lab ID: 4048241001
Collected: 06/20/11 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<3.4**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 11:55	
	TPH (C08-C16)	**<3.4**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 11:55	
	TPH (C16-C28)	**<3.4**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 11:55	
	TPH (C08-C40)	**72.5**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 11:55	3q
	TPH - Diesel (C10-C28)	**<3.4**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 11:55	
Surrogates									
84-15-1	o-Terphenyl (S)	**76**	%.	50-150		1	07/28/11 12:00	08/03/11 11:55	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-DES-C-WHOLE BODY TX
Lab ID: 4048241001
Collected: 06/20/11 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.14**	%			1		07/29/11 06:58	

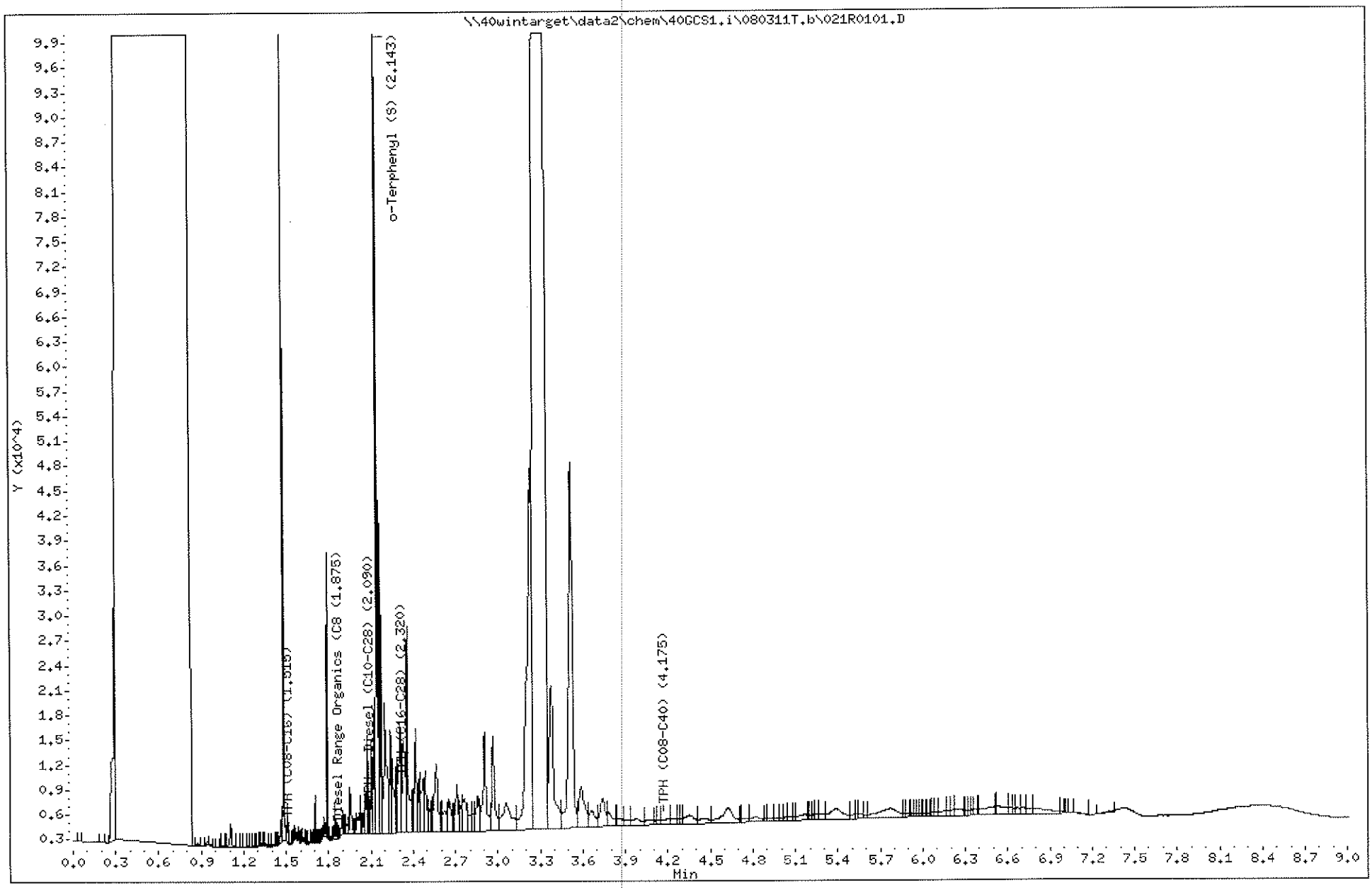
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\021R0101.D
Date : 03-AUG-2011 11:55
Client ID: EWL-DES-C-WHOLE BOD
Sample Info: 4048241001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\021R0101.D
Lab Smp Id: 4048241001 Client Smp ID: EWL-DES-C-WHOLE BOD
Inj Date : 03-AUG-2011 11:55
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241001
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.649	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-7.300			4254977	1062.21	72.51
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			225405	14.9455	1.02(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			300560	34.4780	2.35(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			295668	33.2065	2.26
$	15 o-Terphenyl (S)	2.143	2.140	0.003	191537	37.8272	2.58

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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J. Duranceau

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Sample: EWL-HOU-C-WHOLE BODY TX
Lab ID: 4048241002
Collected: 06/20/11 18:18
Received: 07/13/11 09:30

Results reported on a "wet-weight" basis

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**8.0**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 12:07	
	TPH (C08-C16)	**<3.5**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 12:07	
	TPH (C16-C28)	**7.4**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 12:07	
	TPH (C08-C40)	**98.5**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 12:07	3q
	TPH - Diesel (C10-C28)	**7.9**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/03/11 12:07	
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	07/28/11 12:00	08/03/11 12:07	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-HOU-C-WHOLE BODY TX
Lab ID: 4048241002
Collected: 06/20/11 18:18
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.55**	%			1		07/29/11 06:58	

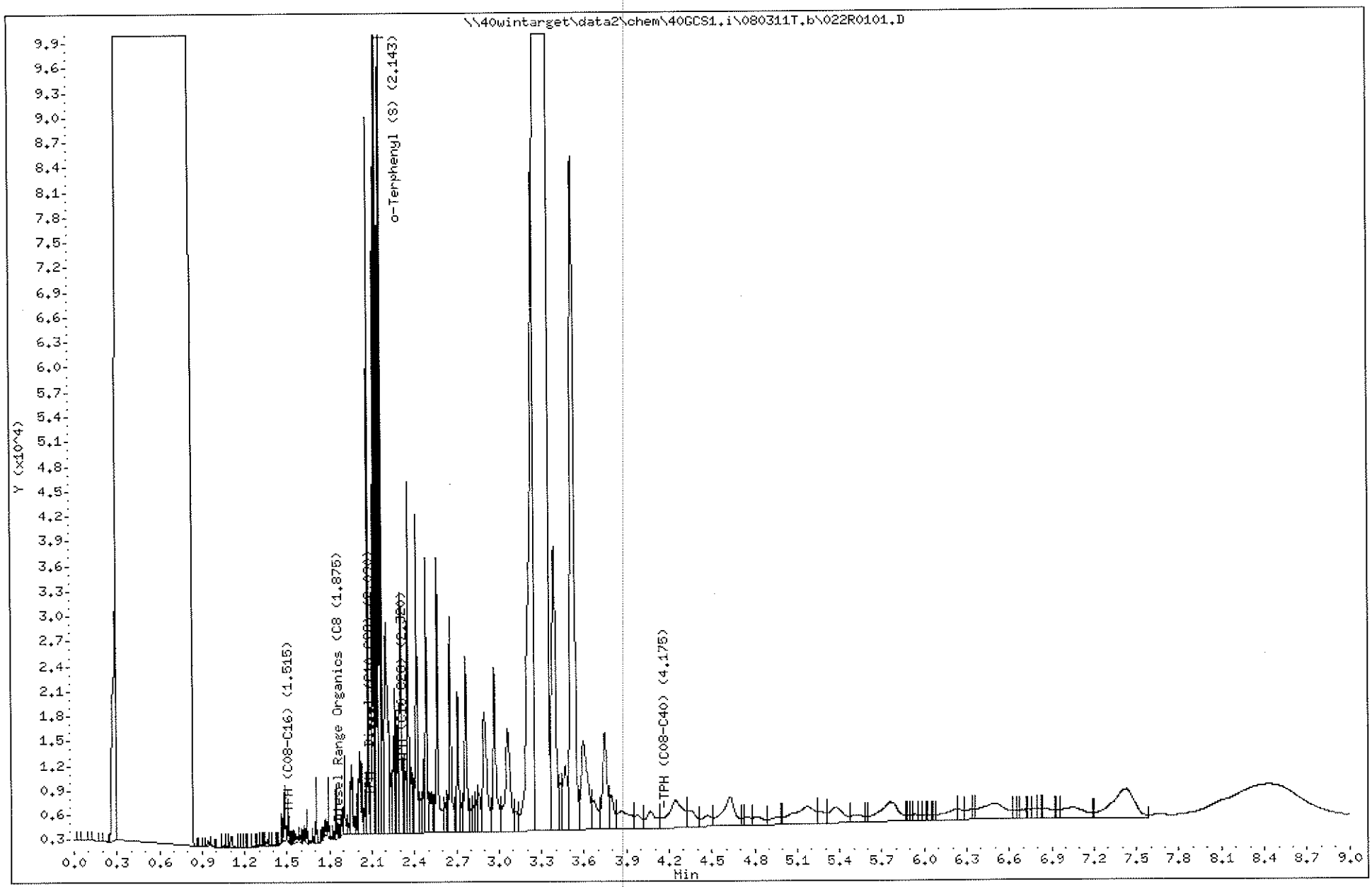
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\022R0101.D
Date : 03-AUG-2011 12:07
Client ID: EWL-HOU-C-WHOLE BOD
Sample Info: 4048241002
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\022R0101.D
Lab Smp Id: 4048241002 Client Smp ID: EWL-HOU-C-WHOLE BOD
Inj Date : 03-AUG-2011 12:07
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241002
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.389	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-7.300			5623185	1417.80	98.53
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			575232	105.864	7.35
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			610346	114.990	7.99
S	8 TPH - Diesel (C10-C28)	1.480-2.700			605208	113.654	7.89
$	15 o-Terphenyl (S)	2.143	2.140	0.003	155180	30.6470	2.12

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-BIL-C-WHOLE BODY TX
Lab ID: 4048241003
Collected: 06/09/11 12:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**8.9**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 12:19	
	TPH (C08-C16)	**<3.4**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 12:19	
	TPH (C16-C28)	**8.1**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 12:19	
	TPH (C08-C40)	**132**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 12:19	3q
	TPH - Diesel (C10-C28)	**8.8**	mg/kg	6.8	3.4	1	07/28/11 12:00	08/03/11 12:19	
Surrogates									
84-15-1	o-Terphenyl (S)	**64**	%.	50-150		1	07/28/11 12:00	08/03/11 12:19	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-BIL-C-WHOLE BODY TX
Lab ID: 4048241003
Collected: 06/09/11 12:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.70**	%			1		07/29/11 06:58	

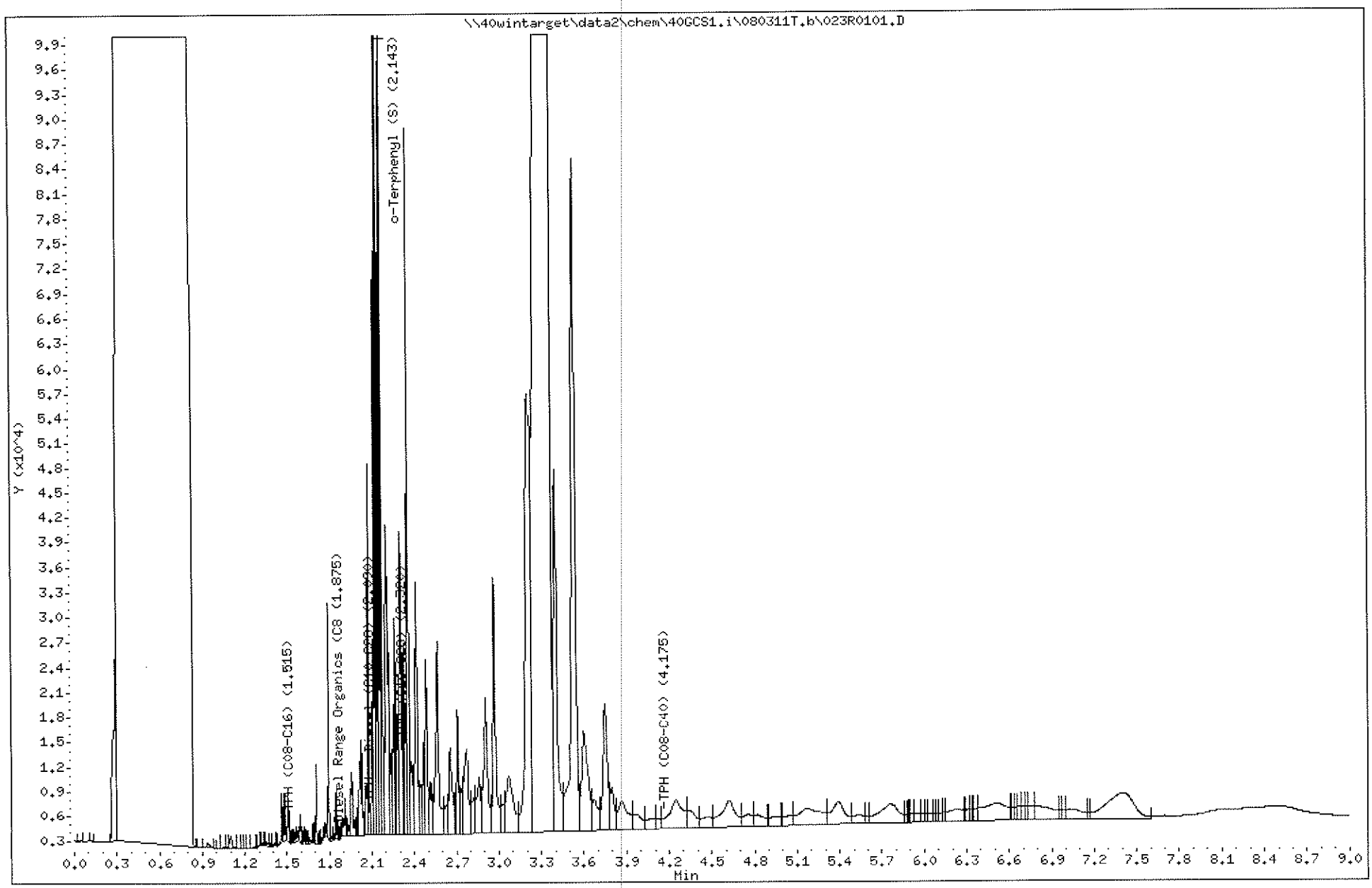
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\023R0101.D
Date : 03-AUG-2011 12:19
Client ID: EWL-BIL-C-WHOLE BOD
Sample Info: 4048241003
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\023R0101.D
Lab Smp Id: 4048241003 Client Smp ID: EWL-BIL-C-WHOLE BOD
Inj Date : 03-AUG-2011 12:19
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241003
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.638	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			7610853	1934.39	132.14
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			624578	118.689	8.10
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			669247	130.298	8.90
S	8 TPH - Diesel (C10-C28)	1.480-2.700			662514	128.548	8.78
$	15 o-Terphenyl (S)	2.143	2.140	0.003	162987	32.1888	2.19

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-T-01A-C-WHOLE BODY TX
Lab ID: 4048241004
Collected: 12/15/10 12:37
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**4.3J**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/03/11 12:31	
	TPH (C08-C16)	**<3.5**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/03/11 12:31	
	TPH (C16-C28)	**3.7J**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/03/11 12:31	
	TPH (C08-C40)	**126**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/03/11 12:31	3q
	TPH - Diesel (C10-C28)	**4.2J**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/03/11 12:31	
Surrogates									
84-15-1	o-Terphenyl (S)	**72**	%.	50-150		1	07/28/11 12:00	08/03/11 12:31	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-T-01A-C-WHOLE BODY TX
Lab ID: 4048241004
Collected: 12/15/10 12:37
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.35**	%			1		07/29/11 06:58	

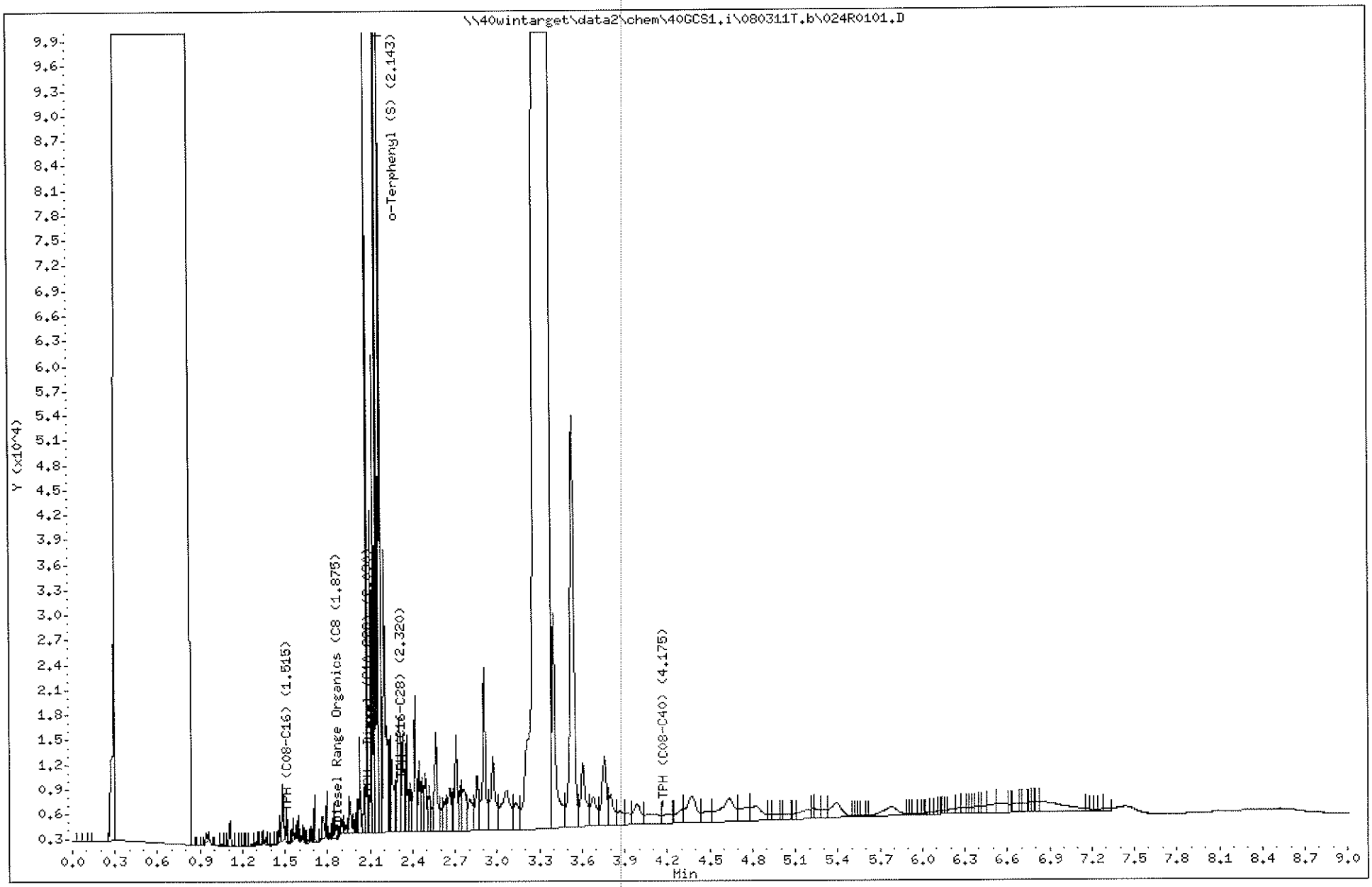
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\024R0101.D
Date : 03-AUG-2011 12:31
Client ID: EWL-T-01A-C-WHOLE B
Sample Info: 4048241004
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\024R0101.D
Lab Smp Id: 4048241004 Client Smp ID: EWL-T-01A-C-WHOLE B
Inj Date : 03-AUG-2011 12:31
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241004
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.111	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-7.300			6996636	1774.76	125.77
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			369151	52.3044	3.70(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			401263	60.6502	4.29(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			394392	58.8644	4.17
S	15 o-Terphenyl (S)	2.143	2.140	0.003	181921	35.9281	2.54

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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Green Bay, WI 54302
(920)469-2436

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J. Duranceau

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Results reported on a "wet-weight" basis

Sample: EWL-TR-01-C-WHOLE BODY TX
Lab ID: 4048241005
Collected: 12/15/10 11:26
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<3.6**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 12:43	
	TPH (C08-C16)	**<3.6**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 12:43	
	TPH (C16-C28)	**<3.6**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 12:43	
	TPH (C08-C40)	**97.8**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 12:43	3q
	TPH - Diesel (C10-C28)	**<3.6**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 12:43	
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	07/28/11 12:00	08/03/11 12:43	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-01-C-WHOLE BODY TX
Lab ID: 4048241005
Collected: 12/15/10 11:26
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.18**	%			1		07/29/11 06:58	

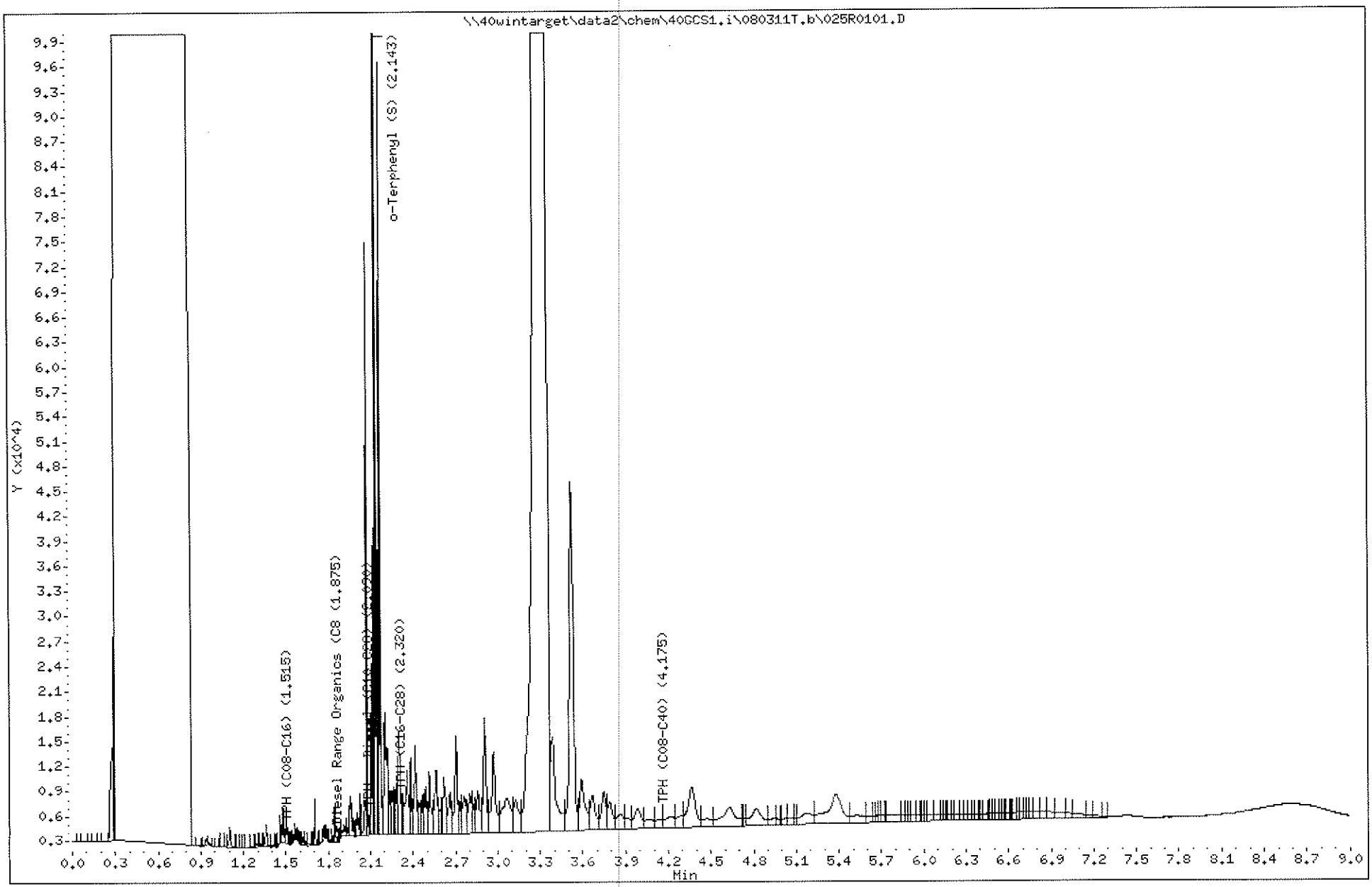
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\025R0101.D
Date : 03-AUG-2011 12:43
Client ID: EWL-TR-01-C-WHOLE B
Sample Info: 4048241005
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\025R0101.D
Lab Smp Id: 4048241005 Client Smp ID: EWL-TR-01-C-WHOLE B
Inj Date : 03-AUG-2011 12:43
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241005
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.928	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-7.300			5408581	1362.03	97.79
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			266907	25.7317	1.84(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			290983	31.9889	2.29(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			284795	30.3807	2.18
$	15 o-Terphenyl (S)	2.143	2.140	0.003	153375	30.2905	2.17

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-02-C-WHOLE BODY TX
Lab ID: 4048241006
Collected: 01/03/11 10:16
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<7.1**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/03/11 15:42	
	TPH (C08-C16)	**<7.1**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/03/11 15:42	
	TPH (C16-C28)	**<7.1**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/03/11 15:42	
	TPH (C08-C40)	**155**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/03/11 15:42	3q
	TPH - Diesel (C10-C28)	**<7.1**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/03/11 15:42	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	07/28/11 12:00	08/03/11 15:42	S4

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-02-C-WHOLE BODY TX
Lab ID: 4048241006
Collected: 01/03/11 10:16
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.55**	%			1		07/29/11 06:58	

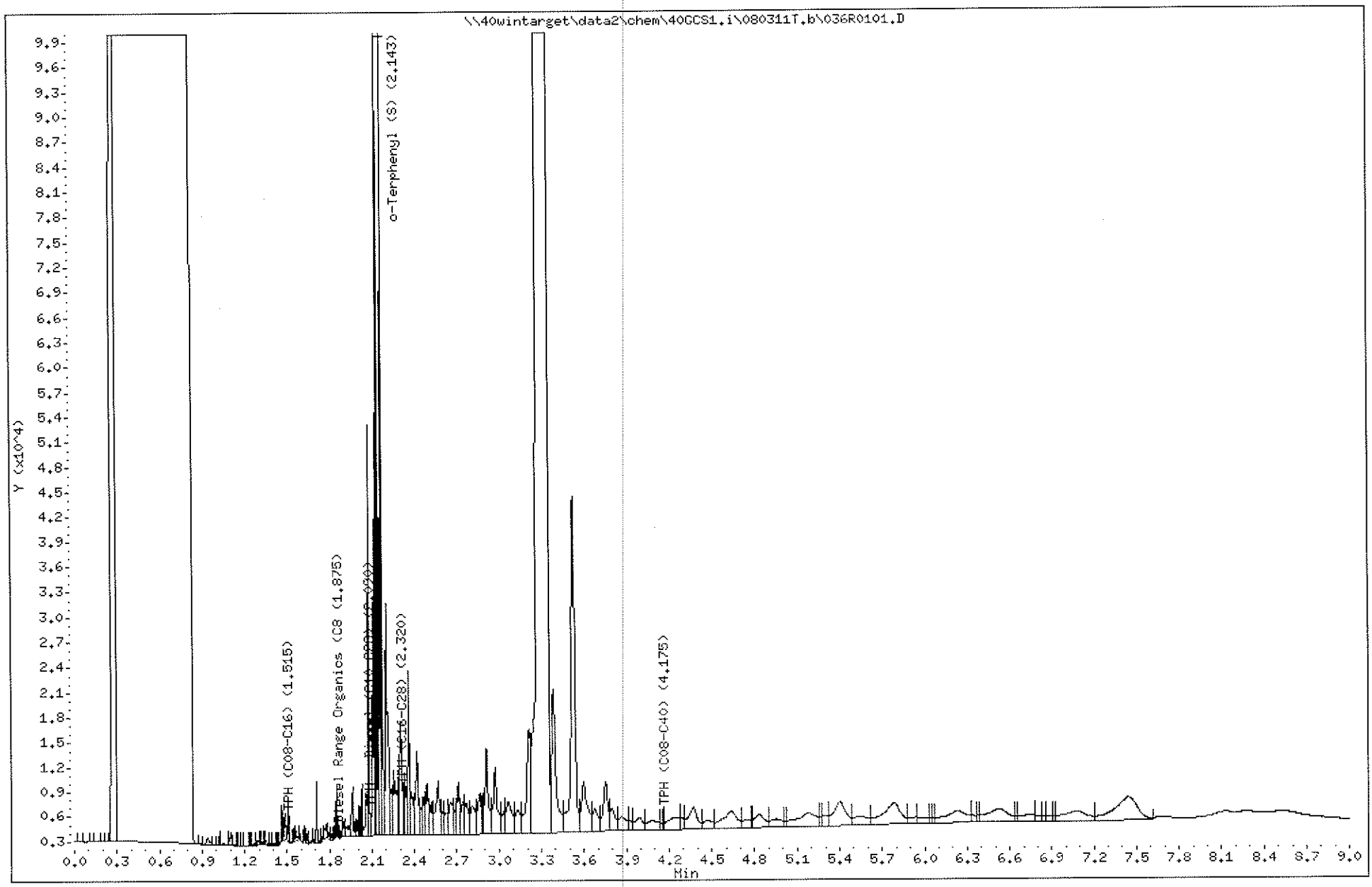
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\036R0101.D
Date : 03-AUG-2011 15:42
Client ID: EWL-TR-02-C-WHOLE B
Sample Info: 4048241006X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\036R0101.D
Lab Smp Id: 4048241006 Client Smp ID: EWL-TR-02-C-WHOLE B
Inj Date : 03-AUG-2011 15:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241006X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 36
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.985	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.050-7.300			4351027	1087.17	155.47
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			312695	37.6318	5.38(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			340423	44.8382	6.41(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			334620	43.3300	6.19
$	15 o-Terphenyl (S)	2.143	2.140	0.003	81080	16.0127	1.14(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-03A-C-WHOLE BODY TX
Lab ID: 4048241007
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**6.0J**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 13:07	
	TPH (C08-C16)	**<3.6**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 13:07	
	TPH (C16-C28)	**4.9J**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 13:07	
	TPH (C08-C40)	**126**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 13:07	3q
	TPH - Diesel (C10-C28)	**5.7J**	mg/kg	7.2	3.6	1	07/28/11 12:00	08/03/11 13:07	
Surrogates									
84-15-1	o-Terphenyl (S)	**65**	%.	50-150		1	07/28/11 12:00	08/03/11 13:07	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-03A-C-WHOLE BODY TX
Lab ID: 4048241007
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.37**	%			1		07/29/11 06:58	

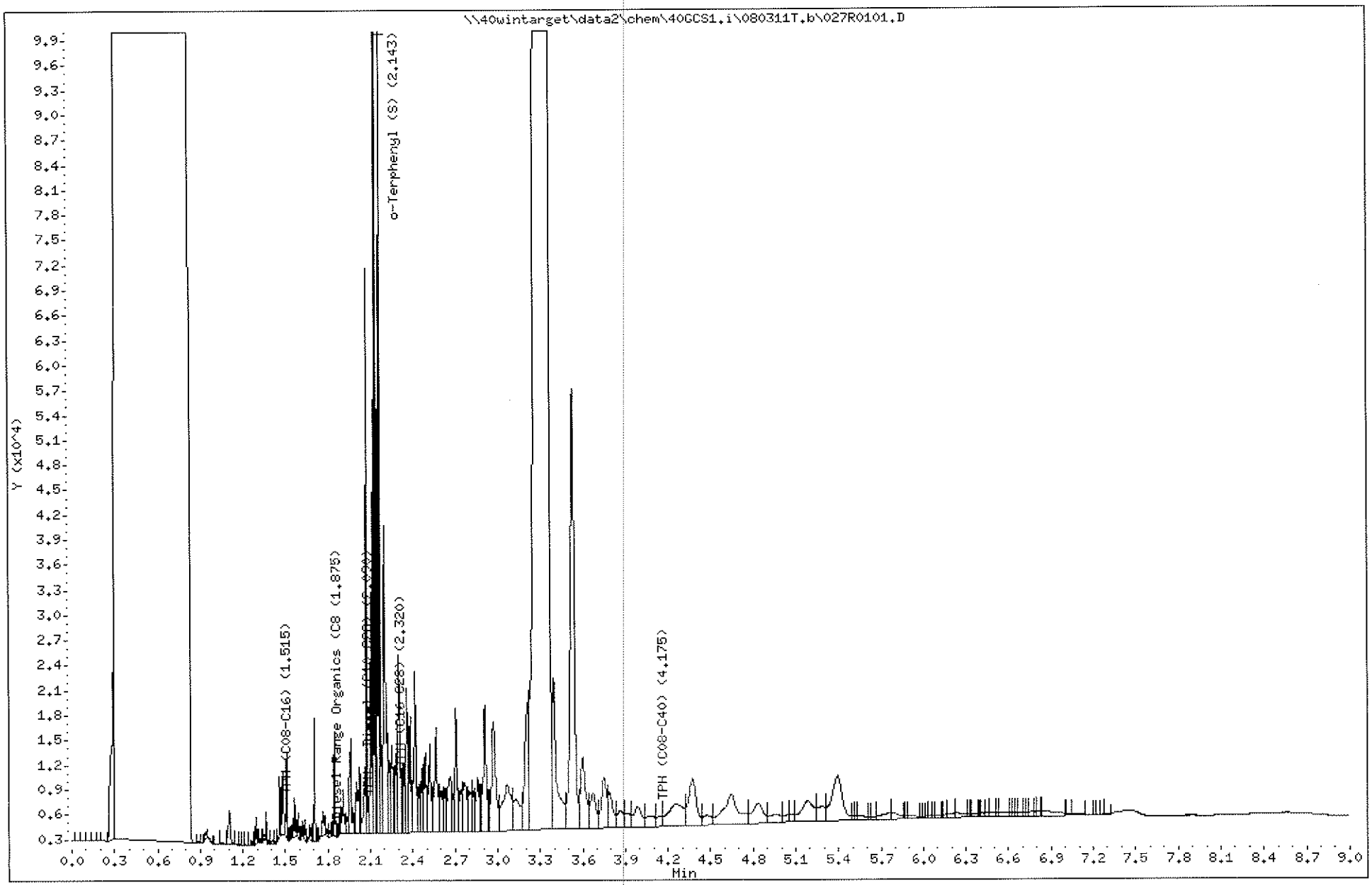
Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\027R0101.D
Date : 03-AUG-2011 13:07
Client ID: EWL-TR-03A-C-WHOLE
Sample Info: 4048241007
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\027R0101.D
Lab Smp Id: 4048241007 Client Smp ID: EWL-TR-03A-C-WHOLE
Inj Date : 03-AUG-2011 13:07
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241007
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.840	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			6893317	1747.90	126.29
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			428021	67.6045	4.88(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			485562	82.5591	5.96(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			472029	79.0419	5.71
$	15 o-Terphenyl (S)	2.143	2.140	0.003	165208	32.6274	2.35

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-TR-03-C-WHOLE BODY TX
Lab ID: 4048241008
Collected: 01/03/11 10:36
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<7.3**	mg/kg	14.5	7.3	2	07/28/11 12:00	08/03/11 15:54	
	TPH (C08-C16)	**<7.3**	mg/kg	14.5	7.3	2	07/28/11 12:00	08/03/11 15:54	
	TPH (C16-C28)	**<7.3**	mg/kg	14.5	7.3	2	07/28/11 12:00	08/03/11 15:54	
	TPH (C08-C40)	**164**	mg/kg	14.5	7.3	2	07/28/11 12:00	08/03/11 15:54	3q
	TPH - Diesel (C10-C28)	**<7.3**	mg/kg	14.5	7.3	2	07/28/11 12:00	08/03/11 15:54	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	07/28/11 12:00	08/03/11 15:54	S4

Date: 06/04/2012 11:38 AM

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048241

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-TR-03-C-WHOLE BODY TX
Lab ID: 4048241008
Collected: 01/03/11 10:36
Received: 07/13/11 09:30

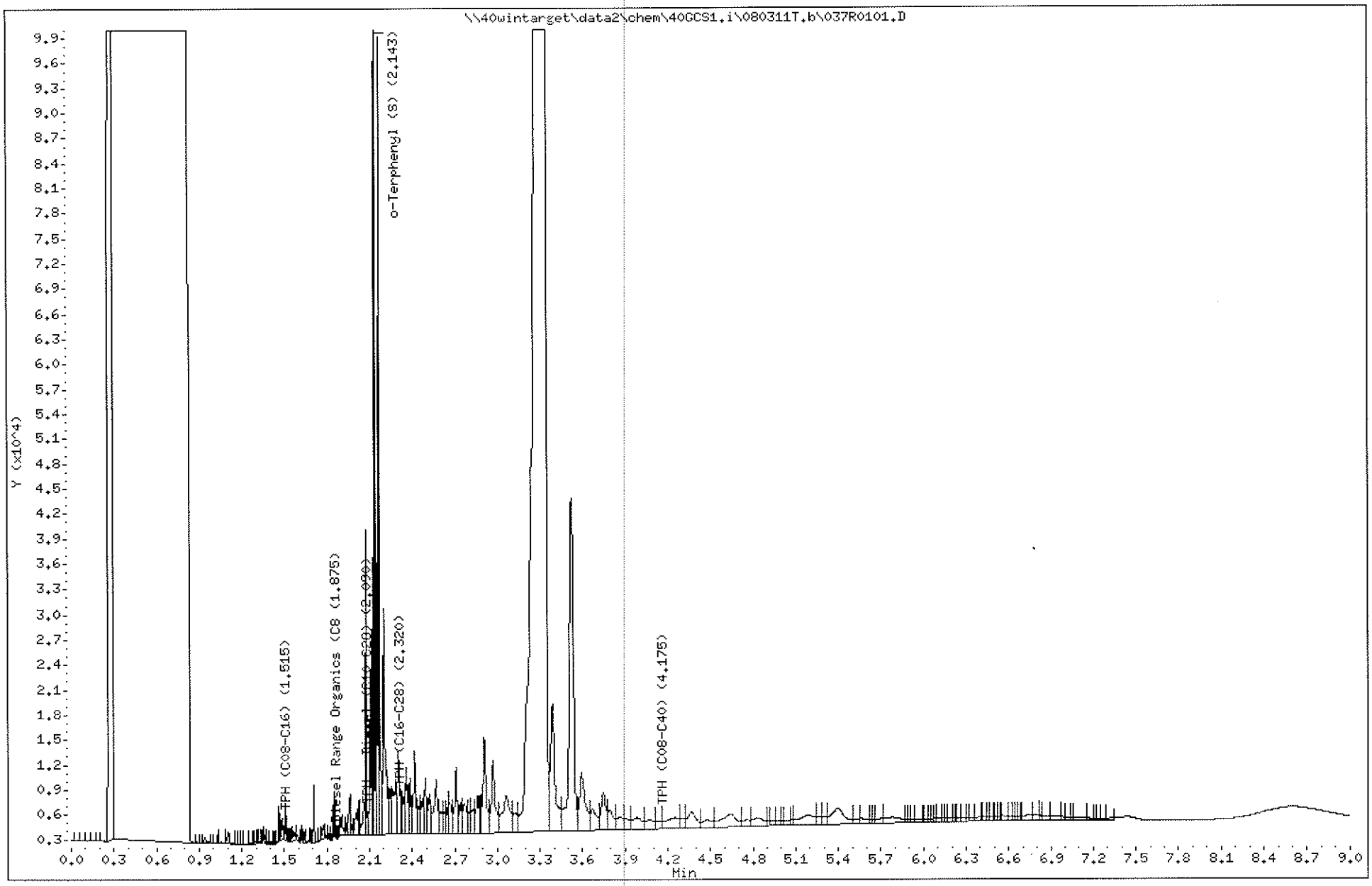
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.47**	%			1		07/29/11 06:58	

Date: 06/04/2012 11:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\037R0101.D
Date : 03-AUG-2011 15:54
Client ID: EWL-TR-03-C-WHOLE B
Sample Info: 4048241008X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\037R0101.D
Lab Smp Id: 4048241008 Client Smp ID: EWL-TR-03-C-WHOLE B
Inj Date : 03-AUG-2011 15:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048241008X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 37
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.776	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			4507728	1127.90	163.74
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			258699	23.5985	3.42(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			285055	30.4483	4.42(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			279918	29.1132	4.22
$	15 o-Terphenyl (S)	2.143	2.140	0.003	80328	15.8642	1.15(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048241

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:17 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	2 Diesel Range Organics (C8-C28	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	3 High End Organics (C8-C34)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	4 TPH (C08-C36)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	5 TPH (C08-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	6 TPH (C10-C12)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	7 TPH (C10-C20)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	8 TPH - Diesel (C10-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
	9 TPH (C10-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
	10 TPH (C12-C20)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
	11 TPH (C12-C36)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
	12 TPH (C16-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
	13 TPH (C16-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	14 TPH (C20-C34)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:17 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 o-Terphenyl (S)	0.00025	0.00022	0.00018	0.00023	0.00017	0.00014	AVRG		0.00020		20.84467	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

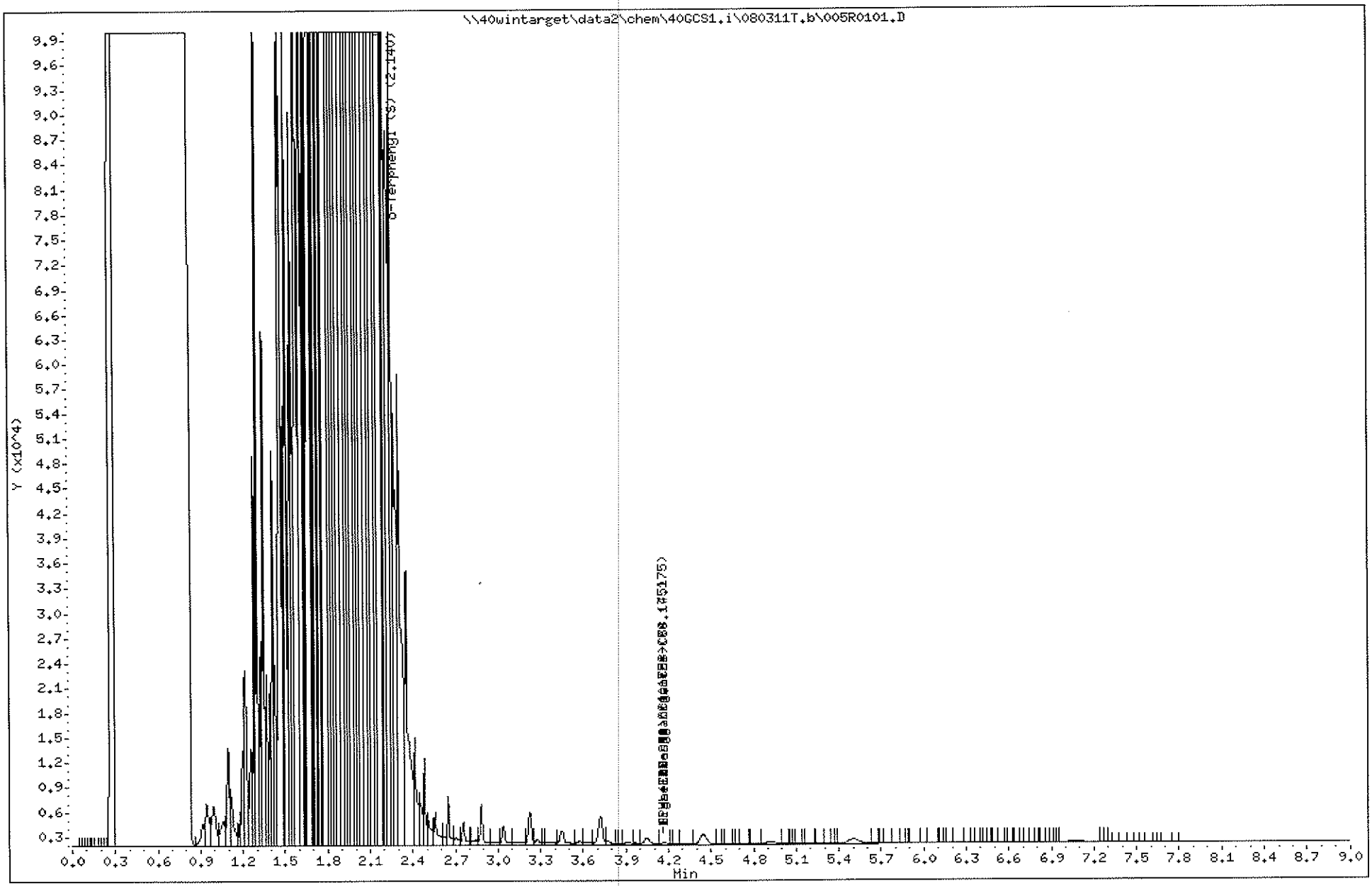
Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:17 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D
Date : 03-AUG-2011 08:35
Client ID: 2000 2860-31-01
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01 Client Smp ID: 2000 2860-31-01
Inj Date : 03-AUG-2011 08:35
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:35 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050	1.980		7907189	2000.00	2011.40(TA)
S	11 TPH (C12-C36)	1.050	7.300		7907189	2000.00	2011.40(A)
S	2 Diesel Range Organics (C8-C28)	1.050	2.700		7907189	2000.00	2011.40(TA)
S	3 High End Organics (C8-C34)	1.050	7.300		7907189	2000.00	2011.40(A)
S	4 TPH (C08-C36)	1.050	7.300		7907189	2000.00	2011.40(A)
S	5 TPH (C08-C40)	1.050	7.300		7907189	2000.00	2011.40(A)
S	6 TPH (C10-C12)	1.050	7.300		7907189	2000.00	2011.40(A)
S	7 TPH (C10-C20)	1.050	7.300		7907189	2000.00	2011.40(A)
S	8 TPH - Diesel (C10-C28)	1.480	2.700		7907189	2000.00	2011.40(TA)
S	9 TPH (C10-C40)	1.050	7.300		7907189	2000.00	2011.40(A)
S	10 TPH (C12-C20)	1.050	7.300		7907189	2000.00	2011.40(A)
S	12 TPH (C16-C28)	1.050	1.980		7907189	2000.00	2011.40(TA)
S	13 TPH (C16-C40)	1.050	7.300		7907189	2000.00	2011.40(A)
S	14 TPH (C20-C34)	1.050	7.300		7907189	2000.00	2011.40(A)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	360822	50.0000	71.25

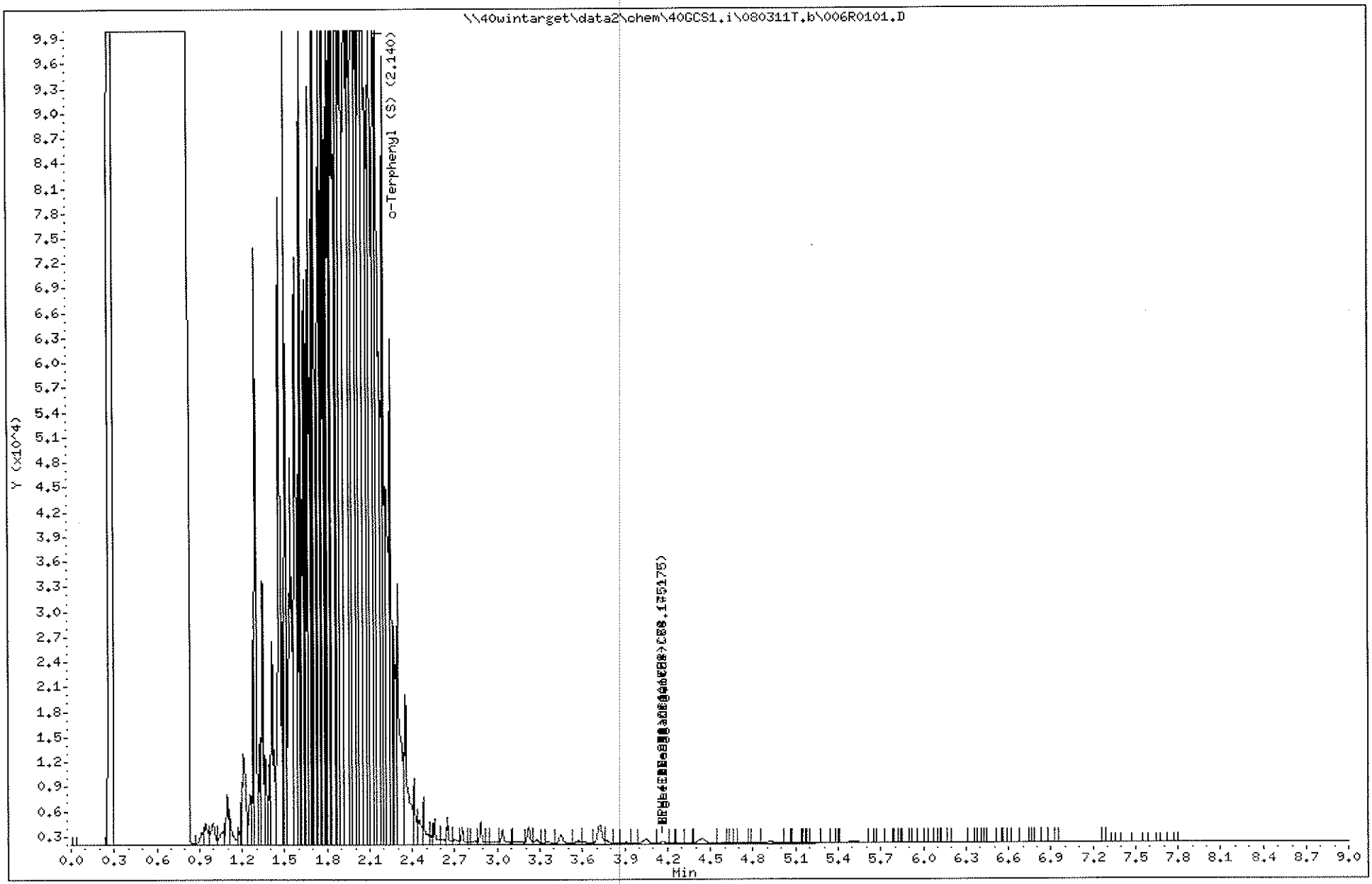
QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Date : 03-AUG-2011 08:45
Client ID: 1000 2860-31-02
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02 Client Smp ID: 1000 2860-31-02
Inj Date : 03-AUG-2011 08:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:45 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			4009201	1000.00	998.33(T)
S	11 TPH (C12-C36)	1.050-7.300			4009201	1000.00	998.33
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			4009201	1000.00	998.33(T)
S	3 High End Organics (C8-C34)	1.050-7.300			4009201	1000.00	998.33
S	4 TPH (C08-C36)	1.050-7.300			4009201	1000.00	998.33
S	5 TPH (C08-C40)	1.050-7.300			4009201	1000.00	998.33
S	6 TPH (C10-C12)	1.050-7.300			4009201	1000.00	998.33
S	7 TPH (C10-C20)	1.050-7.300			4009201	1000.00	998.33
S	8 TPH - Diesel (C10-C28)	1.480-2.700			4009201	1000.00	998.33(T)
S	9 TPH (C10-C40)	1.050-7.300			4009201	1000.00	998.33
S	10 TPH (C12-C20)	1.050-7.300			4009201	1000.00	998.33
S	12 TPH (C16-C28)	1.050-1.980			4009201	1000.00	998.33(T)
S	13 TPH (C16-C40)	1.050-7.300			4009201	1000.00	998.33
S	14 TPH (C20-C34)	1.050-7.300			4009201	1000.00	998.33
$	15 o-Terphenyl (S)	2.140	2.140	0.000	293346	50.0000	57.93

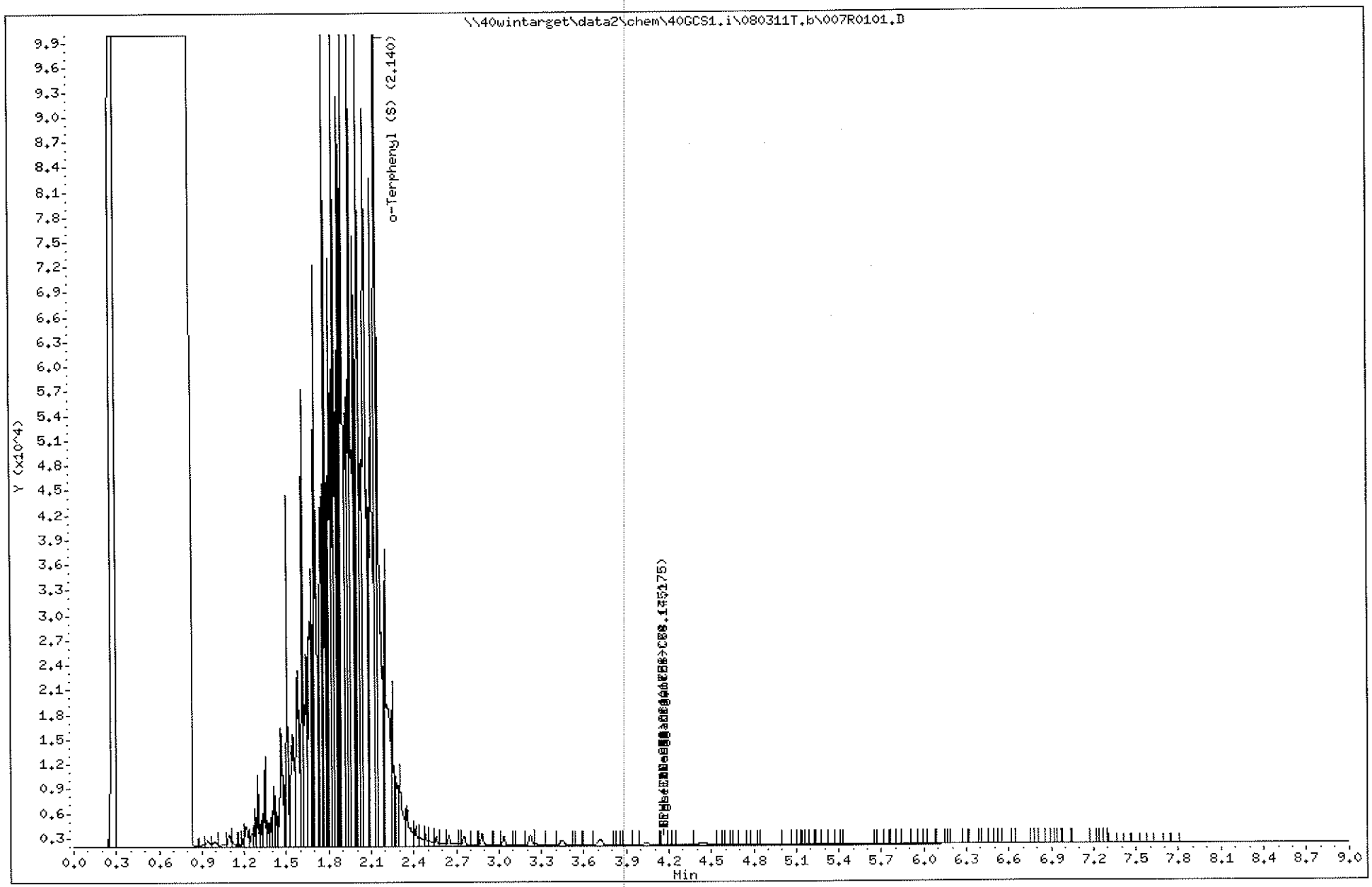
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Date : 03-AUG-2011 08:57
Client ID: 500 2860-31-14
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Lab Smp Id: 500 2860-31-14 Client Smp ID: 500 2860-31-14
Inj Date : 03-AUG-2011 08:57
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:57 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050	1.980		1794982	500.000	422.87(T)
S	11 TPH (C12-C36)	1.050	7.300		1794982	500.000	422.87
S	2 Diesel Range Organics (C8-C28)	1.050	2.700		1794982	500.000	422.87(T)
S	3 High End Organics (C8-C34)	1.050	7.300		1794982	500.000	422.87
S	4 TPH (C08-C36)	1.050	7.300		1794982	500.000	422.87
S	5 TPH (C08-C40)	1.050	7.300		1794982	500.000	422.87
S	6 TPH (C10-C12)	1.050	7.300		1794982	500.000	422.87
S	7 TPH (C10-C20)	1.050	7.300		1794982	500.000	422.87
S	8 TPH - Diesel (C10-C28)	1.480	2.700		1794982	500.000	422.87(T)
S	9 TPH (C10-C40)	1.050	7.300		1794982	500.000	422.87
S	10 TPH (C12-C20)	1.050	7.300		1794982	500.000	422.87
S	12 TPH (C16-C28)	1.050	1.980		1794982	500.000	422.87(T)
S	13 TPH (C16-C40)	1.050	7.300		1794982	500.000	422.87
S	14 TPH (C20-C34)	1.050	7.300		1794982	500.000	422.87
$	15 o-Terphenyl (S)	2.140	2.140	0.000	217195	50.0000	42.89

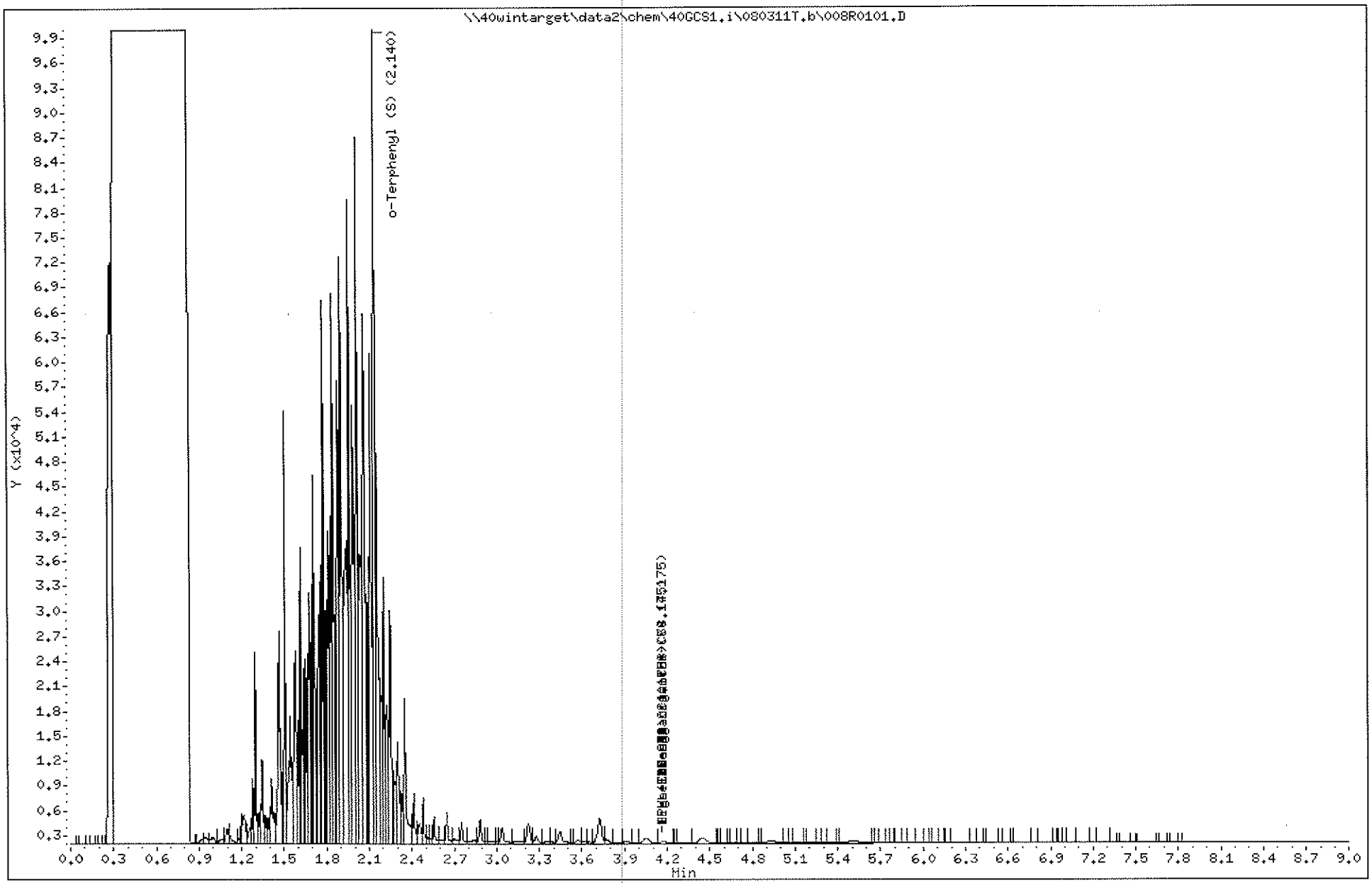
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Date : 03-AUG-2011 09:09
Client ID: 250 2860-30-13
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Lab Smp Id: 250 2860-30-13 Client Smp ID: 250 2860-30-13
Inj Date : 03-AUG-2011 09:09
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:09 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-1.980			1402797	250.000	320.94(T)
S 11	TPH (C12-C36)	1.050-7.300			1402797	250.000	320.94
S 2	Diesel Range Organics (C8-C28)	1.050-2.700			1402797	250.000	320.94(T)
S 3	High End Organics (C8-C34)	1.050-7.300			1402797	250.000	320.94
S 4	TPH (C08-C36)	1.050-7.300			1402797	250.000	320.94
S 5	TPH (C08-C40)	1.050-7.300			1402797	250.000	320.94
S 6	TPH (C10-C12)	1.050-7.300			1402797	250.000	320.94
S 7	TPH (C10-C20)	1.050-7.300			1402797	250.000	320.94
S 8	TPH - Diesel (C10-C28)	1.480-2.700			1402797	250.000	320.94(T)
S 9	TPH (C10-C40)	1.050-7.300			1402797	250.000	320.94
S 10	TPH (C12-C20)	1.050-7.300			1402797	250.000	320.94
S 12	TPH (C16-C28)	1.050-1.980			1402797	250.000	320.94(T)
S 13	TPH (C16-C40)	1.050-7.300			1402797	250.000	320.94
S 14	TPH (C20-C34)	1.050-7.300			1402797	250.000	320.94
$ 15	o-Terphenyl (S)	2.140	2.140	0.000	279515	50.0000	55.20

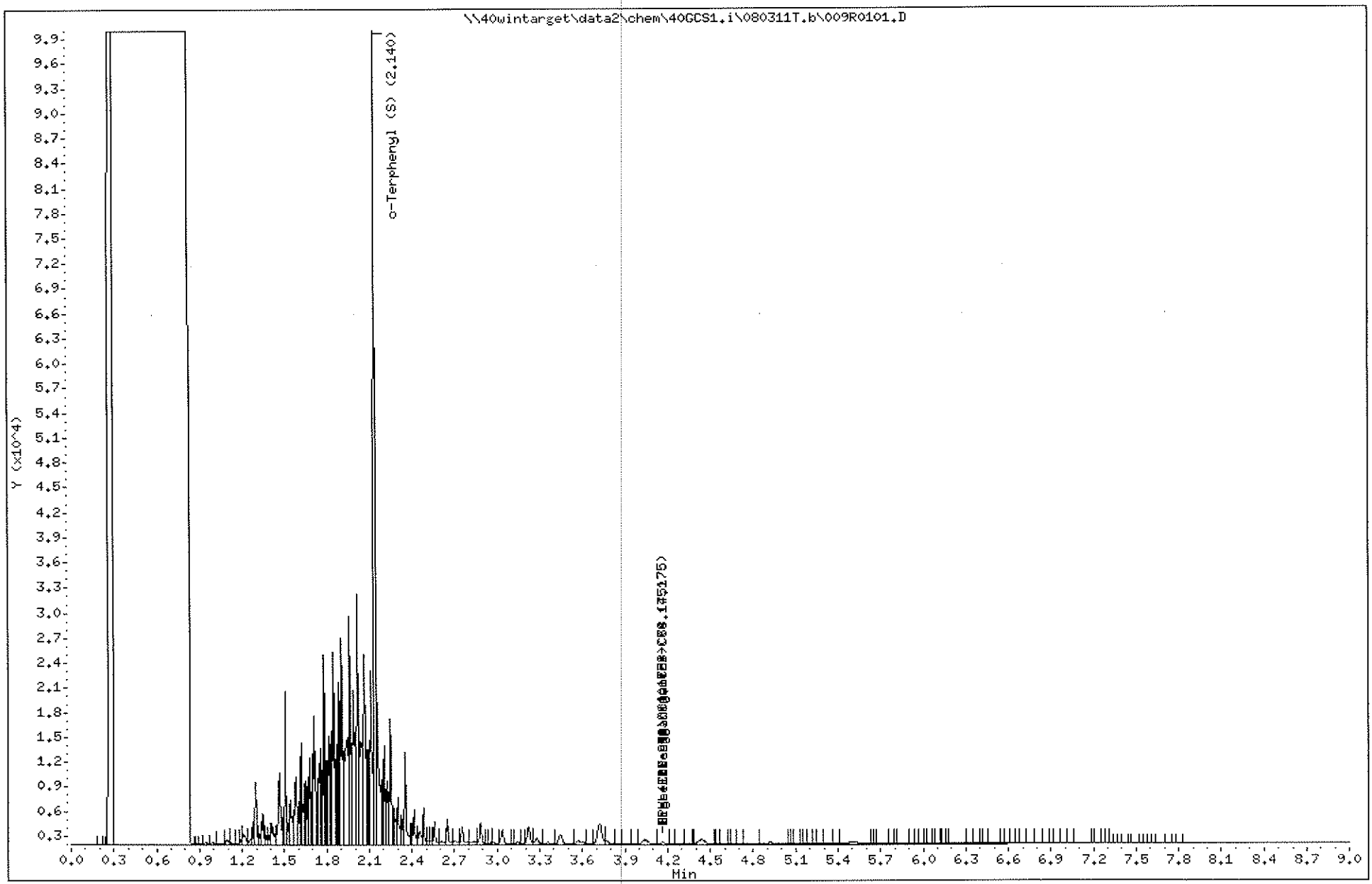
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Date : 03-AUG-2011 09:21
Client ID: 100 2860-30-14
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Lab Smp Id: 100 2860-30-14 Client Smp ID: 100 2860-30-14
Inj Date : 03-AUG-2011 09:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:21 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050	1.980		542086	100.000	97.24(Ta)
S	11 TPH (C12-C36)	1.050	7.300		542086	100.000	97.24(a)
S	2 Diesel Range Organics (C8-C28)	1.050	2.700		542086	100.000	97.24(Ta)
S	3 High End Organics (C8-C34)	1.050	7.300		542086	100.000	97.24(a)
S	4 TPH (C08-C36)	1.050	7.300		542086	100.000	97.24(a)
S	5 TPH (C08-C40)	1.050	7.300		542086	100.000	97.24(a)
S	6 TPH (C10-C12)	1.050	7.300		542086	100.000	97.24(a)
S	7 TPH (C10-C20)	1.050	7.300		542086	100.000	97.24(a)
S	8 TPH - Diesel (C10-C28)	1.490	2.700		542086	100.000	97.24(T)
S	9 TPH (C10-C40)	1.050	7.300		542086	100.000	97.24(a)
S	10 TPH (C12-C20)	1.050	7.300		542086	100.000	97.24(a)
S	12 TPH (C16-C28)	1.050	1.980		542086	100.000	97.24(Ta)
S	13 TPH (C16-C40)	1.050	7.300		542086	100.000	97.24(a)
S	14 TPH (C20-C34)	1.050	7.300		542086	100.000	97.24(a)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	225457	50.0000	44.52

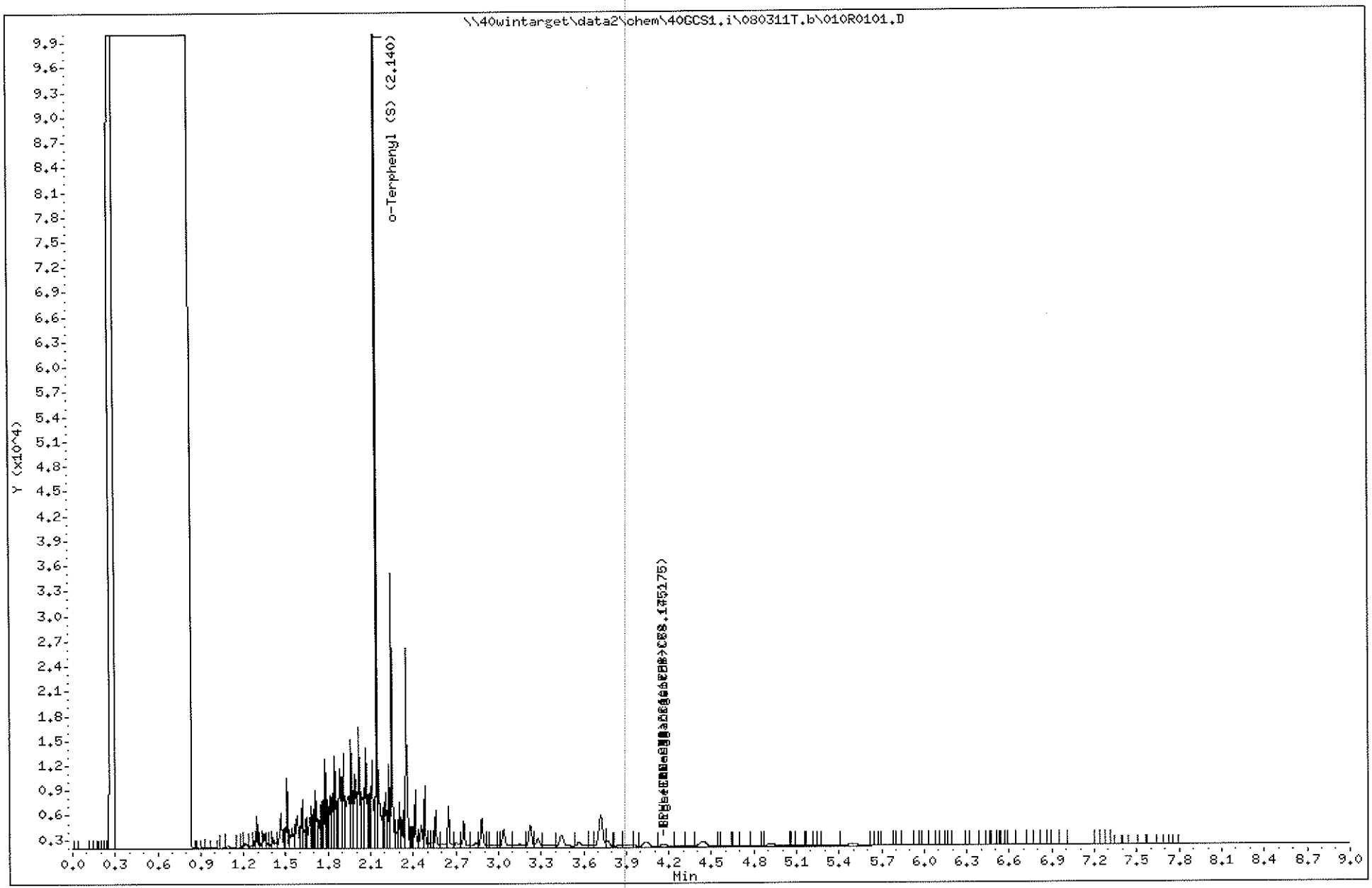
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Date : 03-AUG-2011 09:33
Client ID: 50 2860-30-15
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Lab Smp Id: 50 2860-30-15 Client Smp ID: 50 2860-30-15
Inj Date : 03-AUG-2011 09:33
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			357190	50.0000	49.19(Ta)
S	11 TPH (C12-C36)	1.050-7.300			357190	50.0000	49.19(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			357190	50.0000	49.19(Ta)
S	3 High End Organics (C8-C34)	1.050-7.300			357190	50.0000	49.19(a)
S	4 TPH (C08-C36)	1.050-7.300			357190	50.0000	49.19(a)
S	5 TPH (C08-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	6 TPH (C10-C12)	1.050-7.300			357190	50.0000	49.19(a)
S	7 TPH (C10-C20)	1.050-7.300			357190	50.0000	49.19(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			357190	50.0000	49.19(T)
S	9 TPH (C10-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	10 TPH (C12-C20)	1.050-7.300			357190	50.0000	49.19(a)
S	12 TPH (C16-C28)	1.050-1.980			357190	50.0000	49.19(Ta)
S	13 TPH (C16-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	14 TPH (C20-C34)	1.050-7.300			357190	50.0000	49.19(a)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	204017	50.0000	40.29

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

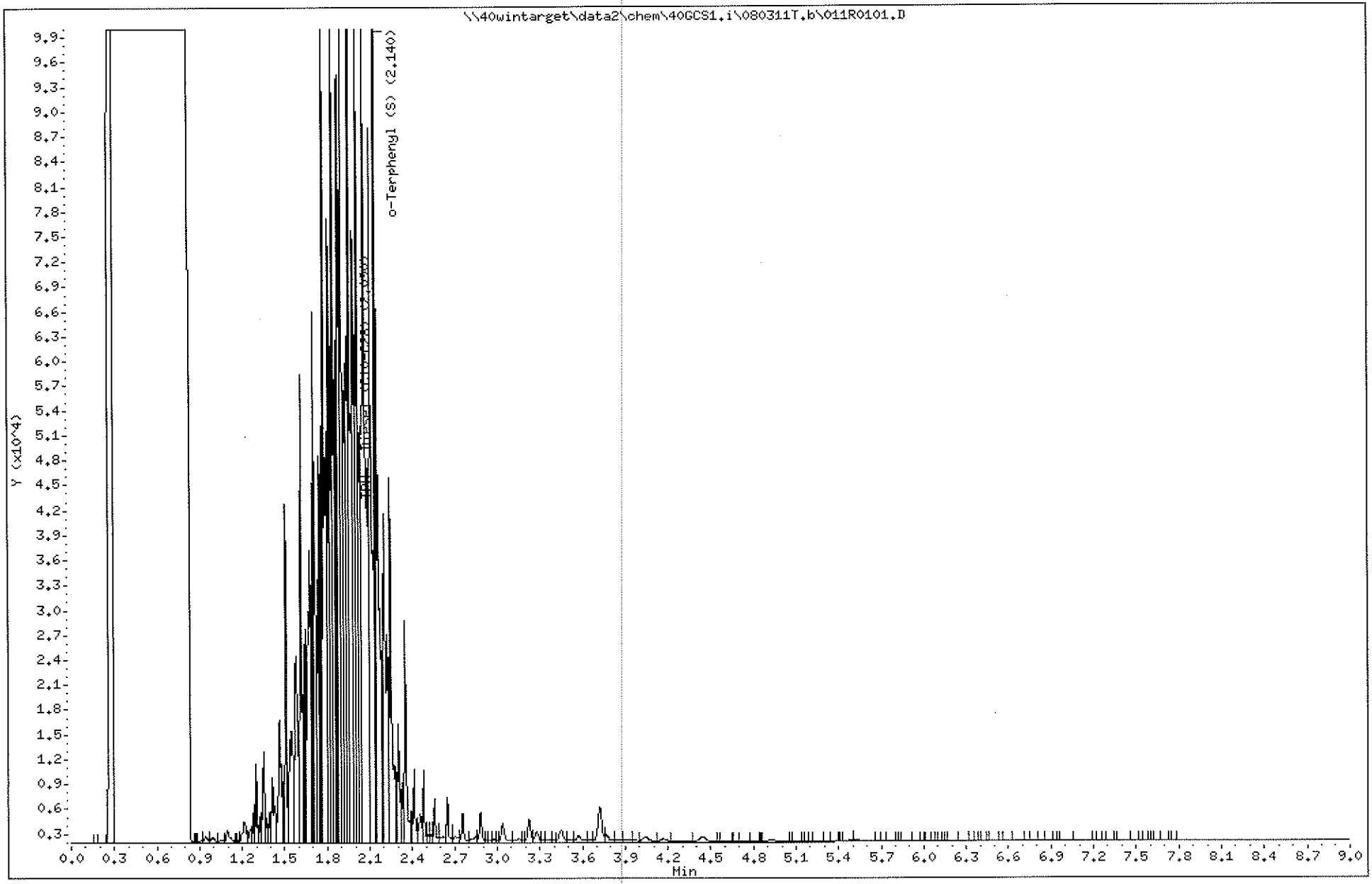
Instrument ID: 40GCS1.i Injection Date: 03-AUG-2011 09:45
Lab File ID: 011R0101.D Init. Cal. Date(s): 03-AUG-2011 03-AUG-2011
Analysis Type: WATER Init. Cal. Times: 08:35 09:33
Lab Sample ID: IC500 2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	447	0.00026	0.000	-10.57179	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.97091	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\011R0101.D
Date : 03-AUG-2011 09:45
Client ID: IC500 2860-30-16
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16 Client Smp ID: IC500 2860-30-16
Inj Date : 03-AUG-2011 09:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480	2.700		1888366	500.000	447.14
$ 15 o-Terphenyl (S)	2.140	2.140	0.000	228144	50.0000	45.05

Pace Analytical Services, Inc

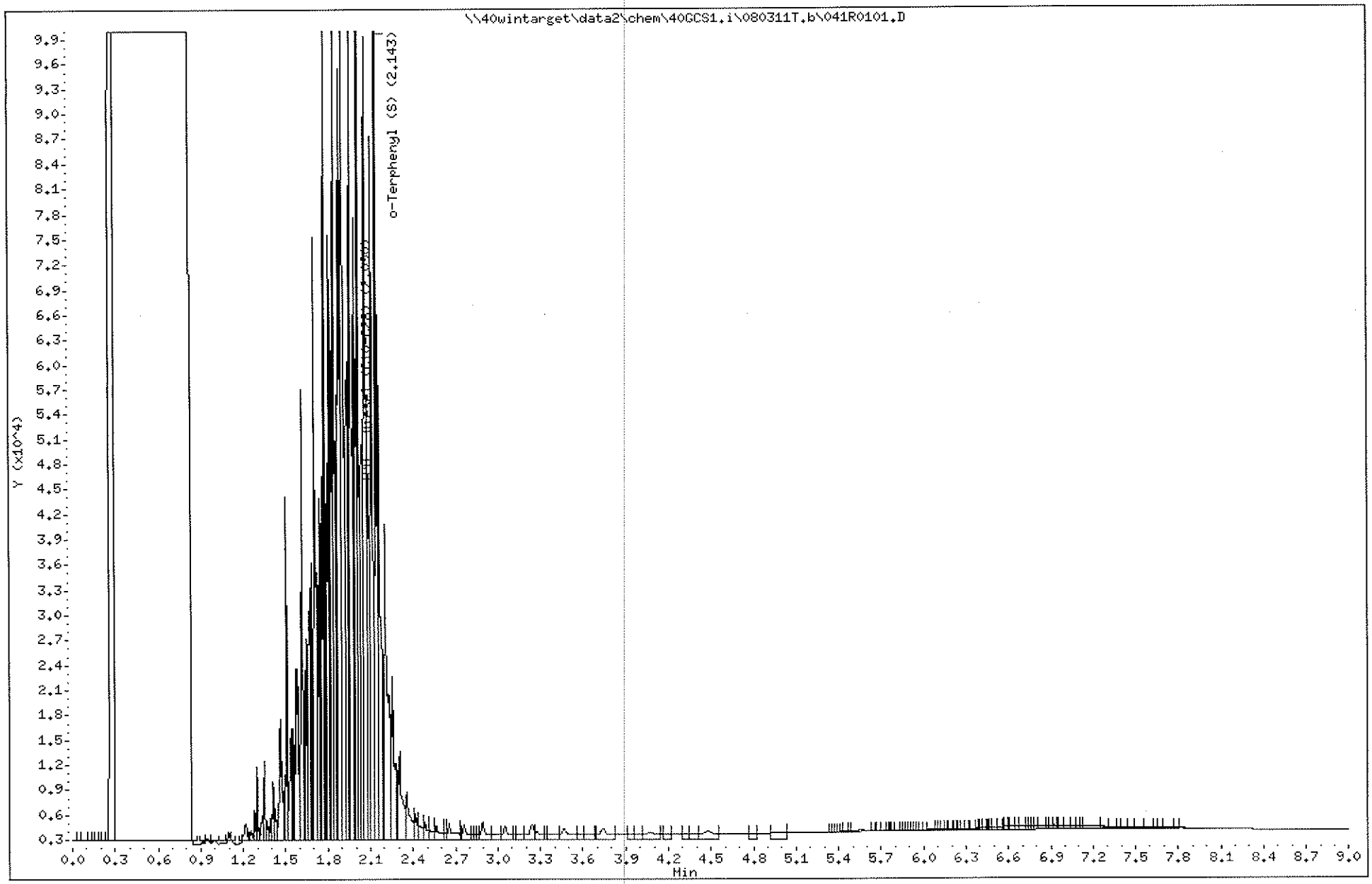
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 03-AUG-2011 16:42
Lab File ID: 041R0101.D Init. Cal. Date(s): 03-AUG-2011 03-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 08:35 09:33
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	469	0.00025	0.000	-6.17478	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.20336	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\041R0101.D
Date : 03-AUG-2011 16:42
Client ID: CC500 2860-31-14
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\041R0101.D
Lab Smp Id: CC500 2860-31-14 Client Smp ID: CC500 2860-31-14
Inj Date : 03-AUG-2011 16:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:17 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 41 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1972958	500.000	469.12
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	229733	50.0000	45.37(M)

QC Flag Legend

M - Compound response manually integrated.

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048241

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REVISED
JUN 0 4 2012
J. Duranceau

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048241

QB Batch: OEXT/12023 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048241001, 4048241002, 4048241003, 4048241004, 4048241005, 4048241006, 4048241007, 4048241008

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH (C08-C16)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH (C08-C40)	135	mg/kg	13.3	6.7	08/03/11	3q
	TPH (C16-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH - Diesel (C10-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	

Type	Sample	Matrix
BLANK	482788	Tissue

REPORT OF LABORATORY ANALYSIS

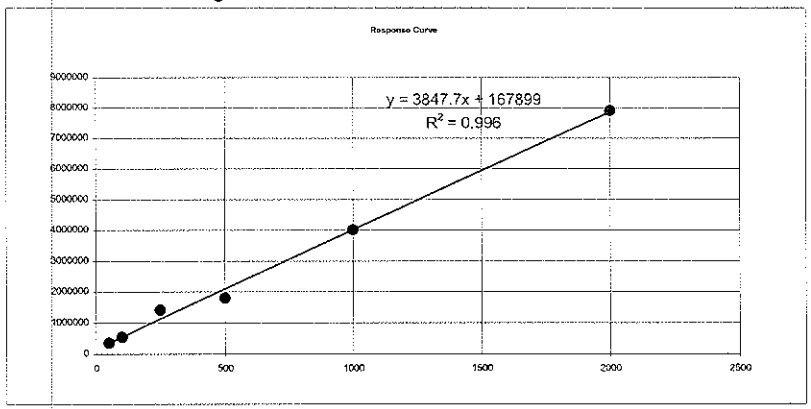
SampleID: 482788 File: 31R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	88740	
2.017	80868	
2.077	45255	
2.710	113262	

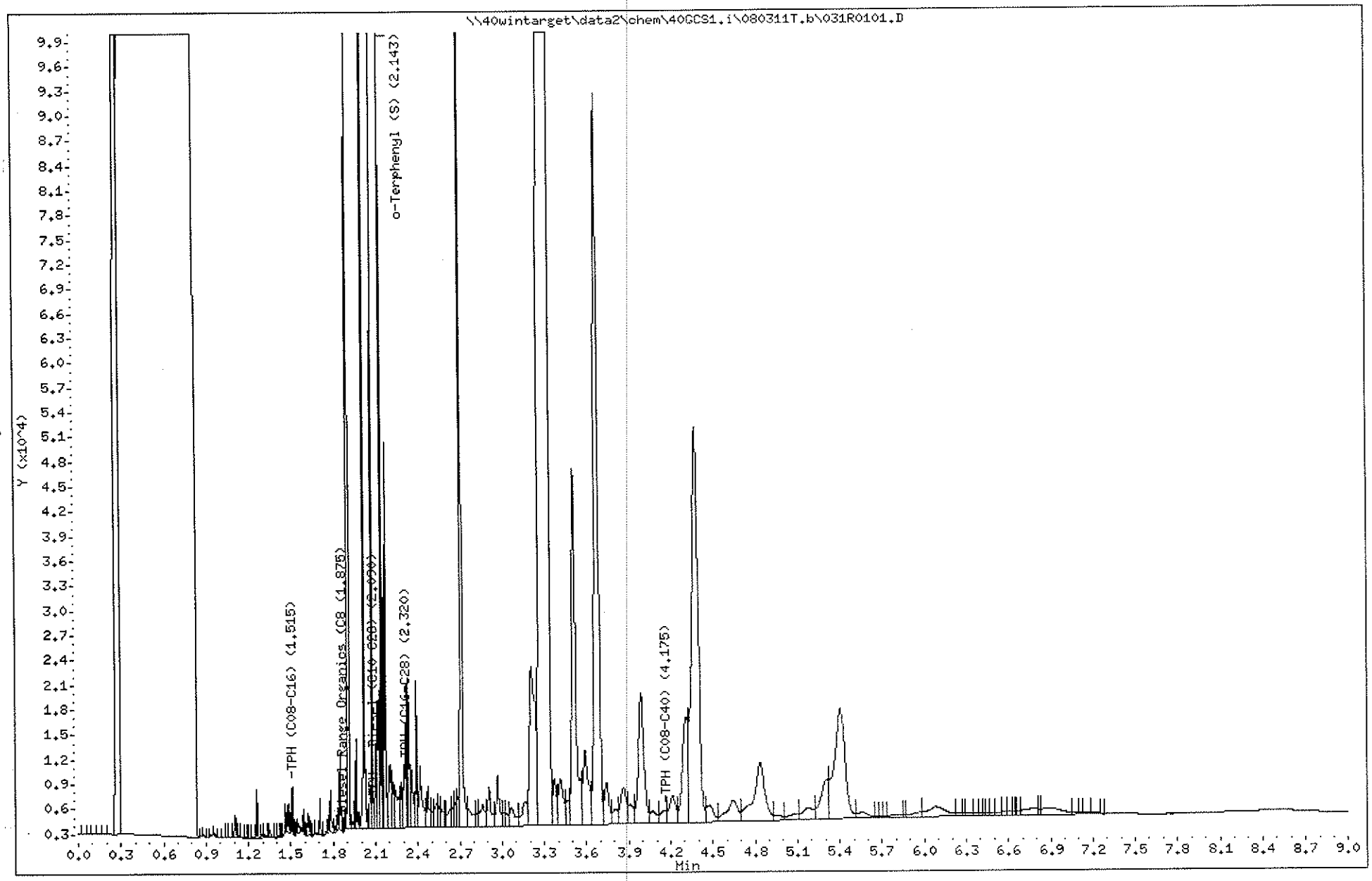
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	129097	88740	-33.1475
Diesel Range Organics (	442943	214863	15.64075
TPH - Diesel (C10-C28)	434755	214863	13.51273
TPH (C16-C28)	321252	126123	7.076949
TPH (C08-C40)	4400136	328125	1014.66

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Date : 03-AUG-2011 14:42
Client ID: MB
Sample Info: 482788X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Lab Smp Id: 482788 Client Smp ID: MB
Inj Date : 03-AUG-2011 14:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482788X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 31 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			4400136	1099.94	146.65
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			321252	39.8557	5.31(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			442943	71.4826	9.53(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			434754	69.3543	9.24
$	15 o-Terphenyl (S)	2.143	2.140	0.003	83667	16.5236	1.10(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Lab Smp Id: 482788 Client Smp ID: MB
Inj Date : 03-AUG-2011 14:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482788X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 31 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	29	20	0.690	0.00		
0.100	24	21	0.864	0.00		
0.167	12	15	1.250	0.00		
0.283	230423	108751	0.472	0.04		
0.317	557764994	94462710	0.169	98.96		
0.887	190	224	1.179	0.00		
0.940	167	170	1.017	0.00		
0.960	236	250	1.058	0.00		
1.027	39	49	1.247	0.00		
1.515	129097	331584	2.568	0.02	S	1 TPH (C08-C16)
1.875	442943	825658	1.864	0.07	S	2 Diesel Range Organi
1.050	15	23	1.575			
1.070	49	73	1.478			
1.107	2008	2609	1.300			
1.133	122	223	1.835			
1.153	102	162	1.582			
1.177	93	135	1.458			
1.197	11	27	2.455			
1.210	22	55	2.511			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.227	141	216	1.534			
1.260	2722	5918	2.174			
1.290	221	406	1.834			
1.313	301	404	1.340			
1.337	54	188	3.481			
1.353	581	792	1.364			
1.407	88	175	1.995			
1.427	90	204	2.257			
1.460	1569	3385	2.157			
2.090	434755	810663	1.865	0.07	S	8 TPH - Diesel (C10-C
1.483	2362	3364	1.424			
1.500	681	2169	3.186			
1.513	3336	5518	1.654			
1.540	70	215	3.080			
1.553	1120	1141	1.019			
1.590	1110	2694	2.426			
1.613	1881	1293	0.687			
1.663	82	112	1.373			
1.673	372	563	1.515			
1.707	1760	4348	2.470			
1.750	101	225	2.223			
1.760	939	2129	2.266			
1.780	3373	4925	1.460			
1.813	359	761	2.122			
1.830	923	2014	2.181			
1.847	4702	9243	1.966			
1.887	1175	2583	2.198			
1.907	88592	257725	2.909			
1.937	566	870	1.537			
1.953	1957	3843	1.964			
1.963	5449	10854	1.992			
2.017	80644	147162	1.825			
2.047	724	1391	1.922			
2.063	3604	5163	1.433			
2.077	45167	122765	2.718			
2.110	10599	15070	1.422			
2.120	13138	15571	1.185			
2.157	11182	27927	2.497			
2.167	29095	25617	0.880			
2.197	9859	7377	0.748			
2.217	6856	6923	1.010			
2.243	7435	4485	0.603			
2.273	1329	3514	2.643			
2.287	4169	5405	1.296			
2.310	9528	12553	1.317			
2.327	10546	18004	1.707			
2.340	7788	15180	1.949			
2.353	8258	7547	0.914			
2.390	10616	17701	1.667			
2.417	11406	7416	0.650			
2.470	6233	4980	0.799			
2.500	2217	1929	0.870			
2.533	3718	2828	0.761			
2.547	2303	2506	1.088			
2.563	4109	2181	0.531			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.600	933	1566	1.679			
2.630	4124	2229	0.540			
2.657	2825	2579	0.913			
2.673	2834	2957	1.044			
2.687	2608	3548	1.360			
2.143	83668	232005	2.773	0.01	$	15 o-Terpheny1 (S)
2.320	321252	508771	1.584	0.05	S	12 TPH (C16-C28)
4.175	4400136	2432976	0.553	0.78	S	5 TPH (C08-C40)
2.710	112942	141392	1.252			
2.760	5881	2117	0.360			
2.810	595	1491	2.507			
2.823	1531	1575	1.029			
2.860	6555	2661	0.406			
2.910	8395	4678	0.557			
2.970	9327	6121	0.656			
3.013	2122	1576	0.743			
3.030	1992	1511	0.759			
3.070	5994	2306	0.385			
3.167	7593	2882	0.380			
3.210	52555	19153	0.364			
3.337	2927775	1124827	0.384			
3.373	9023	5560	0.616			
3.417	13916	5620	0.404			
3.470	4437	2951	0.665			
3.513	85924	43080	0.501			
3.590	23501	8971	0.382			
3.680	177083	88476	0.500			
3.743	11648	5068	0.435			
3.803	4336	1714	0.395			
3.863	12455	4369	0.351			
3.913	5422	2271	0.419			
3.990	44796	15768	0.352			
4.073	4399	1451	0.330			
4.150	4790	1471	0.307			
4.210	10658	3292	0.309			
4.313	35435	12748	0.360			
4.380	156347	47737	0.305			
4.477	7054	1971	0.279			
4.643	13789	2563	0.186			
4.840	40217	7014	0.174			
4.967	2462	596	0.242			
5.083	3329	668	0.201			
5.183	7185	1293	0.180			
5.313	18966	4790	0.253			
5.407	70127	13290	0.190			
5.557	3756	725	0.193			
5.673	312	181	0.580			
5.697	300	196	0.653			
5.733	421	221	0.525			
5.807	1931	315	0.163			
5.863	200	254	1.269			
5.980	2712	572	0.211			
6.083	10617	1160	0.109			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.257	1098	373	0.340		
6.280	506	364	0.719		
6.303	1129	366	0.324		
6.370	800	340	0.425		
6.397	662	336	0.508		
6.430	258	326	1.264		
6.443	583	326	0.560		
6.480	780	330	0.423		
6.550	1053	378	0.359		
6.580	801	418	0.522		
6.620	926	437	0.472		
6.630	521	445	0.854		
6.653	349	445	1.275		
6.680	750	490	0.654		
6.773	4998	706	0.141		
6.817	661	670	1.013		
6.897	7504	777	0.104		
7.057	709	275	0.388		
7.113	482	249	0.517		
7.133	801	252	0.315		
7.187	745	209	0.280		
7.257	272	160	0.589		
	562479919	97237191		100.000	

Total unknown % area = 99.00

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048241

QB Batch: OEXT/12034 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048241001, 4048241002, 4048241003, 4048241004, 4048241005, 4048241006, 4048241007, 4048241008

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.53	%			07/29/11	

Type	Sample	Matrix
BLANK	483066	Tissue

REPORT OF LABORATORY ANALYSIS

REVISED

JUN 0 4 2012

J. Duranceau

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048241

QB Batch: OEXT/12023
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	68	59	14	50-150	20	66.7	45.2	39.3	mg/kg	08/03/11	08/03/11		
TPH (C08-C16)	29	26		50-150	20	66.7	19.6J	17.6J	mg/kg	08/03/11	08/03/11	L0	L0
TPH (C08-C40)	274	262	4	50-150	20	66.7	182	175	mg/kg	08/03/11	08/03/11	1q	2q
TPH (C16-C28)	33	27		50-150	20	66.7	22.2	18.1J	mg/kg	08/03/11	08/03/11	L0	L0
TPH - Diesel (C10-C28)	64	56	14	50-150	20	66.7	42.8	37.4	mg/kg	08/03/11	08/03/11		

Type	Sample
LCS	482789
LCSD	482790

REPORT OF LABORATORY ANALYSIS

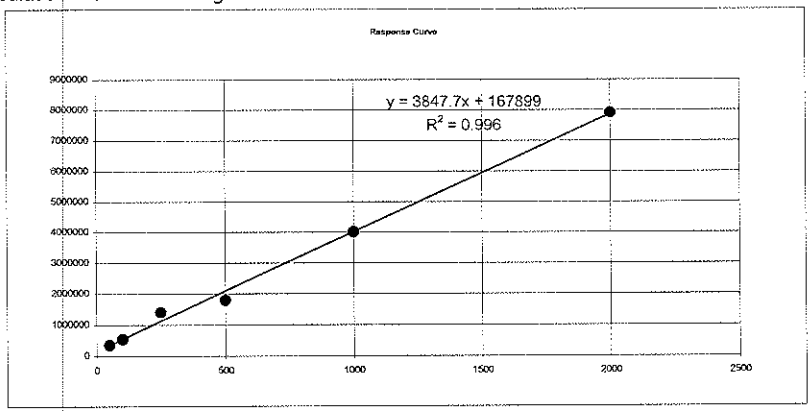
SampleID: 482789 File: 30R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	92085	
2.017	98503	
2.077	59685	
2.713	76809	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	637306	92085	98.06416
Diesel Range Organics (	1287435	250273	225.9173
TPH - Diesel (C10-C28)	1242182	250273	214.1562
TPH (C16-C28)	754062	158188	111.2286
TPH (C08-C40)	4005649	327082	912.4056

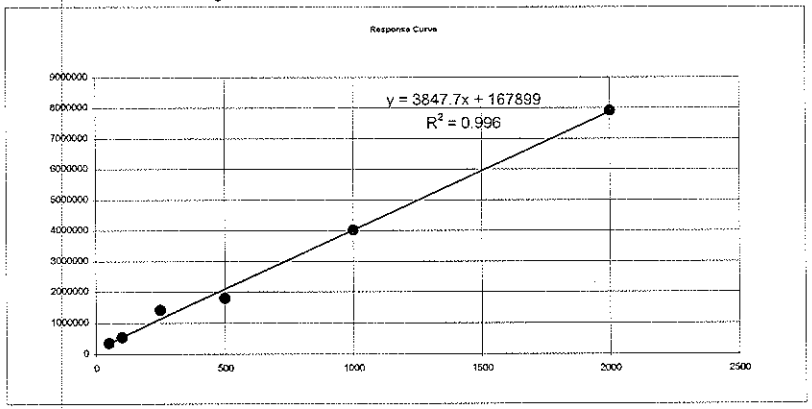
SampleID: 482790 File: 32R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	87750	
2.017	93204	
2.077	55921	
2.713	73046	

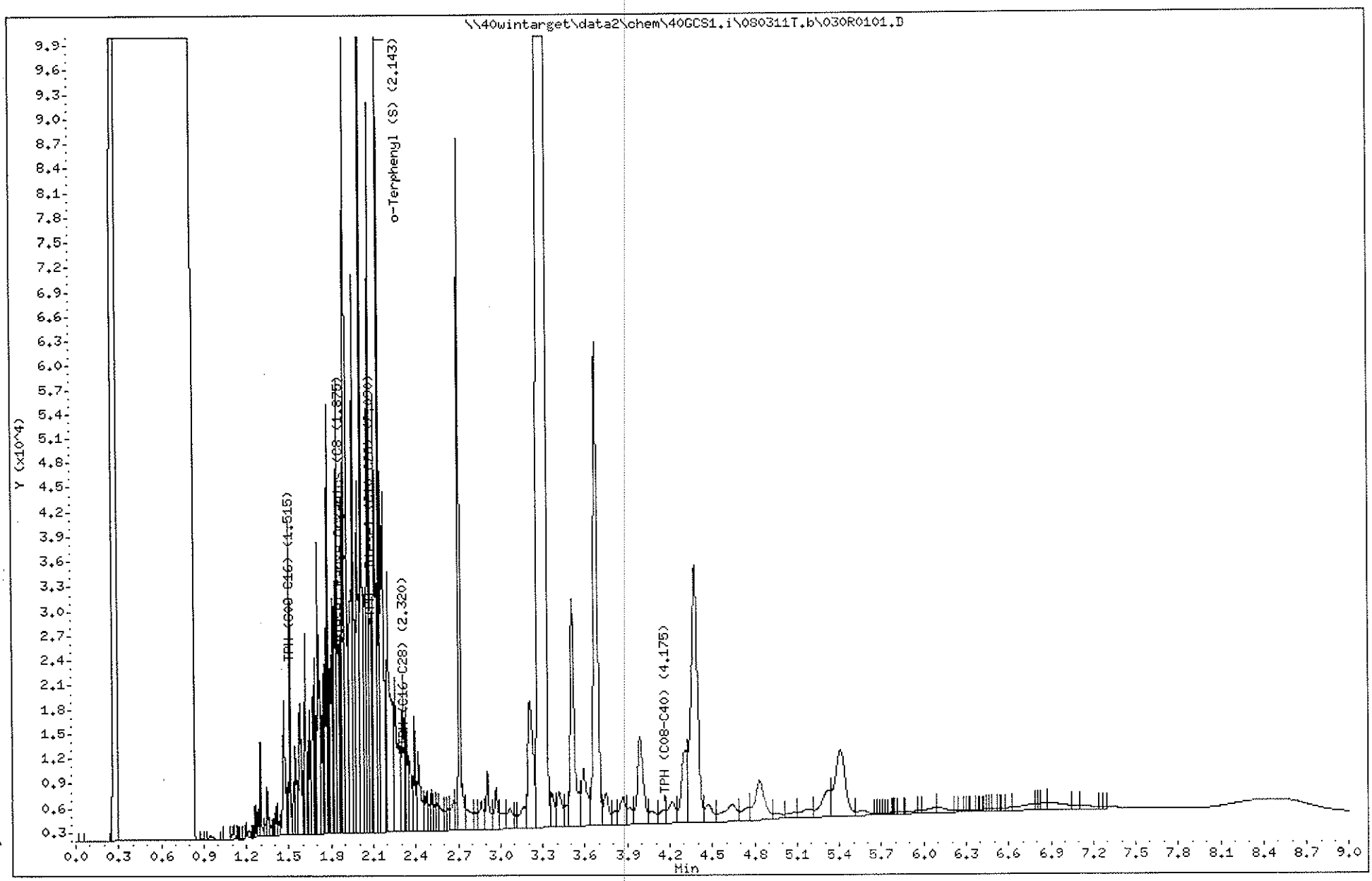
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	594167	87750	87.97919
Diesel Range Organics (	1159991	236875	196.2773
TPH - Diesel (C10-C28)	1124286	236875	186.9977
TPH (C16-C28)	664642	149125	90.34424
TPH (C08-C40)	3839232	309921	873.6147

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Date : 03-AUG-2011 14:32
Client ID: MBLCS
Sample Info: 482789X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Lab Smp Id: 482789 Client Smp ID: MBLCS
Inj Date : 03-AUG-2011 14:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482789X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 30 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			4005649	997.413	199.48
S 1 TPH (C08-C16)	1.050-1.980			637305	121.996	24.39
S 12 TPH (C16-C28)	1.940-2.700			754062	152.341	30.46
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			1287434	290.962	58.19
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1242181	279.201	55.84(R)
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	79533	15.7072	1.04(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Lab Smp Id: 482789 Client Smp ID: MBLCS
Inj Date : 03-AUG-2011 14:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482789X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 30 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	11	10	0.926	0.00		
0.283	270294	144952	0.536	0.04		
0.313	556264609	94883731	0.171	98.56		
0.890	114	135	1.181	0.00		
0.947	1128	519	0.460	0.00		
1.515	637306	911851	1.431	0.11	S	1 TPH (C08-C16)
1.875	1287435	1566127	1.216	0.22	S	2 Diesel Range Organi
1.073	84	44	0.523			
1.110	1578	1642	1.040			
1.137	65	141	2.156			
1.157	64	100	1.558			
1.180	67	119	1.779			
1.200	113	221	1.957			
1.213	905	766	0.847			
1.263	2225	3897	1.752			
1.283	1743	3250	1.865			
1.300	7056	11369	1.611			
1.333	1381	1518	1.099			
1.347	4906	5940	1.211			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.370	908	1323	1.457			
1.387	249	516	2.074			
1.397	763	1153	1.511			
1.417	2913	3868	1.328			
1.430	1357	1767	1.303			
1.467	18876	16288	0.863			
2.090	1242182	1512205	1.217	0.22	S	8 TPH - Diesel (C10-C
1.493	3915	5923	1.513			
1.510	18335	38205	2.084			
1.537	4596	6372	1.386			
1.547	9908	10779	1.088			
1.577	21243	14797	0.697			
1.607	4443	10141	2.283			
1.620	15648	24516	1.567			
1.637	8589	9686	1.128			
1.650	8948	15157	1.694			
1.670	14134	16691	1.181			
1.683	12120	21549	1.778			
1.697	7230	14420	1.995			
1.707	34386	35511	1.033			
1.740	9233	14409	1.561			
1.750	14040	19439	1.385			
1.763	15567	25107	1.613			
1.780	28755	52194	1.815			
1.793	11666	20189	1.731			
1.803	15135	21836	1.443			
1.817	23516	28596	1.216			
1.833	18672	30238	1.619			
1.847	36157	55370	1.531			
1.867	12010	21384	1.781			
1.877	14429	27399	1.899			
1.887	33540	45013	1.342			
1.907	91907	176624	1.922			
1.940	54003	28369	0.525			
1.963	49930	68015	1.362			
1.990	48612	42819	0.881			
2.017	98317	132892	1.352			
2.043	27906	29143	1.044			
2.067	45240	54841	1.212			
2.077	59542	88949	1.494			
2.097	14836	24902	1.678			
2.113	66323	53431	0.806			
2.160	65461	43793	0.669			
2.197	18041	19693	1.092			
2.207	48098	31700	0.659			
2.257	35848	18766	0.523			
2.310	17820	18688	1.049			
2.327	10880	15161	1.393			
2.340	9325	12141	1.302			
2.357	11099	8574	0.773			
2.390	12822	13961	1.089			
2.417	16201	9784	0.604			
2.470	5338	4720	0.884			
2.487	5066	3474	0.686			
2.517	4563	5071	1.111			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.533	2468	3182	1.289				
2.550	3810	3432	0.901				
2.567	5920	3047	0.515				
2.600	2374	2386	1.005				
2.630	4048	2674	0.661				
2.667	7497	3665	0.489				
2.687	2673	3387	1.267				
2.143	79533	188794	2.374	0.01	$	15	o-Terphenyl (S)
2.320	754062	750660	0.995	0.13	S	12	TPH (C16-C28)
4.175	4005649	2807441	0.701	0.71	S	5	TPH (C08-C40)
2.713	76278	84282	1.105				
2.760	8172	2583	0.316				
2.827	2887	2110	0.731				
2.863	8010	3387	0.423				
2.910	11414	7069	0.619				
2.970	8712	4971	0.571				
3.013	5321	1958	0.368				
3.070	6383	2465	0.386				
3.103	2215	1593	0.719				
3.170	7476	2602	0.348				
3.210	39239	15497	0.395				
3.323	1948860	900538	0.462				
3.370	7995	4090	0.512				
3.417	10946	4338	0.396				
3.467	3961	2627	0.663				
3.510	59725	27697	0.464				
3.590	19027	6984	0.367				
3.680	116133	58834	0.507				
3.750	9858	3976	0.403				
3.810	4367	1734	0.397				
3.867	9754	3372	0.346				
3.917	5331	2044	0.383				
3.990	31911	10609	0.332				
4.073	4939	1547	0.313				
4.157	5431	1624	0.299				
4.217	9377	2570	0.274				
4.310	26190	8694	0.332				
4.380	102073	31189	0.306				
4.473	8033	2099	0.261				
4.647	13582	2005	0.148				
4.760	6242	1588	0.254				
4.837	23763	4758	0.200				
4.953	2985	682	0.228				
5.093	3001	642	0.214				
5.177	5702	981	0.172				
5.327	15003	3175	0.212				
5.410	41088	8032	0.195				
5.563	3455	608	0.176				
5.660	284	208	0.733				
5.687	247	209	0.848				
5.703	214	223	1.041				
5.717	219	220	1.007				
5.737	311	228	0.734				

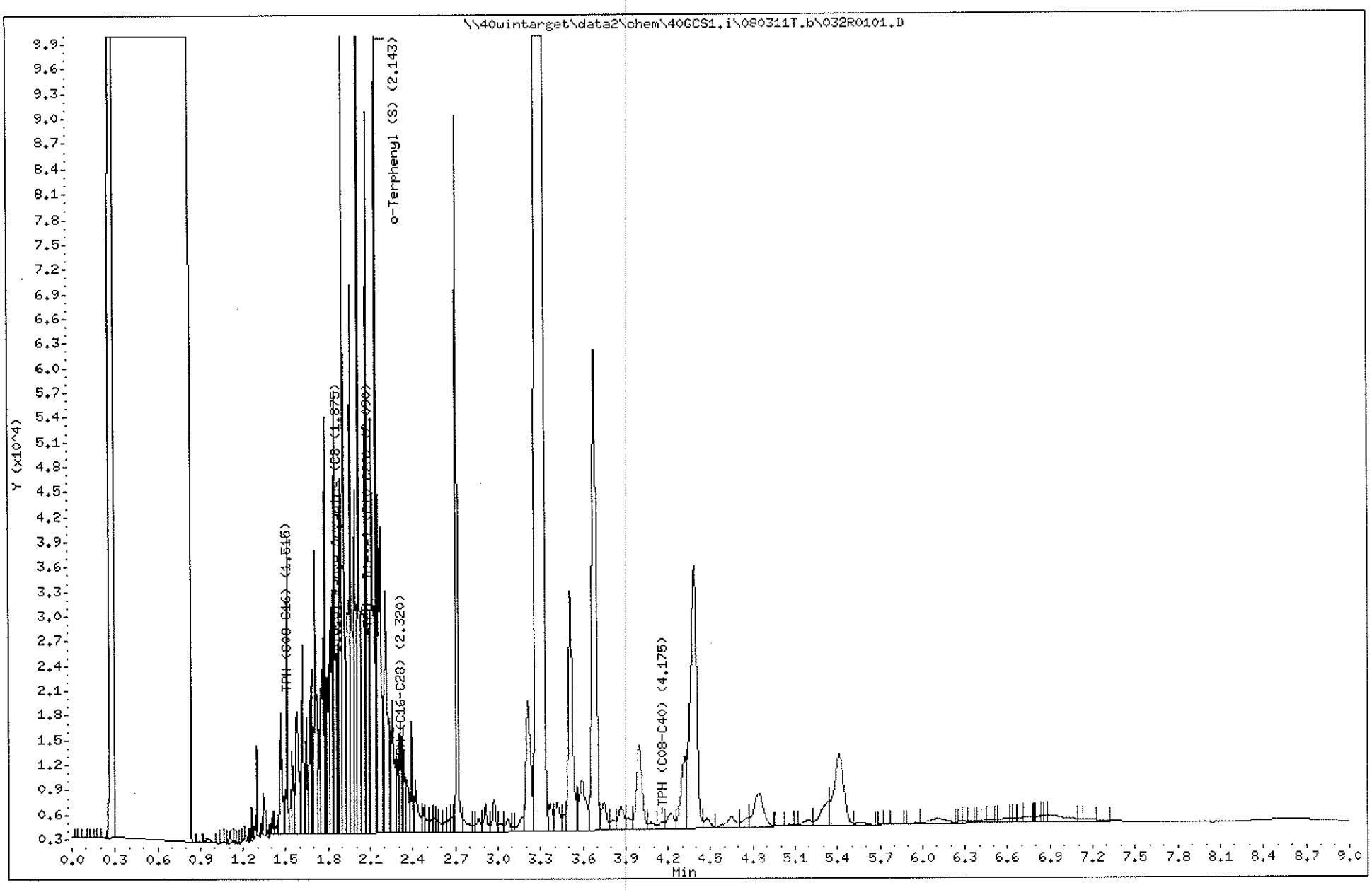
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.770	365	238	0.652		
5.783	194	255	1.311		
5.793	151	254	1.678		
5.803	205	259	1.265		
5.823	679	260	0.383		
5.867	173	217	1.254		
5.957	1451	339	0.234		
5.973	425	366	0.861		
6.090	3302	667	0.202		
6.100	3318	675	0.203		
6.243	421	236	0.560		
6.277	516	251	0.486		
6.293	296	251	0.849		
6.310	197	251	1.275		
6.323	145	246	1.695		
6.347	537	254	0.473		
6.377	291	250	0.858		
6.393	200	255	1.274		
6.407	308	264	0.859		
6.423	154	259	1.680		
6.440	261	265	1.016		
6.457	321	278	0.866		
6.483	387	282	0.729		
6.517	568	302	0.531		
6.530	305	311	1.018		
6.547	254	327	1.289		
6.577	622	366	0.589		
6.623	1097	427	0.389		
6.783	5745	764	0.133		
6.800	767	772	1.007		
6.820	949	800	0.843		
6.867	2742	904	0.330		
6.900	7780	920	0.118		
7.057	2172	609	0.280		
7.113	3533	535	0.151		
7.243	759	393	0.517		
7.277	512	370	0.722		
	560621339	98025582		100.000	

Total unknown % area = 98.60

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Date : 03-AUG-2011 14:54
Client ID: MBLCSD
Sample Info: 482790X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Lab Smp Id: 482790 Client Smp ID: MBLCSD
Inj Date : 03-AUG-2011 14:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482790X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 32 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			3839232	954.162	190.83
S 1 TPH (C08-C16)	1.050-1.980			594167	110.785	22.15
S 12 TPH (C16-C28)	1.940-2.700			664641	129.101	25.82
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			1159990	257.840	51.56
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1124286	248.560	49.71(R)
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	75904	14.9905	0.99(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Lab Smp Id: 482790 Client Smp ID: MBLCSD
Inj Date : 03-AUG-2011 14:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482790X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 32 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	14	24	1.678	0.00		
0.043	25	31	1.250	0.00		
0.110	16	16	1.013	0.00		
0.133	10	15	1.500	0.00		
0.173	10	9	0.891	0.00		
0.200	34	9	0.263	0.00		
0.283	268820	130100	0.484	0.04		
0.317	547977154	93525145	0.171	98.63		
0.890	103	124	1.206	0.00		
0.947	979	501	0.512	0.00		
1.515	594167	843778	1.420	0.10	S	1 TPH (C08-C16)
1.875	1159991	1457539	1.257	0.21	S	2 Diesel Range Organi
1.053	19	28	1.481			
1.073	28	42	1.522			
1.110	1332	1445	1.085			
1.137	76	148	1.958			
1.157	59	92	1.554			
1.180	58	107	1.842			
1.200	65	144	2.202			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.217	723	641	0.886			
1.260	2140	3995	1.866			
1.283	1274	2583	2.027			
1.297	5849	10699	1.829			
1.333	509	809	1.588			
1.347	3938	5088	1.292			
1.370	423	796	1.882			
1.387	29	103	3.576			
1.397	198	523	2.643			
1.417	2039	2906	1.425			
1.430	587	985	1.678			
1.467	16358	14581	0.891			
2.090	1124286	1411824	1.256	0.20	S	8 TPH - Diesel (C10-C
1.493	2454	5017	2.044			
1.510	17335	35977	2.075			
1.537	3982	5508	1.383			
1.547	8641	10014	1.159			
1.577	19524	14167	0.726			
1.607	4222	9729	2.304			
1.620	14777	22910	1.550			
1.637	6174	9135	1.480			
1.647	9769	14031	1.436			
1.670	13412	16174	1.206			
1.683	11380	19998	1.757			
1.697	6695	12869	1.922			
1.707	32459	34304	1.057			
1.740	8612	13484	1.566			
1.750	27967	18125	0.648			
1.780	27695	50360	1.818			
1.793	10917	18937	1.735			
1.803	14267	20507	1.437			
1.817	22451	27401	1.220			
1.833	17791	29065	1.634			
1.847	34619	53376	1.542			
1.867	11308	20133	1.780			
1.877	13688	26181	1.913			
1.887	31882	42785	1.342			
1.907	87623	173253	1.977			
1.947	50866	28299	0.556			
1.963	47953	66324	1.383			
1.990	46743	41514	0.888			
2.017	93071	127964	1.375			
2.043	37084	27388	0.739			
2.067	32090	51076	1.592			
2.077	55819	87115	1.561			
2.097	13903	23272	1.674			
2.113	61630	50200	0.815			
2.160	59268	41034	0.692			
2.197	16029	17597	1.098			
2.207	34034	29378	0.863			
2.240	9361	11893	1.270			
2.253	20758	16068	0.774			
2.287	7783	8712	1.119			
2.310	12271	13253	1.080			
2.327	8689	12733	1.465			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.340	7150	9972	1.395				
2.357	7840	6488	0.828				
2.390	9754	13499	1.384				
2.417	11003	6360	0.578				
2.470	2728	2955	1.083				
2.487	3188	1891	0.593				
2.537	2801	1758	0.628				
2.550	1665	1864	1.120				
2.567	1423	1550	1.089				
2.583	2211	1258	0.569				
2.630	2133	1348	0.632				
2.657	2036	1624	0.798				
2.673	1756	1828	1.041				
2.690	1603	2169	1.353				
2.143	75905	182252	2.401	0.01	$	15	o-Terphenyl (S)
2.320	664642	708384	1.066	0.12	S	12	TPH (C16-C28)
4.175	3839232	2680738	0.698	0.69	S	5	TPH (C08-C40)
2.713	72668	86523	1.191				
2.760	4018	1411	0.351				
2.830	1011	856	0.847				
2.863	3410	1628	0.477				
2.910	5469	3302	0.604				
2.970	5570	3842	0.690				
3.013	2130	882	0.414				
3.070	3117	1502	0.482				
3.110	571	577	1.011				
3.170	4153	1698	0.409				
3.210	35566	15807	0.444				
3.327	2015326	903758	0.448				
3.370	5919	3213	0.543				
3.420	8171	3351	0.410				
3.470	2819	2004	0.711				
3.513	54391	29056	0.534				
3.560	3683	3753	1.019				
3.593	17552	6231	0.355				
3.683	119522	58007	0.485				
3.747	7934	3293	0.415				
3.813	2843	1145	0.403				
3.870	7609	2765	0.363				
3.920	3870	1425	0.368				
3.997	28798	10092	0.350				
4.077	2405	768	0.319				
4.160	2469	861	0.349				
4.220	6169	1954	0.317				
4.320	23229	8712	0.375				
4.387	102046	31813	0.312				
4.480	3457	1153	0.334				
4.650	6325	1269	0.201				
4.763	3441	1108	0.322				
4.843	19606	4067	0.207				
4.953	78	128	1.647				
4.970	421	128	0.304				
5.083	545	219	0.402				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.100	387	223	0.577		
5.190	3092	686	0.222		
5.333	11196	2890	0.258		
5.410	42383	8620	0.203		
5.570	1433	296	0.207		
5.710	29	16	0.552		
5.817	140	43	0.307		
5.983	491	173	0.352		
6.113	5071	583	0.115		
6.250	194	172	0.887		
6.280	341	202	0.592		
6.313	431	230	0.534		
6.367	783	262	0.334		
6.377	157	264	1.685		
6.407	491	284	0.579		
6.447	715	312	0.437		
6.503	1131	355	0.314		
6.527	509	378	0.742		
6.610	2193	499	0.228		
6.630	703	507	0.721		
6.657	725	531	0.732		
6.673	539	544	1.009		
6.703	1023	593	0.579		
6.770	2635	713	0.271		
6.780	577	726	1.259		
6.797	584	734	1.258		
6.833	1617	741	0.458		
6.853	896	757	0.845		
6.883	1394	792	0.568		
6.900	7382	816	0.111		
7.097	950	387	0.407		
7.140	1648	340	0.206		
7.233	1096	229	0.209		
	552162301	96518964		100.000	

Total unknown % area = 98.67

03 Aug 11 05:04 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080311.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	CC500 2860-31-14				TPHMACHB	1
1	5	2000 2860-31-01				TPHMACHB	1
1	6	1000 2860-31-02				TPHMACHB	1
1	7	500 2860-31-14				TPHMACHB	1
1	8	250 2860-30-13				TPHMACHB	1
1	9	100 2860-30-14				TPHMACHB	1
1	10	50 2860-30-15				TPHMACHB	1
1	11	IC500 2860-30-16-OC				TPHMACHB	1
1	12	482789RSX3				TPHMACHB	1
1	13	482788RSX2				TPHMACHB	1
1	14	482790RSX3				TPHMACHB	1
1	15	4048240001				TPHMACHB	1
1	16	4048240002RSX2				TPHMACHB	1
1	17	4048240003				TPHMACHB	1
1	18	4048240004	TPH-D			TPHMACHB	1
1	19	4048240005RSX2	GCSV			TPHMACHB	1
1	20	4048240006RSX3	62560			TPHMACHB	1
1	21	4048241001	HBN			TPHMACHB	1
1	22	4048241002	77475			TPHMACHB	1
1	23	4048241003				TPHMACHB	1
1	24	4048241004				TPHMACHB	1
1	25	4048241005				TPHMACHB	1
1	26	4048241006RSX2				TPHMACHB	1
1	27	4048241007				TPHMACHB	1
1	28	4048241008RSX2				TPHMACHB	1
1	29	4048243001				TPHMACHB	1
1	30	482789X3				TPHMACHB	1
1	31	482788X2				TPHMACHB	1
1	32	482790X3				TPHMACHB	1
1	33	4048240002X2				TPHMACHB	1
1	34	4048240005X2				TPHMACHB	1
1	35	4048240006X3				TPHMACHB	1
1	36	4048241006X2				TPHMACHB	1
1	37	4048241008X2				TPHMACHB	1
1	38	BLANK				TPHMACHB	1
1	39	BLANK				TPHMACHB	1
1	40	BLANK				TPHMACHB	1
1	41	CC500 2860-31-14-OC				TPHMACHB	1
1	42	484444				TPHMACHB	1
1	43	484443				TPHMACHB	1
1	44	484445X5	TPH-S			TPHMACHB	1
1	45	484446X7	GCSV			TPHMACHB	1
1	46	4048810002X6	62666			TPHMACHB	1
1	47	4048810001X100	HBN			TPHMACHB	1
1	48	4048810003X50	77574			TPHMACHB	1
1	49	4048810004				TPHMACHB	1
1	50	4048810005				TPHMACHB	1
1	51	4048810006X300				TPHMACHB	1

KJB 8/4/11

Continued on Page 78

Read and Understood By

Signed Date Signed Date

03 Aug 11 05:04 PM
Sequence: C:\HPCHEM\1\SEQUENCE\080311.SEQ

page 2

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4048810007					TPHMACHB	1
1	53	4048810008					TPHMACHB	1
1	54	4048810009					TPHMACHB	1
1	55	4048810011					TPHMACHB	1
1	56	4048941001					TPHMACHB	1
1	57	4048941002					TPHMACHB	1
1	58	4048941003					TPHMACHB	1
1	59	4048941004					TPHMACHB	1
1	60	4048941005					TPHMACHB	1
1	61	4048941006					TPHMACHB	1
1	62	4048941007					TPHMACHB	1
1	63	4048941008					TPHMACHB	1
1	64	4048942001					TPHMACHB	1
1	65	BLANK					TPHMACHB	1
1	66	CC500 2860-31-14-~~oc~~					TPHMACHB	1
REAR 1								

KHB 8/4/11

TPH-S
GCSV
62666
HBN
77574

KHB 8/4/11

Continued on Page —

Read and Understood By

Signed: [signature] Date: 8/4/11
Signed: [signature] Date: 8/4/11

Pace Analytical® Prep Log Report

Batch Information: OEXT HBN 77364 TPH-B

Prep Method	EPA 3541
Spiked By	BLM
Methylene Chloride	12455
Batch Notes	

Analysis Method	TPH-B
Spiked By Date	07/28/2011
Sodium Sulfate	7513
Reviewed By	JLH

Extracted By	BLM
Conc. Temp #1	98.5
Florisil 3620B	5238
Reviewed By Date	07/29/2011

Extracted By Date	07/28/2011
Conc. Temp #2	98.5
3620B Date/Initials	7/29/11 BLM

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**482788**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**482789**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**482790**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048240001**	14.406	1	0.5			6045 (.5)
8015 T_P	PS	**4048240002**	14.319	1	0.5			6045 (.5)
8015 T_P	PS	**4048240003**	14.332	1	0.5			6045 (.5)
8015 T_P	PS	**4048240004**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048240005**	14.736	1	0.5			6045 (.5)
8015 T_P	PS	**4048240006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048241001**	14.649	1	0.5			6045 (.5)
8015 T_P	PS	**4048241002**	14.389	1	0.5			6045 (.5)
8015 T_P	PS	**4048241003**	14.638	1	0.5			6045 (.5)
8015 T_P	PS	**4048241004**	14.111	1	0.5			6045 (.5)
8015 T_P	PS	**4048241005**	13.928	1	0.5			6045 (.5)
8015 T_P	PS	**4048241006**	13.985	1	0.5			6045 (.5)
8015 T_P	PS	**4048241007**	13.84	1	0.5			6045 (.5)
8015 T_P	PS	**4048241008**	13.776	1	0.5			6045 (.5)
8015 T_P	PS	**4048243001**	13.6	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Fri, 29 Jul 2011 10:23:57 -0500

Pace Analytical Services					Instrument ID:	40BALC			
LIPID					Analyst:	BLM			

12034 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483066		0.9535	0.9733	15.0000	4.0000	1.0000	0.5280	07/29/2011 06:57:24		
4048240001		0.9551	0.9685	14.4060	4.0000	1.0000	0.3721	07/29/2011 06:57:30		
4048240002		0.9522	0.9636	14.3190	4.0000	1.0000	0.3185	07/29/2011 06:57:36		
4048240003		0.9506	0.9618	14.3320	4.0000	1.0000	0.3126	07/29/2011 06:57:43		
4048240004		0.9492	0.9563	15.0000	4.0000	1.0000	0.1893	07/29/2011 06:57:52		
4048240005		0.9478	0.9591	14.7360	4.0000	1.0000	0.3067	07/29/2011 06:57:59		
4048240006		0.9457	0.9676	15.0000	4.0000	1.0000	0.5840	07/29/2011 06:58:05		
4048241001		0.9460	0.9511	14.6490	4.0000	1.0000	0.1393	07/29/2011 06:58:11		
4048241002		0.9467	0.9665	14.3890	4.0000	1.0000	0.5504	07/29/2011 06:58:17		
4048241003		0.9472	0.9729	14.6380	4.0000	1.0000	0.7023	07/29/2011 06:58:24		
4048241004		0.9457	0.9582	14.1110	4.0000	1.0000	0.3543	07/29/2011 06:58:30		
4048241005		0.9504	0.9565	13.9280	4.0000	1.0000	0.1752	07/29/2011 06:58:36		
4048241006		0.9520	0.9711	13.9850	4.0000	1.0000	0.5463	07/29/2011 06:58:43		
4048241007		0.9543	0.9672	13.8400	4.0000	1.0000	0.3728	07/29/2011 06:58:50		
4048241008		0.9553	0.9714	13.7760	4.0000	1.0000	0.4675	07/29/2011 06:58:57		
4048243001		0.9558	0.9653	13.6000	4.0000	1.0000	0.2794	07/29/2011 06:59:04		

Approved by BH 7/29/11

9/28/10
2860-16-01 500 ul of 4000 ppm SV IS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11
9/30/10
2860-16-02 500 ul of 4000 ppm SV IS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11
* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR
10/4/10
2860-16-03 500 ul of 4000 ppm SV IS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11
10/6/10
2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 100ml CH_2Cl_2 2ppm WYAH IS RON 10/6/10 Exp 10/6/11
10/06/10
2860-16-05 500 ul of 4000 ppm SV IS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11
10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0 ml w Nanopure H_2O 5 [illegible]
2860-16-07 2500ul of 10,000 mg/L Oterphenyl (2713-86) diluted to 250 ml with CH_2Cl_2 (2712-62) = 100 ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 101210
* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR
10/8/10
2860-16-08 500 ul of 4000 ppm SV IS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50 ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by [illegible] File# 1012T008
10/13/10 500 ul of 4000 ppm SV IS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11
RON 10/14/10
2860-16-11 ~~20~~ 40ul of 5000ppm N-NDMA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm MDL STD Ex 7/13/11 RON 10/13/10
~~10/18/10~~ ~~500~~ ARO 10/18/10

Continued on Page

Read and Understood By

[signature] 10/18/10 Valerie M Ringquin 10/18/2010
Signed Date Signed Date

11/24/10

2860-22-01 500ul of 4000ppm SVIS (2945-06A) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Exp 11/24/11 RM 11/24

* 11/29/10 CH_2Cl_2 Changed at 8:00 to lot 2712-73 VMR

11/30/10

2860-22-02 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d

12/1/2010

2860-22-06 1 ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on inst by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%

12-2-10

2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Hexane/DCM ✓50

" " -08 25uls of 2860-10-11 " " " " 500ppm

12/03/10

2860-22-09 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 50ul of 4000ppm SVIS (2945-06C) upto 10.0ml CH_2Cl_2 20ppm WPAH-IS Ft 12/8/11 RM 12/8

2860-22-11 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10

2860-22-12 400ul of 16,000 ppm ERDO (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date

Signed — 12/22/10 — Date

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MeOH spike)
→ 1.0 mL [Final] = 500 mg/mL EG 7-19-11 DRL

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KAT

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVIS (~~2945-03~~ 2945-03C 4/11/11 KAT) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SVIS KAT Exp 8/25/11 KAT
Agilent instr by RJN file # 40mss4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RJN 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) upto 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RJN 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100 ul of 5000ppm B/N SS (2945-20H) upto 10.0mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RJN 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) upto 1.0ml CH_2Cl_2 25ppm PAH CAL Ex 7/3/11 RJN 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 67ul of 150ppm B/N SS (2860-27-01) upto 1.0ml CH_2Cl_2 / 4ppm PAH 2nd Source Ex 9/2/11 RJN 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - AKO exp 2/28/12

3/3/2011

2860-29-15 2500 ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Ranon inst by ~~DAE~~ GC file # (VMR) Exp 3/3/2012 VMR

VMR 3/3/2011 OK to use per GC Ranon inst 3/8/11 VMR

→ 40GCSF.i / 0307116.b - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Continued on Page

Valerie M Renguin 3/3/2011 Signed Date

Signed Date 3/7/11

Continued From Page

3-4-11

2860-30-01 50 mL @ 2380-100-01 (TPH @ 20000ug/mL) → 1.0mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5-6-11 DAR

TPH ICAL

2860-30-02 500 uL @ 2713-490 (#2 Diesel Fuel @ 20,000ug/mL) → 5.0mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3.4.12 DAR

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 mL = 500 ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ use only 1.0 mL of 2860-30-02
All standards + 5 uL 2945-135 (o-terphenyl @ 10,000ug/mL) 2713-990
[Final] = 50 ug/mL All standard Exp 2.22.12 DAR

TPH ICV

2860-30-08 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2 2713-990
+ 5mL 2945-135 (o-terphenyl @ 10,000ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2.22.12 DAR

2860-30-09 25uL of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JHI

3.7.11

2860-30-10 1.0mL @ 2860-30-02 + 5 uL 2713-990 (o-terp @ 10,000ug/mL) = 2000 ug/mL + 50 ug/mL
2860-30-11 500 mL @ → 1.0mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 mL = 500 ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 50 ug/mL Exp 5-6-11 GC

2860-30-16 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp 5-6-11 DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

Signed — Date 3.7.11 — Signed Valerium Renquin — Date 3/24/11

3.7.11

2860-31-01 100 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-02 50 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-03 25 uL of 2860-10-19 diluted to 1.0 mL w 50/50 MeOH/H_2O 500 ppm JHI ✓

2860-31-04 300 uL of 4000 ppm SVIS (2945-17J) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO exp 3/10/12

2860-31-05 500 uL of 2860-10-11 diluted to 100 mL w 50/50 MeOH H_2O 1000 ppm JHI
-06 25 uL of 2860-31-05 diluted to 1.0 mL w 25 ppm → JHI
-07 100
-08 250
-09 500
-10 750

3.14.11

2860-31-11 1.0 mL of 100 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL EXP 1-10-12 DAR

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) up to 1.0 mL CH_2Cl_2 2000 ppm 1/4 HS-IS Ex 3/15/12 RW 3/15/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-990 (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL Exp 3.4.12 DAR

Continued on Page

Read and Understood By

Signed 3/17/11 Date

Valerie M Pangelinan Signed 3/24/11 Date

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC	**Volume of Standard:** 250 mL	**Lot ID:** OEXT
Created: 04/01/2011 15:07	**Manufacturer:** N/A	**Part ID:** N/A
Expires: 10/18/2011	**Manufacturer Lot ID:** N/A	**Standard ID:** 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048242

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048242

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048242001	EWL T-01-C-WHOLE BODY	Tissue	12/20/10 12:36	07/13/11 09:30
4048242002	EWL T-02-C-WHOLE BODY	Tissue	12/20/10 12:28	07/13/11 09:30
4048242003	EWL T-04-C-WHOLE BODY	Tissue	12/20/10 12:22	07/13/11 09:30
4048242004	EWL T-11-C-WHOLE BODY	Tissue	12/21/10 10:53	07/13/11 09:30
4048242005	EWL NO-C-WHOLE BODY	Tissue		07/13/11 09:30
4048242006	EWL-BR-C-WHOLE BODY	Tissue	12/27/10 12:30	07/13/11 09:30

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048242
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1106150

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. The recoveries of the LCS and LCSD were below control criteria and the "S0" applied. Sample EWL-T-01-C-WHOLE BODY surrogate recovery was below control criteria and no sample mass available for re-extraction.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD. The recoveries of TPH (C08-C40) were above control criteria in the LCS/LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifiers.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** None required for this SDG.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 05/14/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048242

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048242001	EWL T-01-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048242002	EWL T-02-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
		ASTM D2974-87	JAL	1
4048242003	EWL T-04-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048242004	EWL T-11-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048242005	EWL NO-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048242006	EWL-BR-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4048242

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6258

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S0	Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048242

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

4048242

Project Number: K1106150
Project Manager: ~~Lynda Huckestein~~ David Lingle / URS

TT

	Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None
								TPH
001	K1106150-005	EWL T-01-C-Whole Body	1	Animal Tissue	12/20/10	1236	Pace PA	✓
002	K1106150-010	EWL T-02-C-Whole Body	1	Animal Tissue	12/20/10	1228	Pace PA	✓
003	K1106150-016	EWL T-04-C-Whole Body	1	Animal Tissue	12/20/10	1222	Pace PA	✓
004	K1106150-019	EWL T-11-C-Whole Body	1	Animal Tissue	12/21/10	1053	Pace PA	✓
005	K1106150-024	EWL NO-C-Whole Body	1	Animal Tissue			Pace PA	✓
006	K1106150-031	EWL-BR-C-Whole Body	1	Animal Tissue	12/27/10	1230	Pace PA	✓

1-202 cc

Test Comments

Relinquish - None K1106150-005,16,19,24,31
Relinquish - None K1106150-010

Ship to Pace: Green Bay, WI
Ship to Pace: Green Bay,WI Client specified QC (MS,MSD) on this sample

Folder Comments:

Report tissues on a wet weight basis.
Samples are a re-issue from K1014149,K1014150,K1014022,K1014227,K1014320,K1014324.

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com
Joe
Contact David Lingle / URS
East White Lake Project

Turnaround Requirements

____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____STANDARD
Requested FAX Date: _____
Requested Report Date: 06/15/11

Report Requirements

____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information

PO# K1106150
Bill to

Relinquished By: [signature] 7/12/11 1200
Rec: Feddy
Received By: [signature] 7/13/11 930
Airbill Number: _____

Page

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Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Project # 4048242

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used JB Type of Ice: Wet Blue (Dry) None ☑ Samples on ice, cooling process has begun

Cooler Temperature <0°C Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7-13-11
Initials: C

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: JD TO Date: 7/13/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048242

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048242

QB Batch: OEXT / 12029
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048242001		EWL T-01-C-WHOLE BODY	1	43											
483016	BLANK		1	71											
4048242002		EWL T-02-C-WHOLE BODY	1	60											
483017	LCS		3	0	S0										
4048242003		EWL T-04-C-WHOLE BODY	1	53											
483018	LCSD		3	0	S0										
4048242004		EWL T-11-C-WHOLE BODY	1	64											
4048242005		EWL NO-C-WHOLE BODY	1	61											
4048242006		EWL-BR-C-WHOLE BODY	1	61											
			QC Limits:	50-150											

Sur 1: o-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048242

QB Batch: OEXT/12029 **LCS Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048242

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048242001	EWL T-01-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048242002	EWL T-02-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048242003	EWL T-04-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048242004	EWL T-11-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048242005	EWL NO-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048242006	EWL-BR-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048242001	EWL T-01-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048242002	EWL T-02-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048242003	EWL T-04-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048242004	EWL T-11-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048242005	EWL NO-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048242006	EWL-BR-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048242002	EWL T-02-C-WHOLE BODY	ASTM D2974-87	PMST/6456		

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(920)469-2436

DUPLICATE RESULTS

Project: CRABS
Pace Project No.: 4048242

QB Batch: PMST/6456 **Prepared:**
Method(s): ASTM D2974-87

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Percent Moisture	1	10	70.9	70.5	%	12/02/11	

Type	Sample	Client Sample ID
DUP	540622	4048240004

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048242

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/04/11 08/04/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.15

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-38-01	2000 2860-38-01	08/04/11	1042	2.15	
02	1000 2860-38-02	1000 2860-38-02	08/04/11	1052	2.15	
03	500 2860-38-03	500 2860-38-03	08/04/11	1104	2.15	
04	250 2860-38-04	250 2860-38-04	08/04/11	1116	2.15	
05	100 2860-38-05	100 2860-38-05	08/04/11	1129	2.15	
06	50 2860-38-06	50 2860-38-06	08/04/11	1140	2.15	
07	IC500 2860-38-07	IC500 2860-38-07	08/04/11	1244	2.15	
08	8015DS-CCV	8015DS-CCV	08/08/11	0834	2.15	
09	MB	483016	08/08/11	0905	2.15	
10	EWL T-01-C-WHOLE BO	4048242001	08/08/11	0928	2.15	
11	EWL T-02-C-WHOLE BO	4048242002	08/08/11	0940	2.15	
12	EWL T-04-C-WHOLE BO	4048242003	08/08/11	0952	2.15	
13	EWL T-11-C-WHOLE BO	4048242004	08/08/11	1004	2.15	
14	EWL NO-C-WHOLE BODY	4048242005	08/08/11	1016	2.15	
15	EWL-BR-C-WHOLE BODY	4048242006	08/08/11	1028	2.15	
16	MBLCS	483017	08/08/11	1304	2.15	
17	MBLCSD	483018	08/08/11	1316	2.15	
18	8015DS-CCV	8015DS-CCV	08/08/11	1559	2.15	
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048242

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-01-C-WHOLE BODY TX
Lab ID: 4048242001
Collected: 12/20/10 12:36
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**8.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:28	
	TPH (C08-C16)	**<3.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:28	
	TPH (C16-C28)	**7.6**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:28	
	TPH (C08-C40)	**102**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:28	3q
	TPH - Diesel (C10-C28)	**8.2**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:28	
Surrogates									
84-15-1	o-Terphenyl (S)	**43**	%.	50-150		1	07/28/11 12:00	08/08/11 09:28	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-01-C-WHOLE BODY TX
Lab ID: 4048242001
Collected: 12/20/10 12:36
Received: 07/13/11 09:30

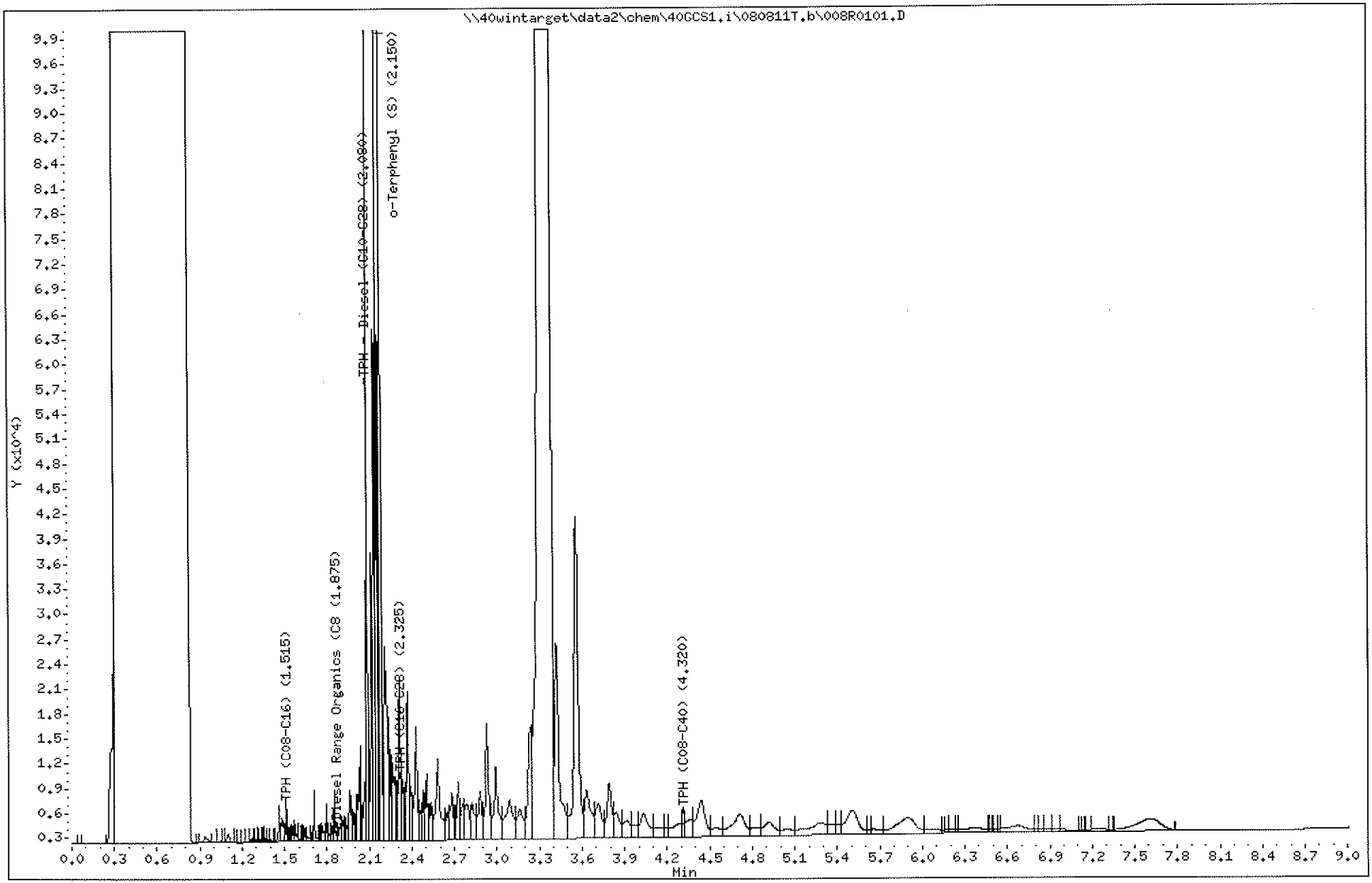
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.29**	%			1		07/29/11 07:00	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\008R0101.D
Date : 08-AUG-2011 09:28
Client ID: EWL T-01-C-WHOLE BO
Sample Info: 4048242001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\008R0101.D
Lab Smp Id: 4048242001 Client Smp ID: EWL T-01-C-WHOLE BO
Inj Date : 08-AUG-2011 09:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048242001
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			5267909	1526.57	101.77
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			448420	113.980	7.59
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			483635	124.302	8.28
S	8 TPH - Diesel (C10-C28)	1.450-2.710			480427	123.362	8.22
$	15 o-Terphenyl (S)	2.150	2.146	0.004	112070	21.4969	1.43

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-02-C-WHOLE BODY TX
Lab ID: 4048242002
Collected: 12/20/10 12:28
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**7.4**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:40	
	TPH (C08-C16)	**<3.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:40	
	TPH (C16-C28)	**6.4J**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:40	
	TPH (C08-C40)	**131**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:40	3q
	TPH - Diesel (C10-C28)	**7.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 09:40	
Surrogates									
84-15-1	o-Terphenyl (S)	**60**	%.	50-150		1	07/28/11 12:00	08/08/11 09:40	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-02-C-WHOLE BODY TX
Lab ID: 4048242002
Collected: 12/20/10 12:28
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.26**	%			1		07/29/11 07:00	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Percent Moisture
Prep/Method: ASTM D2974-87
Results reported on a "wet-weight" basis

Sample: EWL T-02-C-WHOLE BODY TX
Lab ID: 4048242002
Collected: 12/20/10 12:28
Received: 07/13/11 09:30

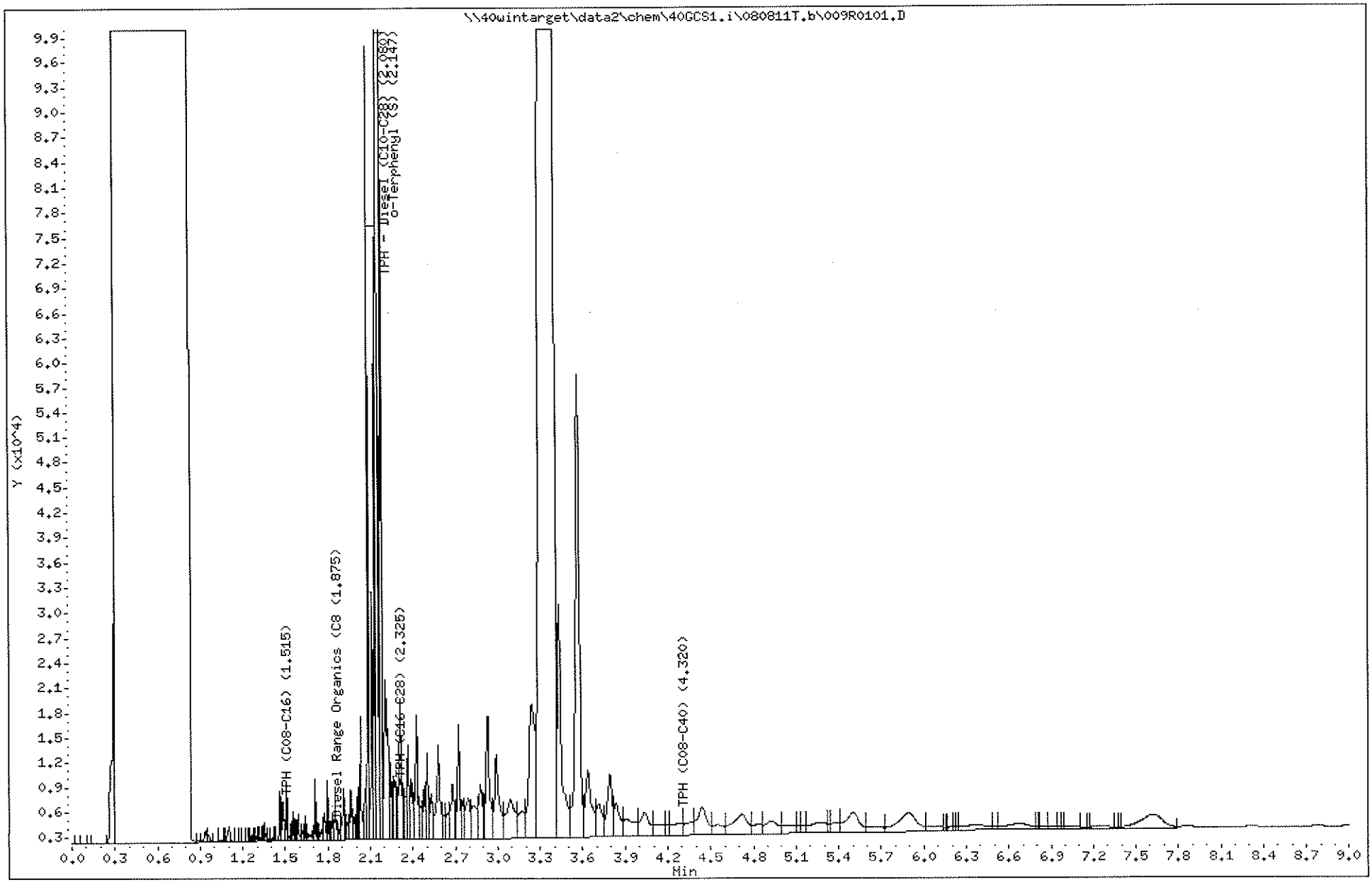
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Percent Moisture	**73.1**	%	0.10	0.10	1		12/02/11 06:26	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\009R0101.D
Date : 08-AUG-2011 09:40
Client ID: EWL T-02-C-WHOLE BO
Sample Info: 4048242002
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\009R0101.D
Lab Smp Id: 4048242002 Client Smp ID: EWL T-02-C-WHOLE BO
Inj Date : 08-AUG-2011 09:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048242002
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			6765699	1965.58	131.03
S	1 TPH (C08-C16)	1.040-1.990			62053	0.73598	0.04(a)
S	12 TPH (C16-C28)	1.940-2.710			388577	96.4403	6.42(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			439937	111.494	7.43
S	8 TPH - Diesel (C10-C28)	1.450-2.710			434826	109.996	7.33
$	15 o-Terphenyl (S)	2.146	2.146	0.000	156425	30.0049	2.00

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-04-C-WHOLE BODY TX
Lab ID: 4048242003
Collected: 12/20/10 12:22
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**9.2**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 09:52	
	TPH (C08-C16)	**<3.5**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 09:52	
	TPH (C16-C28)	**8.0**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 09:52	
	TPH (C08-C40)	**137**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 09:52	3q
	TPH - Diesel (C10-C28)	**9.1**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 09:52	
Surrogates									
84-15-1	o-Terphenyl (S)	**53**	%.	50-150		1	07/28/11 12:00	08/08/11 09:52	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-04-C-WHOLE BODY TX
Lab ID: 4048242003
Collected: 12/20/10 12:22
Received: 07/13/11 09:30

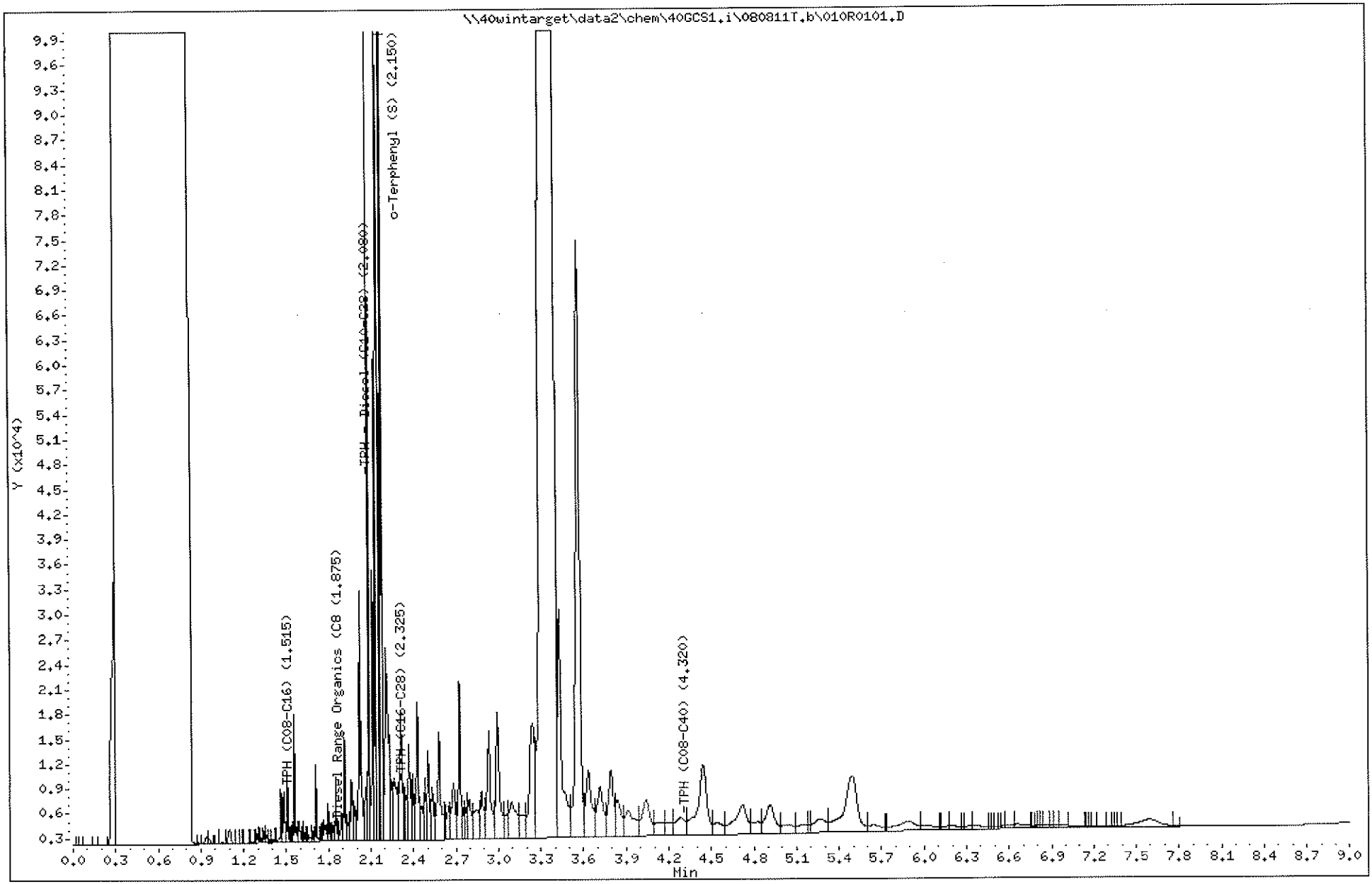
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.22**	%			1		07/29/11 07:00	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\010R0101.D
Date : 08-AUG-2011 09:52
Client ID: EWL T-04-C-WHOLE BO
Sample Info: 4048242003
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\010R0101.D
Lab Smp Id: 4048242003 Client Smp ID: EWL T-04-C-WHOLE BO
Inj Date : 08-AUG-2011 09:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048242003
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.100	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			6638277	1928.23	136.75
S	1 TPH (C08-C16)	1.040-1.990			71789	3.58961	0.25(a)
S	12 TPH (C16-C28)	1.940-2.710			444325	112.780	7.99
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			502254	129.759	9.20
S	8 TPH - Diesel (C10-C28)	1.450-2.710			496597	128.101	9.08
$	15 o-Terphenyl (S)	2.150	2.146	0.004	139070	26.6759	1.89

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-11-C-WHOLE BODY TX
Lab ID: 4048242004
Collected: 12/21/10 10:53
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**10.1**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:04	
	TPH (C08-C16)	**<3.5**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:04	
	TPH (C16-C28)	**8.7**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:04	
	TPH (C08-C40)	**100**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:04	3q
	TPH - Diesel (C10-C28)	**9.9**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:04	
Surrogates									
84-15-1	o-Terphenyl (S)	**64**	%.	50-150		1	07/28/11 12:00	08/08/11 10:04	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-11-C-WHOLE BODY TX
Lab ID: 4048242004
Collected: 12/21/10 10:53
Received: 07/13/11 09:30

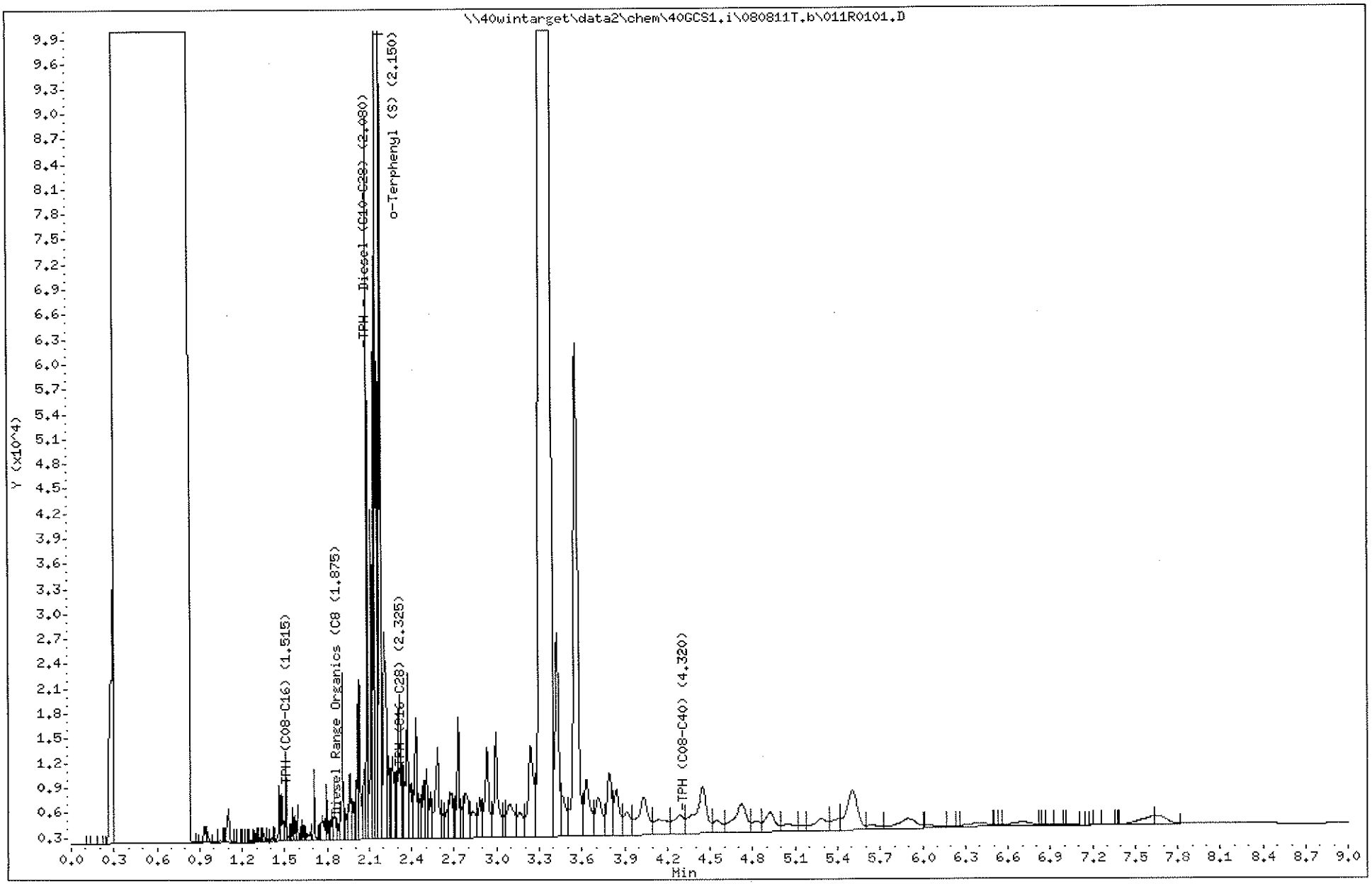
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.22**	%			1		07/29/11 07:00	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\011R0101.D
Date : 08-AUG-2011 10:04
Client ID: EWL T-11-C-WHOLE BO
Sample Info: 4048242004
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\011R0101.D
Lab Smp Id: 4048242004 Client Smp ID: EWL T-11-C-WHOLE BO
Inj Date : 08-AUG-2011 10:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048242004
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.100	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			4887529	1415.09	100.36
S	1 TPH (C08-C16)	1.040-1.990			82356	6.68680	0.47(a)
S	12 TPH (C16-C28)	1.940-2.710			477100	122.386	8.67
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			543222	141.767	10.05
S	8 TPH - Diesel (C10-C28)	1.450-2.710			535063	139.375	9.88
$	15 o-Terphenyl (S)	2.150	2.146	0.004	166669	31.9699	2.26

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL NO-C-WHOLE BODY TX
Lab ID: 4048242005
Collected:
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**7.6**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:16	
	TPH (C08-C16)	**<3.5**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:16	
	TPH (C16-C28)	**6.5J**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:16	
	TPH (C08-C40)	**123**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:16	3q
	TPH - Diesel (C10-C28)	**7.5**	mg/kg	7.1	3.5	1	07/28/11 12:00	08/08/11 10:16	
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	07/28/11 12:00	08/08/11 10:16	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL NO-C-WHOLE BODY TX
Lab ID: 4048242005
Collected:
Received: 07/13/11 09:30

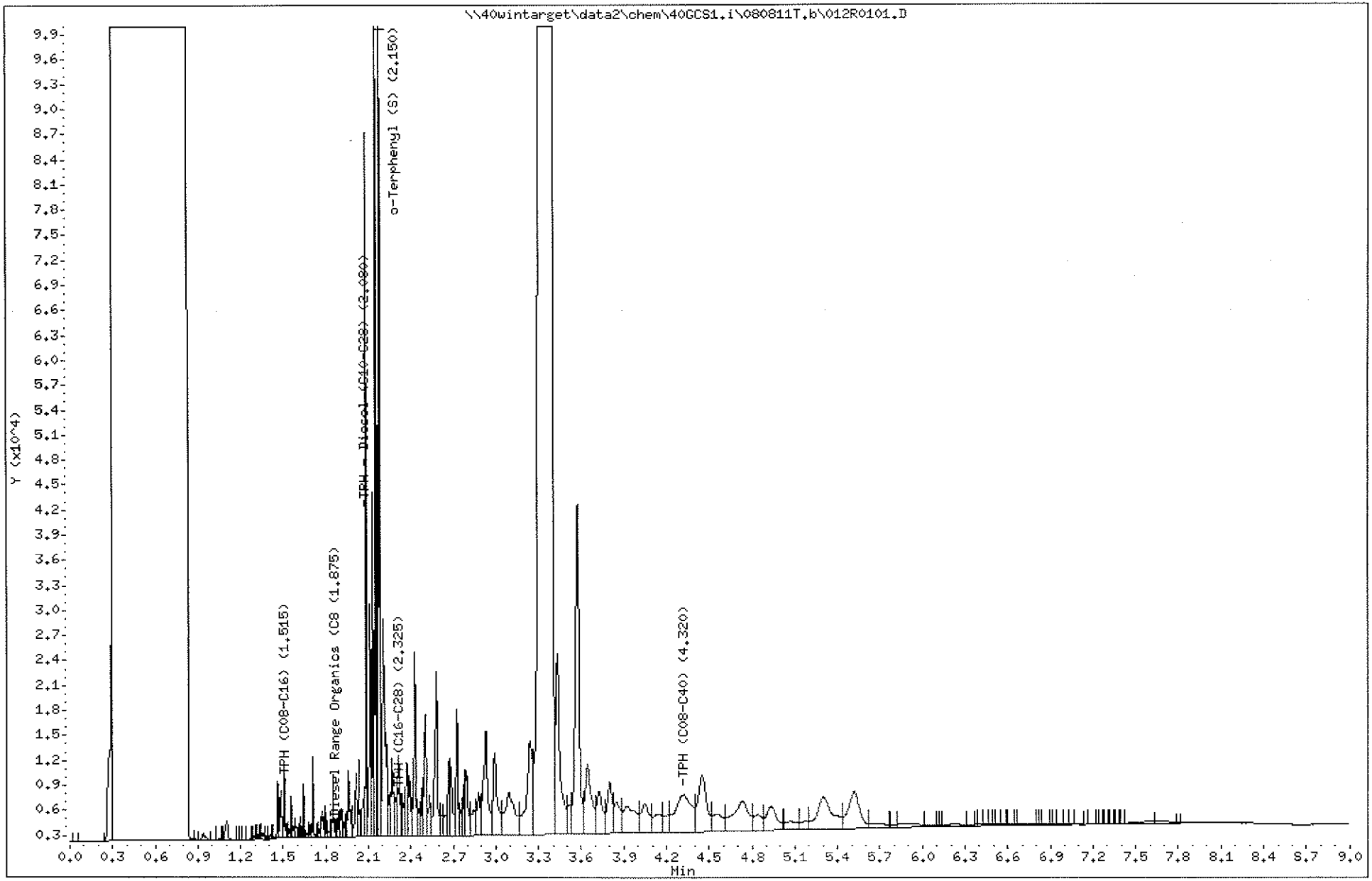
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.16	%			1		07/29/11 07:00	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\012R0101.D
Date : 08-AUG-2011 10:16
Client ID: EWL NO-C-WHOLE BODY
Sample Info: 4048242005
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\012R0101.D
Lab Smp Id: 4048242005 Client Smp ID: EWL NO-C-WHOLE BODY
Inj Date : 08-AUG-2011 10:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048242005
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.100	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			5985818	1736.99	123.19
S	1 TPH (C08-C16)	1.040-1.990			59985	0.12985	0.00(a)
S	12 TPH (C16-C28)	1.940-2.710			373909	92.1411	6.53(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			423601	106.706	7.56
S	8 TPH - Diesel (C10-C28)	1.450-2.710			417969	105.055	7.45
$	15 o-Terphenyl (S)	2.150	2.146	0.004	159059	30.5102	2.16

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-BR-C-WHOLE BODY TX
Lab ID: 4048242006
Collected: 12/27/10 12:30
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**12.3**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 10:28	
	TPH (C08-C16)	**<3.5**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 10:28	
	TPH (C16-C28)	**11.3**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 10:28	
	TPH (C08-C40)	**139**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 10:28	3q
	TPH - Diesel (C10-C28)	**12.2**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 10:28	
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	07/28/11 12:00	08/08/11 10:28	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048242

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-BR-C-WHOLE BODY TX
Lab ID: 4048242006
Collected: 12/27/10 12:30
Received: 07/13/11 09:30

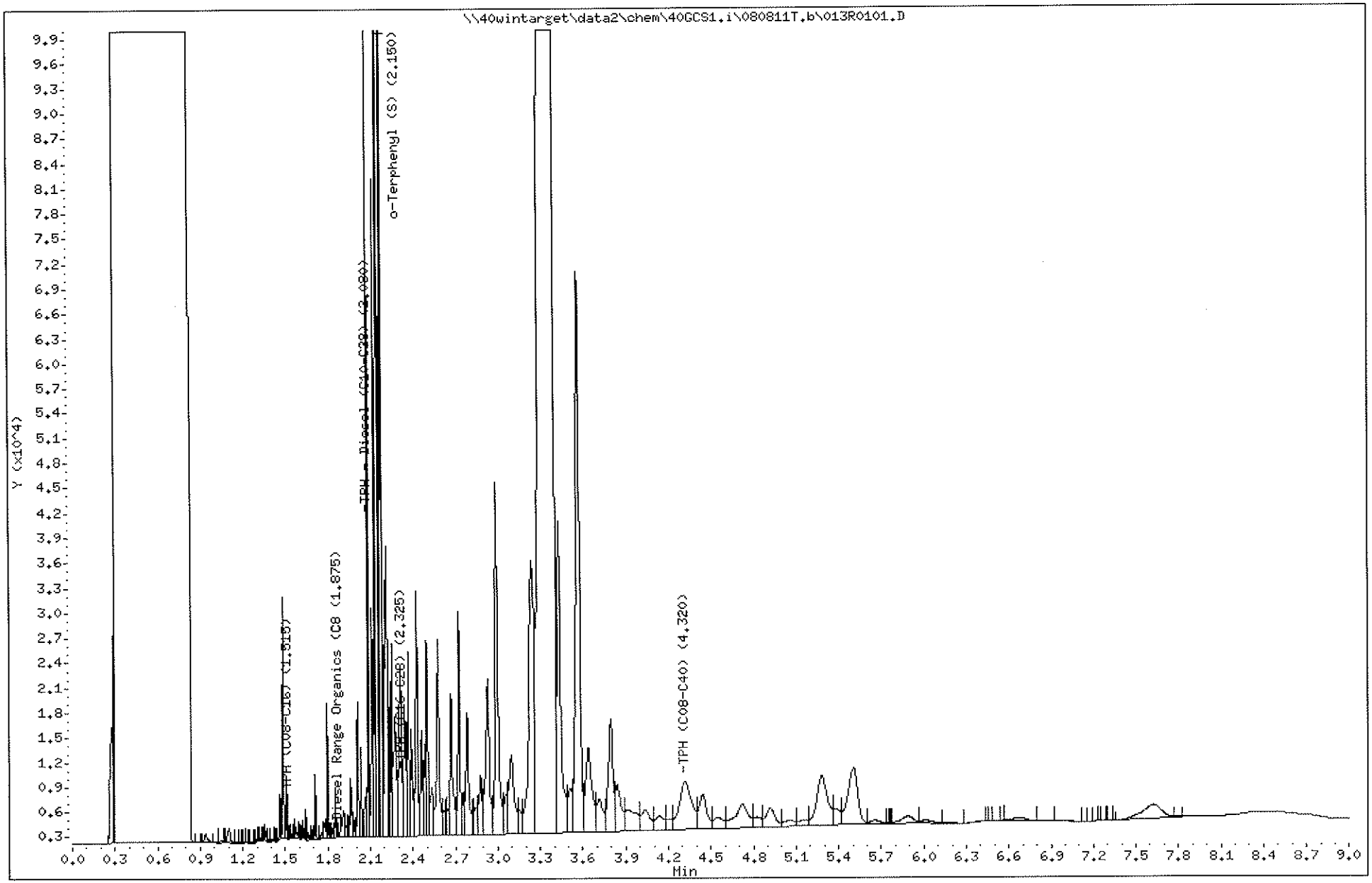
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.48	%			1		07/29/11 07:00	

Date: 05/09/2012 03:58 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\013R0101.D
Date : 08-AUG-2011 10:28
Client ID: EWL-BR-C-WHOLE BODY
Sample Info: 4048242006
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\013R0101.D
Lab Smp Id: 4048242006 Client Smp ID: EWL-BR-C-WHOLE BODY
Inj Date : 08-AUG-2011 10:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048242006
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.300	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			6821923	1982.06	138.60
S	1 TPH (C08-C16)	1.040-1.990			60149	0.17792	0.01(a)
S	12 TPH (C16-C28)	1.940-2.710			608533	160.910	11.25
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			659892	175.963	12.30
S	8 TPH - Diesel (C10-C28)	1.450-2.710			655603	174.706	12.21
$	15 o-Terphenyl (S)	2.150	2.146	0.004	159003	30.4994	2.13

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048242

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	2 Diesel Range Organics (C8-C28	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	3 High End Organics (C8-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	4 TPH (C08-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	5 TPH (C08-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	6 TPH (C10-C12)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	7 TPH (C10-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	8 TPH - Diesel (C10-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	9 TPH (C10-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	10 TPH (C12-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	11 TPH (C12-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	12 TPH (C16-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	13 TPH (C16-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	14 TPH (C20-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
$ 15 o-Terphenyl (S)	0.00022	0.00023	0.00020	0.00017	0.00018	0.00015	AVRG		0.00019		15.94928	

Pace Analytical Services, Inc

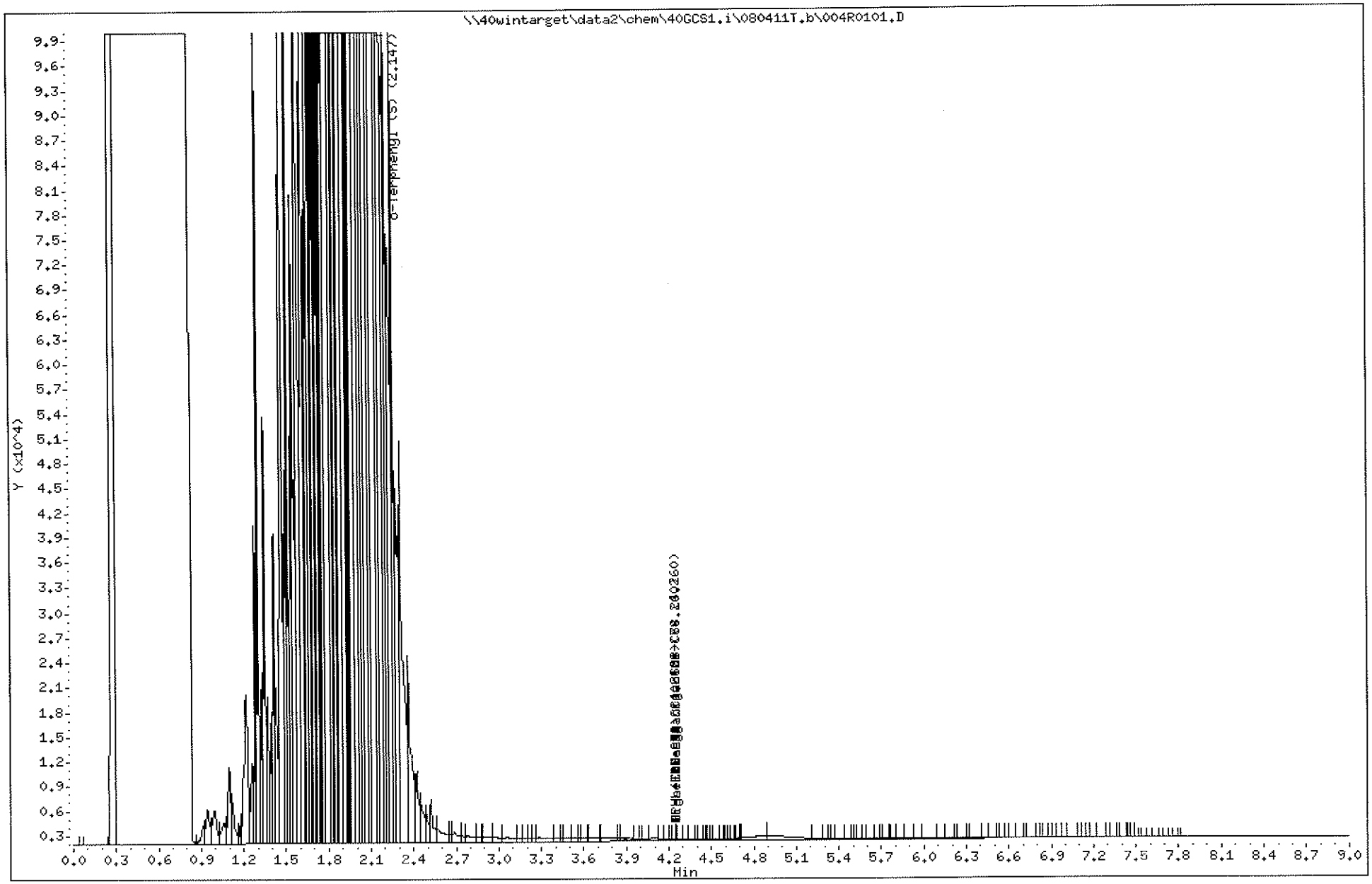
INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Date : 04-AUG-2011 10:42
Client ID: 2000 2860-38-01
Sample Info: 2000 2860-38-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Lab Smp Id: 2000 2860-38-01 Client Smp ID: 2000 2860-38-01
Inj Date : 04-AUG-2011 10:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-38-01
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:42 Cal File: 004R0101.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

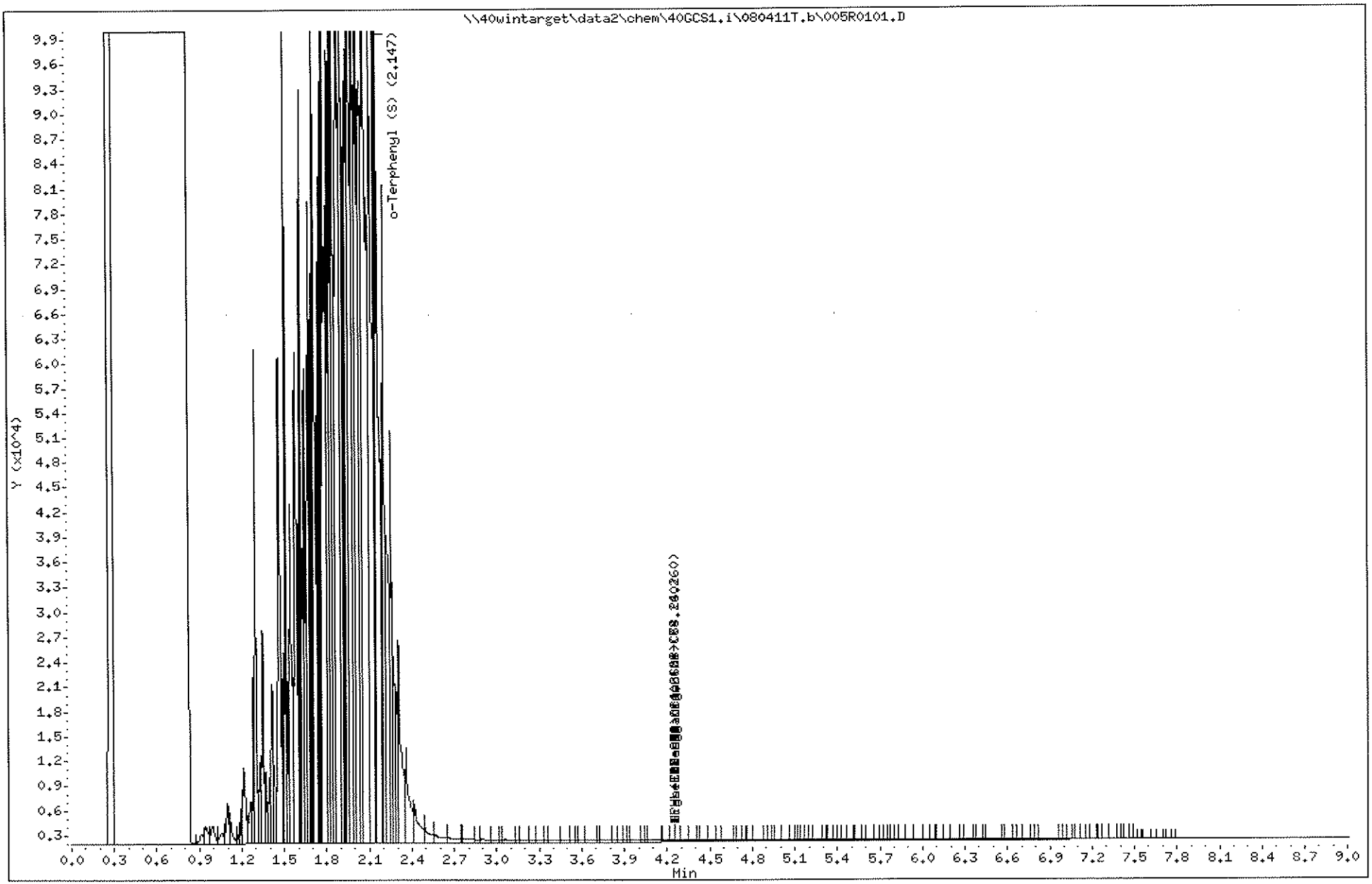
						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			6874016	2000.00	1997.32
S	11 TPH (C12-C36)	1.050-7.470			6874016	2000.00	1997.32
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			6874016	2000.00	1997.32
S	3 High End Organics (C8-C34)	1.050-7.470			6874016	2000.00	1997.32
S	4 TPH (C08-C36)	1.050-7.470			6874016	2000.00	1997.32
S	5 TPH (C08-C40)	1.050-7.470			6874016	2000.00	1997.32
S	6 TPH (C10-C12)	1.050-7.470			6874016	2000.00	1997.32
S	7 TPH (C10-C20)	1.050-7.470			6874016	2000.00	1997.32
S	8 TPH - Diesel (C10-C28)	1.480-2.730			6874016	2000.00	1997.32(T)
S	9 TPH (C10-C40)	1.050-7.470			6874016	2000.00	1997.32
S	10 TPH (C12-C20)	1.050-7.470			6874016	2000.00	1997.32
S	12 TPH (C16-C28)	1.050-7.470			6874016	2000.00	1997.32
S	13 TPH (C16-C40)	1.050-7.470			6874016	2000.00	1997.32
S	14 TPH (C20-C34)	1.050-7.470			6874016	2000.00	1997.32
$	15 o-Terphenyl (S)	2.146	2.146	0.000	330420	50.0000	63.38

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Date : 04-AUG-2011 10:52
Client ID: 1000 2860-38-02
Sample Info: 1000 2860-38-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Lab Smp Id: 1000 2860-38-02 Client Smp ID: 1000 2860-38-02
Inj Date : 04-AUG-2011 10:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-38-02
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:52 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

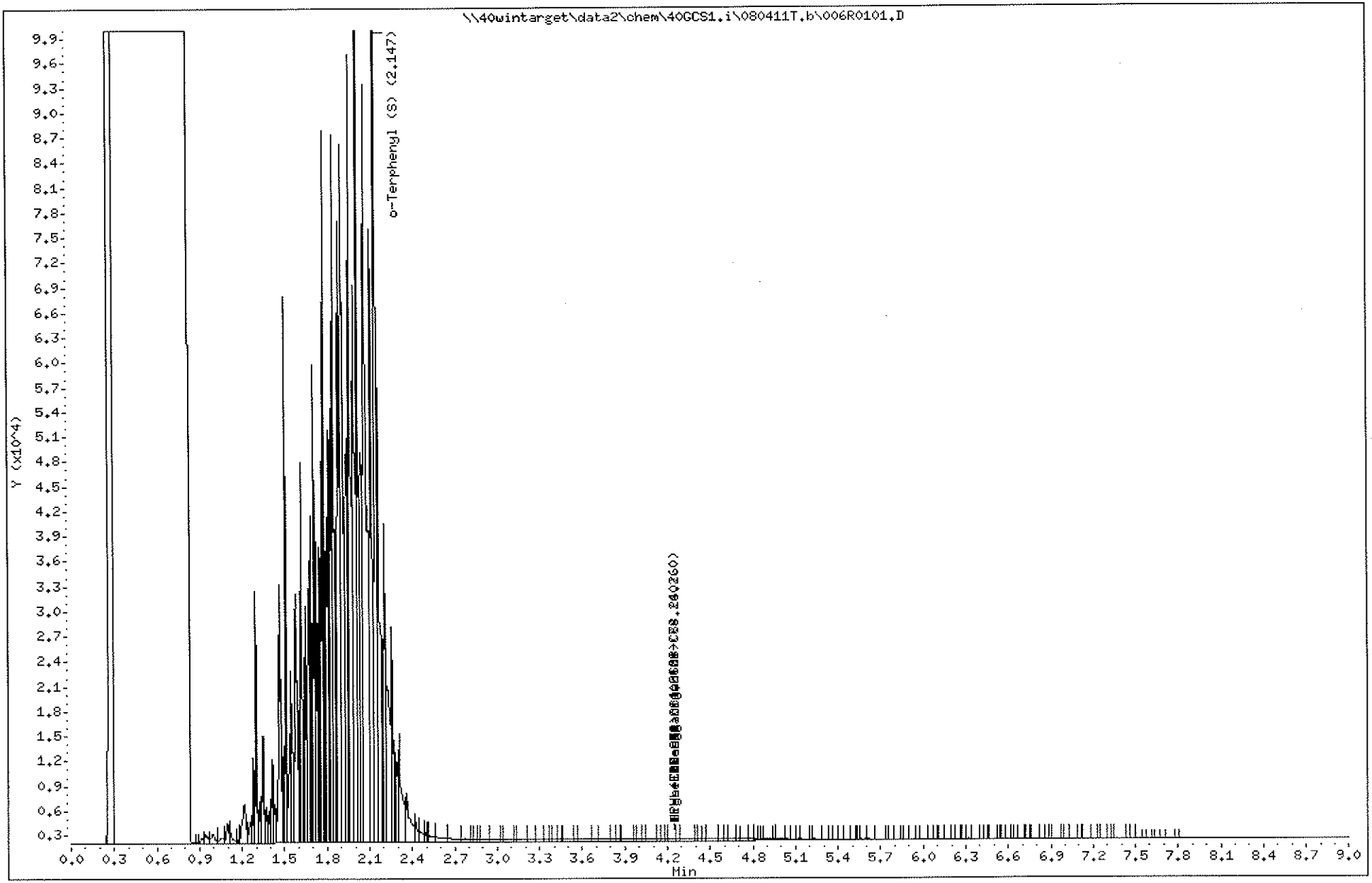
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			3478740	1000.00	1002.16
S	11 TPH (C12-C36)	1.050-7.470			3478740	1000.00	1002.16
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			3478740	1000.00	1002.16
S	3 High End Organics (C8-C34)	1.050-7.470			3478740	1000.00	1002.16
S	4 TPH (C08-C36)	1.050-7.470			3478740	1000.00	1002.16
S	5 TPH (C08-C40)	1.050-7.470			3478740	1000.00	1002.16
S	6 TPH (C10-C12)	1.050-7.470			3478740	1000.00	1002.16
S	7 TPH (C10-C20)	1.050-7.470			3478740	1000.00	1002.16
S	8 TPH - Diesel (C10-C28)	1.480-2.730			3478740	1000.00	1002.16(T)
S	9 TPH (C10-C40)	1.050-7.470			3478740	1000.00	1002.16
S	10 TPH (C12-C20)	1.050-7.470			3478740	1000.00	1002.16
S	12 TPH (C16-C28)	1.050-7.470			3478740	1000.00	1002.16
S	13 TPH (C16-C40)	1.050-7.470			3478740	1000.00	1002.16
S	14 TPH (C20-C34)	1.050-7.470			3478740	1000.00	1002.16
$	15 o-Terphenyl (S)	2.146	2.146	0.000	278558	50.0000	53.43

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Date : 04-AUG-2011 11:04
Client ID: 500 2860-38-03
Sample Info: 500 2860-38-03
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Lab Smp Id: 500 2860-38-03 Client Smp ID: 500 2860-38-03
Inj Date : 04-AUG-2011 11:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-38-03
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:04 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			1793180	500.000	508.13
S	11 TPH (C12-C36)	1.050-7.470			1793180	500.000	508.13
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			1793180	500.000	508.13
S	3 High End Organics (C8-C34)	1.050-7.470			1793180	500.000	508.13
S	4 TPH (C08-C36)	1.050-7.470			1793180	500.000	508.13
S	5 TPH (C08-C40)	1.050-7.470			1793180	500.000	508.13
S	6 TPH (C10-C12)	1.050-7.470			1793180	500.000	508.13
S	7 TPH (C10-C20)	1.050-7.470			1793180	500.000	508.13
S	8 TPH - Diesel (C10-C28)	1.480-2.730			1793180	500.000	508.13(T)
S	9 TPH (C10-C40)	1.050-7.470			1793180	500.000	508.13
S	10 TPH (C12-C20)	1.050-7.470			1793180	500.000	508.13
S	12 TPH (C16-C28)	1.050-7.470			1793180	500.000	508.13
S	13 TPH (C16-C40)	1.050-7.470			1793180	500.000	508.13
S	14 TPH (C20-C34)	1.050-7.470			1793180	500.000	508.13
$	15 o-Terphenyl (S)	2.146	2.146	0.000	295515	50.0000	56.68

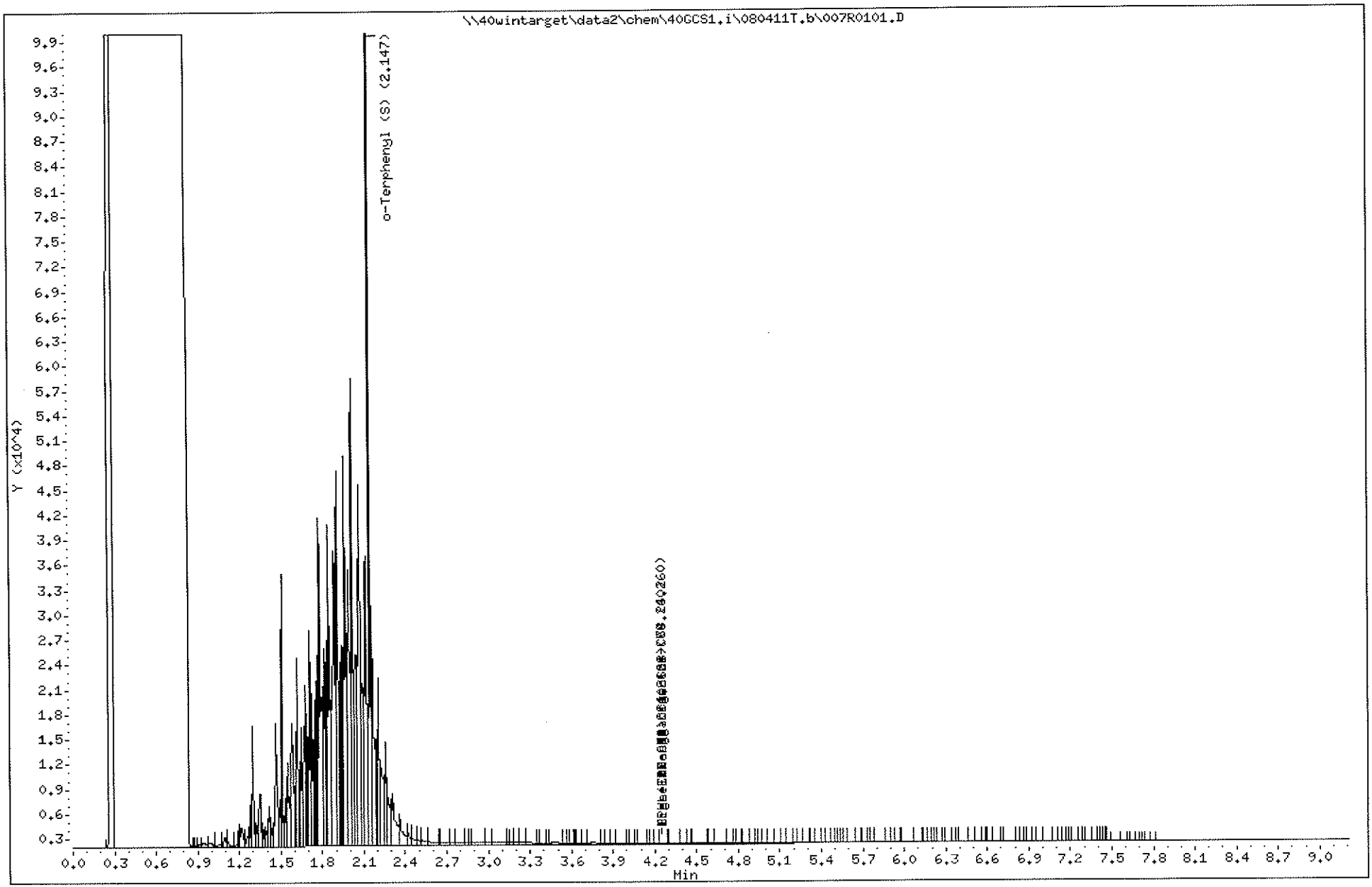
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Date : 04-AUG-2011 11:16
Client ID: 250 2860-38-04
Sample Info: 250 2860-38-04
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Lab Smp Id: 250 2860-38-04 Client Smp ID: 250 2860-38-04
Inj Date : 04-AUG-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-38-04
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:16 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

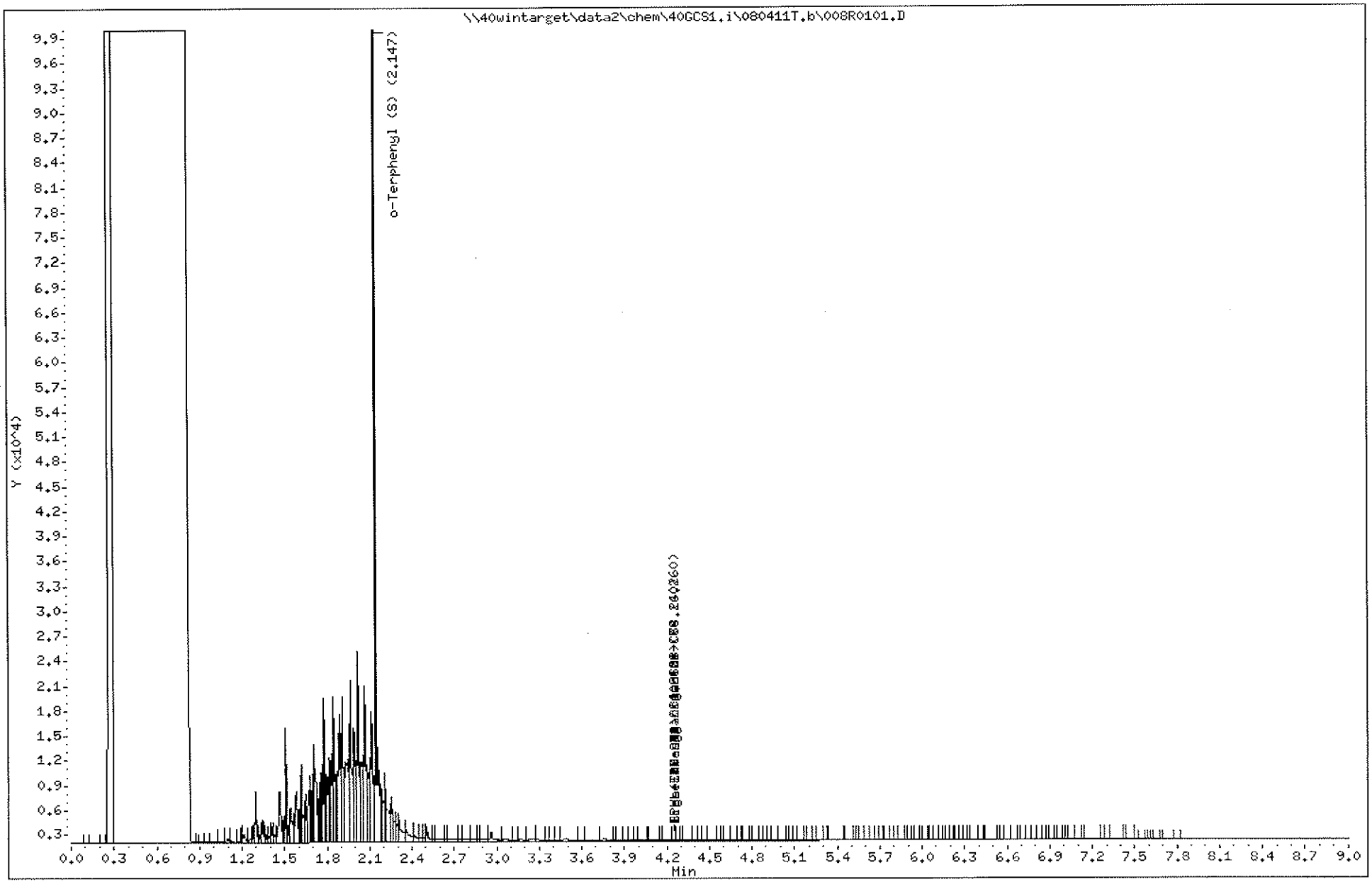
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			903980	250.000	247.50
S 11 TPH (C12-C36)	1.050-7.470			903980	250.000	247.50
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			903980	250.000	247.50
S 3 High End Organics (C8-C34)	1.050-7.470			903980	250.000	247.50
S 4 TPH (C08-C36)	1.050-7.470			903980	250.000	247.50
S 5 TPH (C08-C40)	1.050-7.470			903980	250.000	247.50
S 6 TPH (C10-C12)	1.050-7.470			903980	250.000	247.50
S 7 TPH (C10-C20)	1.050-7.470			903980	250.000	247.50
S 8 TPH - Diesel (C10-C28)	1.480-2.730			903980	250.000	247.50(T)
S 9 TPH (C10-C40)	1.050-7.470			903980	250.000	247.50
S 10 TPH (C12-C20)	1.050-7.470			903980	250.000	247.50
S 12 TPH (C16-C28)	1.050-7.470			903980	250.000	247.50
S 13 TPH (C16-C40)	1.050-7.470			903980	250.000	247.50
S 14 TPH (C20-C34)	1.050-7.470			903980	250.000	247.50
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	250305	50.0000	48.01

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Date : 04-AUG-2011 11:29
Client ID: 100 2860-38-05
Sample Info: 100 2860-38-05
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Lab Smp Id: 100 2860-38-05 Client Smp ID: 100 2860-38-05
Inj Date : 04-AUG-2011 11:29
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-38-05
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:29 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

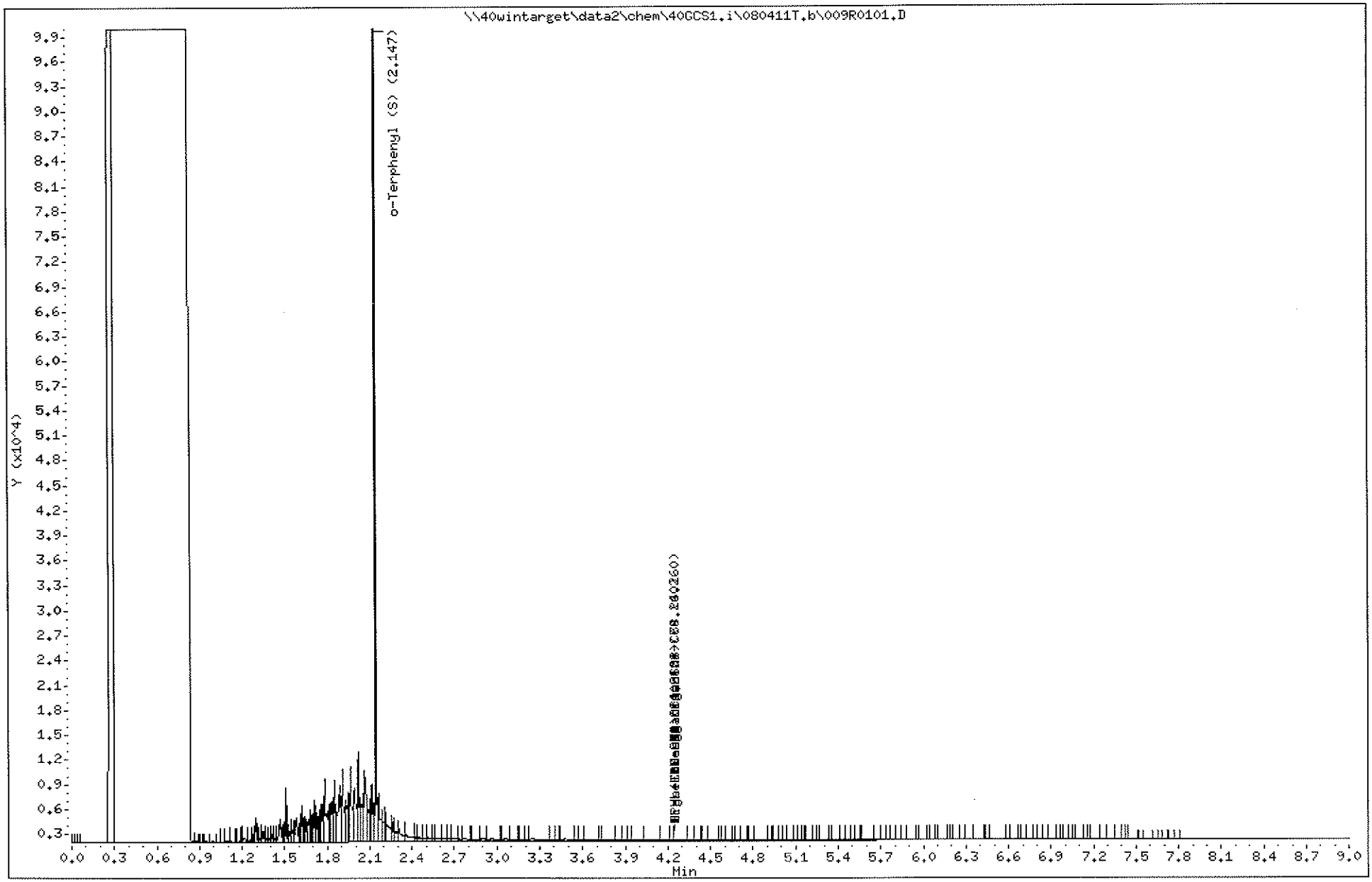
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-7.470			400376	100.000	99.89(a)
S 11	TPH (C12-C36)	1.050-7.470			400376	100.000	99.89(a)
S 2	Diesel Range Organics (C8-C28)	1.050-7.470			400376	100.000	99.89(a)
S 3	High End Organics (C8-C34)	1.050-7.470			400376	100.000	99.89(a)
S 4	TPH (C08-C36)	1.050-7.470			400376	100.000	99.89(a)
S 5	TPH (C08-C40)	1.050-7.470			400376	100.000	99.89(a)
S 6	TPH (C10-C12)	1.050-7.470			400376	100.000	99.89(a)
S 7	TPH (C10-C20)	1.050-7.470			400376	100.000	99.89(a)
S 8	TPH - Diesel (C10-C28)	1.480-2.730			400376	100.000	99.89(T)
S 9	TPH (C10-C40)	1.050-7.470			400376	100.000	99.89(a)
S 10	TPH (C12-C20)	1.050-7.470			400376	100.000	99.89(a)
S 12	TPH (C16-C28)	1.050-7.470			400376	100.000	99.89(a)
S 13	TPH (C16-C40)	1.050-7.470			400376	100.000	99.89(a)
S 14	TPH (C20-C34)	1.050-7.470			400376	100.000	99.89(a)
$ 15	o-Terphenyl (S)	2.146	2.146	0.000	217595	50.0000	41.73

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Date : 04-AUG-2011 11:40
Client ID: 50 2860-38-06
Sample Info: 50 2860-38-06
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Lab Smp Id: 50 2860-38-06 Client Smp ID: 50 2860-38-06
Inj Date : 04-AUG-2011 11:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-38-06
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-7.470			212976	50.0000	44.97(a)
S 11	TPH (C12-C36)	1.050-7.470			212976	50.0000	44.97(a)
S 2	Diesel Range Organics (C8-C28)	1.050-7.470			212976	50.0000	44.97(a)
S 3	High End Organics (C8-C34)	1.050-7.470			212976	50.0000	44.97(a)
S 4	TPH (C08-C36)	1.050-7.470			212976	50.0000	44.97(a)
S 5	TPH (C08-C40)	1.050-7.470			212976	50.0000	44.97(a)
S 6	TPH (C10-C12)	1.050-7.470			212976	50.0000	44.97(a)
S 7	TPH (C10-C20)	1.050-7.470			212976	50.0000	44.97(a)
S 8	TPH - Diesel (C10-C28)	1.480-2.730			212976	50.0000	44.97(T)
S 9	TPH (C10-C40)	1.050-7.470			212976	50.0000	44.97(a)
S 10	TPH (C12-C20)	1.050-7.470			212976	50.0000	44.97(a)
S 12	TPH (C16-C28)	1.050-7.470			212976	50.0000	44.97(a)
S 13	TPH (C16-C40)	1.050-7.470			212976	50.0000	44.97(a)
S 14	TPH (C20-C34)	1.050-7.470			212976	50.0000	44.97(a)
$ 15	o-Terphenyl (S)	2.146	2.146	0.000	225892	50.0000	43.32

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

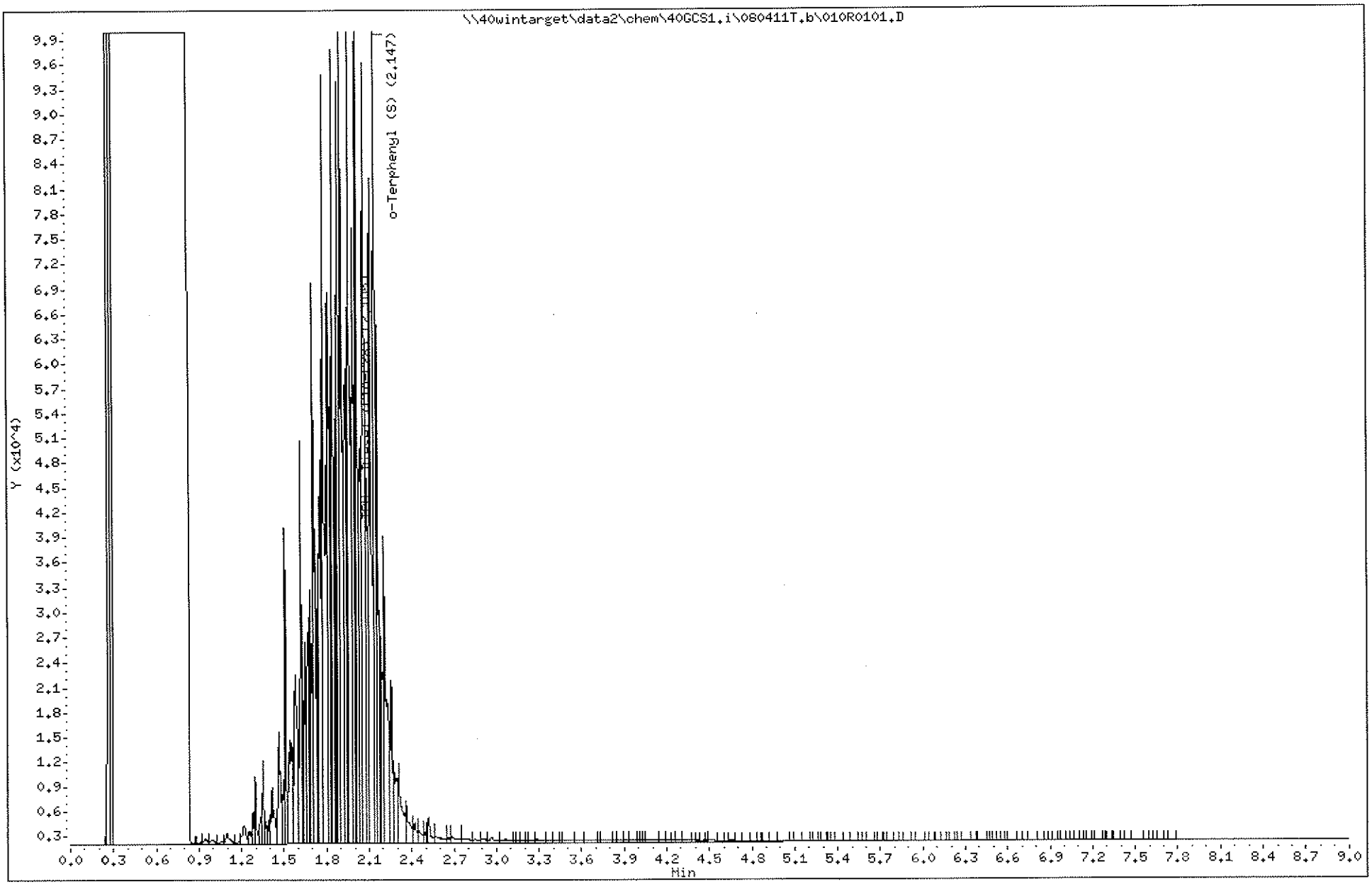
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 04-AUG-2011 12:44
Lab File ID: 010R0101.D Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 10:42 11:40
Lab Sample ID: IC500 2860-38-07 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	490	0.00029	0.000	-1.92564	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00019	0.00019	0.000	-3.17607	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Date : 04-AUG-2011 12:44
Client ID: IC500 2860-38-07
Sample Info: IC500 2860-38-07
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Lab Smp Id: IC500 2860-38-07 Client Smp ID: IC500 2860-38-07
Inj Date : 04-AUG-2011 12:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-38-07
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

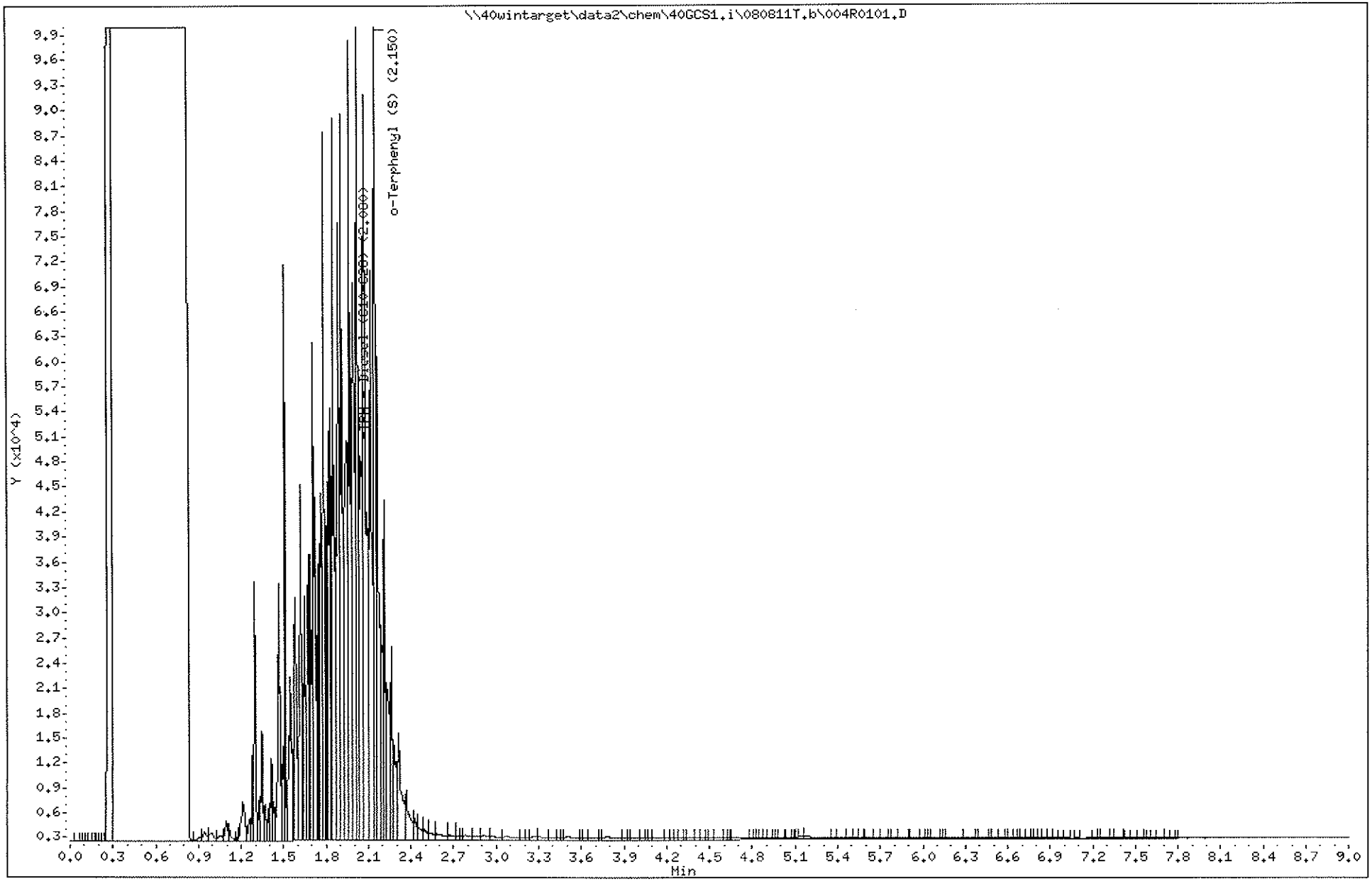
Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.730			1732592	500.000	490.37
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	269216	50.0000	51.64

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Date : 08-AUG-2011 08:34
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 08:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6316
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1647448	500.000	465.41
$ 15 o-Terphenyl (S)	2.150	2.146	0.004	237724	50.0000	45.59

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i
Lab File ID: 004R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 08:34
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	465	0.00030	0.000	-6.91679	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00021	0.00021	0.000	9.65048	50.00000	Averaged

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

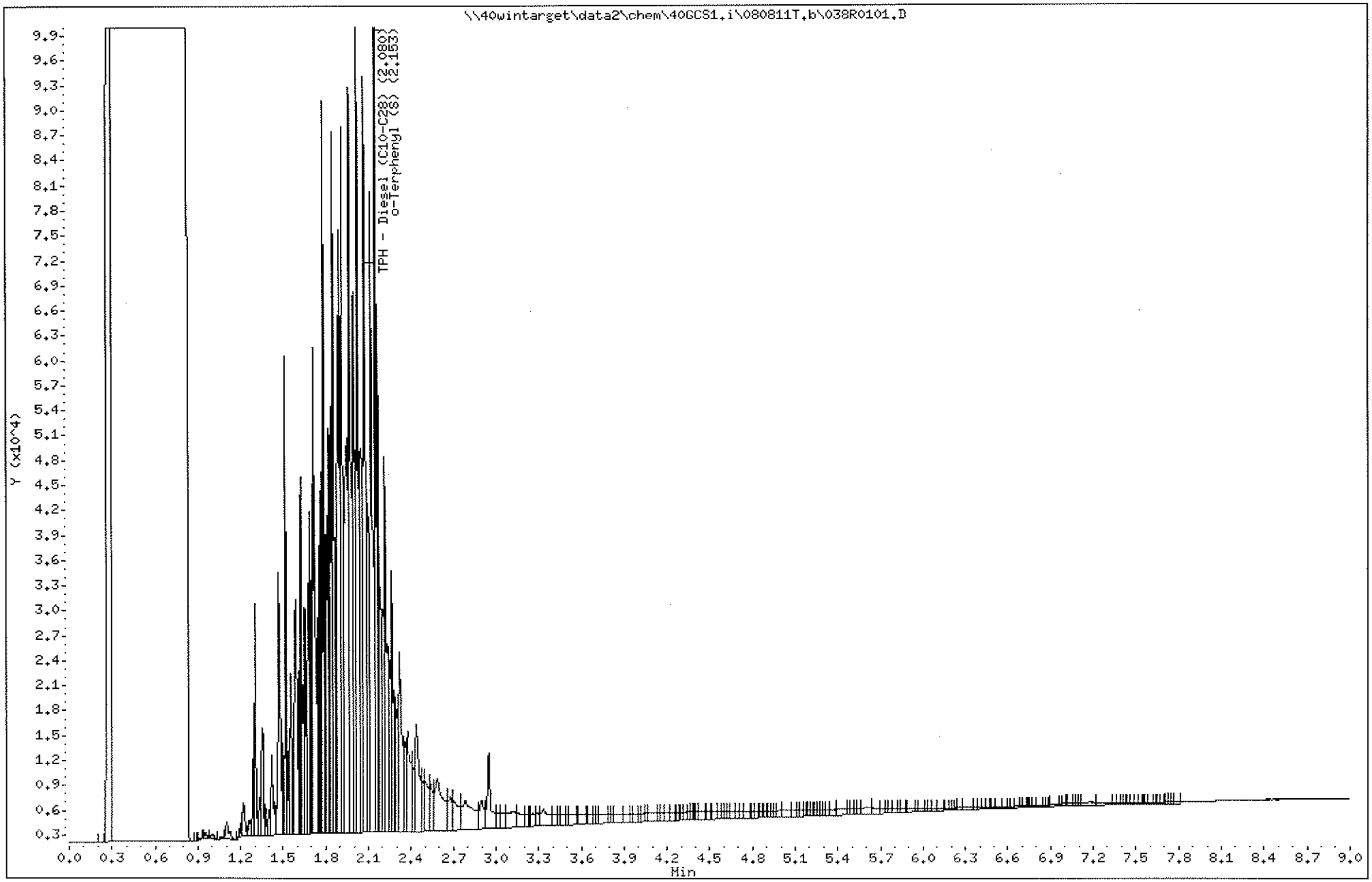
Instrument ID: 40GCS1.i
Lab File ID: 038R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 15:59
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	514	0.00028	0.000	2.81702	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00020	0.00020	0.000	2.90335	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Date : 08-AUG-2011 15:59
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 15:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:36 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 38 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1813497	500.000	514.08
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	253311	50.0000	48.58

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048242

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048242

QB Batch: OEXT/12029 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048242001, 4048242002, 4048242003, 4048242004, 4048242005, 4048242006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C40)	101	mg/kg	6.7	3.3	08/08/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	

Type	Sample	Matrix
BLANK	483016	Tissue

REPORT OF LABORATORY ANALYSIS

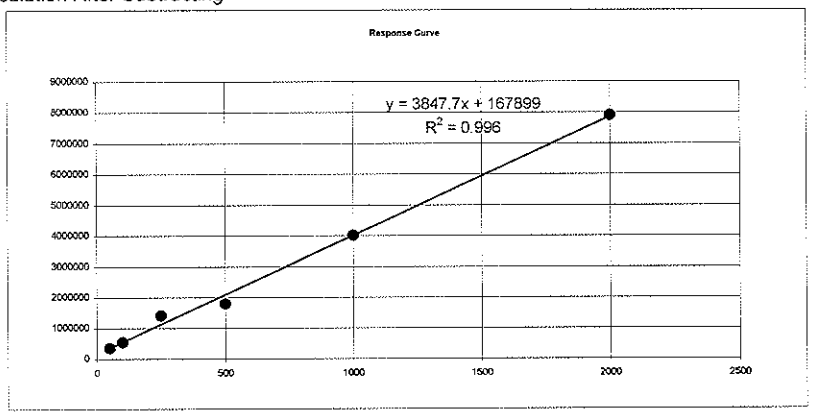
SampleID: 483016 File: 06R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



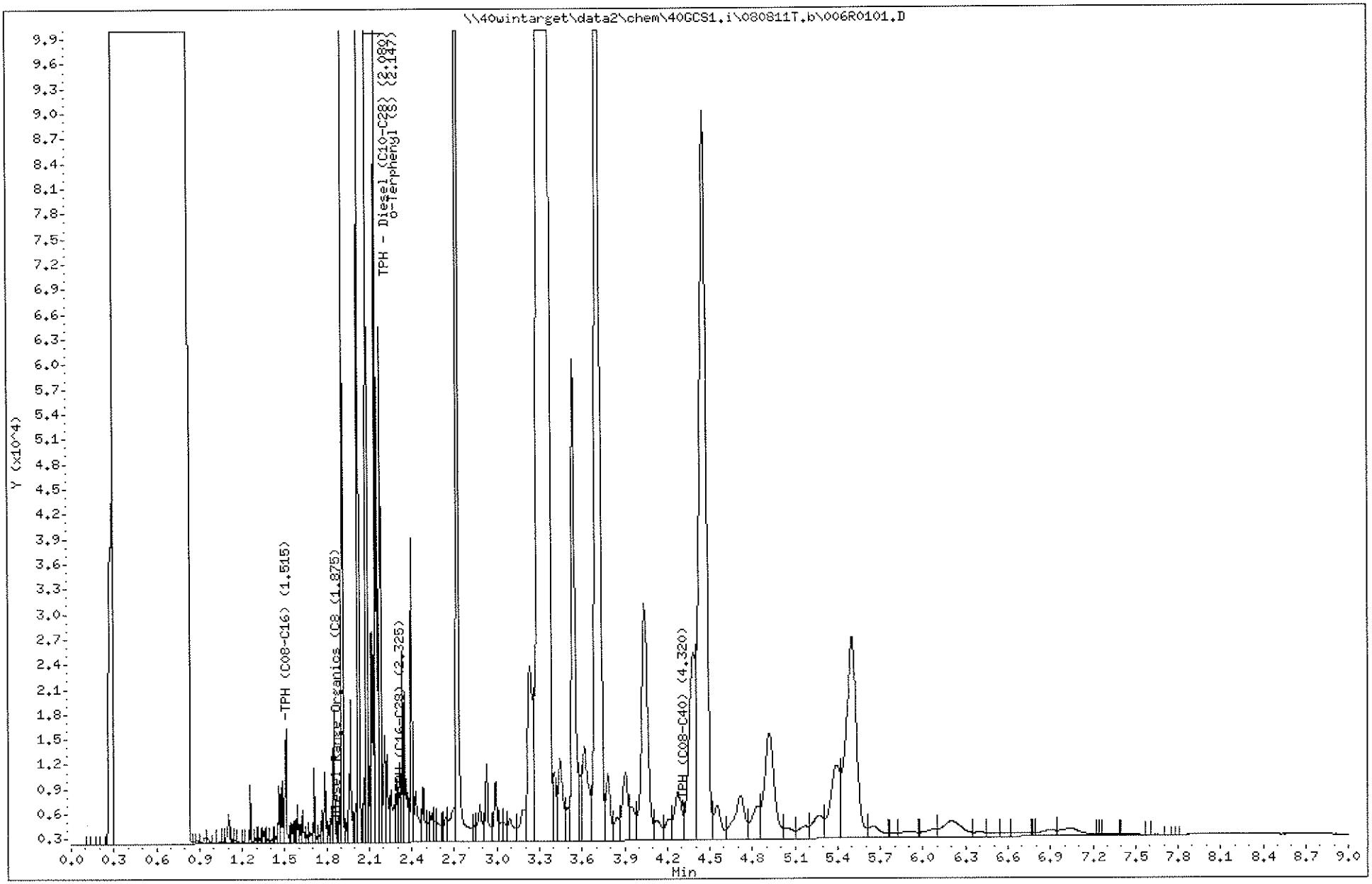
Retention Time	Peak Area	Compound Name
1.910	120198	
2.023	100039	
2.083	64991	
2.723	211870	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	218014	120198	-18.2142
Diesel Range Organics (	624183	285228	44.45663
TPH - Diesel (C10-C28)	610379	285228	40.86904
TPH (C16-C28)	423638	165030	23.57483
TPH (C08-C40)	6490918	497098	1514.129

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Date : 08-AUG-2011 09:05
Client ID: MB
Sample Info: 483016
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			6490918	1885.04	125.66
S	1 TPH (C08-C16)	1.040-1.990			218013	46.4479	3.09(a)
S	12 TPH (C16-C28)	1.940-2.710			423638	106.717	7.11
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			624182	165.496	11.03
S	8 TPH - Diesel (C10-C28)	1.450-2.710			610379	161.451	10.76
$	15 o-Terphenyl (S)	2.146	2.146	0.000	186162	35.7090	2.38

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.117	14	15	1.049	0.00		
0.183	21	15	0.701	0.00		
0.217	22	17	0.762	0.00		
0.293	71418	41400	0.580	0.01		
0.313	556833866	95605407	0.172	98.50		
0.867	203	199	0.980	0.00		
0.883	551	430	0.781	0.00		
0.937	1118	770	0.689	0.00		
0.957	1063	785	0.739	0.00		
1.000	196	115	0.587	0.00		
1.515	218014	446085	2.046	0.03	S	1 TPH (C08-C16)
1.875	624183	1060437	1.699	0.11	S	2 Diesel Range Organi
1.050	271	190	0.701			
1.070	261	266	1.020			
1.107	3649	3555	0.974			
1.130	459	568	1.239			
1.150	359	432	1.204			
1.173	223	264	1.187			
1.210	80	140	1.754			
1.227	41	44	1.073			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.260	3472	7079	2.039			
1.290	468	757	1.619			
1.310	578	901	1.558			
1.323	382	675	1.767			
1.337	290	653	2.249			
1.353	1290	1432	1.110			
1.373	203	456	2.242			
1.383	338	512	1.514			
1.407	503	497	0.989			
1.427	400	678	1.694			
1.443	537	856	1.595			
2.080	610379	1040482	1.705	0.10	S	8 TPH - Diesel (C10-C
1.460	4031	6932	1.720			
1.483	6173	7582	1.228			
1.513	10800	13678	1.266			
1.540	740	1228	1.660			
1.557	1592	2221	1.395			
1.570	868	1902	2.192			
1.580	838	1681	2.007			
1.593	3045	4583	1.505			
1.617	1340	2517	1.878			
1.627	3061	3950	1.290			
1.663	848	1009	1.190			
1.687	1637	1149	0.702			
1.710	4209	8906	2.116			
1.727	475	783	1.648			
1.753	1105	1197	1.083			
1.767	2352	3938	1.674			
1.787	7193	8542	1.188			
1.817	1479	2033	1.374			
1.833	2562	4302	1.679			
1.850	8709	15928	1.829			
1.880	788	1528	1.938			
1.890	2699	5431	2.012			
1.910	120198	312264	2.598			
1.940	1532	2397	1.564			
1.957	14771	8331	0.564			
1.987	1166	2118	1.816			
2.003	3315	4645	1.401			
2.023	100039	181793	1.817			
2.050	1759	3376	1.919			
2.067	6720	7818	1.163			
2.083	64991	163100	2.510			
2.103	5277	9285	1.760			
2.113	32676	25076	0.767			
2.180	38415	61853	1.610			
2.207	13472	12814	0.951			
2.223	10505	10654	1.014			
2.250	10672	6283	0.589			
2.293	5564	7571	1.361			
2.317	9395	9636	1.026			
2.333	12795	22904	1.790			
2.347	17814	18159	1.019			
2.397	20806	36415	1.750			
2.423	12027	6165	0.513			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.477	7711	6670	0.865				
2.513	2720	2318	0.852				
2.540	5034	3496	0.694				
2.557	3071	2665	0.868				
2.577	4819	2415	0.501				
2.617	2001	2035	1.017				
2.640	4041	2982	0.738				
2.700	10531	4224	0.401				
2.147	186162	388356	2.086	0.03	$	15	o-Terphenyl (S)
2.325	423638	627198	1.481	0.07	S	12	TPH (C16-C28)
4.320	6490918	3218044	0.496	1.15	S	5	TPH (C08-C40)
2.723	211870	250885	1.184				
2.840	2591	1935	0.747				
2.877	9194	4384	0.477				
2.927	13441	9421	0.701				
2.990	11956	7151	0.598				
3.033	3581	2277	0.636				
3.053	3409	2270	0.666				
3.090	8162	2822	0.346				
3.193	10294	3831	0.372				
3.233	54060	21152	0.391				
3.373	4074338	1352562	0.332				
3.407	12875	8399	0.652				
3.447	23815	10015	0.421				
3.497	5369	4023	0.749				
3.543	108162	57797	0.534				
3.587	7773	7935	1.021				
3.620	33085	11424	0.345				
3.723	338962	151040	0.446				
3.783	18107	8081	0.446				
3.847	6485	2807	0.433				
3.903	22488	8330	0.370				
3.950	11041	4082	0.370				
4.040	85837	28418	0.331				
4.127	7610	2405	0.316				
4.217	7113	2490	0.350				
4.273	20986	5700	0.272				
4.383	70330	22478	0.320				
4.460	297795	87280	0.293				
4.550	14254	4068	0.285				
4.713	28486	5218	0.183				
4.833	14736	3885	0.264				
4.920	63525	12782	0.201				
5.050	5548	1285	0.232				
5.173	7364	1490	0.202				
5.277	14887	2727	0.183				
5.393	42058	8814	0.210				
5.503	125086	24172	0.193				
5.653	8453	1404	0.166				
5.767	491	492	1.001				
5.813	1675	545	0.325				
5.900	5234	707	0.135				
5.970	446	560	1.257				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.097	5734	976	0.170		
6.197	18884	1888	0.100		
6.383	2884	553	0.192		
6.453	2762	501	0.181		
6.550	1769	421	0.238		
6.703	3651	459	0.126		
6.763	235	396	1.687		
6.793	626	400	0.639		
6.900	5311	675	0.127		
7.047	8794	863	0.098		
7.237	275	198	0.721		
7.257	156	200	1.283		
7.287	1323	206	0.156		
7.393	103	127	1.239		
7.413	1119	128	0.114		
7.587	141	73	0.518		
7.623	401	74	0.185	0.00	
7.707	151	58	0.383	0.00	
7.767	60	46	0.762	0.00	
7.797	95	52	0.550	0.00	
	563586260	99255783		100.000	

Total unknown % area = 98.51

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www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048242

QB Batch: OEXT/12036 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048242001, 4048242002, 4048242003, 4048242004, 4048242005, 4048242006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.43	%			07/29/11	

Type	Sample	Matrix
BLANK	483156	Tissue

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048242

QB Batch: OEXT/12029 **LCS Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

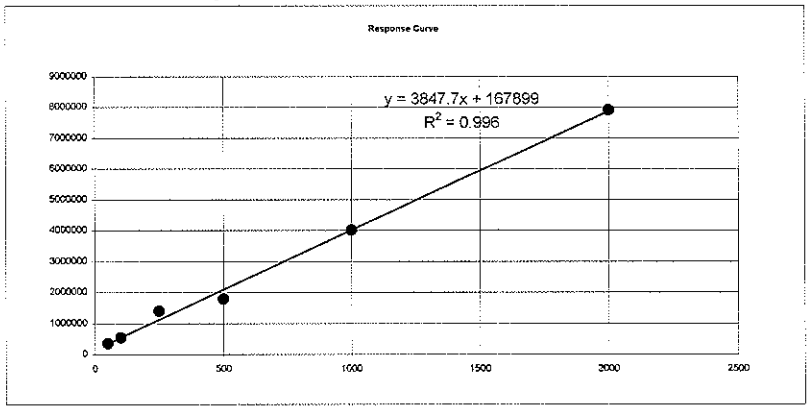
SampleID: 483017 File: 26R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.913	81017	
2.027	88001	
2.087	48403	
2.740	70987	

358

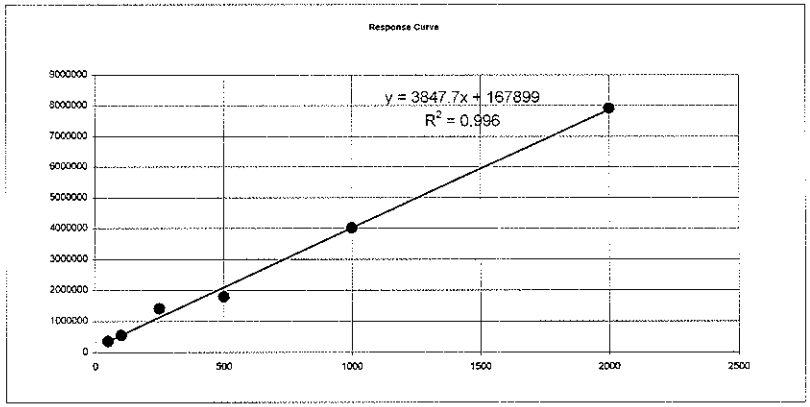
Test Name	Total Area	Area	Conc
TPH (C08-C16)	513513	81017	68.76749
Diesel Range Organics (	1107222	217421	187.6188
TPH - Diesel (C10-C28)	1091471	217421	183.5252
TPH (C16-C28)	684076	136404	98.70117
TPH (C08-C40)	3179742	288408	707.8076

SampleID: 483018 File: 27R0101.D TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.913	86364	
2.027	92572	
2.087	49444	
2.743	72593	

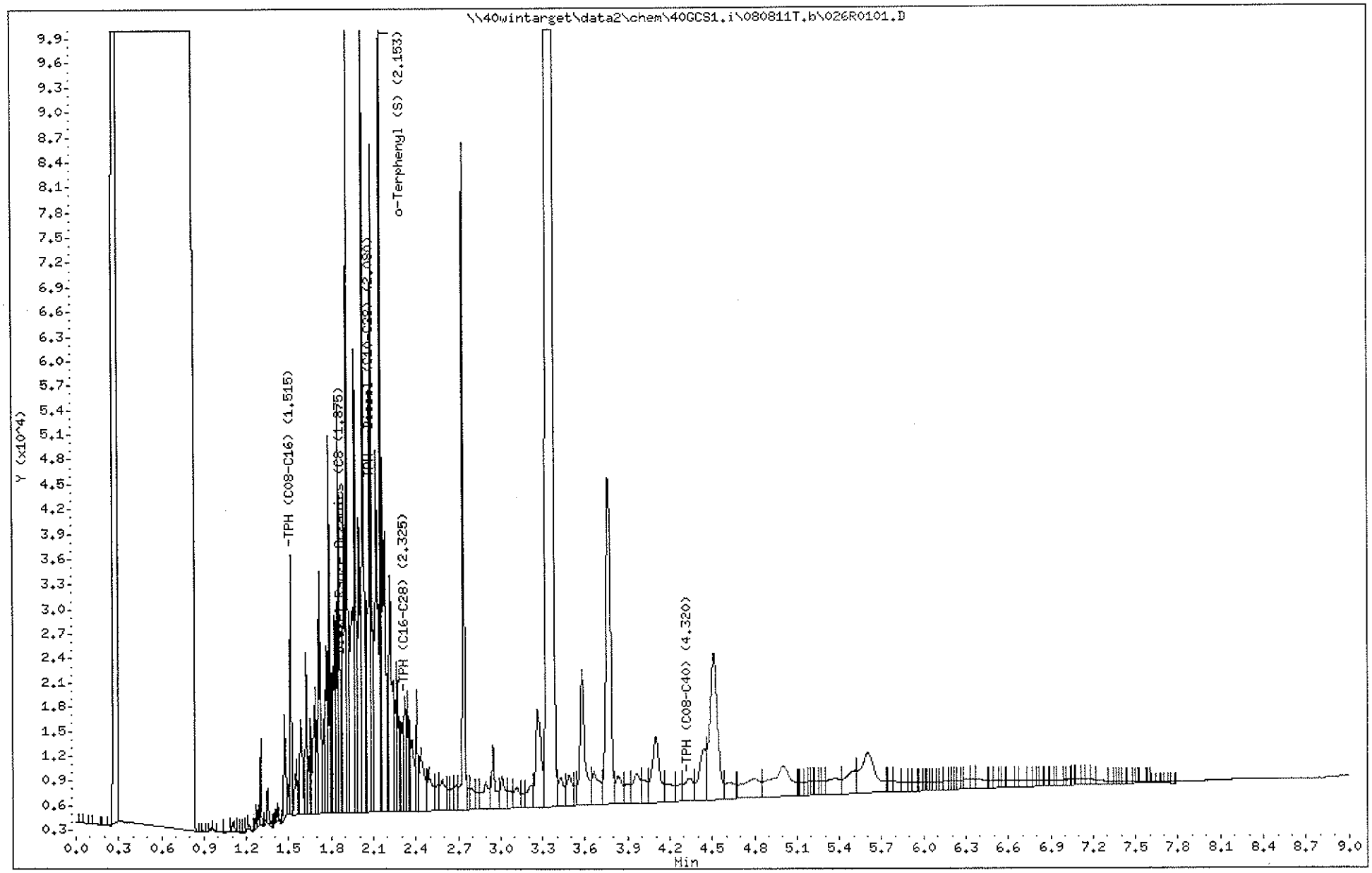
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	562144	86364	80.01678
Diesel Range Organics (	1150605	228380	196.0457
TPH - Diesel (C10-C28)	1133743	228380	191.6633
TPH (C16-C28)	687056	142016	98.01713
TPH (C08-C40)	2984092	300973	653.6935

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Date : 08-AUG-2011 13:04
Client ID: MBLCS
Sample Info: 483017X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			3179742	914.532	182.90
S 1 TPH (C08-C16)	1.040-1.990			513513	133.059	26.61
S 12 TPH (C16-C28)	1.940-2.710			684075	183.051	36.61
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			1107222	307.076	61.41
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1091470	302.459	60.49(R)
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	70769	13.5747	0.90

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.023	14	9	0.662	0.00		
0.090	18	15	0.847	0.00		
0.117	44	12	0.275	0.00		
0.190	24	11	0.458	0.00		
0.283	266192	129517	0.487	0.04		
0.317	552350005	94104610	0.170	98.79		
0.893	63	83	1.309	0.00		
0.947	262	278	1.063	0.00		
0.967	72	84	1.175	0.00		
1.515	513513	675781	1.316	0.09	S	1 TPH (C08-C16)
1.875	1107222	1269076	1.146	0.19	S	2 Diesel Range Organi
1.057	87	64	0.736			
1.110	1485	1254	0.844			
1.137	59	113	1.909			
1.157	44	74	1.701			
1.180	52	102	1.954			
1.200	47	125	2.660			
1.217	677	602	0.889			
1.267	1460	2924	2.002			
1.283	1051	2592	2.465			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.300	5197	10462	2.013			
1.333	289	458	1.583			
1.350	3191	4275	1.340			
1.370	418	688	1.647			
1.400	145	235	1.624			
1.417	1313	2175	1.657			
1.433	236	564	2.390			
2.080	1091471	1242369	1.138	0.19	S	8 TPH - Diesel (C10-C
1.470	12903	12603	0.977			
1.497	2159	3629	1.681			
1.513	14050	31688	2.255			
1.540	8112	3657	0.451			
1.570	1047	2790	2.665			
1.587	13674	11491	0.840			
1.623	15563	19802	1.272			
1.643	4646	7051	1.518			
1.653	7532	11634	1.545			
1.677	11078	13234	1.195			
1.690	14600	15473	1.060			
1.713	27549	29428	1.068			
1.747	7177	11507	1.603			
1.757	23635	15073	0.638			
1.787	24655	45718	1.854			
1.800	9316	16233	1.743			
1.810	12266	18002	1.468			
1.823	19437	24235	1.247			
1.840	15526	25896	1.668			
1.853	34044	49420	1.452			
1.873	6638	17415	2.623			
1.893	40774	38698	0.949			
1.913	81017	143558	1.772			
1.947	46129	24595	0.533			
1.970	44237	56244	1.271			
1.997	47190	35790	0.758			
2.027	88001	121667	1.383			
2.050	19548	24762	1.267			
2.073	45913	51177	1.115			
2.087	48403	80928	1.672			
2.123	70248	43754	0.623			
2.167	58451	42945	0.735			
2.207	16342	17754	1.086			
2.217	33294	28758	0.864			
2.243	16044	14663	0.914			
2.267	15454	18295	1.184			
2.287	7948	10404	1.309			
2.300	9822	10788	1.098			
2.320	14188	14018	0.988			
2.340	10996	14675	1.335			
2.353	9309	11508	1.236			
2.373	12659	8625	0.681			
2.407	12912	14736	1.141			
2.437	16990	7579	0.446			
2.490	12271	5228	0.426			
2.553	5460	3179	0.582			
2.587	10579	3825	0.362			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.627	2501	2516	1.006				
2.657	4112	2651	0.645				
2.680	5074	3070	0.605				
2.153	70769	164785	2.328	0.01	$	15	o-Terphenyl (S)
2.325	684076	674134	0.985	0.12	S	12	TPH (C16-C28)
4.320	3179742	2230237	0.701	0.57	S	5	TPH (C08-C40)
2.740	70987	80760	1.138				
2.767	2555	2612	1.022				
2.797	6558	2568	0.392				
2.830	3235	2060	0.637				
2.897	10465	3287	0.314				
2.947	14286	7646	0.535				
3.013	9195	3912	0.425				
3.057	4741	2026	0.427				
3.113	7400	2499	0.338				
3.160	2401	1728	0.720				
3.220	8357	2615	0.313				
3.263	31867	11937	0.375				
3.373	1304247	628244	0.482				
3.427	8778	3399	0.387				
3.487	11183	3714	0.332				
3.537	2895	2476	0.855				
3.577	40885	16567	0.405				
3.663	14678	4049	0.276				
3.763	90190	39402	0.437				
3.833	10402	3312	0.318				
3.903	6761	2317	0.343				
3.967	12893	3600	0.279				
4.013	7851	2714	0.346				
4.097	30844	7904	0.256				
4.187	8738	2170	0.248				
4.270	5902	1999	0.339				
4.340	13036	2683	0.206				
4.440	20990	6200	0.295				
4.513	70951	17861	0.252				
4.617	9596	1990	0.207				
4.680	956	1586	1.658				
4.797	19607	2275	0.116				
5.000	35336	3687	0.104				
5.107	984	1639	1.665				
5.120	1302	1631	1.253				
5.150	2951	1648	0.558				
5.177	2624	1646	0.627				
5.190	1314	1645	1.252				
5.210	1975	1649	0.835				
5.220	991	1655	1.670				
5.240	2692	1696	0.630				
5.267	2706	1697	0.627				
5.297	3044	1701	0.559				
5.370	11528	1869	0.162				
5.510	15682	2757	0.176				
5.603	36249	4854	0.134				
5.740	530	1327	2.503				

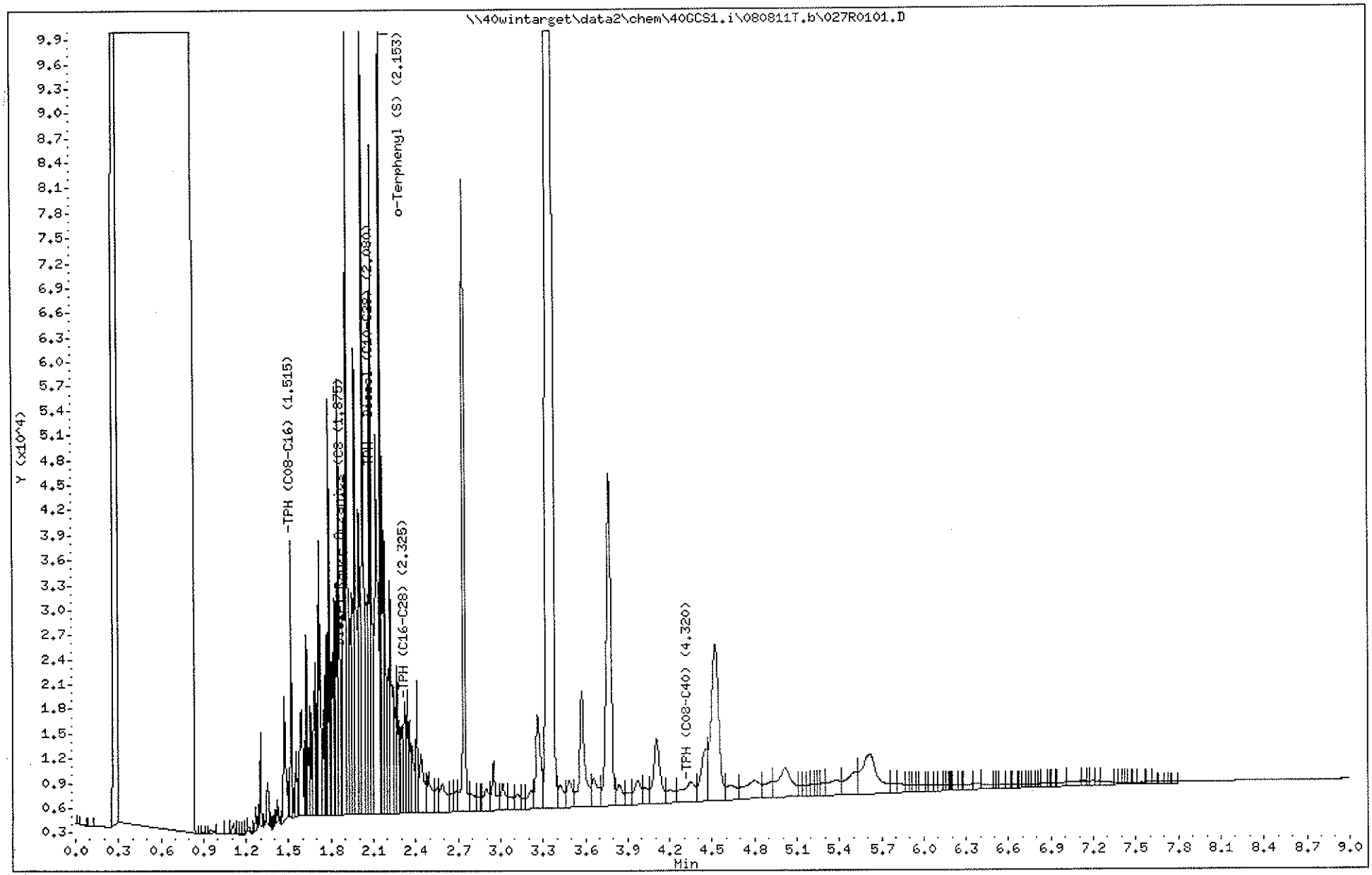
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.757	2882	1320	0.458		
5.787	4217	1292	0.306		
5.843	3195	1176	0.368		
5.890	2191	1106	0.505		
5.920	2142	1083	0.506		
5.963	1049	1049	1.000		
5.987	1670	1051	0.629		
6.010	1259	1050	0.834		
6.020	627	1051	1.677		
6.030	1041	1050	1.008		
6.053	1030	1032	1.002		
6.073	1849	1031	0.558		
6.097	1232	1036	0.841		
6.137	2083	1066	0.512		
6.173	2367	1097	0.463		
6.187	877	1104	1.260		
6.207	1337	1114	0.834		
6.223	1342	1127	0.840		
6.240	2252	1135	0.504		
6.273	895	1122	1.254		
6.317	3753	1208	0.322		
6.337	2852	1204	0.422		
6.377	5100	1143	0.224		
6.457	579	962	1.662		
6.470	1504	949	0.631		
6.490	371	930	2.507		
6.510	1846	928	0.503		
6.543	1281	921	0.719		
6.560	1618	912	0.564		
6.587	531	888	1.672		
6.620	2793	874	0.313		
6.653	1666	850	0.510		
6.690	2369	812	0.343		
6.743	2077	755	0.364		
6.783	1134	715	0.631		
6.807	554	698	1.260		
6.840	1372	699	0.509		
6.857	551	692	1.256		
6.877	827	693	0.838		
6.893	687	690	1.005		
6.917	1212	678	0.559		
6.937	661	663	1.003		
6.987	1994	688	0.345		
7.003	806	681	0.845		
7.023	802	675	0.841		
7.043	534	671	1.258		
7.057	929	672	0.724		
7.073	266	671	2.521		
7.087	1496	684	0.457		
7.123	1317	670	0.509		
7.163	1254	633	0.505		
7.187	1428	617	0.432		
7.223	2478	574	0.232		
7.317	721	347	0.481		
7.357	232	293	1.262		
7.367	399	297	0.744		
7.390	272	278	1.022		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.420	433	280	0.647		
7.437	220	281	1.275		
7.467	741	292	0.394		
7.490	280	286	1.020		
7.510	223	283	1.268		
7.520	281	287	1.021		
7.540	669	288	0.431		
7.583	265	268	1.013		
7.597	272	276	1.015		
7.610	220	281	1.275	0.00	
7.623	438	277	0.633	0.00	
7.650	504	280	0.556	0.00	
7.677	164	275	1.676	0.00	
7.693	283	286	1.011	0.00	
7.707	474	304	0.642	0.00	
7.740	425	317	0.746	0.00	
7.760	440	321	0.730	0.00	
7.783	310	315	1.016	0.00	
	555870461	96632297		100.000	

Total unknown % area = 98.83

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Date : 08-AUG-2011 13:16
Client ID: MBLCSD
Sample Info: 483018X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			2984092	857.187	171.43
S	1 TPH (C08-C16)	1.040-1.990			562144	147.313	29.46
S	12 TPH (C16-C28)	1.940-2.710			687056	183.925	36.78
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			1150604	319.791	63.95
S	8 TPH - Diesel (C10-C28)	1.450-2.710			1133743	314.849	62.96(R)
$	15 o-Terphenyl (S)	2.153	2.146	0.007	73287	14.0577	0.93

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.017	10	12	1.188	0.00		
0.083	14	15	1.056	0.00		
0.100	28	22	0.775	0.00		
0.283	265583	126998	0.478	0.04		
0.317	554663241	93690131	0.169	98.80		
0.897	70	84	1.207	0.00		
0.950	631	405	0.642	0.00		
1.515	562144	798731	1.421	0.10	S	1 TPH (C08-C16)
1.875	1150605	1430450	1.243	0.20	S	2 Diesel Range Organi
1.060	89	60	0.678			
1.113	1456	1378	0.946			
1.140	61	133	2.188			
1.160	43	73	1.682			
1.183	64	102	1.596			
1.203	103	128	1.249			
1.217	735	665	0.905			
1.267	1443	2952	2.045			
1.283	1120	2738	2.445			
1.300	5748	11278	1.962			
1.337	282	359	1.272			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.350	3535	4926	1.394			
1.373	393	709	1.802			
1.390	27	91	3.421			
1.400	84	240	2.844			
1.420	1418	2501	1.764			
1.433	261	638	2.444			
2.080	1133743	1401479	1.236	0.20	S	8 TPH - Diesel (C10-C
1.470	15170	15045	0.992			
1.497	2034	4135	2.033			
1.513	16045	33304	2.076			
1.543	3291	4279	1.300			
1.553	6115	7786	1.273			
1.570	1230	3275	2.663			
1.587	15904	12797	0.805			
1.613	3967	8994	2.267			
1.623	13823	21848	1.581			
1.643	5365	8170	1.523			
1.653	8661	13199	1.524			
1.677	12407	15013	1.210			
1.690	10406	18409	1.769			
1.703	6137	11740	1.913			
1.713	30827	33111	1.074			
1.747	7902	12773	1.616			
1.757	12387	16864	1.361			
1.770	13730	22102	1.610			
1.787	26674	50187	1.882			
1.800	10188	17871	1.754			
1.810	13425	19706	1.468			
1.823	21007	26143	1.244			
1.840	16808	28140	1.674			
1.853	36476	52613	1.442			
1.873	10671	18598	1.743			
1.893	39675	41124	1.037			
1.913	86364	144463	1.673			
1.947	27764	25582	0.921			
1.957	20278	26151	1.290			
1.970	50553	56338	1.114			
1.997	44730	36794	0.823			
2.027	92572	130424	1.409			
2.053	30149	25561	0.848			
2.073	37042	51960	1.403			
2.087	49444	80834	1.635			
2.123	72223	45717	0.633			
2.167	37904	43003	1.135			
2.187	23867	32887	1.378			
2.207	13107	17573	1.341			
2.217	32732	28236	0.863			
2.243	15287	13756	0.900			
2.267	15009	17912	1.193			
2.287	7566	9962	1.317			
2.300	9391	10529	1.121			
2.320	15044	13488	0.897			
2.340	9035	14979	1.658			
2.357	8972	11088	1.236			
2.373	11722	8065	0.688			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.407	12686	16114	1.270			
2.437	15388	7052	0.458			
2.490	10405	4843	0.465			
2.553	5304	2840	0.535			
2.587	11196	3324	0.297			
2.657	3926	2265	0.577			
2.680	3759	2513	0.668			
2.153	73288	173880	2.373	0.01	$	15 o-Terphenyl (S)
2.325	687056	739790	1.077	0.12	S	12 TPH (C16-C28)
4.320	2984092	2306782	0.773	0.53	S	5 TPH (C08-C40)
2.743	72593	76306	1.051			
2.787	5367	2076	0.387			
2.830	2904	1665	0.573			
2.863	1253	1578	1.259			
2.897	7174	2606	0.363			
2.950	11003	5969	0.542			
3.017	7303	3203	0.439			
3.057	3912	1574	0.402			
3.120	4634	1825	0.394			
3.160	2031	1285	0.633			
3.213	6428	2131	0.332			
3.263	26448	11283	0.427			
3.367	1157498	595652	0.515			
3.423	6684	2667	0.399			
3.487	9028	3211	0.356			
3.577	36374	14078	0.387			
3.663	11288	3349	0.297			
3.770	92242	40106	0.435			
3.840	7290	2410	0.331			
3.913	4295	1483	0.345			
3.973	9858	2877	0.292			
4.020	5178	1955	0.378			
4.107	27244	7870	0.289			
4.200	6156	1527	0.248			
4.350	15364	2428	0.158			
4.453	20067	6312	0.315			
4.520	72964	18930	0.259			
4.623	8383	1771	0.211			
4.800	17983	2200	0.122			
4.920	8079	1901	0.235			
5.017	25279	3501	0.138			
5.130	1924	1375	0.715			
5.160	2756	1394	0.506			
5.193	2208	1383	0.626			
5.217	1943	1412	0.727			
5.237	1707	1440	0.844			
5.263	2349	1490	0.634			
5.293	2682	1495	0.557			
5.373	11605	1781	0.153			
5.523	15916	2775	0.174			
5.617	37458	4838	0.129			
5.770	3861	1162	0.301			
5.820	3387	1069	0.316			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.873	1264	914	0.723		
5.900	1055	894	0.847		
5.920	1699	868	0.511		
5.950	819	823	1.005		
5.967	2201	814	0.370		
6.027	907	757	0.835		
6.040	1613	746	0.462		
6.077	1260	714	0.566		
6.113	1607	681	0.424		
6.147	518	651	1.256		
6.160	779	655	0.841		
6.177	388	651	1.677		
6.190	520	654	1.258		
6.203	521	651	1.250		
6.213	1431	658	0.460		
6.250	1124	639	0.569		
6.280	369	619	1.678		
6.340	2333	680	0.292		
6.360	2324	705	0.303		
6.407	2954	634	0.215		
6.493	663	485	0.732		
6.513	453	459	1.014		
6.563	1234	449	0.364		
6.587	1041	438	0.421		
6.617	169	424	2.516		
6.637	1007	432	0.429		
6.667	243	409	1.684		
6.677	565	412	0.729		
6.700	632	398	0.629		
6.723	382	393	1.029		
6.757	517	376	0.727		
6.783	695	402	0.578		
6.803	479	408	0.852		
6.823	404	409	1.012		
6.867	1099	440	0.400		
6.893	689	436	0.633		
6.903	261	440	1.688		
6.923	705	450	0.638		
6.940	263	443	1.686		
7.003	1761	502	0.285		
7.087	3655	593	0.162		
7.127	1247	580	0.465		
7.160	642	545	0.850		
7.187	1181	547	0.463		
7.217	1046	528	0.505		
7.247	2514	519	0.206		
7.350	539	313	0.581		
7.377	363	267	0.736		
7.403	303	260	0.858		
7.430	298	255	0.855		
7.457	444	251	0.565		
7.473	199	255	1.282		
7.493	455	260	0.572		
7.530	770	268	0.348		
7.567	150	256	1.708		
7.583	636	279	0.439		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.623	644	279	0.433	0.00	
7.653	109	275	2.532	0.00	
7.667	617	285	0.462	0.00	
7.703	526	298	0.566	0.00	
7.730	419	305	0.728	0.00	
7.753	189	325	1.720	0.00	
7.763	804	340	0.423	0.00	
	557990264	96300436		100.000	

Total unknown % area = 98.84

05 Aug 11 03:19 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080411.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	2000 2860-31-01					TPHMACHB	1
1	5	1000 2860-31-02					TPHMACHB	1
1	6	500 2860-31-14					TPHMACHB	1
1	7	250 2860-30-13					TPHMACHB	1
1	8	100 2860-30-14					TPHMACHB	1
1	9	50 2860-30-15					TPHMACHB	1
1	10	IC500 2860-30-16					TPHMACHB	1
REAR								
1								

Good

WHB 8/5/11

KHB 8/5/11

Continued on Page

Read and Understood By

Signed 8/5/11 Date Signed 8/5/11 Date

09 Aug 11 08:09 AM
Sequence: C:\HPCHEM\1\SEQUENCE\080811.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	8015DS-CCV-ok				TPHMACHB	1
1	5	483017 RSX3				TPHMACHB	1
1	6	483016				TPHMACHB	1
1	7	483018 RSX3				TPHMACHB	1
1	8	4048242001				TPHMACHB	1
1	9	4048242002				TPHMACHB	1
1	10	4048242003				TPHMACHB	1
1	11	4048242004				TPHMACHB	1
1	12	4048242005				TPHMACHB	1
1	13	4048242006				TPHMACHB	1
1	14	4048244001				TPHMACHB	1
1	15	4048244002 RSX2				TPHMACHB	1
1	16	4048244003 RSX2	TPH.B			TPHMACHB	1
1	17	4048244004 RSX3	GCSV			TPHMACHB	1
1	18	4048244005 RSX3	6258			TPHMACHB	1
1	19	4048244006	HBN			TPHMACHB	1
1	20	4048329001 RSX4	77487			TPHMACHB	1
1	21	4048329002 RSX5				TPHMACHB	1
1	22	4048329003 RSX6				TPHMACHB	1
1	23	4048330001				TPHMACHB	1
1	24	4048330002				TPHMACHB	1
1	25	4048330003				TPHMACHB	1
1	26	483017X3				TPHMACHB	1
1	27	483018X3				TPHMACHB	1
1	28	4048244002X2				TPHMACHB	1
1	29	4048244003X2				TPHMACHB	1
1	30	4048244004X3				TPHMACHB	1
1	31	4048244005X3				TPHMACHB	1
1	32	4048329001X4				TPHMACHB	1
1	33	4048329002X5				TPHMACHB	1
1	34	4048329003X6				TPHMACHB	1
1	35	BLANK				TPHMACHB	1
1	36	BLANK				TPHMACHB	1
1	37	BLANK				TPHMACHB	1
1	38	8015DS-CCV-ok				TPHMACHB	1
1	39	487651				TPHMACHB	1
1	40	487650				TPHMACHB	1
1	41	487652X20 RSX15 = 300	TPH.S			TPHMACHB	1
1	42	487653X20	GCSV			TPHMACHB	1
1	43	4049375001X20	6316			TPHMACHB	1
1	44	4049375002X50 RSX7 = 350	HBN			TPHMACHB	1
1	45	BLANK	78126			TPHMACHB	1
1	46	8015DS-CCV-ok				TPHMACHB	1
REAR							
1							

KHB 8/9/11

KHB 8/9/11

Continued on Page

Read and Understood By

D S H Burns 8/9/11
Signed Date

Signed 8/9/11
Date

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 77394 TPH-B

Prep Method	EPA 3541	Analysis Method	TPH-B	Extracted By	BLM	Extracted By Date	07/28/2011
Spiked By	BLM	Spiked By Date	07/28/2011	Conc. Temp #1	98.5	Conc. Temp #2	98.5
Methylene Chloride	12455	Sodium Sulfate	7513	Florisil 3620B	5238	3620B Date/Initials	7/29/11 BLM
Batch Notes		Reviewed By	JLH	Reviewed By Date	07/29/2011		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**483016**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**483017**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**483018**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048242001**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242002**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242003**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242004**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242005**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242006**	14.3	1	0.5			6045 (.5)
8015 T_P	PS	**4048244001**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244002**	14.2	1	0.5			6045 (.5)
8015 T_P	PS	**4048244003**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244004**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244005**	13.6	1	0.5			6045 (.5)
8015 T_P	PS	**4048244006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048329001**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329002**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329003**	13.4	1	0.5			6045 (.5)
8015 T_P	PS	**4048330001**	9	1	0.5			6045 (.5)
8015 T_P	PS	**4048330002**	9.5	1	0.5			6045 (.5)
8015 T_P	PS	**4048330003**	14.3	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Pace Analytical Services					Instrument ID:	40BALC				
LIPID					Analyst:	BLM				

12036 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483156		0.9375	0.9537	15.0000	4.0000	1.0000	0.4320	07/29/2011 07:00:14		
4048242001		0.9537	0.9646	15.0000	4.0000	1.0000	0.2907	07/29/2011 07:00:21		
4048242002		0.9523	0.9621	15.0000	4.0000	1.0000	0.2613	07/29/2011 07:00:27		
4048242003		0.9523	0.9600	14.1000	4.0000	1.0000	0.2184	07/29/2011 07:00:35		
4048242004		0.9504	0.9583	14.1000	4.0000	1.0000	0.2241	07/29/2011 07:00:41		
4048242005		0.9488	0.9543	14.1000	4.0000	1.0000	0.1560	07/29/2011 07:00:47		
4048242006		0.9448	0.9621	14.3000	4.0000	1.0000	0.4839	07/29/2011 07:00:53		
4048244001		0.9443	0.9618	14.0000	4.0000	1.0000	0.5000	07/29/2011 07:01:00		
4048244002		0.9325	0.9550	14.2000	4.0000	1.0000	0.6338	07/29/2011 07:01:07		
4048244003		0.9457	0.9609	14.0000	4.0000	1.0000	0.4343	07/29/2011 07:01:13		
4048244004		0.9459	0.9720	14.0000	4.0000	1.0000	0.7457	07/29/2011 07:01:20		
4048244005		0.9450	0.9738	13.6000	4.0000	1.0000	0.8471	07/29/2011 07:01:26		
4048244006		0.9461	0.9508	15.0000	4.0000	1.0000	0.1253	07/29/2011 07:01:33		
4048329001		0.9473	1.1178	8.8000	4.0000	1.0000	7.7500	07/29/2011 07:01:39		
4048329002		0.9500	1.1489	8.8000	4.0000	1.0000	9.0409	07/29/2011 07:01:46		
4048329003		0.9528	1.1906	13.4000	4.0000	1.0000	7.0985	07/29/2011 07:01:52		
4048330001		0.9522	0.9557	9.0000	4.0000	1.0000	0.1556	07/29/2011 07:01:58		
4048330002		0.9508	0.9596	9.5000	4.0000	1.0000	0.3705	07/29/2011 07:02:04		
4048330003		0.9440	0.9497	14.3000	4.0000	1.0000	0.1594	07/29/2011 07:02:10		

Approved by BH 7/29/11

Pace Analytical Services, Inc.	Instrument	Queue	Batch	Date/Time In	Temp In	Date/Time Out	Temp Out
	40BALC	PMST	6456	12-1-11 2:30	104°	12-2-11 6:00	104°

% Moisture	Tray #	Tare Weight	Wet Weight	Dry Weight	% MST	% Solids	Date / Time	Parent Sample ID	%RPD
4048240004	1	0.9355	3.8808	1.7925	70.9028	29.10	12/02/2011 06:26		
540622	2	0.9318	3.7654	1.7688	70.4616	29.54	12/02/2011 06:26	4048240004	0.62
4048240006	3	0.9343	4.4296	1.8933	72.5632	27.44	12/02/2011 06:26		
4048242002	4	0.9321	3.522	1.6288	73.0993	26.90	12/02/2011 06:26		
4048244006	5	0.9351	4.9864	2.0901	71.4906	28.51	12/02/2011 06:26		

Approved by CAH 12/6/11

9.4.

Time Acceptance Limits:	>= 8 hours; if less, dry to constant weight.	Instrument:	400VN7/ 400VNH/ 400VNA (circle one)
Temperatu cceptance Limits:	103 - 105C	Method:	ASTM D2974-87

9/28/10
2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/25/11

9/30/10
2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11

* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR

10/4/10
2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10
2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 10.0ml CH_2Cl_2 20ppm WPAH IS RDW 10/6/10 Exp 10/6/11

10/06/10
2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11

10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w nanopure H_2O SHI 50 ppm
2860-16-07 2500ul of 10,000mg/L Oterphenyl (2713-86) diluted to 250ml with CH_2Cl_2 (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10/4/10

* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR

10/8/10
2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50ug/ml ~~B/A~~ Surr. 8270 SKW Ran on Inst. by 40MSS1 file # 1012T008

10/13/10
2860-16-10 500 ul of 4000 ppm SVIS (2713-90I) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11

2860-16-11 ~~20~~ 40ul of 5000ppm N-NDPA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm MDL STD Ex 7/13/11 RDW 10/13/10 (RDW 10/13/10)

~~10/18/10 500~~ ARO 10/18/10

Continued on Page

Read and Understood By

Signed [signature] Date 10/18/10

Signed Valerie M Rinquin Date 10/18/2010

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH_2Cl_2 2000ppm S-PAH IS Exp 11/22/11 RM 11/24
11/29/10 CH_2Cl_2 changed at 8:00 to lot 2712-73 vme
11/30/10
2860-22-02 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d
12/1/2010
2860-22-06 1ml of 50,000 ug/mL #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 Vmr Ran on inst by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%
12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Hexane/methyl ✓50
1 1-08 25uls of 2860-10-11 1 1 1 1 500ppm
12/03/10
2860-22-09 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10
2860-22-10 50ul of 4000ppm SVIS (2945-06D) up to 10.0ml CH_2Cl_2 20ppm W-PAH-IS Ft 12/8/11 RM 12/6

2860-22-11 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11
12/7/10
2860-22-12 400ul of 16,000 ppm ERRO (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm Vmr Exp 12/7/11 vme

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date
Signed — 12/22/10 — Date

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MeOH spike)
→ 1.0 mL [Final] = 500 ng/uL ex 7-19-11 DR

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPN

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVIS (~~2945-03~~ 2945-038 4/15/11 KPN) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SVIS KPN Exp 8/25/11 KPN
Raman instr by RJW file # 40mss4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Ex 2/28/12 RJW 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) upto 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RJW 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100 ul of 5000ppm B/N SS (2945-20H) upto 10.0mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RJW 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) upto 1.0ml CH_2Cl_2 25ppm PAH CAL Ex 7/3/11 RJW 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) upto 1.0ml CH_2Cl_2 1ppm PAH 2nd Source Ex 9/2/11 RJW 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - RJW exp 2/28/12

3/3/2011

2860-29-15 2500 ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000 ppm Raman inst by ~~GC~~ file # GC (VMR) Exp 3/3/2012 VMR

2 VMR 3/3/2011 OK to use per GC Raman inst 3/8/11 VMR

→ 4006SF.i / 0307116.6 - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Continued on Page

Valerie M Renguin 3/3/2011 Signed Date

Signed Date 3/7/11

3-4-11

2860-30-01 50 mL of 2380-100-01 (TPH @ 20000ug/mL) → 1.0mL CH_2Cl_2
[Final] = 100ug/mL Exp 5-6-11 DAT

TPH ICAL

2860-30-02 500 mL of 2713-460 (#2 Diesel Fuel @ 20,000ug/mL) → 5.0mL CH_2Cl_2
[Final] = 2000ug/mL Exp 3.4.12 DAT

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 mL = 500 ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ Use only 1.0 mL of 2860-30-02 2713-990
All standards + 5 mL ~~2945-135~~ (o-terphenyl @ 10,000ug/mL)
[Final] = 50 ug/mL All standard Exp 2.22.12 DAT

TPH ICV

2860-30-08 10 mL of ~~2945-23A~~ 2713-990 (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5mL 2945-135 (o-terphenyl @ 10,000ug/mL)
[Final] = 500 ug/mL + 50ug/mL Exp 2.22.12 DAT

2860-30-09 25uL of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JHI

3.7.11

2860-30-10 1.0mL of 2860-30-02 + 5 mL 2713-990 (o-terp @ 10,000ug/mL) = 2000ug/mL + 50ug/mL
2860-30-11 500 mL of → 1.0mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 mL = 500 ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 50ug/mL Exp ~~3-4-11~~ DAT 5-6-11 GC

2860-30-16 10 mL of 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 500ug/mL + 50ug/mL
Exp ~~3-4-11~~ DAT 3/4/12 GC

DAT 3-7-11

Continued on Page

Read and Understood By

Signed — Date 3.7.11 — Signed Valerie M Penguin — Date 3/24/11

3.7.11

2860-31-01 100 uL of 2713-460 (#2 Diesel Fuel @20,000 ug/mL) → 1.0 DMC 50 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DMC

2860-31-02 50 uL of 2713-460 (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DMC

2860-31-03 25 uL of 2860-10-19 diluted to 1.0 mL w 50/50 MeOH/H_2O 500 ppm ✓ JHE

2860-31-04 300 uL of 4000 ppm SVIS (2945-17J) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - AKO exp 3/10/12

2860-31-05 500 uL of 2860-10-11 diluted to 10.0 mL w 50/50 MeOH H_2O 1000 ppm JHE

-06	25 uL of 2860-31-05 diluted to 1.0 mL w	25 ppm STD
-07	100	100
-08	250	250
-09	500	500
-10	750	750 → JHE

3.14.11

2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DMC

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL EXP 1-10-12 DMC

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) upto 1.0 mL CH_2Cl_2 2000 ppm PAH-IS Exp 3/15/12 RW 3/16/11

3.17.11 TPH CQV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 100 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-990 (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DMC

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Valerie M Pangilinan Signed _____ Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

Pace Analytical®
www.pacelabs.com

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048243

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048243

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048243001	**EWL T-06 WHOLE BODY**	Tissue	12/20/10 12:04	07/13/11 09:30

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048243
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1014155

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD; the "L0" data qualifier applied to the summary. The recoveries of TPH (C08-C40) were above control criteria in the LCS/LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifier.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** None required for this SDG.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 06/04/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048243

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048243001	EWL T-06 WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALIFIERS

Project: CRABS
Pace Project No.: 4048243

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6256

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048243

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

4048243

Project Number: K1014155
Project Manager: Lynda Huckestein David Lingle/URS

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None
K1014155-011	EWL T-06 -1,2,3,4,5,6,7,8,9,10	1	Animal Tissue	12/20/10	1204	Pace PA	1

1-2oz cc

Test Comments
Relinquish - None K1014155-011 Ship to Pace: Green Bay, WI

Folder Comments:
Report tissues on a wet weight basis. ~~Placed on hold per David Lingle at URS.~~ Lisa

Special Instructions/Comments
Please provide the electronic(PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com
Lisa
Contact David Lingle / URS
East White Lake project

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____STANDARD
Requested FAX Date: _____
Requested Report Date: 06/14/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1014155
Bill to

Relinquished By: [signature] 7/12/11 1200
Received By: Fed Ex 7/13/11 930
Airbill Number: _____

Pace Analytical Services, Inc.
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Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Project # 4048243

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used JB Type of Ice: Wet Blue (Dry) None ☑ Samples on ice, cooling process has begun

Cooler Temperature <0°C Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7-13-11
Initials: G

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: JDT Date: 7/13/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048243

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(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048243

QB Batch: OEXT / 12023
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048243001		EWL T-06 WHOLE BODY	1	61											
482788	BLANK		2	0	S4										
482789	LCS		3	0	S4										
482790	LCSD		3	0	S4										
		QC Limits:		50-150											
		Sample Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 06/04/2012 06:42 AM

REPORT OF LABORATORY ANALYSIS

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LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048243

QB Batch: OEXT/12023
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	68	59	14	50-150	20	66.7	45.2	39.3	mg/kg	08/03/11	08/03/11		
TPH (C08-C16)	29	26		50-150	20	66.7	19.6J	17.6J	mg/kg	08/03/11	08/03/11	L0	L0
TPH (C08-C40)	274	262	4	50-150	20	66.7	182	175	mg/kg	08/03/11	08/03/11	1q	2q
TPH (C16-C28)	33	27		50-150	20	66.7	22.2	18.1J	mg/kg	08/03/11	08/03/11	L0	L0
TPH - Diesel (C10-C28)	64	56	14	50-150	20	66.7	42.8	37.4	mg/kg	08/03/11	08/03/11		

Type	Sample
LCS	482789
LCSD	482790

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048243

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048243001	**EWL T-06 WHOLE BODY**	EPA 3541	OEXT/12023	EPA 8015B Modified	GCSV/6256
4048243001	**EWL T-06 WHOLE BODY**	Pace Lipid	OEXT/12034		

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048243

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/03/11 08/03/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.14

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-31-01	2000 2860-31-01	08/03/11	0835	2.14	
02	1000 2860-31-02	1000 2860-31-02	08/03/11	0845	2.14	
03	500 2860-31-14	500 2860-31-14	08/03/11	0857	2.14	
04	250 2860-30-13	250 2860-30-13	08/03/11	0909	2.14	
05	100 2860-30-14	100 2860-30-14	08/03/11	0921	2.14	
06	50 2860-30-15	50 2860-30-15	08/03/11	0933	2.14	
07	IC500 2860-30-16	IC500 2860-30-16	08/03/11	0945	2.14	
08	EWL T-06 WHOLE BODY	4048243001	08/03/11	1331	2.14	
09	MBLCS	482789	08/03/11	1432	2.14	
10	MB	482788	08/03/11	1442	2.14	
11	MBLCSD	482790	08/03/11	1454	2.14	
12	CC500 2860-31-14	CC500 2860-31-14	08/03/11	1642	2.14	
13						
14						
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32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048243

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REVISED

JUN 0 4 2012

J. Duranceau

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048243

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-06 WHOLE BODY TX
Lab ID: 4048243001
Collected: 12/20/10 12:04
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**8.6**	mg/kg	7.4	3.7	1	07/28/11 12:00	08/03/11 13:31	
	TPH (C08-C16)	**<3.7**	mg/kg	7.4	3.7	1	07/28/11 12:00	08/03/11 13:31	
	TPH (C16-C28)	**6.8J**	mg/kg	7.4	3.7	1	07/28/11 12:00	08/03/11 13:31	
	TPH (C08-C40)	**143**	mg/kg	7.4	3.7	1	07/28/11 12:00	08/03/11 13:31	3q
	TPH - Diesel (C10-C28)	**8.0**	mg/kg	7.4	3.7	1	07/28/11 12:00	08/03/11 13:31	
Surrogates									
84-15-1	o-Terphenyl (S)	**61**	%.	50-150		1	07/28/11 12:00	08/03/11 13:31	

Date: 06/04/2012 10:33 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048243

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-06 WHOLE BODY TX
Lab ID: 4048243001
Collected: 12/20/10 12:04
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.28**	%			1		07/29/11 06:59	

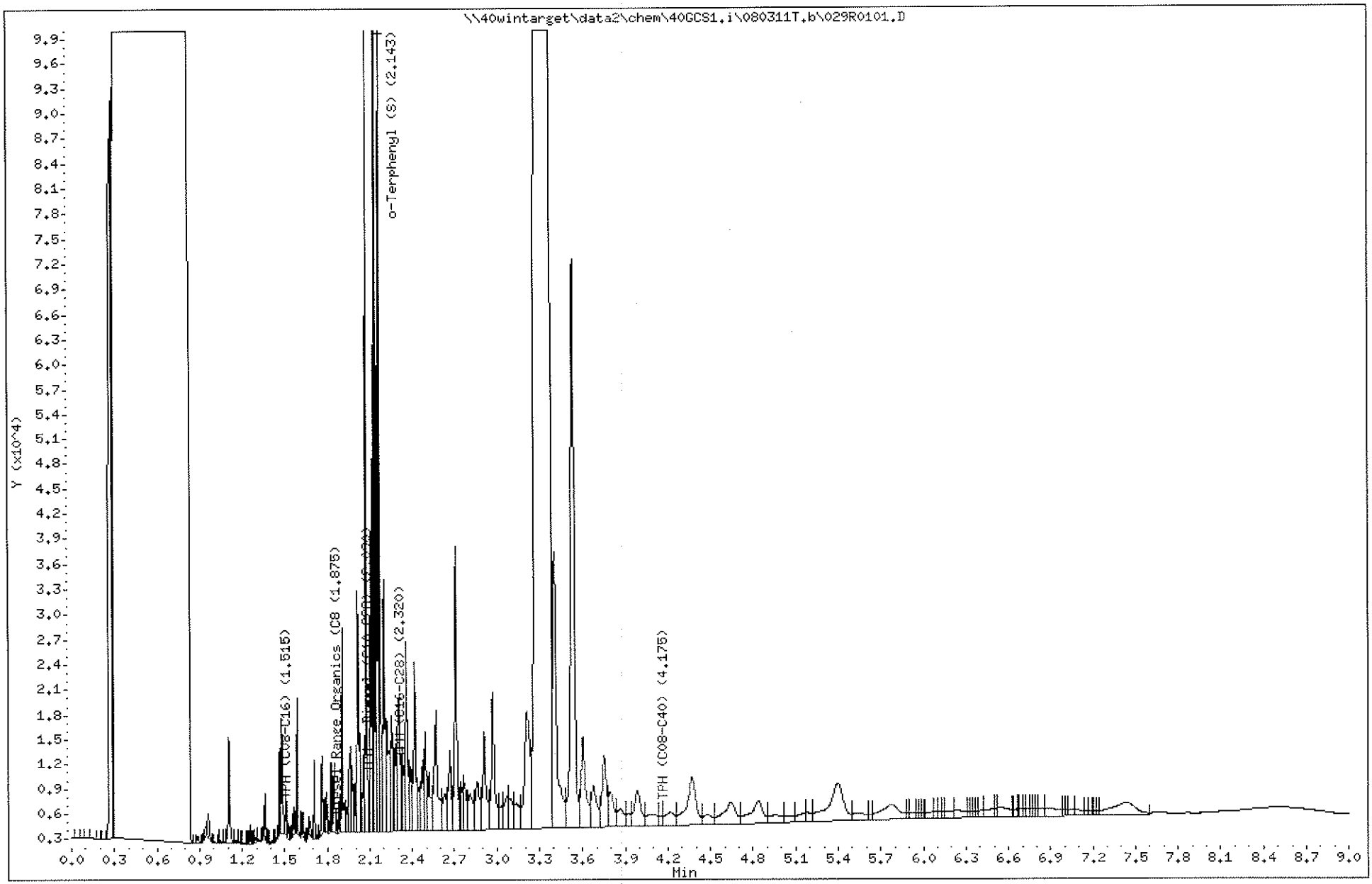
Date: 06/04/2012 10:38 AM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\029R0101.D
Date : 03-AUG-2011 13:31
Client ID: EWL T-06 WHOLE BODY
Sample Info: 4048243001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\029R0101.D
Lab Smp Id: 4048243001 Client Smp ID: EWL T-06 WHOLE BODY
Inj Date : 03-AUG-2011 13:31
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048243001
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:36 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.600	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.050-7.300			7658993	1946.90	143.15
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.700			523879	92.5175	6.80(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			618239	117.041	8.60
S	8 TPH - Diesel (C10-C28)	1.480-2.700			584797	108.350	7.96
$	15 o-Terphenyl (S)	2.143	2.140	0.003	154929	30.5974	2.24

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048243

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:25 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	2 Diesel Range Organics (C8-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	3 High End Organics (C8-C34)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	4 TPH (C08-C36)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	5 TPH (C08-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	6 TPH (C10-C12)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	7 TPH (C10-C20)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	8 TPH - Diesel (C10-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	9 TPH (C10-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	10 TPH (C12-C20)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	11 TPH (C12-C36)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	12 TPH (C16-C28)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	13 TPH (C16-C40)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603
S	14 TPH (C20-C34)	357190	542086	1402797	1794982	4009201	7907189	LINR	-43.63613	0.00026		0.99603

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:25 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
$ 15 o-Terphenyl (S)	0.00025	0.00022	0.00018	0.00023	0.00017	0.00014	AVRG		0.00020		20.84467	<-

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

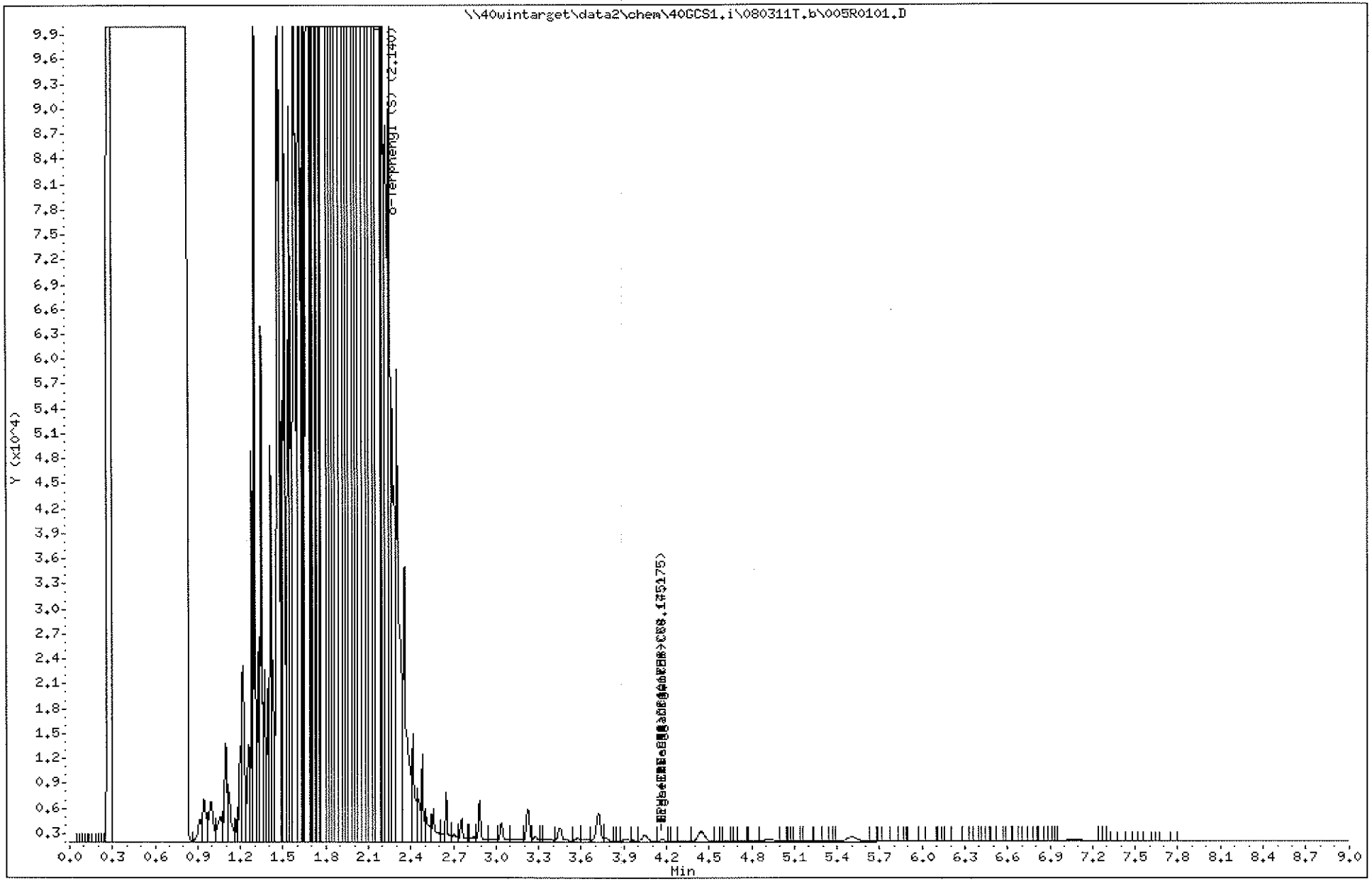
Start Cal Date : 03-AUG-2011 08:35
End Cal Date : 03-AUG-2011 09:33
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Last Edit : 09-May-2012 11:25 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D
Date : 03-AUG-2011 08:35
Client ID: 2000 2860-31-01
Sample Info: 2000 2860-31-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\005R0101.D
Lab Smp Id: 2000 2860-31-01 Client Smp ID: 2000 2860-31-01
Inj Date : 03-AUG-2011 08:35
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-31-01
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:35 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			7907189	2000.00	2011.40(TA)
S	11 TPH (C12-C36)	1.050-7.300			7907189	2000.00	2011.40(A)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			7907189	2000.00	2011.40(TA)
S	3 High End Organics (C8-C34)	1.050-7.300			7907189	2000.00	2011.40(A)
S	4 TPH (C08-C36)	1.050-7.300			7907189	2000.00	2011.40(A)
S	5 TPH (C08-C40)	1.050-7.300			7907189	2000.00	2011.40(A)
S	6 TPH (C10-C12)	1.050-7.300			7907189	2000.00	2011.40(A)
S	7 TPH (C10-C20)	1.050-7.300			7907189	2000.00	2011.40(A)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			7907189	2000.00	2011.40(TA)
S	9 TPH (C10-C40)	1.050-7.300			7907189	2000.00	2011.40(A)
S	10 TPH (C12-C20)	1.050-7.300			7907189	2000.00	2011.40(A)
S	12 TPH (C16-C28)	1.050-1.980			7907189	2000.00	2011.40(TA)
S	13 TPH (C16-C40)	1.050-7.300			7907189	2000.00	2011.40(A)
S	14 TPH (C20-C34)	1.050-7.300			7907189	2000.00	2011.40(A)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	360822	50.0000	71.25

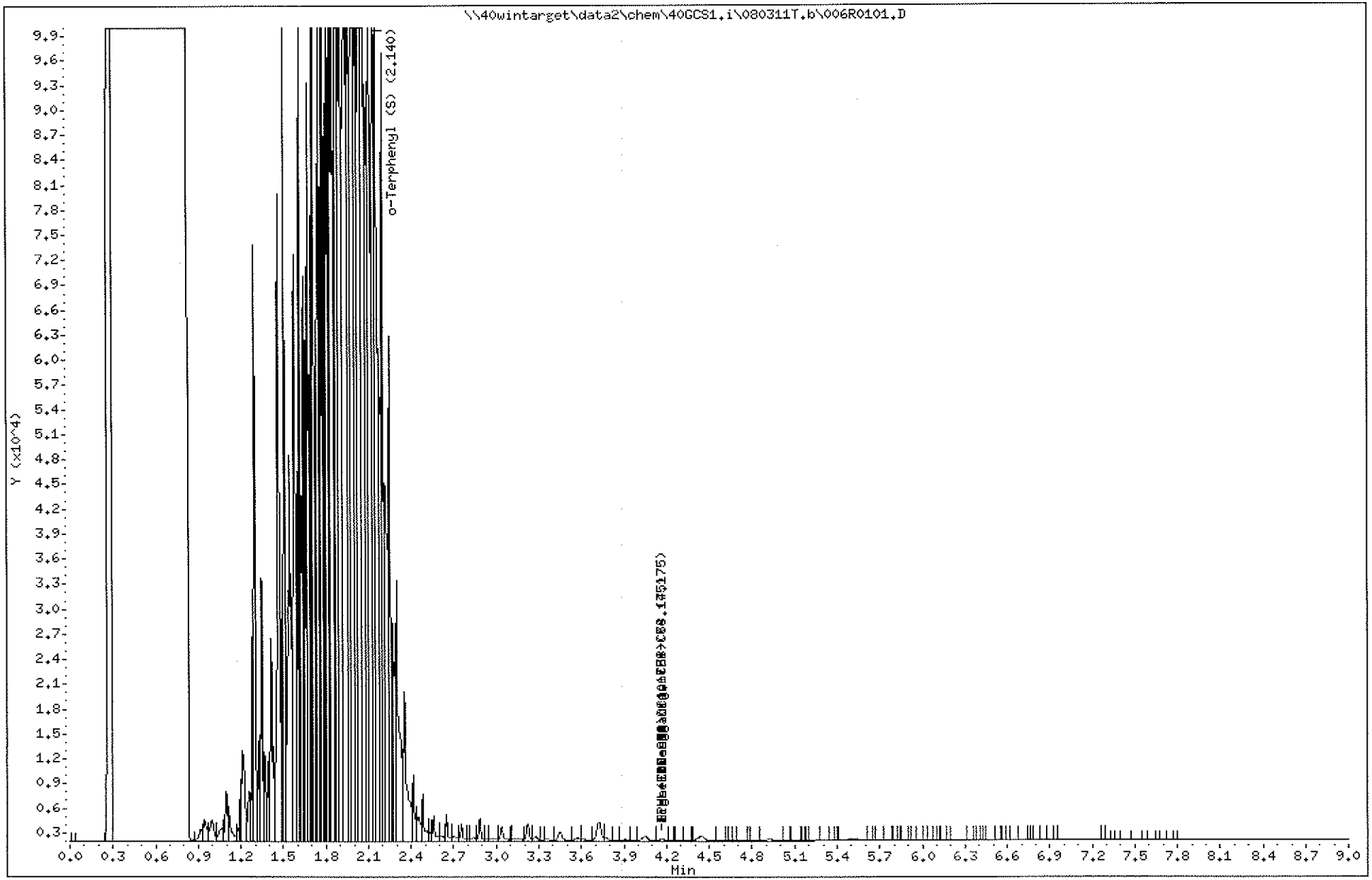
QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Date : 03-AUG-2011 08:45
Client ID: 1000 2860-31-02
Sample Info: 1000 2860-31-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\006R0101.D
Lab Smp Id: 1000 2860-31-02 Client Smp ID: 1000 2860-31-02
Inj Date : 03-AUG-2011 08:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-31-02
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:45 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

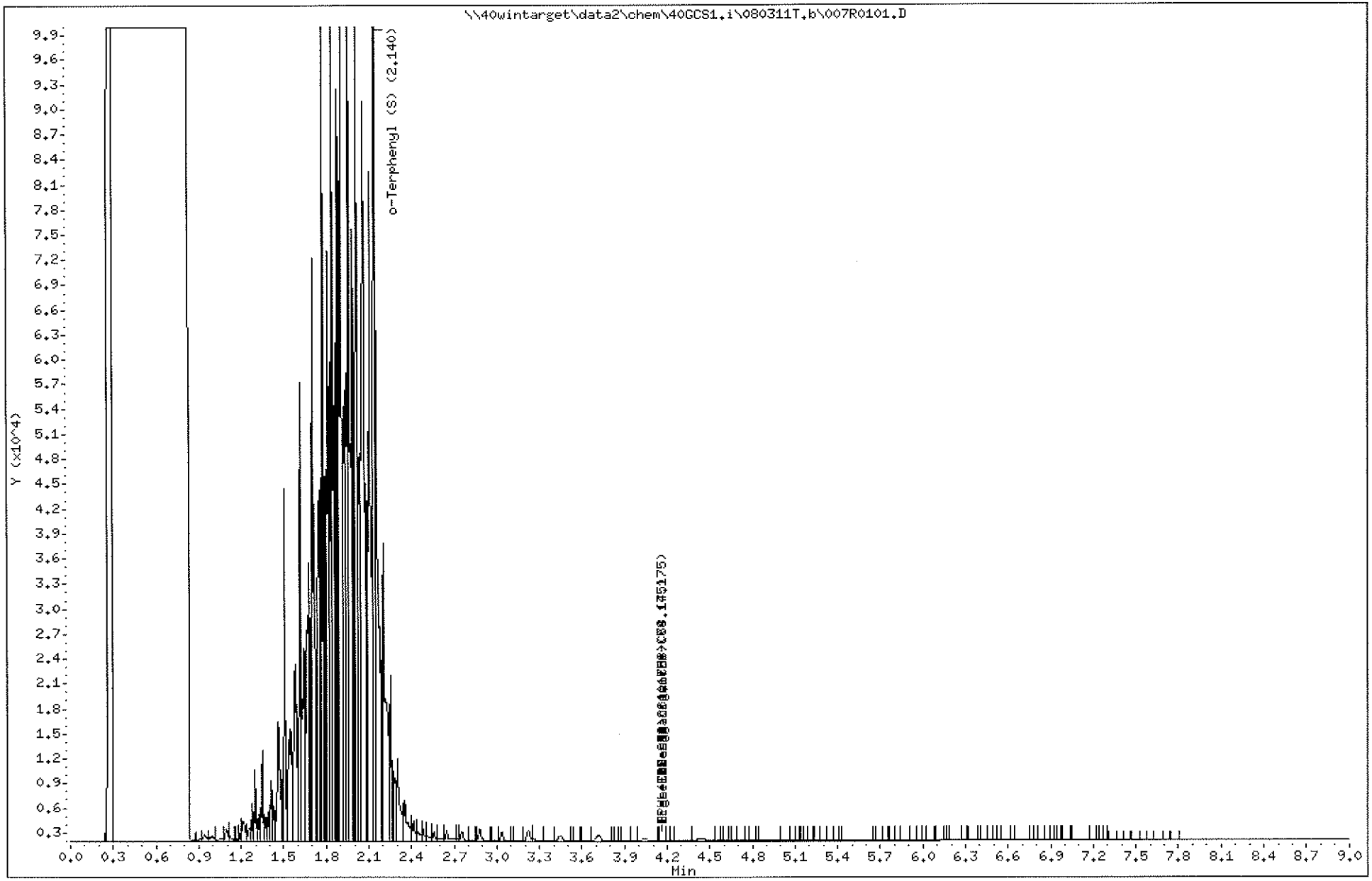
						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			4009201	1000.00	998.33(T)
S	11 TPH (C12-C36)	1.050-7.300			4009201	1000.00	998.33
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			4009201	1000.00	998.33(T)
S	3 High End Organics (C8-C34)	1.050-7.300			4009201	1000.00	998.33
S	4 TPH (C08-C36)	1.050-7.300			4009201	1000.00	998.33
S	5 TPH (C08-C40)	1.050-7.300			4009201	1000.00	998.33
S	6 TPH (C10-C12)	1.050-7.300			4009201	1000.00	998.33
S	7 TPH (C10-C20)	1.050-7.300			4009201	1000.00	998.33
S	8 TPH - Diesel (C10-C28)	1.480-2.700			4009201	1000.00	998.33(T)
S	9 TPH (C10-C40)	1.050-7.300			4009201	1000.00	998.33
S	10 TPH (C12-C20)	1.050-7.300			4009201	1000.00	998.33
S	12 TPH (C16-C28)	1.050-1.980			4009201	1000.00	998.33(T)
S	13 TPH (C16-C40)	1.050-7.300			4009201	1000.00	998.33
S	14 TPH (C20-C34)	1.050-7.300			4009201	1000.00	998.33
$	15 o-Terphenyl (S)	2.140	2.140	0.000	293346	50.0000	57.93

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Date : 03-AUG-2011 08:57
Client ID: 500 2860-31-14
Sample Info: 500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\007R0101.D
Lab Smp Id: 500 2860-31-14 Client Smp ID: 500 2860-31-14
Inj Date : 03-AUG-2011 08:57
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-31-14
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 08:57 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-1.980			1794982	500.000	422.87(T)
S 11	TPH (C12-C36)	1.050-7.300			1794982	500.000	422.87
S 2	Diesel Range Organics (C8-C28)	1.050-2.700			1794982	500.000	422.87(T)
S 3	High End Organics (C8-C34)	1.050-7.300			1794982	500.000	422.87
S 4	TPH (C08-C36)	1.050-7.300			1794982	500.000	422.87
S 5	TPH (C08-C40)	1.050-7.300			1794982	500.000	422.87
S 6	TPH (C10-C12)	1.050-7.300			1794982	500.000	422.87
S 7	TPH (C10-C20)	1.050-7.300			1794982	500.000	422.87
S 8	TPH - Diesel (C10-C28)	1.480-2.700			1794982	500.000	422.87(T)
S 9	TPH (C10-C40)	1.050-7.300			1794982	500.000	422.87
S 10	TPH (C12-C20)	1.050-7.300			1794982	500.000	422.87
S 12	TPH (C16-C28)	1.050-1.980			1794982	500.000	422.87(T)
S 13	TPH (C16-C40)	1.050-7.300			1794982	500.000	422.87
S 14	TPH (C20-C34)	1.050-7.300			1794982	500.000	422.87
$ 15	o-Terphenyl (S)	2.140	2.140	0.000	217195	50.0000	42.89

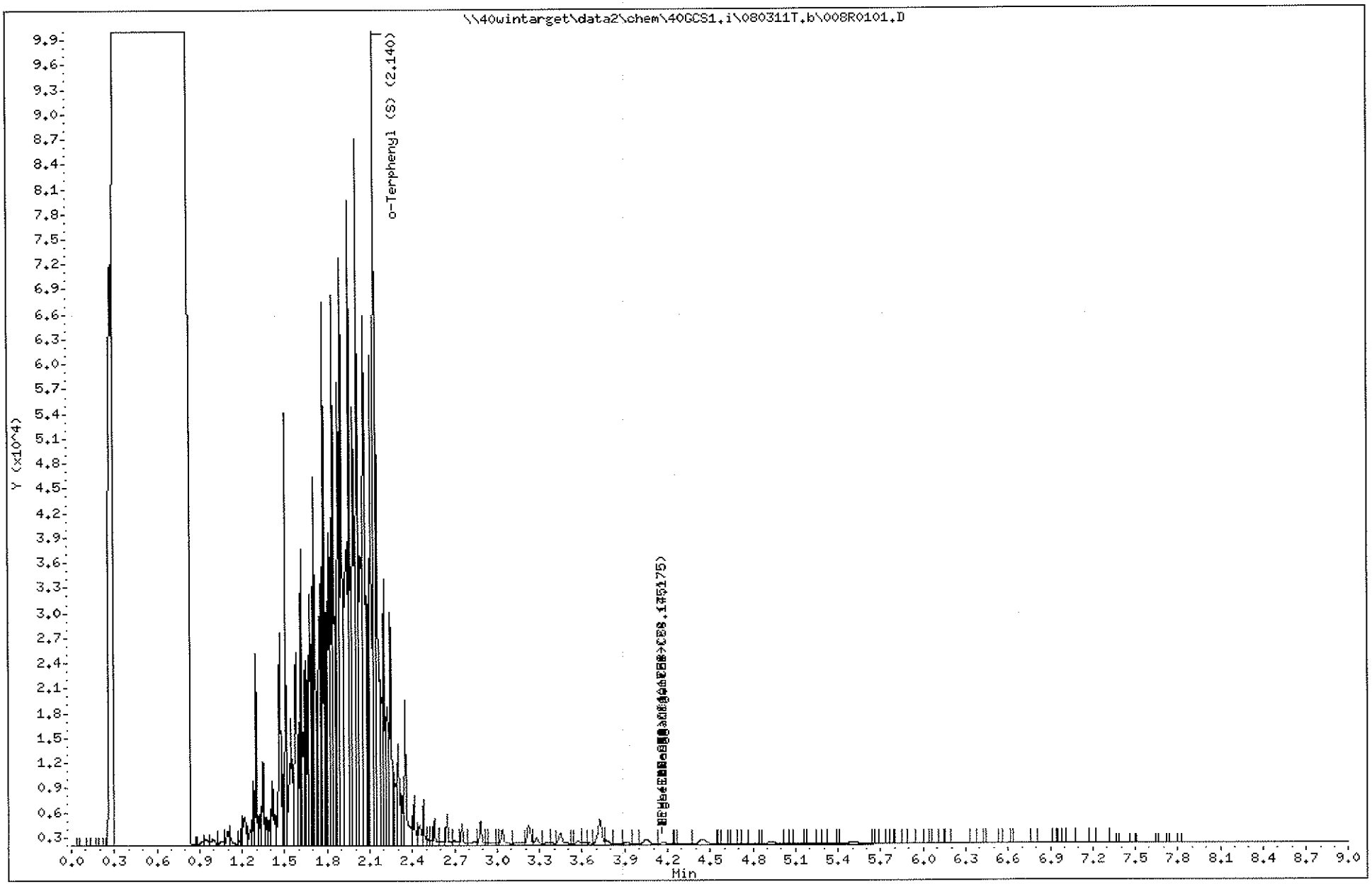
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Date : 03-AUG-2011 09:09
Client ID: 250 2860-30-13
Sample Info: 250 2860-30-13
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\008R0101.D
Lab Smp Id: 250 2860-30-13 Client Smp ID: 250 2860-30-13
Inj Date : 03-AUG-2011 09:09
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-30-13
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:09 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

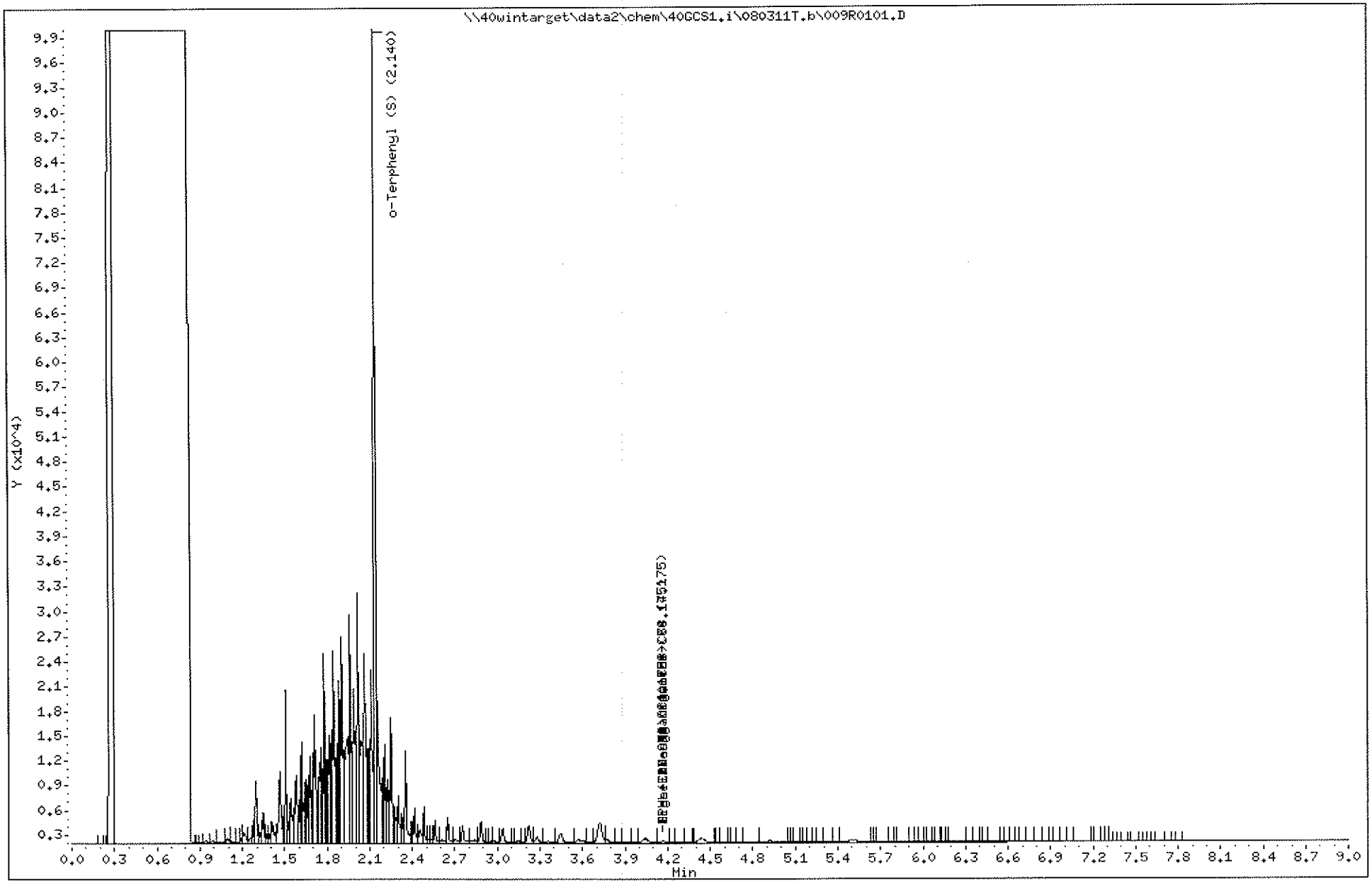
						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			1402797	250.000	320.94(T)
S	11 TPH (C12-C36)	1.050-7.300			1402797	250.000	320.94
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			1402797	250.000	320.94(T)
S	3 High End Organics (C8-C34)	1.050-7.300			1402797	250.000	320.94
S	4 TPH (C08-C36)	1.050-7.300			1402797	250.000	320.94
S	5 TPH (C08-C40)	1.050-7.300			1402797	250.000	320.94
S	6 TPH (C10-C12)	1.050-7.300			1402797	250.000	320.94
S	7 TPH (C10-C20)	1.050-7.300			1402797	250.000	320.94
S	8 TPH - Diesel (C10-C28)	1.480-2.700			1402797	250.000	320.94(T)
S	9 TPH (C10-C40)	1.050-7.300			1402797	250.000	320.94
S	10 TPH (C12-C20)	1.050-7.300			1402797	250.000	320.94
S	12 TPH (C16-C28)	1.050-1.980			1402797	250.000	320.94(T)
S	13 TPH (C16-C40)	1.050-7.300			1402797	250.000	320.94
S	14 TPH (C20-C34)	1.050-7.300			1402797	250.000	320.94
$	15 o-Terphenyl (S)	2.140	2.140	0.000	279515	50.0000	55.20

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Date : 03-AUG-2011 09:21
Client ID: 100 2860-30-14
Sample Info: 100 2860-30-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\009R0101.D
Lab Smp Id: 100 2860-30-14 Client Smp ID: 100 2860-30-14
Inj Date : 03-AUG-2011 09:21
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-30-14
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:21 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			542086	100.000	97.24(Ta)
S	11 TPH (C12-C36)	1.050-7.300			542086	100.000	97.24(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			542086	100.000	97.24(Ta)
S	3 High End Organics (C8-C34)	1.050-7.300			542086	100.000	97.24(a)
S	4 TPH (C08-C36)	1.050-7.300			542086	100.000	97.24(a)
S	5 TPH (C08-C40)	1.050-7.300			542086	100.000	97.24(a)
S	6 TPH (C10-C12)	1.050-7.300			542086	100.000	97.24(a)
S	7 TPH (C10-C20)	1.050-7.300			542086	100.000	97.24(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			542086	100.000	97.24(T)
S	9 TPH (C10-C40)	1.050-7.300			542086	100.000	97.24(a)
S	10 TPH (C12-C20)	1.050-7.300			542086	100.000	97.24(a)
S	12 TPH (C16-C28)	1.050-1.980			542086	100.000	97.24(Ta)
S	13 TPH (C16-C40)	1.050-7.300			542086	100.000	97.24(a)
S	14 TPH (C20-C34)	1.050-7.300			542086	100.000	97.24(a)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	225457	50.0000	44.52

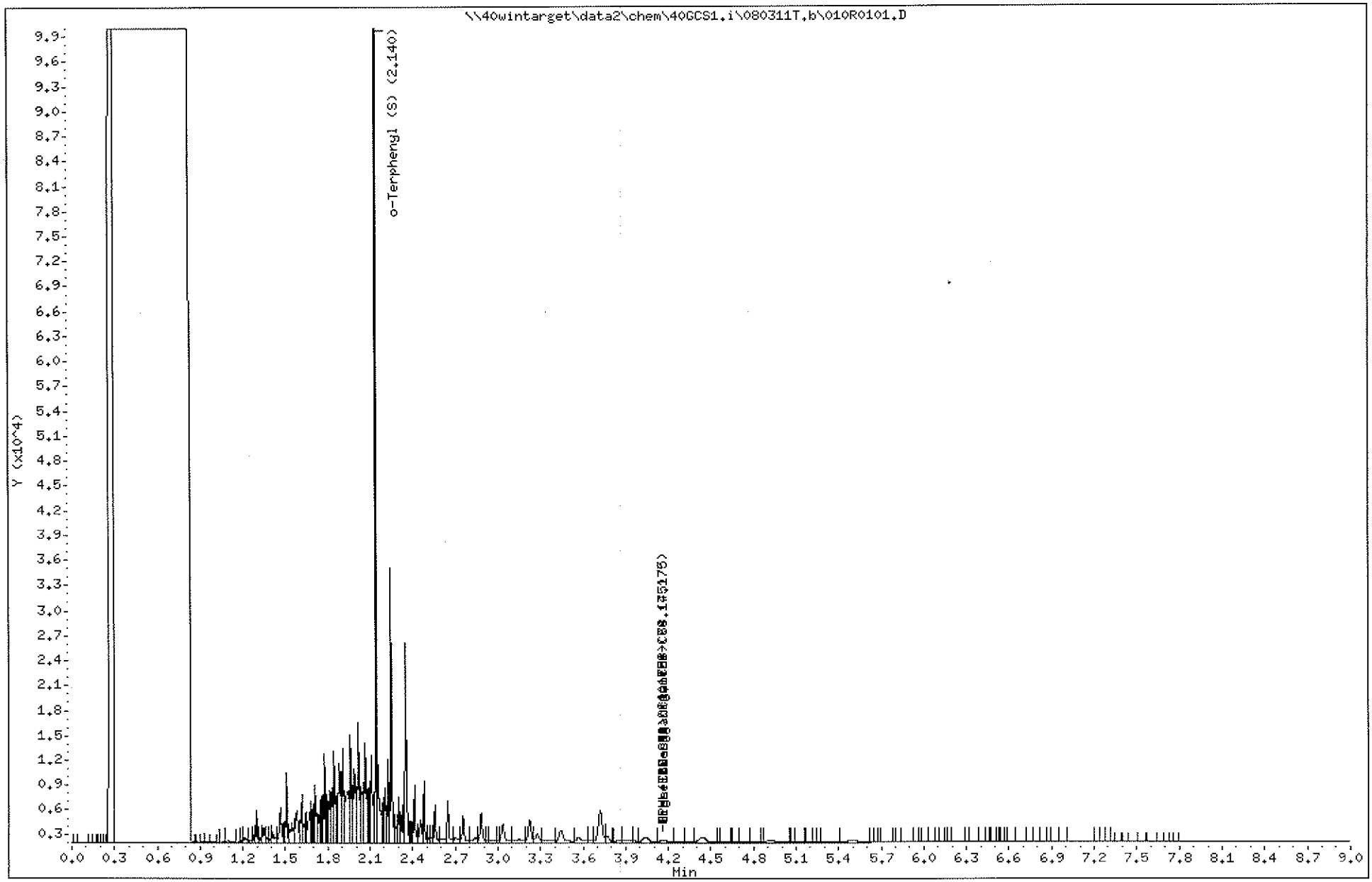
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Date : 03-AUG-2011 09:33
Client ID: 50 2860-30-15
Sample Info: 50 2860-30-15
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\010R0101.D
Lab Smp Id: 50 2860-30-15 Client Smp ID: 50 2860-30-15
Inj Date : 03-AUG-2011 09:33
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-30-15
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-1.980			357190	50.0000	49.19(Ta)
S	11 TPH (C12-C36)	1.050-7.300			357190	50.0000	49.19(a)
S	2 Diesel Range Organics (C8-C28)	1.050-2.700			357190	50.0000	49.19(Ta)
S	3 High End Organics (C8-C34)	1.050-7.300			357190	50.0000	49.19(a)
S	4 TPH (C08-C36)	1.050-7.300			357190	50.0000	49.19(a)
S	5 TPH (C08-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	6 TPH (C10-C12)	1.050-7.300			357190	50.0000	49.19(a)
S	7 TPH (C10-C20)	1.050-7.300			357190	50.0000	49.19(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.700			357190	50.0000	49.19(T)
S	9 TPH (C10-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	10 TPH (C12-C20)	1.050-7.300			357190	50.0000	49.19(a)
S	12 TPH (C16-C28)	1.050-1.980			357190	50.0000	49.19(Ta)
S	13 TPH (C16-C40)	1.050-7.300			357190	50.0000	49.19(a)
S	14 TPH (C20-C34)	1.050-7.300			357190	50.0000	49.19(a)
$	15 o-Terphenyl (S)	2.140	2.140	0.000	204017	50.0000	40.29

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

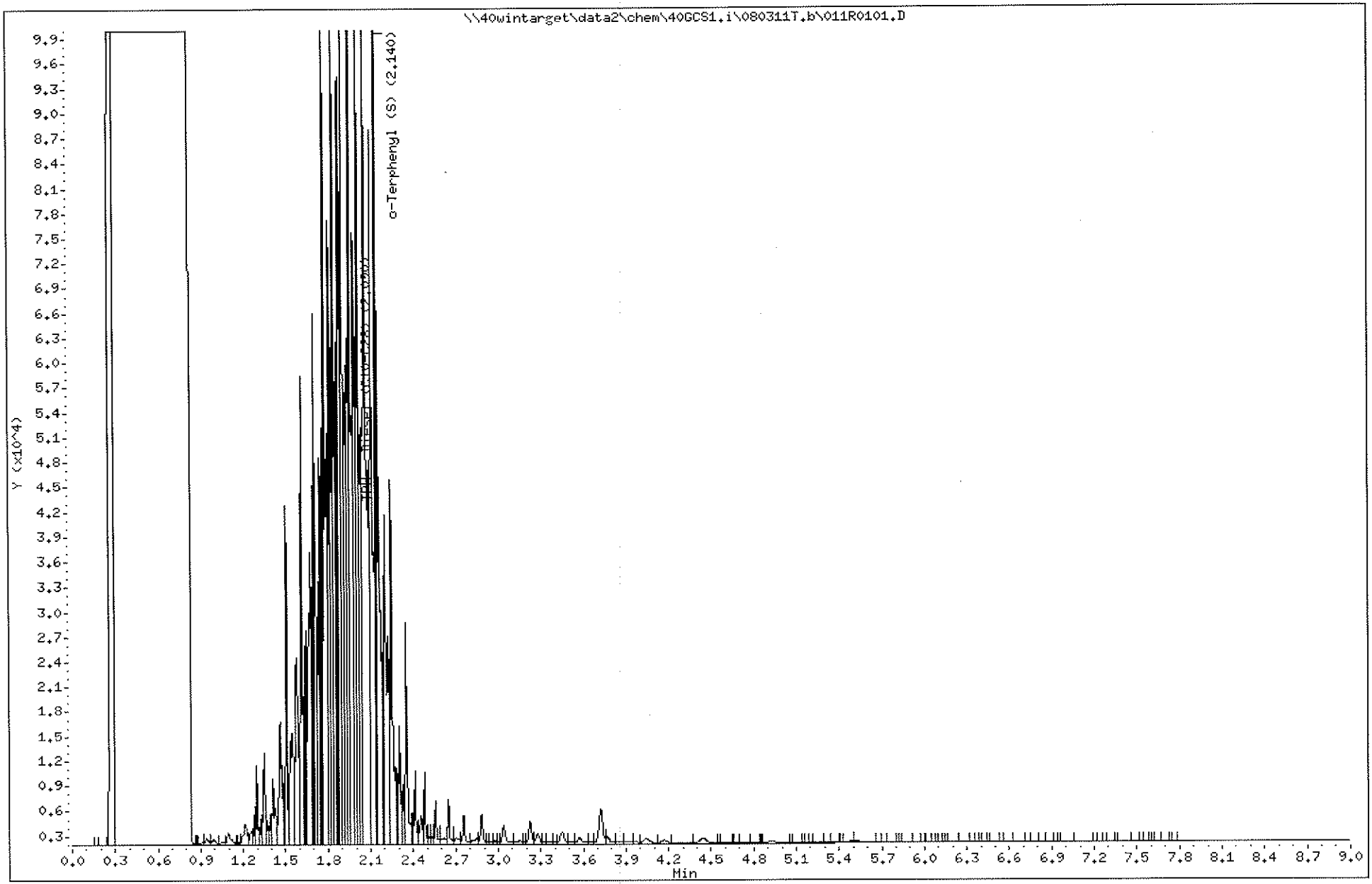
Instrument ID: 40GCS1.i Injection Date: 03-AUG-2011 09:45
Lab File ID: 011R0101.D Init. Cal. Date(s): 03-AUG-2011 03-AUG-2011
Analysis Type: WATER Init. Cal. Times: 08:35 09:33
Lab Sample ID: IC500 2860-30-16 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	447	0.00026	0.000	-10.57179	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.97091	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\011R0101.D
Date : 03-AUG-2011 09:45
Client ID: IC500 2860-30-16
Sample Info: IC500 2860-30-16
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\011R0101.D
Lab Smp Id: IC500 2860-30-16 Client Smp ID: IC500 2860-30-16
Inj Date : 03-AUG-2011 09:45
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-30-16
Misc Info : 6266
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1888366	500.000	447.14
$ 15 o-Terphenyl (S)	2.140	2.140	0.000	228144	50.0000	45.05

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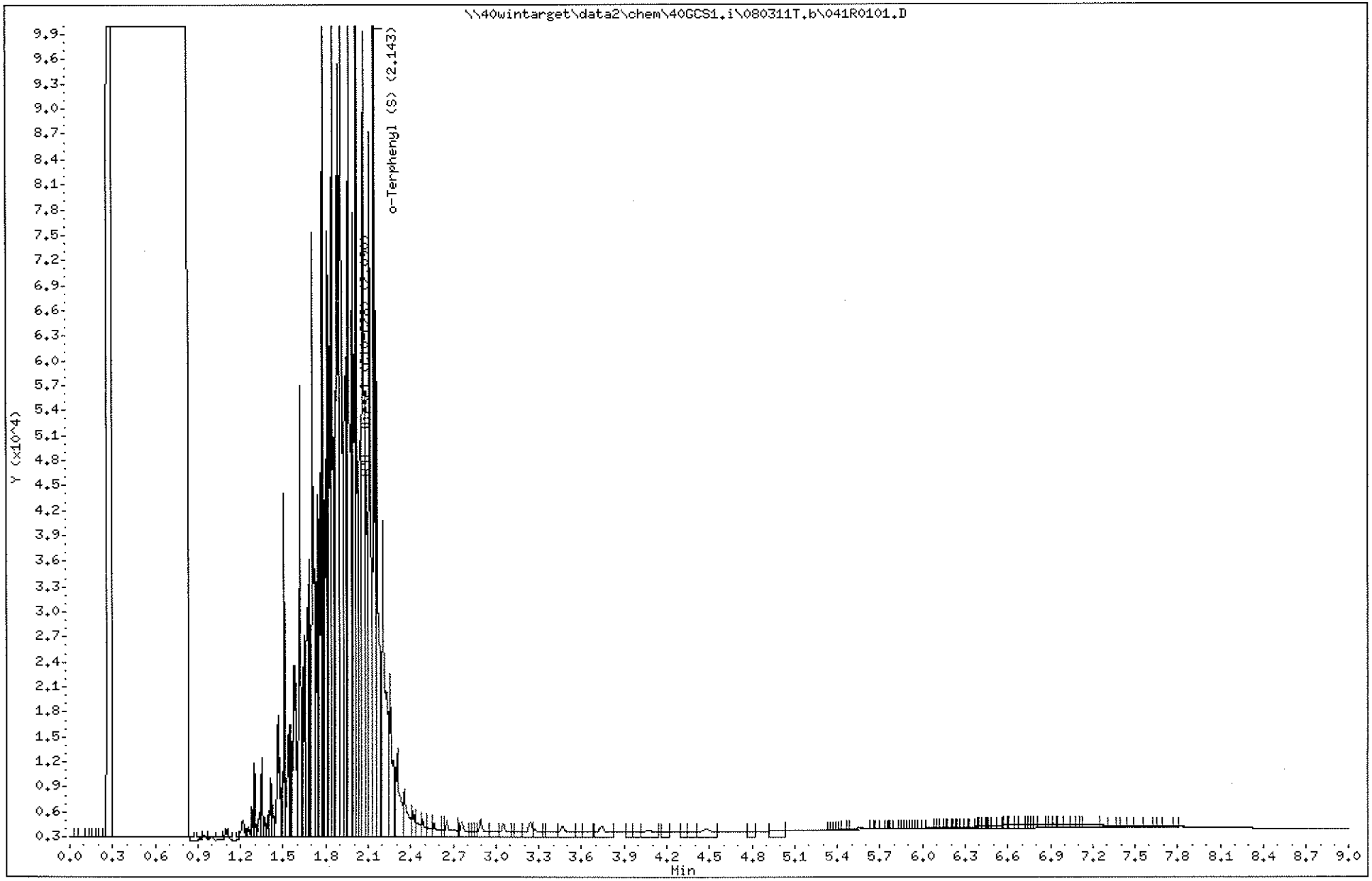
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 03-AUG-2011 16:42
Lab File ID: 041R0101.D Init. Cal. Date(s): 03-AUG-2011 03-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 08:35 09:33
Lab Sample ID: CC500 2860-31-14 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	469	0.00025	0.000	-6.17478	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00020	0.00022	0.00022	0.000	10.20336	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\041R0101.D
Date : 03-AUG-2011 16:42
Client ID: CC500 2860-31-14
Sample Info: CC500 2860-31-14
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\041R0101.D
Lab Smp Id: CC500 2860-31-14 Client Smp ID: CC500 2860-31-14
Inj Date : 03-AUG-2011 16:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : CC500 2860-31-14
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 09-May-2012 11:25 40GCS1.i Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 41 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1972958	500.000	469.12
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	229733	50.0000	45.37(M)

QC Flag Legend

M - Compound response manually integrated.

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048243

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048243

QB Batch: OEXT/12023 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048243001

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH (C08-C16)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH (C08-C40)	135	mg/kg	13.3	6.7	08/03/11	3q
	TPH (C16-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	
	TPH - Diesel (C10-C28)	<6.7	mg/kg	13.3	6.7	08/03/11	

Type	Sample	Matrix
BLANK	482788	Tissue

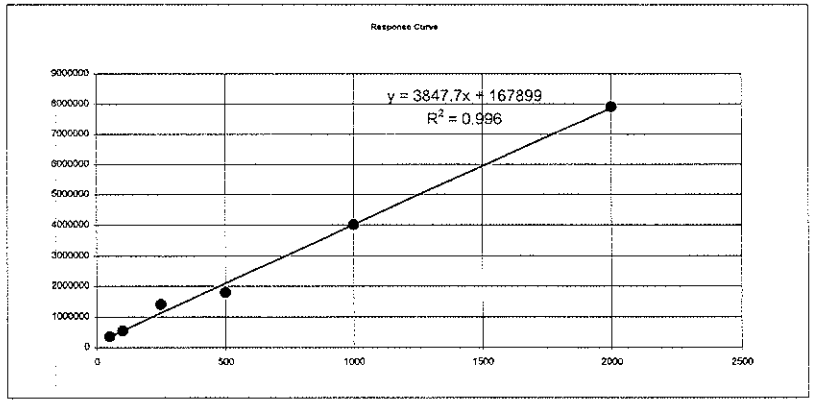
REPORT OF LABORATORY ANALYSIS

SampleID: 482788 File: 31R0101.D TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	88740	
2.017	80868	
2.077	45255	
2.710	113262	

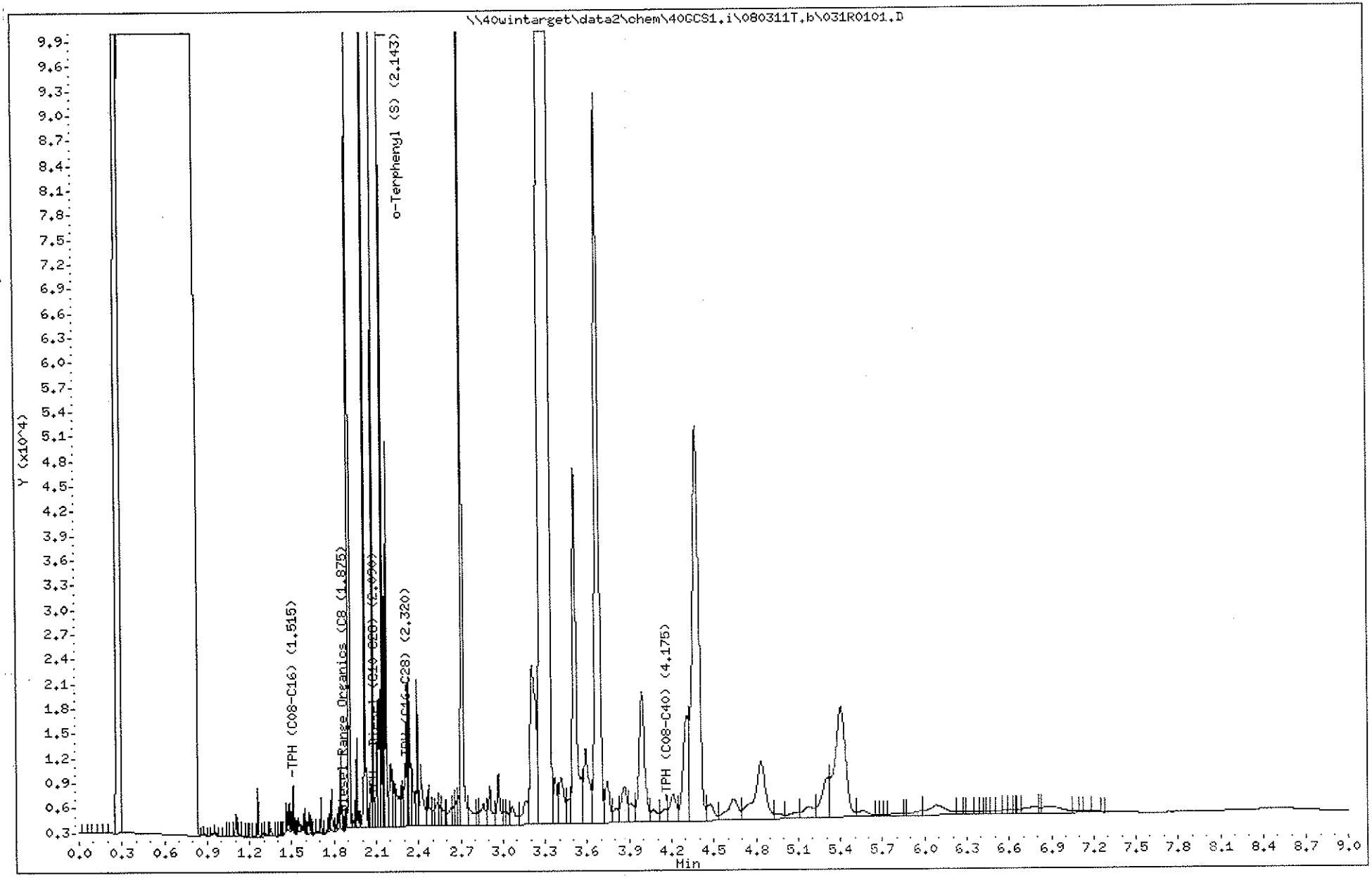
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	129097	88740	-33.1475
Diesel Range Organics (	442943	214863	15.64075
TPH - Diesel (C10-C28)	434755	214863	13.51273
TPH (C16-C28)	321252	126123	7.076949
TPH (C08-C40)	4400136	328125	1014.66

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Date : 03-AUG-2011 14:42
Client ID: MB
Sample Info: 482788X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Lab Smp Id: 482788 Client Smp ID: MB
Inj Date : 03-AUG-2011 14:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482788X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 31 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			4400136	1099.94	146.65
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.700			321252	39.8557	5.31(a)
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			442943	71.4826	9.53(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.700			434754	69.3543	9.24
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	83667	16.5236	1.10(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\031R0101.D
Lab Smp Id: 482788 Client Smp ID: MB
Inj Date : 03-AUG-2011 14:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482788X2
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 31 QC Sample: BLANK
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	29	20	0.690	0.00		
0.100	24	21	0.864	0.00		
0.167	12	15	1.250	0.00		
0.283	230423	108751	0.472	0.04		
0.317	557764994	94462710	0.169	98.96		
0.887	190	224	1.179	0.00		
0.940	167	170	1.017	0.00		
0.960	236	250	1.058	0.00		
1.027	39	49	1.247	0.00		
1.515	129097	331584	2.568	0.02	S	1 TPH (C08-C16)
1.875	442943	825658	1.864	0.07	S	2 Diesel Range Organi
1.050	15	23	1.575			
1.070	49	73	1.478			
1.107	2008	2609	1.300			
1.133	122	223	1.835			
1.153	102	162	1.582			
1.177	93	135	1.458			
1.197	11	27	2.455			
1.210	22	55	2.511			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.227	141	216	1.534			
1.260	2722	5918	2.174			
1.290	221	406	1.834			
1.313	301	404	1.340			
1.337	54	188	3.481			
1.353	581	792	1.364			
1.407	88	175	1.995			
1.427	90	204	2.257			
1.460	1569	3385	2.157			
2.090	434755	810663	1.865	0.07	S	8 TPH - Diesel (C10-C
1.483	2362	3364	1.424			
1.500	681	2169	3.186			
1.513	3336	5518	1.654			
1.540	70	215	3.080			
1.553	1120	1141	1.019			
1.590	1110	2694	2.426			
1.613	1881	1293	0.687			
1.663	82	112	1.373			
1.673	372	563	1.515			
1.707	1760	4348	2.470			
1.750	101	225	2.223			
1.760	939	2129	2.266			
1.780	3373	4925	1.460			
1.813	359	761	2.122			
1.830	923	2014	2.181			
1.847	4702	9243	1.966			
1.887	1175	2583	2.198			
1.907	88592	257725	2.909			
1.937	566	870	1.537			
1.953	1957	3843	1.964			
1.963	5449	10854	1.992			
2.017	80644	147162	1.825			
2.047	724	1391	1.922			
2.063	3604	5163	1.433			
2.077	45167	122765	2.718			
2.110	10599	15070	1.422			
2.120	13138	15571	1.185			
2.157	11182	27927	2.497			
2.167	29095	25617	0.880			
2.197	9859	7377	0.748			
2.217	6856	6923	1.010			
2.243	7435	4485	0.603			
2.273	1329	3514	2.643			
2.287	4169	5405	1.296			
2.310	9528	12553	1.317			
2.327	10546	18004	1.707			
2.340	7788	15180	1.949			
2.353	8258	7547	0.914			
2.390	10616	17701	1.667			
2.417	11406	7416	0.650			
2.470	6233	4980	0.799			
2.500	2217	1929	0.870			
2.533	3718	2828	0.761			
2.547	2303	2506	1.088			
2.563	4109	2181	0.531			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.600	933	1566	1.679			
2.630	4124	2229	0.540			
2.657	2825	2579	0.913			
2.673	2834	2957	1.044			
2.687	2608	3548	1.360			
2.143	83668	232005	2.773	0.01	$	15 o-Terphenyl (S)
2.320	321252	508771	1.584	0.05	S	12 TPH (C16-C28)
4.175	4400136	2432976	0.553	0.78	S	5 TPH (C08-C40)
2.710	112942	141392	1.252			
2.760	5881	2117	0.360			
2.810	595	1491	2.507			
2.823	1531	1575	1.029			
2.860	6555	2661	0.406			
2.910	8395	4678	0.557			
2.970	9327	6121	0.656			
3.013	2122	1576	0.743			
3.030	1992	1511	0.759			
3.070	5994	2306	0.385			
3.167	7593	2882	0.380			
3.210	52555	19153	0.364			
3.337	2927775	1124827	0.384			
3.373	9023	5560	0.616			
3.417	13916	5620	0.404			
3.470	4437	2951	0.665			
3.513	85924	43080	0.501			
3.590	23501	8971	0.382			
3.680	177083	88476	0.500			
3.743	11648	5068	0.435			
3.803	4336	1714	0.395			
3.863	12455	4369	0.351			
3.913	5422	2271	0.419			
3.990	44796	15768	0.352			
4.073	4399	1451	0.330			
4.150	4790	1471	0.307			
4.210	10658	3292	0.309			
4.313	35435	12748	0.360			
4.380	156347	47737	0.305			
4.477	7054	1971	0.279			
4.643	13789	2563	0.186			
4.840	40217	7014	0.174			
4.967	2462	596	0.242			
5.083	3329	668	0.201			
5.183	7185	1293	0.180			
5.313	18966	4790	0.253			
5.407	70127	13290	0.190			
5.557	3756	725	0.193			
5.673	312	181	0.580			
5.697	300	196	0.653			
5.733	421	221	0.525			
5.807	1931	315	0.163			
5.863	200	254	1.269			
5.980	2712	572	0.211			
6.083	10617	1160	0.109			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.257	1098	373	0.340		
6.280	506	364	0.719		
6.303	1129	366	0.324		
6.370	800	340	0.425		
6.397	662	336	0.508		
6.430	258	326	1.264		
6.443	583	326	0.560		
6.480	780	330	0.423		
6.550	1053	378	0.359		
6.580	801	418	0.522		
6.620	926	437	0.472		
6.630	521	445	0.854		
6.653	349	445	1.275		
6.680	750	490	0.654		
6.773	4998	706	0.141		
6.817	661	670	1.013		
6.897	7504	777	0.104		
7.057	709	275	0.388		
7.113	482	249	0.517		
7.133	801	252	0.315		
7.187	745	209	0.280		
7.257	272	160	0.589		
	562479919	97237191		100.000	

Total unknown % area = 99.00

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048243

QB Batch: OEXT/12034 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048243001

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.53	%			07/29/11	

Type	Sample	Matrix
BLANK	483066	Tissue

REPORT OF LABORATORY ANALYSIS

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JUN 0 4 2012

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048243

QB Batch: OEXT/12023
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	QC Limits RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	68	59	14	50-150	20	66.7	45.2	39.3	mg/kg	08/03/11	08/03/11		
TPH (C08-C16)	29	26		50-150	20	66.7	19.6J	17.6J	mg/kg	08/03/11	08/03/11	L0	L0
TPH (C08-C40)	274	262	4	50-150	20	66.7	182	175	mg/kg	08/03/11	08/03/11	1q	2q
TPH (C16-C28)	33	27		50-150	20	66.7	22.2	18.1J	mg/kg	08/03/11	08/03/11	L0	L0
TPH - Diesel (C10-C28)	64	56	14	50-150	20	66.7	42.8	37.4	mg/kg	08/03/11	08/03/11		

Type	Sample
LCS	482789
LCSD	482790

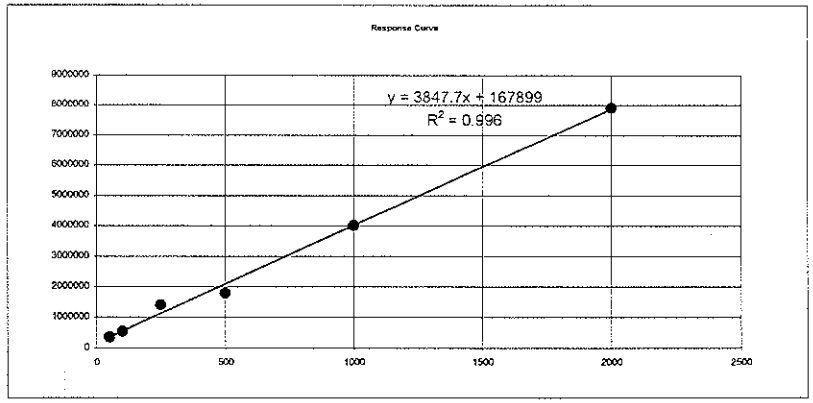
REPORT OF LABORATORY ANALYSIS

SampleID: 482789 File: 30R0101.D TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	92085	
2.017	98503	
2.077	59685	
2.713	76809	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	637306	92085	98.06416
Diesel Range Organics (	1287435	250273	225.9173
TPH - Diesel (C10-C28)	1242182	250273	214.1562
TPH (C16-C28)	754062	158188	111.2286
TPH (C08-C40)	4005649	327082	912.4056

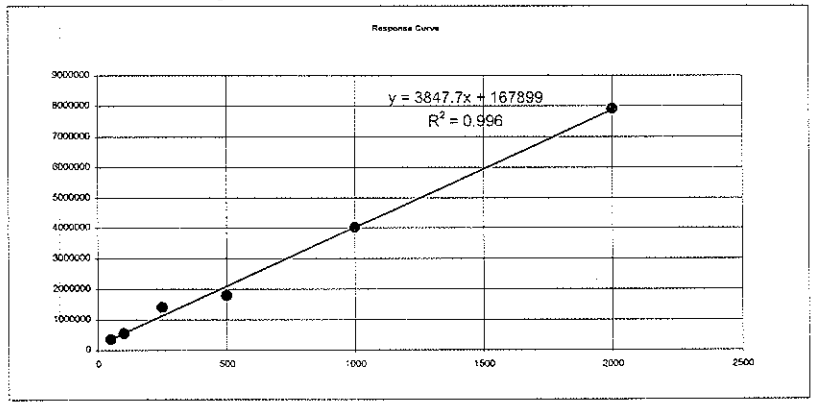
SampleID: 482790 File: 32R0101.D

TPH Re-Calculation After Subtracting

Analyst KHB

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.907	87750	
2.017	93204	
2.077	55921	
2.713	73046	

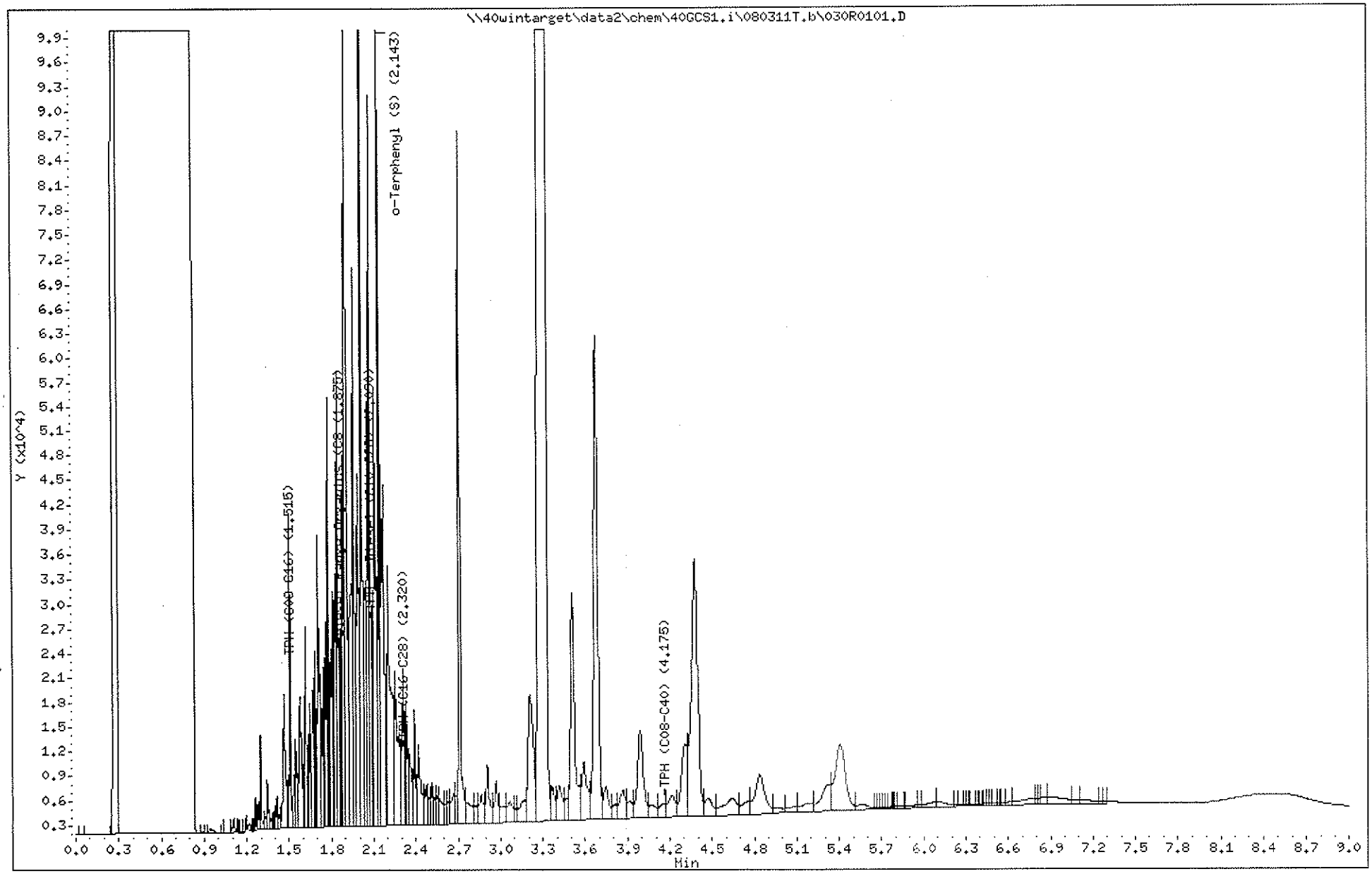
358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	594167	87750	87.97919
Diesel Range Organics (	1159991	236875	196.2773
TPH - Diesel (C10-C28)	1124286	236875	186.9977
TPH (C16-C28)	664642	149125	90.34424
TPH (C08-C40)	3839232	309921	873.6147

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Date : 03-AUG-2011 14:32
Client ID: MBLCS
Sample Info: 482789X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Lab Smp Id: 482789 Client Smp ID: MBLCS
Inj Date : 03-AUG-2011 14:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482789X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 30 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			4005649	997.413	199.48
S 1 TPH (C08-C16)	1.050-1.980			637305	121.996	24.39
S 12 TPH (C16-C28)	1.940-2.700			754062	152.341	30.46
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			1287434	290.962	58.19
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1242181	279.201	55.84(R)
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	79533	15.7072	1.04(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\030R0101.D
Lab Smp Id: 482789 Client Smp ID: MBLCS
Inj Date : 03-AUG-2011 14:32
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482789X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 30 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	11	10	0.926	0.00		
0.283	270294	144952	0.536	0.04		
0.313	556264609	94883731	0.171	98.56		
0.890	114	135	1.181	0.00		
0.947	1128	519	0.460	0.00		
1.515	637306	911851	1.431	0.11	S	1 TPH (C08-C16)
1.875	1287435	1566127	1.216	0.22	S	2 Diesel Range Organi
1.073	84	44	0.523			
1.110	1578	1642	1.040			
1.137	65	141	2.156			
1.157	64	100	1.558			
1.180	67	119	1.779			
1.200	113	221	1.957			
1.213	905	766	0.847			
1.263	2225	3897	1.752			
1.283	1743	3250	1.865			
1.300	7056	11369	1.611			
1.333	1381	1518	1.099			
1.347	4906	5940	1.211			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.370	908	1323	1.457			
1.387	249	516	2.074			
1.397	763	1153	1.511			
1.417	2913	3868	1.328			
1.430	1357	1767	1.303			
1.467	18876	16288	0.863			
2.090	1242182	1512205	1.217	0.22	S	8 TPH - Diesel (C10-C
1.493	3915	5923	1.513			
1.510	18335	38205	2.084			
1.537	4596	6372	1.386			
1.547	9908	10779	1.088			
1.577	21243	14797	0.697			
1.607	4443	10141	2.283			
1.620	15648	24516	1.567			
1.637	8589	9686	1.128			
1.650	8948	15157	1.694			
1.670	14134	16691	1.181			
1.683	12120	21549	1.778			
1.697	7230	14420	1.995			
1.707	34386	35511	1.033			
1.740	9233	14409	1.561			
1.750	14040	19439	1.385			
1.763	15567	25107	1.613			
1.780	28755	52194	1.815			
1.793	11666	20189	1.731			
1.803	15135	21836	1.443			
1.817	23516	28596	1.216			
1.833	18672	30238	1.619			
1.847	36157	55370	1.531			
1.867	12010	21384	1.781			
1.877	14429	27399	1.899			
1.887	33540	45013	1.342			
1.907	91907	176624	1.922			
1.940	54003	28369	0.525			
1.963	49930	68015	1.362			
1.990	48612	42819	0.881			
2.017	98317	132892	1.352			
2.043	27906	29143	1.044			
2.067	45240	54841	1.212			
2.077	59542	88949	1.494			
2.097	14836	24902	1.678			
2.113	66323	53431	0.806			
2.160	65461	43793	0.669			
2.197	18041	19693	1.092			
2.207	48098	31700	0.659			
2.257	35848	18766	0.523			
2.310	17820	18688	1.049			
2.327	10880	15161	1.393			
2.340	9325	12141	1.302			
2.357	11099	8574	0.773			
2.390	12822	13961	1.089			
2.417	16201	9784	0.604			
2.470	5338	4720	0.884			
2.487	5066	3474	0.686			
2.517	4563	5071	1.111			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.533	2468	3182	1.289				
2.550	3810	3432	0.901				
2.567	5920	3047	0.515				
2.600	2374	2386	1.005				
2.630	4048	2674	0.661				
2.667	7497	3665	0.489				
2.687	2673	3387	1.267				
2.143	79533	188794	2.374	0.01	$	15	o-Terphenyl (S)
2.320	754062	750660	0.995	0.13	S	12	TPH (C16-C28)
4.175	4005649	2807441	0.701	0.71	S	5	TPH (C08-C40)
2.713	76278	84282	1.105				
2.760	8172	2583	0.316				
2.827	2887	2110	0.731				
2.863	8010	3387	0.423				
2.910	11414	7069	0.619				
2.970	8712	4971	0.571				
3.013	5321	1958	0.368				
3.070	6383	2465	0.386				
3.103	2215	1593	0.719				
3.170	7476	2602	0.348				
3.210	39239	15497	0.395				
3.323	1948860	900538	0.462				
3.370	7995	4090	0.512				
3.417	10946	4338	0.396				
3.467	3961	2627	0.663				
3.510	59725	27697	0.464				
3.590	19027	6984	0.367				
3.680	116133	58834	0.507				
3.750	9858	3976	0.403				
3.810	4367	1734	0.397				
3.867	9754	3372	0.346				
3.917	5331	2044	0.383				
3.990	31911	10609	0.332				
4.073	4939	1547	0.313				
4.157	5431	1624	0.299				
4.217	9377	2570	0.274				
4.310	26190	8694	0.332				
4.380	102073	31189	0.306				
4.473	8033	2099	0.261				
4.647	13582	2005	0.148				
4.760	6242	1588	0.254				
4.837	23763	4758	0.200				
4.953	2985	682	0.228				
5.093	3001	642	0.214				
5.177	5702	981	0.172				
5.327	15003	3175	0.212				
5.410	41088	8032	0.195				
5.563	3455	608	0.176				
5.660	284	208	0.733				
5.687	247	209	0.848				
5.703	214	223	1.041				
5.717	219	220	1.007				
5.737	311	228	0.734				

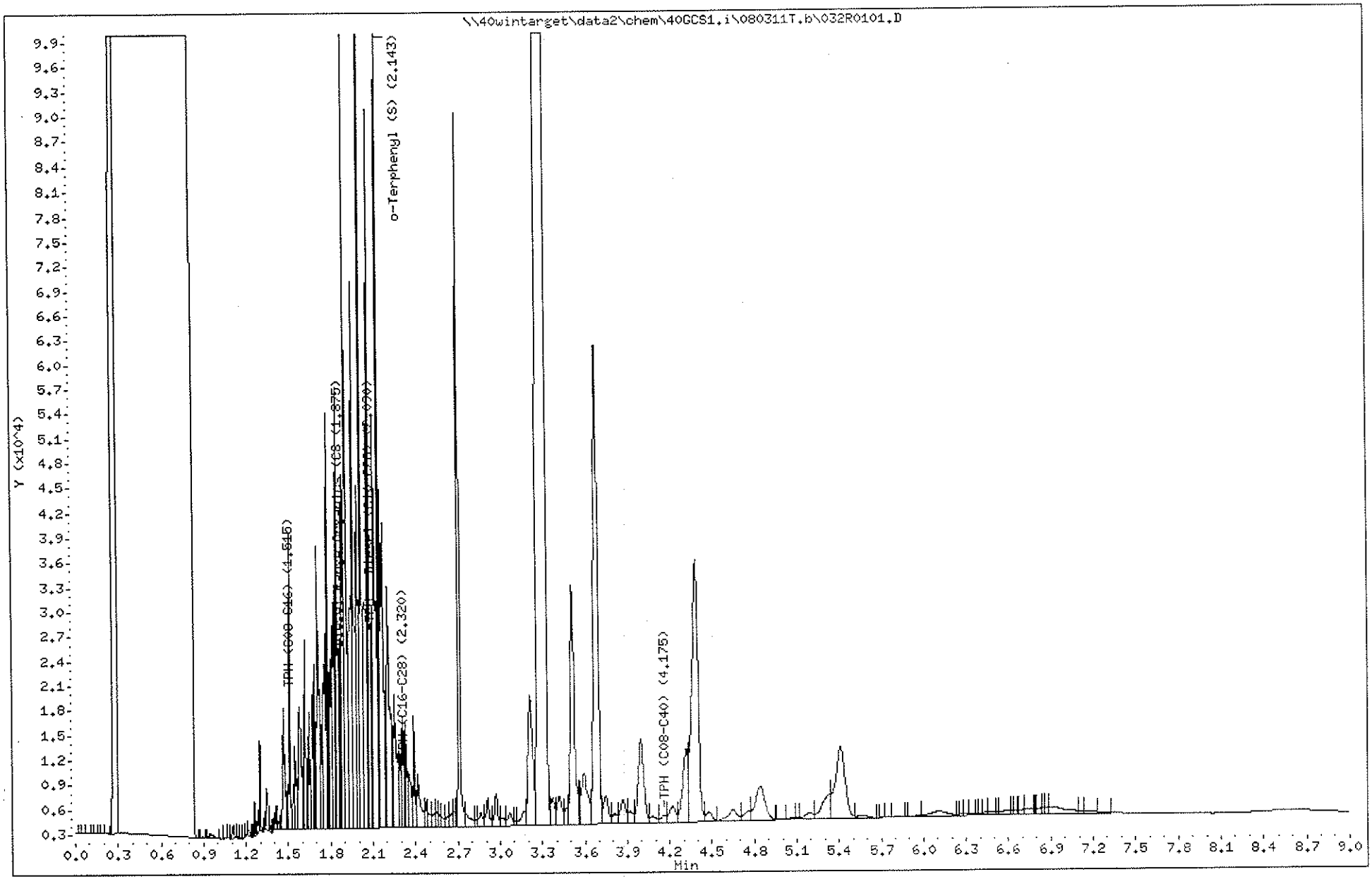
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.770	365	238	0.652		
5.783	194	255	1.311		
5.793	151	254	1.678		
5.803	205	259	1.265		
5.823	679	260	0.383		
5.867	173	217	1.254		
5.957	1451	339	0.234		
5.973	425	366	0.861		
6.090	3302	667	0.202		
6.100	3318	675	0.203		
6.243	421	236	0.560		
6.277	516	251	0.486		
6.293	296	251	0.849		
6.310	197	251	1.275		
6.323	145	246	1.695		
6.347	537	254	0.473		
6.377	291	250	0.858		
6.393	200	255	1.274		
6.407	308	264	0.859		
6.423	154	259	1.680		
6.440	261	265	1.016		
6.457	321	278	0.866		
6.483	387	282	0.729		
6.517	568	302	0.531		
6.530	305	311	1.018		
6.547	254	327	1.289		
6.577	622	366	0.589		
6.623	1097	427	0.389		
6.783	5745	764	0.133		
6.800	767	772	1.007		
6.820	949	800	0.843		
6.867	2742	904	0.330		
6.900	7780	920	0.118		
7.057	2172	609	0.280		
7.113	3533	535	0.151		
7.243	759	393	0.517		
7.277	512	370	0.722		
	560621339	98025582		100.000	

Total unknown % area = 98.60

Data File: \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Date : 03-AUG-2011 14:54
Client ID: MBLCSD
Sample Info: 482790X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Lab Smp Id: 482790 Client Smp ID: MBLCSD
Inj Date : 03-AUG-2011 14:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482790X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: ESTD
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 32 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.050-7.300			3839232	954.162	190.83
S 1 TPH (C08-C16)	1.050-1.980			594167	110.785	22.15
S 12 TPH (C16-C28)	1.940-2.700			664641	129.101	25.82
S 2 Diesel Range Organics (C8-C28)	1.050-2.700			1159990	257.840	51.56
S 8 TPH - Diesel (C10-C28)	1.480-2.700			1124286	248.560	49.71(R)
$ 15 o-Terphenyl (S)	2.143	2.140	0.003	75904	14.9905	0.99(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080311T.b\032R0101.D
Lab Smp Id: 482790 Client Smp ID: MBLCSD
Inj Date : 03-AUG-2011 14:54
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 482790X3
Misc Info : 6256
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080311T.b\TPH.m
Meth Date : 30-May-2012 14:25 kburns Quant Type: AREA%
Cal Date : 03-AUG-2011 09:33 Cal File: 010R0101.D
Als bottle: 32 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14
Processing Host: 40D-KBURNS

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.033	14	24	1.678	0.00		
0.043	25	31	1.250	0.00		
0.110	16	16	1.013	0.00		
0.133	10	15	1.500	0.00		
0.173	10	9	0.891	0.00		
0.200	34	9	0.263	0.00		
0.283	268820	130100	0.484	0.04		
0.317	547977154	93525145	0.171	98.63		
0.890	103	124	1.206	0.00		
0.947	979	501	0.512	0.00		
1.515	594167	843778	1.420	0.10	S	1 TPH (C08-C16)
1.875	1159991	1457539	1.257	0.21	S	2 Diesel Range Organi
1.053	19	28	1.481			
1.073	28	42	1.522			
1.110	1332	1445	1.085			
1.137	76	148	1.958			
1.157	59	92	1.554			
1.180	58	107	1.842			
1.200	65	144	2.202			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.217	723	641	0.886			
1.260	2140	3995	1.866			
1.283	1274	2583	2.027			
1.297	5849	10699	1.829			
1.333	509	809	1.588			
1.347	3938	5088	1.292			
1.370	423	796	1.882			
1.387	29	103	3.576			
1.397	198	523	2.643			
1.417	2039	2906	1.425			
1.430	587	985	1.678			
1.467	16358	14581	0.891			
2.090	1124286	1411824	1.256	0.20	S	8 TPH - Diesel (C10-C
1.493	2454	5017	2.044			
1.510	17335	35977	2.075			
1.537	3982	5508	1.383			
1.547	8641	10014	1.159			
1.577	19524	14167	0.726			
1.607	4222	9729	2.304			
1.620	14777	22910	1.550			
1.637	6174	9135	1.480			
1.647	9769	14031	1.436			
1.670	13412	16174	1.206			
1.683	11380	19998	1.757			
1.697	6695	12869	1.922			
1.707	32459	34304	1.057			
1.740	8612	13484	1.566			
1.750	27967	18125	0.648			
1.780	27695	50360	1.818			
1.793	10917	18937	1.735			
1.803	14267	20507	1.437			
1.817	22451	27401	1.220			
1.833	17791	29065	1.634			
1.847	34619	53376	1.542			
1.867	11308	20133	1.780			
1.877	13688	26181	1.913			
1.887	31882	42785	1.342			
1.907	87623	173253	1.977			
1.947	50866	28299	0.556			
1.963	47953	66324	1.383			
1.990	46743	41514	0.888			
2.017	93071	127964	1.375			
2.043	37084	27388	0.739			
2.067	32090	51076	1.592			
2.077	55819	87115	1.561			
2.097	13903	23272	1.674			
2.113	61630	50200	0.815			
2.160	59268	41034	0.692			
2.197	16029	17597	1.098			
2.207	34034	29378	0.863			
2.240	9361	11893	1.270			
2.253	20758	16068	0.774			
2.287	7783	8712	1.119			
2.310	12271	13253	1.080			
2.327	8689	12733	1.465			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.340	7150	9972	1.395				
2.357	7840	6488	0.828				
2.390	9754	13499	1.384				
2.417	11003	6360	0.578				
2.470	2728	2955	1.083				
2.487	3188	1891	0.593				
2.537	2801	1758	0.628				
2.550	1665	1864	1.120				
2.567	1423	1550	1.089				
2.583	2211	1258	0.569				
2.630	2133	1348	0.632				
2.657	2036	1624	0.798				
2.673	1756	1828	1.041				
2.690	1603	2169	1.353				
2.143	75905	182252	2.401	0.01	$	15	o-Terphenyl (S)
2.320	664642	708384	1.066	0.12	S	12	TPH (C16-C28)
4.175	3839232	2680738	0.698	0.69	S	5	TPH (C08-C40)
2.713	72668	86523	1.191				
2.760	4018	1411	0.351				
2.830	1011	856	0.847				
2.863	3410	1628	0.477				
2.910	5469	3302	0.604				
2.970	5570	3842	0.690				
3.013	2130	882	0.414				
3.070	3117	1502	0.482				
3.110	571	577	1.011				
3.170	4153	1698	0.409				
3.210	35566	15807	0.444				
3.327	2015326	903758	0.448				
3.370	5919	3213	0.543				
3.420	8171	3351	0.410				
3.470	2819	2004	0.711				
3.513	54391	29056	0.534				
3.560	3683	3753	1.019				
3.593	17552	6231	0.355				
3.683	119522	58007	0.485				
3.747	7934	3293	0.415				
3.813	2843	1145	0.403				
3.870	7609	2765	0.363				
3.920	3870	1425	0.368				
3.997	28798	10092	0.350				
4.077	2405	768	0.319				
4.160	2469	861	0.349				
4.220	6169	1954	0.317				
4.320	23229	8712	0.375				
4.387	102046	31813	0.312				
4.480	3457	1153	0.334				
4.650	6325	1269	0.201				
4.763	3441	1108	0.322				
4.843	19606	4067	0.207				
4.953	78	128	1.647				
4.970	421	128	0.304				
5.083	545	219	0.402				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.100	387	223	0.577		
5.190	3092	686	0.222		
5.333	11196	2890	0.258		
5.410	42383	8620	0.203		
5.570	1433	296	0.207		
5.710	29	16	0.552		
5.817	140	43	0.307		
5.983	491	173	0.352		
6.113	5071	583	0.115		
6.250	194	172	0.887		
6.280	341	202	0.592		
6.313	431	230	0.534		
6.367	783	262	0.334		
6.377	157	264	1.685		
6.407	491	284	0.579		
6.447	715	312	0.437		
6.503	1131	355	0.314		
6.527	509	378	0.742		
6.610	2193	499	0.228		
6.630	703	507	0.721		
6.657	725	531	0.732		
6.673	539	544	1.009		
6.703	1023	593	0.579		
6.770	2635	713	0.271		
6.780	577	726	1.259		
6.797	584	734	1.258		
6.833	1617	741	0.458		
6.853	896	757	0.845		
6.883	1394	792	0.568		
6.900	7382	816	0.111		
7.097	950	387	0.407		
7.140	1648	340	0.206		
7.233	1096	229	0.209		
	552162301	96518964		100.000	

Total unknown % area = 98.67

03 Aug 11 05:04 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080311.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	CC500 2860-31-14				TPHMACHB	1
1	5	2000 2860-31-01				TPHMACHB	1
1	6	1000 2860-31-02				TPHMACHB	1
1	7	500 2860-31-14				TPHMACHB	1
1	8	250 2860-30-13				TPHMACHB	1
1	9	100 2860-30-14				TPHMACHB	1
1	10	50 2860-30-15				TPHMACHB	1
1	11	IC500 2860-30-16-OC				TPHMACHB	1
1	12	482789 RSX3				TPHMACHB	1
1	13	482788 RSX2				TPHMACHB	1
1	14	482790 RSX3				TPHMACHB	1
1	15	4048240001				TPHMACHB	1
1	16	4048240002 RSX2				TPHMACHB	1
1	17	4048240003				TPHMACHB	1
1	18	4048240004				TPHMACHB	1
1	19	4048240005 RSX2				TPHMACHB	1
1	20	4048240006 RSX3				TPHMACHB	1
1	21	4048241001				TPHMACHB	1
1	22	4048241002				TPHMACHB	1
1	23	4048241003				TPHMACHB	1
1	24	4048241004				TPHMACHB	1
1	25	4048241005				TPHMACHB	1
1	26	4048241006 RSX2				TPHMACHB	1
1	27	4048241007				TPHMACHB	1
1	28	4048241008 RSX2				TPHMACHB	1
1	29	4048243001				TPHMACHB	1
1	30	482789X3				TPHMACHB	1
1	31	482788X2				TPHMACHB	1
1	32	482790X3				TPHMACHB	1
1	33	4048240002X2				TPHMACHB	1
1	34	4048240005X2				TPHMACHB	1
1	35	4048240006X3				TPHMACHB	1
1	36	4048241006X2				TPHMACHB	1
1	37	4048241008X2				TPHMACHB	1
1	38	BLANK				TPHMACHB	1
1	39	BLANK				TPHMACHB	1
1	40	BLANK				TPHMACHB	1
1	41	CC500 2860-31-14-OC				TPHMACHB	1
1	42	484444				TPHMACHB	1
1	43	484443				TPHMACHB	1
1	44	484445X5				TPHMACHB	1
1	45	484446X7				TPHMACHB	1
1	46	4048810002X6				TPHMACHB	1
1	47	4048810001X100				TPHMACHB	1
1	48	4048810003X50				TPHMACHB	1
1	49	4048810004				TPHMACHB	1
1	50	4048810005				TPHMACHB	1
1	51	4048810006X300				TPHMACHB	1

TPH-D
GCSV
62560
HBN
77475

TPH-S
GCSV
62666
HBN
77574

8/4/11 BH

Continued on Page 78

Read and Understood By

Kurt H Burmaster 8/4/11 Signed Date

Signed 8/4/11 Date

03 Aug 11 05:04 PM page 2
Sequence: C:\HPCHEM\1\SEQUENCE\080311.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	52	4048810007				TPHMACHB	1
1	53	4048810008				TPHMACHB	1
1	54	4048810009				TPHMACHB	1
1	55	4048810011				TPHMACHB	1
1	56	4048941001				TPHMACHB	1
1	57	4048941002				TPHMACHB	1
1	58	4048941003				TPHMACHB	1
1	59	4048941004				TPHMACHB	1
1	60	4048941005				TPHMACHB	1
1	61	4048941006				TPHMACHB	1
1	62	4048941007				TPHMACHB	1
1	63	4048941008				TPHMACHB	1
1	64	4048942001				TPHMACHB	1
1	65	BLANK				TPHMACHB	1
1	66	CC500 2860-31-14-CC				TPHMACHB	1
REAR 1							

TPH-S GCSV 62666 HBN 77574

KHB 8/4/11

KHB 8/4/11

Continued on Page

Read and Understood By

Signed: Kyle H Burns Date: 8/4/11

Signed: [signature] Date: 8/4/11

Pace Analytical® Prep Log Report

Batch Information: OEXT HBN 77364 TPH-B

Prep Method	EPA 3541	Analysis Method	TPH-B	Extracted By	BLM	Extracted By Date	07/28/2011
Spiked By	BLM	Spiked By Date	07/28/2011	Conc. Temp #1	98.5	Conc. Temp #2	98.5
Methylene Chloride	12455	Sodium Sulfate	7513	Florisil 3620B	5238	3620B Date/Initials	7/29/11 BLM
Batch Notes		Reviewed By	JLH	Reviewed By Date	07/29/2011		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**482788**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**482789**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**482790**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048240001**	14.406	1	0.5			6045 (.5)
8015 T_P	PS	**4048240002**	14.319	1	0.5			6045 (.5)
8015 T_P	PS	**4048240003**	14.332	1	0.5			6045 (.5)
8015 T_P	PS	**4048240004**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048240005**	14.736	1	0.5			6045 (.5)
8015 T_P	PS	**4048240006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048241001**	14.649	1	0.5			6045 (.5)
8015 T_P	PS	**4048241002**	14.389	1	0.5			6045 (.5)
8015 T_P	PS	**4048241003**	14.638	1	0.5			6045 (.5)
8015 T_P	PS	**4048241004**	14.111	1	0.5			6045 (.5)
8015 T_P	PS	**4048241005**	13.928	1	0.5			6045 (.5)
8015 T_P	PS	**4048241006**	13.985	1	0.5			6045 (.5)
8015 T_P	PS	**4048241007**	13.84	1	0.5			6045 (.5)
8015 T_P	PS	**4048241008**	13.776	1	0.5			6045 (.5)
8015 T_P	PS	**4048243001**	13.6	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Fri, 29 Jul 2011 10:23:57 -0500

Pace Analytical Services					Instrument ID:	40BALC			
LIPID					Analyst:	BLM			

12034 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483066		0.9535	0.9733	15.0000	4.0000	1.0000	0.5280	07/29/2011 06:57:24		
4048240001		0.9551	0.9685	14.4060	4.0000	1.0000	0.3721	07/29/2011 06:57:30		
4048240002		0.9522	0.9636	14.3190	4.0000	1.0000	0.3185	07/29/2011 06:57:36		
4048240003		0.9506	0.9618	14.3320	4.0000	1.0000	0.3126	07/29/2011 06:57:43		
4048240004		0.9492	0.9563	15.0000	4.0000	1.0000	0.1893	07/29/2011 06:57:52		
4048240005		0.9478	0.9591	14.7360	4.0000	1.0000	0.3067	07/29/2011 06:57:59		
4048240006		0.9457	0.9676	15.0000	4.0000	1.0000	0.5840	07/29/2011 06:58:05		
4048241001		0.9460	0.9511	14.6490	4.0000	1.0000	0.1393	07/29/2011 06:58:11		
4048241002		0.9467	0.9665	14.3890	4.0000	1.0000	0.5504	07/29/2011 06:58:17		
4048241003		0.9472	0.9729	14.6380	4.0000	1.0000	0.7023	07/29/2011 06:58:24		
4048241004		0.9457	0.9582	14.1110	4.0000	1.0000	0.3543	07/29/2011 06:58:30		
4048241005		0.9504	0.9565	13.9280	4.0000	1.0000	0.1752	07/29/2011 06:58:36		
4048241006		0.9520	0.9711	13.9850	4.0000	1.0000	0.5463	07/29/2011 06:58:43		
4048241007		0.9543	0.9672	13.8400	4.0000	1.0000	0.3728	07/29/2011 06:58:50		
4048241008		0.9553	0.9714	13.7760	4.0000	1.0000	0.4675	07/29/2011 06:58:57		
4048243001		0.9558	0.9653	13.6000	4.0000	1.0000	0.2794	07/29/2011 06:59:04		

Approved by CSH 7/29/11

9/28/10
2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11
9/30/10
2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11
* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR
10/4/10
2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11

10/6/10
2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 10.0ml CH_2Cl_2 20ppm WPAH IS RDW 10/6/10 Exp 10/6/11
10/06/10
2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11
10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w nanopure H_2O SHI 50 ppm
2860-16-07 2500ul of 10,000mg/L O-terphenyl (2713-86) diluted to 250ml with CH_2Cl_2 (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10/7/10
* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR
10/8/10
2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50ug/ml ~~8270~~ Surr. 8270 SKW Ran on Inst. by 10MSS1 File# 1012T008
10/13/10 500 ul of 4000 ppm SVIS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11
RDW 10/13/10
2860-16-11 ~~20~~ 40ul of 5000ppm N-NDMA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm NDMA STD Ex 7/13/11 RDW 10/13/10
~~10/18/10 500~~ ARO 10/18/10

Continued on Page

Read and Understood By

[signature] 10/18/10 Valerie M Ringquin 10/18/2010
Signed Date Signed Date

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) upto 1.0ml CH_2Cl_2 2000ppm SPAH IS Ex 11/22/11 RM 11/24
* 11/29/10 CH_2Cl_2 changed at 8:00 to lot 2712-T3 VMR
11/30/10
2860-22-02 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40mss4 120105.d
12/1/2010
2860-22-06 1 ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on inst by DAL file # 40ccs1.i\120210T.b\010R0101.D 88.8%
12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Acetone/ 50%
" " -08 25uls of 2860-10-11 " " " " 500 ppm
12/03/10
2860-22-09 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10
2860-22-10 50ul of 4000ppm SVIS (2945-06D) upto 10.0ml CH_2Cl_2 20ppm W-PAH-IS Ex 12/3/11 RM 12/6

2860-22-11 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11
12/7/10
2860-22-12 400ul of 16,000 ppm ERDTO (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date
Signed — 12/9/2/10 — Date

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MEOH spike) → 1.0 mL [Final] = 500 ng/mL ex 7-19-11 DR

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPP

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SVIS (~~2945-03~~ 2945-03C 4/14/11 KPP) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SVIS KPP Exp 8/25/11 KPP
Ran on instr by RJN file # 40mss4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) up to 1.0ml CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RJN 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) up to 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RJN 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100ul of 5000ppm B/N SS (2945-20H) up to 10.0mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RJN 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) up to 1.0ml CH_2Cl_2 25ppm PAH CAL Ex 7/3/11 RJN 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) up to 1.0ml CH_2Cl_2 10ppm PAH 2nd Source Ex 9/2/11 RJN 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - KPP exp 2/28/12

3/3/2011

2860-29-15 2500ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Ran on inst by ~~DAT~~ file # GC (VMR) Exp 3/3/2012 VMR

VMR 3/3/2011 OK to use per GC Ran on inst 3/8/11 VMR

→ 40GCSF.i / 0307116.b - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Continued on Page

Valerie M Renquin 3/3/2011 Signed Date

Signed Date 3/7/11

3-4-11

2860-30-01 50 mL @ 2380-100-01 (TPH @ 20000ug/mL) → 1.0mL CH_2Cl_2
[Final] = 100ug/mL Exp 5-6-11 DAT

TPH ICAL

2860-30-02 500 mL @ 2713-460 (#2 Diesel Fuel @ 20,000ug/mL) → 5.0mL CH_2Cl_2
[Final] = 2000ug/mL Exp 3-4-12 DAT

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000ug/mL
2860-30-04 250 mL = 500ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL

→ Use only 1.0 mL of 2860-30-02 2713-990
All standards + 5 mL 2945-135 (o-terphenyl @ 10,000ug/mL)
[Final] = 50ug/mL All standard Exp 2-22-12 DAT

TPH ICV

2860-30-08 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5mL 2713-990 (o-terphenyl @ 10,000ug/mL)
[Final] = 500 ug/mL + 50ug/mL Exp 2-22-12 DAT

2860-30-09 25uls of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JHH

3-7-11

2860-30-10 1.0mL of 2860-30-02 + 5 mL 2713-990 (o-terph 10,000ug/mL) = 2000ug/mL 50ug/mL
2860-30-11 500 mL @ → 1.0mL CH_2Cl_2 [Final] = 1000ug/mL
2860-30-12 250 mL = 500ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50 ug/mL

→ Plus 5 mL 2713-990 (o-terph 10,000ug/mL) [Final] = 50ug/mL Exp ~~3-4-11~~ DAT 5-6-11 GC

2860-30-16 10 mL @ 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5 mL 2713-990 (o-terph 10,000ug/mL) [Final] = 500ug/mL + 50ug/mL
Exp ~~3-4-11~~ DAT 3/4/12 GC

DAT 3-7-11

Continued on Page

Read and Understood By

Signed — Date 3.7.11 — Signed Valerie M Renquin — Date 3/24/11

PROJECT ______

3.7.11

2860-31-01 100 uL of 2713-46D(#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH2Cl2 + 5 uL 2713-99D(o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-02 50 uL of 2713-46D(#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH2Cl2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-03 25 uLs of 2860-10-19 diluted to 1.0 ml w 50/50 MeOH/H2O 500 ppm JHI

2860-31-04 500 ul of 4000 ppm SVIS (2945-17I) diluted to 1.0 ml w/ CH2Cl2 = 2000 ppm PAH IS - ARO exp 3/10/12

2860-31-05 500 uls of 2860-10-11 diluted to 10.0 ml w 50/50 MeOH H2O JHI 1000 ppm
-06 25 uls of 2860-31-05 diluted to 1.0 ml w 25 ppm std
-07 100 100
-08 250 250
-09 500 500
-10 750 750 JHI

3.14.11

2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH2Cl2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 uL 2713-28E(#2 Diesel @20,000 ug/mL) → 10.0 mL CH2Cl2
[Final] = 500 ug/mL EXP 1-10-12 DAR

3/15/11

2860-31-13 500 ul of 4000 ppm SVIS (2945-17J) up to 1.0 ml CH2Cl2 2000 ppm PAH-S-IS Ex 3/15/12 RW 3/15/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH2Cl2
[Final] = 500 ug/mL + 50 uL 2713-99D (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DAR

Continued on Page ______

Signed [signature] Date 3/17/11

Read and Understood By
Signed Valerie M Penguin Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

Pace Analytical®
www.pacelabs.com

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048244

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048244

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048244001	EWL TR-04-C-WHOLE BODY	Tissue	01/03/11 11:50	07/13/11 09:30
4048244002	EWL TR-05-C-WHOLE BODY	Tissue	12/14/10 00:00	07/13/11 09:30
4048244003	EWL TR-07-C-WHOLE BODY	Tissue	12/14/10 00:00	07/13/11 09:30
4048244004	EWL TR-08-C-WHOLE BODY	Tissue	12/14/10 00:00	07/13/11 09:30
4048244005	EWL TR-09-C-WHOLE BODY	Tissue	12/14/10 00:00	07/13/11 09:30
4048244006	EWL T-03-C-WHOLE BODY	Tissue	12/16/10 00:00	07/13/11 09:30

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048244
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1106148

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. The recoveries of the LCS and LCSD were below control criteria and the "S0" applied. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD. The recoveries of TPH (C08-C40) were above control criteria in the LCS/LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifiers.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** All samples, except EWL T-03C-WHOLE BODY, were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 05/14/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048244

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048244001	EWL TR-04-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048244002	EWL TR-05-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048244003	EWL TR-07-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048244004	EWL TR-08-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048244005	EWL TR-09-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048244006	EWL T-03-C-WHOLE BODY	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
		ASTM D2974-87	JAL	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4048244

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6258

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048244

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

4048244

Project Number: K1106148
Project Manager: Lynda ~~Huckestein~~ David Light/URS

TD

	Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None (TD H)
001	K1106148-025	EWL TR-04-C-Whole Body		Animal Tissue	1/3/11	1150	Pace PA	✓
002	K1106148-046	EWL TR-05-C-Whole Body		Animal Tissue	12/14/10		Pace PA	✓
003	K1106148-059	EWL TR-07-C-Whole Body		Animal Tissue	12/14/10		Pace PA	✓
004	K1106148-072	EWL TR-08-C-Whole Body		Animal Tissue	12/14/10		Pace PA	✓
005	K1106148-093	EWL TR-09-C-Whole Body		Animal Tissue	12/14/10		Pace PA	✓
006	K1106148-106	EWL T-03-C-Whole Body		Animal Tissue	12/16/10		Pace PA	✓

1 - 2oz cc

Test Comments

Relinquish - None K1106148-025,46,59,72,93
Relinquish - None K1106148-106

Ship to Pace: Green Bay, WI
Ship to Pace: Green Bay, WI. Client specified QC (Field Duplicate) on this sample.

Folder Comments:
Samples are a re-issue from K1013866,K1013867,K1013870,K1013871,K1013872,K1014020.

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com
URS

Contact David Light @ URS
East White Lake Project

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ STANDARD
Requested FAX Date: _____
Requested Report Date: 06/13/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1106148
Bill to

Relinquished By: [signature] 7/12/11 1200
Received By: Rec: Fed Ex [signature] 7/13/11 930
Airbill Number: _____

Page

7 of 112

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Project # 4048244

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used JB Type of Ice: Wet Blue (Dry) None ☑ Samples on ice, cooling process has begun

Cooler Temperature <0°C Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7-13-11
Initials: G

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: JTW **Date:** 7/13/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048244

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048244

QB Batch: OEXT / 12029
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048244001		EWL TR-04-C-WHOLE BODY	3	0	S4										
483016	BLANK		1	71											
4048244002		EWL TR-05-C-WHOLE BODY	2	0	S4										
483017	LCS		3	0	S0										
4048244003		EWL TR-07-C-WHOLE BODY	2	0	S4										
483018	LCSD		3	0	S0										
4048244004		EWL TR-08-C-WHOLE BODY	3	0	S4										
4048244005		EWL TR-09-C-WHOLE BODY	3	0	S4										
4048244006		EWL T-03-C-WHOLE BODY	1	62											
		QC Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048244

QB Batch: OEXT/12029 **LCS Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048244

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048244001	EWL TR-04-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048244002	EWL TR-05-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048244003	EWL TR-07-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048244004	EWL TR-08-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048244005	EWL TR-09-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048244006	EWL T-03-C-WHOLE BODY	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048244001	EWL TR-04-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048244002	EWL TR-05-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048244003	EWL TR-07-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048244004	EWL TR-08-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048244005	EWL TR-09-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048244006	EWL T-03-C-WHOLE BODY	Pace Lipid	OEXT/12036		
4048244006	EWL T-03-C-WHOLE BODY	ASTM D2974-87	PMST/6456		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

DUPLICATE RESULTS

Project: CRABS
Pace Project No.: 4048244

QB Batch: PMST/6456 **Prepared:**
Method(s): ASTM D2974-87

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Percent Moisture	1	10	70.9	70.5	%	12/02/11	

Type	Sample	Client Sample ID
DUP	540622	4048240004

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048244

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/04/11 08/04/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.15

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-38-01	2000 2860-38-01	08/04/11	1042	2.15	
02	1000 2860-38-02	1000 2860-38-02	08/04/11	1052	2.15	
03	500 2860-38-03	500 2860-38-03	08/04/11	1104	2.15	
04	250 2860-38-04	250 2860-38-04	08/04/11	1116	2.15	
05	100 2860-38-05	100 2860-38-05	08/04/11	1129	2.15	
06	50 2860-38-06	50 2860-38-06	08/04/11	1140	2.15	
07	IC500 2860-38-07	IC500 2860-38-07	08/04/11	1244	2.15	
08	8015DS-CCV	8015DS-CCV	08/08/11	0834	2.15	
09	ZZZZZ	ZZZZZ	08/08/11	0905	2.15	
10	EWL T-03-C-WHOLE BO	4048244006	08/08/11	1140	2.15	
11	ZZZZZ	ZZZZZ	08/08/11	1304	2.15	
12	ZZZZZ	ZZZZZ	08/08/11	1316	2.15	
13	EWL TR-05-C-WHOLE B	4048244002	08/08/11	1328	2.15	
14	EWL TR-07-C-WHOLE B	4048244003	08/08/11	1340	2.15	
15	EWL TR-08-C-WHOLE B	4048244004	08/08/11	1352	2.15	
16	EWL TR-09-C-WHOLE B	4048244005	08/08/11	1404	2.15	
17	8015DS-CCV	8015DS-CCV	08/08/11	1559	2.15	
18	8015DS-CCV	8015DS-CCV	08/12/11	1346	2.16	
19	EWL TR-04-C-WHOLE B	4048244001	08/12/11	1407	2.14	
20	8015DS-CCV	8015DS-CCV	08/12/11	1438	2.16	
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048244

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-04-C-WHOLE BODY TX
Lab ID: 4048244001
Collected: 01/03/11 11:50
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**19.4J**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/12/11 14:07	
	TPH (C08-C16)	**<10.7**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/12/11 14:07	
	TPH (C16-C28)	**17.8J**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/12/11 14:07	
	TPH (C08-C40)	**263**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/12/11 14:07	3q
	TPH - Diesel (C10-C28)	**19.0J**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/12/11 14:07	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/28/11 12:00	08/12/11 14:07	S4

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-04-C-WHOLE BODY TX
Lab ID: 4048244001
Collected: 01/03/11 11:50
Received: 07/13/11 09:30

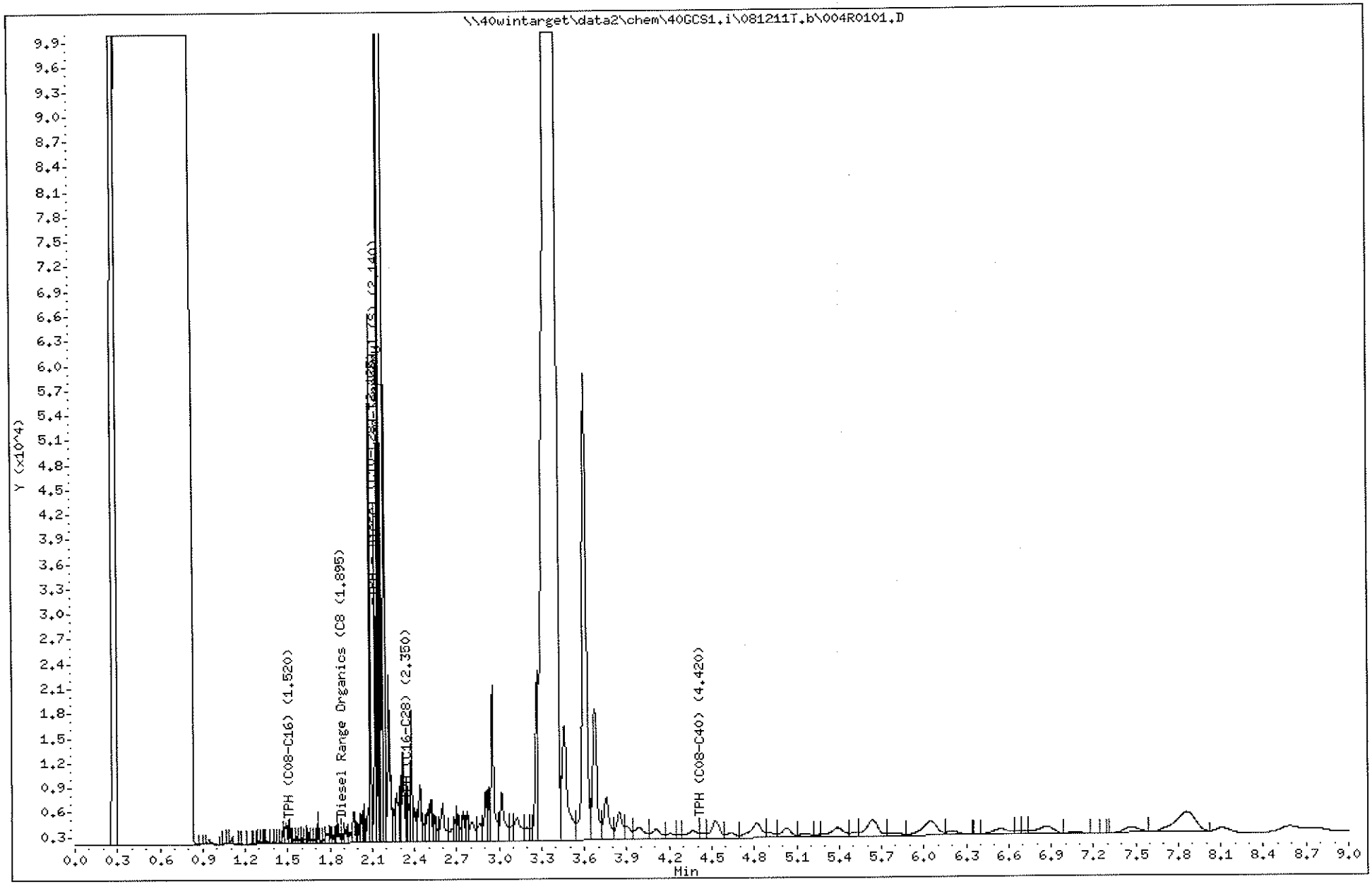
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.50**	%			1		07/29/11 07:01	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\081211T.b\004R0101.D
Date : 12-AUG-2011 14:07
Client ID: EWL TR-04-C-WHOLE B
Sample Info: 4048244001X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\081211T.b\004R0101.D
Lab Smp Id: 4048244001 Client Smp ID: EWL TR-04-C-WHOLE B
Inj Date : 12-AUG-2011 14:07
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048244001X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\081211T.b\TPH.m
Meth Date : 09-May-2012 15:13 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 4
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.800			4242317	1225.97	262.70
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.950-2.750			343538	83.2394	17.83(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.750			367894	90.3781	19.36(a)
S	8 TPH - Diesel (C10-C28)	1.500-2.750			361852	88.6072	18.98
$	15 o-Terphenyl (S)	2.140	2.146	-0.006	23394	4.48736	0.32(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-05-C-WHOLE BODY TX
Lab ID: 4048244002
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**15.1**	mg/kg	14.1	7.0	2	07/28/11 12:00	08/08/11 13:28	
	TPH (C08-C16)	**<7.0**	mg/kg	14.1	7.0	2	07/28/11 12:00	08/08/11 13:28	
	TPH (C16-C28)	**14.0J**	mg/kg	14.1	7.0	2	07/28/11 12:00	08/08/11 13:28	
	TPH (C08-C40)	**143**	mg/kg	14.1	7.0	2	07/28/11 12:00	08/08/11 13:28	3q
	TPH - Diesel (C10-C28)	**14.9**	mg/kg	14.1	7.0	2	07/28/11 12:00	08/08/11 13:28	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		2	07/28/11 12:00	08/08/11 13:28	S4

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-05-C-WHOLE BODY TX
Lab ID: 4048244002
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.63**	%			1		07/29/11 07:01	

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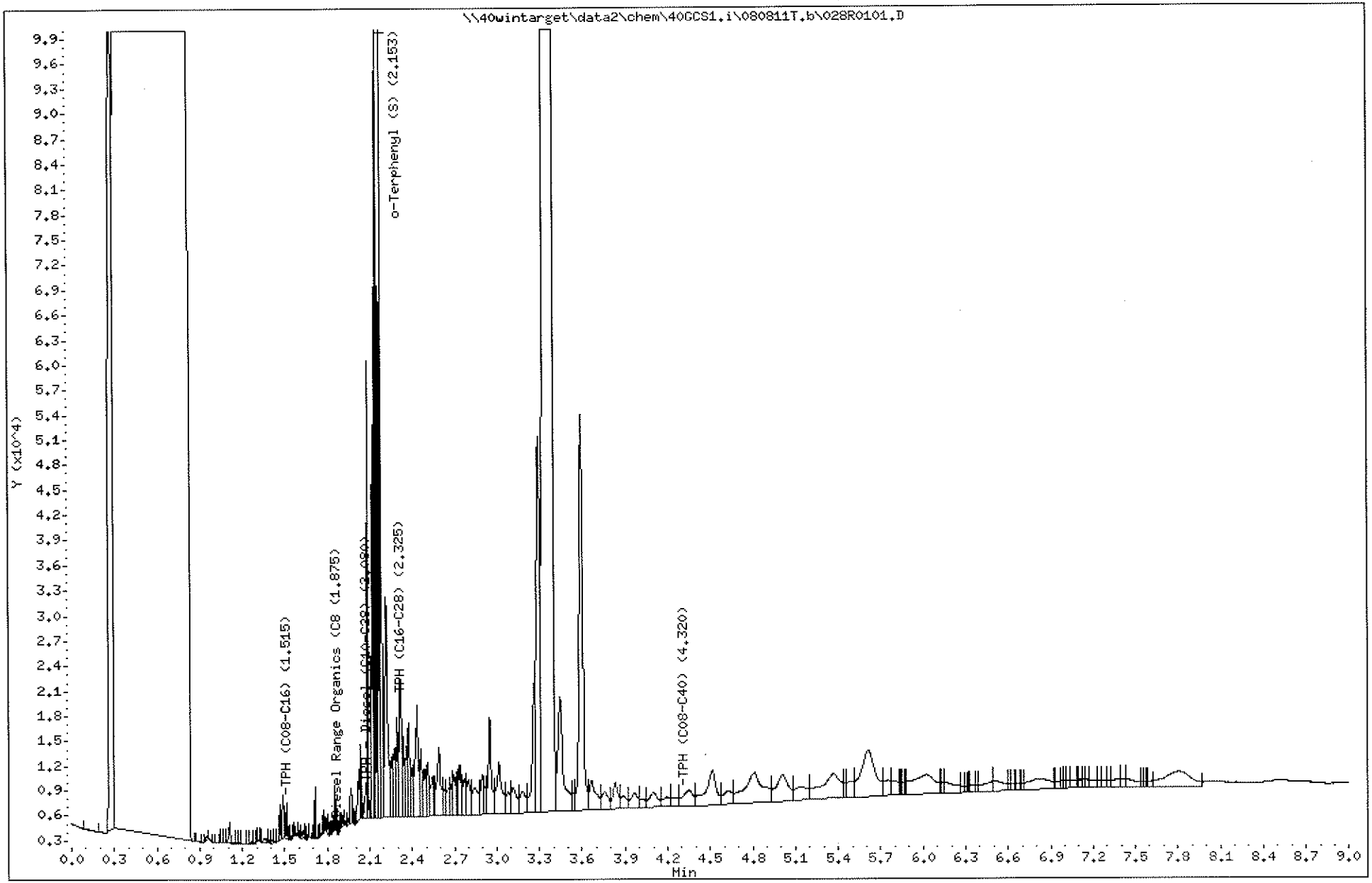
REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\028R0101.D
Date : 08-AUG-2011 13:28
Client ID: EWL TR-05-C-WHOLE B
Sample Info: 4048244002X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\028R0101.D
Lab Smp Id: 4048244002 Client Smp ID: EWL TR-05-C-WHOLE B
Inj Date : 08-AUG-2011 13:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048244002X2
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 28
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.200	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			3530612	1017.37	143.29
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.710			399132	99.5340	14.01(a)
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			425635	107.302	15.11
S 8 TPH - Diesel (C10-C28)	1.450-2.710			421325	106.039	14.93
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	74437	14.2783	1.00

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-07-C-WHOLE BODY TX
Lab ID: 4048244003
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**10.0J**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/08/11 13:40	
	TPH (C08-C16)	**<7.1**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/08/11 13:40	
	TPH (C16-C28)	**9.4J**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/08/11 13:40	
	TPH (C08-C40)	**161**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/08/11 13:40	3q
	TPH - Diesel (C10-C28)	**9.9J**	mg/kg	14.3	7.1	2	07/28/11 12:00	08/08/11 13:40	
Surrogates									
84-15-1	o-Terphenyl (S)	0	%.	50-150		2	07/28/11 12:00	08/08/11 13:40	S4

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-07-C-WHOLE BODY TX
Lab ID: 4048244003
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

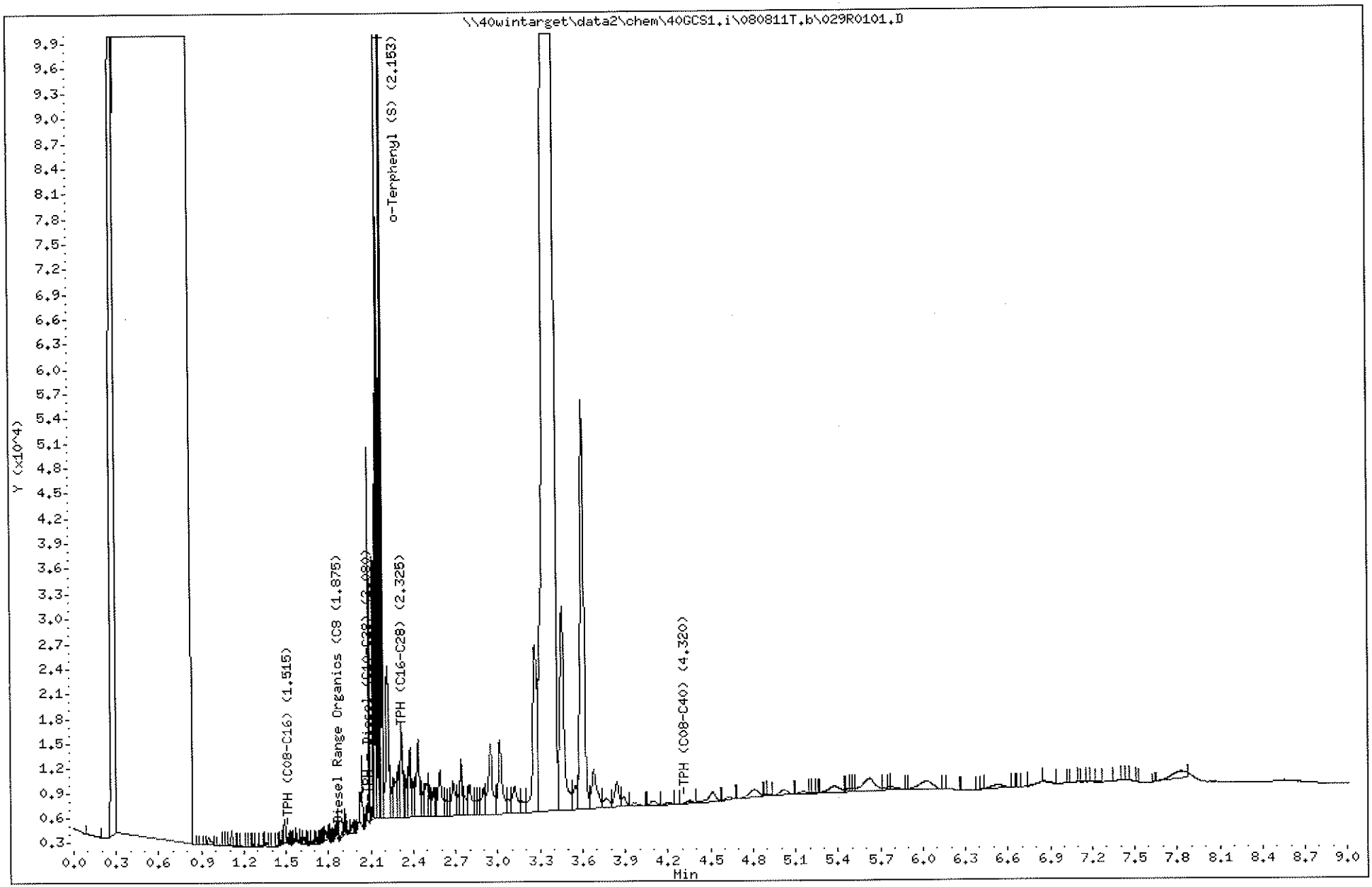
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.43	%			1		07/29/11 07:01	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\029R0101.D
Date : 08-AUG-2011 13:40
Client ID: EWL TR-07-C-WHOLE B
Sample Info: 4048244003X2
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\029R0101.D
Lab Smp Id: 4048244003 Client Smp ID: EWL TR-07-C-WHOLE B
Inj Date : 08-AUG-2011 13:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048244003X2
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 29
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			3899751	1125.57	160.79
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			283188	65.5508	9.36(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			299289	70.2700	10.03(a)
S	8 TPH - Diesel (C10-C28)	1.450-2.710			296732	69.5205	9.93
$	15 o-Terphenyl (S)	2.153	2.146	0.007	69702	13.3700	0.95

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Sample: EWL TR-08-C-WHOLE BODY TX
Lab ID: 4048244004
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

Results reported on a "wet-weight" basis

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**10.8J**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/08/11 13:52	
	TPH (C08-C16)	**<10.7**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/08/11 13:52	
	TPH (C16-C28)	**<10.7**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/08/11 13:52	
	TPH (C08-C40)	**177**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/08/11 13:52	3q
	TPH - Diesel (C10-C28)	**10.7J**	mg/kg	21.4	10.7	3	07/28/11 12:00	08/08/11 13:52	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/28/11 12:00	08/08/11 13:52	S4

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-08-C-WHOLE BODY TX
Lab ID: 4048244004
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

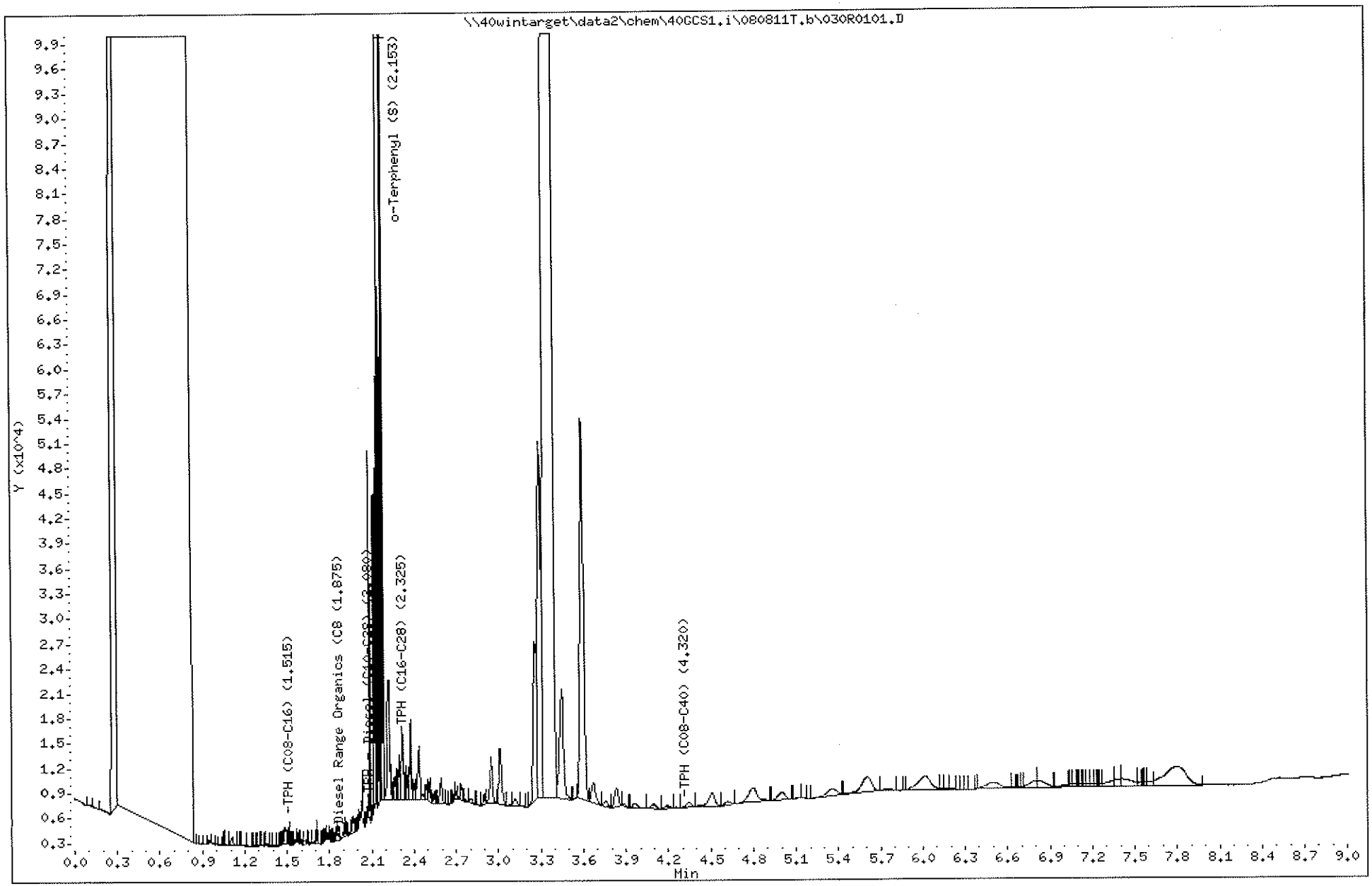
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.75**	%			1		07/29/11 07:01	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\030R0101.D
Date : 08-AUG-2011 13:52
Client ID: EWL TR-08-C-WHOLE B
Sample Info: 4048244004X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\030R0101.D
Lab Smp Id: 4048244004 Client Smp ID: EWL TR-08-C-WHOLE B
Inj Date : 08-AUG-2011 13:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048244004X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 30
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			2872846	824.581	176.69
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			218025	46.4515	9.95(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			232276	50.6284	10.84(a)
S	8 TPH - Diesel (C10-C28)	1.450-2.710			230298	50.0487	10.72
$	15 o-Terphenyl (S)	2.153	2.146	0.007	51592	9.89621	0.70

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL TR-09-C-WHOLE BODY TX
Lab ID: 4048244005
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**<11.0**	mg/kg	22.1	11.0	3	07/28/11 12:00	08/08/11 14:04	
	TPH (C08-C16)	**<11.0**	mg/kg	22.1	11.0	3	07/28/11 12:00	08/08/11 14:04	
	TPH (C16-C28)	**<11.0**	mg/kg	22.1	11.0	3	07/28/11 12:00	08/08/11 14:04	
	TPH (C08-C40)	**229**	mg/kg	22.1	11.0	3	07/28/11 12:00	08/08/11 14:04	3q
	TPH - Diesel (C10-C28)	**<11.0**	mg/kg	22.1	11.0	3	07/28/11 12:00	08/08/11 14:04	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		3	07/28/11 12:00	08/08/11 14:04	S4

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL TR-09-C-WHOLE BODY TX
Lab ID: 4048244005
Collected: 12/14/10 00:00
Received: 07/13/11 09:30

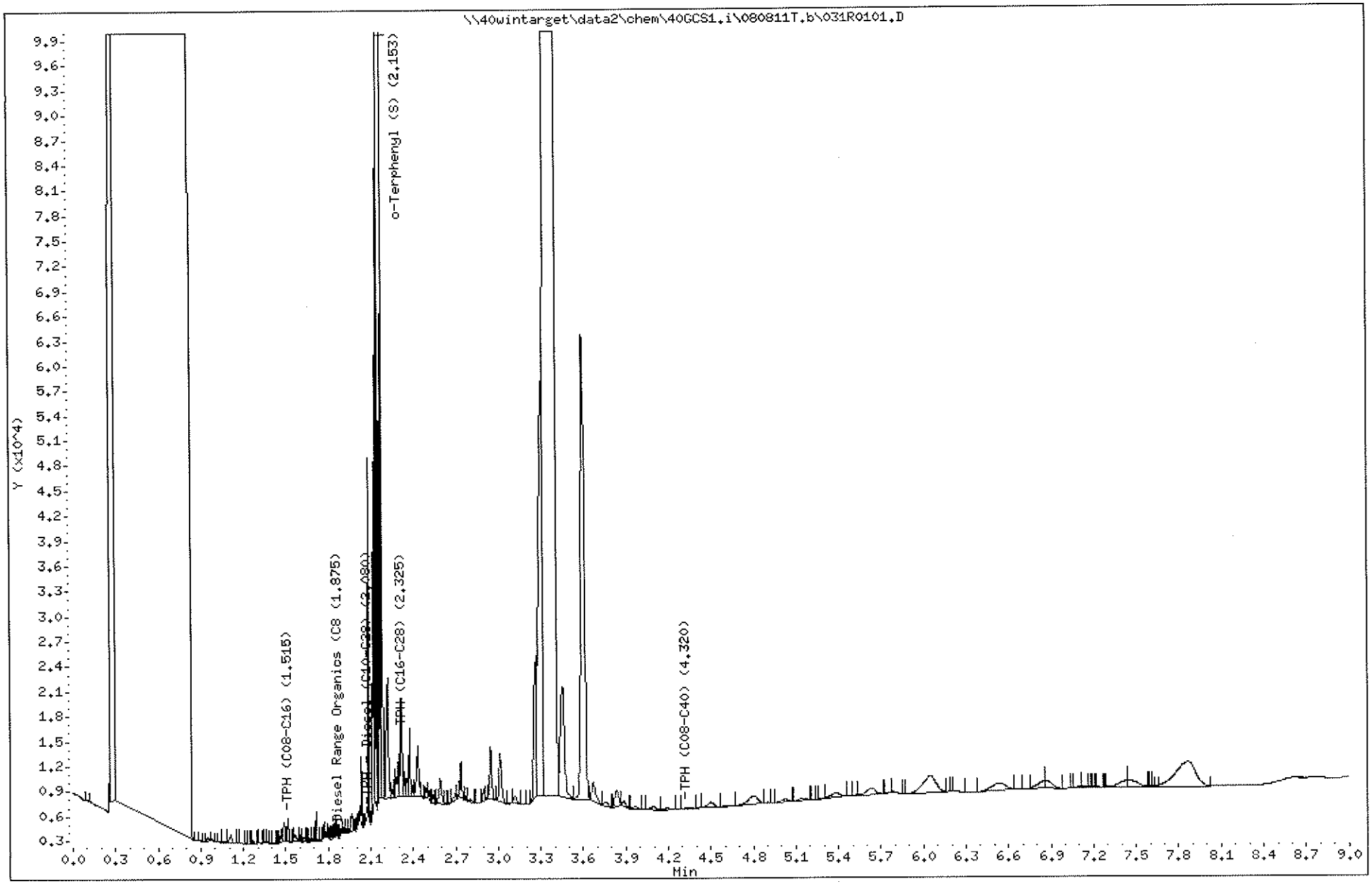
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.85**	%			1		07/29/11 07:01	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\031R0101.D
Date : 08-AUG-2011 14:04
Client ID: EWL TR-09-C-WHOLE B
Sample Info: 4048244005X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\031R0101.D
Lab Smp Id: 4048244005 Client Smp ID: EWL TR-09-C-WHOLE B
Inj Date : 08-AUG-2011 14:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048244005X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 31
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.600	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			3608632	1040.24	229.46
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.710			195652	39.8939	8.80(a)
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			210152	44.1439	9.73(a)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			208011	43.5163	9.59
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	45619	8.75049	0.64

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL T-03-C-WHOLE BODY TX
Lab ID: 4048244006
Collected: 12/16/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**5.0J**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 11:40	
	TPH (C08-C16)	**<3.3**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 11:40	
	TPH (C16-C28)	**4.5J**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 11:40	
	TPH (C08-C40)	**126**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 11:40	3q
	TPH - Diesel (C10-C28)	**4.9J**	mg/kg	6.7	3.3	1	07/28/11 12:00	08/08/11 11:40	
Surrogates									
84-15-1	o-Terphenyl (S)	**62**	%.	50-150		1	07/28/11 12:00	08/08/11 11:40	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL T-03-C-WHOLE BODY TX
Lab ID: 4048244006
Collected: 12/16/10 00:00
Received: 07/13/11 09:30

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.13**	%			1		07/29/11 07:01	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048244

Matrix: Tissue
% Moisture:
Acode: Percent Moisture
Prep/Method: ASTM D2974-87
Results reported on a "wet-weight" basis

Sample: EWL T-03-C-WHOLE BODY TX
Lab ID: 4048244006
Collected: 12/16/10 00:00
Received: 07/13/11 09:30

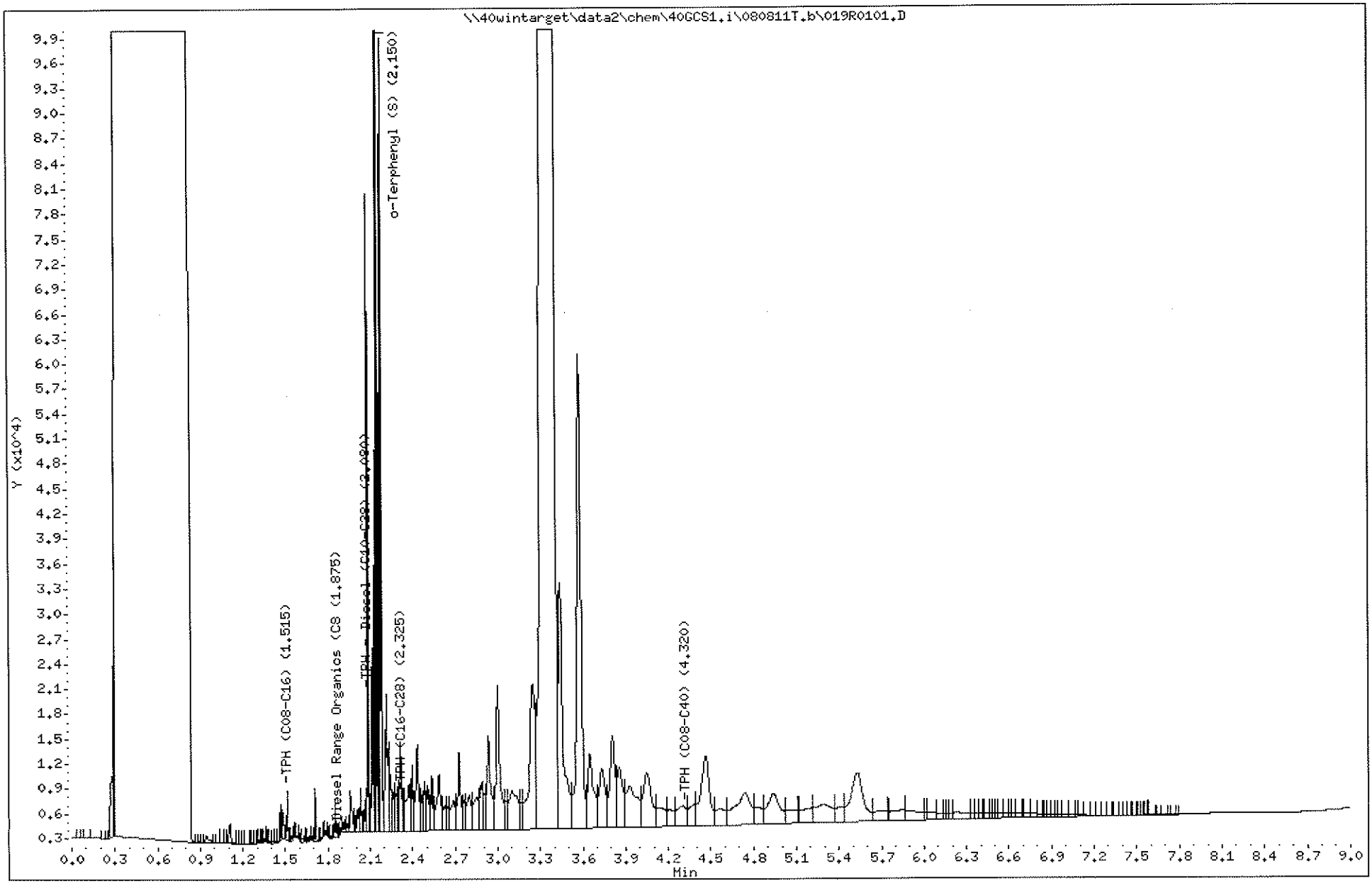
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Percent Moisture	**71.5**	%	0.10	0.10	1		12/02/11 06:26	

Date: 05/09/2012 03:32 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\019R0101.D
Date : 08-AUG-2011 11:40
Client ID: EWL T-03-C-WHOLE BO
Sample Info: 4048244006
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\019R0101.D
Lab Smp Id: 4048244006 Client Smp ID: EWL T-03-C-WHOLE BO
Inj Date : 08-AUG-2011 11:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048244006
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			6523542	1894.60	126.30
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			288133	67.0001	4.46(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			313429	74.4144	4.96(a)
S	8 TPH - Diesel (C10-C28)	1.450-2.710			309138	73.1567	4.87
$	15 o-Terphenyl (S)	2.150	2.146	0.004	161275	30.9352	2.06

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048244

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D

	Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 TPH (C08-C16)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	2 Diesel Range Organics (C8-C28	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	3 High End Organics (C8-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	4 TPH (C08-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	5 TPH (C08-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	6 TPH (C10-C12)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	7 TPH (C10-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	8 TPH - Diesel (C10-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	9 TPH (C10-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	10 TPH (C12-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	11 TPH (C12-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	12 TPH (C16-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	13 TPH (C16-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S	14 TPH (C20-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
15 o-Terphenyl (S)	0.00022	0.00023	0.00020	0.00017	0.00018	0.00015	AVRG		0.00019		15.94928	

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

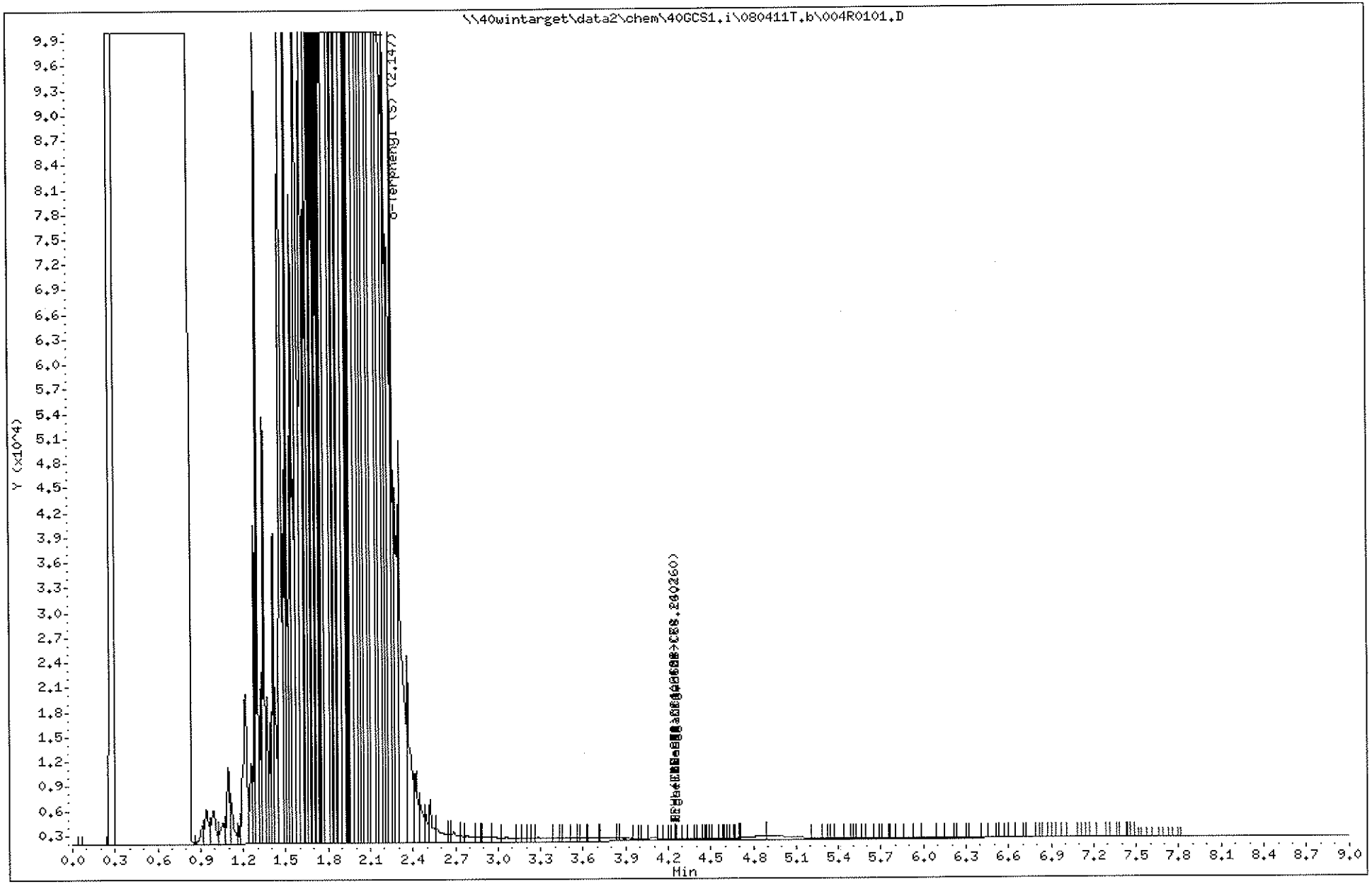
Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Curve	Formula	Units
Averaged	Amt = ml*Rsp	Amount
Linear	Amt = b + ml*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Date : 04-AUG-2011 10:42
Client ID: 2000 2860-38-01
Sample Info: 2000 2860-38-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Lab Smp Id: 2000 2860-38-01 Client Smp ID: 2000 2860-38-01
Inj Date : 04-AUG-2011 10:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-38-01
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:42 Cal File: 004R0101.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

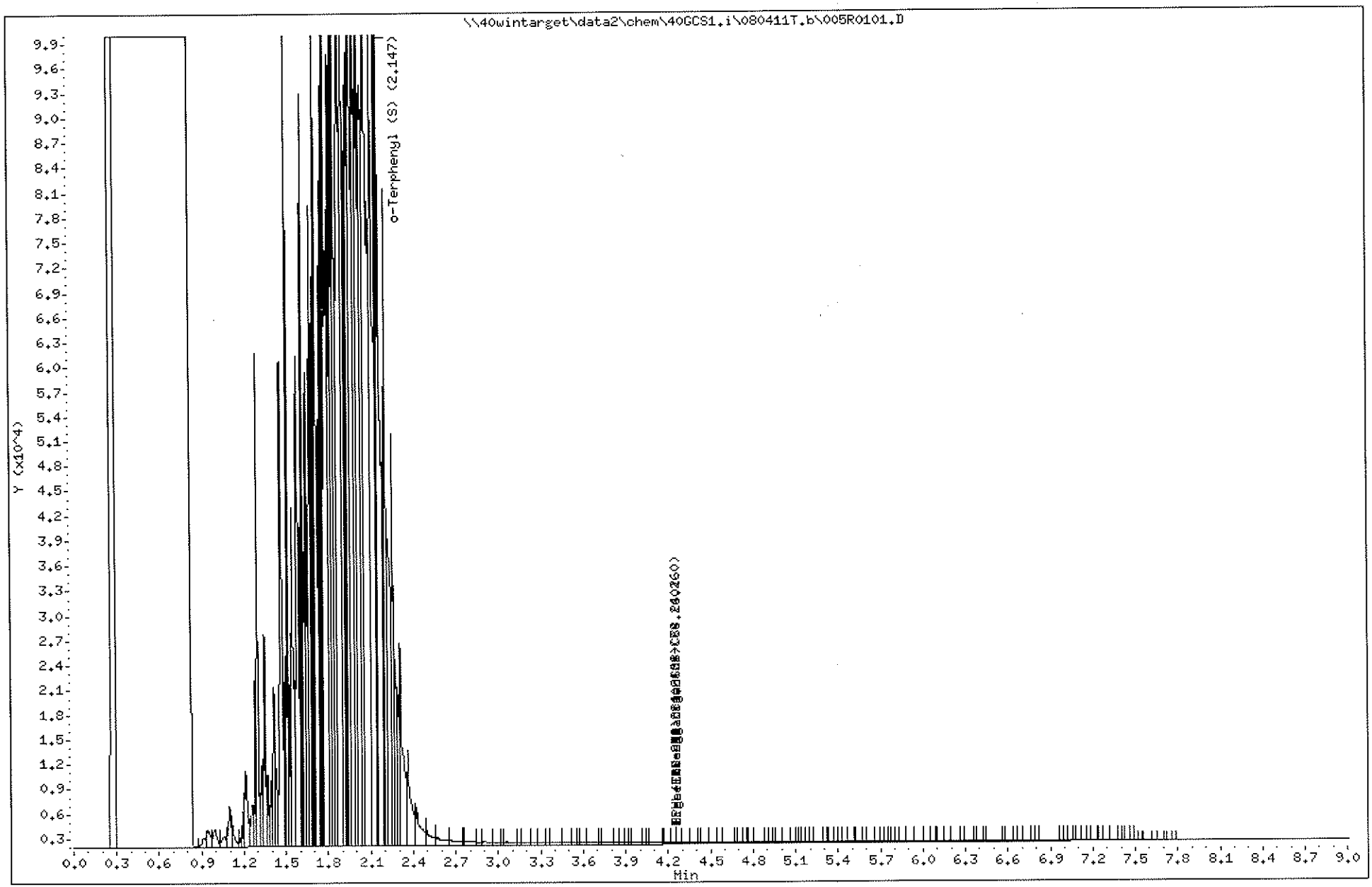
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			6874016	2000.00	1997.32
S 11 TPH (C12-C36)	1.050-7.470			6874016	2000.00	1997.32
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			6874016	2000.00	1997.32
S 3 High End Organics (C8-C34)	1.050-7.470			6874016	2000.00	1997.32
S 4 TPH (C08-C36)	1.050-7.470			6874016	2000.00	1997.32
S 5 TPH (C08-C40)	1.050-7.470			6874016	2000.00	1997.32
S 6 TPH (C10-C12)	1.050-7.470			6874016	2000.00	1997.32
S 7 TPH (C10-C20)	1.050-7.470			6874016	2000.00	1997.32
S 8 TPH - Diesel (C10-C28)	1.480-2.730			6874016	2000.00	1997.32(T)
S 9 TPH (C10-C40)	1.050-7.470			6874016	2000.00	1997.32
S 10 TPH (C12-C20)	1.050-7.470			6874016	2000.00	1997.32
S 12 TPH (C16-C28)	1.050-7.470			6874016	2000.00	1997.32
S 13 TPH (C16-C40)	1.050-7.470			6874016	2000.00	1997.32
S 14 TPH (C20-C34)	1.050-7.470			6874016	2000.00	1997.32
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	330420	50.0000	63.38

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Date : 04-AUG-2011 10:52
Client ID: 1000 2860-38-02
Sample Info: 1000 2860-38-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Lab Smp Id: 1000 2860-38-02 Client Smp ID: 1000 2860-38-02
Inj Date : 04-AUG-2011 10:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-38-02
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:52 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

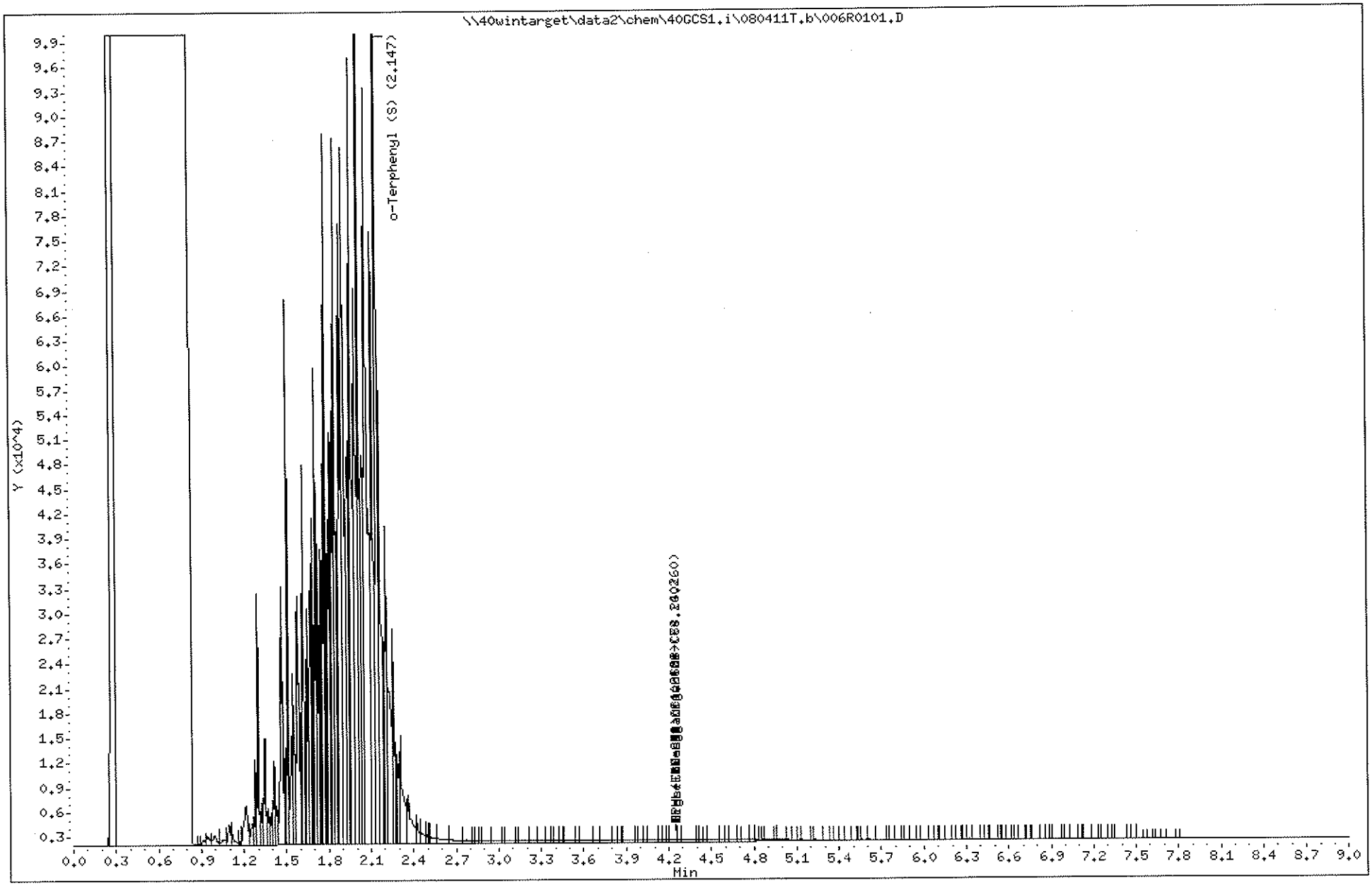
						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			3478740	1000.00	1002.16
S	11 TPH (C12-C36)	1.050-7.470			3478740	1000.00	1002.16
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			3478740	1000.00	1002.16
S	3 High End Organics (C8-C34)	1.050-7.470			3478740	1000.00	1002.16
S	4 TPH (C08-C36)	1.050-7.470			3478740	1000.00	1002.16
S	5 TPH (C08-C40)	1.050-7.470			3478740	1000.00	1002.16
S	6 TPH (C10-C12)	1.050-7.470			3478740	1000.00	1002.16
S	7 TPH (C10-C20)	1.050-7.470			3478740	1000.00	1002.16
S	8 TPH - Diesel (C10-C28)	1.480-2.730			3478740	1000.00	1002.16(T)
S	9 TPH (C10-C40)	1.050-7.470			3478740	1000.00	1002.16
S	10 TPH (C12-C20)	1.050-7.470			3478740	1000.00	1002.16
S	12 TPH (C16-C28)	1.050-7.470			3478740	1000.00	1002.16
S	13 TPH (C16-C40)	1.050-7.470			3478740	1000.00	1002.16
S	14 TPH (C20-C34)	1.050-7.470			3478740	1000.00	1002.16
$	15 o-Terphenyl (S)	2.146	2.146	0.000	278558	50.0000	53.43

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Date : 04-AUG-2011 11:04
Client ID: 500 2860-38-03
Sample Info: 500 2860-38-03
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Lab Smp Id: 500 2860-38-03 Client Smp ID: 500 2860-38-03
Inj Date : 04-AUG-2011 11:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-38-03
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:04 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

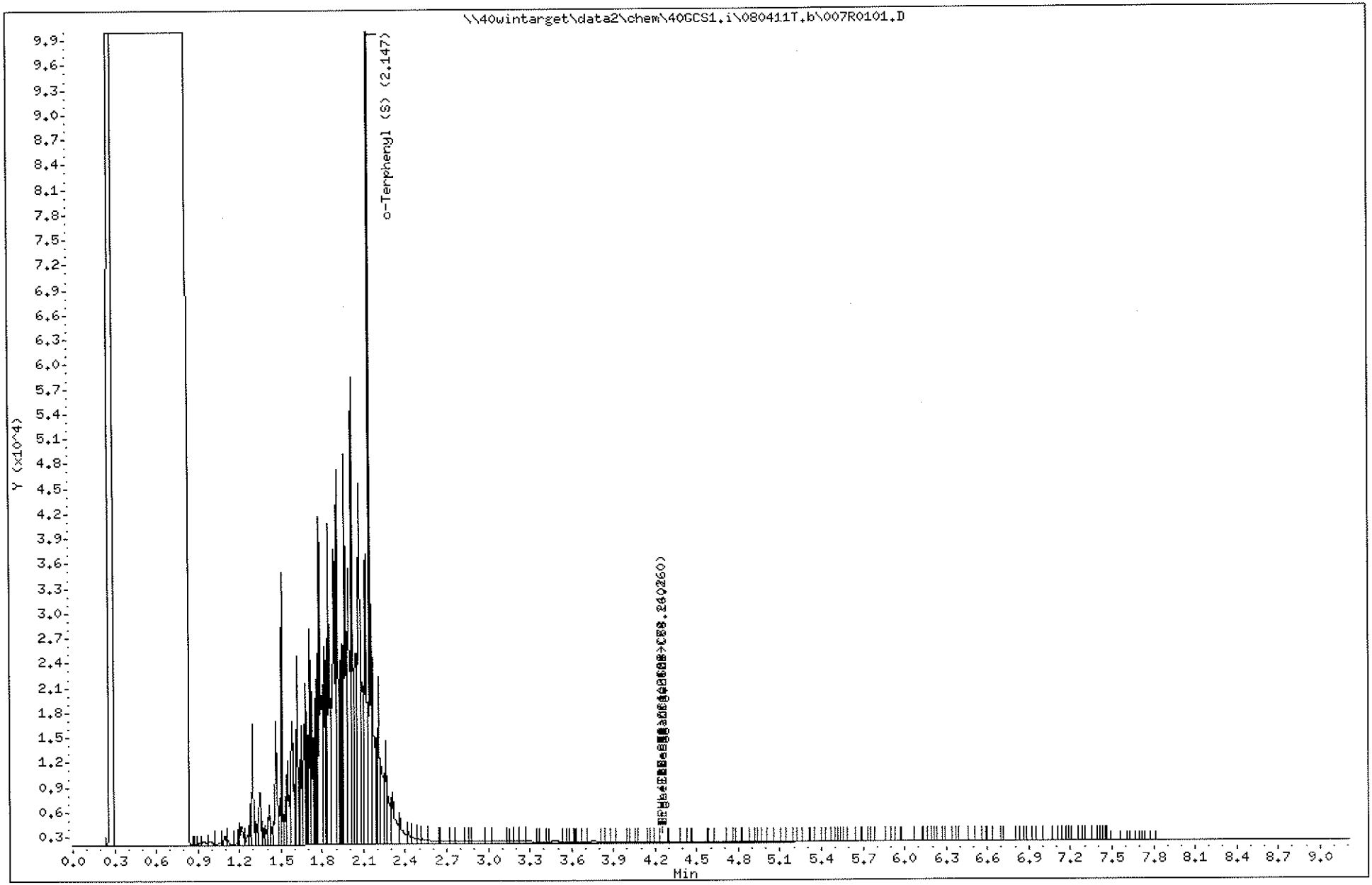
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			1793180	500.000	508.13
S 11 TPH (C12-C36)	1.050-7.470			1793180	500.000	508.13
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			1793180	500.000	508.13
S 3 High End Organics (C8-C34)	1.050-7.470			1793180	500.000	508.13
S 4 TPH (C08-C36)	1.050-7.470			1793180	500.000	508.13
S 5 TPH (C08-C40)	1.050-7.470			1793180	500.000	508.13
S 6 TPH (C10-C12)	1.050-7.470			1793180	500.000	508.13
S 7 TPH (C10-C20)	1.050-7.470			1793180	500.000	508.13
S 8 TPH - Diesel (C10-C28)	1.480-2.730			1793180	500.000	508.13(T)
S 9 TPH (C10-C40)	1.050-7.470			1793180	500.000	508.13
S 10 TPH (C12-C20)	1.050-7.470			1793180	500.000	508.13
S 12 TPH (C16-C28)	1.050-7.470			1793180	500.000	508.13
S 13 TPH (C16-C40)	1.050-7.470			1793180	500.000	508.13
S 14 TPH (C20-C34)	1.050-7.470			1793180	500.000	508.13
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	295515	50.0000	56.68

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Date : 04-AUG-2011 11:16
Client ID: 250 2860-38-04
Sample Info: 250 2860-38-04
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Lab Smp Id: 250 2860-38-04 Client Smp ID: 250 2860-38-04
Inj Date : 04-AUG-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-38-04
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:16 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			903980	250.000	247.50
S	11 TPH (C12-C36)	1.050-7.470			903980	250.000	247.50
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			903980	250.000	247.50
S	3 High End Organics (C8-C34)	1.050-7.470			903980	250.000	247.50
S	4 TPH (C08-C36)	1.050-7.470			903980	250.000	247.50
S	5 TPH (C08-C40)	1.050-7.470			903980	250.000	247.50
S	6 TPH (C10-C12)	1.050-7.470			903980	250.000	247.50
S	7 TPH (C10-C20)	1.050-7.470			903980	250.000	247.50
S	8 TPH - Diesel (C10-C28)	1.480-2.730			903980	250.000	247.50(T)
S	9 TPH (C10-C40)	1.050-7.470			903980	250.000	247.50
S	10 TPH (C12-C20)	1.050-7.470			903980	250.000	247.50
S	12 TPH (C16-C28)	1.050-7.470			903980	250.000	247.50
S	13 TPH (C16-C40)	1.050-7.470			903980	250.000	247.50
S	14 TPH (C20-C34)	1.050-7.470			903980	250.000	247.50
$	15 o-Terphenyl (S)	2.146	2.146	0.000	250305	50.0000	48.01

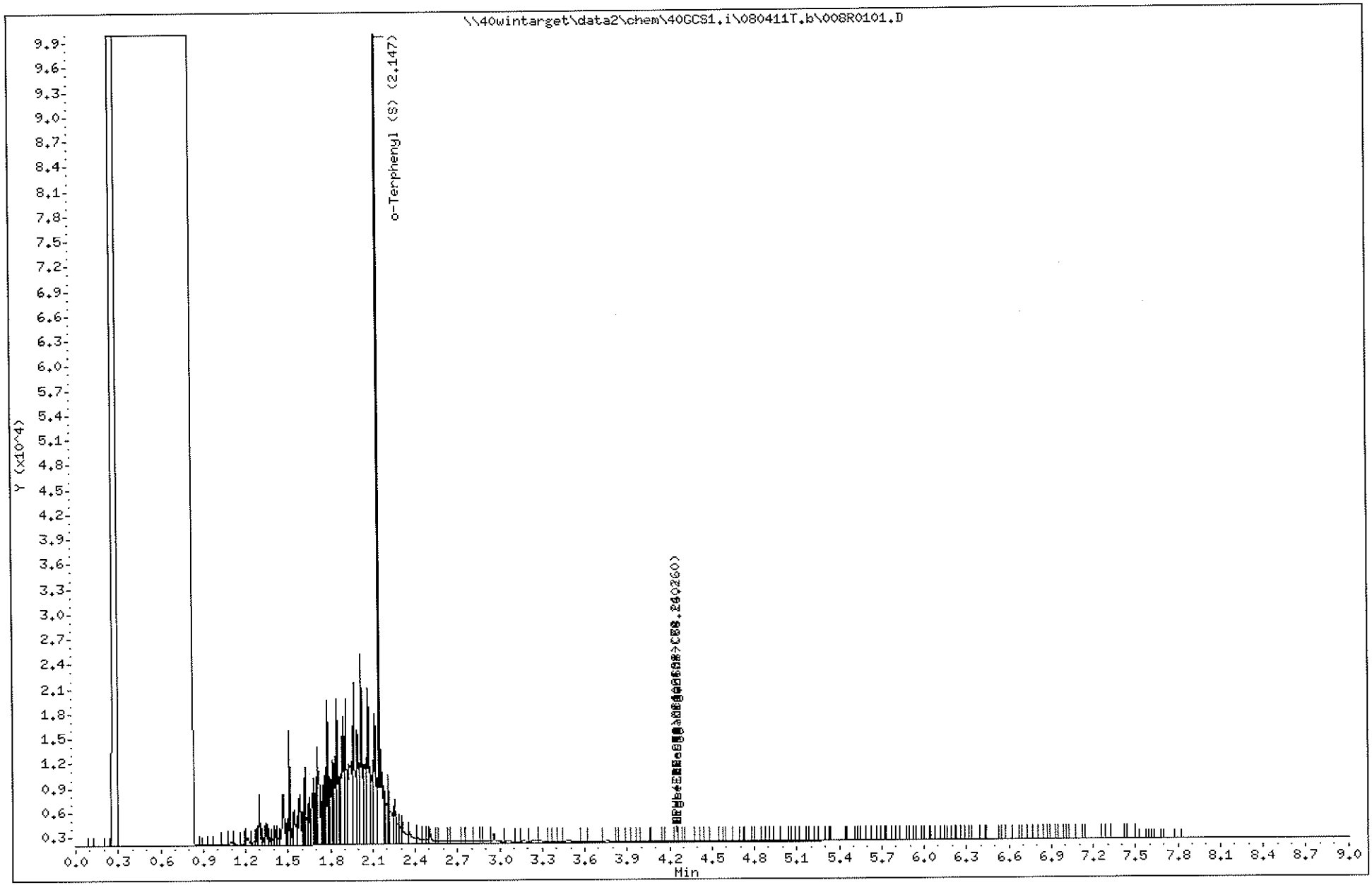
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Date : 04-AUG-2011 11:29
Client ID: 100 2860-38-05
Sample Info: 100 2860-38-05
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Lab Smp Id: 100 2860-38-05 Client Smp ID: 100 2860-38-05
Inj Date : 04-AUG-2011 11:29
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-38-05
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:29 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			400376	100.000	99.89(a)
S	11 TPH (C12-C36)	1.050-7.470			400376	100.000	99.89(a)
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			400376	100.000	99.89(a)
S	3 High End Organics (C8-C34)	1.050-7.470			400376	100.000	99.89(a)
S	4 TPH (C08-C36)	1.050-7.470			400376	100.000	99.89(a)
S	5 TPH (C08-C40)	1.050-7.470			400376	100.000	99.89(a)
S	6 TPH (C10-C12)	1.050-7.470			400376	100.000	99.89(a)
S	7 TPH (C10-C20)	1.050-7.470			400376	100.000	99.89(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.730			400376	100.000	99.89(T)
S	9 TPH (C10-C40)	1.050-7.470			400376	100.000	99.89(a)
S	10 TPH (C12-C20)	1.050-7.470			400376	100.000	99.89(a)
S	12 TPH (C16-C28)	1.050-7.470			400376	100.000	99.89(a)
S	13 TPH (C16-C40)	1.050-7.470			400376	100.000	99.89(a)
S	14 TPH (C20-C34)	1.050-7.470			400376	100.000	99.89(a)
$	15 o-Terphenyl (S)	2.146	2.146	0.000	217595	50.0000	41.73

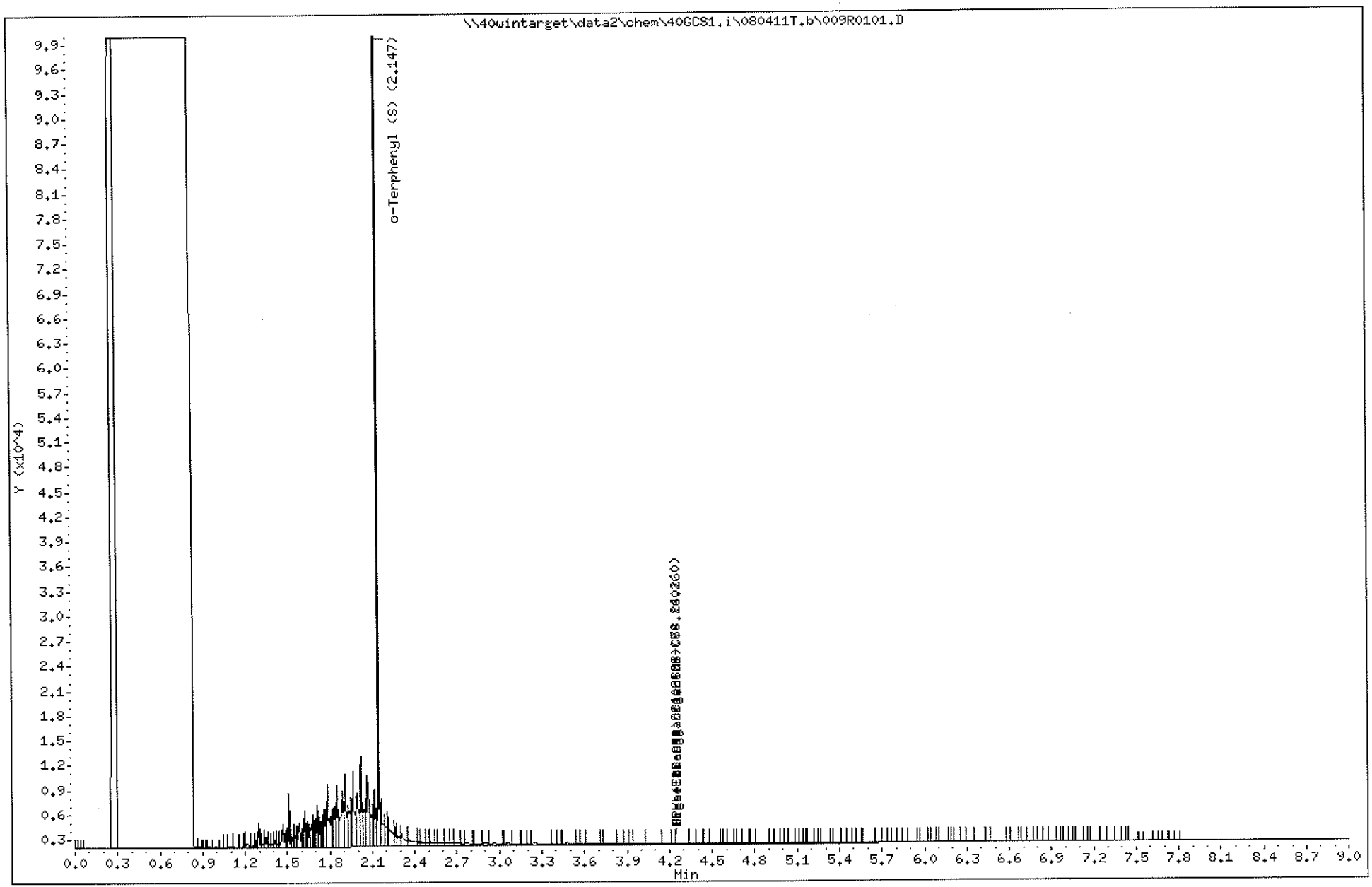
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Date : 04-AUG-2011 11:40
Client ID: 50 2860-38-06
Sample Info: 50 2860-38-06
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Lab Smp Id: 50 2860-38-06 Client Smp ID: 50 2860-38-06
Inj Date : 04-AUG-2011 11:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-38-06
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			212976	50.0000	44.97(a)
S	11 TPH (C12-C36)	1.050-7.470			212976	50.0000	44.97(a)
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			212976	50.0000	44.97(a)
S	3 High End Organics (C8-C34)	1.050-7.470			212976	50.0000	44.97(a)
S	4 TPH (C08-C36)	1.050-7.470			212976	50.0000	44.97(a)
S	5 TPH (C08-C40)	1.050-7.470			212976	50.0000	44.97(a)
S	6 TPH (C10-C12)	1.050-7.470			212976	50.0000	44.97(a)
S	7 TPH (C10-C20)	1.050-7.470			212976	50.0000	44.97(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.730			212976	50.0000	44.97(T)
S	9 TPH (C10-C40)	1.050-7.470			212976	50.0000	44.97(a)
S	10 TPH (C12-C20)	1.050-7.470			212976	50.0000	44.97(a)
S	12 TPH (C16-C28)	1.050-7.470			212976	50.0000	44.97(a)
S	13 TPH (C16-C40)	1.050-7.470			212976	50.0000	44.97(a)
S	14 TPH (C20-C34)	1.050-7.470			212976	50.0000	44.97(a)
$	15 o-Terphenyl (S)	2.146	2.146	0.000	225892	50.0000	43.32

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

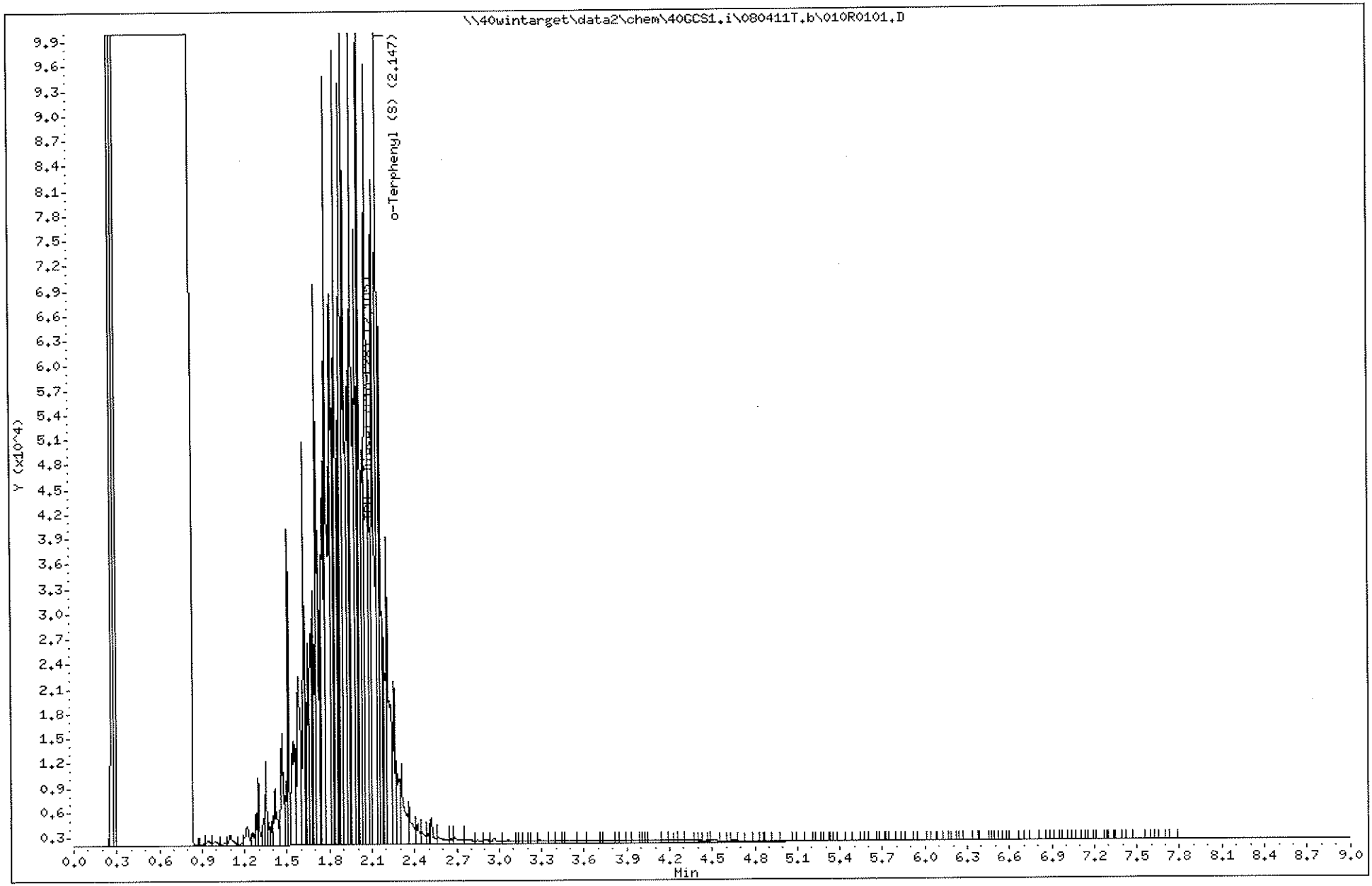
Instrument ID: 40GCS1.i Injection Date: 04-AUG-2011 12:44
Lab File ID: 010R0101.D Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 10:42 11:40
Lab Sample ID: IC500 2860-38-07 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	490	0.00029	0.000	-1.92564	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00019	0.00019	0.000	-3.17607	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Date : 04-AUG-2011 12:44
Client ID: IC500 2860-38-07
Sample Info: IC500 2860-38-07
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Lab Smp Id: IC500 2860-38-07 Client Smp ID: IC500 2860-38-07
Inj Date : 04-AUG-2011 12:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-38-07
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.730			1732592	500.000	490.37
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	269216	50.0000	51.64

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

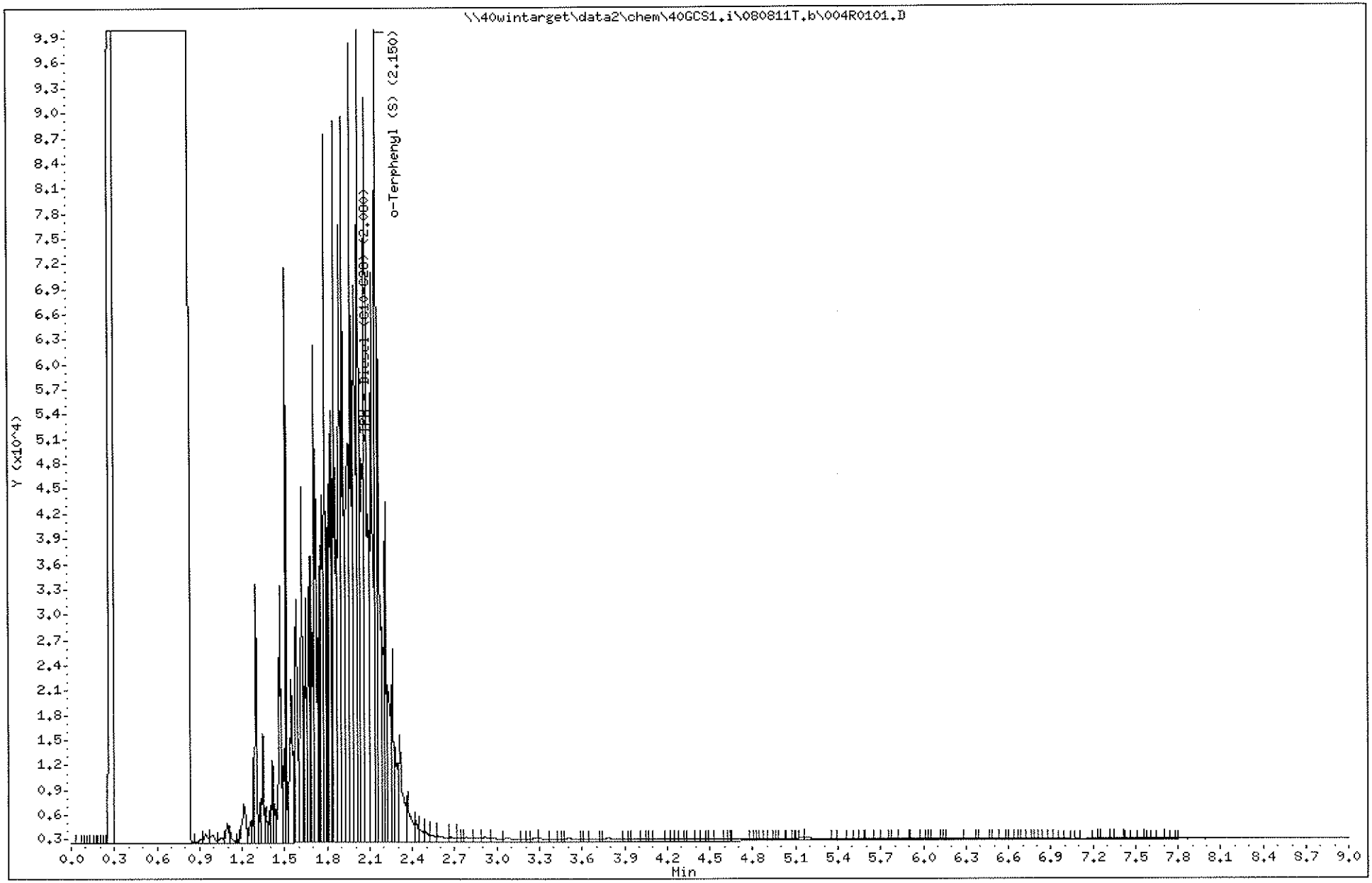
Instrument ID: 40GCS1.i
Lab File ID: 004R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 08:34
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	465	0.00030	0.000	-6.91679	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00021	0.00021	0.000	9.65048	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Date : 08-AUG-2011 08:34
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



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MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 08:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6316
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1647448	500.000	465.41
$ 15 o-Terphenyl (S)	2.150	2.146	0.004	237724	50.0000	45.59

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

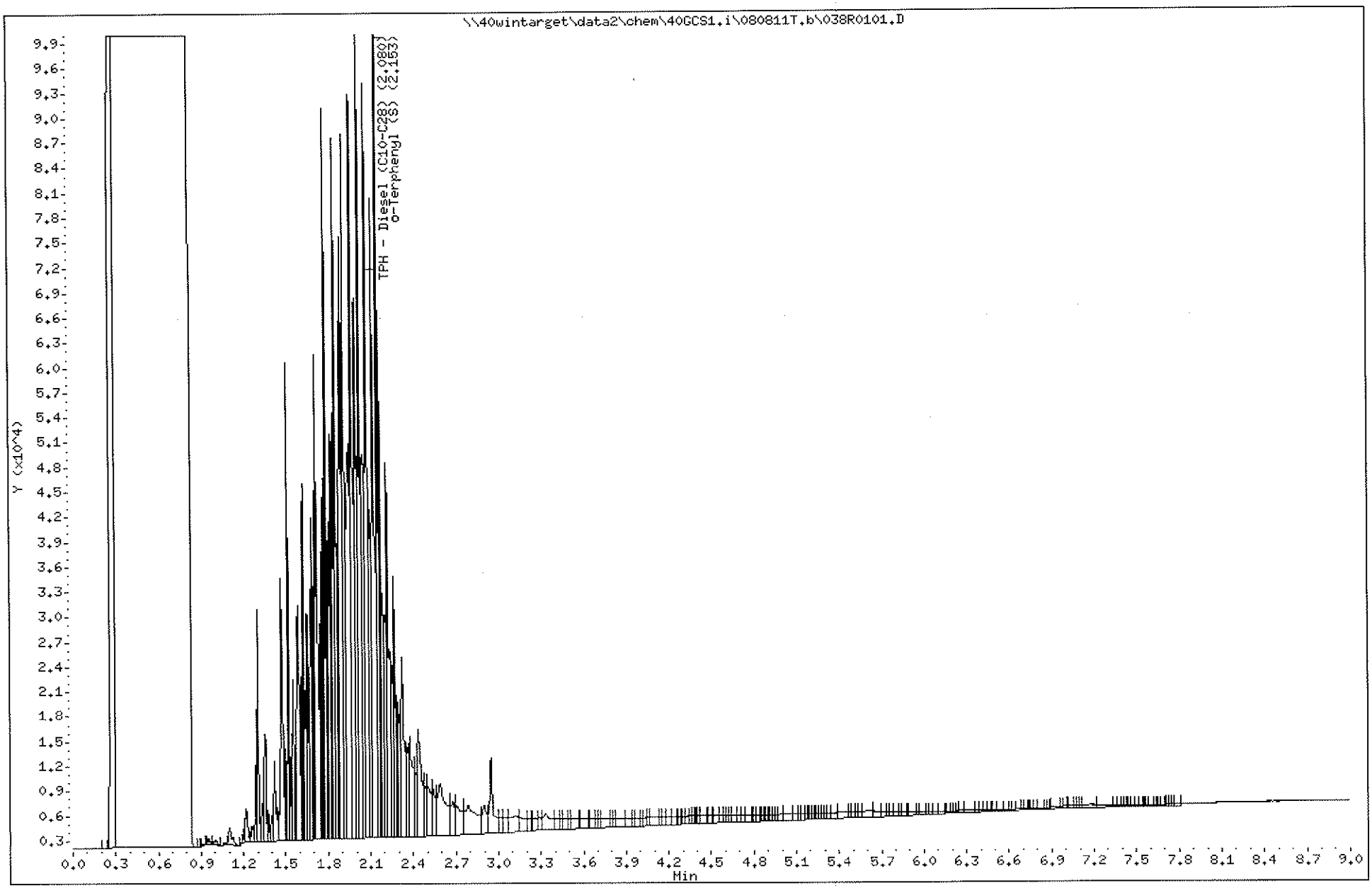
Instrument ID: 40GCS1.i
Lab File ID: 038R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 15:59
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	514	0.00028	0.000	2.81702	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00020	0.00020	0.000	2.90335	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Date : 08-AUG-2011 15:59
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 15:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:49 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 38 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1813497	500.000	514.08
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	253311	50.0000	48.58

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

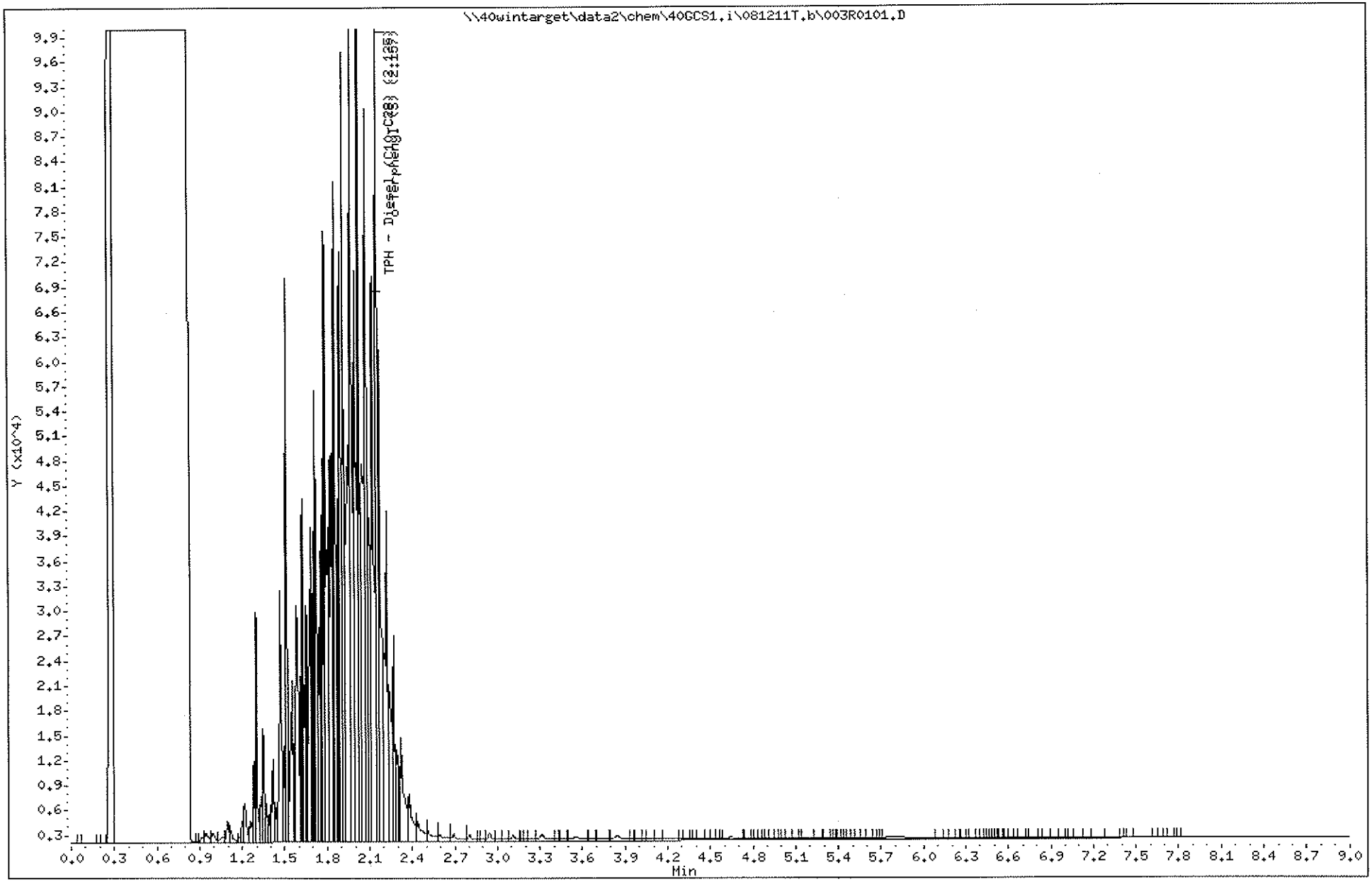
Instrument ID: 40GCS1.i
Lab File ID: 003R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\081211T.b\TPH.m

Injection Date: 12-AUG-2011 13:46
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	448	0.00031	0.000	-10.41735	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00021	0.00021	0.000	8.10165	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\081211T.b\003R0101.D
Date : 12-AUG-2011 13:46
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\081211T.b\003R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 12-AUG-2011 13:46
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6316
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\081211T.b\TPH.m
Meth Date : 09-May-2012 15:13 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.750			1587732	500.000	447.91
$ 15 o-Terphenyl (S)	2.156	2.146	0.010	241130	50.0000	46.25

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

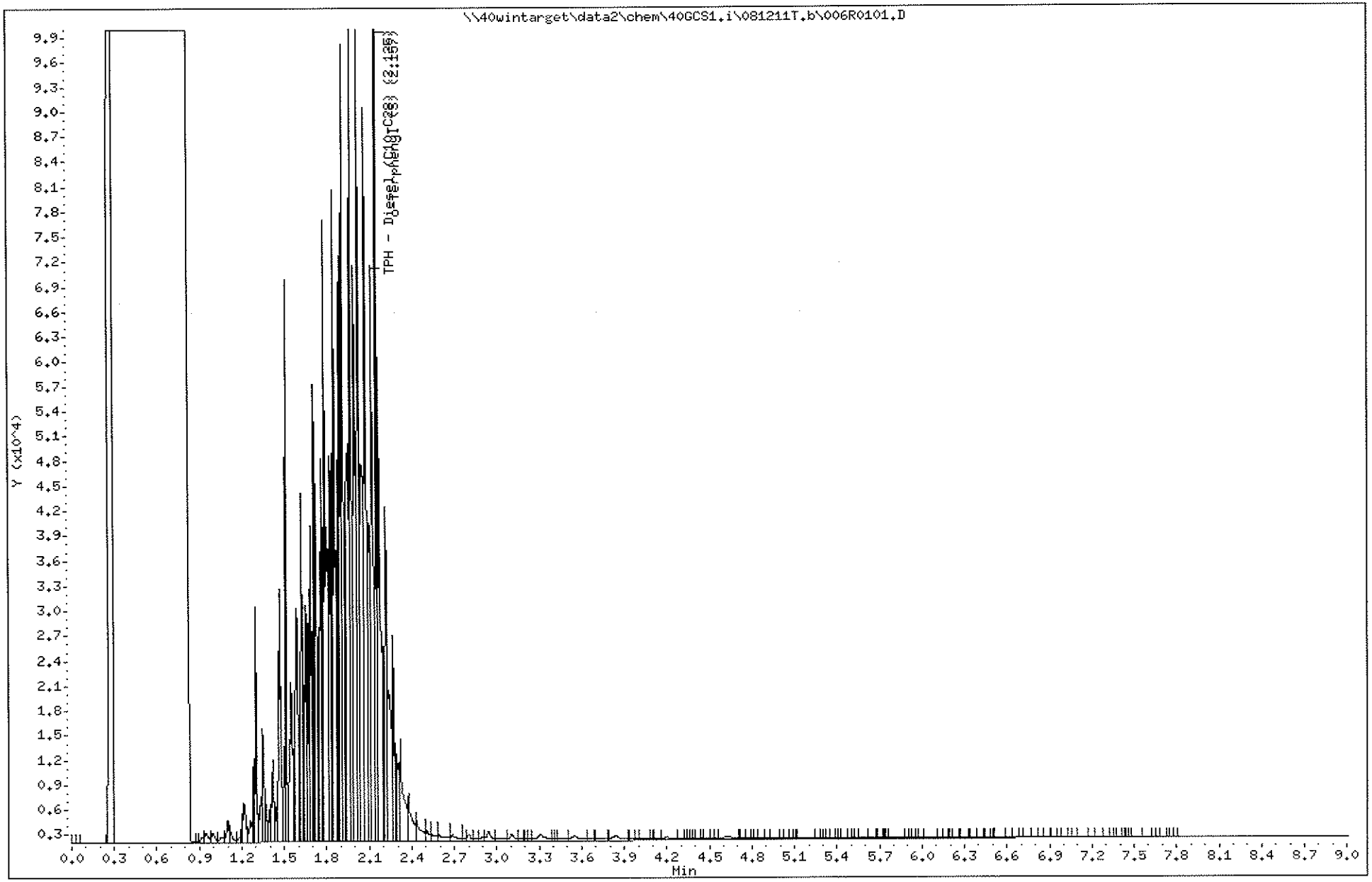
Instrument ID: 40GCS1.i
Lab File ID: 006R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\081211T.b\TPH.m

Injection Date: 12-AUG-2011 14:38
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	451	0.00031	0.000	-9.89141	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00021	0.00021	0.000	10.61882	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\081211T.b\006R0101.D
Date : 12-AUG-2011 14:38
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\081211T.b\006R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 12-AUG-2011 14:38
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6316
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\081211T.b\TPH.m
Meth Date : 09-May-2012 15:13 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.500-2.750			1596704	500.000	450.54
$ 15 o-Terphenyl (S)	2.156	2.146	0.010	235643	50.0000	45.20

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048244

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048244

QB Batch: OEXT/12029 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048244001, 4048244002, 4048244003, 4048244004, 4048244005, 4048244006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C40)	101	mg/kg	6.7	3.3	08/08/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	

Type	Sample	Matrix
BLANK	483016	Tissue

REPORT OF LABORATORY ANALYSIS

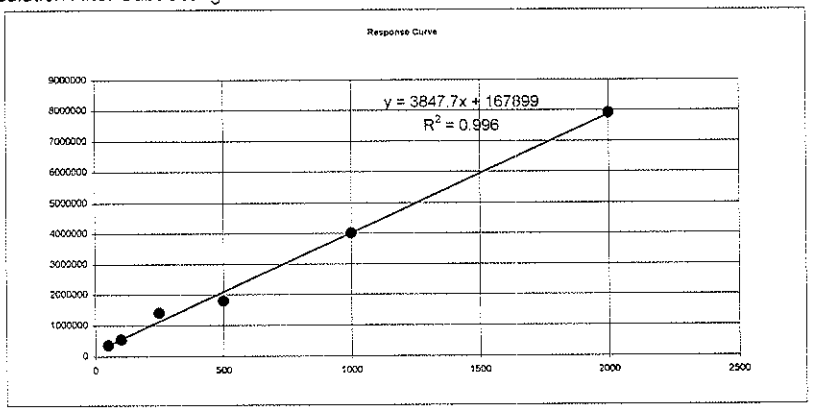
SampleID: 483016 File: 06R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



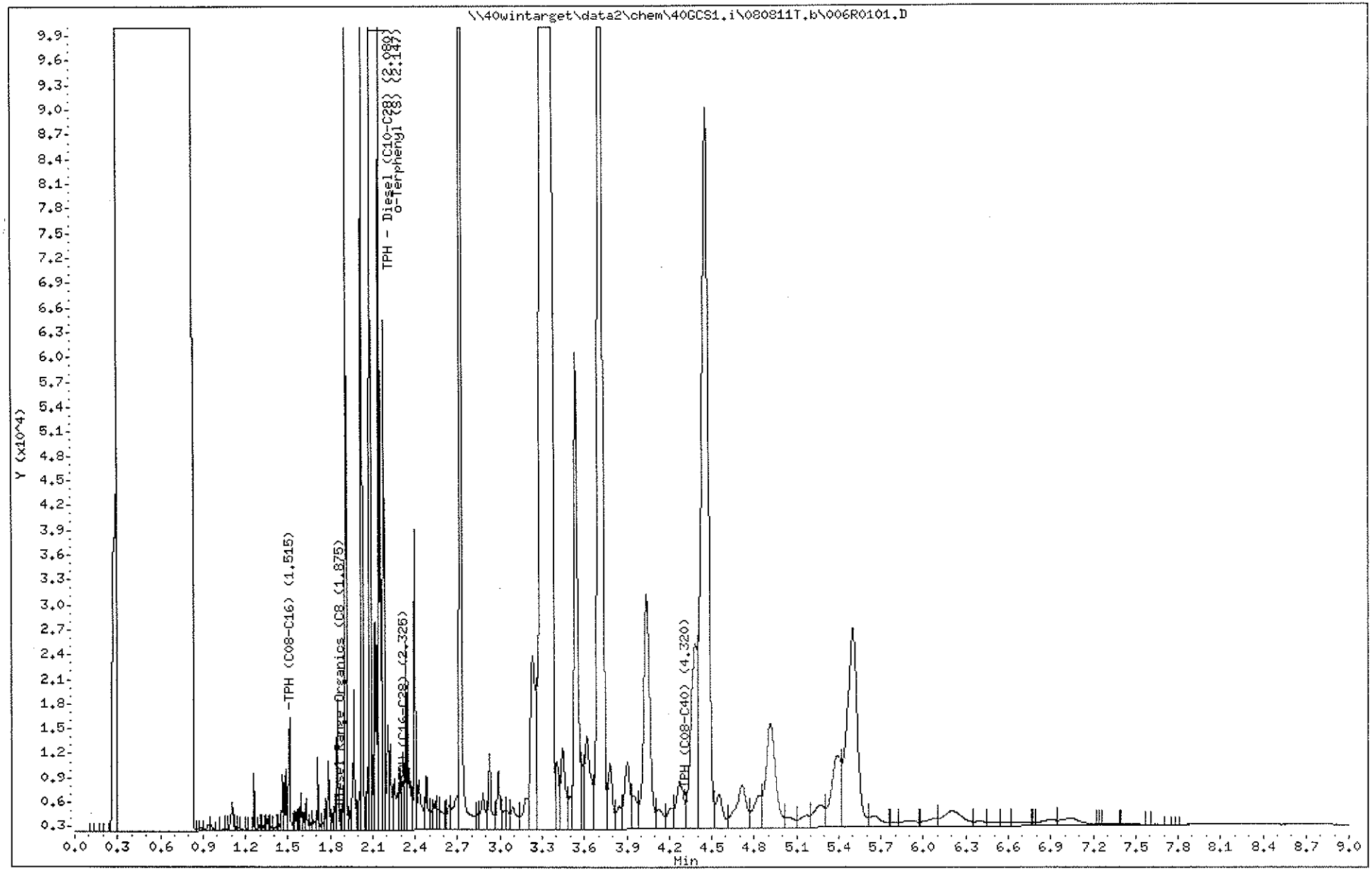
Retention Time	Peak Area	Compound Name
1.910	120198	
2.023	100039	
2.083	64991	
2.723	211870	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	218014	120198	-18.2142
Diesel Range Organics (	624183	285228	44.45663
TPH - Diesel (C10-C28)	610379	285228	40.86904
TPH (C16-C28)	423638	165030	23.57483
TPH (C08-C40)	6490918	497098	1514.129

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Date : 08-AUG-2011 09:05
Client ID: MB
Sample Info: 483016
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			6490918	1885.04	125.66
S	1 TPH (C08-C16)	1.040-1.990			218013	46.4479	3.09(a)
S	12 TPH (C16-C28)	1.940-2.710			423638	106.717	7.11
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			624182	165.496	11.03
S	8 TPH - Diesel (C10-C28)	1.450-2.710			610379	161.451	10.76
$	15 o-Terphenyl (S)	2.146	2.146	0.000	186162	35.7090	2.38

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.117	14	15	1.049	0.00		
0.183	21	15	0.701	0.00		
0.217	22	17	0.762	0.00		
0.293	71418	41400	0.580	0.01		
0.313	556833866	95605407	0.172	98.50		
0.867	203	199	0.980	0.00		
0.883	551	430	0.781	0.00		
0.937	1118	770	0.689	0.00		
0.957	1063	785	0.739	0.00		
1.000	196	115	0.587	0.00		
1.515	218014	446085	2.046	0.03	S	1 TPH (C08-C16)
1.875	624183	1060437	1.699	0.11	S	2 Diesel Range Organi
1.050	271	190	0.701			
1.070	261	266	1.020			
1.107	3649	3555	0.974			
1.130	459	568	1.239			
1.150	359	432	1.204			
1.173	223	264	1.187			
1.210	80	140	1.754			
1.227	41	44	1.073			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.260	3472	7079	2.039			
1.290	468	757	1.619			
1.310	578	901	1.558			
1.323	382	675	1.767			
1.337	290	653	2.249			
1.353	1290	1432	1.110			
1.373	203	456	2.242			
1.383	338	512	1.514			
1.407	503	497	0.989			
1.427	400	678	1.694			
1.443	537	856	1.595			
2.080	610379	1040482	1.705	0.10	S	8 TPH - Diesel (C10-C
1.460	4031	6932	1.720			
1.483	6173	7582	1.228			
1.513	10800	13678	1.266			
1.540	740	1228	1.660			
1.557	1592	2221	1.395			
1.570	868	1902	2.192			
1.580	838	1681	2.007			
1.593	3045	4583	1.505			
1.617	1340	2517	1.878			
1.627	3061	3950	1.290			
1.663	848	1009	1.190			
1.687	1637	1149	0.702			
1.710	4209	8906	2.116			
1.727	475	783	1.648			
1.753	1105	1197	1.083			
1.767	2352	3938	1.674			
1.787	7193	8542	1.188			
1.817	1479	2033	1.374			
1.833	2562	4302	1.679			
1.850	8709	15928	1.829			
1.880	788	1528	1.938			
1.890	2699	5431	2.012			
1.910	120198	312264	2.598			
1.940	1532	2397	1.564			
1.957	14771	8331	0.564			
1.987	1166	2118	1.816			
2.003	3315	4645	1.401			
2.023	100039	181793	1.817			
2.050	1759	3376	1.919			
2.067	6720	7818	1.163			
2.083	64991	163100	2.510			
2.103	5277	9285	1.760			
2.113	32676	25076	0.767			
2.180	38415	61853	1.610			
2.207	13472	12814	0.951			
2.223	10505	10654	1.014			
2.250	10672	6283	0.589			
2.293	5564	7571	1.361			
2.317	9395	9636	1.026			
2.333	12795	22904	1.790			
2.347	17814	18159	1.019			
2.397	20806	36415	1.750			
2.423	12027	6165	0.513			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.477	7711	6670	0.865				
2.513	2720	2318	0.852				
2.540	5034	3496	0.694				
2.557	3071	2665	0.868				
2.577	4819	2415	0.501				
2.617	2001	2035	1.017				
2.640	4041	2982	0.738				
2.700	10531	4224	0.401				
2.147	186162	388356	2.086	0.03	$	15	o-Terphenyl (S)
2.325	423638	627198	1.481	0.07	S	12	TPH (C16-C28)
4.320	6490918	3218044	0.496	1.15	S	5	TPH (C08-C40)
2.723	211870	250885	1.184				
2.840	2591	1935	0.747				
2.877	9194	4384	0.477				
2.927	13441	9421	0.701				
2.990	11956	7151	0.598				
3.033	3581	2277	0.636				
3.053	3409	2270	0.666				
3.090	8162	2822	0.346				
3.193	10294	3831	0.372				
3.233	54060	21152	0.391				
3.373	4074338	1352562	0.332				
3.407	12875	8399	0.652				
3.447	23815	10015	0.421				
3.497	5369	4023	0.749				
3.543	108162	57797	0.534				
3.587	7773	7935	1.021				
3.620	33085	11424	0.345				
3.723	338962	151040	0.446				
3.783	18107	8081	0.446				
3.847	6485	2807	0.433				
3.903	22488	8330	0.370				
3.950	11041	4082	0.370				
4.040	85837	28418	0.331				
4.127	7610	2405	0.316				
4.217	7113	2490	0.350				
4.273	20986	5700	0.272				
4.383	70330	22478	0.320				
4.460	297795	87280	0.293				
4.550	14254	4068	0.285				
4.713	28486	5218	0.183				
4.833	14736	3885	0.264				
4.920	63525	12782	0.201				
5.050	5548	1285	0.232				
5.173	7364	1490	0.202				
5.277	14887	2727	0.183				
5.393	42058	8814	0.210				
5.503	125086	24172	0.193				
5.653	8453	1404	0.166				
5.767	491	492	1.001				
5.813	1675	545	0.325				
5.900	5234	707	0.135				
5.970	446	560	1.257				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.097	5734	976	0.170		
6.197	18884	1888	0.100		
6.383	2884	553	0.192		
6.453	2762	501	0.181		
6.550	1769	421	0.238		
6.703	3651	459	0.126		
6.763	235	396	1.687		
6.793	626	400	0.639		
6.900	5311	675	0.127		
7.047	8794	863	0.098		
7.237	275	198	0.721		
7.257	156	200	1.283		
7.287	1323	206	0.156		
7.393	103	127	1.239		
7.413	1119	128	0.114		
7.587	141	73	0.518		
7.623	401	74	0.185	0.00	
7.707	151	58	0.383	0.00	
7.767	60	46	0.762	0.00	
7.797	95	52	0.550	0.00	
	563586260	99255783		100.000	

Total unknown % area = 98.51

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048244

QB Batch: OEXT/12036 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048244001, 4048244002, 4048244003, 4048244004, 4048244005, 4048244006

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.43	%			07/29/11	

Type	Sample	Matrix
BLANK	483156	Tissue

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048244

QB Batch: OEXT/12029
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

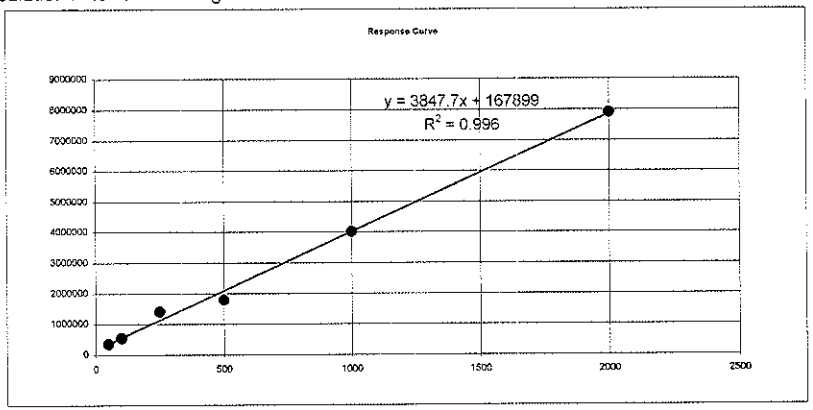
SampleID: 483017 File: 26R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.913	81017	
2.027	88001	
2.087	48403	
2.740	70987	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	513513	81017	68.76749
Diesel Range Organics (	1107222	217421	187.6188
TPH - Diesel (C10-C28)	1091471	217421	183.5252
TPH (C16-C28)	684076	136404	98.70117
TPH (C08-C40)	3179742	288408	707.8076

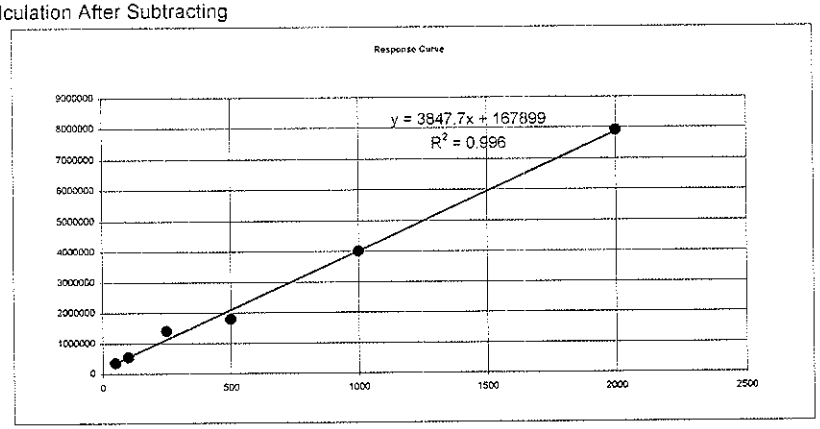
SampleID: 483018 File: 27R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



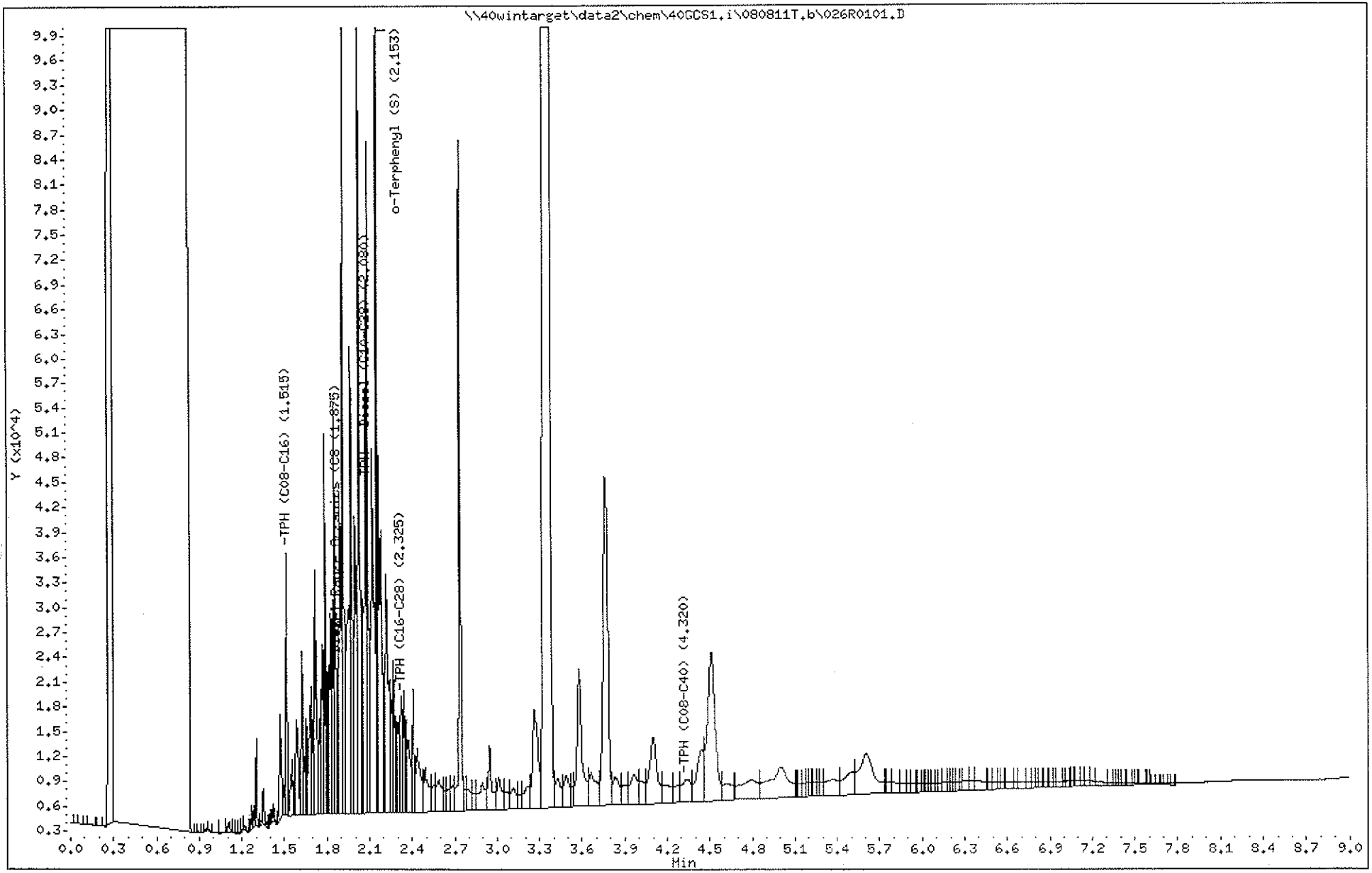
Retention Time	Peak Area	Compound Name
1.913	86364	
2.027	92572	
2.087	49444	
2.743	72593	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	562144	86364	80.01678
Diesel Range Organics (	1150605	228380	196.0457
TPH - Diesel (C10-C28)	1133743	228380	191.6633
TPH (C16-C28)	687056	142016	98.01713
TPH (C08-C40)	2984092	300973	653.6935

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Date : 08-AUG-2011 13:04
Client ID: MBLCS
Sample Info: 483017X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			3179742	914.532	182.90
S 1 TPH (C08-C16)	1.040-1.990			513513	133.059	26.61
S 12 TPH (C16-C28)	1.940-2.710			684075	183.051	36.61
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			1107222	307.076	61.41
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1091470	302.459	60.49(R)
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	70769	13.5747	0.90

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.023	14	9	0.662	0.00		
0.090	18	15	0.847	0.00		
0.117	44	12	0.275	0.00		
0.190	24	11	0.458	0.00		
0.283	266192	129517	0.487	0.04		
0.317	552350005	94104610	0.170	98.79		
0.893	63	83	1.309	0.00		
0.947	262	278	1.063	0.00		
0.967	72	84	1.175	0.00		
1.515	513513	675781	1.316	0.09	S	1 TPH (C08-C16)
1.875	1107222	1269076	1.146	0.19	S	2 Diesel Range Organi
1.057	87	64	0.736			
1.110	1485	1254	0.844			
1.137	59	113	1.909			
1.157	44	74	1.701			
1.180	52	102	1.954			
1.200	47	125	2.660			
1.217	677	602	0.889			
1.267	1460	2924	2.002			
1.283	1051	2592	2.465			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.300	5197	10462	2.013			
1.333	289	458	1.583			
1.350	3191	4275	1.340			
1.370	418	688	1.647			
1.400	145	235	1.624			
1.417	1313	2175	1.657			
1.433	236	564	2.390			
2.080	1091471	1242369	1.138	0.19	S	8 TPH - Diesel (C10-C
1.470	12903	12603	0.977			
1.497	2159	3629	1.681			
1.513	14050	31688	2.255			
1.540	8112	3657	0.451			
1.570	1047	2790	2.665			
1.587	13674	11491	0.840			
1.623	15563	19802	1.272			
1.643	4646	7051	1.518			
1.653	7532	11634	1.545			
1.677	11078	13234	1.195			
1.690	14600	15473	1.060			
1.713	27549	29428	1.068			
1.747	7177	11507	1.603			
1.757	23635	15073	0.638			
1.787	24655	45718	1.854			
1.800	9316	16233	1.743			
1.810	12266	18002	1.468			
1.823	19437	24235	1.247			
1.840	15526	25896	1.668			
1.853	34044	49420	1.452			
1.873	6638	17415	2.623			
1.893	40774	38698	0.949			
1.913	81017	143558	1.772			
1.947	46129	24595	0.533			
1.970	44237	56244	1.271			
1.997	47190	35790	0.758			
2.027	88001	121667	1.383			
2.050	19548	24762	1.267			
2.073	45913	51177	1.115			
2.087	48403	80928	1.672			
2.123	70248	43754	0.623			
2.167	58451	42945	0.735			
2.207	16342	17754	1.086			
2.217	33294	28758	0.864			
2.243	16044	14663	0.914			
2.267	15454	18295	1.184			
2.287	7948	10404	1.309			
2.300	9822	10788	1.098			
2.320	14188	14018	0.988			
2.340	10996	14675	1.335			
2.353	9309	11508	1.236			
2.373	12659	8625	0.681			
2.407	12912	14736	1.141			
2.437	16990	7579	0.446			
2.490	12271	5228	0.426			
2.553	5460	3179	0.582			
2.587	10579	3825	0.362			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.627	2501	2516	1.006				
2.657	4112	2651	0.645				
2.680	5074	3070	0.605				
2.153	70769	164785	2.328	0.01	$	15	o-Terphenyl (S)
2.325	684076	674134	0.985	0.12	S	12	TPH (C16-C28)
4.320	3179742	2230237	0.701	0.57	S	5	TPH (C08-C40)
2.740	70987	80760	1.138				
2.767	2555	2612	1.022				
2.797	6558	2568	0.392				
2.830	3235	2060	0.637				
2.897	10465	3287	0.314				
2.947	14286	7646	0.535				
3.013	9195	3912	0.425				
3.057	4741	2026	0.427				
3.113	7400	2499	0.338				
3.160	2401	1728	0.720				
3.220	8357	2615	0.313				
3.263	31867	11937	0.375				
3.373	1304247	628244	0.482				
3.427	8778	3399	0.387				
3.487	11183	3714	0.332				
3.537	2895	2476	0.855				
3.577	40885	16567	0.405				
3.663	14678	4049	0.276				
3.763	90190	39402	0.437				
3.833	10402	3312	0.318				
3.903	6761	2317	0.343				
3.967	12893	3600	0.279				
4.013	7851	2714	0.346				
4.097	30844	7904	0.256				
4.187	8738	2170	0.248				
4.270	5902	1999	0.339				
4.340	13036	2683	0.206				
4.440	20990	6200	0.295				
4.513	70951	17861	0.252				
4.617	9596	1990	0.207				
4.680	956	1586	1.658				
4.797	19607	2275	0.116				
5.000	35336	3687	0.104				
5.107	984	1639	1.665				
5.120	1302	1631	1.253				
5.150	2951	1648	0.558				
5.177	2624	1646	0.627				
5.190	1314	1645	1.252				
5.210	1975	1649	0.835				
5.220	991	1655	1.670				
5.240	2692	1696	0.630				
5.267	2706	1697	0.627				
5.297	3044	1701	0.559				
5.370	11528	1869	0.162				
5.510	15682	2757	0.176				
5.603	36249	4854	0.134				
5.740	530	1327	2.503				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.757	2882	1320	0.458		
5.787	4217	1292	0.306		
5.843	3195	1176	0.368		
5.890	2191	1106	0.505		
5.920	2142	1083	0.506		
5.963	1049	1049	1.000		
5.987	1670	1051	0.629		
6.010	1259	1050	0.834		
6.020	627	1051	1.677		
6.030	1041	1050	1.008		
6.053	1030	1032	1.002		
6.073	1849	1031	0.558		
6.097	1232	1036	0.841		
6.137	2083	1066	0.512		
6.173	2367	1097	0.463		
6.187	877	1104	1.260		
6.207	1337	1114	0.834		
6.223	1342	1127	0.840		
6.240	2252	1135	0.504		
6.273	895	1122	1.254		
6.317	3753	1208	0.322		
6.337	2852	1204	0.422		
6.377	5100	1143	0.224		
6.457	579	962	1.662		
6.470	1504	949	0.631		
6.490	371	930	2.507		
6.510	1846	928	0.503		
6.543	1281	921	0.719		
6.560	1618	912	0.564		
6.587	531	888	1.672		
6.620	2793	874	0.313		
6.653	1666	850	0.510		
6.690	2369	812	0.343		
6.743	2077	755	0.364		
6.783	1134	715	0.631		
6.807	554	698	1.260		
6.840	1372	699	0.509		
6.857	551	692	1.256		
6.877	827	693	0.838		
6.893	687	690	1.005		
6.917	1212	678	0.559		
6.937	661	663	1.003		
6.987	1994	688	0.345		
7.003	806	681	0.845		
7.023	802	675	0.841		
7.043	534	671	1.258		
7.057	929	672	0.724		
7.073	266	671	2.521		
7.087	1496	684	0.457		
7.123	1317	670	0.509		
7.163	1254	633	0.505		
7.187	1428	617	0.432		
7.223	2478	574	0.232		
7.317	721	347	0.481		
7.357	232	293	1.262		
7.367	399	297	0.744		
7.390	272	278	1.022		

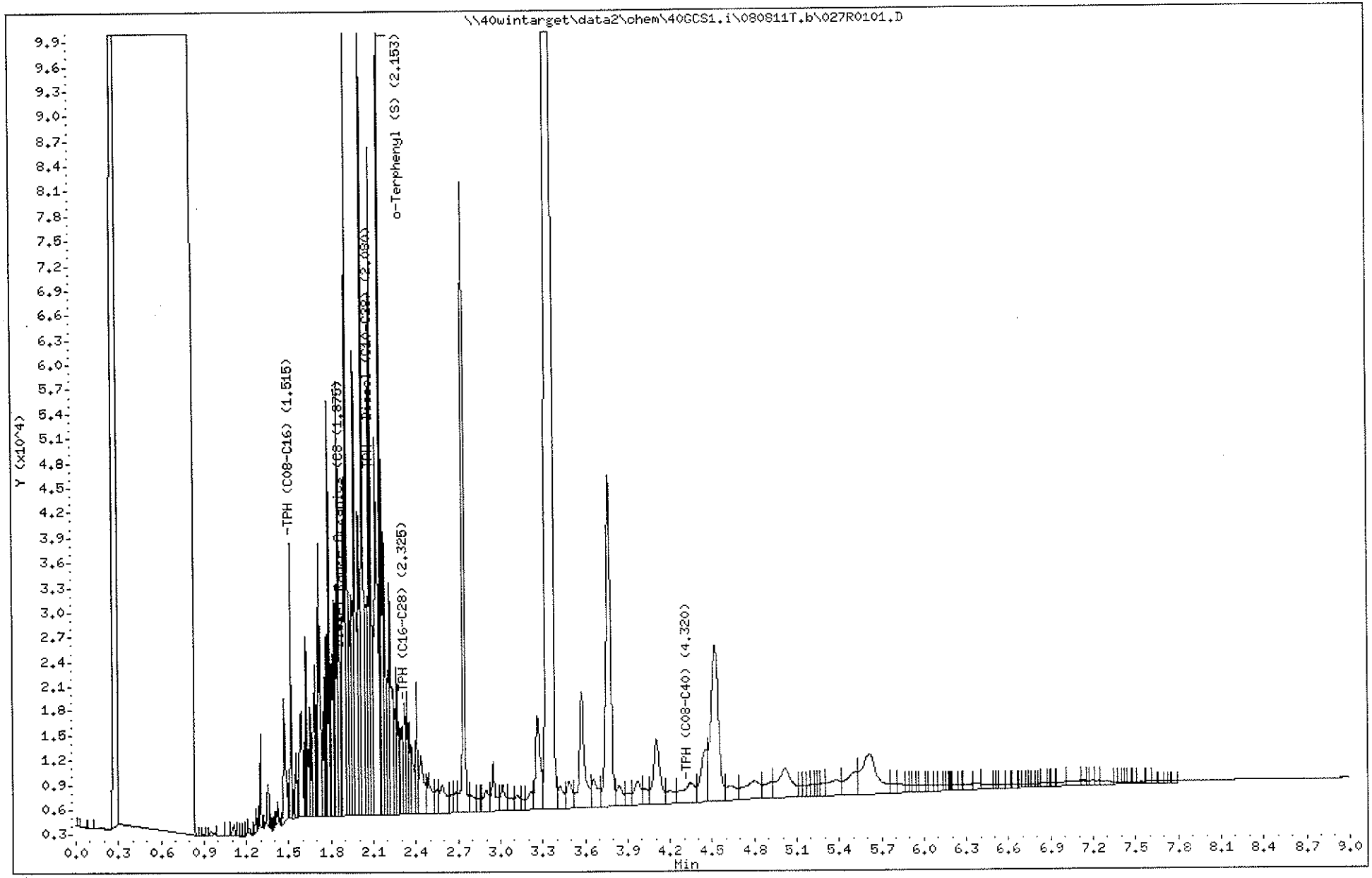
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.420	433	280	0.647		
7.437	220	281	1.275		
7.467	741	292	0.394		
7.490	280	286	1.020		
7.510	223	283	1.268		
7.520	281	287	1.021		
7.540	669	288	0.431		
7.583	265	268	1.013		
7.597	272	276	1.015		
7.610	220	281	1.275	0.00	
7.623	438	277	0.633	0.00	
7.650	504	280	0.556	0.00	
7.677	164	275	1.676	0.00	
7.693	283	286	1.011	0.00	
7.707	474	304	0.642	0.00	
7.740	425	317	0.746	0.00	
7.760	440	321	0.730	0.00	
7.783	310	315	1.016	0.00	
	555870461	96632297		100.000	

Total unknown % area = 98.83

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Date : 08-AUG-2011 13:16
Client ID: MBLCSD
Sample Info: 483018X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			2984092	857.187	171.43
S 1 TPH (C08-C16)	1.040-1.990			562144	147.313	29.46
S 12 TPH (C16-C28)	1.940-2.710			687056	183.925	36.78
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			1150604	319.791	63.95
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1133743	314.849	62.96(R)
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	73287	14.0577	0.93

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.017	10	12	1.188	0.00		
0.083	14	15	1.056	0.00		
0.100	28	22	0.775	0.00		
0.283	265583	126998	0.478	0.04		
0.317	554663241	93690131	0.169	98.80		
0.897	70	84	1.207	0.00		
0.950	631	405	0.642	0.00		
1.515	562144	798731	1.421	0.10	S	1 TPH (C08-C16)
1.875	1150605	1430450	1.243	0.20	S	2 Diesel Range Organi
1.060	89	60	0.678			
1.113	1456	1378	0.946			
1.140	61	133	2.188			
1.160	43	73	1.682			
1.183	64	102	1.596			
1.203	103	128	1.249			
1.217	735	665	0.905			
1.267	1443	2952	2.045			
1.283	1120	2738	2.445			
1.300	5748	11278	1.962			
1.337	282	359	1.272			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.350	3535	4926	1.394			
1.373	393	709	1.802			
1.390	27	91	3.421			
1.400	84	240	2.844			
1.420	1418	2501	1.764			
1.433	261	638	2.444			
2.080	1133743	1401479	1.236	0.20	S	8 TPH - Diesel (C10-C
1.470	15170	15045	0.992			
1.497	2034	4135	2.033			
1.513	16045	33304	2.076			
1.543	3291	4279	1.300			
1.553	6115	7786	1.273			
1.570	1230	3275	2.663			
1.587	15904	12797	0.805			
1.613	3967	8994	2.267			
1.623	13823	21848	1.581			
1.643	5365	8170	1.523			
1.653	8661	13199	1.524			
1.677	12407	15013	1.210			
1.690	10406	18409	1.769			
1.703	6137	11740	1.913			
1.713	30827	33111	1.074			
1.747	7902	12773	1.616			
1.757	12387	16864	1.361			
1.770	13730	22102	1.610			
1.787	26674	50187	1.882			
1.800	10188	17871	1.754			
1.810	13425	19706	1.468			
1.823	21007	26143	1.244			
1.840	16808	28140	1.674			
1.853	36476	52613	1.442			
1.873	10671	18598	1.743			
1.893	39675	41124	1.037			
1.913	86364	144463	1.673			
1.947	27764	25582	0.921			
1.957	20278	26151	1.290			
1.970	50553	56338	1.114			
1.997	44730	36794	0.823			
2.027	92572	130424	1.409			
2.053	30149	25561	0.848			
2.073	37042	51960	1.403			
2.087	49444	80834	1.635			
2.123	72223	45717	0.633			
2.167	37904	43003	1.135			
2.187	23867	32887	1.378			
2.207	13107	17573	1.341			
2.217	32732	28236	0.863			
2.243	15287	13756	0.900			
2.267	15009	17912	1.193			
2.287	7566	9962	1.317			
2.300	9391	10529	1.121			
2.320	15044	13488	0.897			
2.340	9035	14979	1.658			
2.357	8972	11088	1.236			
2.373	11722	8065	0.688			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.407	12686	16114	1.270				
2.437	15388	7052	0.458				
2.490	10405	4843	0.465				
2.553	5304	2840	0.535				
2.587	11196	3324	0.297				
2.657	3926	2265	0.577				
2.680	3759	2513	0.668				
2.153	73288	173880	2.373	0.01	$	15	o-Terphenyl (S)
2.325	687056	739790	1.077	0.12	S	12	TPH (C16-C28)
4.320	2984092	2306782	0.773	0.53	S	5	TPH (C08-C40)
2.743	72593	76306	1.051				
2.787	5367	2076	0.387				
2.830	2904	1665	0.573				
2.863	1253	1578	1.259				
2.897	7174	2606	0.363				
2.950	11003	5969	0.542				
3.017	7303	3203	0.439				
3.057	3912	1574	0.402				
3.120	4634	1825	0.394				
3.160	2031	1285	0.633				
3.213	6428	2131	0.332				
3.263	26448	11283	0.427				
3.367	1157498	595652	0.515				
3.423	6684	2667	0.399				
3.487	9028	3211	0.356				
3.577	36374	14078	0.387				
3.663	11288	3349	0.297				
3.770	92242	40106	0.435				
3.840	7290	2410	0.331				
3.913	4295	1483	0.345				
3.973	9858	2877	0.292				
4.020	5178	1955	0.378				
4.107	27244	7870	0.289				
4.200	6156	1527	0.248				
4.350	15364	2428	0.158				
4.453	20067	6312	0.315				
4.520	72964	18930	0.259				
4.623	8383	1771	0.211				
4.800	17983	2200	0.122				
4.920	8079	1901	0.235				
5.017	25279	3501	0.138				
5.130	1924	1375	0.715				
5.160	2756	1394	0.506				
5.193	2208	1383	0.626				
5.217	1943	1412	0.727				
5.237	1707	1440	0.844				
5.263	2349	1490	0.634				
5.293	2682	1495	0.557				
5.373	11605	1781	0.153				
5.523	15916	2775	0.174				
5.617	37458	4838	0.129				
5.770	3861	1162	0.301				
5.820	3387	1069	0.316				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.873	1264	914	0.723		
5.900	1055	894	0.847		
5.920	1699	868	0.511		
5.950	819	823	1.005		
5.967	2201	814	0.370		
6.027	907	757	0.835		
6.040	1613	746	0.462		
6.077	1260	714	0.566		
6.113	1607	681	0.424		
6.147	518	651	1.256		
6.160	779	655	0.841		
6.177	388	651	1.677		
6.190	520	654	1.258		
6.203	521	651	1.250		
6.213	1431	658	0.460		
6.250	1124	639	0.569		
6.280	369	619	1.678		
6.340	2333	680	0.292		
6.360	2324	705	0.303		
6.407	2954	634	0.215		
6.493	663	485	0.732		
6.513	453	459	1.014		
6.563	1234	449	0.364		
6.587	1041	438	0.421		
6.617	169	424	2.516		
6.637	1007	432	0.429		
6.667	243	409	1.684		
6.677	565	412	0.729		
6.700	632	398	0.629		
6.723	382	393	1.029		
6.757	517	376	0.727		
6.783	695	402	0.578		
6.803	479	408	0.852		
6.823	404	409	1.012		
6.867	1099	440	0.400		
6.893	689	436	0.633		
6.903	261	440	1.688		
6.923	705	450	0.638		
6.940	263	443	1.686		
7.003	1761	502	0.285		
7.087	3655	593	0.162		
7.127	1247	580	0.465		
7.160	642	545	0.850		
7.187	1181	547	0.463		
7.217	1046	528	0.505		
7.247	2514	519	0.206		
7.350	539	313	0.581		
7.377	363	267	0.736		
7.403	303	260	0.858		
7.430	298	255	0.855		
7.457	444	251	0.565		
7.473	199	255	1.282		
7.493	455	260	0.572		
7.530	770	268	0.348		
7.567	150	256	1.708		
7.583	636	279	0.439		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.623	644	279	0.433	0.00	
7.653	109	275	2.532	0.00	
7.667	617	285	0.462	0.00	
7.703	526	298	0.566	0.00	
7.730	419	305	0.728	0.00	
7.753	189	325	1.720	0.00	
7.763	804	340	0.423	0.00	
	557990264	96300436		100.000	

Total unknown % area = 98.84

05 Aug 11 03:19 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080411.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	2000 2860-31-01					TPHMACHB	1
1	5	1000 2860-31-02					TPHMACHB	1
1	6	500 2860-31-14					TPHMACHB	1
1	7	250 2860-30-13					TPHMACHB	1
1	8	100 2860-30-14					TPHMACHB	1
1	9	50 2860-30-15					TPHMACHB	1
1	10	IC500 2860-30-16					TPHMACHB	1
REAR								
1								

Good

LHB 8/5/11

LHB 8/5/11

Continued on Page

Read and Understood By

Signed 8/5/11 Date Signed 8/5/11 Date

09 Aug 11 08:09 AM
Sequence: C:\HPCHEM\1\SEQUENCE\080811.SEQ

page 1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	8015DS-CCV-OC					TPHMACHB	1
1	5	483017 RSX3					TPHMACHB	1
1	6	483016					TPHMACHB	1
1	7	483018 RSX3					TPHMACHB	1
1	8	4048242001					TPHMACHB	1
1	9	4048242002					TPHMACHB	1
1	10	4048242003					TPHMACHB	1
1	11	4048242004					TPHMACHB	1
1	12	4048242005					TPHMACHB	1
1	13	4048242006					TPHMACHB	1
1	14	4048244001					TPHMACHB	1
1	15	4048244002 RSX2					TPHMACHB	1
1	16	4048244003 RSX2					TPHMACHB	1
1	17	4048244004 RSX3					TPHMACHB	1
1	18	4048244005 RSX3					TPHMACHB	1
1	19	4048244006					TPHMACHB	1
1	20	4048329001 RSX4					TPHMACHB	1
1	21	4048329002 RSX5					TPHMACHB	1
1	22	4048329003 RSX6					TPHMACHB	1
1	23	4048330001					TPHMACHB	1
1	24	4048330002					TPHMACHB	1
1	25	4048330003					TPHMACHB	1
1	26	483017X3					TPHMACHB	1
1	27	483018X3					TPHMACHB	1
1	28	4048244002X2					TPHMACHB	1
1	29	4048244003X2					TPHMACHB	1
1	30	4048244004X3					TPHMACHB	1
1	31	4048244005X3					TPHMACHB	1
1	32	4048329001X4					TPHMACHB	1
1	33	4048329002X5					TPHMACHB	1
1	34	4048329003X6					TPHMACHB	1
1	35	BLANK					TPHMACHB	1
1	36	BLANK					TPHMACHB	1
1	37	BLANK					TPHMACHB	1
1	38	8015DS-CCV-OC					TPHMACHB	1
1	39	487651					TPHMACHB	1
1	40	487650					TPHMACHB	1
1	41	487652X20 RSX15 = 300					TPHMACHB	1
1	42	487653X20					TPHMACHB	1
1	43	4049375001X20					TPHMACHB	1
1	44	4049375002X50 RSX7 = 350					TPHMACHB	1
1	45	BLANK					TPHMACHB	1
1	46	8015DS-CCV-OC					TPHMACHB	1
REAR								

TPH-B
GCSV
62958
HBN
77487

TPH-S
GCSV
63116
HBN
78124

KHB 8/9/11

KHB 8/9/11

Continued on Page

Read and Understood By

H Burns 8/9/11
Signed Date

Signed 8/9/11
Date

12 Aug 11 03:09 PM
Sequence: C:\HPCHEM\1\SEQUENCE\081211.SEQ page 1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK					
1	2	WINDOW CHECK				TPHMACHB	1
1	3	8015DS-CCV -OK	TPH-B			TPHMACHB	1
1	4	4048244001X3	GCW 6258			TPHMACHB	1
1	5	BLANK	HBN 77487			TPHMACHB	1
1	6	8015DS-CCV -OC				TPHMACHB	1
REAR							
1							

KHB 8/12/11

KHB 8/12/11

Continued on Page —

Read and Understood By

Kris H Burns — Signed — 8/12/11 — Date

Signed — 8/12/11 — Date

Pace Analytical® Prep Log Report

Batch Information: OEXT HBN 77394 TPH-B

Prep Method	EPA 3541
Spiked By	BLM
Methylene Chloride	12455
Batch Notes	

Analysis Method	TPH-B
Spiked By Date	07/28/2011
Sodium Sulfate	7513
Reviewed By	JLH

Extracted By	BLM
Conc. Temp #1	98.5
Florisil 3620B	5238
Reviewed By Date	07/29/2011

Extracted By Date	07/28/2011
Conc. Temp #2	98.5
3620B Date/Initials	7/29/11 BLM

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**483016**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**483017**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**483018**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048242001**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242002**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242003**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242004**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242005**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242006**	14.3	1	0.5			6045 (.5)
8015 T_P	PS	**4048244001**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244002**	14.2	1	0.5			6045 (.5)
8015 T_P	PS	**4048244003**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244004**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244005**	13.6	1	0.5			6045 (.5)
8015 T_P	PS	**4048244006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048329001**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329002**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329003**	13.4	1	0.5			6045 (.5)
8015 T_P	PS	**4048330001**	9	1	0.5			6045 (.5)
8015 T_P	PS	**4048330002**	9.5	1	0.5			6045 (.5)
8015 T_P	PS	**4048330003**	14.3	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Pace Analytical Services

Instrument ID: 40BALC

LIPID

Analyst: BLM

12036 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483156		0.9375	0.9537	15.0000	4.0000	1.0000	0.4320	07/29/2011 07:00:14		
4048242001		0.9537	0.9646	15.0000	4.0000	1.0000	0.2907	07/29/2011 07:00:21		
4048242002		0.9523	0.9621	15.0000	4.0000	1.0000	0.2613	07/29/2011 07:00:27		
4048242003		0.9523	0.9600	14.1000	4.0000	1.0000	0.2184	07/29/2011 07:00:35		
4048242004		0.9504	0.9583	14.1000	4.0000	1.0000	0.2241	07/29/2011 07:00:41		
4048242005		0.9488	0.9543	14.1000	4.0000	1.0000	0.1560	07/29/2011 07:00:47		
4048242006		0.9448	0.9621	14.3000	4.0000	1.0000	0.4839	07/29/2011 07:00:53		
4048244001		0.9443	0.9618	14.0000	4.0000	1.0000	0.5000	07/29/2011 07:01:00		
4048244002		0.9325	0.9550	14.2000	4.0000	1.0000	0.6338	07/29/2011 07:01:07		
4048244003		0.9457	0.9609	14.0000	4.0000	1.0000	0.4343	07/29/2011 07:01:13		
4048244004		0.9459	0.9720	14.0000	4.0000	1.0000	0.7457	07/29/2011 07:01:20		
4048244005		0.9450	0.9738	13.6000	4.0000	1.0000	0.8471	07/29/2011 07:01:26		
4048244006		0.9461	0.9508	15.0000	4.0000	1.0000	0.1253	07/29/2011 07:01:33		
4048329001		0.9473	1.1178	8.8000	4.0000	1.0000	7.7500	07/29/2011 07:01:39		
4048329002		0.9500	1.1489	8.8000	4.0000	1.0000	9.0409	07/29/2011 07:01:46		
4048329003		0.9528	1.1906	13.4000	4.0000	1.0000	7.0985	07/29/2011 07:01:52		
4048330001		0.9522	0.9557	9.0000	4.0000	1.0000	0.1556	07/29/2011 07:01:58		
4048330002		0.9508	0.9596	9.5000	4.0000	1.0000	0.3705	07/29/2011 07:02:04		
4048330003		0.9440	0.9497	14.3000	4.0000	1.0000	0.1594	07/29/2011 07:02:10		

Approved by BH 7/29/11

Pace Analytical Services, Inc.	Instrument	Queue	Batch	Date/Time In	Temp In	Date/Time Out	Temp Out
	40BALC	PMST	6456	12-1-11 2:30	104°	12-2-11 6:00	104°

9.5.

% Moisture	Tray #	Tare Weight	Wet Weight	Dry Weight	% MST	% Solids	Date / Time	Parent Sample ID	%RPD
4048240004	1	0.9355	3.8808	1.7925	70.9028	29.10	12/02/2011 06:26		
540622	2	0.9318	3.7654	1.7688	70.4616	29.54	12/02/2011 06:26	4048240004	0.62
4048240006	3	0.9343	4.4296	1.8933	72.5632	27.44	12/02/2011 06:26		
4048242002	4	0.9321	3.522	1.6288	73.0993	26.90	12/02/2011 06:26		
4048244006	5	0.9351	4.9864	2.0901	71.4906	28.51	12/02/2011 06:26		

Approved by CAH 12/6/11

Time Acceptance Limits:	>= 8 hours; if less, dry to constant weight.	Instrument:	40OVN7/ 40OVNH/ 40OVNA (circle one)
Temperatu cceptance Limits:	103 - 105C	Method:	ASTM D2974-87

9/28/10
2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11
9/30/10
2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11
* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR
10/4/10
2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11
10/6/10
2860-16-04 50 ul of 4000 ppm SVIS (2713-90G) up to 10 ml CH_2Cl_2 20 ppm WPAH IS RW 10/6/10 Ex 10/6/11
10/06/10
2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11
10-7-10
2860-16-06 250 uls of 2860-09-04 diluted to 1.0 ml w Nanopure H_2O SHI 50 ppm
2860-16-07 2500 ul of 10,000 mg/L O-terphenyl (2713-86) diluted to 250 ml with CH_2Cl_2 (2712-62) = 100 ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CS1:\101106.b\033R0101.D 88% Good DR 10/12/10
* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR
10/8/10
2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000 ul of 5000 ug/ml B/N Surr (2713-51C) +
2860-16-09 5000 ul of 7500 ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50 ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by 40MSS1 file# 1012T008
10/13/10 500 ul of 4000 ppm SVIS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11
RW 10/13/10
2860-16-11 ~~20~~ 40 ul of 5000 ppm N-NDPA (2713-11B) up to 1.0 ml CH_2Cl_2 200 ppm MDL STD Ex 7/13/11 RW 10/13/10
~~10/18/10~~ ARO 10/18/10
~~500~~

Continued on Page

Read and Understood By

[signature] 10/18/10 Valerie M Ringquin 10/18/2010
Signed Date Signed Date

 Notebook No. ______
Continued From Page ______

11/24/10
2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH_2Cl_2 2000ppm S-PAH IS Ex 11/24/11 RJN 11/24
* 11/29/10 ChzClz changed at 8:00 to lot 2712-73 VMR
11/30/10
2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11
2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000ppm chk
2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/1
2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40MS54 1201105.d
12/1/2010
2860-22-06 1ml of 50,000 ug/ml #2 diesel (2713.45C) + 1ml of 50,000 ug/ml #2 die (2713.45A) diluted to 100ml with ChzClz (2713-73) = 1000ppm Expires 12/1 VMR Ran on unit by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8 DAL
12-2-10
2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 H_2O/MeOH 50
⊥ ⊥ -08 25uls of 2860-10-11 ⊥ ⊥ ⊥ ⊥ 500ppm
12/03/10
2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 12
12/6/10
2860-22-10 50ul of 4000ppm SVIS (2945-06C) up to 10.0ml CH_2Cl_2 20ppm w PAH IS Ex 12/3/11 RJN 12/6
2860-22-11 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11
12/7/10
2860-22-12 400ul of 16,000 ppm ERO (2713-42A) diluted to 2.0 ml with ChzClz 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renquin 12/7/10 [signature] 12/22/10
Signed Date Signed Date

PROJECT Continued From Page

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MEOH spike) → 1.0 mL [Final] = 500 mg/L ex 7-19-11 DR

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KPP

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SUR (~~2945-038~~ 2945-038 4/15/11 KPP) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SUR KPP Exp 8/25/11 KPP
Ran on instr by RJW file # 40mss4 022511 28.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) upto 1.0mL CH_2Cl_2 2000ppm SPAH IS Ex 2/23/12 RJW 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) upto 1.0mL CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RJW 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100 ul of 5000ppm B/N SS (2945-20H) upto 10.0mLs CH_2Cl_2 50ppm PAH Ex 7/3/11 RJW 3/2/11

2860-29-06 0.500 ul of 50ppm PAH (2860-29-05) upto 1.0mL CH_2Cl_2 25ppm PAH CAL Ex 7/3/11 RJW 3/2/11

07	0.200		10
08	0.100		5
09	0.020		1
10	0.010		.5
11	0.010	10.0mL	.05
12	0.200	1.0mL	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) upto 1.0mL CH_2Cl_2 10ppm PAH 2nd Source Ex 9/2/11 RJW 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm SPAH IS - KPP exp 2/28/12

3/3/2011

2860-29-15 2500ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50mL with CH_2Cl_2 = 1000 ppm Ran on inst by ~~DAE~~ file # GC (VMR) Exp 3/3/2012 VMR

VMR 3/3/2011 OK to use per GC Ran on inst 3/8/11 VMR

Continued on Page

→ 4066SF.i / 030711b.b - File 010F1001. Read and Understood By Recovery = 106% GC 3/9/11

Valerie M Renguin 3/3/2011 Signed Date

Signed Date 3/7/11

3-4-11

28160-30-01 50 mL of 2380-100 01 (TPH @ 20000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5.6.11 DAR

TPH ICAL

28160-30-02 500 uL of 2713-490 (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3.4.12 DAR

28160-30-03 500 mL of 28160-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
28160-30-04 250 mL = 500 ug/mL
28160-30-05 125 mL = 250 ug/mL
28160-30-06 50 mL = 100 ug/mL
28160-30-07 25 mL = 50 ug/mL

→ USE only 1.0 mL of 28160-30-02 2713-990
All standards + 5 uL 2945-135 (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All standard Exp 2.22.12 DAR

TPH ICV

28160-30-08 10 mL of ~~2945-23A~~ 2713-990 (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2945-135 (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2.22.12 DAR

28160-30-09 25 uL of 28160-10-11 diluted to 1.0 mL w 50/50 H_2O/MeOH JHS

3.7.11

28160-30-10 1.0 mL of 28160-30-02 + 5 mL 2713-990 (o-terp @ 10,000 ug/mL) = 2000 ug/mL 50 ug/mL
28160-30-11 500 mL of → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
28160-30-12 250 mL = 500 ug/mL
28160-30-13 125 mL = 250 ug/mL
28160-30-14 50 mL = 100 ug/mL
28160-30-15 25 mL = 50 ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3.4.11~~ DAR
5-6-11 GC

28160-30-16 10 mL of 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 mL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3.4.11~~ DAR 3/4/12 GC

DAR
3.7.11

Continued on Page

Read and Understood By

Signed _____ Date 3.7.11
Signed Valerium Penguin Date 3/24/11

3.7.11

2860-31-01 100 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 DM 1.0mL CH_2Cl_2 + 5 uL 2713-990 (oterp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DMR

2860-31-02 50 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) →
1.0mL CH_2Cl_2 + 5 uL 2713-990 (oterp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DMR

2860-31-03 25 uL of 2860-10-19 diluted to 1.0mL w 50/50 MeOH/H_2O 500 ppm JKI ✓

2860-31-04 300 uL of 4000 ppm SVIS (2945-17J) diluted to
1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARC exp 3/10/12

2860-31-05 500 u/s of 2860-10-11 diluted to 1.0mL w 50/50 MeOH H_2O 1000 ppm JKI
-06 25 uL of 2860-31-05 diluted to 1.0 mL w 25 ppm STD
-07 100 100
-08 250 250
-09 500 500
-10 750 750
JKI

3.14.11

2860-31-11 1.0mL of 100 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DMR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL EXP 1-10-12 DMR

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) upto 1.0 mL CH_2Cl_2 2000 ppm 1X H-S-IS Ex 3/15/12 RW 3/15/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 100 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-990 (oterphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DMR

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Signed Valerie M Pinguin Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

Pace Analytical®
www.pacelabs.com

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048329

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048329

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048329001	EWL-DES HEPATOPANCREAS	Tissue	06/20/11 00:00	07/14/11 09:40
4048329002	EWL-HOU-C HEPATOPANCREAS	Tissue	05/23/11 18:15	07/14/11 09:40
4048329003	EWL-BIL HEPATOPANCREAS	Tissue	06/09/11 18:15	07/14/11 09:40

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048329
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1106152

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. The recoveries of the LCS and LCSD were below control criteria and the "S0" applied. In the cases where the surrogates are not applicable due to sample dilution, the "S4" data qualifier is applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD. The recoveries of TPH (C08-C40) were above control criteria in the LCS/LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifiers.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** All samples were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 05/14/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048329

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048329001	**EWL-DES HEPATOPANCREAS**	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048329002	**EWL-HOU-C HEPATOPANCREAS**	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048329003	**EWL-BIL HEPATOPANCREAS**	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4048329

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6258

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048329

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

4048329

Project Number: K1106152
Project Manager: ~~Lynda Huckestein~~ David Liggle /URS

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None
K1106152-009	EWL-DES Hepatopancreas		Animal Tissue	6/20/11		Pace PA	–
K1106152-015	EWL-HOU-C Hepatopancreas		Animal Tissue	5/23/11	1815	Pace PA	–
K1106152-025	EWL-BIL Hepatopancreas		Animal Tissue	6/9/11	1815	Pace PA	–

1-20z jar

Test Comments
Relinquish - None   K1106152-009,15,25   Ship 10grams to Pace in Green Bay, WI for TPH.

Folder Comments:
Report tissues on a wet weight basis.

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the ~~electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com~~ Contact David Liggle / URS East White Lake project	____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ____ STANDARD Requested FAX Date: ____ Requested Report Date: 07/16/11	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD N	PO# K1106152 Bill to

Relinquished By: [signature] 7/13/11 1145   Received By: ____   Airbill Number: ____

rel. Fedex 7/14/11 0940   rec. [signature] Pace GB 7/14/11 0940   temp <0°C

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Analytical Services Project # 4048329

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None Other

Thermometer Used JB Type of Ice: Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature 20°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7/14/11
Initials: JD

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes ☐No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MMT for TN **Date:** 7.14.11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048329

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048329

QB Batch: OEXT / 12029
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048329001		EWL-DES HEPATOPANCREAS	4	0	S4										
483016	BLANK		1	71											
4048329002		EWL-HOU-C HEPATOPANCREAS	5	0	S4										
483017	LCS		3	0	S0										
4048329003		EWL-BIL HEPATOPANCREAS	6	0	S4										
483018	LCSD		3	0	S0										
		QC Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048329

QB Batch: OEXT/12029 **LCS Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048329001	EWL-DES HEPATOPANCREAS	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048329002	EWL-HOU-C HEPATOPANCREAS	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048329003	EWL-BIL HEPATOPANCREAS	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048329001	EWL-DES HEPATOPANCREAS	Pace Lipid	OEXT/12036		
4048329002	EWL-HOU-C HEPATOPANCREAS	Pace Lipid	OEXT/12036		
4048329003	EWL-BIL HEPATOPANCREAS	Pace Lipid	OEXT/12036		

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048329

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/04/11 08/04/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.15

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-38-01	2000 2860-38-01	08/04/11	1042	2.15	
02	1000 2860-38-02	1000 2860-38-02	08/04/11	1052	2.15	
03	500 2860-38-03	500 2860-38-03	08/04/11	1104	2.15	
04	250 2860-38-04	250 2860-38-04	08/04/11	1116	2.15	
05	100 2860-38-05	100 2860-38-05	08/04/11	1129	2.15	
06	50 2860-38-06	50 2860-38-06	08/04/11	1140	2.15	
07	IC500 2860-38-07	IC500 2860-38-07	08/04/11	1244	2.15	
08	8015DS-CCV	8015DS-CCV	08/08/11	0834	2.15	
09	MB	483016	08/08/11	0905	2.15	
10	MBLCS	483017	08/08/11	1304	2.15	
11	MBLCSD	483018	08/08/11	1316	2.15	
12	EWL-DES HEPATOPANCR	4048329001	08/08/11	1416	2.15	
13	EWL-HOU-C HEPATOPAN	4048329002	08/08/11	1428	2.15	
14	EWL-BIL HEPATOPANCR	4048329003	08/08/11	1440	2.15	
15	8015DS-CCV	8015DS-CCV	08/08/11	1559	2.15	
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048329

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048329

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-DES HEPATOPANCREAS TX
Lab ID: 4048329001
Collected: 06/20/11 00:00
Received: 07/14/11 09:40

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**105**	mg/kg	45.5	22.7	4	07/28/11 12:00	08/08/11 14:16	
	TPH (C08-C16)	**<22.7**	mg/kg	45.5	22.7	4	07/28/11 12:00	08/08/11 14:16	
	TPH (C16-C28)	**88.1**	mg/kg	45.5	22.7	4	07/28/11 12:00	08/08/11 14:16	
	TPH (C08-C40)	**448**	mg/kg	45.5	22.7	4	07/28/11 12:00	08/08/11 14:16	3q
	TPH - Diesel (C10-C28)	**105**	mg/kg	45.5	22.7	4	07/28/11 12:00	08/08/11 14:16	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		4	07/28/11 12:00	08/08/11 14:16	S4

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048329

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-DES HEPATOPANCREAS TX
Lab ID: 4048329001
Collected: 06/20/11 00:00
Received: 07/14/11 09:40

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**7.8**	%			1		07/29/11 07:01	

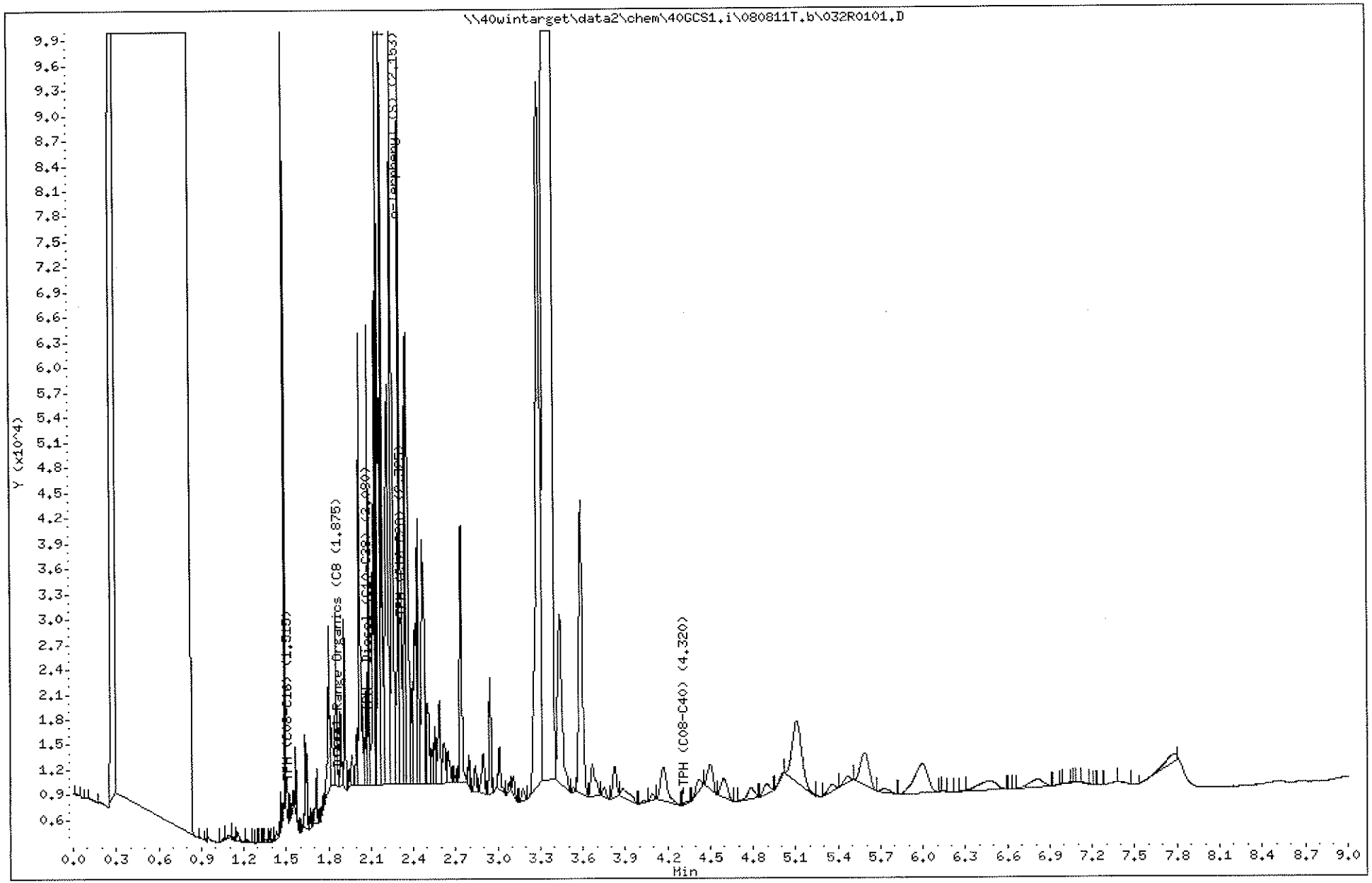
Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\032R0101.D
Date : 08-AUG-2011 14:16
Client ID: EWL-DES HEPATOPANCR
Sample Info: 4048329001X4
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\032R0101.D
Lab Smp Id: 4048329001 Client Smp ID: EWL-DES HEPATOPANCR
Inj Date : 08-AUG-2011 14:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048329001X4
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:57 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 32
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	4.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.800	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			3419868	984.913	447.68
S	1 TPH (C08-C16)	1.040-1.990			133482	21.6719	9.85(a)
S	12 TPH (C16-C28)	1.940-2.710			720812	193.819	88.09
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			849326	231.486	105.22
S	8 TPH - Diesel (C10-C28)	1.450-2.710			844212	229.987	104.53
$	15 o-Terphenyl (S)	2.153	2.146	0.007	79222	15.1961	1.72

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048329

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-HOU-C HEPATOPANCREAS TX
Lab ID: 4048329002
Collected: 05/23/11 18:15
Received: 07/14/11 09:40

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**180**	mg/kg	56.8	28.4	5	07/28/11 12:00	08/08/11 14:28	
	TPH (C08-C16)	**<28.4**	mg/kg	56.8	28.4	5	07/28/11 12:00	08/08/11 14:28	
	TPH (C16-C28)	**174**	mg/kg	56.8	28.4	5	07/28/11 12:00	08/08/11 14:28	
	TPH (C08-C40)	**738**	mg/kg	56.8	28.4	5	07/28/11 12:00	08/08/11 14:28	3q
	TPH - Diesel (C10-C28)	**180**	mg/kg	56.8	28.4	5	07/28/11 12:00	08/08/11 14:28	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		5	07/28/11 12:00	08/08/11 14:28	S4

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048329

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-HOU-C HEPATOPANCREAS TX
Lab ID: 4048329002
Collected: 05/23/11 18:15
Received: 07/14/11 09:40

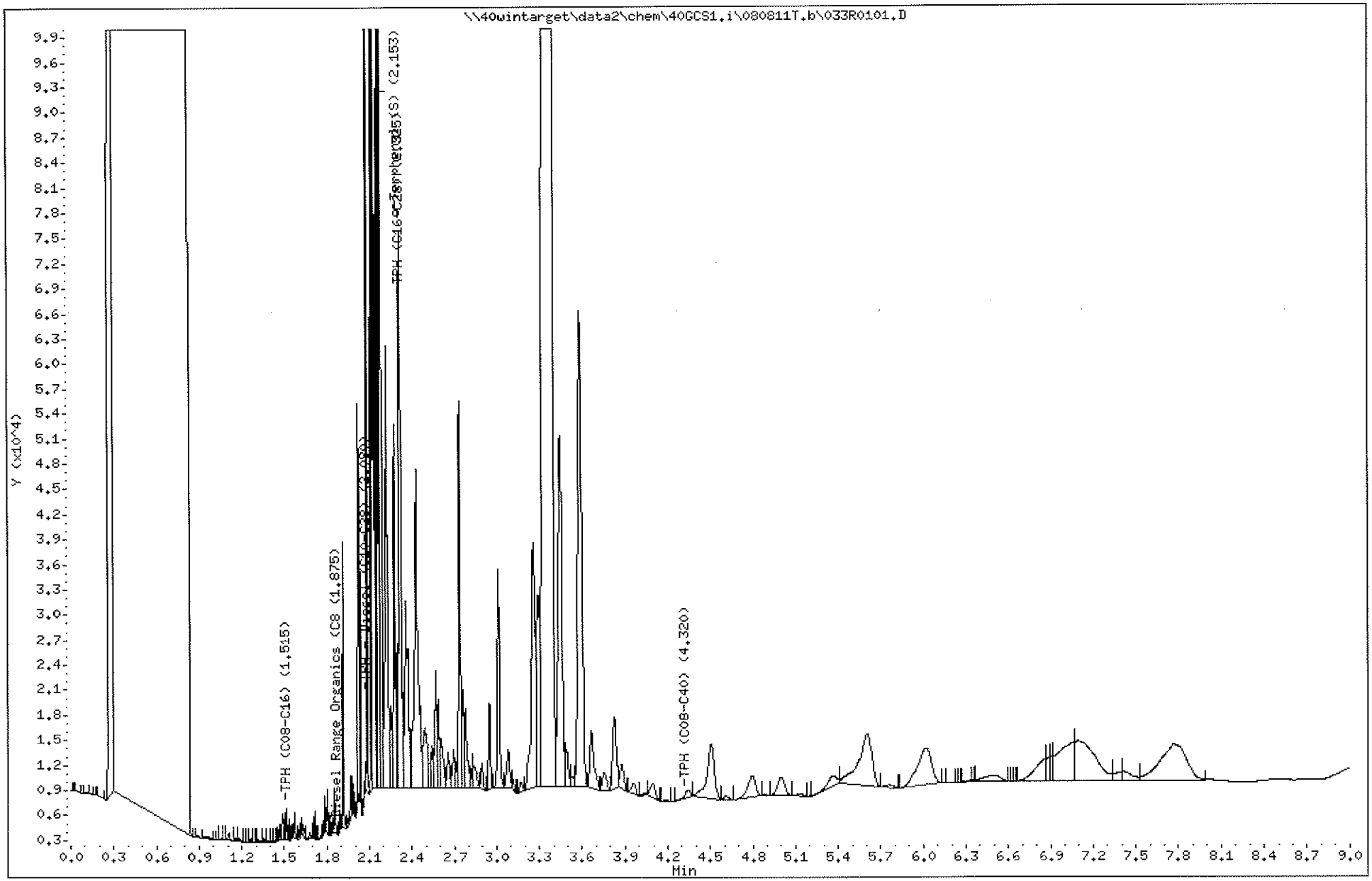
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**9.0**	%			1		07/29/11 07:01	

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\033R0101.D
Date : 08-AUG-2011 14:28
Client ID: EWL-HOU-C HEPATOPAN
Sample Info: 4048329002X5
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\033R0101.D
Lab Smp Id: 4048329002 Client Smp ID: EWL-HOU-C HEPATOPAN
Inj Date : 08-AUG-2011 14:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048329002X5
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:57 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 33
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	5.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	8.800	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			4488143	1298.03	737.51
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			1105839	306.670	174.24
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			1142896	317.532	180.41
S	8 TPH - Diesel (C10-C28)	1.450-2.710			1140259	316.759	179.97
$	15 o-Terphenyl (S)	2.153	2.146	0.007	33669	6.45828	0.73

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048329

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-BIL HEPATOPANCREAS TX
Lab ID: 4048329003
Collected: 06/09/11 18:15
Received: 07/14/11 09:40

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**143**	mg/kg	44.8	22.4	6	07/28/11 12:00	08/08/11 14:40	
	TPH (C08-C16)	**<22.4**	mg/kg	44.8	22.4	6	07/28/11 12:00	08/08/11 14:40	
	TPH (C16-C28)	**140**	mg/kg	44.8	22.4	6	07/28/11 12:00	08/08/11 14:40	
	TPH (C08-C40)	**775**	mg/kg	44.8	22.4	6	07/28/11 12:00	08/08/11 14:40	3q
	TPH - Diesel (C10-C28)	**143**	mg/kg	44.8	22.4	6	07/28/11 12:00	08/08/11 14:40	
Surrogates									
84-15-1	o-Terphenyl (S)	**0**	%.	50-150		6	07/28/11 12:00	08/08/11 14:40	S4

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048329

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-BIL HEPATOPANCREAS TX
Lab ID: 4048329003
Collected: 06/09/11 18:15
Received: 07/14/11 09:40

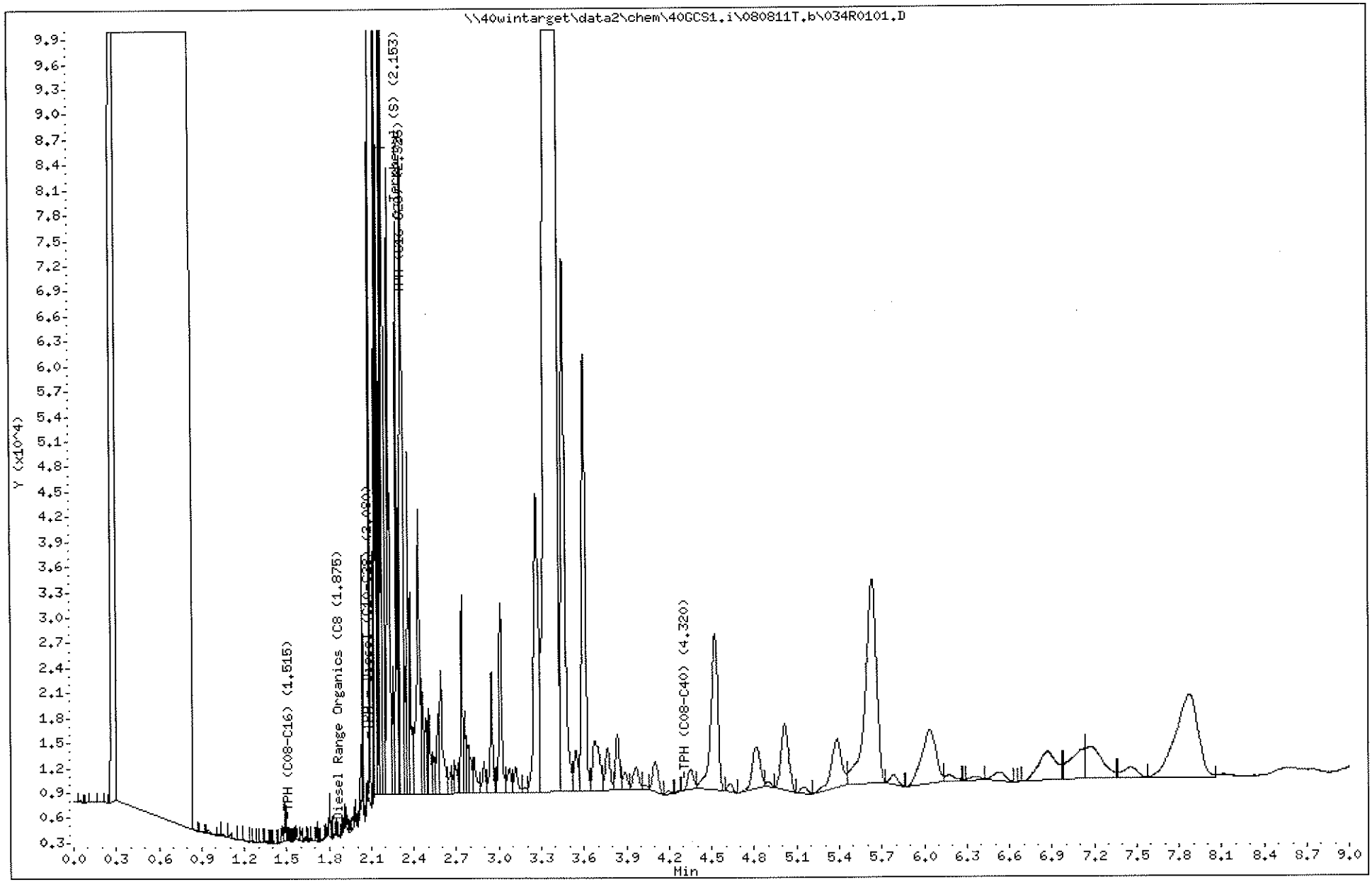
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	7.1	%			1		07/29/11 07:01	

Date: 05/09/2012 03:57 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\034R0101.D
Date : 08-AUG-2011 14:40
Client ID: EWL-BIL HEPATOPANCR
Sample Info: 4048329003X6
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\034R0101.D
Lab Smp Id: 4048329003 Client Smp ID: EWL-BIL HEPATOPANCR
Inj Date : 08-AUG-2011 14:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048329003X6
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:57 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 34
Dil Factor: 6.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	6.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	13.400	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			5963128	1730.34	774.78
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			1129238	313.528	140.38
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			1148032	319.037	142.85
S	8 TPH - Diesel (C10-C28)	1.450-2.710			1146346	318.543	142.63
$	15 o-Terphenyl (S)	2.153	2.146	0.007	30063	5.76659	0.43

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048329

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S 1 TPH (C08-C16)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 2 Diesel Range Organics (C8-C28	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 3 High End Organics (C8-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 4 TPH (C08-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 5 TPH (C08-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 6 TPH (C10-C12)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 7 TPH (C10-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 8 TPH - Diesel (C10-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 9 TPH (C10-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 10 TPH (C12-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 11 TPH (C12-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 12 TPH (C16-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 13 TPH (C16-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 14 TPH (C20-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
$ 15 o-Terphenyl (S)	0.00022	0.00023	0.00020	0.00017	0.00018	0.00015	AVRG		0.00019		15.94928	

Pace Analytical Services, Inc

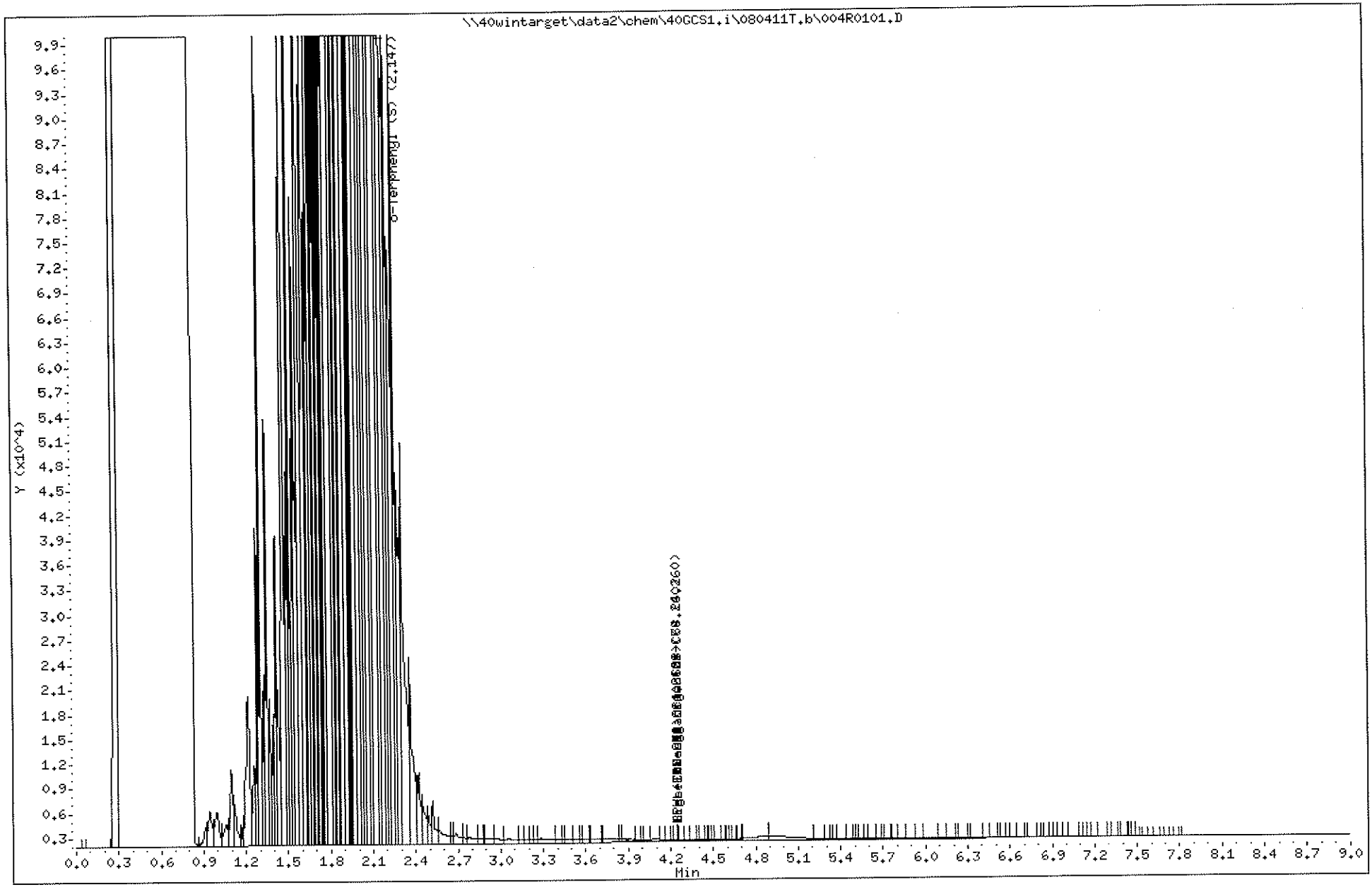
INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Date : 04-AUG-2011 10:42
Client ID: 2000 2860-38-01
Sample Info: 2000 2860-38-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Lab Smp Id: 2000 2860-38-01 Client Smp ID: 2000 2860-38-01
Inj Date : 04-AUG-2011 10:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-38-01
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:42 Cal File: 004R0101.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

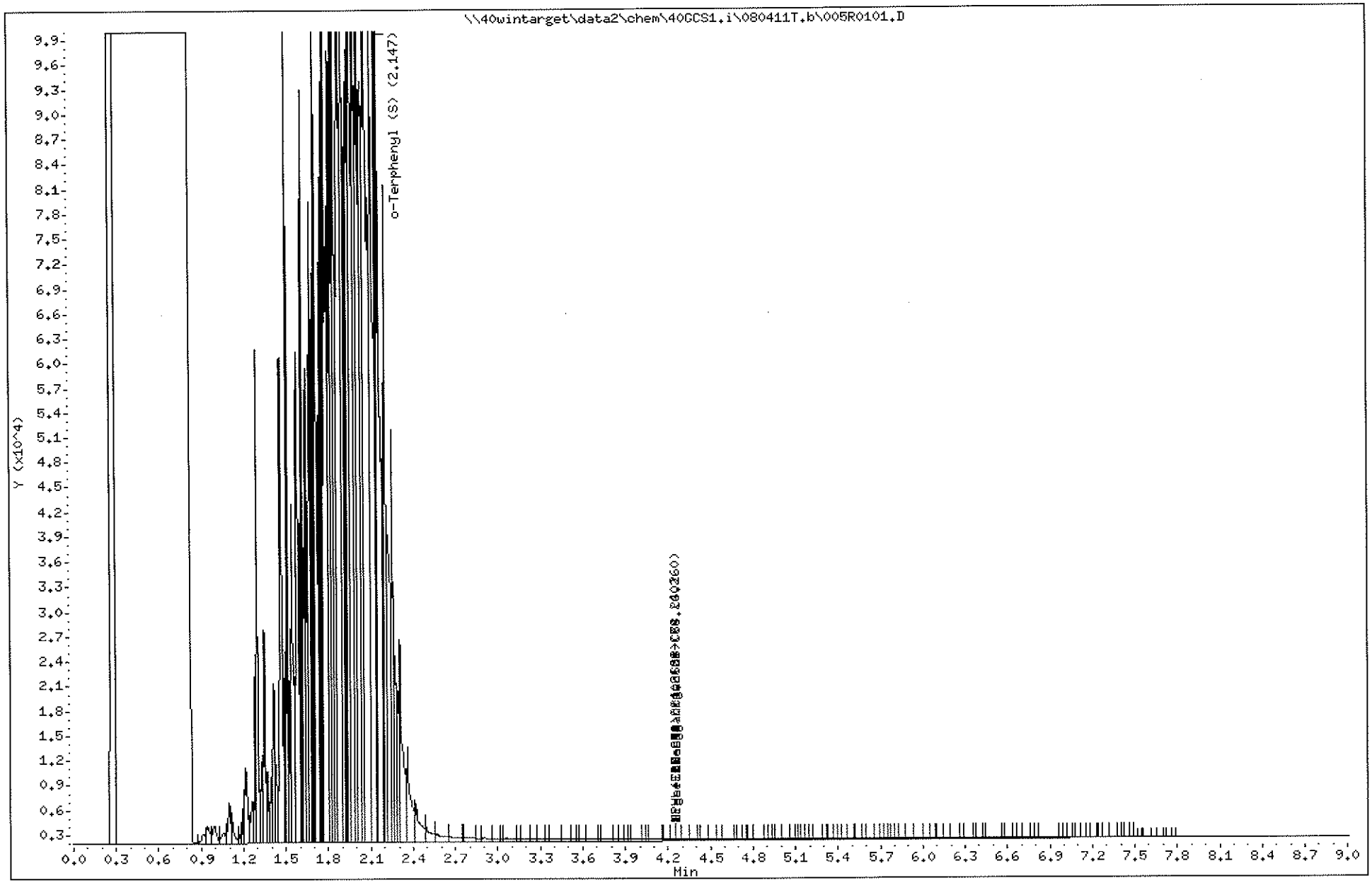
					AMOUNTS	
Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			6874016	2000.00	1997.32
S 11 TPH (C12-C36)	1.050-7.470			6874016	2000.00	1997.32
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			6874016	2000.00	1997.32
S 3 High End Organics (C8-C34)	1.050-7.470			6874016	2000.00	1997.32
S 4 TPH (C08-C36)	1.050-7.470			6874016	2000.00	1997.32
S 5 TPH (C08-C40)	1.050-7.470			6874016	2000.00	1997.32
S 6 TPH (C10-C12)	1.050-7.470			6874016	2000.00	1997.32
S 7 TPH (C10-C20)	1.050-7.470			6874016	2000.00	1997.32
S 8 TPH - Diesel (C10-C28)	1.480-2.730			6874016	2000.00	1997.32(T)
S 9 TPH (C10-C40)	1.050-7.470			6874016	2000.00	1997.32
S 10 TPH (C12-C20)	1.050-7.470			6874016	2000.00	1997.32
S 12 TPH (C16-C28)	1.050-7.470			6874016	2000.00	1997.32
S 13 TPH (C16-C40)	1.050-7.470			6874016	2000.00	1997.32
S 14 TPH (C20-C34)	1.050-7.470			6874016	2000.00	1997.32
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	330420	50.0000	63.38

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Date : 04-AUG-2011 10:52
Client ID: 1000 2860-38-02
Sample Info: 1000 2860-38-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Lab Smp Id: 1000 2860-38-02 Client Smp ID: 1000 2860-38-02
Inj Date : 04-AUG-2011 10:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-38-02
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:52 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

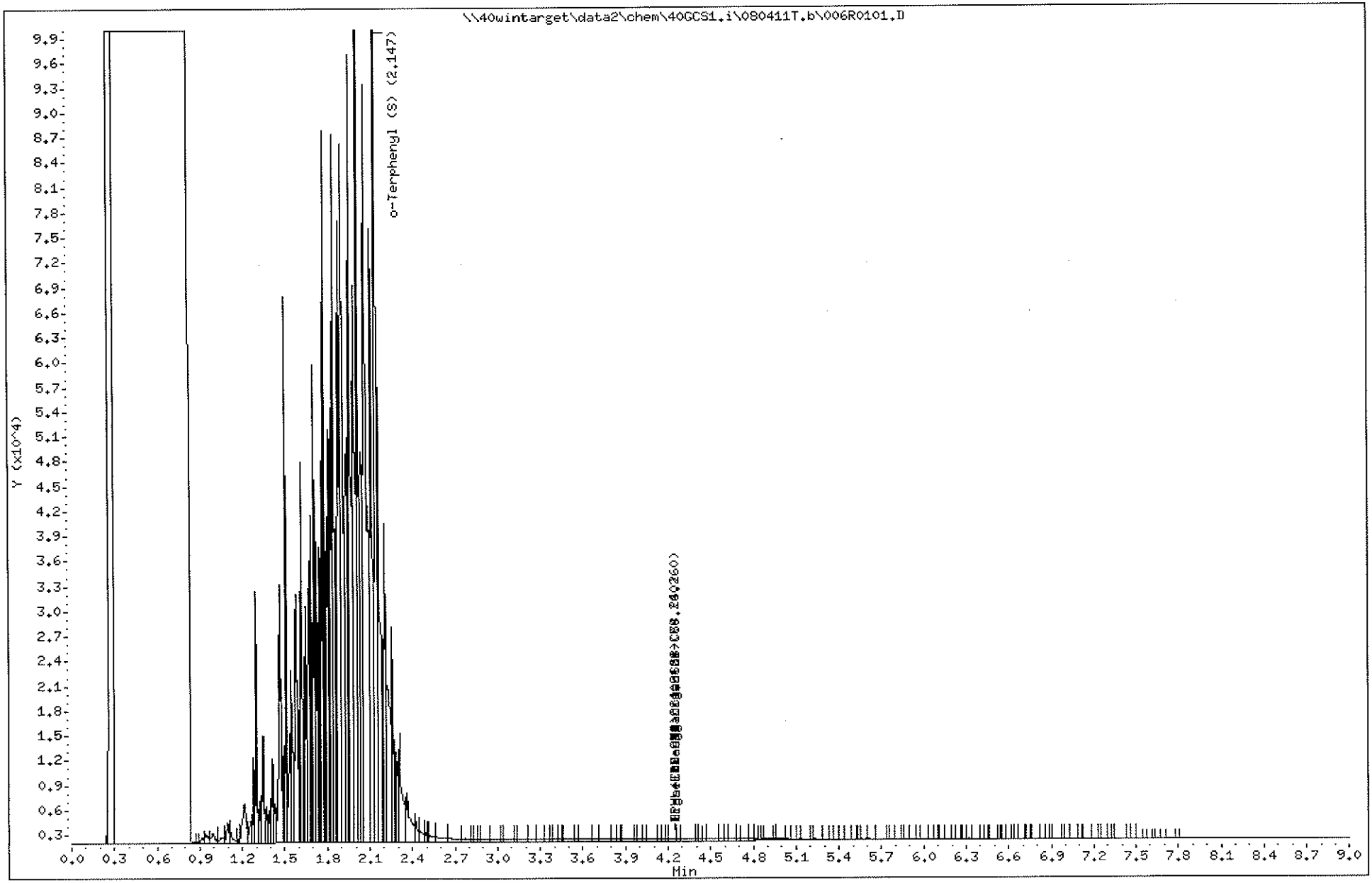
						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			3478740	1000.00	1002.16
S	11 TPH (C12-C36)	1.050-7.470			3478740	1000.00	1002.16
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			3478740	1000.00	1002.16
S	3 High End Organics (C8-C34)	1.050-7.470			3478740	1000.00	1002.16
S	4 TPH (C08-C36)	1.050-7.470			3478740	1000.00	1002.16
S	5 TPH (C08-C40)	1.050-7.470			3478740	1000.00	1002.16
S	6 TPH (C10-C12)	1.050-7.470			3478740	1000.00	1002.16
S	7 TPH (C10-C20)	1.050-7.470			3478740	1000.00	1002.16
S	8 TPH - Diesel (C10-C28)	1.480-2.730			3478740	1000.00	1002.16(T)
S	9 TPH (C10-C40)	1.050-7.470			3478740	1000.00	1002.16
S	10 TPH (C12-C20)	1.050-7.470			3478740	1000.00	1002.16
S	12 TPH (C16-C28)	1.050-7.470			3478740	1000.00	1002.16
S	13 TPH (C16-C40)	1.050-7.470			3478740	1000.00	1002.16
S	14 TPH (C20-C34)	1.050-7.470			3478740	1000.00	1002.16
$	15 o-Terphenyl (S)	2.146	2.146	0.000	278558	50.0000	53.43

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Date : 04-AUG-2011 11:04
Client ID: 500 2860-38-03
Sample Info: 500 2860-38-03
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Lab Smp Id: 500 2860-38-03 Client Smp ID: 500 2860-38-03
Inj Date : 04-AUG-2011 11:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-38-03
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:04 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

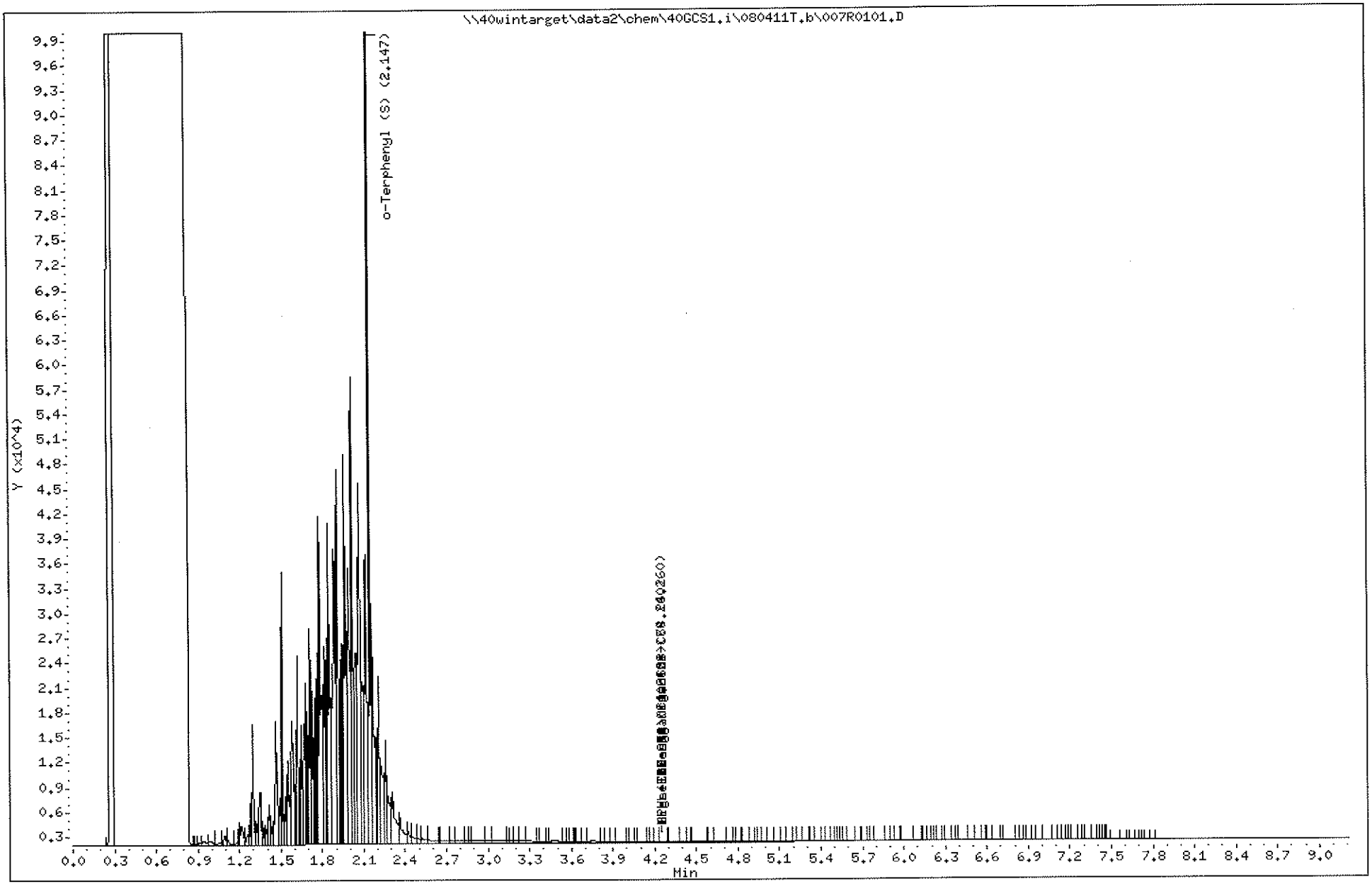
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-7.470			1793180	500.000	508.13
S 11	TPH (C12-C36)	1.050-7.470			1793180	500.000	508.13
S 2	Diesel Range Organics (C8-C28)	1.050-7.470			1793180	500.000	508.13
S 3	High End Organics (C8-C34)	1.050-7.470			1793180	500.000	508.13
S 4	TPH (C08-C36)	1.050-7.470			1793180	500.000	508.13
S 5	TPH (C08-C40)	1.050-7.470			1793180	500.000	508.13
S 6	TPH (C10-C12)	1.050-7.470			1793180	500.000	508.13
S 7	TPH (C10-C20)	1.050-7.470			1793180	500.000	508.13
S 8	TPH - Diesel (C10-C28)	1.480-2.730			1793180	500.000	508.13(T)
S 9	TPH (C10-C40)	1.050-7.470			1793180	500.000	508.13
S 10	TPH (C12-C20)	1.050-7.470			1793180	500.000	508.13
S 12	TPH (C16-C28)	1.050-7.470			1793180	500.000	508.13
S 13	TPH (C16-C40)	1.050-7.470			1793180	500.000	508.13
S 14	TPH (C20-C34)	1.050-7.470			1793180	500.000	508.13
$ 15	o-Terphenyl (S)	2.146	2.146	0.000	295515	50.0000	56.68

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Date : 04-AUG-2011 11:16
Client ID: 250 2860-38-04
Sample Info: 250 2860-38-04
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Lab Smp Id: 250 2860-38-04 Client Smp ID: 250 2860-38-04
Inj Date : 04-AUG-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-38-04
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:16 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

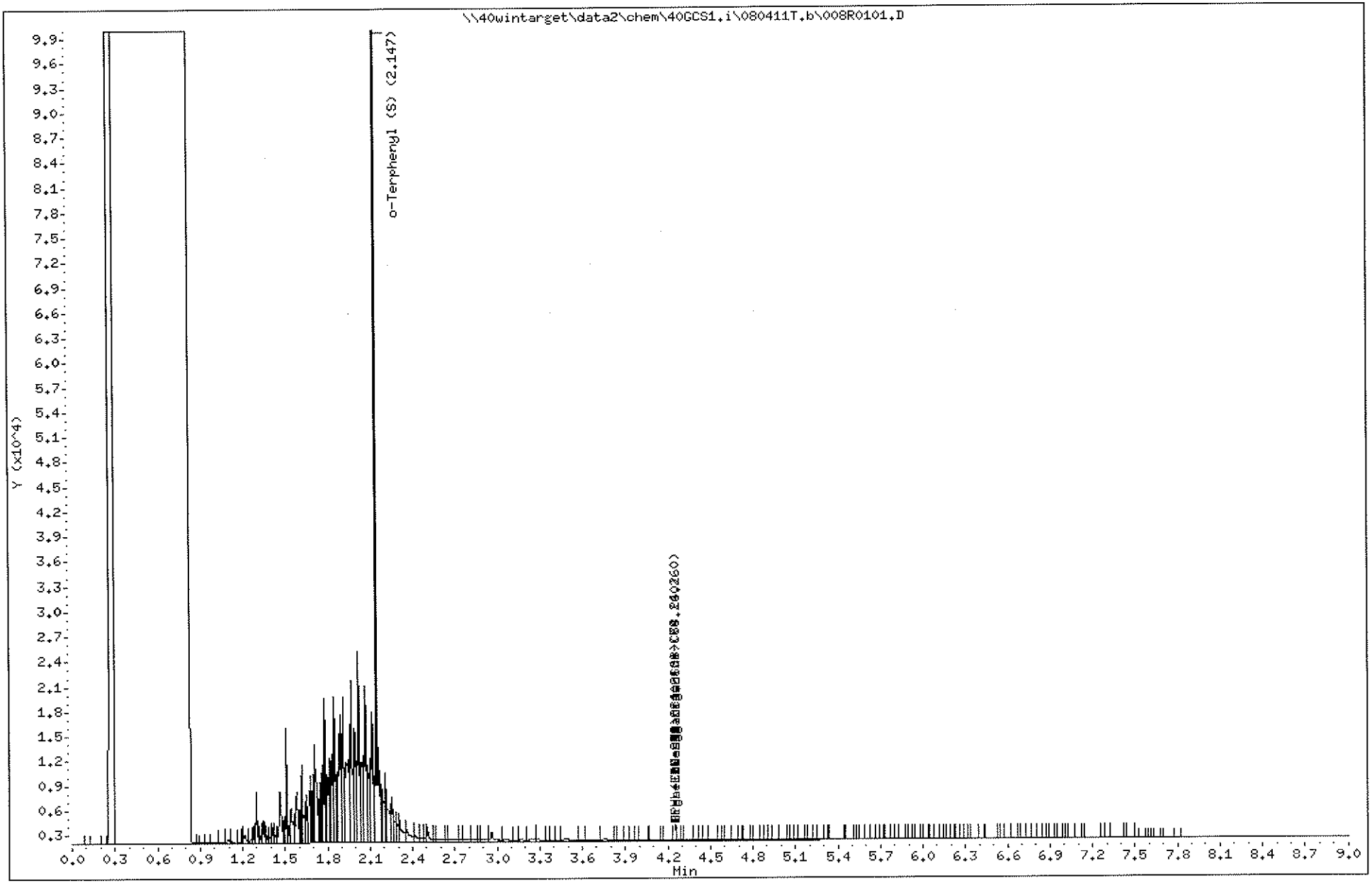
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			903980	250.000	247.50
S 11 TPH (C12-C36)	1.050-7.470			903980	250.000	247.50
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			903980	250.000	247.50
S 3 High End Organics (C8-C34)	1.050-7.470			903980	250.000	247.50
S 4 TPH (C08-C36)	1.050-7.470			903980	250.000	247.50
S 5 TPH (C08-C40)	1.050-7.470			903980	250.000	247.50
S 6 TPH (C10-C12)	1.050-7.470			903980	250.000	247.50
S 7 TPH (C10-C20)	1.050-7.470			903980	250.000	247.50
S 8 TPH - Diesel (C10-C28)	1.480-2.730			903980	250.000	247.50(T)
S 9 TPH (C10-C40)	1.050-7.470			903980	250.000	247.50
S 10 TPH (C12-C20)	1.050-7.470			903980	250.000	247.50
S 12 TPH (C16-C28)	1.050-7.470			903980	250.000	247.50
S 13 TPH (C16-C40)	1.050-7.470			903980	250.000	247.50
S 14 TPH (C20-C34)	1.050-7.470			903980	250.000	247.50
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	250305	50.0000	48.01

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Date : 04-AUG-2011 11:29
Client ID: 100 2860-38-05
Sample Info: 100 2860-38-05
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Lab Smp Id: 100 2860-38-05 Client Smp ID: 100 2860-38-05
Inj Date : 04-AUG-2011 11:29
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-38-05
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:29 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			400376	100.000	99.89(a)
S	11 TPH (C12-C36)	1.050-7.470			400376	100.000	99.89(a)
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			400376	100.000	99.89(a)
S	3 High End Organics (C8-C34)	1.050-7.470			400376	100.000	99.89(a)
S	4 TPH (C08-C36)	1.050-7.470			400376	100.000	99.89(a)
S	5 TPH (C08-C40)	1.050-7.470			400376	100.000	99.89(a)
S	6 TPH (C10-C12)	1.050-7.470			400376	100.000	99.89(a)
S	7 TPH (C10-C20)	1.050-7.470			400376	100.000	99.89(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.730			400376	100.000	99.89(T)
S	9 TPH (C10-C40)	1.050-7.470			400376	100.000	99.89(a)
S	10 TPH (C12-C20)	1.050-7.470			400376	100.000	99.89(a)
S	12 TPH (C16-C28)	1.050-7.470			400376	100.000	99.89(a)
S	13 TPH (C16-C40)	1.050-7.470			400376	100.000	99.89(a)
S	14 TPH (C20-C34)	1.050-7.470			400376	100.000	99.89(a)
$	15 o-Terphenyl (S)	2.146	2.146	0.000	217595	50.0000	41.73

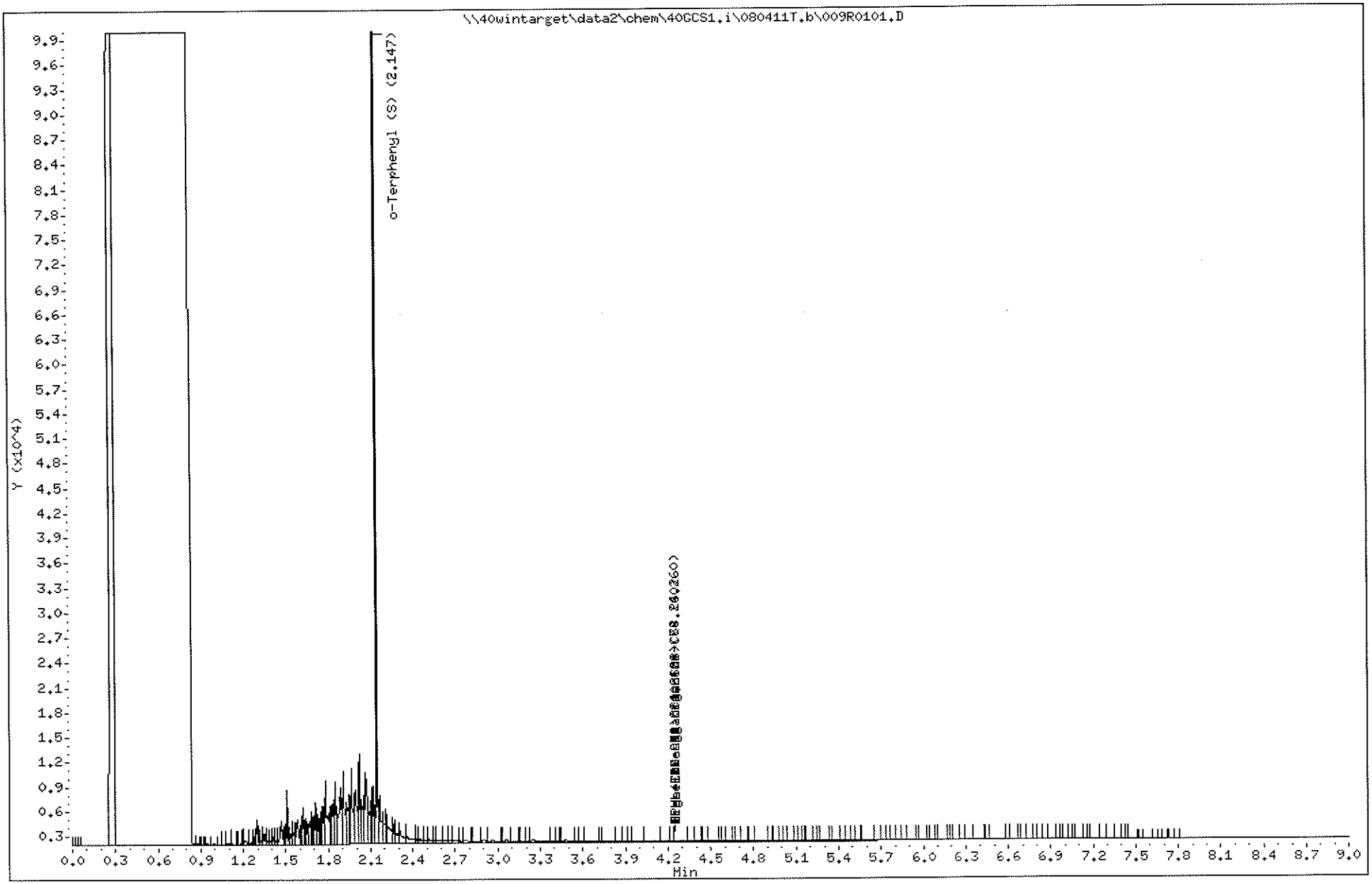
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Date : 04-AUG-2011 11:40
Client ID: 50 2860-38-06
Sample Info: 50 2860-38-06
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Lab Smp Id: 50 2860-38-06 Client Smp ID: 50 2860-38-06
Inj Date : 04-AUG-2011 11:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-38-06
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			212976	50.0000	44.97(a)
S	11 TPH (C12-C36)	1.050-7.470			212976	50.0000	44.97(a)
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			212976	50.0000	44.97(a)
S	3 High End Organics (C8-C34)	1.050-7.470			212976	50.0000	44.97(a)
S	4 TPH (C08-C36)	1.050-7.470			212976	50.0000	44.97(a)
S	5 TPH (C08-C40)	1.050-7.470			212976	50.0000	44.97(a)
S	6 TPH (C10-C12)	1.050-7.470			212976	50.0000	44.97(a)
S	7 TPH (C10-C20)	1.050-7.470			212976	50.0000	44.97(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.730			212976	50.0000	44.97(T)
S	9 TPH (C10-C40)	1.050-7.470			212976	50.0000	44.97(a)
S	10 TPH (C12-C20)	1.050-7.470			212976	50.0000	44.97(a)
S	12 TPH (C16-C28)	1.050-7.470			212976	50.0000	44.97(a)
S	13 TPH (C16-C40)	1.050-7.470			212976	50.0000	44.97(a)
S	14 TPH (C20-C34)	1.050-7.470			212976	50.0000	44.97(a)
$	15 o-Terphenyl (S)	2.146	2.146	0.000	225892	50.0000	43.32

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

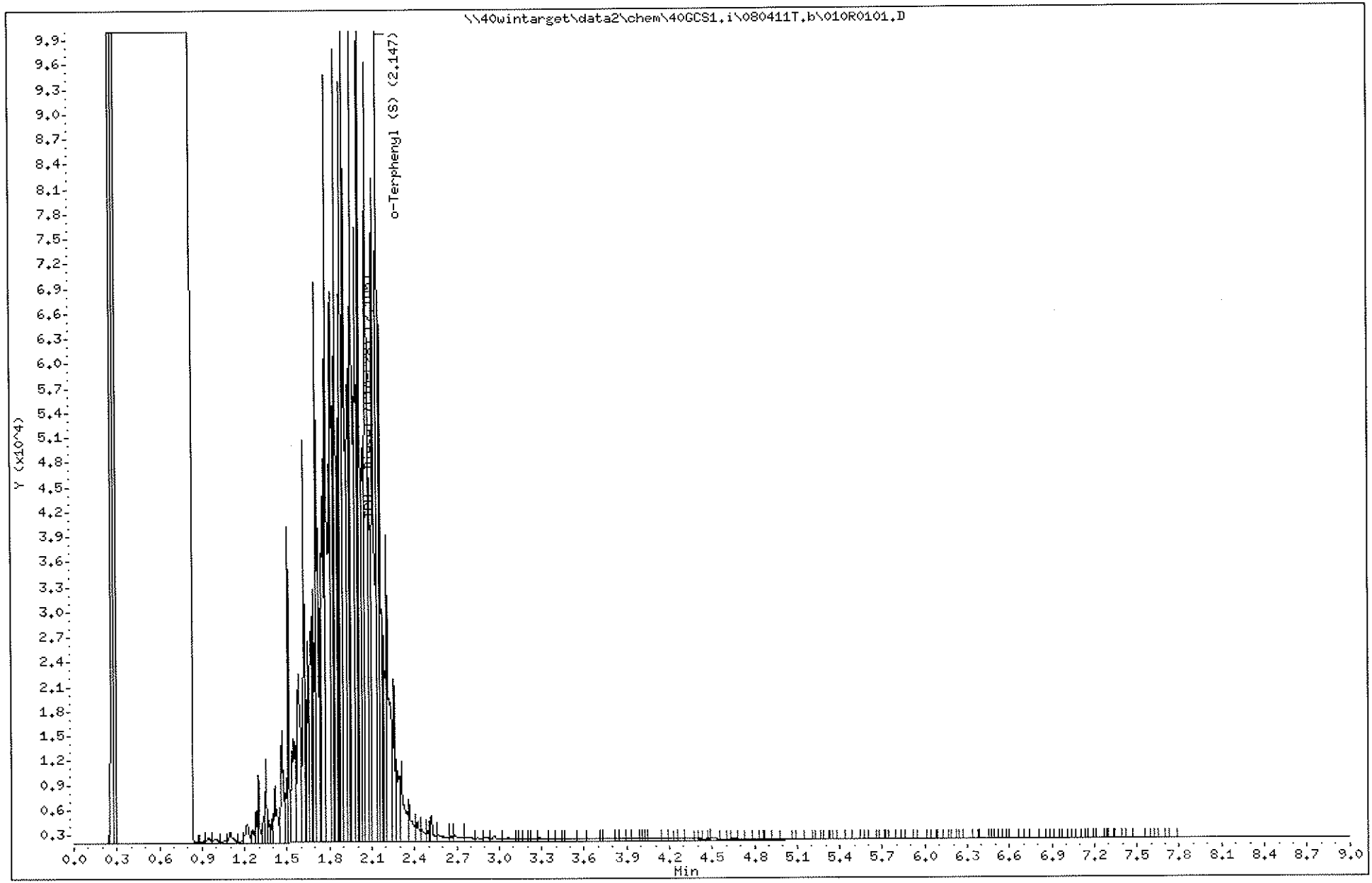
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 04-AUG-2011 12:44
Lab File ID: 010R0101.D Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 10:42 11:40
Lab Sample ID: IC500 2860-38-07 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	490	0.00029	0.000	-1.92564	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00019	0.00019	0.000	-3.17607	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Date : 04-AUG-2011 12:44
Client ID: IC500 2860-38-07
Sample Info: IC500 2860-38-07
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Lab Smp Id: IC500 2860-38-07 Client Smp ID: IC500 2860-38-07
Inj Date : 04-AUG-2011 12:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-38-07
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.730			1732592	500.000	490.37
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	269216	50.0000	51.64

Pace Analytical Services, Inc

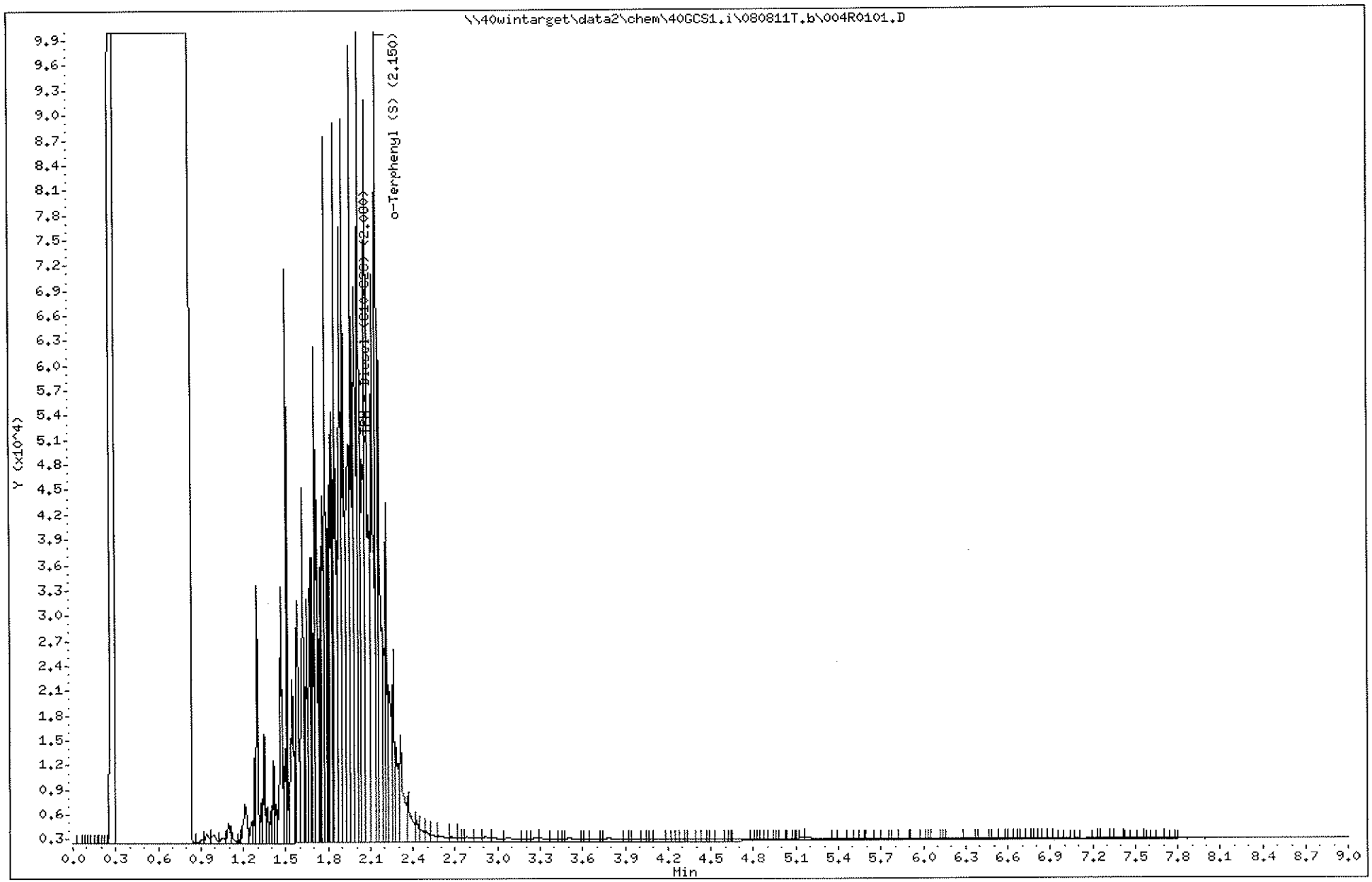
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 08-AUG-2011 08:34
Lab File ID: 004R0101.D Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 10:42 11:40
Lab Sample ID: 8015DS-CCV Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	465	0.00030	0.000	-6.91679	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00021	0.00021	0.000	9.65048	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Date : 08-AUG-2011 08:34
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 08:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6316
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:57 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1647448	500.000	465.41
$ 15 o-Terphenyl (S)	2.150	2.146	0.004	237724	50.0000	45.59

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

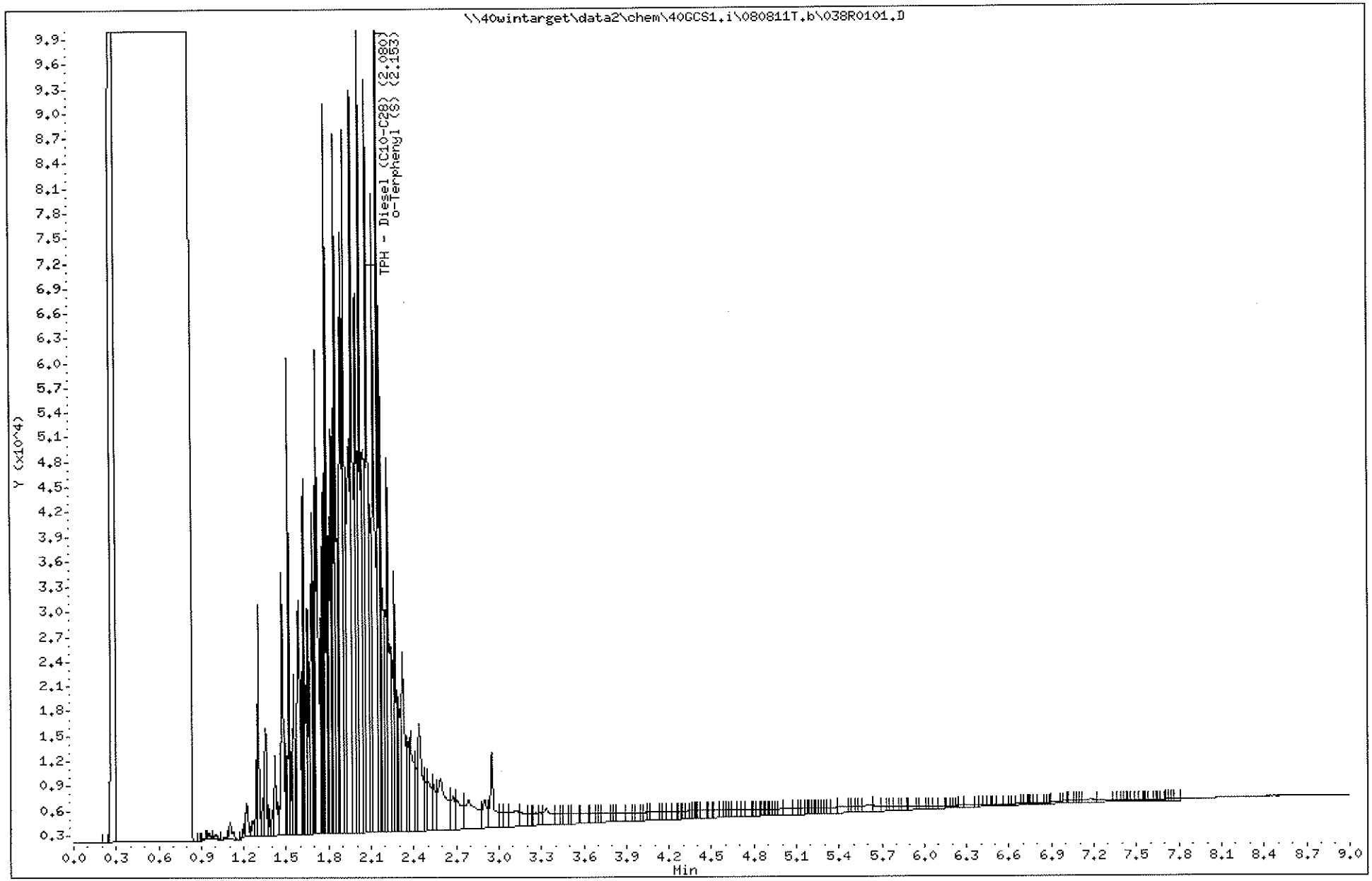
Instrument ID: 40GCS1.i
Lab File ID: 038R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 15:59
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	514	0.00028	0.000	2.81702	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00020	0.00020	0.000	2.90335	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Date : 08-AUG-2011 15:59
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 15:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 11:57 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 38 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1813497	500.000	514.08
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	253311	50.0000	48.58

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048329

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048329

QB Batch: OEXT/12029 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048329001, 4048329002, 4048329003

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C40)	101	mg/kg	6.7	3.3	08/08/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	

Type	Sample	Matrix
BLANK	483016	Tissue

REPORT OF LABORATORY ANALYSIS

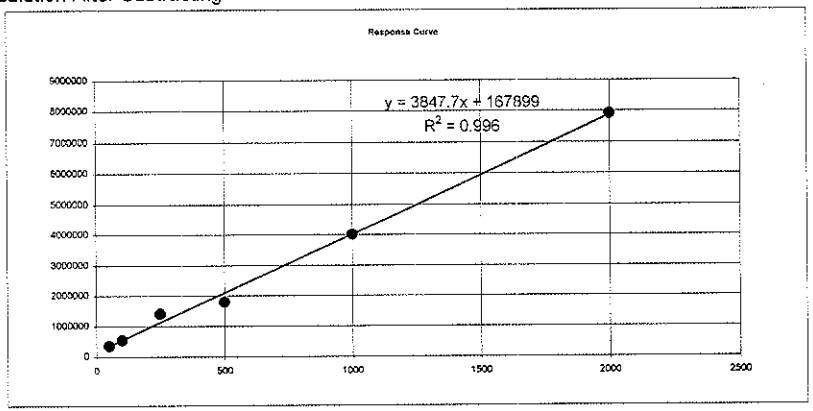
SampleID: 483016 File: 06R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



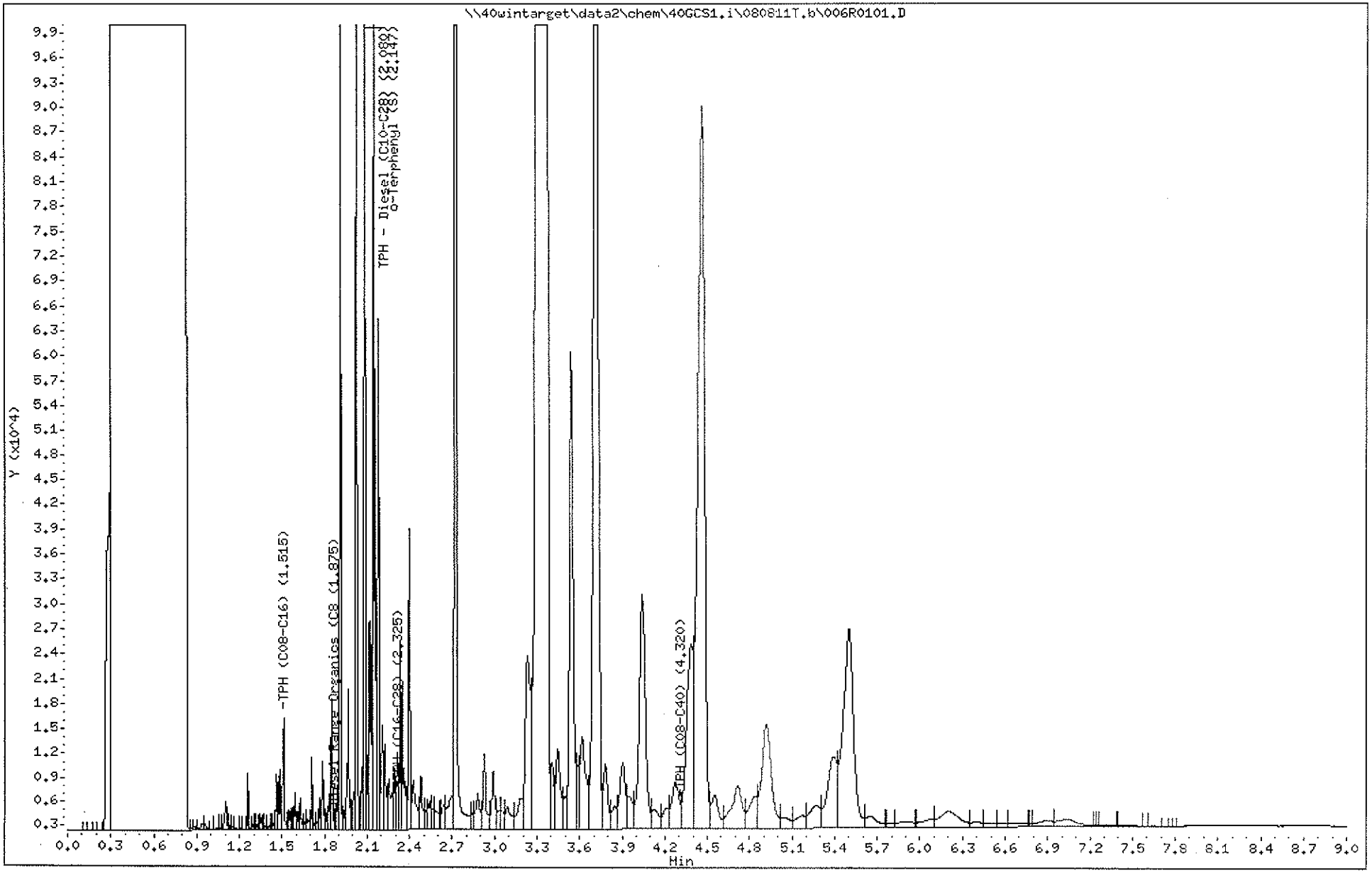
Retention Time	Peak Area	Compound Name
1.910	120198	
2.023	100039	
2.083	64991	
2.723	211870	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	218014	120198	-18.2142
Diesel Range Organics (	624183	285228	44.45563
TPH - Diesel (C10-C28)	610379	285228	40.86904
TPH (C16-C28)	423638	165030	23.57483
TPH (C08-C40)	6490918	497098	1514.129

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Date : 08-AUG-2011 09:05
Client ID: MB
Sample Info: 483016
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			6490918	1885.04	125.66
S	1 TPH (C08-C16)	1.040-1.990			218013	46.4479	3.09(a)
S	12 TPH (C16-C28)	1.940-2.710			423638	106.717	7.11
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			624182	165.496	11.03
S	8 TPH - Diesel (C10-C28)	1.450-2.710			610379	161.451	10.76
$	15 o-Terphenyl (S)	2.146	2.146	0.000	186162	35.7090	2.38

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.117	14	15	1.049	0.00		
0.183	21	15	0.701	0.00		
0.217	22	17	0.762	0.00		
0.293	71418	41400	0.580	0.01		
0.313	556833866	95605407	0.172	98.50		
0.867	203	199	0.980	0.00		
0.883	551	430	0.781	0.00		
0.937	1118	770	0.689	0.00		
0.957	1063	785	0.739	0.00		
1.000	196	115	0.587	0.00		
1.515	218014	446085	2.046	0.03	S	1 TPH (C08-C16)
1.875	624183	1060437	1.699	0.11	S	2 Diesel Range Organi
1.050	271	190	0.701			
1.070	261	266	1.020			
1.107	3649	3555	0.974			
1.130	459	568	1.239			
1.150	359	432	1.204			
1.173	223	264	1.187			
1.210	80	140	1.754			
1.227	41	44	1.073			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.260	3472	7079	2.039			
1.290	468	757	1.619			
1.310	578	901	1.558			
1.323	382	675	1.767			
1.337	290	653	2.249			
1.353	1290	1432	1.110			
1.373	203	456	2.242			
1.383	338	512	1.514			
1.407	503	497	0.989			
1.427	400	678	1.694			
1.443	537	856	1.595			
2.080	610379	1040482	1.705	0.10	S	8 TPH - Diesel (C10-C
1.460	4031	6932	1.720			
1.483	6173	7582	1.228			
1.513	10800	13678	1.266			
1.540	740	1228	1.660			
1.557	1592	2221	1.395			
1.570	868	1902	2.192			
1.580	838	1681	2.007			
1.593	3045	4583	1.505			
1.617	1340	2517	1.878			
1.627	3061	3950	1.290			
1.663	848	1009	1.190			
1.687	1637	1149	0.702			
1.710	4209	8906	2.116			
1.727	475	783	1.648			
1.753	1105	1197	1.083			
1.767	2352	3938	1.674			
1.787	7193	8542	1.188			
1.817	1479	2033	1.374			
1.833	2562	4302	1.679			
1.850	8709	15928	1.829			
1.880	788	1528	1.938			
1.890	2699	5431	2.012			
1.910	120198	312264	2.598			
1.940	1532	2397	1.564			
1.957	14771	8331	0.564			
1.987	1166	2118	1.816			
2.003	3315	4645	1.401			
2.023	100039	181793	1.817			
2.050	1759	3376	1.919			
2.067	6720	7818	1.163			
2.083	64991	163100	2.510			
2.103	5277	9285	1.760			
2.113	32676	25076	0.767			
2.180	38415	61853	1.610			
2.207	13472	12814	0.951			
2.223	10505	10654	1.014			
2.250	10672	6283	0.589			
2.293	5564	7571	1.361			
2.317	9395	9636	1.026			
2.333	12795	22904	1.790			
2.347	17814	18159	1.019			
2.397	20806	36415	1.750			
2.423	12027	6165	0.513			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.477	7711	6670	0.865				
2.513	2720	2318	0.852				
2.540	5034	3496	0.694				
2.557	3071	2665	0.868				
2.577	4819	2415	0.501				
2.617	2001	2035	1.017				
2.640	4041	2982	0.738				
2.700	10531	4224	0.401				
2.147	186162	388356	2.086	0.03	$	15	o-Terphenyl (S)
2.325	423638	627198	1.481	0.07	S	12	TPH (C16-C28)
4.320	6490918	3218044	0.496	1.15	S	5	TPH (C08-C40)
2.723	211870	250885	1.184				
2.840	2591	1935	0.747				
2.877	9194	4384	0.477				
2.927	13441	9421	0.701				
2.990	11956	7151	0.598				
3.033	3581	2277	0.636				
3.053	3409	2270	0.666				
3.090	8162	2822	0.346				
3.193	10294	3831	0.372				
3.233	54060	21152	0.391				
3.373	4074338	1352562	0.332				
3.407	12875	8399	0.652				
3.447	23815	10015	0.421				
3.497	5369	4023	0.749				
3.543	108162	57797	0.534				
3.587	7773	7935	1.021				
3.620	33085	11424	0.345				
3.723	338962	151040	0.446				
3.783	18107	8081	0.446				
3.847	6485	2807	0.433				
3.903	22488	8330	0.370				
3.950	11041	4082	0.370				
4.040	85837	28418	0.331				
4.127	7610	2405	0.316				
4.217	7113	2490	0.350				
4.273	20986	5700	0.272				
4.383	70330	22478	0.320				
4.460	297795	87280	0.293				
4.550	14254	4068	0.285				
4.713	28486	5218	0.183				
4.833	14736	3885	0.264				
4.920	63525	12782	0.201				
5.050	5548	1285	0.232				
5.173	7364	1490	0.202				
5.277	14887	2727	0.183				
5.393	42058	8814	0.210				
5.503	125086	24172	0.193				
5.653	8453	1404	0.166				
5.767	491	492	1.001				
5.813	1675	545	0.325				
5.900	5234	707	0.135				
5.970	446	560	1.257				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.097	5734	976	0.170		
6.197	18884	1888	0.100		
6.383	2884	553	0.192		
6.453	2762	501	0.181		
6.550	1769	421	0.238		
6.703	3651	459	0.126		
6.763	235	396	1.687		
6.793	626	400	0.639		
6.900	5311	675	0.127		
7.047	8794	863	0.098		
7.237	275	198	0.721		
7.257	156	200	1.283		
7.287	1323	206	0.156		
7.393	103	127	1.239		
7.413	1119	128	0.114		
7.587	141	73	0.518		
7.623	401	74	0.185	0.00	
7.707	151	58	0.383	0.00	
7.767	60	46	0.762	0.00	
7.797	95	52	0.550	0.00	
	563586260	99255783		100.000	

Total unknown % area = 98.51

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048329

QB Batch: OEXT/12036 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048329001, 4048329002, 4048329003

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.43	%			07/29/11	

Type	Sample	Matrix
BLANK	483156	Tissue

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048329

QB Batch: OEXT/12029 **LCS Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

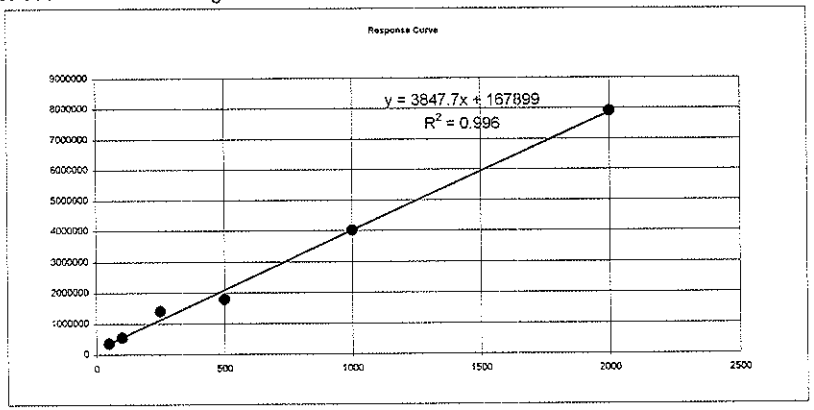
SampleID: 483017 File: 26R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.913	81017	
2.027	88001	
2.087	48403	
2.740	70987	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	513513	81017	68.76749
Diesel Range Organics (	1107222	217421	187.6188
TPH - Diesel (C10-C28)	1091471	217421	183.5252
TPH (C16-C28)	684076	136404	98.70117
TPH (C08-C40)	3179742	288408	707.8076

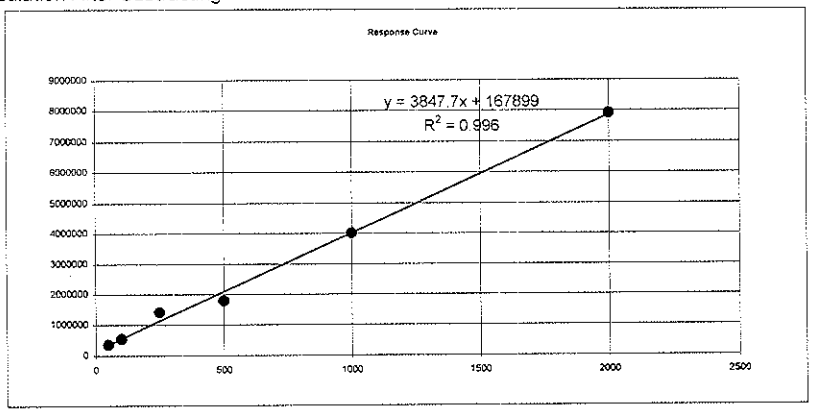
SampleID: 483018 File: 27R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



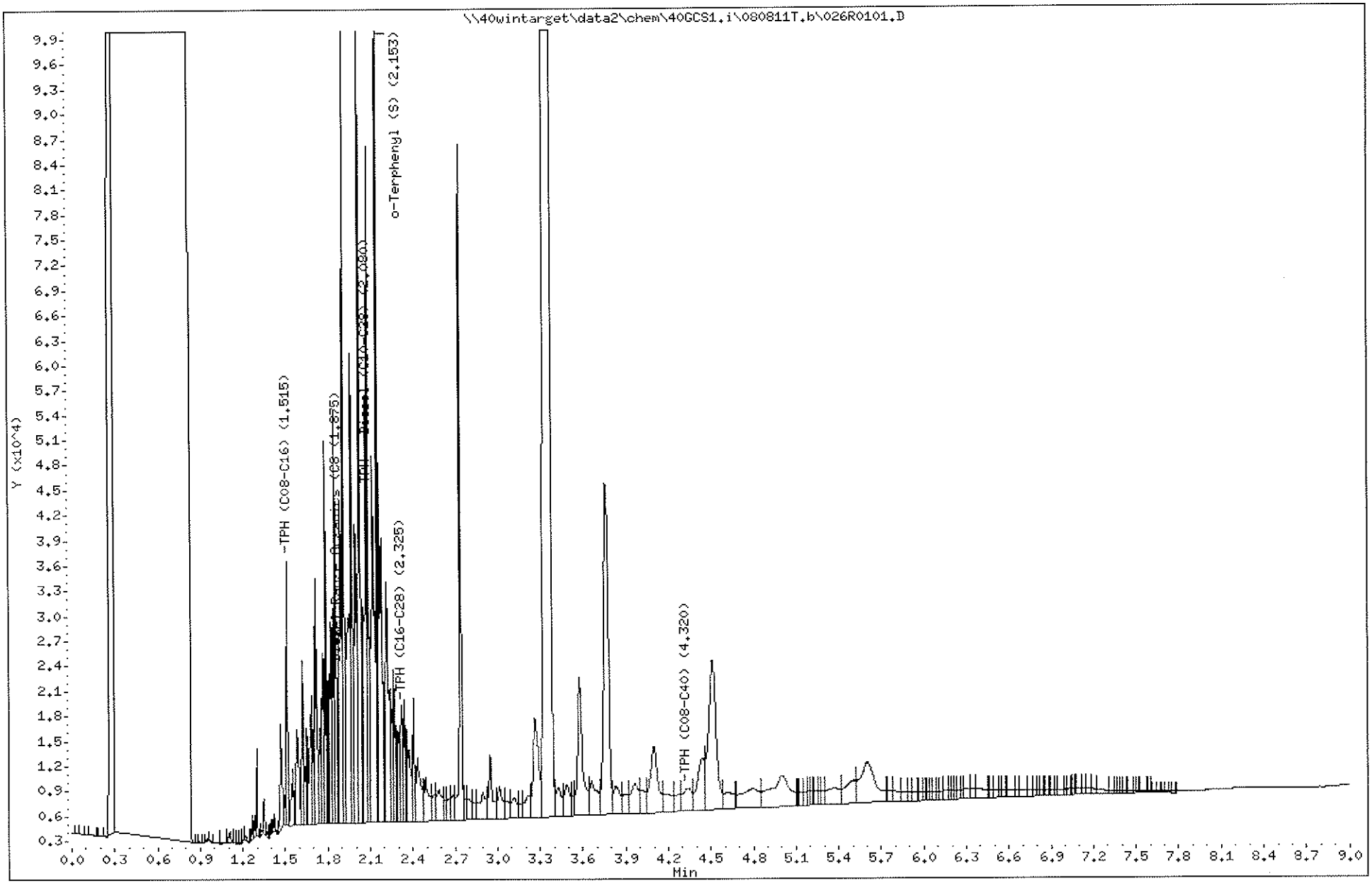
Retention Time	Peak Area	Compound Name
1.913	86364	
2.027	92572	
2.087	49444	
2.743	72593	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	562144	86364	80.01678
Diesel Range Organics (	1150605	228380	196.0457
TPH - Diesel (C10-C28)	1133743	228380	191.6633
TPH (C16-C28)	687056	142016	98.01713
TPH (C08-C40)	2984092	300973	653.6935

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Date : 08-AUG-2011 13:04
Client ID: MBLCS
Sample Info: 483017X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			3179742	914.532	182.90
S	1 TPH (C08-C16)	1.040-1.990			513513	133.059	26.61
S	12 TPH (C16-C28)	1.940-2.710			684075	183.051	36.61
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			1107222	307.076	61.41
S	8 TPH - Diesel (C10-C28)	1.450-2.710			1091470	302.459	60.49(R)
$	15 o-Terphenyl (S)	2.153	2.146	0.007	70769	13.5747	0.90

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.023	14	9	0.662	0.00		
0.090	18	15	0.847	0.00		
0.117	44	12	0.275	0.00		
0.190	24	11	0.458	0.00		
0.283	266192	129517	0.487	0.04		
0.317	552350005	94104610	0.170	98.79		
0.893	63	83	1.309	0.00		
0.947	262	278	1.063	0.00		
0.967	72	84	1.175	0.00		
1.515	513513	675781	1.316	0.09	S	1 TPH (C08-C16)
1.875	1107222	1269076	1.146	0.19	S	2 Diesel Range Organi
1.057	87	64	0.736			
1.110	1485	1254	0.844			
1.137	59	113	1.909			
1.157	44	74	1.701			
1.180	52	102	1.954			
1.200	47	125	2.660			
1.217	677	602	0.889			
1.267	1460	2924	2.002			
1.283	1051	2592	2.465			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.300	5197	10462	2.013			
1.333	289	458	1.583			
1.350	3191	4275	1.340			
1.370	418	688	1.647			
1.400	145	235	1.624			
1.417	1313	2175	1.657			
1.433	236	564	2.390			
2.080	1091471	1242369	1.138	0.19	S	8 TPH - Diesel (C10-C
1.470	12903	12603	0.977			
1.497	2159	3629	1.681			
1.513	14050	31688	2.255			
1.540	8112	3657	0.451			
1.570	1047	2790	2.665			
1.587	13674	11491	0.840			
1.623	15563	19802	1.272			
1.643	4646	7051	1.518			
1.653	7532	11634	1.545			
1.677	11078	13234	1.195			
1.690	14600	15473	1.060			
1.713	27549	29428	1.068			
1.747	7177	11507	1.603			
1.757	23635	15073	0.638			
1.787	24655	45718	1.854			
1.800	9316	16233	1.743			
1.810	12266	18002	1.468			
1.823	19437	24235	1.247			
1.840	15526	25896	1.668			
1.853	34044	49420	1.452			
1.873	6638	17415	2.623			
1.893	40774	38698	0.949			
1.913	81017	143558	1.772			
1.947	46129	24595	0.533			
1.970	44237	56244	1.271			
1.997	47190	35790	0.758			
2.027	88001	121667	1.383			
2.050	19548	24762	1.267			
2.073	45913	51177	1.115			
2.087	48403	80928	1.672			
2.123	70248	43754	0.623			
2.167	58451	42945	0.735			
2.207	16342	17754	1.086			
2.217	33294	28758	0.864			
2.243	16044	14663	0.914			
2.267	15454	18295	1.184			
2.287	7948	10404	1.309			
2.300	9822	10788	1.098			
2.320	14188	14018	0.988			
2.340	10996	14675	1.335			
2.353	9309	11508	1.236			
2.373	12659	8625	0.681			
2.407	12912	14736	1.141			
2.437	16990	7579	0.446			
2.490	12271	5228	0.426			
2.553	5460	3179	0.582			
2.587	10579	3825	0.362			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.627	2501	2516	1.006				
2.657	4112	2651	0.645				
2.680	5074	3070	0.605				
2.153	70769	164785	2.328	0.01	$	15	o-Terphenyl (S)
2.325	684076	674134	0.985	0.12	S	12	TPH (C16-C28)
4.320	3179742	2230237	0.701	0.57	S	5	TPH (C08-C40)
2.740	70987	80760	1.138				
2.767	2555	2612	1.022				
2.797	6558	2568	0.392				
2.830	3235	2060	0.637				
2.897	10465	3287	0.314				
2.947	14286	7646	0.535				
3.013	9195	3912	0.425				
3.057	4741	2026	0.427				
3.113	7400	2499	0.338				
3.160	2401	1728	0.720				
3.220	8357	2615	0.313				
3.263	31867	11937	0.375				
3.373	1304247	628244	0.482				
3.427	8778	3399	0.387				
3.487	11183	3714	0.332				
3.537	2895	2476	0.855				
3.577	40885	16567	0.405				
3.663	14678	4049	0.276				
3.763	90190	39402	0.437				
3.833	10402	3312	0.318				
3.903	6761	2317	0.343				
3.967	12893	3600	0.279				
4.013	7851	2714	0.346				
4.097	30844	7904	0.256				
4.187	8738	2170	0.248				
4.270	5902	1999	0.339				
4.340	13036	2683	0.206				
4.440	20990	6200	0.295				
4.513	70951	17861	0.252				
4.617	9596	1990	0.207				
4.680	956	1586	1.658				
4.797	19607	2275	0.116				
5.000	35336	3687	0.104				
5.107	984	1639	1.665				
5.120	1302	1631	1.253				
5.150	2951	1648	0.558				
5.177	2624	1646	0.627				
5.190	1314	1645	1.252				
5.210	1975	1649	0.835				
5.220	991	1655	1.670				
5.240	2692	1696	0.630				
5.267	2706	1697	0.627				
5.297	3044	1701	0.559				
5.370	11528	1869	0.162				
5.510	15682	2757	0.176				
5.603	36249	4854	0.134				
5.740	530	1327	2.503				

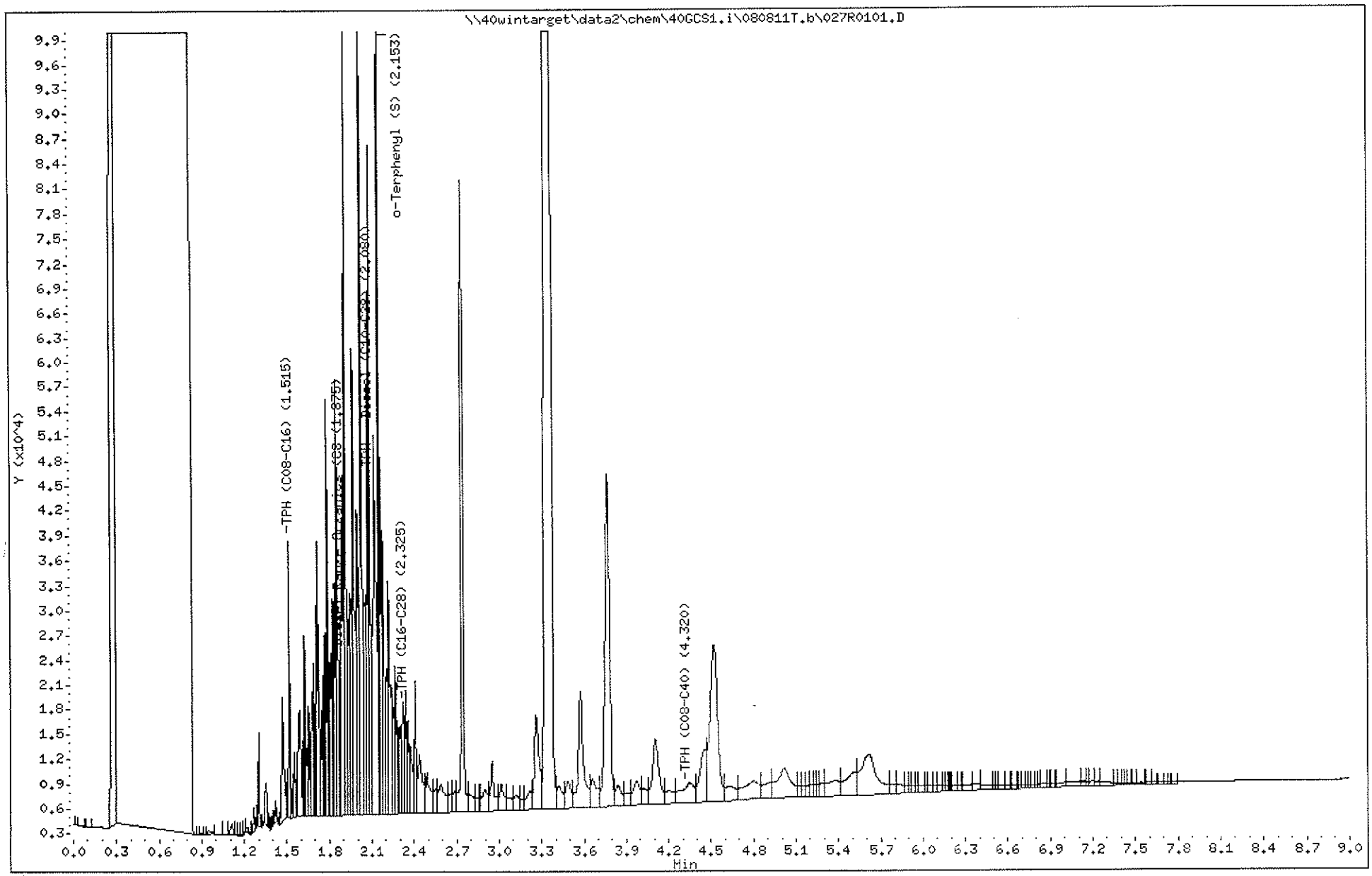
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.757	2882	1320	0.458		
5.787	4217	1292	0.306		
5.843	3195	1176	0.368		
5.890	2191	1106	0.505		
5.920	2142	1083	0.506		
5.963	1049	1049	1.000		
5.987	1670	1051	0.629		
6.010	1259	1050	0.834		
6.020	627	1051	1.677		
6.030	1041	1050	1.008		
6.053	1030	1032	1.002		
6.073	1849	1031	0.558		
6.097	1232	1036	0.841		
6.137	2083	1066	0.512		
6.173	2367	1097	0.463		
6.187	877	1104	1.260		
6.207	1337	1114	0.834		
6.223	1342	1127	0.840		
6.240	2252	1135	0.504		
6.273	895	1122	1.254		
6.317	3753	1208	0.322		
6.337	2852	1204	0.422		
6.377	5100	1143	0.224		
6.457	579	962	1.662		
6.470	1504	949	0.631		
6.490	371	930	2.507		
6.510	1846	928	0.503		
6.543	1281	921	0.719		
6.560	1618	912	0.564		
6.587	531	888	1.672		
6.620	2793	874	0.313		
6.653	1666	850	0.510		
6.690	2369	812	0.343		
6.743	2077	755	0.364		
6.783	1134	715	0.631		
6.807	554	698	1.260		
6.840	1372	699	0.509		
6.857	551	692	1.256		
6.877	827	693	0.838		
6.893	687	690	1.005		
6.917	1212	678	0.559		
6.937	661	663	1.003		
6.987	1994	688	0.345		
7.003	806	681	0.845		
7.023	802	675	0.841		
7.043	534	671	1.258		
7.057	929	672	0.724		
7.073	266	671	2.521		
7.087	1496	684	0.457		
7.123	1317	670	0.509		
7.163	1254	633	0.505		
7.187	1428	617	0.432		
7.223	2478	574	0.232		
7.317	721	347	0.481		
7.357	232	293	1.262		
7.367	399	297	0.744		
7.390	272	278	1.022		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.420	433	280	0.647		
7.437	220	281	1.275		
7.467	741	292	0.394		
7.490	280	286	1.020		
7.510	223	283	1.268		
7.520	281	287	1.021		
7.540	669	288	0.431		
7.583	265	268	1.013		
7.597	272	276	1.015		
7.610	220	281	1.275	0.00	
7.623	438	277	0.633	0.00	
7.650	504	280	0.556	0.00	
7.677	164	275	1.676	0.00	
7.693	283	286	1.011	0.00	
7.707	474	304	0.642	0.00	
7.740	425	317	0.746	0.00	
7.760	440	321	0.730	0.00	
7.783	310	315	1.016	0.00	
	555870461	96632297		100.000	

Total unknown % area = 98.83

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Date : 08-AUG-2011 13:16
Client ID: MBLCSD
Sample Info: 483018X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
Compounds		RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			2984092	857.187	171.43
S	1 TPH (C08-C16)	1.040-1.990			562144	147.313	29.46
S	12 TPH (C16-C28)	1.940-2.710			687056	183.925	36.78
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			1150604	319.791	63.95
S	8 TPH - Diesel (C10-C28)	1.450-2.710			1133743	314.849	62.96(R)
$	15 o-Terphenyl (S)	2.153	2.146	0.007	73287	14.0577	0.93

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.017	10	12	1.188	0.00		
0.083	14	15	1.056	0.00		
0.100	28	22	0.775	0.00		
0.283	265583	126998	0.478	0.04		
0.317	554663241	93690131	0.169	98.80		
0.897	70	84	1.207	0.00		
0.950	631	405	0.642	0.00		
1.515	562144	798731	1.421	0.10	S	1 TPH (C08-C16)
1.875	1150605	1430450	1.243	0.20	S	2 Diesel Range Organi
1.060	89	60	0.678			
1.113	1456	1378	0.946			
1.140	61	133	2.188			
1.160	43	73	1.682			
1.183	64	102	1.596			
1.203	103	128	1.249			
1.217	735	665	0.905			
1.267	1443	2952	2.045			
1.283	1120	2738	2.445			
1.300	5748	11278	1.962			
1.337	282	359	1.272			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.350	3535	4926	1.394			
1.373	393	709	1.802			
1.390	27	91	3.421			
1.400	84	240	2.844			
1.420	1418	2501	1.764			
1.433	261	638	2.444			
2.080	1133743	1401479	1.236	0.20	S	8 TPH - Diesel (C10-C
1.470	15170	15045	0.992			
1.497	2034	4135	2.033			
1.513	16045	33304	2.076			
1.543	3291	4279	1.300			
1.553	6115	7786	1.273			
1.570	1230	3275	2.663			
1.587	15904	12797	0.805			
1.613	3967	8994	2.267			
1.623	13823	21848	1.581			
1.643	5365	8170	1.523			
1.653	8661	13199	1.524			
1.677	12407	15013	1.210			
1.690	10406	18409	1.769			
1.703	6137	11740	1.913			
1.713	30827	33111	1.074			
1.747	7902	12773	1.616			
1.757	12387	16864	1.361			
1.770	13730	22102	1.610			
1.787	26674	50187	1.882			
1.800	10188	17871	1.754			
1.810	13425	19706	1.468			
1.823	21007	26143	1.244			
1.840	16808	28140	1.674			
1.853	36476	52613	1.442			
1.873	10671	18598	1.743			
1.893	39675	41124	1.037			
1.913	86364	144463	1.673			
1.947	27764	25582	0.921			
1.957	20278	26151	1.290			
1.970	50553	56338	1.114			
1.997	44730	36794	0.823			
2.027	92572	130424	1.409			
2.053	30149	25561	0.848			
2.073	37042	51960	1.403			
2.087	49444	80834	1.635			
2.123	72223	45717	0.633			
2.167	37904	43003	1.135			
2.187	23867	32887	1.378			
2.207	13107	17573	1.341			
2.217	32732	28236	0.863			
2.243	15287	13756	0.900			
2.267	15009	17912	1.193			
2.287	7566	9962	1.317			
2.300	9391	10529	1.121			
2.320	15044	13488	0.897			
2.340	9035	14979	1.658			
2.357	8972	11088	1.236			
2.373	11722	8065	0.688			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.407	12686	16114	1.270				
2.437	15388	7052	0.458				
2.490	10405	4843	0.465				
2.553	5304	2840	0.535				
2.587	11196	3324	0.297				
2.657	3926	2265	0.577				
2.680	3759	2513	0.668				
2.153	73288	173880	2.373	0.01	$	15	o-Terphenyl (S)
2.325	687056	739790	1.077	0.12	S	12	TPH (C16-C28)
4.320	2984092	2306782	0.773	0.53	S	5	TPH (C08-C40)
2.743	72593	76306	1.051				
2.787	5367	2076	0.387				
2.830	2904	1665	0.573				
2.863	1253	1578	1.259				
2.897	7174	2606	0.363				
2.950	11003	5969	0.542				
3.017	7303	3203	0.439				
3.057	3912	1574	0.402				
3.120	4634	1825	0.394				
3.160	2031	1285	0.633				
3.213	6428	2131	0.332				
3.263	26448	11283	0.427				
3.367	1157498	595652	0.515				
3.423	6684	2667	0.399				
3.487	9028	3211	0.356				
3.577	36374	14078	0.387				
3.663	11288	3349	0.297				
3.770	92242	40106	0.435				
3.840	7290	2410	0.331				
3.913	4295	1483	0.345				
3.973	9858	2877	0.292				
4.020	5178	1955	0.378				
4.107	27244	7870	0.289				
4.200	6156	1527	0.248				
4.350	15364	2428	0.158				
4.453	20067	6312	0.315				
4.520	72964	18930	0.259				
4.623	8383	1771	0.211				
4.800	17983	2200	0.122				
4.920	8079	1901	0.235				
5.017	25279	3501	0.138				
5.130	1924	1375	0.715				
5.160	2756	1394	0.506				
5.193	2208	1383	0.626				
5.217	1943	1412	0.727				
5.237	1707	1440	0.844				
5.263	2349	1490	0.634				
5.293	2682	1495	0.557				
5.373	11605	1781	0.153				
5.523	15916	2775	0.174				
5.617	37458	4838	0.129				
5.770	3861	1162	0.301				
5.820	3387	1069	0.316				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.873	1264	914	0.723		
5.900	1055	894	0.847		
5.920	1699	868	0.511		
5.950	819	823	1.005		
5.967	2201	814	0.370		
6.027	907	757	0.835		
6.040	1613	746	0.462		
6.077	1260	714	0.566		
6.113	1607	681	0.424		
6.147	518	651	1.256		
6.160	779	655	0.841		
6.177	388	651	1.677		
6.190	520	654	1.258		
6.203	521	651	1.250		
6.213	1431	658	0.460		
6.250	1124	639	0.569		
6.280	369	619	1.678		
6.340	2333	680	0.292		
6.360	2324	705	0.303		
6.407	2954	634	0.215		
6.493	663	485	0.732		
6.513	453	459	1.014		
6.563	1234	449	0.364		
6.587	1041	438	0.421		
6.617	169	424	2.516		
6.637	1007	432	0.429		
6.667	243	409	1.684		
6.677	565	412	0.729		
6.700	632	398	0.629		
6.723	382	393	1.029		
6.757	517	376	0.727		
6.783	695	402	0.578		
6.803	479	408	0.852		
6.823	404	409	1.012		
6.867	1099	440	0.400		
6.893	689	436	0.633		
6.903	261	440	1.688		
6.923	705	450	0.638		
6.940	263	443	1.686		
7.003	1761	502	0.285		
7.087	3655	593	0.162		
7.127	1247	580	0.465		
7.160	642	545	0.850		
7.187	1181	547	0.463		
7.217	1046	528	0.505		
7.247	2514	519	0.206		
7.350	539	313	0.581		
7.377	363	267	0.736		
7.403	303	260	0.858		
7.430	298	255	0.855		
7.457	444	251	0.565		
7.473	199	255	1.282		
7.493	455	260	0.572		
7.530	770	268	0.348		
7.567	150	256	1.708		
7.583	636	279	0.439		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.623	644	279	0.433	0.00	
7.653	109	275	2.532	0.00	
7.667	617	285	0.462	0.00	
7.703	526	298	0.566	0.00	
7.730	419	305	0.728	0.00	
7.753	189	325	1.720	0.00	
7.763	804	340	0.423	0.00	
	557990264	96300436		100.000	

Total unknown % area = 98.84

05 Aug 11 03:19 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080411.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	2000 2860-31-01					TPHMACHB	1
1	5	1000 2860-31-02					TPHMACHB	1
1	6	500 2860-31-14					TPHMACHB	1
1	7	250 2860-30-13					TPHMACHB	1
1	8	100 2860-30-14					TPHMACHB	1
1	9	50 2860-30-15					TPHMACHB	1
1	10	IC500 2860-30-16					TPHMACHB	1
REAR								
1								

Good

11/5/8 CHM

KHB 8/5/11

Continued on Page

Read and Understood By

KHB Hamner 8/5/11 Signed Date

Signed 8/5/11 Date

09 Aug 11 08:09 AM
Sequence: C:\HPCHEM\1\SEQUENCE\080811.SEQ

page 1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	8015DS-CCV-OK				TPHMACHB	1
1	5	483017 RSX3				TPHMACHB	1
1	6	483016				TPHMACHB	1
1	7	483018 RSX3				TPHMACHB	1
1	8	4048242001				TPHMACHB	1
1	9	4048242002				TPHMACHB	1
1	10	4048242003				TPHMACHB	1
1	11	4048242004				TPHMACHB	1
1	12	4048242005				TPHMACHB	1
1	13	4048242006				TPHMACHB	1
1	14	4048244001				TPHMACHB	1
1	15	4048244002 RSX2				TPHMACHB	1
1	16	4048244003 RSX2	TPH.B			TPHMACHB	1
1	17	4048244004 RSX3	GCSV			TPHMACHB	1
1	18	4048244005 RSX3	62958			TPHMACHB	1
1	19	4048244006	HBN			TPHMACHB	1
1	20	4048329001 RSX4	77487			TPHMACHB	1
1	21	4048329002 RSX5				TPHMACHB	1
1	22	4048329003 RSX6				TPHMACHB	1
1	23	4048330001				TPHMACHB	1
1	24	4048330002				TPHMACHB	1
1	25	4048330003				TPHMACHB	1
1	26	483017X3				TPHMACHB	1
1	27	483018X3				TPHMACHB	1
1	28	4048244002X2				TPHMACHB	1
1	29	4048244003X2				TPHMACHB	1
1	30	4048244004X3				TPHMACHB	1
1	31	4048244005X3				TPHMACHB	1
1	32	4048329001X4				TPHMACHB	1
1	33	4048329002X5				TPHMACHB	1
1	34	4048329003X6				TPHMACHB	1
1	35	BLANK				TPHMACHB	1
1	36	BLANK				TPHMACHB	1
1	37	BLANK				TPHMACHB	1
1	38	8015DS-CCV-OK				TPHMACHB	1
1	39	487651				TPHMACHB	1
1	40	487650				TPHMACHB	1
1	41	487652X20 RSX15 = 300	TPH.S			TPHMACHB	1
1	42	487653X20	GCSV			TPHMACHB	1
1	43	4049375001X20	63116			TPHMACHB	1
1	44	4049375002X50 RSX7 = 350	HBN			TPHMACHB	1
1	45	BLANK	78126			TPHMACHB	1
1	46	8015DS-CCV-OK				TPHMACHB	1
REAR							
1							

KHB 8/9/11

KHB 8/9/11

Continued on Page —

Read and Understood By

H Burns 8/9/11
Signed Date

Signed 8/9/11
Date

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 77394 TPH-B

Prep Method	EPA 3541	Analysis Method	TPH-B	Extracted By	BLM	Extracted By Date	07/28/2011
Spiked By	BLM	Spiked By Date	07/28/2011	Conc. Temp #1	98.5	Conc. Temp #2	98.5
Methylene Chloride	12455	Sodium Sulfate	7513	Florisil 3620B	5238	3620B Date/Initials	7/29/11 BLM
Batch Notes		Reviewed By	JLH	Reviewed By Date	07/29/2011		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**483016**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**483017**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**483018**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048242001**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242002**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242003**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242004**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242005**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242006**	14.3	1	0.5			6045 (.5)
8015 T_P	PS	**4048244001**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244002**	14.2	1	0.5			6045 (.5)
8015 T_P	PS	**4048244003**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244004**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244005**	13.6	1	0.5			6045 (.5)
8015 T_P	PS	**4048244006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048329001**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329002**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329003**	13.4	1	0.5			6045 (.5)
8015 T_P	PS	**4048330001**	9	1	0.5			6045 (.5)
8015 T_P	PS	**4048330002**	9.5	1	0.5			6045 (.5)
8015 T_P	PS	**4048330003**	14.3	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Pace Analytical Services					Instrument ID:	40BALC				
LIPID					Analyst:	BLM				

12036 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483156		0.9375	0.9537	15.0000	4.0000	1.0000	0.4320	07/29/2011 07:00:14		
4048242001		0.9537	0.9646	15.0000	4.0000	1.0000	0.2907	07/29/2011 07:00:21		
4048242002		0.9523	0.9621	15.0000	4.0000	1.0000	0.2613	07/29/2011 07:00:27		
4048242003		0.9523	0.9600	14.1000	4.0000	1.0000	0.2184	07/29/2011 07:00:35		
4048242004		0.9504	0.9583	14.1000	4.0000	1.0000	0.2241	07/29/2011 07:00:41		
4048242005		0.9488	0.9543	14.1000	4.0000	1.0000	0.1560	07/29/2011 07:00:47		
4048242006		0.9448	0.9621	14.3000	4.0000	1.0000	0.4839	07/29/2011 07:00:53		
4048244001		0.9443	0.9618	14.0000	4.0000	1.0000	0.5000	07/29/2011 07:01:00		
4048244002		0.9325	0.9550	14.2000	4.0000	1.0000	0.6338	07/29/2011 07:01:07		
4048244003		0.9457	0.9609	14.0000	4.0000	1.0000	0.4343	07/29/2011 07:01:13		
4048244004		0.9459	0.9720	14.0000	4.0000	1.0000	0.7457	07/29/2011 07:01:20		
4048244005		0.9450	0.9738	13.6000	4.0000	1.0000	0.8471	07/29/2011 07:01:26		
4048244006		0.9461	0.9508	15.0000	4.0000	1.0000	0.1253	07/29/2011 07:01:33		
4048329001		0.9473	1.1178	8.8000	4.0000	1.0000	7.7500	07/29/2011 07:01:39		
4048329002		0.9500	1.1489	8.8000	4.0000	1.0000	9.0409	07/29/2011 07:01:46		
4048329003		0.9528	1.1906	13.4000	4.0000	1.0000	7.0985	07/29/2011 07:01:52		
4048330001		0.9522	0.9557	9.0000	4.0000	1.0000	0.1556	07/29/2011 07:01:58		
4048330002		0.9508	0.9596	9.5000	4.0000	1.0000	0.3705	07/29/2011 07:02:04		
4048330003		0.9440	0.9497	14.3000	4.0000	1.0000	0.1594	07/29/2011 07:02:10		

Approved by BH 7/29/11

9/28/10
2860-16-01 500ul of 4000ppm SVIS(2713-90D) diluted to 1.0ml w/CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/25/11
9/30/10
2860-16-02 500ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/29/11
* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR
10/4/10
2860-16-03 500ul of 4000ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 9/30/11
10/6/10
2860-16-04 50ul of 4000ppm SVIS(2713-90G) up to 10ml CH_2Cl_2 20ppm WPAH IS RON 10/6/10 Exp 10/6/11
10/06/10
2860-16-05 500ul of 4000ppm SVIS (2713-90G) diluted to 1.0ml w/CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 10/6/11
10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0ml w nanopure H_2O SAI 50ppm
2860-16-07 2500ul of 10,000mg/L O-terphenyl (2713-86) diluted to 250ml with CH_2Cl_2 (2712-62) = 100ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10/12/10
* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR
10/8/10
2860-16-08 500ul of 4000 ppm SVIS (2713-90H) diluted to 1.0ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by 406MSS1 file# 1012T008
10/13/10
2860-16-10 500ul of 4000 ppm SVIS (2713-90I) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 10/11/11
2860-16-11 ~~20~~ 40ul of 5000ppm N-NDPA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm MDL STD Ext 7/13/11 RON 10/13/10 RON 10/13/10
~~10/18/10 500~~ ARO 10/18/10

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Read and Understood By

Signed [signature] Date 10/18/10 Signed Valerie M Ringquist Date 10/18/2010

Notebook No.

Continued From Page

11/24/10

2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0ml CH_2Cl_2 2000ppm S-PAH IS Ex 11/24/11 RM 11/24

* 11/29/10 CH_2Cl_2 changed at 8:00 to lot 2712-73 VMR

11/30/10

2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40MSS4 120110 5.d

12/1/2010

2860-22-06 1ml of 50,000 ug/ml #2 diesel (2713-45C) + 1ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100ml with CH_2Cl_2 (2713-73) = 1000ppm Expires 12/1 VMR Ran on unit by DAL file # 40GCS1.i\120210T.b\010R0101.D 88.8%

12-2-10

2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 H_2O/MeOH 500
" " -08 25uls of 2860-10-11 " " " " 500ppm

12/03/10

2860-22-09 500ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 500ul of 4000ppm SVIS (2945-06C) up to 1.0ml CH_2Cl_2 2000ppm w/ PAH-IS Ex 12/3/11 RM 12/6

2860-22-11 500 ul of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10

2860-22-12 400ul of 16,000 ppm ERO (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VMR

Continued on Page

Read and Understood By

Valerie M Renquin (Signed) 12/7/10 (Date) [signature] (Signed) 12/22/10 (Date)

2/21/11

2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MEOH spike) → 1.0 mL [Final] = 500 ug/mL GC 7-19-11 DAR

2/24/11 changed CH_2Cl_2 @ 10:00AM to New LOT (2712-085) KPN

2/25/11

2860-29-02 3.0mL of 5000ppm B/N SUR (~~2945-03~~ 2945-03C KAN 4/11/11) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SUR KPN Exp 8/25/11 KAN
Ran on instr by RJN file # 40MSS4 02251128.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) up to 1.0ml CH_2Cl_2 2000ppm SPAHIS Ex 2/23/12 RON 2/25/11

3/2/11

2860-29-04 250ul of 4000ppm SVIS (2945-17G) up to 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RON 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100ul of 5000ppm B/N SS (2945-20A) up to 10.0mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RON 3/2/11

2860-29-06	0.500 ul of 50ppm PAH (2860-29-05)	up to 1.0ml CH_2Cl_2	25ppm PAH CAL	Ex 7/3/11	RON 3/2/11
07	0.200	↓	10	↓	↓
08	0.100	↓	5	↓	↓
09	0.020	↓	1	↓	↓
10	0.010	↓	.5	↓	↓
11	0.010	10.0ml	.05	↓	↓
12	0.200	1.0ml	10ppm Check	↓	↓

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/N SS (2860-27-01) up to 1.0ml CH_2Cl_2 10ppm PAH 2nd Source Ex 9/2/11 RON 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 2/28/12

3/3/2011

2860-29-15 2500ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Ran on inst by ~~DAE~~ GC file # (VMR)
Exp 3/3/2012 VMR

Z VMR 3/3/2011 OK to use per GC ran on inst 3/8/11 VMR → 400USF.i / 0307116.b - File 010F1001. Recovery = 106% GC 3/8/11

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Valerie M Renquin 3/3/2011 [signature] 3/7/11
Signed Date Signed Date

3-4-11

2860-30-01 50 mL of 2380-100-01 (TPH @ 20000ug/mL) → 1.0mL CH_2Cl_2
[Final] = 100ug/mL Exp 5-6-11 DAR
TPH ICAL

2860-30-02 500 mL of 2713-460 (#2 Diesel Fuel @ 20,000ug/mL) → 5.0mL CH_2Cl_2
[Final] = 2000ug/mL Exp 3.4.12 DAR

2860-30-03 500 mL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000ug/mL
2860-30-04 250 mL = 500ug/mL
2860-30-05 125 mL = 250 ug/mL
2860-30-06 50 mL = 100 ug/mL
2860-30-07 25 mL = 50 ug/mL
→ use only 1.0 mL of 2860-30-02 2713-990
All standards + 5 mL 2945-135 (o-terphenyl @ 10,000ug/mL)
[Final] = 50ug/mL All standard Exp 2.22.12 DAR

TPH ICV
2860-30-08 10 mL of ~~2945-23A~~ 2713-990 (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+ 5mL 2945-135 (o-terphenyl @ 10,000ug/mL)
[Final] = 500 ug/mL + 50ug/mL Exp 2.22.12 DAR

2860-30-09 25uL of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JHI

3.7.11

2860-30-10 1.0mL of 2860-30-02 + 5 mL 2713-990 (o-terp @ 10,000ug/mL) = 2000ug/mL 150ug/mL
2860-30-11 500 mL of → 1.0mL CH_2Cl_2 [Final] = 1000ug/mL
2860-30-12 250 mL = 500ug/mL
2860-30-13 125 mL = 250 ug/mL
2860-30-14 50 mL = 100 ug/mL
2860-30-15 25 mL = 50ug/mL
→ Plus 5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 50ug/mL Exp ~~3-4-11~~ DAR 5-6-11 GC

2860-30-16 10 mL of 2945-23A (Diesel Fuel #2 @ 50,000ug/mL) → 1.0mL CH_2Cl_2
+5 mL 2713-990 (o-terp @ 10,000ug/mL) [Final] = 500ug/mL + 50ug/mL
Exp ~~3-4-11~~ DAR 3/4/12 GC

DAR 3-7-11

Continued on Page

Read and Understood By

Signed _____ Date 3.7.11
Signed Valerium Renquin Date 3/24/11

3.7.11

2860-31-01 100 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-02 50 uL of 2713-460D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-990 (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DAR

2860-31-03 25 uL of 2860-10-19 diluted to 4.0 mL w 50/50 MeOH/H_2O JHI 500 ppm

2860-31-04 500 uL of 4000 ppm SVIS (2945-17J) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO Exp 3/10/12

2860-31-05 500 uL of 2860-10-11 diluted to 100 mL w 50/50 MeOH H_2O JHI 1000 ppm
-06 25 uL of 2860-31-05 diluted to 1.0 mL w 25 ppm STD
-07 100 100
-08 250 250
-09 500 500
-10 750 750 JHI

3.14.11

2860-31-11 1.0 mL of 100 2860-22-04 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DAR

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL EXP 1-10-12 DAR

3/15/11

2860-31-13 500 uL of 4000 ppm SVIS (2945-17J) upto 1.0 mL CH_2Cl_2 2000 ppm PAH-IS Exp 3/15/12 RW 3/15/11

3.17.11 TPH CCV

2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-09D (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DAR

Continued on Page

Read and Understood By

Signed _____ Date 3/17/11

Valeria M Penguin
Signed _____ Date 3/24/11

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

Pace Analytical®
www.pacelabs.com

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

TPH-Diesel Data Package Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048330

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: CRABS
Pace Project No.: 4048330

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4048330001	EWL-DES-C-MEAT	Tissue	06/20/11 00:00	07/14/11 09:40
4048330002	EWL-HOU-C-MEAT	Tissue	05/23/11 18:15	07/14/11 09:40
4048330003	EWL-BIL-C-MEAT	Tissue	06/09/11 12:00	07/14/11 09:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical®

CASE NARRATIVE - TPH-DIESEL ANALYSIS

Lab Report Number (SDG): 4048330
Client: URS CORPORATION
Project Name: EAST WHITE LAKE PROJECT
Project Number: K1106166

1. RECEIPT

The samples were received frozen on dry ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method holding times were met.
B. **Sample Analysis:** All method holding times were met.

3. METHOD

A. **Preparation:** SW846 3541
B. **Analysis:** SW846 8015B Modified

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Initial verification:** All method acceptance criteria were met.
   2. **Continuing verification:** All method acceptance criteria were met.
B. **Blanks:**
   1. **Method:** TPH (C08-C40) was detected above the report limit due to a large lipid peak eluting around C34. All associated samples results were reported with the "3q" data qualifier.
C. **Surrogates:** All in-house acceptance criteria were met. The recoveries of the LCS and LCSD were below control criteria and the "S0" applied.
D. **Spikes:**
   1. **Lab Control Spike / Duplicate (LCS/LCSD):** All in-house accuracy and precision criteria were met. The recoveries of TPH (C08-C16) and TPH (C16-C28) were below control criteria in the LCS and LCSD. The recoveries of TPH (C08-C40) were above control criteria in the LCS/LCSD due to large lipid peak eluting around C34 and the summary was reported with the "1q" and "2q" data qualifiers.
   2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):** A MS/MSD pair was not performed for this SDG due to insufficient sample volume.
E. **Samples:** Sample analyses proceeded normally.
F. **Dilutions:** All samples were diluted to bring the TPH (C08-C40) values within the range of calibration.
G. **Reanalysis:** None required for this SDG.
H. **Comments:** No additional comments are needed.

I certify that this data package is in compliance with the terms and conditions agreed to by **Pace Analytical Services, Inc.** and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Jill A. Duranceau Date: 05/14/12

Name: Jill A. Duranceau Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: CRABS
Pace Project No.: 4048330

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4048330001	EWL-DES-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048330002	EWL-HOU-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1
4048330003	EWL-BIL-C-MEAT	EPA 8015B Modified	KHB	6
		Pace Lipid	BLM	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: CRABS
Pace Project No.: 4048330

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/6258

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte recovery in the lab control sample (LCS) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
2q	Analyte recovery in the lab control sample duplicate (LCSD) was outside QC limits due to large lipid peak eluting around C34. Spike criteria of C10-C28 passed QC limits.
3q	Compound was detected in the method blank at a concentration higher than the reporting limit due to a large lipid peak eluting around C34. Results reported and flagged accordingly.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
S0	Surrogate recovery outside laboratory control limits.

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CRABS
Pace Project No.: 4048330

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Carolina Certification #: 503
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

4048330

Project Number: K1106166
Project Manager: Lynda Huckestein David Lingle/URS

	Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Relinquish None TPH	
01	K1106166-009	EWL-DES-C-Meat	1	Animal Tissue	6/20/11		Pace PA	✓	1-2ozjA
02	K1106166-015	EWL-HOU-C-Meat	1	Animal Tissue	5/23/11	1815	Pace PA	✓	
03	K1106166-025	EWL-BIL-C-Meat	1	Animal Tissue	6/9/11	1200	Pace PA	✓	

Test Comments
Relinquish - None K1106166-009,15,25 Ship to Pace in Green Bay, WI for TPH

Folder Comments:
Report tissues on a wet weight basis.

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

David Lingle/URS = Project contact
East White Lake Project

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 07/16/11

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD N

Invoice Information
PO# K1106166
Bill to

Relinquished By: [signature] 7/13/11 1145 Received By: _____ Airbill Number: _____

rel. Fedex 7/14/11 0940 rec [signature] Place GrB 7/14/11 0940 temp. 4.0°C

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Sample Condition Upon Receipt

Client Name: Columbia Analytical Services Project # 4048330

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used JB Type of Ice: Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature 20°C Biological Tissue is Frozen: ☑ yes ☐ no

Temp Blank Present: ☑ yes ☐ no

Person examining contents:
Date: 7/14/11
Initials: TJ

Temp should be above freezing to 6°C for all sample except Biota.
Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: B		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MAT for TN **Date:** 7.14.11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TPH-Diesel QC Summary Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048330

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SURROGATE RECOVERY SUMMARY

Project: CRABS
Pace Project No.: 4048330

QB Batch: OEXT / 12029
Method(s): EPA 3541 / EPA 8015B Modified

Lab ID	Type	Client Sample ID	Dilution	Sur1 % Rec	Sur1 Qual	Sur2 % Rec	Sur2 Qual	Sur3 % Rec	Sur3 Qual	Sur4 % Rec	Sur4 Qual	Sur5 % Rec	Sur5 Qual	Sur6 % Rec	Sur6 Qual
4048330001		EWL-DES-C-MEAT	1	73											
483016	BLANK		1	71											
4048330002		EWL-HOU-C-MEAT	1	60											
483017	LCS		3	0	S0										
4048330003		EWL-BIL-C-MEAT	1	38											
483018	LCSD		3	0	S0										
		QC Limits:		50-150											

Sur 1: o-Terphenyl (S)

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048330

QB Batch: OEXT/12029 **LCS Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified **LCSD Prepared:** 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRABS
Pace Project No.: 4048330

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4048330001	EWL-DES-C-MEAT	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048330002	EWL-HOU-C-MEAT	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048330003	EWL-BIL-C-MEAT	EPA 3541	OEXT/12029	EPA 8015B Modified	GCSV/6258
4048330001	EWL-DES-C-MEAT	Pace Lipid	OEXT/12036		
4048330002	EWL-HOU-C-MEAT	Pace Lipid	OEXT/12036		
4048330003	EWL-BIL-C-MEAT	Pace Lipid	OEXT/12036		

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

8D
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: Contract: URS

Lab Code: Case No.: SAS No.: SDG No.: 4048330

GC Column: DB-5 ID: 0.32 (mm) Init. Calib. Date(s): 08/04/11 08/04/11

Instrument ID: 40GCS1

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.15

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	2000 2860-38-01	2000 2860-38-01	08/04/11	1042	2.15	
02	1000 2860-38-02	1000 2860-38-02	08/04/11	1052	2.15	
03	500 2860-38-03	500 2860-38-03	08/04/11	1104	2.15	
04	250 2860-38-04	250 2860-38-04	08/04/11	1116	2.15	
05	100 2860-38-05	100 2860-38-05	08/04/11	1129	2.15	
06	50 2860-38-06	50 2860-38-06	08/04/11	1140	2.15	
07	IC500 2860-38-07	IC500 2860-38-07	08/04/11	1244	2.15	
08	8015DS-CCV	8015DS-CCV	08/08/11	0834	2.15	
09	MB	483016	08/08/11	0905	2.15	
10	EWL-DES-C-MEAT	4048330001	08/08/11	1228	2.15	
11	EWL-HOU-C-MEAT	4048330002	08/08/11	1240	2.15	
12	EWL-BIL-C-MEAT	4048330003	08/08/11	1252	2.15	
13	MBLCS	483017	08/08/11	1304	2.15	
14	MBLCSD	483018	08/08/11	1316	2.15	
15	8015DS-CCV	8015DS-CCV	08/08/11	1559	2.15	
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = o-Terphenyl (S) (+/- 0.01 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

TPH-Diesel Sample Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048330

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048330

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified

Sample: EWL-DES-C-MEAT TX
Lab ID: 4048330001
Collected: 06/20/11 00:00
Received: 07/14/11 09:40

Results reported on a "wet-weight" basis

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**9.6J**	mg/kg	11.1	5.6	1	07/28/11 12:00	08/08/11 12:28	
	TPH (C08-C16)	**<5.6**	mg/kg	11.1	5.6	1	07/28/11 12:00	08/08/11 12:28	
	TPH (C16-C28)	**8.1J**	mg/kg	11.1	5.6	1	07/28/11 12:00	08/08/11 12:28	
	TPH (C08-C40)	**125**	mg/kg	11.1	5.6	1	07/28/11 12:00	08/08/11 12:28	3q
	TPH - Diesel (C10-C28)	**9.2J**	mg/kg	11.1	5.6	1	07/28/11 12:00	08/08/11 12:28	
Surrogates									
84-15-1	o-Terphenyl (S)	**73**	%.	50-150		1	07/28/11 12:00	08/08/11 12:28	

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048330

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-DES-C-MEAT TX
Lab ID: 4048330001
Collected: 06/20/11 00:00
Received: 07/14/11 09:40

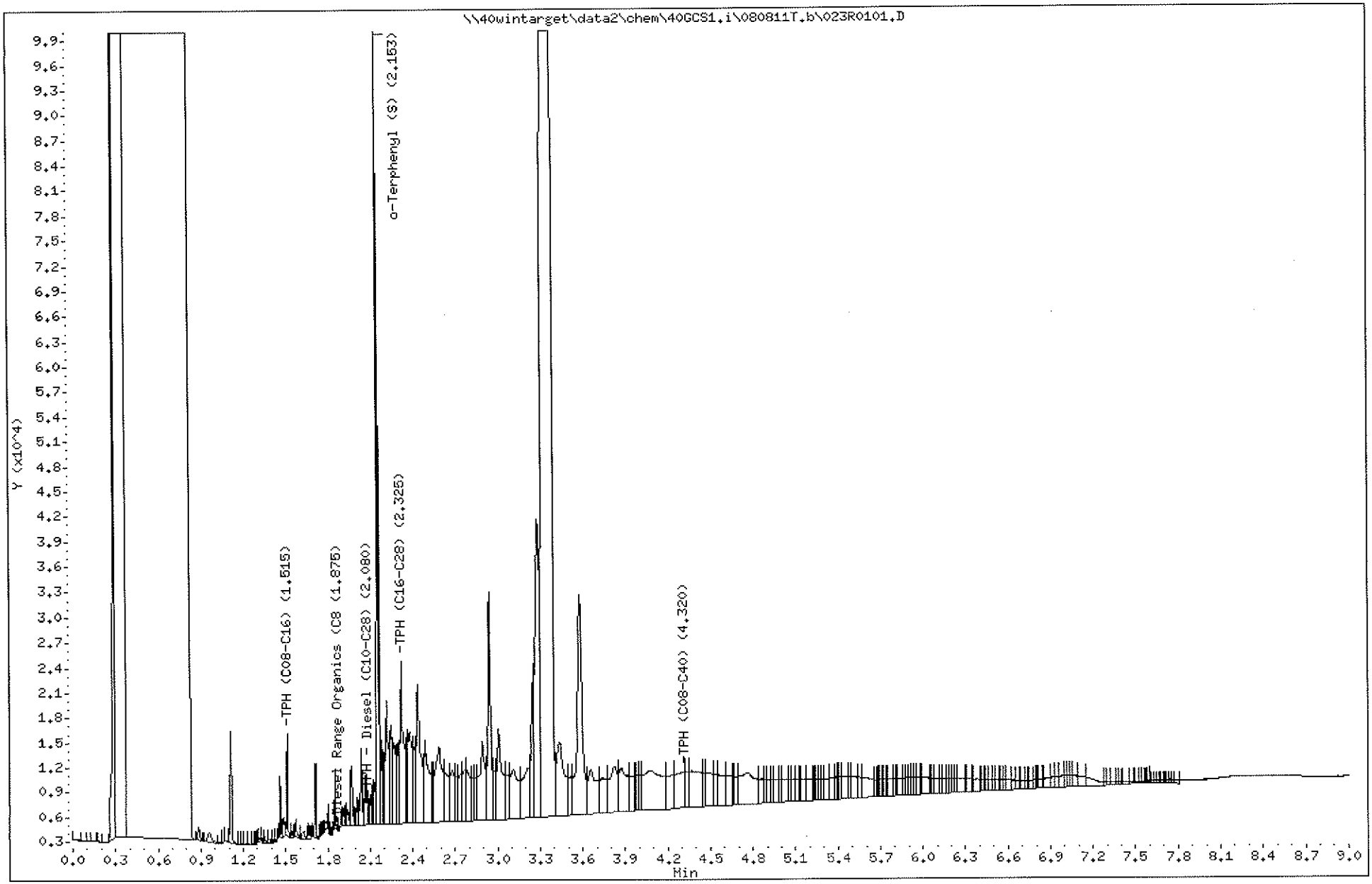
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	0.16	%			1		07/29/11 07:01	

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\023R0101.D
Date : 08-AUG-2011 12:28
Client ID: EWL-DES-C-MEAT
Sample Info: 4048330001
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\023R0101.D
Lab Smp Id: 4048330001 Client Smp ID: EWL-DES-C-MEAT
Inj Date : 08-AUG-2011 12:28
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048330001
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 12:02 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			3889678	1122.61	124.73
S 1 TPH (C08-C16)	Compound Not Detected.					
S 12 TPH (C16-C28)	1.940-2.710			308855	73.0738	8.11(a)
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			354088	86.3316	9.59(a)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			340535	82.3592	9.15
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	191495	36.7319	4.08

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048330

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-HOU-C-MEAT TX
Lab ID: 4048330002
Collected: 05/23/11 18:15
Received: 07/14/11 09:40

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**8.5J**	mg/kg	10.5	5.3	1	07/28/11 12:00	08/08/11 12:40	
	TPH (C08-C16)	**<5.3**	mg/kg	10.5	5.3	1	07/28/11 12:00	08/08/11 12:40	
	TPH (C16-C28)	**7.5J**	mg/kg	10.5	5.3	1	07/28/11 12:00	08/08/11 12:40	
	TPH (C08-C40)	**105**	mg/kg	10.5	5.3	1	07/28/11 12:00	08/08/11 12:40	3q
	TPH - Diesel (C10-C28)	**8.4J**	mg/kg	10.5	5.3	1	07/28/11 12:00	08/08/11 12:40	
Surrogates									
84-15-1	o-Terphenyl (S)	**60**	%.	50-150		1	07/28/11 12:00	08/08/11 12:40	

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048330

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-HOU-C-MEAT TX
Lab ID: 4048330002
Collected: 05/23/11 18:15
Received: 07/14/11 09:40

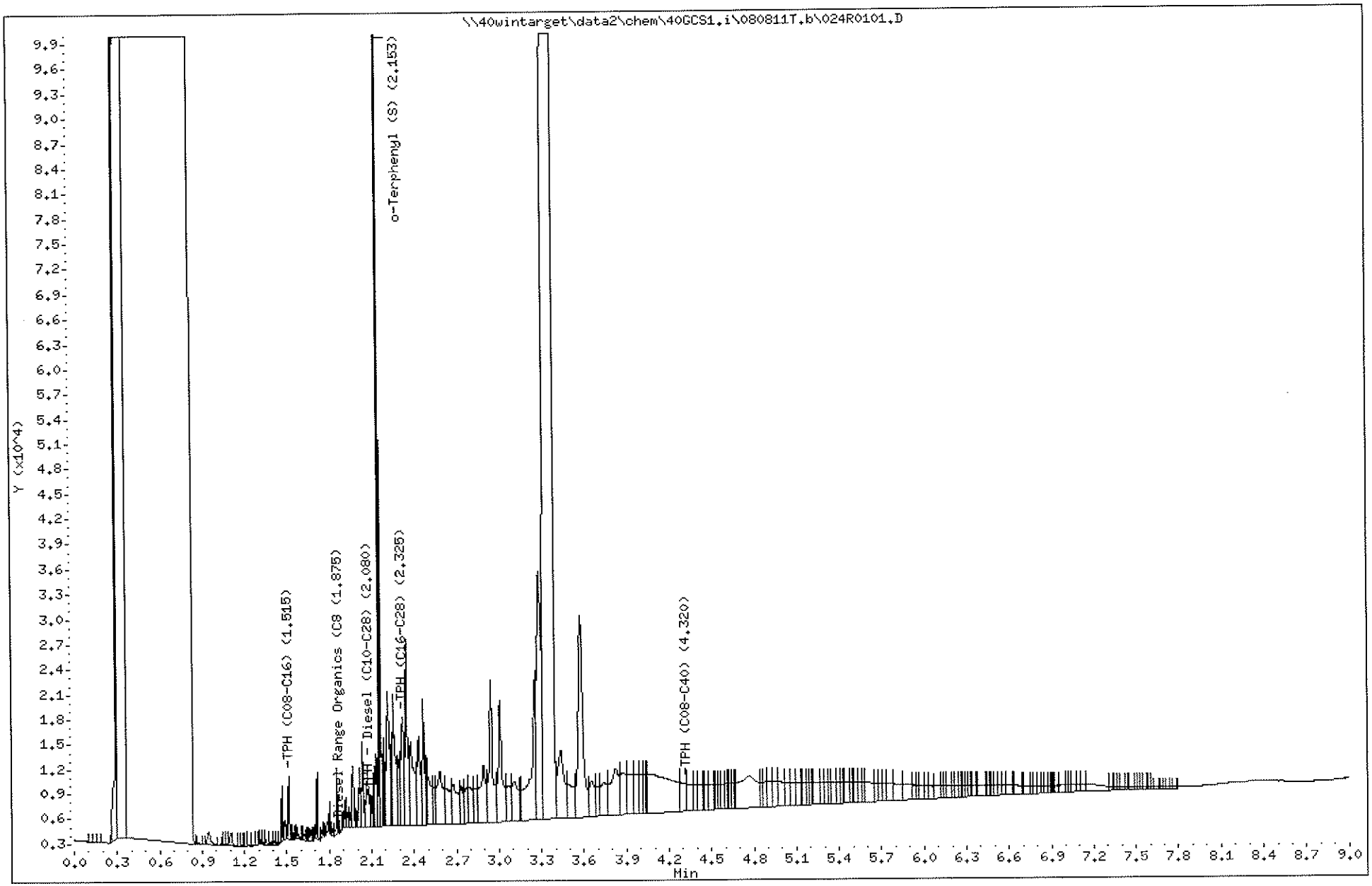
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.37**	%			1		07/29/11 07:02	

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\024R0101.D
Date : 08-AUG-2011 12:40
Client ID: EWL-HOU-C-MEAT
Sample Info: 4048330002
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\024R0101.D
Lab Smp Id: 4048330002 Client Smp ID: EWL-HOU-C-MEAT
Inj Date : 08-AUG-2011 12:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048330002
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 12:02 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	9.500	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			3478345	1002.05	105.47
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			303177	71.4095	7.51(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			335494	80.8817	8.51(a)
S	8 TPH - Diesel (C10-C28)	1.450-2.710			331741	79.7817	8.39
$	15 o-Terphenyl (S)	2.153	2.146	0.007	155626	29.8517	3.14

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048330

Matrix: Tissue
% Moisture:
Acode: 8015 GCS THC-Diesel
Prep/Method: EPA 3541 / EPA 8015B Modified
Results reported on a "wet-weight" basis

Sample: EWL-BIL-C-MEAT TX
Lab ID: 4048330003
Collected: 06/09/11 12:00
Received: 07/14/11 09:40

CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Diesel Range Organics (C8-C28)	**5.0J**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 12:52	
	TPH (C08-C16)	**<3.5**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 12:52	
	TPH (C16-C28)	**4.4J**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 12:52	
	TPH (C08-C40)	**96.9**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 12:52	3q
	TPH - Diesel (C10-C28)	**4.9J**	mg/kg	7.0	3.5	1	07/28/11 12:00	08/08/11 12:52	
Surrogates									
84-15-1	o-Terphenyl (S)	**38**	%.	50-150		1	07/28/11 12:00	08/08/11 12:52	

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: CRABS
Pace Project No.: 4048330

Matrix: Tissue
% Moisture:
Acode: Lipid
Prep/Method: Pace Lipid
Results reported on a "wet-weight" basis

Sample: EWL-BIL-C-MEAT TX
Lab ID: 4048330003
Collected: 06/09/11 12:00
Received: 07/14/11 09:40

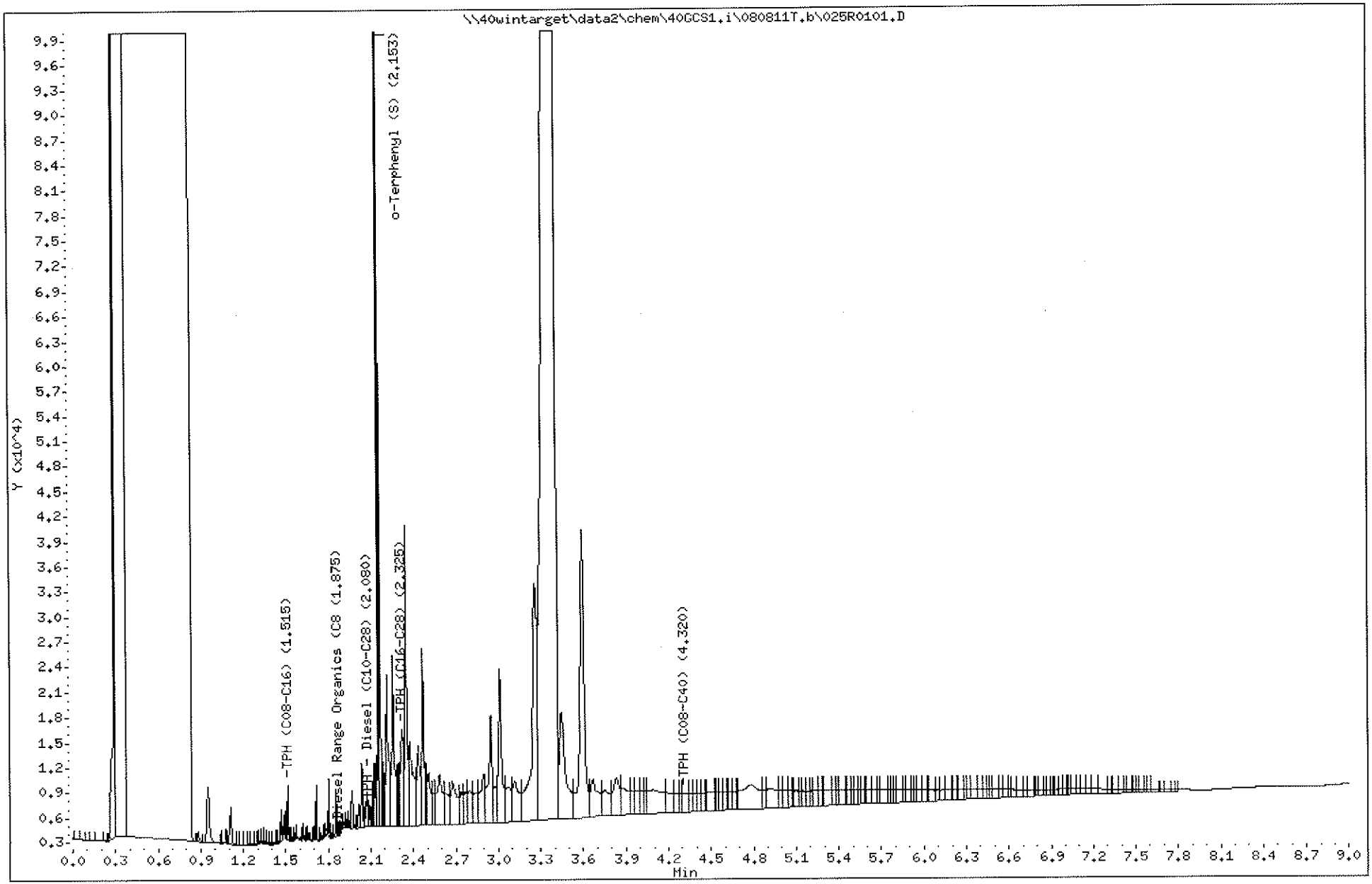
CAS No.	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Qual
	Lipid	**0.16**	%			1		07/29/11 07:02	

Date: 05/09/2012 03:56 PM

REPORT OF LABORATORY ANALYSIS

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\025R0101.D
Date : 08-AUG-2011 12:52
Client ID: EWL-BIL-C-MEAT
Sample Info: 4048330003
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\025R0101.D
Lab Smp Id: 4048330003 Client Smp ID: EWL-BIL-C-MEAT
Inj Date : 08-AUG-2011 12:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 4048330003
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 12:02 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	14.300	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
	Compounds	RT	EXP RT	DLT RT	RESPONSE		
S	5 TPH (C08-C40)	1.040-7.600			4788025	1385.92	96.91
S	1 TPH (C08-C16)	Compound Not Detected.					
S	12 TPH (C16-C28)	1.940-2.710			276590	63.6169	4.44(a)
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			302051	71.0795	4.97(a)
S	8 TPH - Diesel (C10-C28)	1.450-2.710			296543	69.4651	4.85
$	15 o-Terphenyl (S)	2.153	2.146	0.007	98927	18.9759	1.32

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

TPH-Diesel Standard Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048330

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Calibration File Names:
Level 1: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Level 2: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Level 3: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Level 4: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Level 5: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Level 6: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
S 1 TPH (C08-C16)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 2 Diesel Range Organics (C8-C28	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 3 High End Organics (C8-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 4 TPH (C08-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 5 TPH (C08-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 6 TPH (C10-C12)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 7 TPH (C10-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 8 TPH - Diesel (C10-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 9 TPH (C10-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 10 TPH (C12-C20)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 11 TPH (C12-C36)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 12 TPH (C16-C28)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 13 TPH (C16-C40)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996
S 14 TPH (C20-C34)	212976	400376	903980	1793180	3478740	6874016	LINR	-17.45179	0.00029		0.99996

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Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Compound	50.0000 Level 1	100.0000 Level 2	250.0000 Level 3	500.0000 Level 4	1000.0000 Level 5	2000.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
16 TPH C8	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
17 TPH C10	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
18 TPH C12	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
19 TPH C14	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
20 TPH C16	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
21 TPH C18	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
22 TPH C20	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
23 TPH C22	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
24 TPH C24	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
25 TPH C26	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
26 TPH C28	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
27 TPH C30	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
28 TPH C32	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
29 TPH C34	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
30 TPH C36	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
31 TPH C38	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
32 TPH C40	+++++	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+000	0.000e+000		0.000e+000	<-
$ 15 o-Terphenyl (S)	0.00022	0.00023	0.00020	0.00017	0.00018	0.00015	AVRG		0.00019		15.94928	

Pace Analytical Services, Inc

INITIAL CALIBRATION DATA

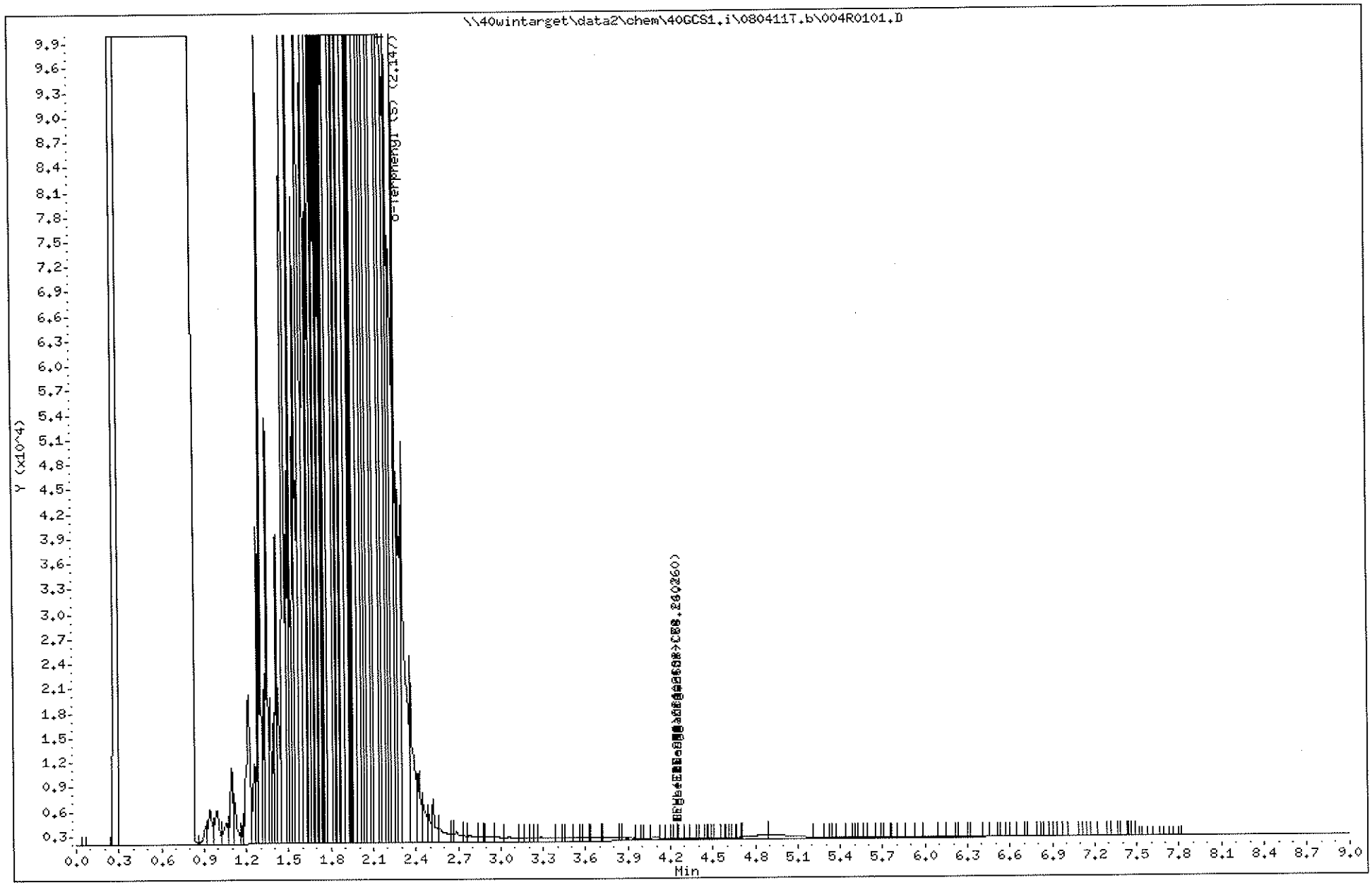
Start Cal Date : 04-AUG-2011 10:42
End Cal Date : 04-AUG-2011 11:40
Quant Method : ESTD
Target Version : 4.14
Integrator : Falcon
Method file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Last Edit : 09-May-2012 11:45 40GCS1.i

Curve	Formula	Units
Averaged	Amt = m1*Rsp	Amount
Linear	Amt = b + m1*Rsp	Amount

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Date : 04-AUG-2011 10:42
Client ID: 2000 2860-38-01
Sample Info: 2000 2860-38-01
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\004R0101.D
Lab Smp Id: 2000 2860-38-01 Client Smp ID: 2000 2860-38-01
Inj Date : 04-AUG-2011 10:42
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 2000 2860-38-01
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:42 Cal File: 004R0101.D
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1	TPH (C08-C16)	1.050-7.470			6874016	2000.00	1997.32
S 11	TPH (C12-C36)	1.050-7.470			6874016	2000.00	1997.32
S 2	Diesel Range Organics (C8-C28)	1.050-7.470			6874016	2000.00	1997.32
S 3	High End Organics (C8-C34)	1.050-7.470			6874016	2000.00	1997.32
S 4	TPH (C08-C36)	1.050-7.470			6874016	2000.00	1997.32
S 5	TPH (C08-C40)	1.050-7.470			6874016	2000.00	1997.32
S 6	TPH (C10-C12)	1.050-7.470			6874016	2000.00	1997.32
S 7	TPH (C10-C20)	1.050-7.470			6874016	2000.00	1997.32
S 8	TPH - Diesel (C10-C28)	1.480-2.730			6874016	2000.00	1997.32(T)
S 9	TPH (C10-C40)	1.050-7.470			6874016	2000.00	1997.32
S 10	TPH (C12-C20)	1.050-7.470			6874016	2000.00	1997.32
S 12	TPH (C16-C28)	1.050-7.470			6874016	2000.00	1997.32
S 13	TPH (C16-C40)	1.050-7.470			6874016	2000.00	1997.32
S 14	TPH (C20-C34)	1.050-7.470			6874016	2000.00	1997.32
$ 15	o-Terphenyl (S)	2.146	2.146	0.000	330420	50.0000	63.38

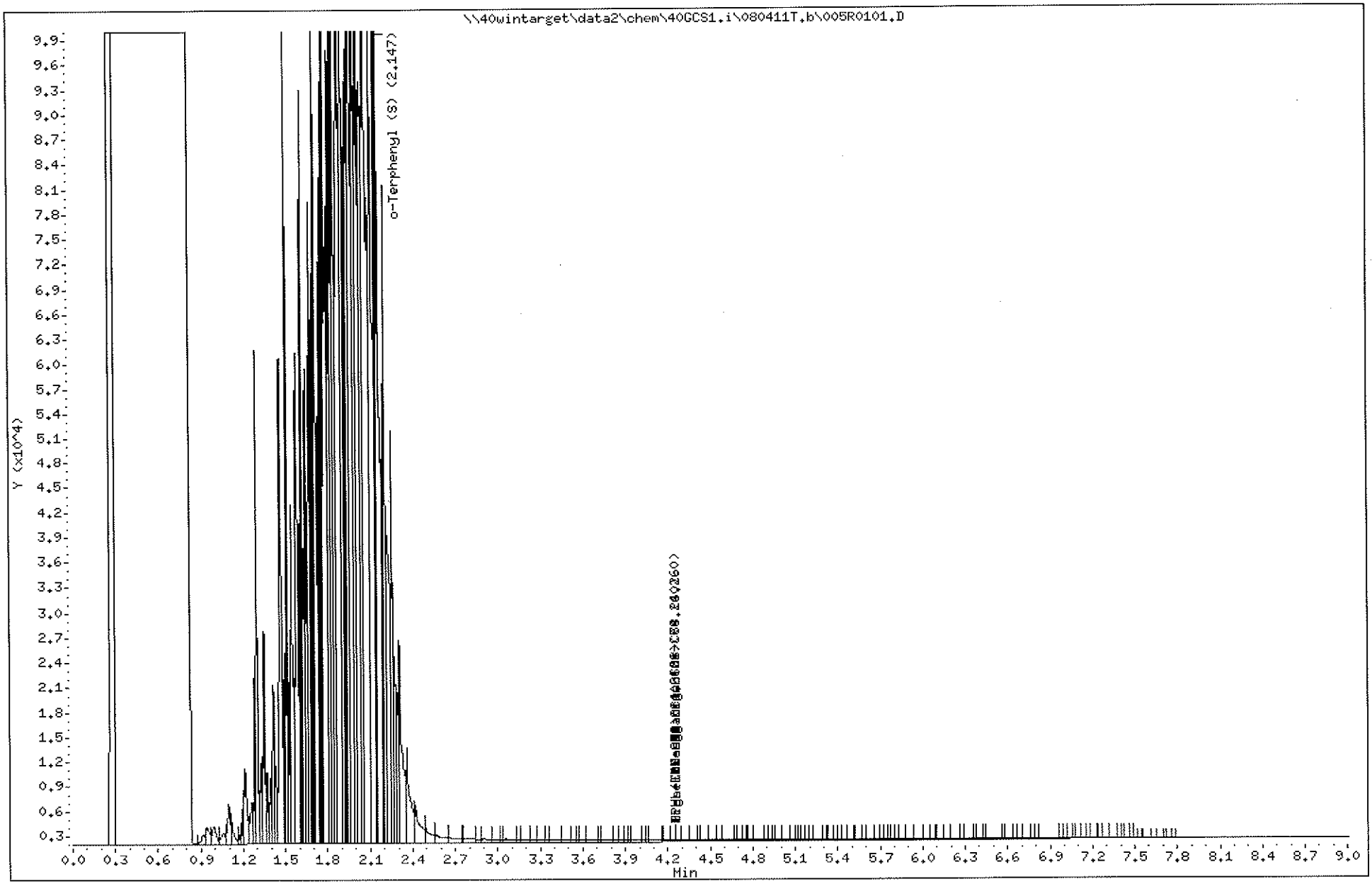
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Date : 04-AUG-2011 10:52
Client ID: 1000 2860-38-02
Sample Info: 1000 2860-38-02
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\005R0101.D
Lab Smp Id: 1000 2860-38-02 Client Smp ID: 1000 2860-38-02
Inj Date : 04-AUG-2011 10:52
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 1000 2860-38-02
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 10:52 Cal File: 005R0101.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

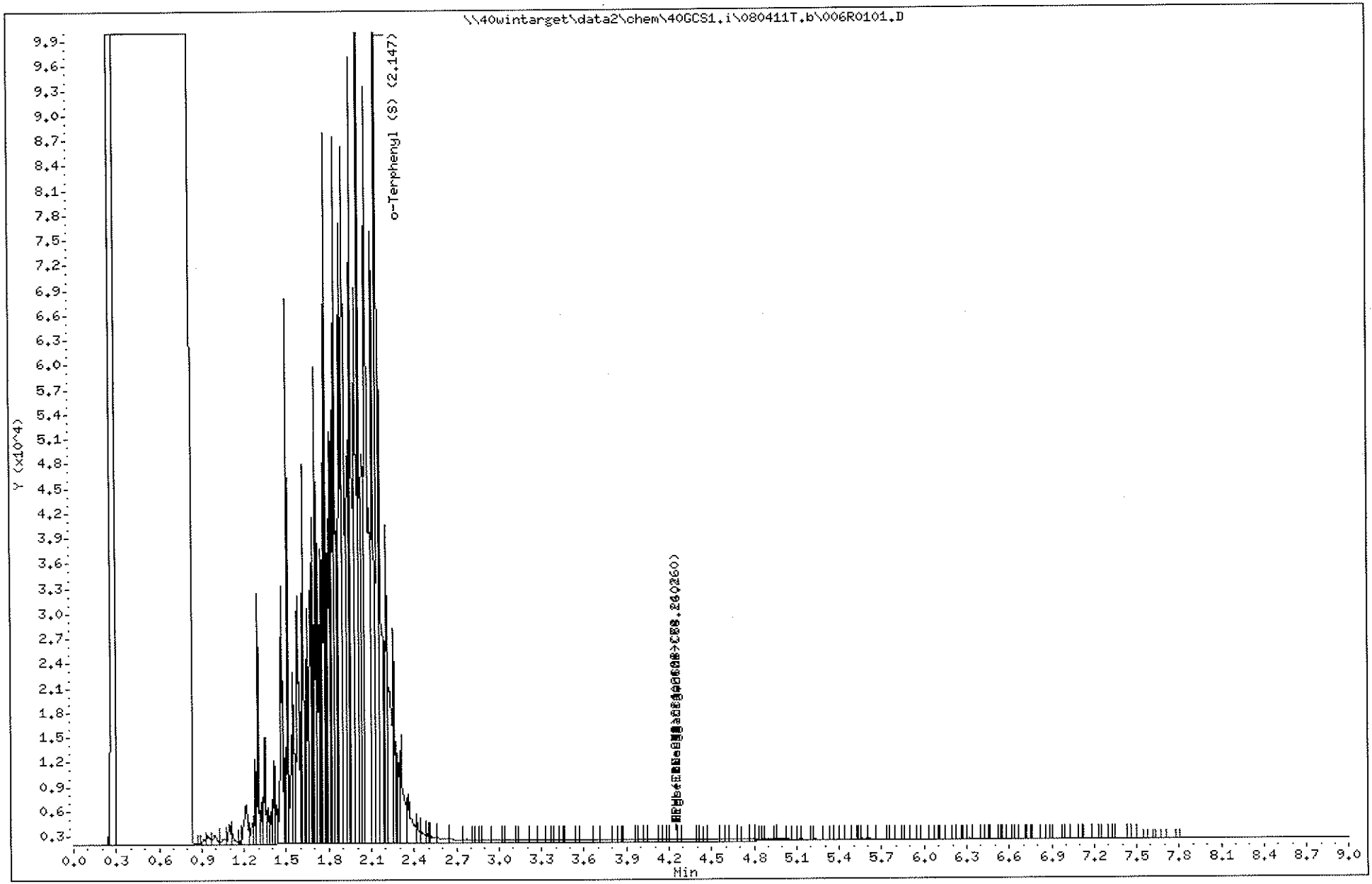
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			3478740	1000.00	1002.16
S 11 TPH (C12-C36)	1.050-7.470			3478740	1000.00	1002.16
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			3478740	1000.00	1002.16
S 3 High End Organics (C8-C34)	1.050-7.470			3478740	1000.00	1002.16
S 4 TPH (C08-C36)	1.050-7.470			3478740	1000.00	1002.16
S 5 TPH (C08-C40)	1.050-7.470			3478740	1000.00	1002.16
S 6 TPH (C10-C12)	1.050-7.470			3478740	1000.00	1002.16
S 7 TPH (C10-C20)	1.050-7.470			3478740	1000.00	1002.16
S 8 TPH - Diesel (C10-C28)	1.480-2.730			3478740	1000.00	1002.16(T)
S 9 TPH (C10-C40)	1.050-7.470			3478740	1000.00	1002.16
S 10 TPH (C12-C20)	1.050-7.470			3478740	1000.00	1002.16
S 12 TPH (C16-C28)	1.050-7.470			3478740	1000.00	1002.16
S 13 TPH (C16-C40)	1.050-7.470			3478740	1000.00	1002.16
S 14 TPH (C20-C34)	1.050-7.470			3478740	1000.00	1002.16
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	278558	50.0000	53.43

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Date : 04-AUG-2011 11:04
Client ID: 500 2860-38-03
Sample Info: 500 2860-38-03
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\006R0101.D
Lab Smp Id: 500 2860-38-03 Client Smp ID: 500 2860-38-03
Inj Date : 04-AUG-2011 11:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 500 2860-38-03
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:04 Cal File: 006R0101.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			1793180	500.000	508.13
S	11 TPH (C12-C36)	1.050-7.470			1793180	500.000	508.13
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			1793180	500.000	508.13
S	3 High End Organics (C8-C34)	1.050-7.470			1793180	500.000	508.13
S	4 TPH (C08-C36)	1.050-7.470			1793180	500.000	508.13
S	5 TPH (C08-C40)	1.050-7.470			1793180	500.000	508.13
S	6 TPH (C10-C12)	1.050-7.470			1793180	500.000	508.13
S	7 TPH (C10-C20)	1.050-7.470			1793180	500.000	508.13
S	8 TPH - Diesel (C10-C28)	1.480-2.730			1793180	500.000	508.13(T)
S	9 TPH (C10-C40)	1.050-7.470			1793180	500.000	508.13
S	10 TPH (C12-C20)	1.050-7.470			1793180	500.000	508.13
S	12 TPH (C16-C28)	1.050-7.470			1793180	500.000	508.13
S	13 TPH (C16-C40)	1.050-7.470			1793180	500.000	508.13
S	14 TPH (C20-C34)	1.050-7.470			1793180	500.000	508.13
$	15 o-Terphenyl (S)	2.146	2.146	0.000	295515	50.0000	56.68

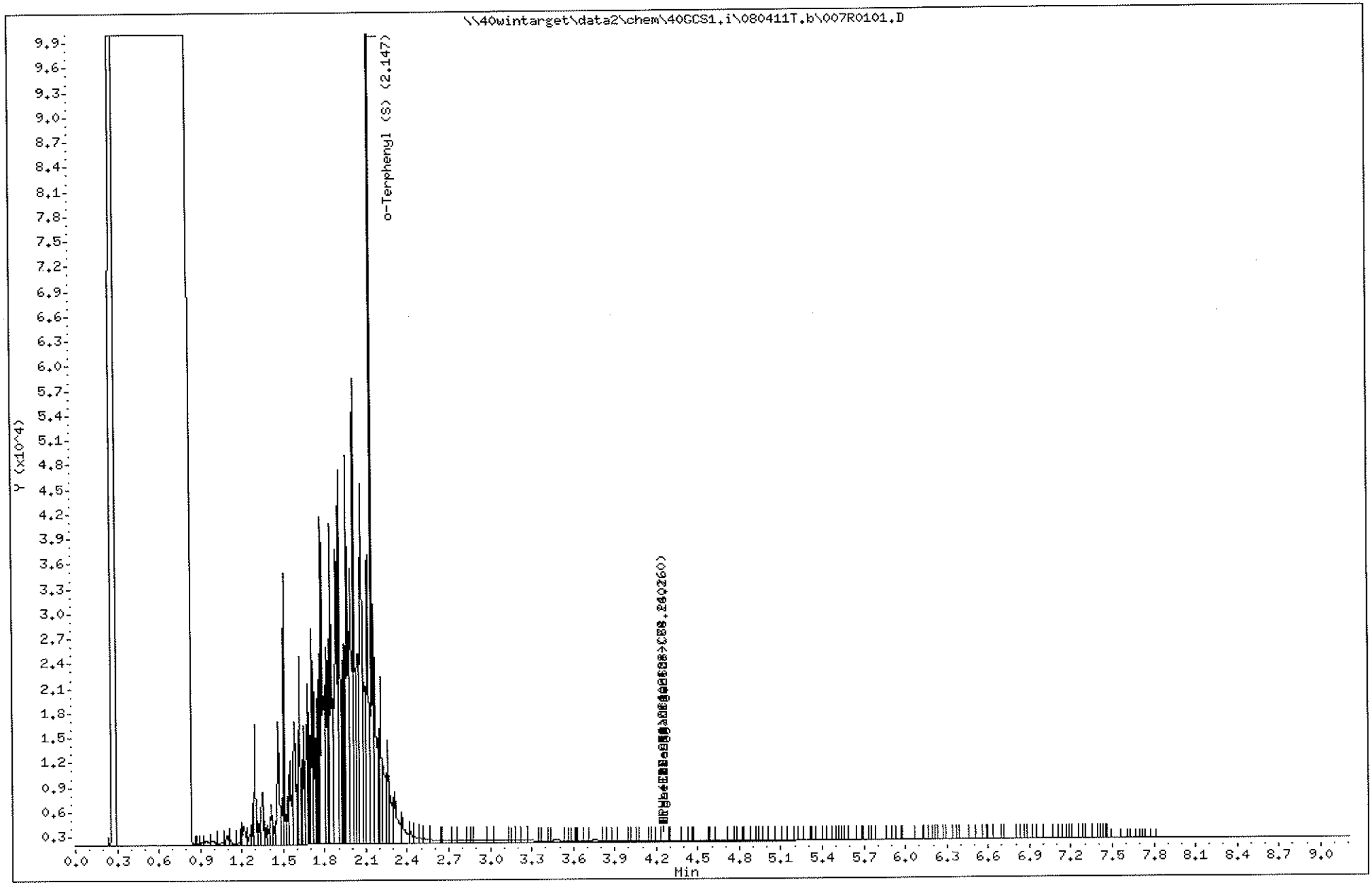
QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Date : 04-AUG-2011 11:16
Client ID: 250 2860-38-04
Sample Info: 250 2860-38-04
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i

Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\007R0101.D
Lab Smp Id: 250 2860-38-04 Client Smp ID: 250 2860-38-04
Inj Date : 04-AUG-2011 11:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 250 2860-38-04
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:16 Cal File: 007R0101.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

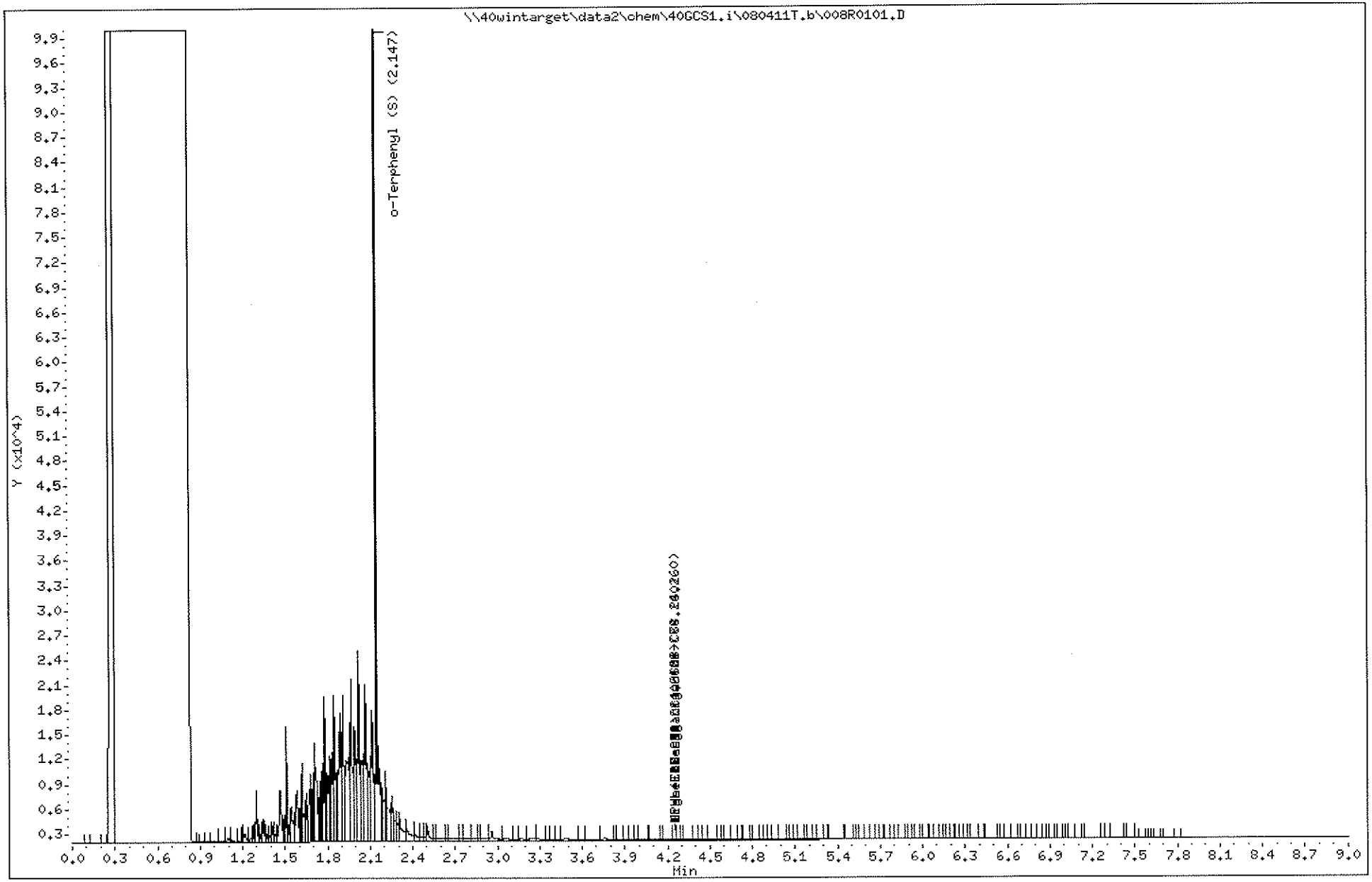
						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			903980	250.000	247.50
S	11 TPH (C12-C36)	1.050-7.470			903980	250.000	247.50
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			903980	250.000	247.50
S	3 High End Organics (C8-C34)	1.050-7.470			903980	250.000	247.50
S	4 TPH (C08-C36)	1.050-7.470			903980	250.000	247.50
S	5 TPH (C08-C40)	1.050-7.470			903980	250.000	247.50
S	6 TPH (C10-C12)	1.050-7.470			903980	250.000	247.50
S	7 TPH (C10-C20)	1.050-7.470			903980	250.000	247.50
S	8 TPH - Diesel (C10-C28)	1.480-2.730			903980	250.000	247.50(T)
S	9 TPH (C10-C40)	1.050-7.470			903980	250.000	247.50
S	10 TPH (C12-C20)	1.050-7.470			903980	250.000	247.50
S	12 TPH (C16-C28)	1.050-7.470			903980	250.000	247.50
S	13 TPH (C16-C40)	1.050-7.470			903980	250.000	247.50
S	14 TPH (C20-C34)	1.050-7.470			903980	250.000	247.50
$	15 o-Terphenyl (S)	2.146	2.146	0.000	250305	50.0000	48.01

QC Flag Legend

T - Target compound detected outside RT window.

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Date : 04-AUG-2011 11:29
Client ID: 100 2860-38-05
Sample Info: 100 2860-38-05
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\008R0101.D
Lab Smp Id: 100 2860-38-05 Client Smp ID: 100 2860-38-05
Inj Date : 04-AUG-2011 11:29
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 100 2860-38-05
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:29 Cal File: 008R0101.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

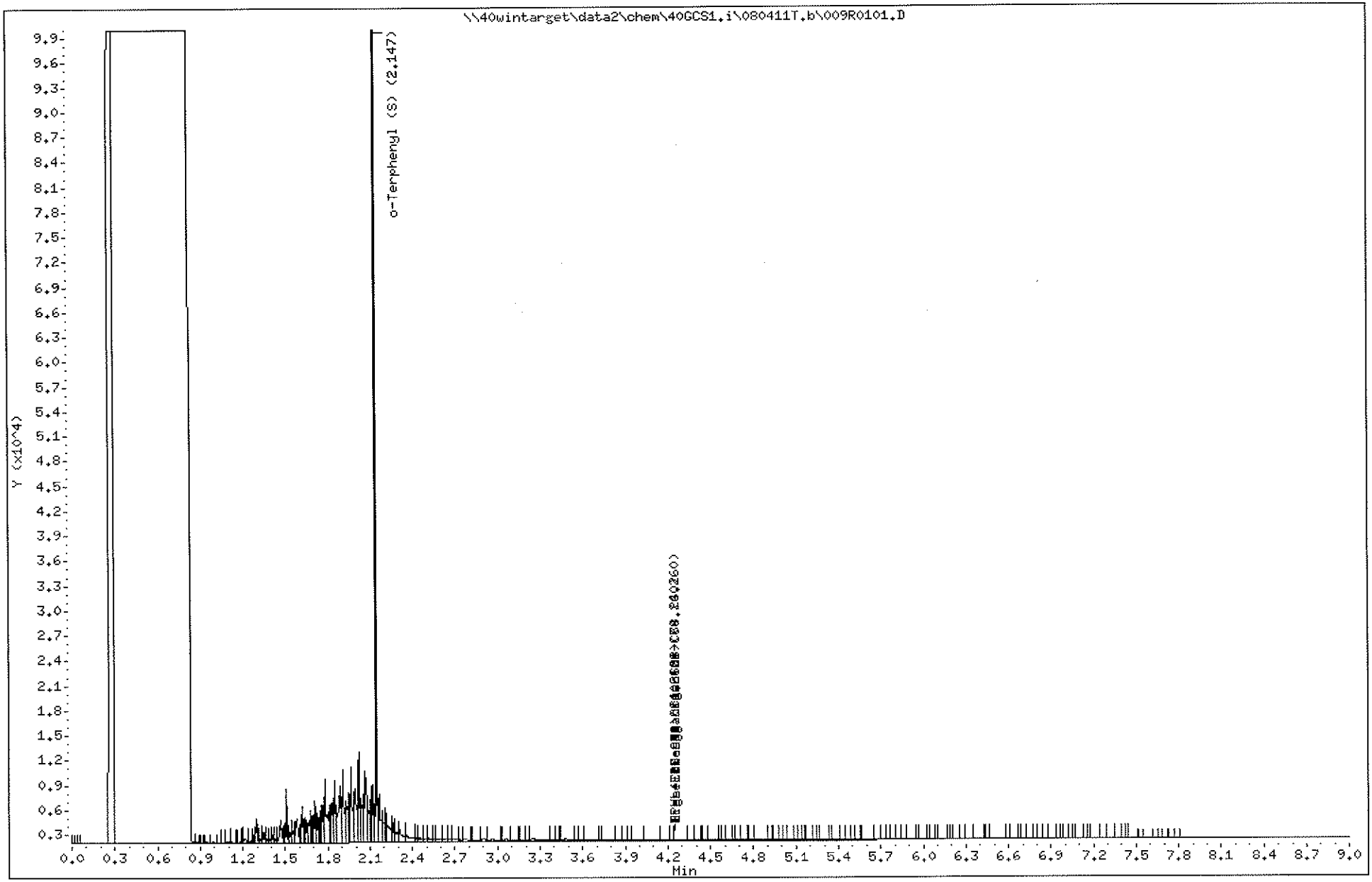
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S	1 TPH (C08-C16)	1.050-7.470			400376	100.000	99.89(a)
S	11 TPH (C12-C36)	1.050-7.470			400376	100.000	99.89(a)
S	2 Diesel Range Organics (C8-C28)	1.050-7.470			400376	100.000	99.89(a)
S	3 High End Organics (C8-C34)	1.050-7.470			400376	100.000	99.89(a)
S	4 TPH (C08-C36)	1.050-7.470			400376	100.000	99.89(a)
S	5 TPH (C08-C40)	1.050-7.470			400376	100.000	99.89(a)
S	6 TPH (C10-C12)	1.050-7.470			400376	100.000	99.89(a)
S	7 TPH (C10-C20)	1.050-7.470			400376	100.000	99.89(a)
S	8 TPH - Diesel (C10-C28)	1.480-2.730			400376	100.000	99.89(T)
S	9 TPH (C10-C40)	1.050-7.470			400376	100.000	99.89(a)
S	10 TPH (C12-C20)	1.050-7.470			400376	100.000	99.89(a)
S	12 TPH (C16-C28)	1.050-7.470			400376	100.000	99.89(a)
S	13 TPH (C16-C40)	1.050-7.470			400376	100.000	99.89(a)
S	14 TPH (C20-C34)	1.050-7.470			400376	100.000	99.89(a)
$	15 o-Terphenyl (S)	2.146	2.146	0.000	217595	50.0000	41.73

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Date : 04-AUG-2011 11:40
Client ID: 50 2860-38-06
Sample Info: 50 2860-38-06
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\009R0101.D
Lab Smp Id: 50 2860-38-06 Client Smp ID: 50 2860-38-06
Inj Date : 04-AUG-2011 11:40
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 50 2860-38-06
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALLTPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	sample volume extracted (mL)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 1 TPH (C08-C16)	1.050-7.470			212976	50.0000	44.97(a)
S 11 TPH (C12-C36)	1.050-7.470			212976	50.0000	44.97(a)
S 2 Diesel Range Organics (C8-C28)	1.050-7.470			212976	50.0000	44.97(a)
S 3 High End Organics (C8-C34)	1.050-7.470			212976	50.0000	44.97(a)
S 4 TPH (C08-C36)	1.050-7.470			212976	50.0000	44.97(a)
S 5 TPH (C08-C40)	1.050-7.470			212976	50.0000	44.97(a)
S 6 TPH (C10-C12)	1.050-7.470			212976	50.0000	44.97(a)
S 7 TPH (C10-C20)	1.050-7.470			212976	50.0000	44.97(a)
S 8 TPH - Diesel (C10-C28)	1.480-2.730			212976	50.0000	44.97(T)
S 9 TPH (C10-C40)	1.050-7.470			212976	50.0000	44.97(a)
S 10 TPH (C12-C20)	1.050-7.470			212976	50.0000	44.97(a)
S 12 TPH (C16-C28)	1.050-7.470			212976	50.0000	44.97(a)
S 13 TPH (C16-C40)	1.050-7.470			212976	50.0000	44.97(a)
S 14 TPH (C20-C34)	1.050-7.470			212976	50.0000	44.97(a)
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	225892	50.0000	43.32

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

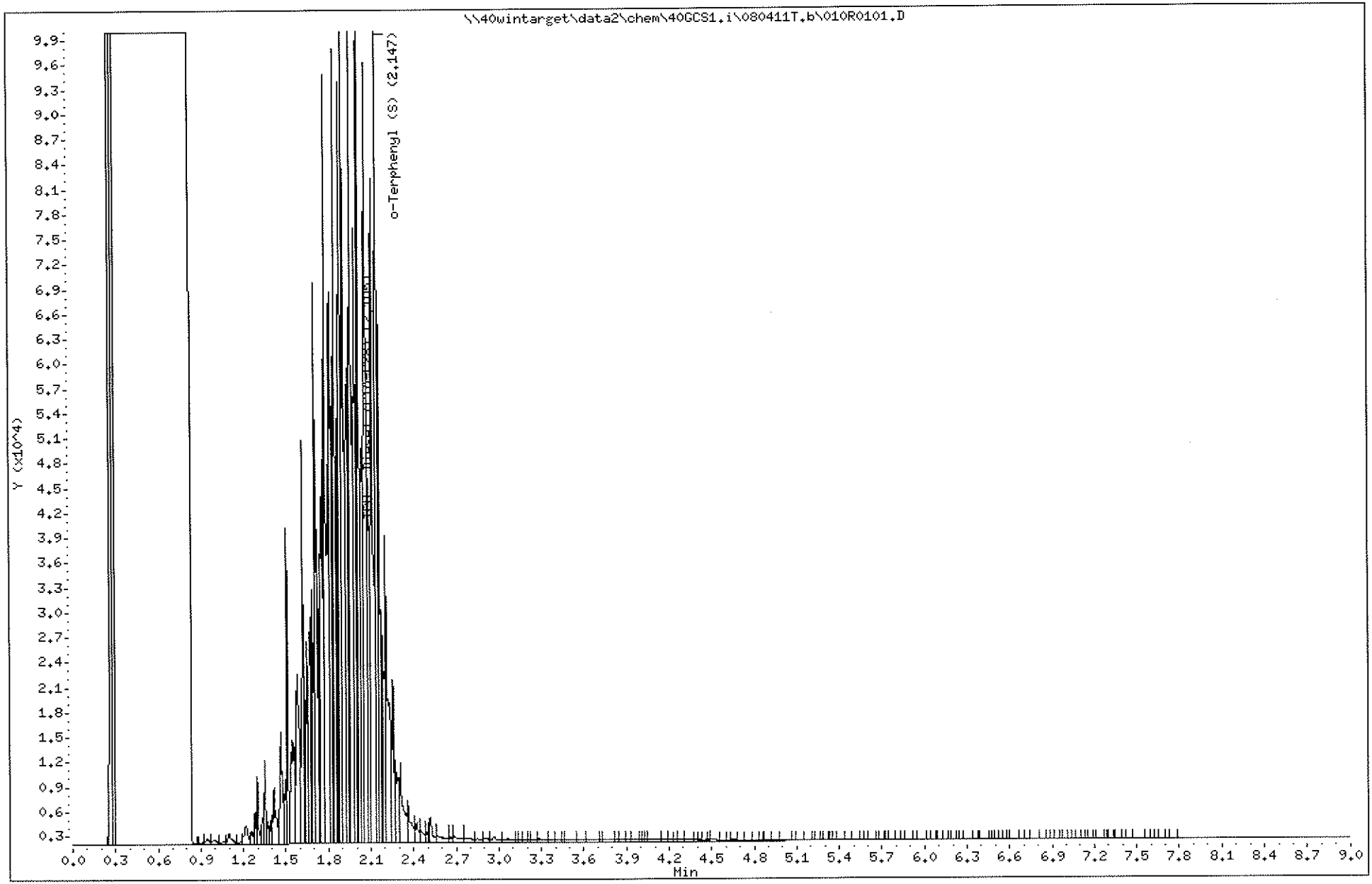
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: 40GCS1.i Injection Date: 04-AUG-2011 12:44
Lab File ID: 010R0101.D Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Analysis Type: SOIL Init. Cal. Times: 10:42 11:40
Lab Sample ID: IC500 2860-38-07 Quant Type: ESTD
Method: \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	490	0.00029	0.000	-1.92564	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00019	0.00019	0.000	-3.17607	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Date : 04-AUG-2011 12:44
Client ID: IC500 2860-38-07
Sample Info: IC500 2860-38-07
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080411T.b\010R0101.D
Lab Smp Id: IC500 2860-38-07 Client Smp ID: IC500 2860-38-07
Inj Date : 04-AUG-2011 12:44
Operator : KHB Inst ID: 40GCS1.i
Smp Info : IC500 2860-38-07
Misc Info :
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080411T.b\TPH.m
Meth Date : 09-May-2012 11:45 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.480-2.730			1732592	500.000	490.37
$ 15 o-Terphenyl (S)	2.146	2.146	0.000	269216	50.0000	51.64

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

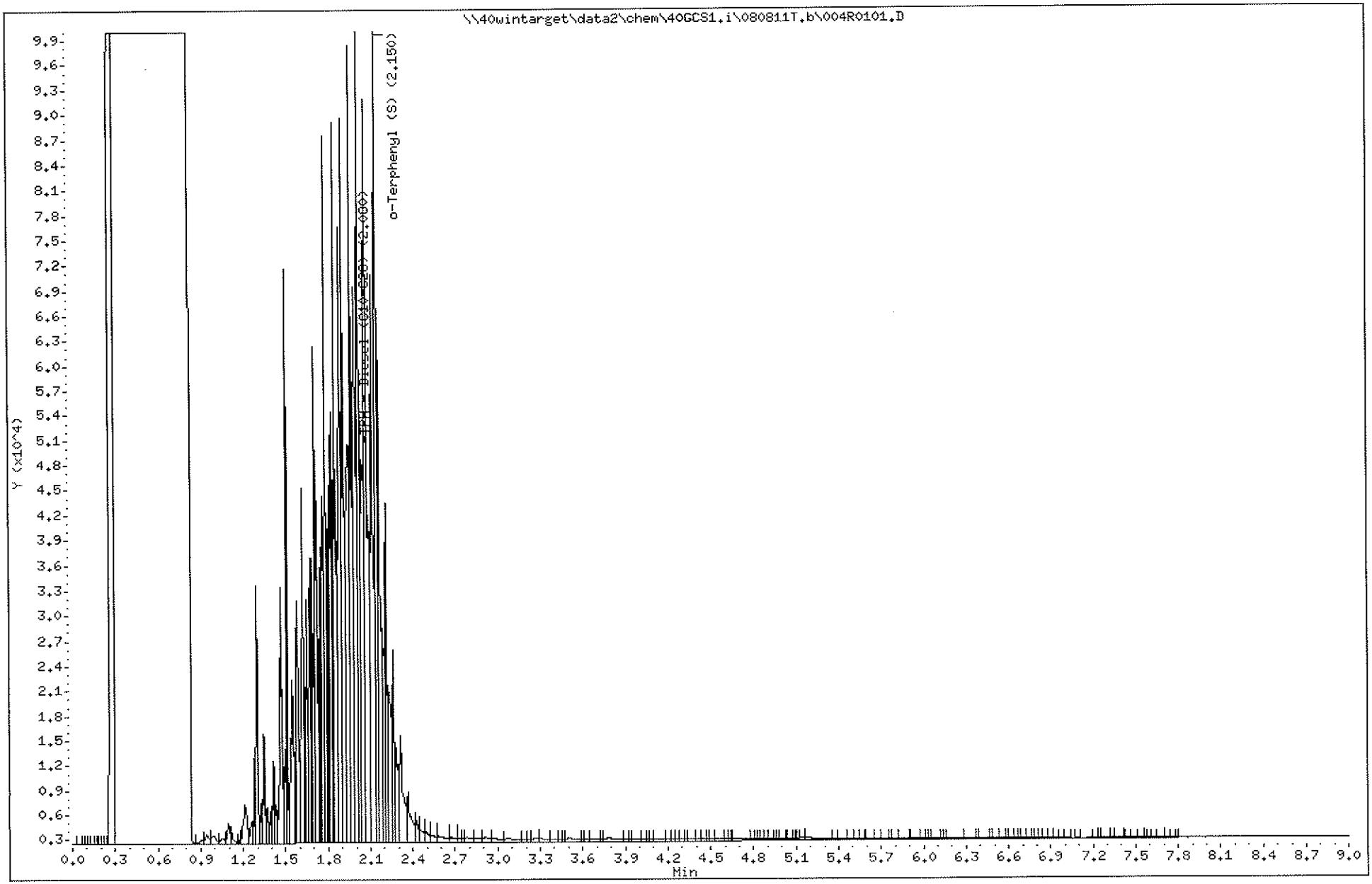
Instrument ID: 40GCS1.i
Lab File ID: 004R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 08:34
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	465	0.00030	0.000	-6.91679	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00021	0.00021	0.000	9.65048	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Date : 08-AUG-2011 08:34
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\004R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 08:34
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6316
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 12:02 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1647448	500.000	465.41
$ 15 o-Terphenyl (S)	2.150	2.146	0.004	237724	50.0000	45.59

Pace Analytical Services, Inc

CONTINUING CALIBRATION COMPOUNDS

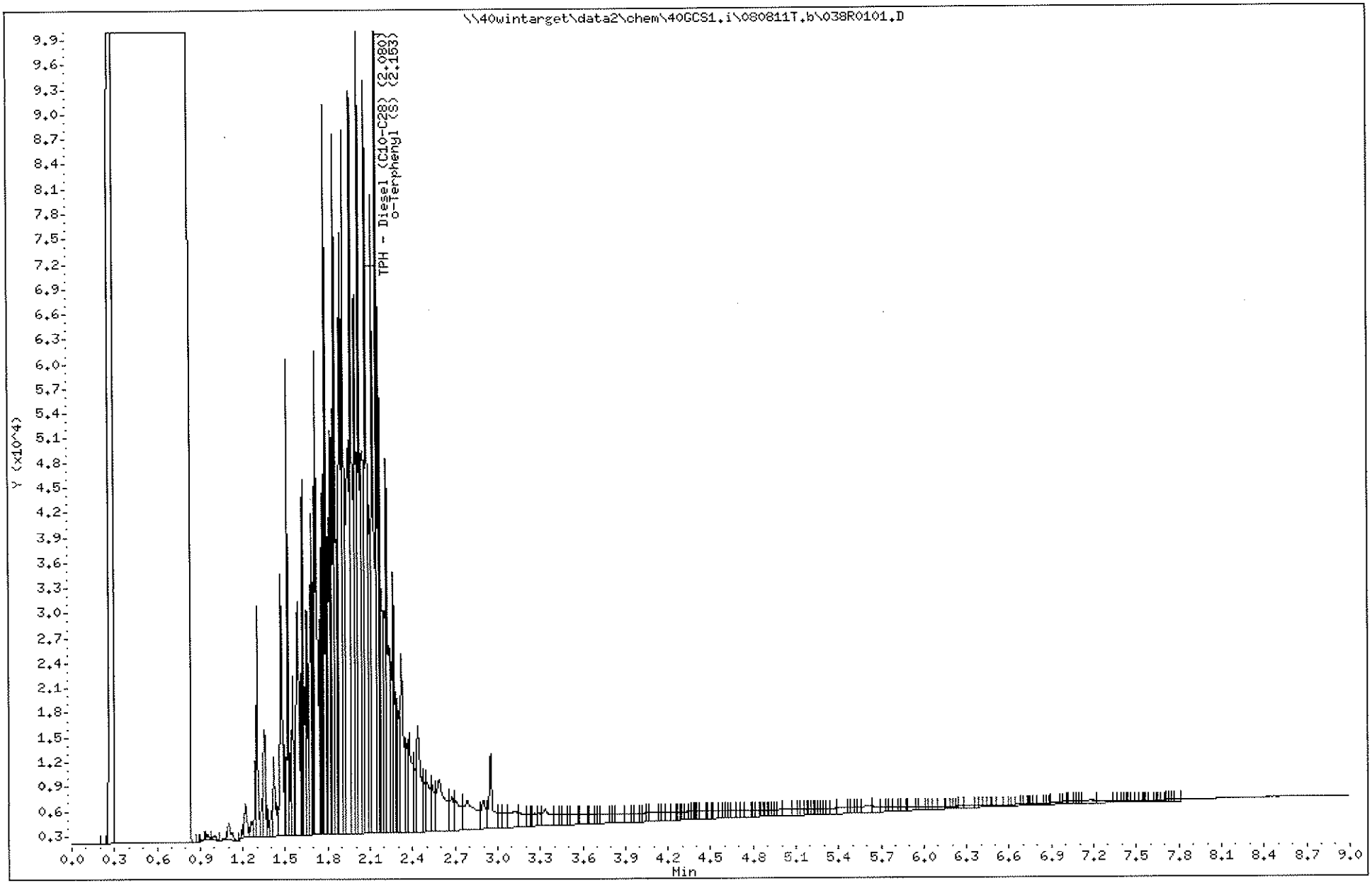
Instrument ID: 40GCS1.i
Lab File ID: 038R0101.D
Analysis Type: SOIL
Lab Sample ID: 8015DS-CCV
Method: \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m

Injection Date: 08-AUG-2011 15:59
Init. Cal. Date(s): 04-AUG-2011 04-AUG-2011
Init. Cal. Times: 10:42 11:40
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF500	CCAL RRF500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
S 8 TPH - Diesel (C10-C28)	500	514	0.00028	0.000	2.81702	15.00000	Linear
$ 15 o-Terphenyl (S)	0.00019	0.00020	0.00020	0.000	2.90335	50.00000	Averaged

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Date : 08-AUG-2011 15:59
Client ID: 8015DS-CCV
Sample Info: 8015DS-CCV
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\038R0101.D
Lab Smp Id: 8015DS-CCV Client Smp ID: 8015DS-CCV
Inj Date : 08-AUG-2011 15:59
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 8015DS-CCV
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 09-May-2012 12:02 40GCS1.i Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 38 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPHDIESEL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	30.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1813497	500.000	514.08
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	253311	50.0000	48.58

TPH-Diesel Raw QC Data Cover Sheet

Client: URS CORPORATION
Project: EAST WHITE LAKE PROJECT
SDG: 4048330

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048330

QB Batch: OEXT/12029 **Prepared:** 07/28/11
Method(s): EPA 3541 / EPA 8015B Modified
Associated Lab Samples: 4048330001, 4048330002, 4048330003

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Diesel Range Organics (C8-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C16)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH (C08-C40)	101	mg/kg	6.7	3.3	08/08/11	3q
	TPH (C16-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	
	TPH - Diesel (C10-C28)	<3.3	mg/kg	6.7	3.3	08/08/11	

Type	Sample	Matrix
BLANK	483016	Tissue

REPORT OF LABORATORY ANALYSIS

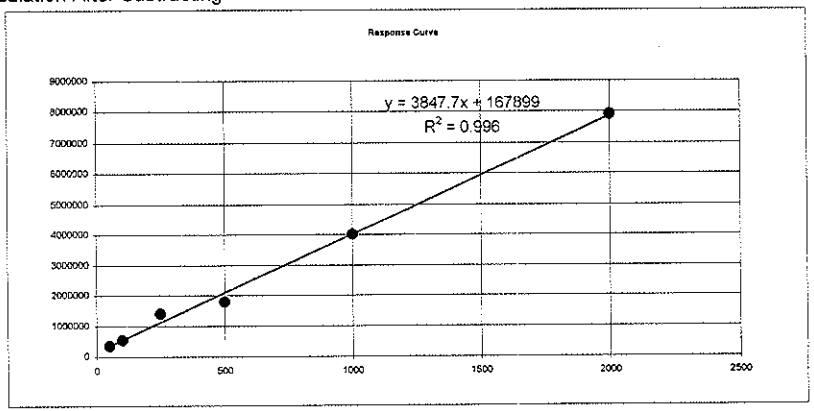
SampleID: 483016 File: 06R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



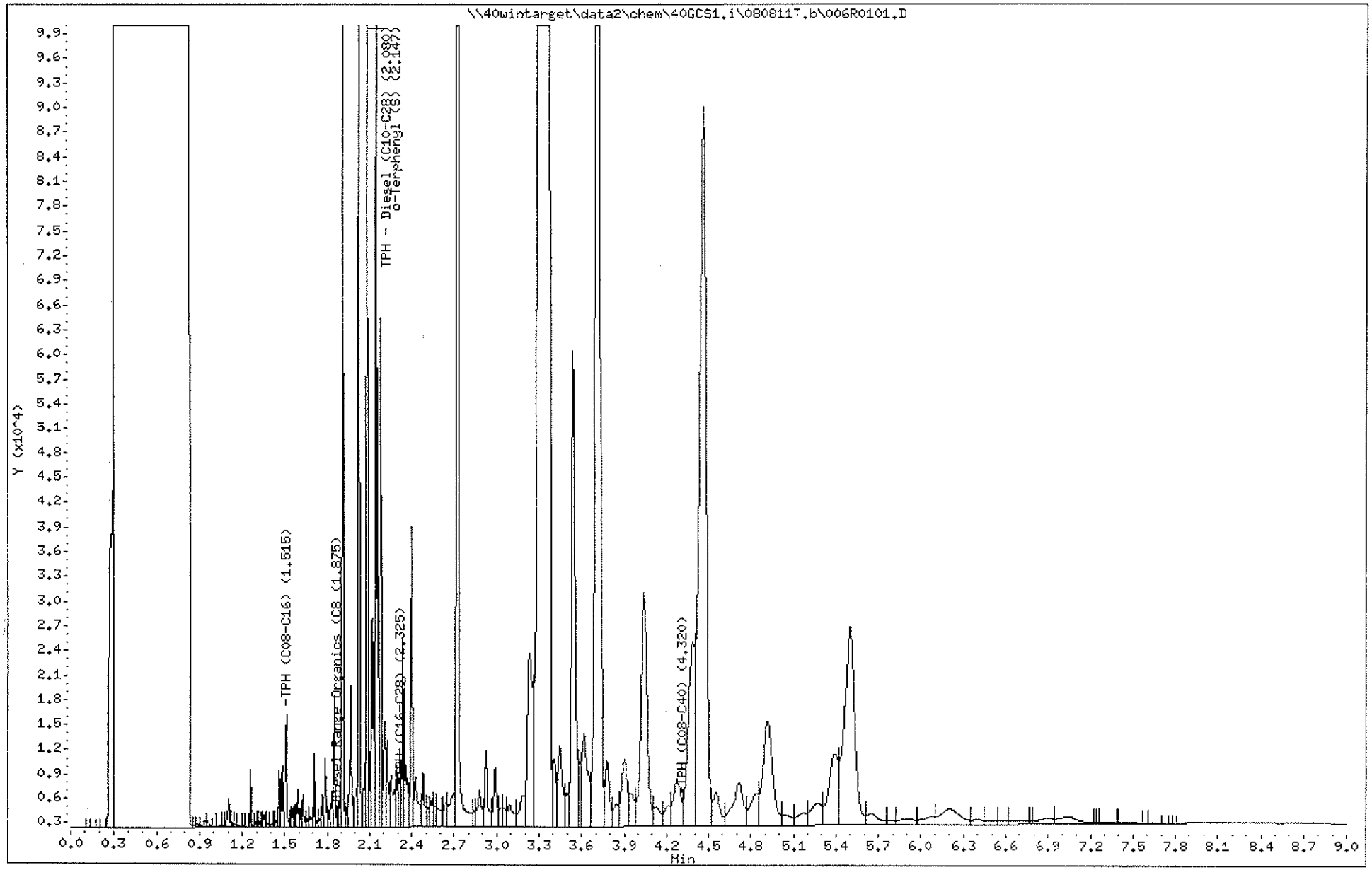
Retention Time	Peak Area	Compound Name
1.910	120198	
2.023	100039	
2.083	64991	
2.723	211870	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	218014	120198	-18.2142
Diesel Range Organics (	624183	285228	44.45663
TPH - Diesel (C10-C28)	610379	285228	40.86904
TPH (C16-C28)	423638	165030	23.57483
TPH (C08-C40)	6490918	497098	1514.129

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Date : 08-AUG-2011 09:05
Client ID: MB
Sample Info: 483016
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/Kg)
S	5 TPH (C08-C40)	1.040-7.600			6490918	1885.04	125.66
S	1 TPH (C08-C16)	1.040-1.990			218013	46.4479	3.09(a)
S	12 TPH (C16-C28)	1.940-2.710			423638	106.717	7.11
S	2 Diesel Range Organics (C8-C28)	1.040-2.710			624182	165.496	11.03
S	8 TPH - Diesel (C10-C28)	1.450-2.710			610379	161.451	10.76
$	15 o-Terphenyl (S)	2.146	2.146	0.000	186162	35.7090	2.38

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\006R0101.D
Lab Smp Id: 483016 Client Smp ID: MB
Inj Date : 08-AUG-2011 09:05
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483016
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.117	14	15	1.049	0.00		
0.183	21	15	0.701	0.00		
0.217	22	17	0.762	0.00		
0.293	71418	41400	0.580	0.01		
0.313	556833866	95605407	0.172	98.50		
0.867	203	199	0.980	0.00		
0.883	551	430	0.781	0.00		
0.937	1118	770	0.689	0.00		
0.957	1063	785	0.739	0.00		
1.000	196	115	0.587	0.00		
1.515	218014	446085	2.046	0.03	S	1 TPH (C08-C16)
1.875	624183	1060437	1.699	0.11	S	2 Diesel Range Organi
1.050	271	190	0.701			
1.070	261	266	1.020			
1.107	3649	3555	0.974			
1.130	459	568	1.239			
1.150	359	432	1.204			
1.173	223	264	1.187			
1.210	80	140	1.754			
1.227	41	44	1.073			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.260	3472	7079	2.039			
1.290	468	757	1.619			
1.310	578	901	1.558			
1.323	382	675	1.767			
1.337	290	653	2.249			
1.353	1290	1432	1.110			
1.373	203	456	2.242			
1.383	338	512	1.514			
1.407	503	497	0.989			
1.427	400	678	1.694			
1.443	537	856	1.595			
2.080	610379	1040482	1.705	0.10	S	8 TPH - Diesel (C10-C
1.460	4031	6932	1.720			
1.483	6173	7582	1.228			
1.513	10800	13678	1.266			
1.540	740	1228	1.660			
1.557	1592	2221	1.395			
1.570	868	1902	2.192			
1.580	838	1681	2.007			
1.593	3045	4583	1.505			
1.617	1340	2517	1.878			
1.627	3061	3950	1.290			
1.663	848	1009	1.190			
1.687	1637	1149	0.702			
1.710	4209	8906	2.116			
1.727	475	783	1.648			
1.753	1105	1197	1.083			
1.767	2352	3938	1.674			
1.787	7193	8542	1.188			
1.817	1479	2033	1.374			
1.833	2562	4302	1.679			
1.850	8709	15928	1.829			
1.880	788	1528	1.938			
1.890	2699	5431	2.012			
1.910	120198	312264	2.598			
1.940	1532	2397	1.564			
1.957	14771	8331	0.564			
1.987	1166	2118	1.816			
2.003	3315	4645	1.401			
2.023	100039	181793	1.817			
2.050	1759	3376	1.919			
2.067	6720	7818	1.163			
2.083	64991	163100	2.510			
2.103	5277	9285	1.760			
2.113	32676	25076	0.767			
2.180	38415	61853	1.610			
2.207	13472	12814	0.951			
2.223	10505	10654	1.014			
2.250	10672	6283	0.589			
2.293	5564	7571	1.361			
2.317	9395	9636	1.026			
2.333	12795	22904	1.790			
2.347	17814	18159	1.019			
2.397	20806	36415	1.750			
2.423	12027	6165	0.513			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.477	7711	6670	0.865				
2.513	2720	2318	0.852				
2.540	5034	3496	0.694				
2.557	3071	2665	0.868				
2.577	4819	2415	0.501				
2.617	2001	2035	1.017				
2.640	4041	2982	0.738				
2.700	10531	4224	0.401				
2.147	186162	388356	2.086	0.03	$	15	o-Terphenyl (S)
2.325	423638	627198	1.481	0.07	S	12	TPH (C16-C28)
4.320	6490918	3218044	0.496	1.15	S	5	TPH (C08-C40)
2.723	211870	250885	1.184				
2.840	2591	1935	0.747				
2.877	9194	4384	0.477				
2.927	13441	9421	0.701				
2.990	11956	7151	0.598				
3.033	3581	2277	0.636				
3.053	3409	2270	0.666				
3.090	8162	2822	0.346				
3.193	10294	3831	0.372				
3.233	54060	21152	0.391				
3.373	4074338	1352562	0.332				
3.407	12875	8399	0.652				
3.447	23815	10015	0.421				
3.497	5369	4023	0.749				
3.543	108162	57797	0.534				
3.587	7773	7935	1.021				
3.620	33085	11424	0.345				
3.723	338962	151040	0.446				
3.783	18107	8081	0.446				
3.847	6485	2807	0.433				
3.903	22488	8330	0.370				
3.950	11041	4082	0.370				
4.040	85837	28418	0.331				
4.127	7610	2405	0.316				
4.217	7113	2490	0.350				
4.273	20986	5700	0.272				
4.383	70330	22478	0.320				
4.460	297795	87280	0.293				
4.550	14254	4068	0.285				
4.713	28486	5218	0.183				
4.833	14736	3885	0.264				
4.920	63525	12782	0.201				
5.050	5548	1285	0.232				
5.173	7364	1490	0.202				
5.277	14887	2727	0.183				
5.393	42058	8814	0.210				
5.503	125086	24172	0.193				
5.653	8453	1404	0.166				
5.767	491	492	1.001				
5.813	1675	545	0.325				
5.900	5234	707	0.135				
5.970	446	560	1.257				

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
6.097	5734	976	0.170		
6.197	18884	1888	0.100		
6.383	2884	553	0.192		
6.453	2762	501	0.181		
6.550	1769	421	0.238		
6.703	3651	459	0.126		
6.763	235	396	1.687		
6.793	626	400	0.639		
6.900	5311	675	0.127		
7.047	8794	863	0.098		
7.237	275	198	0.721		
7.257	156	200	1.283		
7.287	1323	206	0.156		
7.393	103	127	1.239		
7.413	1119	128	0.114		
7.587	141	73	0.518		
7.623	401	74	0.185	0.00	
7.707	151	58	0.383	0.00	
7.767	60	46	0.762	0.00	
7.797	95	52	0.550	0.00	
	563586260	99255783		100.000	

Total unknown % area = 98.51

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: CRABS
Pace Project No.: 4048330

QB Batch: OEXT/12036 **Prepared:**
Method(s): Pace Lipid
Associated Lab Samples: 4048330001, 4048330002, 4048330003

CAS No.	Parameters	Results	Units	Reporting Limit	MDL	Analyzed	Qual
	Lipid	0.43	%			07/29/11	

Type	Sample	Matrix
BLANK	483156	Tissue

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, Wi 54302
(920)469-2436

LAB CONTROL SAMPLE RESULTS

Project: CRABS
Pace Project No.: 4048330

QB Batch: OEXT/12029
Method(s): EPA 3541 / EPA 8015B Modified

LCS Prepared: 07/28/11
LCSD Prepared: 07/28/11

Analyte	LCS % Rec	LCSD % Rec	RPD	QC Limits % Rec	QC Limits RPD	Spike Conc	LCS Conc	LCSD Conc	Units	LCS Analyzed	LCSD Analyzed	LCS Qual	LCSD Qual
Diesel Range Organics (C8-C28)	56	59	4	50-150	20	66.7	37.5	39.2	mg/kg	08/08/11	08/08/11		
TPH (C08-C16)	21	24		50-150	20	66.7	13.8J	16.0J	mg/kg	08/08/11	08/08/11	L0	L0
TPH (C08-C40)	212	196	8	50-150	20	66.7	142	131	mg/kg	08/08/11	08/08/11	1q	2q
TPH (C16-C28)	30	29		50-150	20	66.7	19.7J	19.6J	mg/kg	08/08/11	08/08/11	L0	L0
TPH - Diesel (C10-C28)	55	57	4	50-150	20	66.7	36.7	38.3	mg/kg	08/08/11	08/08/11		

Type	Sample
LCS	483017
LCSD	483018

REPORT OF LABORATORY ANALYSIS

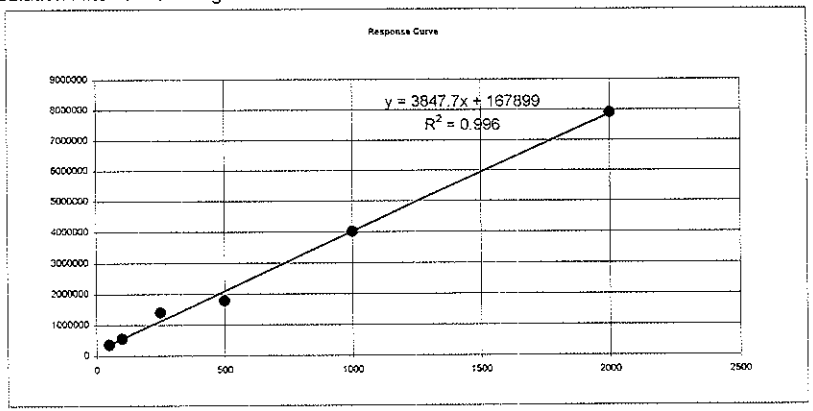
SampleID: 483017 File: 26R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



Retention Time	Peak Area	Compound Name
1.913	81017	
2.027	88001	
2.087	48403	
2.740	70987	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	513513	81017	68.76749
Diesel Range Organics (	1107222	217421	187.6188
TPH - Diesel (C10-C28)	1091471	217421	183.5252
TPH (C16-C28)	684076	136404	98.70117
TPH (C08-C40)	3179742	288408	707.8076

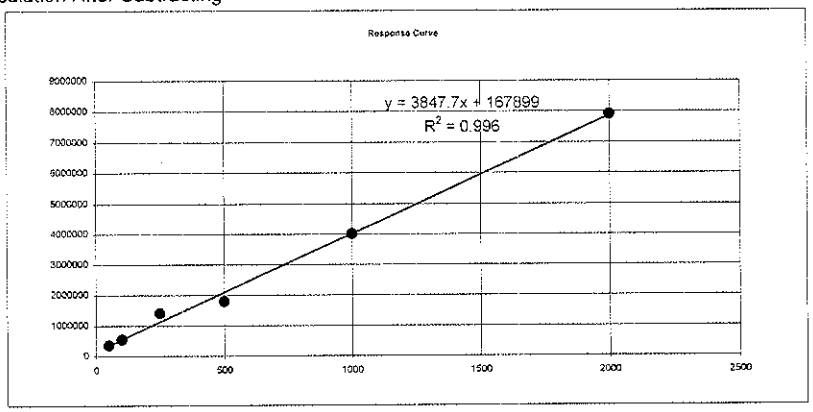
SampleID: 483018 File: 27R0101.D

Analyst KHB

TPH Re-Calculation After Subtracting

Concentration	Area Count
50	357190
100	542086
250	1402797
500	1794982
1000	4009201
2000	7907189

slope	3847.705412
intercept	167898.9821
correlation	0.998012577
R2	0.996029103



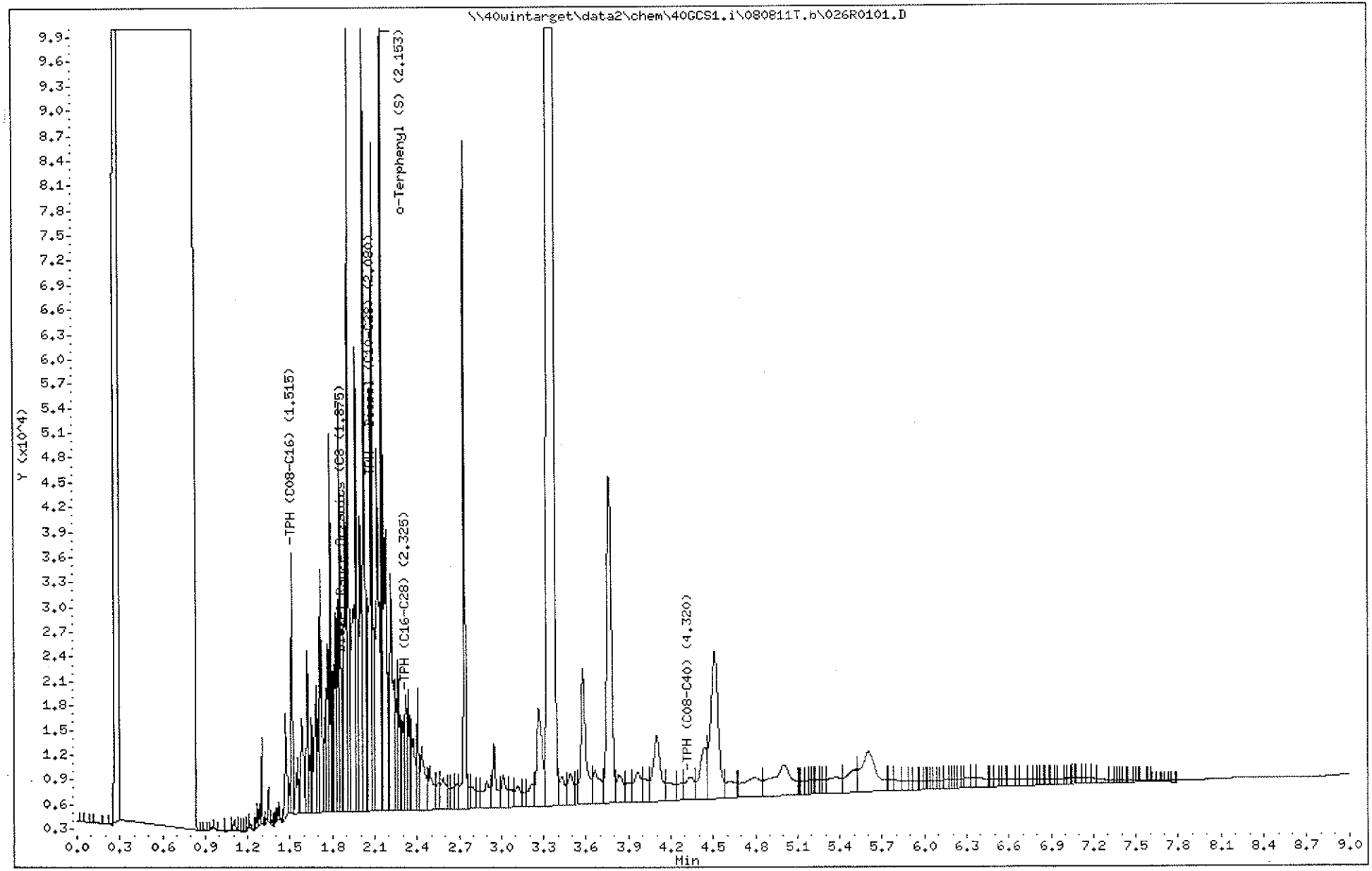
Retention Time	Peak Area	Compound Name
1.913	86364	
2.027	92572	
2.087	49444	
2.743	72593	

358

Test Name	Total Area	Area	Conc
TPH (C08-C16)	562144	86364	80.01678
Diesel Range Organics (	1150605	228380	196.0457
TPH - Diesel (C10-C28)	1133743	228380	191.6633
TPH (C16-C28)	687056	142016	98.01713
TPH (C08-C40)	2984092	300973	653.6935

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Date : 08-AUG-2011 13:04
Client ID: MBLCS
Sample Info: 483017X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			3179742	914.532	182.90
S 1 TPH (C08-C16)	1.040-1.990			513513	133.059	26.61
S 12 TPH (C16-C28)	1.940-2.710			684075	183.051	36.61
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			1107222	307.076	61.41
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1091470	302.459	60.49(R)
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	70769	13.5747	0.90

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\026R0101.D
Lab Smp Id: 483017 Client Smp ID: MBLCS
Inj Date : 08-AUG-2011 13:04
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483017X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 26 QC Sample: LCS
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.023	14	9	0.662	0.00		
0.090	18	15	0.847	0.00		
0.117	44	12	0.275	0.00		
0.190	24	11	0.458	0.00		
0.283	266192	129517	0.487	0.04		
0.317	552350005	94104610	0.170	98.79		
0.893	63	83	1.309	0.00		
0.947	262	278	1.063	0.00		
0.967	72	84	1.175	0.00		
1.515	513513	675781	1.316	0.09	S	1 TPH (C08-C16)
1.875	1107222	1269076	1.146	0.19	S	2 Diesel Range Organi
1.057	87	64	0.736			
1.110	1485	1254	0.844			
1.137	59	113	1.909			
1.157	44	74	1.701			
1.180	52	102	1.954			
1.200	47	125	2.660			
1.217	677	602	0.889			
1.267	1460	2924	2.002			
1.283	1051	2592	2.465			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.300	5197	10462	2.013			
1.333	289	458	1.583			
1.350	3191	4275	1.340			
1.370	418	688	1.647			
1.400	145	235	1.624			
1.417	1313	2175	1.657			
1.433	236	564	2.390			
2.080	1091471	1242369	1.138	0.19	S	8 TPH - Diesel (C10-C
1.470	12903	12603	0.977			
1.497	2159	3629	1.681			
1.513	14050	31688	2.255			
1.540	8112	3657	0.451			
1.570	1047	2790	2.665			
1.587	13674	11491	0.840			
1.623	15563	19802	1.272			
1.643	4646	7051	1.518			
1.653	7532	11634	1.545			
1.677	11078	13234	1.195			
1.690	14600	15473	1.060			
1.713	27549	29428	1.068			
1.747	7177	11507	1.603			
1.757	23635	15073	0.638			
1.787	24655	45718	1.854			
1.800	9316	16233	1.743			
1.810	12266	18002	1.468			
1.823	19437	24235	1.247			
1.840	15526	25896	1.668			
1.853	34044	49420	1.452			
1.873	6638	17415	2.623			
1.893	40774	38698	0.949			
1.913	81017	143558	1.772			
1.947	46129	24595	0.533			
1.970	44237	56244	1.271			
1.997	47190	35790	0.758			
2.027	88001	121667	1.383			
2.050	19548	24762	1.267			
2.073	45913	51177	1.115			
2.087	48403	80928	1.672			
2.123	70248	43754	0.623			
2.167	58451	42945	0.735			
2.207	16342	17754	1.086			
2.217	33294	28758	0.864			
2.243	16044	14663	0.914			
2.267	15454	18295	1.184			
2.287	7948	10404	1.309			
2.300	9822	10788	1.098			
2.320	14188	14018	0.988			
2.340	10996	14675	1.335			
2.353	9309	11508	1.236			
2.373	12659	8625	0.681			
2.407	12912	14736	1.141			
2.437	16990	7579	0.446			
2.490	12271	5228	0.426			
2.553	5460	3179	0.582			
2.587	10579	3825	0.362			

RT	AREA	HEIGHT	HT/AREA	% AREA			COMPOUNDS
2.627	2501	2516	1.006				
2.657	4112	2651	0.645				
2.680	5074	3070	0.605				
2.153	70769	164785	2.328	0.01	$	15	o-Terphenyl (S)
2.325	684076	674134	0.985	0.12	S	12	TPH (C16-C28)
4.320	3179742	2230237	0.701	0.57	S	5	TPH (C08-C40)
2.740	70987	80760	1.138				
2.767	2555	2612	1.022				
2.797	6558	2568	0.392				
2.830	3235	2060	0.637				
2.897	10465	3287	0.314				
2.947	14286	7646	0.535				
3.013	9195	3912	0.425				
3.057	4741	2026	0.427				
3.113	7400	2499	0.338				
3.160	2401	1728	0.720				
3.220	8357	2615	0.313				
3.263	31867	11937	0.375				
3.373	1304247	628244	0.482				
3.427	8778	3399	0.387				
3.487	11183	3714	0.332				
3.537	2895	2476	0.855				
3.577	40885	16567	0.405				
3.663	14678	4049	0.276				
3.763	90190	39402	0.437				
3.833	10402	3312	0.318				
3.903	6761	2317	0.343				
3.967	12893	3600	0.279				
4.013	7851	2714	0.346				
4.097	30844	7904	0.256				
4.187	8738	2170	0.248				
4.270	5902	1999	0.339				
4.340	13036	2683	0.206				
4.440	20990	6200	0.295				
4.513	70951	17861	0.252				
4.617	9596	1990	0.207				
4.680	956	1586	1.658				
4.797	19607	2275	0.116				
5.000	35336	3687	0.104				
5.107	984	1639	1.665				
5.120	1302	1631	1.253				
5.150	2951	1648	0.558				
5.177	2624	1646	0.627				
5.190	1314	1645	1.252				
5.210	1975	1649	0.835				
5.220	991	1655	1.670				
5.240	2692	1696	0.630				
5.267	2706	1697	0.627				
5.297	3044	1701	0.559				
5.370	11528	1869	0.162				
5.510	15682	2757	0.176				
5.603	36249	4854	0.134				
5.740	530	1327	2.503				

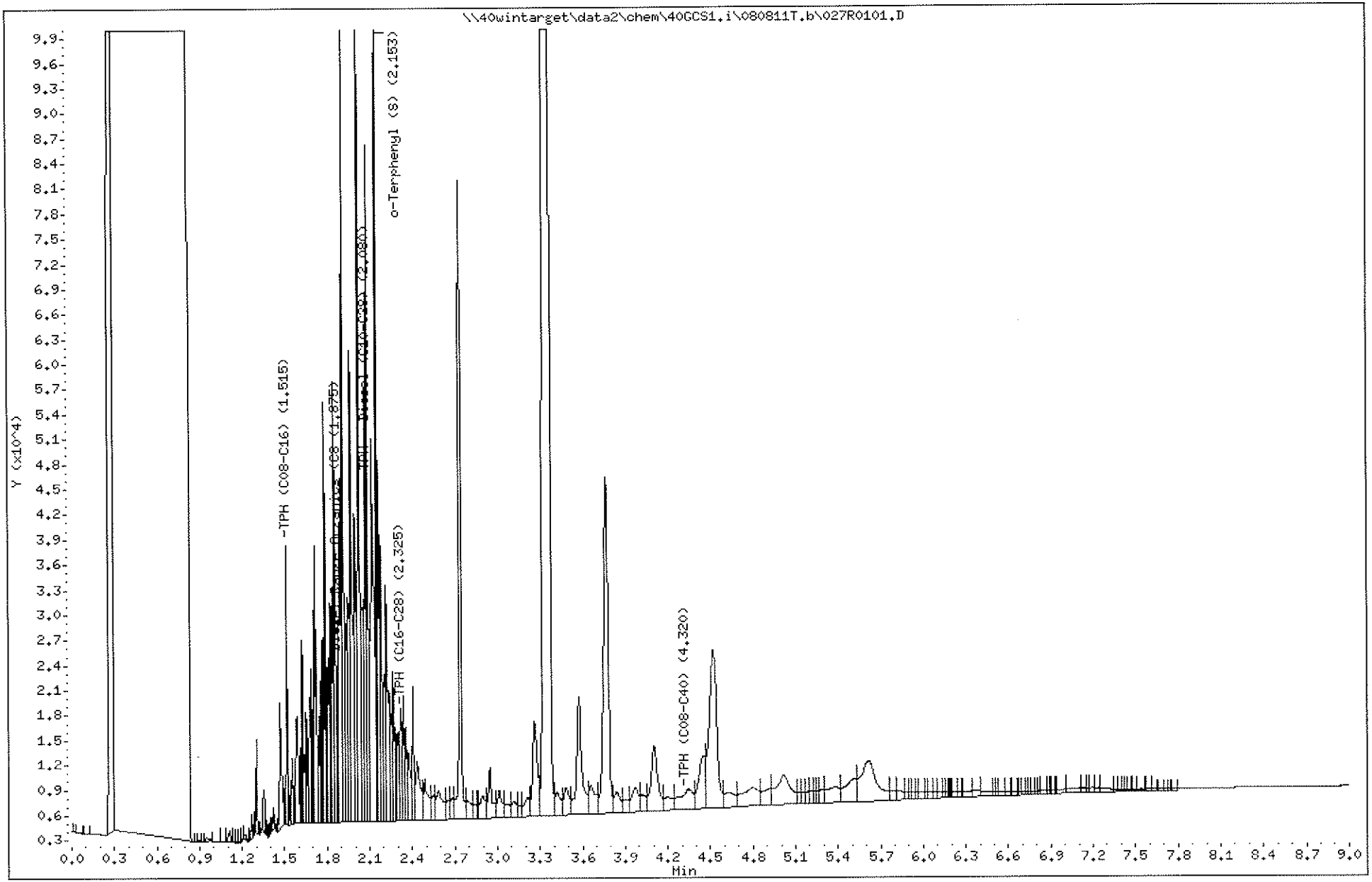
RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.757	2882	1320	0.458		
5.787	4217	1292	0.306		
5.843	3195	1176	0.368		
5.890	2191	1106	0.505		
5.920	2142	1083	0.506		
5.963	1049	1049	1.000		
5.987	1670	1051	0.629		
6.010	1259	1050	0.834		
6.020	627	1051	1.677		
6.030	1041	1050	1.008		
6.053	1030	1032	1.002		
6.073	1849	1031	0.558		
6.097	1232	1036	0.841		
6.137	2083	1066	0.512		
6.173	2367	1097	0.463		
6.187	877	1104	1.260		
6.207	1337	1114	0.834		
6.223	1342	1127	0.840		
6.240	2252	1135	0.504		
6.273	895	1122	1.254		
6.317	3753	1208	0.322		
6.337	2852	1204	0.422		
6.377	5100	1143	0.224		
6.457	579	962	1.662		
6.470	1504	949	0.631		
6.490	371	930	2.507		
6.510	1846	928	0.503		
6.543	1281	921	0.719		
6.560	1618	912	0.564		
6.587	531	888	1.672		
6.620	2793	874	0.313		
6.653	1666	850	0.510		
6.690	2369	812	0.343		
6.743	2077	755	0.364		
6.783	1134	715	0.631		
6.807	554	698	1.260		
6.840	1372	699	0.509		
6.857	551	692	1.256		
6.877	827	693	0.838		
6.893	687	690	1.005		
6.917	1212	678	0.559		
6.937	661	663	1.003		
6.987	1994	688	0.345		
7.003	806	681	0.845		
7.023	802	675	0.841		
7.043	534	671	1.258		
7.057	929	672	0.724		
7.073	266	671	2.521		
7.087	1496	684	0.457		
7.123	1317	670	0.509		
7.163	1254	633	0.505		
7.187	1428	617	0.432		
7.223	2478	574	0.232		
7.317	721	347	0.481		
7.357	232	293	1.262		
7.367	399	297	0.744		
7.390	272	278	1.022		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.420	433	280	0.647		
7.437	220	281	1.275		
7.467	741	292	0.394		
7.490	280	286	1.020		
7.510	223	283	1.268		
7.520	281	287	1.021		
7.540	669	288	0.431		
7.583	265	268	1.013		
7.597	272	276	1.015		
7.610	220	281	1.275	0.00	
7.623	438	277	0.633	0.00	
7.650	504	280	0.556	0.00	
7.677	164	275	1.676	0.00	
7.693	283	286	1.011	0.00	
7.707	474	304	0.642	0.00	
7.740	425	317	0.746	0.00	
7.760	440	321	0.730	0.00	
7.783	310	315	1.016	0.00	
	555870461	96632297		100.000	

Total unknown % area = 98.83

Data File: \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Date : 08-AUG-2011 13:16
Client ID: MBLCSD
Sample Info: 483018X3
Volume Injected (uL): 1.0
Column phase: DB-5

Instrument: 40GCS1.i
Operator: KHB
Column diameter: 0.32



Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: ESTD
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S 5 TPH (C08-C40)	1.040-7.600			2984092	857.187	171.43
S 1 TPH (C08-C16)	1.040-1.990			562144	147.313	29.46
S 12 TPH (C16-C28)	1.940-2.710			687056	183.925	36.78
S 2 Diesel Range Organics (C8-C28)	1.040-2.710			1150604	319.791	63.95
S 8 TPH - Diesel (C10-C28)	1.450-2.710			1133743	314.849	62.96(R)
$ 15 o-Terphenyl (S)	2.153	2.146	0.007	73287	14.0577	0.93

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Pace Analytical Services, Inc

MOD 8015B TPH DIESEL

Data file : \\40wintarget\data2\chem\40GCS1.i\080811T.b\027R0101.D
Lab Smp Id: 483018 Client Smp ID: MBLCSD *
Inj Date : 08-AUG-2011 13:16
Operator : KHB Inst ID: 40GCS1.i
Smp Info : 483018X3
Misc Info : 6258
Comment : MOD 8015 TPH DIESEL
Method : \\40wintarget\data2\chem\40GCS1.i\080811T.b\TPH.m
Meth Date : 14-May-2012 08:53 kburns Quant Type: AREA%
Cal Date : 04-AUG-2011 11:40 Cal File: 009R0101.D
Als bottle: 27 QC Sample: LCSD
Dil Factor: 3.00000
Integrator: Falcon Compound Sublist: 40TPHBIOTA.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVari

Name	Value	Description
DF	3.000	Dilution Factor
Uf	0.00100	ng unit correction factor
Vt	1000.000	final extract volume (uL)
Vi	1.000	Volume injected (uL)
Ws	15.000	Weight of sample extracted (g)
M	0.00000	% moisture
Cpnd Variable		Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
0.017	10	12	1.188	0.00		
0.083	14	15	1.056	0.00		
0.100	28	22	0.775	0.00		
0.283	265583	126998	0.478	0.04		
0.317	554663241	93690131	0.169	98.80		
0.897	70	84	1.207	0.00		
0.950	631	405	0.642	0.00		
1.515	562144	798731	1.421	0.10	S	1 TPH (C08-C16)
1.875	1150605	1430450	1.243	0.20	S	2 Diesel Range Organi
1.060	89	60	0.678			
1.113	1456	1378	0.946			
1.140	61	133	2.188			
1.160	43	73	1.682			
1.183	64	102	1.596			
1.203	103	128	1.249			
1.217	735	665	0.905			
1.267	1443	2952	2.045			
1.283	1120	2738	2.445			
1.300	5748	11278	1.962			
1.337	282	359	1.272			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
1.350	3535	4926	1.394			
1.373	393	709	1.802			
1.390	27	91	3.421			
1.400	84	240	2.844			
1.420	1418	2501	1.764			
1.433	261	638	2.444			
2.080	1133743	1401479	1.236	0.20	S	8 TPH - Diesel (C10-C
1.470	15170	15045	0.992			
1.497	2034	4135	2.033			
1.513	16045	33304	2.076			
1.543	3291	4279	1.300			
1.553	6115	7786	1.273			
1.570	1230	3275	2.663			
1.587	15904	12797	0.805			
1.613	3967	8994	2.267			
1.623	13823	21848	1.581			
1.643	5365	8170	1.523			
1.653	8661	13199	1.524			
1.677	12407	15013	1.210			
1.690	10406	18409	1.769			
1.703	6137	11740	1.913			
1.713	30827	33111	1.074			
1.747	7902	12773	1.616			
1.757	12387	16864	1.361			
1.770	13730	22102	1.610			
1.787	26674	50187	1.882			
1.800	10188	17871	1.754			
1.810	13425	19706	1.468			
1.823	21007	26143	1.244			
1.840	16808	28140	1.674			
1.853	36476	52613	1.442			
1.873	10671	18598	1.743			
1.893	39675	41124	1.037			
1.913	86364	144463	1.673			
1.947	27764	25582	0.921			
1.957	20278	26151	1.290			
1.970	50553	56338	1.114			
1.997	44730	36794	0.823			
2.027	92572	130424	1.409			
2.053	30149	25561	0.848			
2.073	37042	51960	1.403			
2.087	49444	80834	1.635			
2.123	72223	45717	0.633			
2.167	37904	43003	1.135			
2.187	23867	32887	1.378			
2.207	13107	17573	1.341			
2.217	32732	28236	0.863			
2.243	15287	13756	0.900			
2.267	15009	17912	1.193			
2.287	7566	9962	1.317			
2.300	9391	10529	1.121			
2.320	15044	13488	0.897			
2.340	9035	14979	1.658			
2.357	8972	11088	1.236			
2.373	11722	8065	0.688			

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
2.407	12686	16114	1.270			
2.437	15388	7052	0.458			
2.490	10405	4843	0.465			
2.553	5304	2840	0.535			
2.587	11196	3324	0.297			
2.657	3926	2265	0.577			
2.680	3759	2513	0.668			
2.153	73288	173880	2.373	0.01	$	15 o-Terphenyl (S)
2.325	687056	739790	1.077	0.12	S	12 TPH (C16-C28)
4.320	2984092	2306782	0.773	0.53	S	5 TPH (C08-C40)
2.743	72593	76306	1.051			
2.787	5367	2076	0.387			
2.830	2904	1665	0.573			
2.863	1253	1578	1.259			
2.897	7174	2606	0.363			
2.950	11003	5969	0.542			
3.017	7303	3203	0.439			
3.057	3912	1574	0.402			
3.120	4634	1825	0.394			
3.160	2031	1285	0.633			
3.213	6428	2131	0.332			
3.263	26448	11283	0.427			
3.367	1157498	595652	0.515			
3.423	6684	2667	0.399			
3.487	9028	3211	0.356			
3.577	36374	14078	0.387			
3.663	11288	3349	0.297			
3.770	92242	40106	0.435			
3.840	7290	2410	0.331			
3.913	4295	1483	0.345			
3.973	9858	2877	0.292			
4.020	5178	1955	0.378			
4.107	27244	7870	0.289			
4.200	6156	1527	0.248			
4.350	15364	2428	0.158			
4.453	20067	6312	0.315			
4.520	72964	18930	0.259			
4.623	8383	1771	0.211			
4.800	17983	2200	0.122			
4.920	8079	1901	0.235			
5.017	25279	3501	0.138			
5.130	1924	1375	0.715			
5.160	2756	1394	0.506			
5.193	2208	1383	0.626			
5.217	1943	1412	0.727			
5.237	1707	1440	0.844			
5.263	2349	1490	0.634			
5.293	2682	1495	0.557			
5.373	11605	1781	0.153			
5.523	15916	2775	0.174			
5.617	37458	4838	0.129			
5.770	3861	1162	0.301			
5.820	3387	1069	0.316			

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.873	1264	914	0.723		
5.900	1055	894	0.847		
5.920	1699	868	0.511		
5.950	819	823	1.005		
5.967	2201	814	0.370		
6.027	907	757	0.835		
6.040	1613	746	0.462		
6.077	1260	714	0.566		
6.113	1607	681	0.424		
6.147	518	651	1.256		
6.160	779	655	0.841		
6.177	388	651	1.677		
6.190	520	654	1.258		
6.203	521	651	1.250		
6.213	1431	658	0.460		
6.250	1124	639	0.569		
6.280	369	619	1.678		
6.340	2333	680	0.292		
6.360	2324	705	0.303		
6.407	2954	634	0.215		
6.493	663	485	0.732		
6.513	453	459	1.014		
6.563	1234	449	0.364		
6.587	1041	438	0.421		
6.617	169	424	2.516		
6.637	1007	432	0.429		
6.667	243	409	1.684		
6.677	565	412	0.729		
6.700	632	398	0.629		
6.723	382	393	1.029		
6.757	517	376	0.727		
6.783	695	402	0.578		
6.803	479	408	0.852		
6.823	404	409	1.012		
6.867	1099	440	0.400		
6.893	689	436	0.633		
6.903	261	440	1.688		
6.923	705	450	0.638		
6.940	263	443	1.686		
7.003	1761	502	0.285		
7.087	3655	593	0.162		
7.127	1247	580	0.465		
7.160	642	545	0.850		
7.187	1181	547	0.463		
7.217	1046	528	0.505		
7.247	2514	519	0.206		
7.350	539	313	0.581		
7.377	363	267	0.736		
7.403	303	260	0.858		
7.430	298	255	0.855		
7.457	444	251	0.565		
7.473	199	255	1.282		
7.493	455	260	0.572		
7.530	770	268	0.348		
7.567	150	256	1.708		
7.583	636	279	0.439		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.623	644	279	0.433	0.00	
7.653	109	275	2.532	0.00	
7.667	617	285	0.462	0.00	
7.703	526	298	0.566	0.00	
7.730	419	305	0.728	0.00	
7.753	189	325	1.720	0.00	
7.763	804	340	0.423	0.00	
	557990264	96300436		100.000	

Total unknown % area = 98.84

05 Aug 11 03:19 PM page 1
Sequence: C:\HPCHEM\1\SEQUENCE\080411.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT							
1	1	BLANK				TPHMACHB	1
1	2	BLANK				TPHMACHB	1
1	3	WINDOW CHECK				TPHMACHB	1
1	4	2000 2860-31-01				TPHMACHB	1
1	5	1000 2860-31-02				TPHMACHB	1
1	6	500 2860-31-14				TPHMACHB	1
1	7	250 2860-30-13				TPHMACHB	1
1	8	100 2860-30-14				TPHMACHB	1
1	9	50 2860-30-15				TPHMACHB	1
1	10	IC500 2860-30-16				TPHMACHB	1
REAR							
1							

Good

LHB 8/5/11

LHB 8/5/11

Continued on Page

Read and Understood By

Signed 8/5/11 Date Signed 8/5/11 Date

09 Aug 11 08:09 AM
Sequence: C:\HPCHEM\1\SEQUENCE\080811.SEQ

page 1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1	1	BLANK					TPHMACHB	1
1	2	BLANK					TPHMACHB	1
1	3	WINDOW CHECK					TPHMACHB	1
1	4	8015DS-CCV-ok					TPHMACHB	1
1	5	483017 RSX3					TPHMACHB	1
1	6	483016					TPHMACHB	1
1	7	483018 RSX3					TPHMACHB	1
1	8	4048242001					TPHMACHB	1
1	9	4048242002					TPHMACHB	1
1	10	4048242003					TPHMACHB	1
1	11	4048242004					TPHMACHB	1
1	12	4048242005					TPHMACHB	1
1	13	4048242006					TPHMACHB	1
1	14	4048244001					TPHMACHB	1
1	15	4048244002 RSX2					TPHMACHB	1
1	16	4048244003 RSX2					TPHMACHB	1
1	17	4048244004 RSX3					TPHMACHB	1
1	18	4048244005 RSX3					TPHMACHB	1
1	19	4048244006					TPHMACHB	1
1	20	4048329001 RSX4					TPHMACHB	1
1	21	4048329002 RSX5					TPHMACHB	1
1	22	4048329003 RSX6					TPHMACHB	1
1	23	4048330001					TPHMACHB	1
1	24	4048330002					TPHMACHB	1
1	25	4048330003					TPHMACHB	1
1	26	483017X3					TPHMACHB	1
1	27	483018X3					TPHMACHB	1
1	28	4048244002X2					TPHMACHB	1
1	29	4048244003X2					TPHMACHB	1
1	30	4048244004X3					TPHMACHB	1
1	31	4048244005X3					TPHMACHB	1
1	32	4048329001X4					TPHMACHB	1
1	33	4048329002X5					TPHMACHB	1
1	34	4048329003X6					TPHMACHB	1
1	35	BLANK					TPHMACHB	1
1	36	BLANK					TPHMACHB	1
1	37	BLANK					TPHMACHB	1
1	38	8015DS-CCV-ok					TPHMACHB	1
1	39	487651					TPHMACHB	1
1	40	487650					TPHMACHB	1
1	41	487652X20 RSX15 = 300					TPHMACHB	1
1	42	487653X20					TPHMACHB	1
1	43	4049375001X20					TPHMACHB	1
1	44	4049375002X50 RSX7 = 350					TPHMACHB	1
1	45	BLANK					TPHMACHB	1
1	46	8015DS-CCV-ok					TPHMACHB	1
REAR								
1								

TPH-B
GCSV
62958
HBN
77487

TPH-S
GCSV
63146
HBN
78126

KHB 8/9/11

KHB
8/9/11

Read and Understood By

H Burns 8/9/11
Signed Date

Signed 8/9/11
Date

Pace Analytical Prep Log Report

Batch Information: OEXT HBN 77394 TPH-B

Prep Method	EPA 3541	Analysis Method	TPH-B	Extracted By	BLM	Extracted By Date	07/28/2011
Spiked By	BLM	Spiked By Date	07/28/2011	Conc. Temp #1	98.5	Conc. Temp #2	98.5
Methylene Chloride	12455	Sodium Sulfate	7513	Florisil 3620B	5238	3620B Date/Initials	7/29/11 BLM
Batch Notes		Reviewed By	JLH	Reviewed By Date	07/29/2011		

Sample Information:

QC Rule	Sample Type	Lab Sample ID	Initial Weight (g)	Final Volume (mL)	Volume Delivered (mL)	Sample Notes	8015T-SPK (mL)	8015T-SUR (mL)
8015 T_P	BLANK	**483016**	15	1	0.5			6045 (.5)
8015 T_P	LCS	**483017**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	LCSD	**483018**	15	1	0.5		10277 (1)	6045 (.5)
8015 T_P	PS	**4048242001**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242002**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048242003**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242004**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242005**	14.1	1	0.5			6045 (.5)
8015 T_P	PS	**4048242006**	14.3	1	0.5			6045 (.5)
8015 T_P	PS	**4048244001**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244002**	14.2	1	0.5			6045 (.5)
8015 T_P	PS	**4048244003**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244004**	14	1	0.5			6045 (.5)
8015 T_P	PS	**4048244005**	13.6	1	0.5			6045 (.5)
8015 T_P	PS	**4048244006**	15	1	0.5			6045 (.5)
8015 T_P	PS	**4048329001**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329002**	8.8	1	0.5			6045 (.5)
8015 T_P	PS	**4048329003**	13.4	1	0.5			6045 (.5)
8015 T_P	PS	**4048330001**	9	1	0.5			6045 (.5)
8015 T_P	PS	**4048330002**	9.5	1	0.5			6045 (.5)
8015 T_P	PS	**4048330003**	14.3	1	0.5			6045 (.5)

Standard Notes:

10277: TPH Biota Spk @ 1000 ug/mL

6045: TPH Biota Surr Spk @ 100 ug/mL

Pace Analytical Services					Instrument ID:	40BALC			
LIPID					Analyst:	BLM			

12036 No sample volume for DUP

Sample ID	Dish	Dish Weight	Final Weight	Biota Extract	Sample Volume (mL)	Aliquot (mL)	Lipid %	Date/Time:	Parent Sample ID	RPD %
483156		0.9375	0.9537	15.0000	4.0000	1.0000	0.4320	07/29/2011 07:00:14		
4048242001		0.9537	0.9646	15.0000	4.0000	1.0000	0.2907	07/29/2011 07:00:21		
4048242002		0.9523	0.9621	15.0000	4.0000	1.0000	0.2613	07/29/2011 07:00:27		
4048242003		0.9523	0.9600	14.1000	4.0000	1.0000	0.2184	07/29/2011 07:00:35		
4048242004		0.9504	0.9583	14.1000	4.0000	1.0000	0.2241	07/29/2011 07:00:41		
4048242005		0.9488	0.9543	14.1000	4.0000	1.0000	0.1560	07/29/2011 07:00:47		
4048242006		0.9448	0.9621	14.3000	4.0000	1.0000	0.4839	07/29/2011 07:00:53		
4048244001		0.9443	0.9618	14.0000	4.0000	1.0000	0.5000	07/29/2011 07:01:00		
4048244002		0.9325	0.9550	14.2000	4.0000	1.0000	0.6338	07/29/2011 07:01:07		
4048244003		0.9457	0.9609	14.0000	4.0000	1.0000	0.4343	07/29/2011 07:01:13		
4048244004		0.9459	0.9720	14.0000	4.0000	1.0000	0.7457	07/29/2011 07:01:20		
4048244005		0.9450	0.9738	13.6000	4.0000	1.0000	0.8471	07/29/2011 07:01:26		
4048244006		0.9461	0.9508	15.0000	4.0000	1.0000	0.1253	07/29/2011 07:01:33		
4048329001		0.9473	1.1178	8.8000	4.0000	1.0000	7.7500	07/29/2011 07:01:39		
4048329002		0.9500	1.1489	8.8000	4.0000	1.0000	9.0409	07/29/2011 07:01:46		
4048329003		0.9528	1.1906	13.4000	4.0000	1.0000	7.0985	07/29/2011 07:01:52		
4048330001		0.9522	0.9557	9.0000	4.0000	1.0000	0.1556	07/29/2011 07:01:58		
4048330002		0.9508	0.9596	9.5000	4.0000	1.0000	0.3705	07/29/2011 07:02:04		
4048330003		0.9440	0.9497	14.3000	4.0000	1.0000	0.1594	07/29/2011 07:02:10		

Approved by BH 7/29/11

9/28/10
2860-16-01 500 ul of 4000 ppm SVIS (2713-90D) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/28/11
9/30/10
2860-16-02 500 ul of 4000 ppm SVIS (2713-90E) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/29/11
* 10/1/10 CH_2Cl_2 changed at 13:50 to lot 2712-62 VMR
10/4/10
2860-16-03 500 ul of 4000 ppm SVIS (2713-90F) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 9/30/11
10/6/10
2860-16-04 50ul of 4000ppm SVIS (2713-90G) up to 10.0ml CH_2Cl_2 20ppm WPAH IS RON 10/6/10 Ex 10/6/11
10/06/10
2860-16-05 500 ul of 4000 ppm SVIS (2713-90G) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/6/11
10-7-10
2860-16-06 250uls of 2860-09-04 diluted to 1.0 ml w nanopure H_2O SHI 50 ppm
2860-16-07 2500ul of 10,000 mg/L Oterphenyl (2713-86) diluted to 250 ml with CH_2Cl_2 (2712-62) = 100 ppm Expires 10/7/2011 VMR Ran on instrument by DAL file # 406CSL:\101106.b\033R0101.D 88% Good DR 10/12/10
* 10/8/10 CH_2Cl_2 changed at 11:30 to lot 2712-64 VMR
10/8/10
2860-16-08 500 ul of 4000 ppm SVIS (2713-90H) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/7/11

10/8/10 5000ul of 5000ug/ml B/N Surr (2713-51C) +
2860-16-09 5000ul of 7500ug/ml Acid Surr. (2713-03B) dilute to 500 ml CH_2Cl_2 (2712-64) = 75/50 ug/ml ~~B/N~~ Surr. 8270 SKW Ran on Inst. by 40MS51 File# 1012T008
10/13/10 500 ul of 4000 ppm SVIS (2713-90I) diluted to
2860-16-10 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 10/11/11
2860-16-11 ~~20~~ 40ul of 5000ppm N-NDMA (2713-11B) up to 1.0ml CH_2Cl_2 200ppm NDMA STD Ex 7/13/11 RON 10/13/10 (RON 10/13/10)
~~10/18/10 500~~ ARO 10/18/10

Continued on Page

Read and Understood By
[signature] Signed 10/18/10 Date
Valerie M Ringquin Signed 10/18/2010 Date

11/24/10

2860-22-01 500ul of 4000ppm SVIS (2945-06A) up to 1.0 ml CH_2Cl_2 2000ppm SPAH IS Exp 11/22/11 RM 11/24

11/29/10 CH_2Cl_2 Changed at 8:00 to lot 2712-73 vme

11/30/10

2860-22-02 500ul of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 11/30/11

2860-22-03 500uls of 2860-09-04 diluted to 1.0ml 1000 ppm chk

2860-22-04 500µl of 4000 ppm SVIS (2945-06B) diluted to 1.0 ml w/ CH_2Cl_2 = 2000ppm SPAH IS - ARO exp 11/30/11

2860-22-05 1.5 ml of 5000 ppm B/N Surr (2713-51B) and 1.5 ml of 5000 ppm B/N Surr (2945-03B) diluted to 100 ml w/ CH_2Cl_2 = 150 ppm B/N Surr - ARO exp 9/16/11
Confirmed by ARO file # 40ms54 120105.d

12/1/2010

2860-22-06 1 ml of 50,000 ug/ml #2 diesel (2713-45C) + 1 ml of 50,000 ug/ml #2 diesel (2713-45A) diluted to 100 ml with CH_2Cl_2 (2713-73) = 1000 ppm Expires 12/1 VMR Ran on inst by DAL file # 40GCSL.i\120210T.b\010R0101.D 88.8%

12-2-10

2860-22-07 500uls of 2860-10-13 diluted to 1.0ml w 50/50 Hexane/MeOH 50

" " -08 25uls of 2860-10-11 " " " " 500 ppm

12/03/10

2860-22-09 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12

12/6/10

2860-22-10 50ul of 4000ppm SVIS (2945-06C) up to 10.0ml CH_2Cl_2 20ppm w PAH-IS Ft 12/8/11 for 12/6

2860-22-11 500µl of 4000 ppm (2945-06C) SVIS diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 12/3/11

12/7/10

2860-22-12 400ul of 16,000 ppm ERDO (2713-42A) diluted to 2.0 ml with CH_2Cl_2 2712-73 = 3200 ppm VMR Exp 12/7/11 VME

Continued on Page

Read and Understood By

Valerie M Renguin — Signed — 12/7/10 — Date

Signed — 12/22/10 — Date

2/21/11
2860-29-01 250 uL of 2860-09-04 (2000mg/L in H_2O, MEOH spike)
→ 1.0 mL [Final] = 500 ug/mL Ex 7-19-11 DRL

2/24/11 changed CH_2Cl_2 @ 10:00AM to NEW LOT (2712-085) KAM

2/25/11
2860-29-02 3.0mL of 5000ppm B/N SURR (2945-03C [4/11/11 KAM]) diluted to 100 mL w/ CH_2Cl_2 (2712-085) = 150ppm B/N SURR KAM Exp 8/25/11 KAM
Ran on instr by RJN file # 40MSS4 0225112S.D

2860-29-03 500ul of 4000ppm SVIS (2945-17F) up to 1.0ml CH_2Cl_2 2000ppm SPAHIS Ex 2/23/12 RAW 2/25/11

3/2/11
2860-29-04 250ul of 4000ppm SVIS (2945-176) up to 1.0ml CH_2Cl_2 1000ppm PAH-IS Ex 2/28/12 RAW 3/2/11

2860-29-05 250ul of 2000ppm PAH (2575-60C) + 100ul of 5000ppm B/N SS (2945-20A) up to 10.0mls CH_2Cl_2 50ppm PAH Ex 7/3/11 RAW 3/2/11

Ex 7/3/11 RAW 3/2/11

2860-29-06	0.500 ul of 50ppm PAH (2860-29-05)	up to 1.0ml CH_2Cl_2	25ppm PAH CAL
07	0.200	↓	10
08	0.100	↓	5
09	0.020	↓	1
10	0.010	↓	.5
11	0.010	10.0ml	.05
12	0.200	1.0ml	10ppm Check

2860-29-13 20ul of 500ppm 2nd Source (2945-08D) + 6.7ul of 150ppm B/NSS (2860-27-01) up to 1.0ml CH_2Cl_2
10ppm PAH 2nd Source Ex 9/2/11 RAW 3/2/11

2860-29-14 500ul of 4000 ppm SVIS (2945-17G) diluted to 1.0 mL w/ CH_2Cl_2 = 2000 ppm SPAH IS - ARO exp 2/28/12

3/3/2011
2860-29-15 2500ul of 20,000 mg/L #2 diesel (2713-46A,B,C) diluted to 50ml with CH_2Cl_2 = 1000ppm Ran on inst by ~~DAE~~ GC (VMR) file #
Exp 3/3/2012 VMR
Z VMR 3/3/2011 OK to use per GC ran on inst 3/8/11 VMR
→ 40GCSF.i / 0307116.b - File 010F1001. Recovery = 106% GC 3/9/11

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Read and Understood By

Valerie M Renquin 3/3/2011 [signature] 3/7/11
Signed Date Signed Date

PROJECT
Notebook No.
Continued From Page

3-4-11

2860-30-01 50 uL of 2380-100-01 (TPH @ 2000 ug/mL) → 1.0 mL CH_2Cl_2
[Final] = 100 ug/mL Exp 5.6.11 DAZ

TPH ICAL

2860-30-02 500 uL of 2713-46D (#2 Diesel Fuel @ 20,000 ug/mL) → 5.0 mL CH_2Cl_2
[Final] = 2000 ug/mL Exp 3.4.12 DAZ
2860-30-03 500 uL of 2860-30-02 → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-04 250 uL = 500 ug/mL
2860-30-05 125 uL = 250 ug/mL
2860-30-06 50 uL = 100 ug/mL
2860-30-07 25 uL = 50 ug/mL
→ Use only 1.0 mL of 2860-30-02
All standards + 5 uL ~~2945-13B~~ 2713-990 (o-terphenyl @ 10,000 ug/mL)
[Final] = 50 ug/mL All standard Exp 2.22.12 DAZ

TPH ICV
2860-30-08 10 uL of ~~2945-23A~~ 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 uL ~~2945-13B~~ 2713-990 (o-terphenyl @ 10,000 ug/mL)
[Final] = 500 ug/mL + 50 ug/mL Exp 2.22.12 DAZ

2860-30-09 25 uls of 2860-10-11 diluted to 1.0 ml w 50/50 H_2O/MeOH JHI

3-7-11
2860-30-10 1.0 mL of 2860-30-02 + 5 uL 2713-990 (o-terp @ 10,000 ug/mL) = 2000 ug/mL + 50 ug/mL
2860-30-11 500 uL of → 1.0 mL CH_2Cl_2 [Final] = 1000 ug/mL
2860-30-12 250 uL = 500 ug/mL
2860-30-13 125 uL = 250 ug/mL
2860-30-14 50 uL = 100 ug/mL
2860-30-15 25 uL = 50 ug/mL
→ Plus 5 uL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 50 ug/mL Exp ~~3-4-11~~ DAZ 5-6-11 GC

2860-30-16 10 uL of 2945-23A (Diesel Fuel #2 @ 50,000 ug/mL) → 1.0 mL CH_2Cl_2
+ 5 uL 2713-990 (o-terp @ 10,000 ug/mL) [Final] = 500 ug/mL + 50 ug/mL
Exp ~~3-4-11~~ DAZ 3/4/12 GC

DAZ 3-7-11

Continued on Page —

Read and Understood By

Signed	Date	Signed	Date
[signature]	3.7.11	Valerie M Renquin	3/24/11

PROJECT
3.7.11

2860-31-01 100 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) → 1.0 mL CH_2Cl_2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 2000 + 50 ug/mL Exp 3.4.12 DAL

2860-31-02 50 uL of 2713-46D (#2 Diesel Fuel @20,000 ug/mL) →
1.0 mL CH_2Cl_2 + 5 uL 2713-99D (o-terp @10,000 ug/mL)
[Final] = 1000 + 50 ug/mL Exp 3.4.12 DAL

2860-31-03 25 uls of 2860-10-19 diluted to 1.0 ml w 50/50 MeOH/H_2O JHI 5000 ppm

2860-31-04 500 ul of 4000 ppm SVIS (2945-17J) diluted to 1.0 ml w/ CH_2Cl_2 = 2000 ppm PAH IS - ARO exp 3/10/12

2860-31-05 500 uls of 2860-10-11 diluted to 10.0 ml w 50/50 MeOH H_2O JHI 1000 ppm
-06 25 uls of 2860-31-05 diluted to 1.0 ml w 25 ppm JHI
-07 100 | | | | 100
-08 250 | | | | 250
-09 500 | | | | 500
-10 750 | | | | 750 JHI

3.14.11
2860-31-11 1.0 mL of ~~100~~ 2860-22-06 (1000 ppm #2 diesel) → 20.0 mL CH_2Cl_2
[Final] = 50 ppm EXP 12/1/11 DAL

2860-31-12 250 uL 2713-28E (#2 Diesel @20,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL EXP 1-10-12 DAL

3/15/11
2860-31-13 500 ul of 4000 ppm SVIS (2945-17J) up to 1.0 ml CH_2Cl_2 2000 ppm PAH-S-IS Ex 3/15/12 RW 3/15/11

3.17.11 TPH CCV
2860-31-14 100 uL of 2945-23B (Diesel Fuel #2 @50,000 ug/mL) → 10.0 mL CH_2Cl_2
[Final] = 500 ug/mL + 50 uL 2713-99D (o-terphenyl @10,000 ug/mL)
[Final] = 50 ug/mL EXP 3.4.12 DAL

Continued on Page

Read and Understood By

[signature] Signed 3/17/11 Date

Valerie M Penguin Signed 3/24/11 Date

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #5651, TPH Biota Surr @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 04/01/2011 15:07
Expires: 10/18/2011

Volume of Standard: 250 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr @ 100 ug/mL

Compound Name and Concentration for Standard #5651

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 ug/mL	Methylene Chloride	ug/mL

Composed of Information for Standard #5651

Composed of Standard Seq	Notes	Volume	Units
5484	O-Terphenyl @ 10,000 ug/mL	2.5	mL
2501	Methylene Chloride	247.5	mL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #6045, TPH Biota Surr Spk @ 100 ug/mL

WORKING STANDARD

Created By: GAC
Created: 12/01/2010 00:00
Expires: 07/16/2020

Volume of Standard: 1 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: TPH Diesel Biota Surr SPK
Part ID: N/A
Standard ID: 8015T-SUR

Notes: TPH Biota Surr Spk @ 100 ug/mL

Compound Name and Concentration for Standard #6045

Compound Name	Concentration	Compound Name	Concentration
o-Terphenyl (S)	100 mg/L		

Composed of Information for Standard #6045

Composed of Standard Seq	Notes	Volume	Units
6043	O-Terphenyl @ 10,000 ug/mL	10	uL
198		990	uL

Standard Log

PASI Green Bay Laboratory

Standards Log Information for Standard #10277, TPH Biota Spk @ 1000 ug/mL

WORKING STANDARD

Created By: SKW
Created: 06/01/2011 00:00
Expires: 09/30/2011

Volume of Standard: 50 mL
Manufacturer: N/A
Manufacturer Lot ID: N/A

Lot ID: OEXT
Part ID: N/A
Standard ID: 8015T-SPK

Notes: TPH Biota Spk @ 1000 ug/mL

Compound Name and Concentration for Standard #10277

Compound Name	Concentration	Compound Name	Concentration
Methylene Chloride	ug/mL	TPH (C10-C40)	1000 ug/mL
Diesel Components	1000 ug/mL	TPH (C12-C20)	1000 ug/mL
TPH - Diesel (C10-C28)	1000 ug/mL	TPH (C16-C40)	1000 ug/mL
TPH (C08-C16)	1000 ug/mL	TPH (C20-C34)	1000 ug/mL
TPH (C08-C36)	1000 ug/mL	Diesel Range Organics (C8-C28)	1000 ug/mL
TPH (C10-C12)	1000 ug/mL	High End Organics (C8-C34)	1000 ug/mL
TPH (C08-C40)	1000 ug/mL	TPH (C12-C36)	1000 ug/mL
TPH (C10-C20)	1000 ug/mL	TPH (C16-C28)	1000 ug/mL

Composed of Information for Standard #10277

Composed of Standard Seq	Notes	Volume	Units
10276	TPH #2 Diesel Fuel @ 20,000 ug/mL	2500	uL
2501	Methylene Chloride	47.5	mL

Laboratory Reports - Columbia Analytical Services, Inc.

Attachment 3

Environmental Resources Management Southwest, Inc.
3838 North Causeway Boulevard, Suite 2725
Metairie, Louisiana 70002
(504) 831-6700

Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 5, 2011 Analytical Report for Service Request No: K1106152

David Lingle
URS Corporation
9801 Westheimer, Suite 500
Houston, TX 77042

RE: East White Lake/Hepatopancreas

Dear David:

Enclosed are the results of the samples submitted to our laboratory on May 24, 2011. For your reference, these analyses have been assigned our service request number K1106152.

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

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

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

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

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

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Agency	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DEQ	WA100010
South Carolina DHEC	61002
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	URS Corporation	**Service Request No.:**	K1106152
Project:	East White Lake	**Date Received:**	5/24-6/21-2011
Sample Matrix:	Tissue		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Homogenization and Compositing

Whole body blue crab samples were received at Columbia Analytical Services on 5/24-6/21-2011. The hepatopancreas, other soft tissue, meat and exoskeleton were separated from each crab. The samples from each location were composited and subsequently subaliquoted for each of the sample locations in accordance with sample mass requirements for testing; additionally, sample custody of an aliquot of each was relinquished to Pace Analytical for analysis of Total Petroleum Hydrocarbons in accordance with instructions received from URS Corporation. Each tissue type was logged into a separate service request. The data set included here is for the hepatopancreas tissue.

Metals

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

Approved by _____ **Date** 5/9/11

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Solids, Total

Prep Method:	NONE	Units:	PERCENT
Analysis Method:	Freeze Dry	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
EWL-DES Hepatopancreas Composi	K1106152-009	07/12/11	19.6	
EWL-HOU-C Hepatopancreas Comp	K1106152-015	07/12/11	23.5	
EWL-BIL Hepatopancreas Composit	K1106152-025	07/12/11	23.1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
Sample Matrix: Tissue

Service Request: K1106152
Date Collected: 06/09/11
Date Received: 06/10/11
Date Extracted: NA
Date Analyzed: 07/12/11

Duplicate Summary
Total Metals

Sample Name: EWL-BIL Hepatopancreas Composite
Lab Code: K1106152-025
Test Notes:

Units: PERCENT
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	23.1	22.6	22.9	2	

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K1106152

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106152-009	10.359	14.809	16.842	2.033	19.6%
K1106152-015	10.263	15.062	17.469	2.407	23.5%
K1106152-025	10.116	15.070	17.409	2.339	23.1%
K1106152-025 Dup	10.032	15.044	17.310	2.266	22.6%
					7/14/11

Date/Time in Freeze Dryer: 04:30pm 07-12-11 Date/Time out of Freeze Dryer:08:30am 07-14-11

Balance ID: 21 B Date Balance checked: 07-12-11,07-14-11

Comments:

x = RPD

Analyst: Teresa Jones	Date: 7/14/11
Reviewed By: Anna Cheatley	Date: 7/21/11

Columbia Analytical Services, Inc.

Service Request #: K1106152
Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106152-009	10.359	14.809	16.842		
K1106152-015	10.263	15.062	17.469		
K1106152-025	10.116	15.070	17.409		
K1106152-25Dup	10.032	15.044	17.310		
		7/14/11			

Date/Time in Freeze Dryer: 7/12/11 8:4:30 pm Date/Time out of Freeze Dryer: 8:30 am 7/14/11

Balance ID: 21B Date Balance checked: 7.12.11 7/14/11

Comments: _____

High - Low / Average = RPD

x = RPD

Analyst: Anna Whatley	Date: 7.12.11
Reviewed By:	Date: 7/13/11

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Columbia Analytical Services, Inc.

Service Request Number(s):
K1106152

Analysis for:
Pace TPH

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106152-009		10.01		~~79.85~~ 79.96	7-11-11	crab
K1106152-015		10.05		79.07		crab
K1106152-025		15.04		79.04		crab
					7/13/11	

Balance ID: 28 | Date Balance Checked: 7.11.11

Analyst: Anna Oheatley | Date: 7-11-11

Reviewed: | Date: 7/13/11

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Columbia Analytical Services, Inc.

Service Request Number(s):	K1106152
Analysis for: Lipids	

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106152-009		3.05		212.70		Soft Tissue
K1106152-015		3.04		214.97		Soft Tissue
K1106152-025		3.05		198.39		Soft Tissue
K1106152-025 Dup		3.04		214.85		Soft Tissue
K1106152-025 Trip		3.06		215.73		Soft Tissue
						7/13/11

Comments: Please weigh approximately 2 g into a 40ml VOA Vial.

Balance ID: 28 — Date Balance Checked: 7.12.11

Analyst: Emma Cheatley — Date: 7.12.11

Reviewed: — Date: 7/13/11

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Columbia Analytical Services, Inc.

Service Request Number(s):
K1106152
Analysis for:
Composite

COMPOSITE DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106152-009		40.82		480.15		crab
K1106152-015		60.47		480.09		crab
K1106152-025		87.39		480.09		crab

7/13/11

Balance ID: 28 Date Balance Checked: 7.11.11

Analyst: Anna Chestley Date: 7-11-11

Reviewed: Date: 7/13/11

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Total Inorganic Arsenic

Prep Method:	Method	Units:	ug/g
Analysis Method:	1632 Rev. A	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Hepatopancreas Composi	K1106152-009	0.008	0.003	2	07/31/11	08/01/11	0.028	
EWL-HOU-C Hepatopancreas Comp	K1106152-015	0.009	0.003	2	07/31/11	08/01/11	0.036	
EWL-BIL Hepatopancreas Composit	K1106152-025	0.009	0.003	2	07/31/11	08/01/11	0.072	
Method Blank 1	K1106152-MB1	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 2	K1106152-MB2	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 3	K1106152-MB3	0.002	0.0008	1	07/31/11	08/01/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
Sample Matrix: Animal tissue

Service Request: K1106152
Date Collected: 06/09/11
Date Received: 06/10/11
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Total Metals
Matrix Spike/Duplicate Matrix Spike Summary

Sample Name: EWL-BIL Hepatopancreas Composite
Lab Code: K1106152-025SD
Test Notes:

Units: ug/g
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	Method Acceptance Limits	Relative Percent Difference	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.04	0.14	0.14	0.072	0.248	0.244	127	125	50-150	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
LCS Matrix: Water

Service Request: K1106152
Date Collected: NA
Date Received: NA
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery

Units: ug/g
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.200	0.229	114	50-150	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
LCS Matrix: Water

Service Request: K1106152
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 1

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.227	114	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
LCS Matrix: Water

Service Request: K1106152
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 2

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.230	115	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
LCS Matrix: Water

Service Request: K1106152
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 3

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.232	116	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
LCS Matrix: Water

Service Request: K1106152
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 4

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.204	102	80-120	

HG-CGC-AAS Arsenic Speciation Data Review Form

Element: Total Inorganic Arsenic

Starlims Run #: 255580

CALSTD Source: AA1-20-H
CALVER Source: AA1-21-A

Service Request Numbers:

K1106152, K1106154, K1106157, K1106166

	Yes	No	NA
1) Three or more non-zero calibration points analyzed	X		
2) Mean calibration factor RSD <20%	X		
3) CALVER's within 20% of true value	X		
4) CALBLK's below MRL	X		
5) CALVER's, CALBLK's ran every 10 samples	X		
6) A minimum of three method blanks analyzed	X		
7) All reported samples within calibration range	X		
8) MS/MSD every 10 samples	X		
9) MS/MSD within 50-150%; RPD <35%	X		
10) Samples analyzed within hold time	X		
11) QCS analyzed quarterly with the mean from 3 analyses within 10% of the true value	X		

Comments:

Primary Reviewed By: BJS Date: 8/1/11

Secondary Reviewed By: RRM Date: 8/2/11

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA	Service Request # :
Analysis For: As	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L or ng/g	Comments
1	30 ng wk std A	~	~	50	~	1608.2970	30.52	610.3	
2	20 ng wk std A	~	~	50	~	1107.7680	20.85	417.0	
3	10 ng wk std A	~	~	50	~	596.6090	10.98	219.6	
4	1.0 ng wk std A	~	~	50	~	71.5780	0.84	16.8	
5	CALBLK 1	~	~	50	~	27.9660	0.00	0.0	
6	CALVER 1	~	~	50	~	614.8745	11.33	226.7	CALVER : 113%
7	CALBLK 2	~	~	50	~	35.9410	0.15	3.1	
8	OPR	0.500	10	2.0	~	1214.3380	22.91	229.1	OPR : 115%
9	MB-1	4.545	10	2.0	~	35.3255	0.14	0.2	
10	MB-2	4.545	10	2.0	~	23.2160	-0.09	-0.1	
11	MB-3	4.545	10	2.0	~	31.3310	0.06	0.1	
12	K1106152-009	2.556	10	1.0	2	400.4800	7.19	28.1	
13	K1106152-015	2.128	10	1.0	2	426.1660	7.69	36.1	
14	K1106152-025	2.173	10	1.0	2	841.2000	15.70	72.3	
15	K1106152-025MS	2.165	10	0.25	8	721.5740	13.39	247.5	MS : 126%
16	K1106152-025MSD	2.169	10	0.25	8	712.2670	13.21	243.7	MSD : 124%
17	K1106154-009	4.555	10	0.5	4	565.5450	10.38	45.6	
18	CALVER 2	~	~	50	~	624.4760	11.52	230.4	CALVER : 115%
19	CALBLK 3	~	~	50	~	42.1715	0.27	5.5	
20	K1106154-015	4.107	10	0.5	4	340.2450	6.03	29.4	
21	K1106154-025	2.368	10	0.5	4	278.6690	4.84	40.9	
22	~~K1106157-009~~	~~0.960~~	~~10~~	~~1.0~~	~~2~~	~~196.2410~~	~~3.25~~	~~33.9~~	Rerun
23	K1106157-009	0.960	10	2.0	~	302.3290	5.30	27.6	
24	K1106157-015	0.854	10	2.0	~	573.9690	10.54	61.7	
25	K1106157-025	0.994	10	2.0	~	1316.2730	24.88	125.1	

Comments: wk std A : AA1-20-H / wk std B : AA1-21-A / KBH4 : A1245129 / 6M HCl : HG-AAS1-1-O / Tris-Buffer : HG-AAS1-1-I	Calibration: ng	net peak area	Calibration Factor	
	30	1580.3310	52.6777	
	20	1079.8020	53.9901	
	10	568.6430	56.8643	
	1	43.6120	43.6120	
			51.7860	CF mean
			5.72	CF Stdev
CALVER : 10ng wk std B			11.05	RSD

Analyst:	Date:	Page Number:
	8/1/11	1

[1632Runlog.xls] As1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA Analysis For: As	Service Request # :

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L	Comments
1	K1106166-009	0.648	10	2.0	~	61.8065	0.65	5.0	
2	K1106166-015	0.585	10	2.0	~	76.2005	0.93	8.0	
3	~~K1106166-015MS~~	~~0.580~~	~~10~~	~~2.0~~	~	~~3627.8170~~	~~69.51~~	~~599.7~~	Rerun
4	K1106166-015MS	0.580	10	0.5	4	1076.7395	20.25	698.3	MS : 132%
5	~~CALVER 3~~	~	~	~~50~~	~	~~764.7670~~	~~14.23~~	~~284.6~~	Rerun
6	CALVER 3	~	~	50	~	628.0615	11.59	231.8	CALVER : 116%
7	CALBLK 4	~	~	50	~	50.8045	0.44	8.8	
8	K1106166-015MSD	0.574	10	0.5	4	1082.6750	20.37	709.8	MSD : 134%
9	K1106166-025	0.538	10	2.0	~	103.9290	1.47	13.6	
10	CALVER 4	~	~	50	~	557.1400	10.22	204.4	CALVER : 102%
11	CALVER 5	~	~	50	~	42.6490	0.28	5.7	
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Calibration: wk std A : AA1-20-H wk std B : AA1-21-A	ng	net peak area	Calibration Factor	
KBH4 : A1245129	30	1580.3310	52.6777	
6M HCl : HG-AAS1-1-O	20	1079.8020	53.9901	
Tris-Buffer : HG-AAS1-1-I	10	568.6430	56.8643	
	0.5	43.6120	43.6120	
			51.7860	CF mean
			5.72	CF Stdev
CALVER : 10ng wk std B			11.05	RSD

Analyst:	Date:	Page Number:
	8/V11	2

[1632Runlog.xls] As1.XLS (2)

Columbia Analytical Services, Inc.

Sample Number(s):		Service Request Number(s):	K1106152, K1106154, K1106157, K1106166
Analysis for:	Tissue Extraction for TIAs		

DATA

SR #	Sample ID	Freeze Dried Sample (g)	Extraction Sol'n	Amount of Extraction Sol'n (mL)
OPR		0.500	2M HCl	10
MB-1		0.500	2M HCl	10
MB-2		0.500	2M HCl	10
MB-3		0.500	2M HCl	10
K1106152-009		0.501	2M HCl	10
K1106152-015		0.500	2M HCl	10
K1106152-025		0.502	2M HCl	10
K1106154-009		0.501	2M HCl	10
K1106154-015		0.501	2M HCl	10
K1106154-025		0.502	2M HCl	10
K1106157-009		0.502	2M HCl	10
K1106157-015		0.505	2M HCl	10
K1106157-025		0.500	2M HCl	10
K1106166-009		0.103	2M HCl	10
K1106166-015		0.103	2M HCl	10
K1106166-025		0.100	2M HCl	10
K1106166-015 MS		0.102	2M HCl	10
↓ MSD		0.101	2M HCl	10
K1106152-025 MS		0.500	2M HCl	10
↓ MSD		0.501	2M HCl	10

BJJ 7/31/11

Comments: OPR : 0.05mL 2.0 µg/mL TIAs AA1-21-C exp. 1/28/12 Stock Lot # 138852
MS/MSD: 0.15mL 2.0 µg/mL TIAs AA1-21-C exp. 1/28/12
2M HCl: H6-AAS-1-9

Analyst: BJJ 7/31/11 HE 7/31/11

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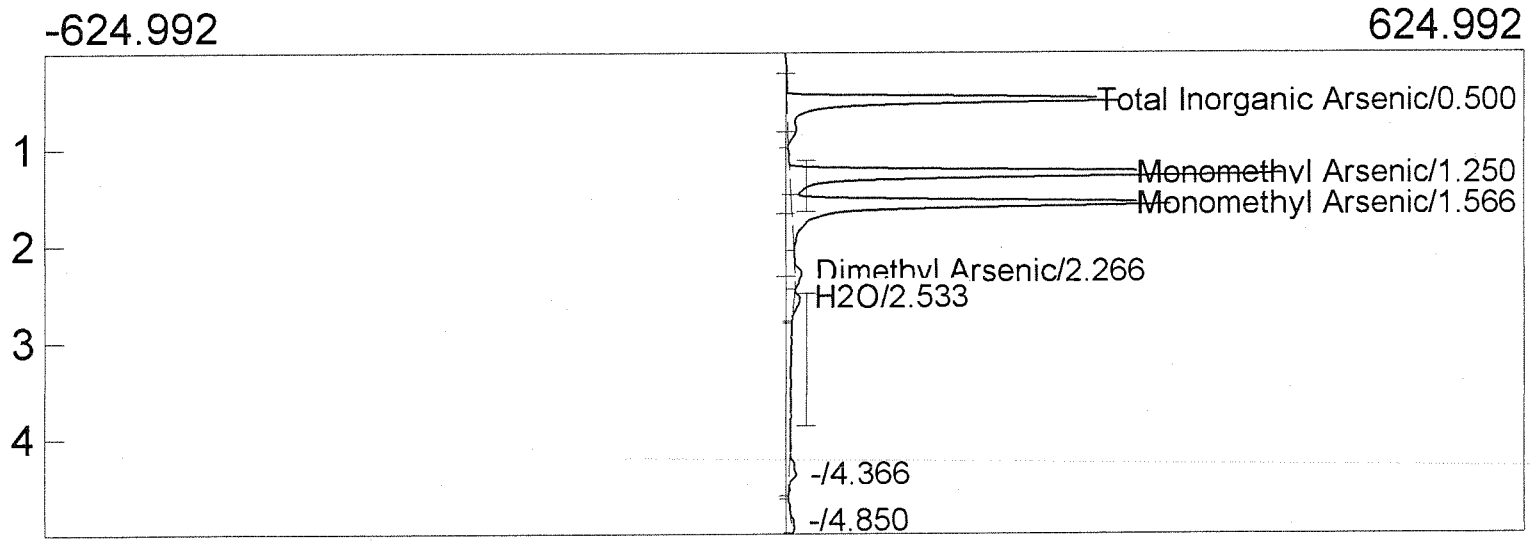
Conversion from dry weight to wet weight:

Standard MRL = 0.02
Standard MDL = 0.007
Standard Dilution = 1
Standard Sample Mass = 0.500

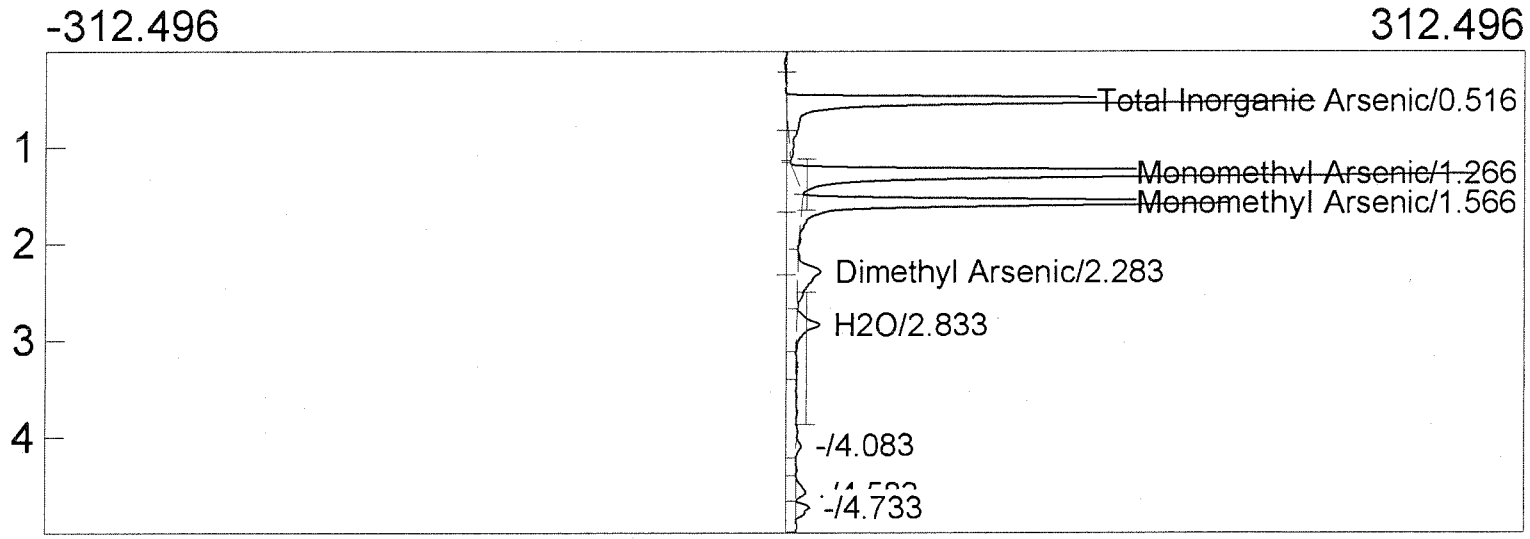
Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.501	19.6	**2.556**	2	**0.01**	**0.003**
K1106152-015	0.500	23.5	**2.128**	2	**0.01**	**0.003**
K1106152-025	0.502	23.1	**2.173**	2	**0.01**	**0.003**
K1106152-025MS	0.500	23.1	**2.165**	8	**0.04**	**0.013**
K1106152-025MSD	0.501	23.1	**2.169**	8	**0.04**	**0.013**
K1106154-009	0.501	11.0	**4.555**	4	**0.01**	**0.003**
K1106154-015	0.501	12.2	**4.107**	4	**0.01**	**0.003**
K1106154-025	0.502	21.2	**2.368**	4	**0.02**	**0.006**
K1106157-009	0.502	52.3	**0.960**	1	**0.01**	**0.004**
K1106157-015	0.505	59.1	**0.854**	1	**0.01**	**0.004**
K1106157-025	0.500	50.3	**0.994**	1	**0.01**	**0.004**
K1106166-009	0.103	15.9	**0.648**	1	**0.02**	**0.005**
K1106166-015	0.103	17.6	**0.585**	1	**0.02**	**0.006**
K1106166-015MS	0.102	17.6	**0.580**	4	**0.07**	**0.024**
K1106166-015MSD	0.101	17.6	**0.574**	4	**0.07**	**0.024**
K1106166-025	0.100	18.6	**0.538**	1	**0.02**	**0.007**
Method Blank	0.500	11.000	**4.545**	1	**0.00**	**0.001**

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:50:11
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 30 ng.CHR ()
Operator: RRM



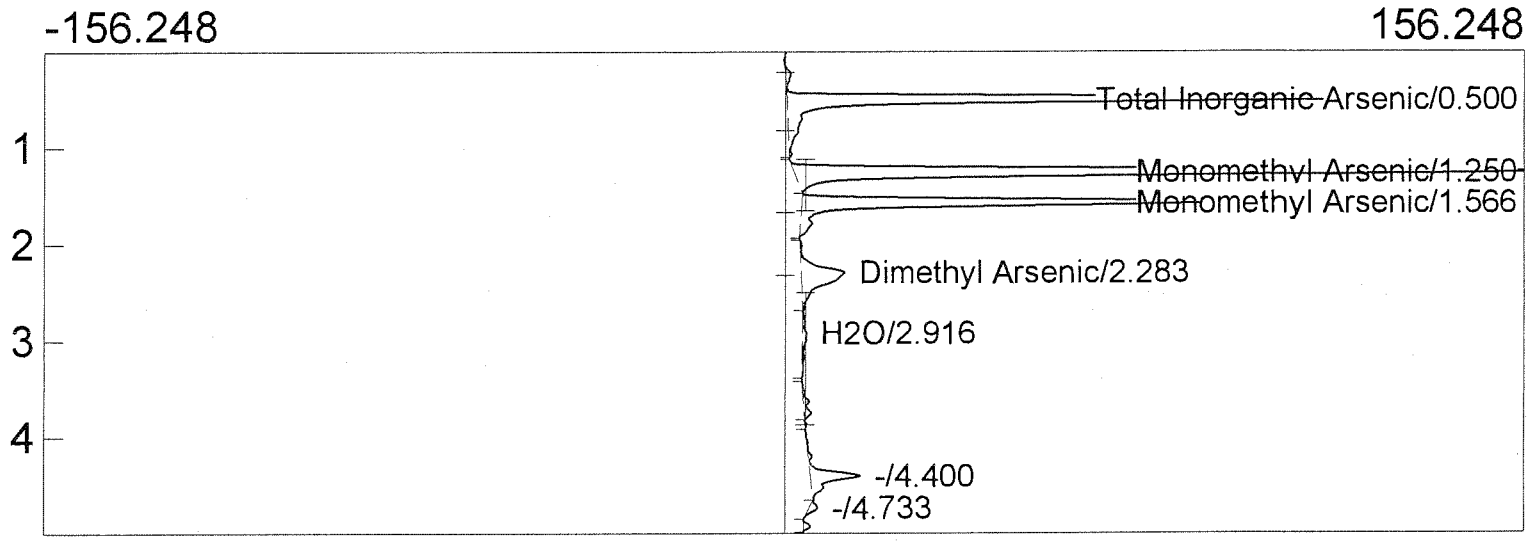
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1608.2970	311.451
Monomethyl Arsenic	1.250	2127.7730	425.590
Monomethyl Arsenic	1.566	1919.7775	339.613
Dimethyl Arsenic	2.266	57.0860	5.895
H2O	2.533	49.8820	4.784
		5762.8155	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:58:50
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 20 ng.CHR ()
Operator: RRM



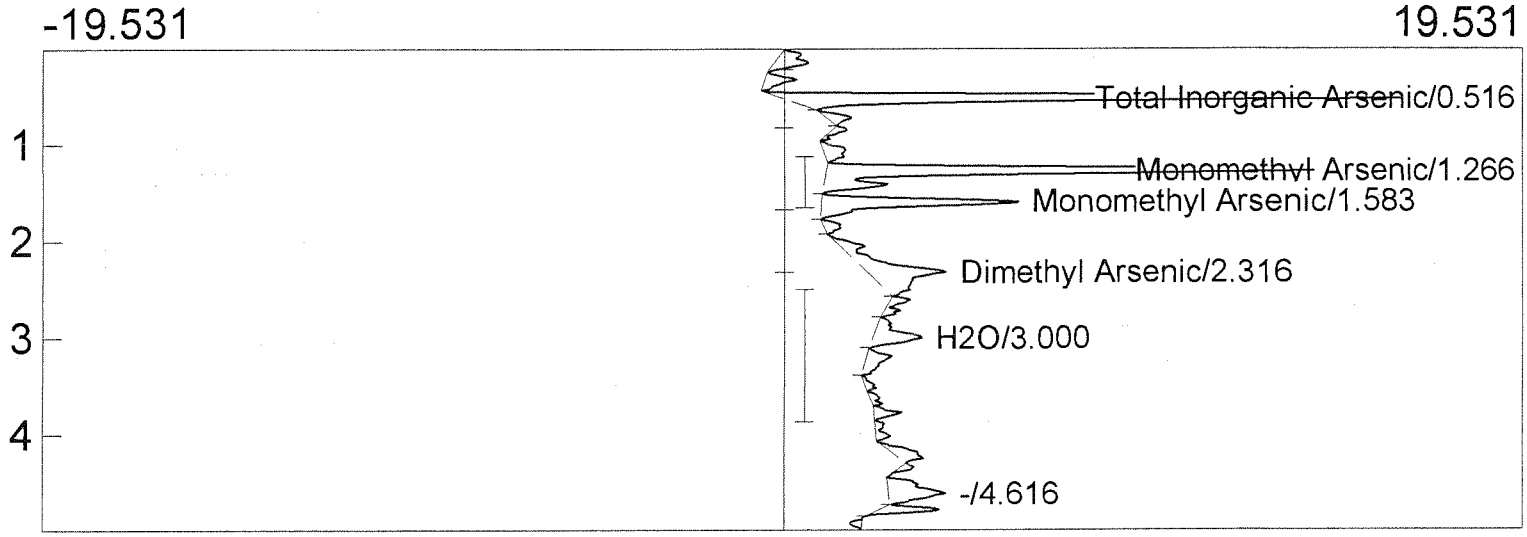
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1107.7680	225.335
Monomethyl Arsenic	1.266	1463.5120	288.371
Monomethyl Arsenic	1.566	930.3530	190.580
Dimethyl Arsenic	2.283	131.5590	10.032
H2O	2.833	85.8665	9.705
		3719.0585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:25:15
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 10 ng.CHR ()
Operator: RRM



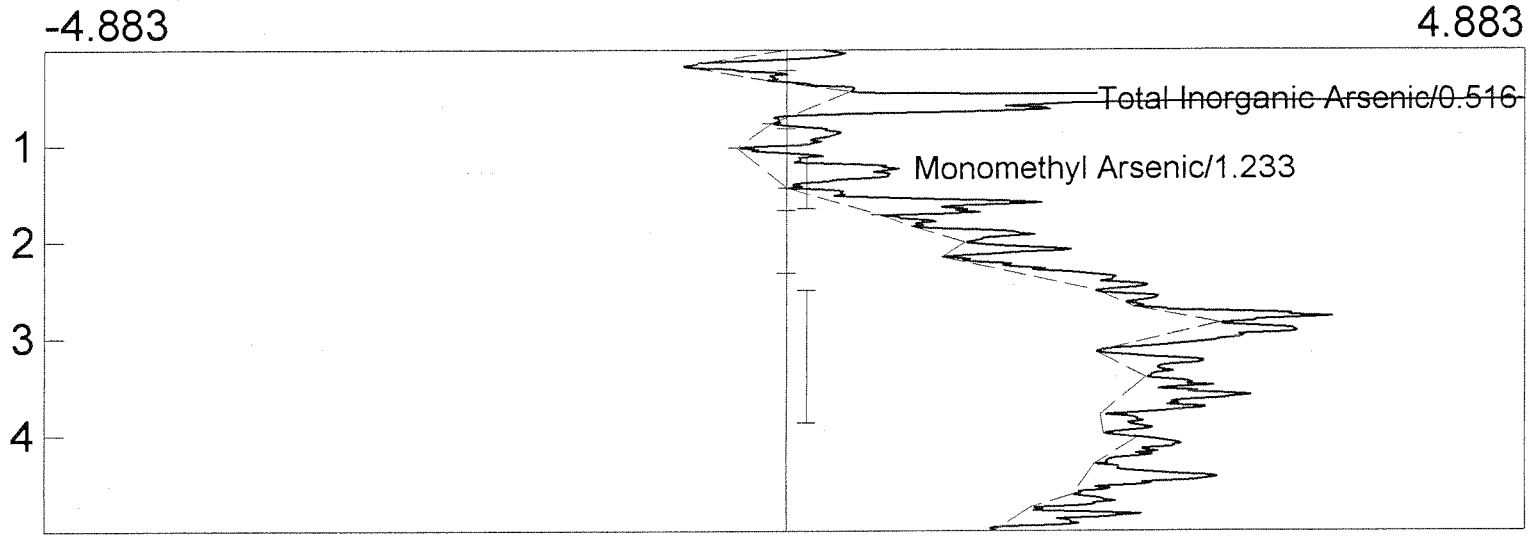
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	596.6090	122.606
Monomethyl Arsenic	1.250	766.2740	160.471
Monomethyl Arsenic	1.566	454.9720	90.116
Dimethyl Arsenic	2.283	120.8860	9.270
H2O	2.916	17.6870	0.969
		1956.4280	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:43:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 1.0 ng.CHR ()
Operator: RRM



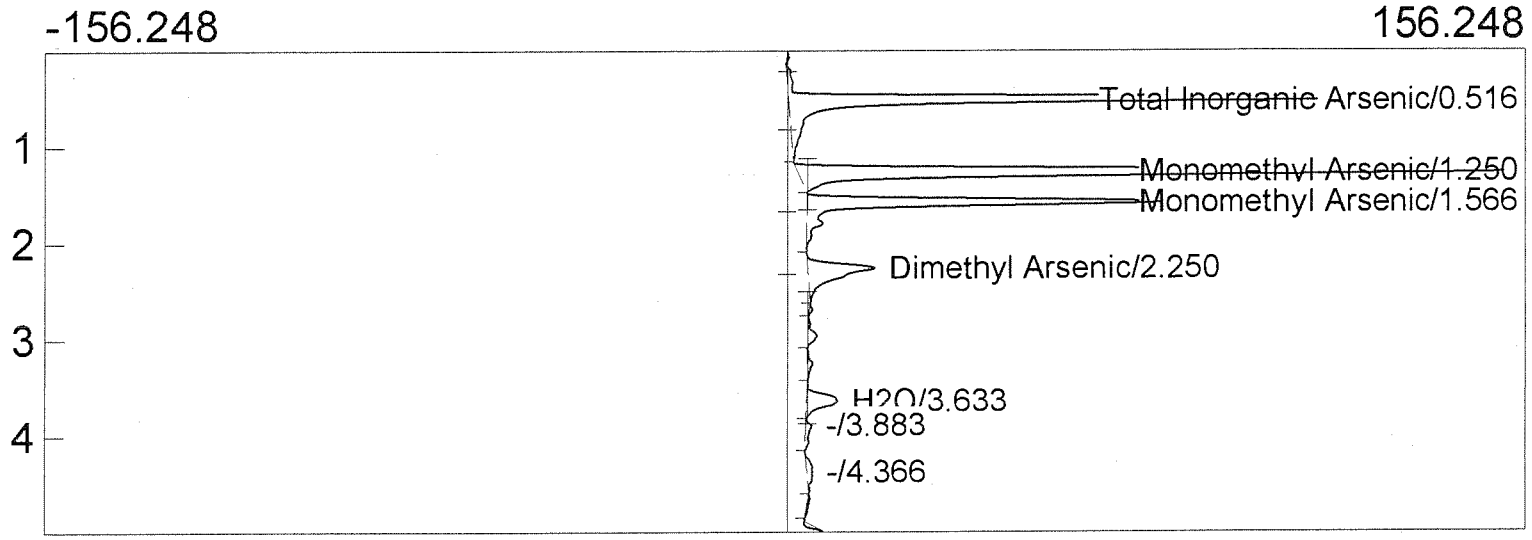
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	71.5780	16.469
Monomethyl Arsenic	1.266	68.1710	12.834
Monomethyl Arsenic	1.583	29.6050	5.232
Dimethyl Arsenic	2.316	27.4240	2.109
H2O	3.000	11.1325	1.299
		207.9105	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:53:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 1.CHR ()
Operator: RRM



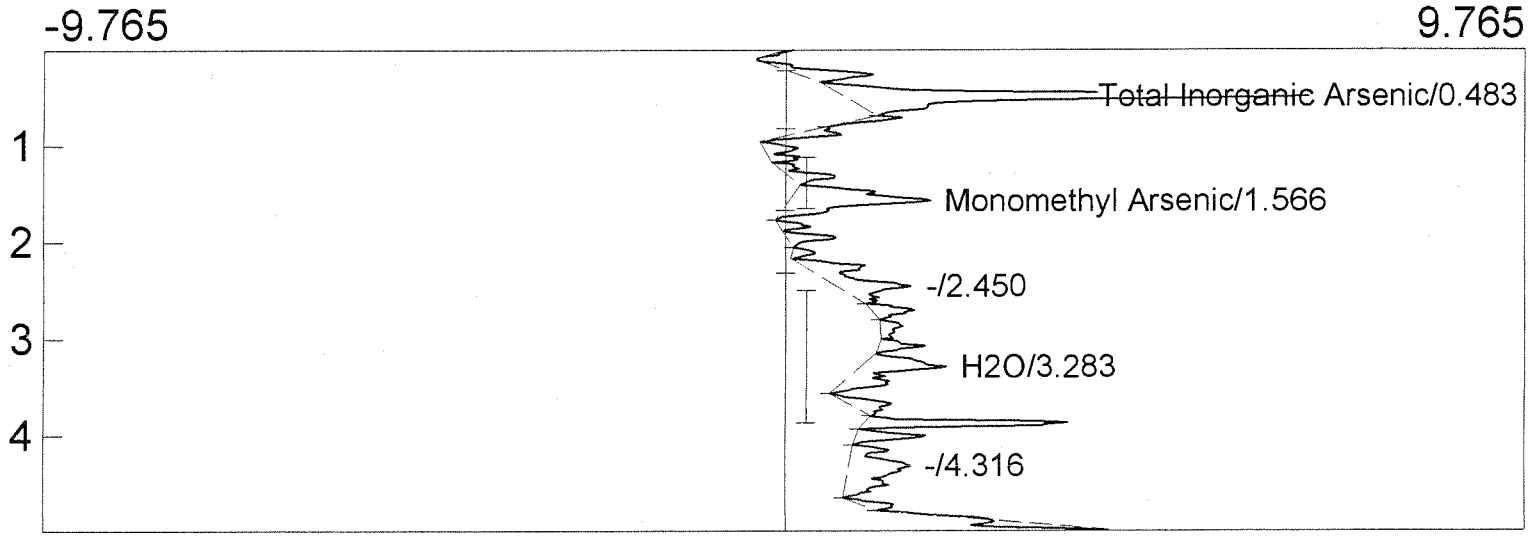
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	27.9660	4.727
Monomethyl Arsenic	1.233	11.0725	0.906
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		39.0385	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:04:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 1.CHR ()
Operator: BJS



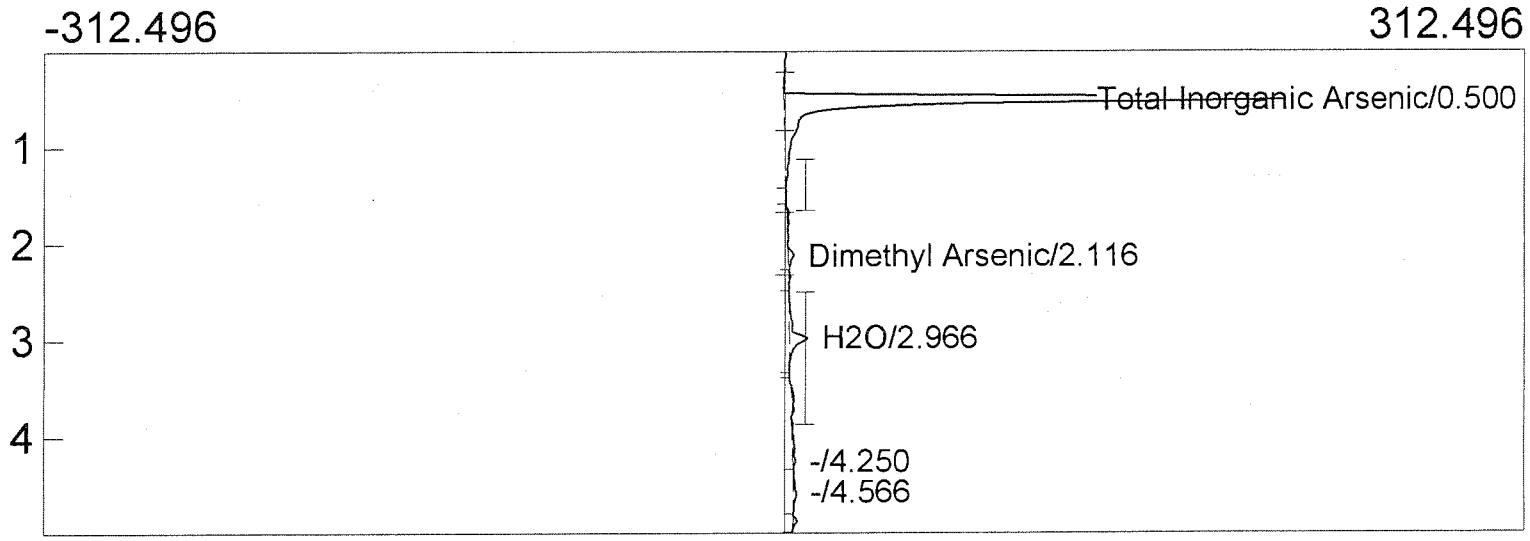
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	614.8745	113.241
Monomethyl Arsenic	1.250	747.7600	150.255
Monomethyl Arsenic	1.566	394.4830	76.652
Dimethyl Arsenic	2.250	131.7080	14.378
H2O	3.633	61.2840	6.640
		1950.1095	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:14:21
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 2.CHR ()
Operator: BJS



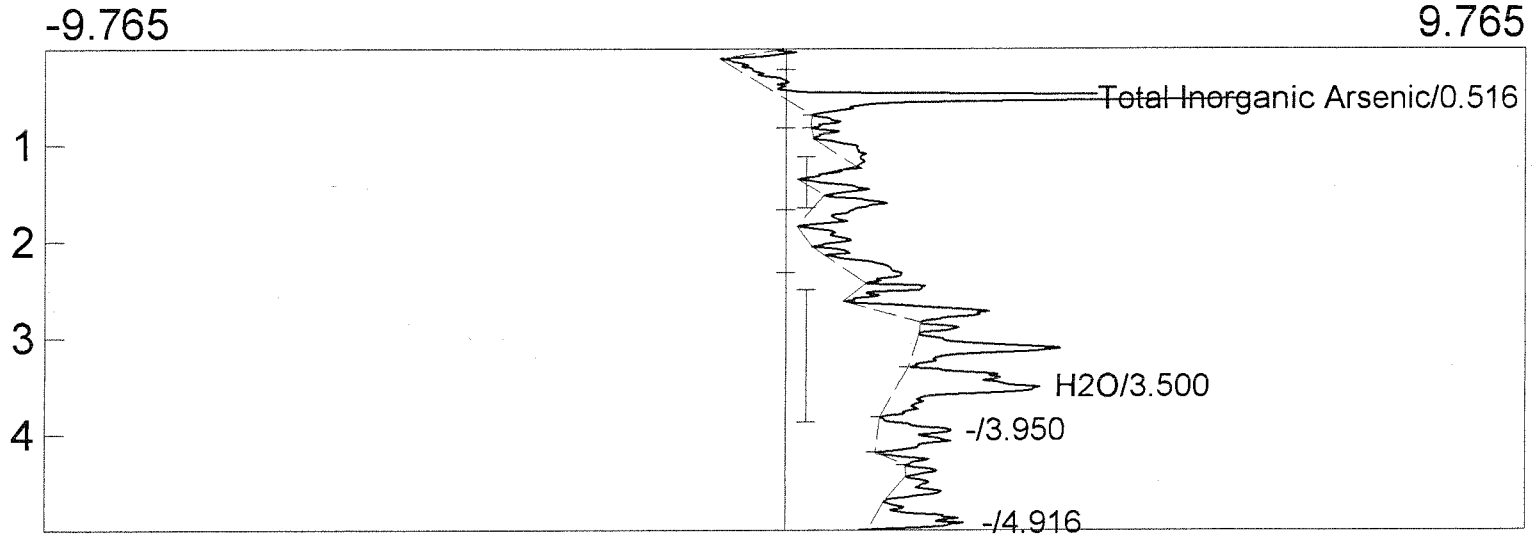
Component	Retention	Area	Height
Total Inorganic Arsenic	0.483	35.9410	6.155
Monomethyl Arsenic	1.566	18.0690	1.875
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.283	12.7535	1.135
		66.7635	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:24:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-OPR 2.0mL.CHR ()
Operator: BJS



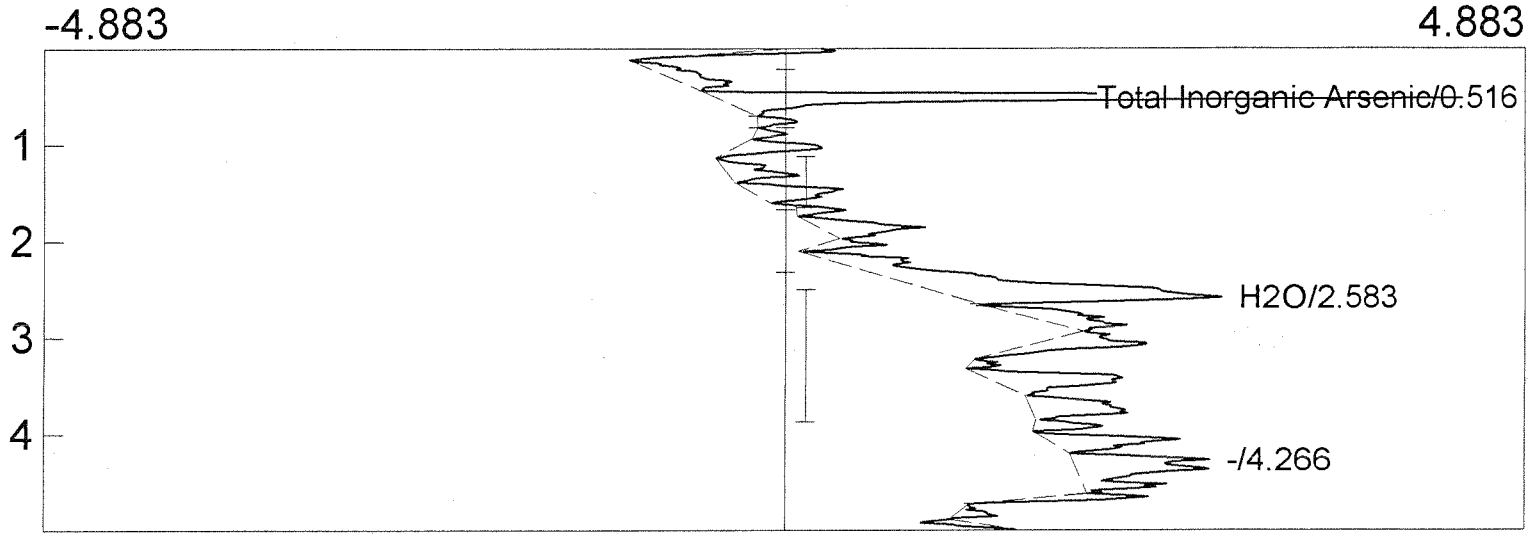
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1214.3380	221.998
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	16.4490	2.410
H2O	2.966	74.9180	7.946
		1305.7050	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:33:47
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB1 2.0mL.CHR ()
Operator: BJS



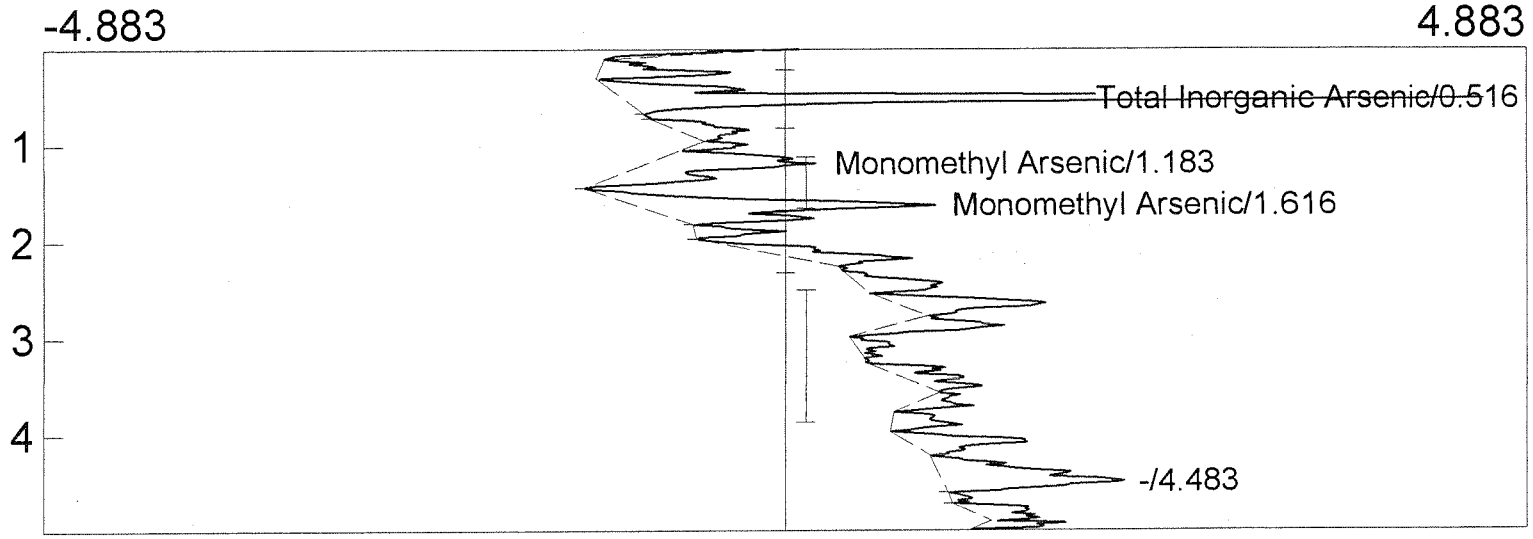
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	35.3255	6.230
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.500	25.8845	1.894
		61.2100	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:42:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB2 2.0mL.CHR ()
Operator: BJS



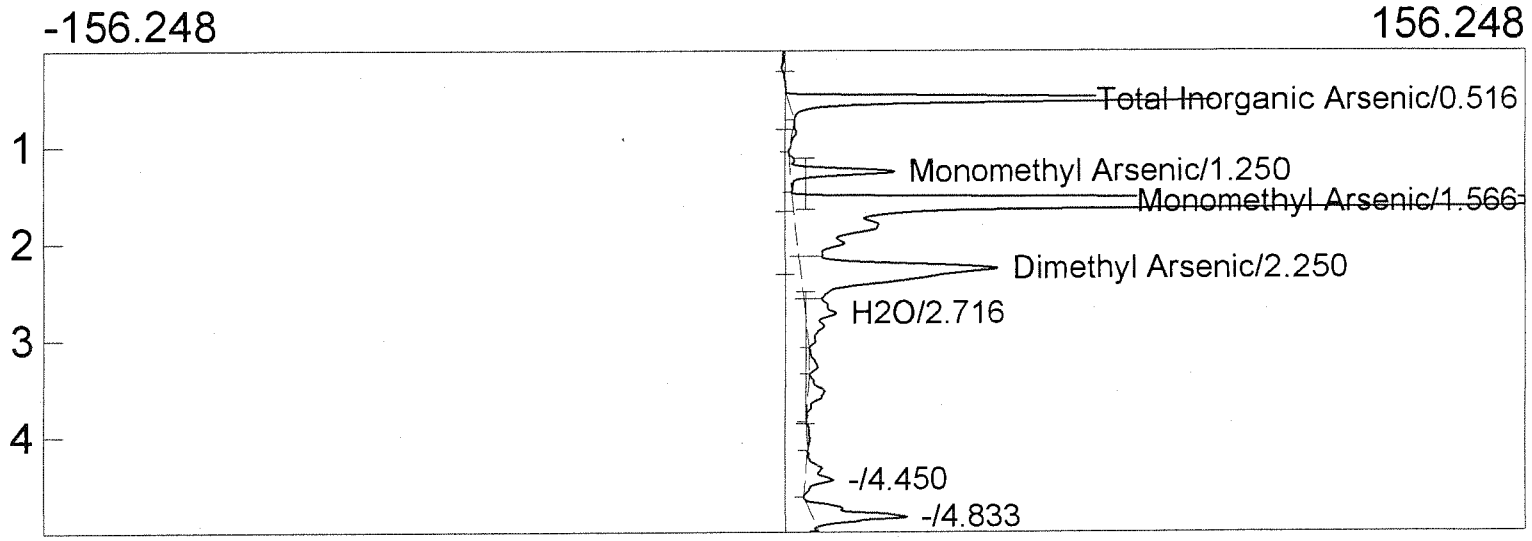
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	23.2160	4.977
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.583	26.4360	1.769
		49.6520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:52:40
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB3 2.0mL.CHR ()
Operator: BJS



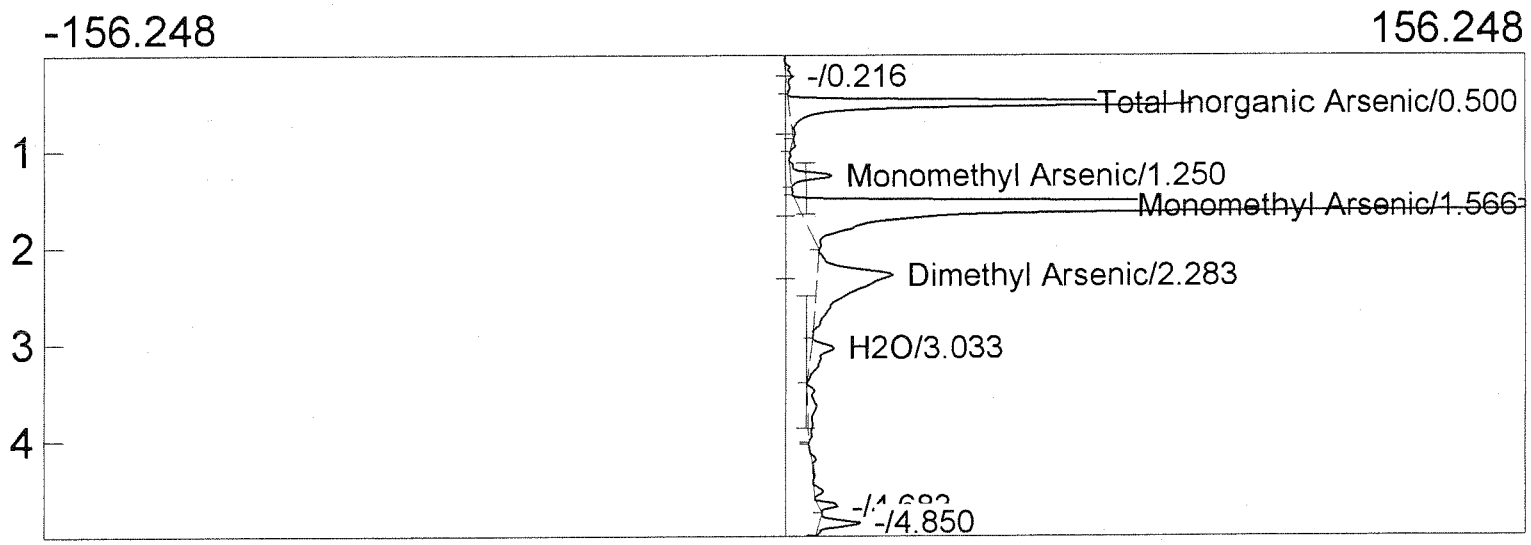
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	31.3310	5.729
Monomethyl Arsenic	1.183	13.9035	1.156
Monomethyl Arsenic	1.616	18.3815	2.001
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		63.6160	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:04:32
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-009 1.0mL.CHR ()
Operator: BJS



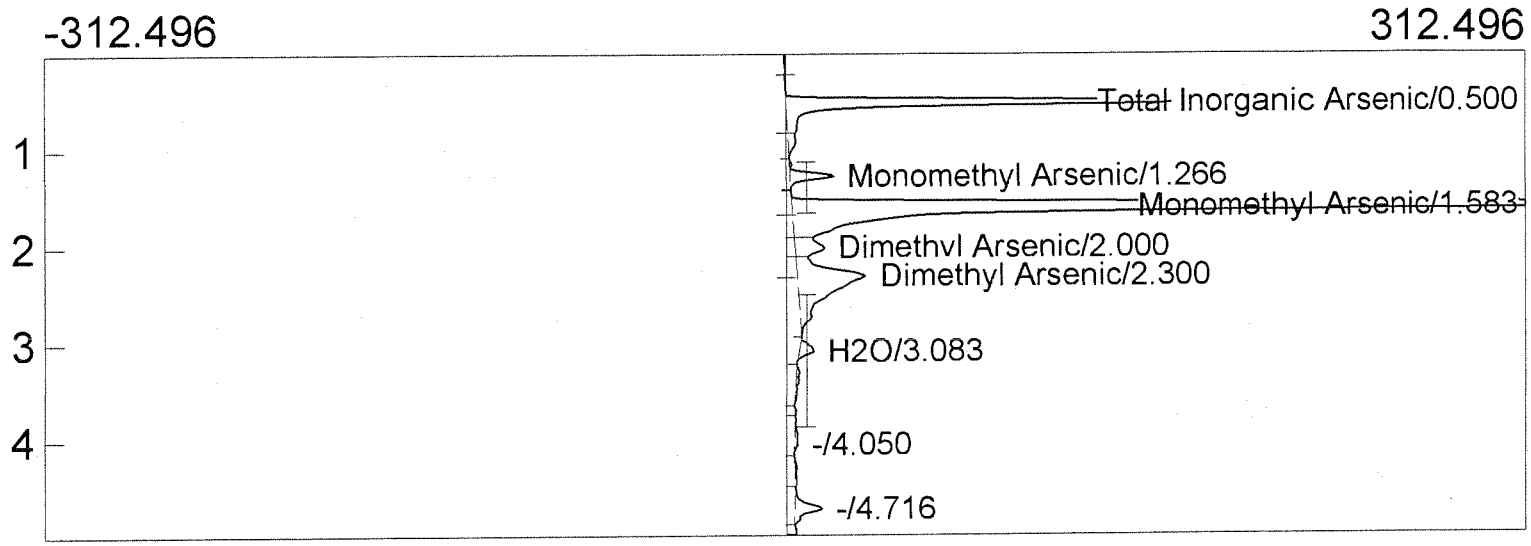
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	400.4800	91.013
Monomethyl Arsenic	1.250	111.9560	22.189
Monomethyl Arsenic	1.566	2303.9920	407.247
Dimethyl Arsenic	2.250	481.7150	42.038
H2O	2.716	102.0690	6.631
		3400.2120	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:13:56
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-015 1.0mL.CHR ()
Operator: BJS



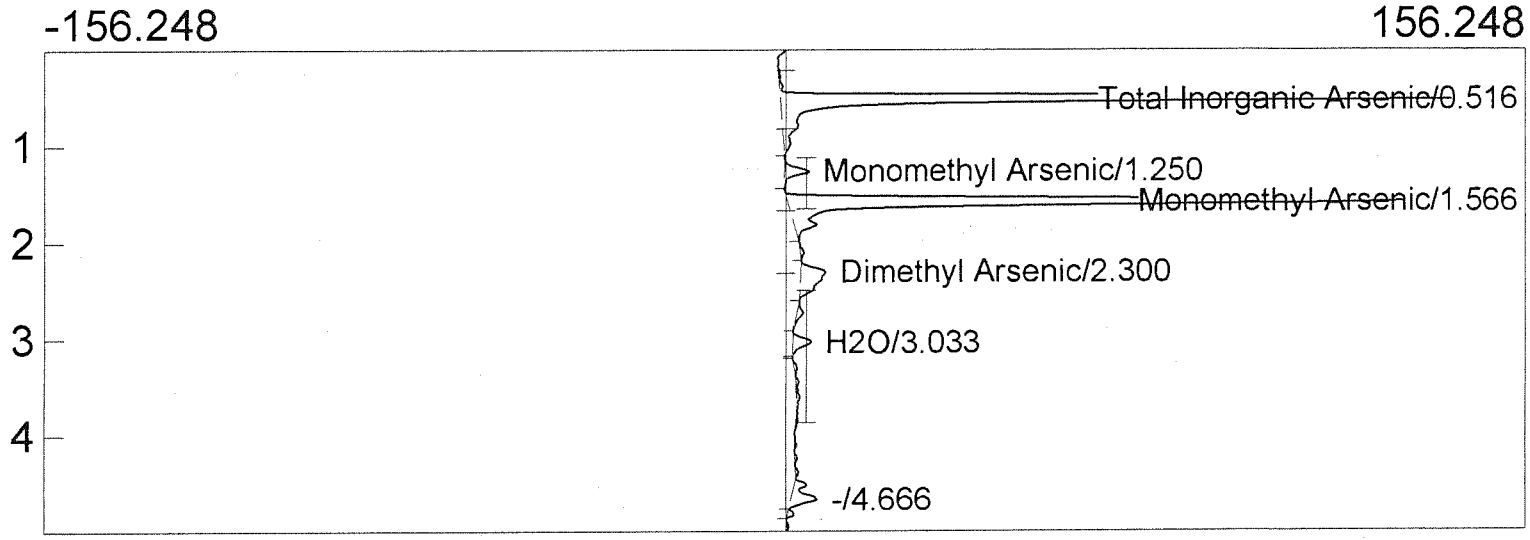
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	426.1660	86.647
Monomethyl Arsenic	1.250	45.8840	8.902
Monomethyl Arsenic	1.566	2033.1280	381.133
Dimethyl Arsenic	2.283	275.8515	16.081
H2O	3.033	53.7590	4.862
		2834.7885	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:23:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025 1.0mL.CHR ()
Operator: BJS



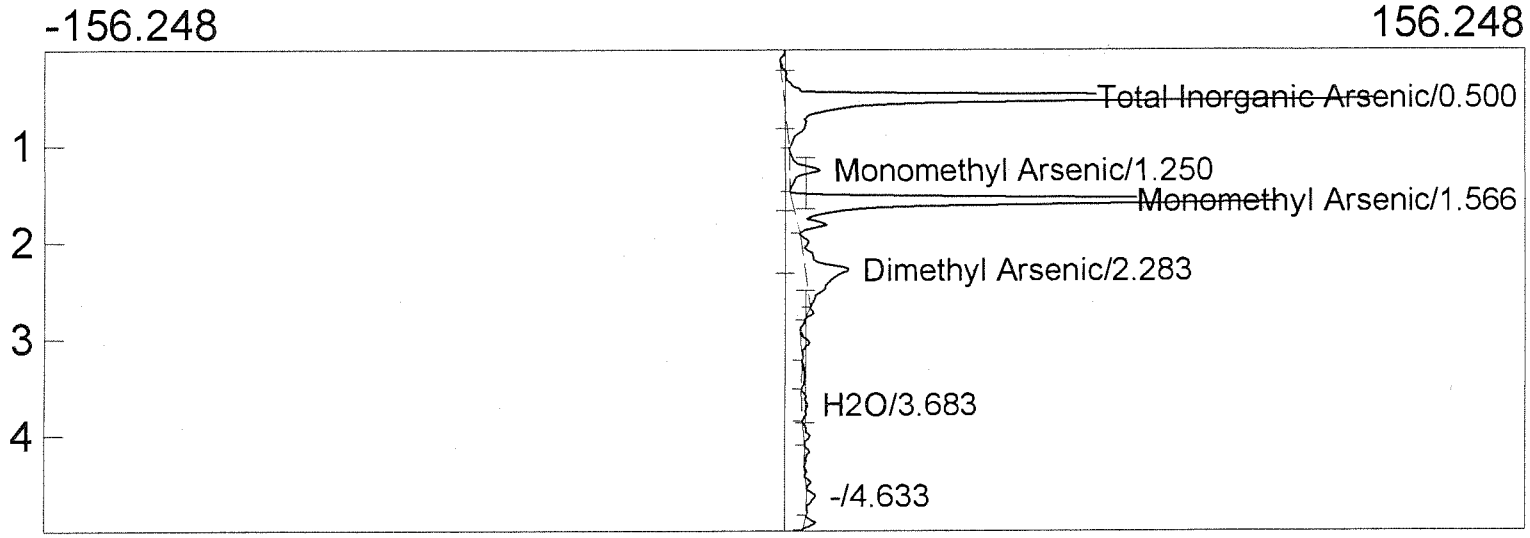
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	841.2000	163.484
Monomethyl Arsenic	1.266	92.5165	18.606
Monomethyl Arsenic	1.583	2923.7050	537.723
Dimethyl Arsenic	2.000	114.2820	12.457
Dimethyl Arsenic	2.300	523.9380	29.164
H2O	3.083	45.5070	6.262
		4541.1485	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:33:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025ms 0.25mL.CHR ()
Operator: BJS



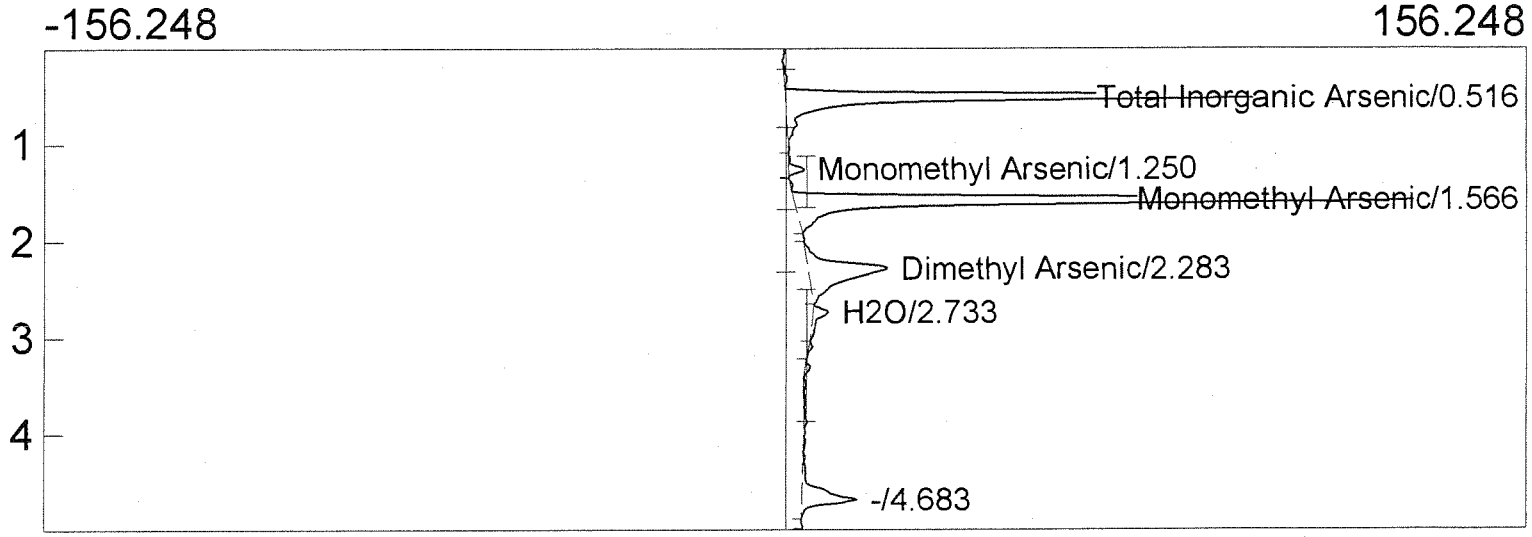
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	721.5740	144.049
Monomethyl Arsenic	1.250	29.2380	5.247
Monomethyl Arsenic	1.566	675.4080	132.674
Dimethyl Arsenic	2.300	68.3810	5.243
H2O	3.033	25.9780	3.908
		1520.5790	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:42:20
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025MSD 0.25mL.CHR ()
Operator: BJS



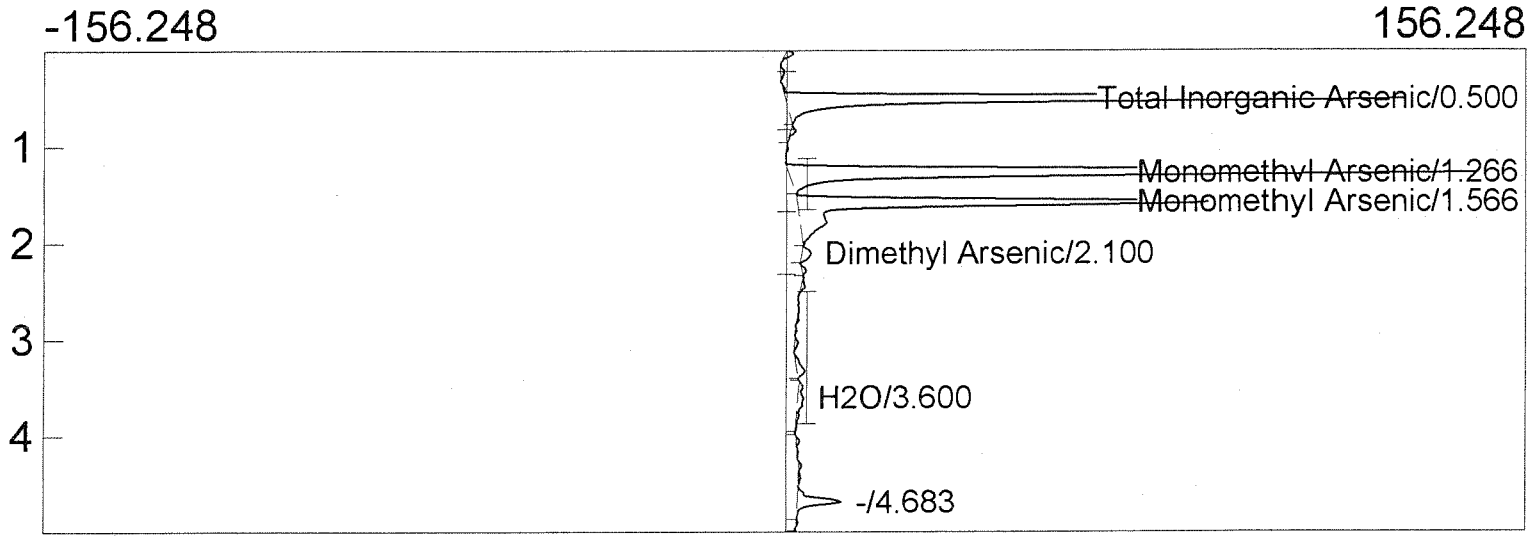
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	712.2670	126.993
Monomethyl Arsenic	1.250	45.0395	6.418
Monomethyl Arsenic	1.566	589.0770	108.026
Dimethyl Arsenic	2.283	139.0140	9.113
H2O	3.683	14.9530	1.275
		1500.3505	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:53:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-009 0.5mL.CHR ()
Operator: BJS



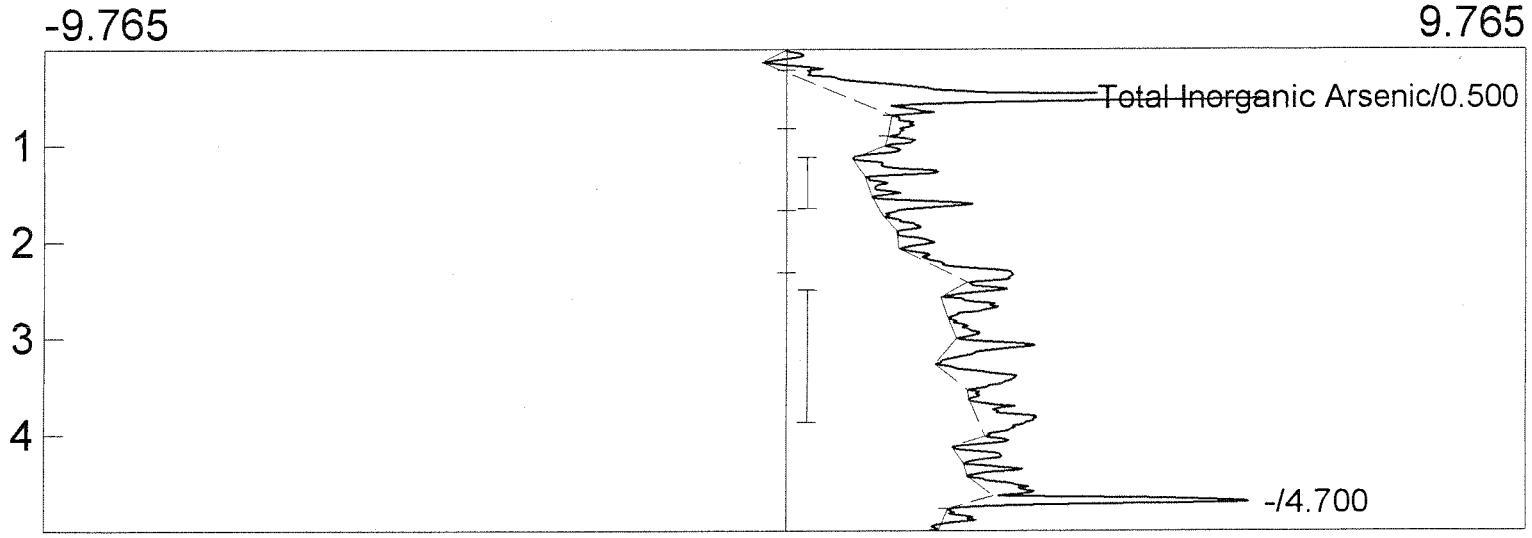
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	565.5450	100.699
Monomethyl Arsenic	1.250	16.5110	3.358
Monomethyl Arsenic	1.566	699.0285	132.262
Dimethyl Arsenic	2.283	210.4215	16.842
H2O	2.733	26.9115	3.295
		1518.4175	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:03:34
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 2.CHR ()
Operator: BJS



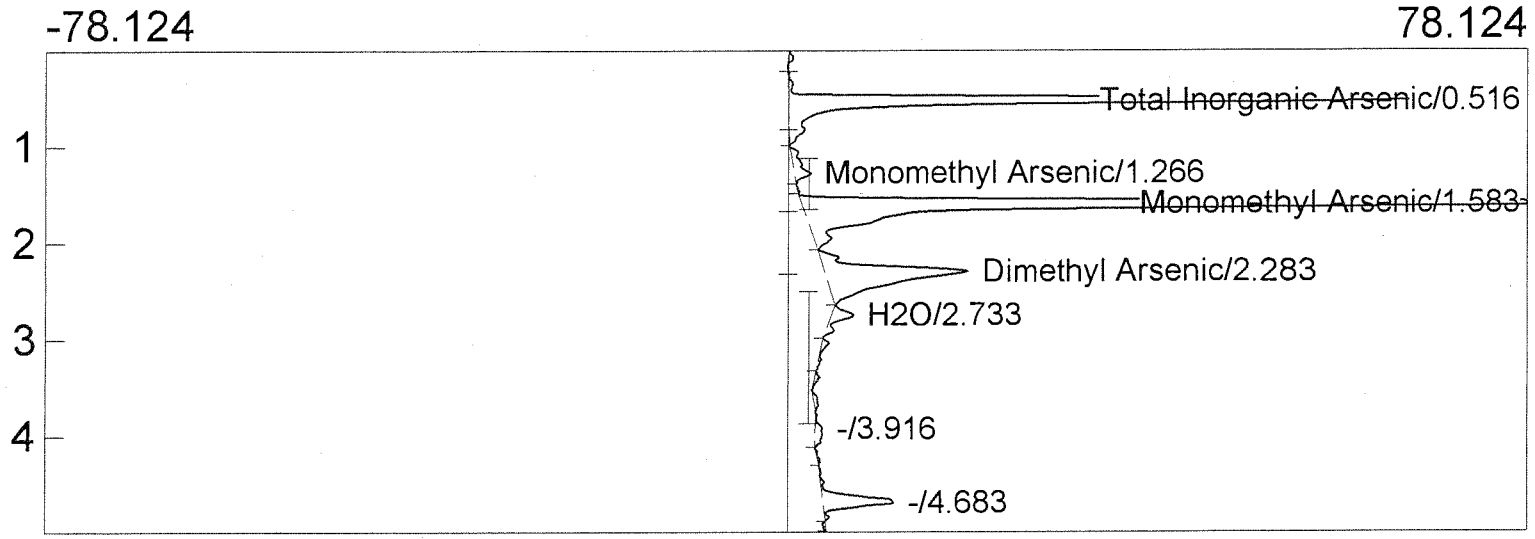
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	624.4760	134.205
Monomethyl Arsenic	1.266	723.6635	145.627
Monomethyl Arsenic	1.566	480.6050	87.928
Dimethyl Arsenic	2.100	13.9075	1.967
H2O	3.600	20.9690	1.368
		1863.6210	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:13:16
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 3.CHR ()
Operator: BJS



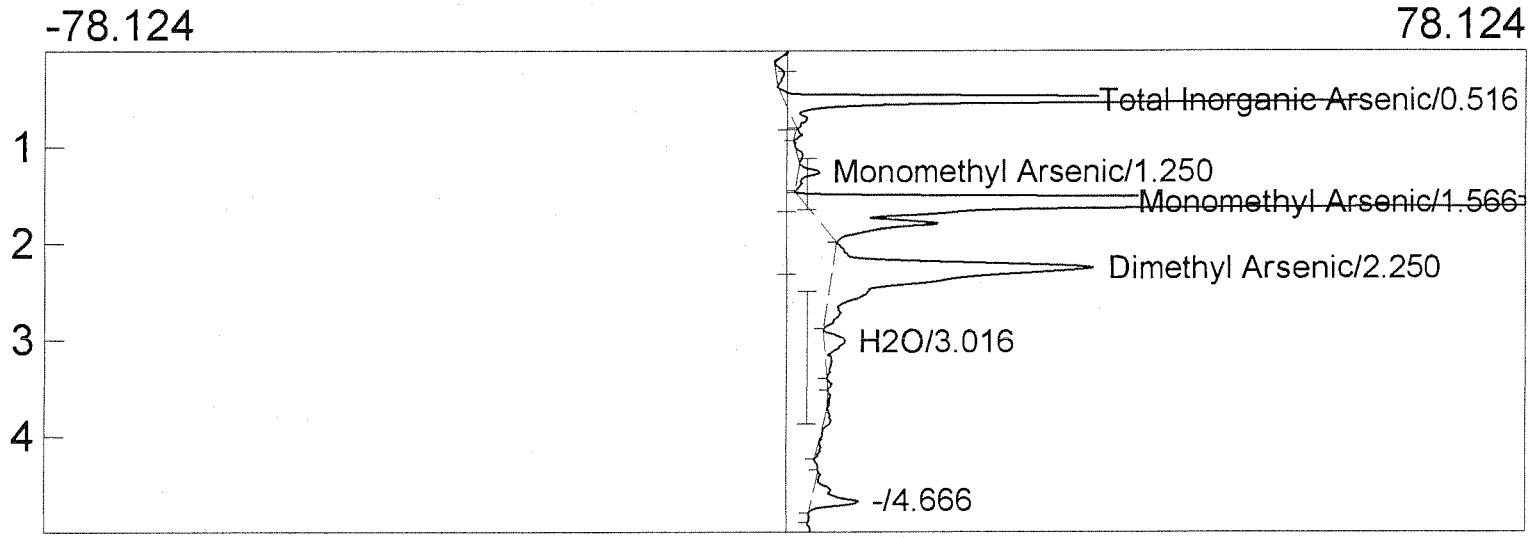
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	42.1715	5.468
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		42.1715	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:23:01
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-015 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	340.2450	65.755
Monomethyl Arsenic	1.266	18.0160	1.759
Monomethyl Arsenic	1.583	564.6230	98.460
Dimethyl Arsenic	2.283	175.0000	15.282
H2O	2.733	19.2520	2.301
		1117.1360	

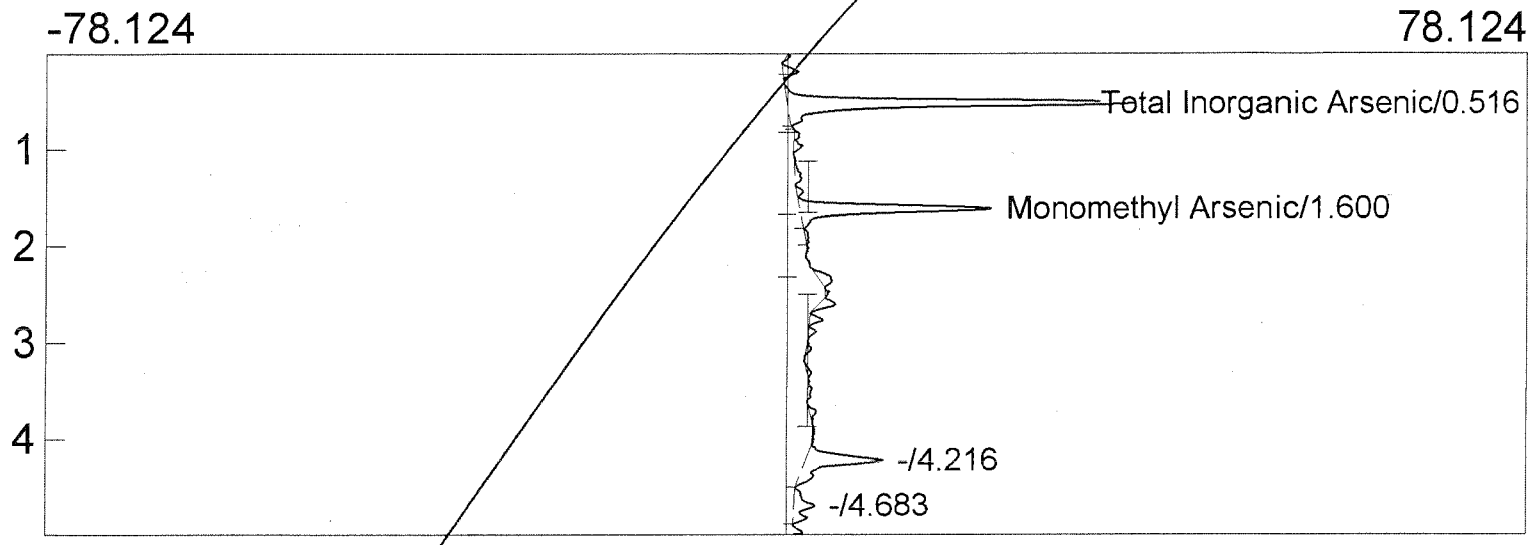
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:32:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-025 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	278.6690	61.260
Monomethyl Arsenic	1.250	14.7915	2.280
Monomethyl Arsenic	1.566	1154.9225	214.421
Dimethyl Arsenic	2.250	346.0270	27.626
H2O	3.016	27.6505	2.230
		1822.0605	

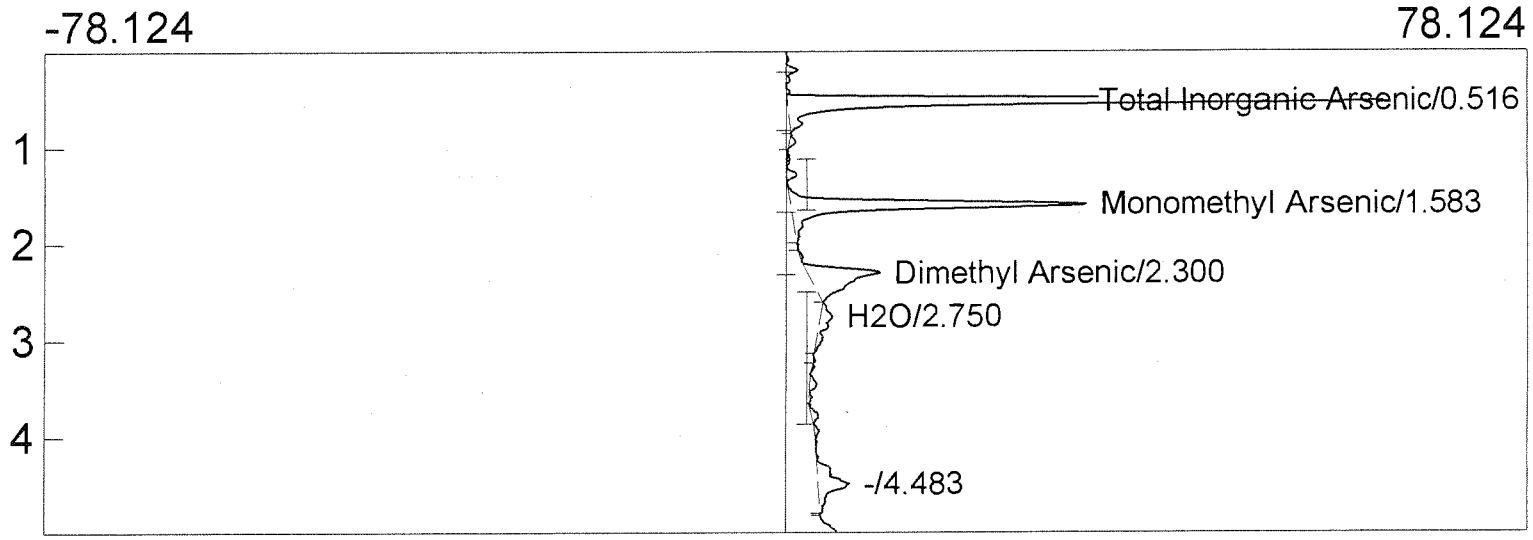
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:42:25
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 1.0mL.CHR ()
Operator: BJS

BJS 8/1/11



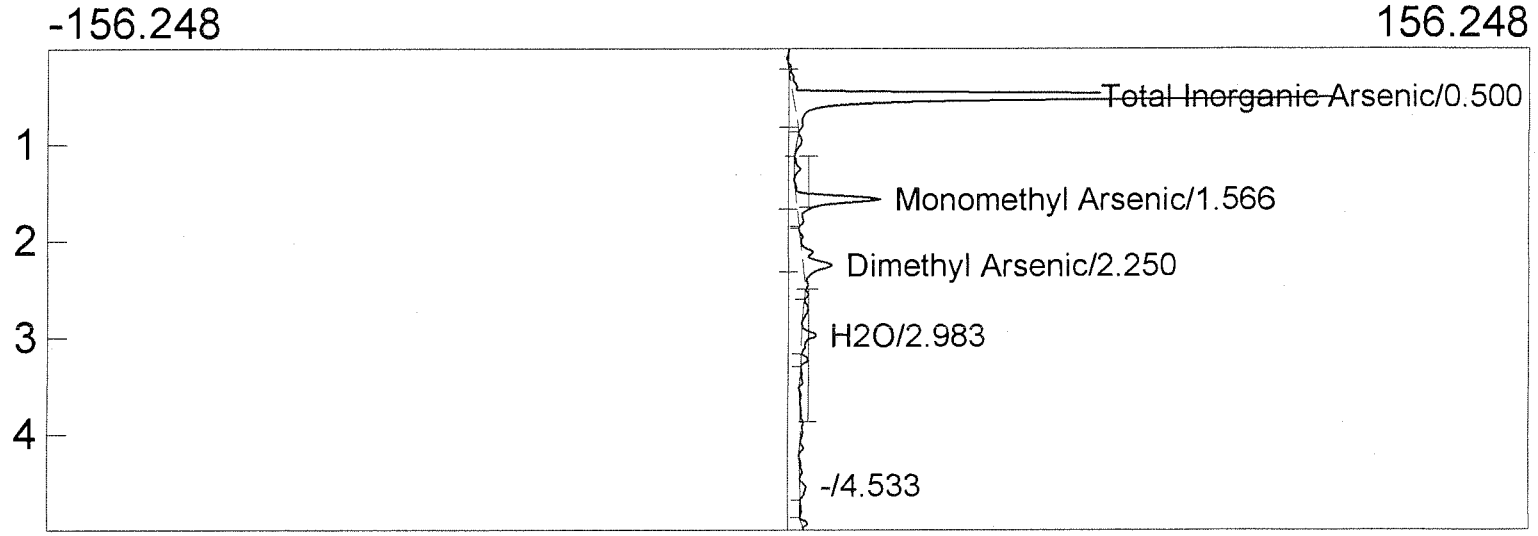
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	196.2410	36.801
Monomethyl Arsenic	1.600	113.4035	20.317
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		309.6445	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:50:49
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 2.0mL.CHR ()
Operator: BJS



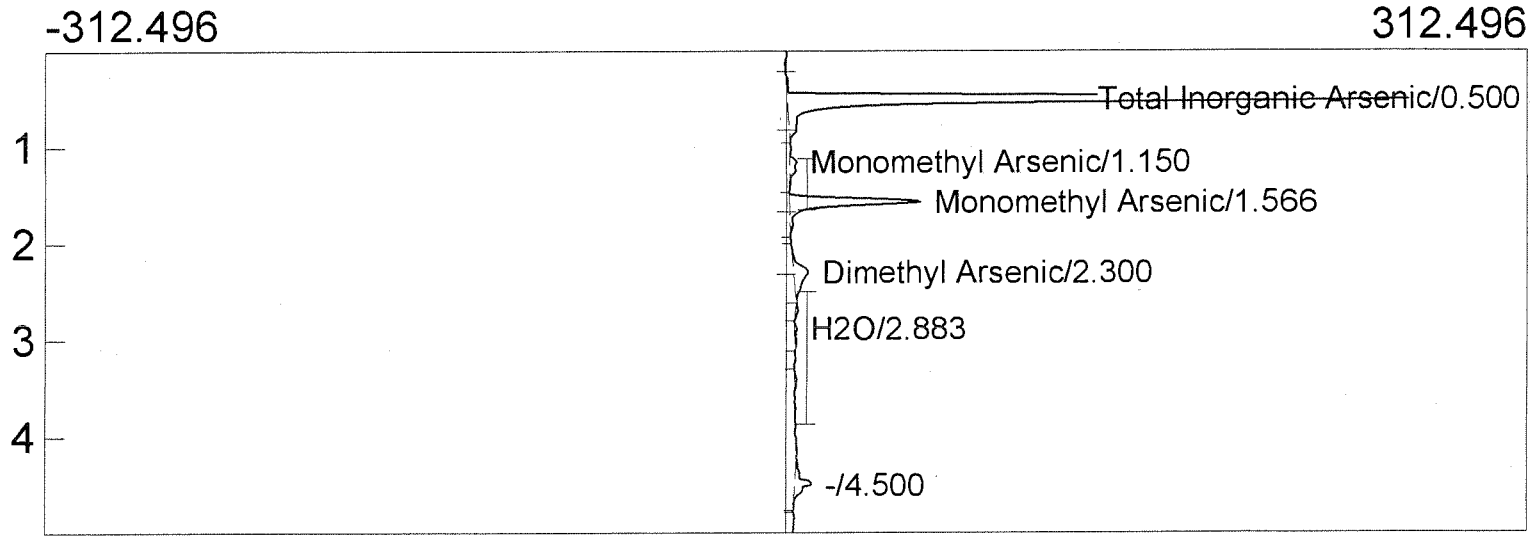
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	302.3290	62.664
Monomethyl Arsenic	1.583	182.6600	31.208
Dimethyl Arsenic	2.300	79.6525	7.619
H2O	2.750	20.4600	1.279
		585.1015	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 12:00:44
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-015 2.0mL.CHR ()
Operator: BJS



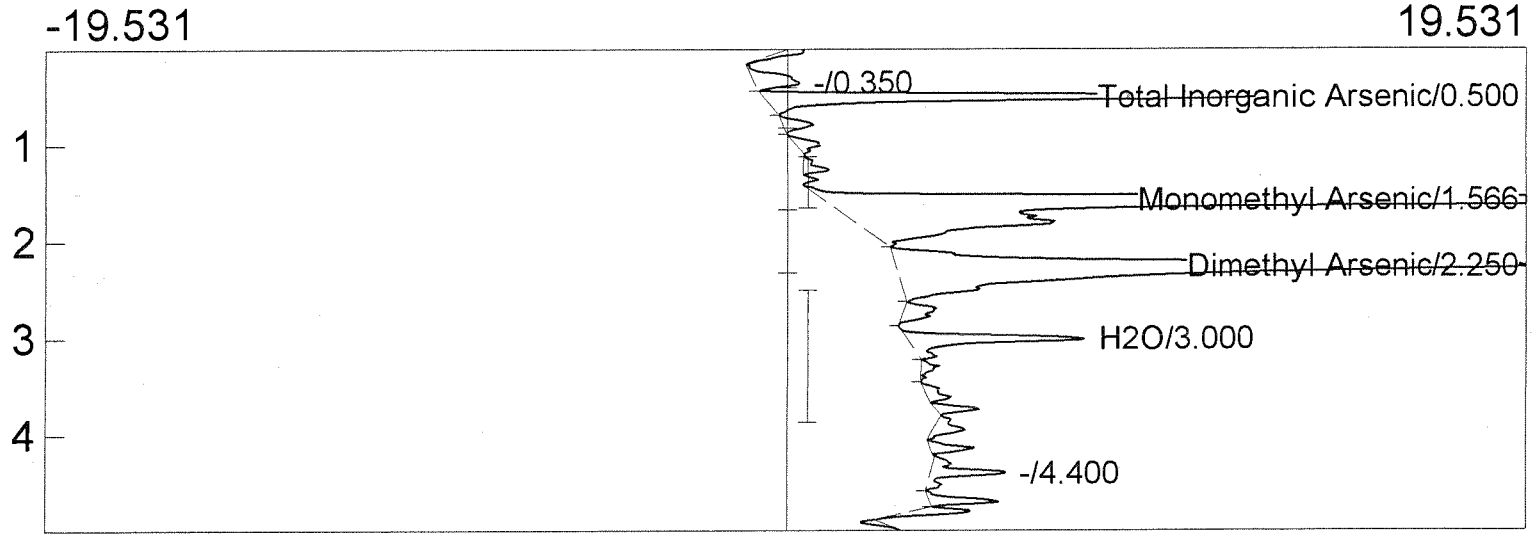
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	573.9690	117.018
Monomethyl Arsenic	1.566	107.9995	17.856
Dimethyl Arsenic	2.250	59.8680	6.013
H2O	2.983	22.0330	3.070
		763.8695	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:09:19
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-025 2.0mL.CHR ()
Operator: BJS



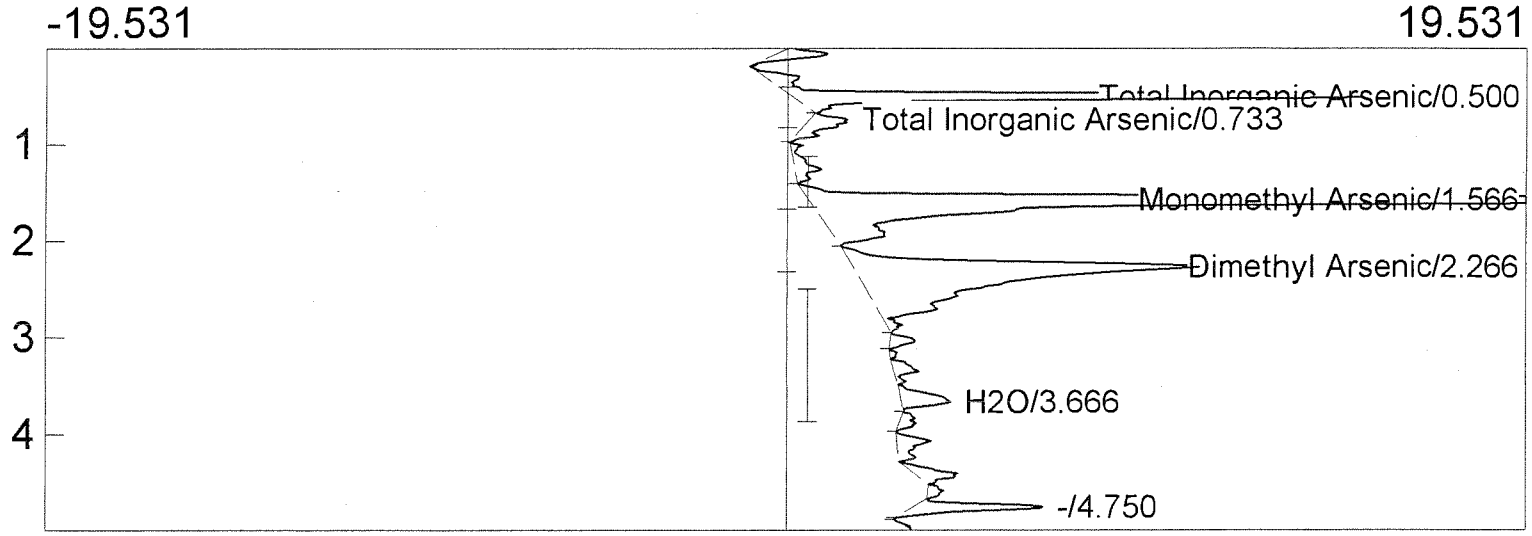
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1316.2730	278.404
Monomethyl Arsenic	1.150	32.5580	3.052
Monomethyl Arsenic	1.566	295.0650	55.481
Dimethyl Arsenic	2.300	81.0160	6.127
H2O	2.883	10.7355	0.947
		1735.6475	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:19:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-009 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	61.8065	13.327
Monomethyl Arsenic	1.566	319.0940	51.717
Dimethyl Arsenic	2.250	168.4380	17.667
H2O	3.000	26.1185	4.697
		575.4570	

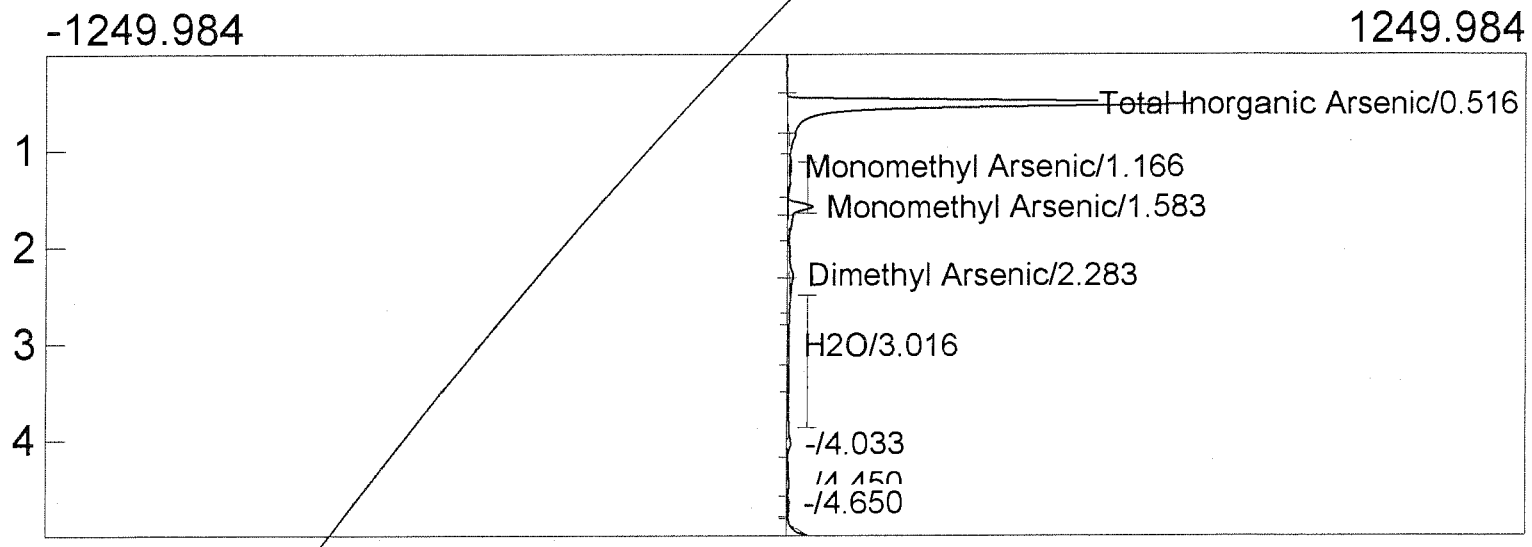
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:28:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	76.2005	15.526
Total Inorganic Arsenic	0.733	10.4180	1.002
Monomethyl Arsenic	1.566	243.9430	40.262
Dimethyl Arsenic	2.266	137.6080	9.218
H2O	3.666	10.7630	1.309
		478.9325	

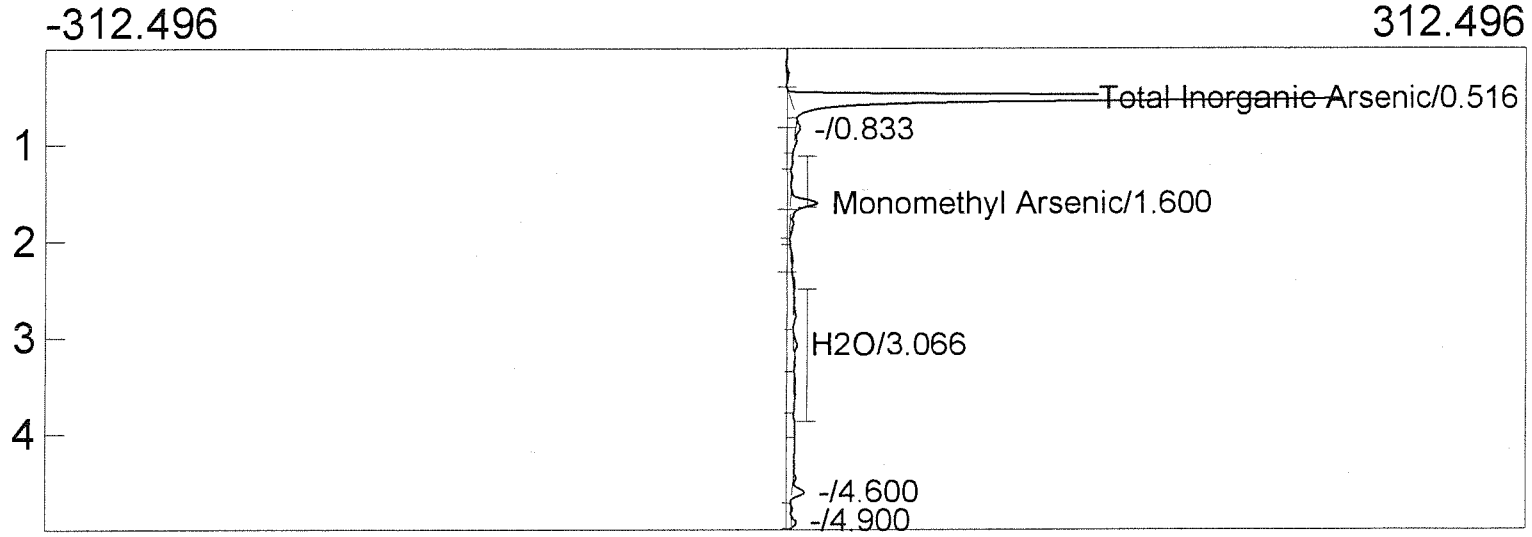
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:37:52
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 2.0mL.CHR ()
Operator: BJS

BJS 8/11



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	3627.8170	690.233
Monomethyl Arsenic	1.166	42.9135	2.741
Monomethyl Arsenic	1.583	267.3405	41.414
Dimethyl Arsenic	2.283	110.1535	6.707
H2O	3.016	11.4340	0.956
		4059.6585	

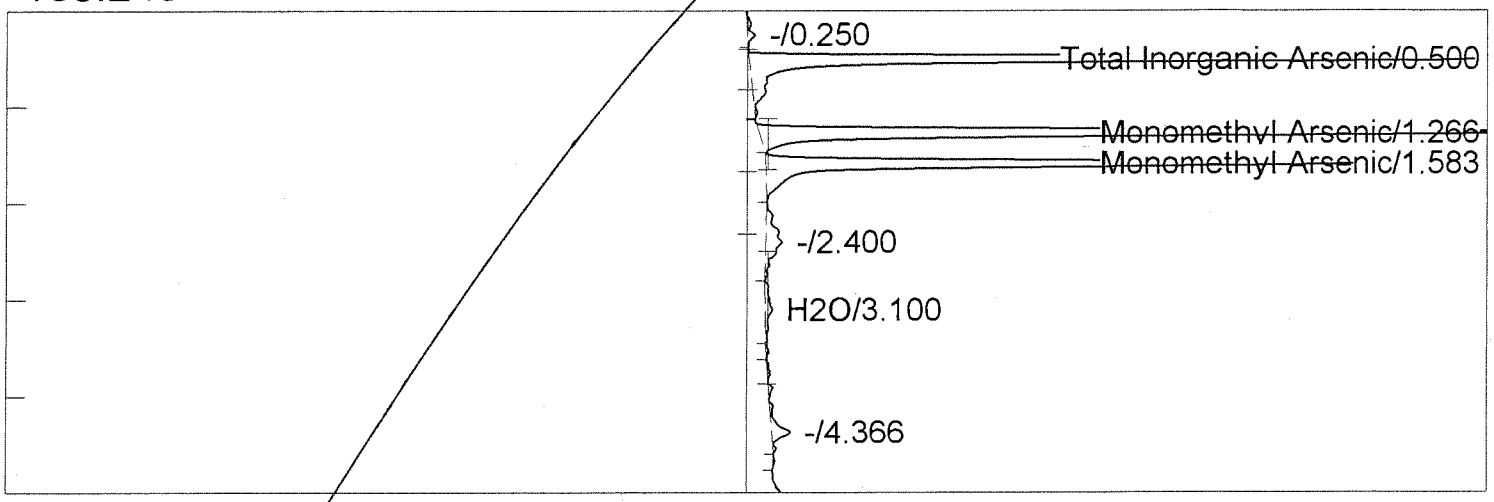
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:45:55
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1076.7395	233.401
Monomethyl Arsenic	1.600	84.3420	11.800
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.066	16.8770	1.586
		1177.9585	

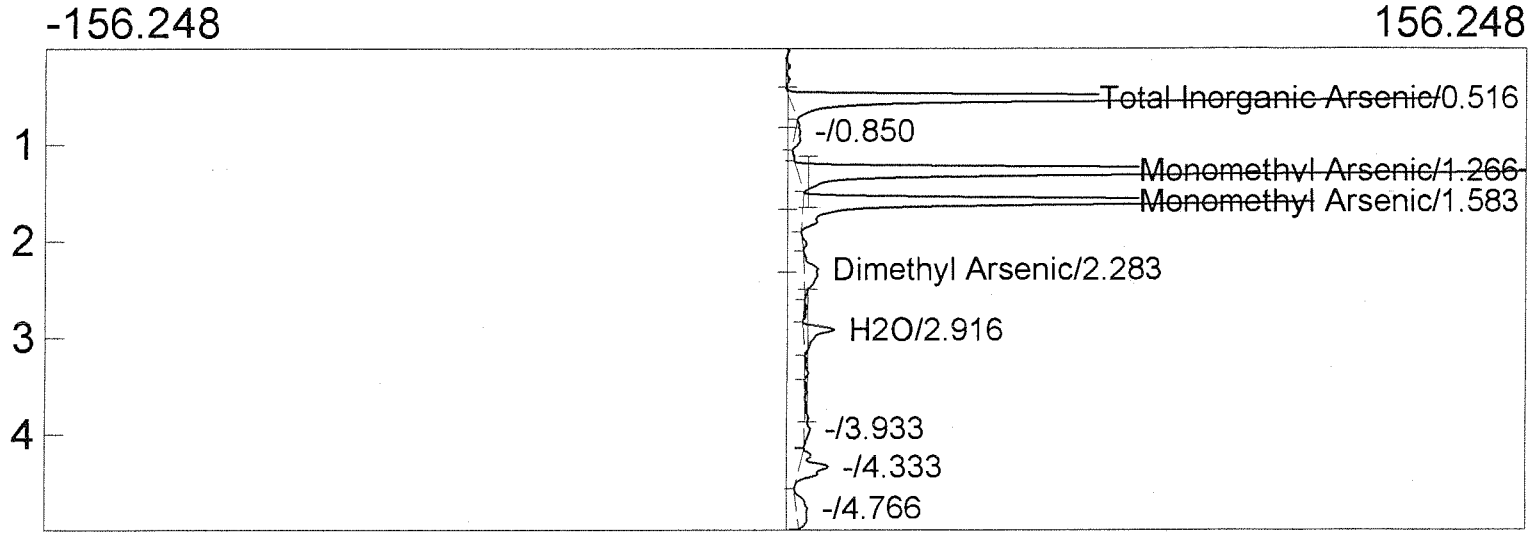
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:56:33
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3.CHR ()
Operator: BJS

BJS 8/1/11



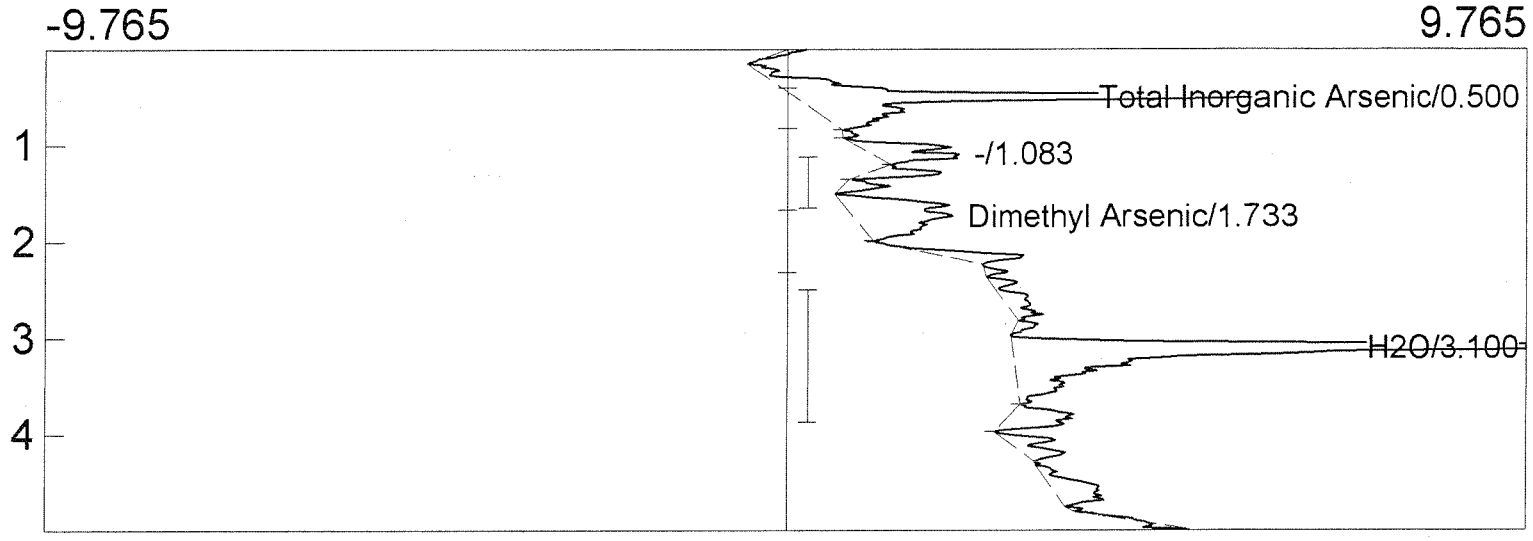
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	764.7670	155.330
Monomethyl Arsenic	1.266	822.6510	172.463
Monomethyl Arsenic	1.583	629.3575	124.905
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.100	26.9830	1.489
		2243.7585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:06:23
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3 Rerun.CHR ()
Operator: BJS



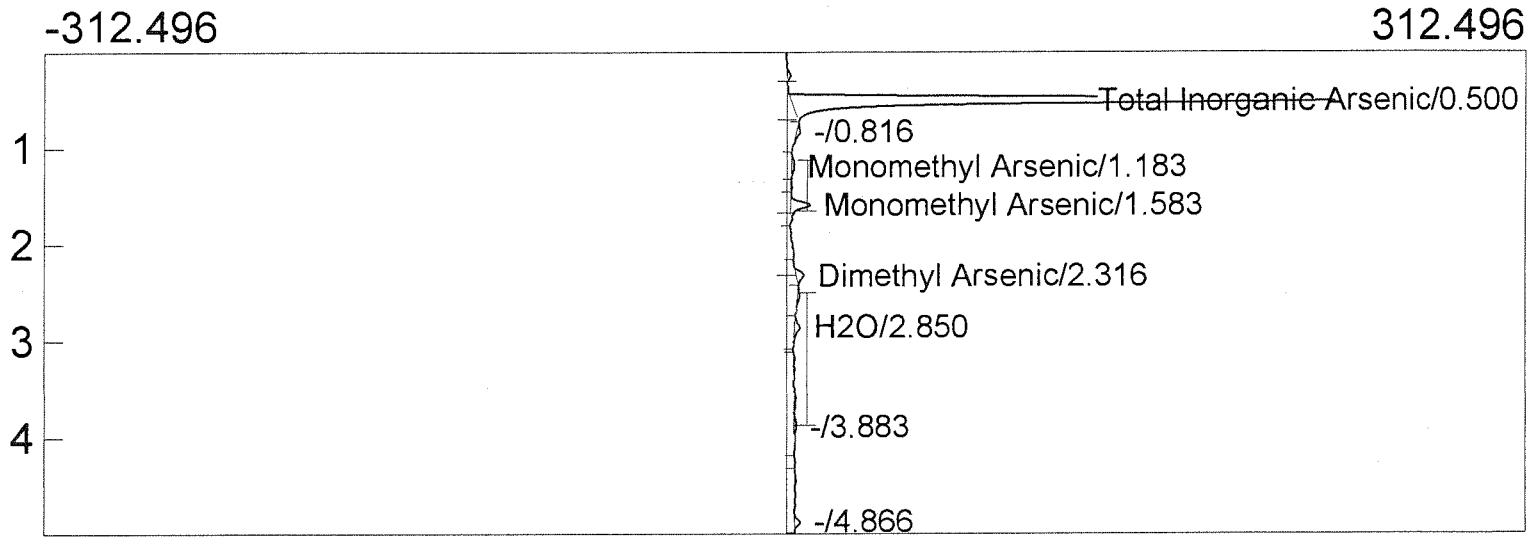
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	628.0615	137.877
Monomethyl Arsenic	1.266	790.9515	162.769
Monomethyl Arsenic	1.583	552.6305	109.285
Dimethyl Arsenic	2.283	42.0890	3.032
H2O	2.916	46.7670	6.655
		2060.4995	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:15:06
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 4.CHR ()
Operator: BJS



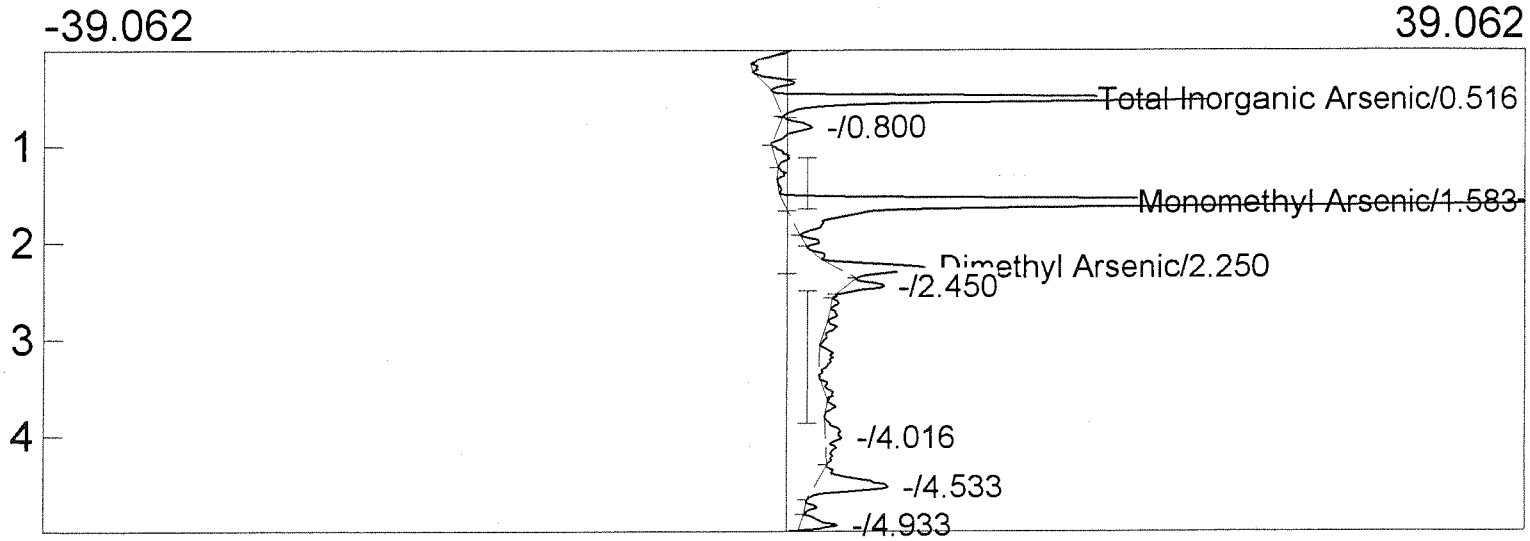
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	50.8045	6.340
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	1.733	23.6610	1.319
H2O	3.100	73.7845	8.241
		148.2500	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:24:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MSD 0.5mL.CHR ()
Operator: BJS



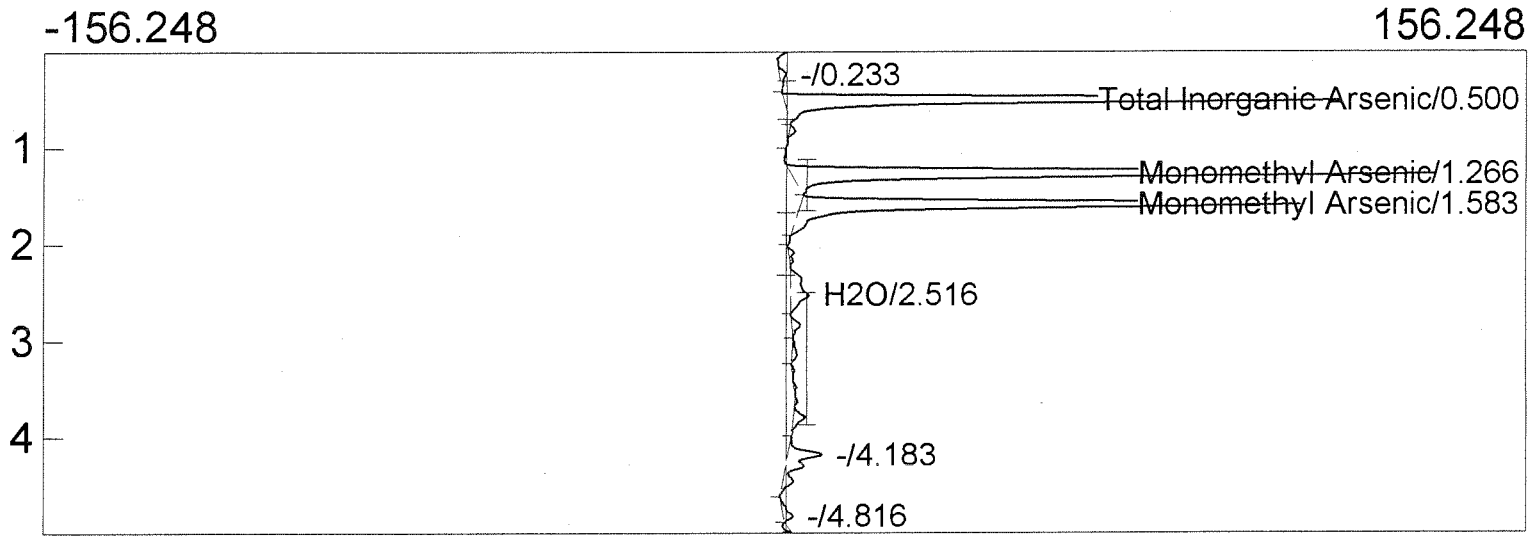
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1082.6750	237.765
Monomethyl Arsenic	1.183	10.2550	1.111
Monomethyl Arsenic	1.583	49.0340	8.460
Dimethyl Arsenic	2.316	19.0135	3.352
H2O	2.850	17.2500	2.279
		1178.2275	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:34:59
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-025 2.0mL.CHR ()
Operator: BJS



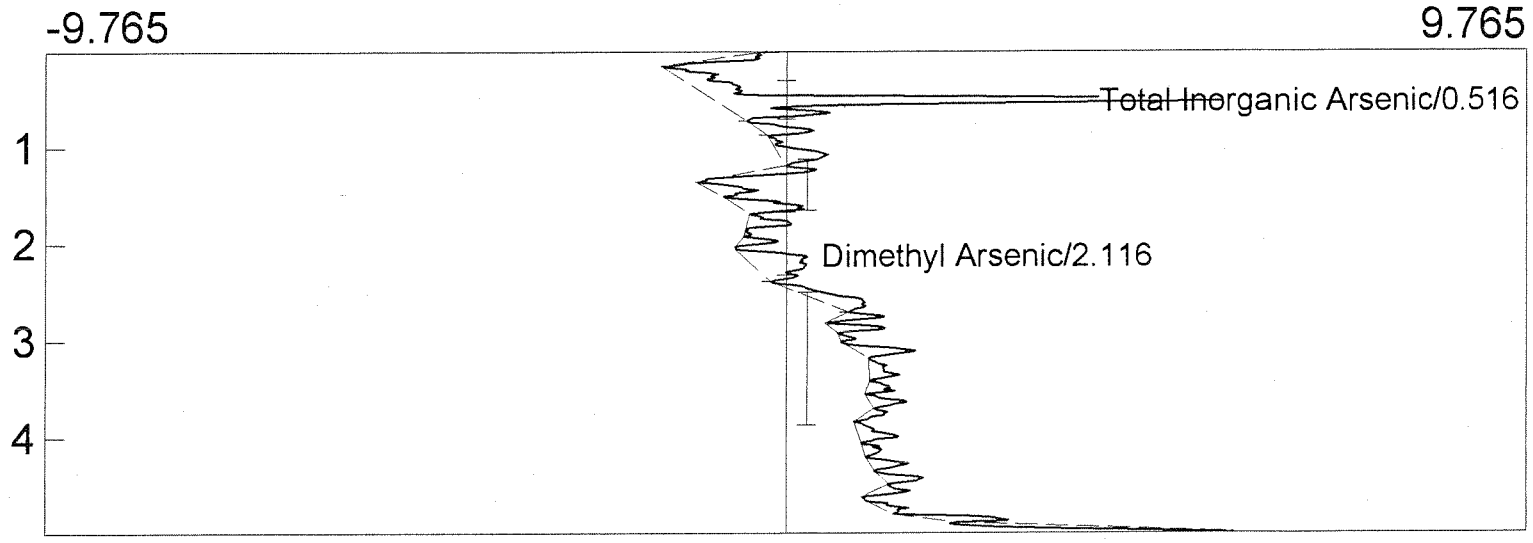
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	103.9290	23.142
Monomethyl Arsenic	1.583	239.1630	44.823
Dimethyl Arsenic	2.250	26.7600	4.779
H2O	0.000	0.0000	0.000
		369.8520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:51:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 4.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	557.1400	121.037
Monomethyl Arsenic	1.266	679.0480	135.979
Monomethyl Arsenic	1.583	547.6840	106.711
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.516	55.0280	3.912
		1838.9000	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:59:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 5.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	42.6490	6.789
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	10.2100	0.852
H2O	0.000	0.0000	0.000
		52.8590	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
Sample Matrix: Tissue

Service Request: K1106152
Date Collected: 05/23-06/20/11
Date Received: 05/24-06/21/11

Methyl Mercury

Prep Method: CAS SOP
Analysis Method: CAS SOP
Test Notes:

Units: ng/g
Basis: Wet

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Hepatopancreas Composi	K1106152-009	1.9	0.8	1	07/28/11	07/29/11	5.79	
EWL-HOU-C Hepatopancreas Comp	K1106152-015	2.2	0.9	1	07/28/11	07/29/11	10.4	
EWL-BIL Hepatopancreas Composit	K1106152-025	2.3	0.9	1	07/28/11	07/29/11	14.8	
Method Blank 1	K1106152-MB1	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 2	K1106152-MB2	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 3	K1106152-MB3	1.1	0.4	1	07/28/11	07/29/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
Sample Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Matrix Spike/Duplicate Matrix Spike Summary
Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K1106157-025S, K1106157-025SD	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	5.0	1002	1002	10.5	1180	1300	117	129	65-135	10	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	106	106	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	103	103	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	163	141	87	67-133	

Service Request #	K1106152 K1106154 K1106157 K1106166		
MS/MSD with #	K1106157-025		
Star Lims Prep #	138641		
Star Lims Run #	255350		
OPR Parent Std	AF1-57-A	Exp.	08/27/11
OPR Intermediate Std	AF1-63-A	Exp.	08/01/11
QCS Parent Std	NA	Exp.	NA
QCS Intermediate Std	NA	Exp.	NA

1630M Tissue Data Review Form

		Yes	No	N/A
1	20 samples (or less) in batch	X		
2	MS/MSD every 20 samples	X		
3	Mean of Ethylation Blanks less than 2 pg	X		
4	3 Method Blanks Run	X		
5	Method blank below MRL	X		
6	Current Calibration factor used	X		
7	Calibration data included	X		
8	OPR, QCS in control (67-133%)	X		
9	MS/MSD recovery (65 -135%)	X		
10	MS/MSD RPD within 35%	X		
11	All samples within the linear range	X		
12	All corresponding charts included	X		
13	Dilution factors calculated	X		
14	Bench sheet signed	X		

Comments

Primary Reviewed by KDK Date 7/29/2011

Secondary Reviewed by BJS Date 7/29/11

Batch Information Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run Duration:	7.0	Method Blank Type:	Concentration
Heating Time:	1.00	Integration Mode:	Methyl Hg
Retention Start Time:	2.5	Integration Type:	Peak Height
Retention Stop Time:	3.5	Result Units:	µg/Kg
Calibration File:	060211calsoil&tissue.brd		

Reagents

Name	Lot Number
1% NaBEt4	RE2-35-E
2M KOAc	RE2-36-J
25% KOH	RE2-37-K
MeOH	RE2-37-J

Standards

Name	Concentration	Lot Number
MeHgCl 1000pg	1000 pg/mL	AF1-62-H
MeHgCl 100pg	100 pg/mL	AF1-63-A
MeHgCl 10pg	10 pg/mL	AF1-62-J
QCS Intermediate	1000 pg/mL	AF1-62- I
QCS	100 pg/mL	AF1-63-B

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Run Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Peak	Peak Height	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
20	OPR	OPR		2	46,598	103		103	67-133	accept

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106157-025	1,180	µg/Kg	1002	10.5	117	65-135			accept
MSD	K1106157-025	1,300	µg/Kg	1002	10.5	129	65-135	9.85	< 35	accept
OPR	OPR	106	pg	100		106	67-133			accept
	OPR	103	pg	100		103	67-133			accept
QCS	TORT	141	µg/Kg	163		86.4	67-133			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	STD 2	1.76	pg	2	88.0	75-125			accept
	STD 20	18.6	pg	20	93.0	75-125			accept
	STD 50	52.2	pg	50	104	75-125			accept
	STD 100	96.2	pg	100	96.2	75-125			accept
	STD 1000	1,140	pg	1000	114	75-125			accept
	STD 2000	2,200	pg	2000	110.	75-125			accept
Calibration Factor		0.00221	pg/PH				10.5	< 15	accept
Calibration Date		6/2/11							

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
MBA	MBLK 1	0.0311	µg/Kg	< 10			accept
	MBLK 2	0.0524	µg/Kg	< 10			accept
	MBLK 3	0.0903	µg/Kg	< 10			accept
Average		0.0579	µg/Kg		0.0300		

QA Comments:

QA Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Name/ID	Final Result (µg/Kg)	Notes
9	K1106152-009	5.79	accept
10	K1106152-015	10.4	accept
11	K1106152-025	14.8	accept
12	K1106154-009	3.85	accept
13	K1106154-015	6.05	accept
14	K1106154-025	8.62	accept
15	K1106157-009	4.47	accept
16	K1106157-015	4.66	accept
6	K1106157-025	10.5	accept
17	K1106166-009	11.7	accept
18	K1106166-015	29.2	accept
19	K1106166-025	27.9	accept

Run Information Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	OPR	OPR					100	
2	QCS	TORT	MBA	210	50	0.050	163	mg/Kg
3	MBA	MBLK 1		2273	50	0.050		
4	MBA	MBLK 2		2273	50	0.050		
5	MBA	MBLK 3		2273	50	0.050		
6	S	K1106157-025	MBA	505	50	0.050		
7	MS	K1106157-025	MBA	499	50	0.050	1002	
8	MSD	K1106157-025	MBA	499	50	0.050	1002	
9	S	K1106152-009	MBA	1286	50	0.050		
10	S	K1106152-015	MBA	1162	50	0.050		
11	S	K1106152-025	MBA	1095	50	0.050		
12	S	K1106154-009	MBA	2318	50	0.050		
13	S	K1106154-015	MBA	2049	50	0.050		
14	S	K1106154-025	MBA	1193	50	0.050		
15	S	K1106157-009	MBA	478	50	0.050		
16	S	K1106157-015	MBA	433	50	0.050		
17	S	K1106166-009	MBA	1673	50	0.050		
18	S	K1106166-015	MBA	1460	50	0.050		
19	S	K1106166-025	MBA	1435	50	0.050		
20	OPR	OPR					100	

Columbia Analytical Services, Inc.

Sample Number(s): As Listed	Service Request Number(s): K1106152 K1106154 K1106157 K1106166
Analysis for: MeHg in Tissues	Method: 1630m

DATA **StarLIMS #138641**

Sample ID		Initial Weight (g)		Final Volume (mL)			Matrix
MB-1		0.250		50mL			25% KOH
MB-2		0.250		50mL			25% KOH
MB-3		0.250		50mL			25% KOH
TORT		0.222		50mL			25% KOH
K1106152-009		0.252		50mL			25% KOH
K1106152-015		0.273		50mL			25% KOH
K1106152-025		0.253		50mL			25% KOH
K1106154-009		0.255		50mL			25% KOH
K1106154-015		0.250		50mL			25% KOH
K1106154-025		0.253		50mL			25% KOH
K1106157-009		0.250		50mL			25% KOH
K1106157-015		0.256		50mL			25% KOH
K1106157-025		0.254		50mL			25% KOH
K1106157-025S		0.251		50mL			25% KOH
K1106157-025SD		0.251		50mL			25% KOH
K1106166-009		0.266		50mL			25% KOH
K1106166-015		0.257		50mL			25% KOH
K1106166-025		0.267		50mL			25% KOH

Start Time: 02:45 PM 07/28/2011
Oven Temperature: 80°C

Comments: Spike Standard: 0.5ml of 1000ng/mL AF1-57-A
25% KOH: RE2-37-K

Analyst:	Date:
	7/28/2011

R:\:ICP\misc\digforms\072811

Conversion from dry weight to wet weight:

Standard MRL =	10
Standard MDL =	4.0
Standard Dilution =	1
Standard Sample Mass =	0.250

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.252	19.6	**1.286**	1	**1.9**	**0.8**
K1106152-015	0.273	23.5	**1.162**	1	**2.2**	**0.9**
K1106152-025	0.253	23.1	**1.095**	1	**2.3**	**0.9**
K1106154-009	0.255	11.0	**2.318**	1	**1.1**	**0.4**
K1106154-015	0.250	12.2	**2.049**	1	**1.2**	**0.5**
K1106154-025	0.253	21.2	**1.193**	1	**2.1**	**0.8**
K1106157-009	0.250	52.3	**0.478**	1	**5.2**	**2.1**
K1106157-015	0.256	59.1	**0.433**	1	**5.8**	**2.3**
K1106157-025	0.254	50.3	**0.505**	1	**5.0**	**2.0**
K1106157-025S	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106157-025SD	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106166-009	0.266	15.9	**1.673**	1	**1.5**	**0.6**
K1106166-015	0.257	17.6	**1.460**	1	**1.7**	**0.7**
K1106166-025	0.267	18.6	**1.435**	1	**1.7**	**0.7**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
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			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
Method Blank	0.250	11.000	**2.273**	1	**1.1**	**0.4**

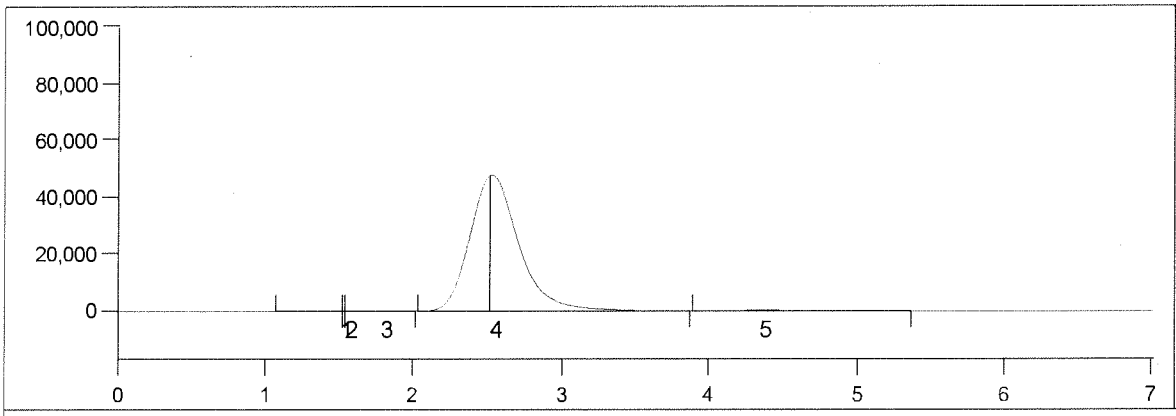
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

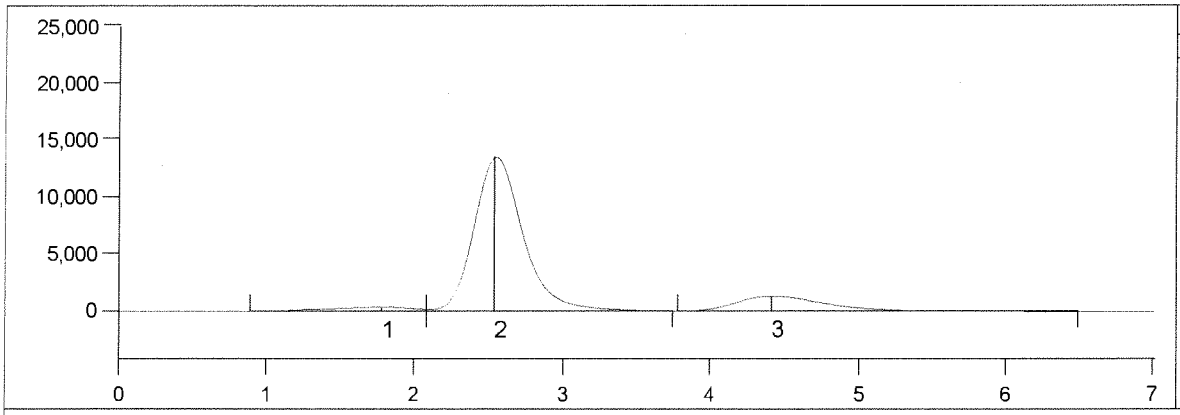


Date: 7/29/11
Time: 8:45 AM

Peak	rt	Height
1	1.51	8
2	1.54	1
3	1.77	83
4	2.52	48,026
5	4.35	352

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept

Notes

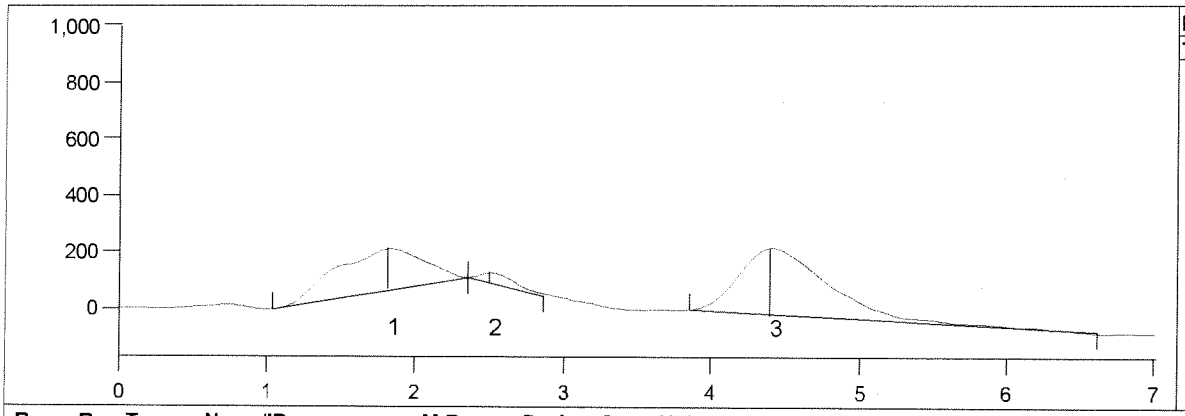


Date: 7/29/11
Time: 8:54 AM

Peak	rt	Height
1	1.77	280
2	2.54	13,412
3	4.40	1,314

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept

Notesmg/Kg



Date: 7/29/11
Time: 9:04 AM

Peak	rt	Height
1	1.80	147
2	2.49	32
3	4.39	237

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept

Notes

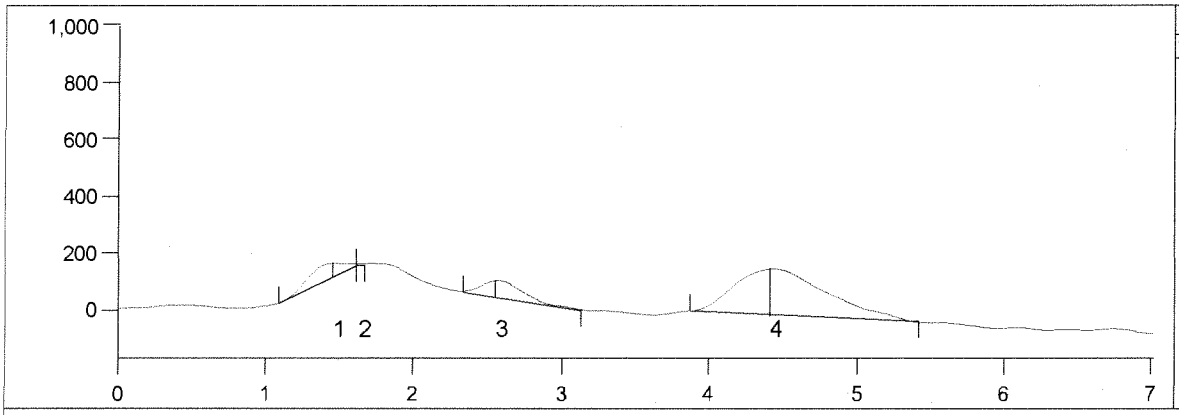
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

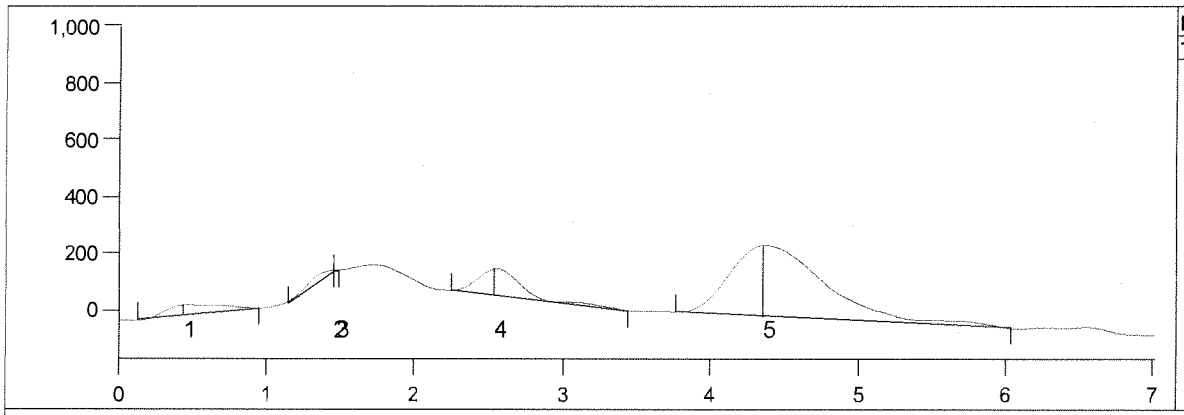


Date: 7/29/11
Time: 9:12 AM

Peak	rt	Height
1	1.44	46
2	1.63	1
3	2.54	54
4	4.41	165

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept

Notes

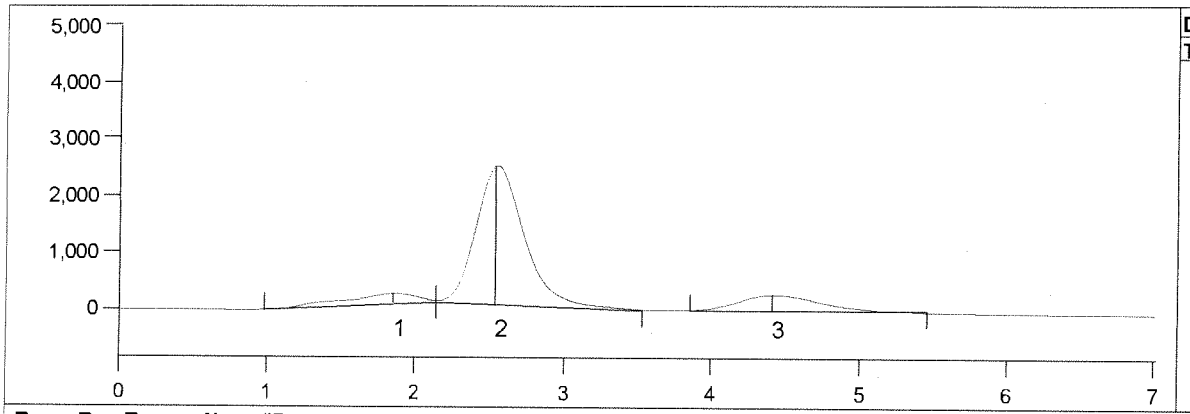


Date: 7/29/11
Time: 9:19 AM

Peak	rt	Height
1	0.44	40
2	1.45	2
3	1.48	1
4	2.53	93
5	4.35	252

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept

Notes



Date: 7/29/11
Time: 9:27 AM

Peak	rt	Height
1	1.85	169
2	2.54	2,424
3	4.40	286

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept

Notes

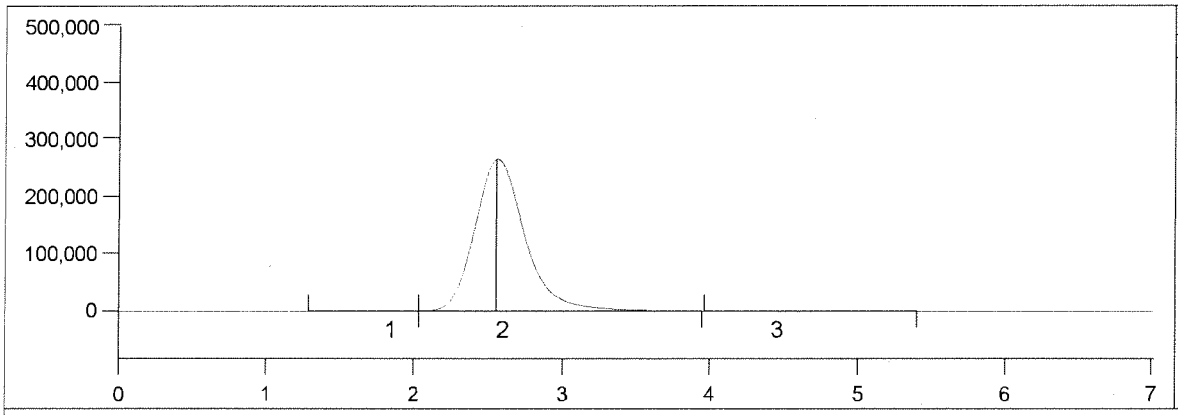
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

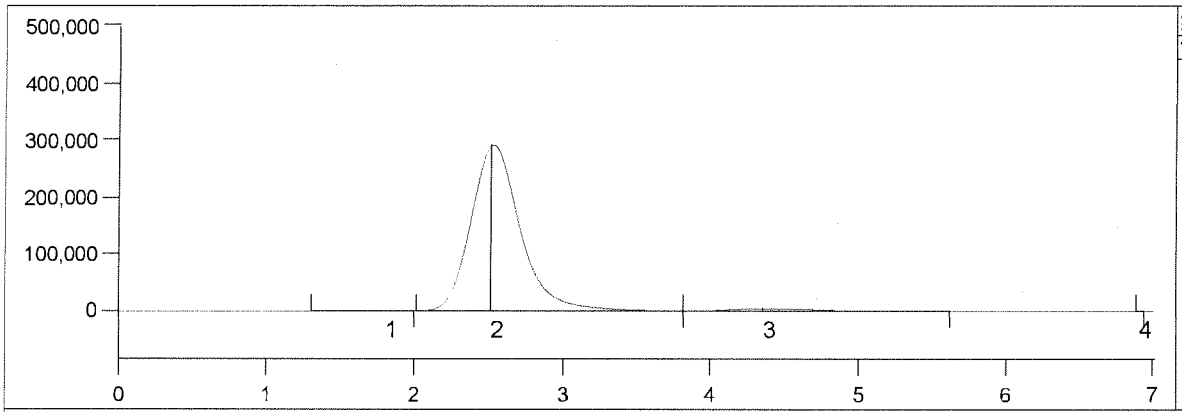


Date: 7/29/11
Time: 9:34 AM

Peak	rt	Height
1	1.80	1,028
2	2.55	266,530
3	4.41	1,274

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept

Notes

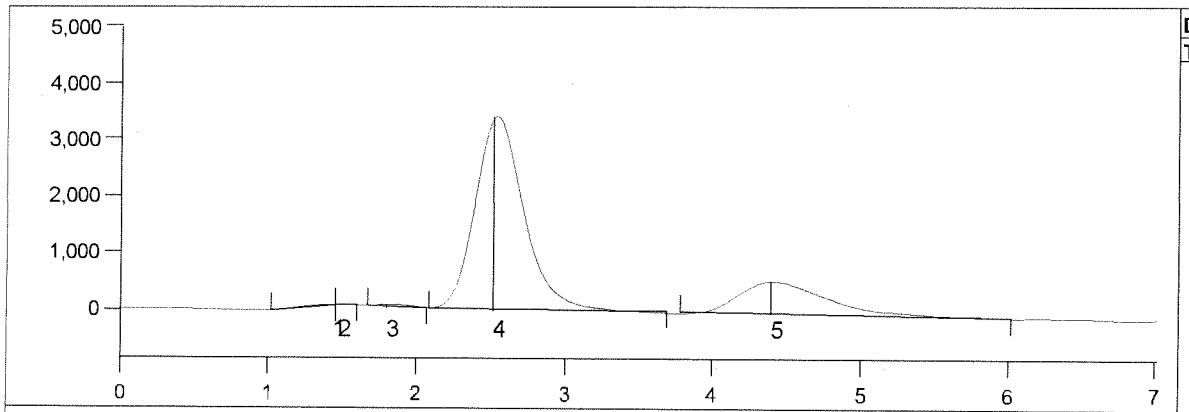


Date: 7/29/11
Time: 9:42 AM

Peak	rt	Height
1	1.80	888
2	2.52	294,141
3	4.36	4,627
4	6.91	0

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept

Notes



Date: 7/29/11
Time: 9:49 AM

Peak	rt	Height
1	1.44	3
2	1.47	1
3	1.80	28
4	2.52	3,410
5	4.39	581

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept

Notes

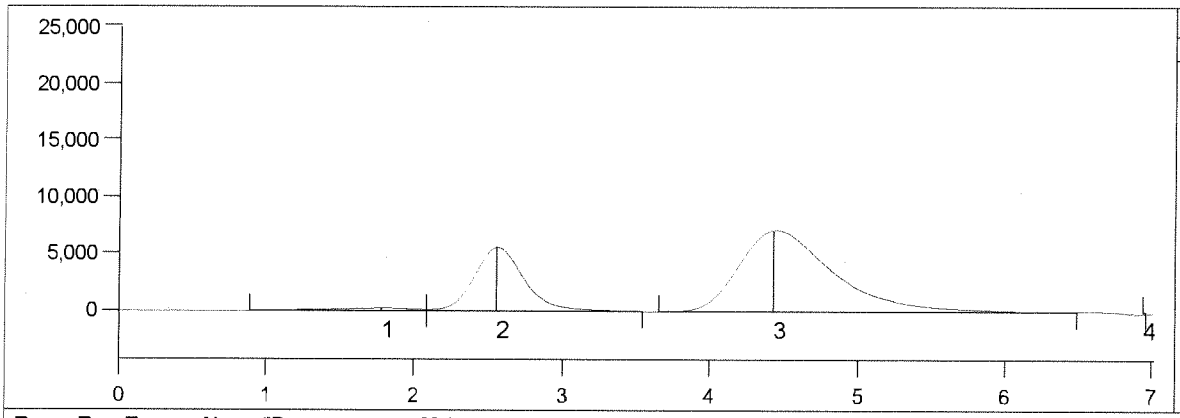
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

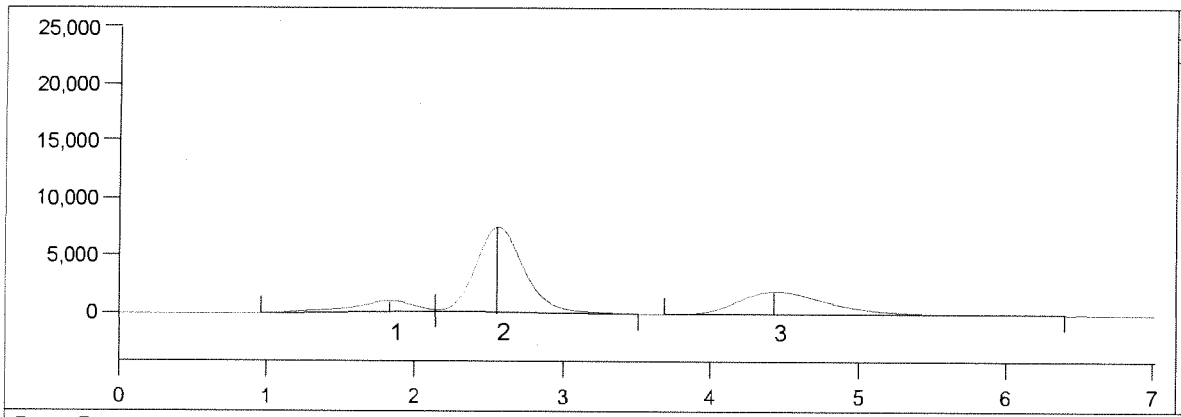
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 9:57 AM

Peak	rt	Height
1	1.78	178
2	2.55	5,501
3	4.44	7,144
4	6.94	-1

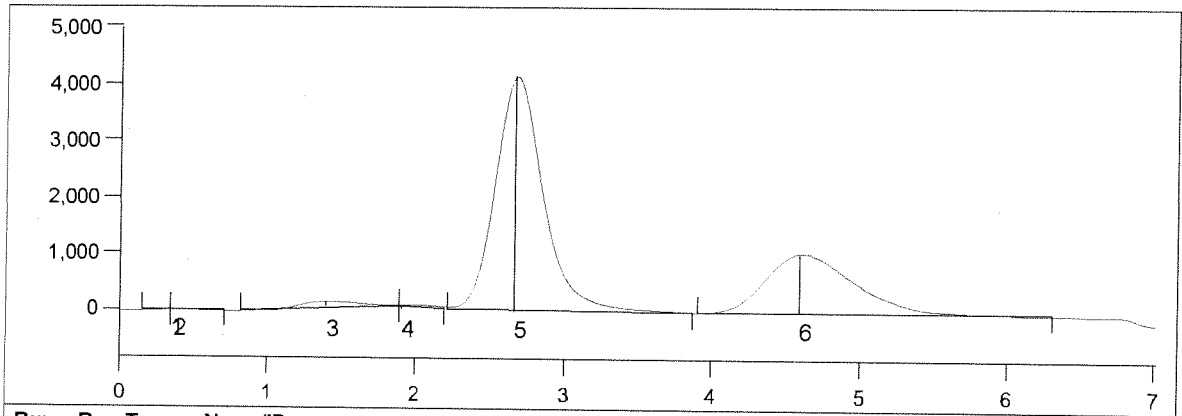
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
Notes										



Date: 7/29/11
Time: 10:04 AM

Peak	rt	Height
1	1.82	878
2	2.55	7,363
3	4.43	2,089

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
Notes										



Date: 7/29/11
Time: 10:23 AM

Peak	rt	Height
1	0.35	1
2	0.37	1
3	1.39	120
4	1.90	2
5	2.66	4,101
6	4.60	1,069

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
Notes										

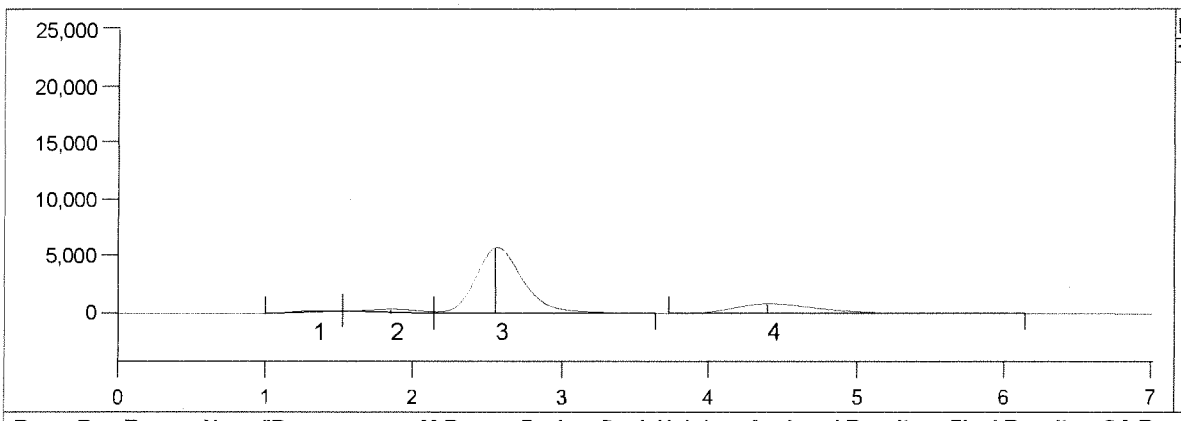
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

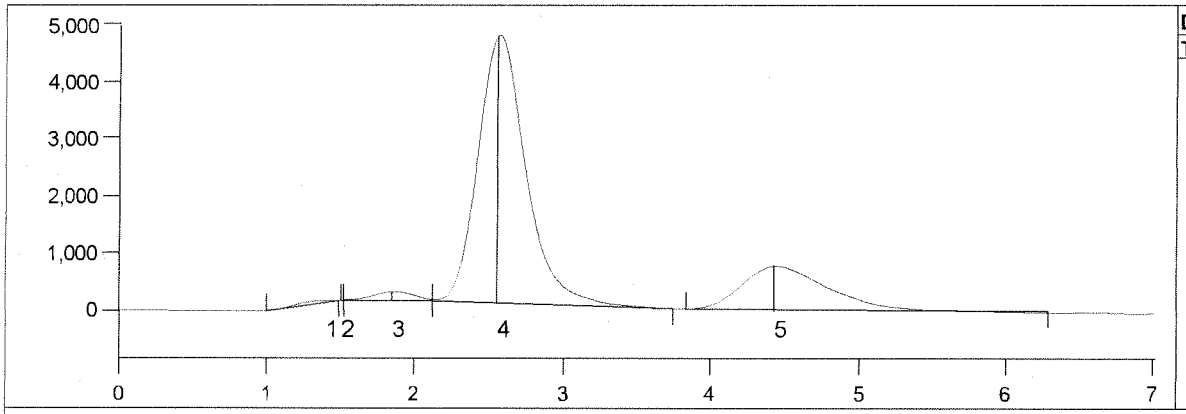
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 10:30 AM

Peak	rt	Height
1	1.34	97
2	1.84	203
3	2.56	5,672
4	4.39	894

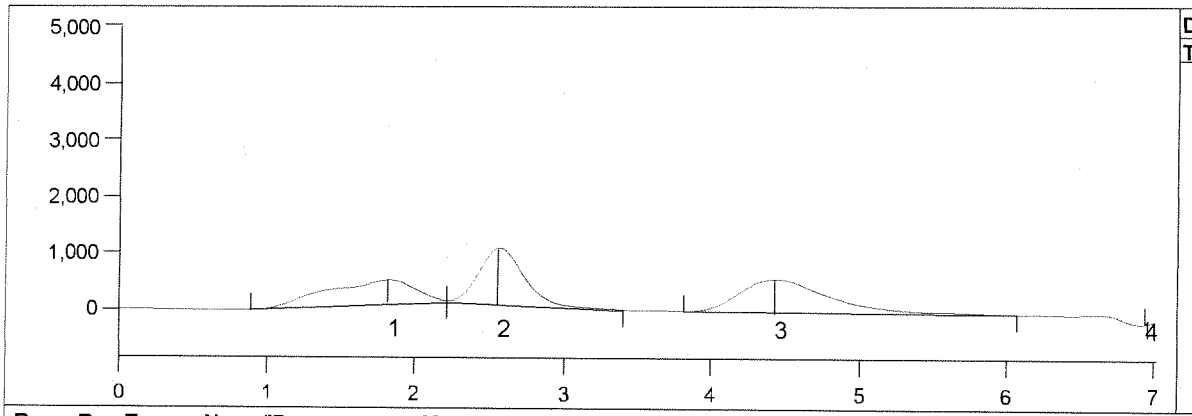
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
Notes										



Date: 7/29/11
Time: 10:38 AM

Peak	rt	Height
1	1.40	37
2	1.52	1
3	1.85	150
4	2.55	4,692
5	4.43	764

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
Notes										



Date: 7/29/11
Time: 10:46 AM

Peak	rt	Height
1	1.81	414
2	2.55	981
3	4.42	589
4	6.94	0

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
Notes										

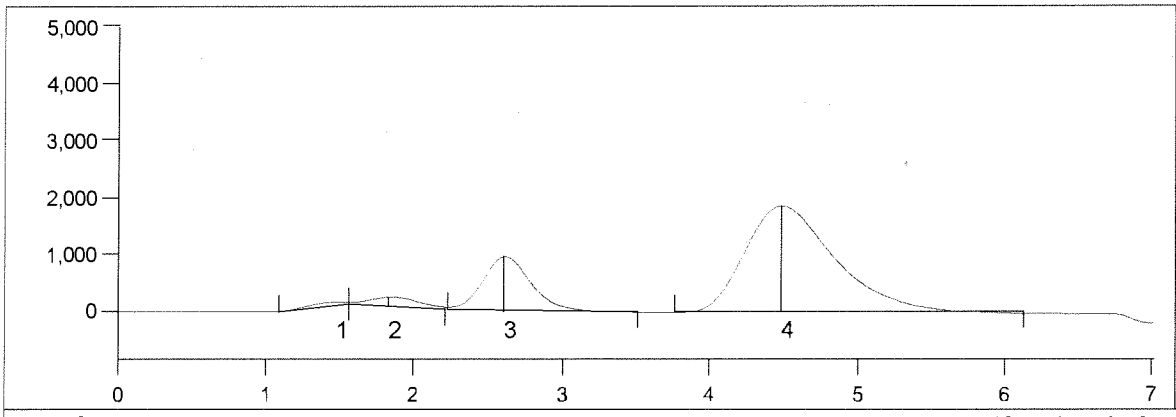
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

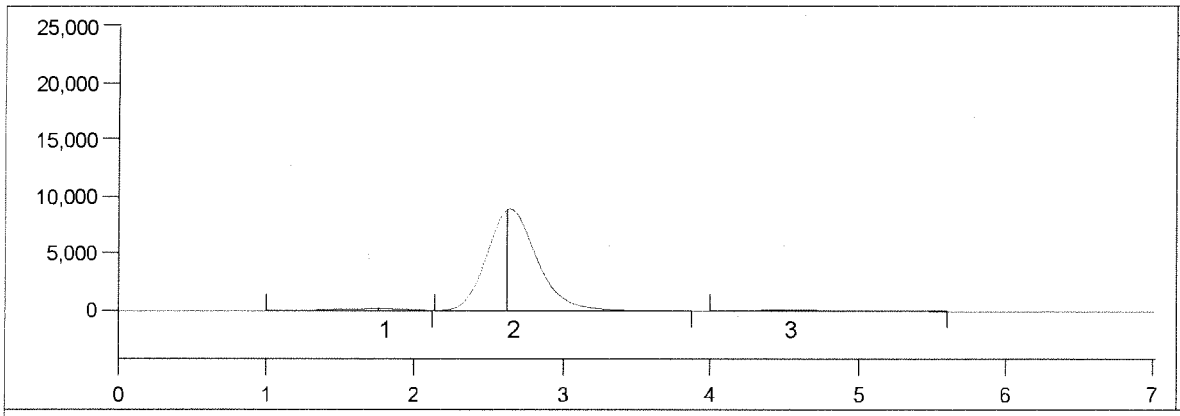


Date: 7/29/11
Time: 10:53 AM

Peak	rt	Height
1	1.46	38
2	1.84	122
3	2.60	926
4	4.48	1,903

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept

Notes

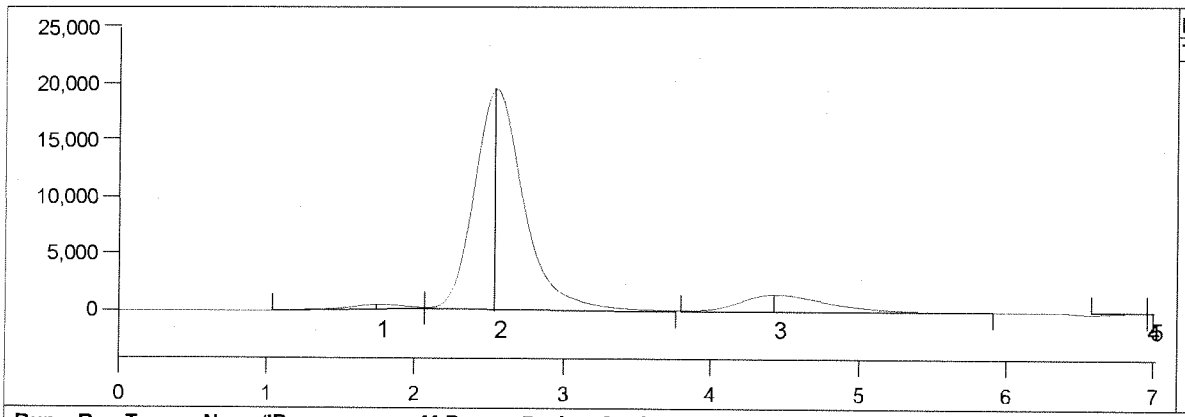


Date: 7/29/11
Time: 11:00 AM

Peak	rt	Height
1	1.76	184
2	2.63	8,940
3	4.49	183

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept

Notes



Date: 7/29/11
Time: 11:07 AM

Peak	rt	Height
1	1.75	396
2	2.53	19,363
3	4.43	1,472
4	6.96	2
5	6.98	1

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept

Notes

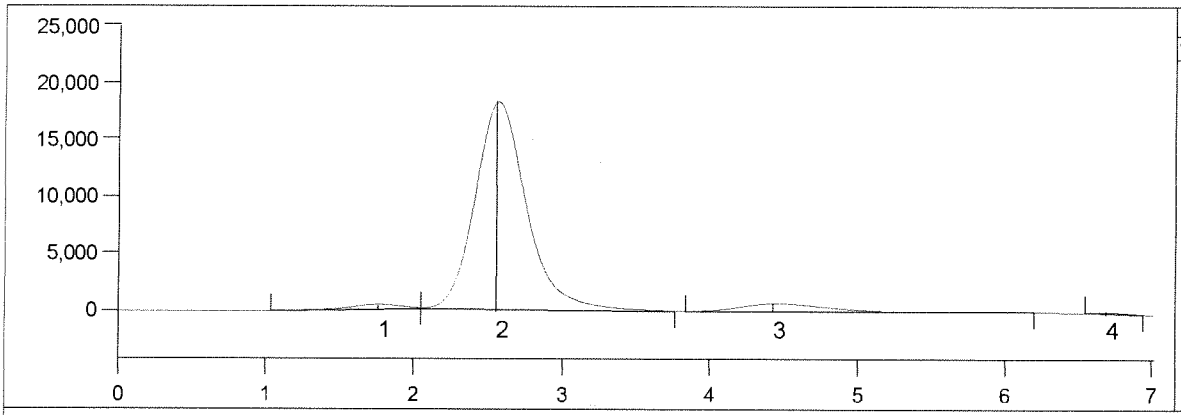
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

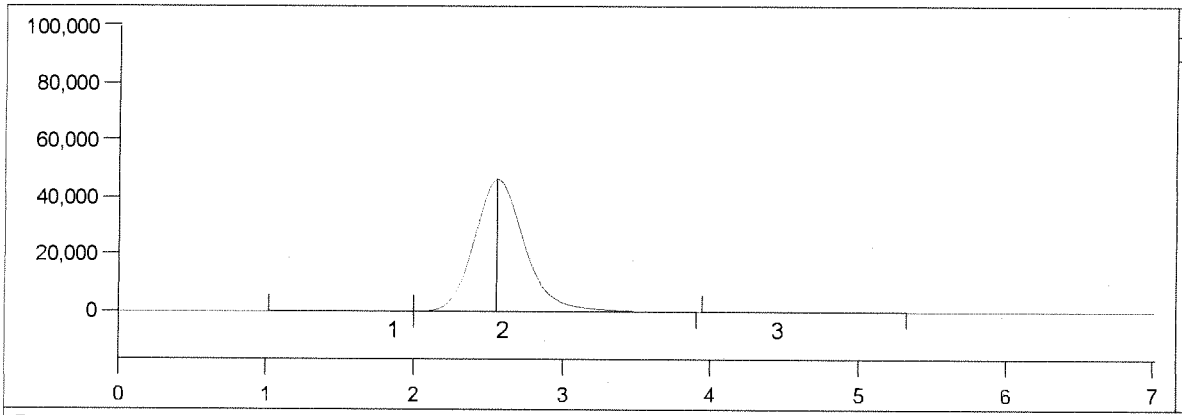
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 11:15 AM

Peak	rt	Height
1	1.75	401
2	2.56	18,197
3	4.44	734
4	6.69	80

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
Notes										



Date: 7/29/11
Time: 11:22 AM

Peak	rt	Height
1	1.82	92
2	2.54	46,598
3	4.41	275

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	OPR	OPR		2	46,598	103		103	67-133	accept
Notes										

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	WET
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Hepatopancreas Composite	K1106152-009	0.9	0.3	100	07/15/11	07/18/11	9.8	
EWL-HOU-C Hepatopancreas Composite	K1106152-015	1.1	0.3	100	07/15/11	07/18/11	17.3	
EWL-BIL Hepatopancreas Composite	K1106152-025	1.2	0.4	100	07/15/11	07/18/11	34.7	
Method Blank1	K1106152-MB1	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank2	K1106152-MB2	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank3	K1106152-MB3	0.2	0.06	20	07/15/11	07/18/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
Sample Matrix: Tissue

Service Request: K1106152
Date Collected: 05/24-06/21/11
Date Received: 05/23-06/20/11
Date Extracted: 07/15/11
Date Analyzed: 07/18/11

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name: EWL-BIL Hepatopancreas Composite
Lab Code: K1106152-025MS, K1106152-025MSD
Test Notes:

Units: ng/g
Basis: WET

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	1.1	57	56	34.7	82.9	95.6	85	109	70-130	14	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.24	105	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.49	110	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Test Notes:

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	270	272	101	70-130	

Service Request #:	K1106152, K1106154, K1106157, K1106166		
MS/MSD with #:	K1106152, K1106166		
StarLims Run # :	253805		
VER Standard ID:	AF1-63-C	Expiration Date:	07/30/11
Parent VER ID:	AF1-59-D	Expiration Date:	06/09/12

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. Ave of Bubbler Blanks less than 50 pg	X		
7. Verification Standards Passed (75-123%)	X		
8. OPR, QCS in control (70-130%)	X		
9. MS/MSD recovery 71-125%	X		
10. Spike RPD within 30%	X		
11. All samples within the linear range	X		
12. All corresponding charts included	X		
13. Dilution factors calculated	X		
14. Bench sheet signed	X		
	X		

Comments

Primary Reviewed by AEL Date 7/18/11

Secondary Reviewed by [signature] Date 7/27/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run Duration:	2.25	Integration Mode:	Total Hg
Heating Time:	1.75	Integration Type:	Peak Area
Retention Start Time:	.75	Result Units:	µg/Kg
Retention Stop Time:	1.75		
Calibration File:	CAL CURVE 032911.brd		

Reagents

Name	Lot Number
BrCl	RE2-36-M
SnCl+HCl	RE2-37-B

AEK 7/18/11

Standards

Name	Concentration	Lot Number
VER STD	10 ppb	AF1-63-C
OPR STD	40 ppb	AF1-63-E

Comments
PMT: 606 OFFSET: 5,090 NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept
~~15~~	~~S~~	~~K1106157-009~~		~~1~~	~~645,142~~	~~76.8~~	~~3.93~~		~~< HS~~	~~reject~~
~~16~~	~~S~~	~~K1106157-015~~		~~1~~	~~1,460,869~~	~~174~~	~~10.6~~		~~< HS~~	~~reject~~
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
Average		0.00	pg	< 25	0.00	< 10	accept
MBA	MB-1	0.169	µg/Kg	< 1			accept
	MB-2	0.0983	µg/Kg	< 1			accept
	MB-3	0.138	µg/Kg	< 1			accept
Average		0.135	µg/Kg		0.0354		

Comments

PMT: 606
OFFSET: 5,090
NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106152-025	82.9	µg/Kg	57	34.7	84.6	70-130			accept
	K1106166-025	94.5	µg/Kg	45	49.4	100	70-130			accept
MSD	K1106152-025	95.6	µg/Kg	56	34.7	109	70-130	14.2	< 30	accept
	K1106166-025	106	µg/Kg	45	49.4	127	70-130	11.8	< 30	accept
IPR	TORT	272	µg/Kg	270		101	70-130			accept
OPR	OPR-1	5.24	µg/Kg	5		105	70-130			accept
	OPR-2	5.49	µg/Kg	5		110	70-130			accept
QCS	VER-1	5.09	µg/Kg	5		102	77-123			accept
	VER-2	4.77	µg/Kg	5		95.5	77-123			accept
	VER-3	5.14	µg/Kg	5		103	77-123			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	20	21.5	pg	20	108	75-125			accept
	50	51.9	pg	50	104	75-125			accept
	200	198	pg	200	99.0	75-125			accept
	500	554	pg	500	111	75-125			accept
	2000	1,930	pg	2000	96.5	75-125			accept
	5000	4,790	pg	5000	95.8	75-125			accept
	15000	14,100	pg	15000	94.0	75-125			accept
	100	95.1	pg	100	95.1	75-125			accept
Calibration Factor		0.000119	pg/PA				6.00	< 15	accept
Calibration Date		3/29/11							

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Name/ID	Final Result (µg/Kg)	Notes
10	K1106152-009	9.78	accepted
11	K1106152-015	17.3	accepted
6	K1106152-025	34.7	accepted
12	K1106154-009	3.93	accepted
13	K1106154-015	6.94	accepted
14	K1106154-025	10.5	accepted
~~15~~	~~K1106157-009~~	~~3.93~~	~~rejected~~
18	K1106157-009	4.06	accepted
~~16~~	~~K1106157-015~~	~~10.0~~	~~rejected~~
19	K1106157-015	8.62	accepted
20	K1106157-025	15.2	accepted
21	K1106166-009	17.3	accepted
22	K1106166-015	33.2	accepted
24	K1106166-025	49.4	accepted

AEK 7/18/11

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	QCS	VER-1		100	100	100	5	
2	MBA	MB-1		400	40	5.0		
3	MBA	MB-2		400	40	5.0		
4	OPR	OPR-1		400	40	5.0	5	
5	IPR	TORT		391	40	2.5	270	
6	S	K1106152-025		1714	40	1.0		
7	MS	K1106152-025		1745	40	1.0	57	
8	MSD	K1106152-025		1771	40	1.0	56	
9	CB	BB (VER)		100	100	100		
10	S	K1106152-009		2209	40	1.0		
11	S	K1106152-015		1745	40	1.0		
12	S	K1106154-009		3700	40	1.0		
13	S	K1106154-015		3615	40	1.0		
14	S	K1106154-025		1929	40	1.0		
~~15~~	~~S~~	~~K1106157-009~~		~~782~~	~~40~~	~~1.0~~		AEL 7/18/11
~~16~~	~~S~~	~~K1106157-015~~		~~695~~	~~40~~	~~1.0~~		
17	QCS	VER-2		100	100	100	5	
18	S	K1106157-009		782	40	5.0		
19	S	K1106157-015		695	40	5.0		
20	S	K1106157-025		813	40	5.0		
21	S	K1106166-009		2478	40	5.0		
22	S	K1106166-015		2455	40	5.0		
23	CB	BB (VER)		100	100	100		
24	S	K1106166-025		2177	40	1.0		
25	MS	K1106166-025		2204	40	1.0	45	
26	MSD	K1106166-025		2215	40	1.0	45	
27	MBA	MB-3		400	40	5.0		
28	OPR	OPR-2		400	40	5.0	5	
29	QCS	VER-3		100	100	100	5	
30	CB	BB (VER)		100	100	100		

Columbia Analytical Services
Metals Digestion Sheet

StarLims Number: 137751

Method : 1631EApp. | Analysis for : CVAFS

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	100ml	100ml	0.5% BrCl
VER-2	Water		x	100ml	100ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
Tort-2			x	0.413	40	0.02N BrCl
K1106152-009		x		0.433	40	0.02N BrCl
K1106152-015		x		0.410	40	0.02N BrCl
K1106152-025		x		0.396	40	0.02N BrCl
K1106152-025MS		x		0.403	40	0.02N BrCl
K1106152-025MSD		x		0.409	40	0.02N BrCl
K1106154-009		x		0.407	40	0.02N BrCl
K1106154-015		x		0.441	40	0.02N BrCl
K1106154-025		x		0.409	40	0.02N BrCl
K1106157-009		x		0.409	40	0.02N BrCl
K1106157-015		x		0.411	40	0.02N BrCl
K1106157-025		x		0.409	40	0.02N BrCl
K1106166-009		x		0.394	40	0.02N BrCl
K1106166-015		x		0.432	40	0.02N BrCl
K1106166-025		x		0.405	40	0.02N BrCl
K1106166-025MS		x		0.410	40	0.02N BrCl
K1106166-025MSD		x		0.412	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	100ml	100ml	0.5% BrCl

HNO3 Lot # J41037 **H2SO4 Lot # 50068** **BrCl =** RE2-36-M

AF1-63-E *(40ppb)* **OPR: 0.05ml** **Digestion Acid Mixture: RE2-36-N**

1st MS / DMS: 0.1 ml **Balance ID:** 37

2nd MS / DMS: 0.1 ml

Comments: MS/MSD - 0.1 ml of parent QCS (AF1-53-A : 1000 ug/L)

Time Digestion Started: 10:00

Analyst _____ **Date** 7/15/11

1631Dig.XLS
06/17/04

Conversion from dry weight to wet weight:

Standard MRL = 1.0
Standard MDL = 0.3
Standard Dilution = 20
Standard Sample Mass = 0.400

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.433	19.6	**2.209**	100	**0.9**	**0.3**
K1106152-015	0.410	23.5	**1.745**	100	**1.1**	**0.3**
K1106152-025	0.396	23.1	**1.714**	100	**1.2**	**0.4**
K1106152-025MS	0.403	23.1	**1.745**	100	**1.1**	**0.3**
K1106152-025MSD	0.409	23.1	**1.771**	100	**1.1**	**0.3**
K1106154-009	0.407	11.0	**3.700**	100	**0.5**	**0.2**
K1106154-015	0.441	12.2	**3.615**	100	**0.6**	**0.2**
K1106154-025	0.409	21.2	**1.929**	100	**1.0**	**0.3**
K1106157-009	0.409	52.3	**0.782**	20	**0.5**	**0.2**
K1106157-015	0.411	59.1	**0.695**	20	**0.6**	**0.2**
K1106157-025	0.409	50.3	**0.813**	20	**0.5**	**0.1**
K1106166-009	0.394	15.9	**2.478**	20	**0.2**	**0.0**
K1106166-015	0.432	17.6	**2.455**	20	**0.2**	**0.0**
K1106166-025	0.405	18.6	**2.177**	100	**0.9**	**0.3**
K1106166-025MS	0.410	18.6	**2.204**	100	**0.9**	**0.3**
K1106166-025MSD	0.412	18.6	**2.215**	100	**0.9**	**0.3**
Method Blank	0.400	20.000	**2.000**	20	**0.2**	**0.06**

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K1106152

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106152-009	10.359	14.809	16.842	2.033	19.6%
K1106152-015	10.263	15.062	17.469	2.407	23.5%
K1106152-025	10.116	15.070	17.409	2.339	23.1%
K1106152-025 Dup	10.032	15.044	17.310	2.266	22.6%
					7/14/11

Date/Time in Freeze Dryer: 04:30pm 07-12-11 Date/Time out of Freeze Dryer:08:30am 07-14-11

Balance ID: 21 B Date Balance checked: 07-12-11,07-14-11

Comments:

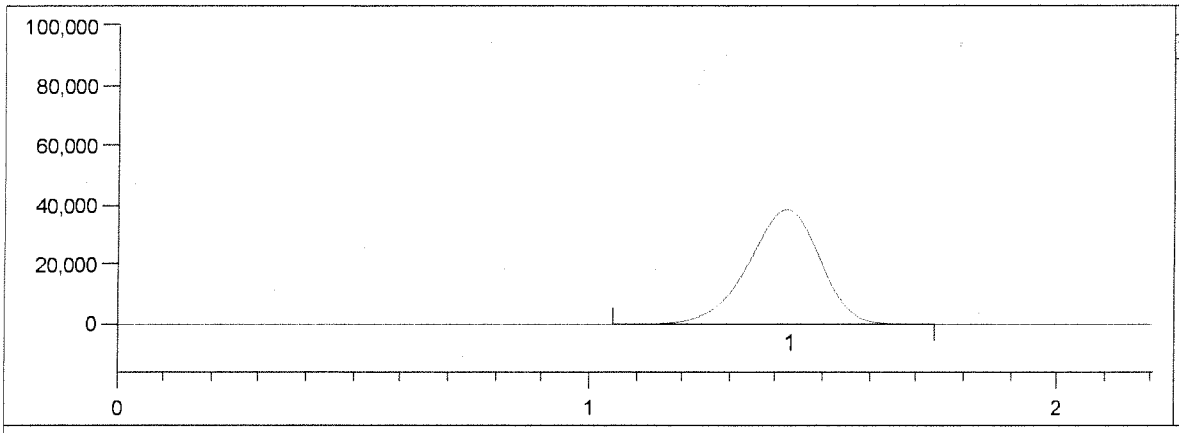
x = RPD

Analyst: Teresa Cook	Date: 7/14/11
Reviewed By: Anna Chatterley	Date: 7/21/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

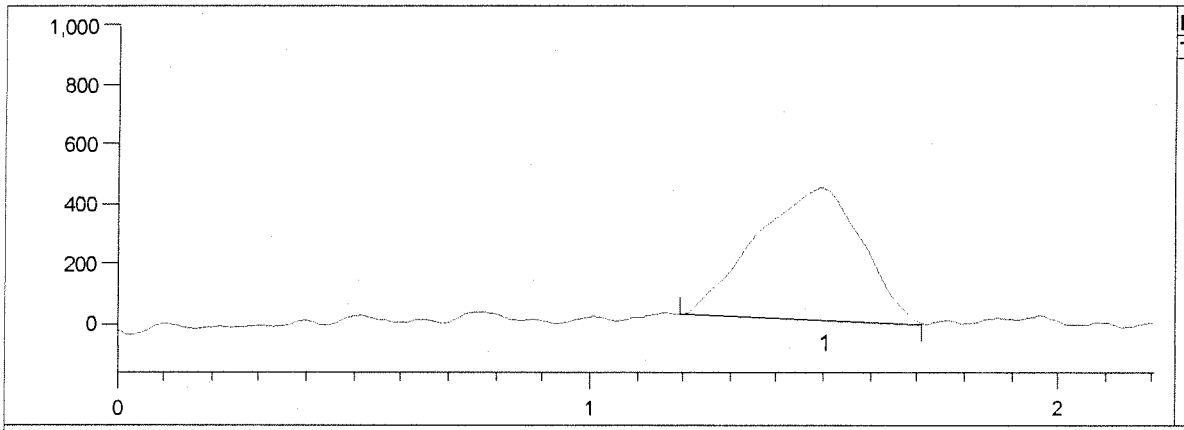


Date: 7/18/11
Time: 8:29 AM

Peak	rt	Area
1	1.45	4,275,377

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept

Notes:

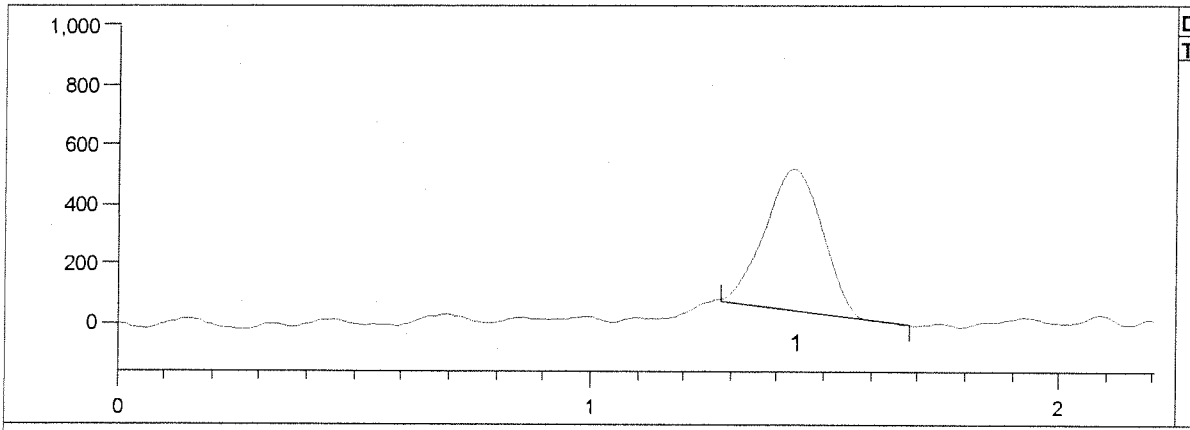


Date: 7/18/11
Time: 8:33 AM

Peak	rt	Area
1	1.52	70,960

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept

Notes:



Date: 7/18/11
Time: 8:36 AM

Peak	rt	Area
1	1.46	41,293

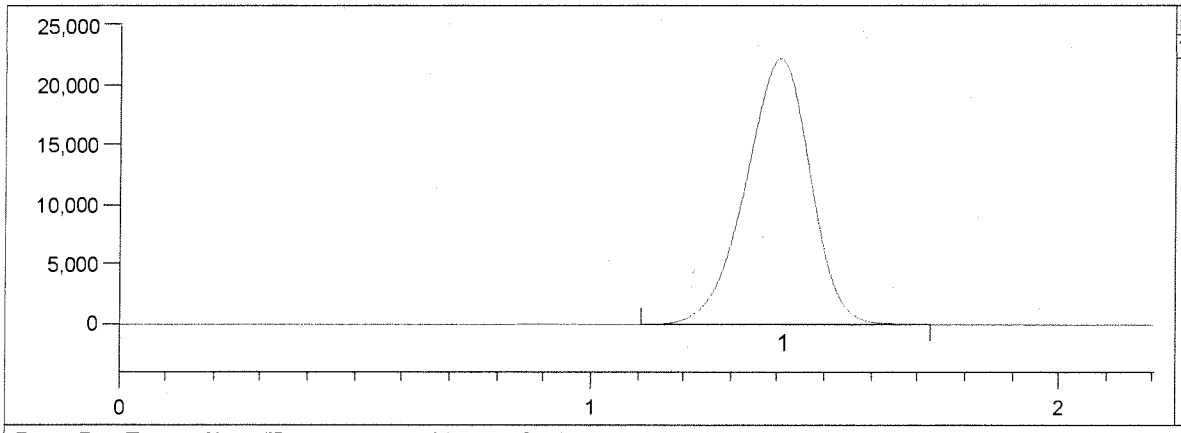
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

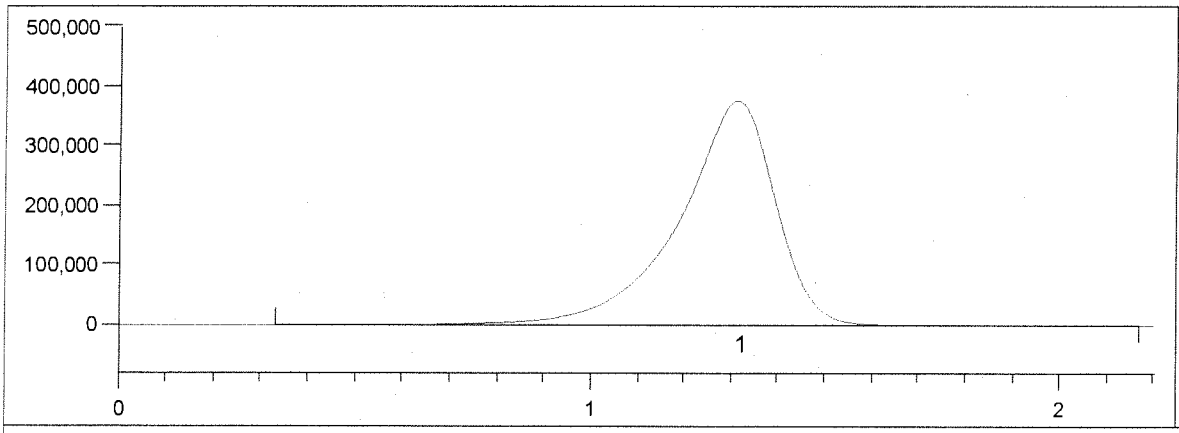


Date: 7/18/11
Time: 8:38 AM

Peak	rt	Area
1	1.43	2,201,449

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept

Notes:

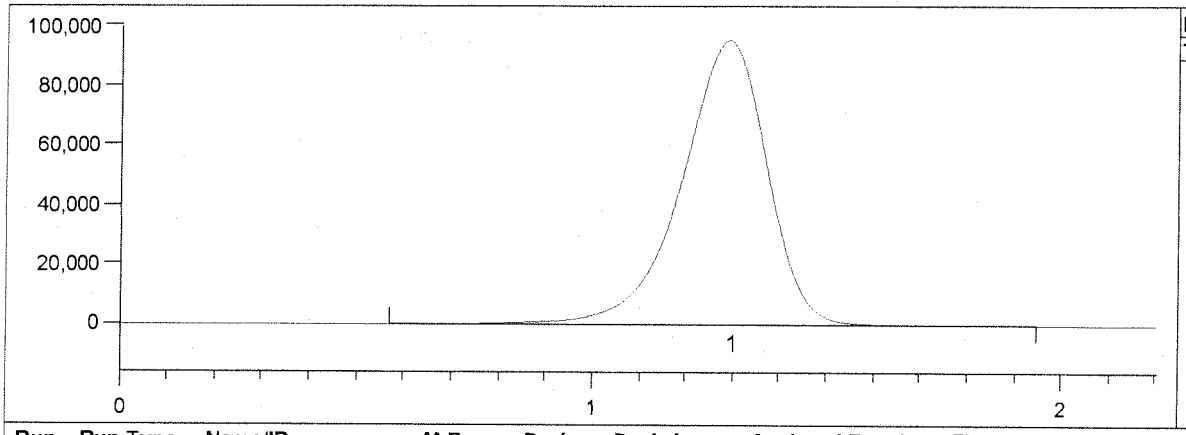


Date: 7/18/11
Time: 8:41 AM

Peak	rt	Area
1	1.34	55,771,809

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept

Notes:



Date: 7/18/11
Time: 8:44 AM

Peak	rt	Area
1	1.31	12,492,603

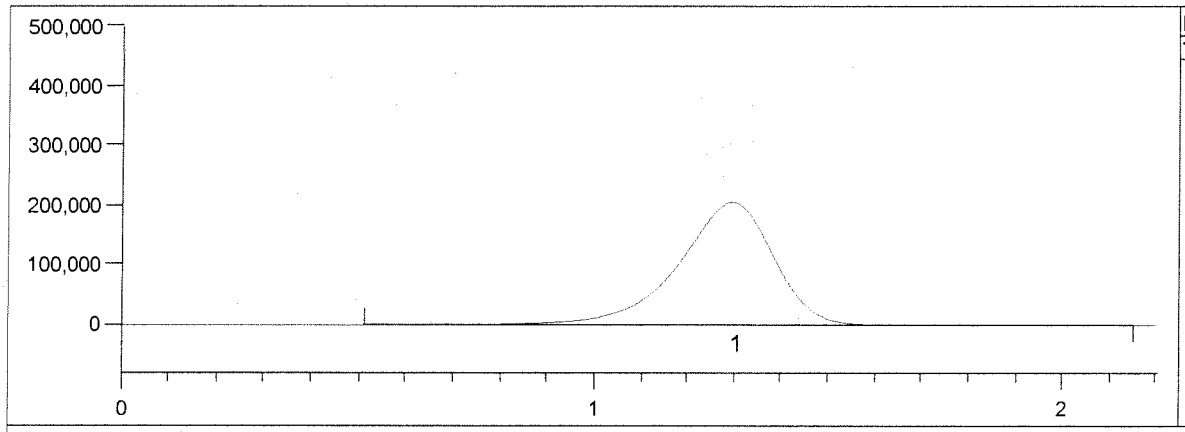
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

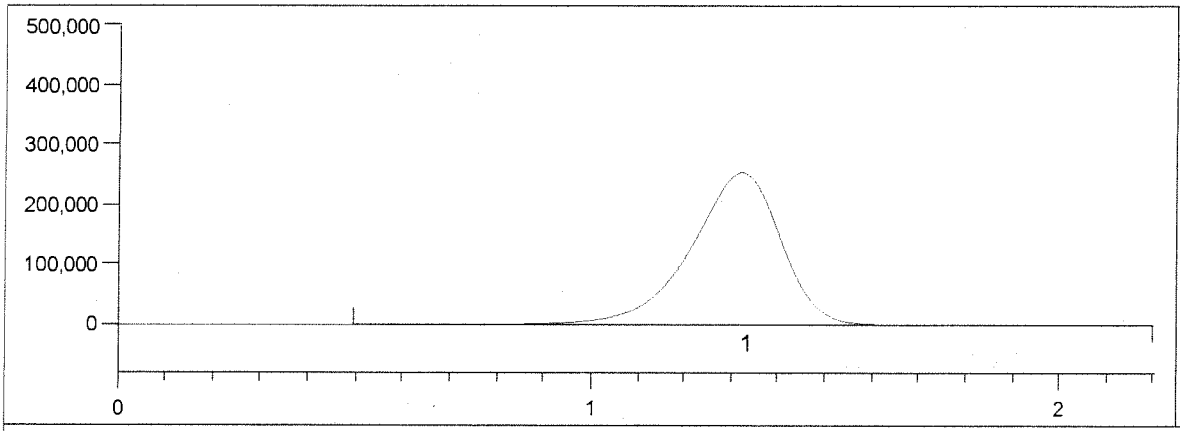


Date: 7/18/11
Time: 8:48 AM

Peak	rt	Area
1	1.32	30,397,517

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept

Notes:

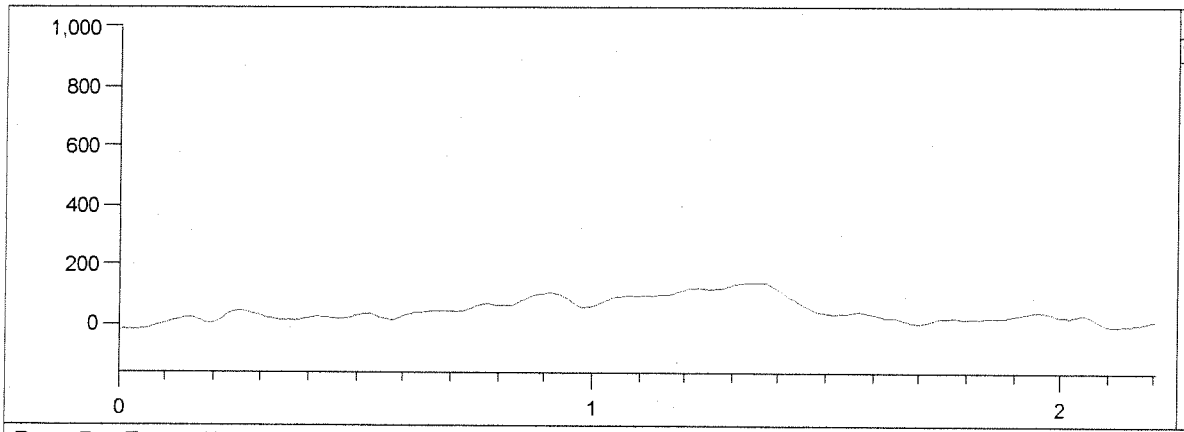


Date: 7/18/11
Time: 8:52 AM

Peak	rt	Area
1	1.35	35,575,102

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept

Notes:



Date: 7/18/11
Time: 8:56 AM

Peak	rt	Area

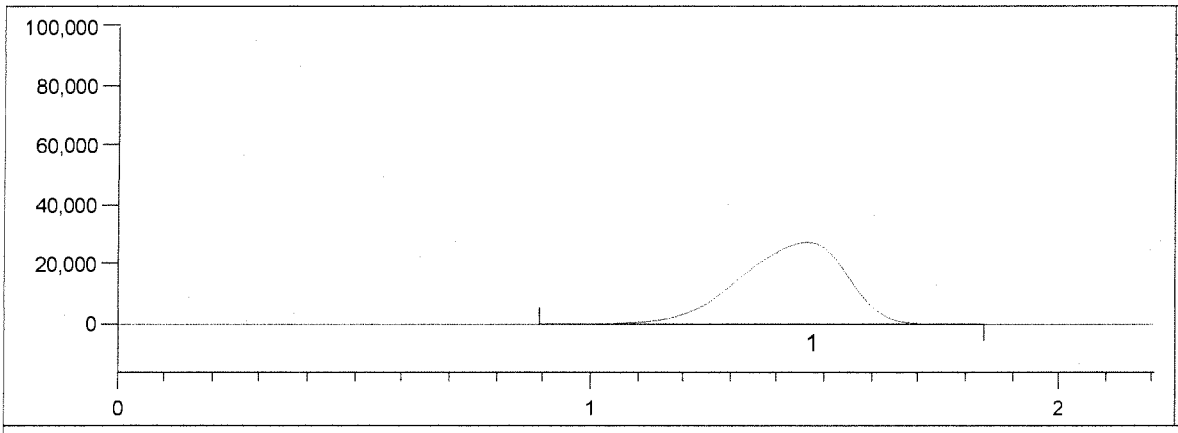
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

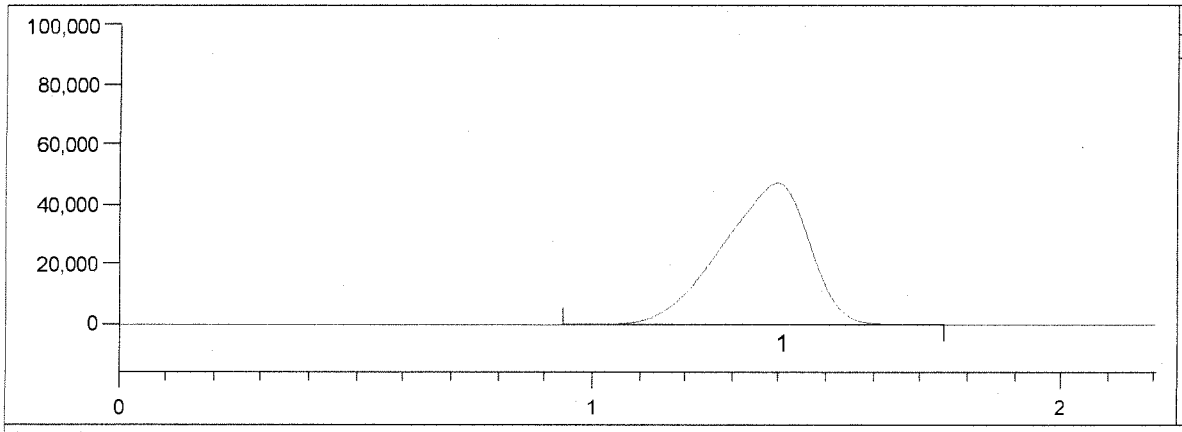


Date: 7/18/11
Time: 9:24 AM

Peak	rt	Area
1	1.49	4,537,778

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept

Notes:

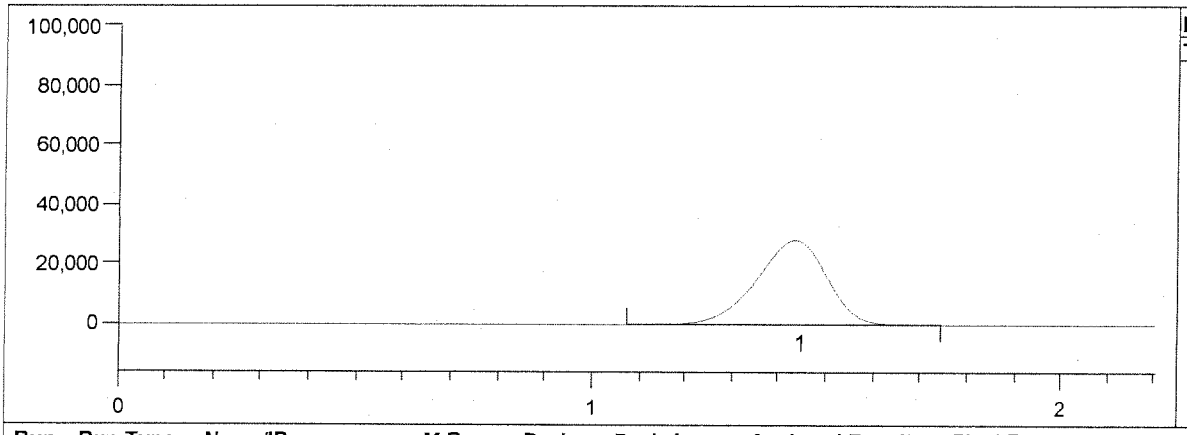


Date: 7/18/11
Time: 9:27 AM

Peak	rt	Area
1	1.42	6,354,186

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept

Notes:



Date: 7/18/11
Time: 9:29 AM

Peak	rt	Area
1	1.46	3,057,282

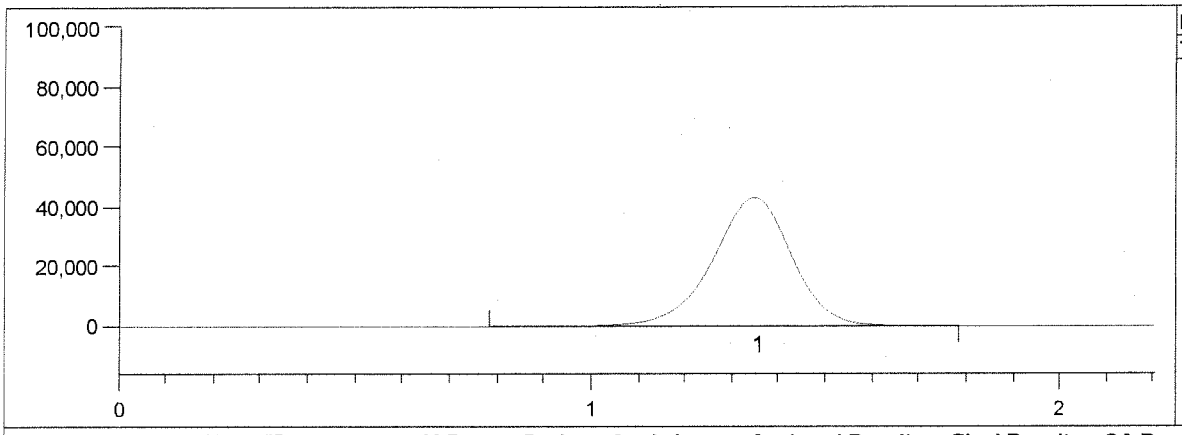
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

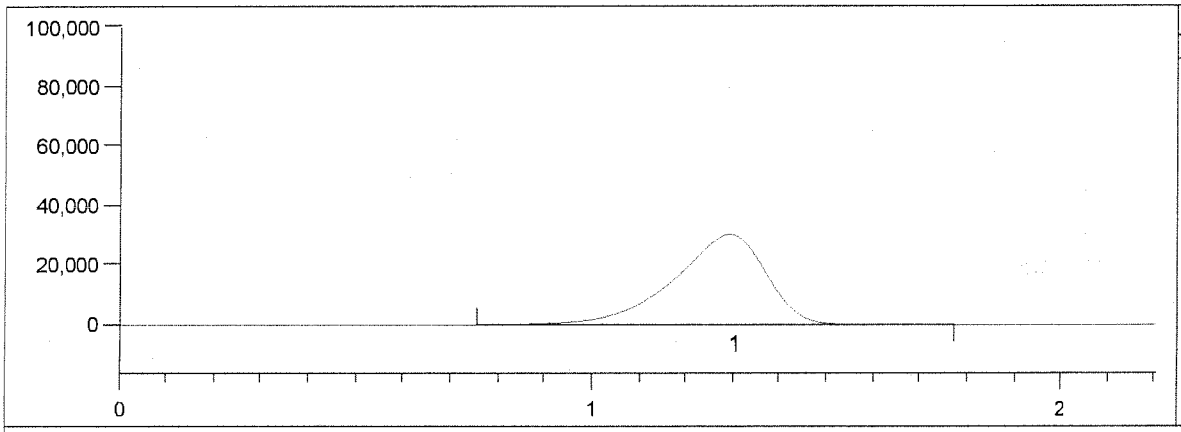


Date: 7/18/11
Time: 9:33 AM

Peak	rt	Area
1	1.37	5,273,318

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept

Notes:

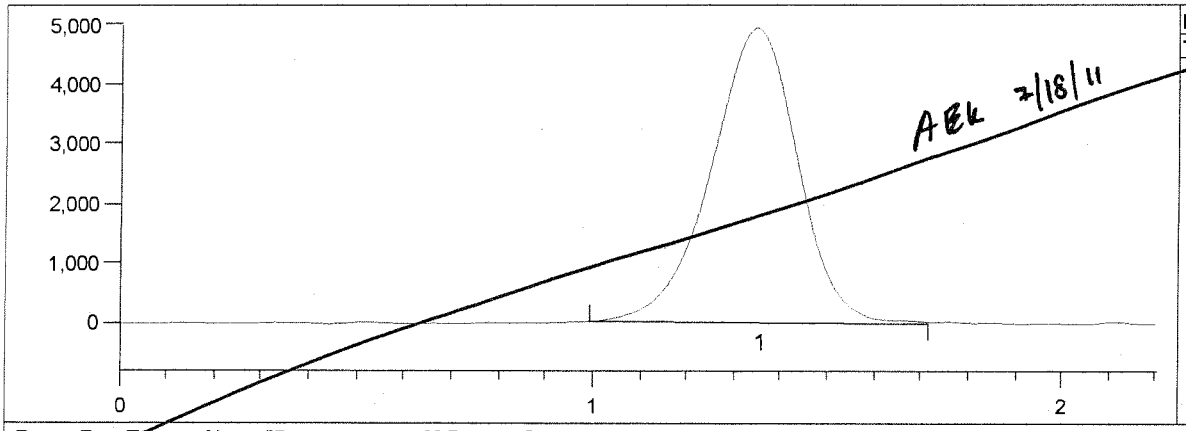


Date: 7/18/11
Time: 9:35 AM

Peak	rt	Area
1	1.32	4,246,839

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept

Notes:



Date: 7/18/11
Time: 9:38 AM

Peak	rt	Area
1	1.37	645,142

Overdiluted sample.
Rerun - 18.

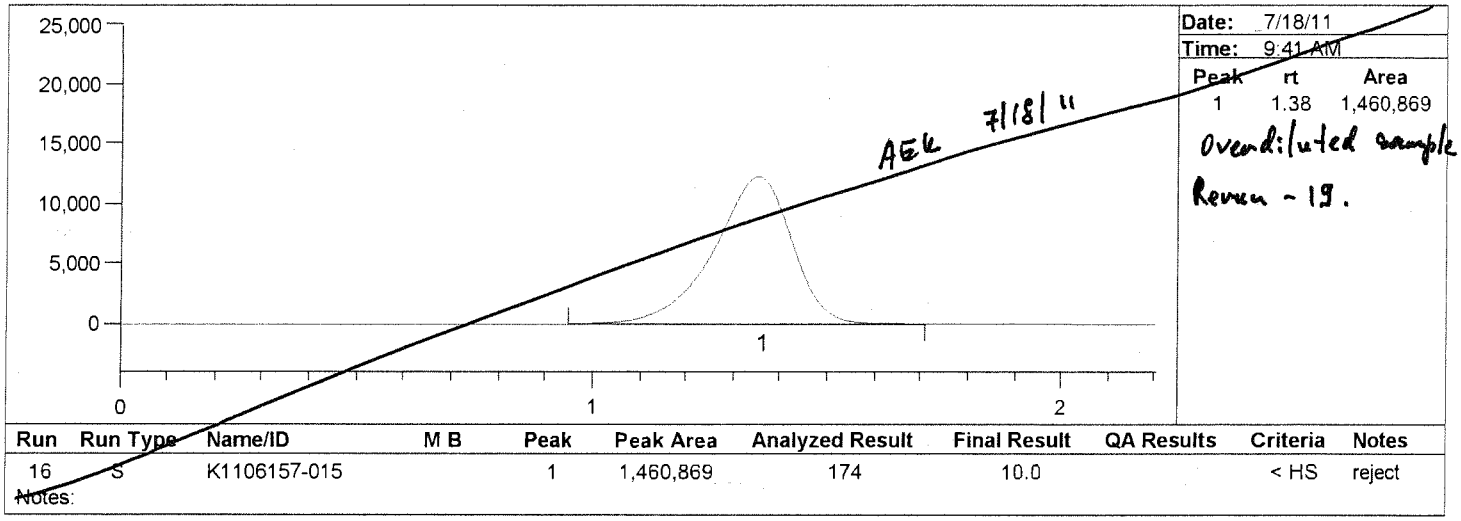
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009		1	645,142	76.8	3.93		< HS	reject

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

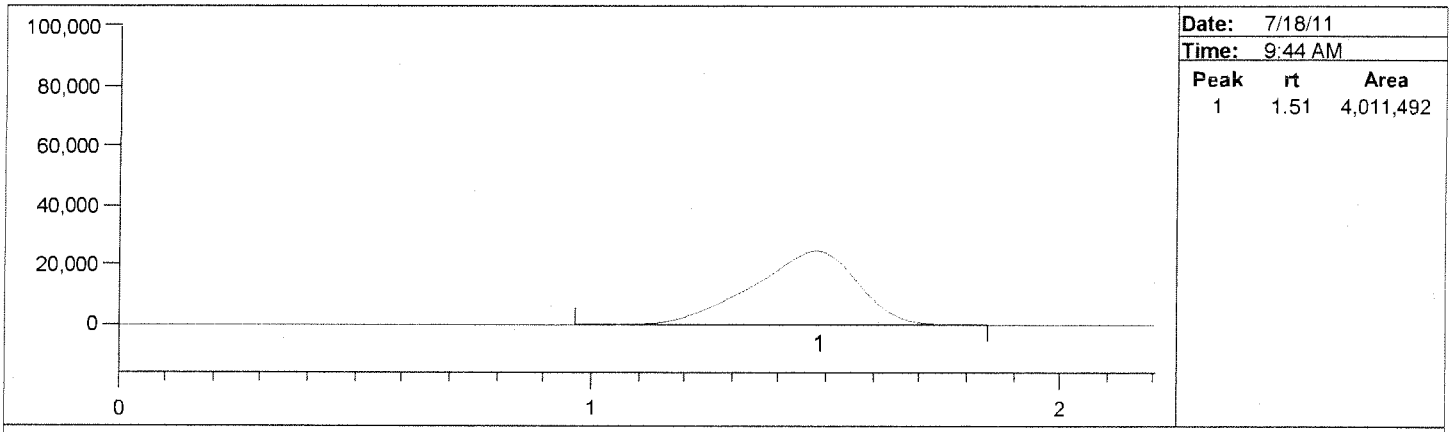
Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou



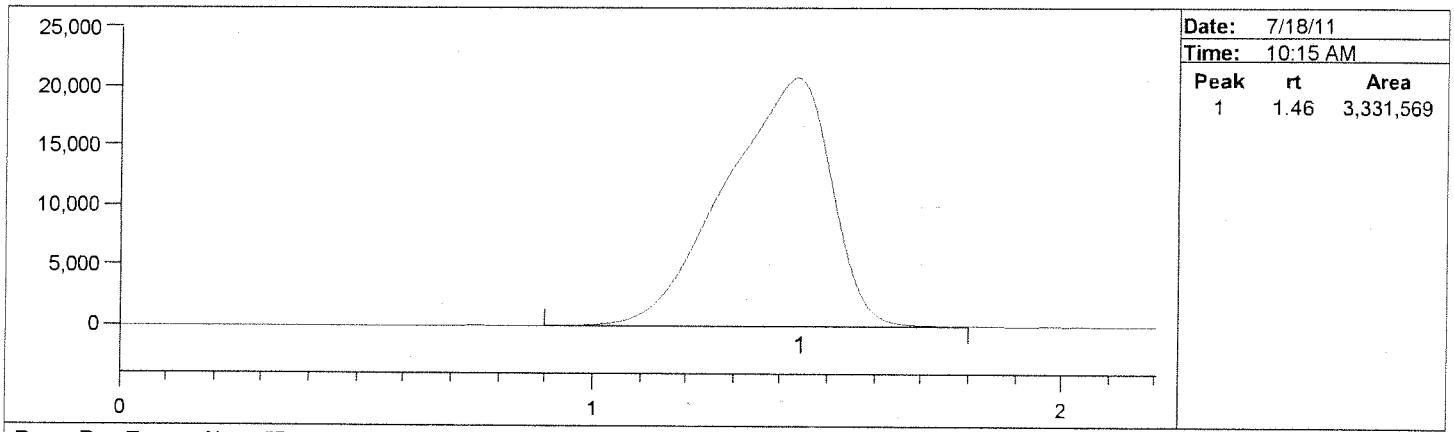
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015		1	1,460,869	174	10.0		< HS	reject

Notes:



Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept

Notes:



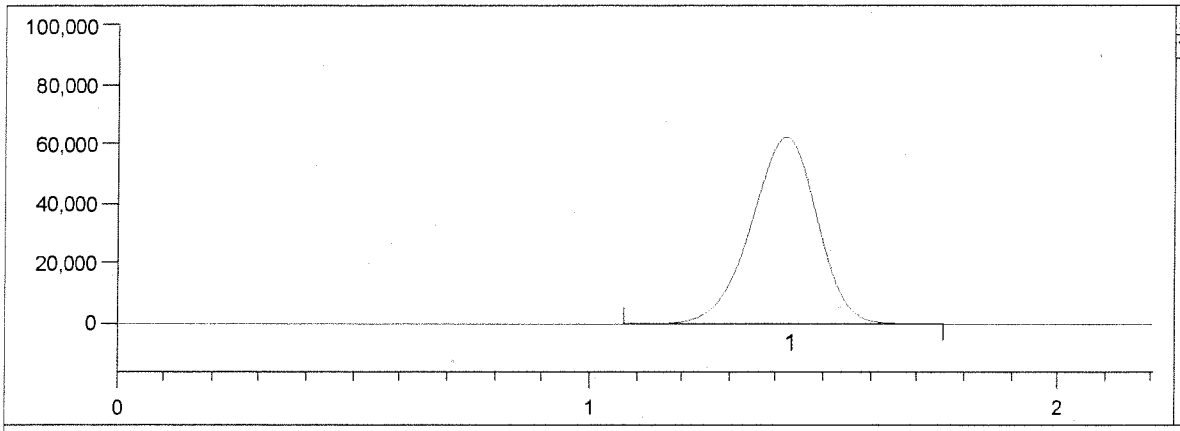
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

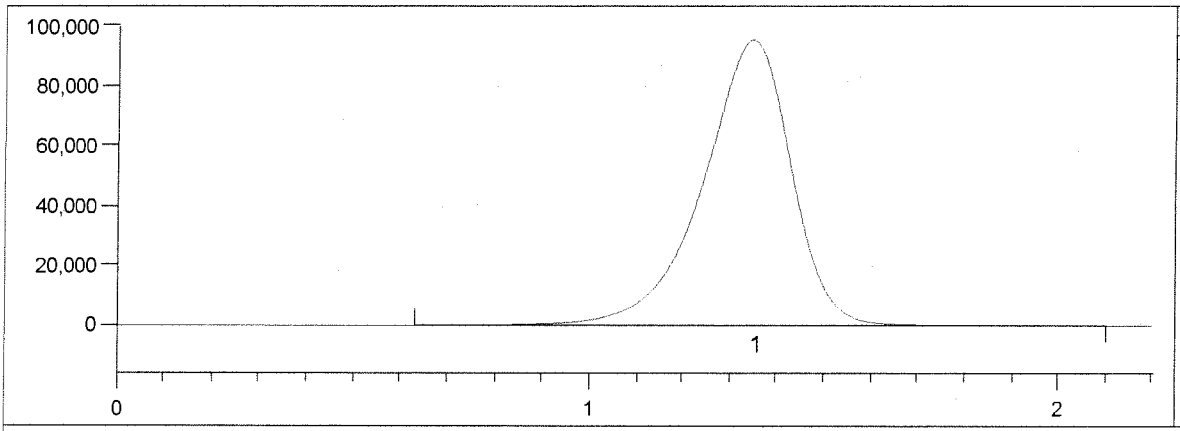


Date:	7/18/11
Time:	10:18 AM

Peak	rt	Area
1	1.44	6,292,061

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept

Notes:

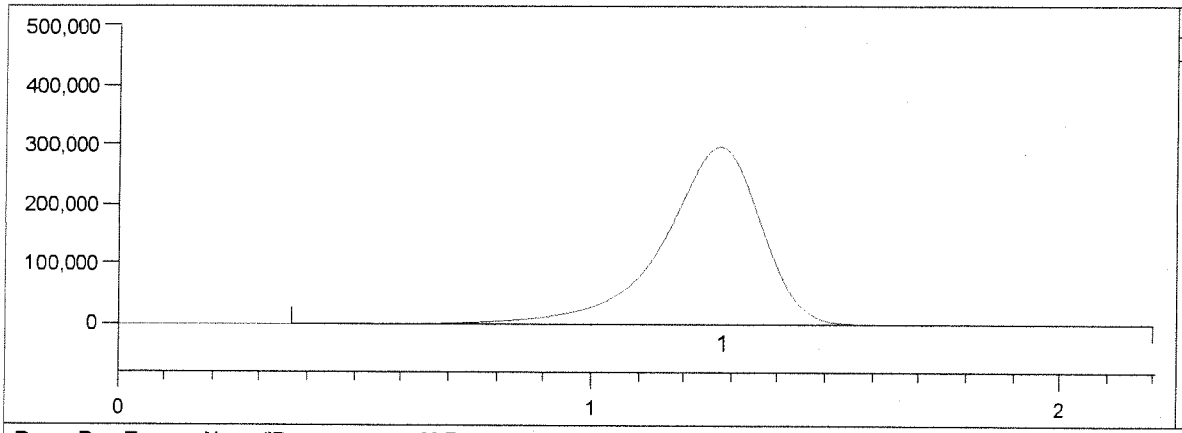


Date:	7/18/11
Time:	10:23 AM

Peak	rt	Area
1	1.37	12,938,810

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept

Notes:



Date:	7/18/11
Time:	10:26 AM

Peak	rt	Area
1	1.30	45,095,719

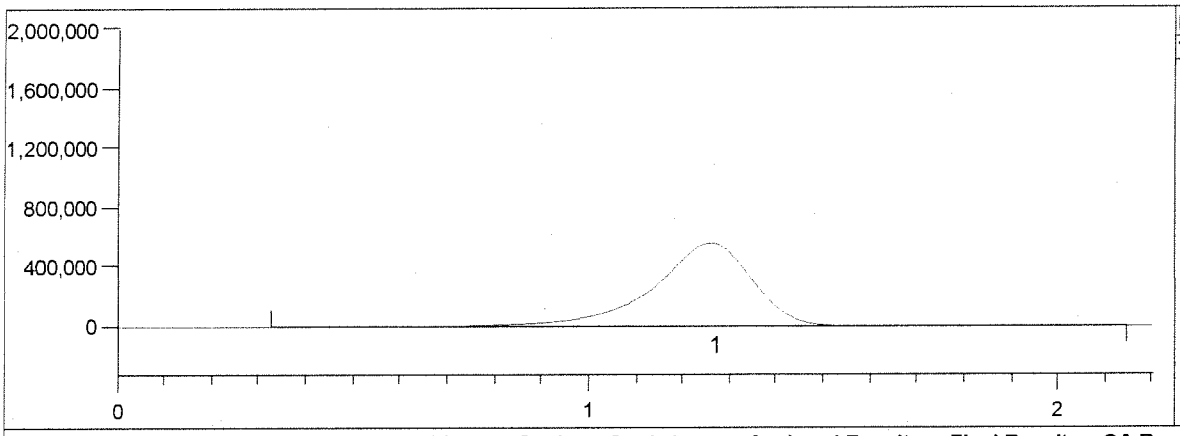
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

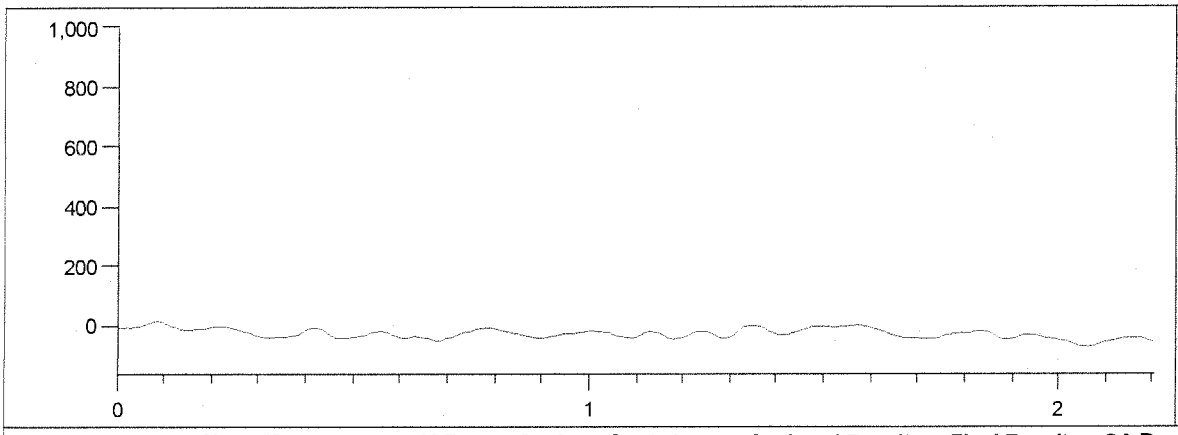


Date: 7/18/11
Time: 10:29 AM

Peak	rt	Area
1	1.28	85,712,221

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept

Notes:

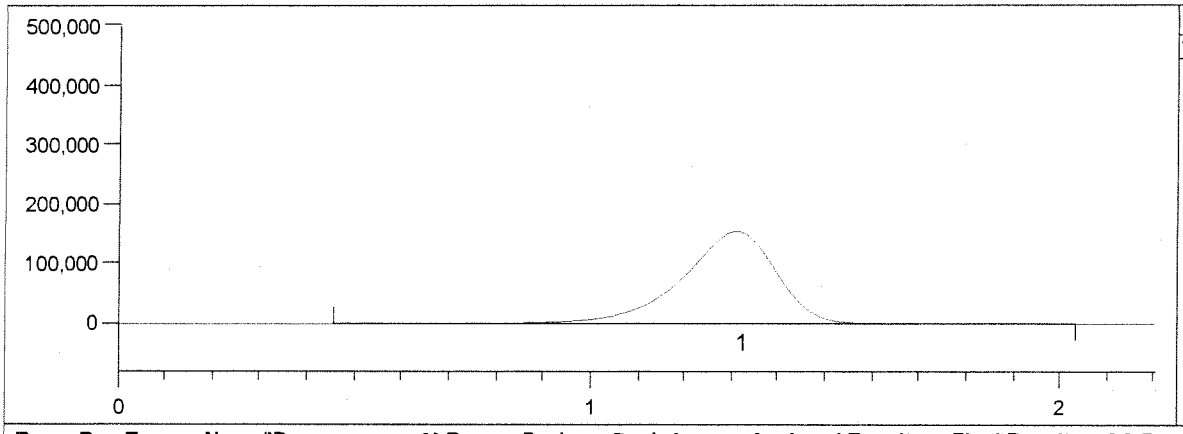


Date: 7/18/11
Time: 10:33 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:



Date: 7/18/11
Time: 10:58 AM

Peak	rt	Area
1	1.34	22,596,619

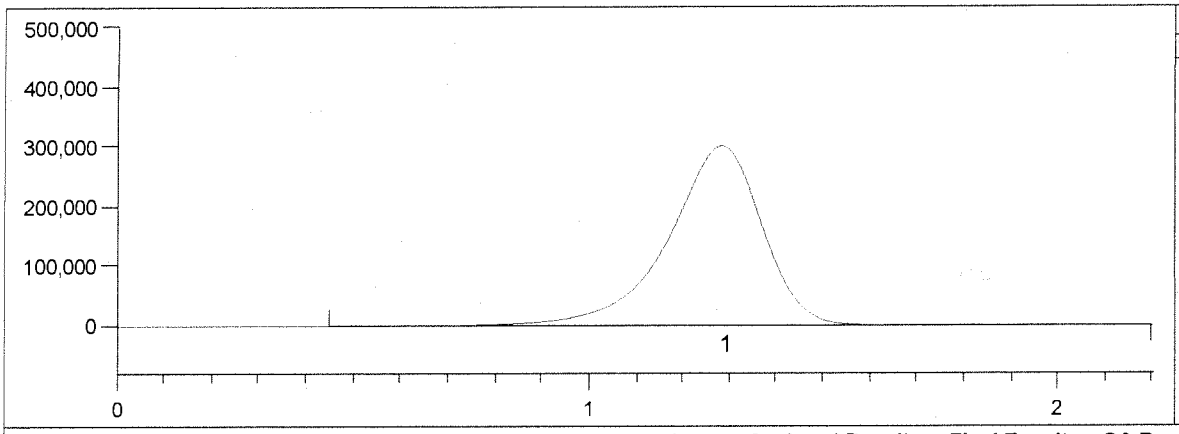
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

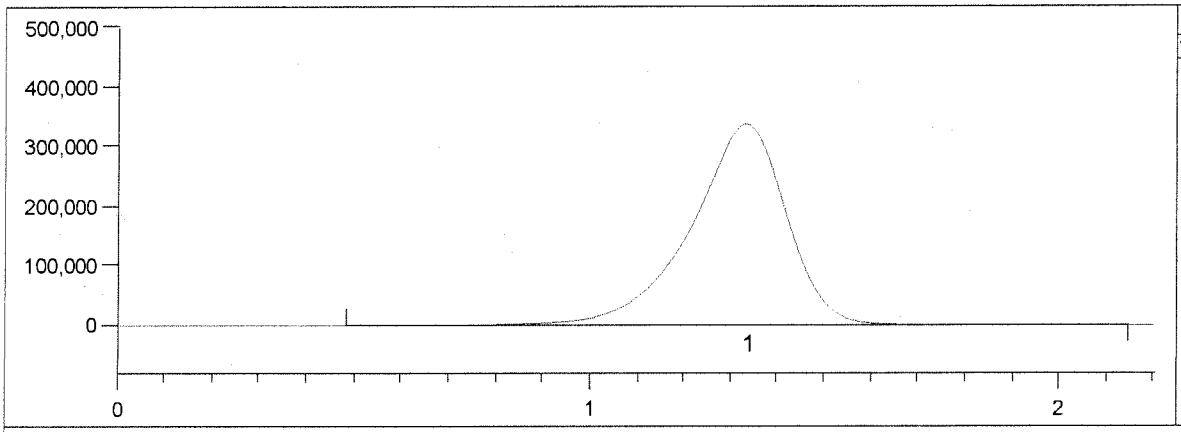


Date: 7/18/11
Time: 11:01 AM

Peak	rt	Area
1	1.31	43,769,737

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept

Notes:

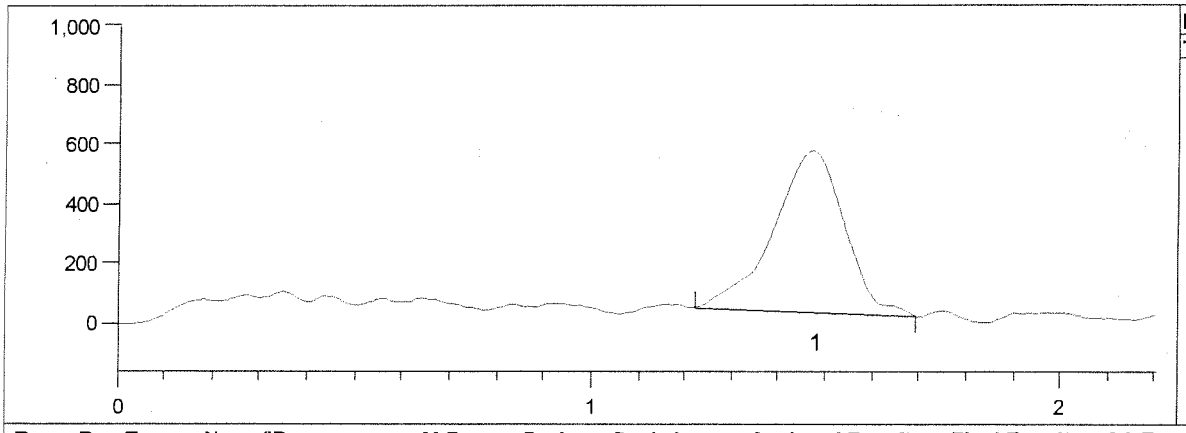


Date: 7/18/11
Time: 11:04 AM

Peak	rt	Area
1	1.36	49,516,237

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept

Notes:



Date: 7/18/11
Time: 11:07 AM

Peak	rt	Area
1	1.50	57,808

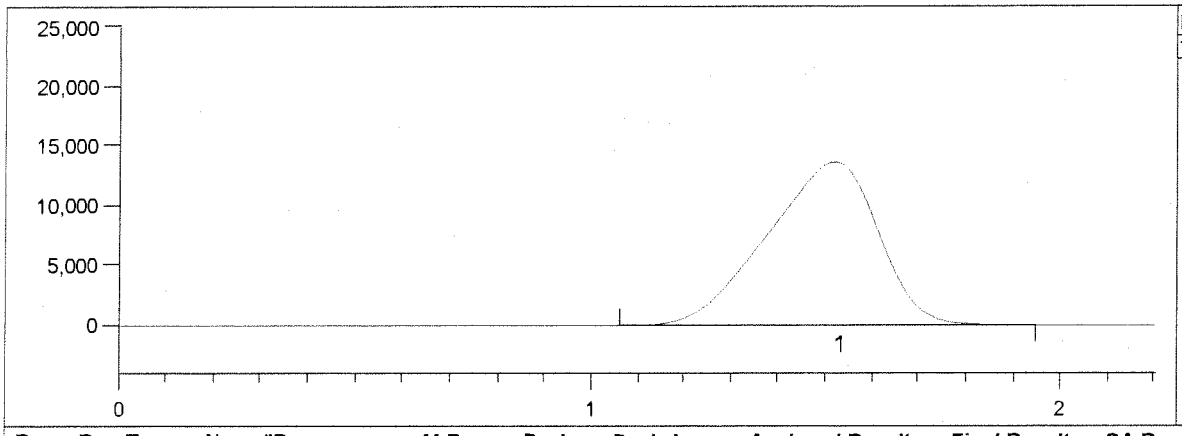
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

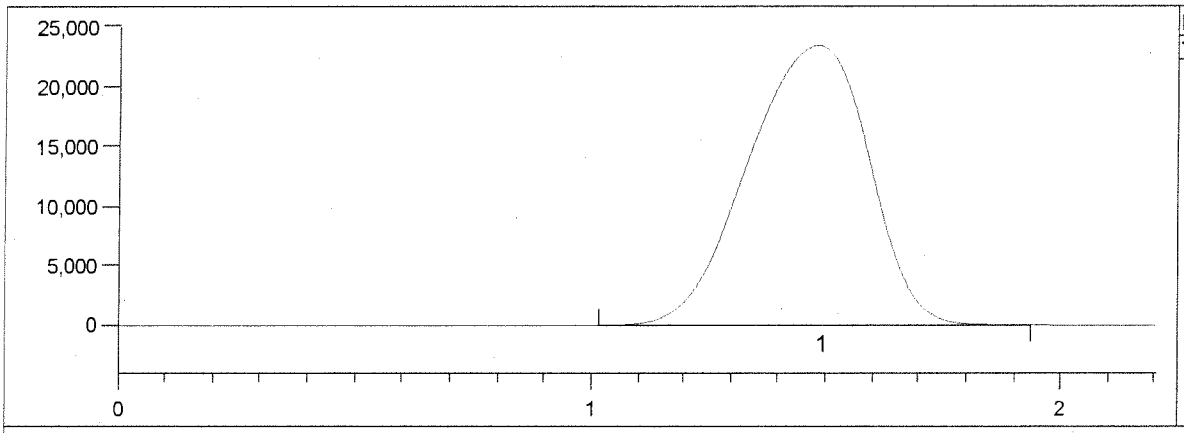


Date: 7/18/11
Time: 11:10 AM

Peak	rt	Area
1	1.55	2,304,787

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept

Notes:

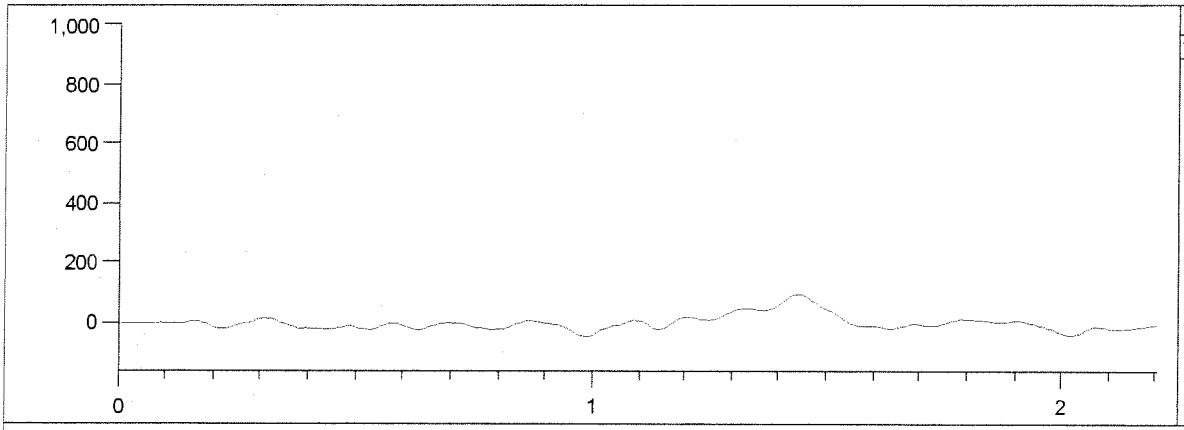


Date: 7/18/11
Time: 11:13 AM

Peak	rt	Area
1	1.51	4,319,605

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept

Notes:



Date: 7/18/11
Time: 11:16 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: URS Corporation
Project Name: East White Lake
Project No.: Hepatopancreas

Service Request: K1106152

Sample Name:	Lab Code:
EWL-DES Hepatopancreas Composite	K1106152-009
EWL-HOU-C Hepatopancreas Composite	K1106152-015
EWL-BIL Hepatopancreas Composite	K1106152-025
EWL-BIL Hepatopancreas CompositeD	K1106152-025D
EWL-BIL Hepatopancreas CompositeS	K1106152-025S
Method Blank	K1106152-MB

Comments:

Approved By: 3C **Date:** 8/12/11

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106152
Project No.:	Hepatopancreas	**Date Collected:**	06/20/11
Project Name:	East White Lake	**Date Received:**	06/21/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-DES Hepatopancreas Composit **Lab Code:** K1106152-009

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.097	0.012	5.0	07/14/11	07/25/11	0.994		
Barium	6020A	0.010	0.002	5.0	07/14/11	07/25/11	4.910		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106152
Project No.:	Hepatopancreas	**Date Collected:**	05/23/11
Project Name:	East White Lake	**Date Received:**	05/24/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-HOU-C Hepatopancreas Compos **Lab Code:** K1106152-015

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.117	0.014	5.0	07/14/11	07/25/11	2.150		
Barium	6020A	0.012	0.002	5.0	07/14/11	07/25/11	2.610		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106152
Project No.:	Hepatopancreas	**Date Collected:**	06/09/11
Project Name:	East White Lake	**Date Received:**	06/10/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-BIL Hepatopancreas Composit **Lab Code:** K1106152-025

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.115	0.014	5.0	07/14/11	07/25/11	3.950		
Barium	6020A	0.012	0.002	5.0	07/14/11	07/25/11	1.190		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106152
Project No.:	Hepatopancreas	**Date Collected:**	
Project Name:	East White Lake	**Date Received:**	
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: Method Blank **Lab Code:** K1106152-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.075	0.009	5.0	07/14/11	07/25/11	0.009	U	
Barium	6020A	0.008	0.001	5.0	07/14/11	07/25/11	0.001	U	

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	24.8	99	25.0	25.1	100	24.9	100	6020A
Barium	100.0	100.3	100	25.0	25.1	100	25.1	100	6020A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				25.0	25.4	102			6020A
Barium				25.0	25.6	102			6020A

Metals

- 2a -

LOW LEVEL INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **SDG No.:** K1106152

Contract: Hepatopancreas **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: CAS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICVS									
	Arsenic	0.93	1.00	93	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
	Barium	0.09	0.10	90	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
LLCCV2									
	Arsenic	1.08	1.00	108	70.0 - 130.0	MS	07/25/11	21:10	072511CMS
	Barium	0.11	0.10	110	70.0 - 130.0	MS	07/25/11	21:10	072511CMS

Metals

-3-

BLANKS

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Arsenic	0.120	U	0.120	U	0.120	U	0.120	U	6020A
Barium	0.016	U	0.016	U	0.016	U	0.073	J	6020A

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.00	25.00	0.07	23.59	94			
Barium	0.00		0.13	0.12				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL Hepatopancreas Com **Lab Code:** K1106152-025S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	7.630		3.950		3.82	96.3		6020A
Barium	70 - 130	45.3		1.190		45.74	96.4		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: URS Corporation
Service Request: K1106152
Project No.: Hepatopancreas
Units: UG/L
Project Name: East White Lake
Basis: WET
Matrix: WATER

Sample Name: EWL-BIL Hepatopancreas Com
Lab Code: K1106152-025A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	83.80		34.32		50.0	99		6020A
Barium	75 - 125	58.70		10.36		50.0	97		6020A

Metals

- 6 -

DUPLICATES

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL Hepatopancreas Co **Lab Code:** K1106152-025D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	3.950		4.000		1.3		6020A
Barium	30	1.190		1.220		2.5		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

-7-

LABORATORY CONTROL SAMPLE

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	167	158	94.6					
Barium	2000	1950	97.5					

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106152-SRM1	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Dorm-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	6.88	6.49	94	5.26 - 8.62	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106152-SRM2	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	21.6	20.1	93	15.8-28.1	

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas **Units:** UG/L

Project Name: East White Lake

Sample Name: EWL-BIL Hepatopancreas Com **Lab Code:** K1106152-025L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	34.322		33.995		1		MS
Barium	10.363		9.601		7		MS

Metals

- 10 -

DETECTION LIMITS

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

ICP/ICP-MS ID #: K-ICP-MS-03

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL mg/Kg	MDL mg/Kg	M
Arsenic	75		1.00	0.12	MS
Barium	137		0.100	0.016	MS

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	2000	6020A
Barium	15.000	2000	6020A

Comments:

Metals
-13-
PREPARATION LOG

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas

Project Name: East White Lake

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1106152-009	07/14/11	1.5408	30.0
K1106152-015	07/14/11	1.2851	30.0
K1106152-025	07/14/11	1.3030	30.0
K1106152-025D	07/14/11	1.3074	30.0
K1106152-025S	07/14/11	1.3117	30.0
K1106152-MB	07/14/11	2.0000	30.0
K1106152-SRM1	07/14/11	0.3010	30.0
K1106152-SRM2	07/14/11	0.3020	30.0
LCSW	07/14/11	30.0	30.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: URS Corporation **Service Request:** K1106152

Project No.: Hepatopancreas **Run Number:** 072511CMS03

Project Name: East White Lake

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 07/25/11 **End Date:** 07/25/11

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Cal. Blk	1.00	19:48				X	X																							
Cal. Stn	1.00	19:50				X	X																							
ICV1	1.00	19:53				X	X																							
CCV1	1.00	19:56				X	X																							
ICB1	1.00	19:58				X	X																							
CCB1	1.00	20:01				X	X																							
LLICVS	1.00	20:03				X	X																							
ICS-A1	1.00	20:06				X	X																							
ICS-AB1	1.00	20:09				X	X																							
K1106152-MB	5.00	20:11				X	X																							
LCSW	5.00	20:14				X	X																							
K1106152-SRM1	5.00	20:17																												
K1106152-SRM2	5.00	20:19																												
K1106152-009	5.00	20:22				X	X																							
K1106152-015	5.00	20:24				X	X																							
K1106152-025	5.00	20:27				X	X																							
CCV2	1.00	20:30				X	X																							
CCB2	1.00	20:32				X	X																							
K1106152-025D	5.00	20:35				X	X																							
K1106152-025L	25.00	20:38				X	X																							
K1106152-025A	5.00	20:40				X	X																							
K1106152-025S	5.00	20:43				X	X																							
ZZZZZZ	5.00	20:46																												
ZZZZZZ	5.00	20:48																												
ZZZZZZ	5.00	20:51																												
ZZZZZZ	5.00	20:54																												
ZZZZZZ	5.00	20:57																												
ZZZZZZ	5.00	20:59																												
CCV3	1.00	21:02				X	X																							
CCB3	1.00	21:05				X	X																							
LLCCV2	1.00	21:10				X	X																							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: Hepatopancreas

Lab Code: CAS Case No.: NRAS No. SDG NO.: K1106152

ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 07/25/2011 End Date: 07/25/2011

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Ga_71	Q	Element Rh_103	Q	Element In_115	Q	Element	Q	Element	Q	Element	Q
Cal. Blk	Cal. Blk	1948	100		100		100							
Cal. Stn	Cal. Stn	1950	99		99		101							
ICV1	ICV1	1953	99		99		100							
CCV1	CCV1	1956	98		99		100							
ICB1	ICB1	1958	97		98		99							
CCB1	CCB1	2001	97		99		99							
LLICVS	LLICVS	2003	99		100		101							
ICS-A1	ICSA	2006	82		80		84							
ICS-AB1	ICSAB	2009	85		82		86							
K1106152-MB	Method Blank	2011	95		95		96							
LCSW	LCSW	2014	98		98		99							
K1106152-SRM1	DORM	2017	92		90		93							
K1106152-SRM2	TORT	2019	90		90		94							
K1106152-009	EWL-DES	2022	89		90		94							
K1106152-015	EWL-HOU-C	2024	89		89		93							
K1106152-025	EWL-BIL	2027	89		89		94							
CCV2	CCV2	2030	93		94		97							
CCB2	CCB2	2032	92		92		94							
K1106152-025D	EWL-BIL	2035	87		86		91							
K1106152-025L	EWL-BIL	2038	91		92		96							
K1106152-025A	EWL-BIL	2040	87		87		92							
K1106152-025S	EWL-BIL	2043	86		87		92							
ZZZZZZ	ZZZZZZ	2046												
ZZZZZZ	ZZZZZZ	2048												
ZZZZZZ	ZZZZZZ	2051												
ZZZZZZ	ZZZZZZ	2054												
ZZZZZZ	ZZZZZZ	2057												
ZZZZZZ	ZZZZZZ	2059												
CCV3	CCV3	2102	100		101		103							
CCB3	CCB3	2105	98		98		101							
LLCCV2	LLCCV2	2110	95		96		99							

Conversion from dry weight to wet weight:

Sample I.D.	Dry Weight	Percent Solids	Wet Weight
K1106152-009	0.3020	19.6	1.5408
K1106152-015	0.3020	23.5	1.2851
K1106152-025	0.3010	23.1	1.3030
K1106152-025D	0.3020	23.1	1.3074
K1106152-025S	0.3030	23.1	1.3117
K1106154-009	0.3020	11.0	2.7455
K1106154-015	0.3000	12.2	2.4590
K1106154-025	0.3010	21.2	1.4198
K1106154-025D	0.3020	21.2	1.4245
K1106154-025S	0.3030	21.2	1.4292
K1106157-009	0.3000	52.3	0.5736
K1106157-015	0.3010	59.1	0.5093
K1106157-025	0.3030	50.3	0.6024
K1106157-025D	0.3010	50.3	0.5984
K1106157-025S	0.3000	50.3	0.5964
K1106166-009	0.3010	15.9	1.8931
K1106166-015	0.3030	17.6	1.7216
K1106166-025	0.3030	18.6	1.6290
K1106166-025D	0.3020	18.6	1.6237
K1106166-025S	0.3030	18.6	1.6290

SG 7/23/14

Columbia Analytical Services
Metals Tissue Digestion Sheet

Service Request Number(s) : K1106152, K1106154, K1106157, K1106166 137816					
Star Lims Run No.:			Analysis for : ICP (ICP-MS) GFAA		
Method : 6020A			other:		
Sample	**Initial Weight (g)**	**freeze Dry**	**Wet**	**Final Volume (ml)**	**Matrix**
Blank			X	30	15% HNO3
LCS			X		15% HNO3
Dorm-3	0.301		X		15% HNO3
Tort-2	0.302		X		15% HNO3
K1106152-009	0.302	X			15% HNO3
K1106152-015	0.302	X			15% HNO3
K1106152-025	0.301	X			15% HNO3
K1106152-025 Dup	0.302	X			15% HNO3
K1106152-025 MS	0.303	X			15% HNO3
K1106154-009	0.302	X			15% HNO3
K1106154-015	0.300	X			15% HNO3
K1106154-025	0.301	X			15% HNO3
K1106154-025 Dup	0.302	X			15% HNO3
K1106154-025 MS	0.303	X			15% HNO3
K1106157-009	0.300	X			15% HNO3
K1106157-015	0.301	X			15% HNO3
K1106157-025	0.303	X			15% HNO3
K1106157-025 Dup	0.301	X			15% HNO3
K1106157-025 MS	0.300	X			15% HNO3
K1106166-009	0.301	X			15% HNO3
K1106166-015	0.303	X			15% HNO3
K1106166-025	0.303	X			15% HNO3
K1106166-025 Dup	0.302	X			15% HNO3
K1106166-025 MS	0.303	X			15% HNO3
		IV 7/18/11			

Time Digestion Started: 7/14/11 5:00pm **Oven Temp:** 109 **Time Digestion Ended:** 7:00pm 7/17/11

Lot # Acids Used: HNO3 ~~50181~~ 49713 **Oven Temp:** 109

LCS: Dorm-3 (96.1% Solids) ID#14879, Tort-2(94.7% Solids) ID#29883 **Balance I.D.:** 21B

SPIKE INFO IV 7/17/11 0.300

K-MET SS1 ID# 28451, ~~0.500~~ **mls added**

K-MET SS3 ID#28474, 0.050 **mls added**

K-MET SS4 ID#28373, 0.050 **mls added**

K-MET SS2 ID#28554, 0 **mls added**

K-MET SS5 ID#29301, 0.300 **mls added**

Additional spikes:

Comments:

Analyst [signature] **Date** 7/14/11

Reviewer [signature] **Date** 7/21/11

TissueDig.xls
7/14/2011

Service Request # _K1106152_____
Calibration __072511CMS03_____
QC in calibration___072511CMS03_____
QC Service Request # ___K1106152_____
STARLIMS run # ___254739_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. LLICV run	X		
14. Cd Correction Applied	X	X	
15. ICSA and ICSAB in control	X		
16. Serial dilution run	X		
17. Post spike in control	X		
18. Was run stop prematurely, If so why?		X	

Comments:

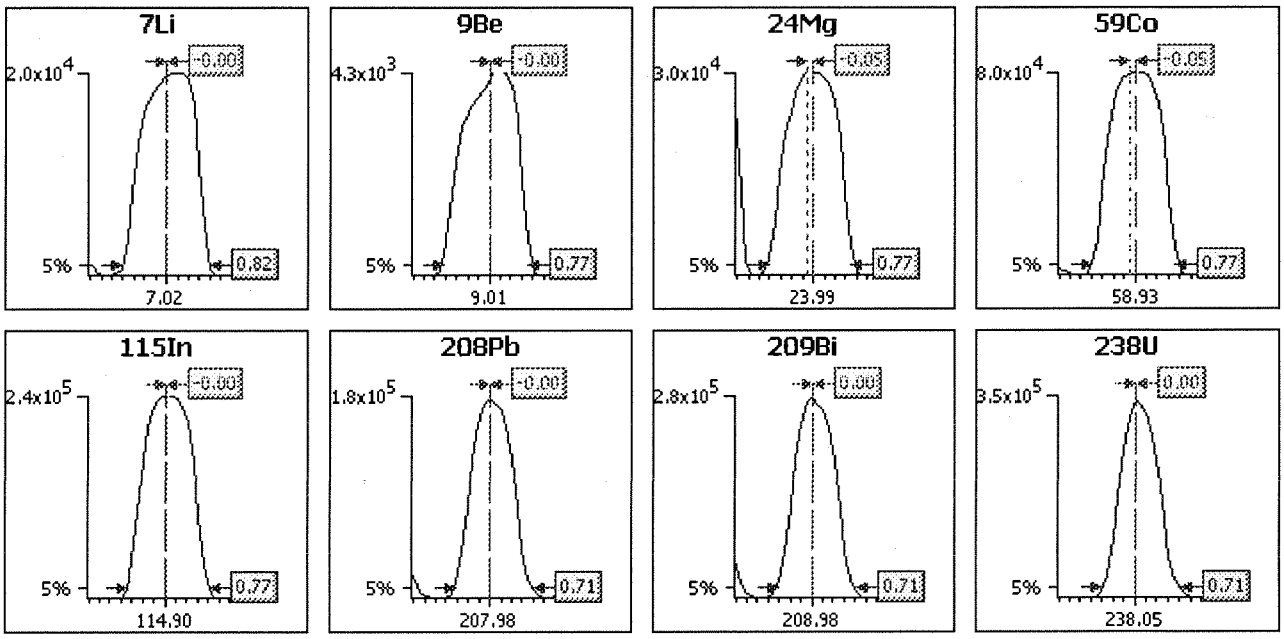
Primary Review by JDB Date 7/26/11
Secondary Review by _____ Date JG 7/26/11
R:\icp\misc\data review forms\icpms review form

Performance Report

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Mass Calibration verification

Acquisition parameters
Sweeps : 100
Dwell : 1.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.90	0.60	0.10	0.82	-0.00
9Be	0.90	0.60	0.10	0.77	-0.00
24Mg	0.90	0.60	0.10	0.77	-0.05
59Co	0.90	0.60	0.10	0.77	-0.05
115In	0.90	0.60	0.10	0.77	-0.00
208Pb	0.90	0.60	0.10	0.71	-0.00
209Bi	0.90	0.60	0.10	0.71	0.00
238U	0.90	0.60	0.10	0.71	0.00

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Tune conditions

Major	
Extraction	-122
Lens 1	3.8
Focus	22.4
D1	-36.9
Pole Bias	0.5
Hexapole Bias	0.6
Nebuliser	0.78
Sampling Depth	70

Minor	
Lens 2	-16.5
Lens 3	-187.5
Forward power	1247
Horizontal	123
Vertical	305
D2	-147
DA	-35.3
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	115
High resolution	125
Analogue Detector	1800
PC Detector	3750

Add. Gases

Sensitivity and stability results

Acquisition parameters
Sweeps : 400

Run	Time	5Bkg	7Li	9Be	24Mg	59Co	115In	140Ce	156Ce O	208Pb
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	-	-	5.0%
	Countrate	-	>1000	>1000	>1000	>1000	>1000	-	-	>1000
1	9:14:47 AM	0.000	22206.088	4623.425	31765.651	83586.510	246835.65	277700.92	4135.691	182092.85
2	9:16:01 AM	0.000	21986.806	4584.906	31601.079	82773.876	246324.05	277752.46	4148.947	182861.29
3	9:17:14 AM	0.000	22481.514	4611.419	31917.181	83515.361	248154.07	279178.92	4073.162	183171.95
4	9:18:27 AM	0.000	22185.037	4656.942	31580.508	82715.094	246120.91	277306.66	4103.176	182404.25
5	9:19:40 AM	0.000	22596.047	4673.701	31791.742	83502.241	247094.28	278116.85	4191.966	183633.37
x		0.000	22291.098	4630.079	31731.232	83218.616	246905.79	278011.16	4130.588	182832.74
σ		0.00	245.11	35.56	140.61	434.50	798.92	713.15	45.22	609.91
%RSD		0.000	1.100	0.768	0.443	0.522	0.324	0.257	1.095	0.334

Run	Time	209Bi	220Bkg	238U
Dwell (mSecs)		10.0	10.0	10.0
Limits	%RSD	5.0%	-	5.0%
	Countrate	>1000	-	>1000
1	9:14:47 AM	280521.57	0.000	358531.50
2	9:16:01 AM	281510.70	0.000	359822.53
3	9:17:14 AM	282585.28	0.500	362153.66
4	9:18:27 AM	281348.80	0.000	360010.25
5	9:19:40 AM	282502.26	0.000	362593.95
x		281693.72	0.100	360622.38
σ		862.41	0.22	1704.27
%RSD		0.306	223.607	0.473

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0200
1	9:14:47 AM	0.015
2	9:16:01 AM	0.015
3	9:17:14 AM	0.015
4	9:18:27 AM	0.015
5	9:19:40 AM	0.015
x		0.0149
σ		0.00
%RSD		1.2102

Result : The performance report passed.

Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	Cal. Blk	Blank	1.000	0	1	1	150
2	Cal. Stn	Fully Quant Standard	1.000	0	1	2	150
3	ICV1	Unknown	1.000	0	1	3	150
4	CCV1	Unknown	1.000	0	1	2	150
5	ICB1	Unknown	1.000	0	1	1	150
6	CCB1	Unknown	1.000	0	1	1	150
7	LLICVS	Unknown	1.000	0	1	4	150
8	ICSA	Unknown	1.000	0	1	5	150
9	ICSAB	Unknown	1.000	0	1	6	150
10	K1106152-MB 1/5	Unknown	1.000	1	1	1	150
11	LCSW 1/5	Unknown	1.000	1	1	2	150
12	DORM 1/5	Unknown	1.000	1	1	3	150
13	TORT 1/5	Unknown	1.000	1	1	4	150
14	K1106152-009 1/5	Unknown	1.000	1	1	5	150
15	K1106152-015 1/5	Unknown	1.000	1	1	6	150
16	K1106152-025 1/5	Unknown	1.000	1	1	7	150
17	CCV2	Unknown	1.000	0	1	2	150
18	CCB2	Unknown	1.000	0	1	1	150
19	K1106152-025D 1/5	Unknown	1.000	1	1	8	150
20	K1106152-025L 1/5	Unknown	1.000	1	1	9	150
21	K1106152-025A 1/5	Unknown	1.000	1	1	10	150
22	K1106152-025S 1/5	Unknown	1.000	1	1	11	150
23	K1106154-009 1/5	Unknown	1.000	1	1	12	150
24	K1106154-015 1/5	Unknown	1.000	1	2	1	150
25	K1106154-025 1/5	Unknown	1.000	1	2	2	150
26	K1106154-025D 1/5	Unknown	1.000	1	2	3	150
27	K1106154-025S 1/5	Unknown	1.000	1	2	4	150
28	K1106157-009 1/5	Unknown	1.000	1	2	5	150
29	CCV3	Unknown	1.000	0	1	2	150
30	CCB3	Unknown	1.000	0	1	1	150
31	LLCCV2	Unknown	1.000	0	1	4	150
32	K1106157-015 1/5	Unknown	1.000	1	2	6	150
33	K1106157-025 1/5	Unknown	1.000	1	2	7	150
34	K1106157-025D 1/5	Unknown	1.000	1	2	8	150
35	K1106157-025S 1/5	Unknown	1.000	1	2	9	150
36	K1106166-009 1/5	Unknown	1.000	1	2	10	150
37	K1106166-015 1/5	Unknown	1.000	1	2	11	150
38	K1106166-025 1/5	Unknown	1.000	1	2	12	150
39	K1106166-025D 1/5	Unknown	1.000	1	3	1	150
40	K1106166-025S	Unknown	1.000	1	3	2	150
41	CCV4	Unknown	1.000	0	1	2	150
42	CCB4	Unknown	1.000	0	1	1	150
43	LLCCV3	Unknown	1.000	0	1	4	150

Dilution Corrected Concentrations

Cal. Blk 7/25/2011 7:48:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:24	99.0%	0.0000	0.0802	-0.1049	0.0697	98.9%	98.7%	-0.0022
2	19:48:41	101.2%	-0.0202	-0.0462	0.0665	-0.1182	101.1%	100.9%	-0.0009
3	19:48:57	99.9%	0.0201	-0.0340	0.0383	0.0485	100.0%	100.4%	0.0031
x		100.0%	0.0000	0.0000	-0.0000	0.0000	100.0%	100.0%	-0.0000
σ		1.1%	0.0202	0.0697	0.0919	0.1029	1.1%	1.2%	0.0028
%RSD		1.1	0.0000	0.0000	0.0000	0.0000	1.1	1.2	0.0000

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:48:24	0.0003	0.0007
2	19:48:41	0.0010	0.0000
3	19:48:57	-0.0013	-0.0007
x		-0.0000	0.0000
σ		0.0012	0.0007
%RSD		0.0000	0.0000

Cal. Stn 7/25/2011 7:50:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:50:44	97.4%	25.1399	24.7348	25.1750	25.0817	97.2%	98.3%	25.1977
2	19:51:01	99.9%	24.7859	24.9687	24.8226	24.7612	100.1%	102.1%	24.5238
3	19:51:18	100.2%	25.0742	25.2966	25.0024	25.1570	100.5%	101.4%	25.2785
x		99.2%	25.0000	25.0000	25.0000	25.0000	99.3%	100.6%	25.0000
σ		1.5%	0.1883	0.2822	0.1762	0.2102	1.8%	2.0%	0.4144
%RSD		1.5	0.7533	1.1288	0.7050	0.8407	1.8	2.0	1.6574

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:50:44	25.1884	25.0694
2	19:51:01	24.5550	24.6070
3	19:51:18	25.2566	25.3236
x		25.0000	25.0000
σ		0.3869	0.3633
%RSD		1.5474	1.4532

ICV1 7/25/2011 7:53:22 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:22	97.6%	24.7893	26.2531	25.6672	24.7835	97.8%	98.3%	100.5858
2	19:53:39	99.6%	24.8304	24.6038	25.1208	24.8302	99.3%	100.4%	101.0716
3	19:53:55	100.4%	24.8304	25.4895	25.1111	24.9097	100.1%	101.7%	100.6995
x		99.2%	24.8167	25.4488	25.2997	24.8411	99.1%	100.1%	100.7856
σ		1.4%	0.0238	0.8254	0.3183	0.0638	1.2%	1.7%	0.2541
%RSD		1.4	0.0957	3.2434	1.2583	0.2568	1.2	1.7	0.2521

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:53:22	100.4979	104.1746
2	19:53:39	99.9873	104.5875
3	19:53:55	100.5339	104.3110
x		100.3397	104.3577
σ		0.3057	0.2104
%RSD		0.3047	0.2016

CCV1 7/25/2011 7:56:02 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:02	97.0%	24.9811	25.9538	25.3871	25.6478	97.4%	98.2%	25.0097
2	19:56:19	98.0%	24.9097	25.5188	25.4736	25.2765	98.5%	99.7%	25.4247
3	19:56:37	98.2%	25.3698	24.8088	24.6192	24.9617	99.7%	101.5%	24.9522
x		97.7%	25.0869	25.4271	25.1600	25.2953	98.5%	99.8%	25.1289
σ		0.6%	0.2476	0.5780	0.4703	0.3434	1.2%	1.7%	0.2578
%RSD		0.7	0.9871	2.2731	1.8694	1.3577	1.2	1.7	1.0260

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:56:02	25.0456	24.9841
2	19:56:19	25.3132	25.3080
3	19:56:37	24.9474	25.1083
x		25.1020	25.1335
σ		0.1893	0.1634
%RSD		0.7542	0.6500

ICB1 7/25/2011 7:58:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:52	96.7%	0.0267	0.1452	0.0579	0.1823	97.4%	97.1%	0.0062
2	19:59:09	94.6%	-0.0384	0.1062	0.2146	-0.1174	95.4%	96.0%	0.0098
3	19:59:26	100.3%	-0.0207	-0.0354	-0.1495	-0.1854	101.2%	102.4%	0.0108
x		97.2%	-0.0108	0.0720	0.0410	-0.0401	98.0%	98.5%	0.0089
σ		2.9%	0.0337	0.0950	0.1826	0.1956	3.0%	3.5%	0.0024
%RSD		3.0	310.5099	131.9958	445.4244	487.2992	3.0	3.5	27.4426

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:58:52	0.0012	0.0028
2	19:59:09	0.0048	0.0063
3	19:59:26	0.0161	0.0166
x		0.0073	0.0086
σ		0.0078	0.0072
%RSD		105.7930	83.9788

CCB1 7/25/2011 8:01:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:24	96.5%	0.0030	0.0218	0.3092	0.0024	97.9%	98.1%	-0.0008
2	20:01:41	97.9%	-0.0120	0.0645	-0.1944	0.0019	99.0%	99.8%	0.0011
3	20:01:58	97.8%	0.0255	0.0743	-0.0342	0.1319	99.0%	100.2%	0.0045
x		97.4%	0.0055	0.0536	0.0268	0.0454	98.6%	99.4%	0.0016
σ		0.8%	0.0189	0.0279	0.2573	0.0749	0.6%	1.1%	0.0027
%RSD		0.8	345.3118	52.1393	958.5967	164.8773	0.6	1.1	166.5632

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:01:24	0.0011	0.0016
2	20:01:41	0.0067	0.0040
3	20:01:58	0.0071	0.0065
x		0.0050	0.0041
σ		0.0033	0.0025
%RSD		67.2597	60.5126

LLICVS 7/25/2011 8:03:59 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	97.8%	0.8915	2.2567	2.1029	1.6968	98.7%	99.0%	0.1091
2	20:04:16	97.6%	1.0030	2.0525	2.0579	1.9848	99.0%	99.5%	0.1132
3	20:04:33	101.5%	0.8952	1.9795	1.7485	1.7279	103.3%	104.8%	0.1028
x		99.0%	0.9299	2.0962	1.9698	1.8032	100.3%	101.1%	0.1084
σ		2.2%	0.0634	0.1437	0.1929	0.1581	2.6%	3.2%	0.0053
%RSD		2.2	6.8143	6.8544	9.7949	8.7672	2.6	3.2	4.8678

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:03:59	0.0922	0.0964
2	20:04:16	0.0978	0.0997
3	20:04:33	0.0887	0.0884
x		0.0929	0.0948
σ		0.0046	0.0058
%RSD		4.9647	6.1276

ICSA 7/25/2011 8:06:33 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:33	81.4%	0.0678	2.6181	-0.0538	1.0635	79.2%	82.8%	0.1095
2	20:06:50	81.9%	0.1049	2.3636	0.0064	1.1228	79.9%	84.5%	0.0921
3	20:07:07	83.5%	0.0493	2.4830	0.3068	0.9823	80.6%	85.5%	0.1162
x		82.3%	0.0740	2.4882	0.0865	1.0562	79.9%	84.3%	0.1059
σ		1.1%	0.0283	0.1273	0.1932	0.0705	0.7%	1.3%	0.0124
%RSD		1.3	38.2677	5.1164	223.4657	6.6764	0.9	1.6	11.7411

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:06:33	0.1166	0.1180
2	20:06:50	0.1375	0.1228
3	20:07:07	0.1266	0.1185
x		0.1269	0.1198
σ		0.0105	0.0026
%RSD		8.2479	2.1961

ICSAB 7/25/2011 8:09:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:09	84.8%	23.5408	26.5246	24.0616	24.7128	81.3%	84.9%	0.1185
2	20:09:26	84.8%	23.5502	26.6444	24.3181	24.9215	81.8%	85.6%	0.1081
3	20:09:43	85.6%	23.6833	26.6194	24.8697	24.7376	82.2%	86.6%	0.1254
x		85.0%	23.5914	26.5961	24.4165	24.7907	81.8%	85.7%	0.1174
σ		0.5%	0.0797	0.0632	0.4129	0.1140	0.4%	0.9%	0.0087
%RSD		0.6	0.3378	0.2375	1.6913	0.4599	0.5	1.0	7.4039

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:09:09	0.1216	0.1200
2	20:09:26	0.1335	0.1257
3	20:09:43	0.1113	0.1210
x		0.1221	0.1222
σ		0.0111	0.0030
%RSD		9.1077	2.4847

K1106152-MB 1/5 7/25/2011 8:11:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:11:44	94.8%	0.0705	0.0674	-0.0553	0.2797	94.2%	94.9%	0.0043
2	20:12:00	94.9%	0.1097	-0.0012	-0.1027	0.3356	94.5%	95.6%	0.0007
3	20:12:17	95.9%	-0.0109	0.1495	-0.1868	0.0235	96.0%	97.1%	0.0041
x		95.2%	0.0564	0.0719	-0.1149	0.2129	94.9%	95.9%	0.0030
σ		0.6%	0.0615	0.0755	0.0666	0.1664	1.0%	1.1%	0.0020
%RSD		0.6	109.0543	104.9782	57.9352	78.1391	1.0	1.2	66.4349

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:11:44	0.0041	0.0022
2	20:12:00	0.0060	0.0037
3	20:12:17	0.0082	0.0032
x		0.0061	0.0030
σ		0.0021	0.0008
%RSD		33.6538	25.0129

LCSW 1/5 7/25/2011 8:14:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:16	97.4%	31.4714	32.5214	32.4444	31.6754	96.0%	97.0%	384.3275
2	20:14:32	98.7%	31.7658	32.6121	32.8171	31.7772	98.4%	99.0%	386.4839
3	20:14:49	98.8%	31.7295	32.0995	32.0367	32.2489	98.1%	100.2%	386.0672
x		98.3%	31.6556	32.4110	32.4327	31.9005	97.5%	98.7%	385.6262
σ		0.8%	0.1605	0.2735	0.3903	0.3060	1.3%	1.6%	1.1438
%RSD		0.8	0.5072	0.8439	1.2035	0.9592	1.3	1.6	0.2966

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:14:16	389.2819	399.4309
2	20:14:32	390.6857	398.7584
3	20:14:49	390.4196	396.5722
x		390.1291	398.2538
σ		0.7456	1.4946
%RSD		0.1911	0.3753

DORM 1/5 7/25/2011 8:17:00 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:00	92.2%	12.4278	6.9888	6.3983	7.4829	89.4%	91.8%	9.2627
2	20:17:16	92.5%	12.4614	6.9190	6.2835	7.1830	90.5%	93.5%	9.3537
3	20:17:33	92.3%	12.6429	7.2214	6.4155	8.0865	90.8%	93.7%	9.4918
x		92.3%	12.5107	7.0431	6.3658	7.5841	90.2%	93.0%	9.3694
σ		0.2%	0.1157	0.1583	0.0717	0.4602	0.8%	1.0%	0.1154
%RSD		0.2	0.9250	2.2481	1.1268	6.0679	0.8	1.1	1.2311

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:17:00	9.4446	9.3860
2	20:17:16	9.5969	9.4310
3	20:17:33	9.5239	9.4339
x		9.5218	9.4170
σ		0.0762	0.0269
%RSD		0.8001	0.2854

TORT 1/5 7/25/2011 8:19:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:38	90.6%	38.2332	11.1557	10.5149	11.6591	89.5%	92.4%	3.4312
2	20:19:55	90.6%	38.2690	11.5411	10.5302	11.6344	90.0%	93.2%	3.4661
3	20:20:12	89.9%	38.3356	10.9716	10.4744	11.1890	90.9%	94.9%	3.4493
x		90.4%	38.2793	11.2228	10.5065	11.4942	90.1%	93.5%	3.4488
σ		0.4%	0.0519	0.2906	0.0288	0.2645	0.7%	1.3%	0.0174
%RSD		0.5	0.1357	2.5897	0.2741	2.3016	0.8	1.3	0.5055

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:19:38	3.4050	3.3623
2	20:19:55	3.4302	3.4008
3	20:20:12	3.3755	3.3985
x		3.4036	3.3872
σ		0.0274	0.0216
%RSD		0.8043	0.6380

K1106152-009 1/5 7/25/2011 8:22:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:14	88.5%	10.3315	7.6477	7.1709	8.9740	88.8%	92.1%	50.6858
2	20:22:31	89.0%	10.3636	7.6755	7.4402	8.8644	89.9%	93.5%	51.2620
3	20:22:48	90.4%	9.9222	8.1156	6.7847	8.7775	90.8%	95.8%	49.0315
x		89.3%	10.2058	7.8129	7.1319	8.8720	89.8%	93.8%	50.3264
σ		0.9%	0.2461	0.2625	0.3295	0.0985	1.0%	1.9%	1.1579
%RSD		1.1	2.4110	3.3595	4.6199	1.1099	1.1	2.0	2.3008

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:22:14	50.9750	51.5372
2	20:22:31	51.0843	52.0591
3	20:22:48	49.2548	49.9271
x		50.4381	51.1744
σ		1.0262	1.1113
%RSD		2.0345	2.1717

K1106152-015 1/5 7/25/2011 8:24:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:55	88.6%	18.4827	8.7899	7.8941	10.4379	88.5%	91.9%	22.2248
2	20:25:12	88.4%	18.2008	8.8723	8.3066	10.3363	89.1%	93.4%	22.2225
3	20:25:29	89.9%	18.6007	8.6387	8.1558	10.7388	90.0%	94.7%	22.4456
x		89.0%	18.4280	8.7669	8.1188	10.5043	89.2%	93.3%	22.2976
σ		0.8%	0.2055	0.1185	0.2087	0.2093	0.7%	1.4%	0.1282
%RSD		0.9	1.1149	1.3518	2.5708	1.9924	0.8	1.5	0.5748

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:24:55	22.2943	22.2822
2	20:25:12	22.4404	22.3510
3	20:25:29	22.3668	22.2781
x		22.3672	22.3038
σ		0.0731	0.0409
%RSD		0.3268	0.1836

K1106152-025 1/5 7/25/2011 8:27:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:36	87.2%	34.3973	10.9555	10.6992	12.3307	87.4%	91.9%	10.3502
2	20:27:53	87.9%	34.5593	11.6510	10.9314	12.2852	89.1%	93.2%	10.5133
3	20:28:10	91.2%	34.0105	11.1559	10.5216	12.3866	90.9%	96.1%	10.4430
x		88.8%	34.3224	11.2541	10.7174	12.3342	89.1%	93.7%	10.4355
σ		2.1%	0.2820	0.3580	0.2055	0.0508	1.8%	2.1%	0.0818
%RSD		2.4	0.8216	3.1812	1.9175	0.4120	2.0	2.3	0.7837

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:27:36	10.4181	10.2433
2	20:27:53	10.3702	10.4904
3	20:28:10	10.3004	10.2256
x		10.3629	10.3198
σ		0.0592	0.1481
%RSD		0.5714	1.4347

CCV2 7/25/2011 8:30:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:14	92.7%	25.2461	24.5765	24.5949	26.1126	94.2%	96.1%	25.0647
2	20:30:32	92.6%	24.7233	25.1948	25.0779	24.9978	94.2%	97.1%	25.1032
3	20:30:48	93.6%	24.7587	24.6564	24.3541	25.1058	94.9%	97.6%	25.0295
x		93.0%	24.9094	24.8092	24.6756	25.4054	94.4%	97.0%	25.0658
σ		0.5%	0.2921	0.3363	0.3686	0.6148	0.4%	0.8%	0.0369
%RSD		0.6	1.1728	1.3555	1.4936	2.4201	0.4	0.8	0.1472

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:30:14	24.9866	25.0973
2	20:30:32	24.9385	25.1608
3	20:30:48	25.3110	25.2951
x		25.0787	25.1844
σ		0.2026	0.1010
%RSD		0.8079	0.4012

CCB2 7/25/2011 8:32:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:58	91.6%	0.0954	0.0188	-0.1648	0.2896	91.6%	93.3%	0.0037
2	20:33:15	92.7%	0.0718	0.0848	-0.3457	0.2425	92.5%	94.4%	0.0043
3	20:33:32	92.8%	0.0931	0.0647	-0.2672	0.3002	92.7%	95.4%	0.0099
x		92.4%	0.0868	0.0561	-0.2592	0.2774	92.3%	94.4%	0.0060
σ		0.7%	0.0130	0.0338	0.0907	0.0307	0.6%	1.1%	0.0034
%RSD		0.7	14.9948	60.3268	34.9896	11.0799	0.6	1.1	56.6580

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:32:58	0.0034	0.0027
2	20:33:15	0.0049	0.0073
3	20:33:32	0.0120	0.0122
x		0.0068	0.0074
σ		0.0046	0.0047
%RSD		67.4063	64.1009

K1106152-025D 1/5 7/25/2011 8:35:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:35:31	87.3%	34.3755	11.0086	10.3655	12.4777	86.5%	90.6%	10.3519
2	20:35:48	86.1%	35.3760	11.5325	11.4532	12.1977	86.2%	90.3%	10.7928
3	20:36:04	87.2%	34.9379	11.7899	11.1546	12.3071	86.3%	92.2%	10.7030
x		86.9%	34.8965	11.4436	10.9911	12.3275	86.3%	91.0%	10.6159
σ		0.7%	0.5015	0.3981	0.5619	0.1411	0.2%	1.0%	0.2330
%RSD		0.8	1.4371	3.4791	5.1127	1.1450	0.2	1.1	2.1948

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:35:31	10.4449	10.3740
2	20:35:48	10.7723	10.8009
3	20:36:04	10.7101	10.6165
x		10.6425	10.5971
σ		0.1739	0.2141
%RSD		1.6336	2.0201

K1106152-025L 1/5 7/25/2011 8:38:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:09	89.2%	6.9076	2.5026	1.8856	2.6061	89.9%	93.5%	1.9546
2	20:38:26	92.2%	6.7477	2.4176	1.4925	2.9008	92.0%	96.8%	1.9563
3	20:38:43	91.4%	6.7413	2.5126	1.7836	2.7418	92.7%	97.0%	1.8996
x		90.9%	6.7989	2.4776	1.7206	2.7496	91.5%	95.8%	1.9368
σ		1.5%	0.0942	0.0522	0.2040	0.1475	1.4%	2.0%	0.0322
%RSD		1.7	1.3859	2.1067	11.8565	5.3654	1.6	2.1	1.6636

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:38:09	1.9429	1.9252
2	20:38:26	1.8772	1.8926
3	20:38:43	1.9406	1.8837
x		1.9202	1.9005
σ		0.0373	0.0218
%RSD		1.9433	1.1495

K1106152-025A 1/5 7/25/2011 8:40:48 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:40:48	85.8%	84.3328	60.1753	59.7787	60.5201	85.7%	90.6%	58.7233
2	20:41:05	87.2%	83.2527	61.5064	60.2662	61.0484	86.8%	92.6%	59.2410
3	20:41:22	87.5%	83.8190	58.7445	58.8060	62.6952	87.5%	93.9%	58.8108
x		86.8%	83.8015	60.1421	59.6170	61.4212	86.7%	92.4%	58.9250
σ		0.9%	0.5403	1.3813	0.7434	1.1345	0.9%	1.7%	0.2771
%RSD		1.0	0.6447	2.2967	1.2470	1.8470	1.1	1.8	0.4703

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:40:48	58.7089	60.0755
2	20:41:05	58.7846	60.2840
3	20:41:22	58.5977	59.9680
x		58.6970	60.1091
σ		0.0940	0.1607
%RSD		0.1602	0.2673

K1106152-025S 1/5 7/25/2011 8:43:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:43:31	85.7%	67.0829	43.5343	43.6521	46.3245	86.0%	90.5%	388.9626
2	20:43:48	85.2%	68.0453	44.1922	44.1283	46.8821	85.6%	90.9%	402.3458
3	20:44:04	87.6%	65.1100	41.4758	42.0788	44.0860	88.7%	94.3%	379.7889
x		86.2%	66.7461	43.0674	43.2864	45.7642	86.8%	91.9%	390.3658
σ		1.3%	1.4964	1.4171	1.0726	1.4799	1.7%	2.1%	11.3437
%RSD		1.5	2.2419	3.2904	2.4779	3.2337	1.9	2.3	2.9059

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:43:31	393.9724	406.1686
2	20:43:48	407.8022	414.9542
3	20:44:04	386.6041	393.2854
x		396.1262	404.8028
σ		10.7619	10.8988
%RSD		2.7168	2.6924

K1106154-009 1/5 7/25/2011 8:46:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:16	88.1%	6.3656	4.6838	3.6338	8.0406	87.5%	93.2%	220.0446
2	20:46:32	87.7%	6.3832	5.1776	3.6022	7.7614	88.2%	94.1%	227.4309
3	20:46:49	87.9%	6.6882	4.8163	4.0134	8.2153	88.6%	94.6%	230.3609
x		87.9%	6.4790	4.8926	3.7498	8.0058	88.1%	94.0%	225.9455
σ		0.2%	0.1814	0.2556	0.2289	0.2289	0.5%	0.7%	5.3161
%RSD		0.2	2.8002	5.2240	6.1033	2.8595	0.6	0.8	2.3528

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:46:16	222.0766	231.0681
2	20:46:32	228.5365	235.2880
3	20:46:49	232.0782	238.5573
x		227.5638	234.9711
σ		5.0713	3.7546
%RSD		2.2285	1.5979

K1106154-015 1/5 7/25/2011 8:48:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:58	86.6%	14.8148	8.1878	6.5586	12.5508	86.2%	91.3%	142.9237
2	20:49:15	87.5%	14.6857	7.2952	6.9641	11.9548	87.1%	93.0%	143.1859
3	20:49:32	88.1%	14.9542	7.1336	6.8182	12.6714	88.3%	94.2%	142.6085
x		87.4%	14.8183	7.5389	6.7803	12.3923	87.2%	92.8%	142.9060
σ		0.8%	0.1343	0.5678	0.2054	0.3837	1.1%	1.5%	0.2891
%RSD		0.9	0.9061	7.5316	3.0297	3.0960	1.2	1.6	0.2023

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:48:58	143.2520	150.5614
2	20:49:15	143.0995	152.3008
3	20:49:32	143.2500	151.6626
x		143.2005	151.5083
σ		0.0875	0.8799
%RSD		0.0611	0.5808

K1106154-025 1/5 7/25/2011 8:51:40 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:40	87.2%	24.7874	7.4422	6.8240	10.5757	87.8%	91.6%	42.1623
2	20:51:57	88.2%	24.6294	7.1942	7.0690	10.4849	88.5%	93.6%	41.7352
3	20:52:13	88.7%	24.4095	7.7216	6.8160	10.6212	89.0%	94.4%	41.7118
x		88.1%	24.6088	7.4527	6.9030	10.5606	88.4%	93.2%	41.8698
σ		0.8%	0.1898	0.2638	0.1438	0.0694	0.6%	1.5%	0.2536
%RSD		0.9	0.7713	3.5400	2.0834	0.6568	0.7	1.6	0.6057

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:51:40	42.2824	42.4014
2	20:51:57	41.7811	42.0794
3	20:52:13	41.6806	42.2795
x		41.9147	42.2534
σ		0.3224	0.1625
%RSD		0.7691	0.3847

K1106154-025D 1/5 7/25/2011 8:54:20 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:20	87.7%	24.7814	7.3761	6.5299	9.9749	86.6%	90.4%	33.1784
2	20:54:37	87.5%	24.4345	7.4456	6.6336	10.0091	87.6%	92.1%	33.3948
3	20:54:54	88.3%	24.8430	7.0569	6.7480	9.8763	88.1%	93.1%	33.4492
x		87.9%	24.6863	7.2929	6.6372	9.9535	87.4%	91.9%	33.3408
σ		0.4%	0.2202	0.2073	0.1091	0.0689	0.8%	1.4%	0.1432
%RSD		0.5	0.8920	2.8422	1.6435	0.6927	0.9	1.5	0.4296

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:54:20	33.2600	33.4782
2	20:54:37	33.4963	33.5536
3	20:54:54	33.2498	33.5332
x		33.3354	33.5217
σ		0.1395	0.0390
%RSD		0.4184	0.1164

K1106154-025S 1/5 7/25/2011 8:57:01 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:01	86.9%	56.0943	40.5881	39.2579	42.8717	85.8%	90.2%	431.3307
2	20:57:18	88.2%	55.8655	39.8129	38.7404	41.8497	87.6%	92.4%	429.2607
3	20:57:34	89.2%	55.0017	40.3869	38.2641	41.5949	88.2%	93.4%	432.0546
x		88.1%	55.6539	40.2626	38.7542	42.1054	87.2%	92.0%	430.8820
σ		1.1%	0.5762	0.4022	0.4970	0.6757	1.2%	1.6%	1.4500
%RSD		1.3	1.0354	0.9990	1.2826	1.6048	1.4	1.7	0.3365

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:57:01	437.0015	450.0845
2	20:57:18	435.0139	445.2183
3	20:57:34	438.1749	445.9379
x		436.7301	447.0802
σ		1.5978	2.6265
%RSD		0.3659	0.5875

K1106157-009 1/5 7/25/2011 8:59:46 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:59:46	88.2%	1.4718	1.5245	1.2788	3.5385	85.7%	90.9%	1357.4406
2	21:00:02	89.3%	1.3086	1.6741	0.7563	3.2905	87.8%	93.6%	1284.0608
3	21:00:19	90.8%	1.4290	1.5854	0.8854	3.5262	88.2%	95.0%	1281.3477
x		89.4%	1.4032	1.5947	0.9735	3.4517	87.2%	93.2%	1307.6164
σ		1.3%	0.0846	0.0752	0.2722	0.1397	1.4%	2.1%	43.1703
%RSD		1.4	6.0306	4.7180	27.9588	4.0483	1.6	2.2	3.3015

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:59:46	1318.4990	1363.5993
2	21:00:02	1296.2479	1347.4511
3	21:00:19	1293.2552	1340.3673
x		1302.6674	1350.4726
σ		13.7920	11.9071
%RSD		1.0588	0.8817

CCV3 7/25/2011 9:02:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:34	99.3%	26.0952	25.7427	26.3060	26.3259	100.3%	100.8%	25.8832
2	21:02:51	100.6%	24.6036	24.4687	25.3435	24.9107	102.2%	105.3%	24.5144
3	21:03:08	99.9%	25.3586	25.8593	26.1686	25.5309	100.7%	103.2%	26.3595
x		99.9%	25.3525	25.3569	25.9394	25.5892	101.1%	103.1%	25.5857
σ		0.6%	0.7458	0.7714	0.5206	0.7094	1.0%	2.2%	0.9578
%RSD		0.6	2.9419	3.0421	2.0071	2.7722	1.0	2.2	3.7437

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:02:34	25.9585	26.0338
2	21:02:51	24.6930	24.6966
3	21:03:08	26.2432	26.4351
x		25.6316	25.7218
σ		0.8252	0.9103
%RSD		3.2193	3.5389

CCB3 7/25/2011 9:05:19 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:05:19	97.3%	0.0853	0.1332	-0.2541	0.3393	97.8%	98.8%	0.0270
2	21:05:36	98.1%	0.0277	0.1395	-0.1471	0.1453	98.5%	101.1%	0.0529
3	21:05:53	98.0%	0.1608	0.1208	0.4181	0.6026	98.9%	101.7%	0.1286
x		97.8%	0.0913	0.1312	0.0056	0.3624	98.4%	100.5%	0.0695
σ		0.4%	0.0667	0.0095	0.3612	0.2295	0.6%	1.5%	0.0527
%RSD		0.4	73.1087	7.2570	6422.5664	63.3339	0.6	1.5	75.8819

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:05:19	0.0206	0.0259
2	21:05:36	0.0663	0.0552
3	21:05:53	0.1329	0.1360
x		0.0733	0.0723
σ		0.0565	0.0570
%RSD		77.0626	78.8342

LLCCV2 7/25/2011 9:10:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:10:34	93.4%	1.1143	1.9255	1.7509	2.2746	94.1%	96.2%	0.1062
2	21:10:50	94.6%	1.0644	2.1541	2.0767	2.3126	96.5%	99.1%	0.0920
3	21:11:07	95.5%	1.0479	2.0639	1.8878	2.1170	97.3%	100.4%	0.1322
x		94.5%	1.0755	2.0478	1.9051	2.2347	96.0%	98.6%	0.1102
σ		1.1%	0.0346	0.1151	0.1636	0.1037	1.7%	2.2%	0.0204
%RSD		1.1	3.2134	5.6220	8.5885	4.6424	1.7	2.2	18.5227

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:10:34	0.1227	0.1088
2	21:10:50	0.1051	0.1021
3	21:11:07	0.1150	0.1105
x		0.1143	0.1071
σ		0.0088	0.0045
%RSD		7.7172	4.1941

K1106157-015 1/5 7/25/2011 9:13:07 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:07	89.6%	2.2201	1.7641	1.4004	3.2459	87.2%	92.4%	807.4174
2	21:13:24	92.3%	2.1262	1.9564	1.7890	3.4091	89.7%	94.9%	808.1947
3	21:13:41	92.5%	2.1263	1.9807	1.5157	3.4649	90.1%	95.6%	813.3167
x		91.5%	2.1575	1.9004	1.5684	3.3733	89.0%	94.3%	809.6429
σ		1.6%	0.0542	0.1187	0.1996	0.1138	1.6%	1.7%	3.2052
%RSD		1.7	2.5112	6.2440	12.7264	3.3731	1.8	1.8	0.3959

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:13:07	823.7413	824.3102
2	21:13:24	826.8480	815.7736
3	21:13:41	832.0509	818.5209
x		827.5467	819.5349
σ		4.1986	4.3577
%RSD		0.5074	0.5317

K1106157-025 1/5 7/25/2011 9:15:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:55	91.6%	5.3167	2.3393	1.8677	3.5353	88.7%	94.0%	309.9191
2	21:16:12	94.1%	5.5312	2.0221	1.7204	4.4611	91.3%	96.7%	306.6572
3	21:16:28	93.0%	5.6174	2.4121	1.9053	4.3282	89.6%	95.5%	319.3831
x		92.9%	5.4884	2.2579	1.8311	4.1082	89.9%	95.4%	311.9865
σ		1.3%	0.1549	0.2073	0.0977	0.5006	1.3%	1.3%	6.6100
%RSD		1.4	2.8220	9.1834	5.3380	12.1850	1.4	1.4	2.1187

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:15:55	310.6326	322.0835
2	21:16:12	308.3458	317.5740
3	21:16:28	321.3966	328.2275
x		313.4583	322.6284
σ		6.9692	5.3476
%RSD		2.2233	1.6575

K1106157-025D 1/5 7/25/2011 9:18:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:38	94.1%	5.6573	2.0806	1.9168	4.3093	91.3%	96.6%	301.3823
2	21:18:55	90.6%	6.0108	2.5836	2.4865	4.3714	87.5%	93.2%	331.5772
3	21:19:11	94.5%	5.6393	2.5328	1.8501	4.5944	91.6%	98.0%	307.6577
x		93.1%	5.7692	2.3990	2.0845	4.4251	90.1%	95.9%	313.5391
σ		2.1%	0.2095	0.2769	0.3498	0.1499	2.3%	2.5%	15.9335
%RSD		2.3	3.6308	11.5421	16.7796	3.3883	2.5	2.6	5.0818

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:18:38	302.5674	312.8714
2	21:18:55	332.5413	340.8849
3	21:19:11	309.0595	315.6721
x		314.7227	323.1428
σ		15.7691	15.4288
%RSD		5.0105	4.7746

K1106157-025S 1/5 7/25/2011 9:21:29 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:29	92.8%	37.5694	32.5887	32.7783	34.3832	90.8%	95.6%	696.8755
2	21:21:45	95.1%	36.6446	31.8673	32.2730	32.4727	92.1%	98.0%	689.8174
3	21:22:02	95.8%	35.1222	31.2963	31.0028	31.5040	94.3%	101.1%	663.9563
x		94.6%	36.4454	31.9174	32.0181	32.7866	92.4%	98.3%	683.5497
σ		1.6%	1.2357	0.6477	0.9148	1.4650	1.8%	2.8%	17.3315
%RSD		1.7	3.3905	2.0292	2.8572	4.4684	1.9	2.8	2.5355

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:21:29	709.9814	714.4389
2	21:21:45	703.8134	699.7073
3	21:22:02	678.9257	670.2445
x		697.5735	694.7969
σ		16.4413	22.5027
%RSD		2.3569	3.2387

K1106166-009 1/5 7/25/2011 9:24:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:24:14	92.9%	2.9319	3.4044	3.8420	3.9167	93.3%	98.0%	16.7376
2	21:24:31	95.2%	3.0173	3.3845	3.2131	4.3946	95.4%	100.1%	16.7794
3	21:24:48	95.3%	3.0292	3.1023	3.6341	4.0695	95.4%	100.5%	17.0312
x		94.5%	2.9928	3.2971	3.5631	4.1270	94.7%	99.6%	16.8494
σ		1.3%	0.0531	0.1690	0.3204	0.2441	1.2%	1.3%	0.1588
%RSD		1.4	1.7738	5.1247	8.9928	5.9143	1.3	1.3	0.9426

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:24:14	16.7664	16.7352
2	21:24:31	16.6634	16.6956
3	21:24:48	17.1033	17.0079
x		16.8444	16.8129
σ		0.2301	0.1700
%RSD		1.3662	1.0113

K1106166-015 1/5 7/25/2011 9:26:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:26:55	91.2%	11.6124	5.0716	6.1674	6.9615	91.5%	95.3%	15.0883
2	21:27:11	91.5%	11.2510	5.8003	5.9720	6.5818	91.7%	96.0%	15.1009
3	21:27:28	92.7%	11.1771	6.1405	5.8606	6.2016	92.8%	97.5%	15.0069
x		91.8%	11.3468	5.6708	6.0000	6.5817	92.0%	96.3%	15.0654
σ		0.8%	0.2330	0.5461	0.1553	0.3799	0.7%	1.1%	0.0511
%RSD		0.9	2.0532	9.6300	2.5891	5.7728	0.8	1.2	0.3389

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:26:55	15.0029	14.9202
2	21:27:11	15.1176	15.1516
3	21:27:28	15.0791	15.0856
x		15.0665	15.0525
σ		0.0584	0.1192
%RSD		0.3876	0.7919

K1106166-025 1/5 7/25/2011 9:29:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:36	91.9%	19.1674	5.4782	5.7291	5.3273	92.5%	97.0%	5.0513
2	21:29:53	92.6%	19.6432	5.9219	5.6128	6.0356	93.9%	98.9%	5.2258
3	21:30:10	94.4%	19.2668	5.6700	5.4693	5.8252	95.6%	100.3%	5.1603
x		93.0%	19.3592	5.6901	5.6037	5.7294	94.0%	98.7%	5.1458
σ		1.3%	0.2510	0.2226	0.1301	0.3637	1.6%	1.7%	0.0882
%RSD		1.4	1.2965	3.9115	2.3221	6.3487	1.7	1.7	1.7135

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:29:36	5.2313	5.1618
2	21:29:53	5.1736	5.1607
3	21:30:10	5.1305	5.1319
x		5.1784	5.1514
σ		0.0506	0.0170
%RSD		0.9767	0.3295

K1106166-025D 1/5 7/25/2011 9:32:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:14	89.6%	20.4177	5.6060	5.9482	6.6587	90.3%	94.3%	6.0379
2	21:32:31	90.4%	19.9310	6.2074	5.6264	6.1599	91.4%	96.0%	5.8924
3	21:32:48	91.1%	20.0633	6.0540	5.7035	6.3630	91.9%	96.3%	6.0668
x		90.4%	20.1374	5.9558	5.7593	6.3939	91.2%	95.5%	5.9990
σ		0.8%	0.2517	0.3125	0.1680	0.2508	0.8%	1.1%	0.0935
%RSD		0.8	1.2497	5.2473	2.9172	3.9227	0.9	1.1	1.5579

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:32:14	5.9735	5.9023
2	21:32:31	5.9866	5.9322
3	21:32:48	5.9645	6.0021
x		5.9748	5.9455
σ		0.0111	0.0513
%RSD		0.1857	0.8620

K1106166-025S 7/25/2011 9:34:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:34:52	89.4%	51.4241	37.6464	38.5443	38.3850	89.4%	93.5%	392.7703
2	21:35:09	89.2%	51.4776	37.9628	38.1375	37.4839	89.7%	94.9%	397.2461
3	21:35:26	90.8%	51.1801	37.3385	37.7249	37.5549	90.4%	95.4%	398.0944
x		89.8%	51.3606	37.6492	38.1356	37.8079	89.8%	94.6%	396.0369
σ		0.9%	0.1586	0.3121	0.4097	0.5010	0.5%	1.0%	2.8606
%RSD		1.0	0.3088	0.8291	1.0743	1.3251	0.6	1.1	0.7223

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:34:52	397.2021	410.7206
2	21:35:09	400.9366	409.4920
3	21:35:26	402.4704	409.8121
x		400.2031	410.0082
σ		2.7097	0.6374
%RSD		0.6771	0.1555

CCV4 7/25/2011 9:37:43 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:43	93.9%	25.1223	26.1076	25.5784	25.9579	93.7%	95.8%	25.6710
2	21:38:00	94.5%	24.9964	26.2088	26.0547	25.6281	94.2%	97.5%	25.6382
3	21:38:17	94.3%	25.1208	25.3340	25.5726	25.2380	95.7%	98.2%	25.9747
x		94.2%	25.0798	25.8835	25.7353	25.6080	94.5%	97.2%	25.7613
σ		0.3%	0.0723	0.4785	0.2767	0.3604	1.0%	1.2%	0.1855
%RSD		0.3	0.2882	1.8488	1.0750	1.4072	1.1	1.3	0.7201

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:37:43	25.4896	25.5904
2	21:38:00	25.5911	25.6174
3	21:38:17	25.5738	25.6901
x		25.5515	25.6326
σ		0.0543	0.0516
%RSD		0.2124	0.2012

CCB4 7/25/2011 9:40:23 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:23	92.9%	0.0534	0.1835	0.0181	0.2566	92.6%	94.9%	0.0248
2	21:40:40	93.3%	0.1007	0.0530	-0.0004	0.3060	92.7%	95.8%	0.0337
3	21:40:57	93.4%	0.0634	0.1021	0.4380	0.1544	93.2%	96.6%	0.0883
x		93.2%	0.0725	0.1129	0.1519	0.2390	92.9%	95.8%	0.0489
σ		0.3%	0.0249	0.0659	0.2479	0.0773	0.3%	0.9%	0.0344
%RSD		0.3	34.3771	58.3876	163.2419	32.3398	0.3	0.9	70.2335

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:40:23	0.0205	0.0223
2	21:40:40	0.0381	0.0372
3	21:40:57	0.0930	0.0847
x		0.0505	0.0481
σ		0.0378	0.0326
%RSD		74.8994	67.7308

LLCCV3 7/25/2011 9:42:56 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:56	89.3%	1.0501	2.3666	2.3491	2.2304	88.2%	90.7%	0.1366
2	21:43:13	94.0%	1.0502	2.2090	2.0116	2.3953	93.8%	96.3%	0.1074
3	21:43:29	94.7%	0.8581	2.0850	1.9592	1.6204	94.3%	97.1%	0.1252
x		92.6%	0.9861	2.2202	2.1066	2.0820	92.1%	94.7%	0.1231
σ		2.9%	0.1109	0.1411	0.2116	0.4082	3.4%	3.5%	0.0147
%RSD		3.2	11.2431	6.3566	10.0467	19.6038	3.7	3.7	11.9494

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:42:56	0.1278	0.1134
2	21:43:13	0.1020	0.1093
3	21:43:29	0.1028	0.1159
x		0.1108	0.1128
σ		0.0147	0.0033
%RSD		13.2450	2.9326

Lipids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106152
Project:	East White Lake/Hepatopancreas	**Date Collected:**	5/23-6/20/2011
Sample Matrix:	Animal tissue	**Date Received:**	5/24-6/21/2011

Lipids, Total

Prep Method:	EPA 3541	Units:	PERCENT
Analysis Method:	NOAA	Basis:	AS RECEIVED
Test Notes:			

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Hepatopancreas Composi	K1106152-009	0.16	7/18/2011	7/20/2011	6.4	
EWL-HOU-C Hepatopancreas Comp	K1106152-015	0.16	7/18/2011	7/20/2011	9.2	
EWL-BIL Hepatopancreas Composit	K1106152-025	0.16	7/18/2011	7/20/2011	7.2	
Method Blank	K1106166-MB	0.05	7/18/2011	7/20/2011	0.05	U

Approved By: Elissa Erickson Date: 7-29-11

1A/092099p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Hepatopancreas
Sample Matrix: Animal tissue

Service Request: K1106152
Date Collected: NA
Date Received: NA
Date Extracted: 7/18/2011
Date Analyzed: 7/20/2011

Triplicate Summary
Lipids, Total

Sample Name: Batch QC
Lab Code: K1106154-025 TRP
Test Notes:

Units: PERCENT
Basis: AS RECEIVED

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
Lipids, Total	EPA 3541	NOAA	0.05	2.6	2.7	2.7	2.7	3	

Approved By: Elissa Erickson Date: 7-29-11

DUP/091599p
K1106152svg.sm2 - TRP 7/28/2011

% Lipid - Electronic Benchsheet

wo #	wet wt	dish	dish/lip	% lip	mb corr	% lipids (rounded)	mrl
K1106152-009	3.05	1.294	1.333	6.393443	0.0000	6.4	0.16
K1106152-015	3.04	1.318	1.374	9.210526	0.0000	9.2	0.16
K1106152-025	3.05	1.305	1.349	7.213115	0.0000	7.2	0.16
K1106166-MB	10.10	1.294	1.294	0.000000	0.0000	0.00	0.05
K1106154-025 DUP	10.05	1.315	1.370	2.736318	0.0000	2.7	0.05
K1106154-025 TRP	10.03	1.316	1.370	2.691924	0.0000	2.7	0.05

Reviewed By: Elissa Erickson Date: 7-29-11

Lipids Raw Benchsheet

Lab ID	Client ID	Sample Weight (g)	Wt. Dish (g)	Wt. Dish + Lipid (g)
K1106152-009	EWL-DES Hepatopancreas Composite	3.05	1.294	1.333
K1106152-015	EWL-HOU-C Hepatopancreas Composite	3.04	1.318	1.374
K1106152-025	EWL-BIL Hepatopancreas Composite	3.05	1.305	1.349
K1106154-009	EWL-DES-C-Soft Tissue	10.07	1.301	1.314
K1106154-015	EWL-HOU-C-Soft Tissue	10.10	1.304	1.317
K1106154-025	EWL-BIL-C-Soft Tissue	10.04	1.314	1.366
K1106157-009	EWL-DES Exoskeleton Composite	10.05	1.314	1.317
K1106157-015	EWL-HOU Exoskeleton Composite	10.01	1.316	1.318
K1106157-025	EWL-BIL Exoskeleton Composite	10.03	1.311	1.314
K1106166-009	EWL-DES-C-Meat	10.10	1.304	1.312
K1106166-015	EWL-HOU-C-Meat	10.04	1.311	1.319
K1106166-025	EWL-BIL-C-Meat	10.07	1.317	1.325
K1106154-MB	Method Blank	DE 7-29-11 10.05	1.294	1.294
K1106154-025 DUP	Sample Duplicate	10.03	1.315	1.370
K1106154-025 TRP	Sample Triplicate	10.10 03	1.316	1.370

Extraction Start Time/Date:	7-18-11	**Extraction Method:**	3541
Extraction Stop Time/Date:	7-18-11	**DCM Lot #:**	DD930, DE202
Extracted By:	D. Wood	**Sulfate Lot #:**	BK1022
Intermediate Volume of Extracts:	10 mL	**Aliquot used for % Lipids:**	2 mL
Date Analyzed:	7-20-11	**Balance ID:**	K-Balance-40
Analyzed By:	S. Mancilla		

Prep Run #: 137914

Reviewed By: Elissa Ericksen Date: 7-29-11

Chain of Custody

Columbia Analytical Services
800.695.7222
www.caslab.com

CHAIN of CUSTODY

Page 1 of 1

Client: David Lingle
Project: EWL-Tissue Study
Project Manager: John Rodgers
Telephone No.
Fax No.
Method of Shipment: Fed Ex
Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic SW6020	Inorganic As EPA 1632A	Total Ba SW6020	Total Mercury EPA 1631	Methylmercury EPA 1630	TPH Texas 1005/1006									Turn Around Time (working days)
						Grabs																			
EWL-DES						X			6-20-11		X	X	X	X	X	X									

K1105581

MARKS

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Sample Received Intact: Yes No
Temperature received: Ice No ice

	Date	Time	
Relinq. by sampler (Sign & Print Name) Patrick M. Ritchie	6-20-11	1500	Received by (Sign & Print Name)
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory CAS Date 6/21/11 Time 0845

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC 144

Client / Project: IRS Service Request K11 5581

Received: 6/21/11 Opened: 6/21/11 By: AJ Unloaded: 6/21/11 By: AJ

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.5		298			

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

Notes, Discrepancies, & Resolutions: Read 12 CRES

Columbia Analytical Services
800.695.7222
www.caslab.com

CHAIN of CUSTODY

Page 1 of 1

Client: EWL Project - D. Lingle

Project: EWL - Tissue Study

Project Manager: John Rodgers

Telephone No.

Fax No.

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

K1105244

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic - SW6020	Inorganic Arsenic - EPA1632A	Total Barium - SW6020	Total Mercury - EPA 1631	Methyl mercury - EPA 1630	TPH - Texas 1005 / 1006								Turn Around Time (working days)
EWL-BIL		1				X (Crabs)			6.9.11	1200	X	X	X	X	X	X								

MARKS

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Sample Received Intact: Yes No

Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name)	Date	Time	Received by (Sign & Print Name)
Randy Graves	6.9.11	1730	
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory: CAS — Date 6/10/11 — Time 0930

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Lynda

lient / Project: URS Service Request K11 5244

eceived: 6/10/11 Opened: 6/10/11 By: AF Unloaded: 6/10/11 By: AF

Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*

Were custody seals on coolers? NA Y (N) If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
4.0		299		7955 3874 7438	

Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other*_____

Were custody papers properly filled out (ink, signed, etc.)?	NA	Y	N
Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*	NA	Y	N
). Were all sample labels complete (i.e analysis, preservation, etc.)?	NA	Y	N
. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.*	NA	Y	N
2. Were appropriate bottles/containers and volumes received for the tests indicated?	NA	Y	N
3. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below*	NA	Y	N
4. Were VOA vials received without headspace? *Indicate in the table below.*	NA	Y	N
5. Was C12/Res negative?	NA	Y	N

Sample ID on Bottle	Sample ID on COC	Identified by:

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

otes, Discrepancies, & Resolutions: Rec'd 12 Crab.

Page 1 of ____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

SR# K1104604

PAGE _____ OF _____

Project Name: EWL Tissue Study **Project Number:** _____

Project Manager: John Rodgers **Company:** _____

Company/Address: _____ **Phone:** _____

City, State, Zip: _____ **FAX:** _____

Sampler's Signature: David Lingle

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Total Arsenic SW 6020	Inorganic Arsenic EPA 1632A	Total Barium SW 6020	Total Mercury EPA 1631	Methylmercury EPA 1630	Lipid Content	TPH	REMARKS
EWL-HOU-C	5/23/2011	6:15pm		Tissue	1	x	x	x	x	x	x	x	

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TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_____ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: _____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

_____ V. EDD

Comments/Special Instructions:

Dissect eight (8) blue crabs into Meat, Hepatopancreas, Other Soft Tissue, and Exoskeleton.

EWL-HOU-C-MEAT

EWL-HOU-C-HEPATOPANCREAS

EWL-HOU-C-OTHER SOFT TISSUE

EWL-HOU-C-EXOSKELETON

TPH analysis to be conducted by Pace - Green Bay.

RELINQUISHED BY:

Signature: David Lingle

Printed Name: David Lingle

Firm: URS Corporation

Date/Time: 05/23/11; 6:15 pm

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: SHOPKINS

Firm: CAS

Date/Time: 5/24/11 0830

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC M11

Client / Project: URS Service Request K11 4604

Received: 5/24/11 Opened: 5/24/11 By: SX Unloaded: 5/24/11 By: SX

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.4		281		7971 2767 7864	

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

*Notes, Discrepancies, & Resolutions:*_____

Page 1 of ____

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 5, 2011 Analytical Report for Service Request No: K1106154

David Lingle
URS Corporation
9801 Westheimer, Suite 500
Houston, TX 77042

RE: East White Lake/Soft Tissue

Dear David:

Enclosed are the results of the samples submitted to our laboratory on May 24, 2011. For your reference, these analyses have been assigned our service request number K1106154.

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

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

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

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated valuc.
N	The result is presumptive. The analyte was tentatively identified, hut a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

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

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Agency	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DEQ	WA100010
South Carolina DHEC	61002
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	URS Corporation	**Service Request No.:**	K1106154
Project:	East White Lake	**Date Received:**	5/24-6/21-2011
Sample Matrix:	Tissue		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Homogenization and Compositing

Whole body blue crab samples were received at Columbia Analytical Services on 5/24-6/21-2011. The hepatopancreas, other soft tissue, meat and exoskeleton were separated from each crab. The samples from each location were composited and subsequently subaliquoted for each of the sample locations in accordance with sample mass requirements for testing; additionally, sample custody of an aliquot of each was relinquished to Pace Analytical for analysis of Total Petroleum Hydrocarbons in accordance with instructions received from URS Corporation. Each tissue type was logged into a separate service request. The data set included here is for the soft tissue.

Metals

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

Approved by_____ **Date** 8/9/11

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Solids, Total

Prep Method:	NONE	Units:	PERCENT
Analysis Method:	Freeze Dry	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
EWL-DES-C-Soft Tissue	K1106154-009	07/12/11	11.0	
EWL-HOU-C-Soft Tissue	K1106154-015	07/12/11	12.2	
EWL-BIL-C-Soft Tissue	K1106154-025	07/12/11	21.2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	06/09/11
Sample Matrix:	Tissue	**Date Received:**	06/10/11
		Date Extracted:	NA
		Date Analyzed:	07/12/11

Duplicate Summary
Total Metals

Sample Name:	EWL-BIL-C-Soft Tissue	Units:	PERCENT
Lab Code:	K1106154-025	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	21.2	20.8	21.0	2	

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K1106154

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106154-009	10.149	14.870	15.990	1.120	11.0%
K1106154-015	10.241	14.743	15.992	1.249	12.2%
K1106154-025	10.006	15.134	17.253	2.119	21.2%
K1106154-025 Dup	10.199	14.927	17.047	2.120	20.8%
				7/14/11	

Date/Time in Freeze Dryer: 04:30pm 07-12-11 Date/Time out of Freeze Dryer:08:30am 07-14-11

Balance ID: 21 B Date Balance checked: 07-12-11, 07-14-11

Comments:

x = RPD

Analyst: Tamra Jones	Date: 7/14/11
Reviewed By: Anna Cheatley	Date: 7/21/11

Columbia Analytical Services, Inc.

Service Request #: K1106154
Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106154-009	10.149	14.870	15.990		
K1106154-015	10.241	14.743	15.992		
K1106154-025	10.006	15.134	17.293		
K1106154-025 DUP	10.199	14.927	17.047		
					7.1.14

Date/Time in Freeze Dryer: 4:30pm 7/12/11 Date/Time out of Freeze Dryer: 8:30am 7/14/11

Balance ID: 21B 7/12/11 Date Balance checked: 7.12.11 7/14/11

Comments: ~~21850290~~

High - Low / Average = RPD

x = RPD

Analyst: Anna Cheatley	Date: 7.12.11 7/14/11
Reviewed By:	Date: 7/13/11

R:\ICP\misc\digforms\K1106154

Columbia Analytical Services, Inc.

Service Request Number(s): K1106154
Analysis for: Pace TPH

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106154-009		10.02		78.94		crab
K1106154-015		10.06		80.26		crab
K1106154-025		15.06		79.13		crab

7/13/11

Balance ID: 28

Date Balance Checked: 7.12.11

Analyst: Brittany Hull Anna Cheatley

Date: 7.12.11

Reviewed:

Date: 7/13/11

R\:ICP\misc\digforms\TISSUEBENCHSHT1

Columbia Analytical Services, Inc.

Service Request Number(s):	K1106154
Analysis for: Lipids	

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106154-009		10.07		214.95		Soft Tissue
K1106154-015		10.10		210.83		Soft Tissue
K1106154-025		10.04		211.42		Soft Tissue
K1106154-025 Dup		10.05		211.23		Soft Tissue
K1106154-025 Trip		10.03		214.98		Soft Tissue

Comments: Please weigh approximately 10 g into a 8 oz. Jar.

Balance ID: 28 Date Balance Checked: 7.12.11

Analyst: Anne Cheatley Date: 7.12.11

Reviewed: Date: 7/13/11

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Columbia Analytical Services, Inc.

Service Request Number(s):
K1106154
Analysis for:
Composite

COMPOSITE DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106154-009		181.93		480.40		crab
K1106154-015		191.70		480.21		crab
K1106154-025		207.57		480.25		crab

7/13/11

Balance ID: 28 Date Balance Checked: 7.12.11

Analyst: Anna Cheatley Date: 7.12.11

Reviewed: Date: 7/13/11

R\:ICP\misc\digforms\TISSUEBENCHSHT1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06-21/11

Total Inorganic Arsenic

Prep Method:	Method	Units:	ug/g
Analysis Method:	1632 Rev. A	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Soft Tissue	K1106154-009	0.009	0.003	4	07/31/11	08/01/11	0.046	
EWL-HOU-C-Soft Tissue	K1106154-015	0.01	0.003	4	07/31/11	08/01/11	0.029	
EWL-BIL-C-Soft Tissue	K1106154-025	0.02	0.006	4	07/31/11	08/01/11	0.041	
Method Blank 1	K1106154-MB1	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 2	K1106154-MB2	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 3	K1106154-MB3	0.002	0.0008	1	07/31/11	08/01/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
Sample Matrix: Animal tissue

Service Request: K1106154
Date Collected: NA
Date Received: NA
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Total Metals
Matrix Spike/Duplicate Matrix Spike Summary

Sample Name: Batch QC
Lab Code: K1106152-025SD
Test Notes:

Units: ug/g
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	Method Acceptance Limits	Relative Percent Difference	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.04	0.14	0.14	0.072	0.248	0.244	127	125	50-150	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
LCS Matrix: Water

Service Request: K1106154
Date Collected: NA
Date Received: NA
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery

Units: ug/g
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.200	0.229	114	50-150	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
LCS Matrix: Water

Service Request: K1106154
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 1

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.227	114	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
LCS Matrix: Water

Service Request: K1106154
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 2

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.230	115	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
LCS Matrix: Water

Service Request: K1106154
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 3

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.232	116	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
LCS Matrix: Water

Service Request: K1106154
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 4

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.204	102	80-120	

HG-CGC-AAS Arsenic Speciation Data Review Form

Element: Total Inorganic Arsenic

Starlims Run #: 255580

CALSTD Source: AA1-20-H
CALVER Source: AA1-21-A

Service Request Numbers:

K1106152, K1106154, K1106157, K1106166

	Yes	No	NA
1) Three or more non-zero calibration points analyzed	X		
2) Mean calibration factor RSD <20%	X		
3) CALVER's within 20% of true value	X		
4) CALBLK's below MRL	X		
5) CALVER's, CALBLK's ran every 10 samples	X		
6) A minimum of three method blanks analyzed	X		
7) All reported samples within calibration range	X		
8) MS/MSD every 10 samples	X		
9) MS/MSD within 50-150%; RPD <35%	X		
10) Samples analyzed within hold time	X		
11) QCS analyzed quarterly with the mean from 3 analyses within 10% of the true value	X		

Comments:

Primary Reviewed By: BJS Date: 8/1/11

Secondary Reviewed By: RPM Date: 8/2/11

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA	**Service Request # :**
Analysis For: As	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L or ng/g	Comments
1	30 ng wk std A	~	~	50	~	1608.2970	30.52	610.3	
2	20 ng wk std A	~	~	50	~	1107.7680	20.85	417.0	
3	10 ng wk std A	~	~	50	~	596.6090	10.98	219.6	
4	1.0 ng wk std A	~	~	50	~	71.5780	0.84	16.8	
5	CALBLK 1	~	~	50	~	27.9660	0.00	0.0	
6	CALVER 1	~	~	50	~	614.8745	11.33	226.7	CALVER : 113%
7	CALBLK 2	~	~	50	~	35.9410	0.15	3.1	
8	OPR	0.500	10	2.0	~	1214.3380	22.91	229.1	OPR : 115%
9	MB-1	4.545	10	2.0	~	35.3255	0.14	0.2	
10	MB-2	4.545	10	2.0	~	23.2160	-0.09	-0.1	
11	MB-3	4.545	10	2.0	~	31.3310	0.06	0.1	
12	K1106152-009	2.556	10	1.0	2	400.4800	7.19	28.1	
13	K1106152-015	2.128	10	1.0	2	426.1660	7.69	36.1	
14	K1106152-025	2.173	10	1.0	2	841.2000	15.70	72.3	
15	K1106152-025MS	2.165	10	0.25	8	721.5740	13.39	247.5	MS : 126%
16	K1106152-025MSD	2.169	10	0.25	8	712.2670	13.21	243.7	MSD : 124%
17	K1106154-009	4.555	10	0.5	4	565.5450	10.38	45.6	
18	CALVER 2	~	~	50	~	624.4760	11.52	230.4	CALVER : 115%
19	CALBLK 3	~	~	50	~	42.1715	0.27	5.5	
20	K1106154-015	4.107	10	0.5	4	340.2450	6.03	29.4	
21	K1106154-025	2.368	10	0.5	4	278.6690	4.84	40.9	
22	~~K1106157-009~~	~~0.960~~	~~10~~	~~1.0~~	~~2~~	~~196.2410~~	~~3.25~~	~~33.9~~	Rerun
23	K1106157-009	0.960	10	2.0	~	302.3290	5.30	27.6	
24	K1106157-015	0.854	10	2.0	~	573.9690	10.54	61.7	
25	K1106157-025	0.994	10	2.0	~	1316.2730	24.88	125.1	

Comments:	**wk std A : AA1-20-H**	**Calibration:**				
	wk std B : AA1-21-A		**ng**	**net peak area**	**Calibration Factor**	
	KBH4 : A1245129		**30**	**1580.3310**	**52.6777**	
	6M HCl : HG-AAS1-1-O		**20**	**1079.8020**	**53.9901**	
	Tris-Buffer : HG-AAS1-1-I		**10**	**568.6430**	**56.8643**	
			1	**43.6120**	**43.6120**	
					51.7860	**CF mean**
					5.72	**CF Stdev**
	CALVER : 10ng wk std B				**11.05**	**RSD**

Analyst:	**Date:**	**Page Number:**
	8/1/11	1

[1632Runlog.xls] As1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA Analysis For: As	Service Request # :

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L	Comments
1	K1106166-009	0.648	10	2.0	~	61.8065	0.65	5.0	
2	K1106166-015	0.585	10	2.0	~	76.2005	0.93	8.0	
3	~~K1106166-015MS~~	~~0.580~~	~~10~~	~~2.0~~	~	~~3627.8170~~	~~69.51~~	~~599.7~~	Rerun
4	K1106166-015MS	0.580	10	0.5	4	1076.7395	20.25	698.3	MS : 132%
5	~~CALVER 3~~	~	~	~~50~~	~	~~764.7670~~	~~14.23~~	~~284.6~~	Rerun
6	CALVER 3	~	~	50	~	628.0615	11.59	231.8	CALVER : 116%
7	CALBLK 4	~	~	50	~	50.8045	0.44	8.8	
8	K1106166-015MSD	0.574	10	0.5	4	1082.6750	20.37	709.8	MSD : 134%
9	K1106166-025	0.538	10	2.0	~	103.9290	1.47	13.6	
10	CALVER 4	~	~	50	~	557.1400	10.22	204.4	CALVER : 102%
11	CALVER 5	~	~	50	~	42.6490	0.28	5.7	
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Calibration: wk std A : AA1-20-H wk std B : AA1-21-A	ng	net peak area	Calibration Factor	
KBH4 : A1245129	30	1580.3310	52.6777	
6M HCl : HG-AAS1-1-O	20	1079.8020	53.9901	
Tris-Buffer : HG-AAS1-1-I	10	568.6430	56.8643	
	0.5	43.6120	43.6120	
			51.7860	CF mean
			5.72	CF Stdev
CALVER : 10ng wk std B			11.05	RSD

Analyst:	Date:	Page Number:
	8/V11	2

[1632Runlog.xls] As1.XLS (2)

Columbia Analytical Services, Inc.

Sample Number(s):		Service Request Number(s):	K1106152, K1106154, K1106157, K1106166
Analysis for:	Tissue Extraction for TIAs		

DATA

SR #	Sample ID	Freeze Dried Sample (g)	Extraction Sol'n	Amount of Extraction Sol'n (mL)
OPR		0.500	2M HCl	10
MB-1		0.500	2M HCl	10
MB-2		0.500	2M HCl	10
MB-3		0.500	2M HCl	10
K1106152-009		0.501	2M HCl	10
K1106152-015		0.500	2M HCl	10
K1106152-025		0.502	2M HCl	10
K1106154-009		0.501	2M HCl	10
K1106154-015		0.501	2M HCl	10
K1106154-025		0.502	2M HCl	10
K1106157-009		0.502	2M HCl	10
K1106157-015		0.505	2M HCl	10
K1106157-025		0.500	2M HCl	10
K1106166-009		0.103	2M HCl	10
K1106166-015		0.103	2M HCl	10
K1106166-025		0.100	2M HCl	10
K1106166-015 MS		0.102	2M HCl	10
↓ MSD		0.101	2M HCl	10
K1106152-025 MS		0.500	2M HCl	10
↓ MSD		0.501	2M HCl	10

BSJ 7/31/11

Comments: OPR: 0.05mL 10 µg/mL TIAs AA1-21-C exp. 1/28/12 Starline # 138852
MS/MSD: 0.15 mL 2.0 µg/mL TIAs AA1-21-C exp. 1/28/12
2M HCl: H6-AAs-1-6

Analyst: [signature] [signature]

BSJ 7/31/11
HE 7/31/11

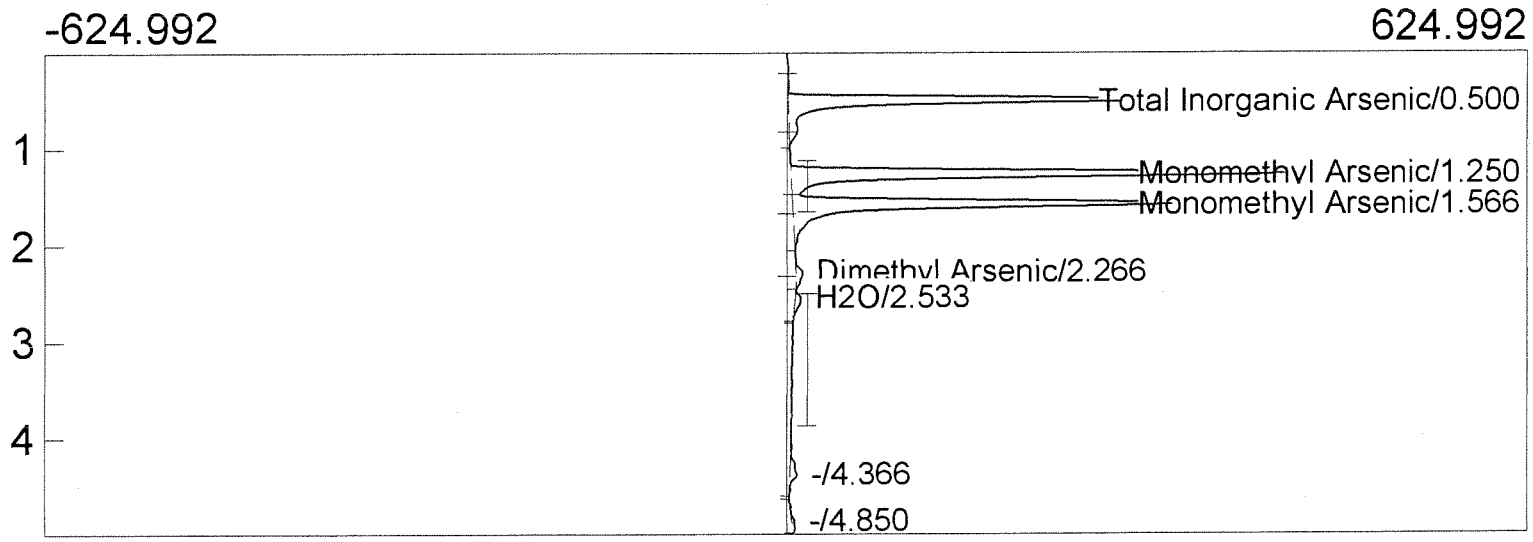
R:\ICP\misc\digforms\TissueExtractionRev11

Conversion from dry weight to wet weight:

Standard MRL = 0.02
Standard MDL = 0.007
Standard Dilution = 1
Standard Sample Mass = 0.500

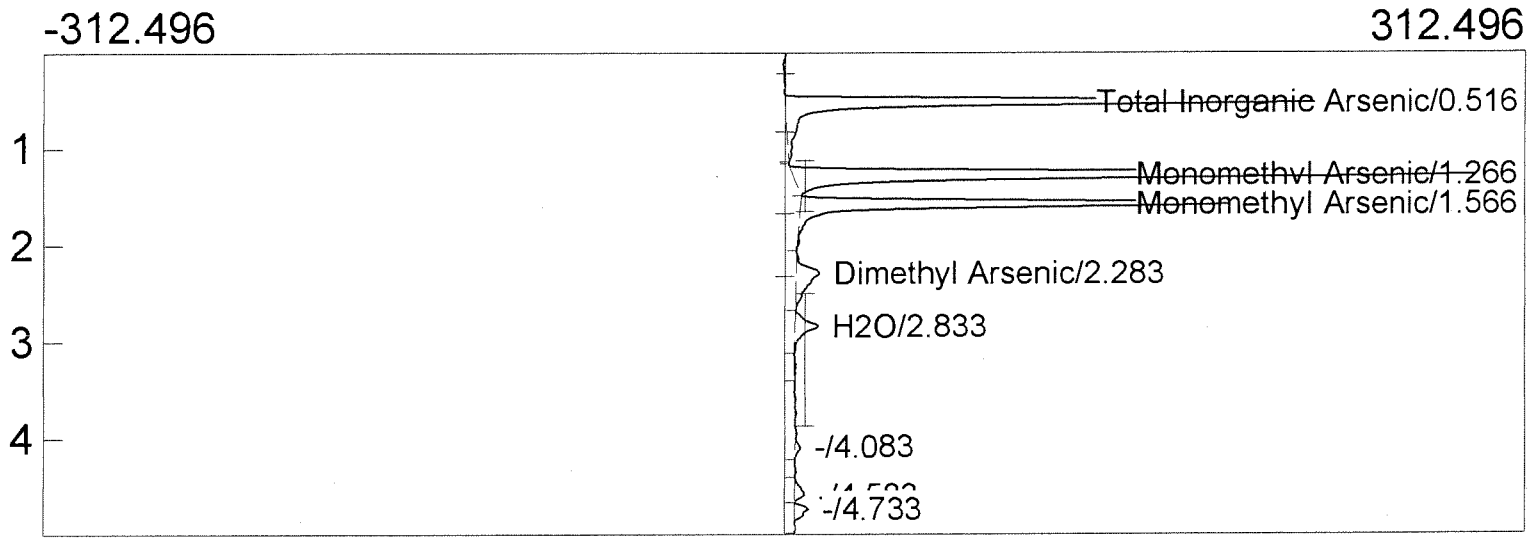
Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.501	19.6	**2.556**	2	**0.01**	**0.003**
K1106152-015	0.500	23.5	**2.128**	2	**0.01**	**0.003**
K1106152-025	0.502	23.1	**2.173**	2	**0.01**	**0.003**
K1106152-025MS	0.500	23.1	**2.165**	8	**0.04**	**0.013**
K1106152-025MSD	0.501	23.1	**2.169**	8	**0.04**	**0.013**
K1106154-009	0.501	11.0	**4.555**	4	**0.01**	**0.003**
K1106154-015	0.501	12.2	**4.107**	4	**0.01**	**0.003**
K1106154-025	0.502	21.2	**2.368**	4	**0.02**	**0.006**
K1106157-009	0.502	52.3	**0.960**	1	**0.01**	**0.004**
K1106157-015	0.505	59.1	**0.854**	1	**0.01**	**0.004**
K1106157-025	0.500	50.3	**0.994**	1	**0.01**	**0.004**
K1106166-009	0.103	15.9	**0.648**	1	**0.02**	**0.005**
K1106166-015	0.103	17.6	**0.585**	1	**0.02**	**0.006**
K1106166-015MS	0.102	17.6	**0.580**	4	**0.07**	**0.024**
K1106166-015MSD	0.101	17.6	**0.574**	4	**0.07**	**0.024**
K1106166-025	0.100	18.6	**0.538**	1	**0.02**	**0.007**
Method Blank	0.500	11.000	**4.545**	1	**0.00**	**0.001**

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:50:11
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 30 ng.CHR ()
Operator: RRM



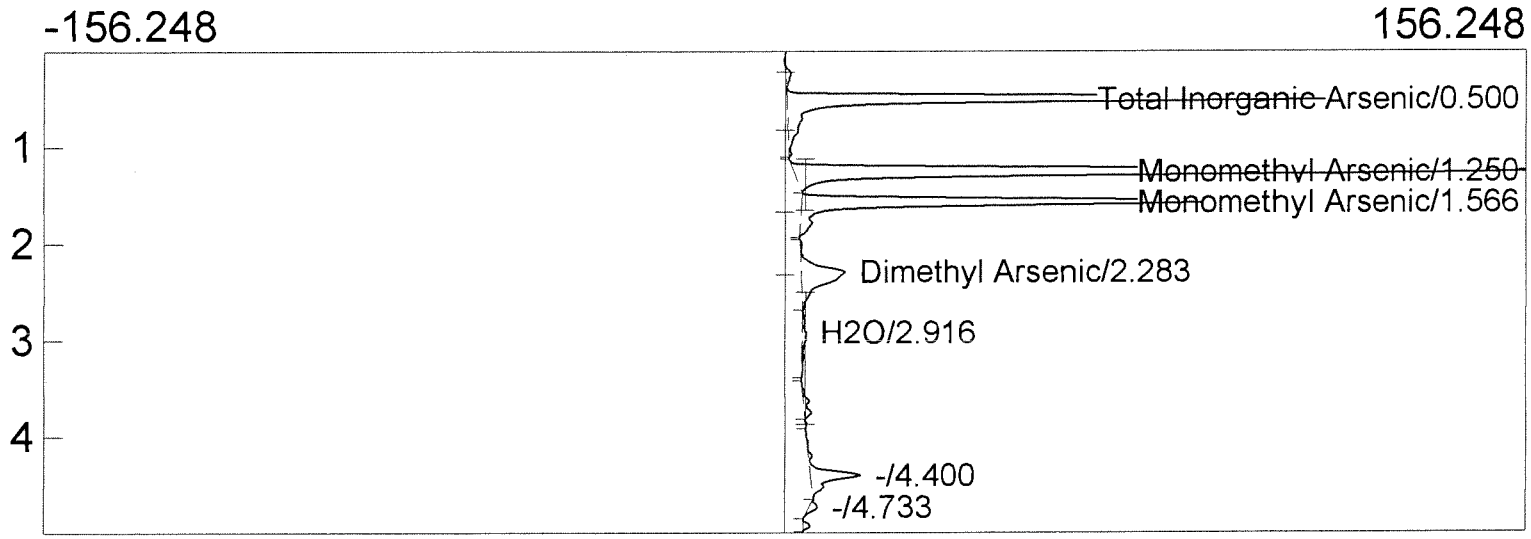
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1608.2970	311.451
Monomethyl Arsenic	1.250	2127.7730	425.590
Monomethyl Arsenic	1.566	1919.7775	339.613
Dimethyl Arsenic	2.266	57.0860	5.895
H2O	2.533	49.8820	4.784
		5762.8155	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:58:50
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 20 ng.CHR ()
Operator: RRM



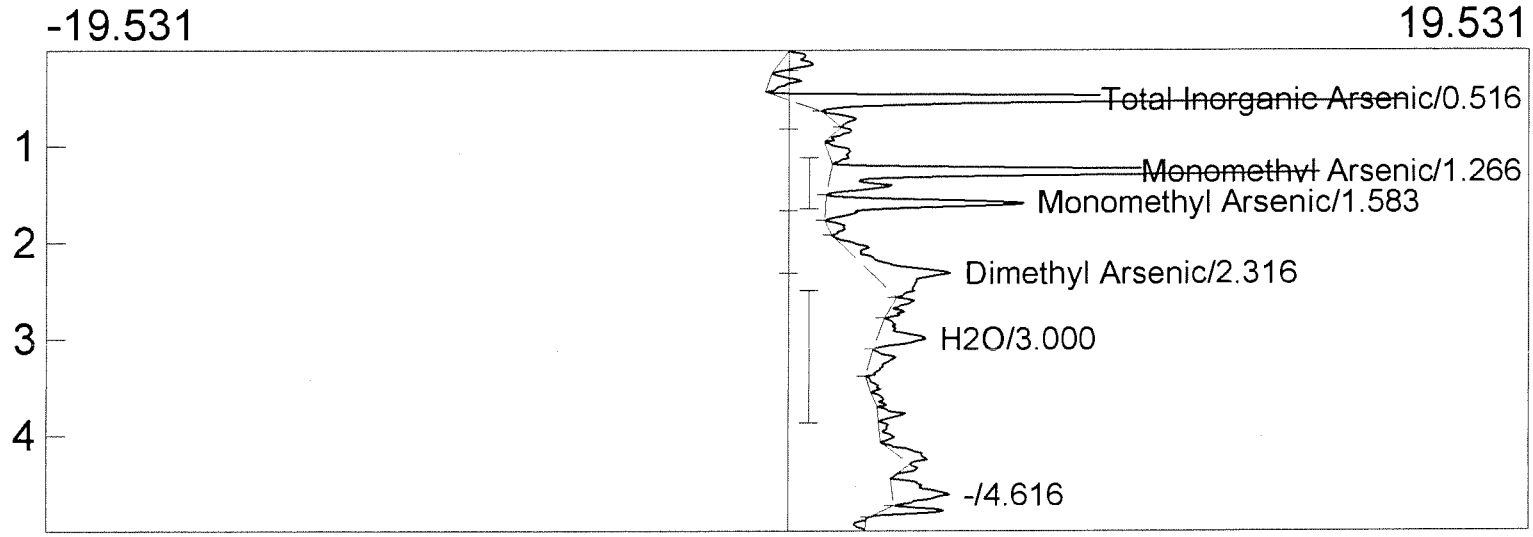
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1107.7680	225.335
Monomethyl Arsenic	1.266	1463.5120	288.371
Monomethyl Arsenic	1.566	930.3530	190.580
Dimethyl Arsenic	2.283	131.5590	10.032
H2O	2.833	85.8665	9.705
		3719.0585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:25:15
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 10 ng.CHR ()
Operator: RRM



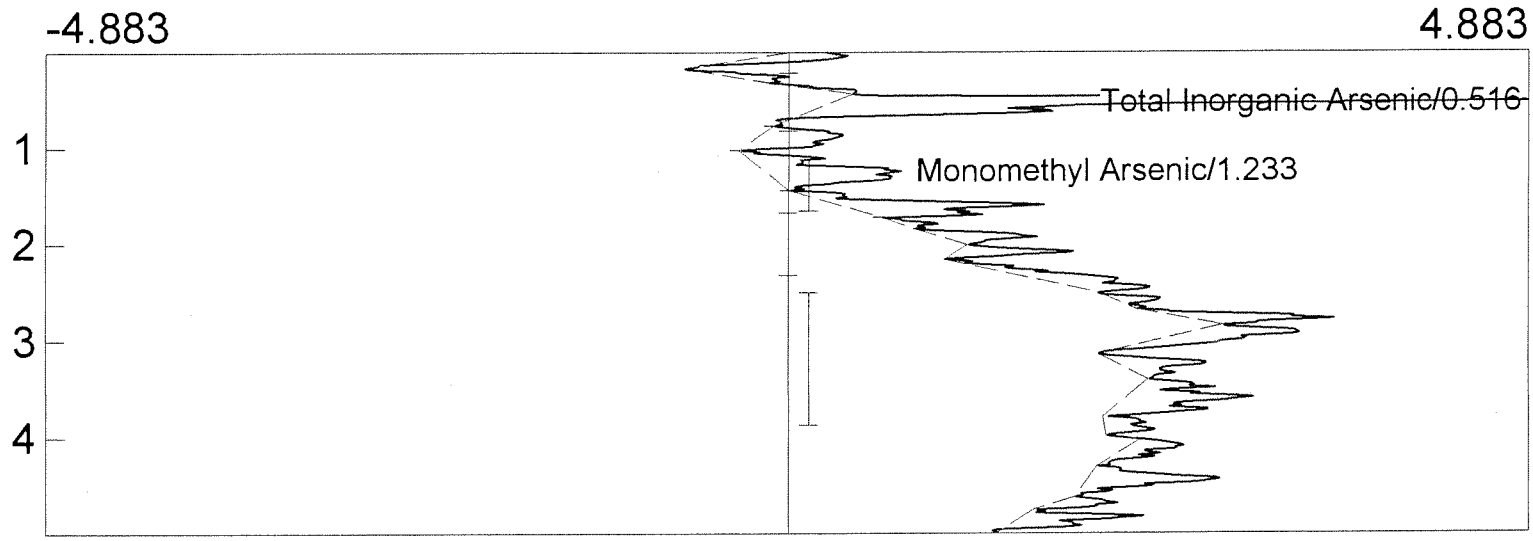
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	596.6090	122.606
Monomethyl Arsenic	1.250	766.2740	160.471
Monomethyl Arsenic	1.566	454.9720	90.116
Dimethyl Arsenic	2.283	120.8860	9.270
H2O	2.916	17.6870	0.969
		1956.4280	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:43:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 1.0 ng.CHR ()
Operator: RRM



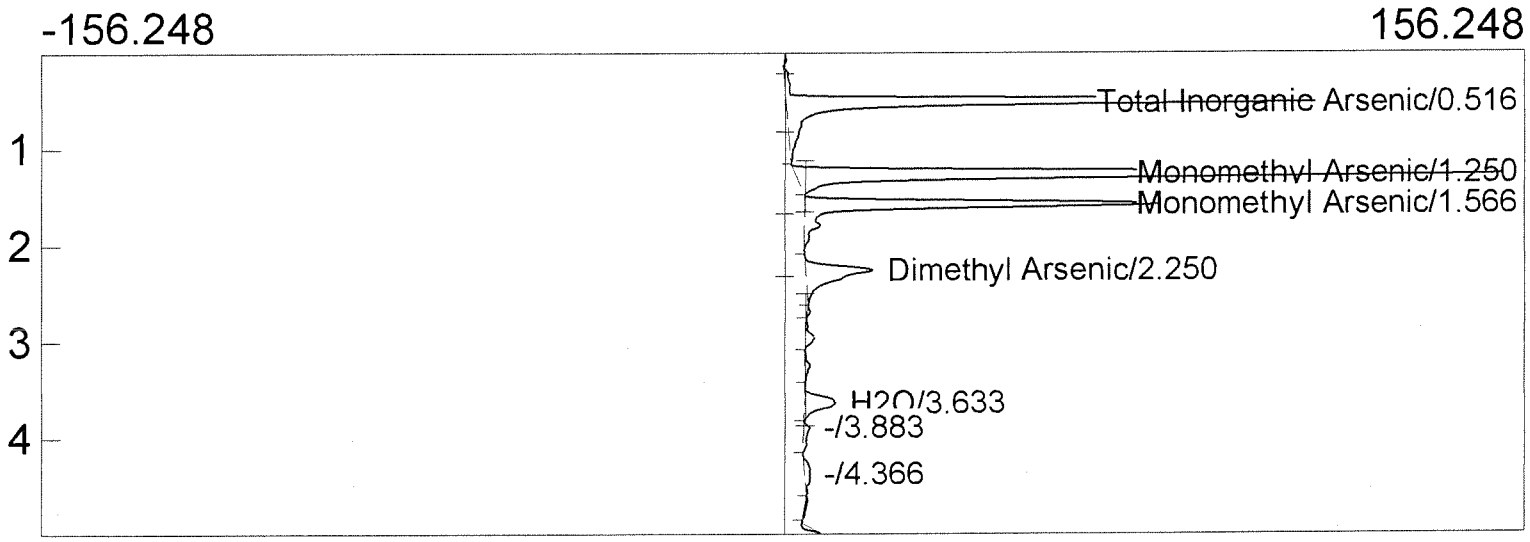
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	71.5780	16.469
Monomethyl Arsenic	1.266	68.1710	12.834
Monomethyl Arsenic	1.583	29.6050	5.232
Dimethyl Arsenic	2.316	27.4240	2.109
H2O	3.000	11.1325	1.299
		207.9105	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:53:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 1.CHR ()
Operator: RRM



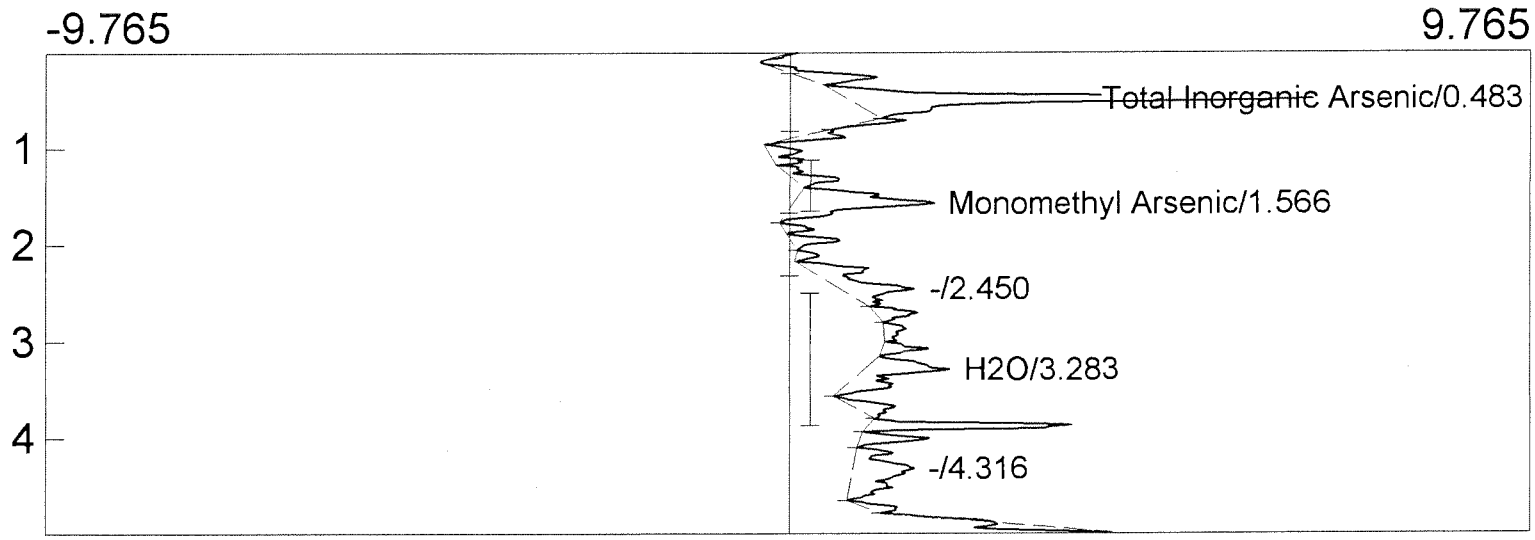
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	27.9660	4.727
Monomethyl Arsenic	1.233	11.0725	0.906
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		39.0385	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:04:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 1.CHR ()
Operator: BJS



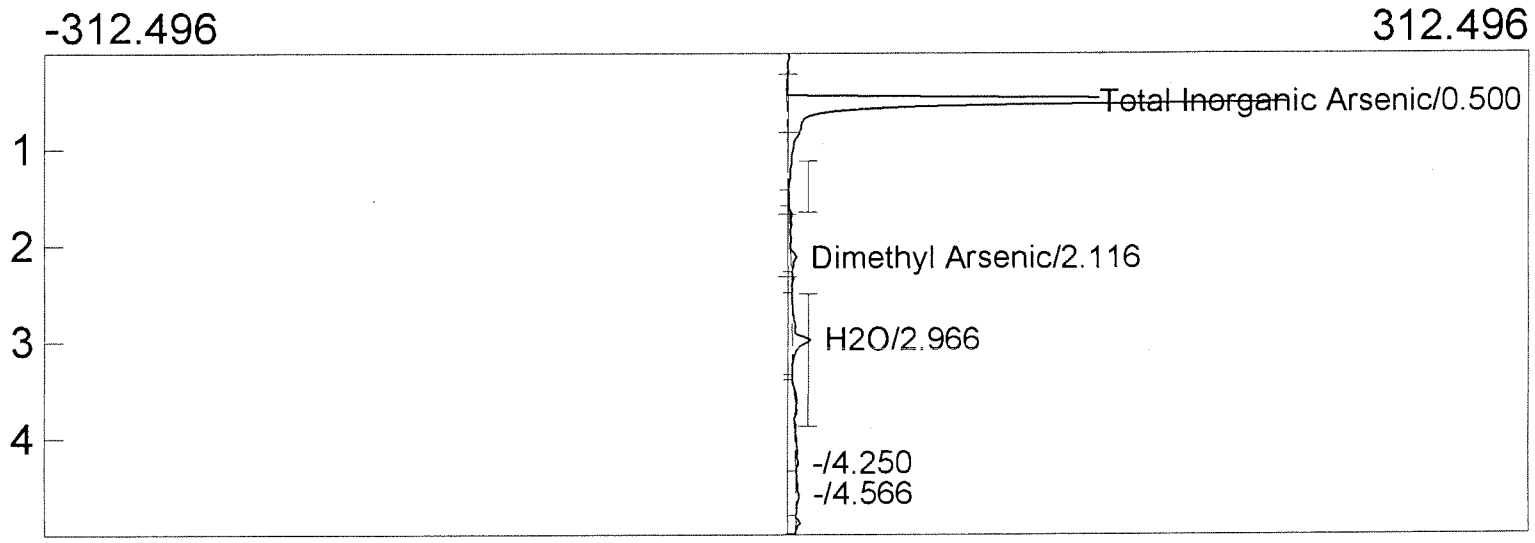
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	614.8745	113.241
Monomethyl Arsenic	1.250	747.7600	150.255
Monomethyl Arsenic	1.566	394.4830	76.652
Dimethyl Arsenic	2.250	131.7080	14.378
H2O	3.633	61.2840	6.640
		1950.1095	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:14:21
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 2.CHR ()
Operator: BJS



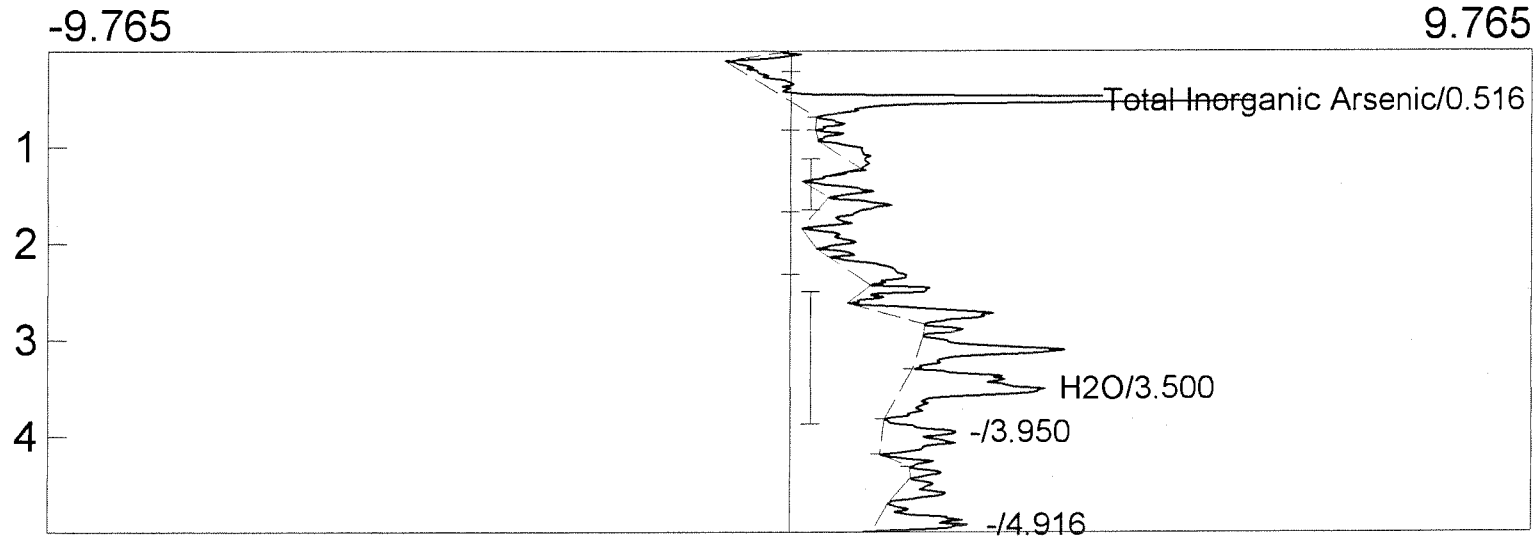
Component	Retention	Area	Height
Total Inorganic Arsenic	0.483	35.9410	6.155
Monomethyl Arsenic	1.566	18.0690	1.875
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.283	12.7535	1.135
		66.7635	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:24:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-OPR 2.0mL.CHR ()
Operator: BJS



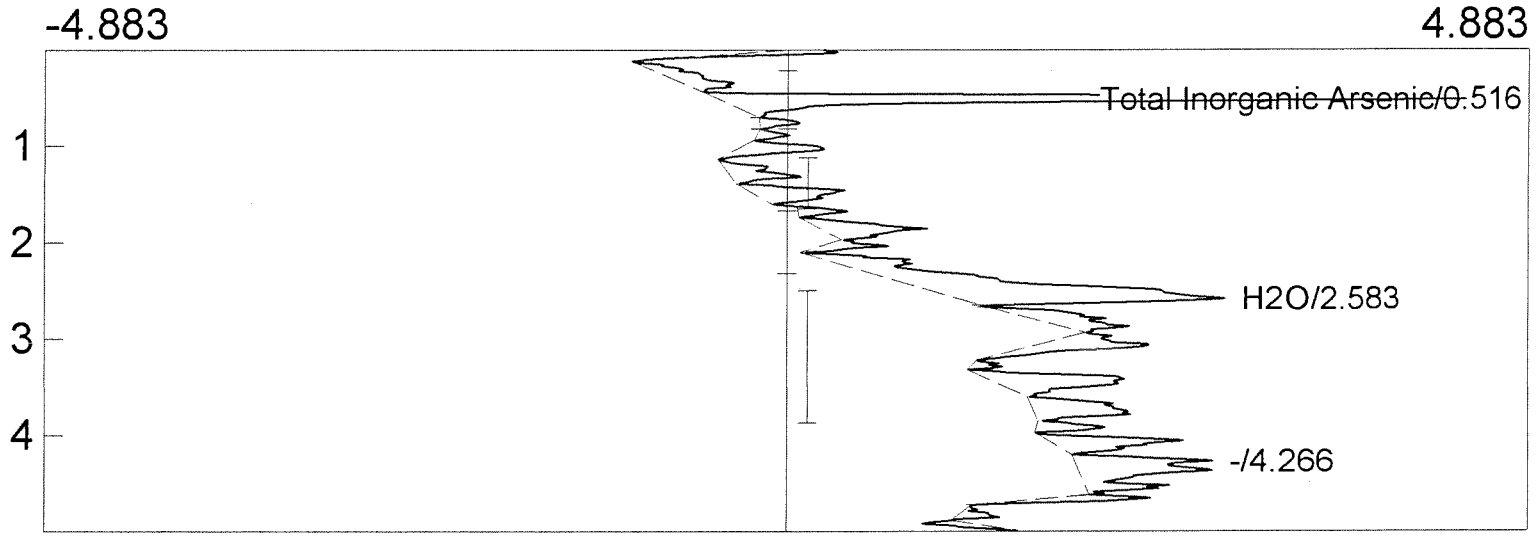
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1214.3380	221.998
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	16.4490	2.410
H2O	2.966	74.9180	7.946
		1305.7050	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:33:47
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB1 2.0mL.CHR ()
Operator: BJS



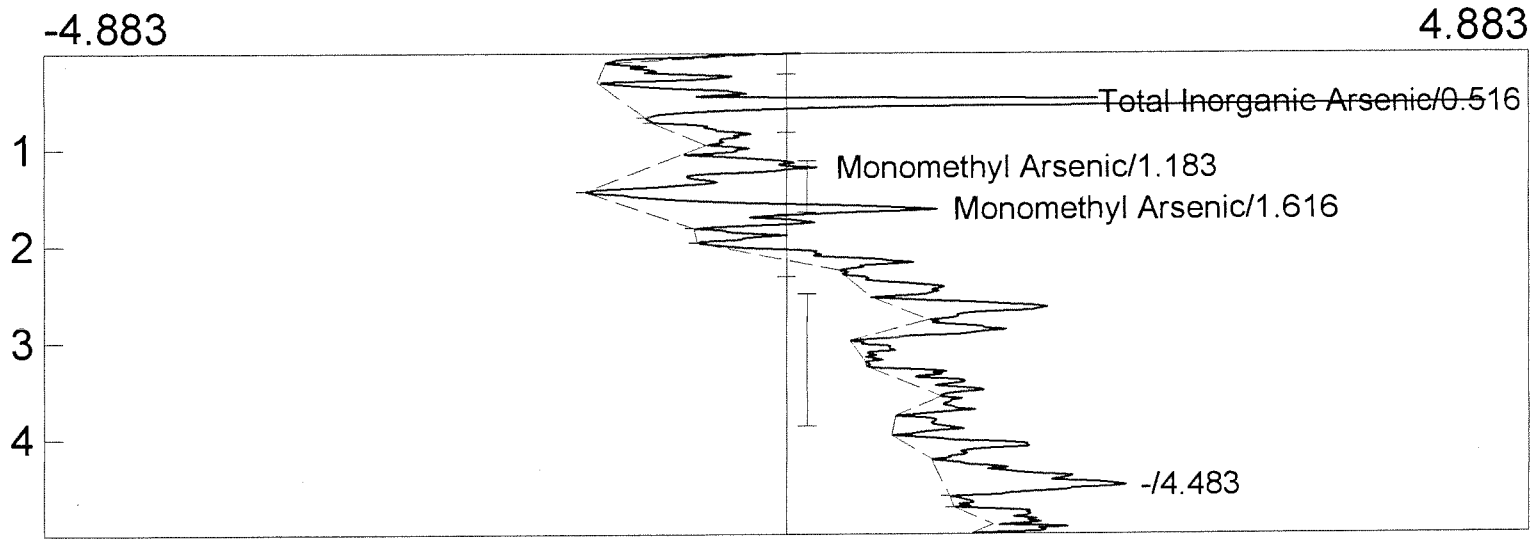
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	35.3255	6.230
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.500	25.8845	1.894
		61.2100	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:42:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB2 2.0mL.CHR ()
Operator: BJS



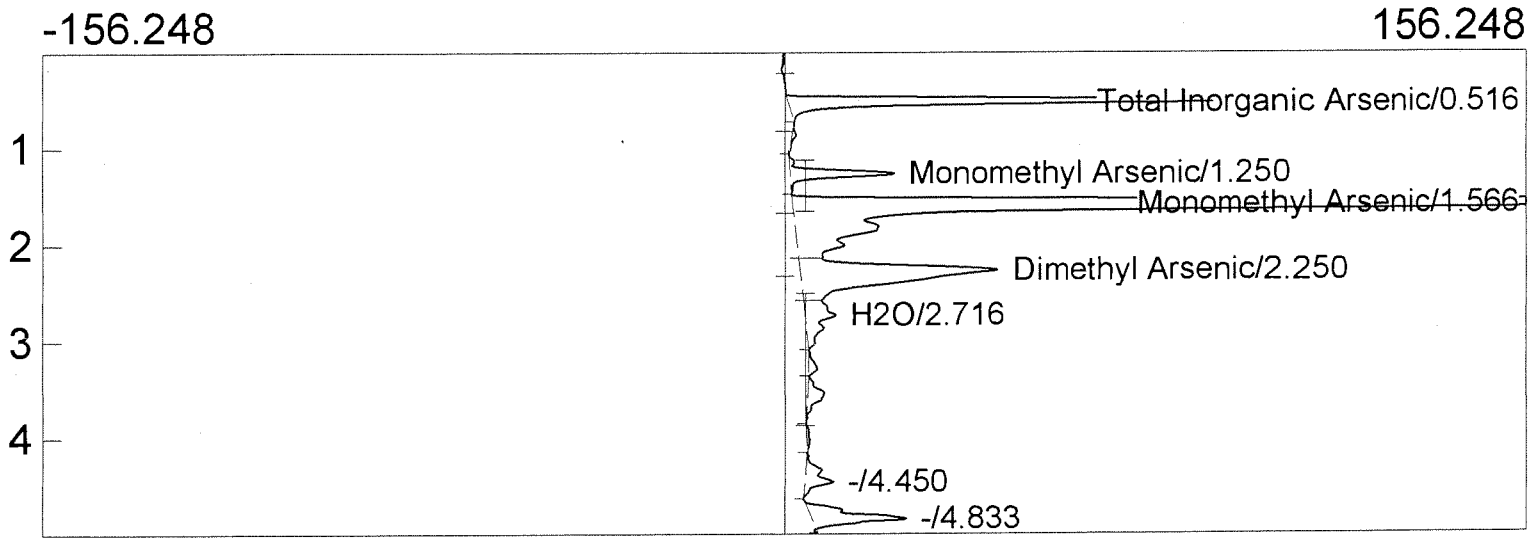
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	23.2160	4.977
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.583	26.4360	1.769
		49.6520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:52:40
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB3 2.0mL.CHR ()
Operator: BJS



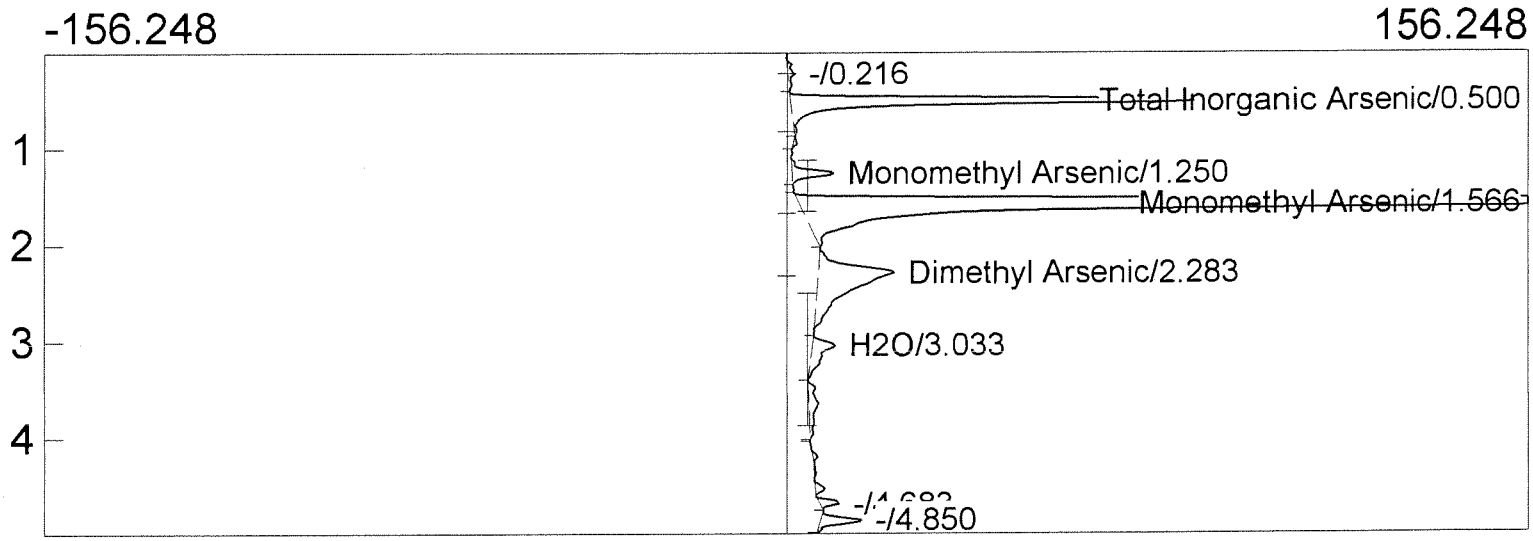
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	31.3310	5.729
Monomethyl Arsenic	1.183	13.9035	1.156
Monomethyl Arsenic	1.616	18.3815	2.001
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		63.6160	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:04:32
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-009 1.0mL.CHR ()
Operator: BJS



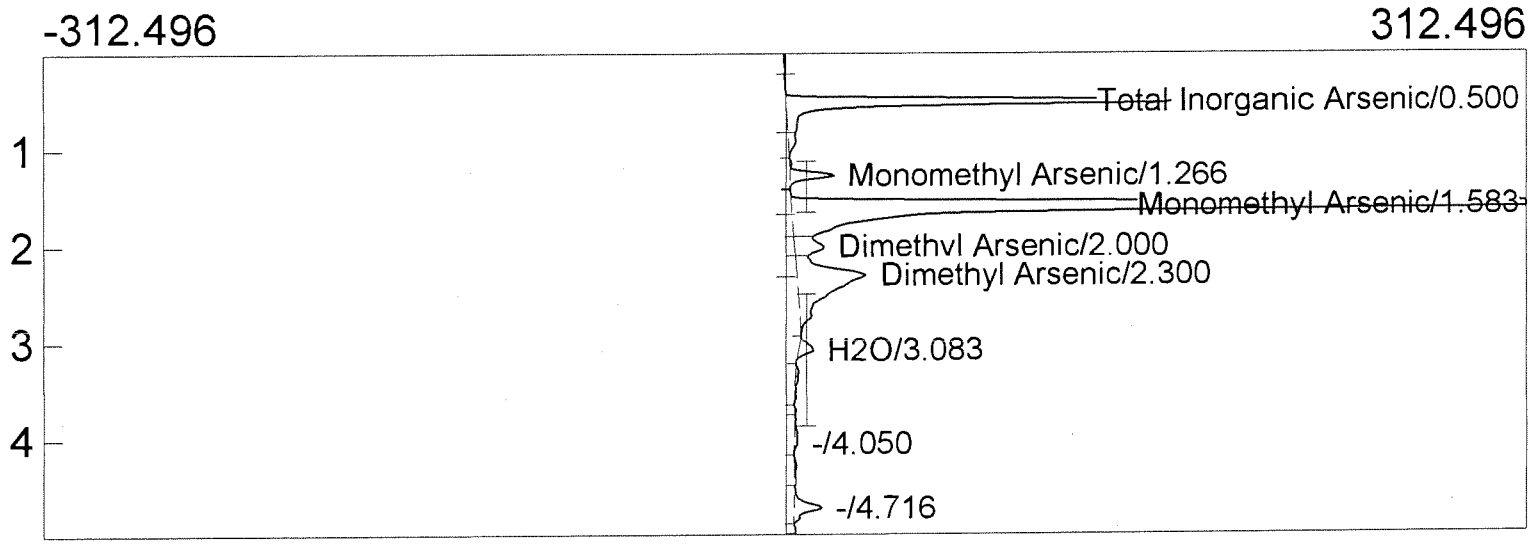
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	400.4800	91.013
Monomethyl Arsenic	1.250	111.9560	22.189
Monomethyl Arsenic	1.566	2303.9920	407.247
Dimethyl Arsenic	2.250	481.7150	42.038
H2O	2.716	102.0690	6.631
		3400.2120	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:13:56
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-015 1.0mL.CHR ()
Operator: BJS



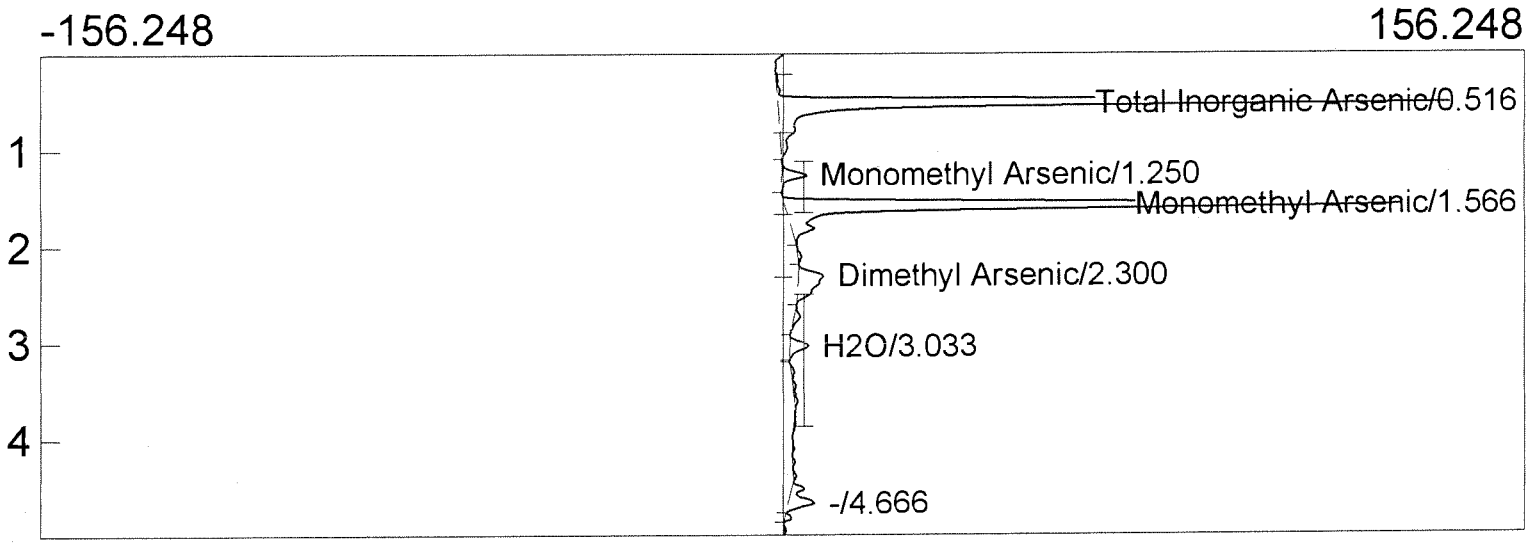
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	426.1660	86.647
Monomethyl Arsenic	1.250	45.8840	8.902
Monomethyl Arsenic	1.566	2033.1280	381.133
Dimethyl Arsenic	2.283	275.8515	16.081
H2O	3.033	53.7590	4.862
		2834.7885	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:23:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025 1.0mL.CHR ()
Operator: BJS



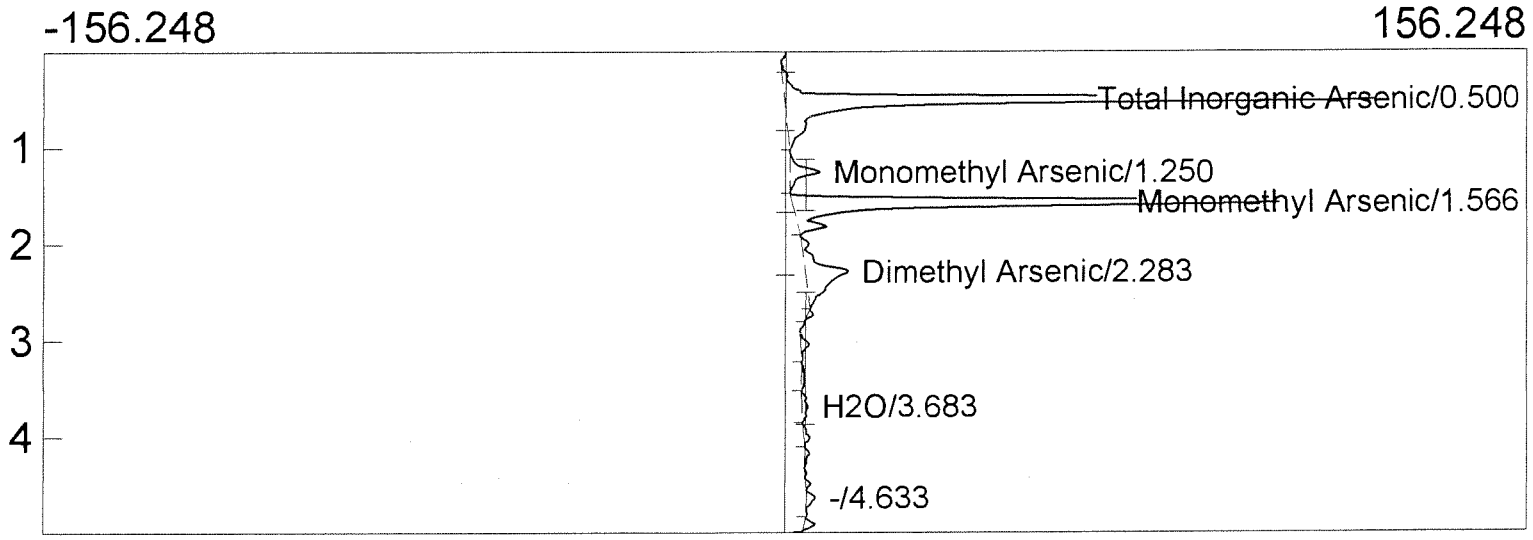
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	841.2000	163.484
Monomethyl Arsenic	1.266	92.5165	18.606
Monomethyl Arsenic	1.583	2923.7050	537.723
Dimethyl Arsenic	2.000	114.2820	12.457
Dimethyl Arsenic	2.300	523.9380	29.164
H2O	3.083	45.5070	6.262
		4541.1485	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:33:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025ms 0.25mL.CHR ()
Operator: BJS



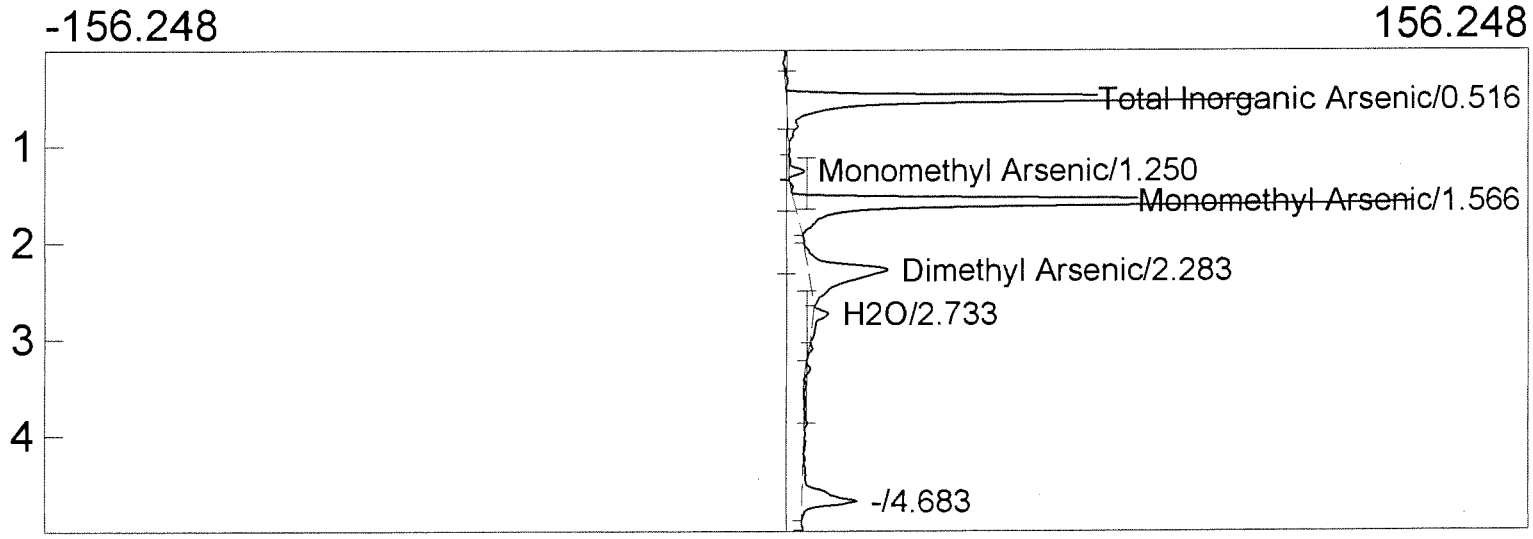
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	721.5740	144.049
Monomethyl Arsenic	1.250	29.2380	5.247
Monomethyl Arsenic	1.566	675.4080	132.674
Dimethyl Arsenic	2.300	68.3810	5.243
H2O	3.033	25.9780	3.908
		1520.5790	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:42:20
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025MSD 0.25mL.CHR ()
Operator: BJS



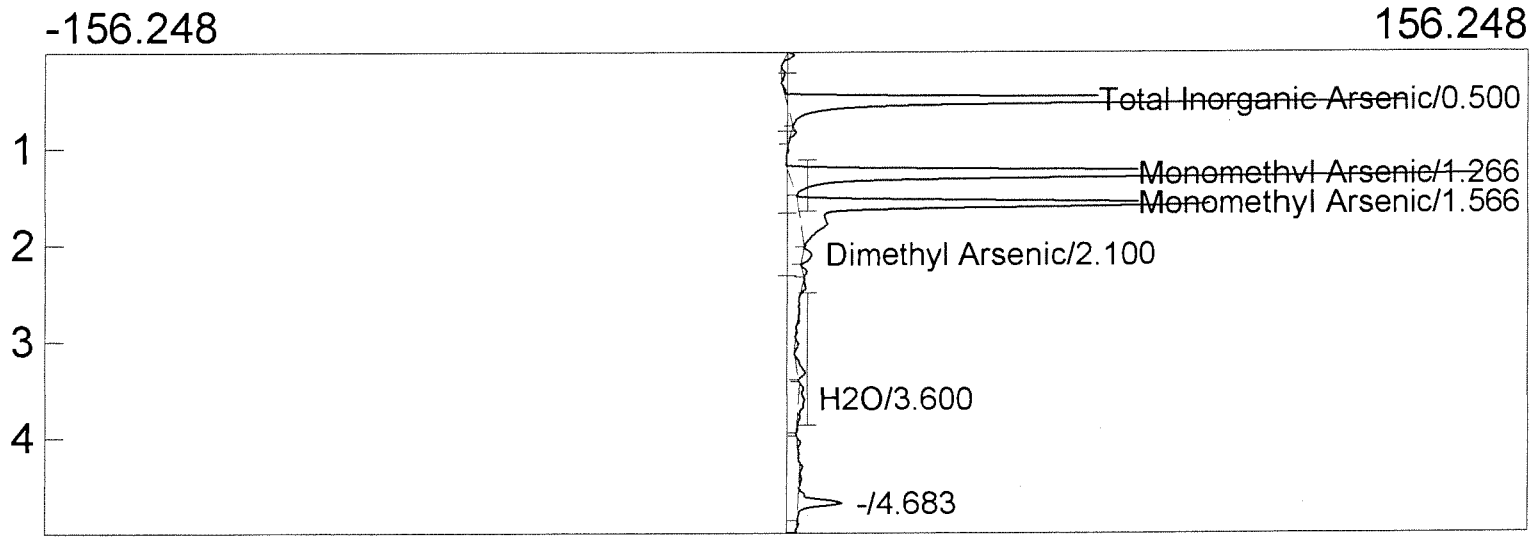
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	712.2670	126.993
Monomethyl Arsenic	1.250	45.0395	6.418
Monomethyl Arsenic	1.566	589.0770	108.026
Dimethyl Arsenic	2.283	139.0140	9.113
H2O	3.683	14.9530	1.275
		1500.3505	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:53:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-009 0.5mL.CHR ()
Operator: BJS



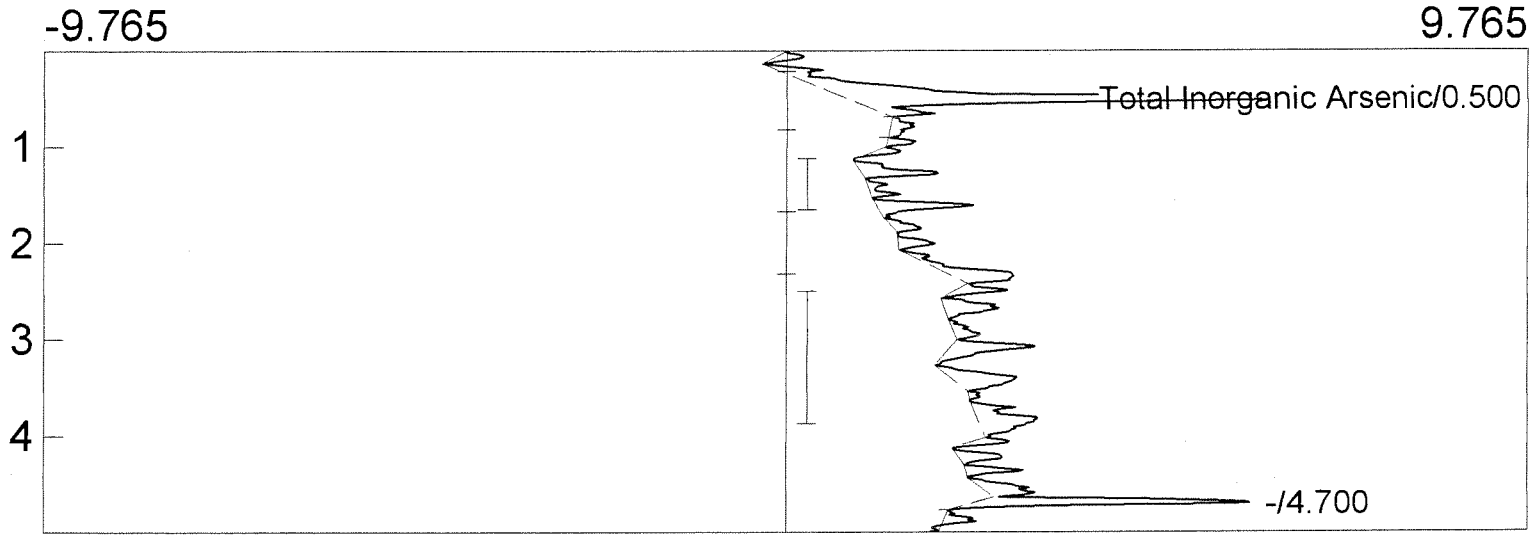
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	565.5450	100.699
Monomethyl Arsenic	1.250	16.5110	3.358
Monomethyl Arsenic	1.566	699.0285	132.262
Dimethyl Arsenic	2.283	210.4215	16.842
H2O	2.733	26.9115	3.295
		1518.4175	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:03:34
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 2.CHR ()
Operator: BJS



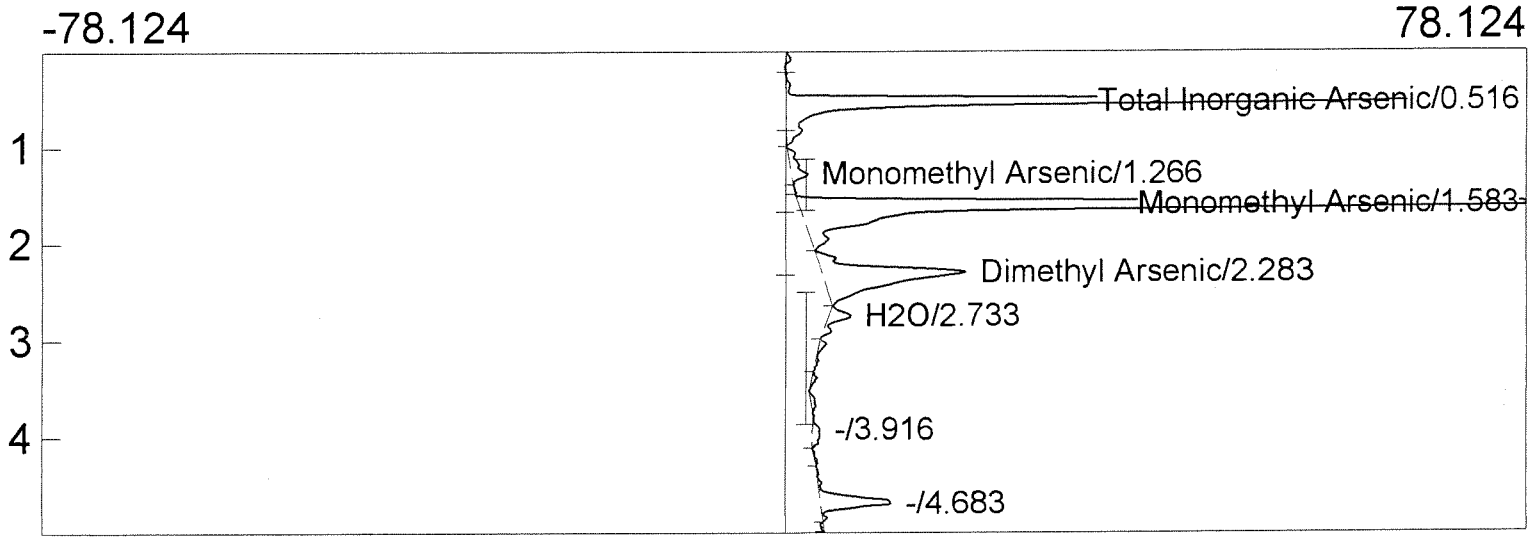
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	624.4760	134.205
Monomethyl Arsenic	1.266	723.6635	145.627
Monomethyl Arsenic	1.566	480.6050	87.928
Dimethyl Arsenic	2.100	13.9075	1.967
H2O	3.600	20.9690	1.368
		1863.6210	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:13:16
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 3.CHR ()
Operator: BJS



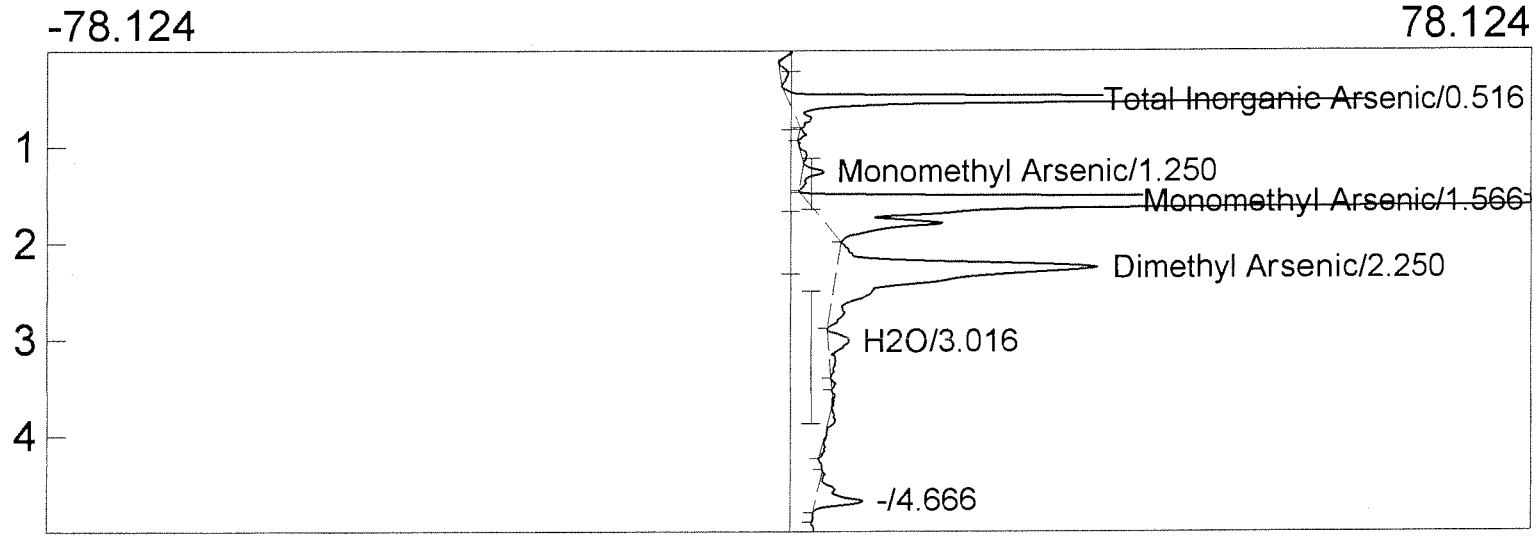
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	42.1715	5.468
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		42.1715	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:23:01
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-015 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	340.2450	65.755
Monomethyl Arsenic	1.266	18.0160	1.759
Monomethyl Arsenic	1.583	564.6230	98.460
Dimethyl Arsenic	2.283	175.0000	15.282
H2O	2.733	19.2520	2.301
		1117.1360	

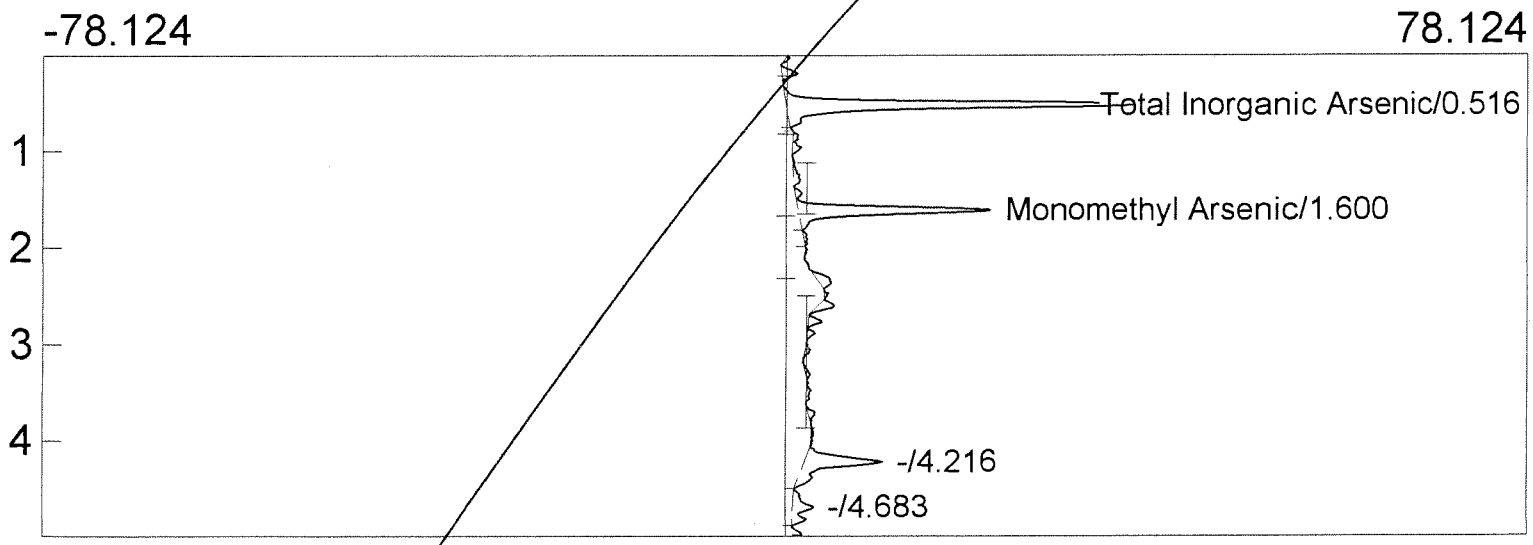
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:32:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-025 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	278.6690	61.260
Monomethyl Arsenic	1.250	14.7915	2.280
Monomethyl Arsenic	1.566	1154.9225	214.421
Dimethyl Arsenic	2.250	346.0270	27.626
H2O	3.016	27.6505	2.230
		1822.0605	

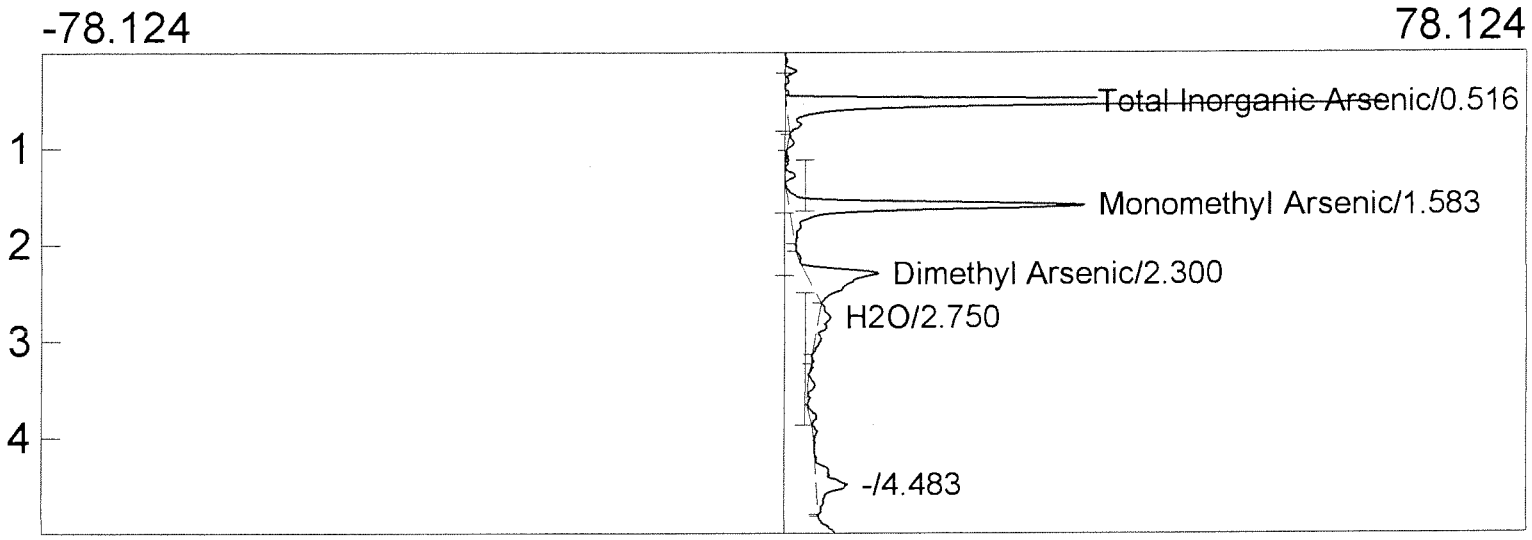
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:42:25
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 1.0mL.CHR ()
Operator: BJS

BJS 8/1/11



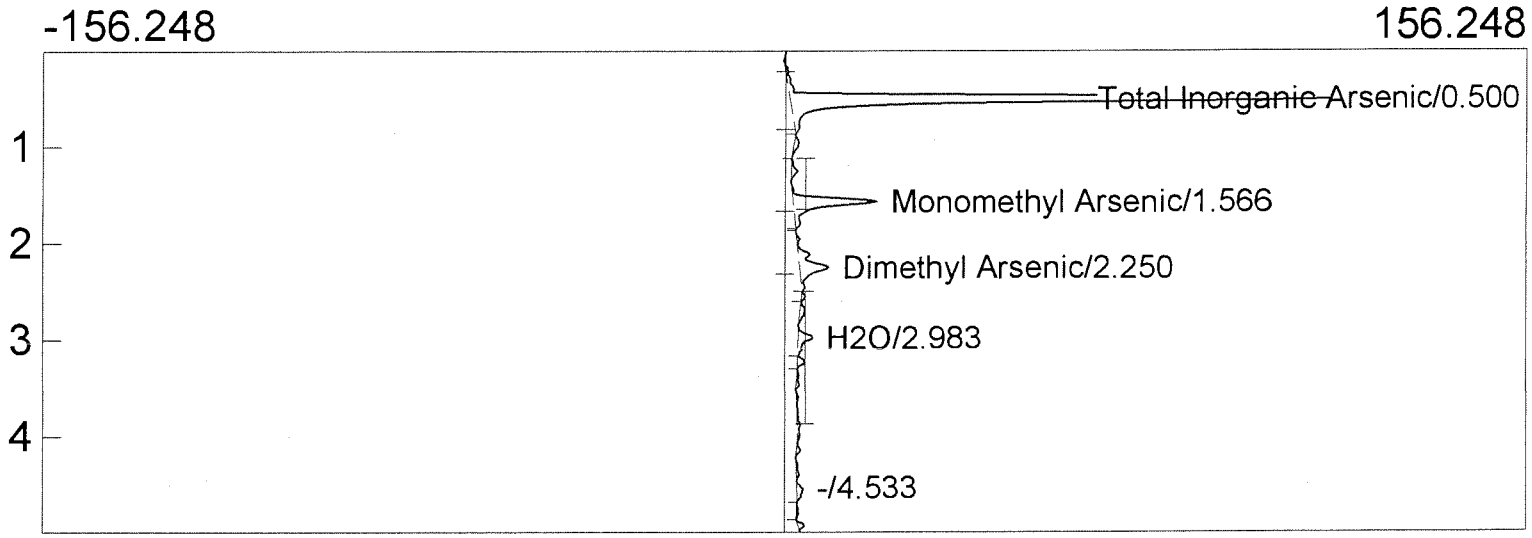
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	196.2410	36.801
Monomethyl Arsenic	1.600	113.4035	20.317
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		309.6445	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:50:49
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 2.0mL.CHR ()
Operator: BJS



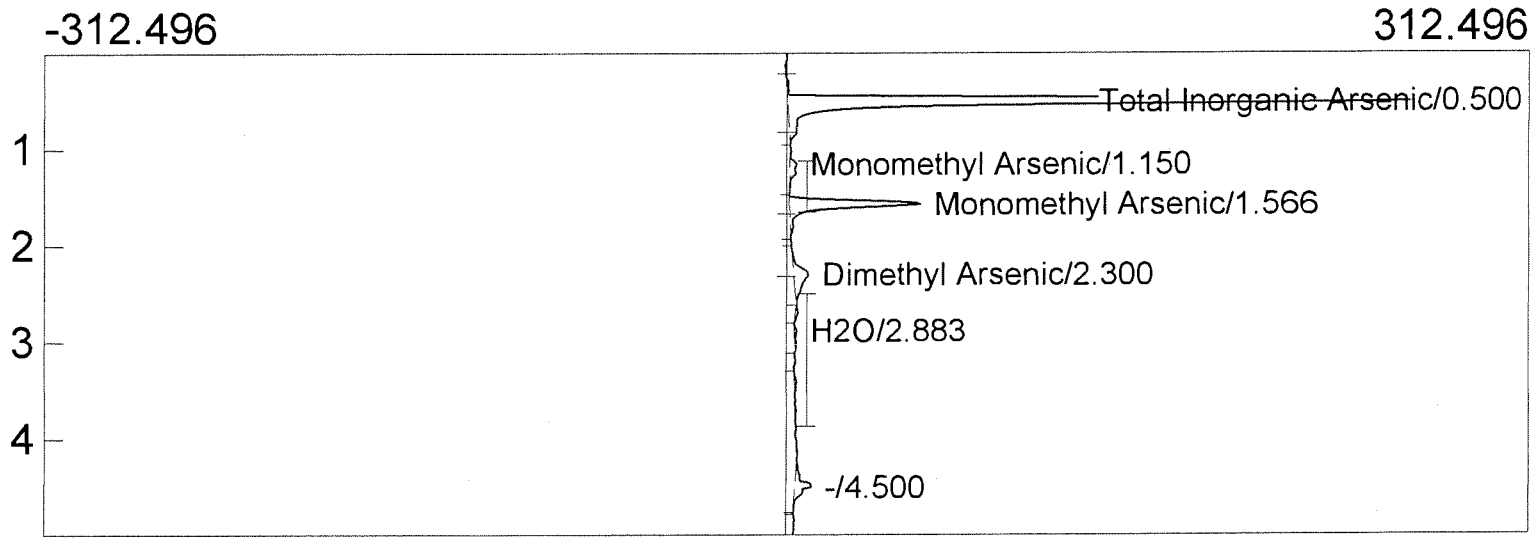
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	302.3290	62.664
Monomethyl Arsenic	1.583	182.6600	31.208
Dimethyl Arsenic	2.300	79.6525	7.619
H2O	2.750	20.4600	1.279
		585.1015	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 12:00:44
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-015 2.0mL.CHR ()
Operator: BJS



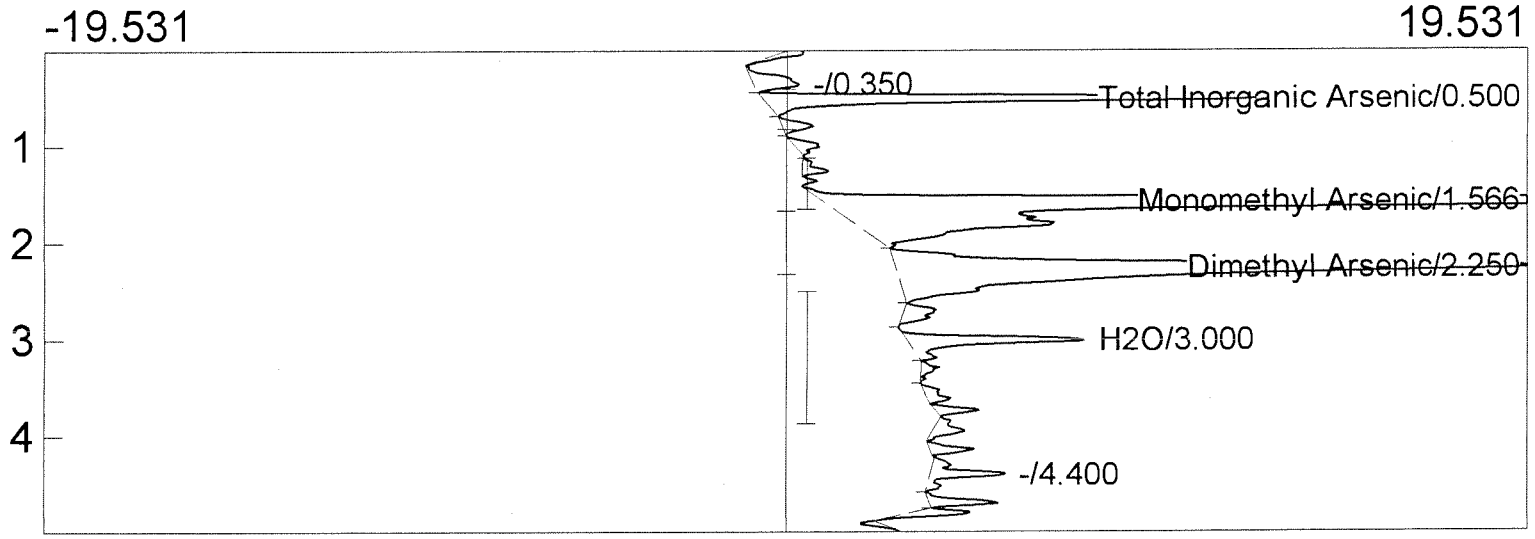
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	573.9690	117.018
Monomethyl Arsenic	1.566	107.9995	17.856
Dimethyl Arsenic	2.250	59.8680	6.013
H2O	2.983	22.0330	3.070
		763.8695	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:09:19
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-025 2.0mL.CHR ()
Operator: BJS



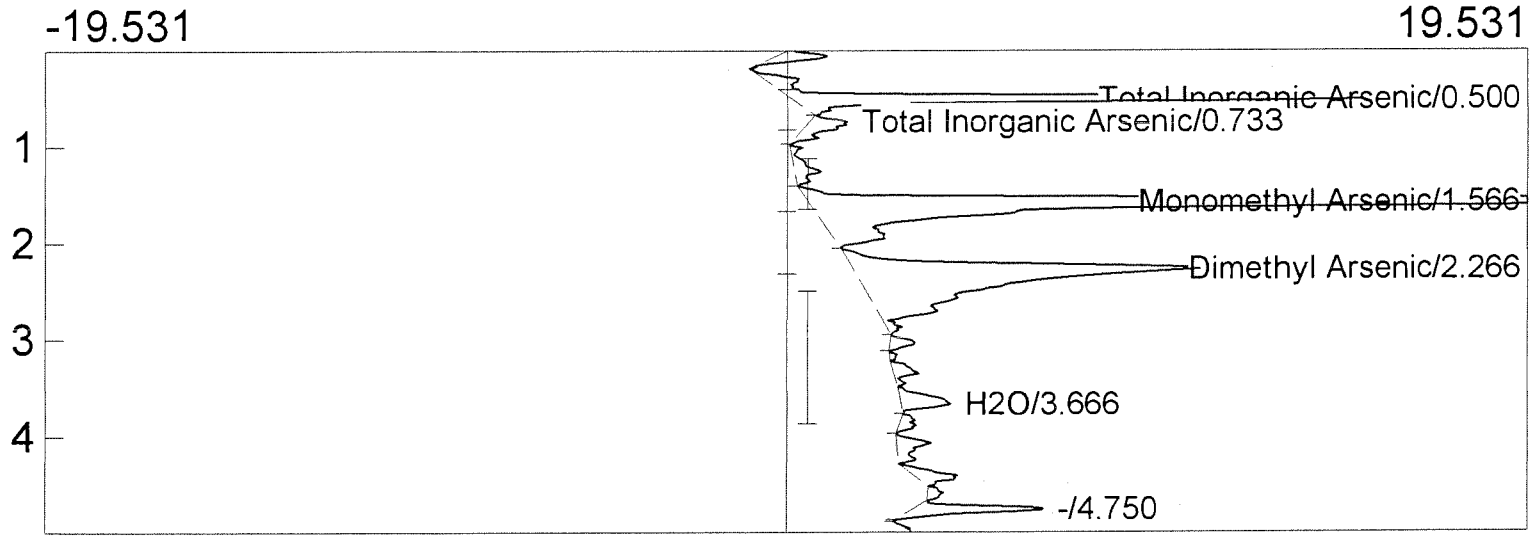
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1316.2730	278.404
Monomethyl Arsenic	1.150	32.5580	3.052
Monomethyl Arsenic	1.566	295.0650	55.481
Dimethyl Arsenic	2.300	81.0160	6.127
H2O	2.883	10.7355	0.947
		1735.6475	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:19:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-009 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	61.8065	13.327
Monomethyl Arsenic	1.566	319.0940	51.717
Dimethyl Arsenic	2.250	168.4380	17.667
H2O	3.000	26.1185	4.697
		575.4570	

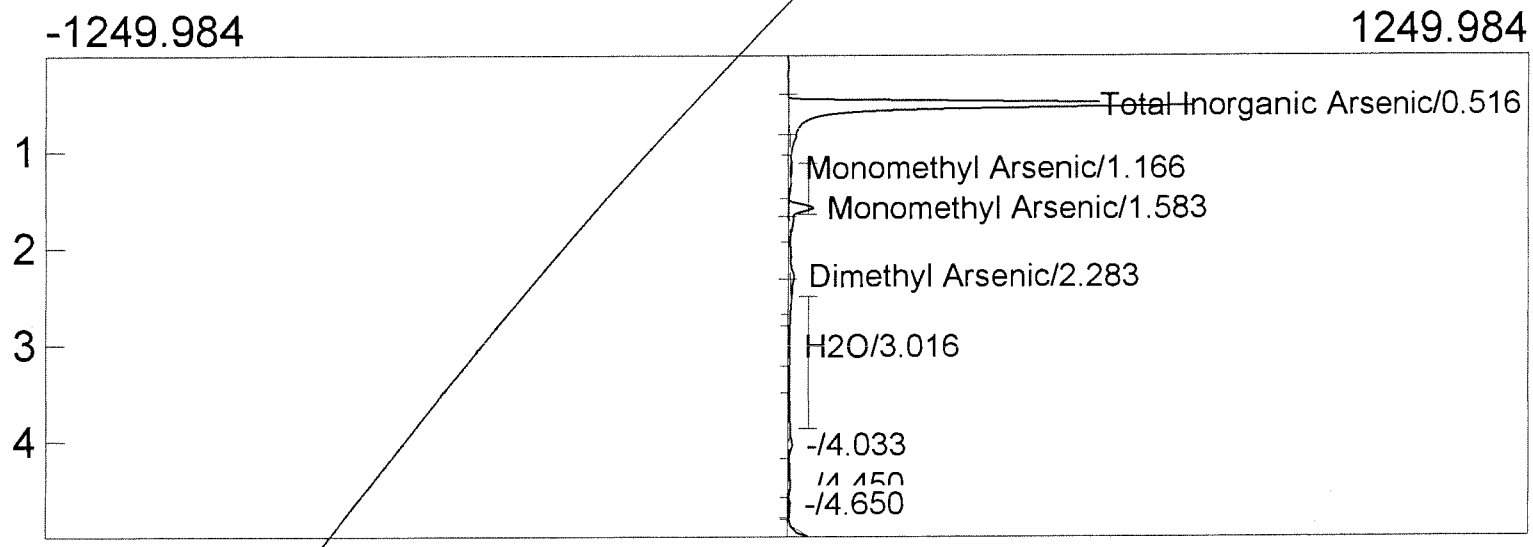
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:28:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	76.2005	15.526
Total Inorganic Arsenic	0.733	10.4180	1.002
Monomethyl Arsenic	1.566	243.9430	40.262
Dimethyl Arsenic	2.266	137.6080	9.218
H2O	3.666	10.7630	1.309
		478.9325	

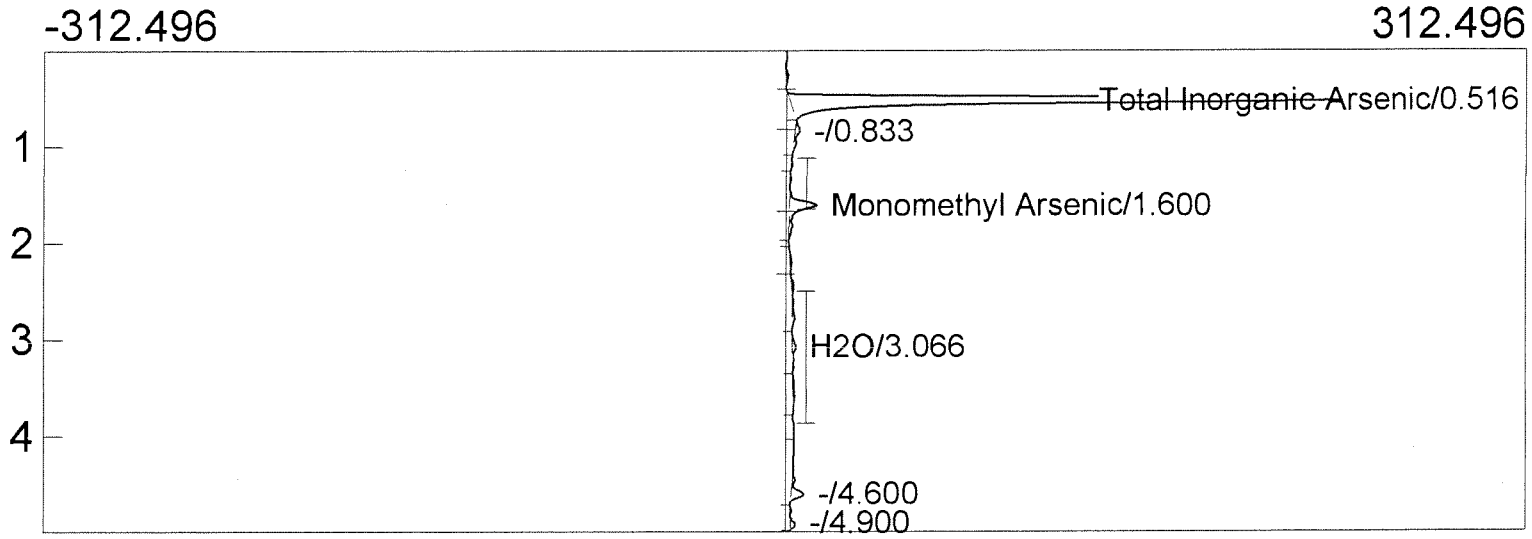
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:37:52
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 2.0mL.CHR ()
Operator: BJS

BJS 8/11



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	3627.8170	690.233
Monomethyl Arsenic	1.166	42.9135	2.741
Monomethyl Arsenic	1.583	267.3405	41.414
Dimethyl Arsenic	2.283	110.1535	6.707
H2O	3.016	11.4340	0.956
		4059.6585	

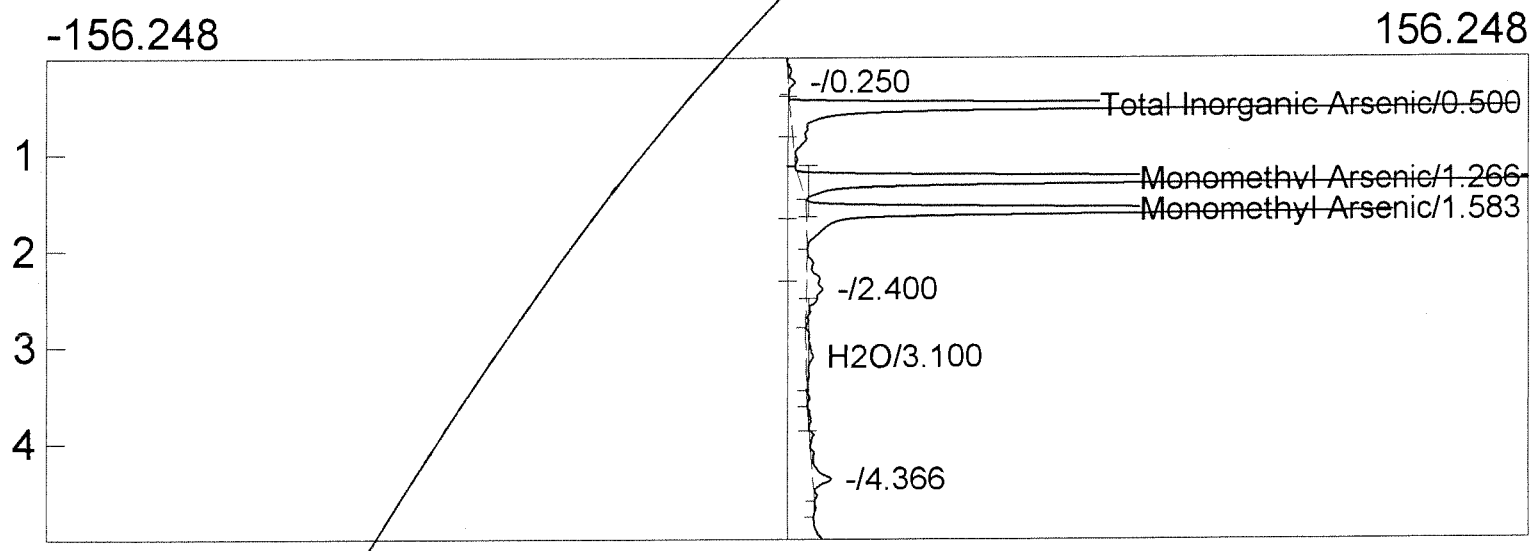
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:45:55
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1076.7395	233.401
Monomethyl Arsenic	1.600	84.3420	11.800
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.066	16.8770	1.586
		1177.9585	

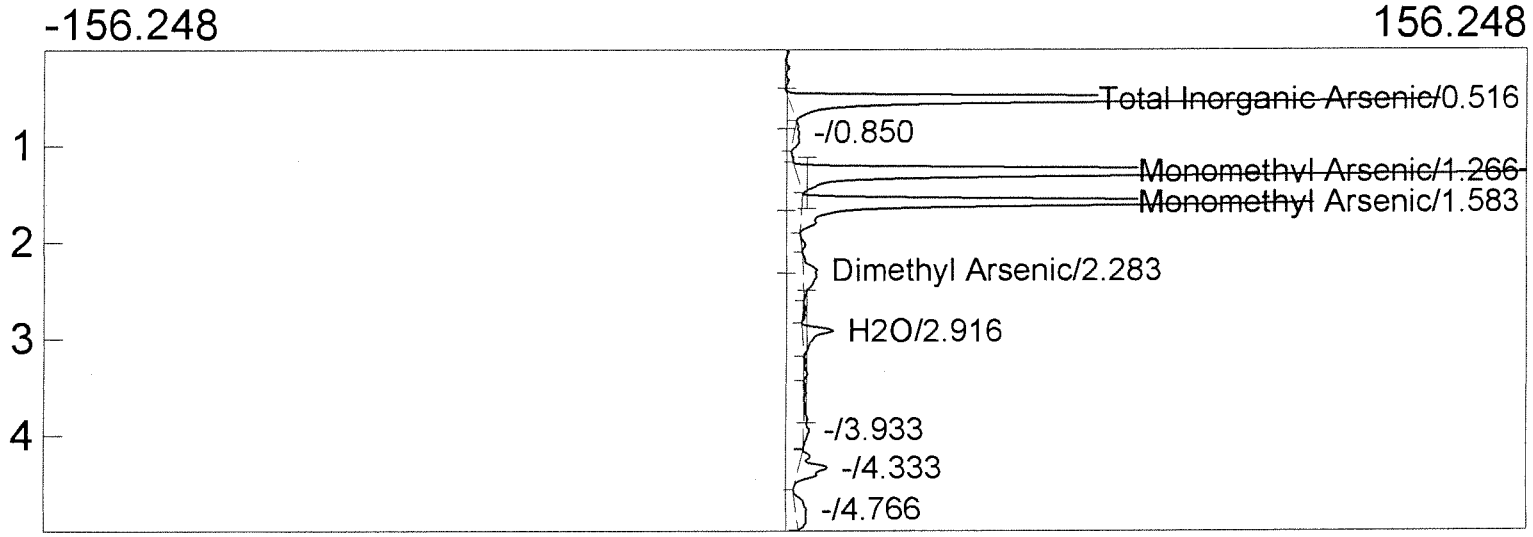
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:56:33
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3.CHR ()
Operator: BJS

BJS 8/1/11



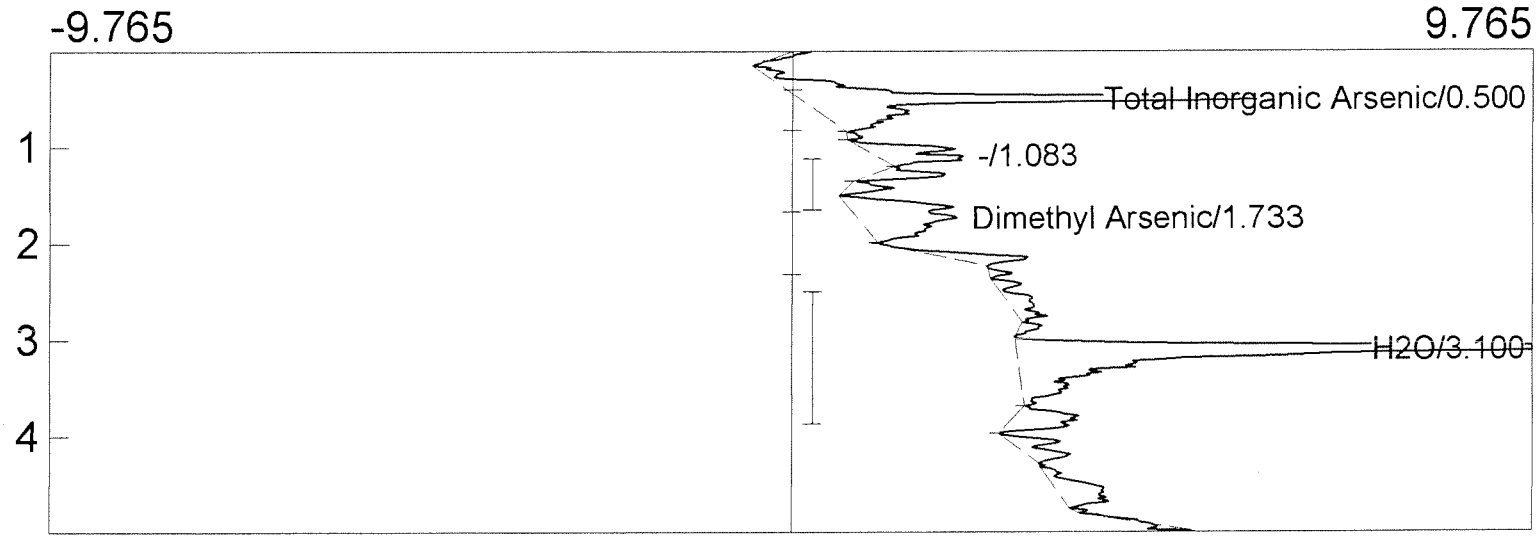
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	764.7670	155.330
Monomethyl Arsenic	1.266	822.6510	172.463
Monomethyl Arsenic	1.583	629.3575	124.905
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.100	26.9830	1.489
		2243.7585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:06:23
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3 Rerun.CHR ()
Operator: BJS



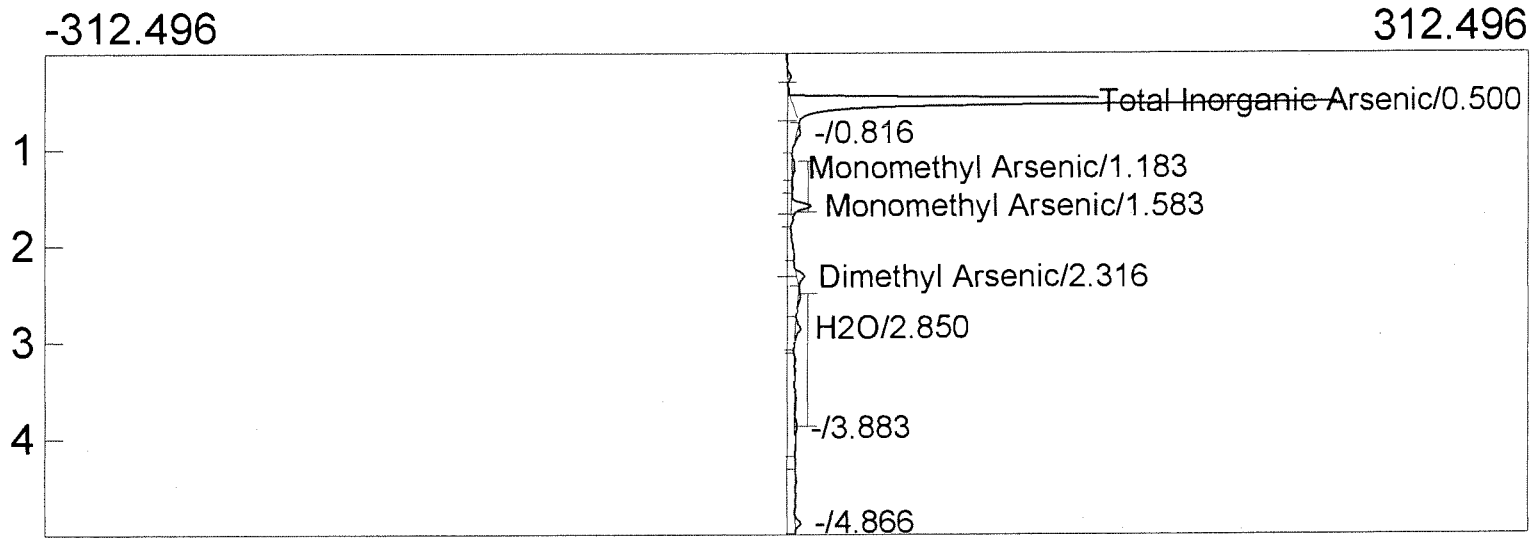
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	628.0615	137.877
Monomethyl Arsenic	1.266	790.9515	162.769
Monomethyl Arsenic	1.583	552.6305	109.285
Dimethyl Arsenic	2.283	42.0890	3.032
H2O	2.916	46.7670	6.655
		2060.4995	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:15:06
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 4.CHR ()
Operator: BJS



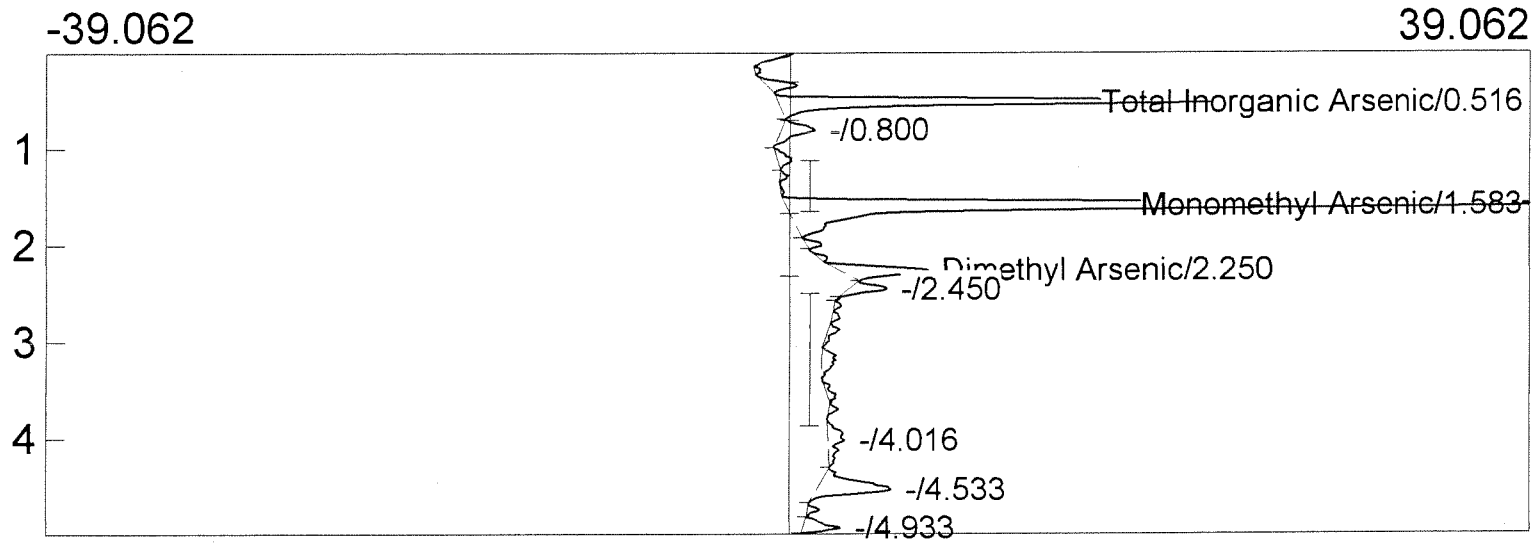
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	50.8045	6.340
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	1.733	23.6610	1.319
H2O	3.100	73.7845	8.241
		148.2500	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:24:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MSD 0.5mL.CHR ()
Operator: BJS



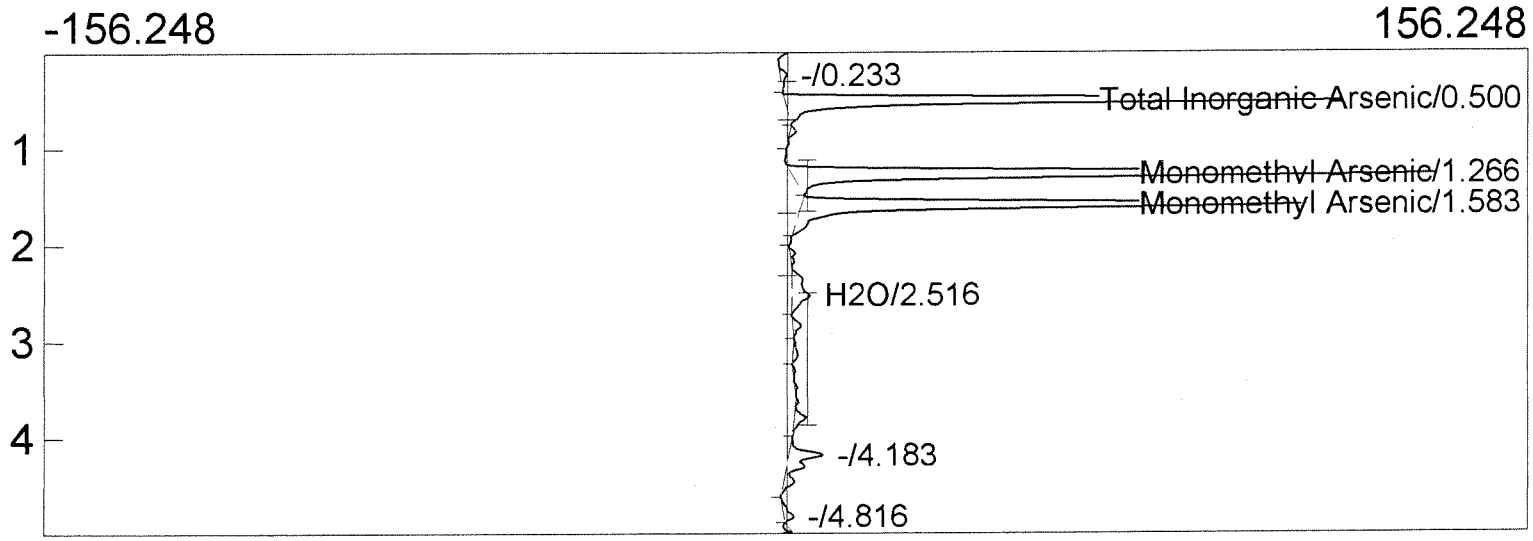
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1082.6750	237.765
Monomethyl Arsenic	1.183	10.2550	1.111
Monomethyl Arsenic	1.583	49.0340	8.460
Dimethyl Arsenic	2.316	19.0135	3.352
H2O	2.850	17.2500	2.279
		1178.2275	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:34:59
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-025 2.0mL.CHR ()
Operator: BJS



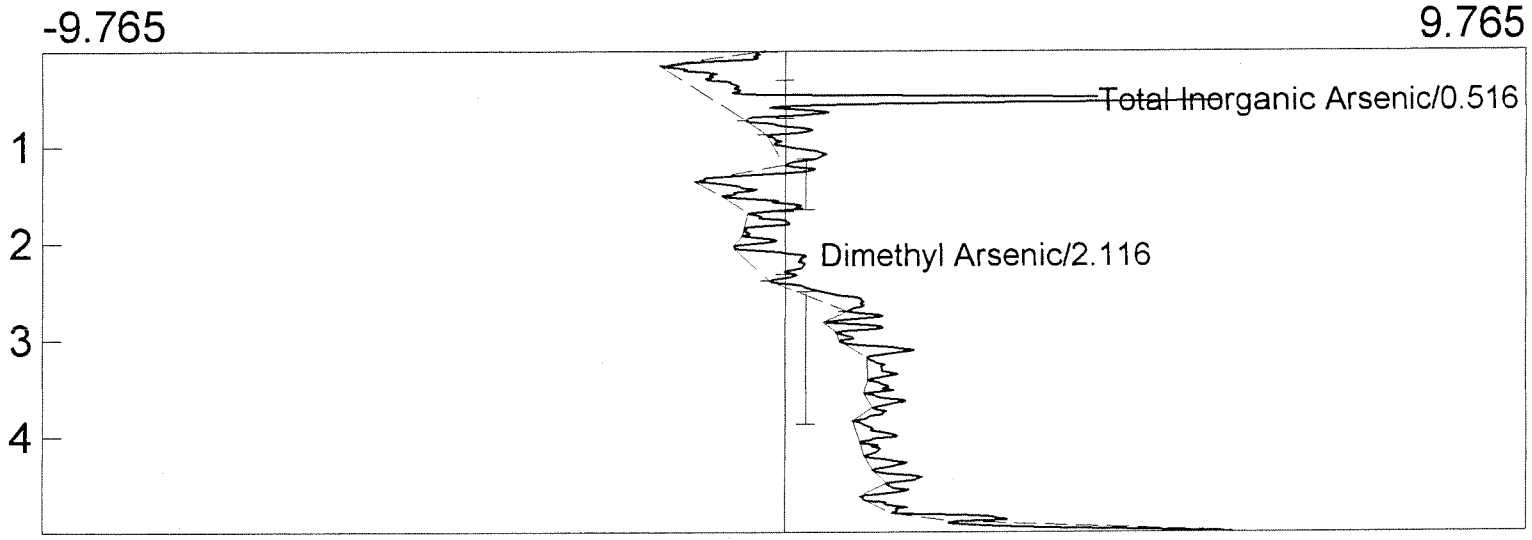
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	103.9290	23.142
Monomethyl Arsenic	1.583	239.1630	44.823
Dimethyl Arsenic	2.250	26.7600	4.779
H2O	0.000	0.0000	0.000
		369.8520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:51:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 4.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	557.1400	121.037
Monomethyl Arsenic	1.266	679.0480	135.979
Monomethyl Arsenic	1.583	547.6840	106.711
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.516	55.0280	3.912
		1838.9000	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:59:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 5.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	42.6490	6.789
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	10.2100	0.852
H2O	0.000	0.0000	0.000
		52.8590	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Methyl Mercury

Prep Method:	CAS SOP	Units:	ng/g
Analysis Method:	CAS SOP	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Soft Tissue	K1106154-009	1.1	0.4	1	07/28/11	07/29/11	3.85	
EWL-HOU-C-Soft Tissue	K1106154-015	1.2	0.5	1	07/28/11	07/29/11	6.05	
EWL-BIL-C-Soft Tissue	K1106154-025	2.1	0.8	1	07/28/11	07/29/11	8.62	
Method Blank 1	K1106154-MB1	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 2	K1106154-MB2	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 3	K1106154-MB3	1.1	0.4	1	07/28/11	07/29/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
Sample Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Matrix Spike/Duplicate Matrix Spike Summary
Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K1106157-025S, K1106157-025SD	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	5.0	1002	1002	10.5	1180	1300	117	129	65-135	10	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	106	106	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	103	103	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	163	141	87	67-133	

Service Request #	K1106152 K1106154 K1106157 K1106166		
MS/MSD with #	K1106157-025		
Star Lims Prep #	138641		
Star Lims Run #	255350		
OPR Parent Std	AF1-57-A	Exp.	08/27/11
OPR Intermediate Std	AF1-63-A	Exp.	08/01/11
QCS Parent Std	NA	Exp.	NA
QCS Intermediate Std	NA	Exp.	NA

1630M Tissue Data Review Form

		Yes	No	N/A
1	20 samples (or less) in batch	X		
2	MS/MSD every 20 samples	X		
3	Mean of Ethylation Blanks less than 2 pg	X		
4	3 Method Blanks Run	X		
5	Method blank below MRL	X		
6	Current Calibration factor used	X		
7	Calibration data included	X		
8	OPR, QCS in control (67-133%)	X		
9	MS/MSD recovery (65 -135%)	X		
10	MS/MSD RPD within 35%	X		
11	All samples within the linear range	X		
12	All corresponding charts included	X		
13	Dilution factors calculated	X		
14	Bench sheet signed	X		

Comments

Primary Reviewed by KDK Date 7/29/2011

Secondary Reviewed by BJS Date 7/29/11

Batch Information Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run Duration:	7.0	Method Blank Type:	Concentration
Heating Time:	1.00	Integration Mode:	Methyl Hg
Retention Start Time:	2.5	Integration Type:	Peak Height
Retention Stop Time:	3.5	Result Units:	µg/Kg
Calibration File:	060211calsoil&tissue.brd		

Reagents

Name	Lot Number
1% NaBEt4	RE2-35-E
2M KOAc	RE2-36-J
25% KOH	RE2-37-K
MeOH	RE2-37-J

Standards

Name	Concentration	Lot Number
MeHgCl 1000pg	1000 pg/mL	AF1-62-H
MeHgCl 100pg	100 pg/mL	AF1-63-A
MeHgCl 10pg	10 pg/mL	AF1-62-J
QCS Intermediate	1000 pg/mL	AF1-62- I
QCS	100 pg/mL	AF1-63-B

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Run Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Peak	Peak Height	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
20	OPR	OPR		2	46,598	103		103	67-133	accept

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106157-025	1,180	µg/Kg	1002	10.5	117	65-135			accept
MSD	K1106157-025	1,300	µg/Kg	1002	10.5	129	65-135	9.85	< 35	accept
OPR	OPR	106	pg	100		106	67-133			accept
	OPR	103	pg	100		103	67-133			accept
QCS	TORT	141	µg/Kg	163		86.4	67-133			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	STD 2	1.76	pg	2	88.0	75-125			accept
	STD 20	18.6	pg	20	93.0	75-125			accept
	STD 50	52.2	pg	50	104	75-125			accept
	STD 100	96.2	pg	100	96.2	75-125			accept
	STD 1000	1,140	pg	1000	114	75-125			accept
	STD 2000	2,200	pg	2000	110.	75-125			accept
Calibration Factor		0.00221	pg/PH				10.5	< 15	accept
Calibration Date		6/2/11							

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
MBA	MBLK 1	0.0311	µg/Kg	< 10			accept
	MBLK 2	0.0524	µg/Kg	< 10			accept
	MBLK 3	0.0903	µg/Kg	< 10			accept
Average		0.0579	µg/Kg		0.0300		

QA Comments:

QA Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Name/ID	Final Result (µg/Kg)	Notes
9	K1106152-009	5.79	accept
10	K1106152-015	10.4	accept
11	K1106152-025	14.8	accept
12	K1106154-009	3.85	accept
13	K1106154-015	6.05	accept
14	K1106154-025	8.62	accept
15	K1106157-009	4.47	accept
16	K1106157-015	4.66	accept
6	K1106157-025	10.5	accept
17	K1106166-009	11.7	accept
18	K1106166-015	29.2	accept
19	K1106166-025	27.9	accept

Run Information Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	OPR	OPR					100	
2	QCS	TORT	MBA	210	50	0.050	163	mg/Kg
3	MBA	MBLK 1		2273	50	0.050		
4	MBA	MBLK 2		2273	50	0.050		
5	MBA	MBLK 3		2273	50	0.050		
6	S	K1106157-025	MBA	505	50	0.050		
7	MS	K1106157-025	MBA	499	50	0.050	1002	
8	MSD	K1106157-025	MBA	499	50	0.050	1002	
9	S	K1106152-009	MBA	1286	50	0.050		
10	S	K1106152-015	MBA	1162	50	0.050		
11	S	K1106152-025	MBA	1095	50	0.050		
12	S	K1106154-009	MBA	2318	50	0.050		
13	S	K1106154-015	MBA	2049	50	0.050		
14	S	K1106154-025	MBA	1193	50	0.050		
15	S	K1106157-009	MBA	478	50	0.050		
16	S	K1106157-015	MBA	433	50	0.050		
17	S	K1106166-009	MBA	1673	50	0.050		
18	S	K1106166-015	MBA	1460	50	0.050		
19	S	K1106166-025	MBA	1435	50	0.050		
20	OPR	OPR					100	

Columbia Analytical Services, Inc.

Sample Number(s): As Listed	Service Request Number(s): K1106152 K1106154 K1106157 K1106166
Analysis for: MeHg in Tissues	Method: 1630m

DATA **StarLIMS #138641**

Sample ID		Initial Weight (g)		Final Volume (mL)			Matrix
MB-1		0.250		50mL			25% KOH
MB-2		0.250		50mL			25% KOH
MB-3		0.250		50mL			25% KOH
TORT		0.222		50mL			25% KOH
K1106152-009		0.252		50mL			25% KOH
K1106152-015		0.273		50mL			25% KOH
K1106152-025		0.253		50mL			25% KOH
K1106154-009		0.255		50mL			25% KOH
K1106154-015		0.250		50mL			25% KOH
K1106154-025		0.253		50mL			25% KOH
K1106157-009		0.250		50mL			25% KOH
K1106157-015		0.256		50mL			25% KOH
K1106157-025		0.254		50mL			25% KOH
K1106157-025S		0.251		50mL			25% KOH
K1106157-025SD		0.251		50mL			25% KOH
K1106166-009		0.266		50mL			25% KOH
K1106166-015		0.257		50mL			25% KOH
K1106166-025		0.267		50mL			25% KOH
						Start Time: 02:45 PM 07/28/2011	
						Oven Temperature: 80°C	

Comments: Spike Standard: 0.5ml of 1000ng/mL AF1-57-A
25% KOH: RE2-37-K

Analyst:	Date:
	7/28/2011

R\:ICP\misc\digforms\072811

Conversion from dry weight to wet weight:

Standard MRL =	10
Standard MDL =	4.0
Standard Dilution =	1
Standard Sample Mass =	0.250

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.252	19.6	**1.286**	1	**1.9**	**0.8**
K1106152-015	0.273	23.5	**1.162**	1	**2.2**	**0.9**
K1106152-025	0.253	23.1	**1.095**	1	**2.3**	**0.9**
K1106154-009	0.255	11.0	**2.318**	1	**1.1**	**0.4**
K1106154-015	0.250	12.2	**2.049**	1	**1.2**	**0.5**
K1106154-025	0.253	21.2	**1.193**	1	**2.1**	**0.8**
K1106157-009	0.250	52.3	**0.478**	1	**5.2**	**2.1**
K1106157-015	0.256	59.1	**0.433**	1	**5.8**	**2.3**
K1106157-025	0.254	50.3	**0.505**	1	**5.0**	**2.0**
K1106157-025S	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106157-025SD	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106166-009	0.266	15.9	**1.673**	1	**1.5**	**0.6**
K1106166-015	0.257	17.6	**1.460**	1	**1.7**	**0.7**
K1106166-025	0.267	18.6	**1.435**	1	**1.7**	**0.7**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
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			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
Method Blank	0.250	11.000	**2.273**	1	**1.1**	**0.4**

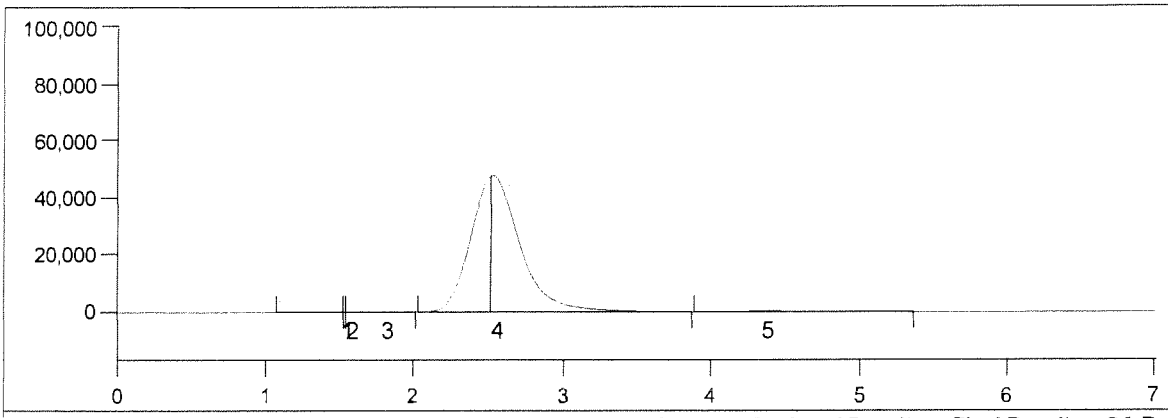
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

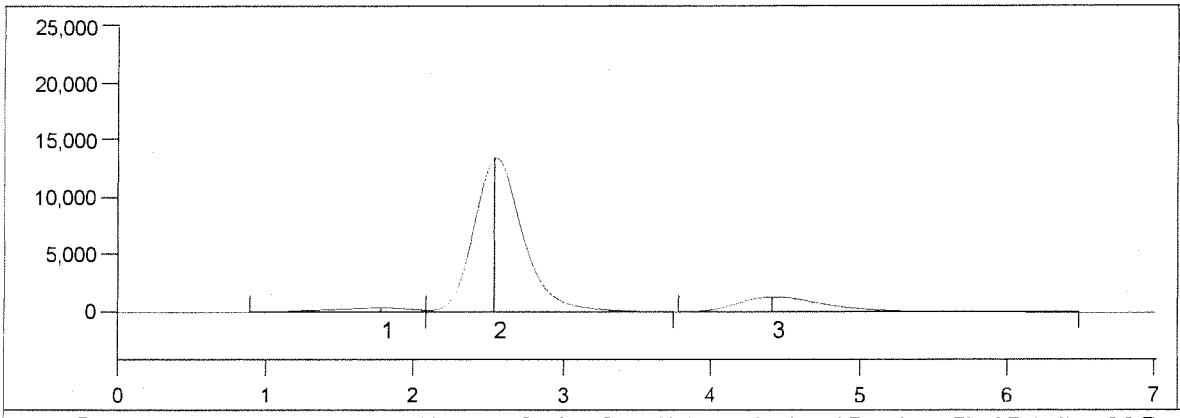


Date:	7/29/11
Time:	8:45 AM

Peak	rt	Height
1	1.51	8
2	1.54	1
3	1.77	83
4	2.52	48,026
5	4.35	352

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept

Notes

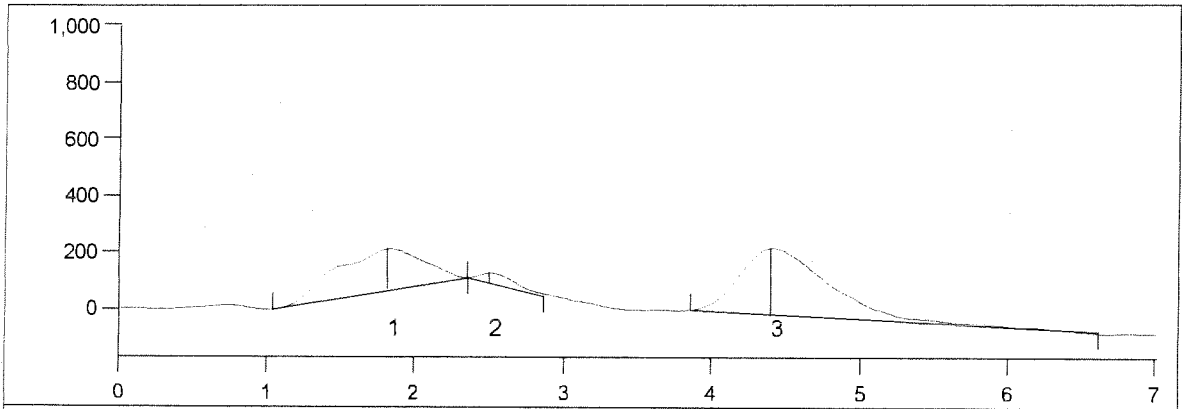


Date:	7/29/11
Time:	8:54 AM

Peak	rt	Height
1	1.77	280
2	2.54	13,412
3	4.40	1,314

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept

Notesmg/Kg



Date:	7/29/11
Time:	9:04 AM

Peak	rt	Height
1	1.80	147
2	2.49	32
3	4.39	237

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept

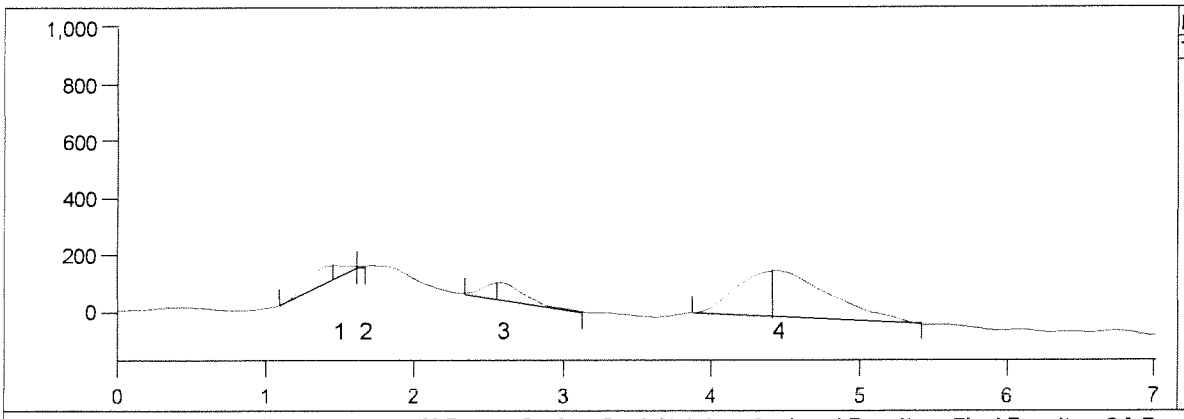
Notes

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

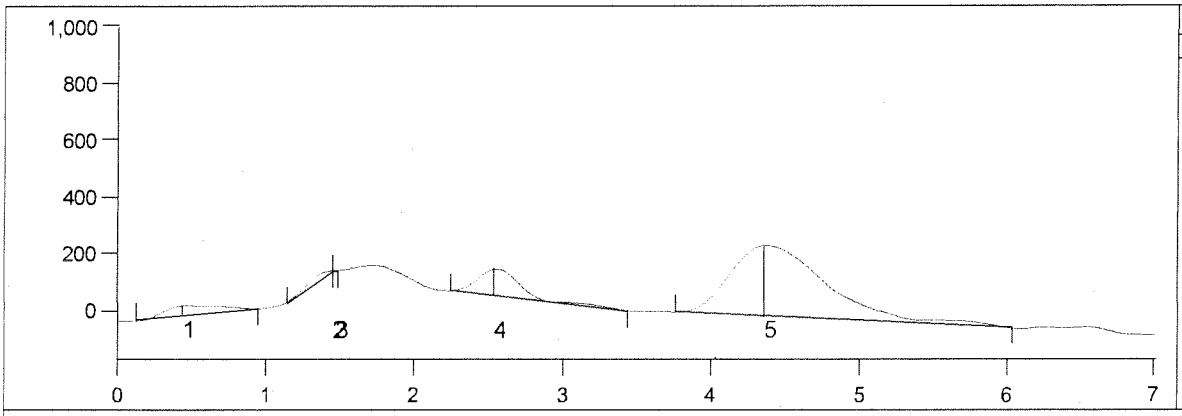


Date: 7/29/11
Time: 9:12 AM

Peak	rt	Height
1	1.44	46
2	1.63	1
3	2.54	54
4	4.41	165

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept

Notes

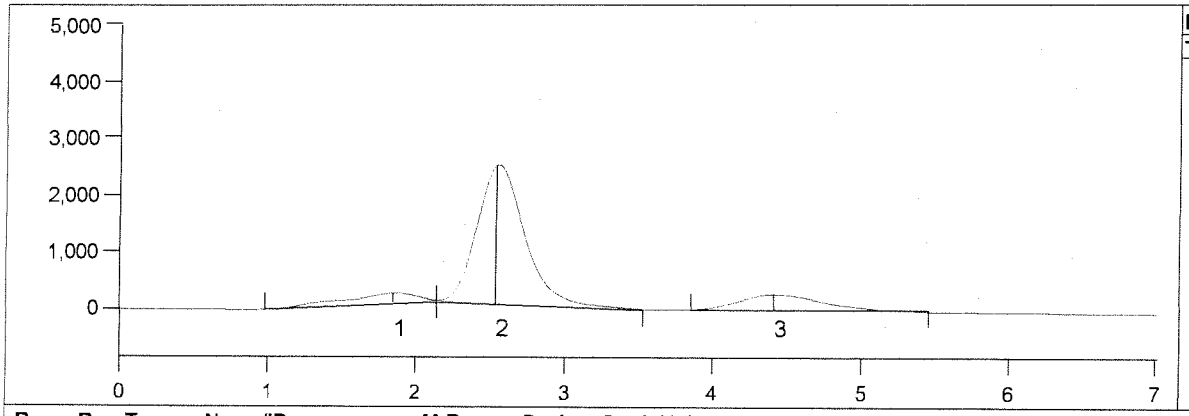


Date: 7/29/11
Time: 9:19 AM

Peak	rt	Height
1	0.44	40
2	1.45	2
3	1.48	1
4	2.53	93
5	4.35	252

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept

Notes



Date: 7/29/11
Time: 9:27 AM

Peak	rt	Height
1	1.85	169
2	2.54	2,424
3	4.40	286

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept

Notes

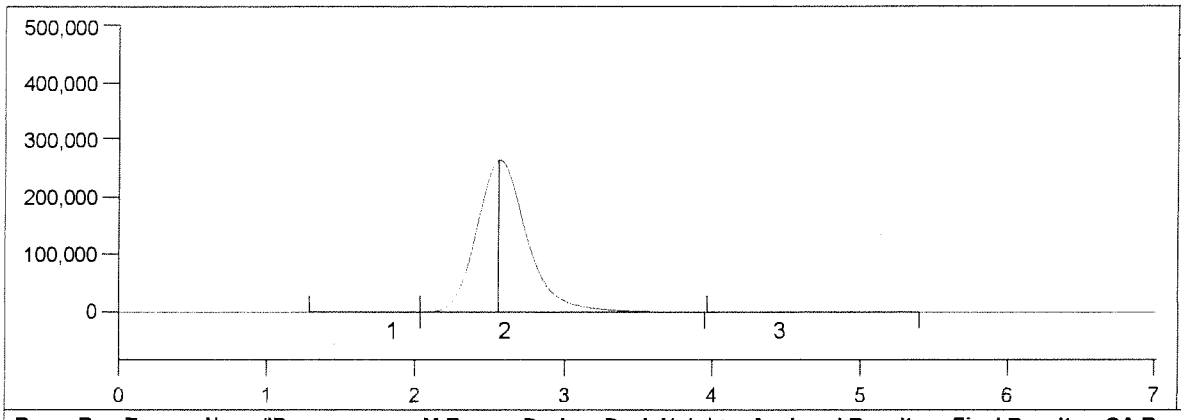
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

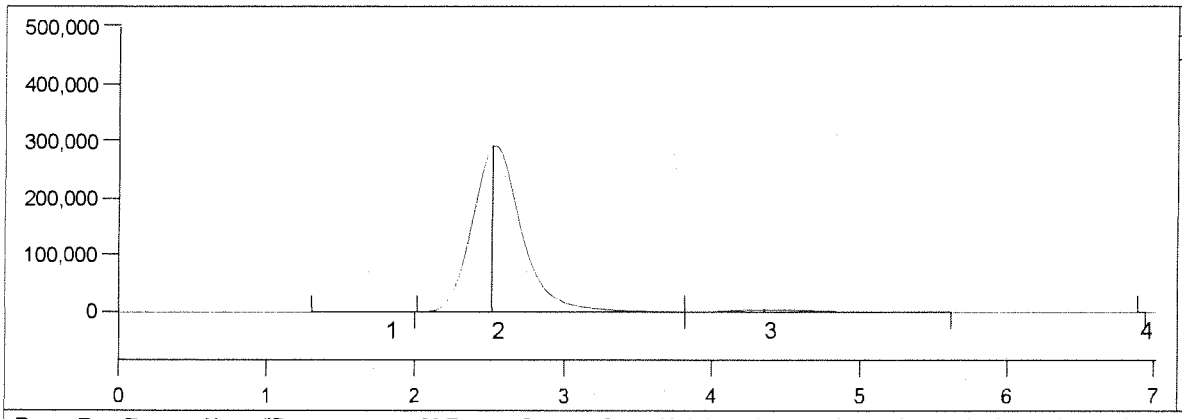


Date: 7/29/11
Time: 9:34 AM

Peak	rt	Height
1	1.80	1,028
2	2.55	266,530
3	4.41	1,274

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept

Notes

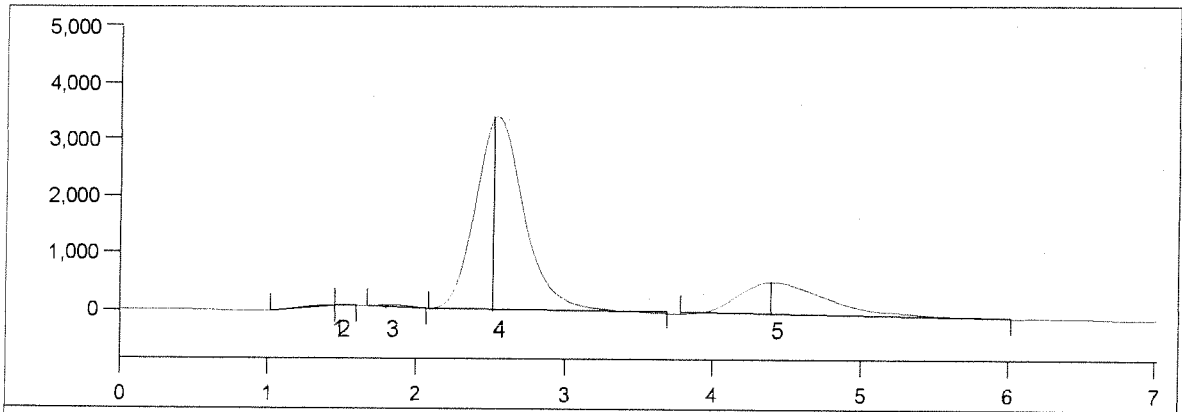


Date: 7/29/11
Time: 9:42 AM

Peak	rt	Height
1	1.80	888
2	2.52	294,141
3	4.36	4,627
4	6.91	0

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept

Notes



Date: 7/29/11
Time: 9:49 AM

Peak	rt	Height
1	1.44	3
2	1.47	1
3	1.80	28
4	2.52	3,410
5	4.39	581

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept

Notes

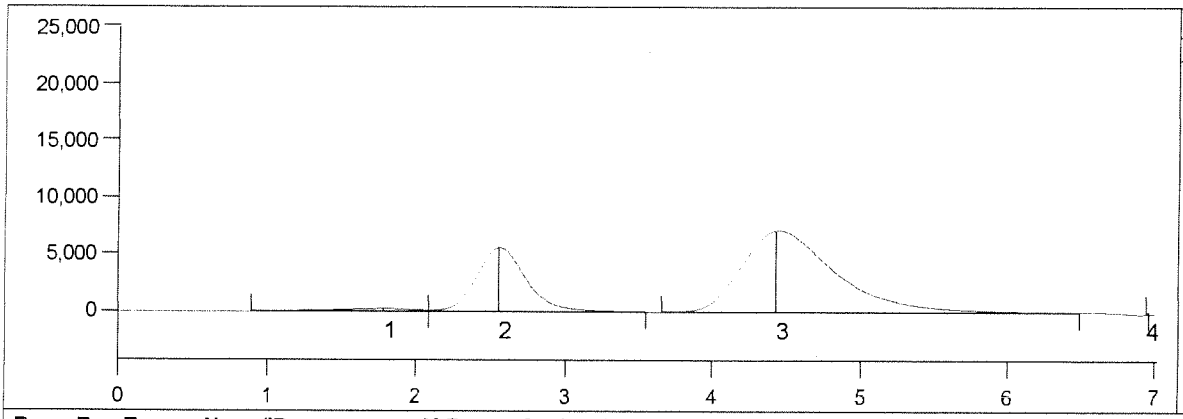
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

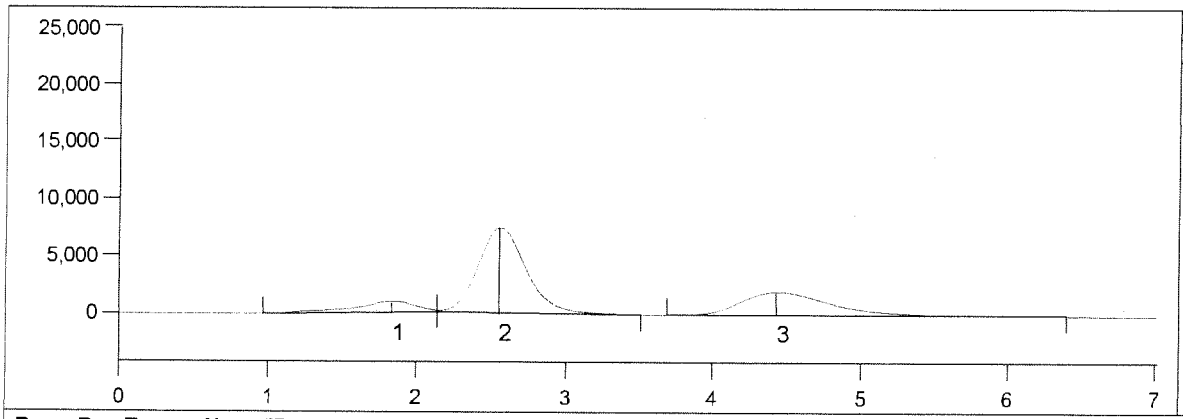
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 9:57 AM

Peak	rt	Height
1	1.78	178
2	2.55	5,501
3	4.44	7,144
4	6.94	-1

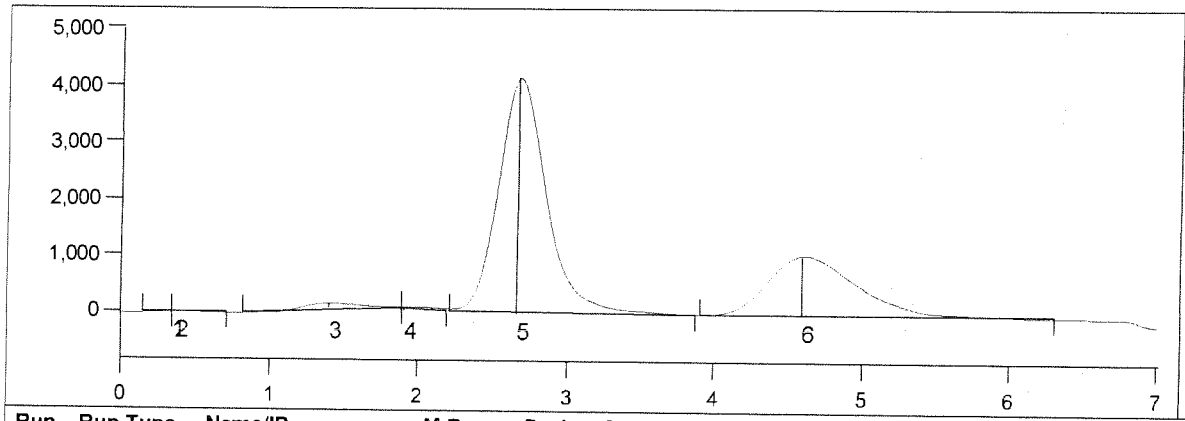
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
Notes										



Date: 7/29/11
Time: 10:04 AM

Peak	rt	Height
1	1.82	878
2	2.55	7,363
3	4.43	2,089

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
Notes										



Date: 7/29/11
Time: 10:23 AM

Peak	rt	Height
1	0.35	1
2	0.37	1
3	1.39	120
4	1.90	2
5	2.66	4,101
6	4.60	1,069

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
Notes										

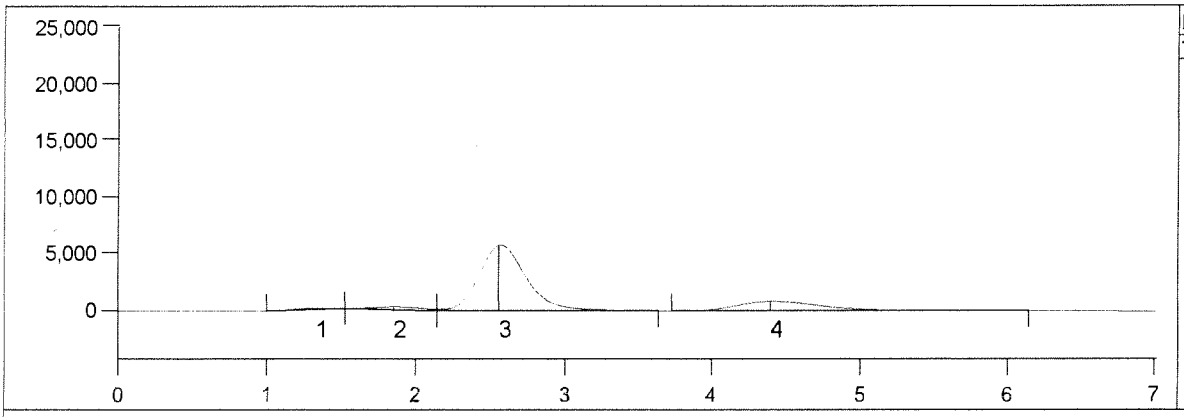
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

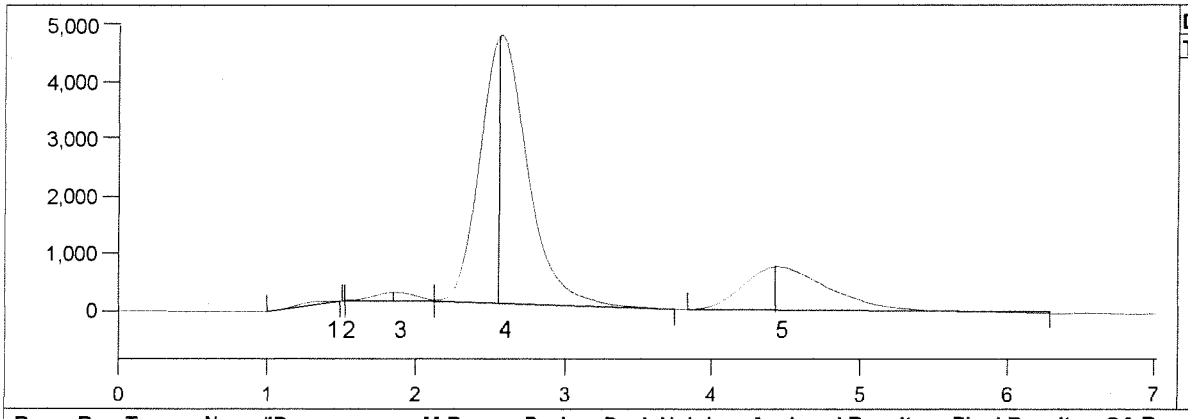
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date:	7/29/11
Time:	10:30 AM

Peak	rt	Height
1	1.34	97
2	1.84	203
3	2.56	5,672
4	4.39	894

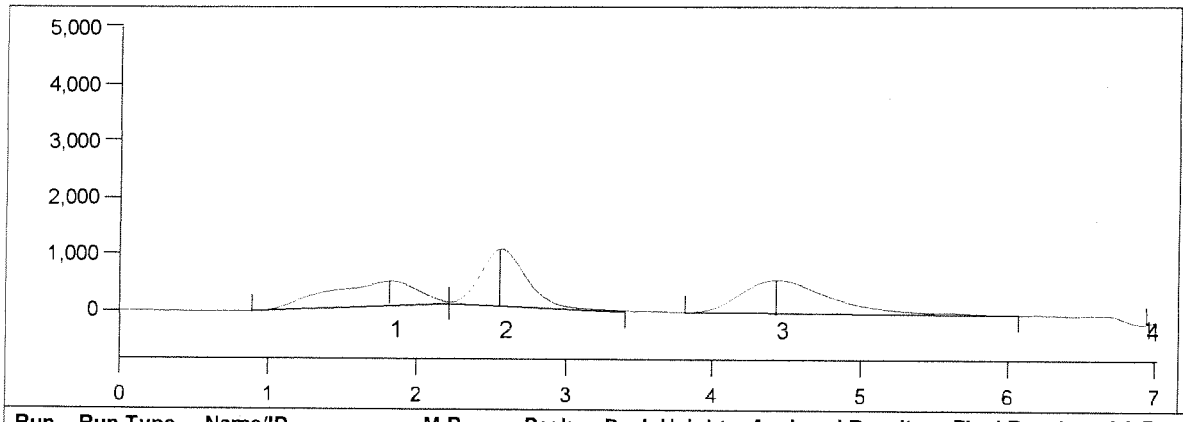
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
Notes										



Date:	7/29/11
Time:	10:38 AM

Peak	rt	Height
1	1.40	37
2	1.52	1
3	1.85	150
4	2.55	4,692
5	4.43	764

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
Notes										



Date:	7/29/11
Time:	10:46 AM

Peak	rt	Height
1	1.81	414
2	2.55	981
3	4.42	589
4	6.94	0

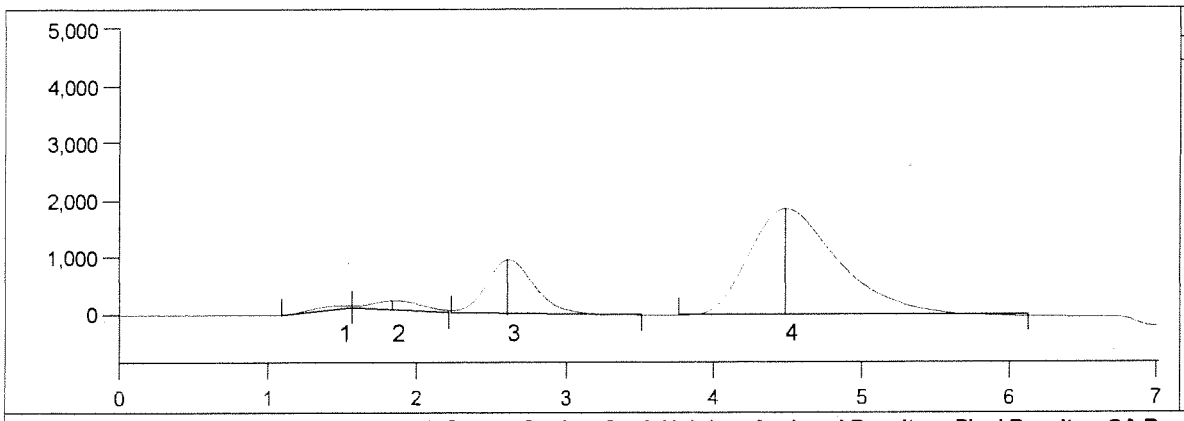
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

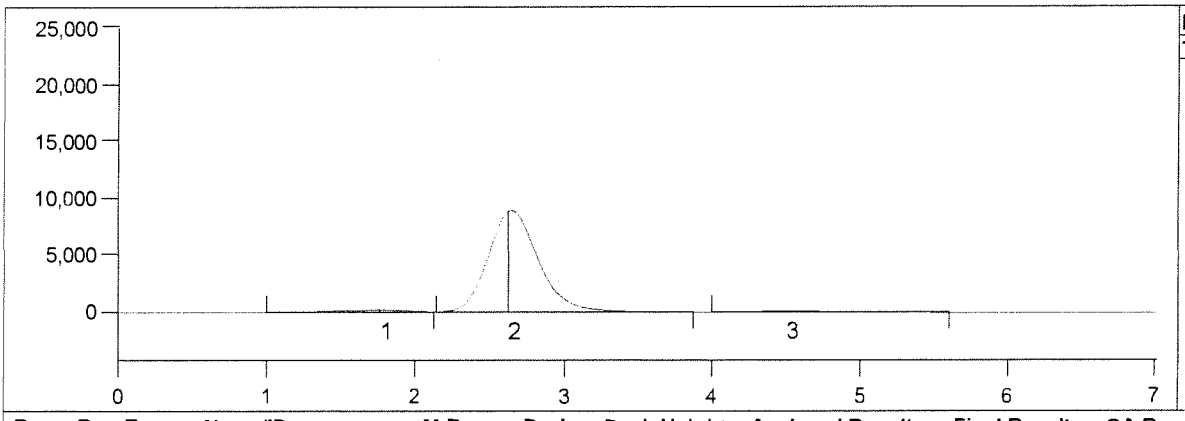
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date:	7/29/11
Time:	10:53 AM

Peak	rt	Height
1	1.46	38
2	1.84	122
3	2.60	926
4	4.48	1,903

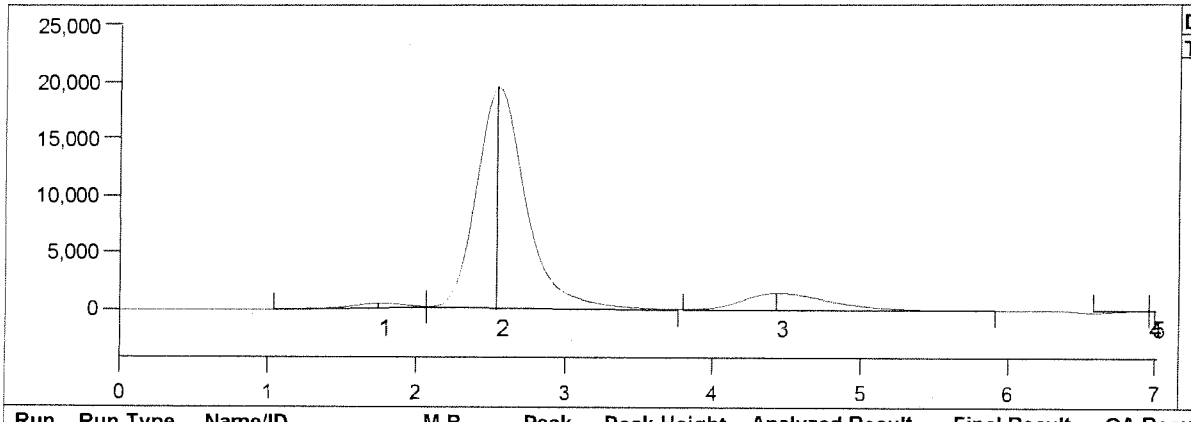
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept
Notes										



Date:	7/29/11
Time:	11:00 AM

Peak	rt	Height
1	1.76	184
2	2.63	8,940
3	4.49	183

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept
Notes										



Date:	7/29/11
Time:	11:07 AM

Peak	rt	Height
1	1.75	396
2	2.53	19,363
3	4.43	1,472
4	6.96	2
5	6.98	1

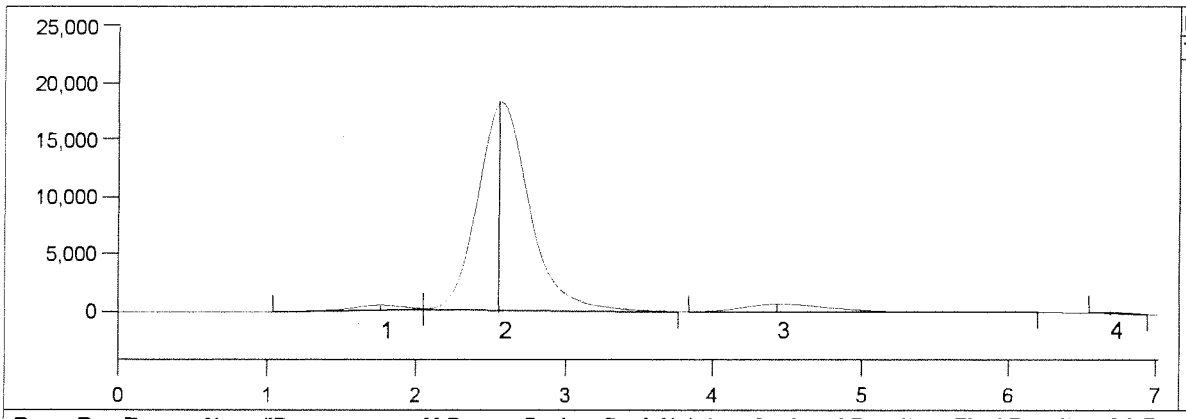
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

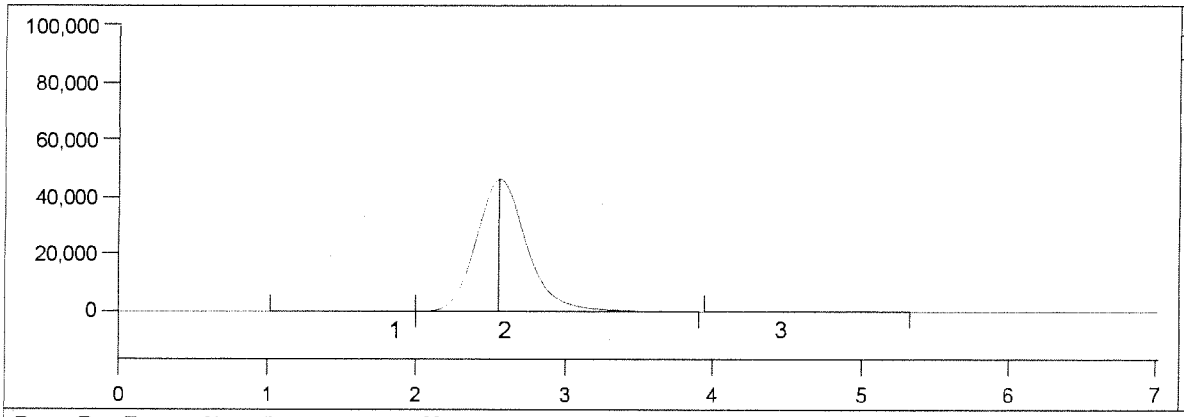
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 11:15 AM

Peak	rt	Height
1	1.75	401
2	2.56	18,197
3	4.44	734
4	6.69	80

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
Notes										



Date: 7/29/11
Time: 11:22 AM

Peak	rt	Height
1	1.82	92
2	2.54	46,598
3	4.41	275

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	OPR	OPR		2	46,598	103		103	67-133	accept
Notes										

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	WET
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Soft Tissue	K1106154-009	0.5	0.2	100	07/15/11	07/18/11	3.9	
EWL-HOU-C-Soft Tissue	K1106154-015	0.6	0.2	100	07/15/11	07/18/11	6.9	
EWL-BIL-C-Soft Tissue	K1106154-025	1.0	0.3	100	07/15/11	07/18/11	10.5	
Method Blank1	K1106154-MB1	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank2	K1106154-MB2	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank3	K1106154-MB3	0.2	0.06	20	07/15/11	07/18/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
Sample Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K1106152-025MS, K1106152-025MSD	Basis:	WET
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	1.1	57	56	34.7	82.9	95.6	85	109	70-130	14	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.24	105	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.49	110	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Test Notes:

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	270	272	101	70-130	

Service Request #:	K1106152, K1106154, K1106157, K1106166		
MS/MSD with #:	K1106152, K1106166		
StarLims Run # :	253805		
VER Standard ID:	AF1-63-C	Expiration Date:	07/30/11
Parent VER ID:	AF1-59-D	Expiration Date:	06/09/12

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. Ave of Bubbler Blanks less than 50 pg	X		
7. Verification Standards Passed (75-123%)	X		
8. OPR, QCS in control (70-130%)	X		
9. MS/MSD recovery 71-125%	X		
10. Spike RPD within 30%	X		
11. All samples within the linear range	X		
12. All corresponding charts included	X		
13. Dilution factors calculated	X		
14. Bench sheet signed	X		
	X		

Comments

Primary Reviewed by AEL Date 7/18/11

Secondary Reviewed by [signature] Date 7/27/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run Duration:	2.25	Integration Mode:	Total Hg
Heating Time:	1.75	Integration Type:	Peak Area
Retention Start Time:	.75	Result Units:	µg/Kg
Retention Stop Time:	1.75		
Calibration File:	CAL CURVE 032911.brd		

Reagents

Name	Lot Number
BrCl	RE2-36-M
SnCl+HCl	RE2-37-B

AEK 7/18/11

Standards

Name	Concentration	Lot Number
VER STD	10 ppb	AF1-63-C
OPR STD	40 ppb	AF1-63-E

Comments

PMT: 606
OFFSET: 5,090
NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept
~~15~~	~~S~~	~~K1106157-009~~		~~1~~	~~645,142~~	~~76.8~~	~~3.93~~		~~< HS~~	~~reject~~
~~16~~	~~S~~	~~K1106157-015~~		~~1~~	~~1,460,869~~	~~174~~	~~10.0~~		~~< HS~~	~~reject~~
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106152-025	82.9	µg/Kg	57	34.7	84.6	70-130			accept
	K1106166-025	94.5	µg/Kg	45	49.4	100	70-130			accept
MSD	K1106152-025	95.6	µg/Kg	56	34.7	109	70-130	14.2	< 30	accept
	K1106166-025	106	µg/Kg	45	49.4	127	70-130	11.8	< 30	accept
IPR	TORT	272	µg/Kg	270		101	70-130			accept
OPR	OPR-1	5.24	µg/Kg	5		105	70-130			accept
	OPR-2	5.49	µg/Kg	5		110	70-130			accept
QCS	VER-1	5.09	µg/Kg	5		102	77-123			accept
	VER-2	4.77	µg/Kg	5		95.5	77-123			accept
	VER-3	5.14	µg/Kg	5		103	77-123			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	20	21.5	pg	20	108	75-125			accept
	50	51.9	pg	50	104	75-125			accept
	200	198	pg	200	99.0	75-125			accept
	500	554	pg	500	111	75-125			accept
	2000	1,930	pg	2000	96.5	75-125			accept
	5000	4,790	pg	5000	95.8	75-125			accept
	15000	14,100	pg	15000	94.0	75-125			accept
	100	95.1	pg	100	95.1	75-125			accept
Calibration Factor		0.000119	pg/PA				6.00	< 15	accept
Calibration Date		3/29/11							

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
Average		0.00	pg	< 25	0.00	< 10	accept
MBA	MB-1	0.169	µg/Kg	< 1			accept
	MB-2	0.0983	µg/Kg	< 1			accept
	MB-3	0.138	µg/Kg	< 1			accept
Average		0.135	µg/Kg		0.0354		

Comments

PMT: 606
OFFSET: 5,090
NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Name/ID	Final Result (µg/Kg)	Notes
10	K1106152-009	9.78	accepted
11	K1106152-015	17.3	accepted
6	K1106152-025	34.7	accepted
12	K1106154-009	3.93	accepted
13	K1106154-015	6.94	accepted
14	K1106154-025	10.5	accepted
~~15~~	~~K1106157-009~~	~~3.93~~	~~rejected~~
18	K1106157-009	4.06	accepted
~~16~~	~~K1106157-015~~	~~10.0~~	~~rejected~~
19	K1106157-015	8.62	accepted
20	K1106157-025	15.2	accepted
21	K1106166-009	17.3	accepted
22	K1106166-015	33.2	accepted
24	K1106166-025	49.4	accepted

AEK 7/18/11

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	QCS	VER-1		100	100	100	5	
2	MBA	MB-1		400	40	5.0		
3	MBA	MB-2		400	40	5.0		
4	OPR	OPR-1		400	40	5.0	5	
5	IPR	TORT		391	40	2.5	270	
6	S	K1106152-025		1714	40	1.0		
7	MS	K1106152-025		1745	40	1.0	57	
8	MSD	K1106152-025		1771	40	1.0	56	
9	CB	BB (VER)		100	100	100		
10	S	K1106152-009		2209	40	1.0		
11	S	K1106152-015		1745	40	1.0		
12	S	K1106154-009		3700	40	1.0		
13	S	K1106154-015		3615	40	1.0		
14	S	K1106154-025		1929	40	1.0		
~~15~~	~~S~~	~~K1106157-009~~		~~782~~	~~40~~	~~1.0~~		AEK 7/18/11
~~16~~	~~S~~	~~K1106157-015~~		~~695~~	~~40~~	~~1.0~~		
17	QCS	VER-2		100	100	100	5	
18	S	K1106157-009		782	40	5.0		
19	S	K1106157-015		695	40	5.0		
20	S	K1106157-025		813	40	5.0		
21	S	K1106166-009		2478	40	5.0		
22	S	K1106166-015		2455	40	5.0		
23	CB	BB (VER)		100	100	100		
24	S	K1106166-025		2177	40	1.0		
25	MS	K1106166-025		2204	40	1.0	45	
26	MSD	K1106166-025		2215	40	1.0	45	
27	MBA	MB-3		400	40	5.0		
28	OPR	OPR-2		400	40	5.0	5	
29	QCS	VER-3		100	100	100	5	
30	CB	BB (VER)		100	100	100		

Columbia Analytical Services
Metals Digestion Sheet

StarLims Number: 137751

Method : **1631EApp.** Analysis for : **CVAFS**

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	100ml	100ml	0.5% BrCl
VER-2	Water		x	100ml	100ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
Tort-2			x	0.413	40	0.02N BrCl
K1106152-009		x		0.433	40	0.02N BrCl
K1106152-015		x		0.410	40	0.02N BrCl
K1106152-025		x		0.396	40	0.02N BrCl
K1106152-025MS		x		0.403	40	0.02N BrCl
K1106152-025MSD		x		0.409	40	0.02N BrCl
K1106154-009		x		0.407	40	0.02N BrCl
K1106154-015		x		0.441	40	0.02N BrCl
K1106154-025		x		0.409	40	0.02N BrCl
K1106157-009		x		0.409	40	0.02N BrCl
K1106157-015		x		0.411	40	0.02N BrCl
K1106157-025		x		0.409	40	0.02N BrCl
K1106166-009		x		0.394	40	0.02N BrCl
K1106166-015		x		0.432	40	0.02N BrCl
K1106166-025		x		0.405	40	0.02N BrCl
K1106166-025MS		x		0.410	40	0.02N BrCl
K1106166-025MSD		x		0.412	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	100ml	100ml	0.5% BrCl

HNO3 Lot # J41037 **H2SO4 Lot # 50068** **BrCl =** RE2-36-M

AF1-63-E *(40ppb)* **OPR: 0.05ml** **Digestion Acid Mixture: RE2-36-N**

1st MS / DMS: 0.1 ml **Balance ID:** 37

2nd MS / DMS: 0.1 ml

Comments: MS/MSD - 0.1 ml of parent QCS (AF1-53-A: 1000 ug/L)

Time Digestion Started: 10:00

Analyst _____ **Date** 7/15/11

1631Dig.XLS
06/17/04

Conversion from dry weight to wet weight:

Standard MRL = 1.0
Standard MDL = 0.3
Standard Dilution = 20
Standard Sample Mass = 0.400

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.433	19.6	**2.209**	100	**0.9**	**0.3**
K1106152-015	0.410	23.5	**1.745**	100	**1.1**	**0.3**
K1106152-025	0.396	23.1	**1.714**	100	**1.2**	**0.4**
K1106152-025MS	0.403	23.1	**1.745**	100	**1.1**	**0.3**
K1106152-025MSD	0.409	23.1	**1.771**	100	**1.1**	**0.3**
K1106154-009	0.407	11.0	**3.700**	100	**0.5**	**0.2**
K1106154-015	0.441	12.2	**3.615**	100	**0.6**	**0.2**
K1106154-025	0.409	21.2	**1.929**	100	**1.0**	**0.3**
K1106157-009	0.409	52.3	**0.782**	20	**0.5**	**0.2**
K1106157-015	0.411	59.1	**0.695**	20	**0.6**	**0.2**
K1106157-025	0.409	50.3	**0.813**	20	**0.5**	**0.1**
K1106166-009	0.394	15.9	**2.478**	20	**0.2**	**0.0**
K1106166-015	0.432	17.6	**2.455**	20	**0.2**	**0.0**
K1106166-025	0.405	18.6	**2.177**	100	**0.9**	**0.3**
K1106166-025MS	0.410	18.6	**2.204**	100	**0.9**	**0.3**
K1106166-025MSD	0.412	18.6	**2.215**	100	**0.9**	**0.3**
Method Blank	0.400	20.000	**2.000**	20	**0.2**	**0.06**

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K1106154

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106154-009	10.149	14.870	15.990	1.120	11.0%
K1106154-015	10.241	14.743	15.992	1.249	12.2%
K1106154-025	10.006	15.134	17.253	2.119	21.2%
K1106154-025 Dup	10.199	14.927	17.047	2.120	20.8%

7/14/11

Date/Time in Freeze Dryer: 04:30pm 07-12-11 Date/Time out of Freeze Dryer:08:30am 07-14-11

Balance ID: 21 B Date Balance checked: 07-12-11, 07-14-11

Comments:

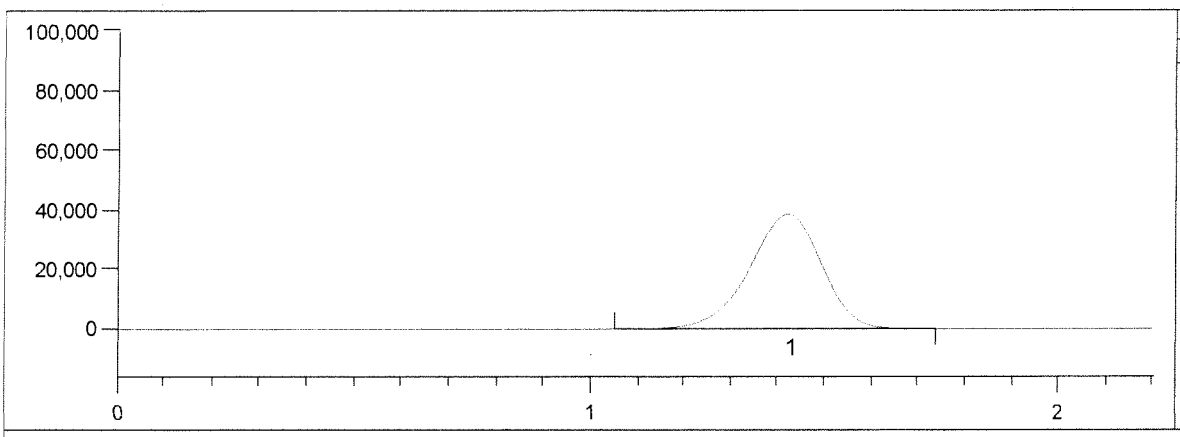
x = RPD

Analyst: Tonia Tosh	Date: 7/14/11
Reviewed By: Anna Cheatley	Date: 7/21/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

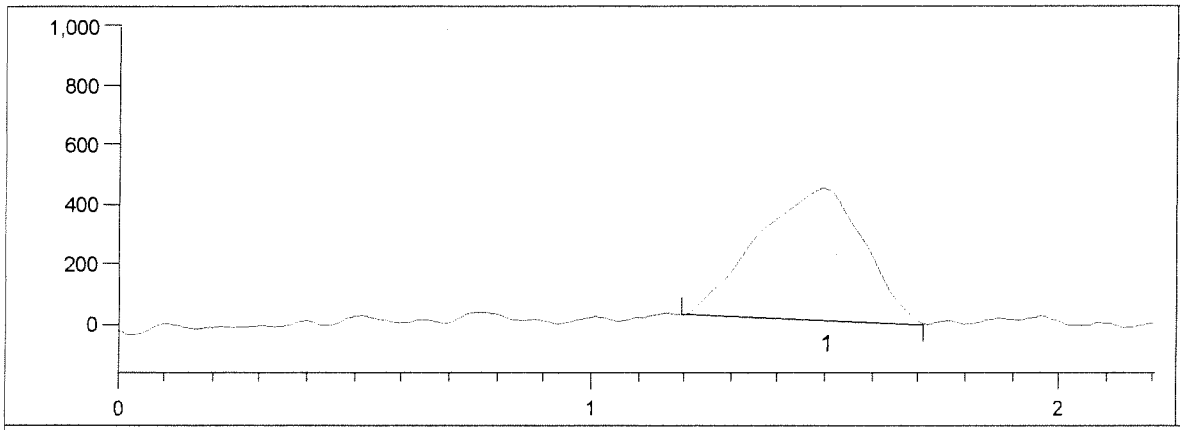


Date: 7/18/11
Time: 8:29 AM

Peak	rt	Area
1	1.45	4,275,377

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept

Notes:

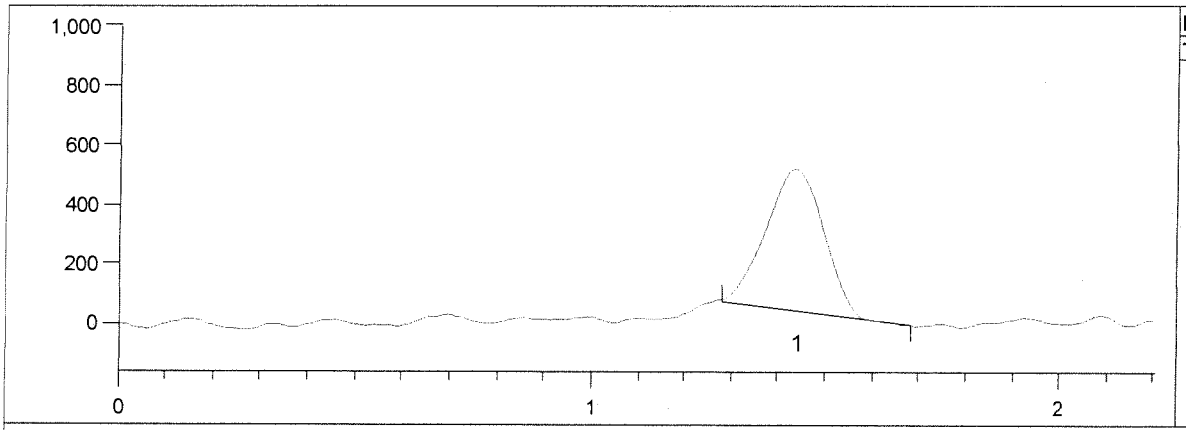


Date: 7/18/11
Time: 8:33 AM

Peak	rt	Area
1	1.52	70,960

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept

Notes:



Date: 7/18/11
Time: 8:36 AM

Peak	rt	Area
1	1.46	41,293

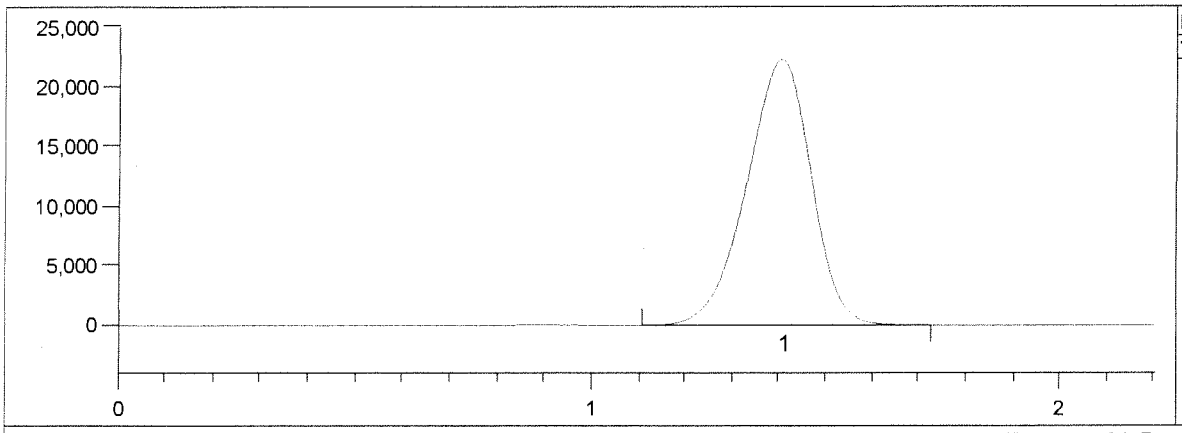
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

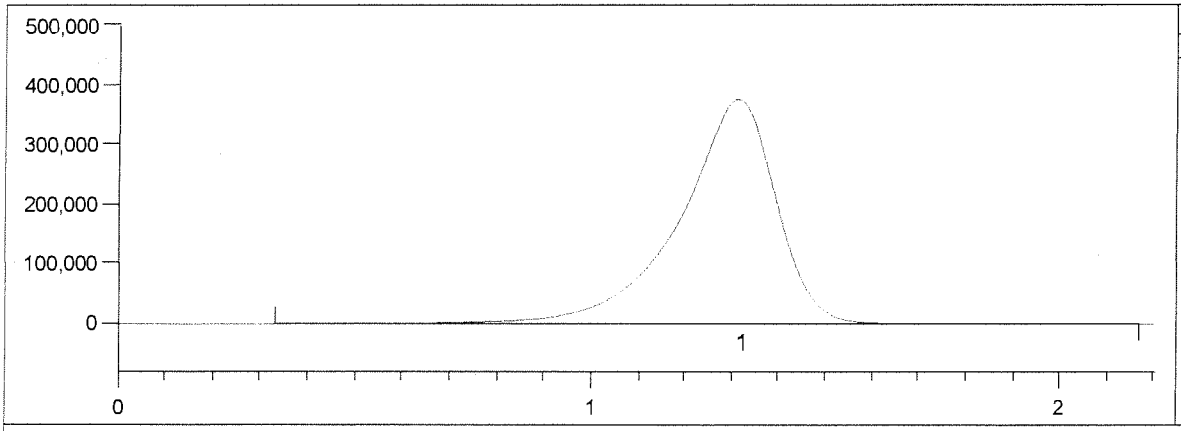


Date: 7/18/11
Time: 8:38 AM

Peak	rt	Area
1	1.43	2,201,449

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept

Notes:

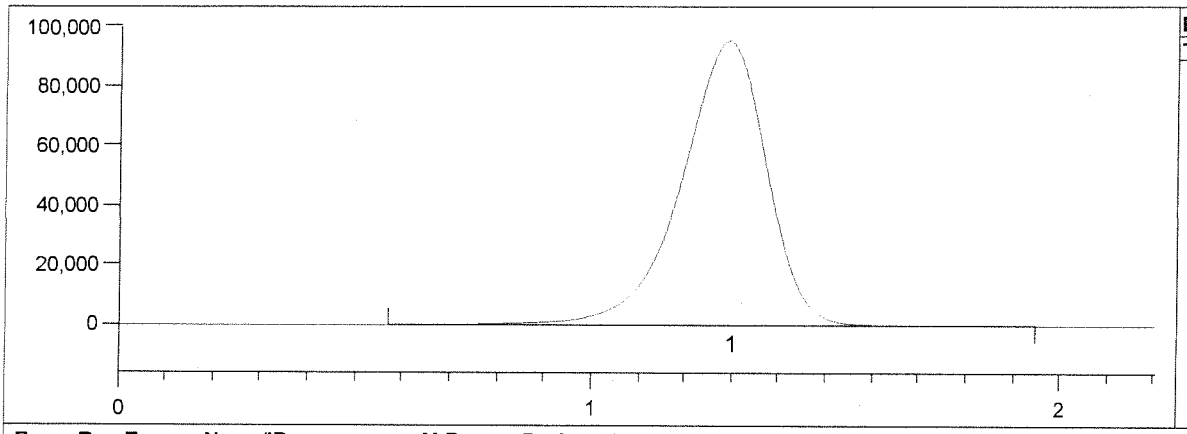


Date: 7/18/11
Time: 8:41 AM

Peak	rt	Area
1	1.34	55,771,809

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept

Notes:



Date: 7/18/11
Time: 8:44 AM

Peak	rt	Area
1	1.31	12,492,603

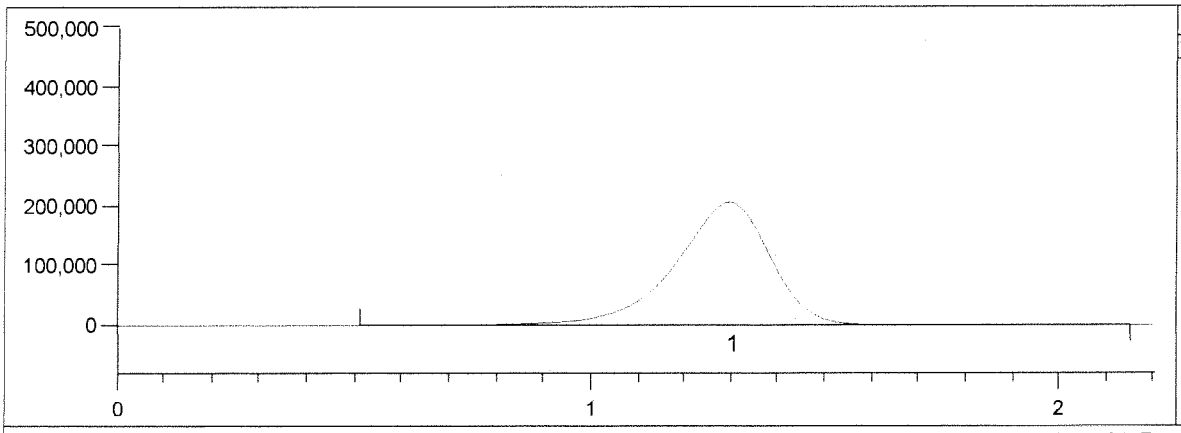
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

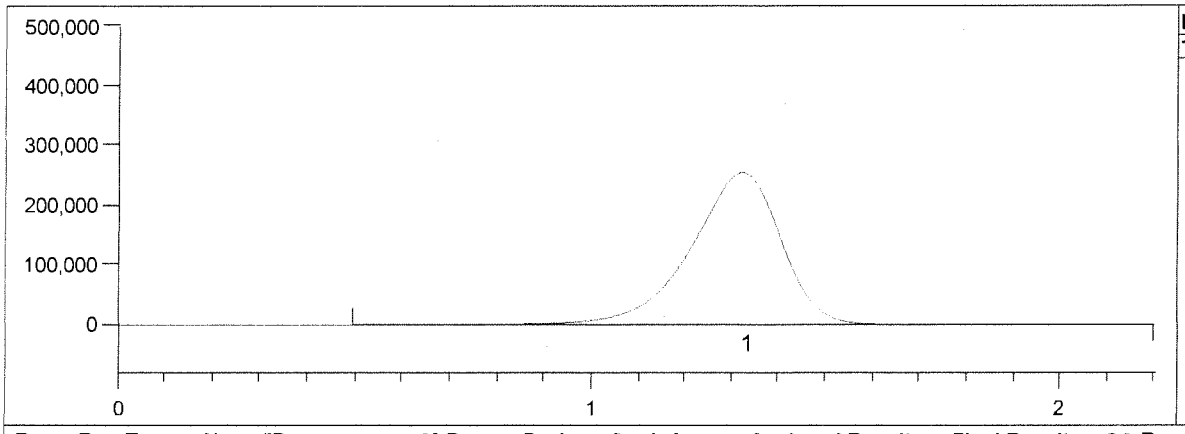


Date:	7/18/11
Time:	8:48 AM

Peak	rt	Area
1	1.32	30,397,517

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept

Notes:

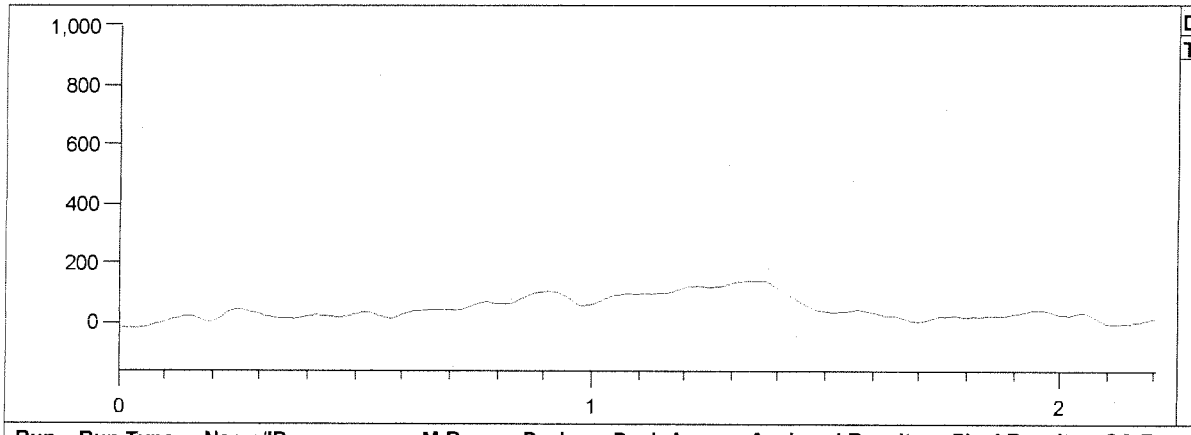


Date:	7/18/11
Time:	8:52 AM

Peak	rt	Area
1	1.35	35,575,102

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept

Notes:



Date:	7/18/11
Time:	8:56 AM

Peak	rt	Area

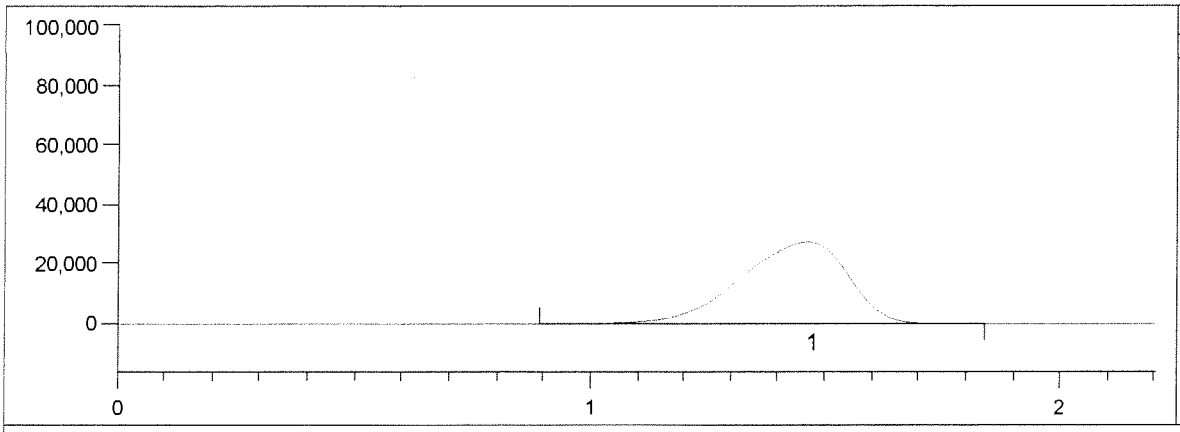
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

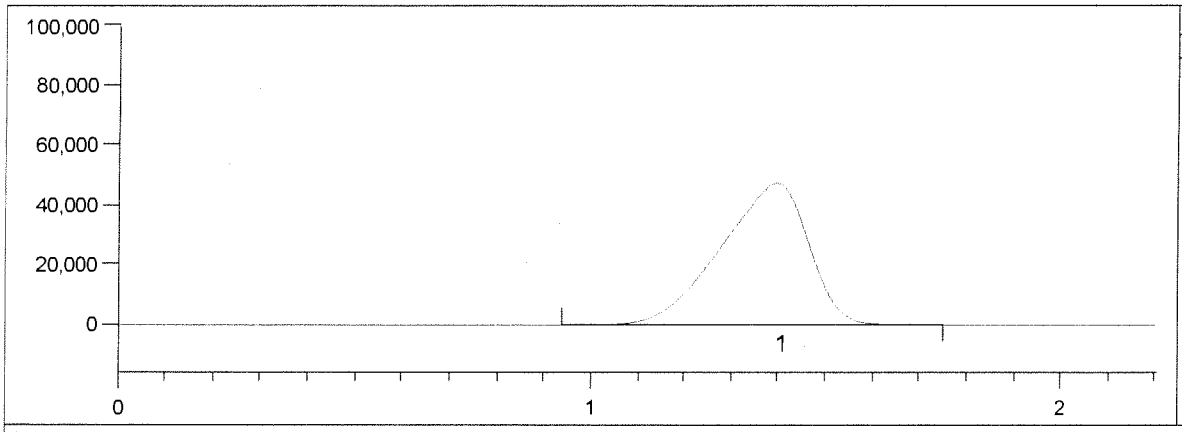


Date:	7/18/11
Time:	9:24 AM

Peak	rt	Area
1	1.49	4,537,778

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept

Notes:

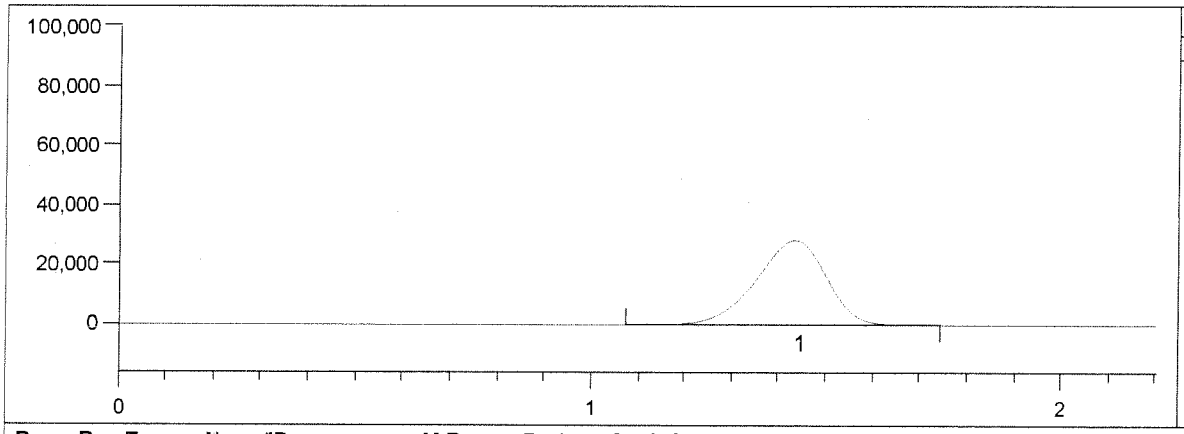


Date:	7/18/11
Time:	9:27 AM

Peak	rt	Area
1	1.42	6,354,186

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept

Notes:



Date:	7/18/11
Time:	9:29 AM

Peak	rt	Area
1	1.46	3,057,282

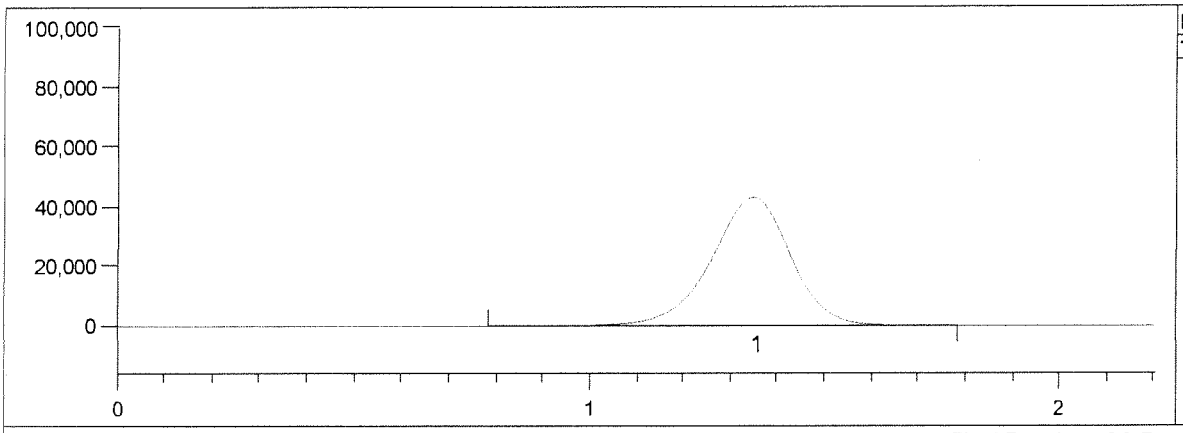
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

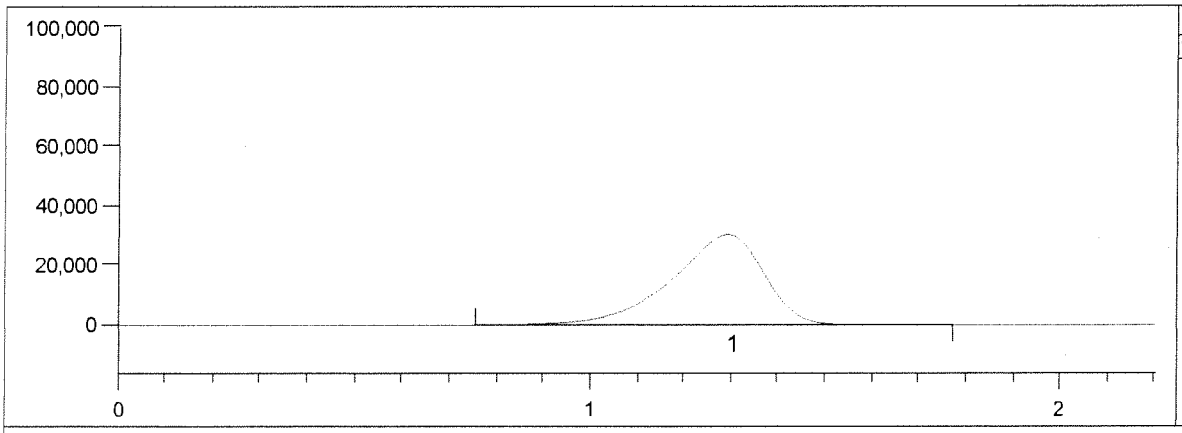


Date: 7/18/11
Time: 9:33 AM

Peak	rt	Area
1	1.37	5,273,318

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept

Notes:

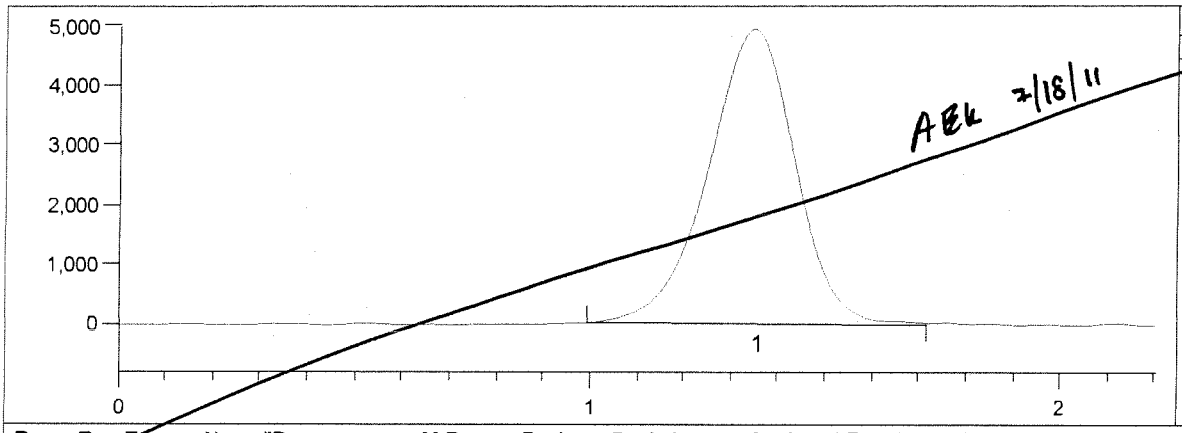


Date: 7/18/11
Time: 9:35 AM

Peak	rt	Area
1	1.32	4,246,839

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept

Notes:



Date: 7/18/11
Time: 9:38 AM

Peak	rt	Area
1	1.37	645,142

Overdiluted Sample.
Rerun - 18.

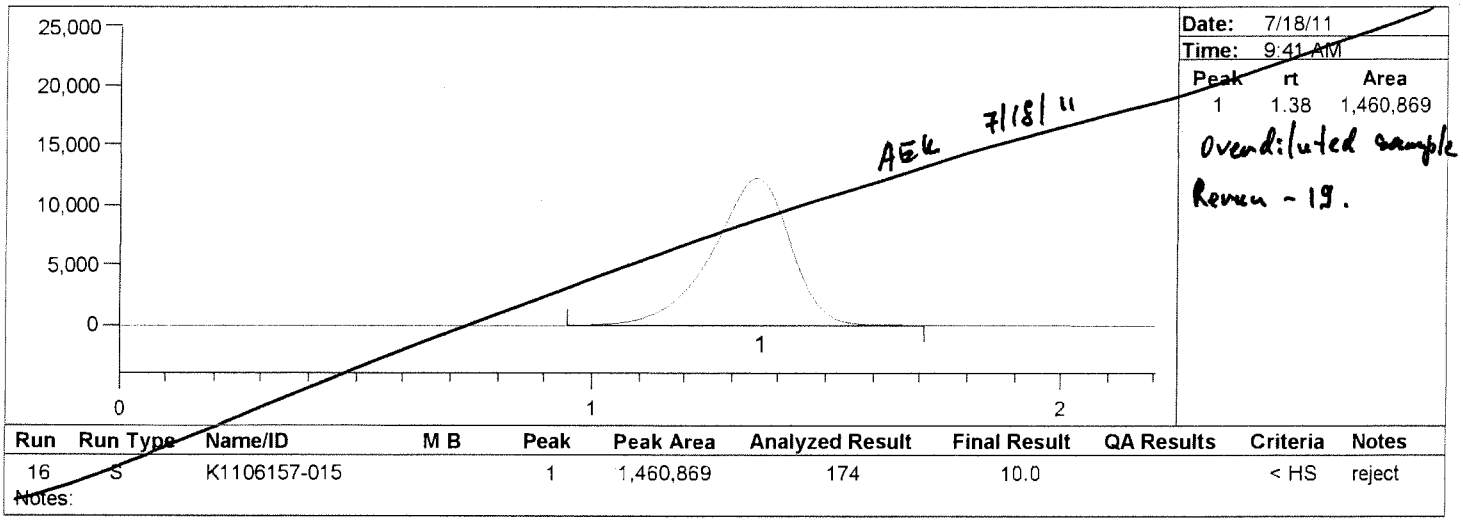
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009		1	645,142	76.8	3.93		< HS	reject

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

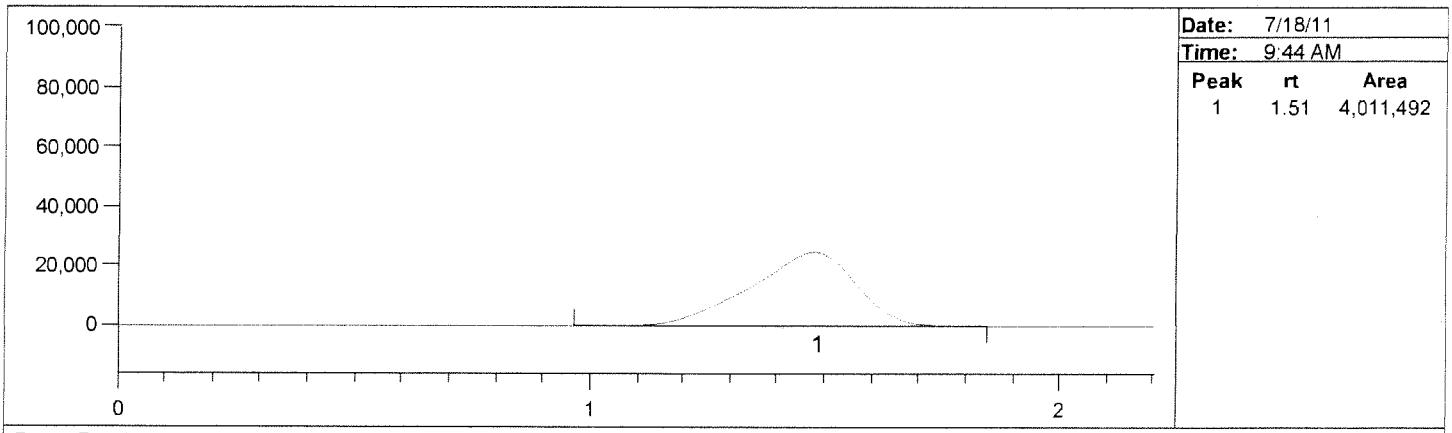


Date: 7/18/11
Time: 9:41 AM

Peak	rt	Area
1	1.38	1,460,869

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015		1	1,460,869	174	10.0		< HS	reject

Notes:

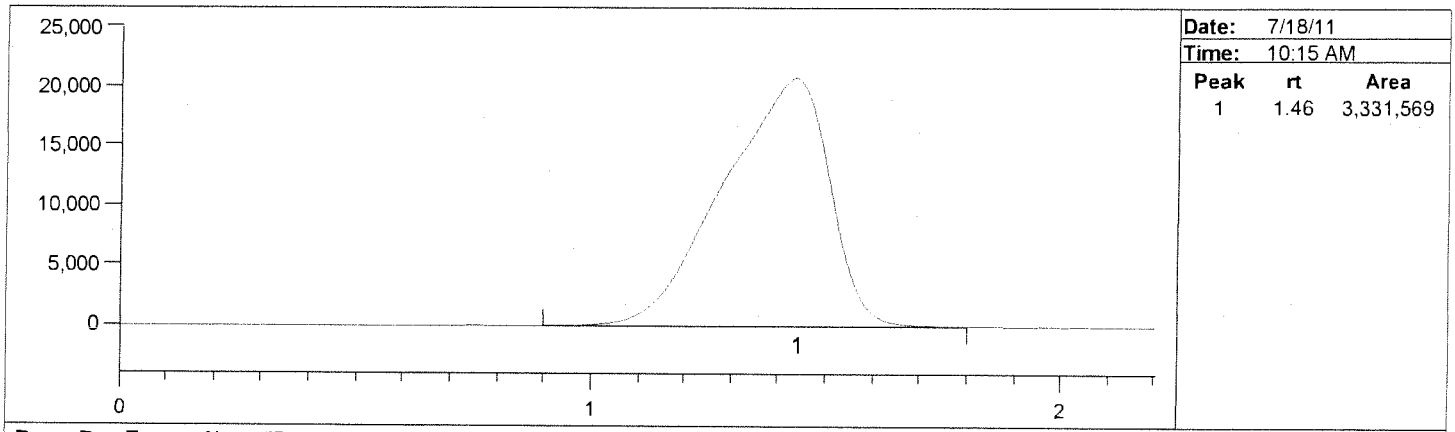


Date: 7/18/11
Time: 9:44 AM

Peak	rt	Area
1	1.51	4,011,492

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept

Notes:



Date: 7/18/11
Time: 10:15 AM

Peak	rt	Area
1	1.46	3,331,569

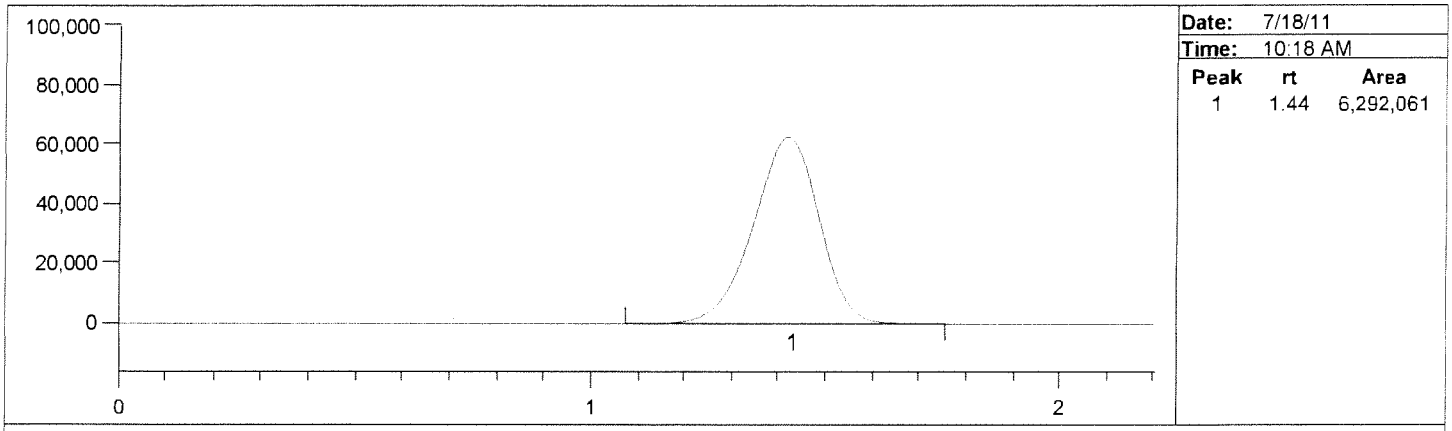
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

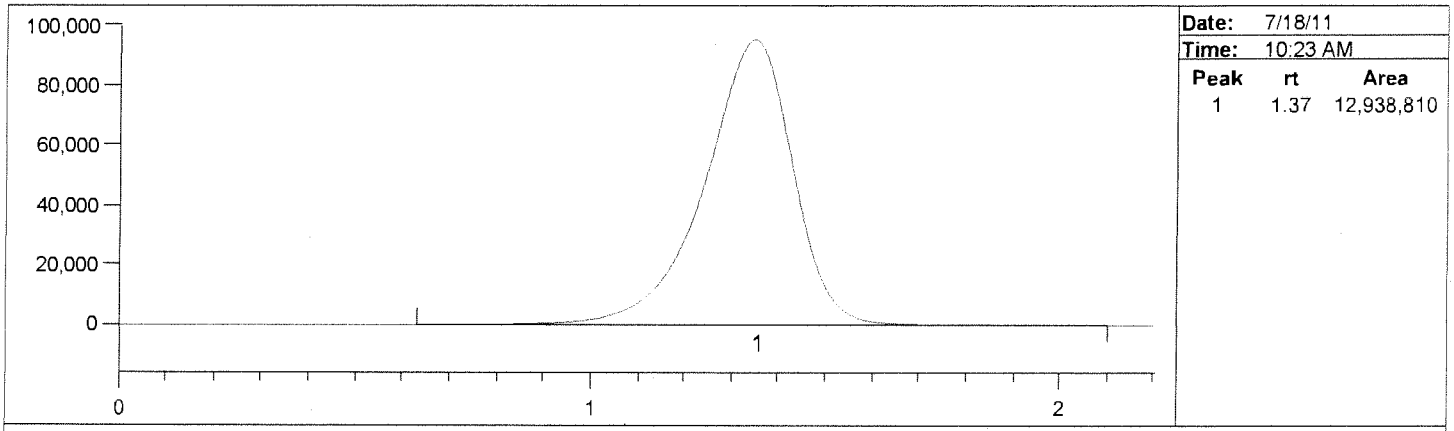


Peak	rt	Area
1	1.44	6,292,061

Date: 7/18/11
Time: 10:18 AM

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept

Notes:

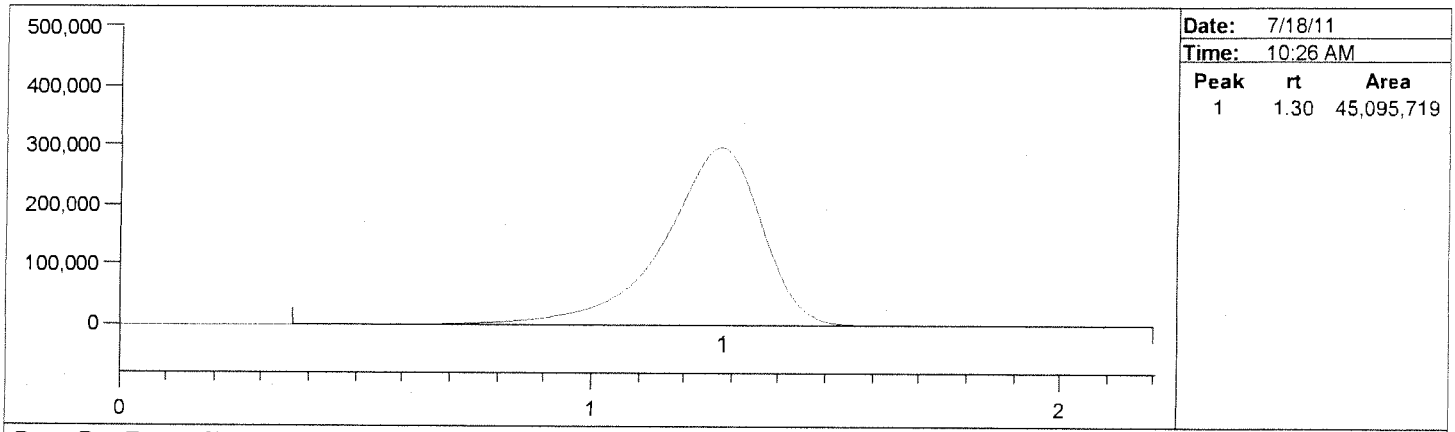


Peak	rt	Area
1	1.37	12,938,810

Date: 7/18/11
Time: 10:23 AM

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept

Notes:



Peak	rt	Area
1	1.30	45,095,719

Date: 7/18/11
Time: 10:26 AM

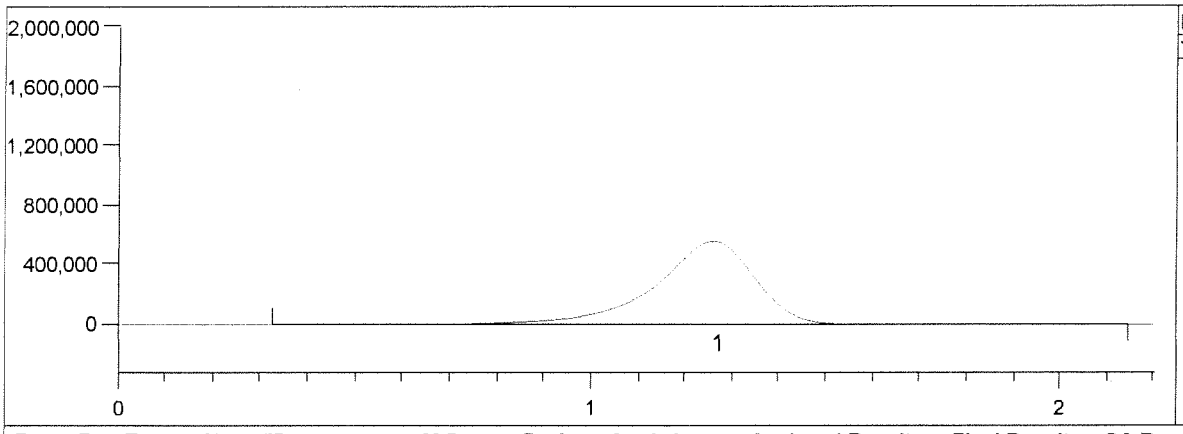
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

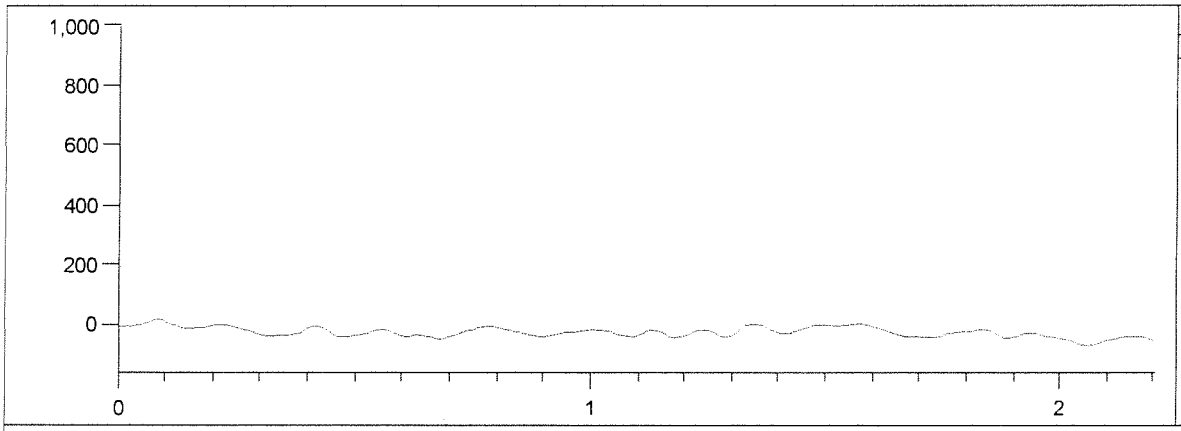


Date: 7/18/11
Time: 10:29 AM

Peak	rt	Area
1	1.28	85,712,221

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept

Notes:

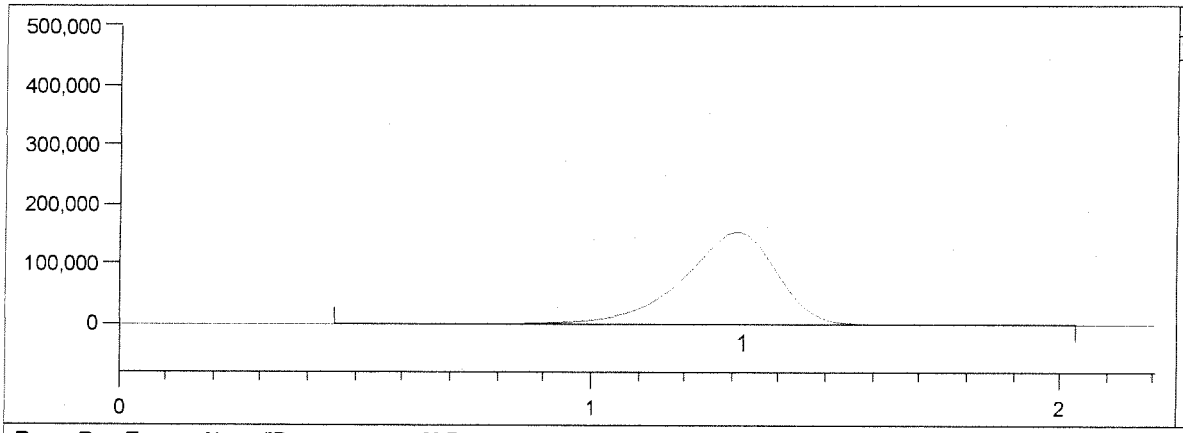


Date: 7/18/11
Time: 10:33 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:



Date: 7/18/11
Time: 10:58 AM

Peak	rt	Area
1	1.34	22,596,619

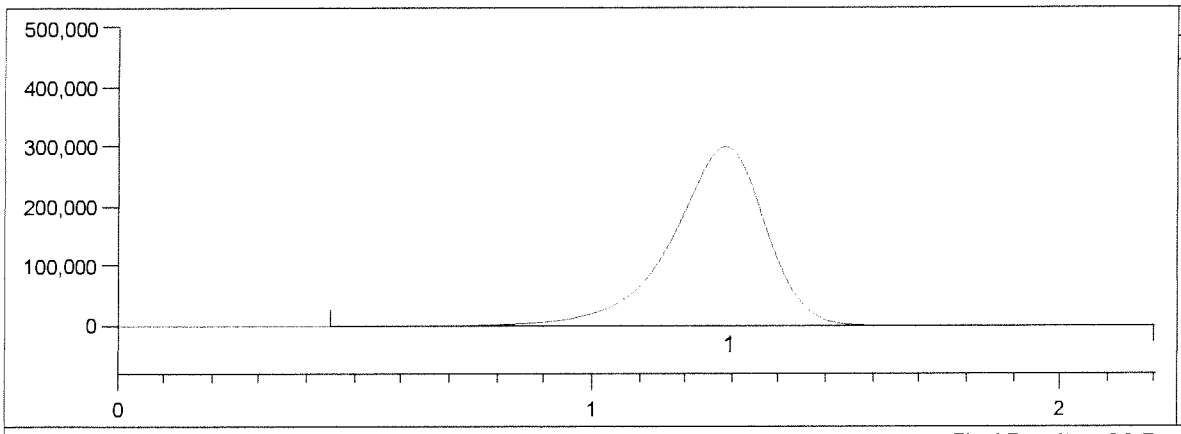
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

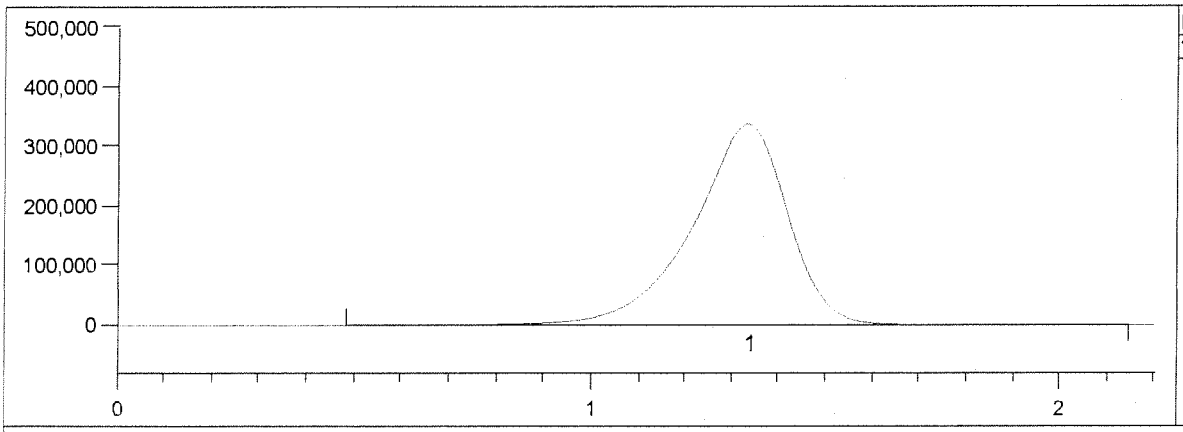


Date:	7/18/11
Time:	11:01 AM

Peak	rt	Area
1	1.31	43,769,737

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept

Notes:

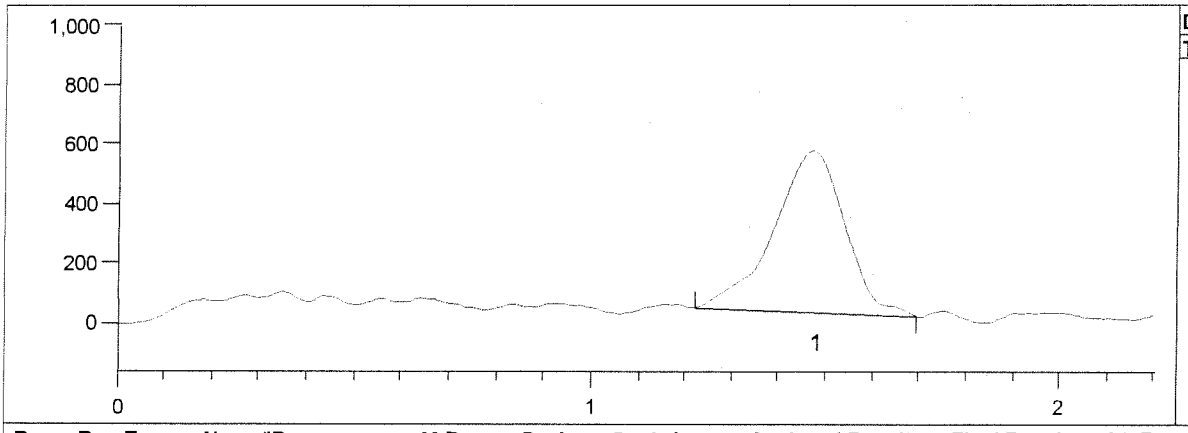


Date:	7/18/11
Time:	11:04 AM

Peak	rt	Area
1	1.36	49,516,237

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept

Notes:



Date:	7/18/11
Time:	11:07 AM

Peak	rt	Area
1	1.50	57,808

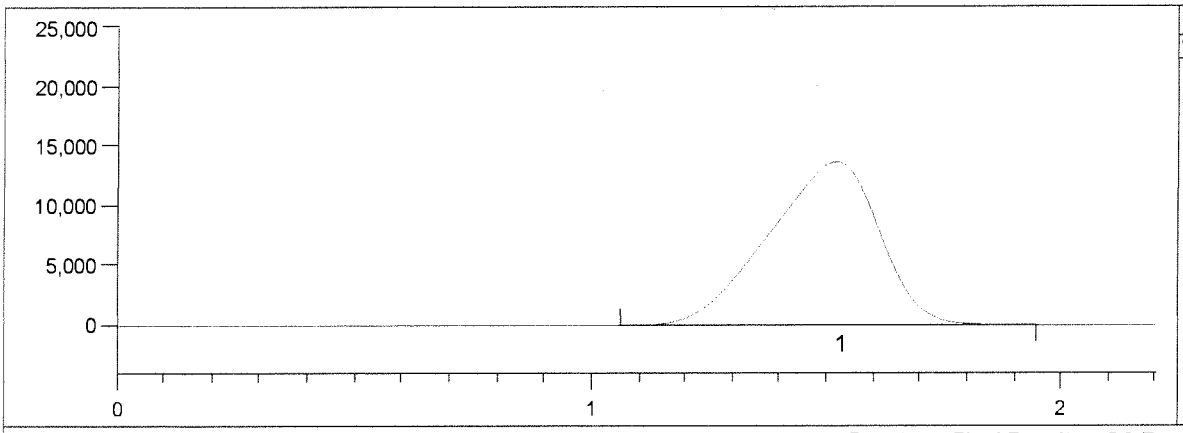
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

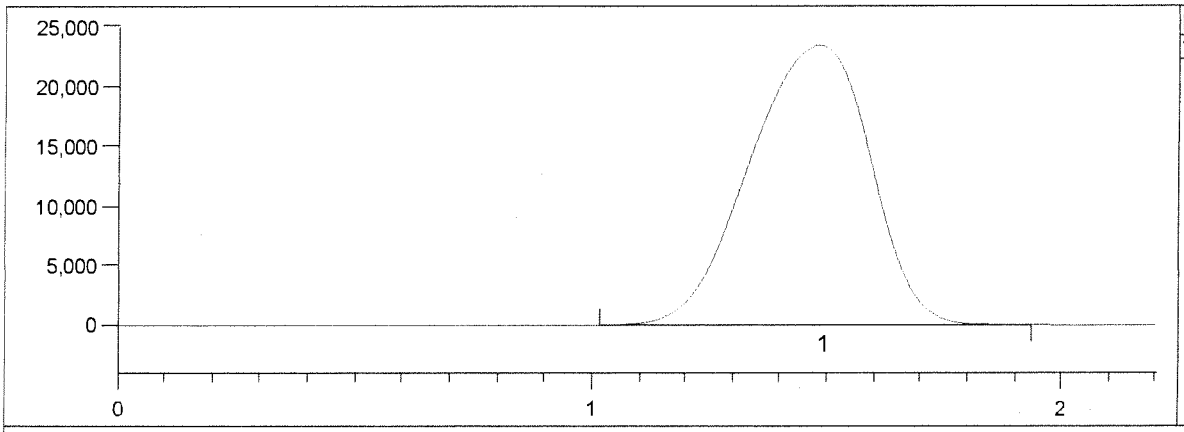


Date: 7/18/11
Time: 11:10 AM

Peak	rt	Area
1	1.55	2,304,787

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept

Notes:

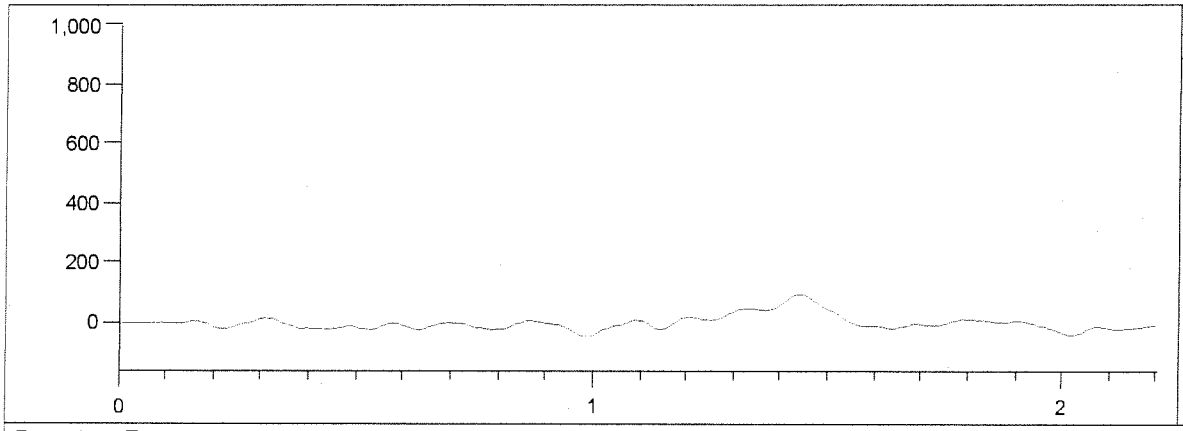


Date: 7/18/11
Time: 11:13 AM

Peak	rt	Area
1	1.51	4,319,605

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept

Notes:



Date: 7/18/11
Time: 11:16 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: URS Corporation
Project Name: East White Lake
Project No.: Soft Tissue

Service Request: K1106154

Sample Name:	Lab Code:
EWL-DES-C-Soft Tissue	K1106154-009
EWL-HOU-C-Soft Tissue	K1106154-015
EWL-BIL-C-Soft Tissue	K1106154-025
EWL-BIL-C-Soft TissueD	K1106154-025D
EWL-BIL-C-Soft TissueS	K1106154-025S
Method Blank	K1106154-MB

Comments:

Approved By: SC **Date:** 8/2/11

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106154
Project No.:	Soft Tissue	**Date Collected:**	06/20/11
Project Name:	East White Lake	**Date Received:**	06/21/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-DES-C-Soft Tissue **Lab Code:** K1106154-009

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.055	0.007	5.0	07/14/11	07/25/11	0.354		
Barium	6020A	0.005	0.001	5.0	07/14/11	07/25/11	12.4		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106154
Project No.:	Soft Tissue	**Date Collected:**	05/23/11
Project Name:	East White Lake	**Date Received:**	05/24/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-HOU-C-Soft Tissue **Lab Code:** K1106154-015

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.061	0.007	5.0	07/14/11	07/25/11	0.904		
Barium	6020A	0.006	0.001	5.0	07/14/11	07/25/11	8.740		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106154
Project No.:	Soft Tissue	**Date Collected:**	06/09/11
Project Name:	East White Lake	**Date Received:**	06/10/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-BIL-C-Soft Tissue **Lab Code:** K1106154-025

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.106	0.013	5.0	07/14/11	07/25/11	2.600		
Barium	6020A	0.011	0.002	5.0	07/14/11	07/25/11	4.430		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106154
Project No.:	Soft Tissue	**Date Collected:**	
Project Name:	East White Lake	**Date Received:**	
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: Method Blank **Lab Code:** K1106154-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.075	0.009	5.0	07/14/11	07/25/11	0.009	U	
Barium	6020A	0.008	0.001	5.0	07/14/11	07/25/11	0.001	U	

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	24.8	99	25.0	25.1	100	24.9	100	6020A
Barium	100.0	100.3	100	25.0	25.1	100	25.1	100	6020A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				25.0	25.4	102			6020A
Barium				25.0	25.6	102			6020A

Metals

- 2a -

LOW LEVEL INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **SDG No.:** K1106154

Contract: Soft Tissue **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: CAS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICVS									
	Arsenic	0.93	1.00	93	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
	Barium	0.09	0.10	90	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
LLCCV2									
	Arsenic	1.08	1.00	108	70.0 - 130.0	MS	07/25/11	21:10	072511CMS
	Barium	0.11	0.10	110	70.0 - 130.0	MS	07/25/11	21:10	072511CMS

Metals

-3-

BLANKS

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Arsenic	0.120	U	0.120	U	0.120	U	0.120	U	6020A
Barium	0.016	U	0.016	U	0.016	U	0.073	J	6020A

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.00	25.00	0.07	23.59	94			
Barium	0.00		0.13	0.12				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL-C-Soft TissueS **Lab Code:** K1106154-025S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	5.840		2.600		3.51	92.3		6020A
Barium	70 - 130	45.8		4.430		41.98	98.5		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: URS Corporation

Service Request: K1106154

Project No.: Soft Tissue

Units: UG/L

Project Name: East White Lake

Basis: WET

Matrix: WATER

Sample Name: Batch QC1A

Lab Code: K1106152-025A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	83.80		34.32		50.0	99		6020A
Barium	75 - 125	58.70		10.36		50.0	97		6020A

Metals

- 6 -

DUPLICATES

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL-C-Soft TissueD **Lab Code:** K1106154-025D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	2.600		2.600		0.0		6020A
Barium	30	4.430		3.510		23.2		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	167	158	94.6					
Barium	2000	1950	97.5					

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106154-SRM1	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Dorm-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	6.88	6.49	94	5.26 - 8.62	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106154-SRM2	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	21.6	20.1	93	15.8-28.1	

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue **Units:** UG/L

Project Name: East White Lake

Sample Name: Batch QC1L **Lab Code:** K1106152-025L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	34.322		33.995		1		MS
Barium	10.363		9.601		7		MS

Metals

- 10 -

DETECTION LIMITS

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

ICP/ICP-MS ID #: K-ICP-MS-03

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL mg/Kg	MDL mg/Kg	M
Arsenic	75		1.00	0.12	MS
Barium	137		0.100	0.016	MS

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	2000	6020A
Barium	15.000	2000	6020A

Comments:

Metals
-13-
PREPARATION LOG

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue

Project Name: East White Lake

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1106154-009	07/14/11	2.7455	30.0
K1106154-015	07/14/11	2.4590	30.0
K1106154-025	07/14/11	1.4198	30.0
K1106154-025D	07/14/11	1.4245	30.0
K1106154-025S	07/14/11	1.4292	30.0
K1106154-MB	07/14/11	2.0000	30.0
K1106154-SRM1	07/14/11	0.3010	30.0
K1106154-SRM2	07/14/11	0.3020	30.0
LCSW	07/14/11	30.0	30.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: URS Corporation **Service Request:** K1106154

Project No.: Soft Tissue **Run Number:** 072511CMS03

Project Name: East White Lake

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 07/25/11 **End Date:** 07/25/11

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Cal. Blk	1.00	19:48				X	X																							
Cal. Stn	1.00	19:50				X	X																							
ICV1	1.00	19:53				X	X																							
CCV1	1.00	19:56				X	X																							
ICB1	1.00	19:58				X	X																							
CCB1	1.00	20:01				X	X																							
LLICVS	1.00	20:03				X	X																							
ICS-A1	1.00	20:06				X	X																							
ICS-AB1	1.00	20:09				X	X																							
K1106154-MB	5.00	20:11				X	X																							
LCSW	5.00	20:14				X	X																							
K1106154-SRM1	5.00	20:17																												
K1106154-SRM2	5.00	20:19																												
ZZZZZZ	5.00	20:22																												
ZZZZZZ	5.00	20:24																												
ZZZZZZ	5.00	20:27																												
CCV2	1.00	20:30				X	X																							
CCB2	1.00	20:32				X	X																							
ZZZZZZ	5.00	20:35																												
K1106152-025L	25.00	20:38				X	X																							
K1106152-025A	5.00	20:40				X	X																							
ZZZZZZ	5.00	20:43																												
K1106154-009	5.00	20:46				X	X																							
K1106154-015	5.00	20:48				X	X																							
K1106154-025	5.00	20:51				X	X																							
K1106154-025D	5.00	20:54				X	X																							
K1106154-025S	5.00	20:57				X	X																							
ZZZZZZ	5.00	20:59																												
CCV3	1.00	21:02				X	X																							
CCB3	1.00	21:05				X	X																							
LLCCV2	1.00	21:10				X	X																							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: Soft Tissue

Lab Code: CAS Case No.: _____ NRAS No. _____ SDG NO.: K1106154

ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 07/25/2011 End Date: 07/25/2011

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Ga_71	Q	Element Rh_103	Q	Element In_115	Q	Element	Q	Element	Q	Element	Q
Cal. Blk	Cal. Blk	1948	100		100		100							
Cal. Stn	Cal. Stn	1950	99		99		101							
ICV1	ICV1	1953	99		99		100							
CCV1	CCV1	1956	98		99		100							
ICB1	ICB1	1958	97		98		99							
CCB1	CCB1	2001	97		99		99							
LLICVS	LLICVS	2003	99		100		101							
ICS-A1	ICSA	2006	82		80		84							
ICS-AB1	ICSAB	2009	85		82		86							
K1106154-MB	Method Blank	2011	95		95		96							
LCSW	LCSW	2014	98		98		99							
K1106154-SRM1	DORM	2017	92		90		93							
K1106154-SRM2	TORT	2019	90		90		94							
ZZZZZZ	ZZZZZZ	2022												
ZZZZZZ	ZZZZZZ	2024												
ZZZZZZ	ZZZZZZ	2027												
CCV2	CCV2	2030	93		94		97							
CCB2	CCB2	2032	92		92		94							
ZZZZZZ	ZZZZZZ	2035												
K1106152-025L	Batch QC1L	2038	91		92		96							
K1106152-025A	Batch QC1A	2040	87		87		92							
ZZZZZZ	ZZZZZZ	2043												
K1106154-009	EWL-DES-C-Soft	2046	88		88		94							
K1106154-015	EWL-HOU-C-Soft	2048	87		87		93							
K1106154-025	EWL-BIL-C-Soft	2051	88		88		93							
K1106154-025D	EWL-BIL-C-Soft	2054	88		87		92							
K1106154-025S	EWL-BIL-C-Soft	2057	88		87		92							
ZZZZZZ	ZZZZZZ	2059												
CCV3	CCV3	2102	100		101		103							
CCB3	CCB3	2105	98		98		101							
LLCCV2	LLCCV2	2110	95		96		99							

Conversion from dry weight to wet weight:

Sample I.D.	Dry Weight	Percent Solids	Wet Weight
K1106152-009	0.3020	19.6	1.5408
K1106152-015	0.3020	23.5	1.2851
K1106152-025	0.3010	23.1	1.3030
K1106152-025D	0.3020	23.1	1.3074
K1106152-025S	0.3030	23.1	1.3117
K1106154-009	0.3020	11.0	2.7455
K1106154-015	0.3000	12.2	2.4590
K1106154-025	0.3010	21.2	1.4198
K1106154-025D	0.3020	21.2	1.4245
K1106154-025S	0.3030	21.2	1.4292
K1106157-009	0.3000	52.3	0.5736
K1106157-015	0.3010	59.1	0.5093
K1106157-025	0.3030	50.3	0.6024
K1106157-025D	0.3010	50.3	0.5984
K1106157-025S	0.3000	50.3	0.5964
K1106166-009	0.3010	15.9	1.8931
K1106166-015	0.3030	17.6	1.7216
K1106166-025	0.3030	18.6	1.6290
K1106166-025D	0.3020	18.6	1.6237
K1106166-025S	0.3030	18.6	1.6290

SP 7/28/11

Columbia Analytical Services
Metals Tissue Digestion Sheet

Service Request Number(s) : K1106152, K1106154, K1106157, K1106166 137816

Star Lims Run No.:

Method : 6020A

Analysis for : ICP (ICP-MS) GFAA

other: _____

Sample	Initial Weight (g)	freeze Dry	Wet	Final Volume (ml)	Matrix
Blank			X	30	15% HNO3
LCS			X		15% HNO3
Dorm-3	0.301		X		15% HNO3
Tort-2	0.302		X		15% HNO3
K1106152-009	0.302	X			15% HNO3
K1106152-015	0.302	X			15% HNO3
K1106152-025	0.301	X			15% HNO3
K1106152-025 Dup	0.302	X			15% HNO3
K1106152-025 MS	0.303	X			15% HNO3
K1106154-009	0.302	X			15% HNO3
K1106154-015	0.300	X			15% HNO3
K1106154-025	0.301	X			15% HNO3
K1106154-025 Dup	0.302	X			15% HNO3
K1106154-025 MS	0.303	X			15% HNO3
K1106157-009	0.300	X			15% HNO3
K1106157-015	0.301	X			15% HNO3
K1106157-025	0.303	X			15% HNO3
K1106157-025 Dup	0.301	X			15% HNO3
K1106157-025 MS	0.300	X			15% HNO3
K1106166-009	0.301	X			15% HNO3
K1106166-015	0.303	X			15% HNO3
K1106166-025	0.303	X			15% HNO3
K1106166-025 Dup	0.302	X			15% HNO3
K1106166-025 MS	0.303	X			15% HNO3
		2nd 7/18/11			

Time Digestion Started: 7/14/11 5:00pm **Oven Temp:** 105 **Time Digestion Ended:** 7:00pm 7/14/11

Lot # Acids Used: HNO3 ~~Seth 7/14/11~~ 49713 **Oven Temp:** 109

LCS: Dorm-3 (96.1% Solids) ID#14879, Tort-2(94.7% Solids) ID#29883 **Balance I.D.:** 21B

SPIKE INFO 7/21/11 0.300

K-MET SS1 ID# 28451, ~~1.500~~ **mls added**

K-MET SS3 ID#28474, 0.050 **mls added**

K-MET SS4 ID#28373, 0.050 **mls added**

K-MET SS2 ID#28554, ~~0~~ **mls added**

K-MET SS5 ID#29301, 0.300 **mls added**

Additional spikes: _____

Comments: _____

Analyst _____ **Date** 7/14/11

Reviewer _____ **Date** 7/21/11

TissueDig.xls
7/14/2011

Service Request # _K1106154_____
Calibration __072511CMS03_____
QC in calibration___072511CMS03_____
QC Service Request # ___K1106154_____
STARLIMS run # ___254739_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. LLICV run	X		
14. Cd Correction Applied	X	X	
15. ICSA and ICSAB in control	X		
16. Serial dilution run	X		
17. Post spike in control	X		
18. Was run stop prematurely, If so why?		X	

Comments:

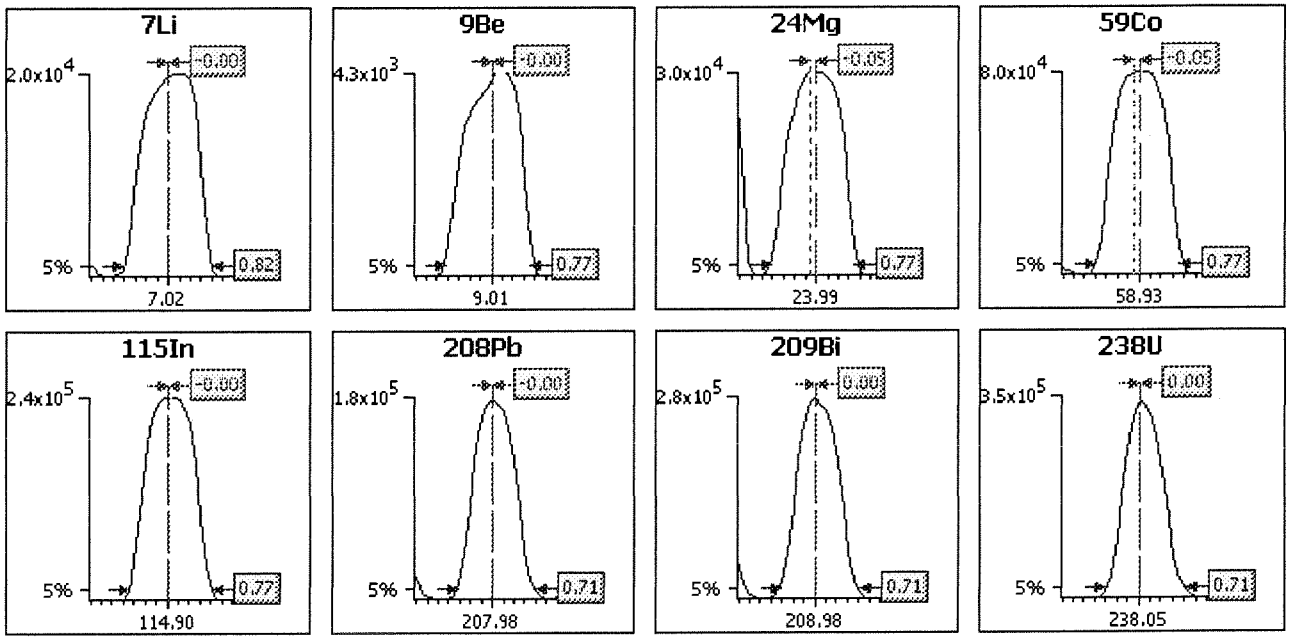
Primary Review by JDB Date 7/26/11
Secondary Review by _____ Date 7/26/11
R:\icp\misc\data review forms\icpms review form

Performance Report

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Mass Calibration verification

Acquisition parameters
Sweeps : 100
Dwell : 1.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.90	0.60	0.10	0.82	-0.00
9Be	0.90	0.60	0.10	0.77	-0.00
24Mg	0.90	0.60	0.10	0.77	-0.05
59Co	0.90	0.60	0.10	0.77	-0.05
115In	0.90	0.60	0.10	0.77	-0.00
208Pb	0.90	0.60	0.10	0.71	-0.00
209Bi	0.90	0.60	0.10	0.71	0.00
238U	0.90	0.60	0.10	0.71	0.00

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Tune conditions

Major	
Extraction	-122
Lens 1	3.8
Focus	22.4
D1	-36.9
Pole Bias	0.5
Hexapole Bias	0.6
Nebuliser	0.78
Sampling Depth	70

Minor	
Lens 2	-16.5
Lens 3	-187.5
Forward power	1247
Horizontal	123
Vertical	305
D2	-147
DA	-35.3
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	115
High resolution	125
Analogue Detector	1800
PC Detector	3750

Add. Gases

Sensitivity and stability results

Acquisition parameters
Sweeps : 400

Run	Time	5Bkg	7Li	9Be	24Mg	59Co	115In	140Ce	156Ce O	208Pb
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	-	-	5.0%
	Countrate	-	>1000	>1000	>1000	>1000	>1000	-	-	>1000
1	9:14:47 AM	0.000	22206.088	4623.425	31765.651	83586.510	246835.65	277700.92	4135.691	182092.85
2	9:16:01 AM	0.000	21986.806	4584.906	31601.079	82773.876	246324.05	277752.46	4148.947	182861.29
3	9:17:14 AM	0.000	22481.514	4611.419	31917.181	83515.361	248154.07	279178.92	4073.162	183171.95
4	9:18:27 AM	0.000	22185.037	4656.942	31580.508	82715.094	246120.91	277306.66	4103.176	182404.25
5	9:19:40 AM	0.000	22596.047	4673.701	31791.742	83502.241	247094.28	278116.85	4191.966	183633.37
x		0.000	22291.098	4630.079	31731.232	83218.616	246905.79	278011.16	4130.588	182832.74
σ		0.00	245.11	35.56	140.61	434.50	798.92	713.15	45.22	609.91
%RSD		0.000	1.100	0.768	0.443	0.522	0.324	0.257	1.095	0.334

Run	Time	209Bi	220Bkg	238U
Dwell (mSecs)		10.0	10.0	10.0
Limits	%RSD	5.0%	-	5.0%
	Countrate	>1000	-	>1000
1	9:14:47 AM	280521.57	0.000	358531.50
2	9:16:01 AM	281510.70	0.000	359822.53
3	9:17:14 AM	282585.28	0.500	362153.66
4	9:18:27 AM	281348.80	0.000	360010.25
5	9:19:40 AM	282502.26	0.000	362593.95
x		281693.72	0.100	360622.38
σ		862.41	0.22	1704.27
%RSD		0.306	223.607	0.473

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0200
1	9:14:47 AM	0.015
2	9:16:01 AM	0.015
3	9:17:14 AM	0.015
4	9:18:27 AM	0.015
5	9:19:40 AM	0.015
x		0.0149
σ		0.00
%RSD		1.2102

Result : The performance report passed.

Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	Cal. Blk	Blank	1.000	0	1	1	150
2	Cal. Stn	Fully Quant Standard	1.000	0	1	2	150
3	ICV1	Unknown	1.000	0	1	3	150
4	CCV1	Unknown	1.000	0	1	2	150
5	ICB1	Unknown	1.000	0	1	1	150
6	CCB1	Unknown	1.000	0	1	1	150
7	LLICVS	Unknown	1.000	0	1	4	150
8	ICSA	Unknown	1.000	0	1	5	150
9	ICSAB	Unknown	1.000	0	1	6	150
10	K1106152-MB 1/5	Unknown	1.000	1	1	1	150
11	LCSW 1/5	Unknown	1.000	1	1	2	150
12	DORM 1/5	Unknown	1.000	1	1	3	150
13	TORT 1/5	Unknown	1.000	1	1	4	150
14	K1106152-009 1/5	Unknown	1.000	1	1	5	150
15	K1106152-015 1/5	Unknown	1.000	1	1	6	150
16	K1106152-025 1/5	Unknown	1.000	1	1	7	150
17	CCV2	Unknown	1.000	0	1	2	150
18	CCB2	Unknown	1.000	0	1	1	150
19	K1106152-025D 1/5	Unknown	1.000	1	1	8	150
20	K1106152-025L 1/5	Unknown	1.000	1	1	9	150
21	K1106152-025A 1/5	Unknown	1.000	1	1	10	150
22	K1106152-025S 1/5	Unknown	1.000	1	1	11	150
23	K1106154-009 1/5	Unknown	1.000	1	1	12	150
24	K1106154-015 1/5	Unknown	1.000	1	2	1	150
25	K1106154-025 1/5	Unknown	1.000	1	2	2	150
26	K1106154-025D 1/5	Unknown	1.000	1	2	3	150
27	K1106154-025S 1/5	Unknown	1.000	1	2	4	150
28	K1106157-009 1/5	Unknown	1.000	1	2	5	150
29	CCV3	Unknown	1.000	0	1	2	150
30	CCB3	Unknown	1.000	0	1	1	150
31	LLCCV2	Unknown	1.000	0	1	4	150
32	K1106157-015 1/5	Unknown	1.000	1	2	6	150
33	K1106157-025 1/5	Unknown	1.000	1	2	7	150
34	K1106157-025D 1/5	Unknown	1.000	1	2	8	150
35	K1106157-025S 1/5	Unknown	1.000	1	2	9	150
36	K1106166-009 1/5	Unknown	1.000	1	2	10	150
37	K1106166-015 1/5	Unknown	1.000	1	2	11	150
38	K1106166-025 1/5	Unknown	1.000	1	2	12	150
39	K1106166-025D 1/5	Unknown	1.000	1	3	1	150
40	K1106166-025S	Unknown	1.000	1	3	2	150
41	CCV4	Unknown	1.000	0	1	2	150
42	CCB4	Unknown	1.000	0	1	1	150
43	LLCCV3	Unknown	1.000	0	1	4	150

Dilution Corrected Concentrations

Cal. Blk 7/25/2011 7:48:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:24	99.0%	0.0000	0.0802	-0.1049	0.0697	98.9%	98.7%	-0.0022
2	19:48:41	101.2%	-0.0202	-0.0462	0.0665	-0.1182	101.1%	100.9%	-0.0009
3	19:48:57	99.9%	0.0201	-0.0340	0.0383	0.0485	100.0%	100.4%	0.0031
x		100.0%	0.0000	0.0000	-0.0000	0.0000	100.0%	100.0%	-0.0000
σ		1.1%	0.0202	0.0697	0.0919	0.1029	1.1%	1.2%	0.0028
%RSD		1.1	0.0000	0.0000	0.0000	0.0000	1.1	1.2	0.0000

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:48:24	0.0003	0.0007
2	19:48:41	0.0010	0.0000
3	19:48:57	-0.0013	-0.0007
x		-0.0000	0.0000
σ		0.0012	0.0007
%RSD		0.0000	0.0000

Cal. Stn 7/25/2011 7:50:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:50:44	97.4%	25.1399	24.7348	25.1750	25.0817	97.2%	98.3%	25.1977
2	19:51:01	99.9%	24.7859	24.9687	24.8226	24.7612	100.1%	102.1%	24.5238
3	19:51:18	100.2%	25.0742	25.2966	25.0024	25.1570	100.5%	101.4%	25.2785
x		99.2%	25.0000	25.0000	25.0000	25.0000	99.3%	100.6%	25.0000
σ		1.5%	0.1883	0.2822	0.1762	0.2102	1.8%	2.0%	0.4144
%RSD		1.5	0.7533	1.1288	0.7050	0.8407	1.8	2.0	1.6574

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:50:44	25.1884	25.0694
2	19:51:01	24.5550	24.6070
3	19:51:18	25.2566	25.3236
x		25.0000	25.0000
σ		0.3869	0.3633
%RSD		1.5474	1.4532

ICV1 7/25/2011 7:53:22 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:22	97.6%	24.7893	26.2531	25.6672	24.7835	97.8%	98.3%	100.5858
2	19:53:39	99.6%	24.8304	24.6038	25.1208	24.8302	99.3%	100.4%	101.0716
3	19:53:55	100.4%	24.8304	25.4895	25.1111	24.9097	100.1%	101.7%	100.6995
x		99.2%	24.8167	25.4488	25.2997	24.8411	99.1%	100.1%	100.7856
σ		1.4%	0.0238	0.8254	0.3183	0.0638	1.2%	1.7%	0.2541
%RSD		1.4	0.0957	3.2434	1.2583	0.2568	1.2	1.7	0.2521

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:53:22	100.4979	104.1746
2	19:53:39	99.9873	104.5875
3	19:53:55	100.5339	104.3110
x		100.3397	104.3577
σ		0.3057	0.2104
%RSD		0.3047	0.2016

CCV1 7/25/2011 7:56:02 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:02	97.0%	24.9811	25.9538	25.3871	25.6478	97.4%	98.2%	25.0097
2	19:56:19	98.0%	24.9097	25.5188	25.4736	25.2765	98.5%	99.7%	25.4247
3	19:56:37	98.2%	25.3698	24.8088	24.6192	24.9617	99.7%	101.5%	24.9522
x		97.7%	25.0869	25.4271	25.1600	25.2953	98.5%	99.8%	25.1289
σ		0.6%	0.2476	0.5780	0.4703	0.3434	1.2%	1.7%	0.2578
%RSD		0.7	0.9871	2.2731	1.8694	1.3577	1.2	1.7	1.0260

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:56:02	25.0456	24.9841
2	19:56:19	25.3132	25.3080
3	19:56:37	24.9474	25.1083
x		25.1020	25.1335
σ		0.1893	0.1634
%RSD		0.7542	0.6500

ICB1 7/25/2011 7:58:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:52	96.7%	0.0267	0.1452	0.0579	0.1823	97.4%	97.1%	0.0062
2	19:59:09	94.6%	-0.0384	0.1062	0.2146	-0.1174	95.4%	96.0%	0.0098
3	19:59:26	100.3%	-0.0207	-0.0354	-0.1495	-0.1854	101.2%	102.4%	0.0108
x		97.2%	-0.0108	0.0720	0.0410	-0.0401	98.0%	98.5%	0.0089
σ		2.9%	0.0337	0.0950	0.1826	0.1956	3.0%	3.5%	0.0024
%RSD		3.0	310.5099	131.9958	445.4244	487.2992	3.0	3.5	27.4426

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:58:52	0.0012	0.0028
2	19:59:09	0.0048	0.0063
3	19:59:26	0.0161	0.0166
x		0.0073	0.0086
σ		0.0078	0.0072
%RSD		105.7930	83.9788

CCB1 7/25/2011 8:01:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:24	96.5%	0.0030	0.0218	0.3092	0.0024	97.9%	98.1%	-0.0008
2	20:01:41	97.9%	-0.0120	0.0645	-0.1944	0.0019	99.0%	99.8%	0.0011
3	20:01:58	97.8%	0.0255	0.0743	-0.0342	0.1319	99.0%	100.2%	0.0045
x		97.4%	0.0055	0.0536	0.0268	0.0454	98.6%	99.4%	0.0016
σ		0.8%	0.0189	0.0279	0.2573	0.0749	0.6%	1.1%	0.0027
%RSD		0.8	345.3118	52.1393	958.5967	164.8773	0.6	1.1	166.5632

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:01:24	0.0011	0.0016
2	20:01:41	0.0067	0.0040
3	20:01:58	0.0071	0.0065
x		0.0050	0.0041
σ		0.0033	0.0025
%RSD		67.2597	60.5126

LLICVS 7/25/2011 8:03:59 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	97.8%	0.8915	2.2567	2.1029	1.6968	98.7%	99.0%	0.1091
2	20:04:16	97.6%	1.0030	2.0525	2.0579	1.9848	99.0%	99.5%	0.1132
3	20:04:33	101.5%	0.8952	1.9795	1.7485	1.7279	103.3%	104.8%	0.1028
x		99.0%	0.9299	2.0962	1.9698	1.8032	100.3%	101.1%	0.1084
σ		2.2%	0.0634	0.1437	0.1929	0.1581	2.6%	3.2%	0.0053
%RSD		2.2	6.8143	6.8544	9.7949	8.7672	2.6	3.2	4.8678

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:03:59	0.0922	0.0964
2	20:04:16	0.0978	0.0997
3	20:04:33	0.0887	0.0884
x		0.0929	0.0948
σ		0.0046	0.0058
%RSD		4.9647	6.1276

ICSA 7/25/2011 8:06:33 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:33	81.4%	0.0678	2.6181	-0.0538	1.0635	79.2%	82.8%	0.1095
2	20:06:50	81.9%	0.1049	2.3636	0.0064	1.1228	79.9%	84.5%	0.0921
3	20:07:07	83.5%	0.0493	2.4830	0.3068	0.9823	80.6%	85.5%	0.1162
x		82.3%	0.0740	2.4882	0.0865	1.0562	79.9%	84.3%	0.1059
σ		1.1%	0.0283	0.1273	0.1932	0.0705	0.7%	1.3%	0.0124
%RSD		1.3	38.2677	5.1164	223.4657	6.6764	0.9	1.6	11.7411

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:06:33	0.1166	0.1180
2	20:06:50	0.1375	0.1228
3	20:07:07	0.1266	0.1185
x		0.1269	0.1198
σ		0.0105	0.0026
%RSD		8.2479	2.1961

ICSAB 7/25/2011 8:09:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:09	84.8%	23.5408	26.5246	24.0616	24.7128	81.3%	84.9%	0.1185
2	20:09:26	84.8%	23.5502	26.6444	24.3181	24.9215	81.8%	85.6%	0.1081
3	20:09:43	85.6%	23.6833	26.6194	24.8697	24.7376	82.2%	86.6%	0.1254
x		85.0%	23.5914	26.5961	24.4165	24.7907	81.8%	85.7%	0.1174
σ		0.5%	0.0797	0.0632	0.4129	0.1140	0.4%	0.9%	0.0087
%RSD		0.6	0.3378	0.2375	1.6913	0.4599	0.5	1.0	7.4039

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:09:09	0.1216	0.1200
2	20:09:26	0.1335	0.1257
3	20:09:43	0.1113	0.1210
x		0.1221	0.1222
σ		0.0111	0.0030
%RSD		9.1077	2.4847

K1106152-MB 1/5 7/25/2011 8:11:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:11:44	94.8%	0.0705	0.0674	-0.0553	0.2797	94.2%	94.9%	0.0043
2	20:12:00	94.9%	0.1097	-0.0012	-0.1027	0.3356	94.5%	95.6%	0.0007
3	20:12:17	95.9%	-0.0109	0.1495	-0.1868	0.0235	96.0%	97.1%	0.0041
x		95.2%	0.0564	0.0719	-0.1149	0.2129	94.9%	95.9%	0.0030
σ		0.6%	0.0615	0.0755	0.0666	0.1664	1.0%	1.1%	0.0020
%RSD		0.6	109.0543	104.9782	57.9352	78.1391	1.0	1.2	66.4349

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:11:44	0.0041	0.0022
2	20:12:00	0.0060	0.0037
3	20:12:17	0.0082	0.0032
x		0.0061	0.0030
σ		0.0021	0.0008
%RSD		33.6538	25.0129

LCSW 1/5 7/25/2011 8:14:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:16	97.4%	31.4714	32.5214	32.4444	31.6754	96.0%	97.0%	384.3275
2	20:14:32	98.7%	31.7658	32.6121	32.8171	31.7772	98.4%	99.0%	386.4839
3	20:14:49	98.8%	31.7295	32.0995	32.0367	32.2489	98.1%	100.2%	386.0672
x		98.3%	31.6556	32.4110	32.4327	31.9005	97.5%	98.7%	385.6262
σ		0.8%	0.1605	0.2735	0.3903	0.3060	1.3%	1.6%	1.1438
%RSD		0.8	0.5072	0.8439	1.2035	0.9592	1.3	1.6	0.2966

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:14:16	389.2819	399.4309
2	20:14:32	390.6857	398.7584
3	20:14:49	390.4196	396.5722
x		390.1291	398.2538
σ		0.7456	1.4946
%RSD		0.1911	0.3753

DORM 1/5 7/25/2011 8:17:00 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:00	92.2%	12.4278	6.9888	6.3983	7.4829	89.4%	91.8%	9.2627
2	20:17:16	92.5%	12.4614	6.9190	6.2835	7.1830	90.5%	93.5%	9.3537
3	20:17:33	92.3%	12.6429	7.2214	6.4155	8.0865	90.8%	93.7%	9.4918
x		92.3%	12.5107	7.0431	6.3658	7.5841	90.2%	93.0%	9.3694
σ		0.2%	0.1157	0.1583	0.0717	0.4602	0.8%	1.0%	0.1154
%RSD		0.2	0.9250	2.2481	1.1268	6.0679	0.8	1.1	1.2311

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:17:00	9.4446	9.3860
2	20:17:16	9.5969	9.4310
3	20:17:33	9.5239	9.4339
x		9.5218	9.4170
σ		0.0762	0.0269
%RSD		0.8001	0.2854

TORT 1/5 7/25/2011 8:19:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:38	90.6%	38.2332	11.1557	10.5149	11.6591	89.5%	92.4%	3.4312
2	20:19:55	90.6%	38.2690	11.5411	10.5302	11.6344	90.0%	93.2%	3.4661
3	20:20:12	89.9%	38.3356	10.9716	10.4744	11.1890	90.9%	94.9%	3.4493
x		90.4%	38.2793	11.2228	10.5065	11.4942	90.1%	93.5%	3.4488
σ		0.4%	0.0519	0.2906	0.0288	0.2645	0.7%	1.3%	0.0174
%RSD		0.5	0.1357	2.5897	0.2741	2.3016	0.8	1.3	0.5055

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:19:38	3.4050	3.3623
2	20:19:55	3.4302	3.4008
3	20:20:12	3.3755	3.3985
x		3.4036	3.3872
σ		0.0274	0.0216
%RSD		0.8043	0.6380

K1106152-009 1/5 7/25/2011 8:22:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:14	88.5%	10.3315	7.6477	7.1709	8.9740	88.8%	92.1%	50.6858
2	20:22:31	89.0%	10.3636	7.6755	7.4402	8.8644	89.9%	93.5%	51.2620
3	20:22:48	90.4%	9.9222	8.1156	6.7847	8.7775	90.8%	95.8%	49.0315
x		89.3%	10.2058	7.8129	7.1319	8.8720	89.8%	93.8%	50.3264
σ		0.9%	0.2461	0.2625	0.3295	0.0985	1.0%	1.9%	1.1579
%RSD		1.1	2.4110	3.3595	4.6199	1.1099	1.1	2.0	2.3008

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:22:14	50.9750	51.5372
2	20:22:31	51.0843	52.0591
3	20:22:48	49.2548	49.9271
x		50.4381	51.1744
σ		1.0262	1.1113
%RSD		2.0345	2.1717

K1106152-015 1/5 7/25/2011 8:24:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:55	88.6%	18.4827	8.7899	7.8941	10.4379	88.5%	91.9%	22.2248
2	20:25:12	88.4%	18.2008	8.8723	8.3066	10.3363	89.1%	93.4%	22.2225
3	20:25:29	89.9%	18.6007	8.6387	8.1558	10.7388	90.0%	94.7%	22.4456
x		89.0%	18.4280	8.7669	8.1188	10.5043	89.2%	93.3%	22.2976
σ		0.8%	0.2055	0.1185	0.2087	0.2093	0.7%	1.4%	0.1282
%RSD		0.9	1.1149	1.3518	2.5708	1.9924	0.8	1.5	0.5748

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:24:55	22.2943	22.2822
2	20:25:12	22.4404	22.3510
3	20:25:29	22.3668	22.2781
x		22.3672	22.3038
σ		0.0731	0.0409
%RSD		0.3268	0.1836

K1106152-025 1/5 7/25/2011 8:27:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:36	87.2%	34.3973	10.9555	10.6992	12.3307	87.4%	91.9%	10.3502
2	20:27:53	87.9%	34.5593	11.6510	10.9314	12.2852	89.1%	93.2%	10.5133
3	20:28:10	91.2%	34.0105	11.1559	10.5216	12.3866	90.9%	96.1%	10.4430
x		88.8%	34.3224	11.2541	10.7174	12.3342	89.1%	93.7%	10.4355
σ		2.1%	0.2820	0.3580	0.2055	0.0508	1.8%	2.1%	0.0818
%RSD		2.4	0.8216	3.1812	1.9175	0.4120	2.0	2.3	0.7837

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:27:36	10.4181	10.2433
2	20:27:53	10.3702	10.4904
3	20:28:10	10.3004	10.2256
x		10.3629	10.3198
σ		0.0592	0.1481
%RSD		0.5714	1.4347

CCV2 7/25/2011 8:30:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:14	92.7%	25.2461	24.5765	24.5949	26.1126	94.2%	96.1%	25.0647
2	20:30:32	92.6%	24.7233	25.1948	25.0779	24.9978	94.2%	97.1%	25.1032
3	20:30:48	93.6%	24.7587	24.6564	24.3541	25.1058	94.9%	97.6%	25.0295
x		93.0%	24.9094	24.8092	24.6756	25.4054	94.4%	97.0%	25.0658
σ		0.5%	0.2921	0.3363	0.3686	0.6148	0.4%	0.8%	0.0369
%RSD		0.6	1.1728	1.3555	1.4936	2.4201	0.4	0.8	0.1472

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:30:14	24.9866	25.0973
2	20:30:32	24.9385	25.1608
3	20:30:48	25.3110	25.2951
x		25.0787	25.1844
σ		0.2026	0.1010
%RSD		0.8079	0.4012

CCB2 7/25/2011 8:32:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:58	91.6%	0.0954	0.0188	-0.1648	0.2896	91.6%	93.3%	0.0037
2	20:33:15	92.7%	0.0718	0.0848	-0.3457	0.2425	92.5%	94.4%	0.0043
3	20:33:32	92.8%	0.0931	0.0647	-0.2672	0.3002	92.7%	95.4%	0.0099
x		92.4%	0.0868	0.0561	-0.2592	0.2774	92.3%	94.4%	0.0060
σ		0.7%	0.0130	0.0338	0.0907	0.0307	0.6%	1.1%	0.0034
%RSD		0.7	14.9948	60.3268	34.9896	11.0799	0.6	1.1	56.6580

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:32:58	0.0034	0.0027
2	20:33:15	0.0049	0.0073
3	20:33:32	0.0120	0.0122
x		0.0068	0.0074
σ		0.0046	0.0047
%RSD		67.4063	64.1009

K1106152-025D 1/5 7/25/2011 8:35:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:35:31	87.3%	34.3755	11.0086	10.3655	12.4777	86.5%	90.6%	10.3519
2	20:35:48	86.1%	35.3760	11.5325	11.4532	12.1977	86.2%	90.3%	10.7928
3	20:36:04	87.2%	34.9379	11.7899	11.1546	12.3071	86.3%	92.2%	10.7030
x		86.9%	34.8965	11.4436	10.9911	12.3275	86.3%	91.0%	10.6159
σ		0.7%	0.5015	0.3981	0.5619	0.1411	0.2%	1.0%	0.2330
%RSD		0.8	1.4371	3.4791	5.1127	1.1450	0.2	1.1	2.1948

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:35:31	10.4449	10.3740
2	20:35:48	10.7723	10.8009
3	20:36:04	10.7101	10.6165
x		10.6425	10.5971
σ		0.1739	0.2141
%RSD		1.6336	2.0201

K1106152-025L 1/5 7/25/2011 8:38:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:09	89.2%	6.9076	2.5026	1.8856	2.6061	89.9%	93.5%	1.9546
2	20:38:26	92.2%	6.7477	2.4176	1.4925	2.9008	92.0%	96.8%	1.9563
3	20:38:43	91.4%	6.7413	2.5126	1.7836	2.7418	92.7%	97.0%	1.8996
x		90.9%	6.7989	2.4776	1.7206	2.7496	91.5%	95.8%	1.9368
σ		1.5%	0.0942	0.0522	0.2040	0.1475	1.4%	2.0%	0.0322
%RSD		1.7	1.3859	2.1067	11.8565	5.3654	1.6	2.1	1.6636

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:38:09	1.9429	1.9252
2	20:38:26	1.8772	1.8926
3	20:38:43	1.9406	1.8837
x		1.9202	1.9005
σ		0.0373	0.0218
%RSD		1.9433	1.1495

K1106152-025A 1/5 7/25/2011 8:40:48 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:40:48	85.8%	84.3328	60.1753	59.7787	60.5201	85.7%	90.6%	58.7233
2	20:41:05	87.2%	83.2527	61.5064	60.2662	61.0484	86.8%	92.6%	59.2410
3	20:41:22	87.5%	83.8190	58.7445	58.8060	62.6952	87.5%	93.9%	58.8108
x		86.8%	83.8015	60.1421	59.6170	61.4212	86.7%	92.4%	58.9250
σ		0.9%	0.5403	1.3813	0.7434	1.1345	0.9%	1.7%	0.2771
%RSD		1.0	0.6447	2.2967	1.2470	1.8470	1.1	1.8	0.4703

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:40:48	58.7089	60.0755
2	20:41:05	58.7846	60.2840
3	20:41:22	58.5977	59.9680
x		58.6970	60.1091
σ		0.0940	0.1607
%RSD		0.1602	0.2673

K1106152-025S 1/5 7/25/2011 8:43:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:43:31	85.7%	67.0829	43.5343	43.6521	46.3245	86.0%	90.5%	388.9626
2	20:43:48	85.2%	68.0453	44.1922	44.1283	46.8821	85.6%	90.9%	402.3458
3	20:44:04	87.6%	65.1100	41.4758	42.0788	44.0860	88.7%	94.3%	379.7889
x		86.2%	66.7461	43.0674	43.2864	45.7642	86.8%	91.9%	390.3658
σ		1.3%	1.4964	1.4171	1.0726	1.4799	1.7%	2.1%	11.3437
%RSD		1.5	2.2419	3.2904	2.4779	3.2337	1.9	2.3	2.9059

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:43:31	393.9724	406.1686
2	20:43:48	407.8022	414.9542
3	20:44:04	386.6041	393.2854
x		396.1262	404.8028
σ		10.7619	10.8988
%RSD		2.7168	2.6924

K1106154-009 1/5 7/25/2011 8:46:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:16	88.1%	6.3656	4.6838	3.6338	8.0406	87.5%	93.2%	220.0446
2	20:46:32	87.7%	6.3832	5.1776	3.6022	7.7614	88.2%	94.1%	227.4309
3	20:46:49	87.9%	6.6882	4.8163	4.0134	8.2153	88.6%	94.6%	230.3609
x		87.9%	6.4790	4.8926	3.7498	8.0058	88.1%	94.0%	225.9455
σ		0.2%	0.1814	0.2556	0.2289	0.2289	0.5%	0.7%	5.3161
%RSD		0.2	2.8002	5.2240	6.1033	2.8595	0.6	0.8	2.3528

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:46:16	222.0766	231.0681
2	20:46:32	228.5365	235.2880
3	20:46:49	232.0782	238.5573
x		227.5638	234.9711
σ		5.0713	3.7546
%RSD		2.2285	1.5979

K1106154-015 1/5 7/25/2011 8:48:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:58	86.6%	14.8148	8.1878	6.5586	12.5508	86.2%	91.3%	142.9237
2	20:49:15	87.5%	14.6857	7.2952	6.9641	11.9548	87.1%	93.0%	143.1859
3	20:49:32	88.1%	14.9542	7.1336	6.8182	12.6714	88.3%	94.2%	142.6085
x		87.4%	14.8183	7.5389	6.7803	12.3923	87.2%	92.8%	142.9060
σ		0.8%	0.1343	0.5678	0.2054	0.3837	1.1%	1.5%	0.2891
%RSD		0.9	0.9061	7.5316	3.0297	3.0960	1.2	1.6	0.2023

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:48:58	143.2520	150.5614
2	20:49:15	143.0995	152.3008
3	20:49:32	143.2500	151.6626
x		143.2005	151.5083
σ		0.0875	0.8799
%RSD		0.0611	0.5808

K1106154-025 1/5 7/25/2011 8:51:40 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:40	87.2%	24.7874	7.4422	6.8240	10.5757	87.8%	91.6%	42.1623
2	20:51:57	88.2%	24.6294	7.1942	7.0690	10.4849	88.5%	93.6%	41.7352
3	20:52:13	88.7%	24.4095	7.7216	6.8160	10.6212	89.0%	94.4%	41.7118
x		88.1%	24.6088	7.4527	6.9030	10.5606	88.4%	93.2%	41.8698
σ		0.8%	0.1898	0.2638	0.1438	0.0694	0.6%	1.5%	0.2536
%RSD		0.9	0.7713	3.5400	2.0834	0.6568	0.7	1.6	0.6057

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:51:40	42.2824	42.4014
2	20:51:57	41.7811	42.0794
3	20:52:13	41.6806	42.2795
x		41.9147	42.2534
σ		0.3224	0.1625
%RSD		0.7691	0.3847

K1106154-025D 1/5 7/25/2011 8:54:20 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:20	87.7%	24.7814	7.3761	6.5299	9.9749	86.6%	90.4%	33.1784
2	20:54:37	87.5%	24.4345	7.4456	6.6336	10.0091	87.6%	92.1%	33.3948
3	20:54:54	88.3%	24.8430	7.0569	6.7480	9.8763	88.1%	93.1%	33.4492
x		87.9%	24.6863	7.2929	6.6372	9.9535	87.4%	91.9%	33.3408
σ		0.4%	0.2202	0.2073	0.1091	0.0689	0.8%	1.4%	0.1432
%RSD		0.5	0.8920	2.8422	1.6435	0.6927	0.9	1.5	0.4296

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:54:20	33.2600	33.4782
2	20:54:37	33.4963	33.5536
3	20:54:54	33.2498	33.5332
x		33.3354	33.5217
σ		0.1395	0.0390
%RSD		0.4184	0.1164

K1106154-025S 1/5 7/25/2011 8:57:01 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:01	86.9%	56.0943	40.5881	39.2579	42.8717	85.8%	90.2%	431.3307
2	20:57:18	88.2%	55.8655	39.8129	38.7404	41.8497	87.6%	92.4%	429.2607
3	20:57:34	89.2%	55.0017	40.3869	38.2641	41.5949	88.2%	93.4%	432.0546
x		88.1%	55.6539	40.2626	38.7542	42.1054	87.2%	92.0%	430.8820
σ		1.1%	0.5762	0.4022	0.4970	0.6757	1.2%	1.6%	1.4500
%RSD		1.3	1.0354	0.9990	1.2826	1.6048	1.4	1.7	0.3365

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:57:01	437.0015	450.0845
2	20:57:18	435.0139	445.2183
3	20:57:34	438.1749	445.9379
x		436.7301	447.0802
σ		1.5978	2.6265
%RSD		0.3659	0.5875

K1106157-009 1/5 7/25/2011 8:59:46 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:59:46	88.2%	1.4718	1.5245	1.2788	3.5385	85.7%	90.9%	1357.4406
2	21:00:02	89.3%	1.3086	1.6741	0.7563	3.2905	87.8%	93.6%	1284.0608
3	21:00:19	90.8%	1.4290	1.5854	0.8854	3.5262	88.2%	95.0%	1281.3477
x		89.4%	1.4032	1.5947	0.9735	3.4517	87.2%	93.2%	1307.6164
σ		1.3%	0.0846	0.0752	0.2722	0.1397	1.4%	2.1%	43.1703
%RSD		1.4	6.0306	4.7180	27.9588	4.0483	1.6	2.2	3.3015

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:59:46	1318.4990	1363.5993
2	21:00:02	1296.2479	1347.4511
3	21:00:19	1293.2552	1340.3673
x		1302.6674	1350.4726
σ		13.7920	11.9071
%RSD		1.0588	0.8817

CCV3 7/25/2011 9:02:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:34	99.3%	26.0952	25.7427	26.3060	26.3259	100.3%	100.8%	25.8832
2	21:02:51	100.6%	24.6036	24.4687	25.3435	24.9107	102.2%	105.3%	24.5144
3	21:03:08	99.9%	25.3586	25.8593	26.1686	25.5309	100.7%	103.2%	26.3595
x		99.9%	25.3525	25.3569	25.9394	25.5892	101.1%	103.1%	25.5857
σ		0.6%	0.7458	0.7714	0.5206	0.7094	1.0%	2.2%	0.9578
%RSD		0.6	2.9419	3.0421	2.0071	2.7722	1.0	2.2	3.7437

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:02:34	25.9585	26.0338
2	21:02:51	24.6930	24.6966
3	21:03:08	26.2432	26.4351
x		25.6316	25.7218
σ		0.8252	0.9103
%RSD		3.2193	3.5389

CCB3 7/25/2011 9:05:19 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:05:19	97.3%	0.0853	0.1332	-0.2541	0.3393	97.8%	98.8%	0.0270
2	21:05:36	98.1%	0.0277	0.1395	-0.1471	0.1453	98.5%	101.1%	0.0529
3	21:05:53	98.0%	0.1608	0.1208	0.4181	0.6026	98.9%	101.7%	0.1286
x		97.8%	0.0913	0.1312	0.0056	0.3624	98.4%	100.5%	0.0695
σ		0.4%	0.0667	0.0095	0.3612	0.2295	0.6%	1.5%	0.0527
%RSD		0.4	73.1087	7.2570	6422.5664	63.3339	0.6	1.5	75.8819

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:05:19	0.0206	0.0259
2	21:05:36	0.0663	0.0552
3	21:05:53	0.1329	0.1360
x		0.0733	0.0723
σ		0.0565	0.0570
%RSD		77.0626	78.8342

LLCCV2 7/25/2011 9:10:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:10:34	93.4%	1.1143	1.9255	1.7509	2.2746	94.1%	96.2%	0.1062
2	21:10:50	94.6%	1.0644	2.1541	2.0767	2.3126	96.5%	99.1%	0.0920
3	21:11:07	95.5%	1.0479	2.0639	1.8878	2.1170	97.3%	100.4%	0.1322
x		94.5%	1.0755	2.0478	1.9051	2.2347	96.0%	98.6%	0.1102
σ		1.1%	0.0346	0.1151	0.1636	0.1037	1.7%	2.2%	0.0204
%RSD		1.1	3.2134	5.6220	8.5885	4.6424	1.7	2.2	18.5227

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:10:34	0.1227	0.1088
2	21:10:50	0.1051	0.1021
3	21:11:07	0.1150	0.1105
x		0.1143	0.1071
σ		0.0088	0.0045
%RSD		7.7172	4.1941

K1106157-015 1/5 7/25/2011 9:13:07 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:07	89.6%	2.2201	1.7641	1.4004	3.2459	87.2%	92.4%	807.4174
2	21:13:24	92.3%	2.1262	1.9564	1.7890	3.4091	89.7%	94.9%	808.1947
3	21:13:41	92.5%	2.1263	1.9807	1.5157	3.4649	90.1%	95.6%	813.3167
x		91.5%	2.1575	1.9004	1.5684	3.3733	89.0%	94.3%	809.6429
σ		1.6%	0.0542	0.1187	0.1996	0.1138	1.6%	1.7%	3.2052
%RSD		1.7	2.5112	6.2440	12.7264	3.3731	1.8	1.8	0.3959

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:13:07	823.7413	824.3102
2	21:13:24	826.8480	815.7736
3	21:13:41	832.0509	818.5209
x		827.5467	819.5349
σ		4.1986	4.3577
%RSD		0.5074	0.5317

K1106157-025 1/5 7/25/2011 9:15:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:55	91.6%	5.3167	2.3393	1.8677	3.5353	88.7%	94.0%	309.9191
2	21:16:12	94.1%	5.5312	2.0221	1.7204	4.4611	91.3%	96.7%	306.6572
3	21:16:28	93.0%	5.6174	2.4121	1.9053	4.3282	89.6%	95.5%	319.3831
x		92.9%	5.4884	2.2579	1.8311	4.1082	89.9%	95.4%	311.9865
σ		1.3%	0.1549	0.2073	0.0977	0.5006	1.3%	1.3%	6.6100
%RSD		1.4	2.8220	9.1834	5.3380	12.1850	1.4	1.4	2.1187

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:15:55	310.6326	322.0835
2	21:16:12	308.3458	317.5740
3	21:16:28	321.3966	328.2275
x		313.4583	322.6284
σ		6.9692	5.3476
%RSD		2.2233	1.6575

K1106157-025D 1/5 7/25/2011 9:18:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:38	94.1%	5.6573	2.0806	1.9168	4.3093	91.3%	96.6%	301.3823
2	21:18:55	90.6%	6.0108	2.5836	2.4865	4.3714	87.5%	93.2%	331.5772
3	21:19:11	94.5%	5.6393	2.5328	1.8501	4.5944	91.6%	98.0%	307.6577
x		93.1%	5.7692	2.3990	2.0845	4.4251	90.1%	95.9%	313.5391
σ		2.1%	0.2095	0.2769	0.3498	0.1499	2.3%	2.5%	15.9335
%RSD		2.3	3.6308	11.5421	16.7796	3.3883	2.5	2.6	5.0818

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:18:38	302.5674	312.8714
2	21:18:55	332.5413	340.8849
3	21:19:11	309.0595	315.6721
x		314.7227	323.1428
σ		15.7691	15.4288
%RSD		5.0105	4.7746

K1106157-025S 1/5 7/25/2011 9:21:29 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:29	92.8%	37.5694	32.5887	32.7783	34.3832	90.8%	95.6%	696.8755
2	21:21:45	95.1%	36.6446	31.8673	32.2730	32.4727	92.1%	98.0%	689.8174
3	21:22:02	95.8%	35.1222	31.2963	31.0028	31.5040	94.3%	101.1%	663.9563
x		94.6%	36.4454	31.9174	32.0181	32.7866	92.4%	98.3%	683.5497
σ		1.6%	1.2357	0.6477	0.9148	1.4650	1.8%	2.8%	17.3315
%RSD		1.7	3.3905	2.0292	2.8572	4.4684	1.9	2.8	2.5355

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:21:29	709.9814	714.4389
2	21:21:45	703.8134	699.7073
3	21:22:02	678.9257	670.2445
x		697.5735	694.7969
σ		16.4413	22.5027
%RSD		2.3569	3.2387

K1106166-009 1/5 7/25/2011 9:24:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:24:14	92.9%	2.9319	3.4044	3.8420	3.9167	93.3%	98.0%	16.7376
2	21:24:31	95.2%	3.0173	3.3845	3.2131	4.3946	95.4%	100.1%	16.7794
3	21:24:48	95.3%	3.0292	3.1023	3.6341	4.0695	95.4%	100.5%	17.0312
x		94.5%	2.9928	3.2971	3.5631	4.1270	94.7%	99.6%	16.8494
σ		1.3%	0.0531	0.1690	0.3204	0.2441	1.2%	1.3%	0.1588
%RSD		1.4	1.7738	5.1247	8.9928	5.9143	1.3	1.3	0.9426

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:24:14	16.7664	16.7352
2	21:24:31	16.6634	16.6956
3	21:24:48	17.1033	17.0079
x		16.8444	16.8129
σ		0.2301	0.1700
%RSD		1.3662	1.0113

K1106166-015 1/5 7/25/2011 9:26:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:26:55	91.2%	11.6124	5.0716	6.1674	6.9615	91.5%	95.3%	15.0883
2	21:27:11	91.5%	11.2510	5.8003	5.9720	6.5818	91.7%	96.0%	15.1009
3	21:27:28	92.7%	11.1771	6.1405	5.8606	6.2016	92.8%	97.5%	15.0069
x		91.8%	11.3468	5.6708	6.0000	6.5817	92.0%	96.3%	15.0654
σ		0.8%	0.2330	0.5461	0.1553	0.3799	0.7%	1.1%	0.0511
%RSD		0.9	2.0532	9.6300	2.5891	5.7728	0.8	1.2	0.3389

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:26:55	15.0029	14.9202
2	21:27:11	15.1176	15.1516
3	21:27:28	15.0791	15.0856
x		15.0665	15.0525
σ		0.0584	0.1192
%RSD		0.3876	0.7919

K1106166-025 1/5 7/25/2011 9:29:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:36	91.9%	19.1674	5.4782	5.7291	5.3273	92.5%	97.0%	5.0513
2	21:29:53	92.6%	19.6432	5.9219	5.6128	6.0356	93.9%	98.9%	5.2258
3	21:30:10	94.4%	19.2668	5.6700	5.4693	5.8252	95.6%	100.3%	5.1603
x		93.0%	19.3592	5.6901	5.6037	5.7294	94.0%	98.7%	5.1458
σ		1.3%	0.2510	0.2226	0.1301	0.3637	1.6%	1.7%	0.0882
%RSD		1.4	1.2965	3.9115	2.3221	6.3487	1.7	1.7	1.7135

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:29:36	5.2313	5.1618
2	21:29:53	5.1736	5.1607
3	21:30:10	5.1305	5.1319
x		5.1784	5.1514
σ		0.0506	0.0170
%RSD		0.9767	0.3295

K1106166-025D 1/5 7/25/2011 9:32:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:14	89.6%	20.4177	5.6060	5.9482	6.6587	90.3%	94.3%	6.0379
2	21:32:31	90.4%	19.9310	6.2074	5.6264	6.1599	91.4%	96.0%	5.8924
3	21:32:48	91.1%	20.0633	6.0540	5.7035	6.3630	91.9%	96.3%	6.0668
x		90.4%	20.1374	5.9558	5.7593	6.3939	91.2%	95.5%	5.9990
σ		0.8%	0.2517	0.3125	0.1680	0.2508	0.8%	1.1%	0.0935
%RSD		0.8	1.2497	5.2473	2.9172	3.9227	0.9	1.1	1.5579

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:32:14	5.9735	5.9023
2	21:32:31	5.9866	5.9322
3	21:32:48	5.9645	6.0021
x		5.9748	5.9455
σ		0.0111	0.0513
%RSD		0.1857	0.8620

K1106166-025S 7/25/2011 9:34:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:34:52	89.4%	51.4241	37.6464	38.5443	38.3850	89.4%	93.5%	392.7703
2	21:35:09	89.2%	51.4776	37.9628	38.1375	37.4839	89.7%	94.9%	397.2461
3	21:35:26	90.8%	51.1801	37.3385	37.7249	37.5549	90.4%	95.4%	398.0944
x		89.8%	51.3606	37.6492	38.1356	37.8079	89.8%	94.6%	396.0369
σ		0.9%	0.1586	0.3121	0.4097	0.5010	0.5%	1.0%	2.8606
%RSD		1.0	0.3088	0.8291	1.0743	1.3251	0.6	1.1	0.7223

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:34:52	397.2021	410.7206
2	21:35:09	400.9366	409.4920
3	21:35:26	402.4704	409.8121
x		400.2031	410.0082
σ		2.7097	0.6374
%RSD		0.6771	0.1555

CCV4 7/25/2011 9:37:43 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:43	93.9%	25.1223	26.1076	25.5784	25.9579	93.7%	95.8%	25.6710
2	21:38:00	94.5%	24.9964	26.2088	26.0547	25.6281	94.2%	97.5%	25.6382
3	21:38:17	94.3%	25.1208	25.3340	25.5726	25.2380	95.7%	98.2%	25.9747
x		94.2%	25.0798	25.8835	25.7353	25.6080	94.5%	97.2%	25.7613
σ		0.3%	0.0723	0.4785	0.2767	0.3604	1.0%	1.2%	0.1855
%RSD		0.3	0.2882	1.8488	1.0750	1.4072	1.1	1.3	0.7201

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:37:43	25.4896	25.5904
2	21:38:00	25.5911	25.6174
3	21:38:17	25.5738	25.6901
x		25.5515	25.6326
σ		0.0543	0.0516
%RSD		0.2124	0.2012

CCB4 7/25/2011 9:40:23 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:23	92.9%	0.0534	0.1835	0.0181	0.2566	92.6%	94.9%	0.0248
2	21:40:40	93.3%	0.1007	0.0530	-0.0004	0.3060	92.7%	95.8%	0.0337
3	21:40:57	93.4%	0.0634	0.1021	0.4380	0.1544	93.2%	96.6%	0.0883
x		93.2%	0.0725	0.1129	0.1519	0.2390	92.9%	95.8%	0.0489
σ		0.3%	0.0249	0.0659	0.2479	0.0773	0.3%	0.9%	0.0344
%RSD		0.3	34.3771	58.3876	163.2419	32.3398	0.3	0.9	70.2335

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:40:23	0.0205	0.0223
2	21:40:40	0.0381	0.0372
3	21:40:57	0.0930	0.0847
x		0.0505	0.0481
σ		0.0378	0.0326
%RSD		74.8994	67.7308

LLCCV3 7/25/2011 9:42:56 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:56	89.3%	1.0501	2.3666	2.3491	2.2304	88.2%	90.7%	0.1366
2	21:43:13	94.0%	1.0502	2.2090	2.0116	2.3953	93.8%	96.3%	0.1074
3	21:43:29	94.7%	0.8581	2.0850	1.9592	1.6204	94.3%	97.1%	0.1252
x		92.6%	0.9861	2.2202	2.1066	2.0820	92.1%	94.7%	0.1231
σ		2.9%	0.1109	0.1411	0.2116	0.4082	3.4%	3.5%	0.0147
%RSD		3.2	11.2431	6.3566	10.0467	19.6038	3.7	3.7	11.9494

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:42:56	0.1278	0.1134
2	21:43:13	0.1020	0.1093
3	21:43:29	0.1028	0.1159
x		0.1108	0.1128
σ		0.0147	0.0033
%RSD		13.2450	2.9326

Lipids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106154
Project:	East White Lake/Soft Tissue	**Date Collected:**	5/23-6/20/2011
Sample Matrix:	Animal tissue	**Date Received:**	5/24-6/21/2011

Lipids, Total

Prep Method:	EPA 3541	Units:	PERCENT
Analysis Method:	NOAA	Basis:	AS RECEIVED
Test Notes:			

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Soft Tissue	K1106154-009	0.05	7/18/2011	7/20/2011	0.65	
EWL-HOU-C-Soft Tissue	K1106154-015	0.05	7/18/2011	7/20/2011	0.64	
EWL-BIL-C-Soft Tissue	K1106154-025	0.05	7/18/2011	7/20/2011	2.6	
Method Blank	K1106154-MB	0.05	7/18/2011	7/20/2011	0.05	U

Approved By: Elissa Erickson Date: 7-29-11

1A/092099p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Soft Tissue
Sample Matrix: Animal tissue

Service Request: K1106154
Date Collected: 6/9/2011
Date Received: 6/10/2011
Date Extracted: 7/18/2011
Date Analyzed: 7/20/2011

Triplicate Summary
Lipids, Total

Sample Name: EWL-BIL SOFT Tissue Composite
Lab Code: K1106154-025 TRP
Test Notes:

Units: PERCENT
Basis: AS RECEIVED

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
Lipids, Total	EPA 3541	NOAA	0.05	2.6	2.7	2.7	2.7	3	

Approved By: Elissa Erickson Date: 7-29-11

DUP/091599p
K1106154svg.sm1 - TRP 7/29/2011

Page No.:

% Lipid - Electronic Benchsheet

wo #	wet wt	dish	dish/lip	% lip	mb corr	% lipids (rounded)	mrl
K1106154-009	10.07	1.301	1.314	0.645482	0.0000	0.65	0.05
K1106154-015	10.10	1.304	1.317	0.643564	0.0000	0.64	0.05
K1106154-025	10.04	1.314	1.366	2.589641	0.0000	2.6	0.05
K1106154-MB	10.10	1.294	1.294	0.000000	0.0000	0.00	0.05
K1106154-025 DUP	10.05	1.315	1.370	2.736318	0.0000	2.7	0.05
K1106154-025 TRP	10.03	1.316	1.370	2.691924	0.0000	2.7	0.05

Reviewed By: Elissa Erickson Date: 7-29-11

Lipids Raw Benchsheet

Lab ID	Client ID	Sample Weight (g)	Wt. Dish (g)	Wt. Dish + Lipid (g)
K1106152-009	EWL-DES Hepatopancreas Composite	3.05	1.294	1.333
K1106152-015	EWL-HOU-C Hepatopancreas Composite	3.04	1.318	1.374
K1106152-025	EWL-BIL Hepatopancreas Composite	3.05	1.305	1.349
K1106154-009	EWL-DES-C-Soft Tissue	10.07	1.301	1.314
K1106154-015	EWL-HOU-C-Soft Tissue	10.10	1.304	1.317
K1106154-025	EWL-BIL-C-Soft Tissue	10.04	1.314	1.366
K1106157-009	EWL-DES Exoskeleton Composite	10.05	1.314	1.317
K1106157-015	EWL-HOU Exoskeleton Composite	10.01	1.316	1.318
K1106157-025	EWL-BIL Exoskeleton Composite	10.03	1.311	1.314
K1106166-009	EWL-DES-C-Meat	10.10	1.304	1.312
K1106166-015	EWL-HOU-C-Meat	10.04	1.311	1.319
K1106166-025	EWL-BIL-C-Meat	10.07	1.317	1.325
K1106154-MB	Method Blank DE 7-29-11	~~10.05~~ 10.05	1.294	1.294
K1106154-025 DUP	Sample Duplicate	~~10.03~~ 10.05	1.315	1.370
K1106154-025 TRP	Sample Triplicate	~~10.10~~ 10.03	1.316	1.370

Extraction Start Time/Date: 7-18-11
Extraction Stop Time/Date: 7-18-11
Extracted By: D. Wood

Extraction Method: 3541
DCM Lot #: DD930, DE202
Sulfate Lot #: BK1022

Intermediate Volume of Extracts: 10 mL

Aliquot used for % Lipids: 2 mL

Date Analyzed: 7-20-11
Analyzed By: S. Mancilla

Balance ID: K-Balance-40

Prep Run #: 137914

Reviewed By: Elissa Ericksan

Date: 7-29-11

Chain of Custody

Columbia Analytical Services™

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www.caslab.com

CHAIN of CUSTODY

Page 1 of 1

Client: David Lingle

Project: EWL-Tissue Study

Project Manager: John Rodgers

Telephone No.

Fax No.

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic SW6020	Inorganic As EPA 1632A	Total Ba SW6020	Total Mercury EPA 1631	Methylmercury EPA 1630	TPH Texas 1005/1006	Turn Around Time (working days)
EWL-DES						X Crabs			6-20-11		X	X	X	X	X	X	

K1105581

MARKS

158

Sample Received Intact: Yes No

Temperature received: Ice No ice

	Date	Time		
Relinq. by sampler (Sign & Print Name) Patrick M. Ritchie	6-20-11	1500	Received by (Sign & Print Name)	
Relinquished by	Date	Time	Received by	
Relinquished by	Date	Time	Received by	
Relinquished by	Date	Time	Received by laboratory: CAS	Date 6/21/11 Time 0845

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC 14

Client / Project: IRS Service Request K11 5581

Received: 6/21/11 Opened: 6/21/11 By: AJ Unloaded: 6/21/11 By: AJ

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.5		295			

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

Notes, Discrepancies, & Resolutions: Read 12 CNDS

Columbia Analytical Services
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CHAIN of CUSTODY

Page 1 of 1

Client: EWL Project - D. Lingle

Project: EWL - Tissue Study

Project Manager: John Rodgers

Telephone No.

Fax No.

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

K1105244

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic - SW6020	Inorganic Arsenic - EPA 1632A	Total Barium - SW6020	Total Mercury - EPA 1631	Methylmercury - EPA 1630	TPH - Texas 1005/1006									Turn Around Time (working days)
EWL-BIL		1				X (Crabs)			6.9.11	1200	X	X	X	X	X	X									

MARKS

160

Sample Received Intact: Yes No

Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name)	Date	Time	Received by (Sign & Print Name)
Randy Graves	6.9.11	1730	
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory: CAS — Date 6/10/11 — Time 0930

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Lynda

lient / Project: URS Service Request K11 5244

eceived: 6/10/11 Opened: 6/10/11 By: AJ Unloaded: 6/10/11 By: AJ

Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*

Were custody seals on coolers? NA Y (N) If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
4.0		299		7955 3874 7438	

Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Sleeves* *Other*_____

Were custody papers properly filled out (ink, signed, etc.)?	NA	(Y)	N
Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*	NA	(Y)	N
). Were all sample labels complete (i.e analysis, preservation, etc.)?	NA	(Y)	N
. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.*	NA	(Y)	N
. Were appropriate bottles/containers and volumes received for the tests indicated?	NA	(Y)	N
. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below*	(NA)	Y	N
. Were VOA vials received without headspace? *Indicate in the table below.*	(NA)	Y	N
. Was C12/Res negative?	(NA)	Y	N

Sample ID on Bottle	Sample ID on COC	Identified by:

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

otes, Discrepancies, & Resolutions: Rec'd 12 vials.

Page 1 of ____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

SR# K1104604

PAGE _____ OF _____

Project Name: EWL Tissue Study **Project Number:** _____

Project Manager: John Rodgers **Company:** _____

Company/Address: _____ **Phone:** _____

City, State, Zip: _____ **FAX:** _____

Sampler's Signature: David Lingle

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Total Arsenic SW 6020	Inorganic Arsenic EPA 1632A	Total Barium SW 6020	Total Mercury EPA 1631	Methylmercury EPA 1630	Lipid Content	TPH	REMARKS
EWL-HOU-C	5/23/2011	6:15pm		Tissue	1	x	x	x	x	x	x	x	

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TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_____ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: _____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

_____ V. EDD

Comments/Special Instructions:

Dissect eight (8) blue crabs into Meat, Hepatopancreas, Other Soft Tissue, and Exoskeleton.

EWL-HOU-C-MEAT

EWL-HOU-C-HEPATOPANCREAS

EWL-HOU-C-OTHER SOFT TISSUE

EWL-HOU-C-EXOSKELETON

TPH analysis to be conducted by Pace - Green Bay.

RELINQUISHED BY:

Signature: David Lingle

Printed Name: David Lingle

Firm: URS Corporation

Date/Time: 05/23/11; 6:15 pm

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: SHOPKINS

Firm: CAS

Date/Time: 5/24/11 0830

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC M11

Client / Project: URS Service Request K11 H604

Received: 5/24/11 Opened: 5/24/11 By: SX Unloaded: 5/24/11 By: SX

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.4		281		7971 2767 7864	

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

*Notes, Discrepancies, & Resolutions:*_____

Page 1 of ____

Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 5, 2011 Analytical Report for Service Request No: K1106157

David Lingle
URS Corporation
9801 Westheimer, Suite 500
Houston, TX 77042

RE: East White Lake/Exoskeleton

Dear David:

Enclosed are the results of the samples submitted to our laboratory on May 24, 2011. For your reference, these analyses have been assigned our service request number K1106157.

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

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

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

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

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

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Agency	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DEQ	WA100010
South Carolina DHEC	61002
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	URS Corporation	**Service Request No.:**	K1106157
Project:	East White Lake	**Date Received:**	5/24-6/21-2011
Sample Matrix:	Tissue		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Homogenization and Compositing

Whole body blue crab samples were received at Columbia Analytical Services on 5/24-6/21-2011. The hepatopancreas, other soft tissue, meat and exoskeleton were separated from each crab. The samples from each location were composited and subsequently subaliquoted for each of the sample locations in accordance with sample mass requirements for testing; additionally, sample custody of an aliquot of each was relinquished to Pace Analytical for analysis of Total Petroleum Hydrocarbons in accordance with instructions received from URS Corporation. Each tissue type was logged into a separate service request. The data set included here is for the exoskeleton tissue.

Metals

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

Approved by_____ **Date** 8/9/11

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Solids, Total

Prep Method:	NONE	Units:	PERCENT
Analysis Method:	Freeze Dry	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
EWL-DES Exoskeleton Composite	K1106157-009	07/12/11	52.3	
EWL-HOU Exoskeleton Composite	K1106157-015	07/12/11	59.1	
EWL-BIL Exoskeleton Composite	K1106157-025	07/12/11	50.3	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Exoskeleton
Sample Matrix: Tissue

Service Request: K1106157
Date Collected: 06/09/11
Date Received: 06/10/11
Date Extracted: NA
Date Analyzed: 07/12/11

Duplicate Summary
Total Metals

Sample Name: EWL-BIL Exoskeleton Composite
Lab Code: K1106157-025
Test Notes:

Units: PERCENT
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	50.3	48.9	49.6	3	

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K1106157

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106157-009	10.249	14.846	20.211	5.365	52.3%
K1106157-015	10.063	14.696	20.644	5.948	59.1%
K1106157-025	10.131	14.897	19.992	5.095	50.3%
K1106157-025 Dup	10.164	15.112	20.086	4.974	48.9%

Date/Time in Freeze Dryer: 4:30pm 7-12-11 Date/Time out of Freeze Dryer: 8:30am 7/14/11

Balance ID: 21 B Date Balance checked: 7-12-11, 7-14-11

Comments:

x = RPD

Analyst:	Date: 7/14/11
Reviewed By:	Date: 7/21/11

Columbia Analytical Services, Inc.

Service Request #: K1106157
Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106157-009	10.249	14.846	20.211		
K1106157-015	10.063	~~15.240~~ 14.686	20.649		
K1106157-025	10.131	14.897	19.992		
K1106157-025Dup	10.164	15.112	20.086		

7/14/11

Date/Time in Freeze Dryer: 4:30pm 7/12/11 Date/Time out of Freeze Dryer: 8:30am 7/14/11

Balance ID: 2JB Date Balance checked: 7.12.11 7/14/11

Comments:

High - Low / Average = RPD

x = RPD

Analyst: Anna Cheatley	Date: 7.12.11 7/14/11
Reviewed By:	Date: 7/14/11

R\:ICP\misc\digforms\K1106154

Columbia Analytical Services, Inc.

Service Request Number(s): K1106157
Analysis for: Pace TPH

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106157-009		10.04		79.06		crab
K1106157-015		10.00		79.02		crab
K1106157-025		15.05		80.08		crab

(10)
(10)
(15)

7/13/11

Balance ID: 28 Date Balance Checked: 7-11-11

Analyst: Anna Cheatley / [illegible] Date: 7/11/11

Reviewed: [illegible] Date: 7/13/11

R\:ICP\misc\digforms\TISSUEBENCHSHT1

Columbia Analytical Services, Inc.

Service Request Number(s):	K1106157
Analysis for: Lipids	

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106157-009		10.05		200.90		Soft Tissue
K1106157-015		10.01		201.07		Soft Tissue
K1106157-025		10.03		201.10		Soft Tissue
K1106157-025 Dup		10.05		200.99		Soft Tissue
K1106157-025 Trip		10.07		201.25		Soft Tissue
					7/13/11	

Comments: Please weigh approximately 10 g into a 8 oz Jar.

Balance ID: 28 Date Balance Checked: 7.12.11

Analyst: Anna Creatley Date: 7.12.11

Reviewed: Date: 7/13/11

R\:ICP\misc\digforms\K1106154

Columbia Analytical Services, Inc.

Service Request Number(s):
K1106157
Analysis for:
Composite

COMPOSITE DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106157-009		5036		480.30		crab
K1106157-015		376.48		479.83		crab
K1106157-025		657.86		480.19		crab

7/13/11

Balance ID: 28 Date Balance Checked: 7-11-11

Analyst: Anna Cheatley / Brittany Hall Date: 7/11/11

Reviewed: Date: 7/13/11

R\:ICP\misc\digforms\TISSUEBENCHSHT1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Total Inorganic Arsenic

Prep Method:	Method	Units:	ug/g
Analysis Method:	1632 Rev. A	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Exoskeleton Composite	K1106157-009	0.01	0.004	1	07/31/11	08/01/11	0.028	
EWL-HOU Exoskeleton Composite	K1106157-015	0.01	0.004	1	07/31/11	08/01/11	0.062	
EWL-BIL Exoskeleton Composite	K1106157-025	0.01	0.004	1	07/31/11	08/01/11	0.125	
Method Blank 1	K1106157-MB1	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 2	K1106157-MB2	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 3	K1106157-MB3	0.002	0.0008	1	07/31/11	08/01/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Exoskeleton
Sample Matrix: Animal tissue

Service Request: K1106157
Date Collected: NA
Date Received: NA
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Total Metals
Matrix Spike/Duplicate Matrix Spike Summary

Sample Name: Batch QC
Lab Code: K1106152-025SD
Test Notes:

Units: ug/g
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	Method Acceptance Limits	Relative Percent Difference	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.04	0.14	0.14	0.072	0.248	0.244	127	125	50-150	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Exoskeleton
LCS Matrix: Water

Service Request: K1106157
Date Collected: NA
Date Received: NA
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery

Units: ug/g
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.200	0.229	114	50-150	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 1

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.227	114	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 2

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.230	115	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 3

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.232	116	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 4

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.204	102	80-120	

HG-CGC-AAS Arsenic Speciation Data Review Form

Element: Total Inorganic Arsenic

Starlims Run #: 255580

CALSTD Source: AA1-20-H
CALVER Source: AA1-21-A

Service Request Numbers:

K1106152, K1106154, K1106157, K1106166

	Yes	No	NA
1) Three or more non-zero calibration points analyzed	X		
2) Mean calibration factor RSD <20%	X		
3) CALVER's within 20% of true value	X		
4) CALBLK's below MRL	X		
5) CALVER's, CALBLK's ran every 10 samples	X		
6) A minimum of three method blanks analyzed	X		
7) All reported samples within calibration range	X		
8) MS/MSD every 10 samples	X		
9) MS/MSD within 50-150%; RPD <35%	X		
10) Samples analyzed within hold time	X		
11) QCS analyzed quarterly with the mean from 3 analyses within 10% of the true value	X		

Comments:

Primary Reviewed By: BJS Date: 8/VII

Secondary Reviewed By: RRM Date: 8/2/11

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA	Service Request # :
Analysis For: As	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L or ng/g	Comments
1	30 ng wk std A	~	~	50	~	1608.2970	30.52	610.3	
2	20 ng wk std A	~	~	50	~	1107.7680	20.85	417.0	
3	10 ng wk std A	~	~	50	~	596.6090	10.98	219.6	
4	1.0 ng wk std A	~	~	50	~	71.5780	0.84	16.8	
5	CALBLK 1	~	~	50	~	27.9660	0.00	0.0	
6	CALVER 1	~	~	50	~	614.8745	11.33	226.7	CALVER : 113%
7	CALBLK 2	~	~	50	~	35.9410	0.15	3.1	
8	OPR	0.500	10	2.0	~	1214.3380	22.91	229.1	OPR : 115%
9	MB-1	4.545	10	2.0	~	35.3255	0.14	0.2	
10	MB-2	4.545	10	2.0	~	23.2160	-0.09	-0.1	
11	MB-3	4.545	10	2.0	~	31.3310	0.06	0.1	
12	K1106152-009	2.556	10	1.0	2	400.4800	7.19	28.1	
13	K1106152-015	2.128	10	1.0	2	426.1660	7.69	36.1	
14	K1106152-025	2.173	10	1.0	2	841.2000	15.70	72.3	
15	K1106152-025MS	2.165	10	0.25	8	721.5740	13.39	247.5	MS : 126%
16	K1106152-025MSD	2.169	10	0.25	8	712.2670	13.21	243.7	MSD : 124%
17	K1106154-009	4.555	10	0.5	4	565.5450	10.38	45.6	
18	CALVER 2	~	~	50	~	624.4760	11.52	230.4	CALVER : 115%
19	CALBLK 3	~	~	50	~	42.1715	0.27	5.5	
20	K1106154-015	4.107	10	0.5	4	340.2450	6.03	29.4	
21	K1106154-025	2.368	10	0.5	4	278.6690	4.84	40.9	
22	~~K1106157-009~~	~~0.960~~	~~10~~	~~1.0~~	~~2~~	~~196.2410~~	~~3.25~~	~~33.9~~	Rerun
23	K1106157-009	0.960	10	2.0	~	302.3290	5.30	27.6	
24	K1106157-015	0.854	10	2.0	~	573.9690	10.54	61.7	
25	K1106157-025	0.994	10	2.0	~	1316.2730	24.88	125.1	

Comments: wk std A : AA1-20-H wk std B : AA1-21-A	Calibration: ng	net peak area	Calibration Factor	
KBH4 : A1245129	30	1580.3310	52.6777	
6M HCl : HG-AAS1-1-O	20	1079.8020	53.9901	
Tris-Buffer : HG-AAS1-1-I	10	568.6430	56.8643	
	1	43.6120	43.6120	
			51.7860	CF mean
			5.72	CF Stdev
CALVER : 10ng wk std B			11.05	RSD

Analyst:	Date:	Page Number:
	8/1/11	1

[1632Runlog.xls] As1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA	Service Request # :
Analysis For: As	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L	Comments
1	K1106166-009	0.648	10	2.0	~	61.8065	0.65	5.0	
2	K1106166-015	0.585	10	2.0	~	76.2005	0.93	8.0	
3	~~K1106166-015MS~~	~~0.580~~	~~10~~	~~2.0~~	~	~~3627.8170~~	~~69.51~~	~~599.7~~	Rerun
4	K1106166-015MS	0.580	10	0.5	4	1076.7395	20.25	698.3	MS : 132%
5	~~CALVER 3~~	~	~	~~50~~	~	~~764.7670~~	~~14.23~~	~~284.6~~	Rerun
6	CALVER 3	~	~	50	~	628.0615	11.59	231.8	CALVER : 116%
7	CALBLK 4	~	~	50	~	50.8045	0.44	8.8	
8	K1106166-015MSD	0.574	10	0.5	4	1082.6750	20.37	709.8	MSD : 134%
9	K1106166-025	0.538	10	2.0	~	103.9290	1.47	13.6	
10	CALVER 4	~	~	50	~	557.1400	10.22	204.4	CALVER : 102%
11	CALVER 5	~	~	50	~	42.6490	0.28	5.7	
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

BSS 8/VII

Calibration: wk std A : AA1-20-H wk std B : AA1-21-A	ng	net peak area	Calibration Factor	
KBH4 : A1245129	30	1580.3310	52.6777	
6M HCl : HG-AAS1-1-O	20	1079.8020	53.9901	
Tris-Buffer : HG-AAS1-1-I	10	568.6430	56.8643	
	0.5	43.6120	43.6120	
			51.7860	CF mean
			5.72	CF Stdev
CALVER : 10ng wk std B			11.05	RSD

Analyst:	Date:	Page Number:
	8/VII	2

[1632Runlog.xls] As1.XLS (2)

Columbia Analytical Services, Inc.

Sample Number(s):		Service Request Number(s):	K1106152, K1106154, K1106157, K1106166
Analysis for:	Tissue Extraction for TIAs		

DATA

SR #	Sample ID	Freeze Dried Sample (g)	Extraction Sol'n	Amount of Extraction Sol'n (mL)
OPR		0.500	2M HCl	10
MB-1		0.500	2M HCl	10
MB-2		0.500	2M HCl	10
MB-3		0.500	2M HCl	10
K1106152-009		0.501	2M HCl	10
K1106152-015		0.500	2M HCl	10
K1106152-025		0.502	2M HCl	10
K1106154-009		0.501	2M HCl	10
K1106154-015		0.501	2M HCl	10
K1106154-025		0.502	2M HCl	10
K1106157-009		0.502	2M HCl	10
K1106157-015		0.505	2M HCl	10
K1106157-025		0.500	2M HCl	10
K1106166-009		0.103	2M HCl	10
K1106166-015		0.103	2M HCl	10
K1106166-025		0.100	2M HCl	10
K1106166-015 MS		0.102	2M HCl	10
↓ MSD		0.101	2M HCl	10
K1106152-025 MS		0.500	2M HCl	10
↓ MSD		0.501	2M HCl	10

BJT 7/31/11

Comments: OPR : 0.05-2.0 µg/mL TIAs AA1-21-C exp. 1/28/12 Stan Lim's # 138852
MS/MSD: 0.15 mL 2.0 µg/mL TIAs AA1-21-C exp. 1/28/12
2M HCl: H6-AAS-1-6

Analyst: BJT 7/31/11 HE 7/31/11

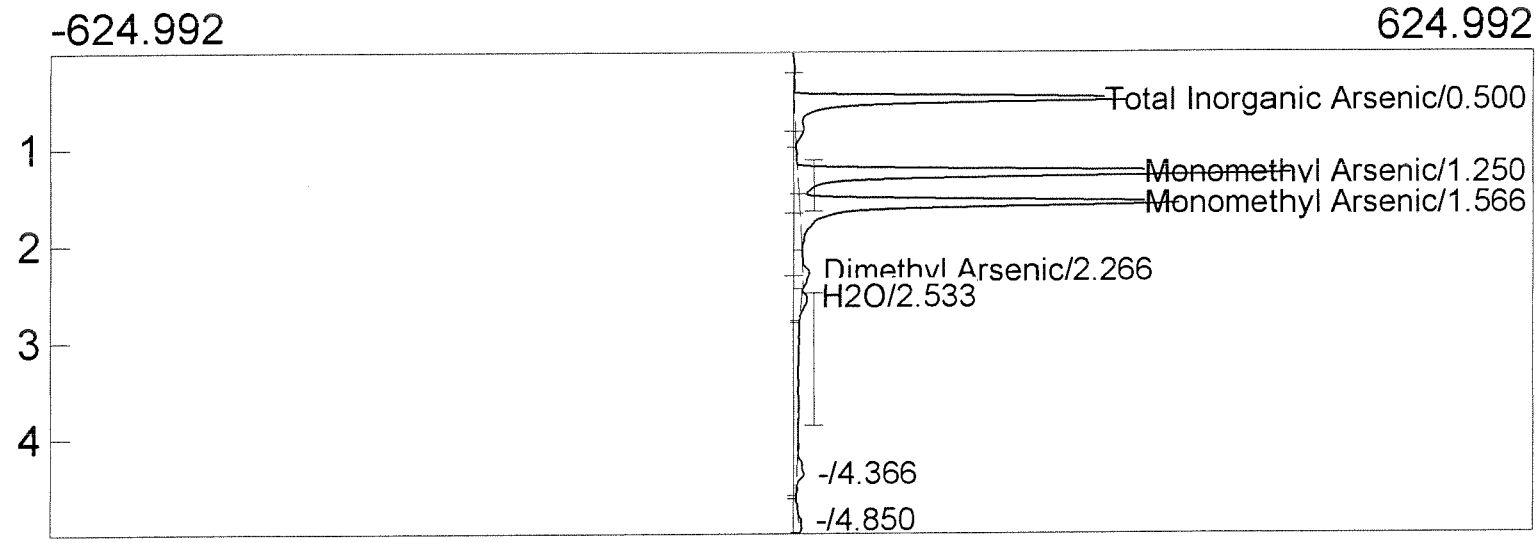
R:\ICP\misc\digforms\TissueExtractionRev11

Conversion from dry weight to wet weight:

Standard MRL = 0.02
Standard MDL = 0.007
Standard Dilution = 1
Standard Sample Mass = 0.500

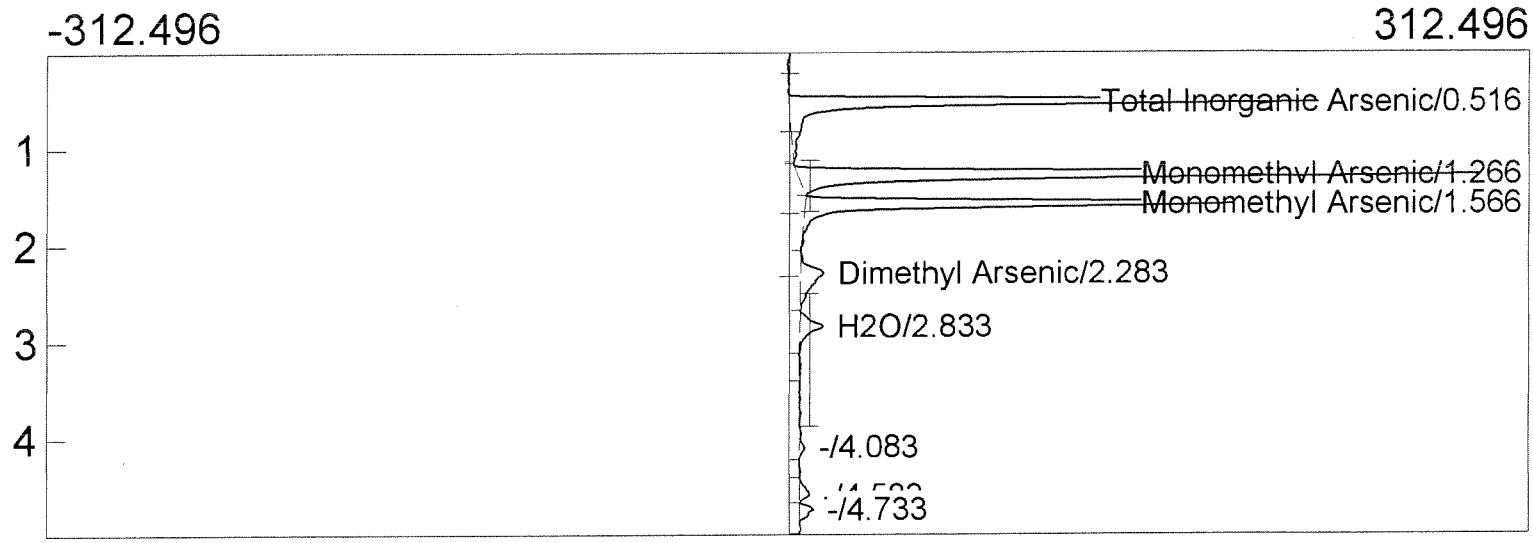
Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.501	19.6	**2.556**	2	**0.01**	**0.003**
K1106152-015	0.500	23.5	**2.128**	2	**0.01**	**0.003**
K1106152-025	0.502	23.1	**2.173**	2	**0.01**	**0.003**
K1106152-025MS	0.500	23.1	**2.165**	8	**0.04**	**0.013**
K1106152-025MSD	0.501	23.1	**2.169**	8	**0.04**	**0.013**
K1106154-009	0.501	11.0	**4.555**	4	**0.01**	**0.003**
K1106154-015	0.501	12.2	**4.107**	4	**0.01**	**0.003**
K1106154-025	0.502	21.2	**2.368**	4	**0.02**	**0.006**
K1106157-009	0.502	52.3	**0.960**	1	**0.01**	**0.004**
K1106157-015	0.505	59.1	**0.854**	1	**0.01**	**0.004**
K1106157-025	0.500	50.3	**0.994**	1	**0.01**	**0.004**
K1106166-009	0.103	15.9	**0.648**	1	**0.02**	**0.005**
K1106166-015	0.103	17.6	**0.585**	1	**0.02**	**0.006**
K1106166-015MS	0.102	17.6	**0.580**	4	**0.07**	**0.024**
K1106166-015MSD	0.101	17.6	**0.574**	4	**0.07**	**0.024**
K1106166-025	0.100	18.6	**0.538**	1	**0.02**	**0.007**
Method Blank	0.500	11.000	**4.545**	1	**0.00**	**0.001**

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:50:11
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 30 ng.CHR ()
Operator: RRM



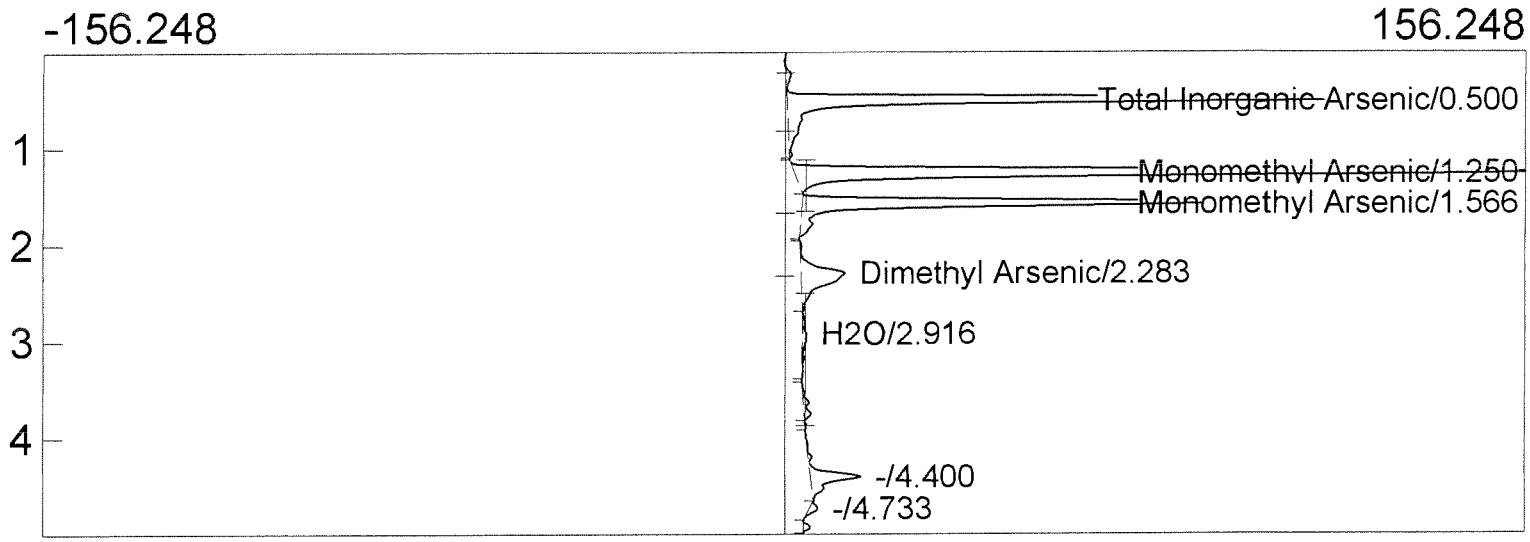
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1608.2970	311.451
Monomethyl Arsenic	1.250	2127.7730	425.590
Monomethyl Arsenic	1.566	1919.7775	339.613
Dimethyl Arsenic	2.266	57.0860	5.895
H2O	2.533	49.8820	4.784
		5762.8155	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:58:50
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 20 ng.CHR ()
Operator: RRM



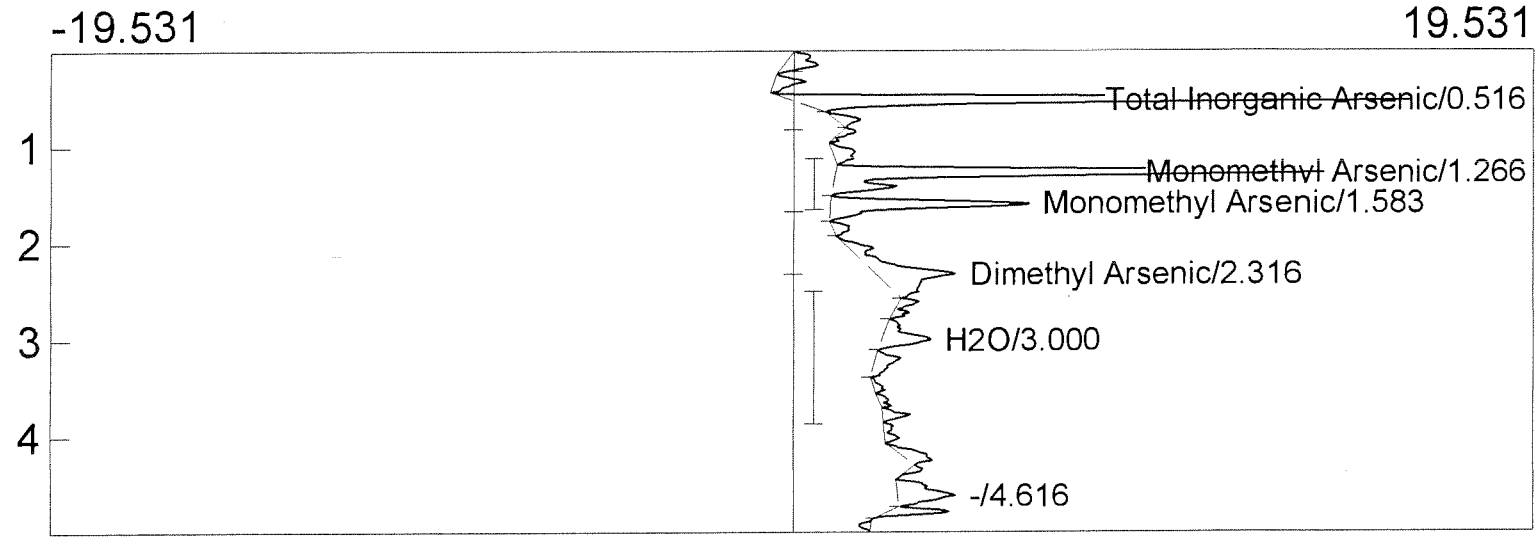
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1107.7680	225.335
Monomethyl Arsenic	1.266	1463.5120	288.371
Monomethyl Arsenic	1.566	930.3530	190.580
Dimethyl Arsenic	2.283	131.5590	10.032
H2O	2.833	85.8665	9.705
		3719.0585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:25:15
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 10 ng.CHR ()
Operator: RRM



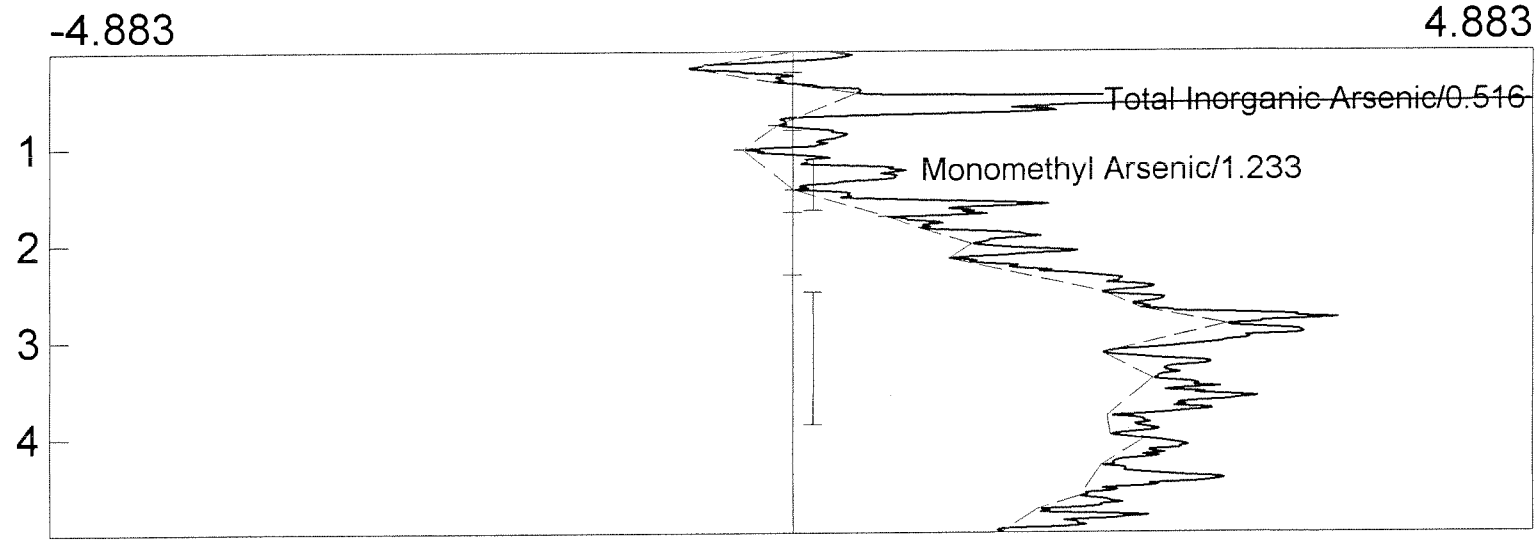
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	596.6090	122.606
Monomethyl Arsenic	1.250	766.2740	160.471
Monomethyl Arsenic	1.566	454.9720	90.116
Dimethyl Arsenic	2.283	120.8860	9.270
H2O	2.916	17.6870	0.969
		1956.4280	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:43:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 1.0 ng.CHR ()
Operator: RRM



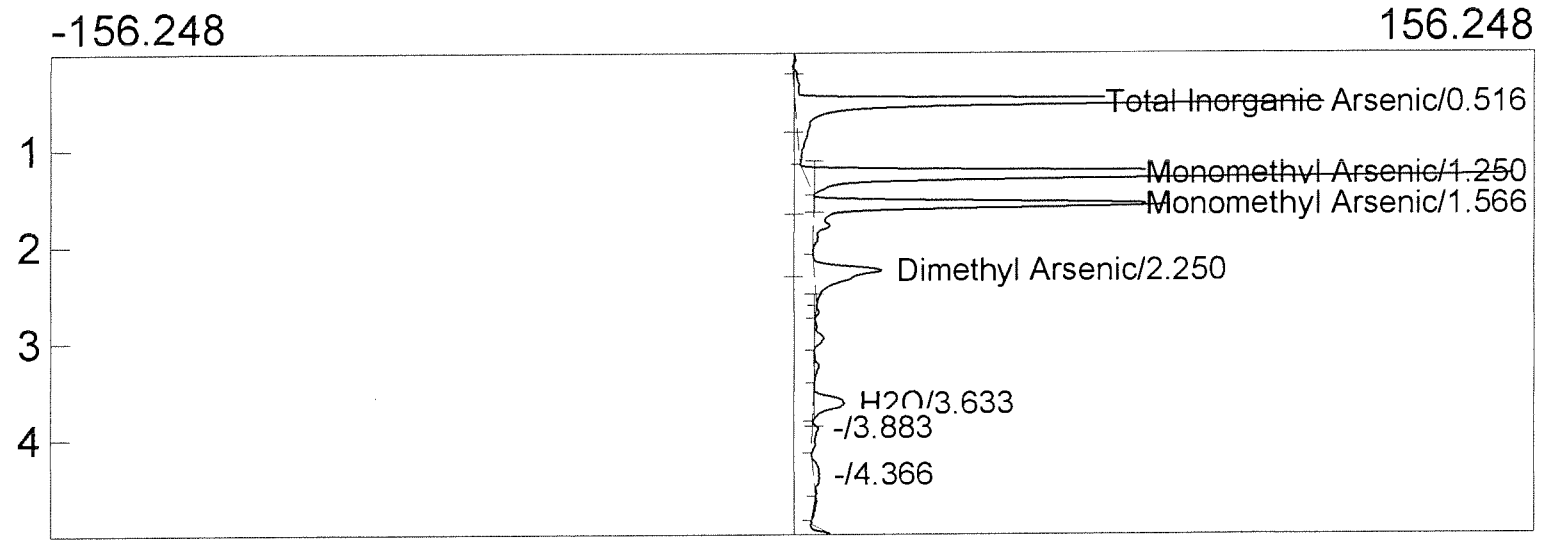
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	71.5780	16.469
Monomethyl Arsenic	1.266	68.1710	12.834
Monomethyl Arsenic	1.583	29.6050	5.232
Dimethyl Arsenic	2.316	27.4240	2.109
H2O	3.000	11.1325	1.299
		207.9105	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:53:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 1.CHR ()
Operator: RRM



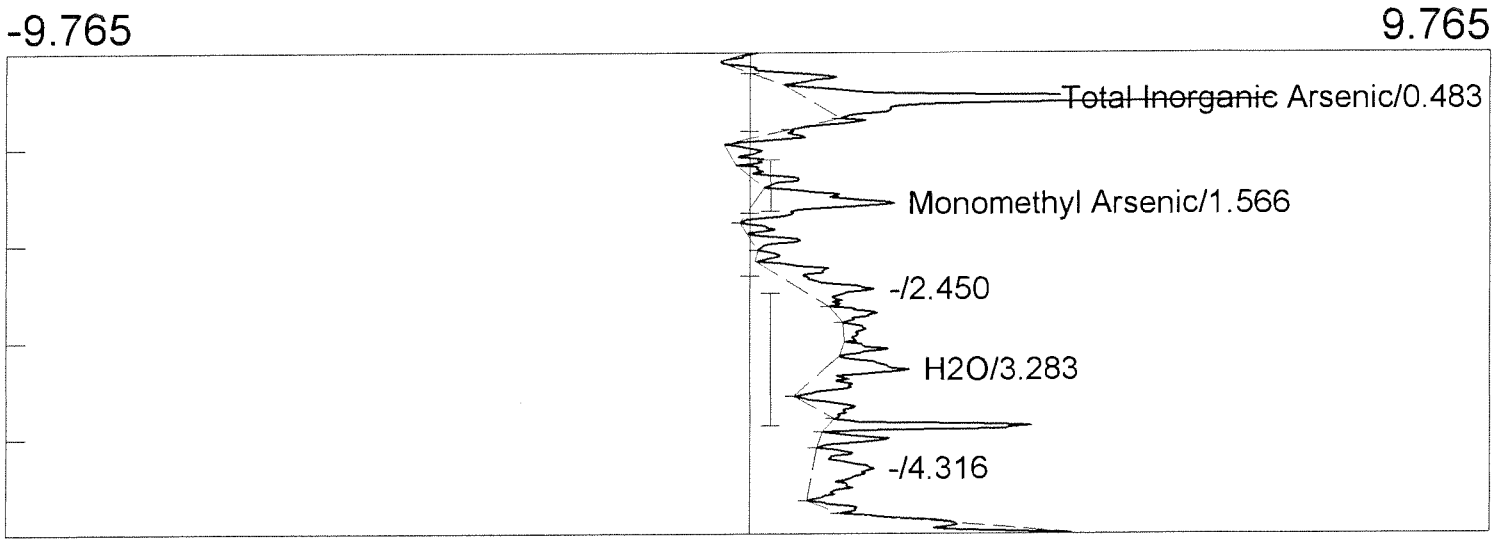
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	27.9660	4.727
Monomethyl Arsenic	1.233	11.0725	0.906
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		39.0385	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:04:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 1.CHR ()
Operator: BJS



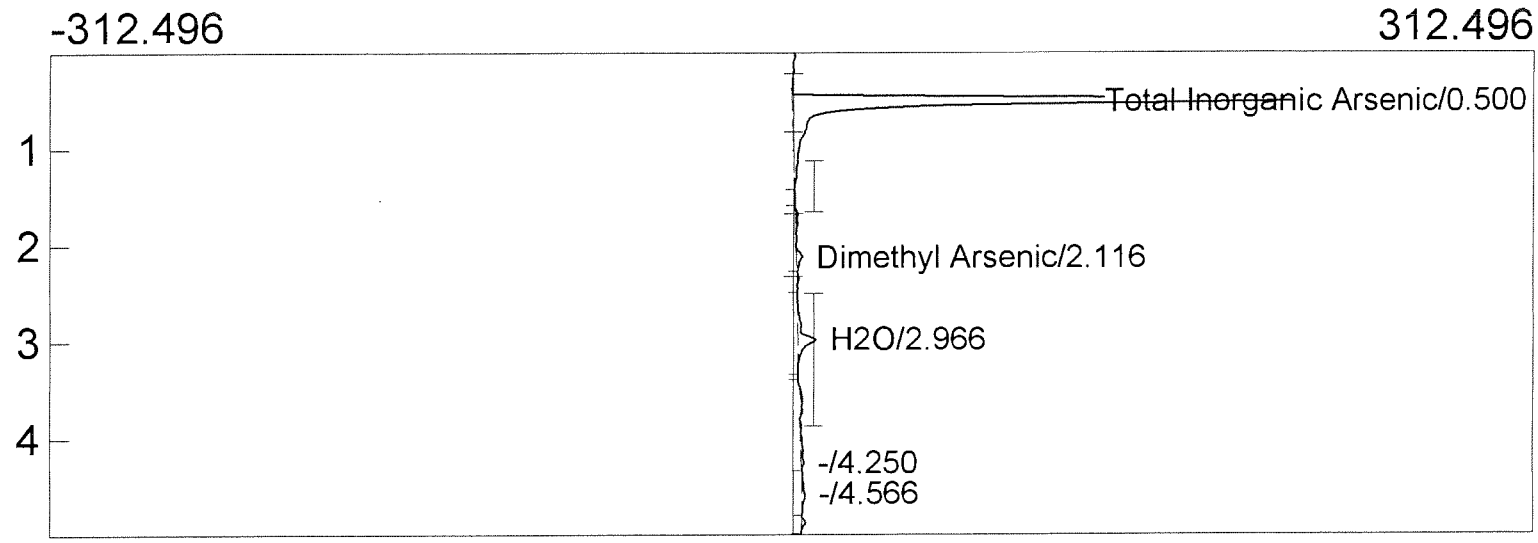
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	614.8745	113.241
Monomethyl Arsenic	1.250	747.7600	150.255
Monomethyl Arsenic	1.566	394.4830	76.652
Dimethyl Arsenic	2.250	131.7080	14.378
H2O	3.633	61.2840	6.640
		1950.1095	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:14:21
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 2.CHR ()
Operator: BJS



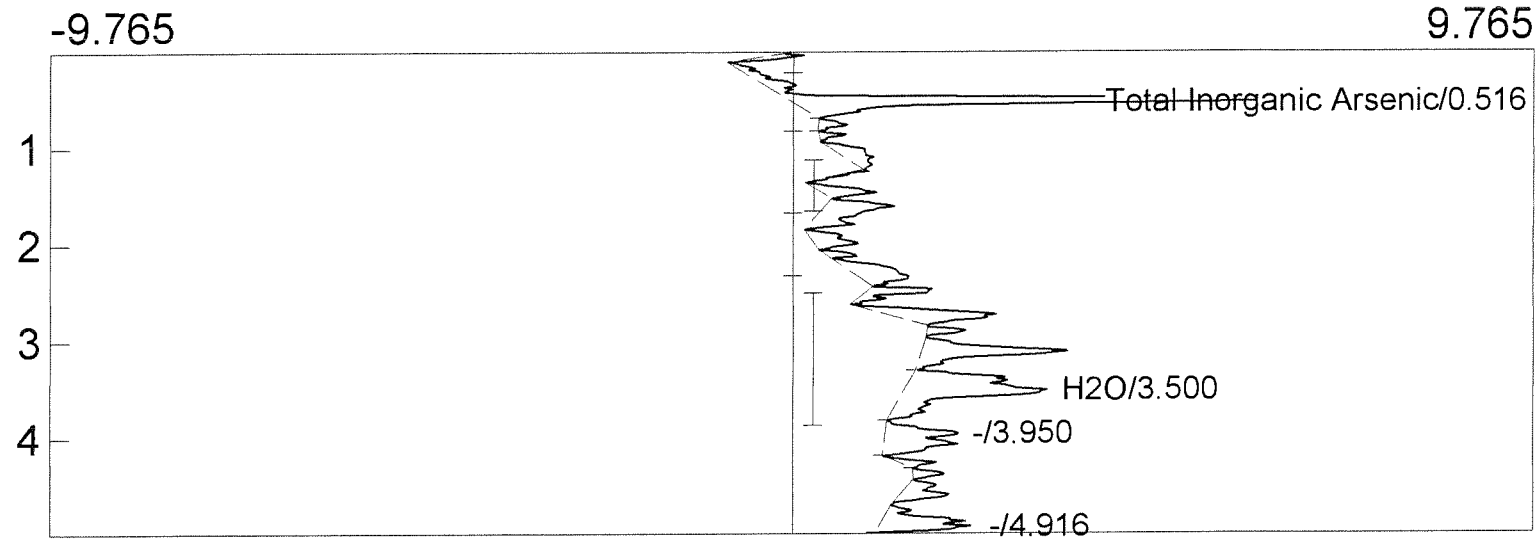
Component	Retention	Area	Height
Total Inorganic Arsenic	0.483	35.9410	6.155
Monomethyl Arsenic	1.566	18.0690	1.875
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.283	12.7535	1.135
		66.7635	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:24:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-OPR 2.0mL.CHR ()
Operator: BJS



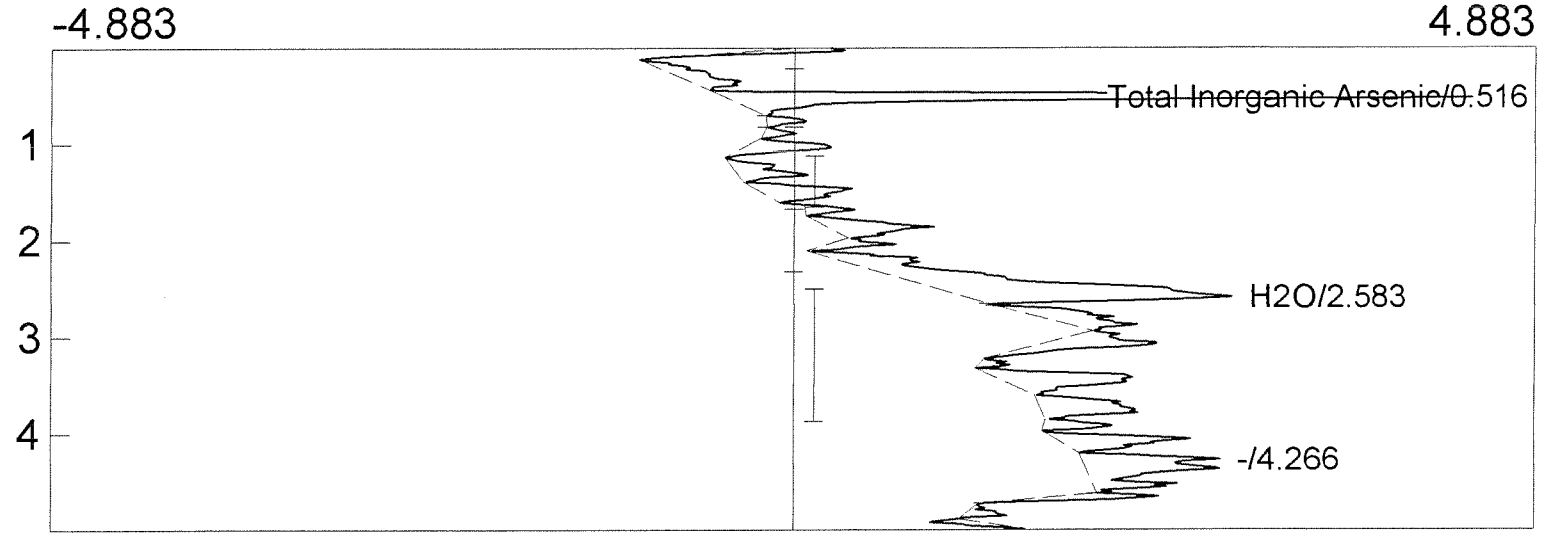
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1214.3380	221.998
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	16.4490	2.410
H2O	2.966	74.9180	7.946
		1305.7050	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:33:47
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB1 2.0mL.CHR ()
Operator: BJS



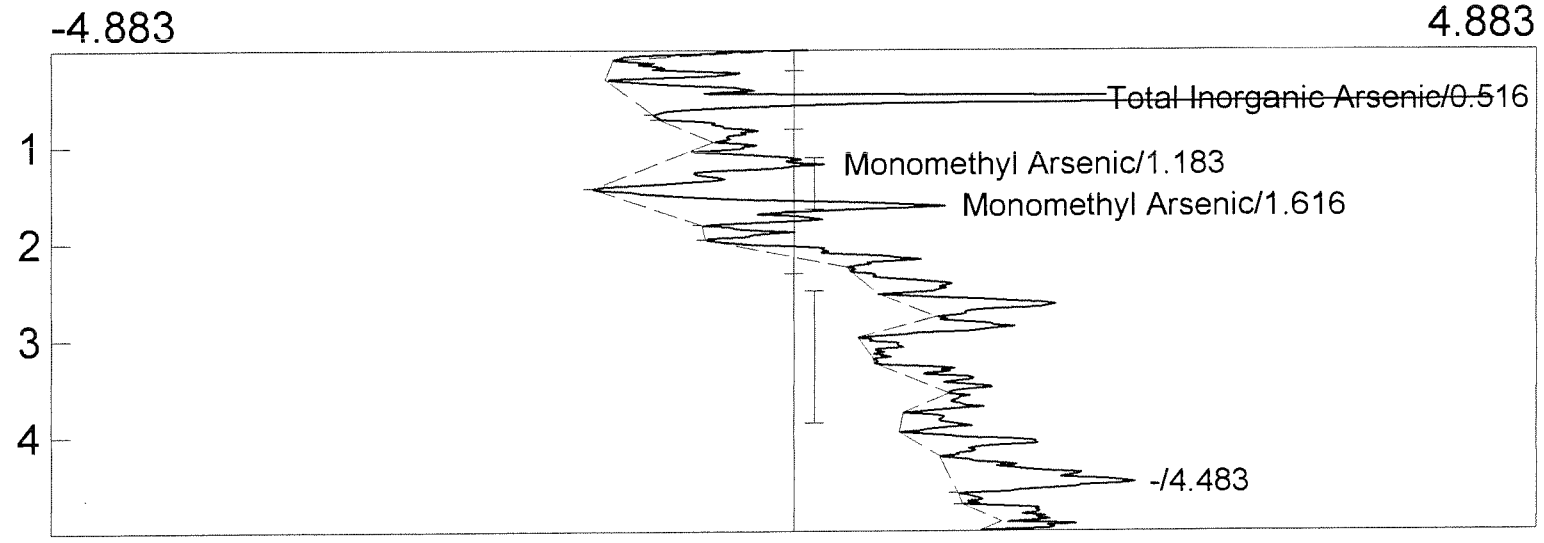
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	35.3255	6.230
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.500	25.8845	1.894
		61.2100	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:42:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB2 2.0mL.CHR ()
Operator: BJS



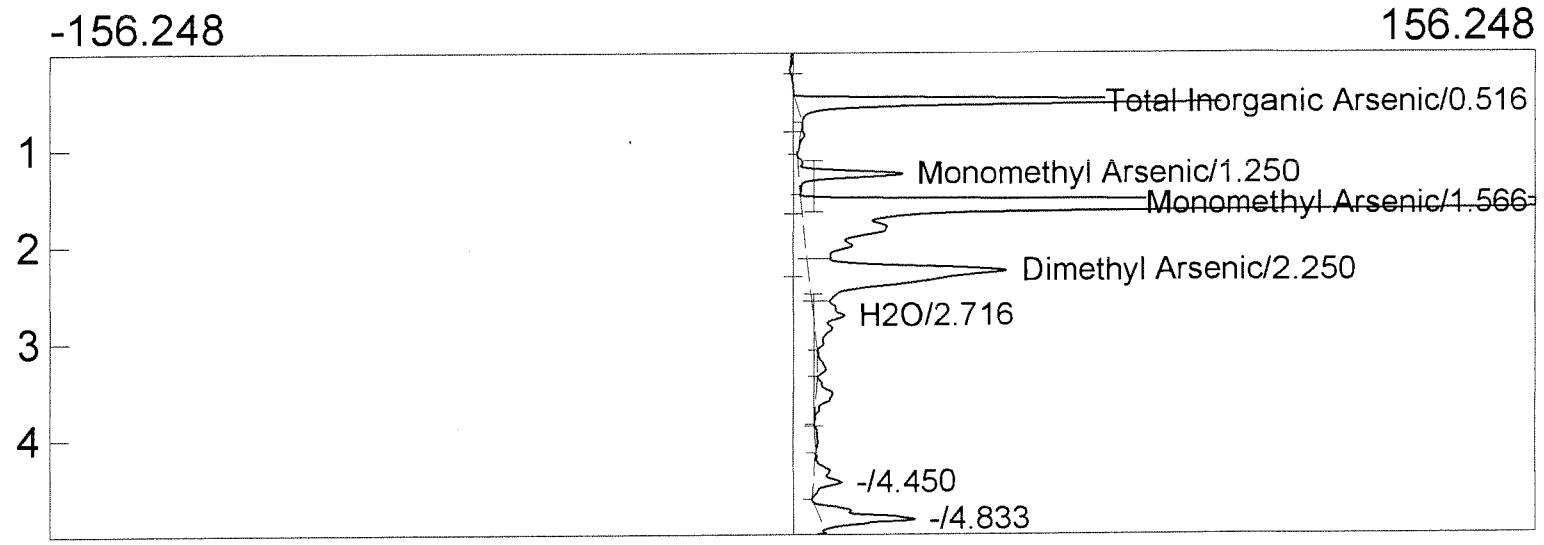
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	23.2160	4.977
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.583	26.4360	1.769
		49.6520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:52:40
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB3 2.0mL.CHR ()
Operator: BJS



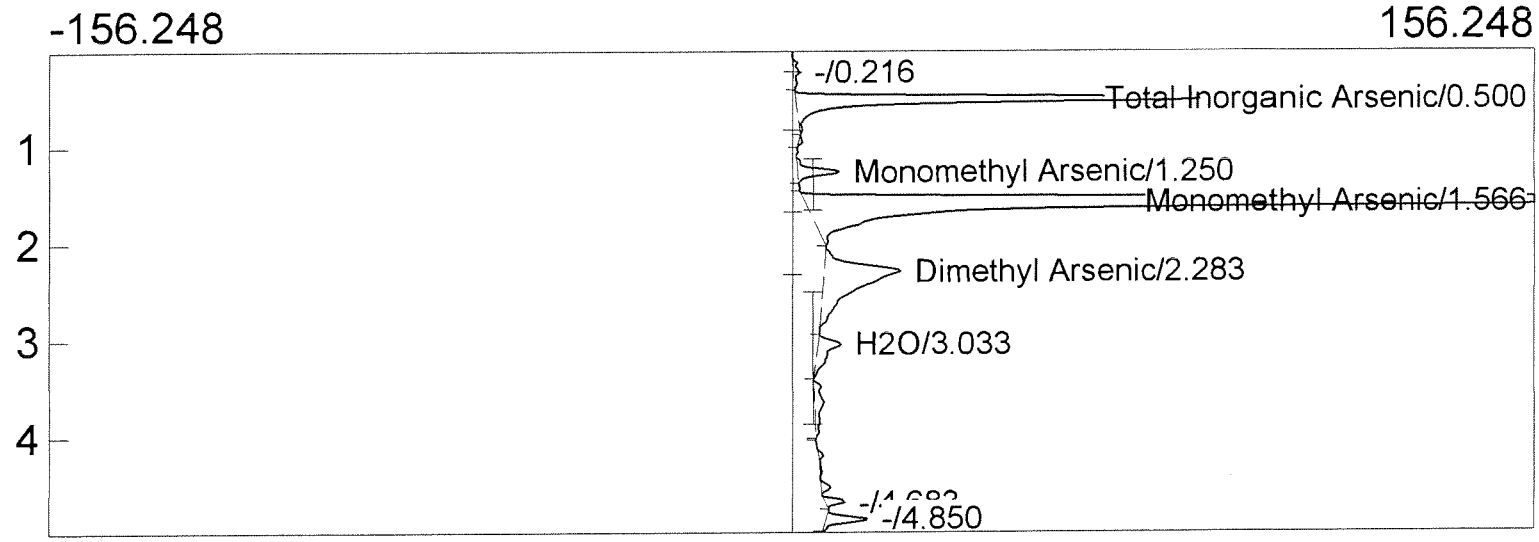
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	31.3310	5.729
Monomethyl Arsenic	1.183	13.9035	1.156
Monomethyl Arsenic	1.616	18.3815	2.001
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		63.6160	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:04:32
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-009 1.0mL.CHR ()
Operator: BJS



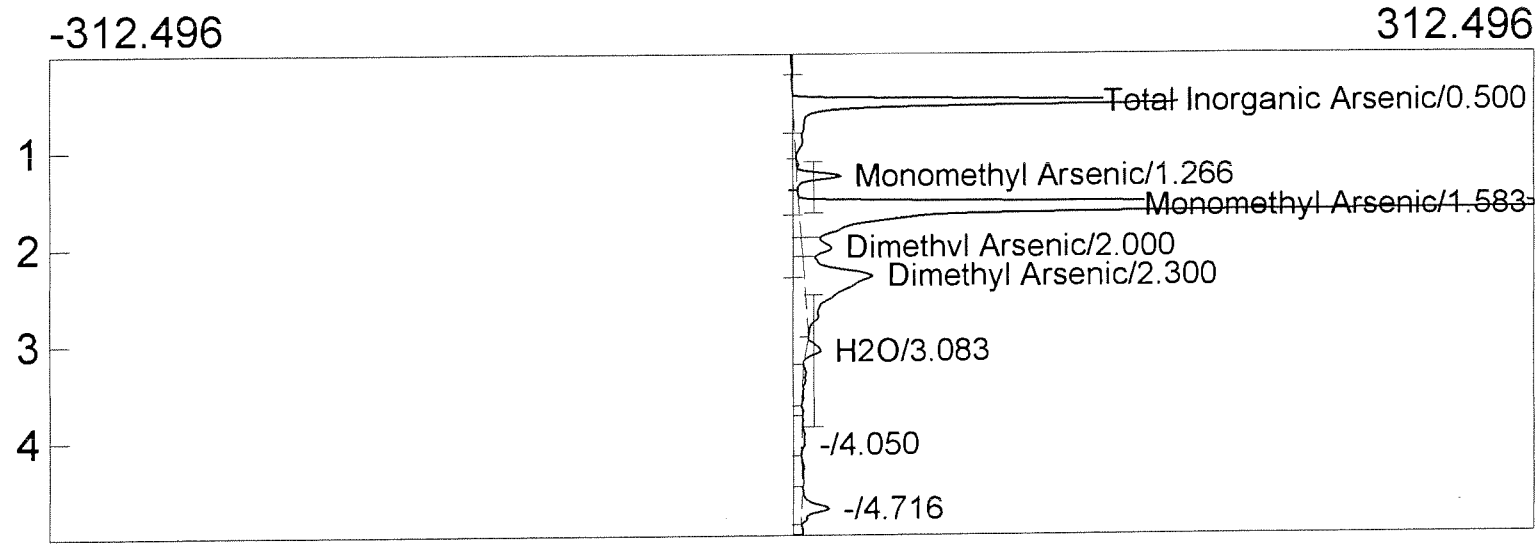
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	400.4800	91.013
Monomethyl Arsenic	1.250	111.9560	22.189
Monomethyl Arsenic	1.566	2303.9920	407.247
Dimethyl Arsenic	2.250	481.7150	42.038
H2O	2.716	102.0690	6.631
		3400.2120	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:13:56
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-015 1.0mL.CHR ()
Operator: BJS



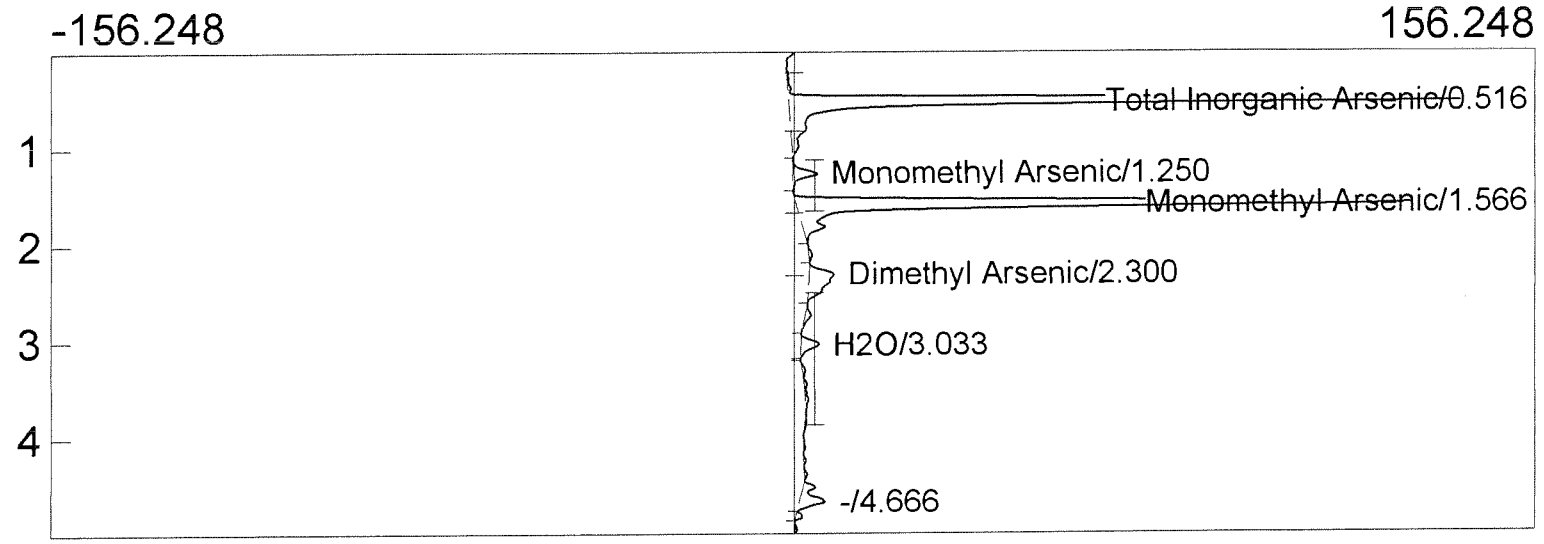
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	426.1660	86.647
Monomethyl Arsenic	1.250	45.8840	8.902
Monomethyl Arsenic	1.566	2033.1280	381.133
Dimethyl Arsenic	2.283	275.8515	16.081
H2O	3.033	53.7590	4.862
		2834.7885	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:23:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025 1.0mL.CHR ()
Operator: BJS



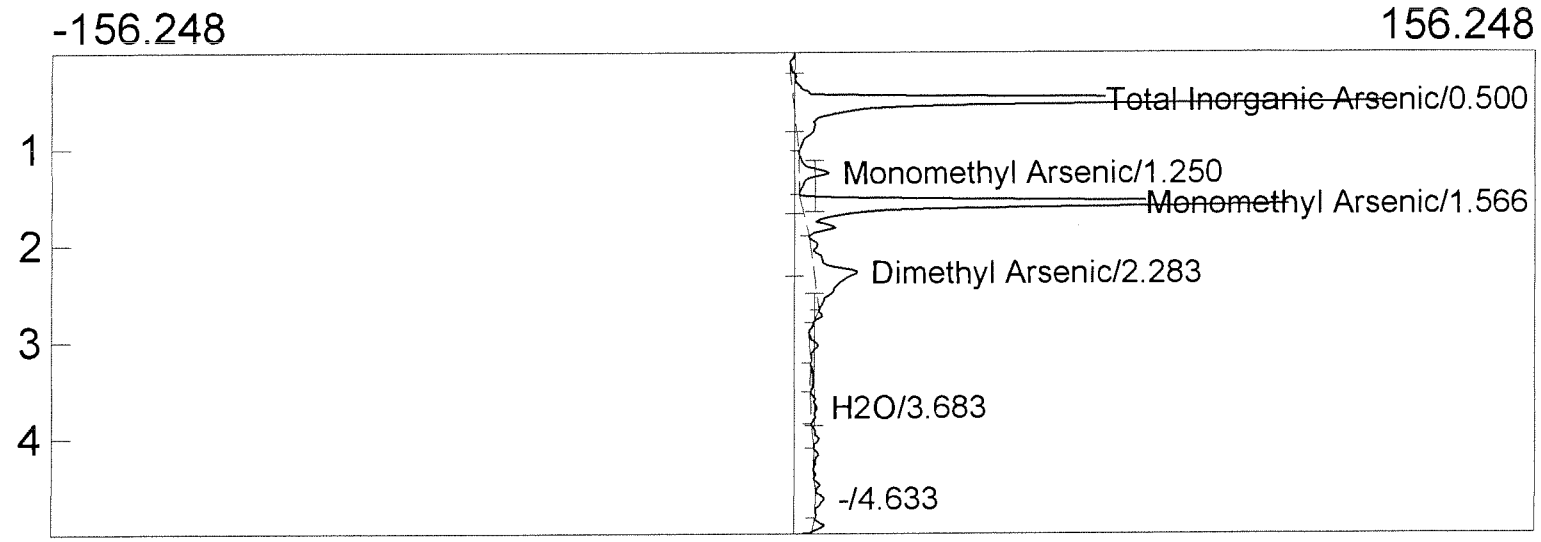
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	841.2000	163.484
Monomethyl Arsenic	1.266	92.5165	18.606
Monomethyl Arsenic	1.583	2923.7050	537.723
Dimethyl Arsenic	2.000	114.2820	12.457
Dimethyl Arsenic	2.300	523.9380	29.164
H2O	3.083	45.5070	6.262
		4541.1485	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:33:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025ms 0.25mL.CHR ()
Operator: BJS



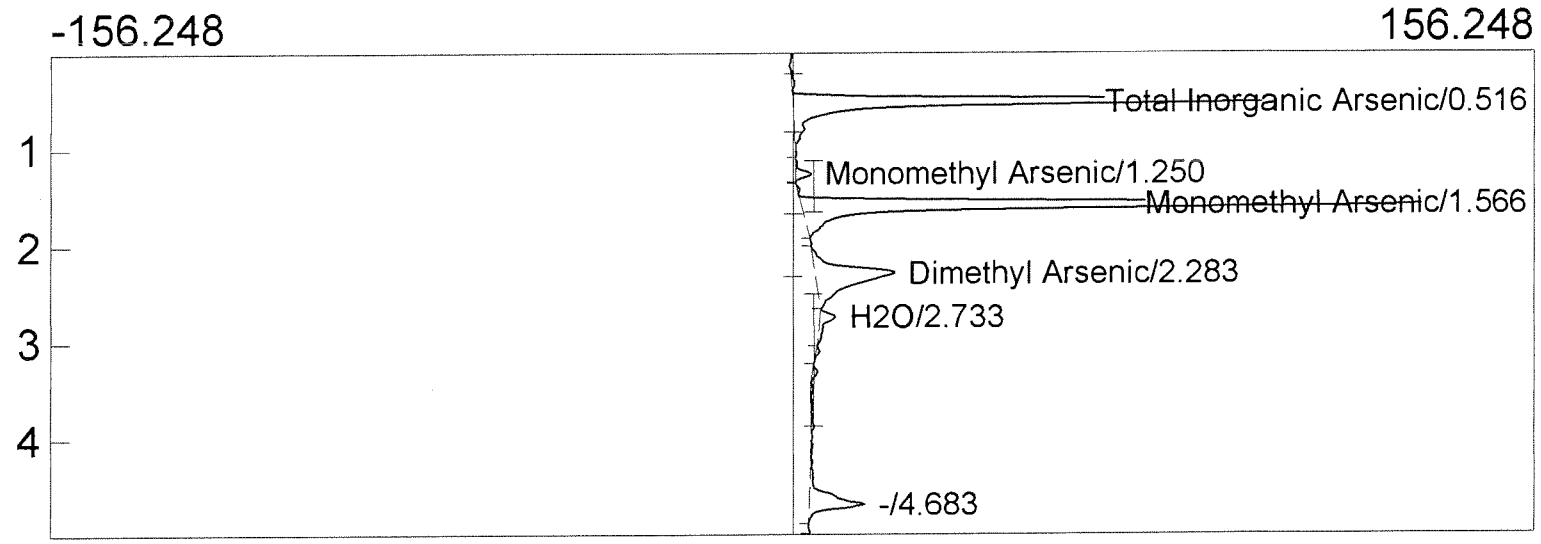
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	721.5740	144.049
Monomethyl Arsenic	1.250	29.2380	5.247
Monomethyl Arsenic	1.566	675.4080	132.674
Dimethyl Arsenic	2.300	68.3810	5.243
H2O	3.033	25.9780	3.908
		1520.5790	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:42:20
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025MSD 0.25mL.CHR ()
Operator: BJS



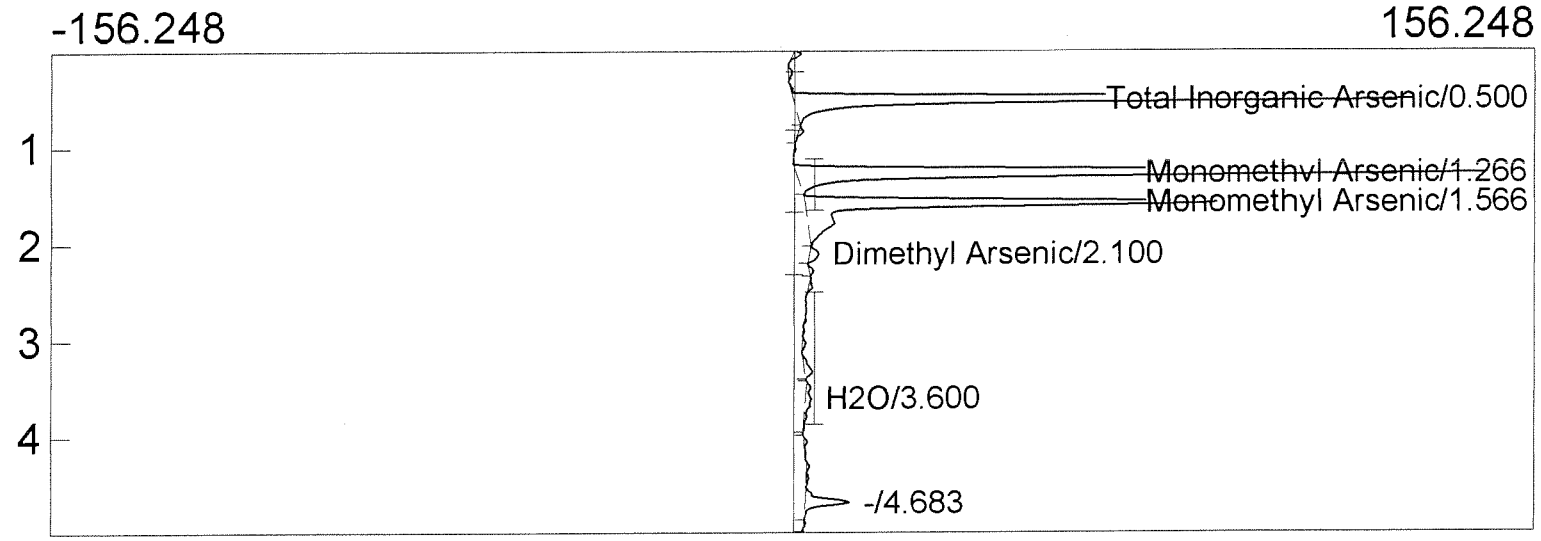
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	712.2670	126.993
Monomethyl Arsenic	1.250	45.0395	6.418
Monomethyl Arsenic	1.566	589.0770	108.026
Dimethyl Arsenic	2.283	139.0140	9.113
H2O	3.683	14.9530	1.275
		1500.3505	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:53:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-009 0.5mL.CHR ()
Operator: BJS



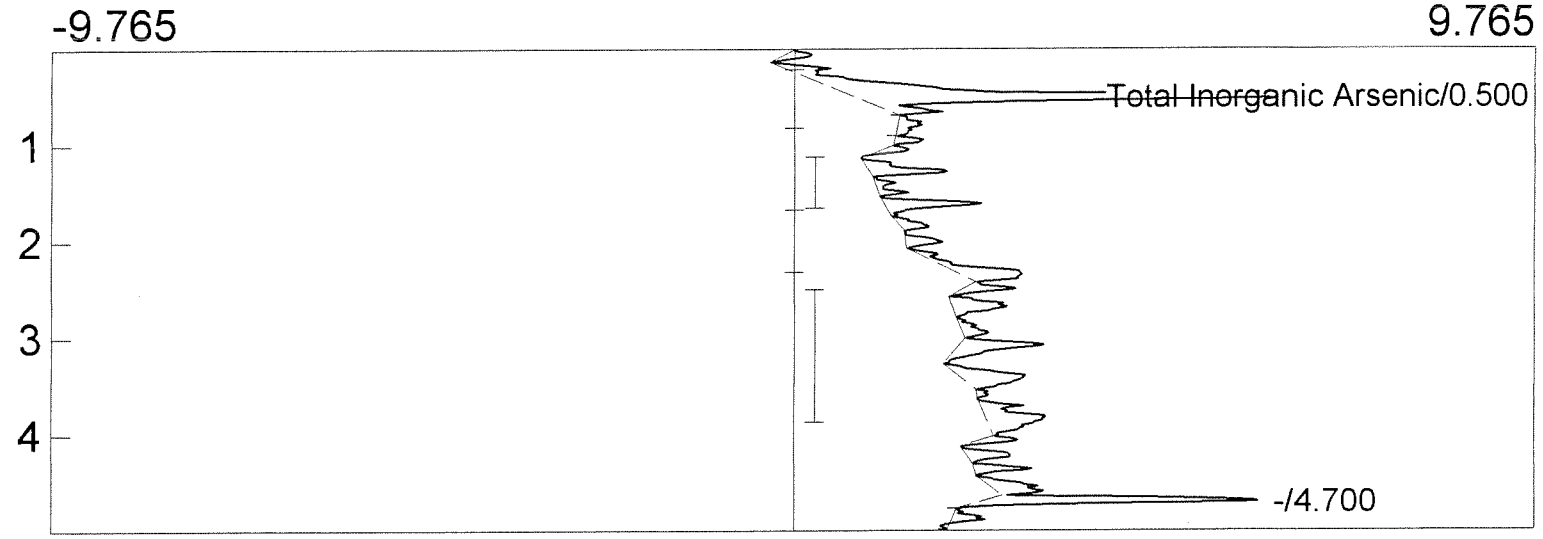
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	565.5450	100.699
Monomethyl Arsenic	1.250	16.5110	3.358
Monomethyl Arsenic	1.566	699.0285	132.262
Dimethyl Arsenic	2.283	210.4215	16.842
H2O	2.733	26.9115	3.295
		1518.4175	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:03:34
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 2.CHR ()
Operator: BJS



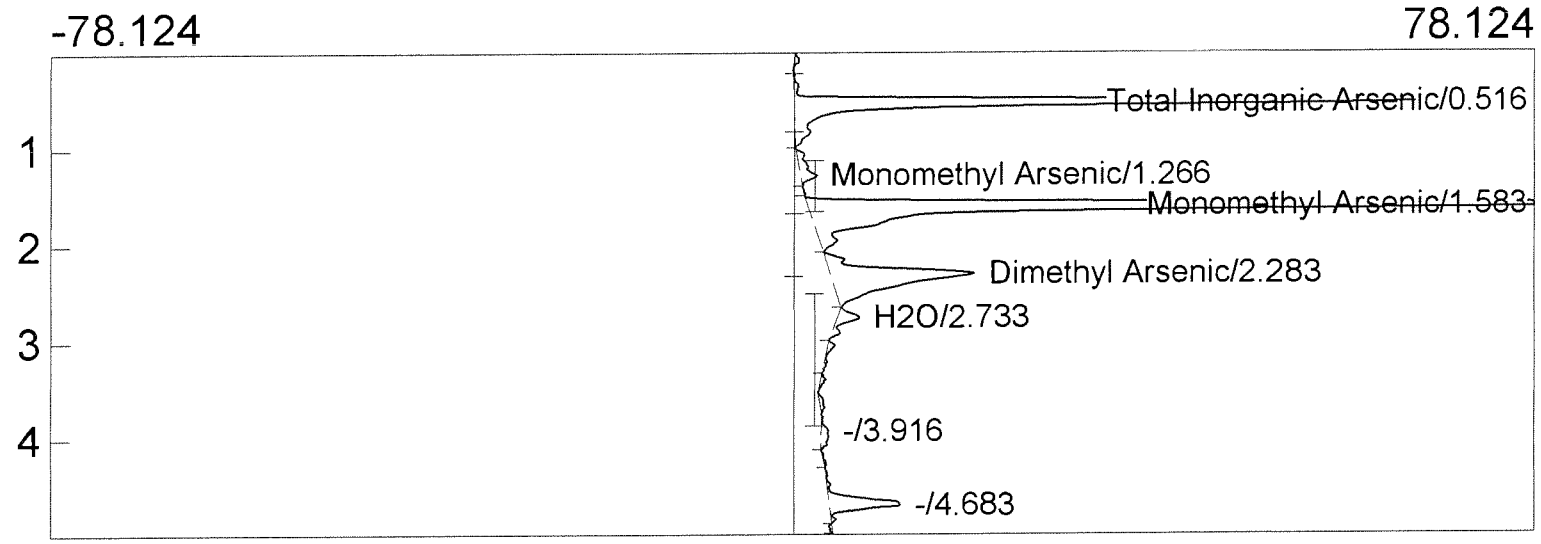
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	624.4760	134.205
Monomethyl Arsenic	1.266	723.6635	145.627
Monomethyl Arsenic	1.566	480.6050	87.928
Dimethyl Arsenic	2.100	13.9075	1.967
H2O	3.600	20.9690	1.368
		1863.6210	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:13:16
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 3.CHR ()
Operator: BJS



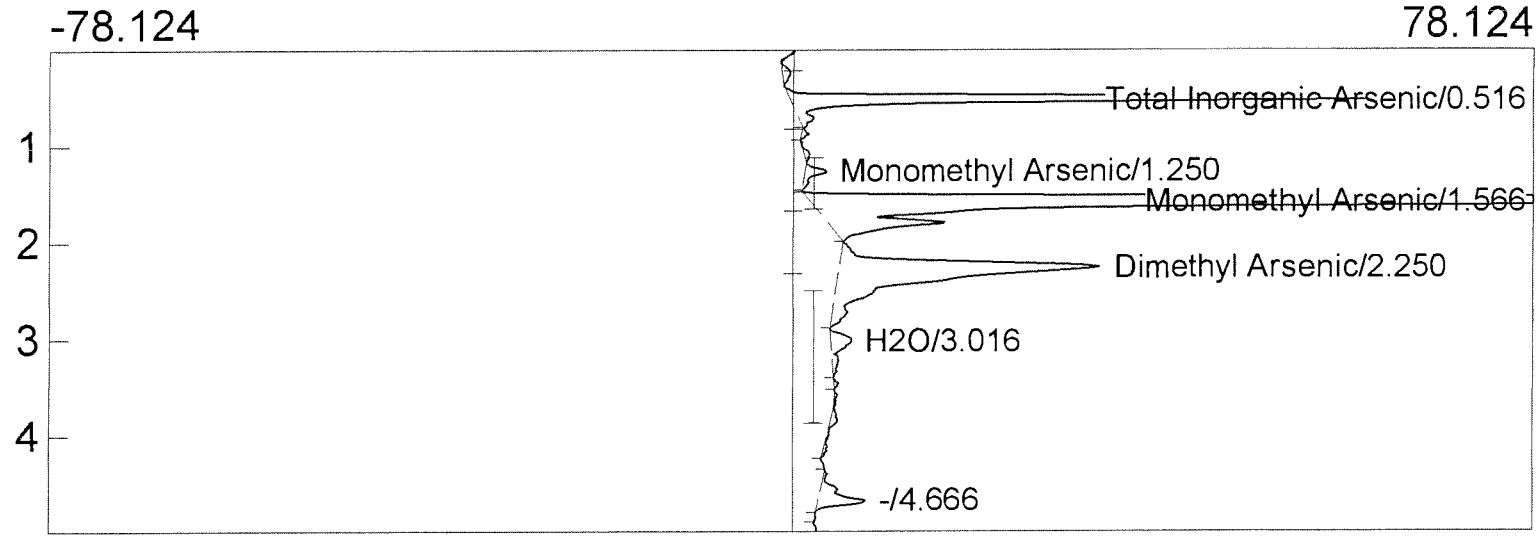
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	42.1715	5.468
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		42.1715	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:23:01
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-015 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	340.2450	65.755
Monomethyl Arsenic	1.266	18.0160	1.759
Monomethyl Arsenic	1.583	564.6230	98.460
Dimethyl Arsenic	2.283	175.0000	15.282
H2O	2.733	19.2520	2.301
		1117.1360	

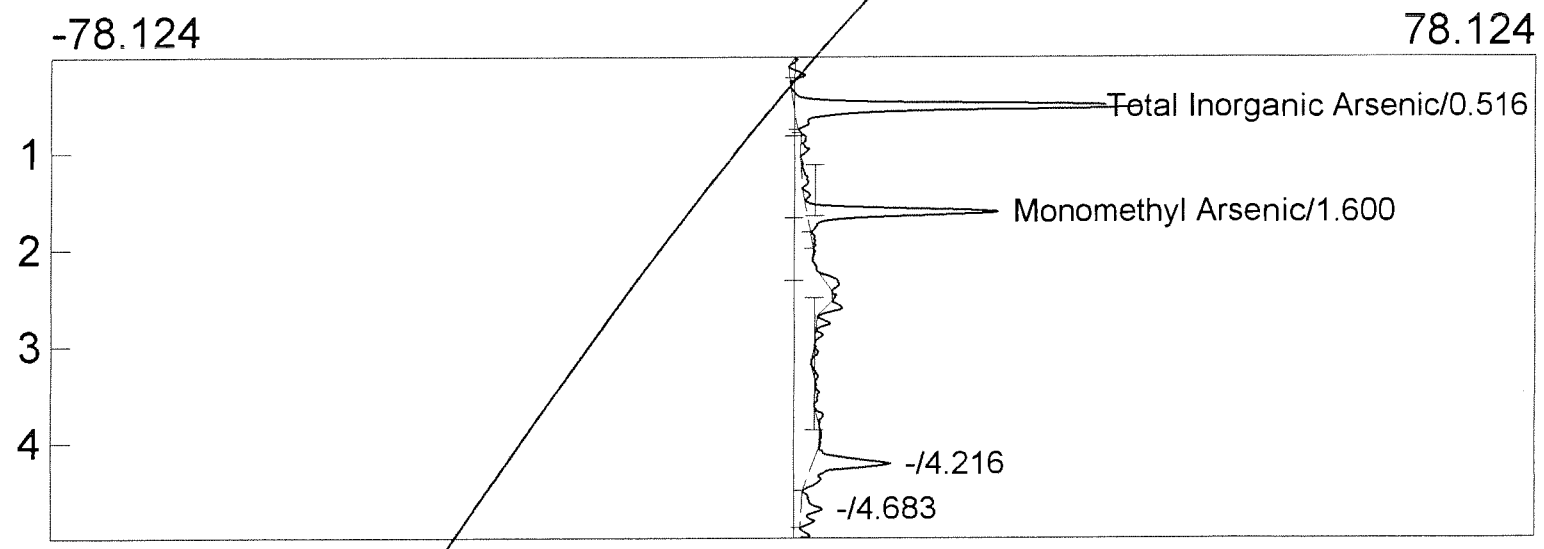
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:32:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-025 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	278.6690	61.260
Monomethyl Arsenic	1.250	14.7915	2.280
Monomethyl Arsenic	1.566	1154.9225	214.421
Dimethyl Arsenic	2.250	346.0270	27.626
H2O	3.016	27.6505	2.230
		1822.0605	

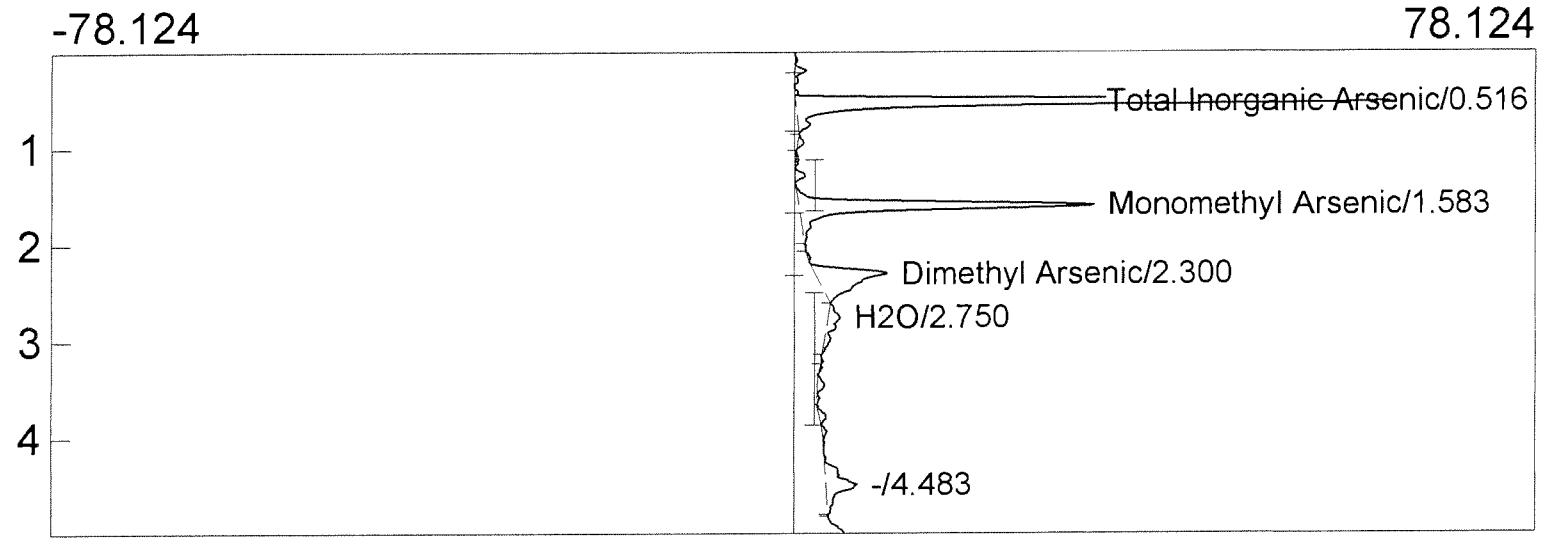
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:42:25
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 1.0mL.CHR ()
Operator: BJS

BJS 8/1/11



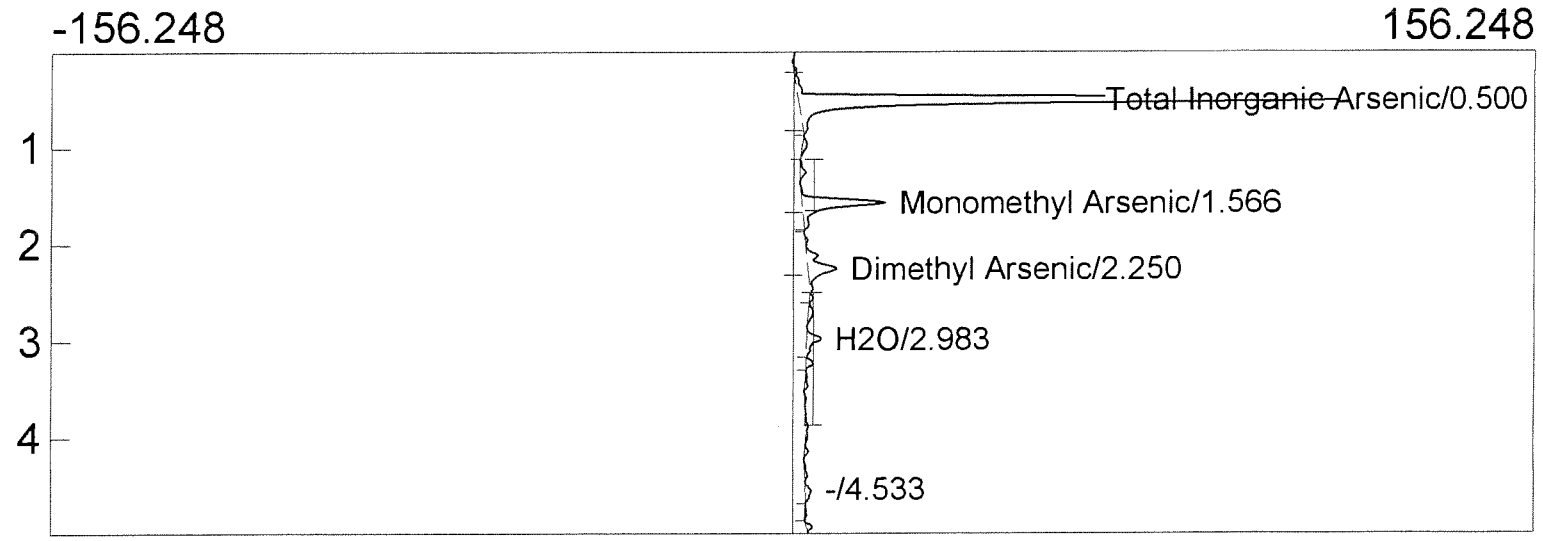
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	196.2410	36.801
Monomethyl Arsenic	1.600	113.4035	20.317
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		309.6445	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:50:49
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 2.0mL.CHR ()
Operator: BJS



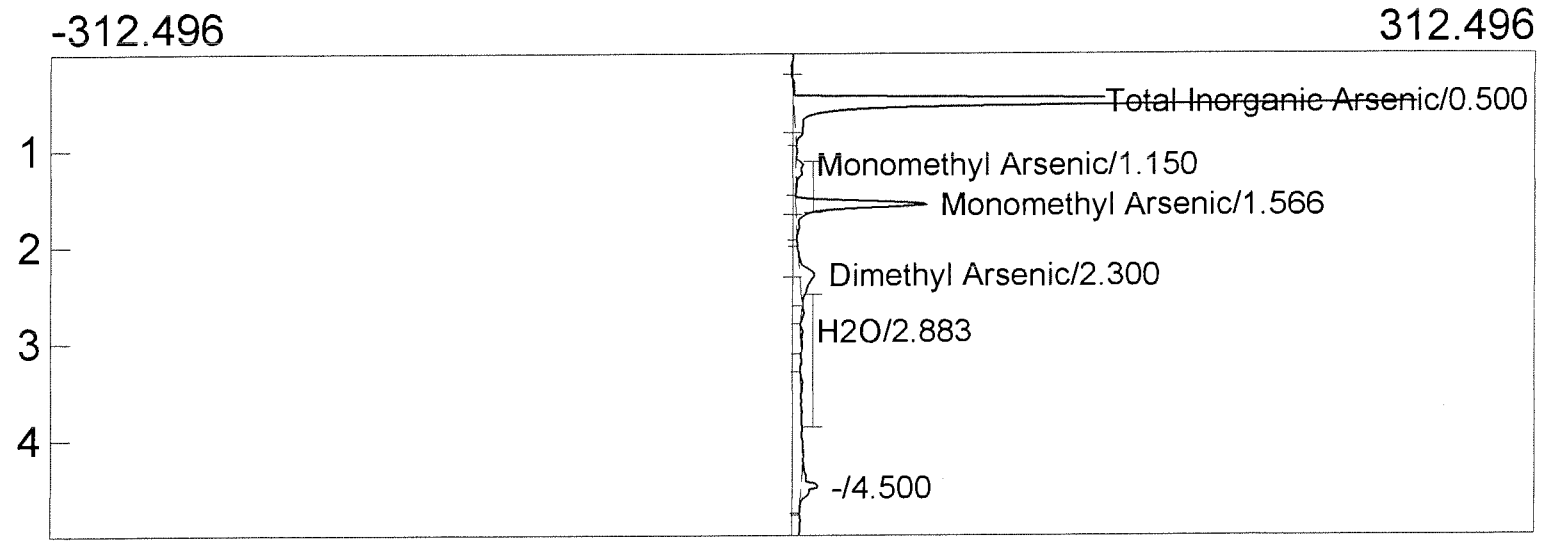
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	302.3290	62.664
Monomethyl Arsenic	1.583	182.6600	31.208
Dimethyl Arsenic	2.300	79.6525	7.619
H2O	2.750	20.4600	1.279
		585.1015	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 12:00:44
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-015 2.0mL.CHR ()
Operator: BJS



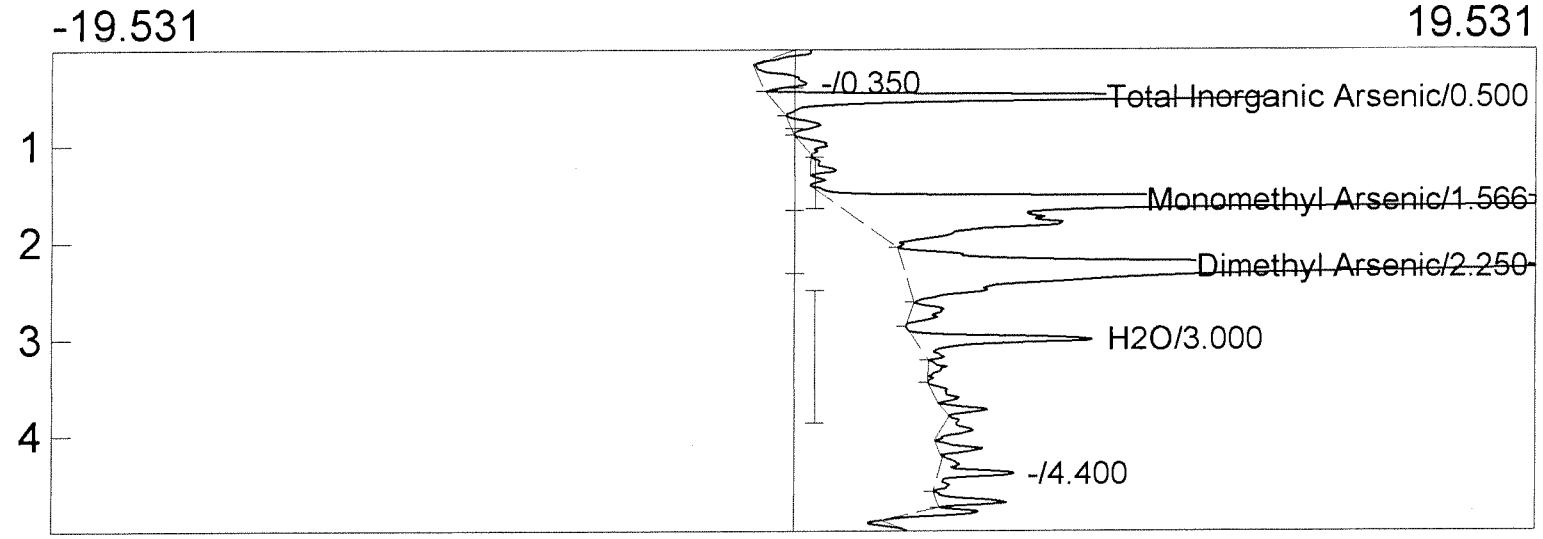
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	573.9690	117.018
Monomethyl Arsenic	1.566	107.9995	17.856
Dimethyl Arsenic	2.250	59.8680	6.013
H2O	2.983	22.0330	3.070
		763.8695	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:09:19
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-025 2.0mL.CHR ()
Operator: BJS



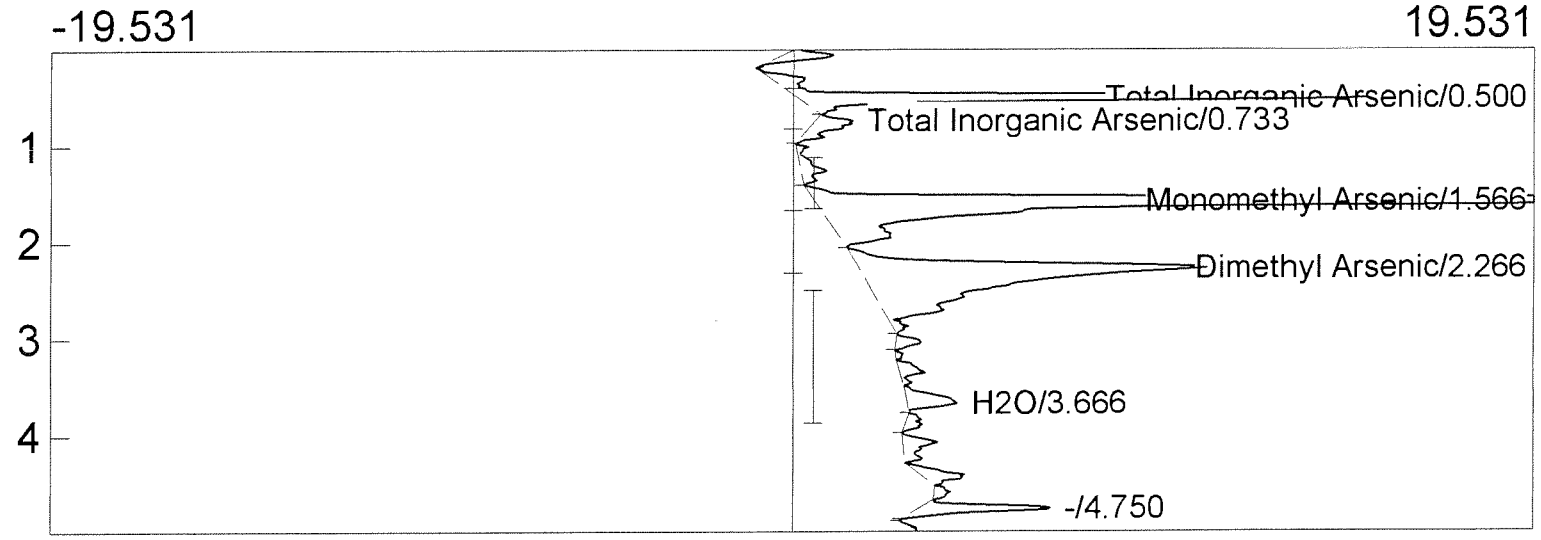
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1316.2730	278.404
Monomethyl Arsenic	1.150	32.5580	3.052
Monomethyl Arsenic	1.566	295.0650	55.481
Dimethyl Arsenic	2.300	81.0160	6.127
H2O	2.883	10.7355	0.947
		1735.6475	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:19:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-009 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	61.8065	13.327
Monomethyl Arsenic	1.566	319.0940	51.717
Dimethyl Arsenic	2.250	168.4380	17.667
H2O	3.000	26.1185	4.697
		575.4570	

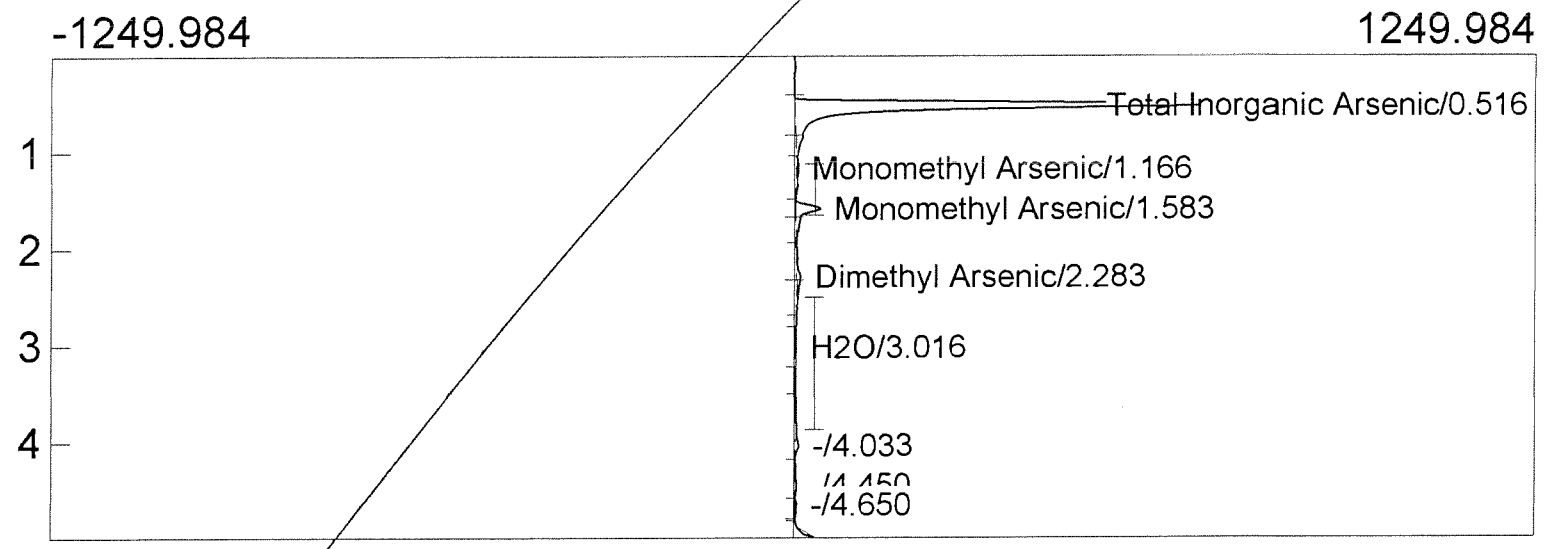
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:28:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	76.2005	15.526
Total Inorganic Arsenic	0.733	10.4180	1.002
Monomethyl Arsenic	1.566	243.9430	40.262
Dimethyl Arsenic	2.266	137.6080	9.218
H2O	3.666	10.7630	1.309
		478.9325	

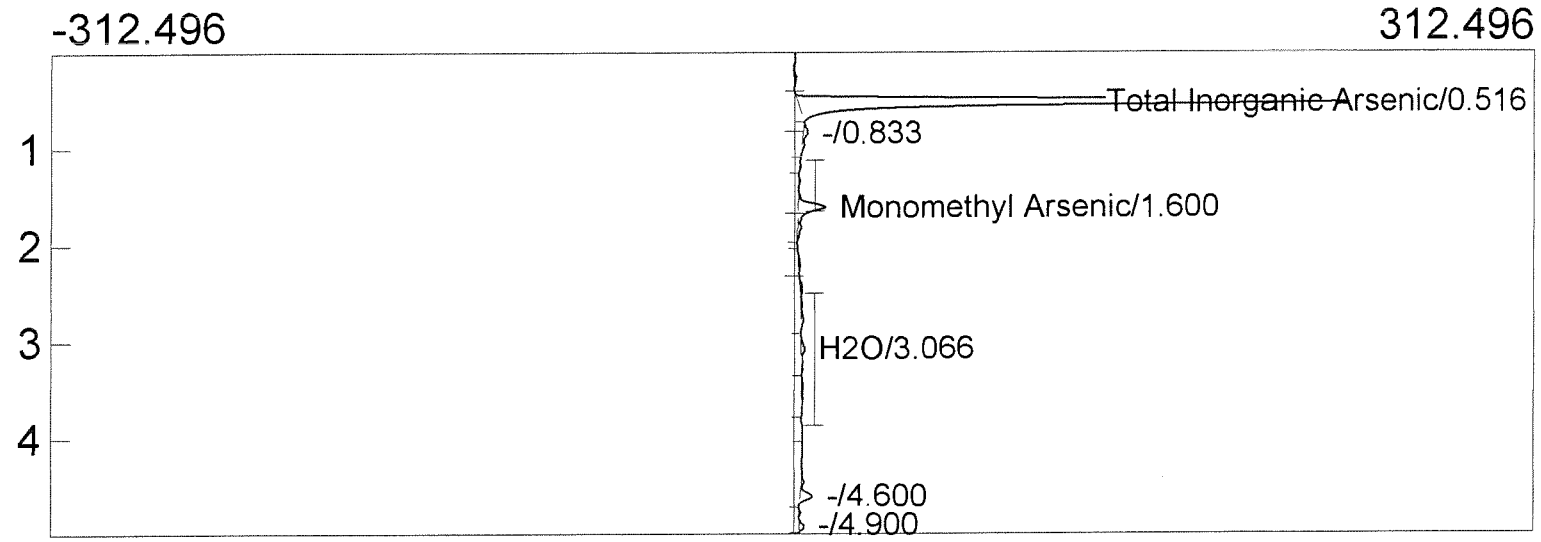
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:37:52
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 2.0mL.CHR ()
Operator: BJS

BJS 8/11



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	3627.8170	690.233
Monomethyl Arsenic	1.166	42.9135	2.741
Monomethyl Arsenic	1.583	267.3405	41.414
Dimethyl Arsenic	2.283	110.1535	6.707
H2O	3.016	11.4340	0.956
		4059.6585	

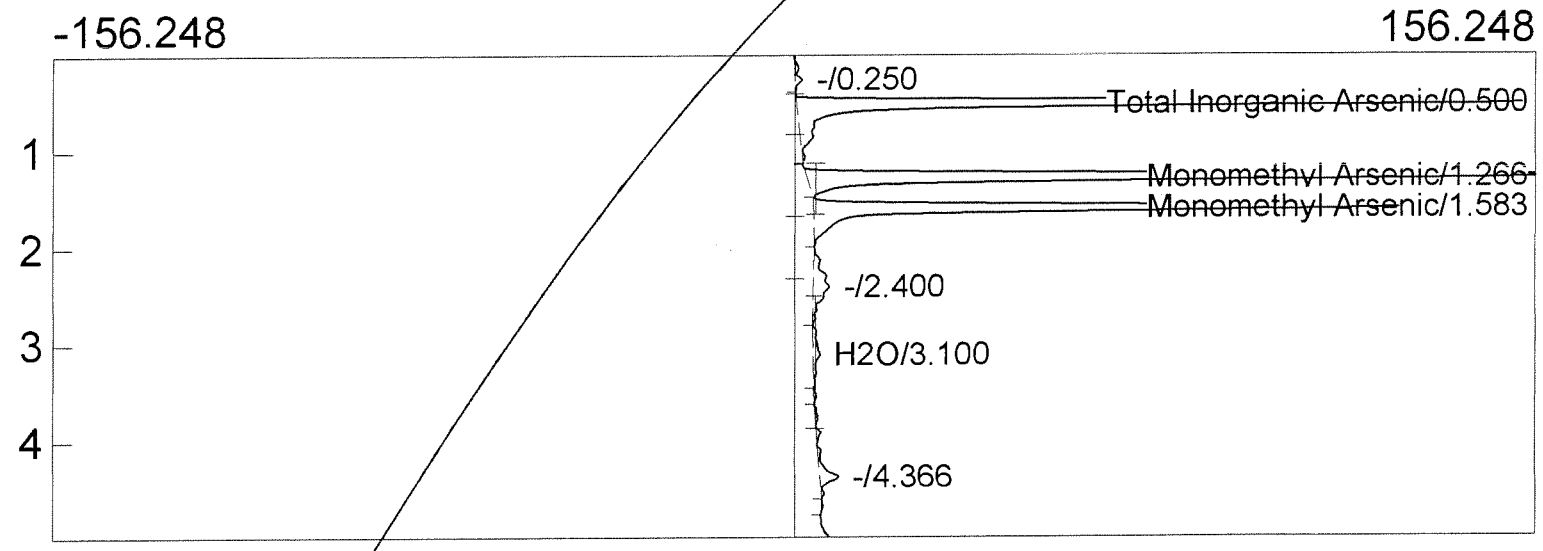
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:45:55
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1076.7395	233.401
Monomethyl Arsenic	1.600	84.3420	11.800
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.066	16.8770	1.586
		1177.9585	

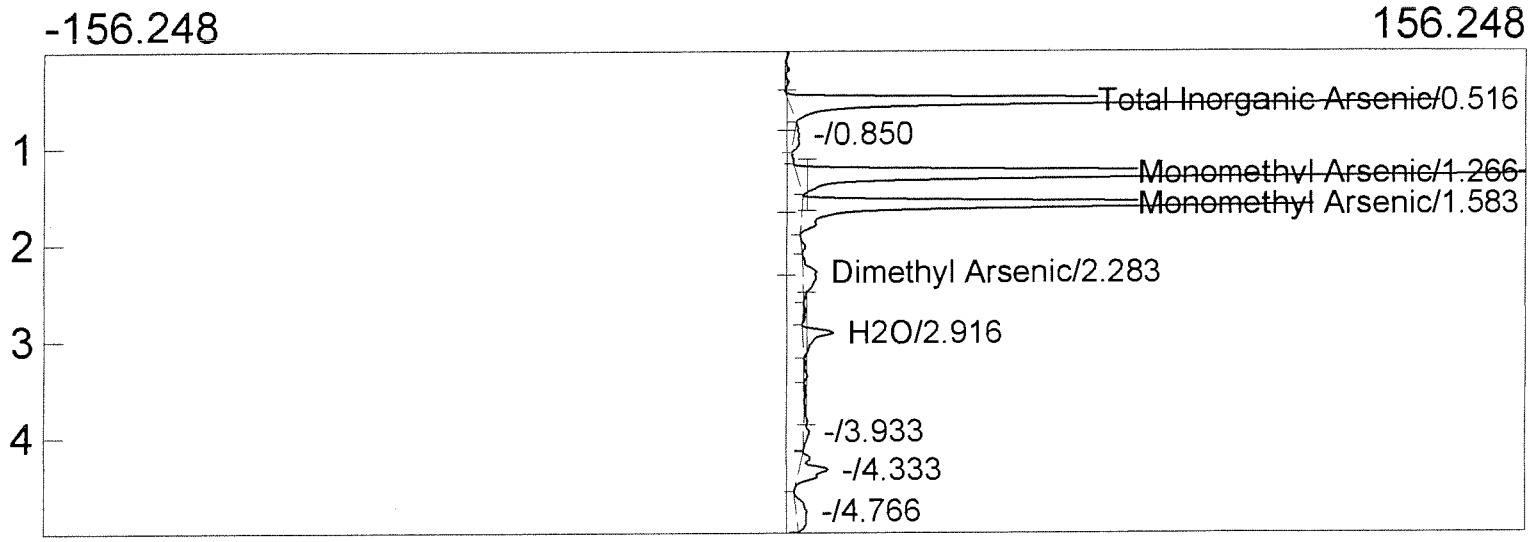
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:56:33
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3.CHR ()
Operator: BJS

BJS 8/1/11



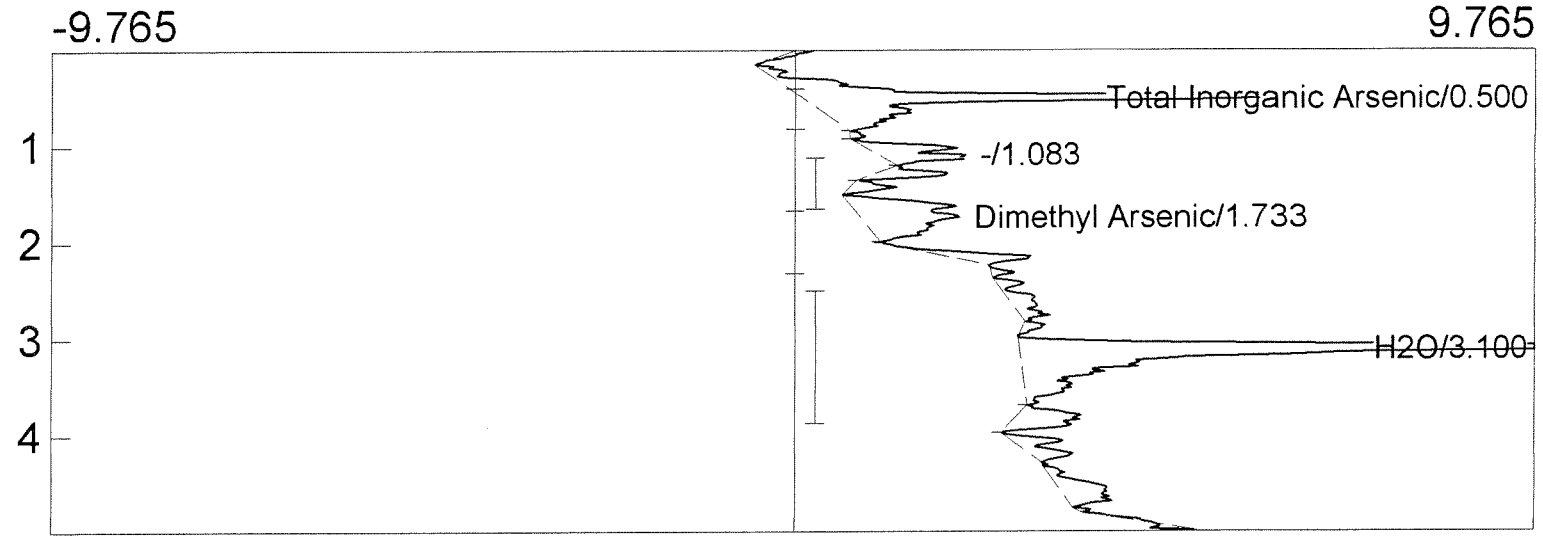
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	764.7670	155.330
Monomethyl Arsenic	1.266	822.6510	172.463
Monomethyl Arsenic	1.583	629.3575	124.905
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.100	26.9830	1.489
		2243.7585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:06:23
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3 Rerun.CHR ()
Operator: BJS



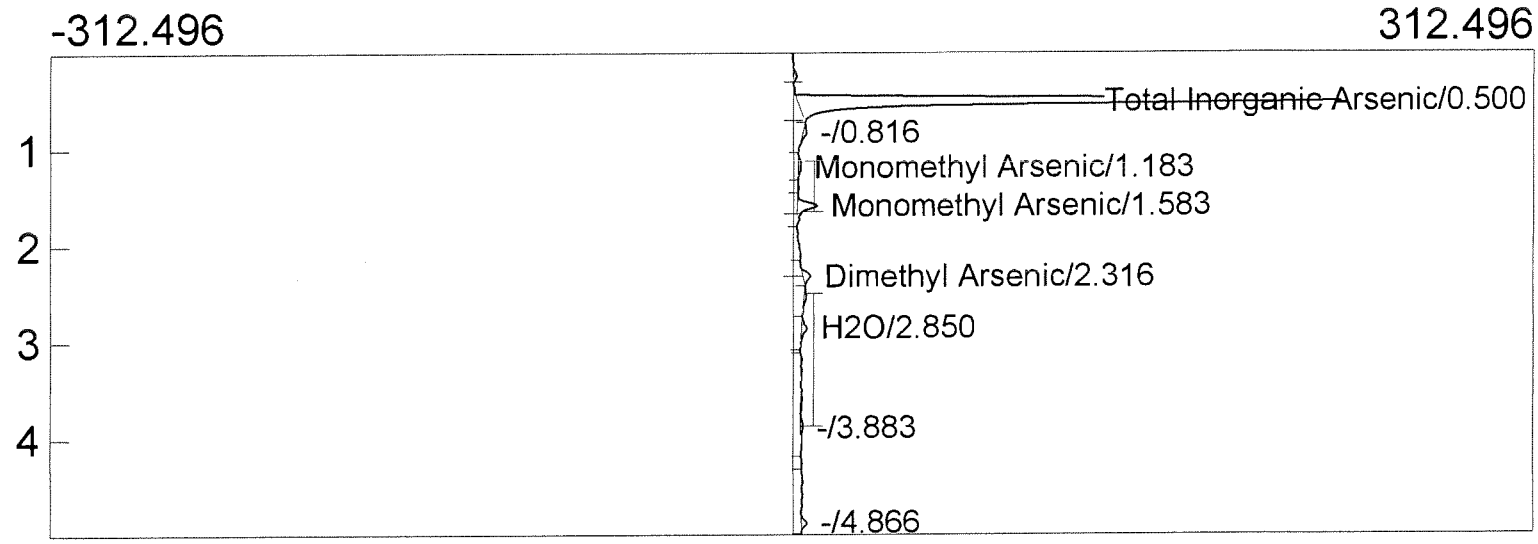
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	628.0615	137.877
Monomethyl Arsenic	1.266	790.9515	162.769
Monomethyl Arsenic	1.583	552.6305	109.285
Dimethyl Arsenic	2.283	42.0890	3.032
H2O	2.916	46.7670	6.655
		2060.4995	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:15:06
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 4.CHR ()
Operator: BJS



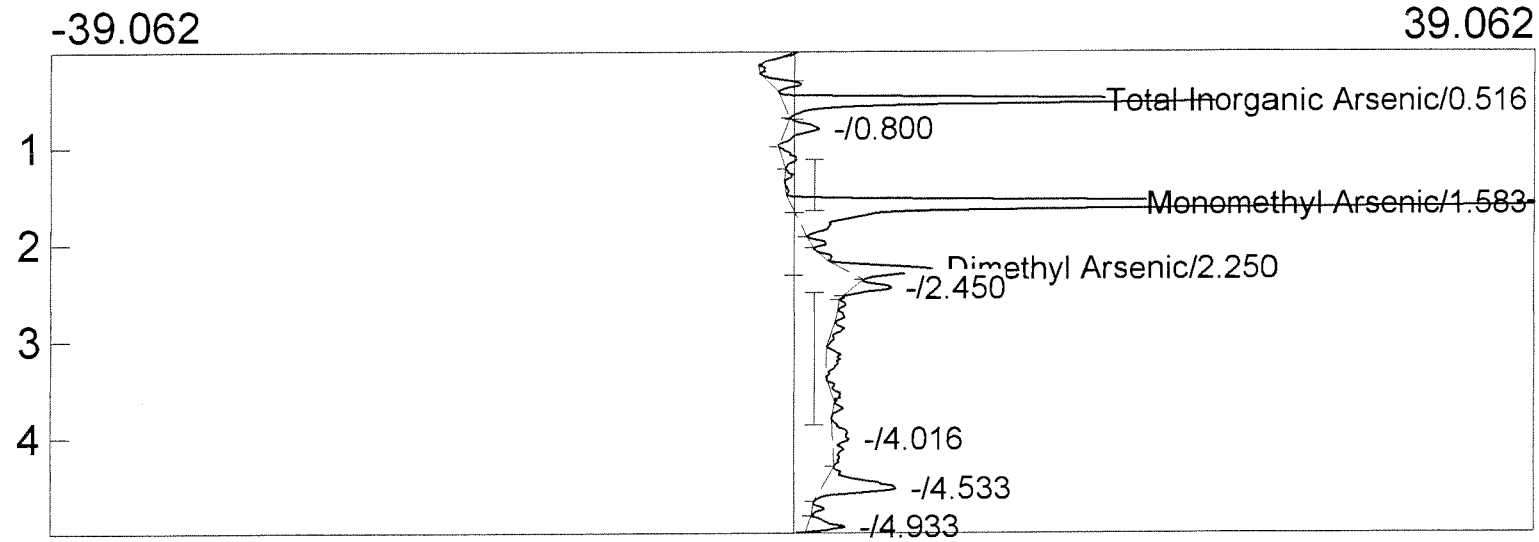
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	50.8045	6.340
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	1.733	23.6610	1.319
H2O	3.100	73.7845	8.241
		148.2500	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:24:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MSD 0.5mL.CHR ()
Operator: BJS



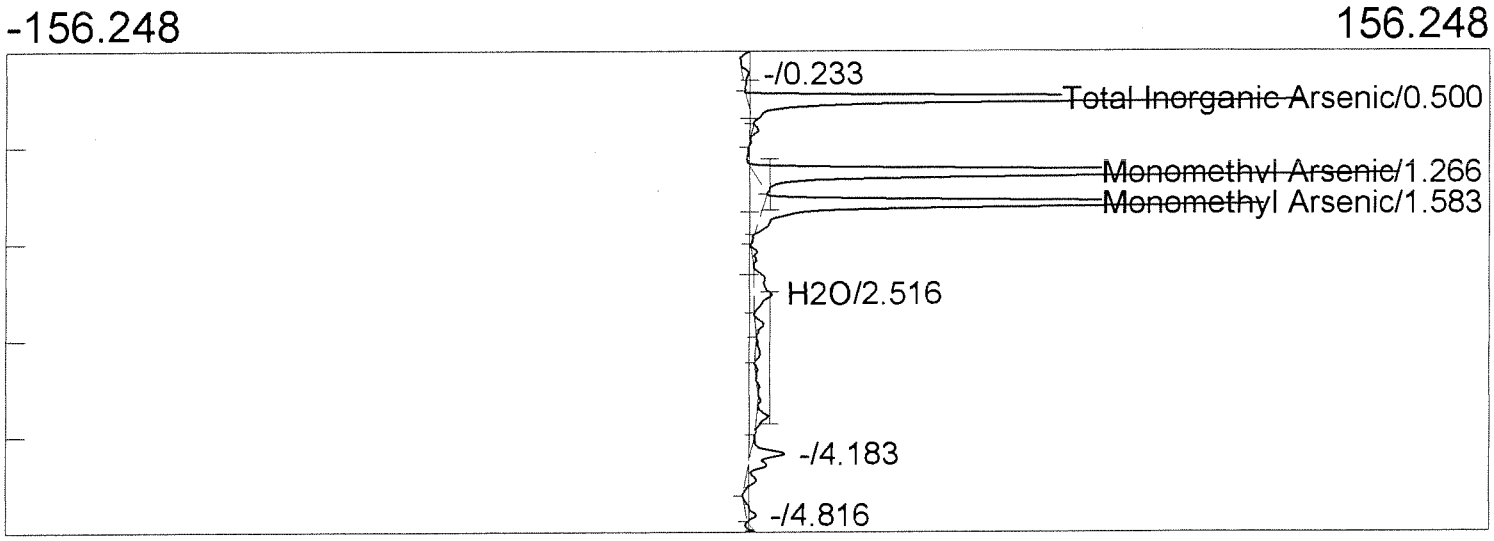
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1082.6750	237.765
Monomethyl Arsenic	1.183	10.2550	1.111
Monomethyl Arsenic	1.583	49.0340	8.460
Dimethyl Arsenic	2.316	19.0135	3.352
H2O	2.850	17.2500	2.279
		1178.2275	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:34:59
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-025 2.0mL.CHR ()
Operator: BJS



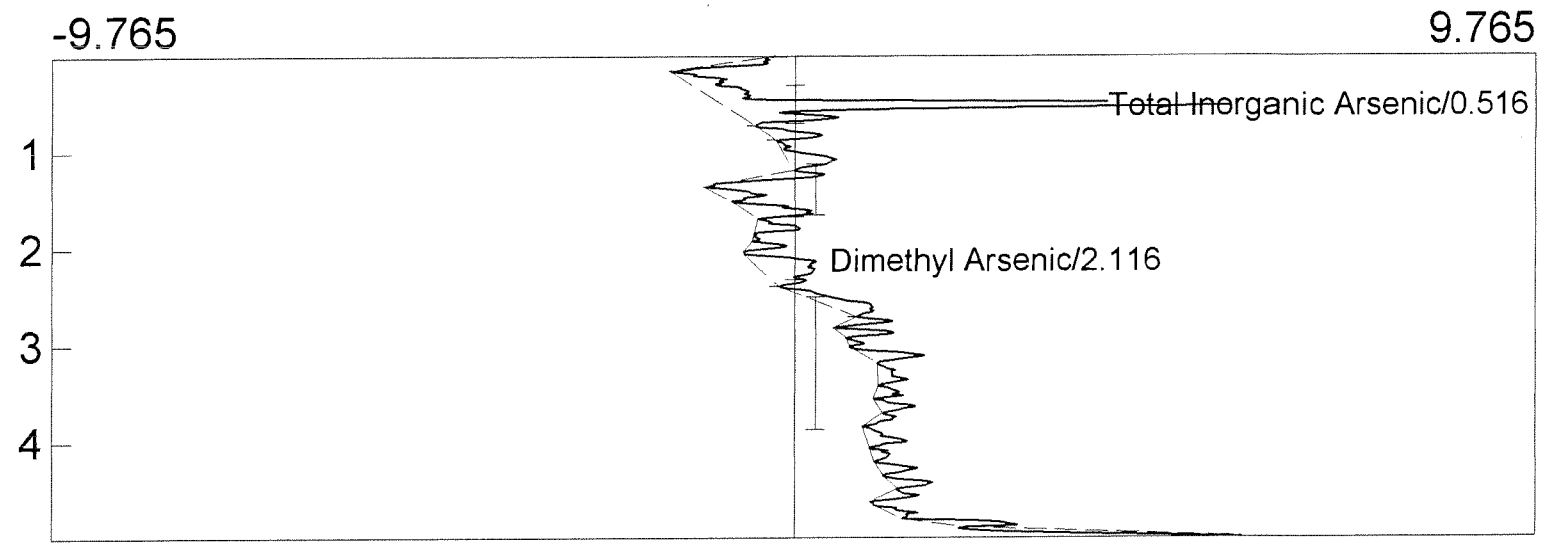
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	103.9290	23.142
Monomethyl Arsenic	1.583	239.1630	44.823
Dimethyl Arsenic	2.250	26.7600	4.779
H2O	0.000	0.0000	0.000
		369.8520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:51:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 4.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	557.1400	121.037
Monomethyl Arsenic	1.266	679.0480	135.979
Monomethyl Arsenic	1.583	547.6840	106.711
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.516	55.0280	3.912
		1838.9000	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:59:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 5.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	42.6490	6.789
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	10.2100	0.852
H2O	0.000	0.0000	0.000
		52.8590	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Methyl Mercury

Prep Method:	CAS SOP	Units:	ng/g
Analysis Method:	CAS SOP	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Exoskeleton Composite	K1106157-009	5.2	2.1	1	07/28/11	07/29/11	4.47	J
EWL-HOU Exoskeleton Composite	K1106157-015	5.8	2.3	1	07/28/11	07/29/11	4.66	J
EWL-BIL Exoskeleton Composite	K1106157-025	5.0	2.0	1	07/28/11	07/29/11	10.5	
Method Blank 1	K1106157-MB1	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 2	K1106157-MB2	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 3	K1106157-MB3	1.1	0.4	1	07/28/11	07/29/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	06/20/11
Sample Matrix:	Tissue	**Date Received:**	06/21/11
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Matrix Spike/Duplicate Matrix Spike Summary
Metals

Sample Name:	EWL-BIL Exoskeleton Composite	Units:	ng/g
Lab Code:	K1106157-025S, K1106157-025SD	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	5.0	1002	1002	10.5	1180	1300	117	129	65-135	10	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	106	106	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	103	103	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	163	141	87	67-133	

Service Request #	K1106152 K1106154 K1106157 K1106166		
MS/MSD with #	K1106157-025		
Star Lims Prep #	138641		
Star Lims Run #	255350		
OPR Parent Std	AF1-57-A	Exp.	08/27/11
OPR Intermediate Std	AF1-63-A	Exp.	08/01/11
QCS Parent Std	NA	Exp.	NA
QCS Intermediate Std	NA	Exp.	NA

1630M Tissue Data Review Form

		Yes	No	N/A
1	20 samples (or less) in batch	X		
2	MS/MSD every 20 samples	X		
3	Mean of Ethylation Blanks less than 2 pg	X		
4	3 Method Blanks Run	X		
5	Method blank below MRL	X		
6	Current Calibration factor used	X		
7	Calibration data included	X		
8	OPR, QCS in control (67-133%)	X		
9	MS/MSD recovery (65 -135%)	X		
10	MS/MSD RPD within 35%	X		
11	All samples within the linear range	X		
12	All corresponding charts included	X		
13	Dilution factors calculated	X		
14	Bench sheet signed	X		

Comments

Primary Reviewed by KDK Date 7/29/2011

Secondary Reviewed by BJS Date 7/29/11

Batch Information Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run Duration:	7.0	Method Blank Type:	Concentration
Heating Time:	1.00	Integration Mode:	Methyl Hg
Retention Start Time:	2.5	Integration Type:	Peak Height
Retention Stop Time:	3.5	Result Units:	µg/Kg
Calibration File:	060211calsoil&tissue.brd		

Reagents

Name	Lot Number
1% NaBEt4	RE2-35-E
2M KOAc	RE2-36-J
25% KOH	RE2-37-K
MeOH	RE2-37-J

Standards

Name	Concentration	Lot Number
MeHgCl 1000pg	1000 pg/mL	AF1-62-H
MeHgCl 100pg	100 pg/mL	AF1-63-A
MeHgCl 10pg	10 pg/mL	AF1-62-J
QCS Intermediate	1000 pg/mL	AF1-62- I
QCS	100 pg/mL	AF1-63-B

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Run Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Peak	Peak Height	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
20	OPR	OPR		2	46,598	103		103	67-133	accept

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106157-025	1,180	µg/Kg	1002	10.5	117	65-135			accept
MSD	K1106157-025	1,300	µg/Kg	1002	10.5	129	65-135	9.85	< 35	accept
OPR	OPR	106	pg	100		106	67-133			accept
	OPR	103	pg	100		103	67-133			accept
QCS	TORT	141	µg/Kg	163		86.4	67-133			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	STD 2	1.76	pg	2	88.0	75-125			accept
	STD 20	18.6	pg	20	93.0	75-125			accept
	STD 50	52.2	pg	50	104	75-125			accept
	STD 100	96.2	pg	100	96.2	75-125			accept
	STD 1000	1,140	pg	1000	114	75-125			accept
	STD 2000	2,200	pg	2000	110.	75-125			accept
Calibration Factor		0.00221	pg/PH				10.5	< 15	accept
Calibration Date		6/2/11							

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
MBA	MBLK 1	0.0311	µg/Kg	< 10			accept
	MBLK 2	0.0524	µg/Kg	< 10			accept
	MBLK 3	0.0903	µg/Kg	< 10			accept
Average		0.0579	µg/Kg		0.0300		

QA Comments:

QA Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Name/ID	Final Result (µg/Kg)	Notes
9	K1106152-009	5.79	accept
10	K1106152-015	10.4	accept
11	K1106152-025	14.8	accept
12	K1106154-009	3.85	accept
13	K1106154-015	6.05	accept
14	K1106154-025	8.62	accept
15	K1106157-009	4.47	accept
16	K1106157-015	4.66	accept
6	K1106157-025	10.5	accept
17	K1106166-009	11.7	accept
18	K1106166-015	29.2	accept
19	K1106166-025	27.9	accept

Run Information Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	OPR	OPR					100	
2	QCS	TORT	MBA	210	50	0.050	163	mg/Kg
3	MBA	MBLK 1		2273	50	0.050		
4	MBA	MBLK 2		2273	50	0.050		
5	MBA	MBLK 3		2273	50	0.050		
6	S	K1106157-025	MBA	505	50	0.050		
7	MS	K1106157-025	MBA	499	50	0.050	1002	
8	MSD	K1106157-025	MBA	499	50	0.050	1002	
9	S	K1106152-009	MBA	1286	50	0.050		
10	S	K1106152-015	MBA	1162	50	0.050		
11	S	K1106152-025	MBA	1095	50	0.050		
12	S	K1106154-009	MBA	2318	50	0.050		
13	S	K1106154-015	MBA	2049	50	0.050		
14	S	K1106154-025	MBA	1193	50	0.050		
15	S	K1106157-009	MBA	478	50	0.050		
16	S	K1106157-015	MBA	433	50	0.050		
17	S	K1106166-009	MBA	1673	50	0.050		
18	S	K1106166-015	MBA	1460	50	0.050		
19	S	K1106166-025	MBA	1435	50	0.050		
20	OPR	OPR					100	

Columbia Analytical Services, Inc.

Sample Number(s):	Service Request Number(s):
As Listed	K1106152 K1106154 K1106157 K1106166
Analysis for:	**Method:**
MeHg in Tissues	1630m

DATA **StarLIMS #138641**

Sample ID		Initial Weight (g)		Final Volume (mL)			Matrix
MB-1		0.250		50mL			25% KOH
MB-2		0.250		50mL			25% KOH
MB-3		0.250		50mL			25% KOH
TORT		0.222		50mL			25% KOH
K1106152-009		0.252		50mL			25% KOH
K1106152-015		0.273		50mL			25% KOH
K1106152-025		0.253		50mL			25% KOH
K1106154-009		0.255		50mL			25% KOH
K1106154-015		0.250		50mL			25% KOH
K1106154-025		0.253		50mL			25% KOH
K1106157-009		0.250		50mL			25% KOH
K1106157-015		0.256		50mL			25% KOH
K1106157-025		0.254		50mL			25% KOH
K1106157-025S		0.251		50mL			25% KOH
K1106157-025SD		0.251		50mL			25% KOH
K1106166-009		0.266		50mL			25% KOH
K1106166-015		0.257		50mL			25% KOH
K1106166-025		0.267		50mL			25% KOH

Start Time: 02:45 PM 07/28/2011
Oven Temperature: 80°C

Comments: Spike Standard: 0.5ml of 1000ng/mL AF1-57-A
25% KOH: RE2-37-K

Analyst:	Date:
	7/28/2011

R\:ICP\misc\digforms\072811

Conversion from dry weight to wet weight:

Standard MRL =	10
Standard MDL =	4.0
Standard Dilution =	1
Standard Sample Mass =	0.250

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.252	19.6	**1.286**	1	**1.9**	**0.8**
K1106152-015	0.273	23.5	**1.162**	1	**2.2**	**0.9**
K1106152-025	0.253	23.1	**1.095**	1	**2.3**	**0.9**
K1106154-009	0.255	11.0	**2.318**	1	**1.1**	**0.4**
K1106154-015	0.250	12.2	**2.049**	1	**1.2**	**0.5**
K1106154-025	0.253	21.2	**1.193**	1	**2.1**	**0.8**
K1106157-009	0.250	52.3	**0.478**	1	**5.2**	**2.1**
K1106157-015	0.256	59.1	**0.433**	1	**5.8**	**2.3**
K1106157-025	0.254	50.3	**0.505**	1	**5.0**	**2.0**
K1106157-025S	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106157-025SD	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106166-009	0.266	15.9	**1.673**	1	**1.5**	**0.6**
K1106166-015	0.257	17.6	**1.460**	1	**1.7**	**0.7**
K1106166-025	0.267	18.6	**1.435**	1	**1.7**	**0.7**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
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			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
Method Blank	0.250	11.000	**2.273**	1	**1.1**	**0.4**

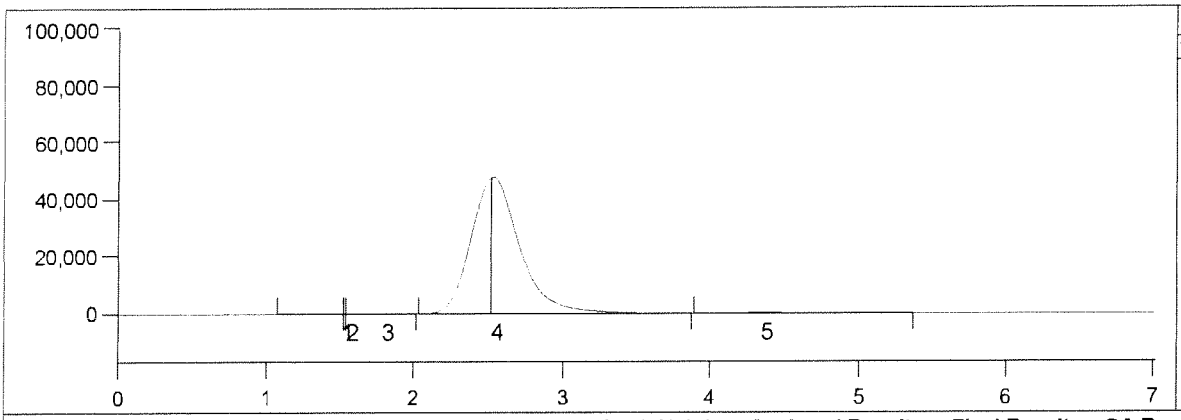
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

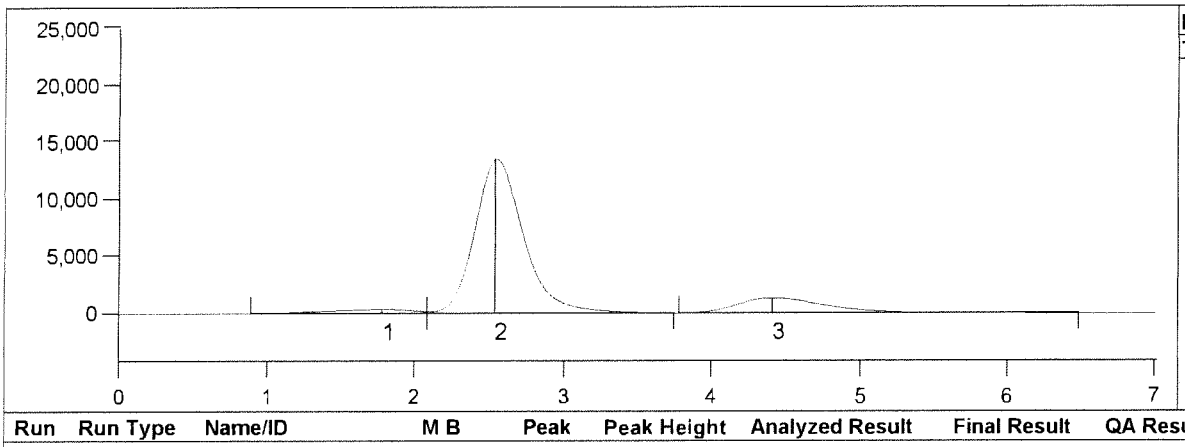
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 8:45 AM

Peak	rt	Height
1	1.51	8
2	1.54	1
3	1.77	83
4	2.52	48,026
5	4.35	352

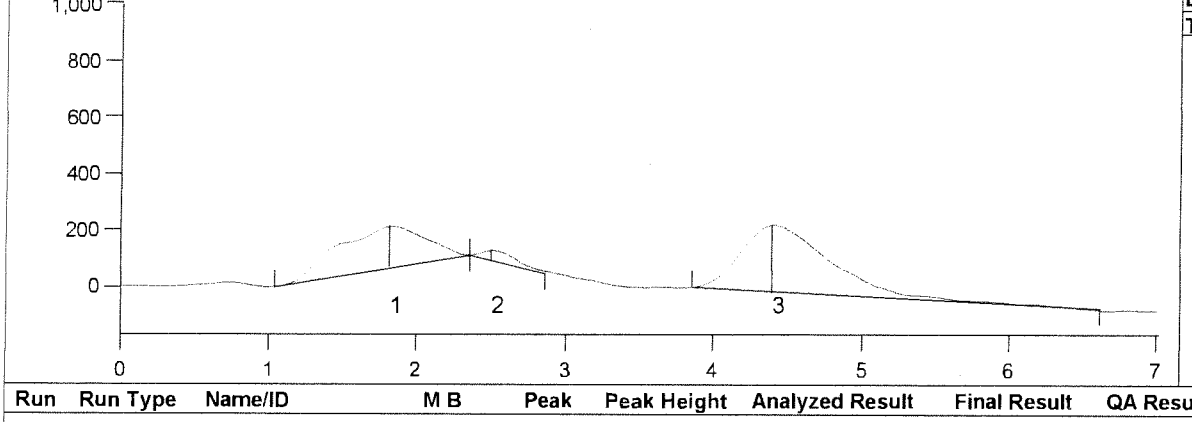
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept
Notes										



Date: 7/29/11
Time: 8:54 AM

Peak	rt	Height
1	1.77	280
2	2.54	13,412
3	4.40	1,314

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept
Notesmg/Kg										



Date: 7/29/11
Time: 9:04 AM

Peak	rt	Height
1	1.80	147
2	2.49	32
3	4.39	237

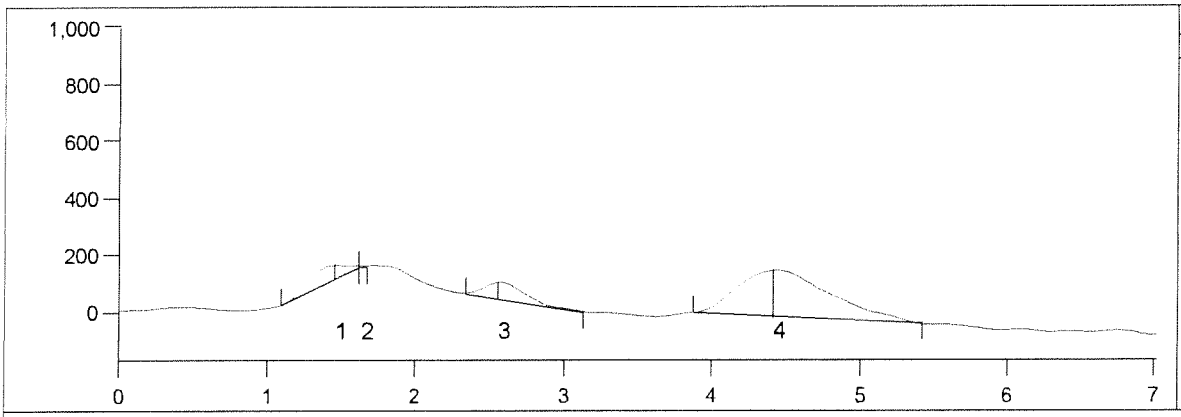
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

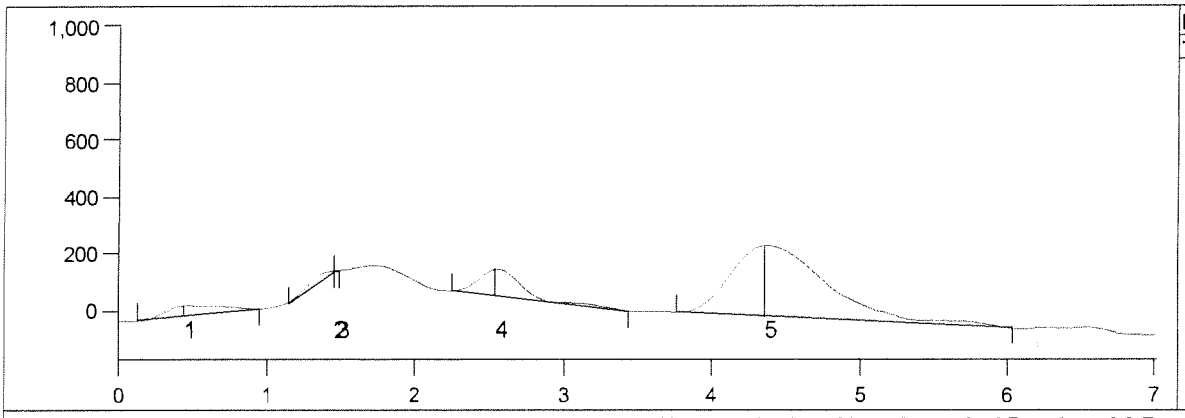


Date:	7/29/11
Time:	9:12 AM

Peak	rt	Height
1	1.44	46
2	1.63	1
3	2.54	54
4	4.41	165

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept

Notes

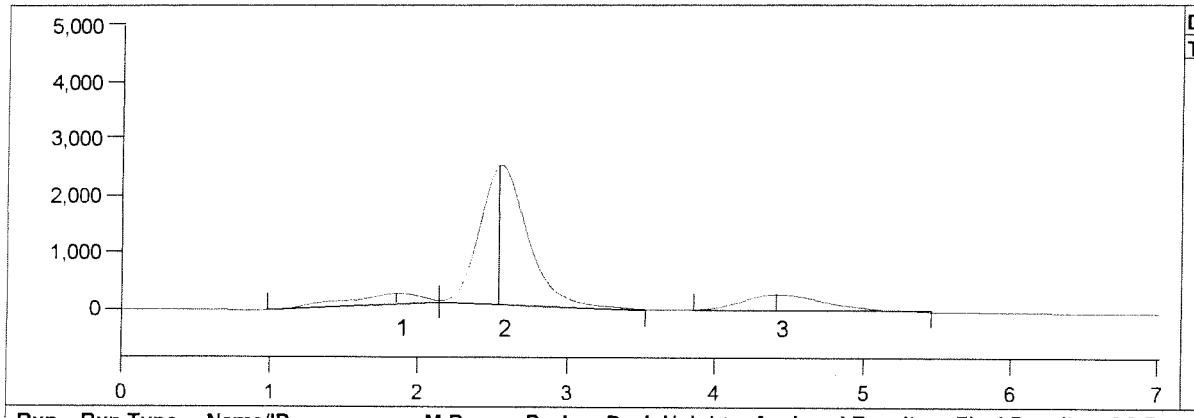


Date:	7/29/11
Time:	9:19 AM

Peak	rt	Height
1	0.44	40
2	1.45	2
3	1.48	1
4	2.53	93
5	4.35	252

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept

Notes



Date:	7/29/11
Time:	9:27 AM

Peak	rt	Height
1	1.85	169
2	2.54	2,424
3	4.40	286

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept

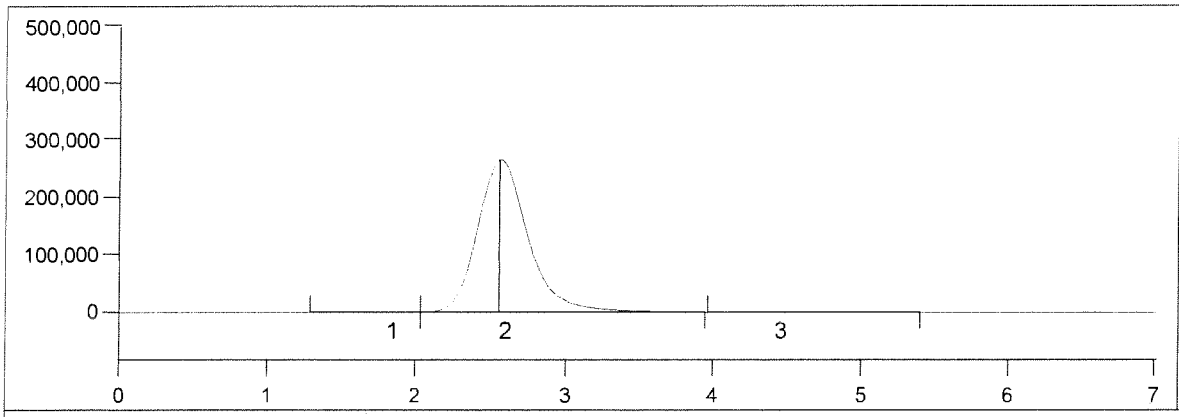
Notes

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

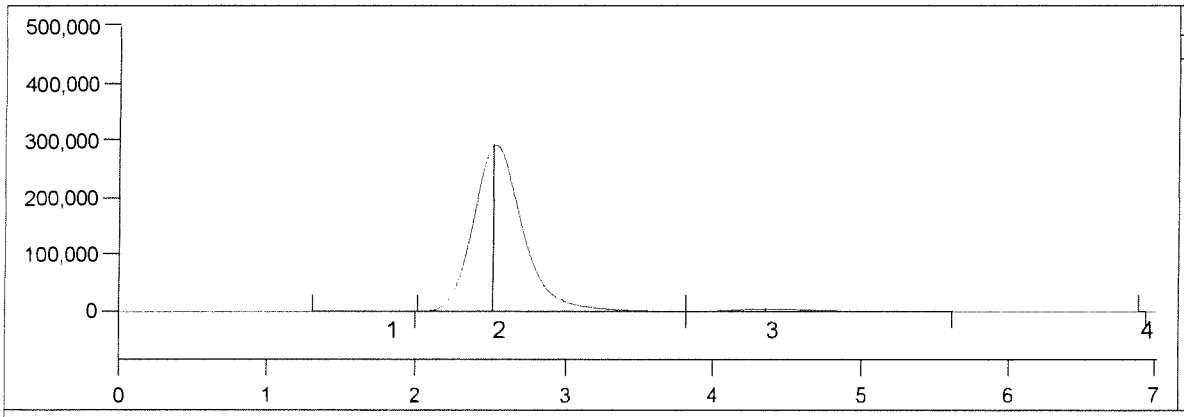
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date:	7/29/11
Time:	9:34 AM

Peak	rt	Height
1	1.80	1,028
2	2.55	266,530
3	4.41	1,274

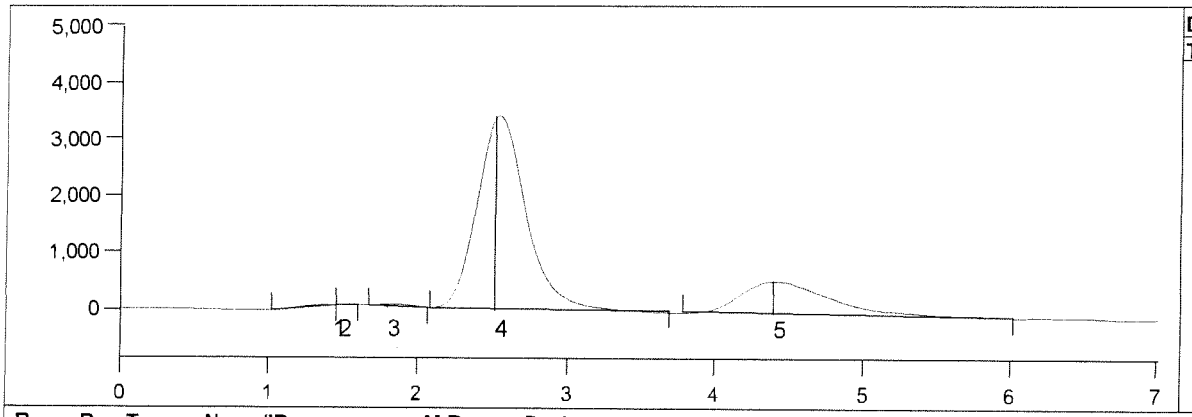
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept
Notes										



Date:	7/29/11
Time:	9:42 AM

Peak	rt	Height
1	1.80	888
2	2.52	294,141
3	4.36	4,627
4	6.91	0

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept
Notes										



Date:	7/29/11
Time:	9:49 AM

Peak	rt	Height
1	1.44	3
2	1.47	1
3	1.80	28
4	2.52	3,410
5	4.39	581

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept
Notes										

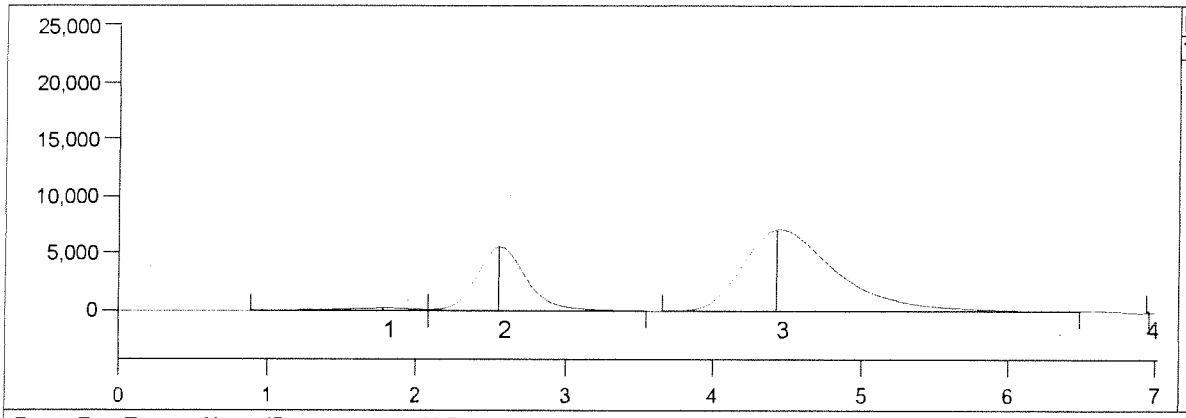
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

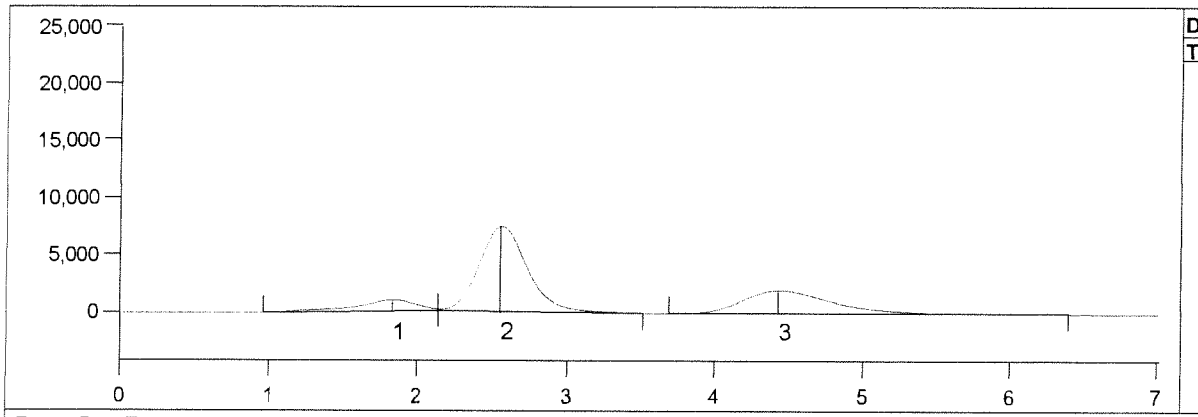
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 9:57 AM

Peak	rt	Height
1	1.78	178
2	2.55	5,501
3	4.44	7,144
4	6.94	-1

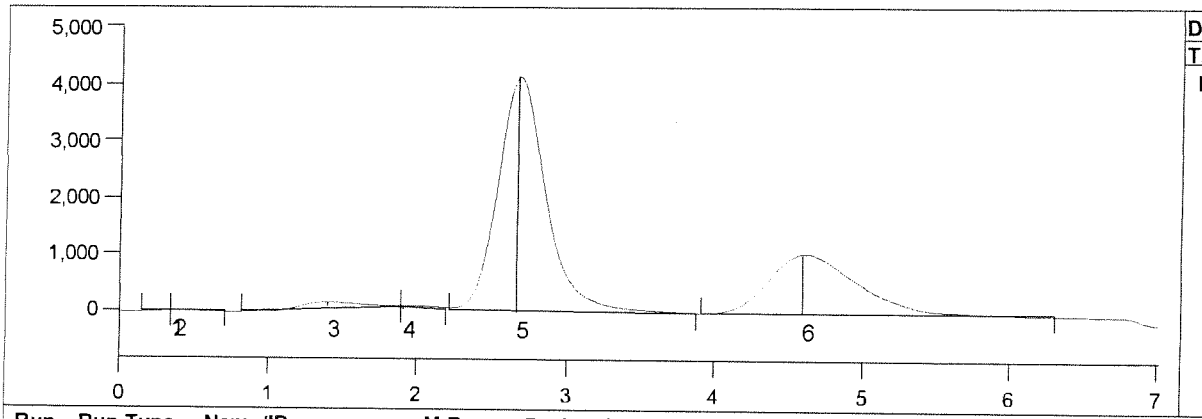
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
Notes										



Date: 7/29/11
Time: 10:04 AM

Peak	rt	Height
1	1.82	878
2	2.55	7,363
3	4.43	2,089

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
Notes										



Date: 7/29/11
Time: 10:23 AM

Peak	rt	Height
1	0.35	1
2	0.37	1
3	1.39	120
4	1.90	2
5	2.66	4,101
6	4.60	1,069

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
Notes										

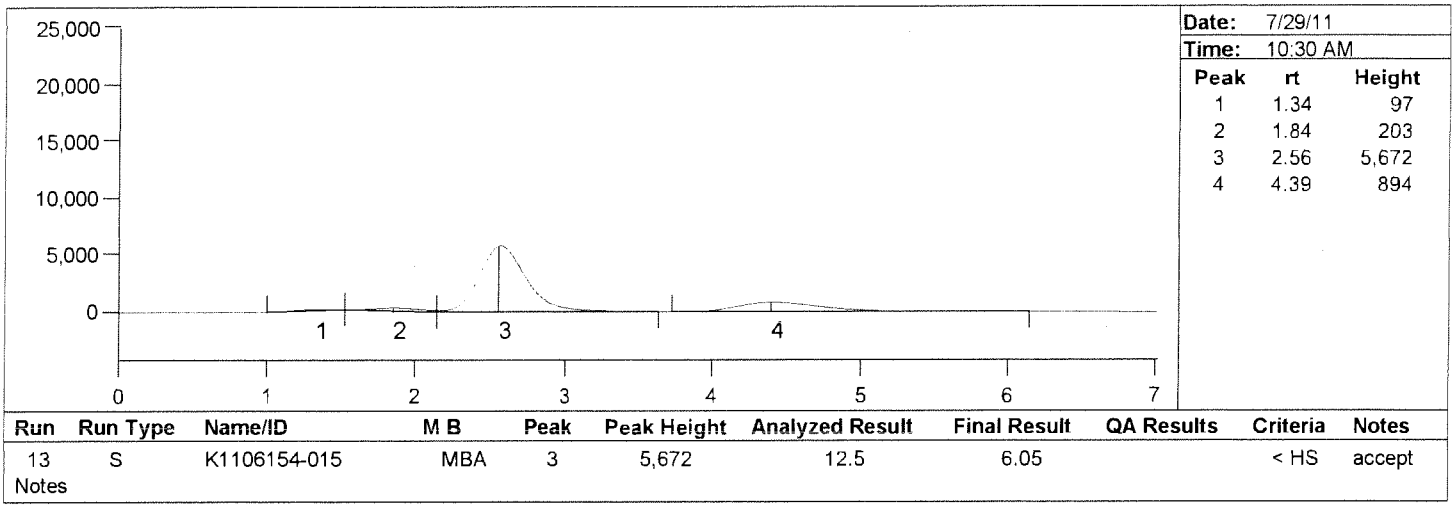
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

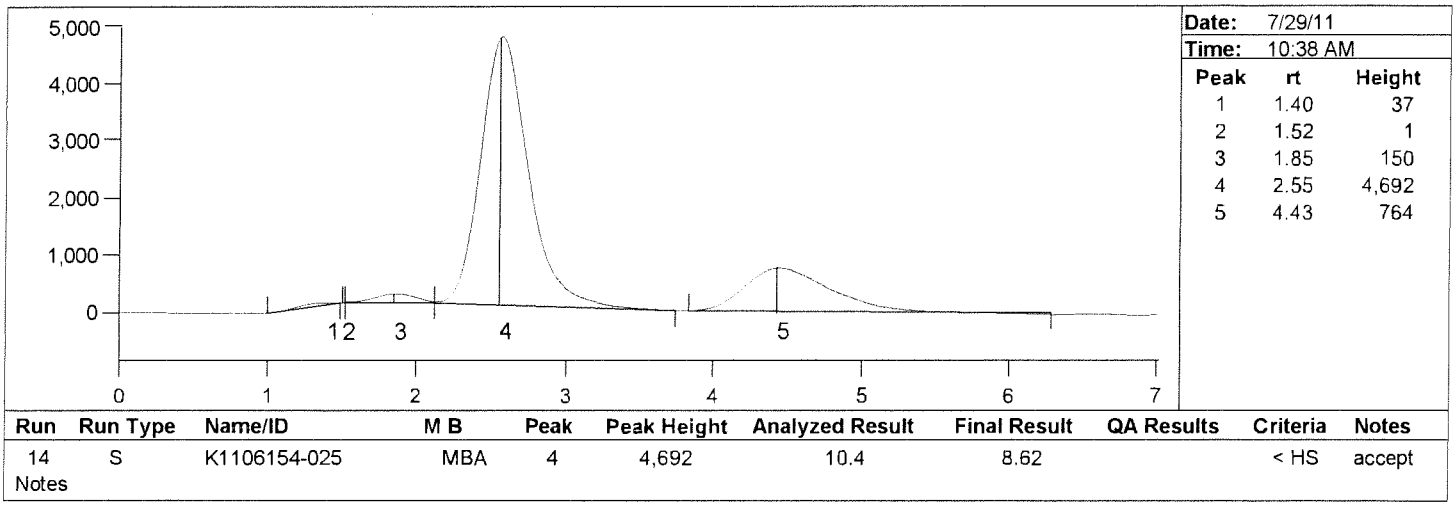
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 10:30 AM

Peak	rt	Height
1	1.34	97
2	1.84	203
3	2.56	5,672
4	4.39	894

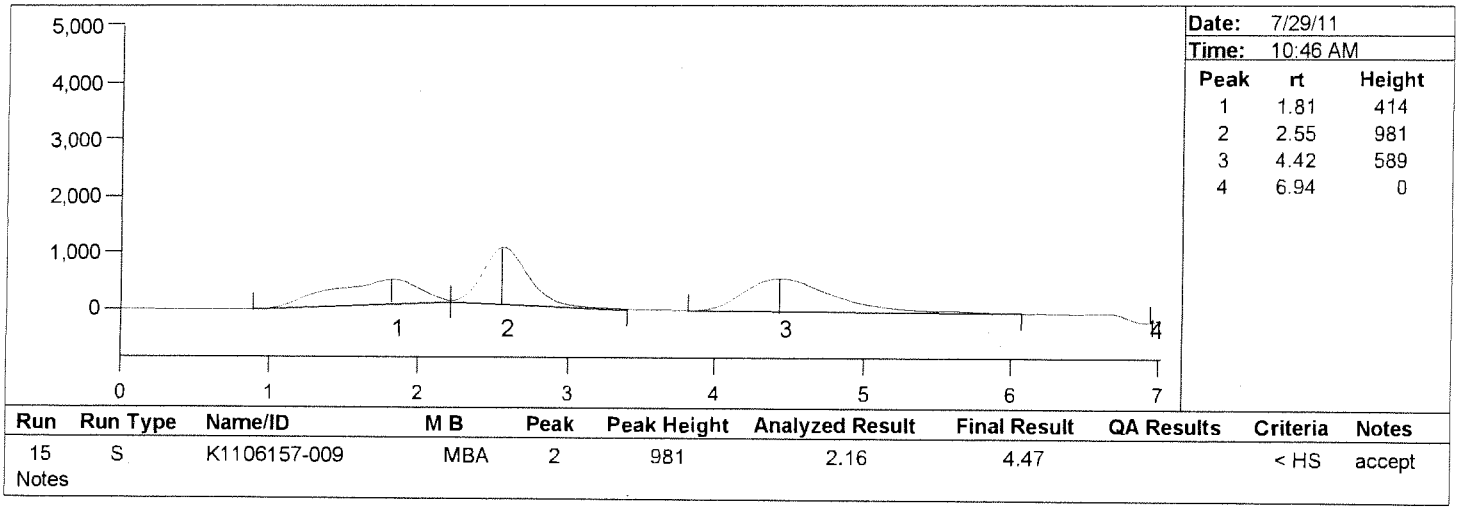
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
Notes										



Date: 7/29/11
Time: 10:38 AM

Peak	rt	Height
1	1.40	37
2	1.52	1
3	1.85	150
4	2.55	4,692
5	4.43	764

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
Notes										



Date: 7/29/11
Time: 10:46 AM

Peak	rt	Height
1	1.81	414
2	2.55	981
3	4.42	589
4	6.94	0

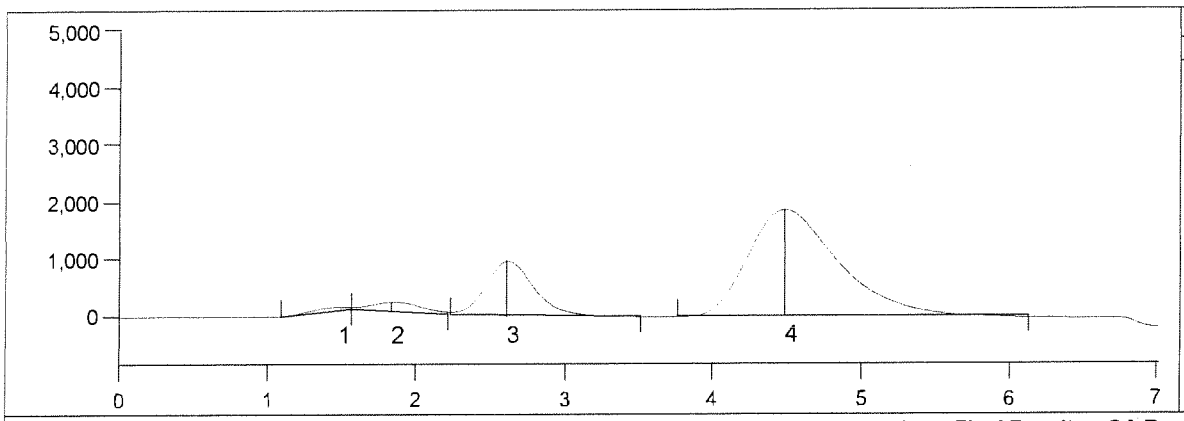
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

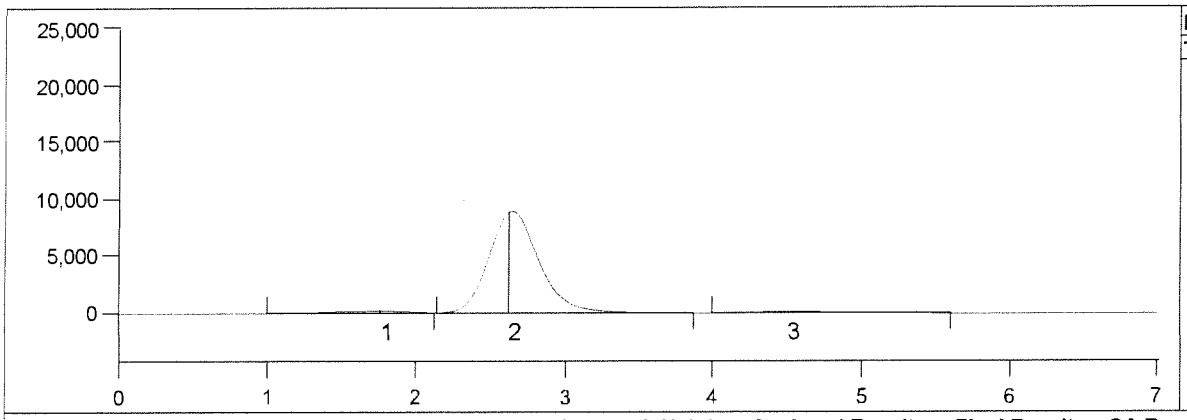


Date: 7/29/11
Time: 10:53 AM

Peak	rt	Height
1	1.46	38
2	1.84	122
3	2.60	926
4	4.48	1,903

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept

Notes

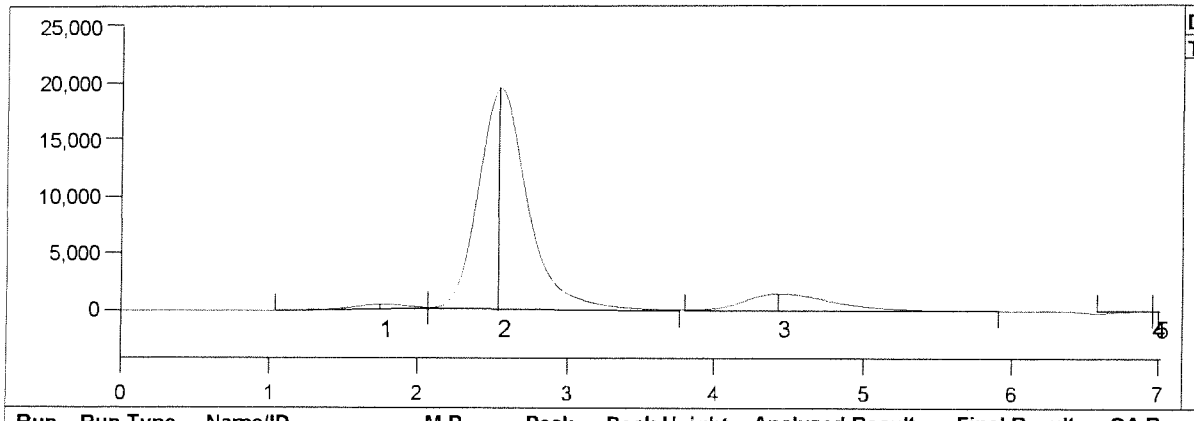


Date: 7/29/11
Time: 11:00 AM

Peak	rt	Height
1	1.76	184
2	2.63	8,940
3	4.49	183

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept

Notes



Date: 7/29/11
Time: 11:07 AM

Peak	rt	Height
1	1.75	396
2	2.53	19,363
3	4.43	1,472
4	6.96	2
5	6.98	1

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept

Notes

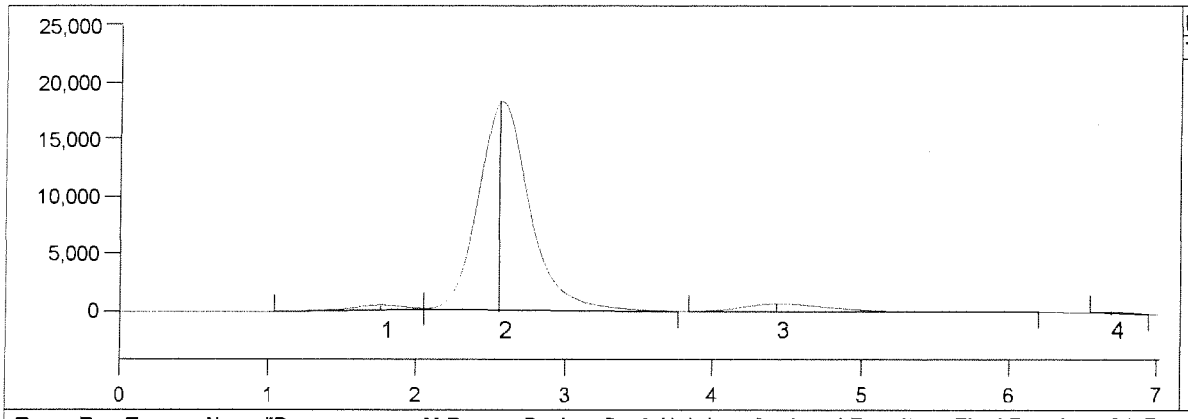
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

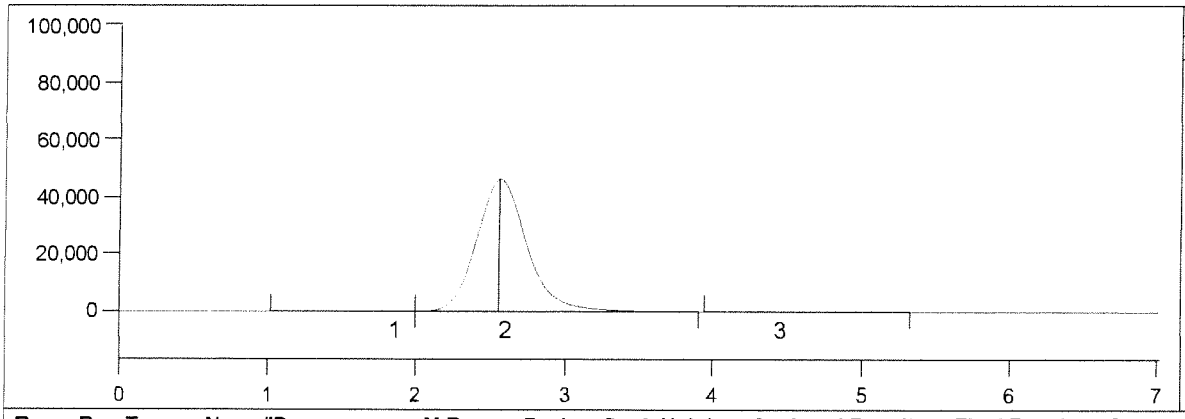
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 11:15 AM

Peak	rt	Height
1	1.75	401
2	2.56	18,197
3	4.44	734
4	6.69	80

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
Notes										



Date: 7/29/11
Time: 11:22 AM

Peak	rt	Height
1	1.82	92
2	2.54	46,598
3	4.41	275

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	OPR	OPR		2	46,598	103		103	67-133	accept
Notes										

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	WET
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Exoskeleton Composite	K1106157-009	0.5	0.2	20	07/15/11	07/18/11	4.1	
EWL-HOU Exoskeleton Composite	K1106157-015	0.6	0.2	20	07/15/11	07/18/11	8.6	
EWL-BIL Exoskeleton Composite	K1106157-025	0.5	0.1	20	07/15/11	07/18/11	15.2	
Method Blank1	K1106157-MB1	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank2	K1106157-MB2	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank3	K1106157-MB3	0.2	0.06	20	07/15/11	07/18/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
Sample Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K1106152-025MS, K1106152-025MSD	Basis:	WET
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	1.1	57	56	34.7	82.9	95.6	85	109	70-130	14	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.24	105	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.49	110	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Test Notes:

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	270	272	101	70-130	

Service Request #:	K1106152, K1106154, K1106157, K1106166		
MS/MSD with #:	K1106152, K1106166		
StarLims Run # :	253805		
VER Standard ID:	AF1-63-C	Expiration Date:	07/30/11
Parent VER ID:	AF1-59-D	Expiration Date:	06/09/12

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. Ave of Bubbler Blanks less than 50 pg	X		
7. Verification Standards Passed (75-123%)	X		
8. OPR, QCS in control (70-130%)	X		
9. MS/MSD recovery 71-125%	X		
10. Spike RPD within 30%	X		
11. All samples within the linear range	X		
12. All corresponding charts included	X		
13. Dilution factors calculated	X		
14. Bench sheet signed	X		
	X		

Comments

Primary Reviewed by AEL Date 7/18/11

Secondary Reviewed by [signature] Date 7/27/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run Duration:	2.25	Integration Mode:	Total Hg
Heating Time:	1.75	Integration Type:	Peak Area
Retention Start Time:	.75	Result Units:	µg/Kg
Retention Stop Time:	1.75		
Calibration File:	CAL CURVE 032911.brd		

Reagents

Name	Lot Number
BrCl	RE2-36-M
SnCl+HCl	RE2-37-B

AEK 7/18/11

Standards

Name	Concentration	Lot Number
VER STD	10 ppb	AF1-63-C
OPR STD	40 ppb	AF1-63-E

Comments
PMT: 606 OFFSET: 5,090 NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept
~~15~~	~~S~~	~~K1106157-009~~		~~1~~	~~645,142~~	~~76.8~~	~~3.93~~		~~< HS~~	~~reject~~
~~16~~	~~S~~	~~K1106157-015~~		~~1~~	~~1,460,869~~	~~174~~	~~10.0~~		~~< HS~~	~~reject~~
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

AEA 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
Average		0.00	pg	< 25	0.00	< 10	accept
MBA	MB-1	0.169	µg/Kg	< 1			accept
	MB-2	0.0983	µg/Kg	< 1			accept
	MB-3	0.138	µg/Kg	< 1			accept
Average		0.135	µg/Kg		0.0354		

Comments

PMT: 606
OFFSET: 5,090
NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Name/ID	Final Result (µg/Kg)	Notes
10	K1106152-009	9.78	accepted
11	K1106152-015	17.3	accepted
6	K1106152-025	34.7	accepted
12	K1106154-009	3.93	accepted
13	K1106154-015	6.94	accepted
14	K1106154-025	10.5	accepted
~~15~~	~~K1106157-009~~	~~3.93~~	~~rejected~~
18	K1106157-009	4.06	accepted
~~16~~	~~K1106157-015~~	~~10.0~~	~~rejected~~
19	K1106157-015	8.62	accepted
20	K1106157-025	15.2	accepted
21	K1106166-009	17.3	accepted
22	K1106166-015	33.2	accepted
24	K1106166-025	49.4	accepted

AEK 7/18/11

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	QCS	VER-1		100	100	100	5	
2	MBA	MB-1		400	40	5.0		
3	MBA	MB-2		400	40	5.0		
4	OPR	OPR-1		400	40	5.0	5	
5	IPR	TORT		391	40	2.5	270	
6	S	K1106152-025		1714	40	1.0		
7	MS	K1106152-025		1745	40	1.0	57	
8	MSD	K1106152-025		1771	40	1.0	56	
9	CB	BB (VER)		100	100	100		
10	S	K1106152-009		2209	40	1.0		
11	S	K1106152-015		1745	40	1.0		
12	S	K1106154-009		3700	40	1.0		
13	S	K1106154-015		3615	40	1.0		
14	S	K1106154-025		1929	40	1.0		
~~15~~	~~S~~	~~K1106157-009~~		~~782~~	~~40~~	~~1.0~~		AEL 7/18/11
~~16~~	~~S~~	~~K1106157-015~~		~~695~~	~~40~~	~~1.0~~		
17	QCS	VER-2		100	100	100	5	
18	S	K1106157-009		782	40	5.0		
19	S	K1106157-015		695	40	5.0		
20	S	K1106157-025		813	40	5.0		
21	S	K1106166-009		2478	40	5.0		
22	S	K1106166-015		2455	40	5.0		
23	CB	BB (VER)		100	100	100		
24	S	K1106166-025		2177	40	1.0		
25	MS	K1106166-025		2204	40	1.0	45	
26	MSD	K1106166-025		2215	40	1.0	45	
27	MBA	MB-3		400	40	5.0		
28	OPR	OPR-2		400	40	5.0	5	
29	QCS	VER-3		100	100	100	5	
30	CB	BB (VER)		100	100	100		

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106152-025	82.9	µg/Kg	57	34.7	84.6	70-130			accept
	K1106166-025	94.5	µg/Kg	45	49.4	100	70-130			accept
MSD	K1106152-025	95.6	µg/Kg	56	34.7	109	70-130	14.2	< 30	accept
	K1106166-025	106	µg/Kg	45	49.4	127	70-130	11.8	< 30	accept
IPR	TORT	272	µg/Kg	270		101	70-130			accept
OPR	OPR-1	5.24	µg/Kg	5		105	70-130			accept
	OPR-2	5.49	µg/Kg	5		110	70-130			accept
QCS	VER-1	5.09	µg/Kg	5		102	77-123			accept
	VER-2	4.77	µg/Kg	5		95.5	77-123			accept
	VER-3	5.14	µg/Kg	5		103	77-123			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	20	21.5	pg	20	108	75-125			accept
	50	51.9	pg	50	104	75-125			accept
	200	198	pg	200	99.0	75-125			accept
	500	554	pg	500	111	75-125			accept
	2000	1,930	pg	2000	96.5	75-125			accept
	5000	4,790	pg	5000	95.8	75-125			accept
	15000	14,100	pg	15000	94.0	75-125			accept
	100	95.1	pg	100	95.1	75-125			accept
Calibration Factor		0.000119	pg/PA				6.00	< 15	accept
Calibration Date		3/29/11							

Columbia Analytical Services
Metals Digestion Sheet

StarLims Number: 137751

Method : 1631EApp. | Analysis for : CVAFS

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	100ml	100ml	0.5% BrCl
VER-2	Water		x	100ml	100ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
Tort-2			x	0.413	40	0.02N BrCl
K1106152-009		x		0.433	40	0.02N BrCl
K1106152-015		x		0.410	40	0.02N BrCl
K1106152-025		x		0.396	40	0.02N BrCl
K1106152-025MS		x		0.403	40	0.02N BrCl
K1106152-025MSD		x		0.409	40	0.02N BrCl
K1106154-009		x		0.407	40	0.02N BrCl
K1106154-015		x		0.441	40	0.02N BrCl
K1106154-025		x		0.409	40	0.02N BrCl
K1106157-009		x		0.409	40	0.02N BrCl
K1106157-015		x		0.411	40	0.02N BrCl
K1106157-025		x		0.409	40	0.02N BrCl
K1106166-009		x		0.394	40	0.02N BrCl
K1106166-015		x		0.432	40	0.02N BrCl
K1106166-025		x		0.405	40	0.02N BrCl
K1106166-025MS		x		0.410	40	0.02N BrCl
K1106166-025MSD		x		0.412	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	100ml	100ml	0.5% BrCl

HNO3 Lot # J41037 **H2SO4 Lot # 50068** **BrCl =** RE2-36-M

AF1-63-E *(40ppb)* **OPR: 0.05ml** **Digestion Acid Mixture: RE2-36-N**

1st MS / DMS: 0.1 ml **Balance ID:** 37

2nd MS / DMS: 0.1 ml

Comments: MS/MSD - 0.1 ml of parent QCS (AF1-53-A : 1000 ug/L)

Time Digestion Started: 10:00

Analyst _____ **Date** 7/15/11

1631Dig.XLS
06/17/04

Conversion from dry weight to wet weight:

Standard MRL = 1.0
Standard MDL = 0.3
Standard Dilution = 20
Standard Sample Mass = 0.400

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.433	19.6	**2.209**	100	**0.9**	**0.3**
K1106152-015	0.410	23.5	**1.745**	100	**1.1**	**0.3**
K1106152-025	0.396	23.1	**1.714**	100	**1.2**	**0.4**
K1106152-025MS	0.403	23.1	**1.745**	100	**1.1**	**0.3**
K1106152-025MSD	0.409	23.1	**1.771**	100	**1.1**	**0.3**
K1106154-009	0.407	11.0	**3.700**	100	**0.5**	**0.2**
K1106154-015	0.441	12.2	**3.615**	100	**0.6**	**0.2**
K1106154-025	0.409	21.2	**1.929**	100	**1.0**	**0.3**
K1106157-009	0.409	52.3	**0.782**	20	**0.5**	**0.2**
K1106157-015	0.411	59.1	**0.695**	20	**0.6**	**0.2**
K1106157-025	0.409	50.3	**0.813**	20	**0.5**	**0.1**
K1106166-009	0.394	15.9	**2.478**	20	**0.2**	**0.0**
K1106166-015	0.432	17.6	**2.455**	20	**0.2**	**0.0**
K1106166-025	0.405	18.6	**2.177**	100	**0.9**	**0.3**
K1106166-025MS	0.410	18.6	**2.204**	100	**0.9**	**0.3**
K1106166-025MSD	0.412	18.6	**2.215**	100	**0.9**	**0.3**
Method Blank	0.400	20.000	**2.000**	20	**0.2**	**0.06**

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K1106157

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106157-009	10.249	14.846	20.211	5.365	52.3%
K1106157-015	10.063	14.696	20.644	5.948	59.1%
K1106157-025	10.131	14.897	19.992	5.095	50.3%
K1106157-025 Dup	10.164	15.112	20.086	4.974	48.9%

7/14/11

Date/Time in Freeze Dryer: 4:30pm 7-12-11 Date/Time out of Freeze Dryer: 8:30am 7/14/11

Balance ID: 21 B Date Balance checked: 7-12-11, 7-14-11

Comments:

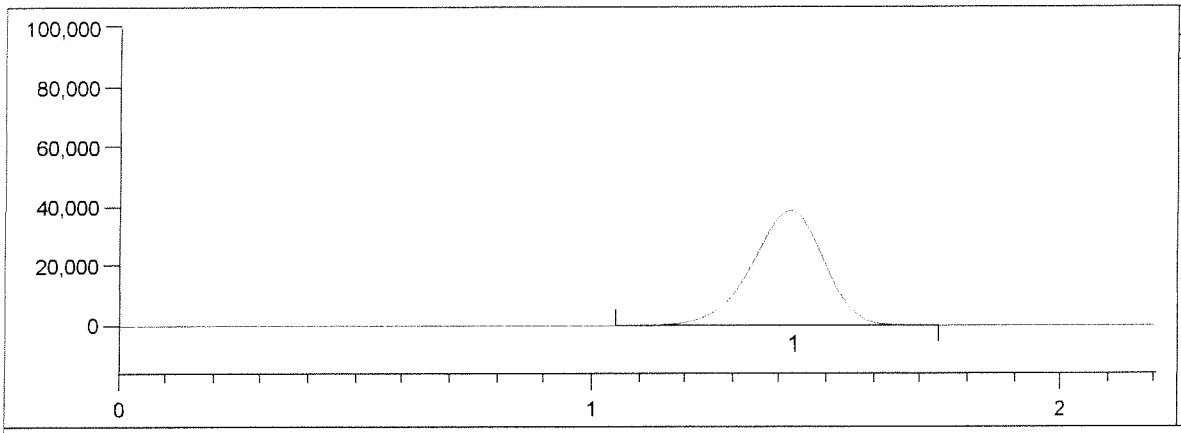
$\bar{x}$ = RPD

Analyst: [signature]	Date: 7/14/11
Reviewed By: Anna Cheatley	Date: 7/21/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

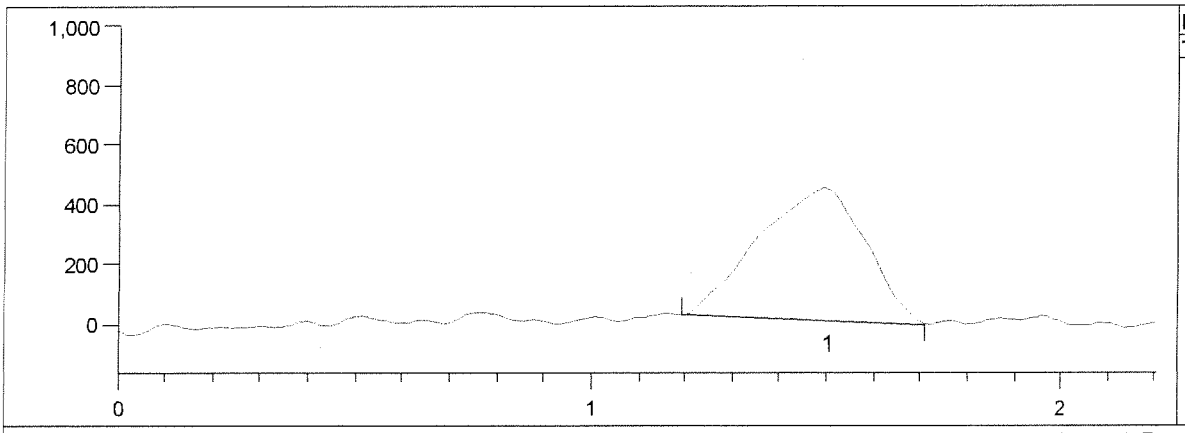


Date:	7/18/11
Time:	8:29 AM

Peak	rt	Area
1	1.45	4,275,377

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept

Notes:

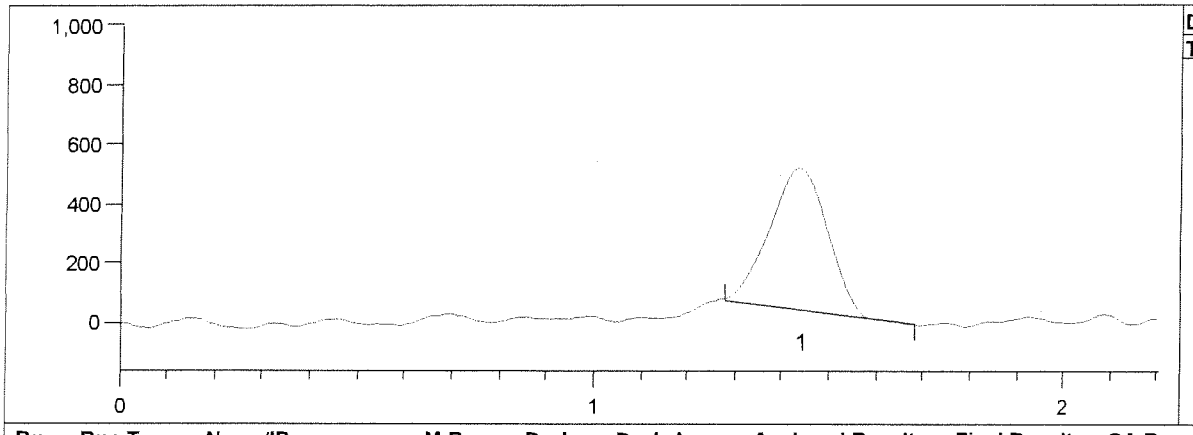


Date:	7/18/11
Time:	8:33 AM

Peak	rt	Area
1	1.52	70,960

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept

Notes:



Date:	7/18/11
Time:	8:36 AM

Peak	rt	Area
1	1.46	41,293

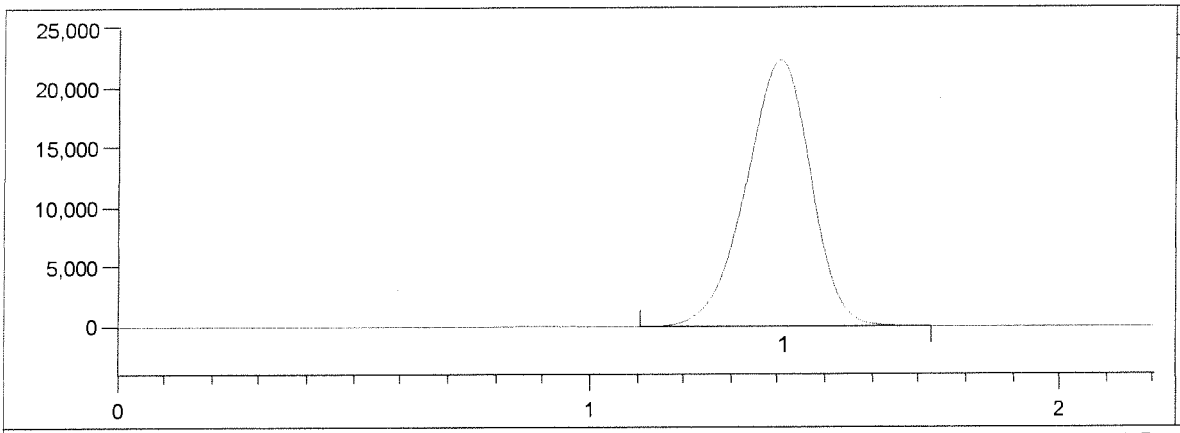
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

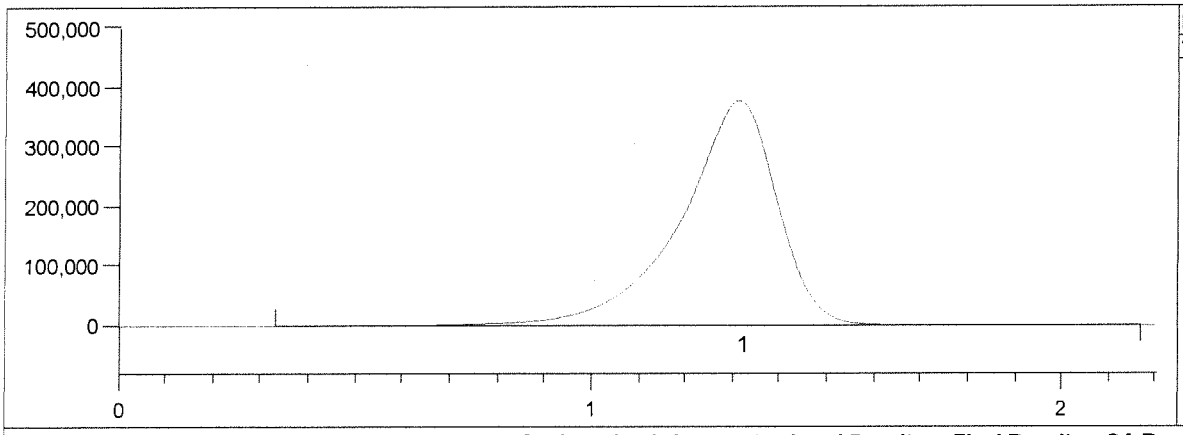


Date:	7/18/11
Time:	8:38 AM

Peak	rt	Area
1	1.43	2,201,449

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept

Notes:

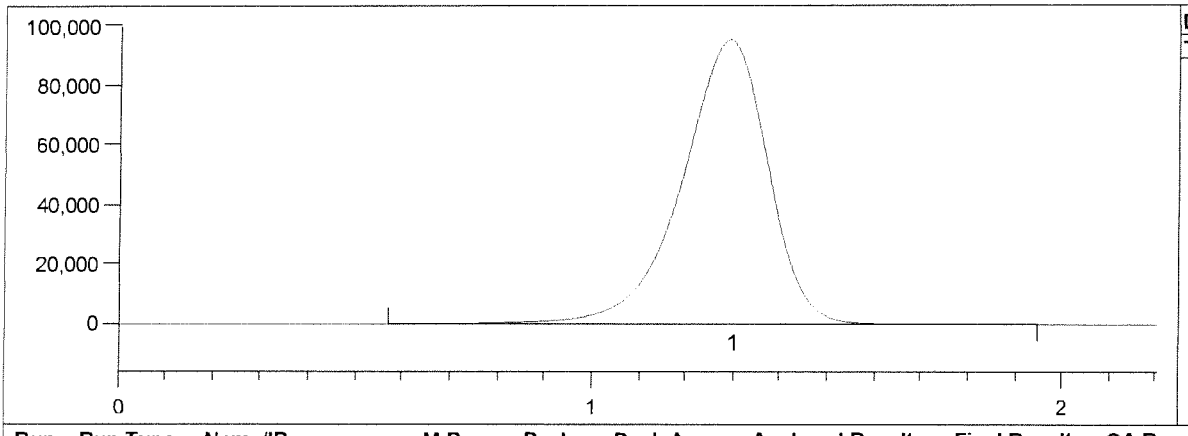


Date:	7/18/11
Time:	8:41 AM

Peak	rt	Area
1	1.34	55,771,809

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept

Notes:



Date:	7/18/11
Time:	8:44 AM

Peak	rt	Area
1	1.31	12,492,603

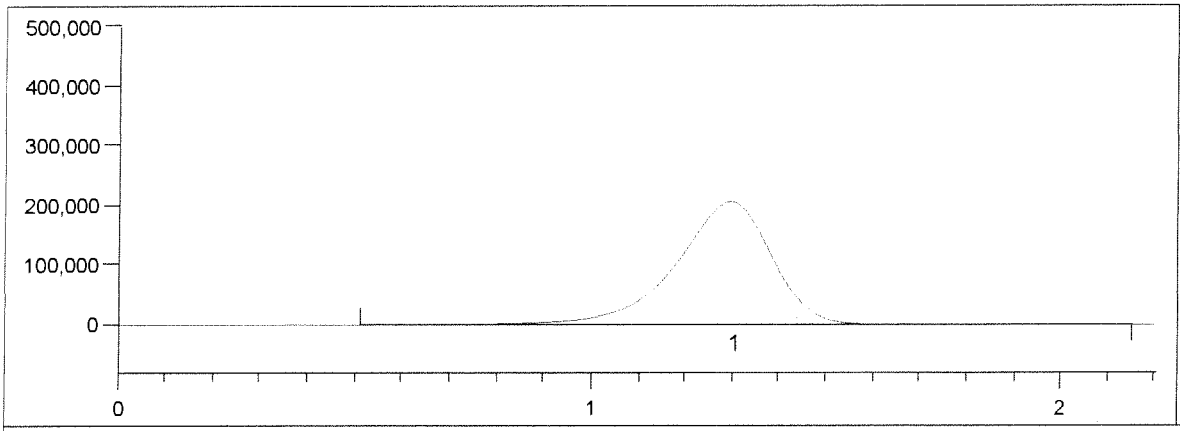
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

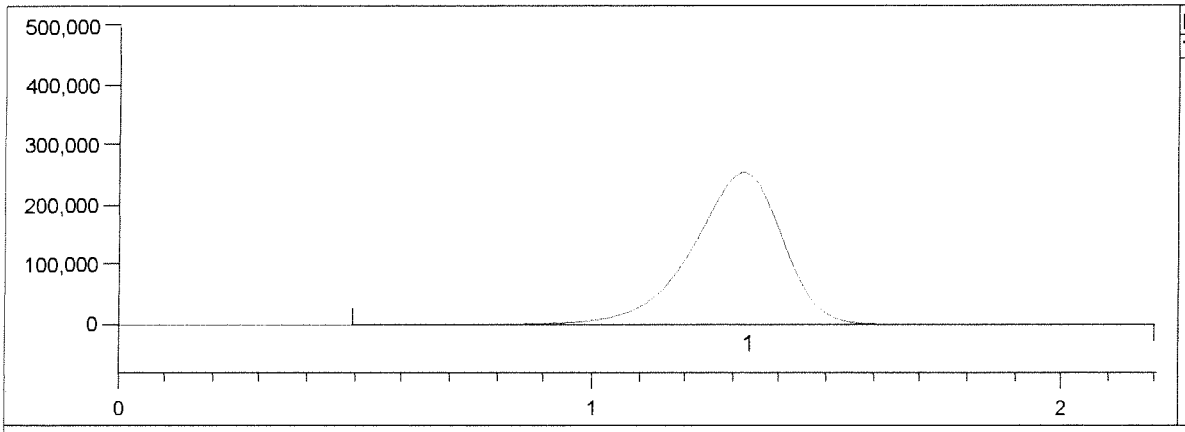


Date: 7/18/11
Time: 8:48 AM

Peak	rt	Area
1	1.32	30,397,517

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept

Notes:

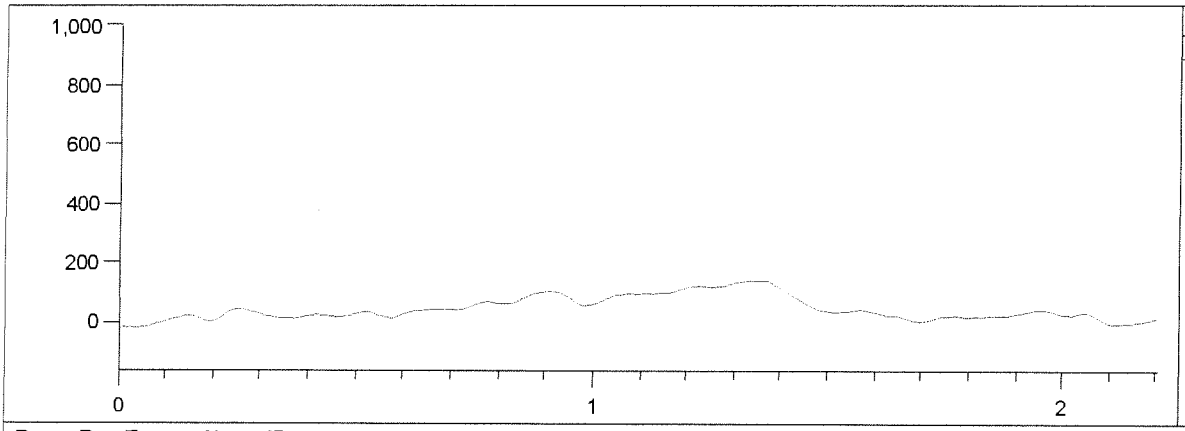


Date: 7/18/11
Time: 8:52 AM

Peak	rt	Area
1	1.35	35,575,102

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept

Notes:



Date: 7/18/11
Time: 8:56 AM

Peak	rt	Area

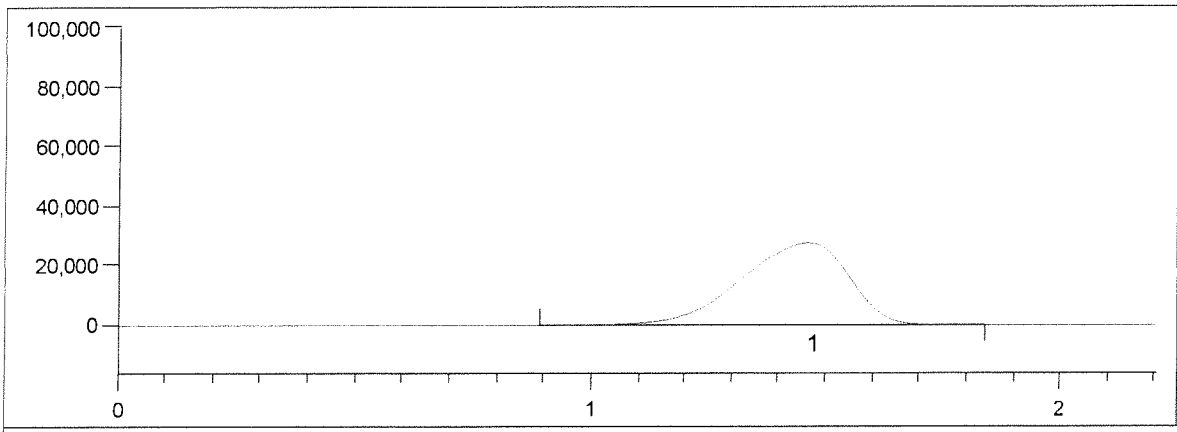
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

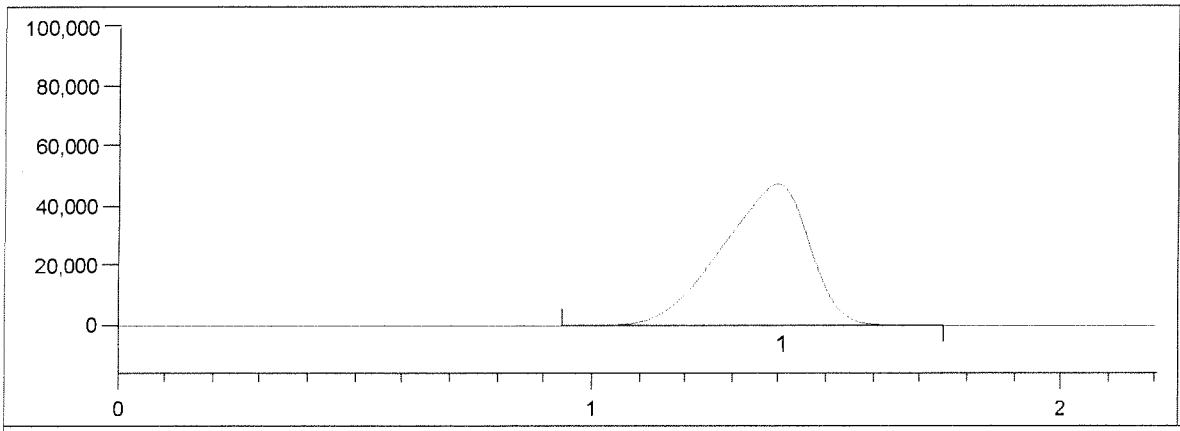


Date: 7/18/11
Time: 9:24 AM

Peak	rt	Area
1	1.49	4,537,778

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept

Notes:

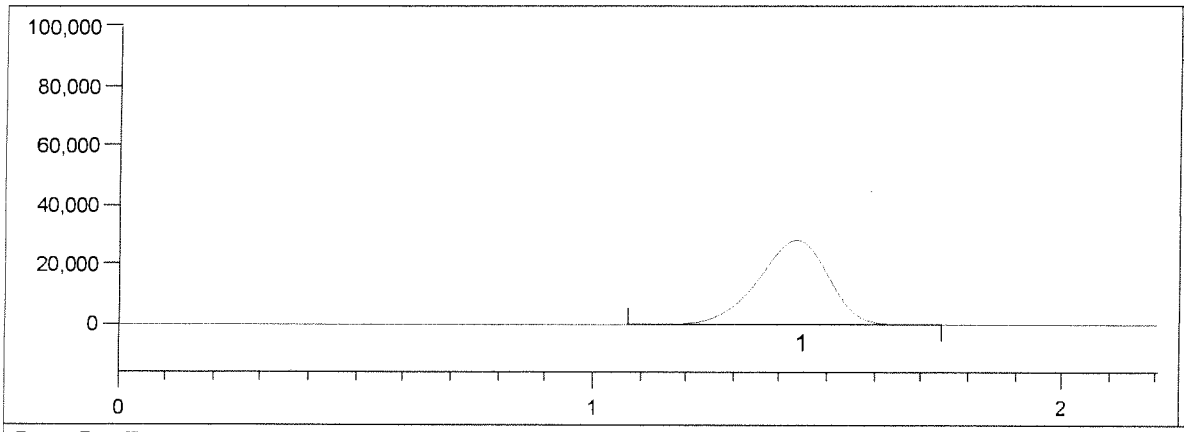


Date: 7/18/11
Time: 9:27 AM

Peak	rt	Area
1	1.42	6,354,186

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept

Notes:



Date: 7/18/11
Time: 9:29 AM

Peak	rt	Area
1	1.46	3,057,282

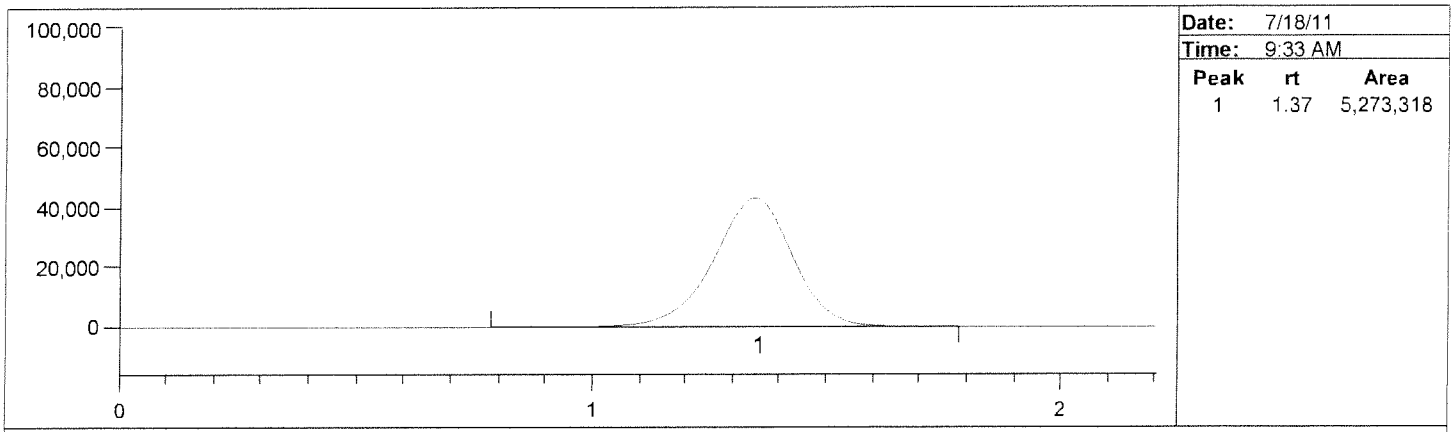
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

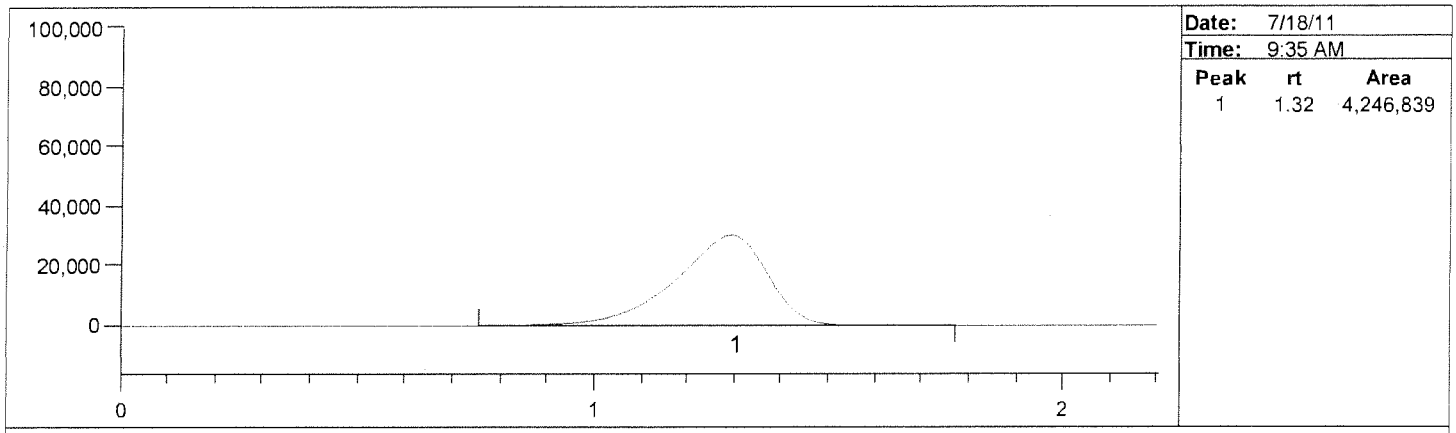


Date: 7/18/11
Time: 9:33 AM

Peak	rt	Area
1	1.37	5,273,318

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept

Notes:

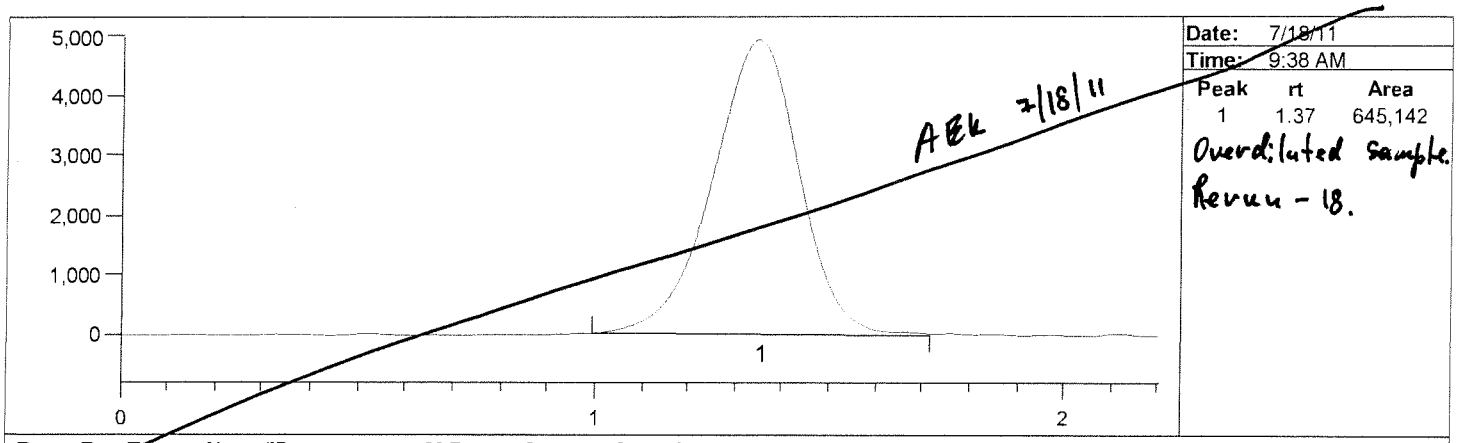


Date: 7/18/11
Time: 9:35 AM

Peak	rt	Area
1	1.32	4,246,839

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept

Notes:



Date: 7/18/11
Time: 9:38 AM

Peak	rt	Area
1	1.37	645,142

Overdiluted sample.
Rerun - 18.

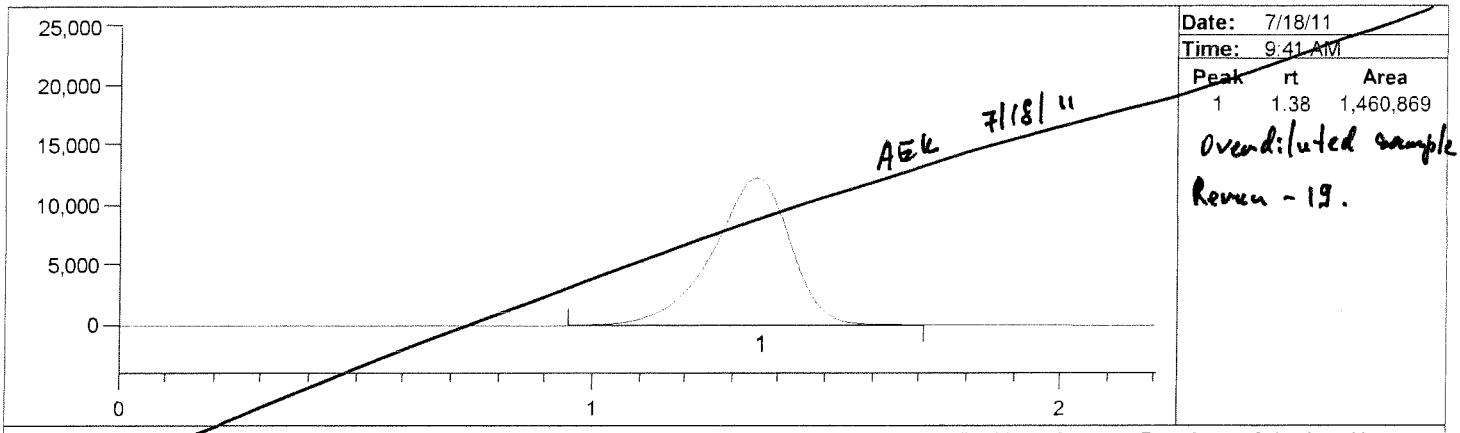
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009		1	645,142	76.8	3.93		< HS	reject

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

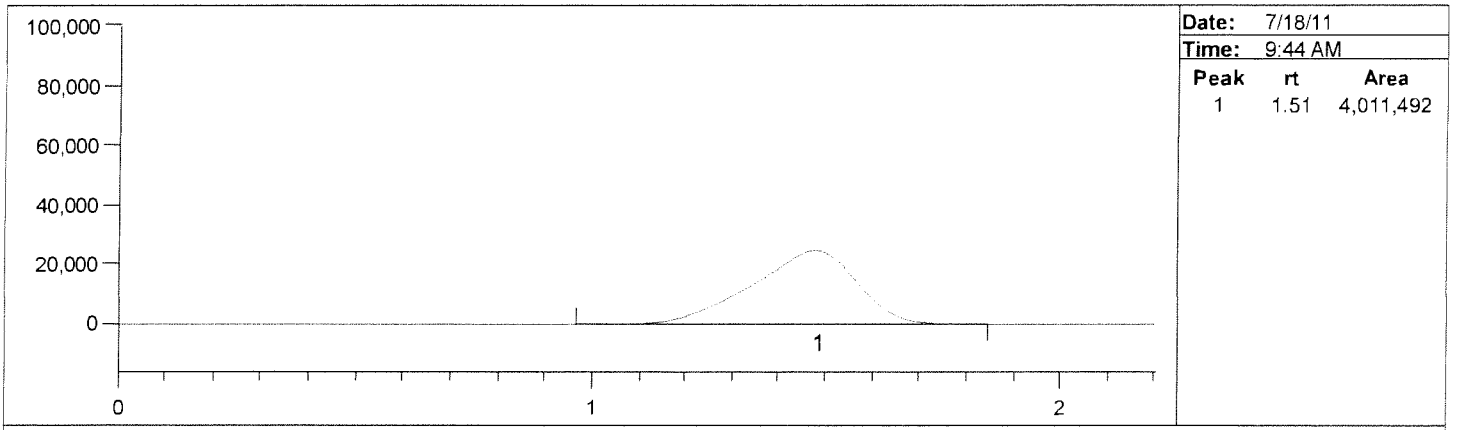


Date: 7/18/11
Time: 9:41 AM

Peak	rt	Area
1	1.38	1,460,869

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015		1	1,460,869	174	10.0		< HS	reject

Notes:

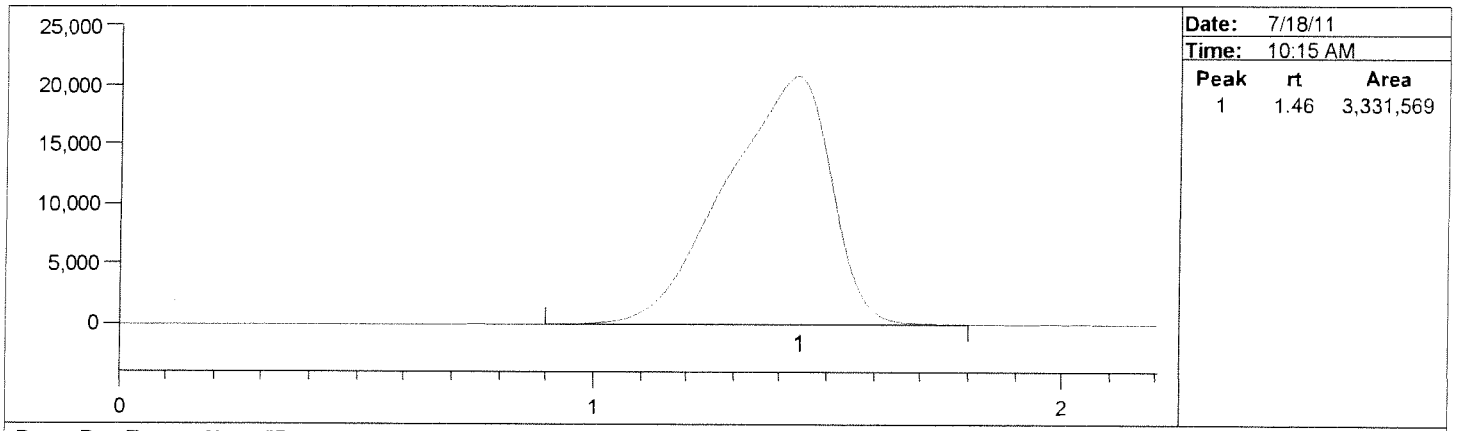


Date: 7/18/11
Time: 9:44 AM

Peak	rt	Area
1	1.51	4,011,492

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept

Notes:



Date: 7/18/11
Time: 10:15 AM

Peak	rt	Area
1	1.46	3,331,569

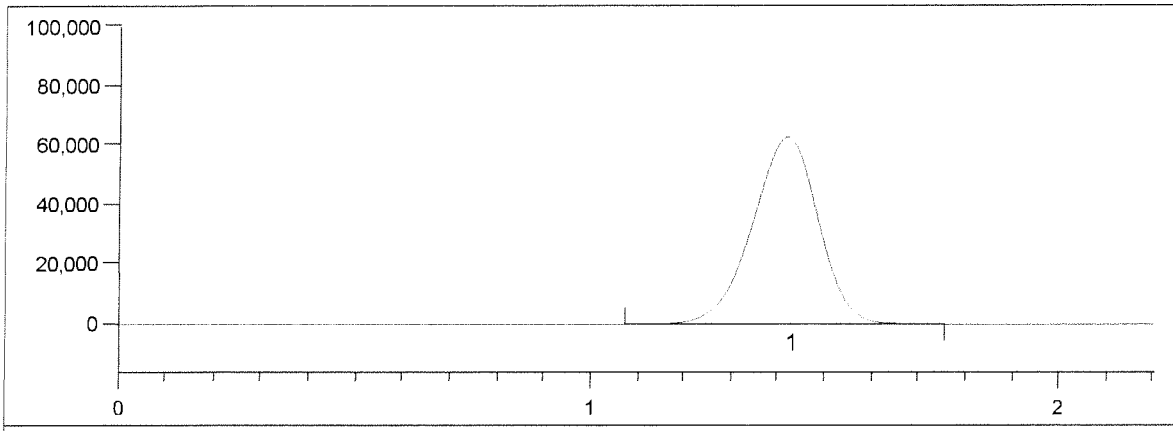
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

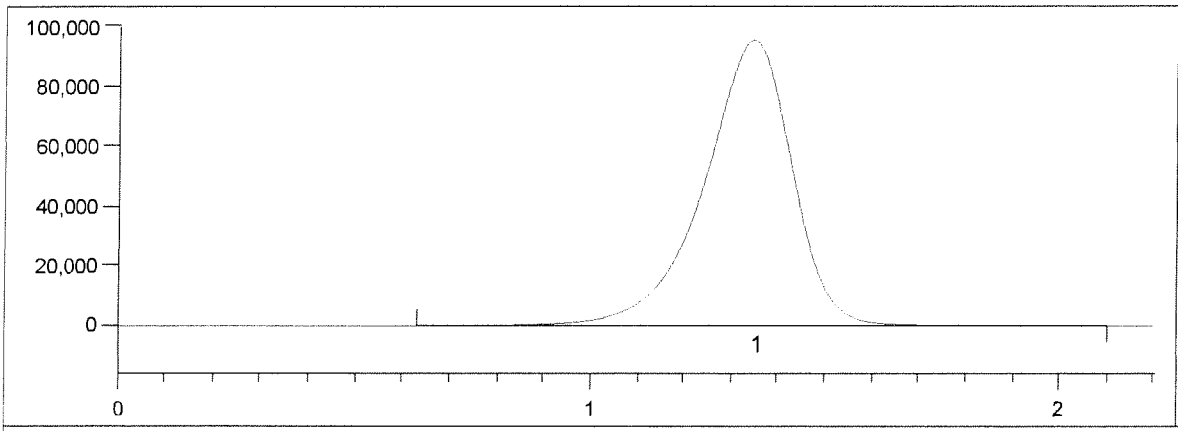


Date: 7/18/11
Time: 10:18 AM

Peak	rt	Area
1	1.44	6,292,061

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept

Notes:

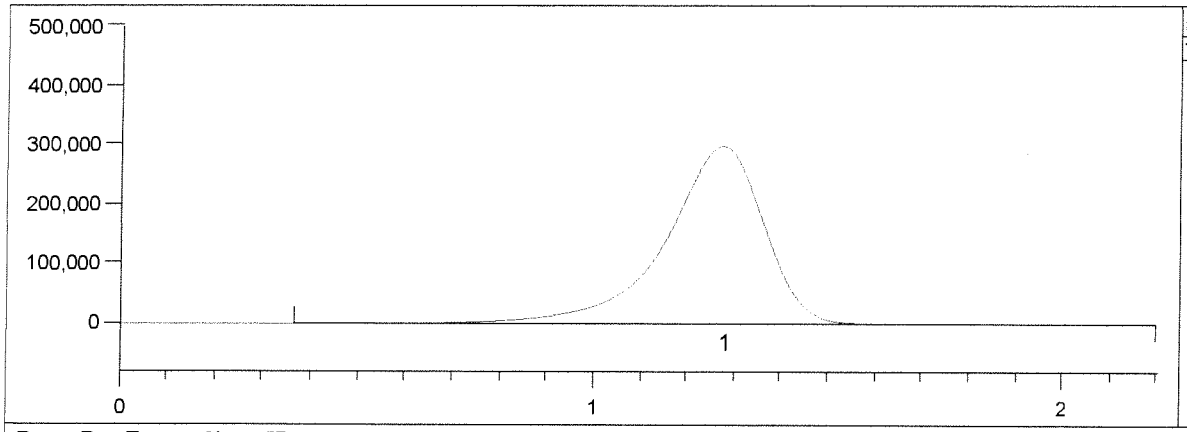


Date: 7/18/11
Time: 10:23 AM

Peak	rt	Area
1	1.37	12,938,810

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept

Notes:



Date: 7/18/11
Time: 10:26 AM

Peak	rt	Area
1	1.30	45,095,719

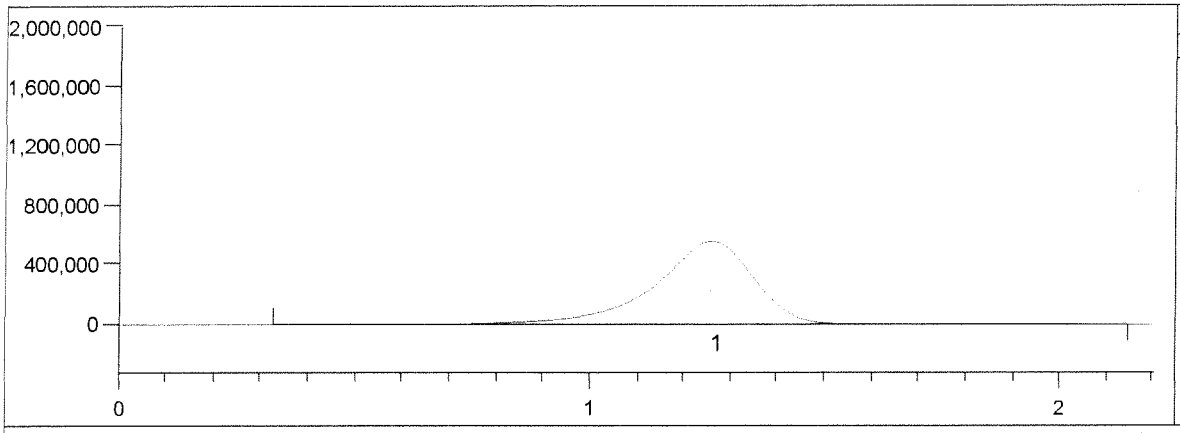
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

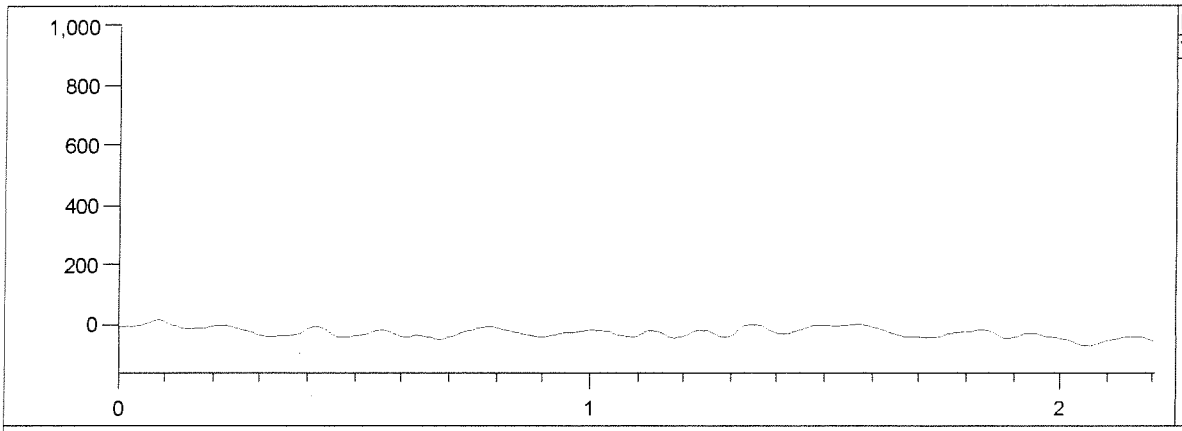


Date: 7/18/11
Time: 10:29 AM

Peak	rt	Area
1	1.28	85,712,221

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept

Notes:

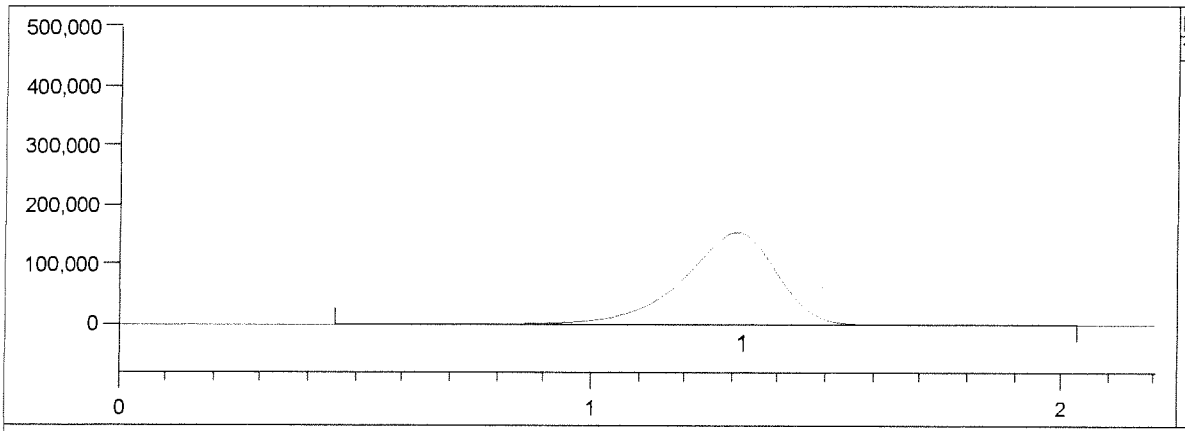


Date: 7/18/11
Time: 10:33 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:



Date: 7/18/11
Time: 10:58 AM

Peak	rt	Area
1	1.34	22,596,619

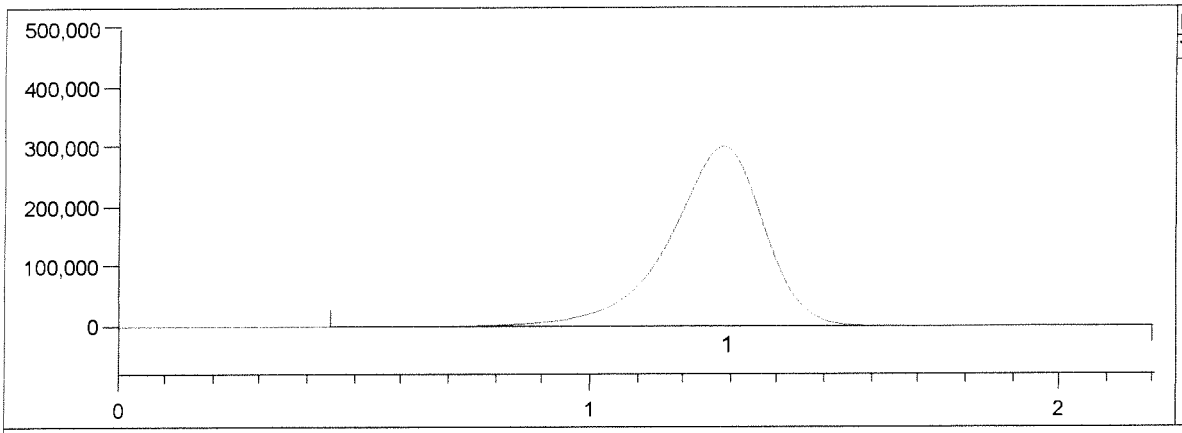
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

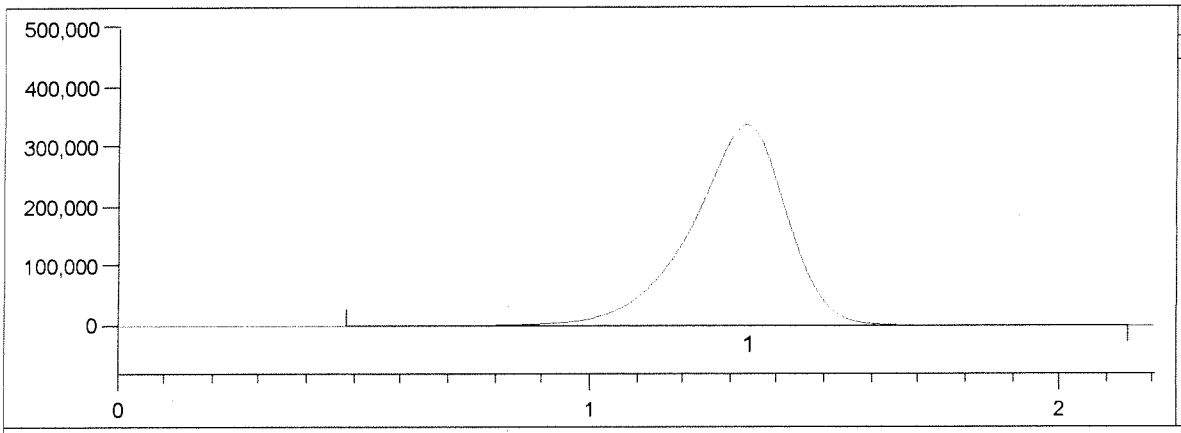


Date: 7/18/11
Time: 11:01 AM

Peak	rt	Area
1	1.31	43,769,737

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept

Notes:

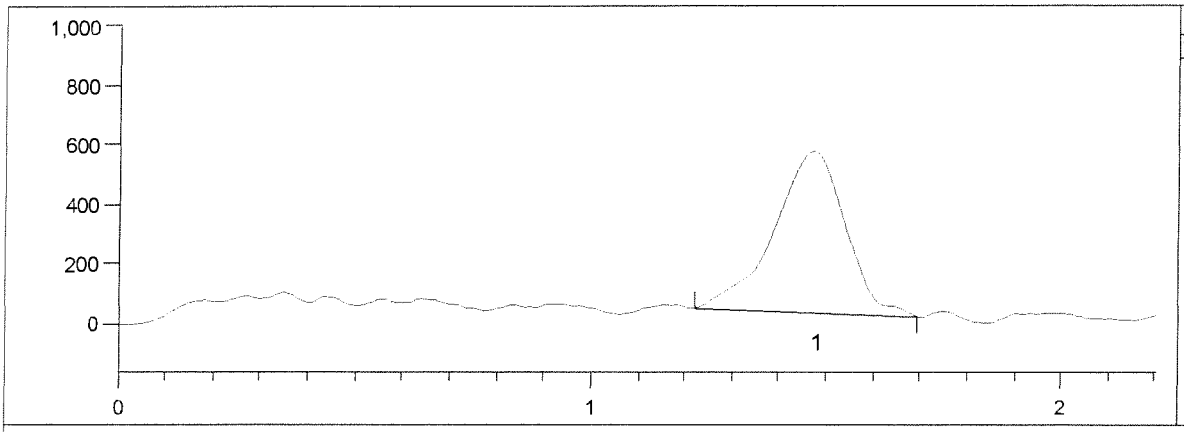


Date: 7/18/11
Time: 11:04 AM

Peak	rt	Area
1	1.36	49,516,237

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept

Notes:



Date: 7/18/11
Time: 11:07 AM

Peak	rt	Area
1	1.50	57,808

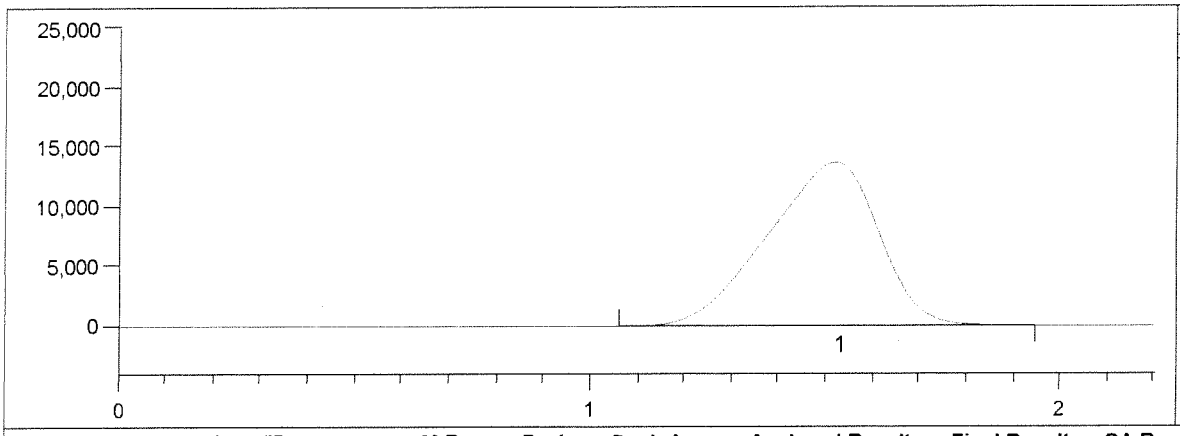
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

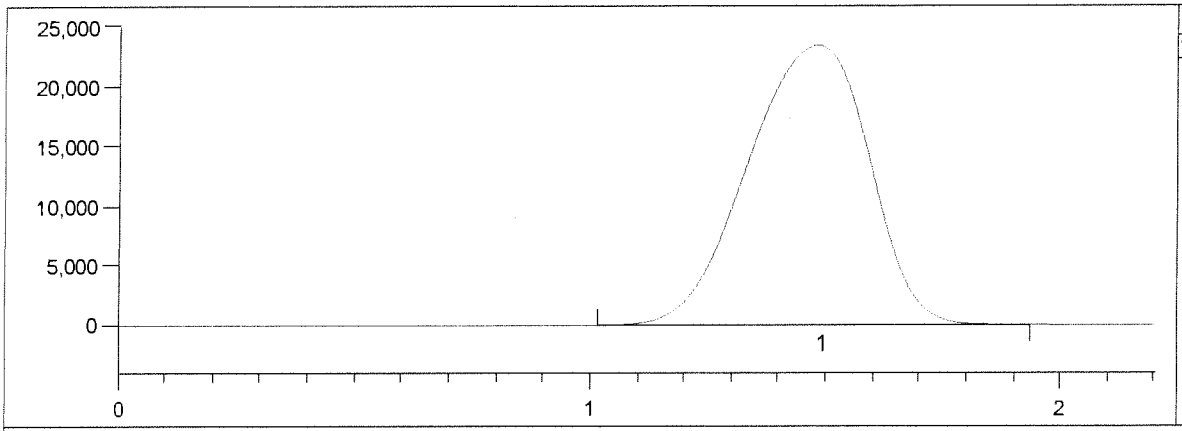


Date: 7/18/11
Time: 11:10 AM

Peak	rt	Area
1	1.55	2,304,787

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept

Notes:

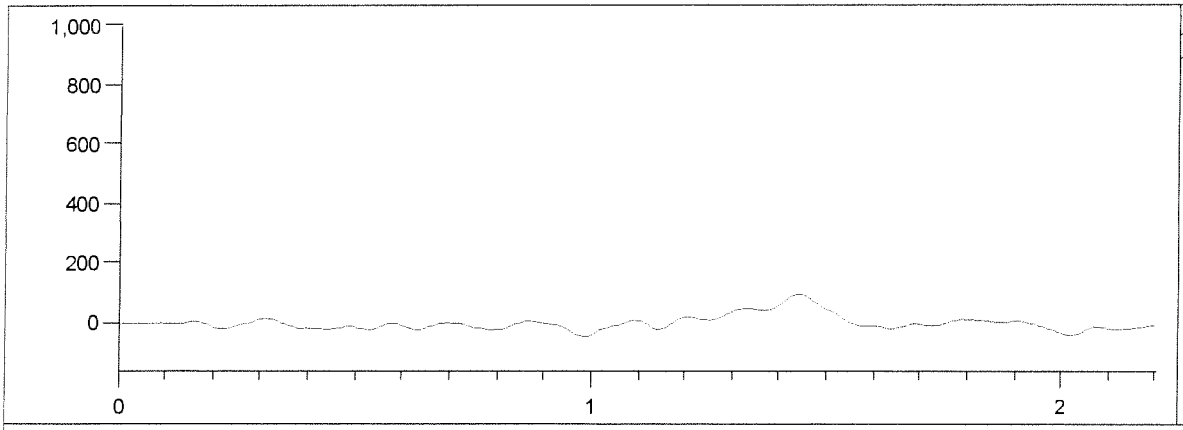


Date: 7/18/11
Time: 11:13 AM

Peak	rt	Area
1	1.51	4,319,605

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept

Notes:



Date: 7/18/11
Time: 11:16 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: URS Corporation
Project Name: East White Lake
Project No.: Exoskeleton

Service Request: K1106157

Sample Name:	Lab Code:
EWL-DES Exoskeleton Composite	K1106157-009
EWL-HOU Exoskeleton Composite	K1106157-015
EWL-BIL Exoskeleton Composite	K1106157-025
EWL-BIL Exoskeleton CompositeD	K1106157-025D
EWL-BIL Exoskeleton CompositeS	K1106157-025S
Method Blank	K1106157-MB

Comments:

Approved By: 3C **Date:** 8/2/11

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106157
Project No.:	Exoskeleton	**Date Collected:**	06/20/11
Project Name:	East White Lake	**Date Received:**	06/21/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-DES Exoskeleton Composite **Lab Code:** K1106157-009

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.262	0.031	5.0	07/14/11	07/25/11	0.367		
Barium	6020A	0.026	0.004	5.0	07/14/11	07/25/11	341		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106157
Project No.:	Exoskeleton	**Date Collected:**	05/23/11
Project Name:	East White Lake	**Date Received:**	05/24/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-HOU Exoskeleton Composite **Lab Code:** K1106157-015

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.295	0.035	5.0	07/14/11	07/25/11	0.635		
Barium	6020A	0.029	0.005	5.0	07/14/11	07/25/11	244		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106157
Project No.:	Exoskeleton	**Date Collected:**	06/09/11
Project Name:	East White Lake	**Date Received:**	06/10/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-BIL Exoskeleton Composite **Lab Code:** K1106157-025

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.249	0.030	5.0	07/14/11	07/25/11	1.370		
Barium	6020A	0.025	0.004	5.0	07/14/11	07/25/11	78.1		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106157
Project No.:	Exoskeleton	**Date Collected:**	
Project Name:	East White Lake	**Date Received:**	
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: Method Blank **Lab Code:** K1106157-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.075	0.009	5.0	07/14/11	07/25/11	0.009	U	
Barium	6020A	0.008	0.001	5.0	07/14/11	07/25/11	0.001	U	

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	24.8	99	25.0	25.1	100	24.9	100	6020A
Barium	100.0	100.3	100	25.0	25.1	100	25.1	100	6020A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				25.0	25.4	102	25.1	100	6020A
Barium				25.0	25.6	102	25.6	102	6020A

Metals

- 2a -

LOW LEVEL INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **SDG No.:** K1106157

Contract: Exoskeleton **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: CAS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICVS									
	Arsenic	0.93	1.00	93	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
	Barium	0.09	0.10	90	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
LLCCV2									
	Arsenic	1.08	1.00	108	70.0 - 130.0	MS	07/25/11	21:10	072511CMS
	Barium	0.11	0.10	110	70.0 - 130.0	MS	07/25/11	21:10	072511CMS
LLCCV3									
	Arsenic	0.99	1.00	99	70.0 - 130.0	MS	07/25/11	21:42	072511CMS
	Barium	0.11	0.10	110	70.0 - 130.0	MS	07/25/11	21:42	072511CMS

Metals

BLANKS

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Arsenic	0.120	U	0.120	U	0.120	U	0.120	U	6020A
Barium	0.016	U	0.016	U	0.016	U	0.073	J	6020A

Metals

BLANKS

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Arsenic			0.120	U					6020A
Barium			0.051	J					6020A

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.00	25.00	0.07	23.59	94			
Barium	0.00		0.13	0.12				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: URS Corporation
Service Request: K1106157
Project No.: Exoskeleton
Units: MG/KG
Project Name: East White Lake
Basis: WET
Matrix: TISSUE

Sample Name: EWL-BIL Exoskeleton Compos
Lab Code: K1106157-025S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	9.170		1.370		8.40	92.9		6020A
Barium	70 - 130	175		78.1		100.60	96.3		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: URS Corporation
Service Request: K1106157
Project No.: Exoskeleton
Units: UG/L
Project Name: East White Lake
Basis: WET
Matrix: WATER

Sample Name: Batch QC1A
Lab Code: K1106152-025A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	83.80		34.32		50.0	99		6020A
Barium	75 - 125	58.70		10.36		50.0	97		6020A

Metals

- 6 -

DUPLICATES

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL Exoskeleton Compo **Lab Code:** K1106157-025D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	1.370		1.450		5.7		6020A
Barium	30	78.1		78.9		1.0		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

-7-

LABORATORY CONTROL SAMPLE

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	167	158	94.6					
Barium	2000	1950	97.5					

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106157-SRM1	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Dorm-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	6.88	6.49	94	5.26 - 8.62	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106157-SRM2	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	21.6	20.1	93	15.8-28.1	

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton **Units:** UG/L

Project Name: East White Lake

Sample Name: Batch QC1L **Lab Code:** K1106152-025L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	34.322		33.995		1		MS
Barium	10.363		9.601		7		MS

Metals

- 10 -

DETECTION LIMITS

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

ICP/ICP-MS ID #: K-ICP-MS-03

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL mg/Kg	MDL mg/Kg	M
Arsenic	75		1.00	0.12	MS
Barium	137		0.100	0.016	MS

Comments:

Metals

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	2000	6020A
Barium	15.000	2000	6020A

Comments:

Metals
-13-
PREPARATION LOG

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton

Project Name: East White Lake

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1106157-009	07/14/11	0.5736	30.0
K1106157-015	07/14/11	0.5093	30.0
K1106157-025	07/14/11	0.6024	30.0
K1106157-025D	07/14/11	0.5984	30.0
K1106157-025S	07/14/11	0.5964	30.0
K1106157-MB	07/14/11	2.0000	30.0
K1106157-SRM1	07/14/11	0.3010	30.0
K1106157-SRM2	07/14/11	0.3020	30.0
LCSW	07/14/11	30.0	30.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton **Run Number:** 072511CMS03

Project Name: East White Lake

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 07/25/11 **End Date:** 07/25/11

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Cal. Blk	1.00	19:48				X	X																							
Cal. Stn	1.00	19:50				X	X																							
ICV1	1.00	19:53				X	X																							
CCV1	1.00	19:56				X	X																							
ICB1	1.00	19:58				X	X																							
CCB1	1.00	20:01				X	X																							
LLICVS	1.00	20:03				X	X																							
ICS-A1	1.00	20:06				X	X																							
ICS-AB1	1.00	20:09				X	X																							
K1106157-MB	5.00	20:11				X	X																							
LCSW	5.00	20:14				X	X																							
K1106157-SRM1	5.00	20:17																												
K1106157-SRM2	5.00	20:19																												
ZZZZZZ	5.00	20:22																												
ZZZZZZ	5.00	20:24																												
ZZZZZZ	5.00	20:27																												
CCV2	1.00	20:30				X	X																							
CCB2	1.00	20:32				X	X																							
ZZZZZZ	5.00	20:35																												
K1106152-025L	25.00	20:38				X	X																							
K1106152-025A	5.00	20:40				X	X																							
ZZZZZZ	5.00	20:43																												
ZZZZZZ	5.00	20:46																												
ZZZZZZ	5.00	20:48																												
ZZZZZZ	5.00	20:51																												
ZZZZZZ	5.00	20:54																												
ZZZZZZ	5.00	20:57																												
K1106157-009	5.00	20:59				X	X																							
CCV3	1.00	21:02				X	X																							
CCB3	1.00	21:05				X	X																							
LLCCV2	1.00	21:10				X	X																							
K1106157-015	5.00	21:13				X	X																							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: URS Corporation **Service Request:** K1106157

Project No.: Exoskeleton **Run Number:** 072511CMS03

Project Name: East White Lake

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 07/25/11 **End Date:** 07/25/11

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
K1106157-025	5.00	21:15				X	X																							
K1106157-025D	5.00	21:18				X	X																							
K1106157-025S	5.00	21:21				X	X																							
ZZZZZZ	5.00	21:24																												
ZZZZZZ	5.00	21:26																												
ZZZZZZ	5.00	21:29																												
ZZZZZZ	5.00	21:32																												
ZZZZZZ	5.00	21:34																												
CCV4	1.00	21:37				X	X																							
CCB4	1.00	21:40				X	X																							
LLCCV3	1.00	21:42				X	X																							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: Exoskeleton

Lab Code: CAS Case No.: _____ NRAS No. _____ SDG NO.: K1106157

ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 07/25/2011 End Date: 07/25/2011

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Ga_71	Q	Element Rh_103	Q	Element In_115	Q	Element	Q	Element	Q	Element	Q
Cal. Blk	Cal. Blk	1948	100		100		100							
Cal. Stn	Cal. Stn	1950	99		99		101							
ICV1	ICV1	1953	99		99		100							
CCV1	CCV1	1956	98		99		100							
ICB1	ICB1	1958	97		98		99							
CCB1	CCB1	2001	97		99		99							
LLICVS	LLICVS	2003	99		100		101							
ICS-A1	ICSA	2006	82		80		84							
ICS-AB1	ICSAB	2009	85		82		86							
K1106157-MB	Method Blank	2011	95		95		96							
LCSW	LCSW	2014	98		98		99							
K1106157-SRM1	DORM	2017	92		90		93							
K1106157-SRM2	TORT	2019	90		90		94							
ZZZZZZ	ZZZZZZ	2022												
ZZZZZZ	ZZZZZZ	2024												
ZZZZZZ	ZZZZZZ	2027												
CCV2	CCV2	2030	93		94		97							
CCB2	CCB2	2032	92		92		94							
ZZZZZZ	ZZZZZZ	2035												
K1106152-025L	Batch QC1L	2038	91		92		96							
K1106152-025A	Batch QC1A	2040	87		87		92							
ZZZZZZ	ZZZZZZ	2043												
ZZZZZZ	ZZZZZZ	2046												
ZZZZZZ	ZZZZZZ	2048												
ZZZZZZ	ZZZZZZ	2051												
ZZZZZZ	ZZZZZZ	2054												
ZZZZZZ	ZZZZZZ	2057												
K1106157-009	EWL-DES	2059	89		87		93							
CCV3	CCV3	2102	100		101		103							
CCB3	CCB3	2105	98		98		101							
LLCCV2	LLCCV2	2110	95		96		99							
K1106157-015	EWL-HOU	2113	92		89		94							
K1106157-025	EWL-BIL	2115	93		90		95							
K1106157-025D	EWL-BIL	2118	93		90		96							
K1106157-025S	EWL-BIL	2121	95		92		98							
ZZZZZZ	ZZZZZZ	2124												
ZZZZZZ	ZZZZZZ	2126												
ZZZZZZ	ZZZZZZ	2129												
ZZZZZZ	ZZZZZZ	2132												
ZZZZZZ	ZZZZZZ	2134												
CCV4	CCV4	2137	94		95		97							
CCB4	CCB4	2140	93		93		96							
LLCCV3	LLCCV3	2142	93		92		95							

Conversion from dry weight to wet weight:

Sample I.D.	Dry Weight	Percent Solids	Wet Weight
K1106152-009	0.3020	19.6	1.5408
K1106152-015	0.3020	23.5	1.2851
K1106152-025	0.3010	23.1	1.3030
K1106152-025D	0.3020	23.1	1.3074
K1106152-025S	0.3030	23.1	1.3117
K1106154-009	0.3020	11.0	2.7455
K1106154-015	0.3000	12.2	2.4590
K1106154-025	0.3010	21.2	1.4198
K1106154-025D	0.3020	21.2	1.4245
K1106154-025S	0.3030	21.2	1.4292
K1106157-009	0.3000	52.3	0.5736
K1106157-015	0.3010	59.1	0.5093
K1106157-025	0.3030	50.3	0.6024
K1106157-025D	0.3010	50.3	0.5984
K1106157-025S	0.3000	50.3	0.5964
K1106166-009	0.3010	15.9	1.8931
K1106166-015	0.3030	17.6	1.7216
K1106166-025	0.3030	18.6	1.6290
K1106166-025D	0.3020	18.6	1.6237
K1106166-025S	0.3030	18.6	1.6290

SB 7/28/11

Columbia Analytical Services
Metals Tissue Digestion Sheet

Service Request Number(s) : K1106152, K1106154, K1106157, K1106166 137816

Star Lims Run No.: Analysis for : ICP (ICP-MS) GFAA

Method : 6020A other: _____

Sample	Initial Weight (g)	freeze Dry	Wet	Final Volume (ml)	Matrix
Blank			X	30	15% HNO3
LCS			X		15% HNO3
Dorm-3	0.301		X		15% HNO3
Tort-2	0.302		X		15% HNO3
K1106152-009	0.302	X			15% HNO3
K1106152-015	0.302	X			15% HNO3
K1106152-025	0.301	X			15% HNO3
K1106152-025 Dup	0.302	X			15% HNO3
K1106152-025 MS	0.303	X			15% HNO3
K1106154-009	0.302	X			15% HNO3
K1106154-015	0.300	X			15% HNO3
K1106154-025	0.301	X			15% HNO3
K1106154-025 Dup	0.302	X			15% HNO3
K1106154-025 MS	0.303	X			15% HNO3
K1106157-009	0.300	X			15% HNO3
K1106157-015	0.301	X			15% HNO3
K1106157-025	0.303	X			15% HNO3
K1106157-025 Dup	0.301	X			15% HNO3
K1106157-025 MS	0.300	X			15% HNO3
K1106166-009	0.301	X			15% HNO3
K1106166-015	0.303	X			15% HNO3
K1106166-025	0.303	X			15% HNO3
K1106166-025 Dup	0.302	X			15% HNO3
K1106166-025 MS	0.303	X			15% HNO3
		30 7/18/11			

Time Digestion Started: 7/14/11 5:00pm **Oven Temp:** 105 **Time Digestion Ended:** 7:00pm 7/17/11

Lot # Acids Used: HNO3 ~~Set R 7/14/11~~ 49713 **Oven Temp:** 109

LCS: Dorm-3 (96.1% Solids) ID#14879, Tort-2(94.7% Solids) ID#29883 **Balance I.D.:** 21B

SPIKE INFO 7R 7/17/11 0.300

K-MET SS1 ID# 28451, ~~4.50~~ **mls added**

K-MET SS3 ID#28474, 0.050 **mls added**

K-MET SS4 ID#28373, 0.050 **mls added**

K-MET SS2 ID#28554, 0 **mls added**

K-MET SS5 ID#29301, 0.300 **mls added**

Additional spikes: _____

Comments: _____

Analyst _____ **Date** 7/14/11

Reviewer _____ **Date** 7/22/11

TissueDig.xls
7/14/2011

Service Request # _K1106157_____
Calibration __072511CMS03_____
QC in calibration___072511CMS03_____
QC Service Request #___K1106157_____
STARLIMS run # ___254739_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. LLICV run	X		
14. Cd Correction Applied	X	X	
15. ICSA and ICSAB in control	X		
16. Serial dilution run	X		
17. Post spike in control	X		
18. Was run stop prematurely, If so why?		X	

Comments:

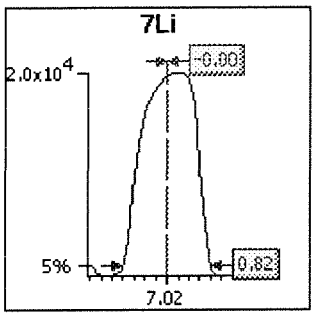
Primary Review by JDB Date 7/26/11
Secondary Review by _____ Date 7/26/11
R:\icp\misc\data review forms\icpms review form

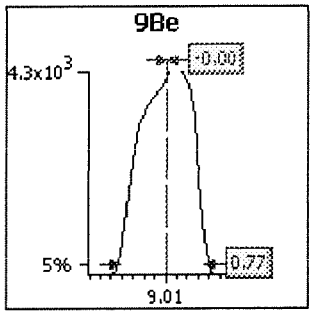
Performance Report

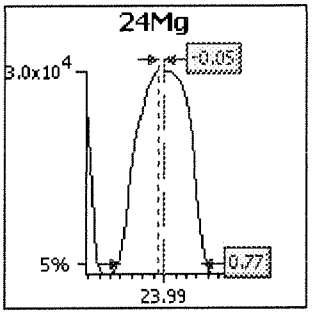
Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

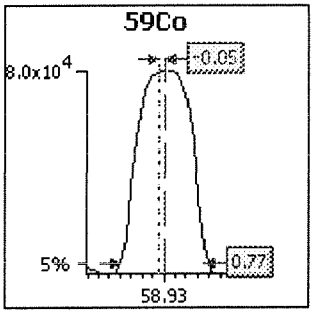
Mass Calibration verification

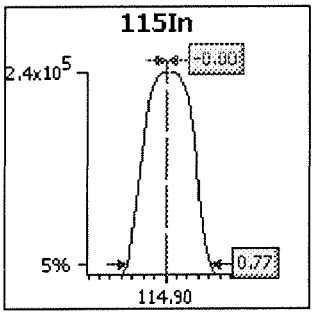
Acquisition parameters
Sweeps : 100
Dwell : 1.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum

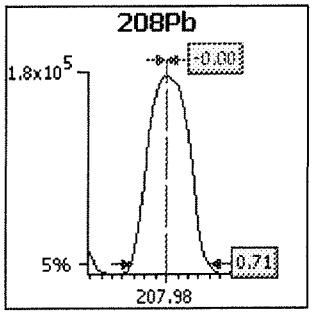


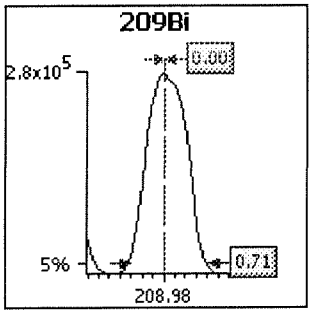


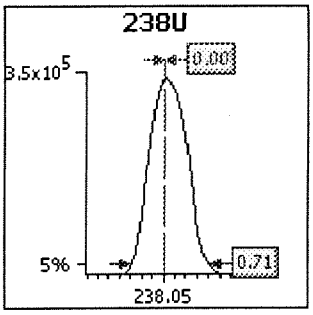












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.90	0.60	0.10	0.82	-0.00
9Be	0.90	0.60	0.10	0.77	-0.00
24Mg	0.90	0.60	0.10	0.77	-0.05
59Co	0.90	0.60	0.10	0.77	-0.05
115In	0.90	0.60	0.10	0.77	-0.00
208Pb	0.90	0.60	0.10	0.71	-0.00
209Bi	0.90	0.60	0.10	0.71	0.00
238U	0.90	0.60	0.10	0.71	0.00

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Tune conditions

Major	
Extraction	-122
Lens 1	3.8
Focus	22.4
D1	-36.9
Pole Bias	0.5
Hexapole Bias	0.6
Nebuliser	0.78
Sampling Depth	70

Minor	
Lens 2	-16.5
Lens 3	-187.5
Forward power	1247
Horizontal	123
Vertical	305
D2	-147
DA	-35.3
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	115
High resolution	125
Analogue Detector	1800
PC Detector	3750

Add. Gases

Sensitivity and stability results

Acquisition parameters
Sweeps : 400

Run	Time	5Bkg	7Li	9Be	24Mg	59Co	115In	140Ce	156Ce O	208Pb
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	-	-	5.0%
	Countrate	-	>1000	>1000	>1000	>1000	>1000	-	-	>1000
1	9:14:47 AM	0.000	22206.088	4623.425	31765.651	83586.510	246835.65	277700.92	4135.691	182092.85
2	9:16:01 AM	0.000	21986.806	4584.906	31601.079	82773.876	246324.05	277752.46	4148.947	182861.29
3	9:17:14 AM	0.000	22481.514	4611.419	31917.181	83515.361	248154.07	279178.92	4073.162	183171.95
4	9:18:27 AM	0.000	22185.037	4656.942	31580.508	82715.094	246120.91	277306.66	4103.176	182404.25
5	9:19:40 AM	0.000	22596.047	4673.701	31791.742	83502.241	247094.28	278116.85	4191.966	183633.37
x		0.000	22291.098	4630.079	31731.232	83218.616	246905.79	278011.16	4130.588	182832.74
σ		0.00	245.11	35.56	140.61	434.50	798.92	713.15	45.22	609.91
%RSD		0.000	1.100	0.768	0.443	0.522	0.324	0.257	1.095	0.334

Run	Time	209Bi	220Bkg	238U
Dwell (mSecs)		10.0	10.0	10.0
Limits	%RSD	5.0%	-	5.0%
	Countrate	>1000	-	>1000
1	9:14:47 AM	280521.57	0.000	358531.50
2	9:16:01 AM	281510.70	0.000	359822.53
3	9:17:14 AM	282585.28	0.500	362153.66
4	9:18:27 AM	281348.80	0.000	360010.25
5	9:19:40 AM	282502.26	0.000	362593.95
x		281693.72	0.100	360622.38
σ		862.41	0.22	1704.27
%RSD		0.306	223.607	0.473

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0200
1	9:14:47 AM	0.015
2	9:16:01 AM	0.015
3	9:17:14 AM	0.015
4	9:18:27 AM	0.015
5	9:19:40 AM	0.015
x		0.0149
σ		0.00
%RSD		1.2102

Result : The performance report passed.

Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	Cal. Blk	Blank	1.000	0	1	1	150
2	Cal. Stn	Fully Quant Standard	1.000	0	1	2	150
3	ICV1	Unknown	1.000	0	1	3	150
4	CCV1	Unknown	1.000	0	1	2	150
5	ICB1	Unknown	1.000	0	1	1	150
6	CCB1	Unknown	1.000	0	1	1	150
7	LLICVS	Unknown	1.000	0	1	4	150
8	ICSA	Unknown	1.000	0	1	5	150
9	ICSAB	Unknown	1.000	0	1	6	150
10	K1106152-MB 1/5	Unknown	1.000	1	1	1	150
11	LCSW 1/5	Unknown	1.000	1	1	2	150
12	DORM 1/5	Unknown	1.000	1	1	3	150
13	TORT 1/5	Unknown	1.000	1	1	4	150
14	K1106152-009 1/5	Unknown	1.000	1	1	5	150
15	K1106152-015 1/5	Unknown	1.000	1	1	6	150
16	K1106152-025 1/5	Unknown	1.000	1	1	7	150
17	CCV2	Unknown	1.000	0	1	2	150
18	CCB2	Unknown	1.000	0	1	1	150
19	K1106152-025D 1/5	Unknown	1.000	1	1	8	150
20	K1106152-025L 1/5	Unknown	1.000	1	1	9	150
21	K1106152-025A 1/5	Unknown	1.000	1	1	10	150
22	K1106152-025S 1/5	Unknown	1.000	1	1	11	150
23	K1106154-009 1/5	Unknown	1.000	1	1	12	150
24	K1106154-015 1/5	Unknown	1.000	1	2	1	150
25	K1106154-025 1/5	Unknown	1.000	1	2	2	150
26	K1106154-025D 1/5	Unknown	1.000	1	2	3	150
27	K1106154-025S 1/5	Unknown	1.000	1	2	4	150
28	K1106157-009 1/5	Unknown	1.000	1	2	5	150
29	CCV3	Unknown	1.000	0	1	2	150
30	CCB3	Unknown	1.000	0	1	1	150
31	LLCCV2	Unknown	1.000	0	1	4	150
32	K1106157-015 1/5	Unknown	1.000	1	2	6	150
33	K1106157-025 1/5	Unknown	1.000	1	2	7	150
34	K1106157-025D 1/5	Unknown	1.000	1	2	8	150
35	K1106157-025S 1/5	Unknown	1.000	1	2	9	150
36	K1106166-009 1/5	Unknown	1.000	1	2	10	150
37	K1106166-015 1/5	Unknown	1.000	1	2	11	150
38	K1106166-025 1/5	Unknown	1.000	1	2	12	150
39	K1106166-025D 1/5	Unknown	1.000	1	3	1	150
40	K1106166-025S	Unknown	1.000	1	3	2	150
41	CCV4	Unknown	1.000	0	1	2	150
42	CCB4	Unknown	1.000	0	1	1	150
43	LLCCV3	Unknown	1.000	0	1	4	150

Dilution Corrected Concentrations

Cal. Blk 7/25/2011 7:48:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:24	99.0%	0.0000	0.0802	-0.1049	0.0697	98.9%	98.7%	-0.0022
2	19:48:41	101.2%	-0.0202	-0.0462	0.0665	-0.1182	101.1%	100.9%	-0.0009
3	19:48:57	99.9%	0.0201	-0.0340	0.0383	0.0485	100.0%	100.4%	0.0031
x		100.0%	0.0000	0.0000	-0.0000	0.0000	100.0%	100.0%	-0.0000
σ		1.1%	0.0202	0.0697	0.0919	0.1029	1.1%	1.2%	0.0028
%RSD		1.1	0.0000	0.0000	0.0000	0.0000	1.1	1.2	0.0000

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:48:24	0.0003	0.0007
2	19:48:41	0.0010	0.0000
3	19:48:57	-0.0013	-0.0007
x		-0.0000	0.0000
σ		0.0012	0.0007
%RSD		0.0000	0.0000

Cal. Stn 7/25/2011 7:50:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:50:44	97.4%	25.1399	24.7348	25.1750	25.0817	97.2%	98.3%	25.1977
2	19:51:01	99.9%	24.7859	24.9687	24.8226	24.7612	100.1%	102.1%	24.5238
3	19:51:18	100.2%	25.0742	25.2966	25.0024	25.1570	100.5%	101.4%	25.2785
x		99.2%	25.0000	25.0000	25.0000	25.0000	99.3%	100.6%	25.0000
σ		1.5%	0.1883	0.2822	0.1762	0.2102	1.8%	2.0%	0.4144
%RSD		1.5	0.7533	1.1288	0.7050	0.8407	1.8	2.0	1.6574

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:50:44	25.1884	25.0694
2	19:51:01	24.5550	24.6070
3	19:51:18	25.2566	25.3236
x		25.0000	25.0000
σ		0.3869	0.3633
%RSD		1.5474	1.4532

ICV1 7/25/2011 7:53:22 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:22	97.6%	24.7893	26.2531	25.6672	24.7835	97.8%	98.3%	100.5858
2	19:53:39	99.6%	24.8304	24.6038	25.1208	24.8302	99.3%	100.4%	101.0716
3	19:53:55	100.4%	24.8304	25.4895	25.1111	24.9097	100.1%	101.7%	100.6995
x		99.2%	24.8167	25.4488	25.2997	24.8411	99.1%	100.1%	100.7856
σ		1.4%	0.0238	0.8254	0.3183	0.0638	1.2%	1.7%	0.2541
%RSD		1.4	0.0957	3.2434	1.2583	0.2568	1.2	1.7	0.2521

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:53:22	100.4979	104.1746
2	19:53:39	99.9873	104.5875
3	19:53:55	100.5339	104.3110
x		100.3397	104.3577
σ		0.3057	0.2104
%RSD		0.3047	0.2016

CCV1 7/25/2011 7:56:02 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:02	97.0%	24.9811	25.9538	25.3871	25.6478	97.4%	98.2%	25.0097
2	19:56:19	98.0%	24.9097	25.5188	25.4736	25.2765	98.5%	99.7%	25.4247
3	19:56:37	98.2%	25.3698	24.8088	24.6192	24.9617	99.7%	101.5%	24.9522
x		97.7%	25.0869	25.4271	25.1600	25.2953	98.5%	99.8%	25.1289
σ		0.6%	0.2476	0.5780	0.4703	0.3434	1.2%	1.7%	0.2578
%RSD		0.7	0.9871	2.2731	1.8694	1.3577	1.2	1.7	1.0260

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:56:02	25.0456	24.9841
2	19:56:19	25.3132	25.3080
3	19:56:37	24.9474	25.1083
x		25.1020	25.1335
σ		0.1893	0.1634
%RSD		0.7542	0.6500

ICB1 7/25/2011 7:58:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:52	96.7%	0.0267	0.1452	0.0579	0.1823	97.4%	97.1%	0.0062
2	19:59:09	94.6%	-0.0384	0.1062	0.2146	-0.1174	95.4%	96.0%	0.0098
3	19:59:26	100.3%	-0.0207	-0.0354	-0.1495	-0.1854	101.2%	102.4%	0.0108
x		97.2%	-0.0108	0.0720	0.0410	-0.0401	98.0%	98.5%	0.0089
σ		2.9%	0.0337	0.0950	0.1826	0.1956	3.0%	3.5%	0.0024
%RSD		3.0	310.5099	131.9958	445.4244	487.2992	3.0	3.5	27.4426

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:58:52	0.0012	0.0028
2	19:59:09	0.0048	0.0063
3	19:59:26	0.0161	0.0166
x		0.0073	0.0086
σ		0.0078	0.0072
%RSD		105.7930	83.9788

CCB1 7/25/2011 8:01:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:24	96.5%	0.0030	0.0218	0.3092	0.0024	97.9%	98.1%	-0.0008
2	20:01:41	97.9%	-0.0120	0.0645	-0.1944	0.0019	99.0%	99.8%	0.0011
3	20:01:58	97.8%	0.0255	0.0743	-0.0342	0.1319	99.0%	100.2%	0.0045
x		97.4%	0.0055	0.0536	0.0268	0.0454	98.6%	99.4%	0.0016
σ		0.8%	0.0189	0.0279	0.2573	0.0749	0.6%	1.1%	0.0027
%RSD		0.8	345.3118	52.1393	958.5967	164.8773	0.6	1.1	166.5632

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:01:24	0.0011	0.0016
2	20:01:41	0.0067	0.0040
3	20:01:58	0.0071	0.0065
x		0.0050	0.0041
σ		0.0033	0.0025
%RSD		67.2597	60.5126

LLICVS 7/25/2011 8:03:59 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	97.8%	0.8915	2.2567	2.1029	1.6968	98.7%	99.0%	0.1091
2	20:04:16	97.6%	1.0030	2.0525	2.0579	1.9848	99.0%	99.5%	0.1132
3	20:04:33	101.5%	0.8952	1.9795	1.7485	1.7279	103.3%	104.8%	0.1028
x		99.0%	0.9299	2.0962	1.9698	1.8032	100.3%	101.1%	0.1084
σ		2.2%	0.0634	0.1437	0.1929	0.1581	2.6%	3.2%	0.0053
%RSD		2.2	6.8143	6.8544	9.7949	8.7672	2.6	3.2	4.8678

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:03:59	0.0922	0.0964
2	20:04:16	0.0978	0.0997
3	20:04:33	0.0887	0.0884
x		0.0929	0.0948
σ		0.0046	0.0058
%RSD		4.9647	6.1276

ICSA 7/25/2011 8:06:33 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:33	81.4%	0.0678	2.6181	-0.0538	1.0635	79.2%	82.8%	0.1095
2	20:06:50	81.9%	0.1049	2.3636	0.0064	1.1228	79.9%	84.5%	0.0921
3	20:07:07	83.5%	0.0493	2.4830	0.3068	0.9823	80.6%	85.5%	0.1162
x		82.3%	0.0740	2.4882	0.0865	1.0562	79.9%	84.3%	0.1059
σ		1.1%	0.0283	0.1273	0.1932	0.0705	0.7%	1.3%	0.0124
%RSD		1.3	38.2677	5.1164	223.4657	6.6764	0.9	1.6	11.7411

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:06:33	0.1166	0.1180
2	20:06:50	0.1375	0.1228
3	20:07:07	0.1266	0.1185
x		0.1269	0.1198
σ		0.0105	0.0026
%RSD		8.2479	2.1961

ICSAB 7/25/2011 8:09:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:09	84.8%	23.5408	26.5246	24.0616	24.7128	81.3%	84.9%	0.1185
2	20:09:26	84.8%	23.5502	26.6444	24.3181	24.9215	81.8%	85.6%	0.1081
3	20:09:43	85.6%	23.6833	26.6194	24.8697	24.7376	82.2%	86.6%	0.1254
x		85.0%	23.5914	26.5961	24.4165	24.7907	81.8%	85.7%	0.1174
σ		0.5%	0.0797	0.0632	0.4129	0.1140	0.4%	0.9%	0.0087
%RSD		0.6	0.3378	0.2375	1.6913	0.4599	0.5	1.0	7.4039

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:09:09	0.1216	0.1200
2	20:09:26	0.1335	0.1257
3	20:09:43	0.1113	0.1210
x		0.1221	0.1222
σ		0.0111	0.0030
%RSD		9.1077	2.4847

K1106152-MB 1/5 7/25/2011 8:11:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:11:44	94.8%	0.0705	0.0674	-0.0553	0.2797	94.2%	94.9%	0.0043
2	20:12:00	94.9%	0.1097	-0.0012	-0.1027	0.3356	94.5%	95.6%	0.0007
3	20:12:17	95.9%	-0.0109	0.1495	-0.1868	0.0235	96.0%	97.1%	0.0041
x		95.2%	0.0564	0.0719	-0.1149	0.2129	94.9%	95.9%	0.0030
σ		0.6%	0.0615	0.0755	0.0666	0.1664	1.0%	1.1%	0.0020
%RSD		0.6	109.0543	104.9782	57.9352	78.1391	1.0	1.2	66.4349

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:11:44	0.0041	0.0022
2	20:12:00	0.0060	0.0037
3	20:12:17	0.0082	0.0032
x		0.0061	0.0030
σ		0.0021	0.0008
%RSD		33.6538	25.0129

LCSW 1/5 7/25/2011 8:14:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:16	97.4%	31.4714	32.5214	32.4444	31.6754	96.0%	97.0%	384.3275
2	20:14:32	98.7%	31.7658	32.6121	32.8171	31.7772	98.4%	99.0%	386.4839
3	20:14:49	98.8%	31.7295	32.0995	32.0367	32.2489	98.1%	100.2%	386.0672
x		98.3%	31.6556	32.4110	32.4327	31.9005	97.5%	98.7%	385.6262
σ		0.8%	0.1605	0.2735	0.3903	0.3060	1.3%	1.6%	1.1438
%RSD		0.8	0.5072	0.8439	1.2035	0.9592	1.3	1.6	0.2966

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:14:16	389.2819	399.4309
2	20:14:32	390.6857	398.7584
3	20:14:49	390.4196	396.5722
x		390.1291	398.2538
σ		0.7456	1.4946
%RSD		0.1911	0.3753

DORM 1/5 7/25/2011 8:17:00 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:00	92.2%	12.4278	6.9888	6.3983	7.4829	89.4%	91.8%	9.2627
2	20:17:16	92.5%	12.4614	6.9190	6.2835	7.1830	90.5%	93.5%	9.3537
3	20:17:33	92.3%	12.6429	7.2214	6.4155	8.0865	90.8%	93.7%	9.4918
x		92.3%	12.5107	7.0431	6.3658	7.5841	90.2%	93.0%	9.3694
σ		0.2%	0.1157	0.1583	0.0717	0.4602	0.8%	1.0%	0.1154
%RSD		0.2	0.9250	2.2481	1.1268	6.0679	0.8	1.1	1.2311

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:17:00	9.4446	9.3860
2	20:17:16	9.5969	9.4310
3	20:17:33	9.5239	9.4339
x		9.5218	9.4170
σ		0.0762	0.0269
%RSD		0.8001	0.2854

TORT 1/5 7/25/2011 8:19:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:38	90.6%	38.2332	11.1557	10.5149	11.6591	89.5%	92.4%	3.4312
2	20:19:55	90.6%	38.2690	11.5411	10.5302	11.6344	90.0%	93.2%	3.4661
3	20:20:12	89.9%	38.3356	10.9716	10.4744	11.1890	90.9%	94.9%	3.4493
x		90.4%	38.2793	11.2228	10.5065	11.4942	90.1%	93.5%	3.4488
σ		0.4%	0.0519	0.2906	0.0288	0.2645	0.7%	1.3%	0.0174
%RSD		0.5	0.1357	2.5897	0.2741	2.3016	0.8	1.3	0.5055

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:19:38	3.4050	3.3623
2	20:19:55	3.4302	3.4008
3	20:20:12	3.3755	3.3985
x		3.4036	3.3872
σ		0.0274	0.0216
%RSD		0.8043	0.6380

K1106152-009 1/5 7/25/2011 8:22:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:14	88.5%	10.3315	7.6477	7.1709	8.9740	88.8%	92.1%	50.6858
2	20:22:31	89.0%	10.3636	7.6755	7.4402	8.8644	89.9%	93.5%	51.2620
3	20:22:48	90.4%	9.9222	8.1156	6.7847	8.7775	90.8%	95.8%	49.0315
x		89.3%	10.2058	7.8129	7.1319	8.8720	89.8%	93.8%	50.3264
σ		0.9%	0.2461	0.2625	0.3295	0.0985	1.0%	1.9%	1.1579
%RSD		1.1	2.4110	3.3595	4.6199	1.1099	1.1	2.0	2.3008

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:22:14	50.9750	51.5372
2	20:22:31	51.0843	52.0591
3	20:22:48	49.2548	49.9271
x		50.4381	51.1744
σ		1.0262	1.1113
%RSD		2.0345	2.1717

K1106152-015 1/5 7/25/2011 8:24:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:55	88.6%	18.4827	8.7899	7.8941	10.4379	88.5%	91.9%	22.2248
2	20:25:12	88.4%	18.2008	8.8723	8.3066	10.3363	89.1%	93.4%	22.2225
3	20:25:29	89.9%	18.6007	8.6387	8.1558	10.7388	90.0%	94.7%	22.4456
x		89.0%	18.4280	8.7669	8.1188	10.5043	89.2%	93.3%	22.2976
σ		0.8%	0.2055	0.1185	0.2087	0.2093	0.7%	1.4%	0.1282
%RSD		0.9	1.1149	1.3518	2.5708	1.9924	0.8	1.5	0.5748

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:24:55	22.2943	22.2822
2	20:25:12	22.4404	22.3510
3	20:25:29	22.3668	22.2781
x		22.3672	22.3038
σ		0.0731	0.0409
%RSD		0.3268	0.1836

K1106152-025 1/5 7/25/2011 8:27:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:36	87.2%	34.3973	10.9555	10.6992	12.3307	87.4%	91.9%	10.3502
2	20:27:53	87.9%	34.5593	11.6510	10.9314	12.2852	89.1%	93.2%	10.5133
3	20:28:10	91.2%	34.0105	11.1559	10.5216	12.3866	90.9%	96.1%	10.4430
x		88.8%	34.3224	11.2541	10.7174	12.3342	89.1%	93.7%	10.4355
σ		2.1%	0.2820	0.3580	0.2055	0.0508	1.8%	2.1%	0.0818
%RSD		2.4	0.8216	3.1812	1.9175	0.4120	2.0	2.3	0.7837

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:27:36	10.4181	10.2433
2	20:27:53	10.3702	10.4904
3	20:28:10	10.3004	10.2256
x		10.3629	10.3198
σ		0.0592	0.1481
%RSD		0.5714	1.4347

CCV2 7/25/2011 8:30:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:14	92.7%	25.2461	24.5765	24.5949	26.1126	94.2%	96.1%	25.0647
2	20:30:32	92.6%	24.7233	25.1948	25.0779	24.9978	94.2%	97.1%	25.1032
3	20:30:48	93.6%	24.7587	24.6564	24.3541	25.1058	94.9%	97.6%	25.0295
x		93.0%	24.9094	24.8092	24.6756	25.4054	94.4%	97.0%	25.0658
σ		0.5%	0.2921	0.3363	0.3686	0.6148	0.4%	0.8%	0.0369
%RSD		0.6	1.1728	1.3555	1.4936	2.4201	0.4	0.8	0.1472

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:30:14	24.9866	25.0973
2	20:30:32	24.9385	25.1608
3	20:30:48	25.3110	25.2951
x		25.0787	25.1844
σ		0.2026	0.1010
%RSD		0.8079	0.4012

CCB2 7/25/2011 8:32:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:58	91.6%	0.0954	0.0188	-0.1648	0.2896	91.6%	93.3%	0.0037
2	20:33:15	92.7%	0.0718	0.0848	-0.3457	0.2425	92.5%	94.4%	0.0043
3	20:33:32	92.8%	0.0931	0.0647	-0.2672	0.3002	92.7%	95.4%	0.0099
x		92.4%	0.0868	0.0561	-0.2592	0.2774	92.3%	94.4%	0.0060
σ		0.7%	0.0130	0.0338	0.0907	0.0307	0.6%	1.1%	0.0034
%RSD		0.7	14.9948	60.3268	34.9896	11.0799	0.6	1.1	56.6580

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:32:58	0.0034	0.0027
2	20:33:15	0.0049	0.0073
3	20:33:32	0.0120	0.0122
x		0.0068	0.0074
σ		0.0046	0.0047
%RSD		67.4063	64.1009

K1106152-025D 1/5 7/25/2011 8:35:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:35:31	87.3%	34.3755	11.0086	10.3655	12.4777	86.5%	90.6%	10.3519
2	20:35:48	86.1%	35.3760	11.5325	11.4532	12.1977	86.2%	90.3%	10.7928
3	20:36:04	87.2%	34.9379	11.7899	11.1546	12.3071	86.3%	92.2%	10.7030
x		86.9%	34.8965	11.4436	10.9911	12.3275	86.3%	91.0%	10.6159
σ		0.7%	0.5015	0.3981	0.5619	0.1411	0.2%	1.0%	0.2330
%RSD		0.8	1.4371	3.4791	5.1127	1.1450	0.2	1.1	2.1948

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:35:31	10.4449	10.3740
2	20:35:48	10.7723	10.8009
3	20:36:04	10.7101	10.6165
x		10.6425	10.5971
σ		0.1739	0.2141
%RSD		1.6336	2.0201

K1106152-025L 1/5 7/25/2011 8:38:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:09	89.2%	6.9076	2.5026	1.8856	2.6061	89.9%	93.5%	1.9546
2	20:38:26	92.2%	6.7477	2.4176	1.4925	2.9008	92.0%	96.8%	1.9563
3	20:38:43	91.4%	6.7413	2.5126	1.7836	2.7418	92.7%	97.0%	1.8996
x		90.9%	6.7989	2.4776	1.7206	2.7496	91.5%	95.8%	1.9368
σ		1.5%	0.0942	0.0522	0.2040	0.1475	1.4%	2.0%	0.0322
%RSD		1.7	1.3859	2.1067	11.8565	5.3654	1.6	2.1	1.6636

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:38:09	1.9429	1.9252
2	20:38:26	1.8772	1.8926
3	20:38:43	1.9406	1.8837
x		1.9202	1.9005
σ		0.0373	0.0218
%RSD		1.9433	1.1495

K1106152-025A 1/5 7/25/2011 8:40:48 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:40:48	85.8%	84.3328	60.1753	59.7787	60.5201	85.7%	90.6%	58.7233
2	20:41:05	87.2%	83.2527	61.5064	60.2662	61.0484	86.8%	92.6%	59.2410
3	20:41:22	87.5%	83.8190	58.7445	58.8060	62.6952	87.5%	93.9%	58.8108
x		86.8%	83.8015	60.1421	59.6170	61.4212	86.7%	92.4%	58.9250
σ		0.9%	0.5403	1.3813	0.7434	1.1345	0.9%	1.7%	0.2771
%RSD		1.0	0.6447	2.2967	1.2470	1.8470	1.1	1.8	0.4703

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:40:48	58.7089	60.0755
2	20:41:05	58.7846	60.2840
3	20:41:22	58.5977	59.9680
x		58.6970	60.1091
σ		0.0940	0.1607
%RSD		0.1602	0.2673

K1106152-025S 1/5 7/25/2011 8:43:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:43:31	85.7%	67.0829	43.5343	43.6521	46.3245	86.0%	90.5%	388.9626
2	20:43:48	85.2%	68.0453	44.1922	44.1283	46.8821	85.6%	90.9%	402.3458
3	20:44:04	87.6%	65.1100	41.4758	42.0788	44.0860	88.7%	94.3%	379.7889
x		86.2%	66.7461	43.0674	43.2864	45.7642	86.8%	91.9%	390.3658
σ		1.3%	1.4964	1.4171	1.0726	1.4799	1.7%	2.1%	11.3437
%RSD		1.5	2.2419	3.2904	2.4779	3.2337	1.9	2.3	2.9059

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:43:31	393.9724	406.1686
2	20:43:48	407.8022	414.9542
3	20:44:04	386.6041	393.2854
x		396.1262	404.8028
σ		10.7619	10.8988
%RSD		2.7168	2.6924

K1106154-009 1/5 7/25/2011 8:46:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:16	88.1%	6.3656	4.6838	3.6338	8.0406	87.5%	93.2%	220.0446
2	20:46:32	87.7%	6.3832	5.1776	3.6022	7.7614	88.2%	94.1%	227.4309
3	20:46:49	87.9%	6.6882	4.8163	4.0134	8.2153	88.6%	94.6%	230.3609
x		87.9%	6.4790	4.8926	3.7498	8.0058	88.1%	94.0%	225.9455
σ		0.2%	0.1814	0.2556	0.2289	0.2289	0.5%	0.7%	5.3161
%RSD		0.2	2.8002	5.2240	6.1033	2.8595	0.6	0.8	2.3528

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:46:16	222.0766	231.0681
2	20:46:32	228.5365	235.2880
3	20:46:49	232.0782	238.5573
x		227.5638	234.9711
σ		5.0713	3.7546
%RSD		2.2285	1.5979

K1106154-015 1/5 7/25/2011 8:48:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:58	86.6%	14.8148	8.1878	6.5586	12.5508	86.2%	91.3%	142.9237
2	20:49:15	87.5%	14.6857	7.2952	6.9641	11.9548	87.1%	93.0%	143.1859
3	20:49:32	88.1%	14.9542	7.1336	6.8182	12.6714	88.3%	94.2%	142.6085
x		87.4%	14.8183	7.5389	6.7803	12.3923	87.2%	92.8%	142.9060
σ		0.8%	0.1343	0.5678	0.2054	0.3837	1.1%	1.5%	0.2891
%RSD		0.9	0.9061	7.5316	3.0297	3.0960	1.2	1.6	0.2023

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:48:58	143.2520	150.5614
2	20:49:15	143.0995	152.3008
3	20:49:32	143.2500	151.6626
x		143.2005	151.5083
σ		0.0875	0.8799
%RSD		0.0611	0.5808

K1106154-025 1/5 7/25/2011 8:51:40 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:40	87.2%	24.7874	7.4422	6.8240	10.5757	87.8%	91.6%	42.1623
2	20:51:57	88.2%	24.6294	7.1942	7.0690	10.4849	88.5%	93.6%	41.7352
3	20:52:13	88.7%	24.4095	7.7216	6.8160	10.6212	89.0%	94.4%	41.7118
x		88.1%	24.6088	7.4527	6.9030	10.5606	88.4%	93.2%	41.8698
σ		0.8%	0.1898	0.2638	0.1438	0.0694	0.6%	1.5%	0.2536
%RSD		0.9	0.7713	3.5400	2.0834	0.6568	0.7	1.6	0.6057

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:51:40	42.2824	42.4014
2	20:51:57	41.7811	42.0794
3	20:52:13	41.6806	42.2795
x		41.9147	42.2534
σ		0.3224	0.1625
%RSD		0.7691	0.3847

K1106154-025D 1/5 7/25/2011 8:54:20 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:20	87.7%	24.7814	7.3761	6.5299	9.9749	86.6%	90.4%	33.1784
2	20:54:37	87.5%	24.4345	7.4456	6.6336	10.0091	87.6%	92.1%	33.3948
3	20:54:54	88.3%	24.8430	7.0569	6.7480	9.8763	88.1%	93.1%	33.4492
x		87.9%	24.6863	7.2929	6.6372	9.9535	87.4%	91.9%	33.3408
σ		0.4%	0.2202	0.2073	0.1091	0.0689	0.8%	1.4%	0.1432
%RSD		0.5	0.8920	2.8422	1.6435	0.6927	0.9	1.5	0.4296

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:54:20	33.2600	33.4782
2	20:54:37	33.4963	33.5536
3	20:54:54	33.2498	33.5332
x		33.3354	33.5217
σ		0.1395	0.0390
%RSD		0.4184	0.1164

K1106154-025S 1/5 7/25/2011 8:57:01 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:01	86.9%	56.0943	40.5881	39.2579	42.8717	85.8%	90.2%	431.3307
2	20:57:18	88.2%	55.8655	39.8129	38.7404	41.8497	87.6%	92.4%	429.2607
3	20:57:34	89.2%	55.0017	40.3869	38.2641	41.5949	88.2%	93.4%	432.0546
x		88.1%	55.6539	40.2626	38.7542	42.1054	87.2%	92.0%	430.8820
σ		1.1%	0.5762	0.4022	0.4970	0.6757	1.2%	1.6%	1.4500
%RSD		1.3	1.0354	0.9990	1.2826	1.6048	1.4	1.7	0.3365

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:57:01	437.0015	450.0845
2	20:57:18	435.0139	445.2183
3	20:57:34	438.1749	445.9379
x		436.7301	447.0802
σ		1.5978	2.6265
%RSD		0.3659	0.5875

K1106157-009 1/5 7/25/2011 8:59:46 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:59:46	88.2%	1.4718	1.5245	1.2788	3.5385	85.7%	90.9%	1357.4406
2	21:00:02	89.3%	1.3086	1.6741	0.7563	3.2905	87.8%	93.6%	1284.0608
3	21:00:19	90.8%	1.4290	1.5854	0.8854	3.5262	88.2%	95.0%	1281.3477
x		89.4%	1.4032	1.5947	0.9735	3.4517	87.2%	93.2%	1307.6164
σ		1.3%	0.0846	0.0752	0.2722	0.1397	1.4%	2.1%	43.1703
%RSD		1.4	6.0306	4.7180	27.9588	4.0483	1.6	2.2	3.3015

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:59:46	1318.4990	1363.5993
2	21:00:02	1296.2479	1347.4511
3	21:00:19	1293.2552	1340.3673
x		1302.6674	1350.4726
σ		13.7920	11.9071
%RSD		1.0588	0.8817

CCV3 7/25/2011 9:02:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:34	99.3%	26.0952	25.7427	26.3060	26.3259	100.3%	100.8%	25.8832
2	21:02:51	100.6%	24.6036	24.4687	25.3435	24.9107	102.2%	105.3%	24.5144
3	21:03:08	99.9%	25.3586	25.8593	26.1686	25.5309	100.7%	103.2%	26.3595
x		99.9%	25.3525	25.3569	25.9394	25.5892	101.1%	103.1%	25.5857
σ		0.6%	0.7458	0.7714	0.5206	0.7094	1.0%	2.2%	0.9578
%RSD		0.6	2.9419	3.0421	2.0071	2.7722	1.0	2.2	3.7437

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:02:34	25.9585	26.0338
2	21:02:51	24.6930	24.6966
3	21:03:08	26.2432	26.4351
x		25.6316	25.7218
σ		0.8252	0.9103
%RSD		3.2193	3.5389

CCB3 7/25/2011 9:05:19 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:05:19	97.3%	0.0853	0.1332	-0.2541	0.3393	97.8%	98.8%	0.0270
2	21:05:36	98.1%	0.0277	0.1395	-0.1471	0.1453	98.5%	101.1%	0.0529
3	21:05:53	98.0%	0.1608	0.1208	0.4181	0.6026	98.9%	101.7%	0.1286
x		97.8%	0.0913	0.1312	0.0056	0.3624	98.4%	100.5%	0.0695
σ		0.4%	0.0667	0.0095	0.3612	0.2295	0.6%	1.5%	0.0527
%RSD		0.4	73.1087	7.2570	6422.5664	63.3339	0.6	1.5	75.8819

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:05:19	0.0206	0.0259
2	21:05:36	0.0663	0.0552
3	21:05:53	0.1329	0.1360
x		0.0733	0.0723
σ		0.0565	0.0570
%RSD		77.0626	78.8342

LLCCV2 7/25/2011 9:10:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:10:34	93.4%	1.1143	1.9255	1.7509	2.2746	94.1%	96.2%	0.1062
2	21:10:50	94.6%	1.0644	2.1541	2.0767	2.3126	96.5%	99.1%	0.0920
3	21:11:07	95.5%	1.0479	2.0639	1.8878	2.1170	97.3%	100.4%	0.1322
x		94.5%	1.0755	2.0478	1.9051	2.2347	96.0%	98.6%	0.1102
σ		1.1%	0.0346	0.1151	0.1636	0.1037	1.7%	2.2%	0.0204
%RSD		1.1	3.2134	5.6220	8.5885	4.6424	1.7	2.2	18.5227

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:10:34	0.1227	0.1088
2	21:10:50	0.1051	0.1021
3	21:11:07	0.1150	0.1105
x		0.1143	0.1071
σ		0.0088	0.0045
%RSD		7.7172	4.1941

K1106157-015 1/5 7/25/2011 9:13:07 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:07	89.6%	2.2201	1.7641	1.4004	3.2459	87.2%	92.4%	807.4174
2	21:13:24	92.3%	2.1262	1.9564	1.7890	3.4091	89.7%	94.9%	808.1947
3	21:13:41	92.5%	2.1263	1.9807	1.5157	3.4649	90.1%	95.6%	813.3167
x		91.5%	2.1575	1.9004	1.5684	3.3733	89.0%	94.3%	809.6429
σ		1.6%	0.0542	0.1187	0.1996	0.1138	1.6%	1.7%	3.2052
%RSD		1.7	2.5112	6.2440	12.7264	3.3731	1.8	1.8	0.3959

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:13:07	823.7413	824.3102
2	21:13:24	826.8480	815.7736
3	21:13:41	832.0509	818.5209
x		827.5467	819.5349
σ		4.1986	4.3577
%RSD		0.5074	0.5317

K1106157-025 1/5 7/25/2011 9:15:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:55	91.6%	5.3167	2.3393	1.8677	3.5353	88.7%	94.0%	309.9191
2	21:16:12	94.1%	5.5312	2.0221	1.7204	4.4611	91.3%	96.7%	306.6572
3	21:16:28	93.0%	5.6174	2.4121	1.9053	4.3282	89.6%	95.5%	319.3831
x		92.9%	5.4884	2.2579	1.8311	4.1082	89.9%	95.4%	311.9865
σ		1.3%	0.1549	0.2073	0.0977	0.5006	1.3%	1.3%	6.6100
%RSD		1.4	2.8220	9.1834	5.3380	12.1850	1.4	1.4	2.1187

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:15:55	310.6326	322.0835
2	21:16:12	308.3458	317.5740
3	21:16:28	321.3966	328.2275
x		313.4583	322.6284
σ		6.9692	5.3476
%RSD		2.2233	1.6575

K1106157-025D 1/5 7/25/2011 9:18:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:38	94.1%	5.6573	2.0806	1.9168	4.3093	91.3%	96.6%	301.3823
2	21:18:55	90.6%	6.0108	2.5836	2.4865	4.3714	87.5%	93.2%	331.5772
3	21:19:11	94.5%	5.6393	2.5328	1.8501	4.5944	91.6%	98.0%	307.6577
x		93.1%	5.7692	2.3990	2.0845	4.4251	90.1%	95.9%	313.5391
σ		2.1%	0.2095	0.2769	0.3498	0.1499	2.3%	2.5%	15.9335
%RSD		2.3	3.6308	11.5421	16.7796	3.3883	2.5	2.6	5.0818

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:18:38	302.5674	312.8714
2	21:18:55	332.5413	340.8849
3	21:19:11	309.0595	315.6721
x		314.7227	323.1428
σ		15.7691	15.4288
%RSD		5.0105	4.7746

K1106157-025S 1/5 7/25/2011 9:21:29 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:29	92.8%	37.5694	32.5887	32.7783	34.3832	90.8%	95.6%	696.8755
2	21:21:45	95.1%	36.6446	31.8673	32.2730	32.4727	92.1%	98.0%	689.8174
3	21:22:02	95.8%	35.1222	31.2963	31.0028	31.5040	94.3%	101.1%	663.9563
x		94.6%	36.4454	31.9174	32.0181	32.7866	92.4%	98.3%	683.5497
σ		1.6%	1.2357	0.6477	0.9148	1.4650	1.8%	2.8%	17.3315
%RSD		1.7	3.3905	2.0292	2.8572	4.4684	1.9	2.8	2.5355

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:21:29	709.9814	714.4389
2	21:21:45	703.8134	699.7073
3	21:22:02	678.9257	670.2445
x		697.5735	694.7969
σ		16.4413	22.5027
%RSD		2.3569	3.2387

K1106166-009 1/5 7/25/2011 9:24:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:24:14	92.9%	2.9319	3.4044	3.8420	3.9167	93.3%	98.0%	16.7376
2	21:24:31	95.2%	3.0173	3.3845	3.2131	4.3946	95.4%	100.1%	16.7794
3	21:24:48	95.3%	3.0292	3.1023	3.6341	4.0695	95.4%	100.5%	17.0312
x		94.5%	2.9928	3.2971	3.5631	4.1270	94.7%	99.6%	16.8494
σ		1.3%	0.0531	0.1690	0.3204	0.2441	1.2%	1.3%	0.1588
%RSD		1.4	1.7738	5.1247	8.9928	5.9143	1.3	1.3	0.9426

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:24:14	16.7664	16.7352
2	21:24:31	16.6634	16.6956
3	21:24:48	17.1033	17.0079
x		16.8444	16.8129
σ		0.2301	0.1700
%RSD		1.3662	1.0113

K1106166-015 1/5 7/25/2011 9:26:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:26:55	91.2%	11.6124	5.0716	6.1674	6.9615	91.5%	95.3%	15.0883
2	21:27:11	91.5%	11.2510	5.8003	5.9720	6.5818	91.7%	96.0%	15.1009
3	21:27:28	92.7%	11.1771	6.1405	5.8606	6.2016	92.8%	97.5%	15.0069
x		91.8%	11.3468	5.6708	6.0000	6.5817	92.0%	96.3%	15.0654
σ		0.8%	0.2330	0.5461	0.1553	0.3799	0.7%	1.1%	0.0511
%RSD		0.9	2.0532	9.6300	2.5891	5.7728	0.8	1.2	0.3389

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:26:55	15.0029	14.9202
2	21:27:11	15.1176	15.1516
3	21:27:28	15.0791	15.0856
x		15.0665	15.0525
σ		0.0584	0.1192
%RSD		0.3876	0.7919

K1106166-025 1/5 7/25/2011 9:29:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:36	91.9%	19.1674	5.4782	5.7291	5.3273	92.5%	97.0%	5.0513
2	21:29:53	92.6%	19.6432	5.9219	5.6128	6.0356	93.9%	98.9%	5.2258
3	21:30:10	94.4%	19.2668	5.6700	5.4693	5.8252	95.6%	100.3%	5.1603
x		93.0%	19.3592	5.6901	5.6037	5.7294	94.0%	98.7%	5.1458
σ		1.3%	0.2510	0.2226	0.1301	0.3637	1.6%	1.7%	0.0882
%RSD		1.4	1.2965	3.9115	2.3221	6.3487	1.7	1.7	1.7135

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:29:36	5.2313	5.1618
2	21:29:53	5.1736	5.1607
3	21:30:10	5.1305	5.1319
x		5.1784	5.1514
σ		0.0506	0.0170
%RSD		0.9767	0.3295

K1106166-025D 1/5 7/25/2011 9:32:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:14	89.6%	20.4177	5.6060	5.9482	6.6587	90.3%	94.3%	6.0379
2	21:32:31	90.4%	19.9310	6.2074	5.6264	6.1599	91.4%	96.0%	5.8924
3	21:32:48	91.1%	20.0633	6.0540	5.7035	6.3630	91.9%	96.3%	6.0668
x		90.4%	20.1374	5.9558	5.7593	6.3939	91.2%	95.5%	5.9990
σ		0.8%	0.2517	0.3125	0.1680	0.2508	0.8%	1.1%	0.0935
%RSD		0.8	1.2497	5.2473	2.9172	3.9227	0.9	1.1	1.5579

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:32:14	5.9735	5.9023
2	21:32:31	5.9866	5.9322
3	21:32:48	5.9645	6.0021
x		5.9748	5.9455
σ		0.0111	0.0513
%RSD		0.1857	0.8620

K1106166-025S 7/25/2011 9:34:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:34:52	89.4%	51.4241	37.6464	38.5443	38.3850	89.4%	93.5%	392.7703
2	21:35:09	89.2%	51.4776	37.9628	38.1375	37.4839	89.7%	94.9%	397.2461
3	21:35:26	90.8%	51.1801	37.3385	37.7249	37.5549	90.4%	95.4%	398.0944
x		89.8%	51.3606	37.6492	38.1356	37.8079	89.8%	94.6%	396.0369
σ		0.9%	0.1586	0.3121	0.4097	0.5010	0.5%	1.0%	2.8606
%RSD		1.0	0.3088	0.8291	1.0743	1.3251	0.6	1.1	0.7223

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:34:52	397.2021	410.7206
2	21:35:09	400.9366	409.4920
3	21:35:26	402.4704	409.8121
x		400.2031	410.0082
σ		2.7097	0.6374
%RSD		0.6771	0.1555

CCV4 7/25/2011 9:37:43 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:43	93.9%	25.1223	26.1076	25.5784	25.9579	93.7%	95.8%	25.6710
2	21:38:00	94.5%	24.9964	26.2088	26.0547	25.6281	94.2%	97.5%	25.6382
3	21:38:17	94.3%	25.1208	25.3340	25.5726	25.2380	95.7%	98.2%	25.9747
x		94.2%	25.0798	25.8835	25.7353	25.6080	94.5%	97.2%	25.7613
σ		0.3%	0.0723	0.4785	0.2767	0.3604	1.0%	1.2%	0.1855
%RSD		0.3	0.2882	1.8488	1.0750	1.4072	1.1	1.3	0.7201

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:37:43	25.4896	25.5904
2	21:38:00	25.5911	25.6174
3	21:38:17	25.5738	25.6901
x		25.5515	25.6326
σ		0.0543	0.0516
%RSD		0.2124	0.2012

CCB4 7/25/2011 9:40:23 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:23	92.9%	0.0534	0.1835	0.0181	0.2566	92.6%	94.9%	0.0248
2	21:40:40	93.3%	0.1007	0.0530	-0.0004	0.3060	92.7%	95.8%	0.0337
3	21:40:57	93.4%	0.0634	0.1021	0.4380	0.1544	93.2%	96.6%	0.0883
x		93.2%	0.0725	0.1129	0.1519	0.2390	92.9%	95.8%	0.0489
σ		0.3%	0.0249	0.0659	0.2479	0.0773	0.3%	0.9%	0.0344
%RSD		0.3	34.3771	58.3876	163.2419	32.3398	0.3	0.9	70.2335

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:40:23	0.0205	0.0223
2	21:40:40	0.0381	0.0372
3	21:40:57	0.0930	0.0847
x		0.0505	0.0481
σ		0.0378	0.0326
%RSD		74.8994	67.7308

LLCCV3 7/25/2011 9:42:56 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:56	89.3%	1.0501	2.3666	2.3491	2.2304	88.2%	90.7%	0.1366
2	21:43:13	94.0%	1.0502	2.2090	2.0116	2.3953	93.8%	96.3%	0.1074
3	21:43:29	94.7%	0.8581	2.0850	1.9592	1.6204	94.3%	97.1%	0.1252
x		92.6%	0.9861	2.2202	2.1066	2.0820	92.1%	94.7%	0.1231
σ		2.9%	0.1109	0.1411	0.2116	0.4082	3.4%	3.5%	0.0147
%RSD		3.2	11.2431	6.3566	10.0467	19.6038	3.7	3.7	11.9494

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:42:56	0.1278	0.1134
2	21:43:13	0.1020	0.1093
3	21:43:29	0.1028	0.1159
x		0.1108	0.1128
σ		0.0147	0.0033
%RSD		13.2450	2.9326

Lipids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:		**Service Request:**	K1106157
Project:	East White Lake/Exoskeleton	**Date Collected:**	5/23-6/20/2011
Sample Matrix:	Animal tissue	**Date Received:**	5/24-6/21/2011

Lipids, Total

Prep Method:	EPA 3541	Units:	PERCENT
Analysis Method:	NOAA	Basis:	AS RECEIVED
Test Notes:			

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES Exoskeleton Composite	K1106157-009	0.05	7/18/2011	7/20/2011	0.15	
EWL-HOU Exoskeleton Composite	K1106157-015	0.05	7/18/2011	7/20/2011	0.10	
EWL-BIL Exoskeleton Composite	K1106157-025	0.05	7/18/2011	7/20/2011	0.15	
Method Blank	K1106157-MB	0.05	7/18/2011	7/20/2011	0.05	U

Approved By: Elissa Erickson Date: 7-29-11

1A/092099p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:
Project: East White Lake/Exoskeleton
Sample Matrix: Animal tissue

Service Request: K1106157
Date Collected: NA
Date Received: NA
Date Extracted: 7/18/2011
Date Analyzed: 7/20/2011

Triplicate Summary
Lipids, Total

Sample Name: Batch QC
Lab Code: K1106154-025 TRP
Test Notes:

Units: PERCENT
Basis: AS RECEIVED

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
Lipids, Total	EPA 3541	NOAA	0.05	2.6	2.7	2.7	2.7	3	

Approved By: Elissa Ericksen Date: 7-29-11

DUP/091599p
K1106157svg.sm1 - TRP 7/29/2011

Page No.:

% Lipid - Electronic Benchsheet

wo #	wet wt	dish	dish/lip	% lip	mb corr	% lipids (rounded)	mrl
K1106157-009	10.05	1.314	1.317	0.149254	0.0000	0.15	0.05
K1106157-015	10.01	1.316	1.318	0.099900	0.0000	0.10	0.05
K1106157-025	10.03	1.311	1.314	0.149551	0.0000	0.15	0.05
K1106157-MB	10.10	1.294	1.294	0.000000	0.0000	0.00	0.05
K1106154-025 DUP	10.05	1.315	1.370	2.736318	0.0000	2.7	0.05
K1106154-025 TRP	10.03	1.316	1.370	2.691924	0.0000	2.7	0.05

Reviewed By: Elissa Erickson Date: 7-29-11

Lipids Raw Benchsheet

Lab ID	Client ID	Sample Weight (g)	Wt. Dish (g)	Wt. Dish + Lipid (g)
K1106152-009	EWL-DES Hepatopancreas Composite	3.05	1.294	1.333
K1106152-015	EWL-HOU-C Hepatopancreas Composite	3.04	1.318	1.374
K1106152-025	EWL-BIL Hepatopancreas Composite	3.05	1.305	1.349
K1106154-009	EWL-DES-C-Soft Tissue	10.07	1.301	1.314
K1106154-015	EWL-HOU-C-Soft Tissue	10.10	1.304	1.317
K1106154-025	EWL-BIL-C-Soft Tissue	10.04	1.314	1.366
K1106157-009	EWL-DES Exoskeleton Composite	10.05	1.314	1.317
K1106157-015	EWL-HOU Exoskeleton Composite	10.01	1.316	1.318
K1106157-025	EWL-BIL Exoskeleton Composite	10.03	1.311	1.314
K1106166-009	EWL-DES-C-Meat	10.10	1.304	1.312
K1106166-015	EWL-HOU-C-Meat	10.04	1.311	1.319
K1106166-025	EWL-BIL-C-Meat	10.07	1.317	1.325
K1106154-MB	Method Blank	10.05	1.294	1.294
K1106154-025 DUP	Sample Duplicate	10.03	1.315	1.370
K1106154-025 TRP	Sample Triplicate	10.03	1.316	1.370

DE 7-29-11

Extraction Start Time/Date: 7-18-11
Extraction Stop Time/Date: 7-18-11
Extracted By: D. Wood

Extraction Method: 3541
DCM Lot #: DD930, DE202
Sulfate Lot #: BK1022

Intermediate Volume of Extracts: 10 mL

Aliquot used for % Lipids: 2 mL

Date Analyzed: 7-20-11
Analyzed By: S. Mancilla

Balance ID: K-Balance-40

Prep Run #: 137914

Reviewed By: Elissa Erickson

Date: 7-29-11

Chain of Custody

Columbia Analytical Services

800.695.7222
www.caslab.com

CHAIN of CUSTODY

Page 1 of 1

Client: David Lingle

Project: EWL-Tissue Study

Project Manager: John Rodgers

Telephone No.: / Fax No.:

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

K11055581

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic SW6020	Inorganic As EPA 1632A	Total Ba SW6020	Total Mercury EPA 1631	Methylmercury EPA 1630	TPH Texas 1005/1006								Turn Around Time (working days)
EWL-DES						X (Crabs)			6-20-11		X	X	X	X	X	X								

MARKS

160

Sample Received Intact: Yes No

Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name)	Date	Time	Received by (Sign & Print Name)
Patrick M. Ritchie	6-20-11	1500	
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory: CAS Date: 6/21/11 Time: 0845

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC 194

Client / Project: IRS Service Request K11 5581

Received: 6/21/11 Opened: 6/21/11 By: AT Unloaded: 6/21/11 By: AT

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.5		298			

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

Notes, Discrepancies, & Resolutions: Rec'd 12 vials

Columbia Analytical Services
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CHAIN of CUSTODY

Page 1 of 1

Client: EWL Project - D. Lingle

Project: EWL - Tissue Study

Project Manager: John Rodgers

Telephone No.

Fax No.

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

K1105244

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other (Crabs)	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic - SW6020	Inorganic Arsenic - CRM6532A	Total Barium - SW6020	Total Mercury - EPA 1631	Methyl mercury - EPA 1630	TPH - Texas 1005 / 1006									Turn Around Time (working days)
EWL-BIL		1				X			6.9.11	1200	X	X	X	X	X	X									

MARKS

Sample Received Intact: Yes No

Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name)	Date	Time	Received by (Sign & Print Name)
Randy Graves	6.9.11	1730	
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory: CAS — Date 6/10/11 — Time 0930

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Lynda

lient / Project: URS Service Request K11 5244

eceived: 6/10/11 Opened: 6/10/11 By: AF Unloaded: 6/10/11 By: AF

Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*

Were custody seals on coolers? NA Y N If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
4.0		299		7955 3874 7438	

Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other*_____

Were custody papers properly filled out (ink, signed, etc.)?	NA	Y	N
Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*	NA	Y	N
). Were all sample labels complete (i.e analysis, preservation, etc.)?	NA	Y	N
1. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.*	NA	Y	N
2. Were appropriate bottles/containers and volumes received for the tests indicated?	NA	Y	N
3. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below*	NA	Y	N
4. Were VOA vials received without headspace? *Indicate in the table below.*	NA	Y	N
5. Was C12/Res negative?	NA	Y	N

Sample ID on Bottle	Sample ID on COC	Identified by:

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

otes, Discrepancies, & Resolutions: Rec'd 12 vials.

Page 1 *of* ____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

SR# K1104604

PAGE _____ OF _____

Project Name: EWL Tissue Study **Project Number:** _____

Project Manager: John Rodgers **Company:** _____

Company/Address: _____ **Phone:** _____

City, State, Zip: _____ **FAX:** _____

Sampler's Signature: David Lingle

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Total Arsenic SW 6020	Inorganic Arsenic EPA 1632A	Total Barium SW 6020	Total Mercury EPA 1631	Methylmercury EPA 1630	Lipid Content	TPH	REMARKS
EWL-HOU-C	5/23/2011	6:15pm		Tissue	1	x	x	x	x	x	x	x	

164

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_____ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: _____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

_____ V. EDD

Comments/Special Instructions:

Dissect eight (8) blue crabs into Meat, Hepatopancreas, Other Soft Tissue, and Exoskeleton.

EWL-HOU-C-MEAT

EWL-HOU-C-HEPATOPANCREAS

EWL-HOU-C-OTHER SOFT TISSUE

EWL-HOU-C-EXOSKELETON

TPH analysis to be conducted by Pace - Green Bay.

RELINQUISHED BY:

Signature: David Lingle

Printed Name: David Lingle

Firm: URS Corporation

Date/Time: 05/23/11; 6:15 pm

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: SHOPKINS

Firm: CAS

Date/Time: 5/24/11 0830

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC 411

Client / Project: URS Service Request K11 4604

Received: 5/24/11 Opened: 5/24/11 By: SX Unloaded: 5/24/11 By: SX

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.4		381		7971 2767 7864	

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

*Notes, Discrepancies, & Resolutions:*_____

Page 1 of ____

Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 5, 2011 Analytical Report for Service Request No: K1106166

David Lingle
URS Corporation
9801 Westheimer, Suite 500
Houston, TX 77042

RE: East White Lake/Meat

Dear David:

Enclosed are the results of the samples submitted to our laboratory on May 24, 2011. For your reference, these analyses have been assigned our service request number K1106166.

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

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

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

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

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

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Agency	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DEQ	WA100010
South Carolina DHEC	61002
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	URS Corporation	**Service Request No.:**	K1106166
Project:	East White Lake	**Date Received:**	5/24-6/21-2011
Sample Matrix:	Tissue		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Homogenization and Compositing

Whole body blue crab samples were received at Columbia Analytical Services on 5/24-6/21-2011. The hepatopancreas, other soft tissue, meat and exoskeleton were separated from each crab. The samples from each location were composited and subsequently subaliquoted for each of the sample locations in accordance with sample mass requirements for testing; additionally, sample custody of an aliquot of each was relinquished to Pace Analytical for analysis of Total Petroleum Hydrocarbons in accordance with instructions received from URS Corporation. Each tissue type was logged into a separate service request. The data set included here is for the meat tissue.

Metals

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

Approved by _____ **Date** 8/9/11

Metals

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Solids, Total

Prep Method:	NONE	Units:	PERCENT
Analysis Method:	Freeze Dry	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
EWL-DES-C-Meat	K1106166-009	07/12/11	15.9	
EWL-HOU-C-Meat	K1106166-015	07/12/11	17.6	
EWL-BIL-C-Meat	K1106166-025	07/12/11	18.6	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	06/09/11
Sample Matrix:	Tissue	**Date Received:**	06/10/11
		Date Extracted:	NA
		Date Analyzed:	07/12/11

Duplicate Summary
Total Metals

Sample Name:	EWL-BIL-C-Meat	Units:	PERCENT
Lab Code:	K1106166-025	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	18.6	19.0	18.8	2	

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K106166

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106166-009	10.115	15.141	16.750	1.609	15.9%
K1106166-015	10.261	15.049	16.860	1.811	17.6%
K1106166-025	10.214	15.163	17.060	1.897	18.6%
K1106166-025 Dup	10.221	15.072	17.017	1.945	19.0%
				7/14/11	

Date/Time in Freeze Dryer: 04:30pm 07-12-11 Date/Time out of Freeze Dryer:08:300am 07-14-11

Balance ID: 21 B Date Balance checked:07-12-11,07-14-11

Comments:

x = RPD

Analyst: Tamie Jones	Date: 7/14/11
Reviewed By: Anna Cheatley	Date: 7/21/11

Columbia Analytical Services, Inc.

Service Request #: K1106166

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106166-009	10.115	15.141	16.750		
K1106166-015	10.261	15.049	16.860		
K1106166-025	10.214	15.163	17.060		
K1106166-025 Dup	10.221	15.072	17.017		
					7/13/11

Date/Time in Freeze Dryer: 4:30pm 7/12/11 Date/Time out of Freeze Dryer: 8:30am 7/14/11

Balance ID: 21B Date Balance checked: 7.12.11 7/14/11

Comments:

High - Low / Average = RPD

x = RPD

Analyst: Anna Cheatley	Date: 7.12.11
Reviewed By:	Date: 7/14/11

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Columbia Analytical Services, Inc.

Service Request Number(s):
K1106166
Analysis for:
Composite

COMPOSITE DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106166-009		478.53		479.87		crab
K1106166-015		420.89		480.34		crab
K1106166-025		469.89		480.56		crab

7/13/11

Balance ID: 23 Date Balance Checked: 7-11-11

Analyst: Anna Cheatley Date: 7/11/11

Reviewed: Date: 7/14/11

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Columbia Analytical Services, Inc.

Service Request Number(s):	K1106166
Analysis for: Lipids	

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106166-009		10.10		201.09		Soft Tissue
K1106166-015		10.04		201.03		Soft Tissue
K1106166-025		10.07		201.42		Soft Tissue
K1106166-025 Dup		10.02		201.33		Soft Tissue
K1106166-025 Trip		10.06		201.19		Soft Tissue

Comments: Please weigh approximately 10 g into a 8 oz Jar.

Balance ID: 28 Date Balance Checked: 7.12.11

Analyst: Anna Greatley Date: 7.12.11

Reviewed: Date: 7/13/11

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Columbia Analytical Services, Inc.

Service Request Number(s):
K1106166
Analysis for:
Pace TPH

ALIQUOT DATA

Service Request #		Wet Wt. (g)		Tare Wt. (g)		Matrix
K1106166-009		10.01		80.07		crab
K1106166-015		10.01		79.00		crab
K1106166-025		15.04		79.93		crab
						7-13-11

Balance ID: 28	Date Balance Checked: 7.11.11
Analyst: Brittney Hall	Date: 7.11.11
Reviewed:	Date: 7/13/11

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Total Inorganic Arsenic

Prep Method:	Method	Units:	ug/g
Analysis Method:	1632 Rev. A	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Meat	K1106166-009	0.02	0.005	1	07/31/11	08/01/11	0.005	J
EWL-HOU-C-Meat	K1106166-015	0.02	0.006	1	07/31/11	08/01/11	0.008	J
EWL-BIL-C-Meat	K1106166-025	0.02	0.007	1	07/31/11	08/01/11	0.014	J
Method Blank 1	K1106166-MB1	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 2	K1106166-MB2	0.002	0.0008	1	07/31/11	08/01/11	ND	
Method Blank 3	K1106166-MB3	0.002	0.0008	1	07/31/11	08/01/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Meat
Sample Matrix: Animal tissue

Service Request: K1106166
Date Collected: 05/23/11
Date Received: 05/24/11
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Total Metals
Matrix Spike/Duplicate Matrix Spike Summary

Sample Name: EWL-HOU-C-Meat
Lab Code: K1106166-015SD
Test Notes:

Units: ug/g
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	Method Acceptance Limits	Relative Percent Difference	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.07	0.52	0.52	0.005	0.698	0.710	134	135	50-150	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Meat
LCS Matrix: Water

Service Request: K1106166
Date Collected: NA
Date Received: NA
Date Extracted: 07/31/11
Date Analyzed: 08/01/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery

Units: ug/g
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	Method	1632 Rev. A	0.200	0.229	114	50-150	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 1

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.227	114	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Meat
LCS Matrix: Water

Service Request: K1106166
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 2

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.230	115	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 3

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.232	116	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/01/11

Calibration Verification (CALVER) Sample Summary
Total Metals

Sample Name: CALVER 4

Units: ug/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Inorganic Arsenic	NA	1632 Rev. A	0.20	0.204	102	80-120	

Conversion from dry weight to wet weight:

Standard MRL = 0.02
Standard MDL = 0.007
Standard Dilution = 1
Standard Sample Mass = 0.500

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.501	19.6	2.556	2	0.008	0.003
K1106152-015	0.500	23.5	2.128	2	0.009	0.003
K1106152-025	0.502	23.1	2.173	2	0.009	0.003
K1106152-025MS	0.500	23.1	2.165	8	0.04	0.013
K1106152-025MSD	0.501	23.1	2.169	8	0.04	0.013
K1106154-009	0.501	11.0	4.555	4	0.009	0.003
K1106154-015	0.501	12.2	4.107	4	0.01	0.003
K1106154-025	0.502	21.2	2.368	4	0.02	0.006
K1106157-009	0.502	52.3	0.960	1	0.01	0.004
K1106157-015	0.505	59.1	0.854	1	0.01	0.004
K1106157-025	0.500	50.3	0.994	1	0.01	0.004
K1106166-009	0.103	15.9	0.648	1	0.02	0.005
K1106166-015	0.103	17.6	0.585	1	0.02	0.006
K1106166-015MS	0.102	17.6	0.580	4	0.07	0.024
K1106166-015MSD	0.101	17.6	0.574	4	0.07	0.024
K1106166-025	0.100	18.6	0.538	1	0.02	0.007
Method Blank	0.500	11.000	4.545	1	0.002	0.0008

HG-CGC-AAS Arsenic Speciation Data Review Form

Element: Total Inorganic Arsenic

Starlims Run #: 255580

CALSTD Source: AA1-20-H
CALVER Source: AA1-21-A

Service Request Numbers:

K1106152, K1106154, K1106157, K1106166

	Yes	No	NA
1) Three or more non-zero calibration points analyzed	X		
2) Mean calibration factor RSD <20%	X		
3) CALVER's within 20% of true value	X		
4) CALBLK's below MRL	X		
5) CALVER's, CALBLK's ran every 10 samples	X		
6) A minimum of three method blanks analyzed	X		
7) All reported samples within calibration range	X		
8) MS/MSD every 10 samples	X		
9) MS/MSD within 50-150%; RPD <35%	X		
10) Samples analyzed within hold time	X		
11) QCS analyzed quarterly with the mean from 3 analyses within 10% of the true value	X		

Comments:

Primary Reviewed By: BJS Date: 8/VII

Secondary Reviewed By: RRM Date: 8/2/11

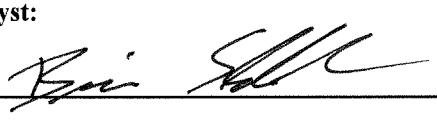
COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA	**Service Request # :**
Analysis For: As	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L or ng/g	Comments
1	30 ng wk std A	~	~	50	~	1608.2970	30.52	610.3	
2	20 ng wk std A	~	~	50	~	1107.7680	20.85	417.0	
3	10 ng wk std A	~	~	50	~	596.6090	10.98	219.6	
4	1.0 ng wk std A	~	~	50	~	71.5780	0.84	16.8	
5	CALBLK 1	~	~	50	~	27.9660	0.00	0.0	
6	CALVER 1	~	~	50	~	614.8745	11.33	226.7	CALVER : 113%
7	CALBLK 2	~	~	50	~	35.9410	0.15	3.1	
8	OPR	0.500	10	2.0	~	1214.3380	22.91	229.1	OPR : 115%
9	MB-1	4.545	10	2.0	~	35.3255	0.14	0.2	
10	MB-2	4.545	10	2.0	~	23.2160	-0.09	-0.1	
11	MB-3	4.545	10	2.0	~	31.3310	0.06	0.1	
12	K1106152-009	2.556	10	1.0	2	400.4800	7.19	28.1	
13	K1106152-015	2.128	10	1.0	2	426.1660	7.69	36.1	
14	K1106152-025	2.173	10	1.0	2	841.2000	15.70	72.3	
15	K1106152-025MS	2.165	10	0.25	8	721.5740	13.39	247.5	MS : 126%
16	K1106152-025MSD	2.169	10	0.25	8	712.2670	13.21	243.7	MSD : 124%
17	K1106154-009	4.555	10	0.5	4	565.5450	10.38	45.6	
18	CALVER 2	~	~	50	~	624.4760	11.52	230.4	CALVER : 115%
19	CALBLK 3	~	~	50	~	42.1715	0.27	5.5	
20	K1106154-015	4.107	10	0.5	4	340.2450	6.03	29.4	
21	K1106154-025	2.368	10	0.5	4	278.6690	4.84	40.9	
22	~~K1106157-009~~	~~0.960~~	~~10~~	~~1.0~~	~~2~~	~~196.2410~~	~~3.25~~	~~33.9~~	Rerun
23	K1106157-009	0.960	10	2.0	~	302.3290	5.30	27.6	
24	K1106157-015	0.854	10	2.0	~	573.9690	10.54	61.7	
25	K1106157-025	0.994	10	2.0	~	1316.2730	24.88	125.1	

Comments:	**wk std A : AA1-20-H**	**Calibration:**				
	wk std B : AA1-21-A		**ng**	**net peak area**	**Calibration Factor**	
	KBH4 : A1245129		**30**	**1580.3310**	**52.6777**	
	6M HCl : HG-AAS1-1-O		**20**	**1079.8020**	**53.9901**	
	Tris-Buffer : HG-AAS1-1-I		**10**	**568.6430**	**56.8643**	
			1	**43.6120**	**43.6120**	
					51.7860	**CF mean**
					5.72	**CF Stdev**
	CALVER : 10ng wk std B				**11.05**	**RSD**

Analyst:	**Date:**	**Page Number:**
	8/1/11	1

[1632Runlog.xls] As1.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

Method 1632: (circle species) TIAs AsIII MMA DMA	**Service Request # :**
Analysis For: As	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g)	Digest Volume (mL)	Aliquot Volume (mL)	Dilution Factor	peak area	net ng	net ng/L or ng/g	Comments
1	K1106166-009	0.648	10	2.0	~	61.8065	0.65	5.0	
2	K1106166-015	0.585	10	2.0	~	76.2005	0.93	8.0	
3	~~K1106166-015MS~~	~~0.580~~	~~10~~	~~2.0~~	~	~~3627.8170~~	~~69.51~~	~~599.7~~	Rerun
4	K1106166-015MS	0.580	10	0.5	4	1076.7395	20.25	698.3	MS : 132%
5	~~CALVER 3~~	~	~	~~50~~	~	~~764.7670~~	~~14.23~~	~~284.6~~	Rerun
6	CALVER 3	~	~	50	~	628.0615	11.59	231.8	CALVER : 116%
7	CALBLK 4	~	~	50	~	50.8045	0.44	8.8	
8	K1106166-015MSD	0.574	10	0.5	4	1082.6750	20.37	709.8	MSD : 134%
9	K1106166-025	0.538	10	2.0	~	103.9290	1.47	13.6	
10	CALVER 4	~	~	50	~	557.1400	10.22	204.4	CALVER : 102%
11	CALVER 5	~	~	50	~	42.6490	0.28	5.7	
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Calibration: wk std A : AA1-20-H / wk std B : AA1-21-A	ng	net peak area	Calibration Factor	
KBH4 : A1245129	30	1580.3310	52.6777	
6M HCl : HG-AAS1-1-O	20	1079.8020	53.9901	
Tris-Buffer : HG-AAS1-1-I	10	568.6430	56.8643	
	0.5	43.6120	43.6120	
			51.7860	CF mean
			5.72	CF Stdev
CALVER : 10ng wk std B			11.05	RSD

Analyst:	Date:	Page Number:
	8/V11	2

[1632Runlog.xls] As1.XLS (2)

Columbia Analytical Services, Inc.

Sample Number(s):		Service Request Number(s):	K1106152, K1106154, K1106157, K1106166
Analysis for:	Tissue Extraction for TIAs		

DATA

SR #	Sample ID	Freeze Dried Sample (g)	Extraction Sol'n	Amount of Extraction Sol'n (mL)
OPR		0.500	2M HCl	10
MB-1		0.500	2M HCl	10
MB-2		0.500	2M HCl	10
MB-3		0.500	2M HCl	10
K1106152-009		0.501	2M HCl	10
K1106152-015		0.500	2M HCl	10
K1106152-025		0.502	2M HCl	10
K1106154-009		0.501	2M HCl	10
K1106154-015		0.501	2M HCl	10
K1106154-025		0.502	2M HCl	10
K1106157-009		0.502	2M HCl	10
K1106157-015		0.505	2M HCl	10
K1106157-025		0.500	2M HCl	10
K1106166-009		0.103	2M HCl	10
K1106166-015		0.103	2M HCl	10
K1106166-025		0.100	2M HCl	10
K1106166-015MS		0.102	2M HCl	10
↓ MSD		0.101	2M HCl	10
K1106152-025MS		0.500	2M HCl	10
↓ MSD		0.501	2M HCl	10

BJS 7/31/11

Comments: OPR: 0.05mL 2.0 µg/mL TIAs AA1-21-C exp. 1/28/12 Starlims # 138852
MS/MSD: 0.15 mL 2.0 µg/mL TIAs AA1-21-C exp. 1/28/12
2M HCl: H6-AAs-1-6

Analyst: BS 7/31/11 HE 7/31/11

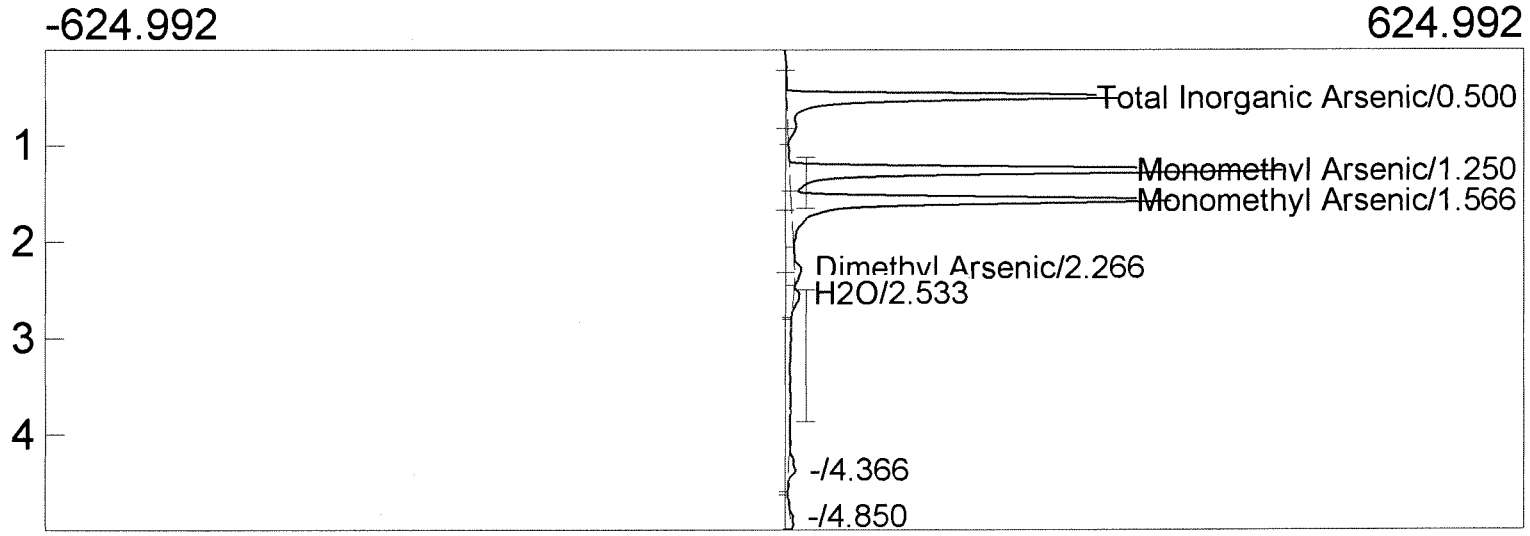
R:\ICP\misc\digforms\TissueExtractionRev11

Conversion from dry weight to wet weight:

Standard MRL = 0.02
Standard MDL = 0.007
Standard Dilution = 1
Standard Sample Mass = 0.500

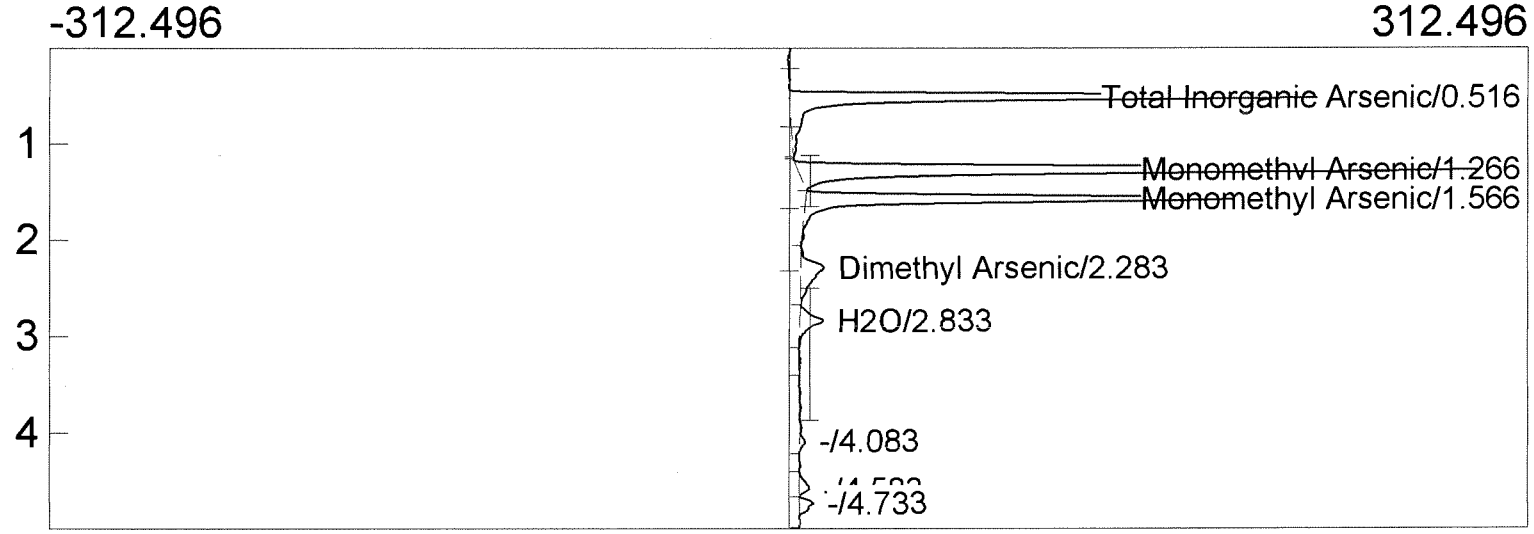
Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.501	19.6	**2.556**	2	**0.01**	**0.003**
K1106152-015	0.500	23.5	**2.128**	2	**0.01**	**0.003**
K1106152-025	0.502	23.1	**2.173**	2	**0.01**	**0.003**
K1106152-025MS	0.500	23.1	**2.165**	8	**0.04**	**0.013**
K1106152-025MSD	0.501	23.1	**2.169**	8	**0.04**	**0.013**
K1106154-009	0.501	11.0	**4.555**	4	**0.01**	**0.003**
K1106154-015	0.501	12.2	**4.107**	4	**0.01**	**0.003**
K1106154-025	0.502	21.2	**2.368**	4	**0.02**	**0.006**
K1106157-009	0.502	52.3	**0.960**	1	**0.01**	**0.004**
K1106157-015	0.505	59.1	**0.854**	1	**0.01**	**0.004**
K1106157-025	0.500	50.3	**0.994**	1	**0.01**	**0.004**
K1106166-009	0.103	15.9	**0.648**	1	**0.02**	**0.005**
K1106166-015	0.103	17.6	**0.585**	1	**0.02**	**0.006**
K1106166-015MS	0.102	17.6	**0.580**	4	**0.07**	**0.024**
K1106166-015MSD	0.101	17.6	**0.574**	4	**0.07**	**0.024**
K1106166-025	0.100	18.6	**0.538**	1	**0.02**	**0.007**
Method Blank	0.500	11.000	**4.545**	1	**0.00**	**0.001**

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:50:11
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 30 ng.CHR ()
Operator: RRM



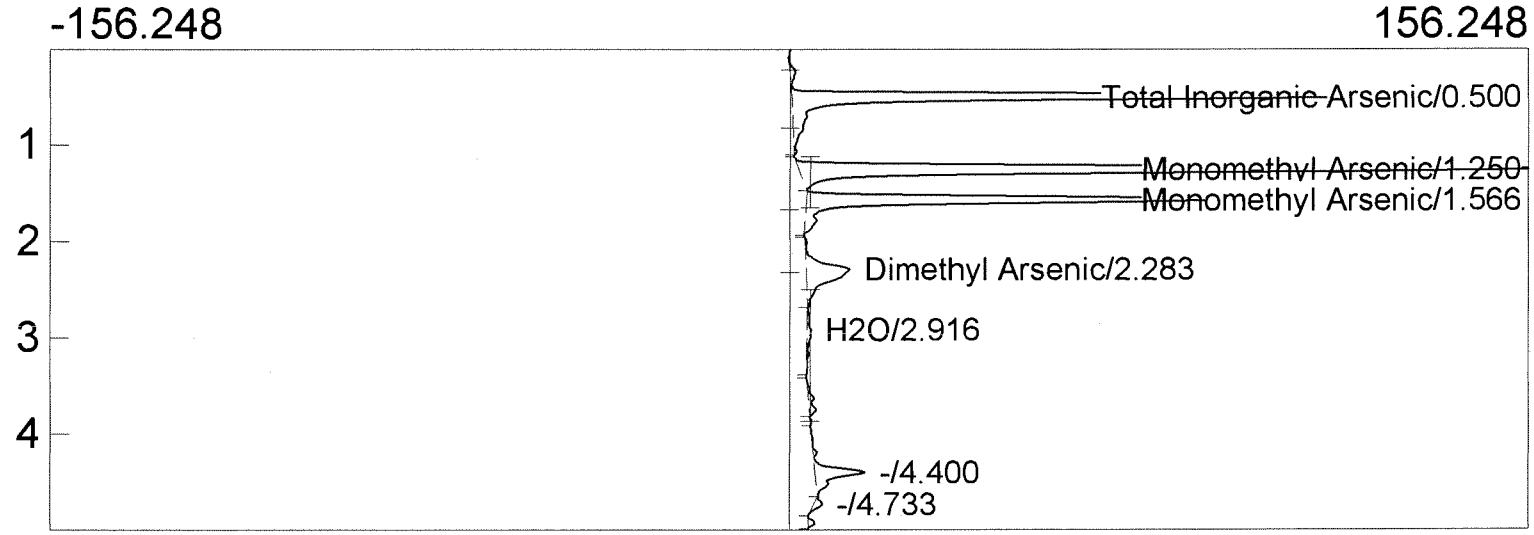
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1608.2970	311.451
Monomethyl Arsenic	1.250	2127.7730	425.590
Monomethyl Arsenic	1.566	1919.7775	339.613
Dimethyl Arsenic	2.266	57.0860	5.895
H2O	2.533	49.8820	4.784
		5762.8155	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 07:58:50
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 20 ng.CHR ()
Operator: RRM



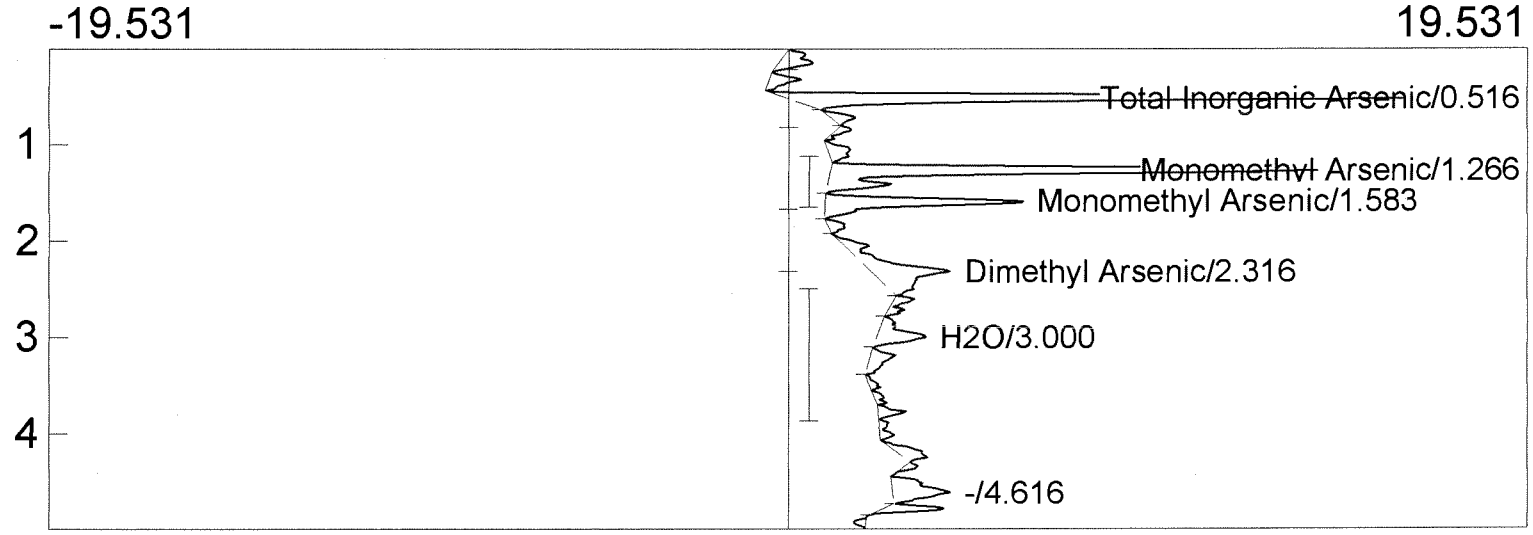
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1107.7680	225.335
Monomethyl Arsenic	1.266	1463.5120	288.371
Monomethyl Arsenic	1.566	930.3530	190.580
Dimethyl Arsenic	2.283	131.5590	10.032
H2O	2.833	85.8665	9.705
		3719.0585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:25:15
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 10 ng.CHR ()
Operator: RRM



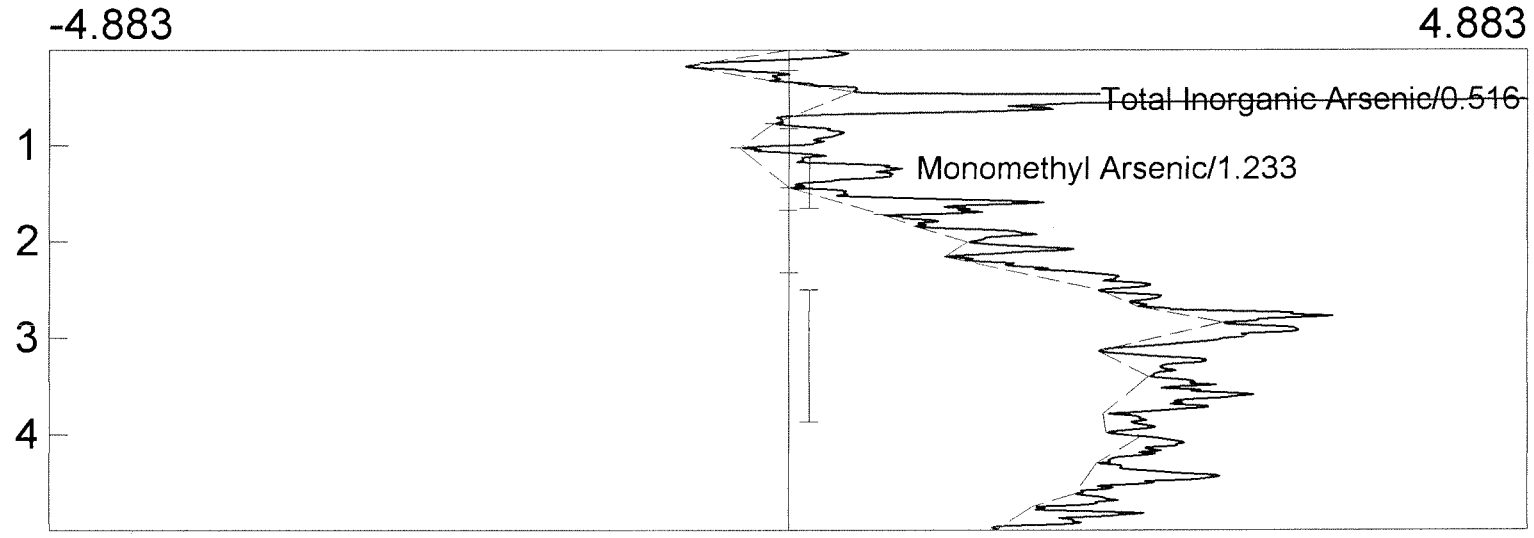
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	596.6090	122.606
Monomethyl Arsenic	1.250	766.2740	160.471
Monomethyl Arsenic	1.566	454.9720	90.116
Dimethyl Arsenic	2.283	120.8860	9.270
H2O	2.916	17.6870	0.969
		1956.4280	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:43:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: 1.0 ng.CHR ()
Operator: RRM



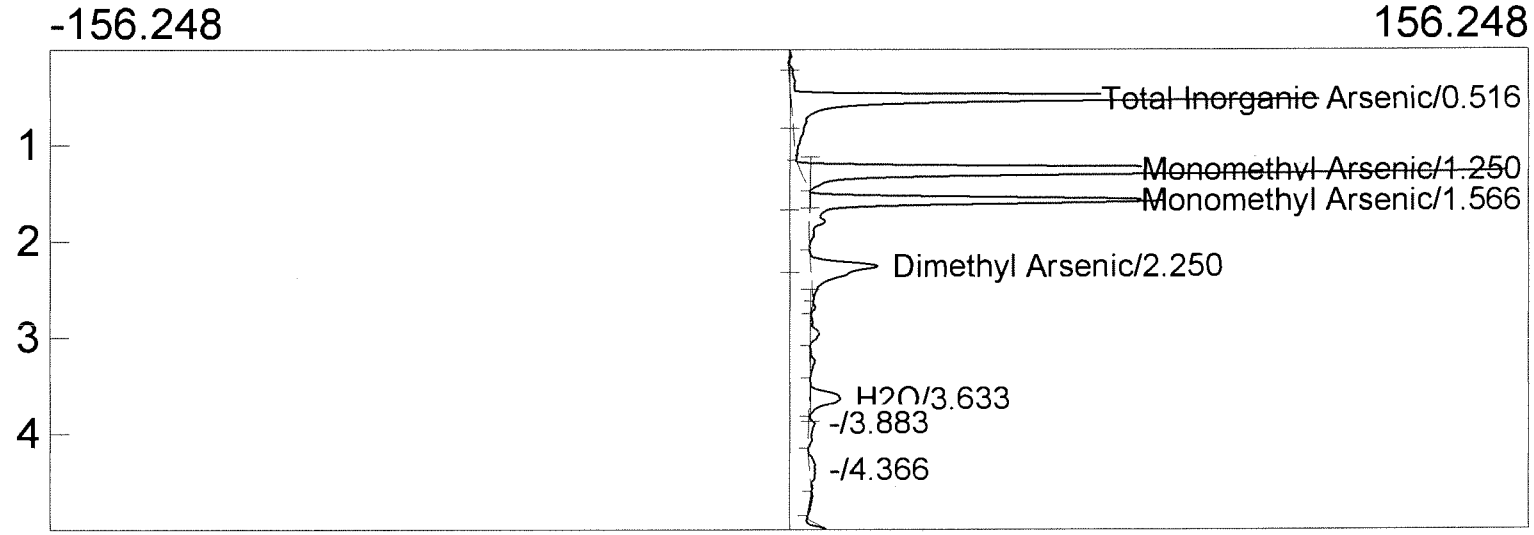
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	71.5780	16.469
Monomethyl Arsenic	1.266	68.1710	12.834
Monomethyl Arsenic	1.583	29.6050	5.232
Dimethyl Arsenic	2.316	27.4240	2.109
H2O	3.000	11.1325	1.299
		207.9105	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 08:53:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 1.CHR ()
Operator: RRM



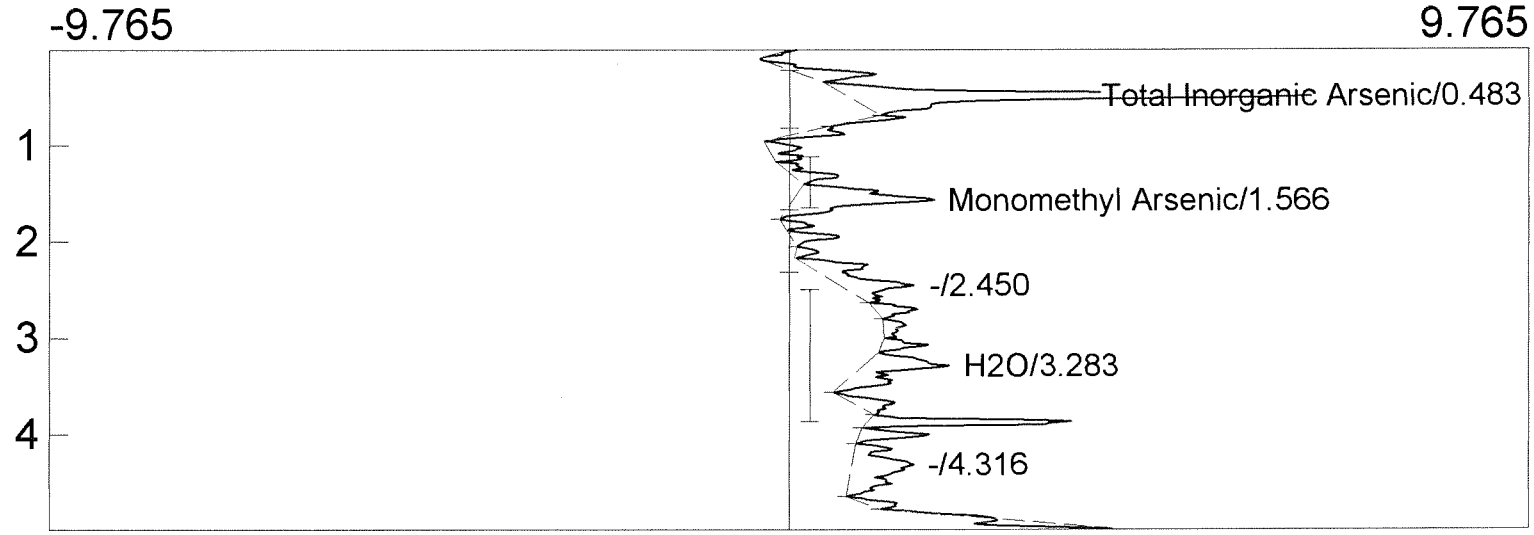
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	27.9660	4.727
Monomethyl Arsenic	1.233	11.0725	0.906
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		39.0385	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:04:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 1.CHR ()
Operator: BJS



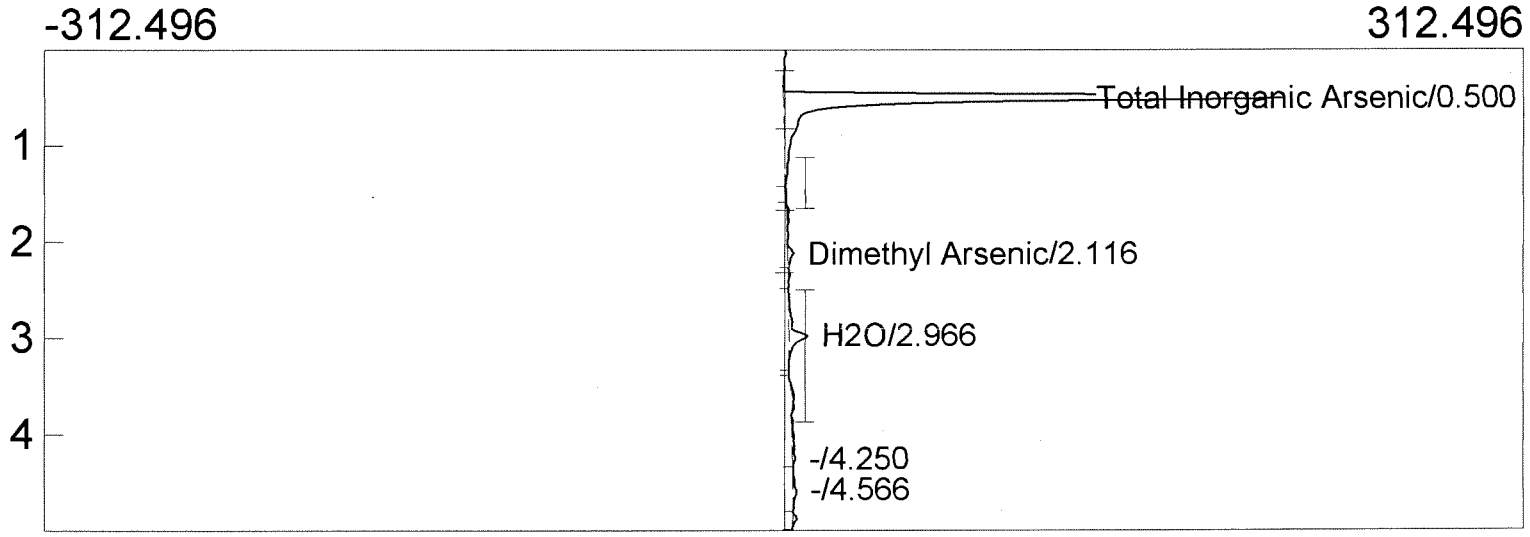
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	614.8745	113.241
Monomethyl Arsenic	1.250	747.7600	150.255
Monomethyl Arsenic	1.566	394.4830	76.652
Dimethyl Arsenic	2.250	131.7080	14.378
H2O	3.633	61.2840	6.640
		1950.1095	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:14:21
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 2.CHR ()
Operator: BJS



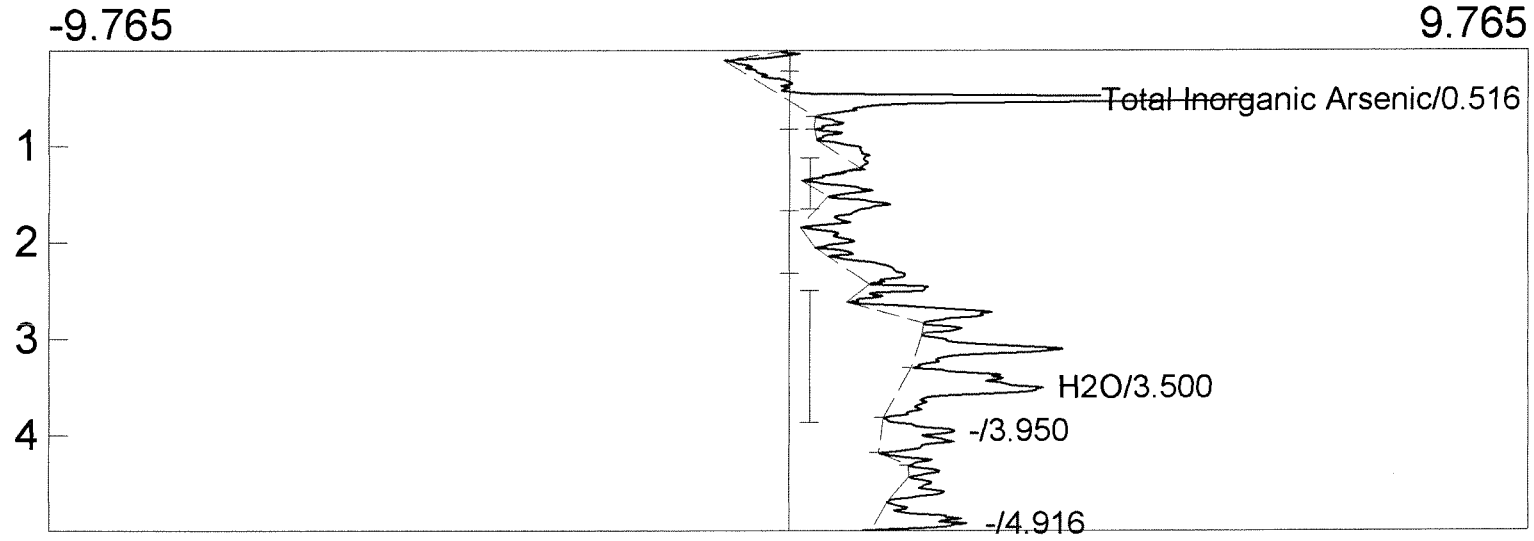
Component	Retention	Area	Height
Total Inorganic Arsenic	0.483	35.9410	6.155
Monomethyl Arsenic	1.566	18.0690	1.875
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.283	12.7535	1.135
		66.7635	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:24:09
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-OPR 2.0mL.CHR ()
Operator: BJS



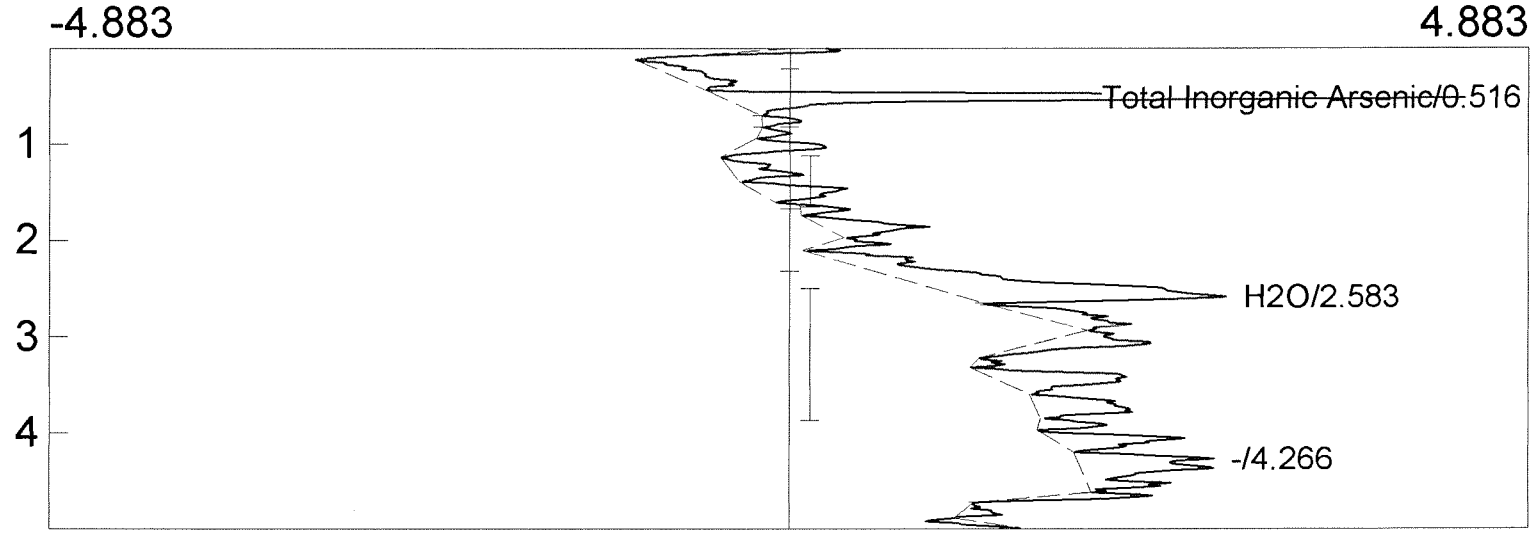
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1214.3380	221.998
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	16.4490	2.410
H2O	2.966	74.9180	7.946
		1305.7050	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:33:47
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB1 2.0mL.CHR ()
Operator: BJS



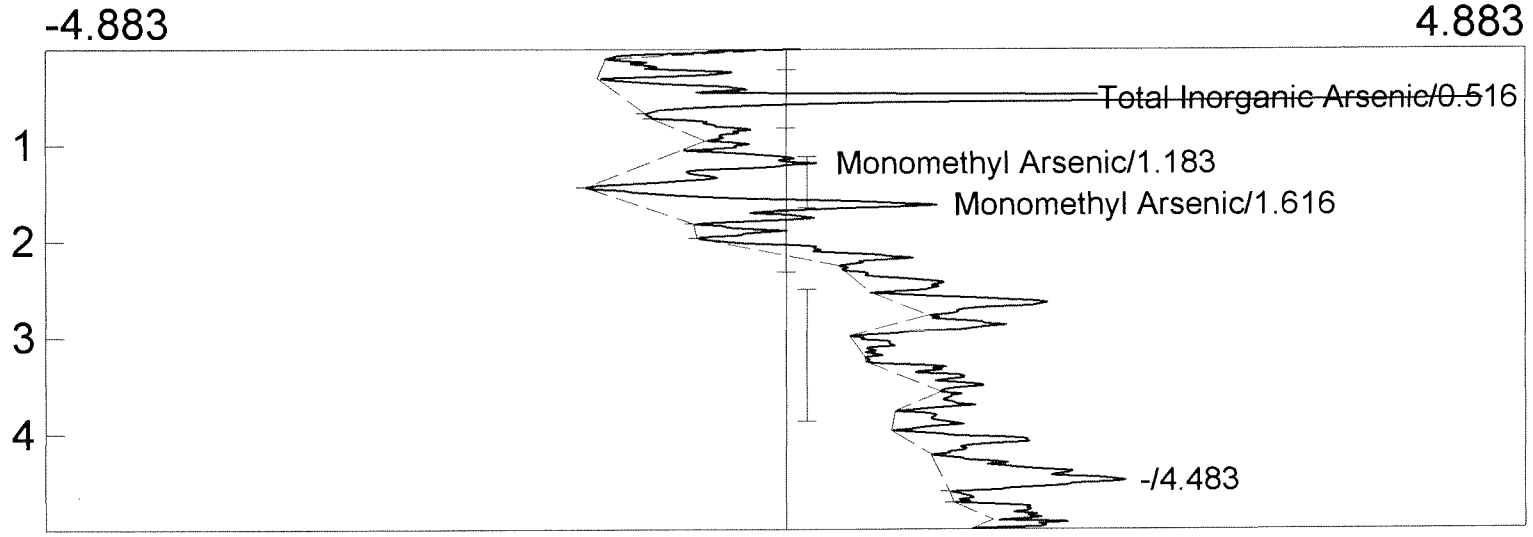
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	35.3255	6.230
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.500	25.8845	1.894
		61.2100	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:42:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB2 2.0mL.CHR ()
Operator: BJS



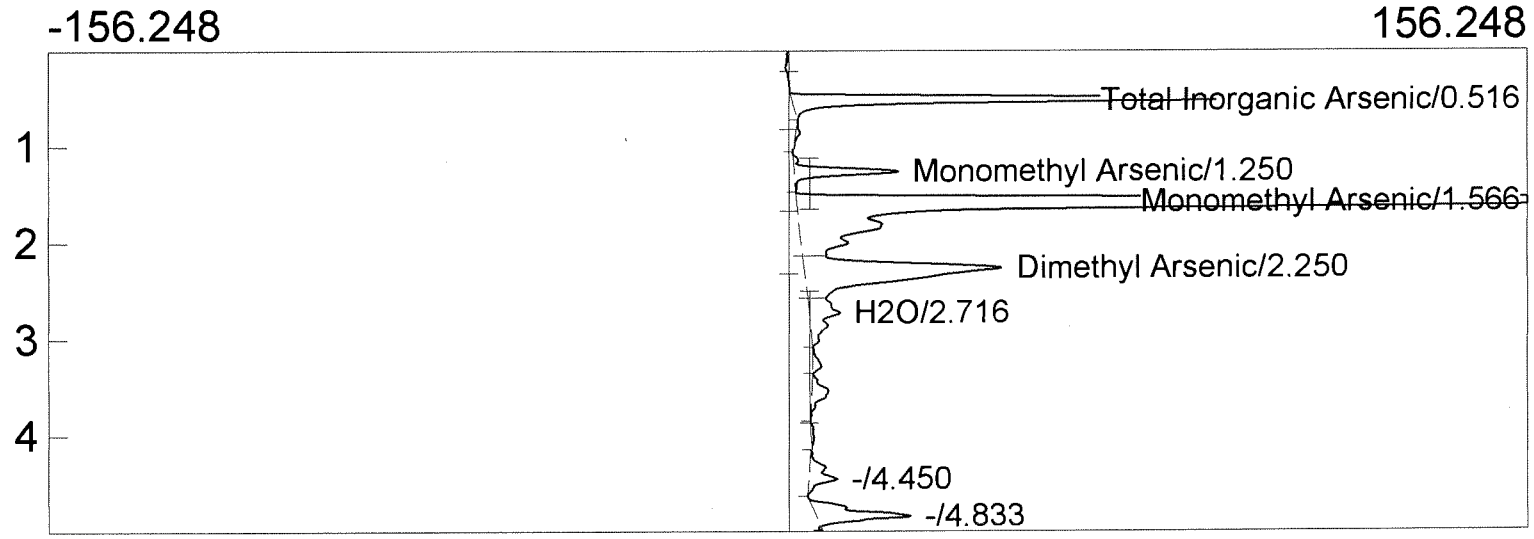
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	23.2160	4.977
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.583	26.4360	1.769
		49.6520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 09:52:40
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-MB3 2.0mL.CHR ()
Operator: BJS



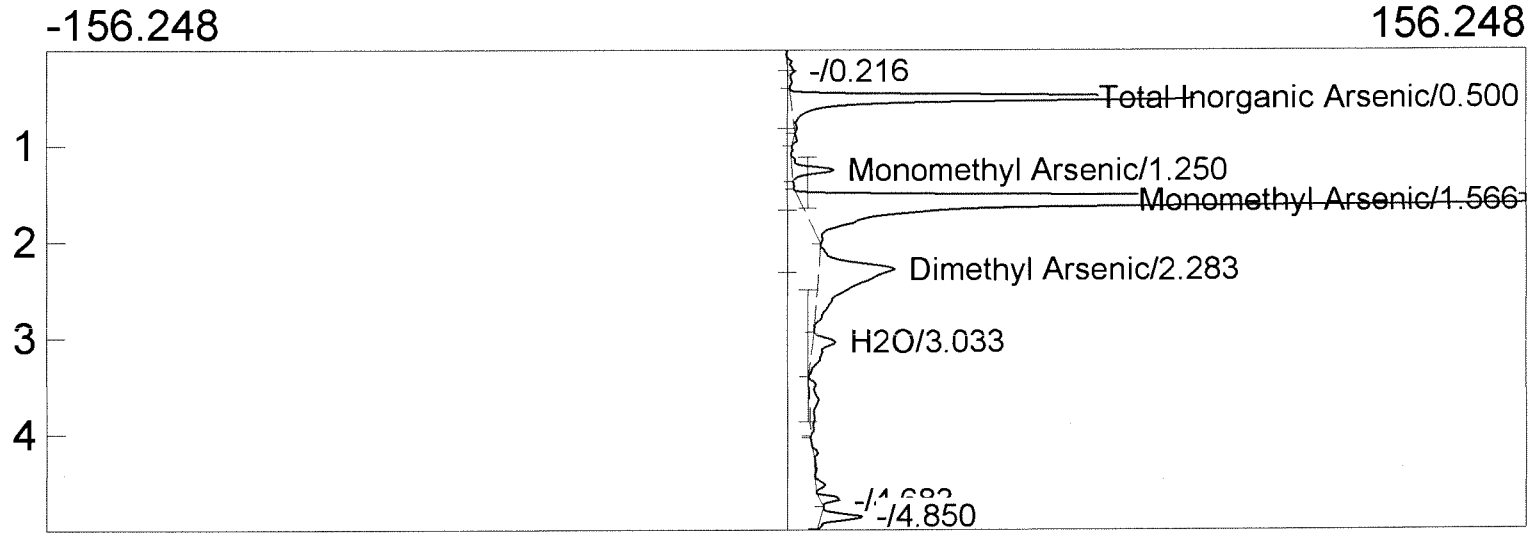
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	31.3310	5.729
Monomethyl Arsenic	1.183	13.9035	1.156
Monomethyl Arsenic	1.616	18.3815	2.001
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		63.6160	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:04:32
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-009 1.0mL.CHR ()
Operator: BJS



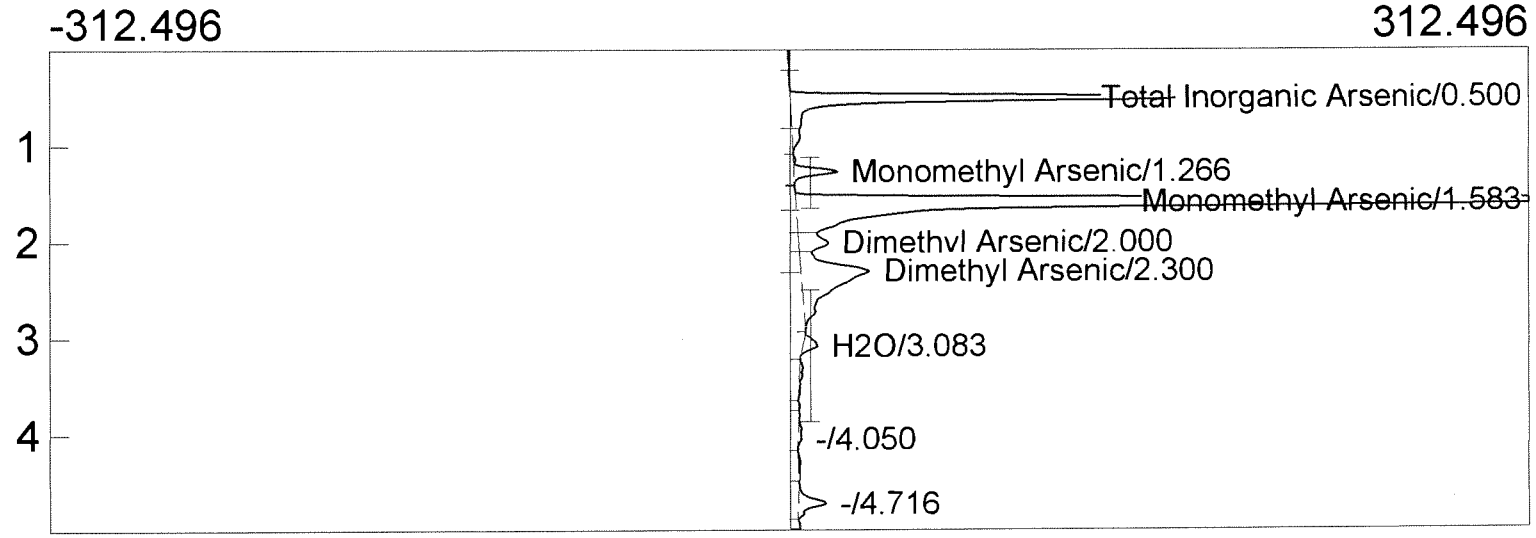
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	400.4800	91.013
Monomethyl Arsenic	1.250	111.9560	22.189
Monomethyl Arsenic	1.566	2303.9920	407.247
Dimethyl Arsenic	2.250	481.7150	42.038
H2O	2.716	102.0690	6.631
		3400.2120	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:13:56
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-015 1.0mL.CHR ()
Operator: BJS



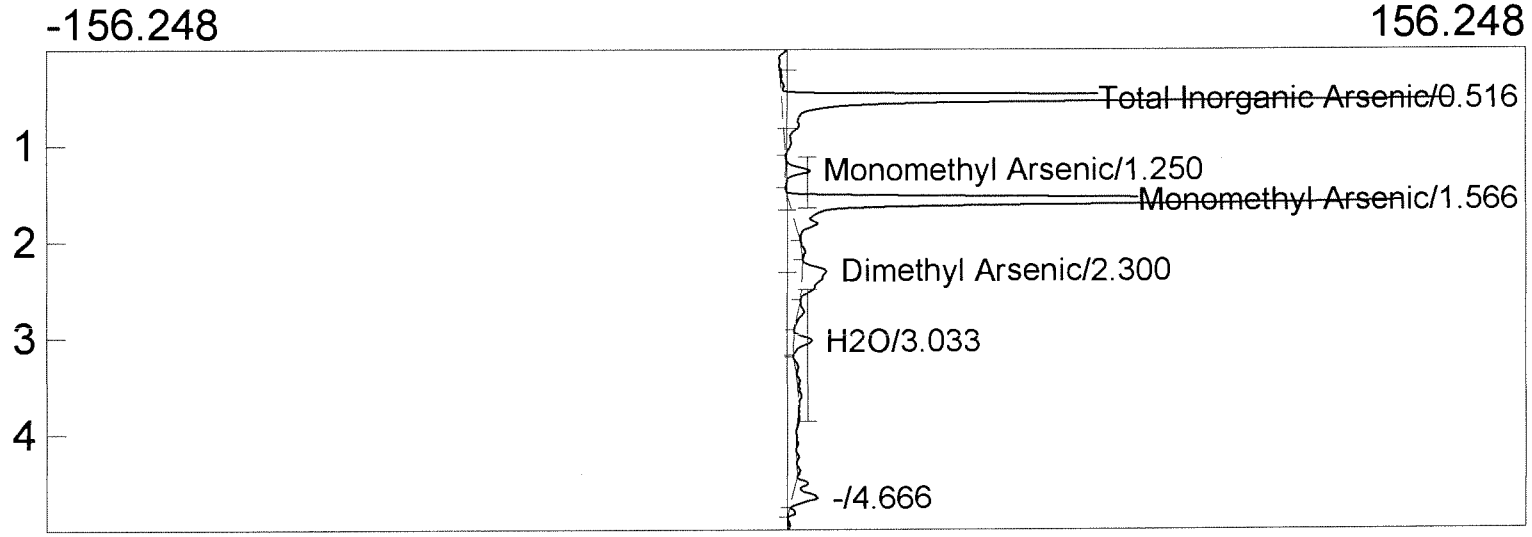
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	426.1660	86.647
Monomethyl Arsenic	1.250	45.8840	8.902
Monomethyl Arsenic	1.566	2033.1280	381.133
Dimethyl Arsenic	2.283	275.8515	16.081
H2O	3.033	53.7590	4.862
		2834.7885	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:23:57
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025 1.0mL.CHR ()
Operator: BJS



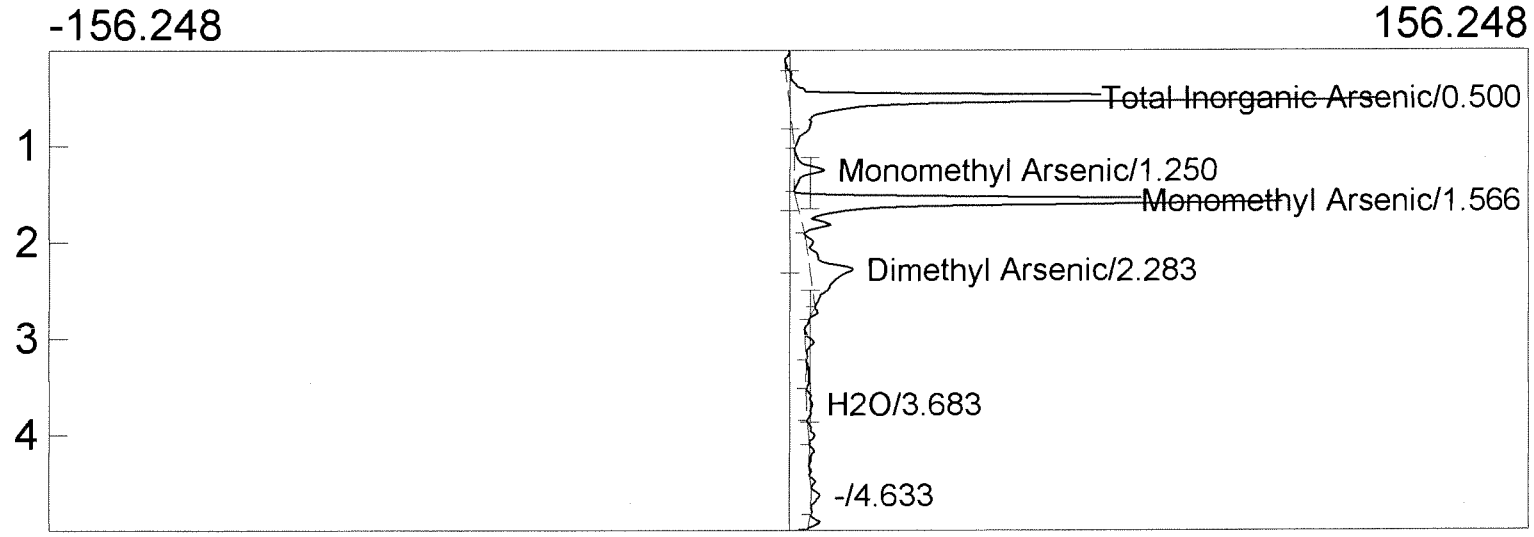
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	841.2000	163.484
Monomethyl Arsenic	1.266	92.5165	18.606
Monomethyl Arsenic	1.583	2923.7050	537.723
Dimethyl Arsenic	2.000	114.2820	12.457
Dimethyl Arsenic	2.300	523.9380	29.164
H2O	3.083	45.5070	6.262
		4541.1485	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:33:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025ms 0.25mL.CHR ()
Operator: BJS



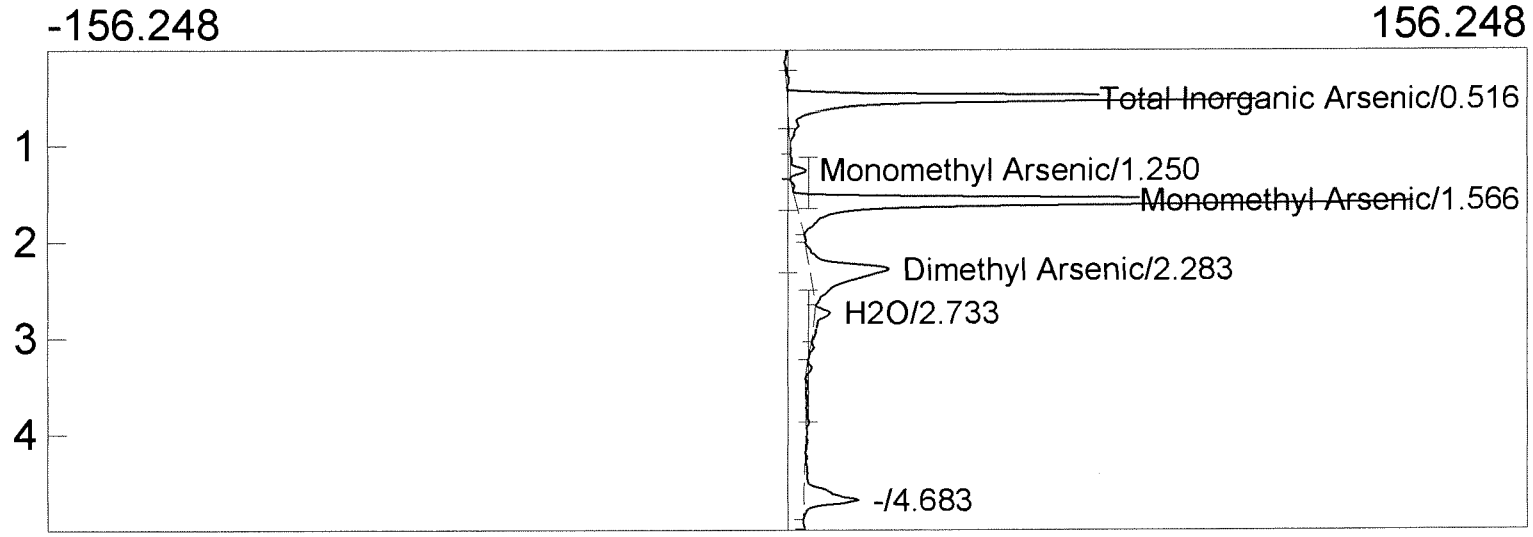
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	721.5740	144.049
Monomethyl Arsenic	1.250	29.2380	5.247
Monomethyl Arsenic	1.566	675.4080	132.674
Dimethyl Arsenic	2.300	68.3810	5.243
H2O	3.033	25.9780	3.908
		1520.5790	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:42:20
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106152-025MSD 0.25mL.CHR ()
Operator: BJS



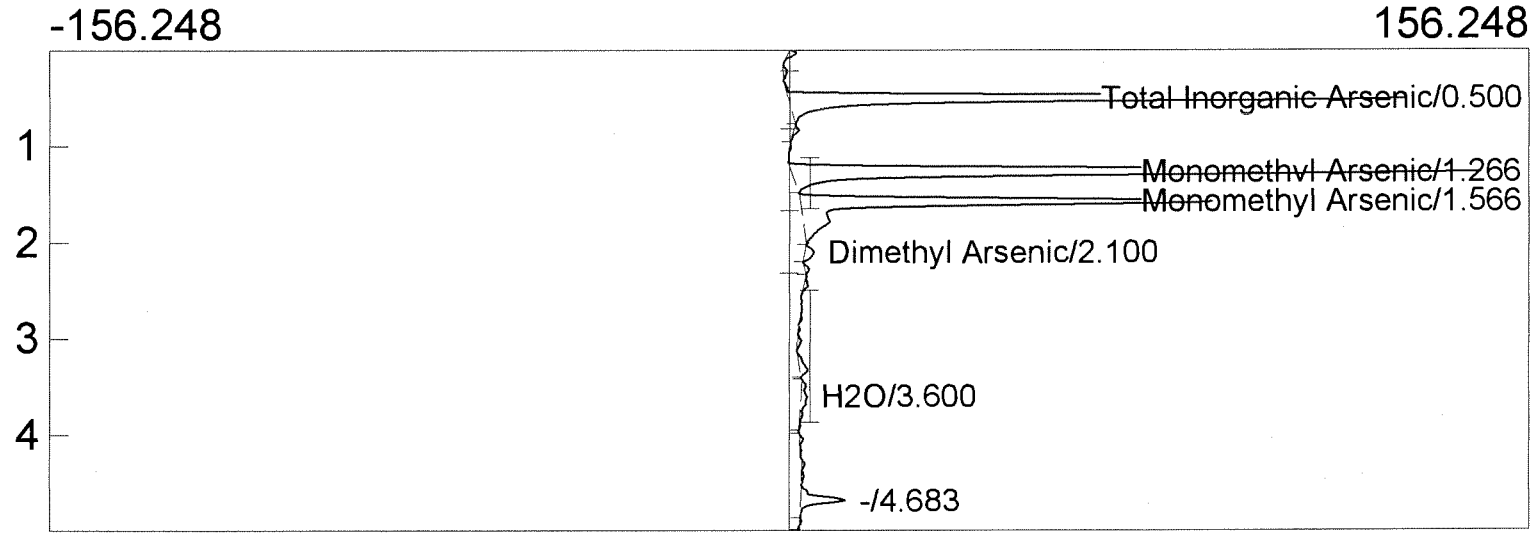
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	712.2670	126.993
Monomethyl Arsenic	1.250	45.0395	6.418
Monomethyl Arsenic	1.566	589.0770	108.026
Dimethyl Arsenic	2.283	139.0140	9.113
H2O	3.683	14.9530	1.275
		1500.3505	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 10:53:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-009 0.5mL.CHR ()
Operator: BJS



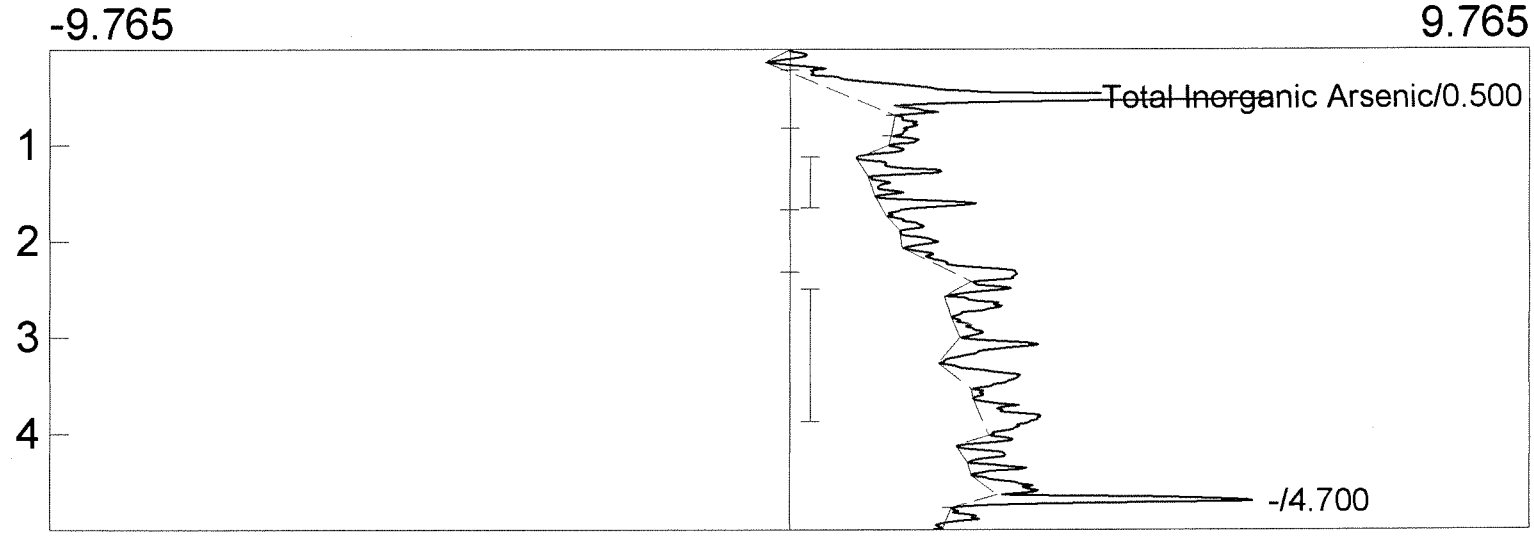
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	565.5450	100.699
Monomethyl Arsenic	1.250	16.5110	3.358
Monomethyl Arsenic	1.566	699.0285	132.262
Dimethyl Arsenic	2.283	210.4215	16.842
H2O	2.733	26.9115	3.295
		1518.4175	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:03:34
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 2.CHR ()
Operator: BJS



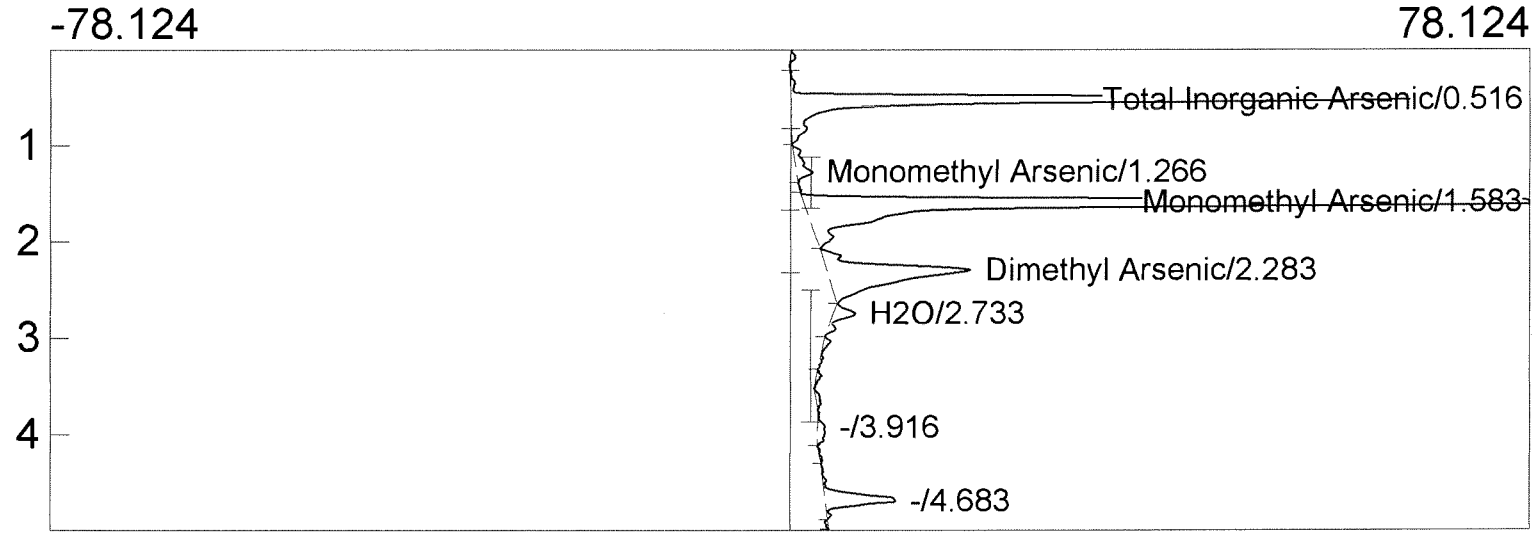
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	624.4760	134.205
Monomethyl Arsenic	1.266	723.6635	145.627
Monomethyl Arsenic	1.566	480.6050	87.928
Dimethyl Arsenic	2.100	13.9075	1.967
H2O	3.600	20.9690	1.368
		1863.6210	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:13:16
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 3.CHR ()
Operator: BJS



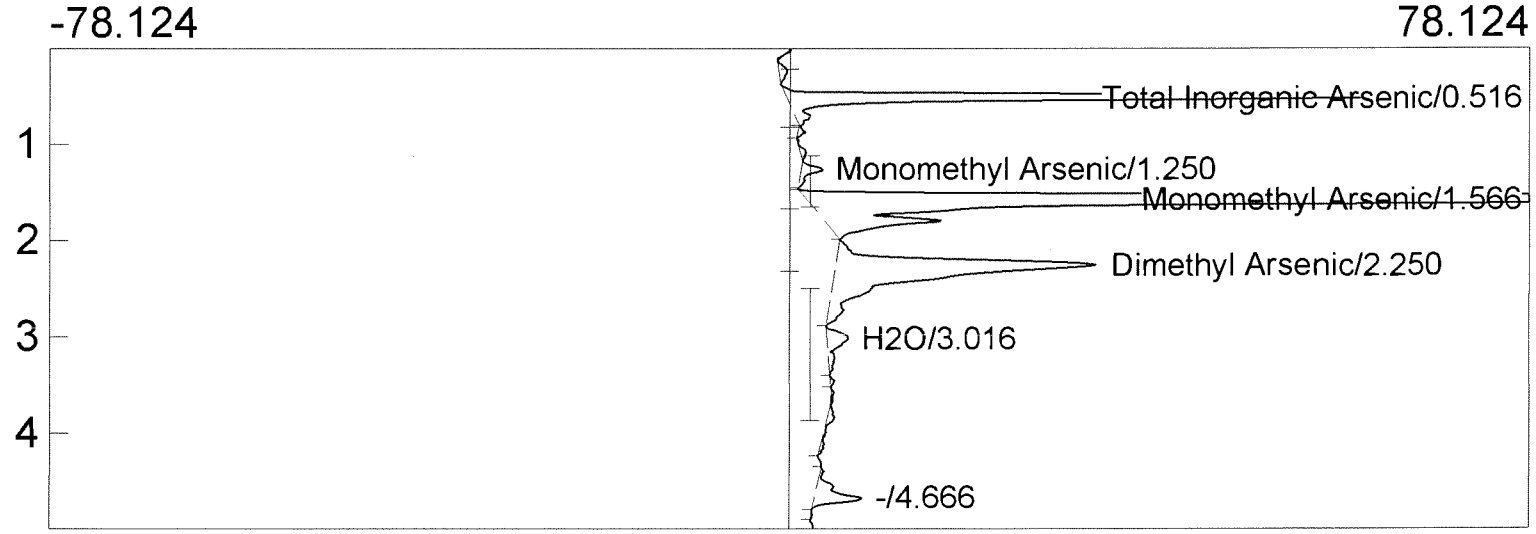
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	42.1715	5.468
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		42.1715	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:23:01
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-015 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	340.2450	65.755
Monomethyl Arsenic	1.266	18.0160	1.759
Monomethyl Arsenic	1.583	564.6230	98.460
Dimethyl Arsenic	2.283	175.0000	15.282
H2O	2.733	19.2520	2.301
		1117.1360	

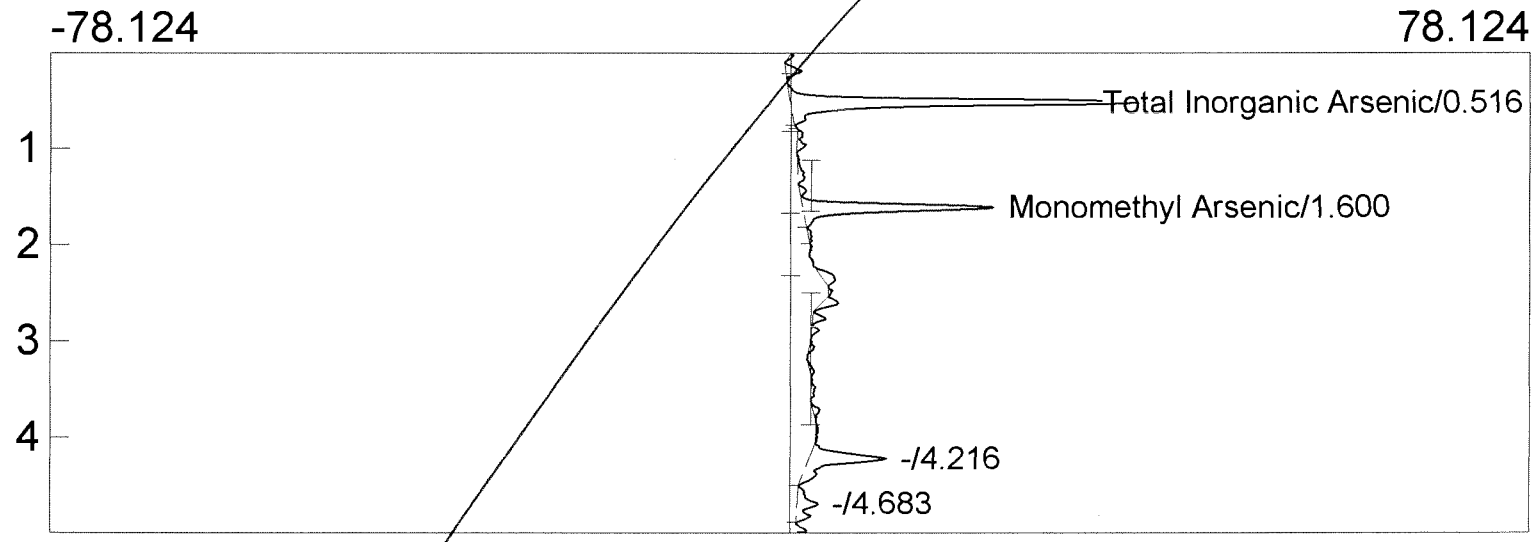
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:32:53
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106154-025 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	278.6690	61.260
Monomethyl Arsenic	1.250	14.7915	2.280
Monomethyl Arsenic	1.566	1154.9225	214.421
Dimethyl Arsenic	2.250	346.0270	27.626
H2O	3.016	27.6505	2.230
		1822.0605	

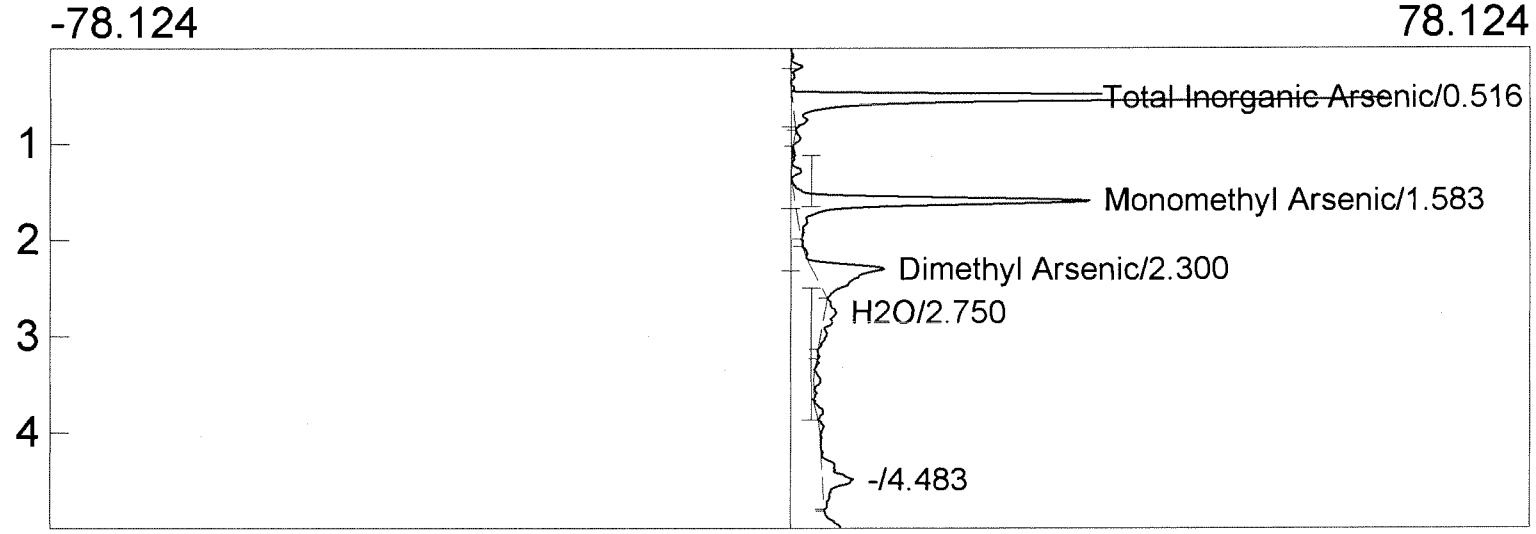
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:42:25
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 1.0mL.CHR ()
Operator: BJS

BSS 8/1/11



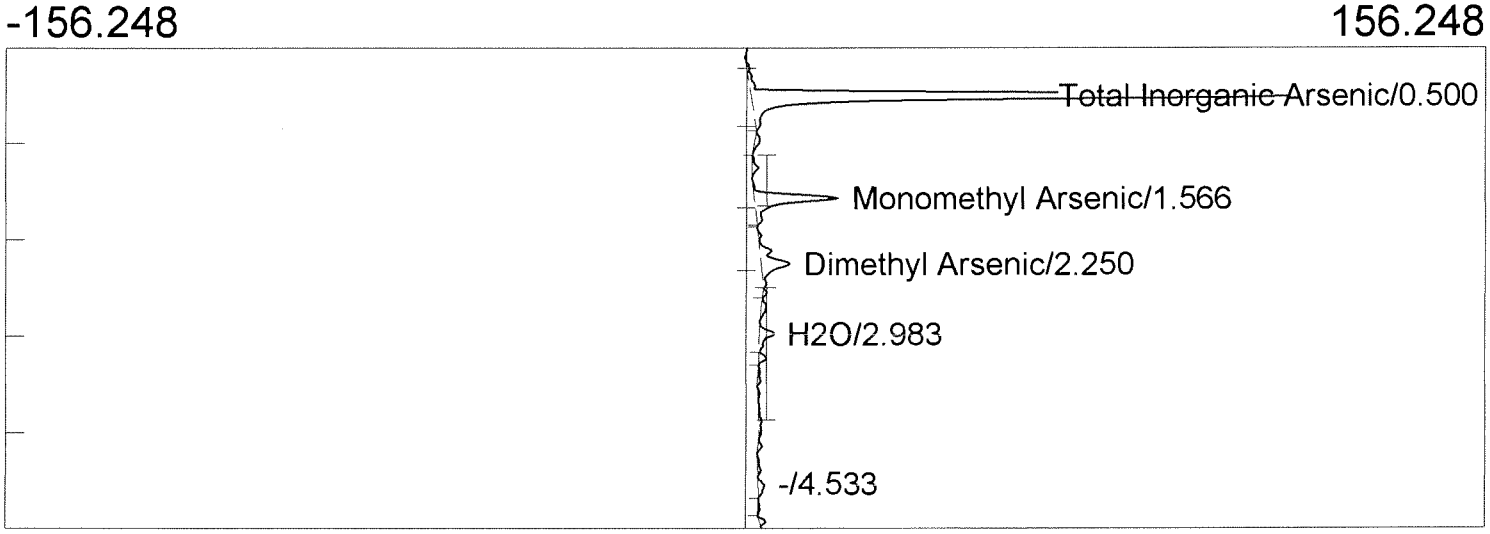
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	196.2410	36.801
Monomethyl Arsenic	1.600	113.4035	20.317
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	0.000	0.0000	0.000
		309.6445	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 11:50:49
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-009 2.0mL.CHR ()
Operator: BJS



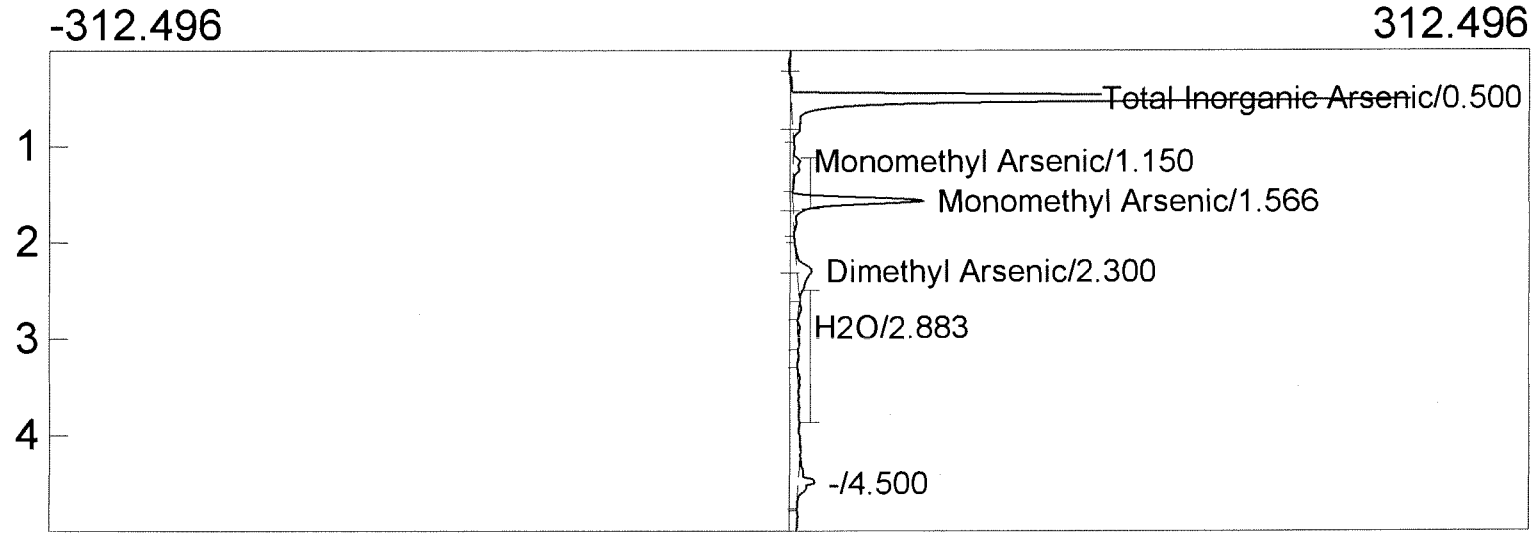
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	302.3290	62.664
Monomethyl Arsenic	1.583	182.6600	31.208
Dimethyl Arsenic	2.300	79.6525	7.619
H2O	2.750	20.4600	1.279
		585.1015	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 12:00:44
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-015 2.0mL.CHR ()
Operator: BJS



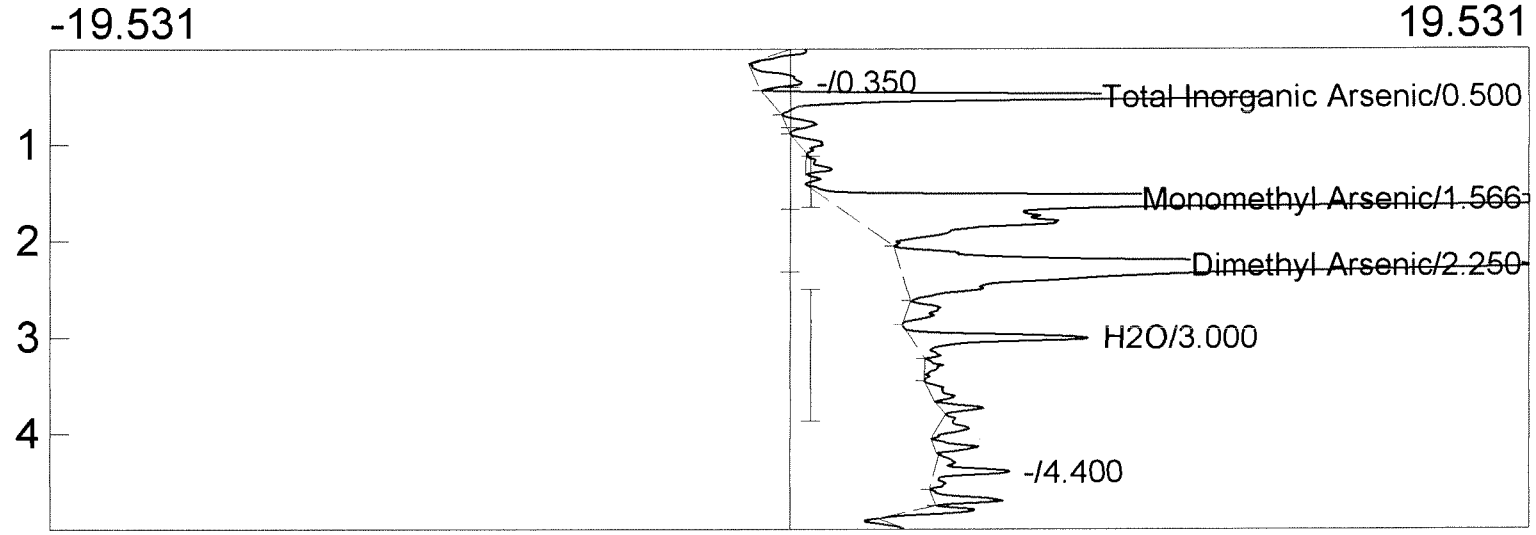
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	573.9690	117.018
Monomethyl Arsenic	1.566	107.9995	17.856
Dimethyl Arsenic	2.250	59.8680	6.013
H2O	2.983	22.0330	3.070
		763.8695	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:09:19
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106157-025 2.0mL.CHR ()
Operator: BJS



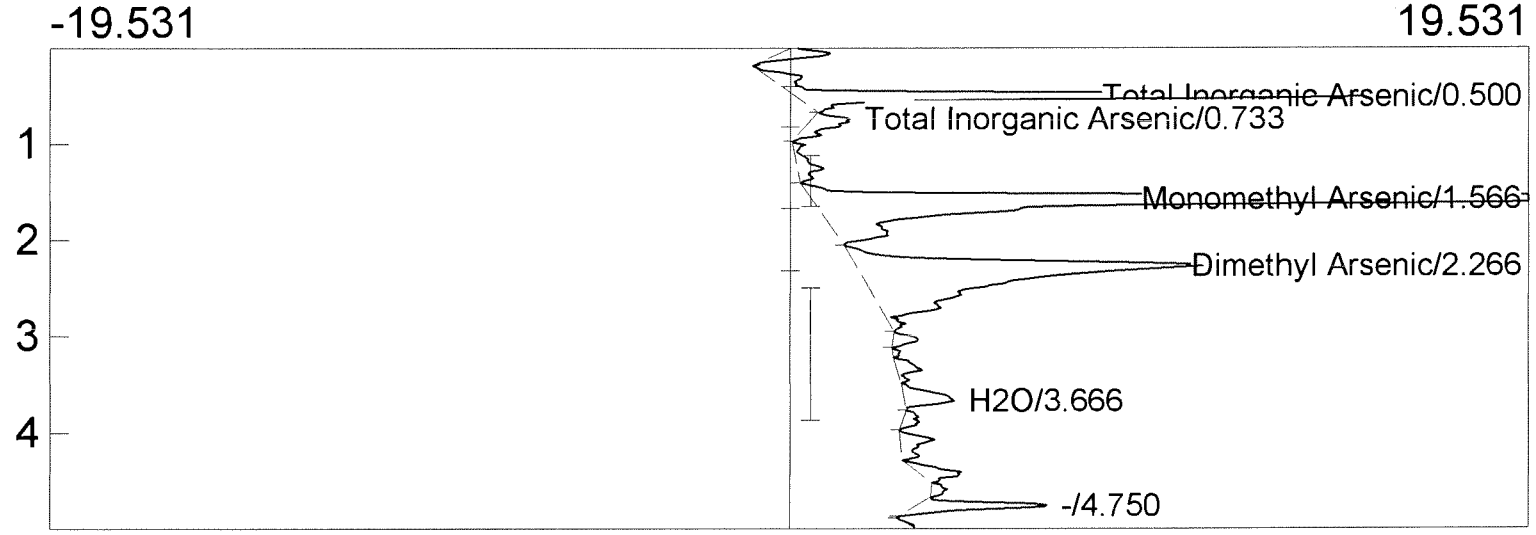
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1316.2730	278.404
Monomethyl Arsenic	1.150	32.5580	3.052
Monomethyl Arsenic	1.566	295.0650	55.481
Dimethyl Arsenic	2.300	81.0160	6.127
H2O	2.883	10.7355	0.947
		1735.6475	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:19:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-009 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	61.8065	13.327
Monomethyl Arsenic	1.566	319.0940	51.717
Dimethyl Arsenic	2.250	168.4380	17.667
H2O	3.000	26.1185	4.697
		575.4570	

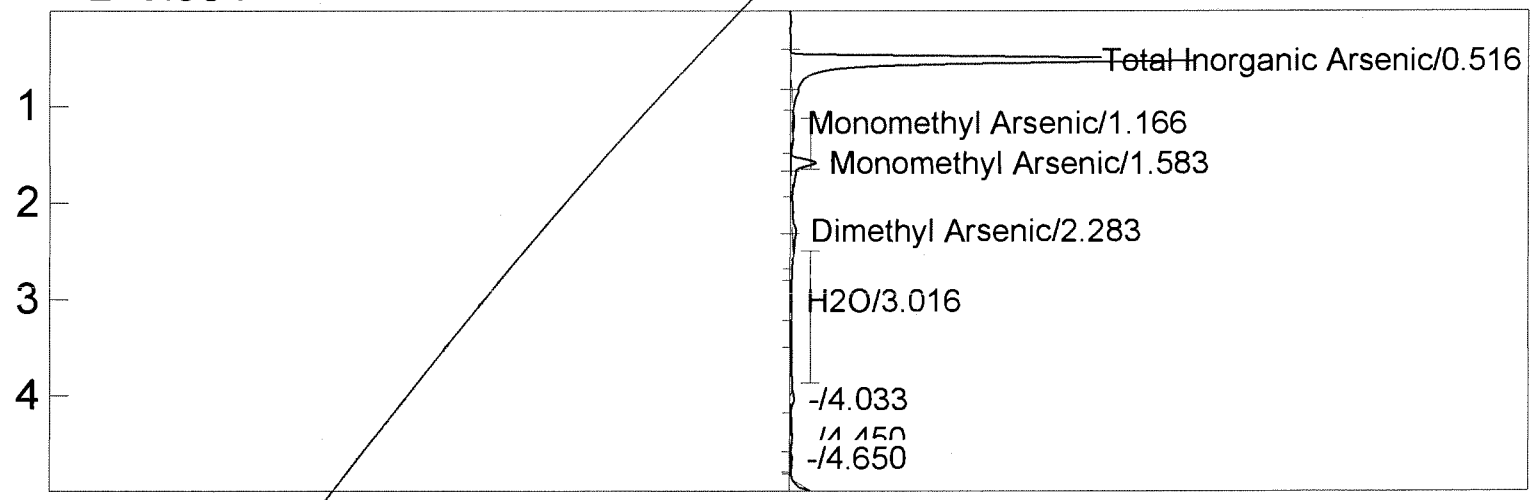
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:28:03
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015 2.0mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	76.2005	15.526
Total Inorganic Arsenic	0.733	10.4180	1.002
Monomethyl Arsenic	1.566	243.9430	40.262
Dimethyl Arsenic	2.266	137.6080	9.218
H2O	3.666	10.7630	1.309
		478.9325	

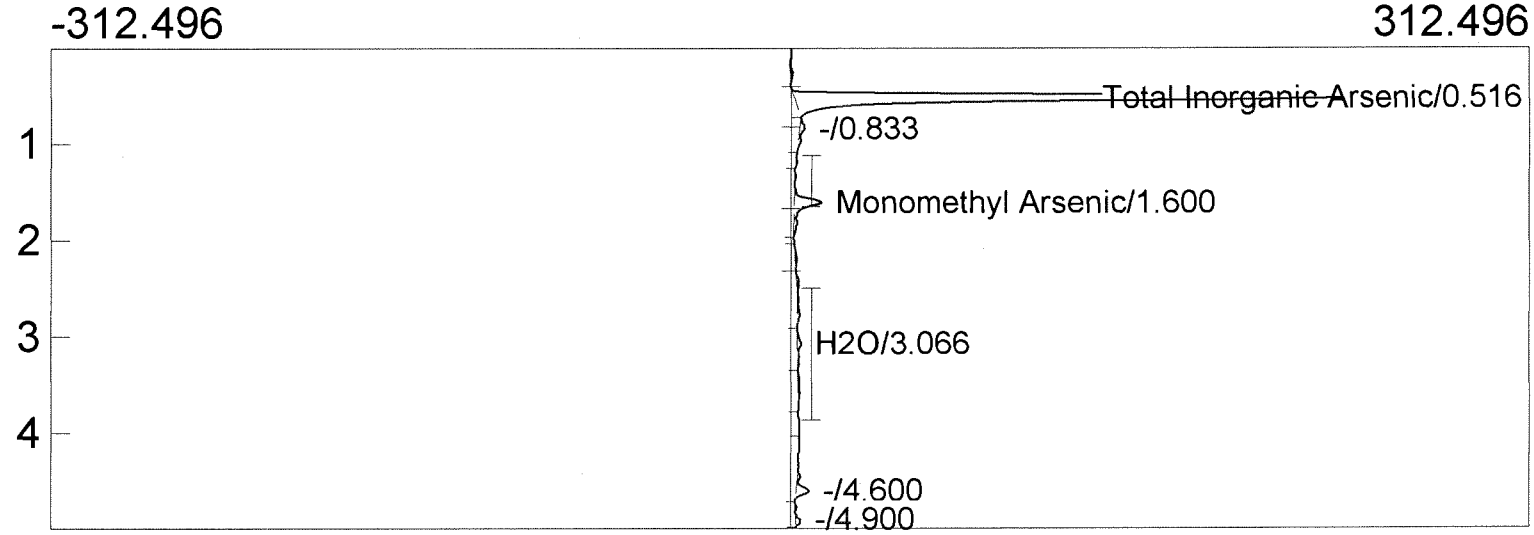
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:37:52
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 2.0mL.CHR ()
Operator: BJS

BJS 8/11



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	3627.8170	690.233
Monomethyl Arsenic	1.166	42.9135	2.741
Monomethyl Arsenic	1.583	267.3405	41.414
Dimethyl Arsenic	2.283	110.1535	6.707
H2O	3.016	11.4340	0.956
		4059.6585	

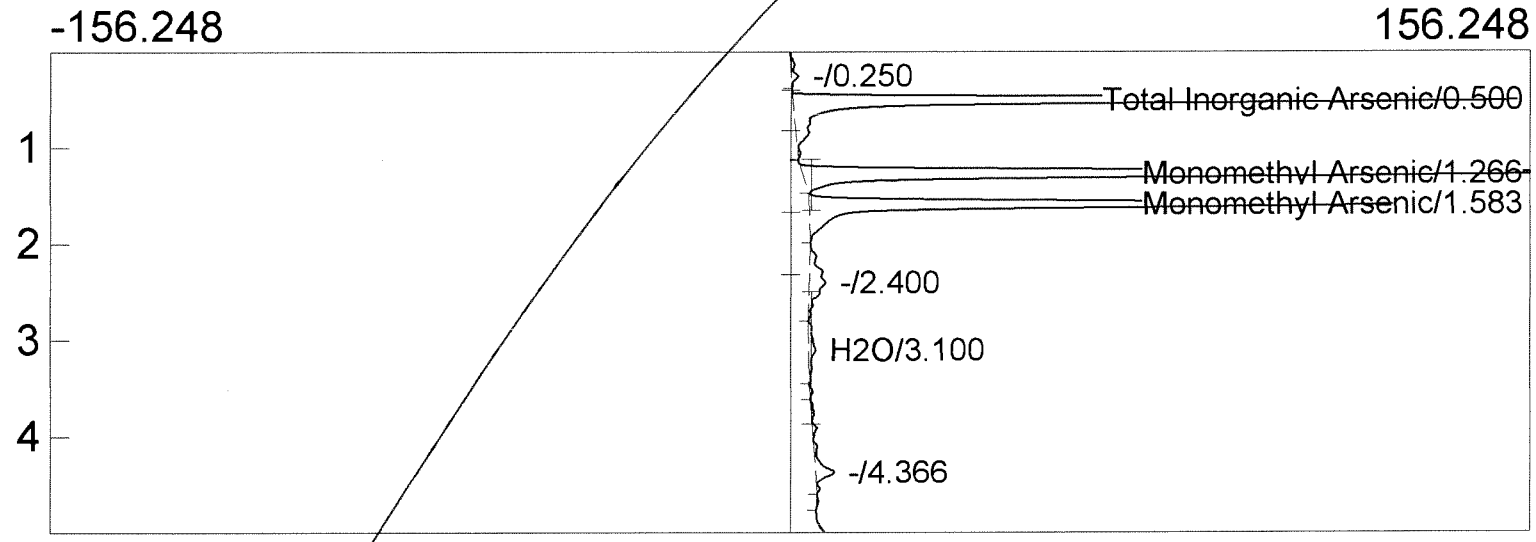
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:45:55
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MS 0.5mL.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	1076.7395	233.401
Monomethyl Arsenic	1.600	84.3420	11.800
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.066	16.8770	1.586
		1177.9585	

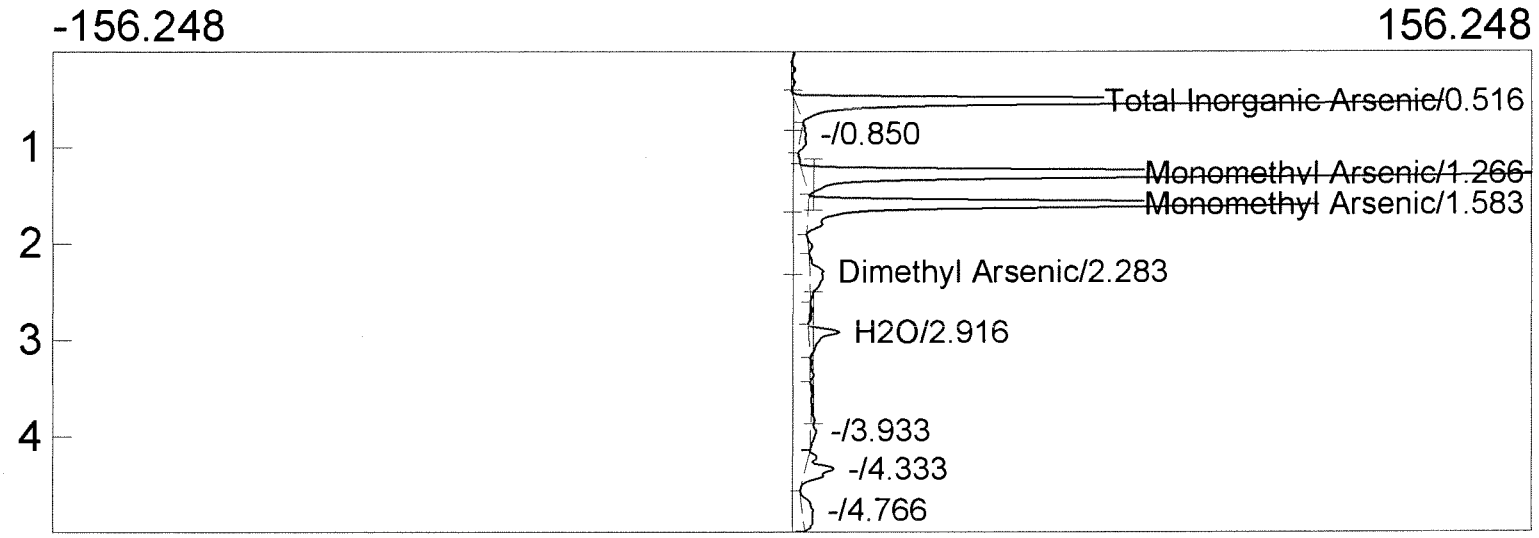
Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 13:56:33
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3.CHR ()
Operator: BJS

BJS 8/1/11



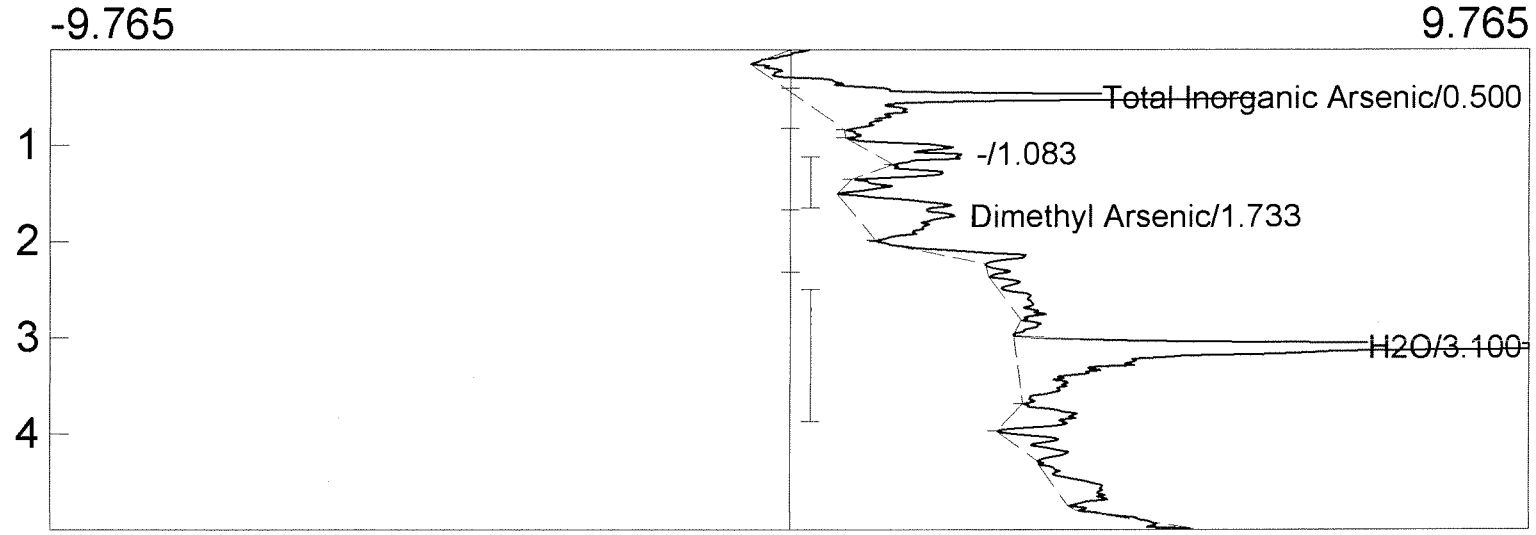
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	764.7670	155.330
Monomethyl Arsenic	1.266	822.6510	172.463
Monomethyl Arsenic	1.583	629.3575	124.905
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	3.100	26.9830	1.489
		2243.7585	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:06:23
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 3 Rerun.CHR ()
Operator: BJS



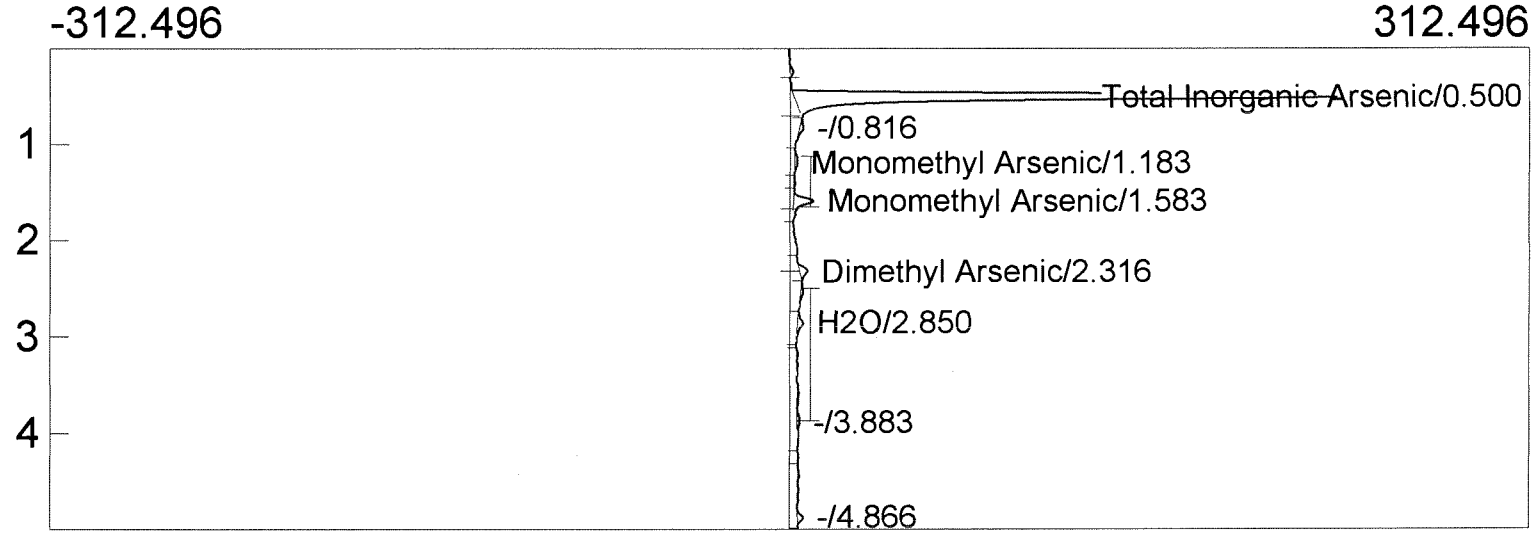
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	628.0615	137.877
Monomethyl Arsenic	1.266	790.9515	162.769
Monomethyl Arsenic	1.583	552.6305	109.285
Dimethyl Arsenic	2.283	42.0890	3.032
H2O	2.916	46.7670	6.655
		2060.4995	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:15:06
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 4.CHR ()
Operator: BJS



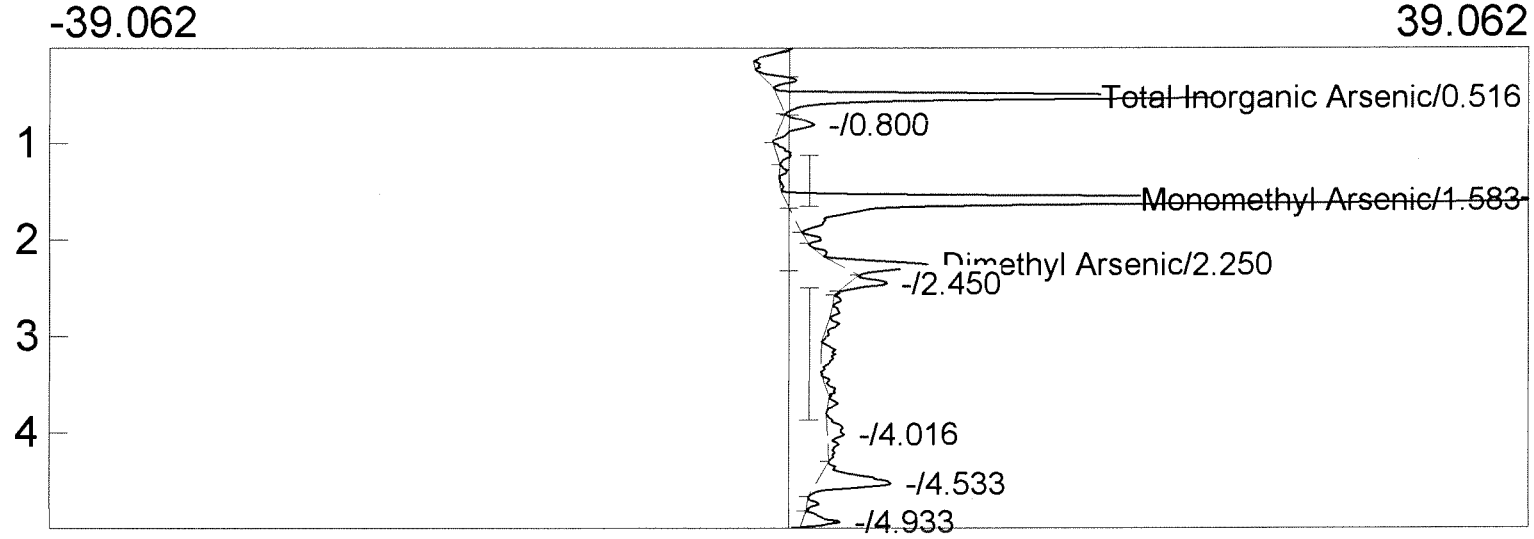
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	50.8045	6.340
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	1.733	23.6610	1.319
H2O	3.100	73.7845	8.241
		148.2500	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:24:27
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-015MSD 0.5mL.CHR ()
Operator: BJS



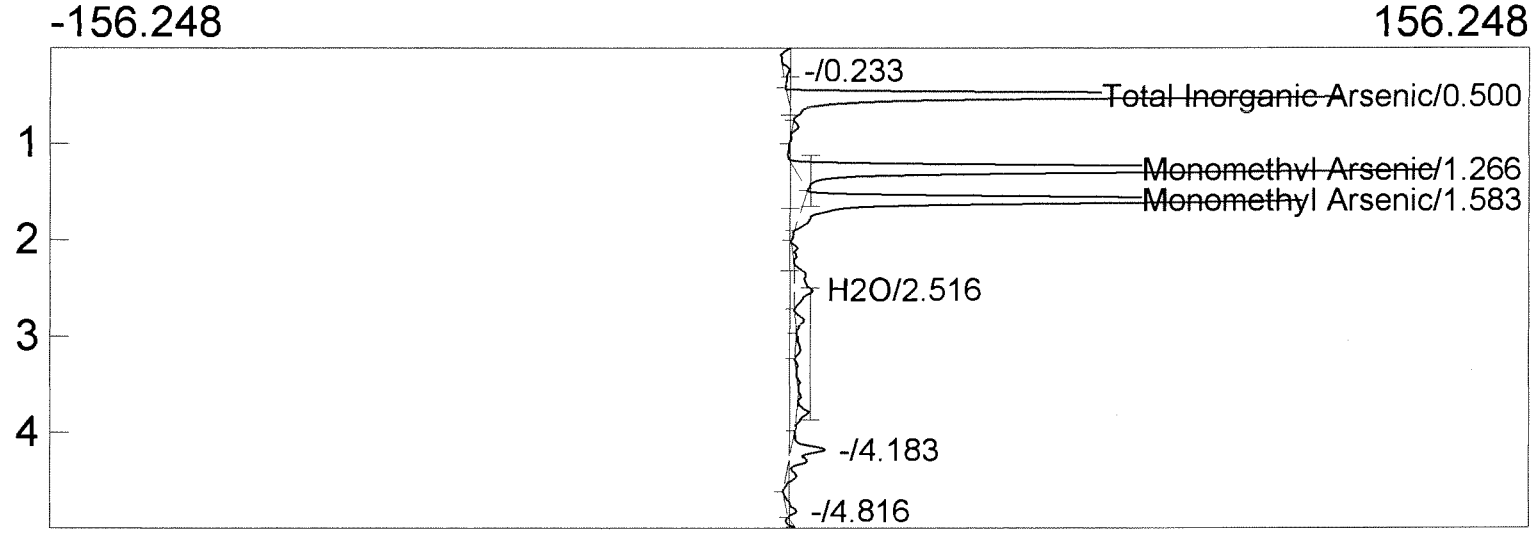
Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	1082.6750	237.765
Monomethyl Arsenic	1.183	10.2550	1.111
Monomethyl Arsenic	1.583	49.0340	8.460
Dimethyl Arsenic	2.316	19.0135	3.352
H2O	2.850	17.2500	2.279
		1178.2275	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:34:59
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: K1106166-025 2.0mL.CHR ()
Operator: BJS



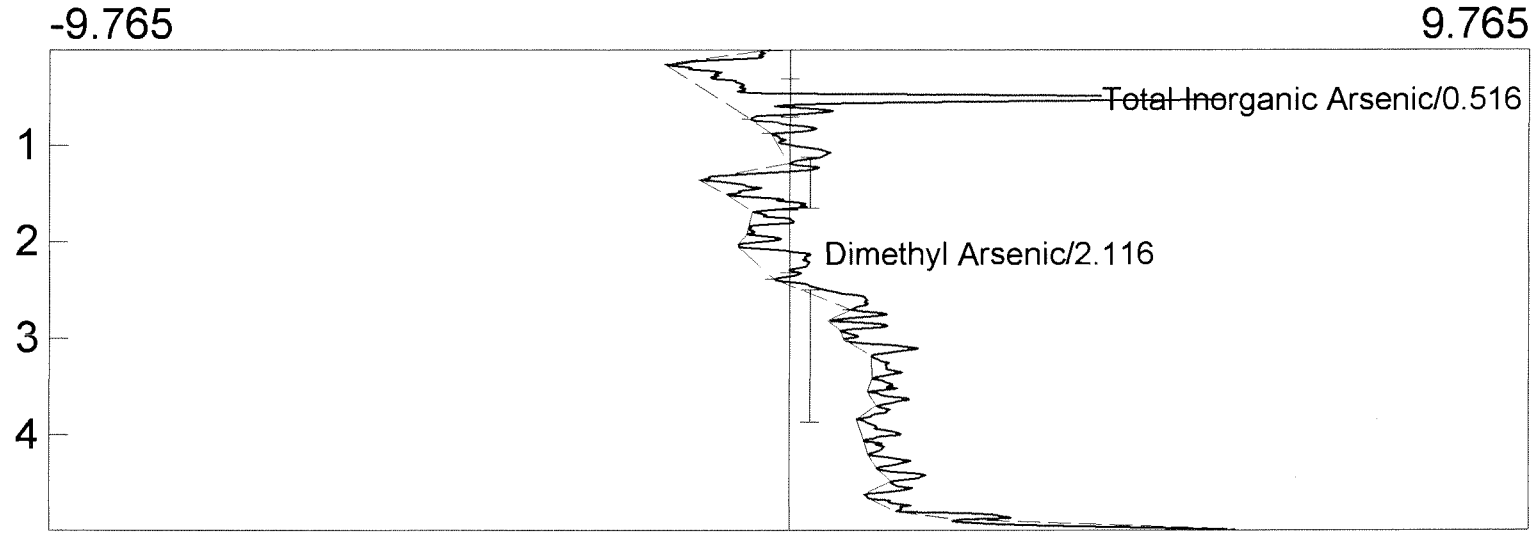
Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	103.9290	23.142
Monomethyl Arsenic	1.583	239.1630	44.823
Dimethyl Arsenic	2.250	26.7600	4.779
H2O	0.000	0.0000	0.000
		369.8520	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:51:05
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALVER 4.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.500	557.1400	121.037
Monomethyl Arsenic	1.266	679.0480	135.979
Monomethyl Arsenic	1.583	547.6840	106.711
Dimethyl Arsenic	0.000	0.0000	0.000
H2O	2.516	55.0280	3.912
		1838.9000	

Lab name: Columbia Analytical
Client: Arsenic Speciation
Analysis date: 08/01/2011 14:59:24
Method: 1632
Description: FID-CHANNEL 1
Column: 15% OV-3 Chromosorb
Carrier: HELIUM
Data file: CALBLK 5.CHR ()
Operator: BJS



Component	Retention	Area	Height
Total Inorganic Arsenic	0.516	42.6490	6.789
Monomethyl Arsenic	0.000	0.0000	0.000
Dimethyl Arsenic	2.116	10.2100	0.852
H2O	0.000	0.0000	0.000
		52.8590	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Methyl Mercury

Prep Method:	CAS SOP	Units:	ng/g
Analysis Method:	CAS SOP	Basis:	Wet
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Meat	K1106166-009	1.5	0.6	1	07/28/11	07/29/11	11.7	
EWL-HOU-C-Meat	K1106166-015	1.7	0.7	1	07/28/11	07/29/11	29.2	
EWL-BIL-C-Meat	K1106166-025	1.7	0.7	1	07/28/11	07/29/11	27.9	
Method Blank 1	K1106166-MB1	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 2	K1106166-MB2	1.1	0.4	1	07/28/11	07/29/11	ND	
Method Blank 3	K1106166-MB3	1.1	0.4	1	07/28/11	07/29/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
Sample Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Matrix Spike/Duplicate Matrix Spike Summary
Metals

Sample Name:	Batch QC	Units:	ng/g
Lab Code:	K1106157-025S, K1106157-025SD	Basis:	Wet
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	5.0	1002	1002	10.5	1180	1300	117	129	65-135	10	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary
Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: picograms (pg)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	106	106	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Ongoing Precision and Recovery (OPR) Sample Summary

Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: picograms (pg)

Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	100	103	103	67-133	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/28/11
		Date Analyzed:	07/29/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Methyl Mercury	CAS SOP	CAS SOP	163	141	87	67-133	

Service Request #	K1106152 K1106154 K1106157 K1106166		
MS/MSD with #	K1106157-025		
Star Lims Prep #	138641		
Star Lims Run #	255350		
OPR Parent Std	AF1-57-A	Exp.	08/27/11
OPR Intermediate Std	AF1-63-A	Exp.	08/01/11
QCS Parent Std	NA	Exp.	NA
QCS Intermediate Std	NA	Exp.	NA

1630M Tissue Data Review Form

		Yes	No	N/A
1	20 samples (or less) in batch	X		
2	MS/MSD every 20 samples	X		
3	Mean of Ethylation Blanks less than 2 pg	X		
4	3 Method Blanks Run	X		
5	Method blank below MRL	X		
6	Current Calibration factor used	X		
7	Calibration data included	X		
8	OPR, QCS in control (67-133%)	X		
9	MS/MSD recovery (65 -135%)	X		
10	MS/MSD RPD within 35%	X		
11	All samples within the linear range	X		
12	All corresponding charts included	X		
13	Dilution factors calculated	X		
14	Bench sheet signed	X		

Comments

Primary Reviewed by KDK Date 7/29/2011

Secondary Reviewed by BJS Date 7/29/11

Batch Information Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run Duration:	7.0	Method Blank Type:	Concentration
Heating Time:	1.00	Integration Mode:	Methyl Hg
Retention Start Time:	2.5	Integration Type:	Peak Height
Retention Stop Time:	3.5	Result Units:	µg/Kg
Calibration File:	060211calsoil&tissue.brd		

Reagents

Name	Lot Number
1% NaBEt4	RE2-35-E
2M KOAc	RE2-36-J
25% KOH	RE2-37-K
MeOH	RE2-37-J

Standards

Name	Concentration	Lot Number
MeHgCl 1000pg	1000 pg/mL	AF1-62-H
MeHgCl 100pg	100 pg/mL	AF1-63-A
MeHgCl 10pg	10 pg/mL	AF1-62-J
QCS Intermediate	1000 pg/mL	AF1-62- I
QCS	100 pg/mL	AF1-63-B

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Run Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Peak	Peak Height	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
20	OPR	OPR		2	46,598	103		103	67-133	accept

Analyst Comments:

Noise: 36
PMT: 789
Offset: 50,308

OPR1.00 mL(100 pg/mL) = 100 pg
Matrix Spike0.50 mL(1000ng/mL) = 2.0 mg/Kg

Freeze Dried:Yes

TORT Solids:94.7%

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106157-025	1,180	µg/Kg	1002	10.5	117	65-135			accept
MSD	K1106157-025	1,300	µg/Kg	1002	10.5	129	65-135	9.85	< 35	accept
OPR	OPR	106	pg	100		106	67-133			accept
	OPR	103	pg	100		103	67-133			accept
QCS	TORT	141	µg/Kg	163		86.4	67-133			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	STD 2	1.76	pg	2	88.0	75-125			accept
	STD 20	18.6	pg	20	93.0	75-125			accept
	STD 50	52.2	pg	50	104	75-125			accept
	STD 100	96.2	pg	100	96.2	75-125			accept
	STD 1000	1,140	pg	1000	114	75-125			accept
	STD 2000	2,200	pg	2000	110.	75-125			accept
Calibration Factor		0.00221	pg/PH				10.5	< 15	accept
Calibration Date		6/2/11							

Peak Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
MBA	MBLK 1	0.0311	µg/Kg	< 10			accept
	MBLK 2	0.0524	µg/Kg	< 10			accept
	MBLK 3	0.0903	µg/Kg	< 10			accept
Average		0.0579	µg/Kg		0.0300		

QA Comments:

QA Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Name/ID	Final Result (µg/Kg)	Notes
9	K1106152-009	5.79	accept
10	K1106152-015	10.4	accept
11	K1106152-025	14.8	accept
12	K1106154-009	3.85	accept
13	K1106154-015	6.05	accept
14	K1106154-025	8.62	accept
15	K1106157-009	4.47	accept
16	K1106157-015	4.66	accept
6	K1106157-025	10.5	accept
17	K1106166-009	11.7	accept
18	K1106166-015	29.2	accept
19	K1106166-025	27.9	accept

Run Information Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	OPR	OPR					100	
2	QCS	TORT	MBA	210	50	0.050	163	mg/Kg
3	MBA	MBLK 1		2273	50	0.050		
4	MBA	MBLK 2		2273	50	0.050		
5	MBA	MBLK 3		2273	50	0.050		
6	S	K1106157-025	MBA	505	50	0.050		
7	MS	K1106157-025	MBA	499	50	0.050	1002	
8	MSD	K1106157-025	MBA	499	50	0.050	1002	
9	S	K1106152-009	MBA	1286	50	0.050		
10	S	K1106152-015	MBA	1162	50	0.050		
11	S	K1106152-025	MBA	1095	50	0.050		
12	S	K1106154-009	MBA	2318	50	0.050		
13	S	K1106154-015	MBA	2049	50	0.050		
14	S	K1106154-025	MBA	1193	50	0.050		
15	S	K1106157-009	MBA	478	50	0.050		
16	S	K1106157-015	MBA	433	50	0.050		
17	S	K1106166-009	MBA	1673	50	0.050		
18	S	K1106166-015	MBA	1460	50	0.050		
19	S	K1106166-025	MBA	1435	50	0.050		
20	OPR	OPR					100	

Columbia Analytical Services, Inc.

Sample Number(s):	Service Request Number(s):
As Listed	K1106152 K1106154 K1106157 K1106166
Analysis for:	**Method:**
MeHg in Tissues	1630m

DATA **StarLIMS #138641**

Sample ID		Initial Weight (g)		Final Volume (mL)			Matrix
MB-1		0.250		50mL			25% KOH
MB-2		0.250		50mL			25% KOH
MB-3		0.250		50mL			25% KOH
TORT		0.222		50mL			25% KOH
K1106152-009		0.252		50mL			25% KOH
K1106152-015		0.273		50mL			25% KOH
K1106152-025		0.253		50mL			25% KOH
K1106154-009		0.255		50mL			25% KOH
K1106154-015		0.250		50mL			25% KOH
K1106154-025		0.253		50mL			25% KOH
K1106157-009		0.250		50mL			25% KOH
K1106157-015		0.256		50mL			25% KOH
K1106157-025		0.254		50mL			25% KOH
K1106157-025S		0.251		50mL			25% KOH
K1106157-025SD		0.251		50mL			25% KOH
K1106166-009		0.266		50mL			25% KOH
K1106166-015		0.257		50mL			25% KOH
K1106166-025		0.267		50mL			25% KOH

Start Time: 02:45 PM 07/28/2011
Oven Temperature: 80°C

Comments: Spike Standard: 0.5ml of 1000ng/mL AF1-57-A
25% KOH: RE2-37-K

Analyst:	Date:
	7/28/2011

R:\ICP\misc\digforms\072811

Conversion from dry weight to wet weight:

Standard MRL =	10
Standard MDL =	4.0
Standard Dilution =	1
Standard Sample Mass =	0.250

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.252	19.6	**1.286**	1	**1.9**	**0.8**
K1106152-015	0.273	23.5	**1.162**	1	**2.2**	**0.9**
K1106152-025	0.253	23.1	**1.095**	1	**2.3**	**0.9**
K1106154-009	0.255	11.0	**2.318**	1	**1.1**	**0.4**
K1106154-015	0.250	12.2	**2.049**	1	**1.2**	**0.5**
K1106154-025	0.253	21.2	**1.193**	1	**2.1**	**0.8**
K1106157-009	0.250	52.3	**0.478**	1	**5.2**	**2.1**
K1106157-015	0.256	59.1	**0.433**	1	**5.8**	**2.3**
K1106157-025	0.254	50.3	**0.505**	1	**5.0**	**2.0**
K1106157-025S	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106157-025SD	0.251	50.3	**0.499**	1	**5.0**	**2.0**
K1106166-009	0.266	15.9	**1.673**	1	**1.5**	**0.6**
K1106166-015	0.257	17.6	**1.460**	1	**1.7**	**0.7**
K1106166-025	0.267	18.6	**1.435**	1	**1.7**	**0.7**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
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			#DIV/0!		**#DIV/0!**	**#DIV/0!**
			#DIV/0!		**#DIV/0!**	**#DIV/0!**
Method Blank	0.250	11.000	**2.273**	1	**1.1**	**0.4**

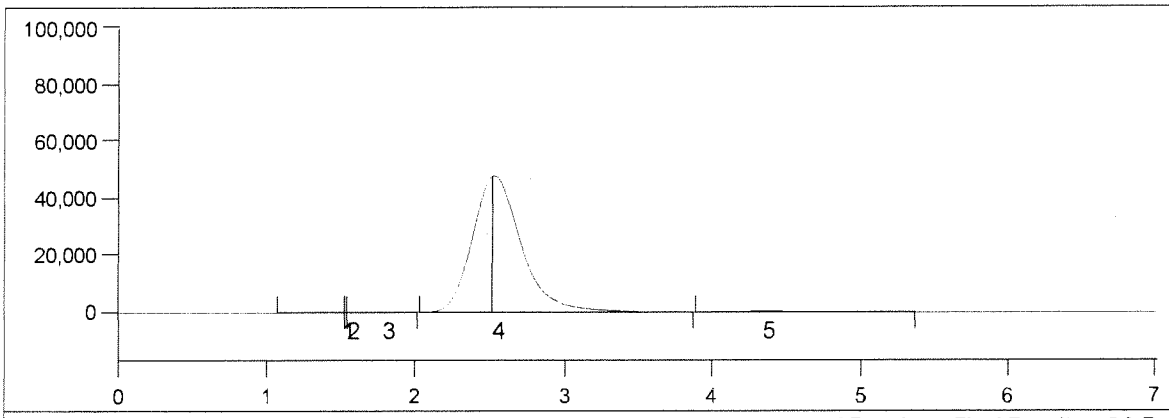
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

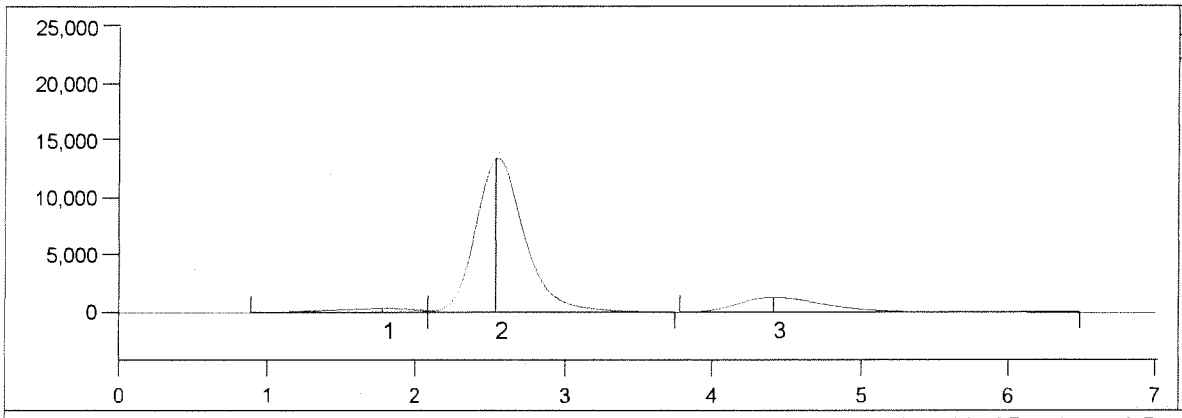
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 8:45 AM

Peak	rt	Height
1	1.51	8
2	1.54	1
3	1.77	83
4	2.52	48,026
5	4.35	352

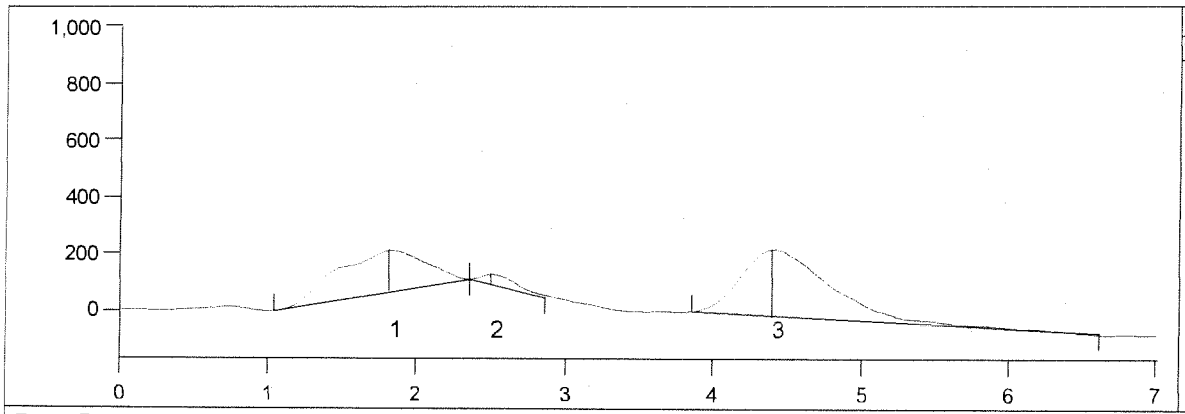
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	OPR	OPR		4	48,026	106		106	67-133	accept
Notes										



Date: 7/29/11
Time: 8:54 AM

Peak	rt	Height
1	1.77	280
2	2.54	13,412
3	4.40	1,314

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	QCS	TORT	MBA	2	13,412	29.6	141	86.4	67-133	accept
Notesmg/Kg										



Date: 7/29/11
Time: 9:04 AM

Peak	rt	Height
1	1.80	147
2	2.49	32
3	4.39	237

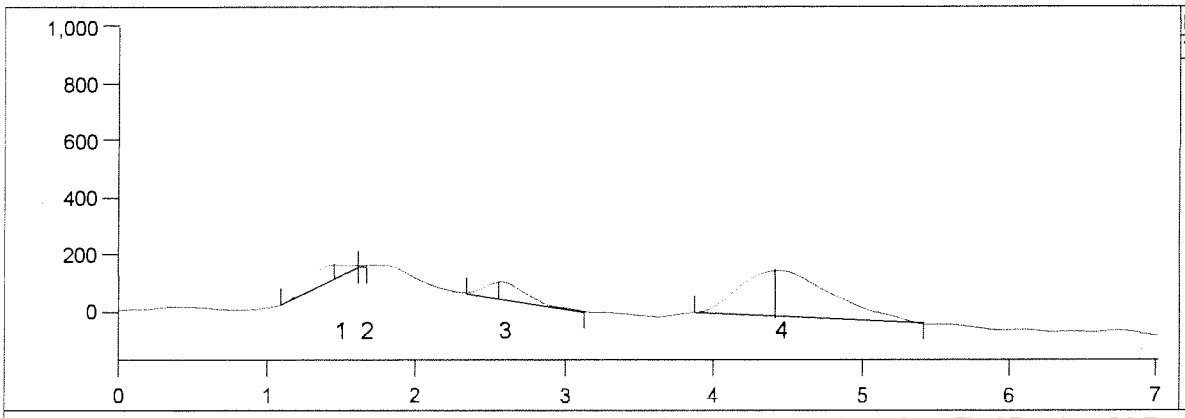
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MBLK 1		2	32	0.0706	0.0311	0.0311	< 10	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

Date Analyzed: 7/29/11
Analyst Name: Kelly Klein

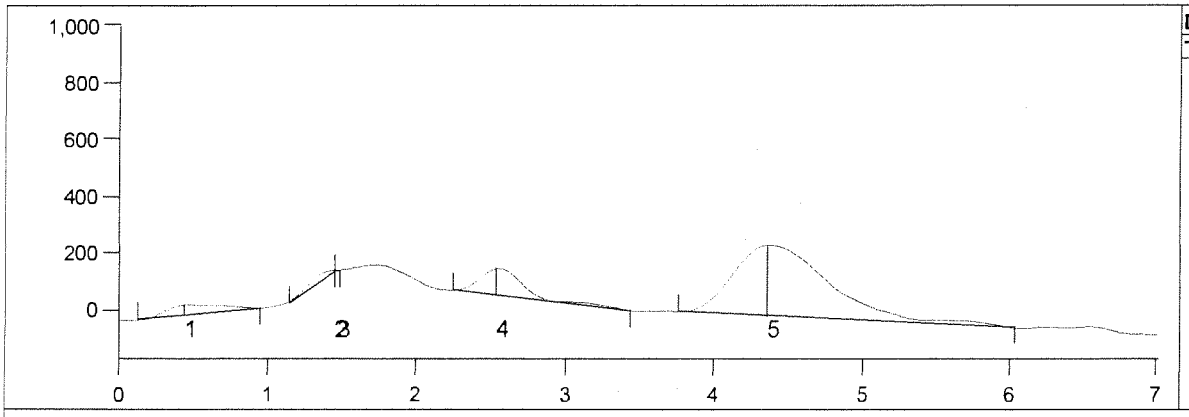


Date: 7/29/11
Time: 9:12 AM

Peak	rt	Height
1	1.44	46
2	1.63	1
3	2.54	54
4	4.41	165

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	MBA	MBLK 2		3	54	0.119	0.0524	0.0524	< 10	accept

Notes

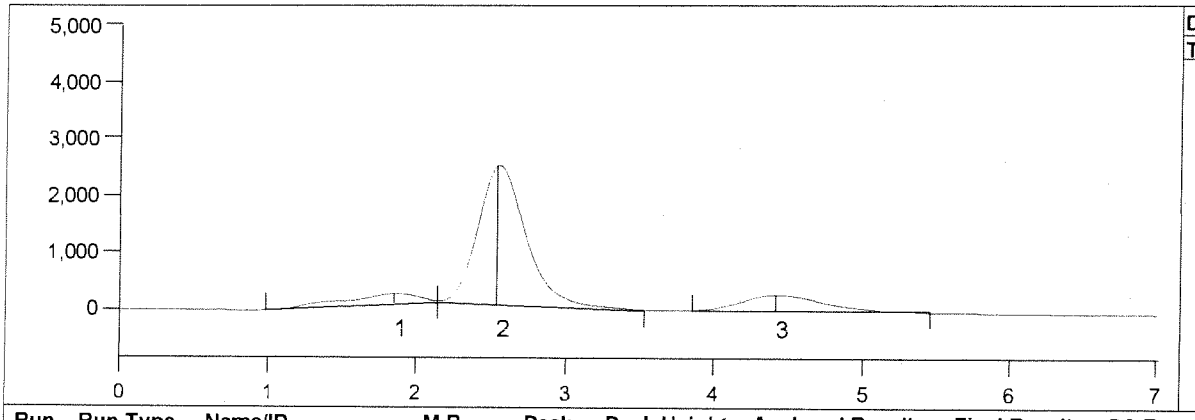


Date: 7/29/11
Time: 9:19 AM

Peak	rt	Height
1	0.44	40
2	1.45	2
3	1.48	1
4	2.53	93
5	4.35	252

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	MBA	MBLK 3		4	93	0.205	0.0903	0.0903	< 10	accept

Notes



Date: 7/29/11
Time: 9:27 AM

Peak	rt	Height
1	1.85	169
2	2.54	2,424
3	4.40	286

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106157-025	MBA	2	2,424	5.35	10.5		< HS	accept

Notes

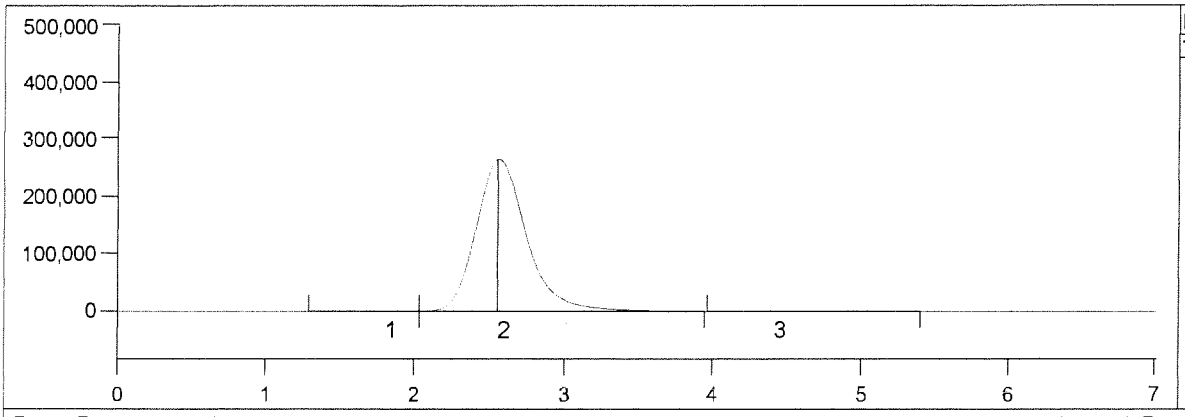
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

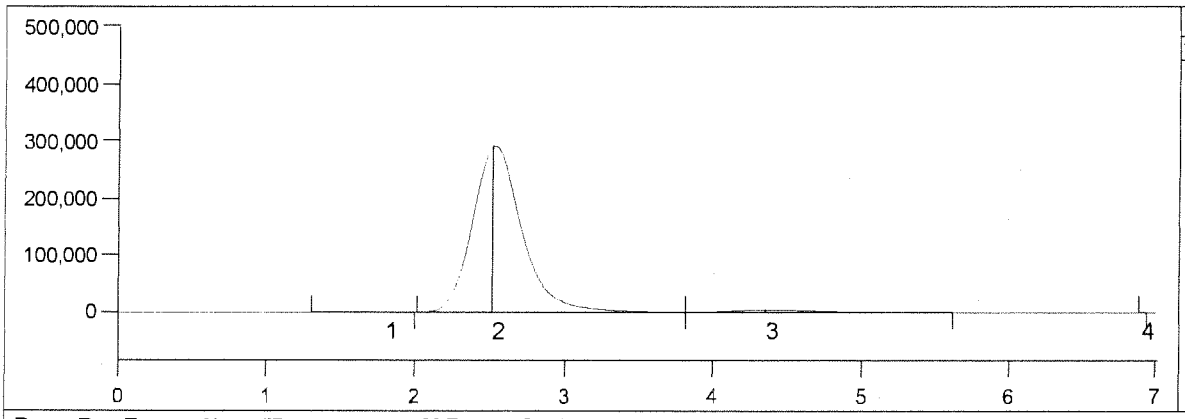
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date:	7/29/11
Time:	9:34 AM

Peak	rt	Height
1	1.80	1,028
2	2.55	266,530
3	4.41	1,274

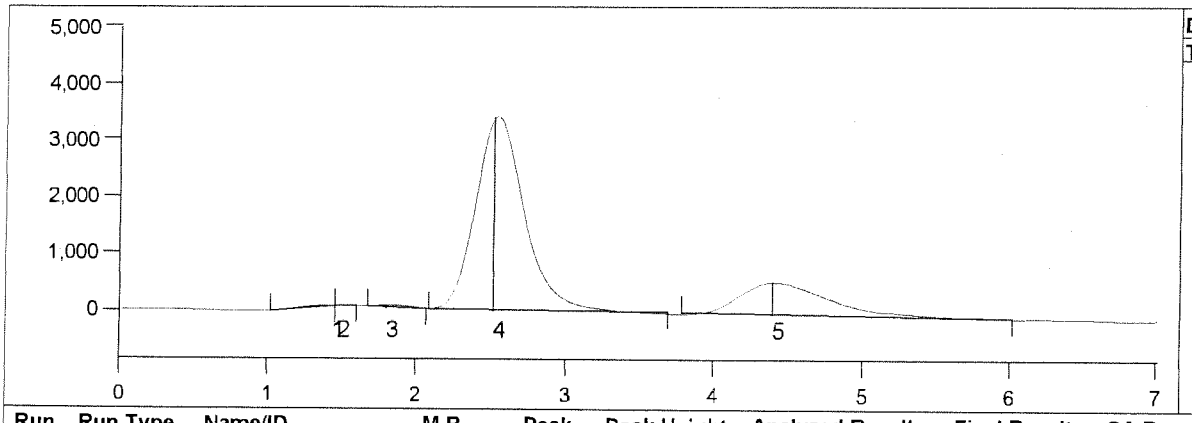
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106157-025	MBA	2	266,530	588	1,180	117	65-135	accept
Notes										



Date:	7/29/11
Time:	9:42 AM

Peak	rt	Height
1	1.80	888
2	2.52	294,141
3	4.36	4,627
4	6.91	0

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106157-025	MBA	2	294,141	649	1,300	129	65-135	accept
Notes										



Date:	7/29/11
Time:	9:49 AM

Peak	rt	Height
1	1.44	3
2	1.47	1
3	1.80	28
4	2.52	3,410
5	4.39	581

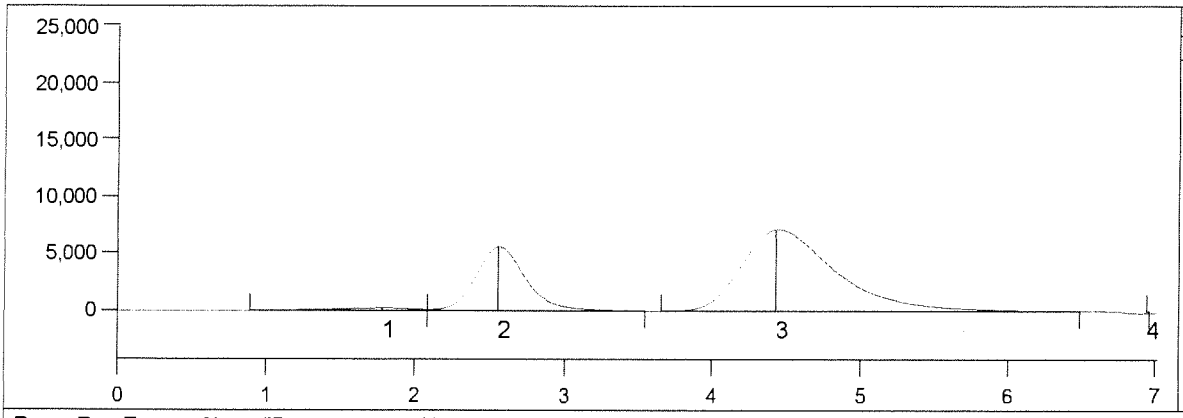
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	S	K1106152-009	MBA	4	3,410	7.52	5.79		< HS	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

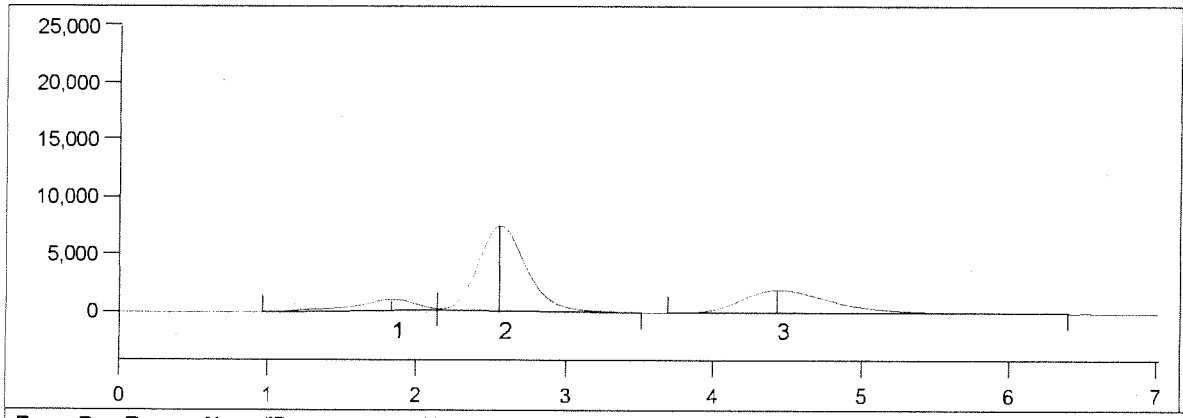
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 9:57 AM

Peak	rt	Height
1	1.78	178
2	2.55	5,501
3	4.44	7,144
4	6.94	-1

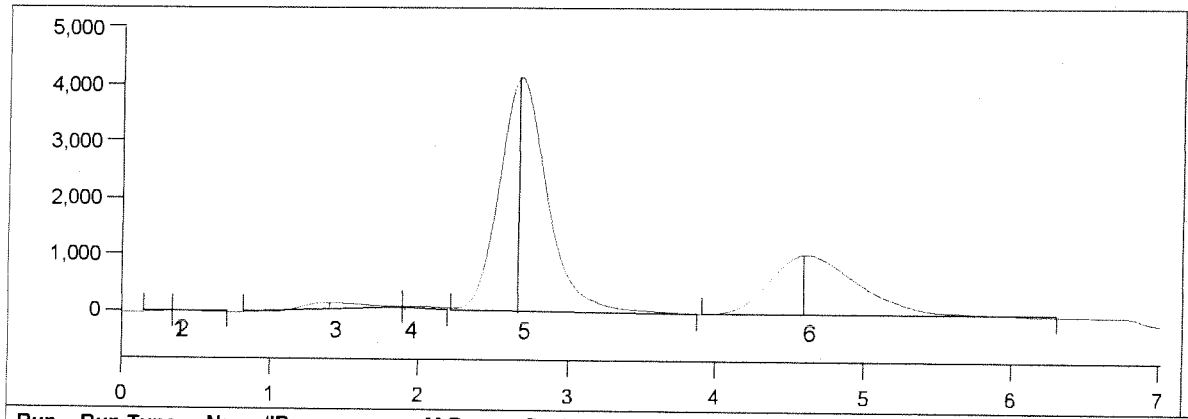
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-015	MBA	2	5,501	12.1	10.4		< HS	accept
Notes										



Date: 7/29/11
Time: 10:04 AM

Peak	rt	Height
1	1.82	878
2	2.55	7,363
3	4.43	2,089

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-025	MBA	2	7,363	16.2	14.8		< HS	accept
Notes										



Date: 7/29/11
Time: 10:23 AM

Peak	rt	Height
1	0.35	1
2	0.37	1
3	1.39	120
4	1.90	2
5	2.66	4,101
6	4.60	1,069

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009	MBA	5	4,101	9.05	3.85		< HS	accept
Notes										

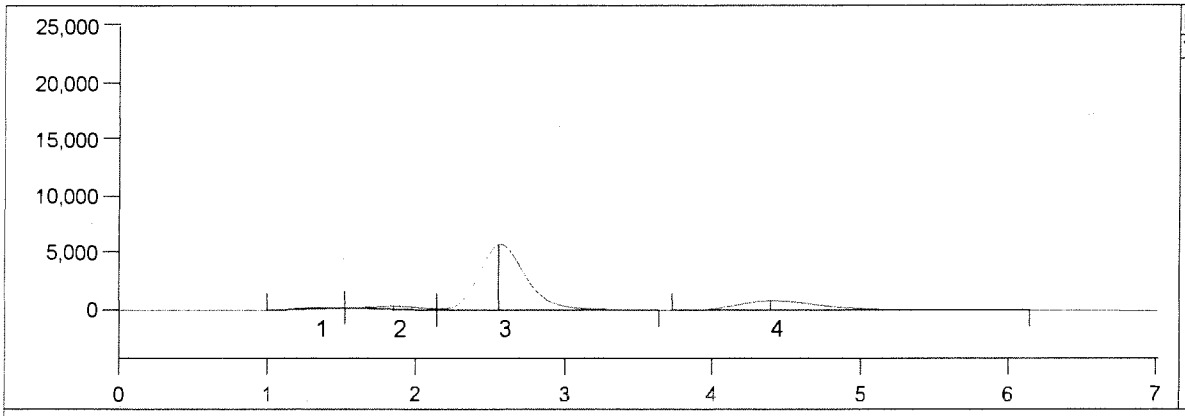
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

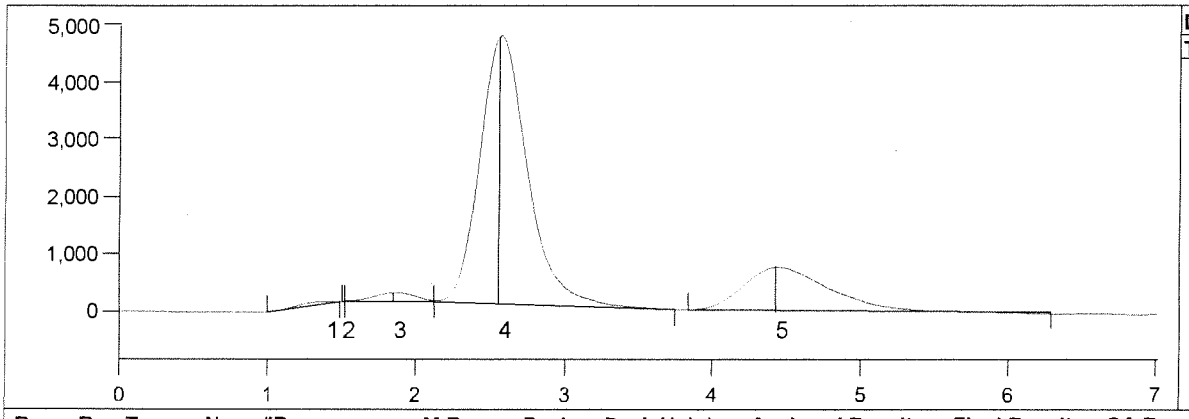
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date:	7/29/11
Time:	10:30 AM

Peak	rt	Height
1	1.34	97
2	1.84	203
3	2.56	5,672
4	4.39	894

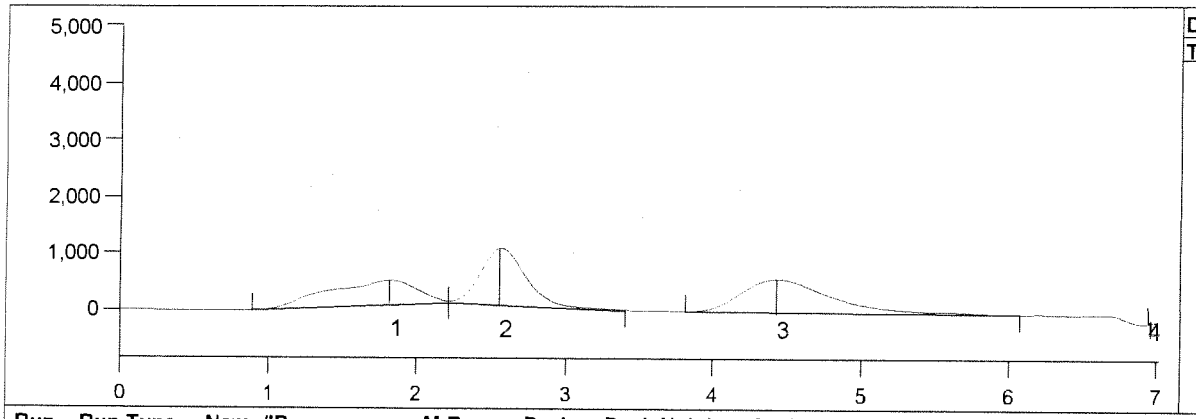
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015	MBA	3	5,672	12.5	6.05		< HS	accept
Notes										



Date:	7/29/11
Time:	10:38 AM

Peak	rt	Height
1	1.40	37
2	1.52	1
3	1.85	150
4	2.55	4,692
5	4.43	764

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025	MBA	4	4,692	10.4	8.62		< HS	accept
Notes										



Date:	7/29/11
Time:	10:46 AM

Peak	rt	Height
1	1.81	414
2	2.55	981
3	4.42	589
4	6.94	0

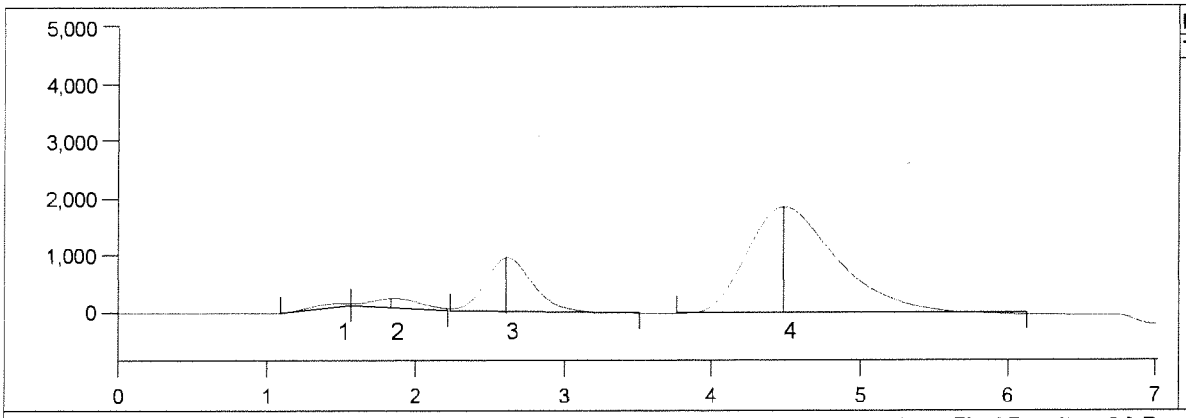
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009	MBA	2	981	2.16	4.47		< HS	accept
Notes										

Sample Results Summary Report

Batch Number: StarLIMS #255350
Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

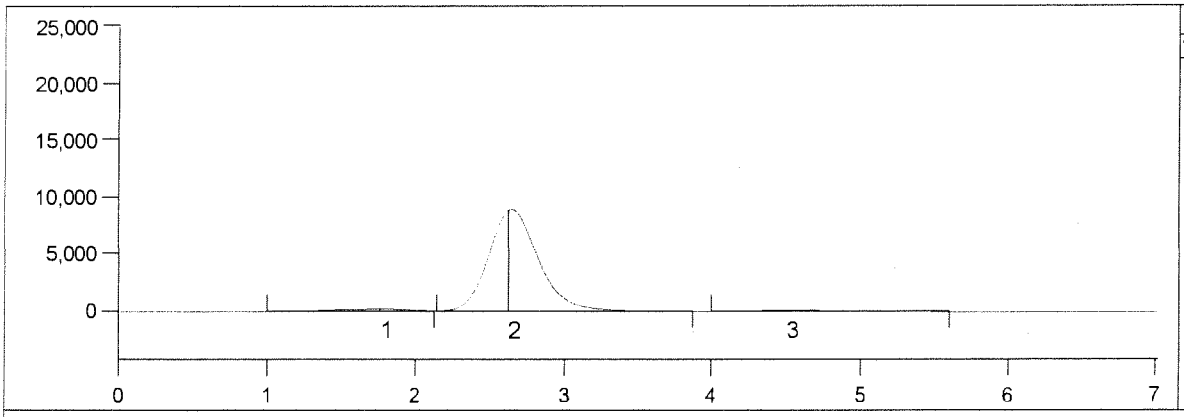
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date:	7/29/11
Time:	10:53 AM

Peak	rt	Height
1	1.46	38
2	1.84	122
3	2.60	926
4	4.48	1,903

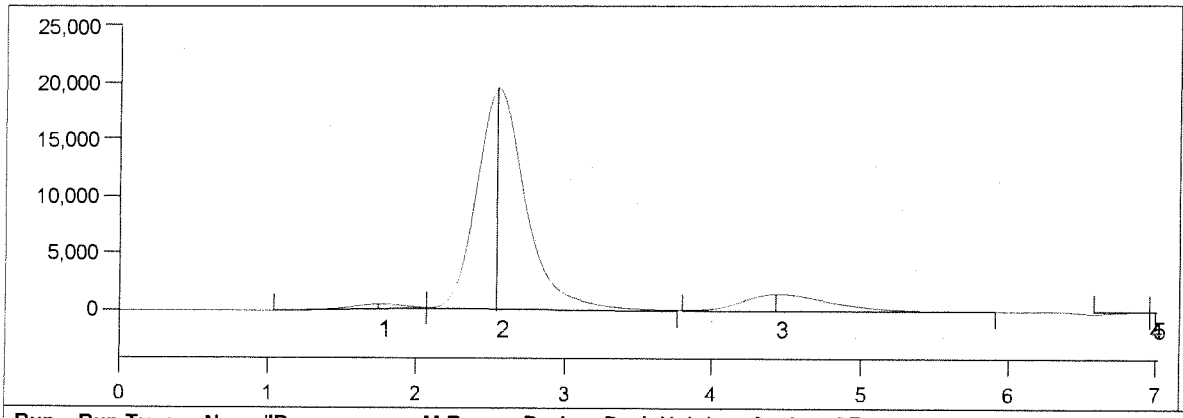
Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015	MBA	3	926	2.04	4.66		< HS	accept
Notes										



Date:	7/29/11
Time:	11:00 AM

Peak	rt	Height
1	1.76	184
2	2.63	8,940
3	4.49	183

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	S	K1106166-009	MBA	2	8,940	19.7	11.7		< HS	accept
Notes										



Date:	7/29/11
Time:	11:07 AM

Peak	rt	Height
1	1.75	396
2	2.53	19,363
3	4.43	1,472
4	6.96	2
5	6.98	1

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106166-015	MBA	2	19,363	42.7	29.2		< HS	accept
Notes										

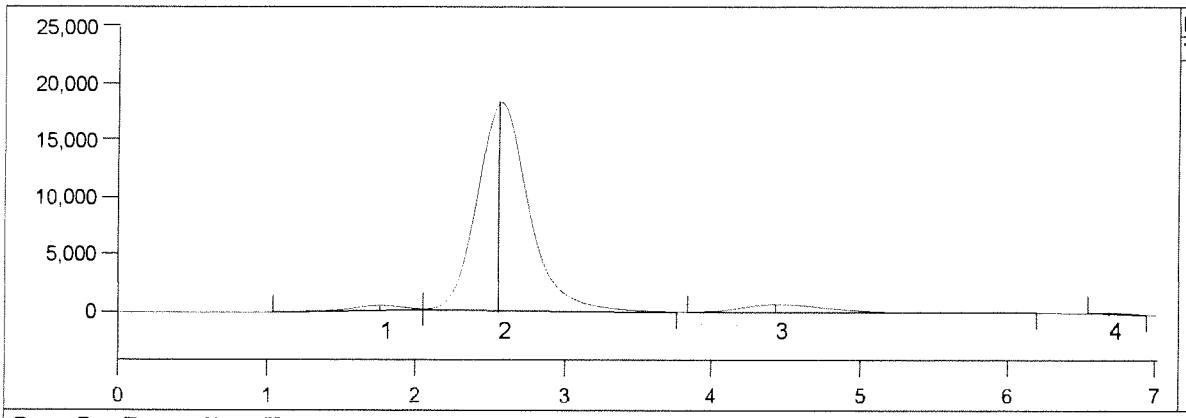
Sample Results Summary Report

Batch Number: StarLIMS #255350

Method Number: 1630M

Project Number(s): MeHg in Tissues
Instrument ID: K-AFS-04

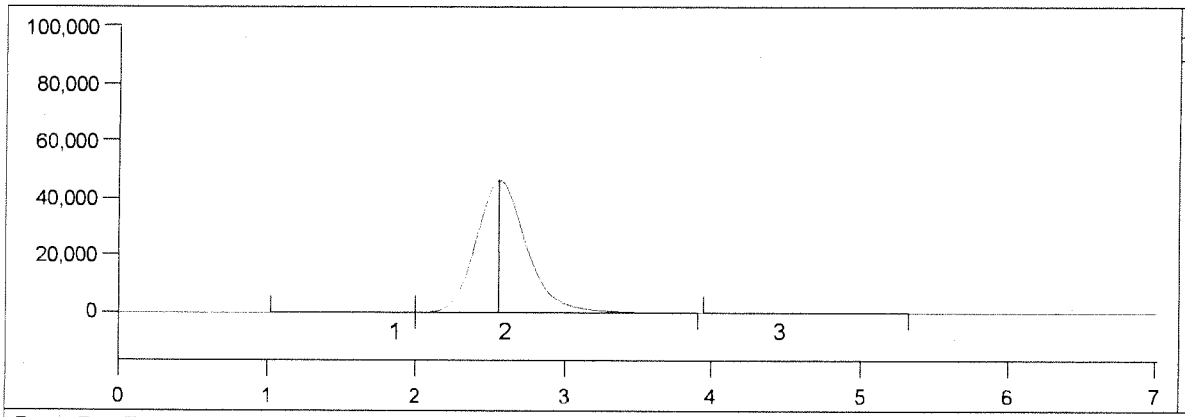
Date Analyzed: 7/29/11
Analyst Name: Kelly Klein



Date: 7/29/11
Time: 11:15 AM

Peak	rt	Height
1	1.75	401
2	2.56	18,197
3	4.44	734
4	6.69	80

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106166-025	MBA	2	18,197	40.1	27.9		< HS	accept
Notes										



Date: 7/29/11
Time: 11:22 AM

Peak	rt	Height
1	1.82	92
2	2.54	46,598
3	4.41	275

Run	Run Type	Name/ID	M B	Peak	Peak Height	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	OPR	OPR		2	46,598	103		103	67-133	accept
Notes										

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	WET
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Meat	K1106166-009	0.2	0.05	20	07/15/11	07/18/11	17.3	
EWL-HOU-C-Meat	K1106166-015	0.2	0.05	20	07/15/11	07/18/11	33.2	
EWL-BIL-C-Meat	K1106166-025	0.9	0.3	100	07/15/11	07/18/11	49.4	
Method Blank1	K1106166-MB1	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank2	K1106166-MB2	0.2	0.06	20	07/15/11	07/18/11	ND	
Method Blank3	K1106166-MB3	0.2	0.06	20	07/15/11	07/18/11	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11

Mercury, Total

Prep Method:	METHOD	Units:	ng/g
Analysis Method:	1631E	Basis:	WET
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Meat	K1106166-009	0.2	0.05	20	07/15/11	07/18/11	17.3	
EWL-HOU-C-Meat	K1106166-015	0.2	0.05	20	07/15/11	07/18/11	33.2	
EWL-BIL-C-Meat	K1106166-025	0.9	0.3	100	07/15/11	07/18/11	49.4	
Method Blank1	K1106166-MB1	1.0	0.3	20	07/15/11	07/18/11	0.17	J
Method Blank2	K1106166-MB2	1.0	0.3	20	07/15/11	07/18/11	0.10	J
Method Blank3	K1106166-MB3	1.0	0.3	20	07/15/11	07/18/11	0.14	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	05/23-06/20/11
Sample Matrix:	Tissue	**Date Received:**	05/24-06/21/11
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	EWL-BIL-C-Meat	Units:	ng/g
Lab Code:	K1106166-025MS, K1106166-025MSD	Basis:	WET
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	0.9	45	45	49.4	94.5	106	100	126	70-130	11	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.24	105	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	07/18/11

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.49	110	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/15/11
		Date Analyzed:	07/18/11

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/g
Basis: Dry

Test Notes:

Source: NRCC Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	270	272	101	70-130	

Service Request #:	K1106152, K1106154, K1106157, K1106166		
MS/MSD with #:	K1106152, K1106166		
StarLims Run # :	253805		
VER Standard ID:	AF1-63-C	Expiration Date:	07/30/11
Parent VER ID:	AF1-59-D	Expiration Date:	06/09/12

1631 Tissue Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method blank below MRL	X		
6. Ave of Bubbler Blanks less than 50 pg	X		
7. Verification Standards Passed (75-123%)	X		
8. OPR, QCS in control (70-130%)	X		
9. MS/MSD recovery 71-125%	X		
10. Spike RPD within 30%	X		
11. All samples within the linear range	X		
12. All corresponding charts included	X		
13. Dilution factors calculated	X		
14. Bench sheet signed	X		
	X		

Comments

Primary Reviewed by AEL Date 7/18/11

Secondary Reviewed by [signature] Date 7/27/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run Duration:	2.25	Integration Mode:	Total Hg
Heating Time:	1.75	Integration Type:	Peak Area
Retention Start Time:	.75	Result Units:	µg/Kg
Retention Stop Time:	1.75		
Calibration File:	CAL CURVE 032911.brd		

Reagents

Name	Lot Number
BrCl	RE2-36-M
SnCl+HCl	RE2-37-B

AEK 7/18/11

Standards

Name	Concentration	Lot Number
VER STD	10 ppb	AF1-63-C
OPR STD	40 ppb	AF1-63-E

Comments
PMT: 606 OFFSET: 5,090 NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (µg/Kg)	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept
~~15~~	~~S~~	~~K1106157-009~~		~~1~~	~~645,142~~	~~76.8~~	~~3.93~~		~~< HS~~	~~reject~~
~~16~~	~~S~~	~~K1106157-015~~		~~1~~	~~1,460,869~~	~~174~~	~~10.0~~		~~< HS~~	~~reject~~
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Bias and Precision

Run Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1106152-025	82.9	µg/Kg	57	34.7	84.6	70-130			accept
	K1106166-025	94.5	µg/Kg	45	49.4	100	70-130			accept
MSD	K1106152-025	95.6	µg/Kg	56	34.7	109	70-130	14.2	< 30	accept
	K1106166-025	106	µg/Kg	45	49.4	127	70-130	11.8	< 30	accept
IPR	TORT	272	µg/Kg	270		101	70-130			accept
OPR	OPR-1	5.24	µg/Kg	5		105	70-130			accept
	OPR-2	5.49	µg/Kg	5		110	70-130			accept
QCS	VER-1	5.09	µg/Kg	5		102	77-123			accept
	VER-2	4.77	µg/Kg	5		95.5	77-123			accept
	VER-3	5.14	µg/Kg	5		103	77-123			accept

Calibration

QA Sample Type	Name/ID	Analyzed Result	Units	Spike Level	% REC	% REC Limit	RSD	RSD Limit	Notes
Calibration	20	21.5	pg	20	108	75-125			accept
	50	51.9	pg	50	104	75-125			accept
	200	198	pg	200	99.0	75-125			accept
	500	554	pg	500	111	75-125			accept
	2000	1,930	pg	2000	96.5	75-125			accept
	5000	4,790	pg	5000	95.8	75-125			accept
	15000	14,100	pg	15000	94.0	75-125			accept
	100	95.1	pg	100	95.1	75-125			accept
Calibration Factor		0.000119	pg/PA				6.00	< 15	accept
Calibration Date		3/29/11							

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
	BB (VER)	0.00	pg	< 50			accept
Average		0.00	pg	< 25	0.00	< 10	accept
MBA	MB-1	0.169	µg/Kg	< 1			accept
	MB-2	0.0983	µg/Kg	< 1			accept
	MB-3	0.138	µg/Kg	< 1			accept
Average		0.135	µg/Kg		0.0354		

Comments

PMT: 606
OFFSET: 5,090
NOISE: 447

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Name/ID	Final Result (µg/Kg)	Notes
10	K1106152-009	9.78	accepted
11	K1106152-015	17.3	accepted
6	K1106152-025	34.7	accepted
12	K1106154-009	3.93	accepted
13	K1106154-015	6.94	accepted
14	K1106154-025	10.5	accepted
~~15~~	~~K1106157-009~~	~~3.93~~	~~rejected~~
18	K1106157-009	4.06	accepted
~~16~~	~~K1106157-015~~	~~10.0~~	~~rejected~~
19	K1106157-015	8.62	accepted
20	K1106157-025	15.2	accepted
21	K1106166-009	17.3	accepted
22	K1106166-015	33.2	accepted
24	K1106166-025	49.4	accepted

AEK 7/18/11

AEK 7/18/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

Run	Run Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	QCS	VER-1		100	100	100	5	
2	MBA	MB-1		400	40	5.0		
3	MBA	MB-2		400	40	5.0		
4	OPR	OPR-1		400	40	5.0	5	
5	IPR	TORT		391	40	2.5	270	
6	S	K1106152-025		1714	40	1.0		
7	MS	K1106152-025		1745	40	1.0	57	
8	MSD	K1106152-025		1771	40	1.0	56	
9	CB	BB (VER)		100	100	100		
10	S	K1106152-009		2209	40	1.0		
11	S	K1106152-015		1745	40	1.0		
12	S	K1106154-009		3700	40	1.0		
13	S	K1106154-015		3615	40	1.0		
14	S	K1106154-025		1929	40	1.0		
~~15~~	~~S~~	~~K1106157-009~~		~~782~~	~~40~~	~~1.0~~		AEL 7/18/11
~~16~~	~~S~~	~~K1106157-015~~		~~695~~	~~40~~	~~1.0~~		
17	QCS	VER-2		100	100	100	5	
18	S	K1106157-009		782	40	5.0		
19	S	K1106157-015		695	40	5.0		
20	S	K1106157-025		813	40	5.0		
21	S	K1106166-009		2478	40	5.0		
22	S	K1106166-015		2455	40	5.0		
23	CB	BB (VER)		100	100	100		
24	S	K1106166-025		2177	40	1.0		
25	MS	K1106166-025		2204	40	1.0	45	
26	MSD	K1106166-025		2215	40	1.0	45	
27	MBA	MB-3		400	40	5.0		
28	OPR	OPR-2		400	40	5.0	5	
29	QCS	VER-3		100	100	100	5	
30	CB	BB (VER)		100	100	100		

Columbia Analytical Services
Metals Digestion Sheet

StarLims Number: 137751

Method : **1631EApp.** Analysis for : **CVAFS**

Sample	Matrices	Dry	Wet	Initial Weight (g)	Final Volume (ml)	Matrix
VER-1	Water		x	100ml	100ml	0.5% BrCl
VER-2	Water		x	100ml	100ml	0.5% BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
Method Blank		x		0.400	40	0.02N BrCl
OPR-1		x		0.400	40	0.02N BrCl
Tort-2			x	0.413	40	0.02N BrCl
K1106152-009		x		0.433	40	0.02N BrCl
K1106152-015		x		0.410	40	0.02N BrCl
K1106152-025		x		0.396	40	0.02N BrCl
K1106152-025MS		x		0.403	40	0.02N BrCl
K1106152-025MSD		x		0.409	40	0.02N BrCl
K1106154-009		x		0.407	40	0.02N BrCl
K1106154-015		x		0.441	40	0.02N BrCl
K1106154-025		x		0.409	40	0.02N BrCl
K1106157-009		x		0.409	40	0.02N BrCl
K1106157-015		x		0.411	40	0.02N BrCl
K1106157-025		x		0.409	40	0.02N BrCl
K1106166-009		x		0.394	40	0.02N BrCl
K1106166-015		x		0.432	40	0.02N BrCl
K1106166-025		x		0.405	40	0.02N BrCl
K1106166-025MS		x		0.410	40	0.02N BrCl
K1106166-025MSD		x		0.412	40	0.02N BrCl
OPR-2		x		0.400	40	0.02N BrCl
VER-3	Water		x	100ml	100ml	0.5% BrCl

HNO3 Lot # J41037 **H2SO4 Lot # 50068** **BrCl** = RE2-36-M

AF1-63-E *(40ppb)* **OPR: 0.05ml** **Digestion Acid Mixture: RE2-36-N**

1st MS / DMS: 0.1 ml **Balance ID:** 37

2nd MS / DMS: 0.1 ml

Comments: MS/MSD - 0.1 ml of parent QCS (AF1-53-A : 1000 ug/L)

Time Digestion Started: 10:00

Analyst _____ **Date** 7/15/11

1631Dig.XLS
06/17/04

Conversion from dry weight to wet weight:

Standard MRL = 1.0
Standard MDL = 0.3
Standard Dilution = 20
Standard Sample Mass = 0.400

Sample I.D.	Dry Weight	Percent Solids	Wet Weight	Dilution	Weight & Dilution Adjusted MRL	Weight & Dilution Adjusted MDL
K1106152-009	0.433	19.6	**2.209**	100	**0.9**	**0.3**
K1106152-015	0.410	23.5	**1.745**	100	**1.1**	**0.3**
K1106152-025	0.396	23.1	**1.714**	100	**1.2**	**0.4**
K1106152-025MS	0.403	23.1	**1.745**	100	**1.1**	**0.3**
K1106152-025MSD	0.409	23.1	**1.771**	100	**1.1**	**0.3**
K1106154-009	0.407	11.0	**3.700**	100	**0.5**	**0.2**
K1106154-015	0.441	12.2	**3.615**	100	**0.6**	**0.2**
K1106154-025	0.409	21.2	**1.929**	100	**1.0**	**0.3**
K1106157-009	0.409	52.3	**0.782**	20	**0.5**	**0.2**
K1106157-015	0.411	59.1	**0.695**	20	**0.6**	**0.2**
K1106157-025	0.409	50.3	**0.813**	20	**0.5**	**0.1**
K1106166-009	0.394	15.9	**2.478**	20	**0.2**	~~**0.0**~~ 0.05
K1106166-015	0.432	17.6	**2.455**	20	**0.2**	~~**0.0**~~ 0.05
K1106166-025	0.405	18.6	**2.177**	100	**0.9**	**0.3**
K1106166-025MS	0.410	18.6	**2.204**	100	**0.9**	**0.3**
K1106166-025MSD	0.412	18.6	**2.215**	100	**0.9**	**0.3**
Method Blank	0.400	20.000	**2.000**	20	**0.2**	**0.06**

KE 7/26/11

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request # K106166

Analysis For: Freeze Dried Solids

Lab Code	Wet Weight (g)	Tare (g)	Tare + Dry Wt.(g)	Dry Weight (g)	% Total Solids
NRCC DORM-3	(If Applicable)				96.1%
NRCC TORT-2	(If Applicable)				94.7%
K1106166-009	10.115	15.141	16.750	1.609	15.9%
K1106166-015	10.261	15.049	16.860	1.811	17.6%
K1106166-025	10.214	15.163	17.060	1.897	18.6%
K1106166-025 Dup	10.221	15.072	17.017	1.945	19.0%

7/14/11

Date/Time in Freeze Dryer: 04:30pm 07-12-11 Date/Time out of Freeze Dryer:08:300am 07-14-11

Balance ID: 21 B Date Balance checked:07-12-11,07-14-11

Comments:

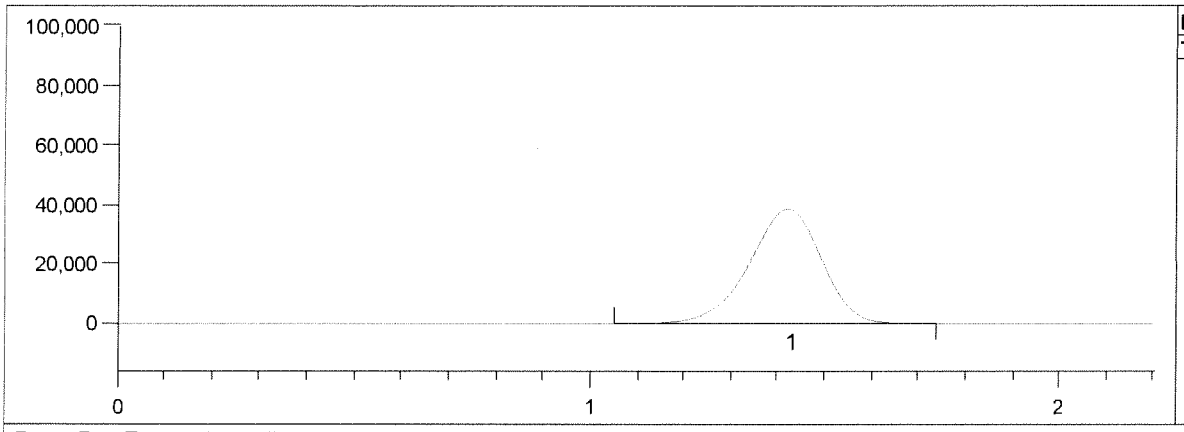
x = RPD

Analyst: Tamra Jones	Date: 7/14/11
Reviewed By: Anna Cheatley	Date: 7/21/11

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

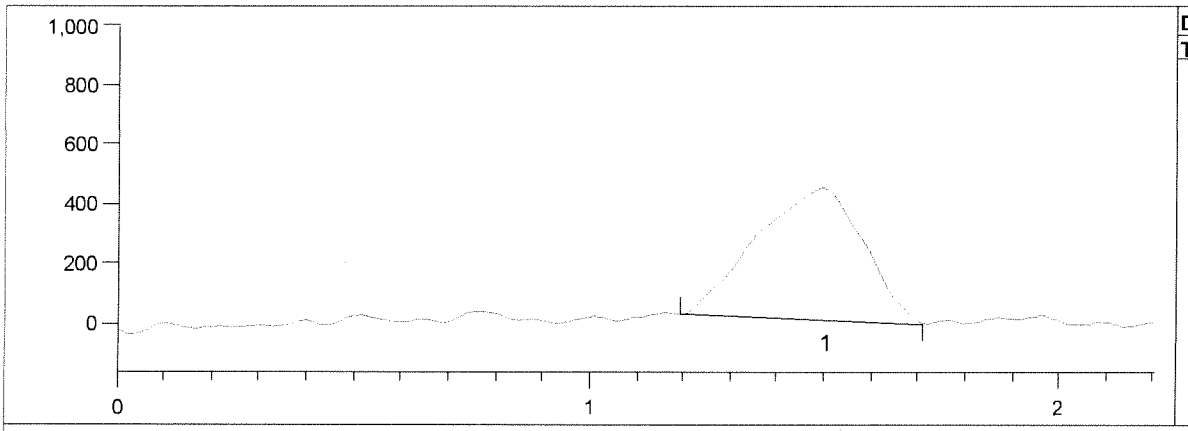


Date: 7/18/11
Time: 8:29 AM

Peak	rt	Area
1	1.45	4,275,377

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	QCS	VER-1		1	4,275,377	509	5.09	102	77-123	accept

Notes:

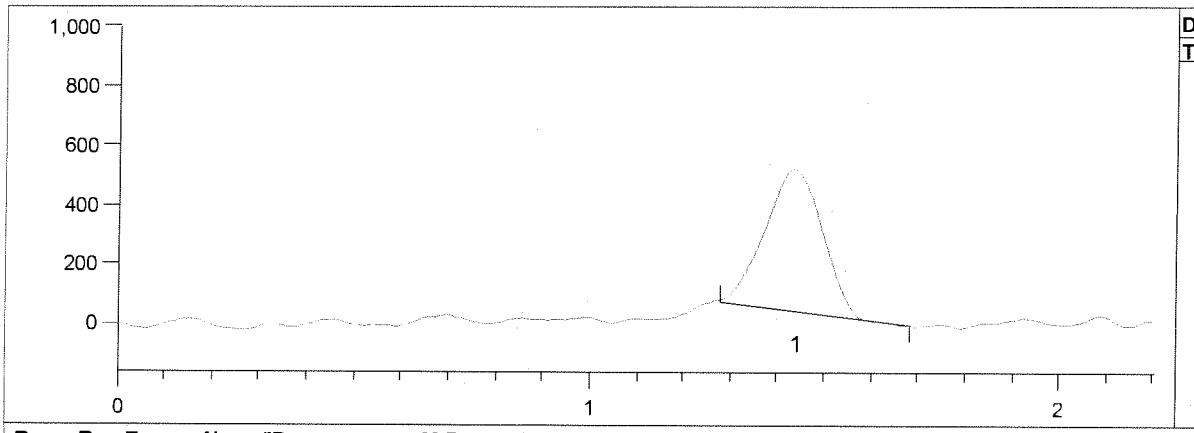


Date: 7/18/11
Time: 8:33 AM

Peak	rt	Area
1	1.52	70,960

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	MBA	MB-1		1	70,960	8.45	0.169	0.169	< 1	accept

Notes:



Date: 7/18/11
Time: 8:36 AM

Peak	rt	Area
1	1.46	41,293

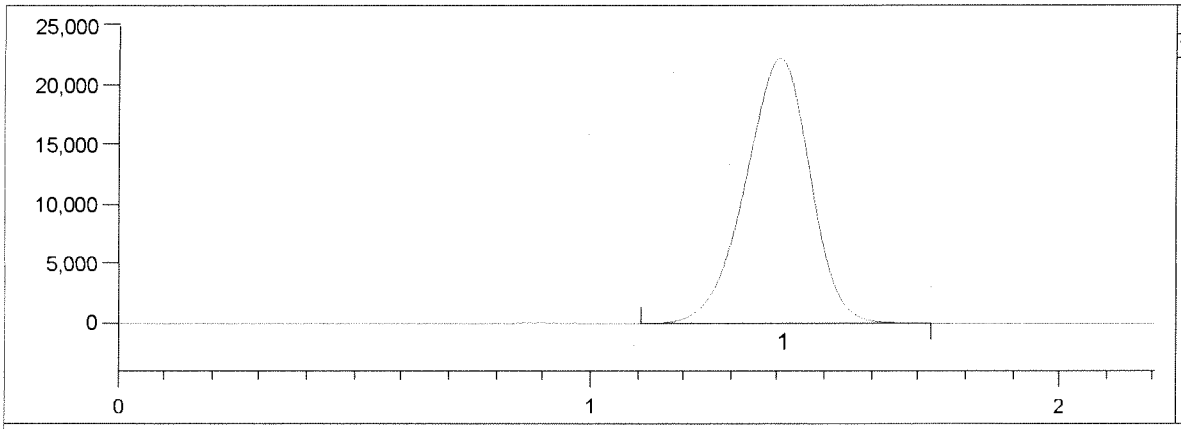
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	MBA	MB-2		1	41,293	4.91	0.0983	0.0983	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

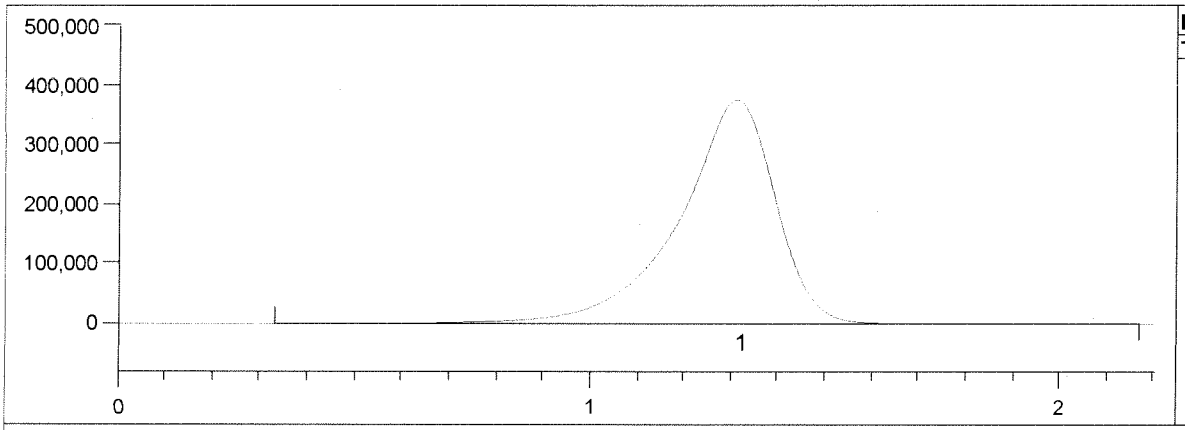


Date: 7/18/11
Time: 8:38 AM

Peak	rt	Area
1	1.43	2,201,449

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	OPR	OPR-1		1	2,201,449	262	5.24	105	70-130	accept

Notes:

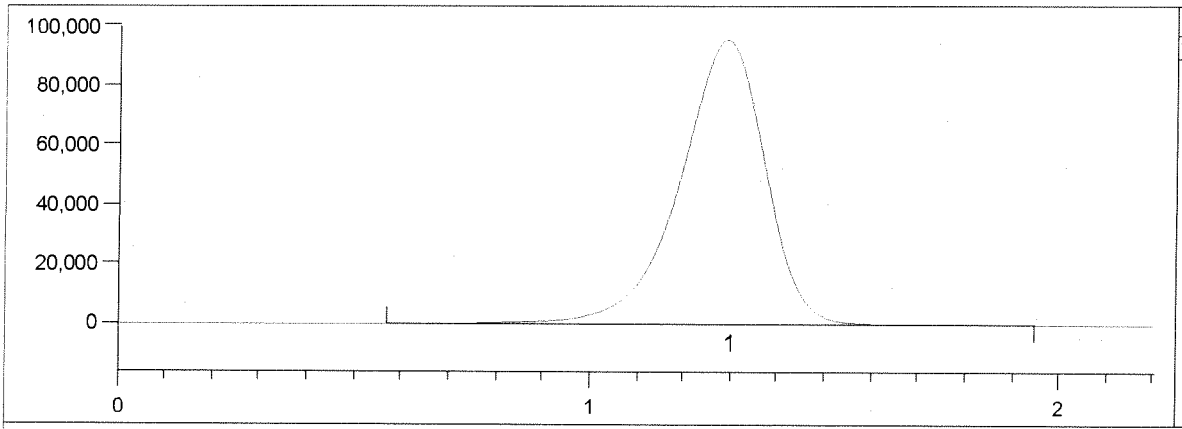


Date: 7/18/11
Time: 8:41 AM

Peak	rt	Area
1	1.34	55,771,809

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	IPR	TORT		1	55,771,809	6,640	272	101	70-130	accept

Notes:



Date: 7/18/11
Time: 8:44 AM

Peak	rt	Area
1	1.31	12,492,603

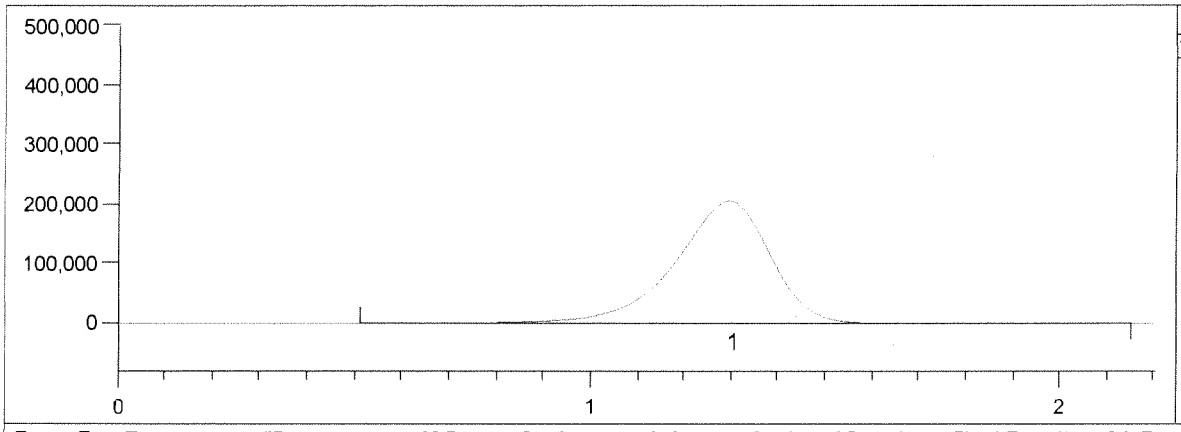
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	S	K1106152-025		1	12,492,603	1,490	34.7		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

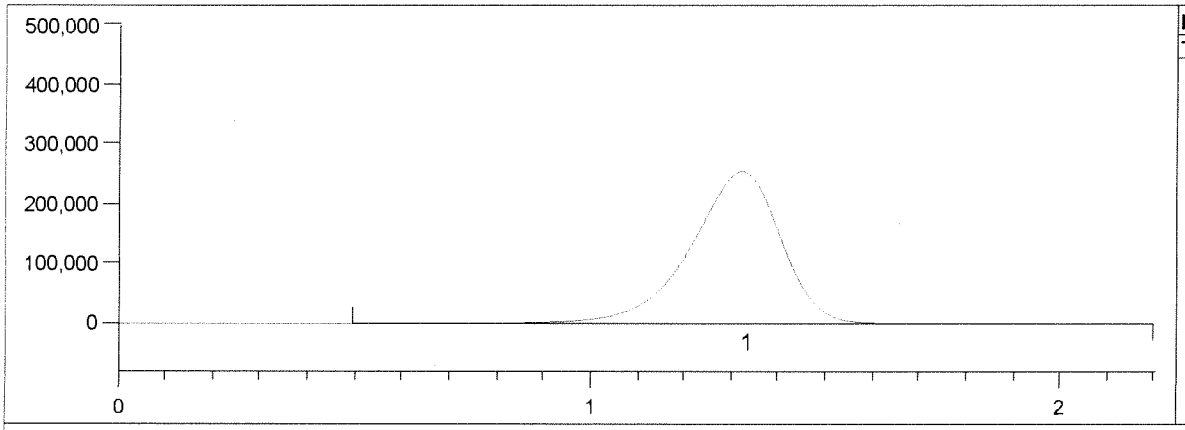


Date: 7/18/11
Time: 8:48 AM

Peak	rt	Area
1	1.32	30,397,517

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	MS	K1106152-025		1	30,397,517	3,620	82.9	84.6	70-130	accept

Notes:

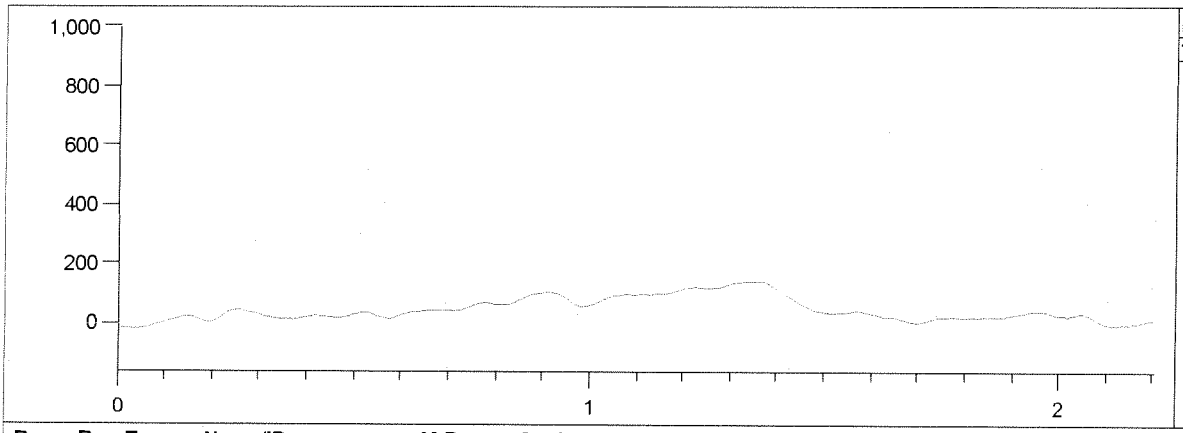


Date: 7/18/11
Time: 8:52 AM

Peak	rt	Area
1	1.35	35,575,102

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	MSD	K1106152-025		1	35,575,102	4,230	95.6	109	70-130	accept

Notes:



Date: 7/18/11
Time: 8:56 AM

Peak	rt	Area

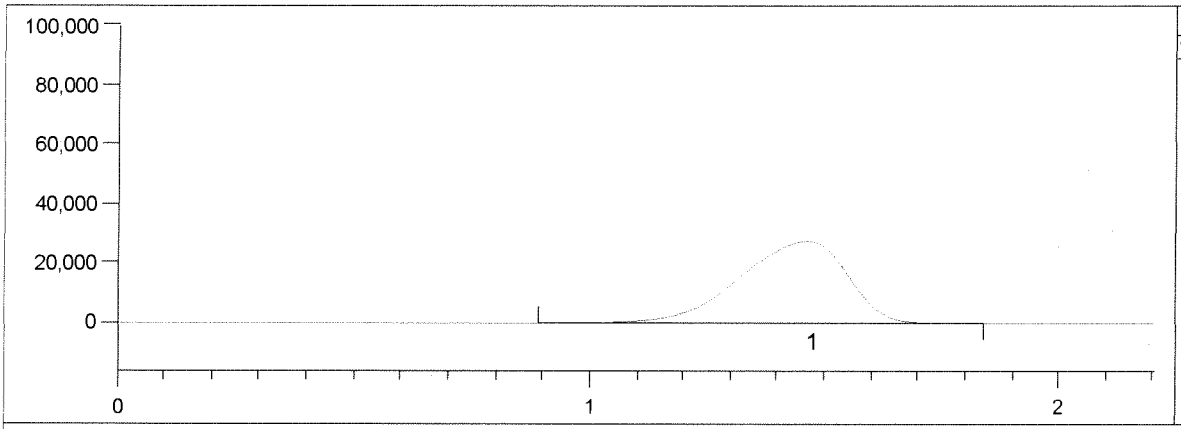
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

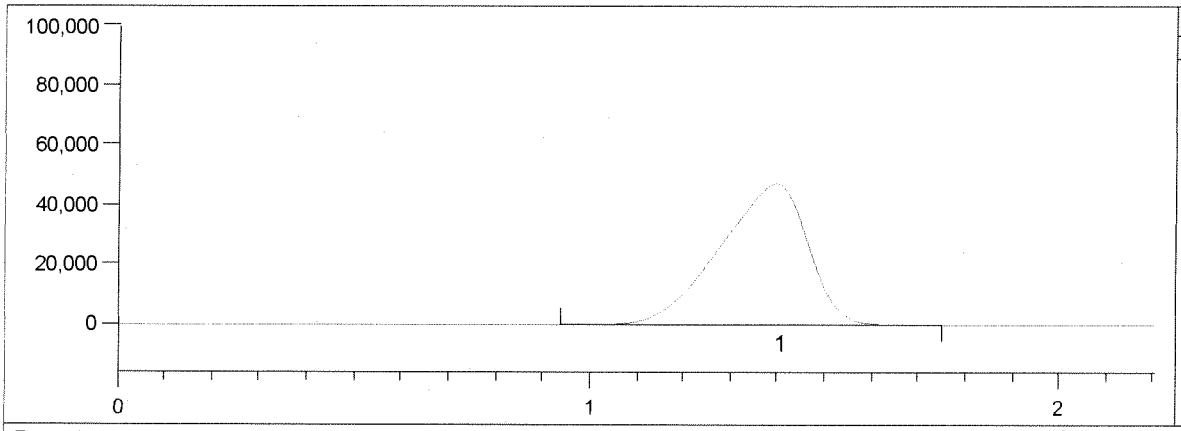


Date: 7/18/11
Time: 9:24 AM

Peak	rt	Area
1	1.49	4,537,778

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	S	K1106152-009		1	4,537,778	540	9.78		< HS	accept

Notes:

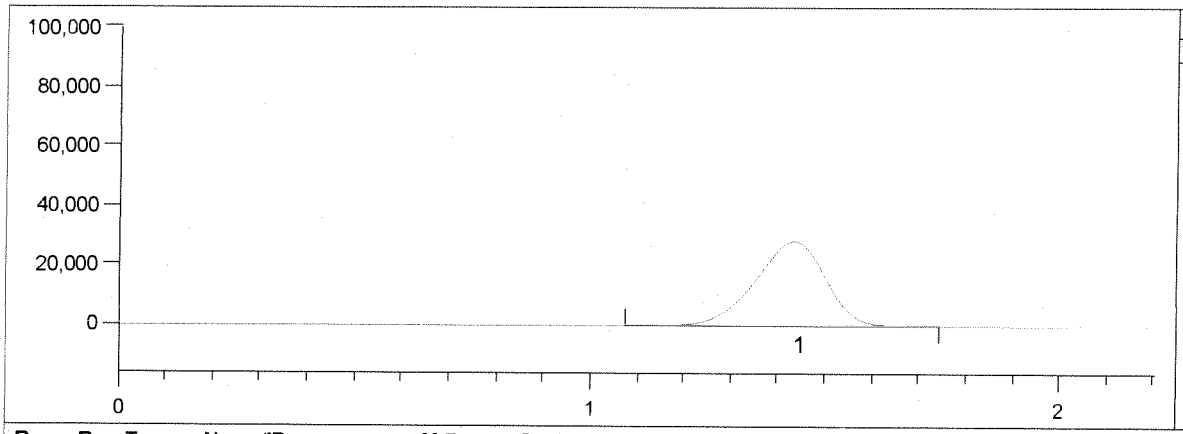


Date: 7/18/11
Time: 9:27 AM

Peak	rt	Area
1	1.42	6,354,186

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	S	K1106152-015		1	6,354,186	756	17.3		< HS	accept

Notes:



Date: 7/18/11
Time: 9:29 AM

Peak	rt	Area
1	1.46	3,057,282

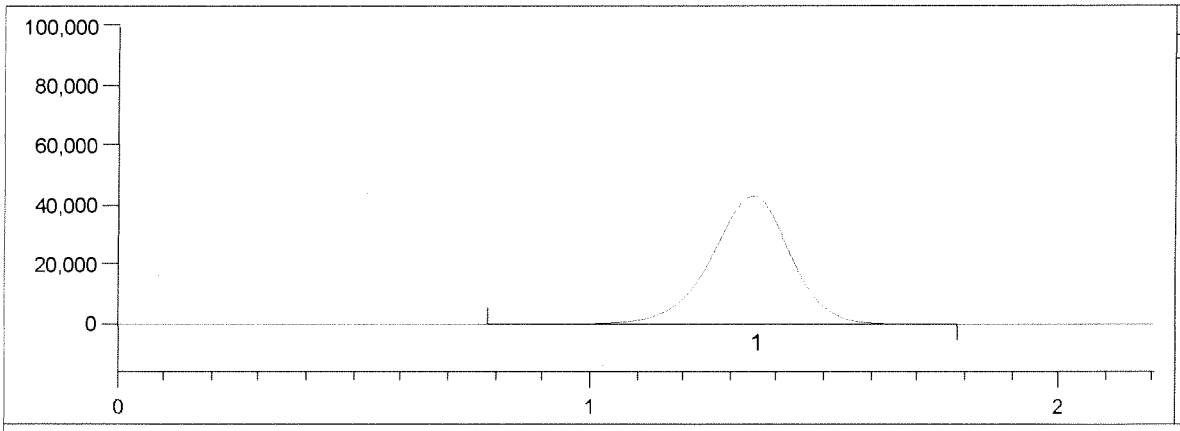
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	S	K1106154-009		1	3,057,282	364	3.93		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

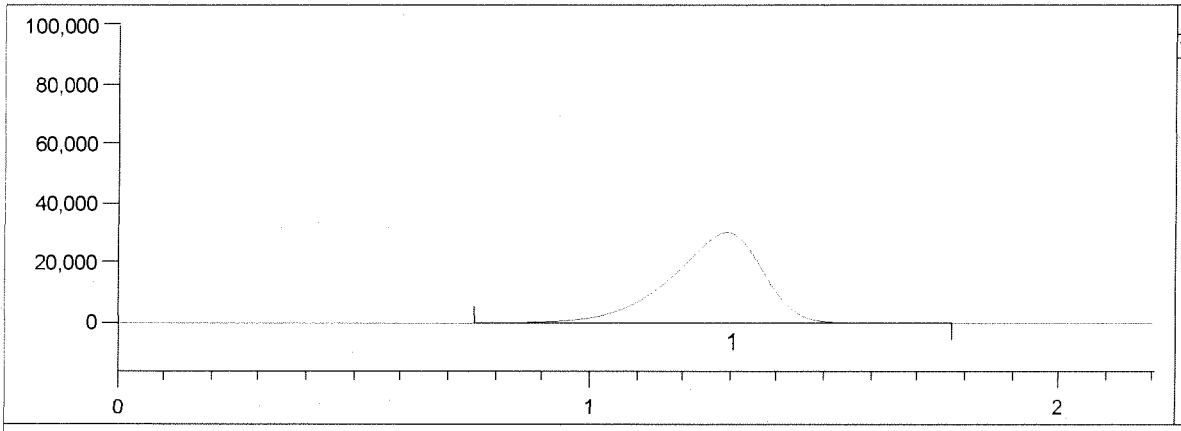


Date: 7/18/11
Time: 9:33 AM

Peak	rt	Area
1	1.37	5,273,318

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	S	K1106154-015		1	5,273,318	628	6.94		< HS	accept

Notes:

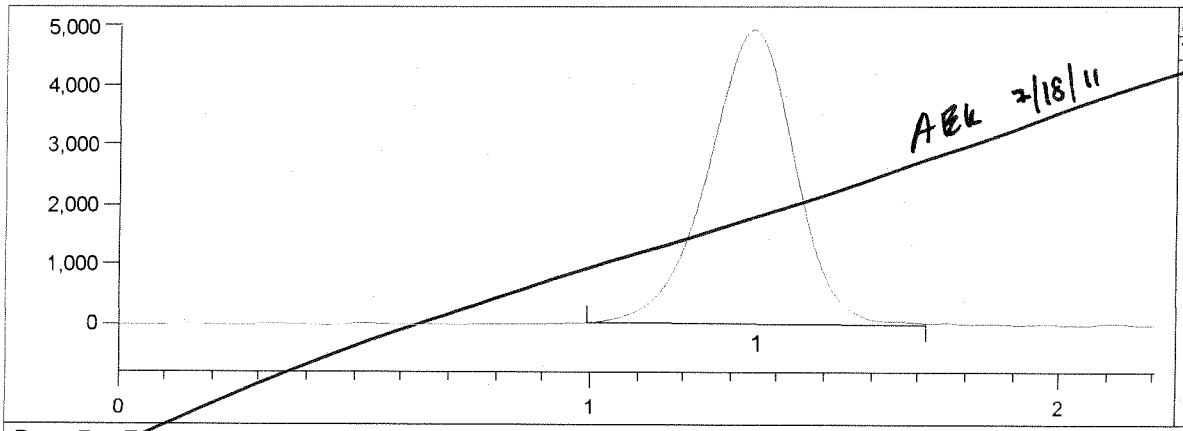


Date: 7/18/11
Time: 9:35 AM

Peak	rt	Area
1	1.32	4,246,839

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
14	S	K1106154-025		1	4,246,839	505	10.5		< HS	accept

Notes:



Date: 7/18/11
Time: 9:38 AM

Peak	rt	Area
1	1.37	645,142

Overdiluted Sample.
Rerun - 18.

AEK 7/18/11

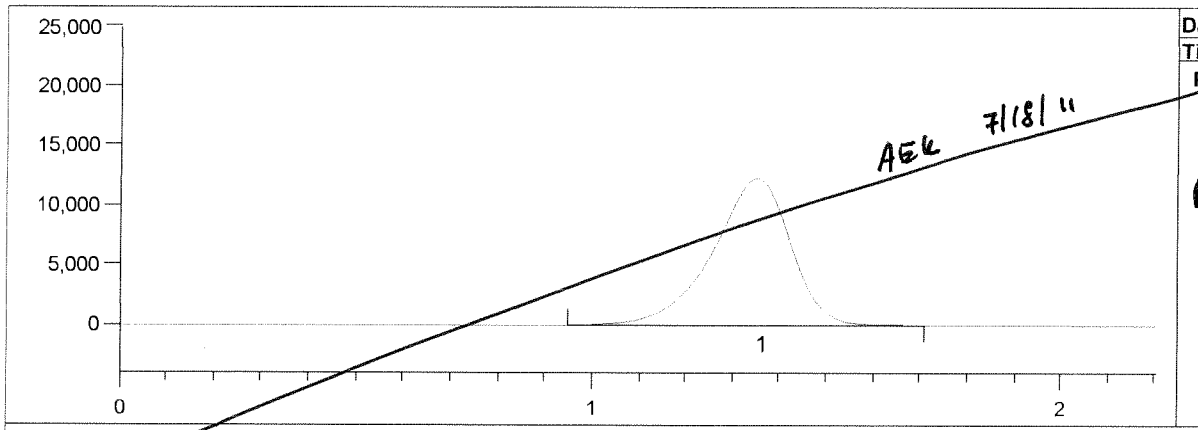
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
15	S	K1106157-009		1	645,142	76.8	3.93		< HS	reject

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou



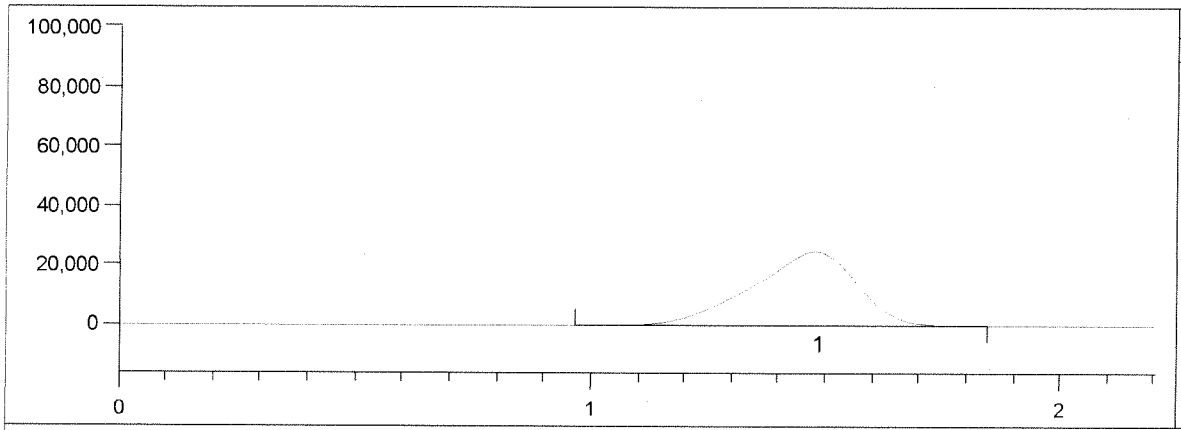
Date: 7/18/11
Time: 9:41 AM

Peak	rt	Area
1	1.38	1,460,869

Overdiluted sample.
Rerun - 19.

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
16	S	K1106157-015		1	1,460,869	174	10.0		< HS	reject

Notes:

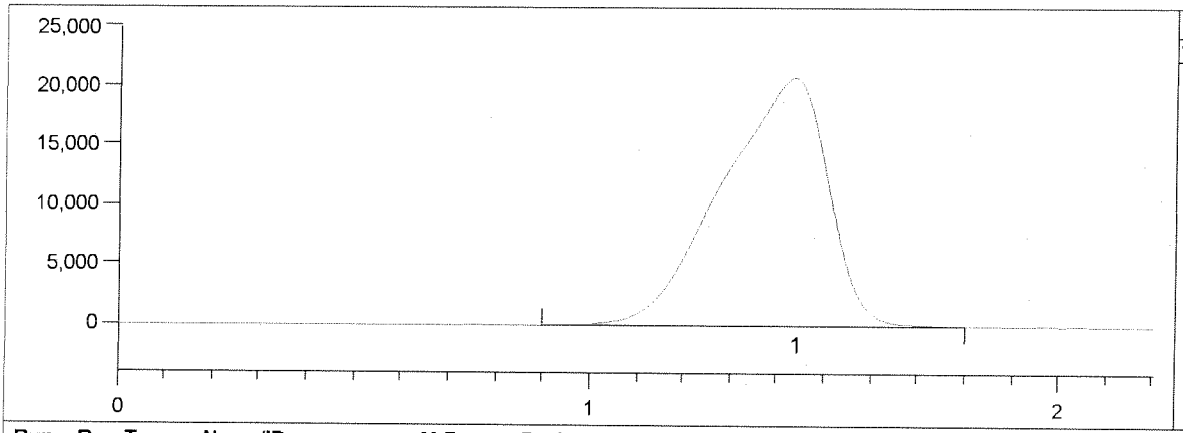


Date: 7/18/11
Time: 9:44 AM

Peak	rt	Area
1	1.51	4,011,492

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
17	QCS	VER-2		1	4,011,492	477	4.77	95.5	77-123	accept

Notes:



Date: 7/18/11
Time: 10:15 AM

Peak	rt	Area
1	1.46	3,331,569

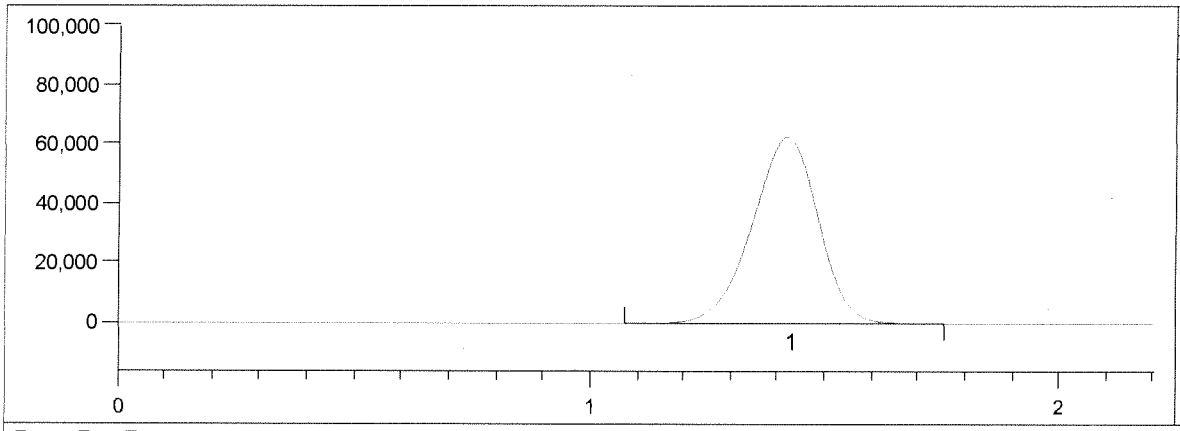
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
18	S	K1106157-009		1	3,331,569	397	4.06		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

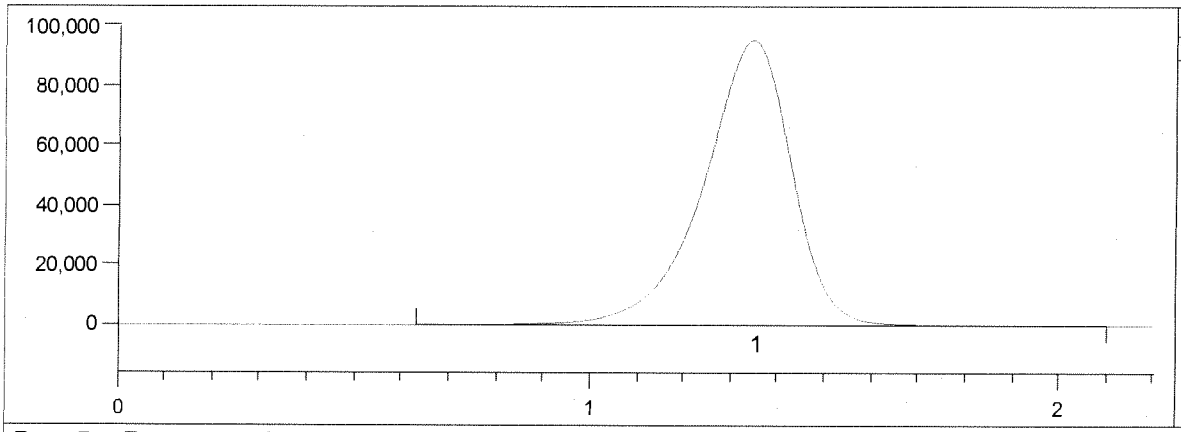


Date: 7/18/11
Time: 10:18 AM

Peak	rt	Area
1	1.44	6,292,061

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
19	S	K1106157-015		1	6,292,061	749	8.62		< HS	accept

Notes:

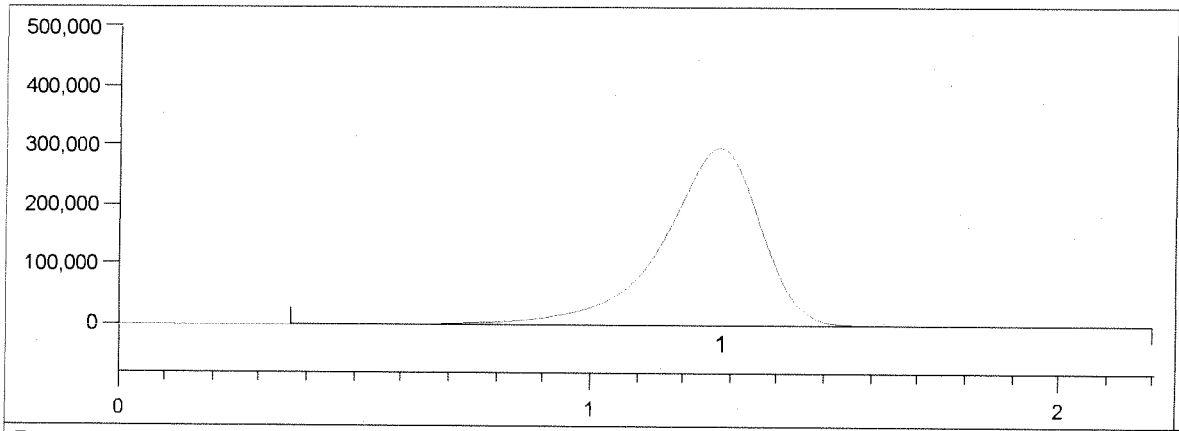


Date: 7/18/11
Time: 10:23 AM

Peak	rt	Area
1	1.37	12,938,810

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
20	S	K1106157-025		1	12,938,810	1,540	15.2		< HS	accept

Notes:



Date: 7/18/11
Time: 10:26 AM

Peak	rt	Area
1	1.30	45,095,719

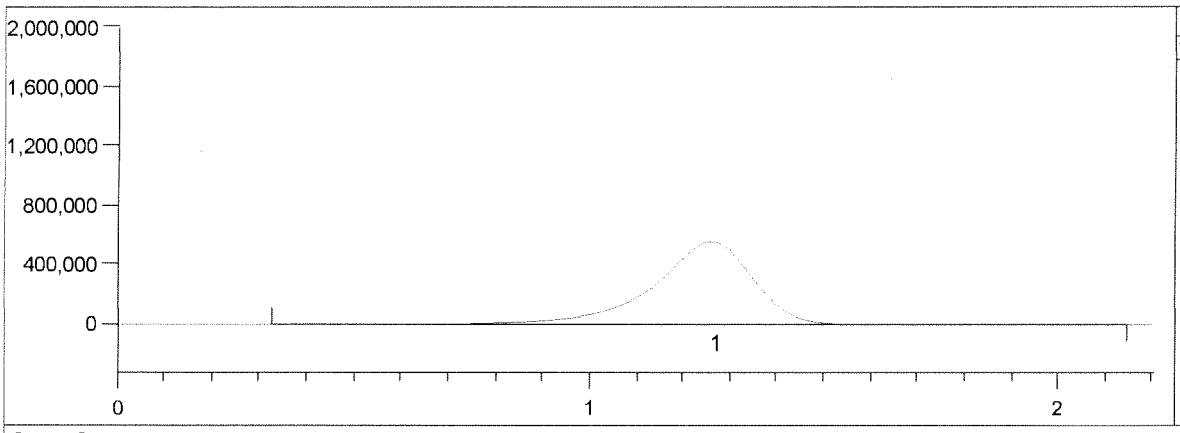
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
21	S	K1106166-009		1	45,095,719	5,370	17.3		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

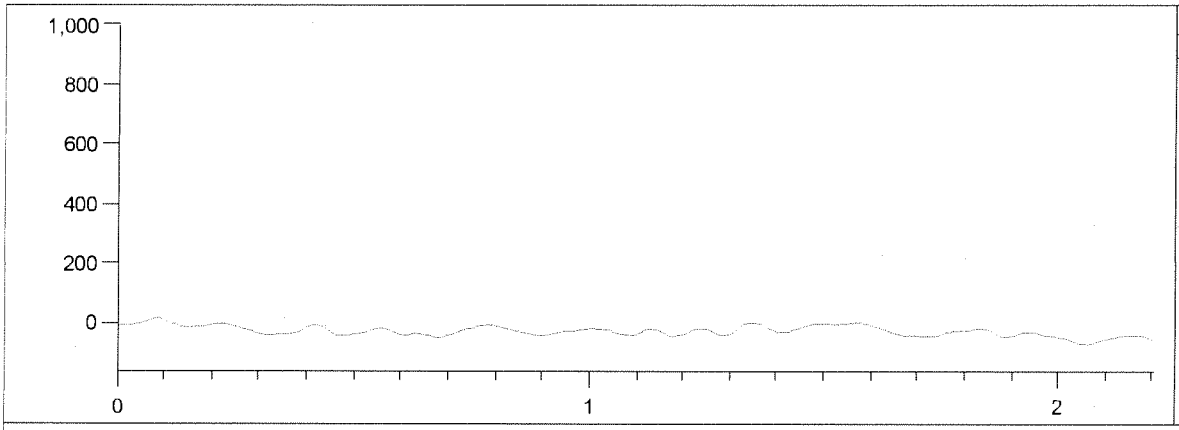


Date: 7/18/11
Time: 10:29 AM

Peak	rt	Area
1	1.28	85,712,221

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
22	S	K1106166-015		1	85,712,221	10,200	33.2		< HS	accept

Notes:

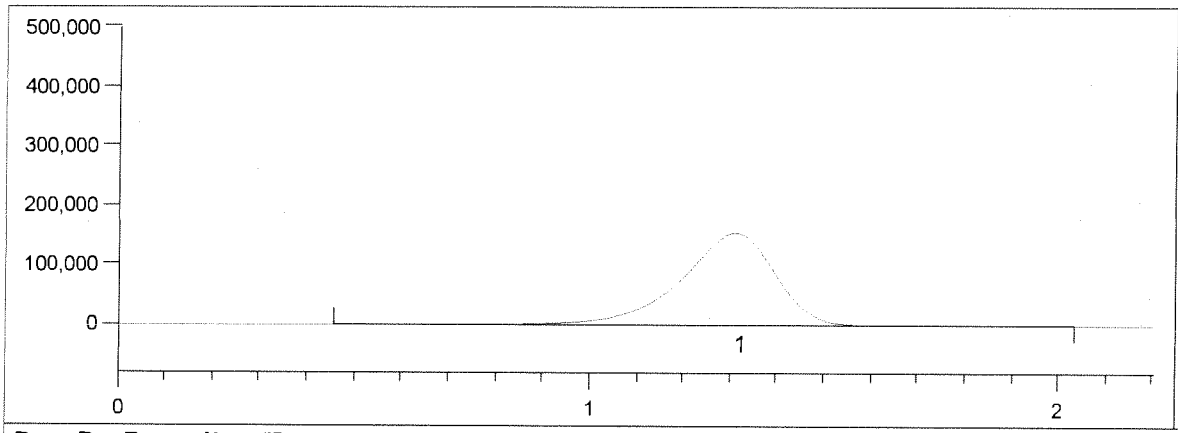


Date: 7/18/11
Time: 10:33 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
23	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:



Date: 7/18/11
Time: 10:58 AM

Peak	rt	Area
1	1.34	22,596,619

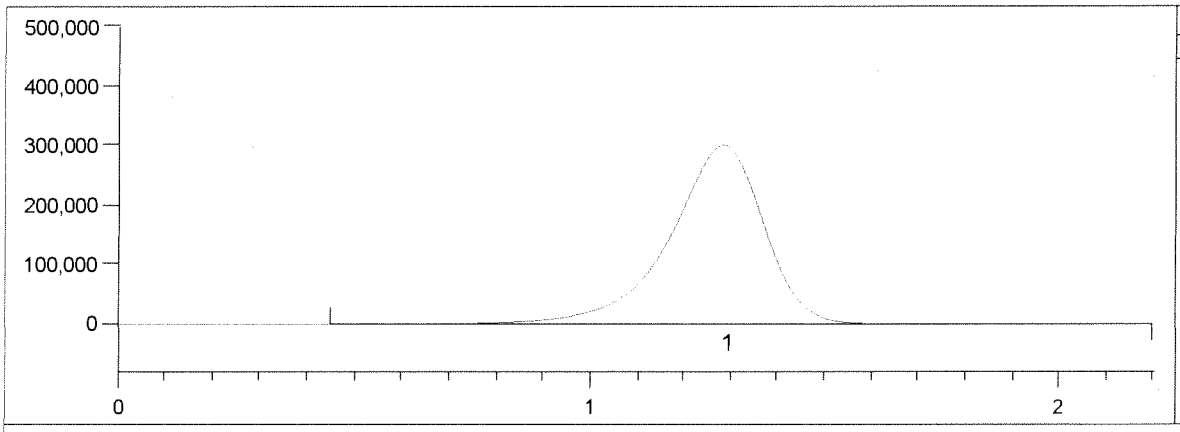
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
24	S	K1106166-025		1	22,596,619	2,690	49.4		< HS	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

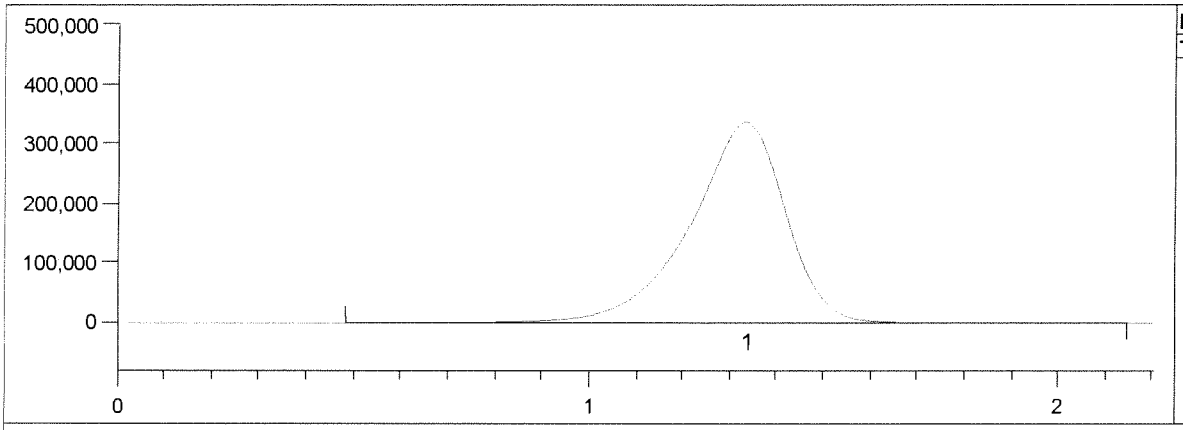


Date: 7/18/11
Time: 11:01 AM

Peak	rt	Area
1	1.31	43,769,737

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
25	MS	K1106166-025		1	43,769,737	5,210	94.5	100	70-130	accept

Notes:

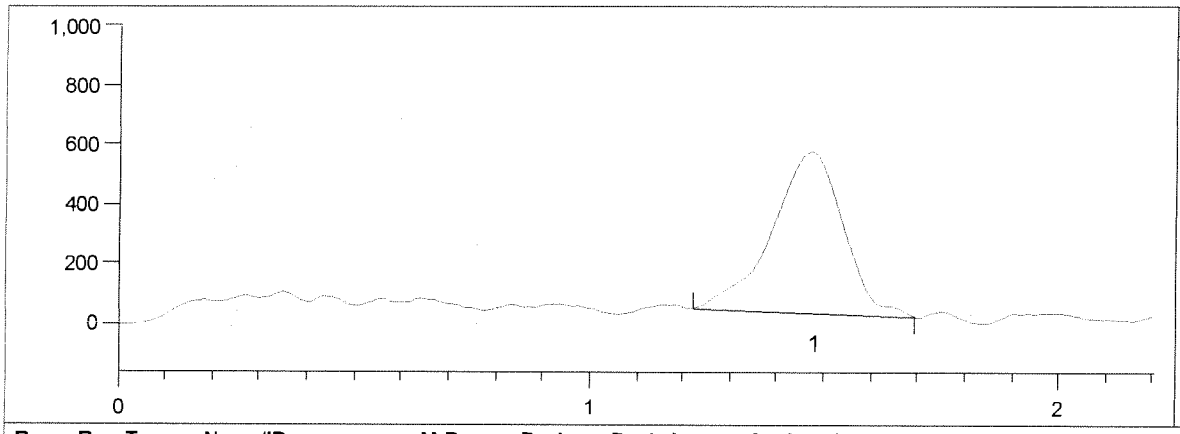


Date: 7/18/11
Time: 11:04 AM

Peak	rt	Area
1	1.36	49,516,237

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
26	MSD	K1106166-025		1	49,516,237	5,890	106	127	70-130	accept

Notes:



Date: 7/18/11
Time: 11:07 AM

Peak	rt	Area
1	1.50	57,808

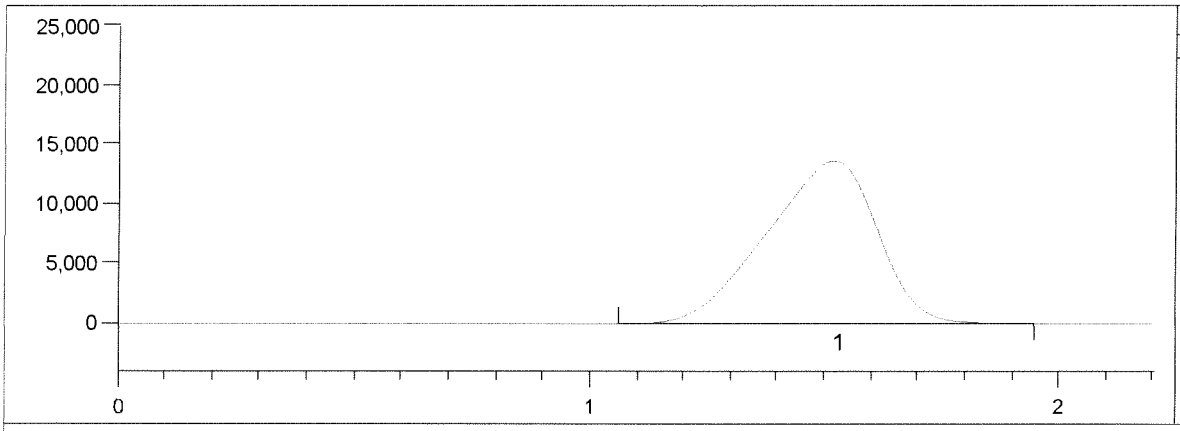
Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
27	MBA	MB-3		1	57,808	6.88	0.138	0.138	< 1	accept

Notes:

Batch Number: 253805
Method Number: EPA 1631 Appdx

Project Number(s): Soils
Instrument ID: K-AFS-01

Date Analyzed: 7/18/11
Analyst Name: Andrei Karankou

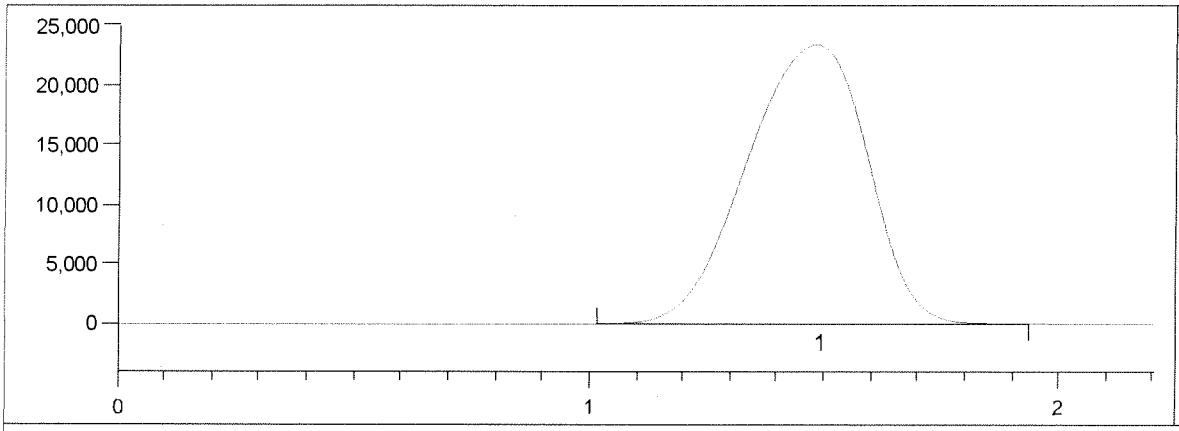


Date: 7/18/11
Time: 11:10 AM

Peak	rt	Area
1	1.55	2,304,787

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
28	OPR	OPR-2		1	2,304,787	274	5.49	110	70-130	accept

Notes:

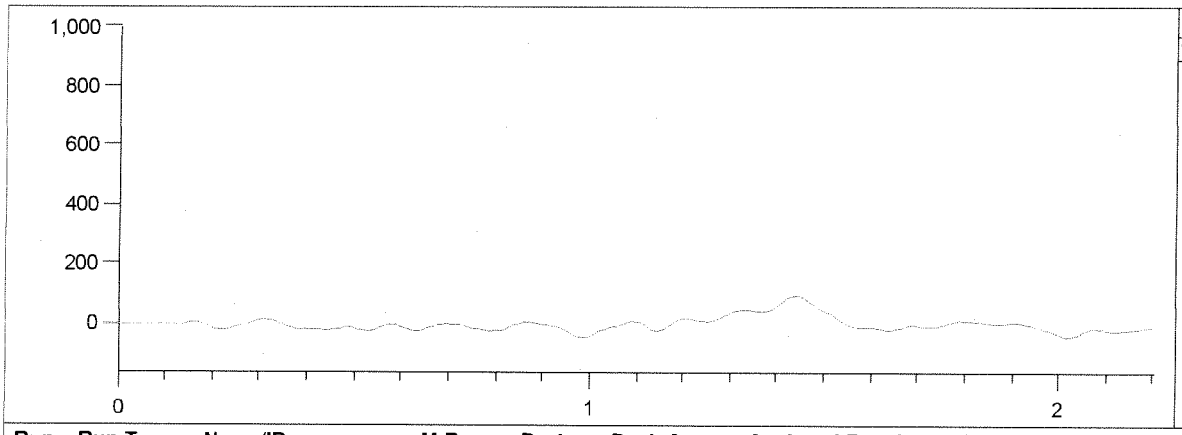


Date: 7/18/11
Time: 11:13 AM

Peak	rt	Area
1	1.51	4,319,605

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
29	QCS	VER-3		1	4,319,605	514	5.14	103	77-123	accept

Notes:



Date: 7/18/11
Time: 11:16 AM

Peak	rt	Area

Run	Run Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
30	CB	BB (VER)		0	0	0.00		0.00	< 50	accept

Notes:

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: URS Corporation
Project Name: East White Lake
Project No.: Meat

Service Request: K1106166

Sample Name:	Lab Code:
EWL-DES-C-Meat	K1106166-009
EWL-HOU-C-Meat	K1106166-015
EWL-BIL-C-Meat	K1106166-025
EWL-BIL-C-MeatD	K1106166-025D
EWL-BIL-C-MeatS	K1106166-025S
Method Blank	K1106166-MB

Comments:

Approved By: SC **Date:** 8/2/11

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106166
Project No.:	Meat	**Date Collected:**	06/20/11
Project Name:	East White Lake	**Date Received:**	06/21/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-DES-C-Meat **Lab Code:** K1106166-009

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.079	0.010	5.0	07/14/11	07/25/11	0.237		
Barium	6020A	0.008	0.001	5.0	07/14/11	07/25/11	1.330		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106166
Project No.:	Meat	**Date Collected:**	05/23/11
Project Name:	East White Lake	**Date Received:**	05/24/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-HOU-C-Meat **Lab Code:** K1106166-015

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.087	0.010	5.0	07/14/11	07/25/11	0.989		
Barium	6020A	0.009	0.001	5.0	07/14/11	07/25/11	1.310		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	URS Corporation	**Service Request:**	K1106166
Project No.:	Meat	**Date Collected:**	06/09/11
Project Name:	East White Lake	**Date Received:**	06/10/11
Matrix:	TISSUE	**Units:**	mg/Kg
		Basis:	WET

Sample Name: EWL-BIL-C-Meat **Lab Code:** K1106166-025

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.092	0.011	5.0	07/14/11	07/25/11	1.780		
Barium	6020A	0.009	0.001	5.0	07/14/11	07/25/11	0.477		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: URS Corporation
Project No.: Meat
Project Name: East White Lake
Matrix: TISSUE

Service Request: K1106166
Date Collected:
Date Received:
Units: mg/Kg
Basis: WET

Sample Name: Method Blank
Lab Code: K1106166-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020A	0.075	0.009	5.0	07/14/11	07/25/11	0.009	U	
Barium	6020A	0.008	0.001	5.0	07/14/11	07/25/11	0.001	U	

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	24.8	99	25.0	25.1	100	24.9	100	6020A
Barium	100.0	100.3	100	25.0	25.1	100	25.1	100	6020A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				25.0	25.4	102	25.1	100	6020A
Barium				25.0	25.6	102	25.6	102	6020A

Metals

- 2a -

LOW LEVEL INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: URS Corporation **SDG No.:** K1106166

Contract: Meat **Lab Code:** CAS **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: CAS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICVS									
	Arsenic	0.93	1.00	93	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
	Barium	0.09	0.10	90	70.0 - 130.0	MS	07/25/11	20:03	072511CMS
LLCCV2									
	Arsenic	1.08	1.00	108	70.0 - 130.0	MS	07/25/11	21:10	072511CMS
	Barium	0.11	0.10	110	70.0 - 130.0	MS	07/25/11	21:10	072511CMS
LLCCV3									
	Arsenic	0.99	1.00	99	70.0 - 130.0	MS	07/25/11	21:42	072511CMS
	Barium	0.11	0.10	110	70.0 - 130.0	MS	07/25/11	21:42	072511CMS

Metals

- 3 -

BLANKS

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Arsenic	0.120	U	0.120	U	0.120	U	0.120	U	6020A
Barium	0.016	U	0.016	U	0.016	U	0.073	J	6020A

Metals

- 3 -

BLANKS

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Arsenic			0.120	U					6020A
Barium			0.051	J					6020A

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Arsenic	0.00	25.00	0.07	23.59	94			
Barium	0.00		0.13	0.12				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL-C-MeatS **Lab Code:** K1106166-025S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	4.730		1.780		3.08	95.8		6020A
Barium	70 - 130	36.9		0.477		36.83	98.9		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat **Units:** UG/L

Project Name: East White Lake **Basis:** WET

Matrix: WATER

Sample Name: Batch QC1A **Lab Code:** K1106152-025A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	83.80		34.32		50.0	99		6020A
Barium	75 - 125	58.70		10.36		50.0	97		6020A

Metals

- 6 -

DUPLICATES

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat **Units:** MG/KG

Project Name: East White Lake **Basis:** WET

Matrix: TISSUE

Sample Name: EWL-BIL-C-MeatD **Lab Code:** K1106166-025D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	1.780		1.860		4.4		6020A
Barium	30	0.477		0.552		14.6		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	167	158	94.6					
Barium	2000	1950	97.5					

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106166-SRM1	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Dorm-3

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	6.88	6.49	94	5.26 - 8.62	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	NA
LCS Matrix:	Tissue	**Date Received:**	NA
		Date Extracted:	07/14/11
		Date Analyzed:	07/25/11

Standard Reference Material Summary
Total Metals

Sample Name:	Standard Reference Material	Units:	mg/Kg (ppm)
Lab Code:	K1106166-SRM2	Basis:	Dry
Test Notes:			

Source: N.R.C.C. Tort-2

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Control Limits	Result Notes
Arsenic	PSEP Tissue	6020A	21.6	20.1	93	15.8-28.1	

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat **Units:** UG/L

Project Name: East White Lake

Sample Name: Batch QC1L **Lab Code:** K1106152-025L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	34.322		33.995		1		MS
Barium	10.363		9.601		7		MS

Metals

- 10 -

DETECTION LIMITS

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

ICP/ICP-MS ID #: K-ICP-MS-03

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL mg/Kg	MDL mg/Kg	M
Arsenic	75		1.00	0.12	MS
Barium	137		0.100	0.016	MS

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

ICP ID Number: K-ICP-MS-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	2000	6020A
Barium	15.000	2000	6020A

Comments:

Metals
-13-
PREPARATION LOG

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat

Project Name: East White Lake

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1106166-009	07/14/11	1.8931	30.0
K1106166-015	07/14/11	1.7216	30.0
K1106166-025	07/14/11	1.6290	30.0
K1106166-025D	07/14/11	1.6237	30.0
K1106166-025S	07/14/11	1.6290	30.0
K1106166-MB	07/14/11	2.0000	30.0
K1106166-SRM1	07/14/11	0.3010	30.0
K1106166-SRM2	07/14/11	0.3020	30.0
LCSW	07/14/11	30.0	30.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat **Run Number:** 072511CMS03

Project Name: East White Lake

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 07/25/11 **End Date:** 07/25/11

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Cal. Blk	1.00	19:48				X	X																							
Cal. Stn	1.00	19:50				X	X																							
ICV1	1.00	19:53				X	X																							
CCV1	1.00	19:56				X	X																							
ICB1	1.00	19:58				X	X																							
CCB1	1.00	20:01				X	X																							
LLICVS	1.00	20:03				X	X																							
ICS-A1	1.00	20:06				X	X																							
ICS-AB1	1.00	20:09				X	X																							
K1106166-MB	5.00	20:11				X	X																							
LCSW	5.00	20:14				X	X																							
K1106166-SRM1	5.00	20:17																												
K1106166-SRM2	5.00	20:19																												
ZZZZZZ	5.00	20:22																												
ZZZZZZ	5.00	20:24																												
ZZZZZZ	5.00	20:27																												
CCV2	1.00	20:30				X	X																							
CCB2	1.00	20:32				X	X																							
ZZZZZZ	5.00	20:35																												
K1106152-025L	25.00	20:38				X	X																							
K1106152-025A	5.00	20:40				X	X																							
ZZZZZZ	5.00	20:43																												
ZZZZZZ	5.00	20:46																												
ZZZZZZ	5.00	20:48																												
ZZZZZZ	5.00	20:51																												
ZZZZZZ	5.00	20:54																												
ZZZZZZ	5.00	20:57																												
ZZZZZZ	5.00	20:59																												
CCV3	1.00	21:02				X	X																							
CCB3	1.00	21:05				X	X																							
LLCCV2	1.00	21:10				X	X																							
ZZZZZZ	5.00	21:13																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: URS Corporation **Service Request:** K1106166

Project No.: Meat **Run Number:** 072511CMS03

Project Name: East White Lake

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 07/25/11 **End Date:** 07/25/11

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5.00	21:15																												
ZZZZZZ	5.00	21:18																												
ZZZZZZ	5.00	21:21																												
K1106166-009	5.00	21:24				X	X																							
K1106166-015	5.00	21:26				X	X																							
K1106166-025	5.00	21:29				X	X																							
K1106166-025D	5.00	21:32				X	X																							
K1106166-025S	5.00	21:34				X	X																							
CCV4	1.00	21:37				X	X																							
CCB4	1.00	21:40				X	X																							
LLCCV3	1.00	21:42				X	X																							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: Meat

Lab Code: CAS Case No.: _____ NRAS No. _____ SDG NO.: K1106166

ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 07/25/2011 End Date: 07/25/2011

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Ga_71	Q	Element Rh_103	Q	Element In_115	Q	Element	Q	Element	Q	Element	Q
Cal. Blk	Cal. Blk	1948	100		100		100							
Cal. Stn	Cal. Stn	1950	99		99		101							
ICV1	ICV1	1953	99		99		100							
CCV1	CCV1	1956	98		99		100							
ICB1	ICB1	1958	97		98		99							
CCB1	CCB1	2001	97		99		99							
LLICVS	LLICVS	2003	99		100		101							
ICS-A1	ICSA	2006	82		80		84							
ICS-AB1	ICSAB	2009	85		82		86							
K1106166-MB	Method Blank	2011	95		95		96							
LCSW	LCSW	2014	98		98		99							
K1106166-SRM1	DORM	2017	92		90		93							
K1106166-SRM2	TORT	2019	90		90		94							
ZZZZZZ	ZZZZZZ	2022												
ZZZZZZ	ZZZZZZ	2024												
ZZZZZZ	ZZZZZZ	2027												
CCV2	CCV2	2030	93		94		97							
CCB2	CCB2	2032	92		92		94							
ZZZZZZ	ZZZZZZ	2035												
K1106152-025L	Batch QC1L	2038	91		92		96							
K1106152-025A	Batch QC1A	2040	87		87		92							
ZZZZZZ	ZZZZZZ	2043												
ZZZZZZ	ZZZZZZ	2046												
ZZZZZZ	ZZZZZZ	2048												
ZZZZZZ	ZZZZZZ	2051												
ZZZZZZ	ZZZZZZ	2054												
ZZZZZZ	ZZZZZZ	2057												
ZZZZZZ	ZZZZZZ	2059												
CCV3	CCV3	2102	100		101		103							
CCB3	CCB3	2105	98		98		101							
LLCCV2	LLCCV2	2110	95		96		99							
ZZZZZZ	ZZZZZZ	2113												
ZZZZZZ	ZZZZZZ	2115												
ZZZZZZ	ZZZZZZ	2118												
ZZZZZZ	ZZZZZZ	2121												
K1106166-009	EWL-DES-C-Meat	2124	95		95		100							
K1106166-015	EWL-HOU-C-Meat	2126	92		92		96							
K1106166-025	EWL-BIL-C-Meat	2129	93		94		99							
K1106166-025D	EWL-BIL-C-MeatD	2132	90		91		96							
K1106166-025S	EWL-BIL-C-MeatS	2134	90		90		95							
CCV4	CCV4	2137	94		95		97							
CCB4	CCB4	2140	93		93		96							
LLCCV3	LLCCV3	2142	93		92		95							

Conversion from dry weight to wet weight:

Sample I.D.	Dry Weight	Percent Solids	Wet Weight
K1106152-009	0.3020	19.6	1.5408
K1106152-015	0.3020	23.5	1.2851
K1106152-025	0.3010	23.1	1.3030
K1106152-025D	0.3020	23.1	1.3074
K1106152-025S	0.3030	23.1	1.3117
K1106154-009	0.3020	11.0	2.7455
K1106154-015	0.3000	12.2	2.4590
K1106154-025	0.3010	21.2	1.4198
K1106154-025D	0.3020	21.2	1.4245
K1106154-025S	0.3030	21.2	1.4292
K1106157-009	0.3000	52.3	0.5736
K1106157-015	0.3010	59.1	0.5093
K1106157-025	0.3030	50.3	0.6024
K1106157-025D	0.3010	50.3	0.5984
K1106157-025S	0.3000	50.3	0.5964
K1106166-009	0.3010	15.9	1.8931
K1106166-015	0.3030	17.6	1.7216
K1106166-025	0.3030	18.6	1.6290
K1106166-025D	0.3020	18.6	1.6237
K1106166-025S	0.3030	18.6	1.6290

SC 1/28/11

Columbia Analytical Services
Metals Tissue Digestion Sheet

Service Request Number(s) : K1106152, K1106154, K1106157, K1106166 137816

Star Lims Run No.: Analysis for : ICP (ICP-MS) GFAA

Method : 6020A other: _____

Sample	Initial Weight (g)	freeze Dry	Wet	Final Volume (ml)	Matrix
Blank			X	30	15% HNO3
LCS			X		15% HNO3
Dorm-3	0.301		X		15% HNO3
Tort-2	0.302		X		15% HNO3
K1106152-009	0.302	X			15% HNO3
K1106152-015	0.302	X			15% HNO3
K1106152-025	0.301	X			15% HNO3
K1106152-025 Dup	0.302	X			15% HNO3
K1106152-025 MS	0.303	X			15% HNO3
K1106154-009	0.302	X			15% HNO3
K1106154-015	0.300	X			15% HNO3
K1106154-025	0.301	X			15% HNO3
K1106154-025 Dup	0.302	X			15% HNO3
K1106154-025 MS	0.303	X			15% HNO3
K1106157-009	0.300	X			15% HNO3
K1106157-015	0.301	X			15% HNO3
K1106157-025	0.303	X			15% HNO3
K1106157-025 Dup	0.301	X			15% HNO3
K1106157-025 MS	0.300	X			15% HNO3
K1106166-009	0.301	X			15% HNO3
K1106166-015	0.303	X			15% HNO3
K1106166-025	0.303	X			15% HNO3
K1106166-025 Dup	0.302	X			15% HNO3
K1106166-025 MS	0.303	X			15% HNO3
		JK 7/19/11			

Time Digestion Started: 7/14/11 5:00pm **Oven Temp:** 105 **Time Digestion Ended:** 7:00pm 7/17/11

Lot # Acids Used: HNO3 ~~Sat 8/2/11~~ 49713 **Oven Temp:** 109

LCS: Dorm-3 (96.1% Solids) ID#14879, Tort-2(94.7% Solids) ID#29883 **Balance I.D.:** 218

SPIKE INFO 7/17/11 0.300
K-MET SS1 ID# 28451, ~~4.50~~ **mls added**
K-MET SS3 ID#28474, 0.050 **mls added**
K-MET SS4 ID#28373, 0.050 **mls added**

K-MET SS2 ID#28554, 0 **mls added**
K-MET SS5 ID#29301, 0.300 **mls added**

Additional spikes: _____
Comments: _____

Analyst _____ **Date** 7/14/11
Reviewer SC **Date** 8/2/11

TissueDig.xls
7/14/2011

Service Request # _K1106166_____
Calibration __072511CMS03_____
QC in calibration___072511CMS03_____
QC Service Request # ___K1106166_____
STARLIMS run # ___254739_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. LLICV run	X		
14. Cd Correction Applied	X	X	
15. ICSA and ICSAB in control	X		
16. Serial dilution run	X		
17. Post spike in control	X		
18. Was run stop prematurely, If so why?		X	

Comments:

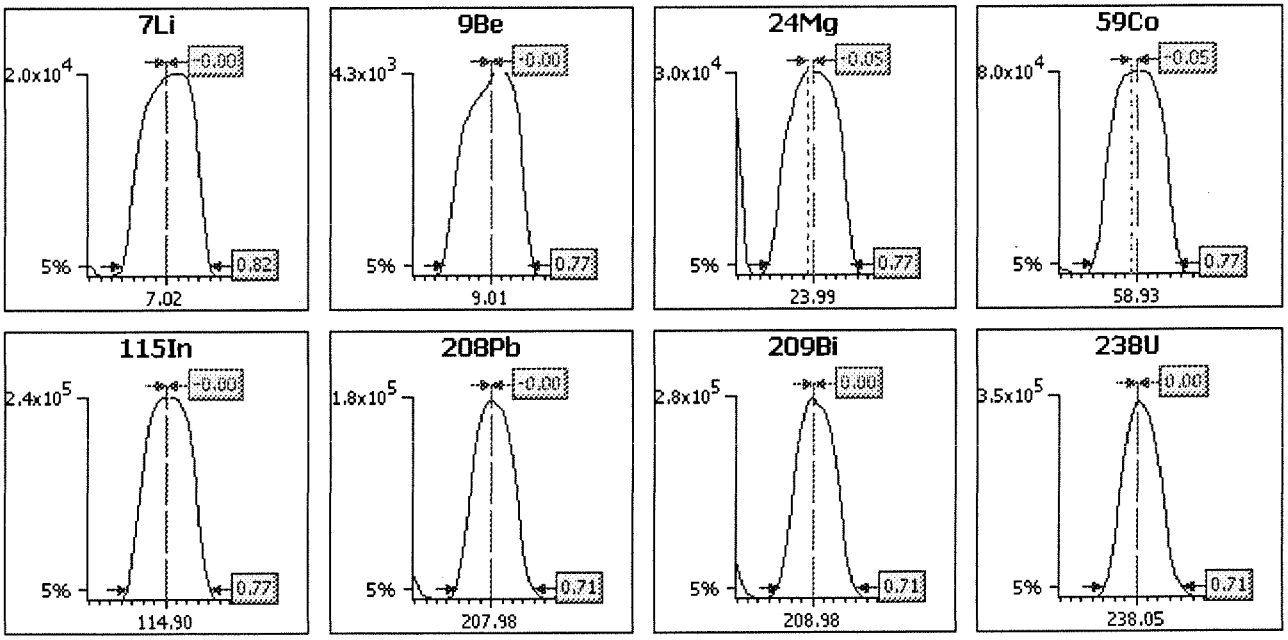
Primary Review by JDB Date 7/26/11
Secondary Review by _____ Date 7/26/11
R:\icp\misc\data review forms\icpms review form

Performance Report

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Mass Calibration verification

Acquisition parameters
Sweeps : 100
Dwell : 1.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.90	0.60	0.10	0.82	-0.00
9Be	0.90	0.60	0.10	0.77	-0.00
24Mg	0.90	0.60	0.10	0.77	-0.05
59Co	0.90	0.60	0.10	0.77	-0.05
115In	0.90	0.60	0.10	0.77	-0.00
208Pb	0.90	0.60	0.10	0.71	-0.00
209Bi	0.90	0.60	0.10	0.71	0.00
238U	0.90	0.60	0.10	0.71	0.00

Sample details
Acquired at : 7/25/2011 9:14:16 AM
Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

Tune conditions

Major	
Extraction	-122
Lens 1	3.8
Focus	22.4
D1	-36.9
Pole Bias	0.5
Hexapole Bias	0.6
Nebuliser	0.78
Sampling Depth	70

Minor	
Lens 2	-16.5
Lens 3	-187.5
Forward power	1247
Horizontal	123
Vertical	305
D2	-147
DA	-35.3
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	115
High resolution	125
Analogue Detector	1800
PC Detector	3750

Add. Gases

Sensitivity and stability results

Acquisition parameters
Sweeps : 400

Run	Time	5Bkg	7Li	9Be	24Mg	59Co	115In	140Ce	156Ce O	208Pb
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	-	-	5.0%
	Countrate	-	>1000	>1000	>1000	>1000	>1000	-	-	>1000
1	9:14:47 AM	0.000	22206.088	4623.425	31765.651	83586.510	246835.65	277700.92	4135.691	182092.85
2	9:16:01 AM	0.000	21986.806	4584.906	31601.079	82773.876	246324.05	277752.46	4148.947	182861.29
3	9:17:14 AM	0.000	22481.514	4611.419	31917.181	83515.361	248154.07	279178.92	4073.162	183171.95
4	9:18:27 AM	0.000	22185.037	4656.942	31580.508	82715.094	246120.91	277306.66	4103.176	182404.25
5	9:19:40 AM	0.000	22596.047	4673.701	31791.742	83502.241	247094.28	278116.85	4191.966	183633.37
x		0.000	22291.098	4630.079	31731.232	83218.616	246905.79	278011.16	4130.588	182832.74
σ		0.00	245.11	35.56	140.61	434.50	798.92	713.15	45.22	609.91
%RSD		0.000	1.100	0.768	0.443	0.522	0.324	0.257	1.095	0.334

Run	Time	209Bi	220Bkg	238U
Dwell (mSecs)		10.0	10.0	10.0
Limits	%RSD	5.0%	-	5.0%
	Countrate	>1000	-	>1000
1	9:14:47 AM	280521.57	0.000	358531.50
2	9:16:01 AM	281510.70	0.000	359822.53
3	9:17:14 AM	282585.28	0.500	362153.66
4	9:18:27 AM	281348.80	0.000	360010.25
5	9:19:40 AM	282502.26	0.000	362593.95
x		281693.72	0.100	360622.38
σ		862.41	0.22	1704.27
%RSD		0.306	223.607	0.473

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0200
1	9:14:47 AM	0.015
2	9:16:01 AM	0.015
3	9:17:14 AM	0.015
4	9:18:27 AM	0.015
5	9:19:40 AM	0.015
x		0.0149
σ		0.00
%RSD		1.2102

Result : The performance report passed.

Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	Cal. Blk	Blank	1.000	0	1	1	150
2	Cal. Stn	Fully Quant Standard	1.000	0	1	2	150
3	ICV1	Unknown	1.000	0	1	3	150
4	CCV1	Unknown	1.000	0	1	2	150
5	ICB1	Unknown	1.000	0	1	1	150
6	CCB1	Unknown	1.000	0	1	1	150
7	LLICVS	Unknown	1.000	0	1	4	150
8	ICSA	Unknown	1.000	0	1	5	150
9	ICSAB	Unknown	1.000	0	1	6	150
10	K1106152-MB 1/5	Unknown	1.000	1	1	1	150
11	LCSW 1/5	Unknown	1.000	1	1	2	150
12	DORM 1/5	Unknown	1.000	1	1	3	150
13	TORT 1/5	Unknown	1.000	1	1	4	150
14	K1106152-009 1/5	Unknown	1.000	1	1	5	150
15	K1106152-015 1/5	Unknown	1.000	1	1	6	150
16	K1106152-025 1/5	Unknown	1.000	1	1	7	150
17	CCV2	Unknown	1.000	0	1	2	150
18	CCB2	Unknown	1.000	0	1	1	150
19	K1106152-025D 1/5	Unknown	1.000	1	1	8	150
20	K1106152-025L 1/5	Unknown	1.000	1	1	9	150
21	K1106152-025A 1/5	Unknown	1.000	1	1	10	150
22	K1106152-025S 1/5	Unknown	1.000	1	1	11	150
23	K1106154-009 1/5	Unknown	1.000	1	1	12	150
24	K1106154-015 1/5	Unknown	1.000	1	2	1	150
25	K1106154-025 1/5	Unknown	1.000	1	2	2	150
26	K1106154-025D 1/5	Unknown	1.000	1	2	3	150
27	K1106154-025S 1/5	Unknown	1.000	1	2	4	150
28	K1106157-009 1/5	Unknown	1.000	1	2	5	150
29	CCV3	Unknown	1.000	0	1	2	150
30	CCB3	Unknown	1.000	0	1	1	150
31	LLCCV2	Unknown	1.000	0	1	4	150
32	K1106157-015 1/5	Unknown	1.000	1	2	6	150
33	K1106157-025 1/5	Unknown	1.000	1	2	7	150
34	K1106157-025D 1/5	Unknown	1.000	1	2	8	150
35	K1106157-025S 1/5	Unknown	1.000	1	2	9	150
36	K1106166-009 1/5	Unknown	1.000	1	2	10	150
37	K1106166-015 1/5	Unknown	1.000	1	2	11	150
38	K1106166-025 1/5	Unknown	1.000	1	2	12	150
39	K1106166-025D 1/5	Unknown	1.000	1	3	1	150
40	K1106166-025S	Unknown	1.000	1	3	2	150
41	CCV4	Unknown	1.000	0	1	2	150
42	CCB4	Unknown	1.000	0	1	1	150
43	LLCCV3	Unknown	1.000	0	1	4	150

Dilution Corrected Concentrations

Cal. Blk 7/25/2011 7:48:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:24	99.0%	0.0000	0.0802	-0.1049	0.0697	98.9%	98.7%	-0.0022
2	19:48:41	101.2%	-0.0202	-0.0462	0.0665	-0.1182	101.1%	100.9%	-0.0009
3	19:48:57	99.9%	0.0201	-0.0340	0.0383	0.0485	100.0%	100.4%	0.0031
x		100.0%	0.0000	0.0000	-0.0000	0.0000	100.0%	100.0%	-0.0000
σ		1.1%	0.0202	0.0697	0.0919	0.1029	1.1%	1.2%	0.0028
%RSD		1.1	0.0000	0.0000	0.0000	0.0000	1.1	1.2	0.0000

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:48:24	0.0003	0.0007
2	19:48:41	0.0010	0.0000
3	19:48:57	-0.0013	-0.0007
x		-0.0000	0.0000
σ		0.0012	0.0007
%RSD		0.0000	0.0000

Cal. Stn 7/25/2011 7:50:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:50:44	97.4%	25.1399	24.7348	25.1750	25.0817	97.2%	98.3%	25.1977
2	19:51:01	99.9%	24.7859	24.9687	24.8226	24.7612	100.1%	102.1%	24.5238
3	19:51:18	100.2%	25.0742	25.2966	25.0024	25.1570	100.5%	101.4%	25.2785
x		99.2%	25.0000	25.0000	25.0000	25.0000	99.3%	100.6%	25.0000
σ		1.5%	0.1883	0.2822	0.1762	0.2102	1.8%	2.0%	0.4144
%RSD		1.5	0.7533	1.1288	0.7050	0.8407	1.8	2.0	1.6574

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:50:44	25.1884	25.0694
2	19:51:01	24.5550	24.6070
3	19:51:18	25.2566	25.3236
x		25.0000	25.0000
σ		0.3869	0.3633
%RSD		1.5474	1.4532

ICV1 7/25/2011 7:53:22 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:22	97.6%	24.7893	26.2531	25.6672	24.7835	97.8%	98.3%	100.5858
2	19:53:39	99.6%	24.8304	24.6038	25.1208	24.8302	99.3%	100.4%	101.0716
3	19:53:55	100.4%	24.8304	25.4895	25.1111	24.9097	100.1%	101.7%	100.6995
x		99.2%	24.8167	25.4488	25.2997	24.8411	99.1%	100.1%	100.7856
σ		1.4%	0.0238	0.8254	0.3183	0.0638	1.2%	1.7%	0.2541
%RSD		1.4	0.0957	3.2434	1.2583	0.2568	1.2	1.7	0.2521

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:53:22	100.4979	104.1746
2	19:53:39	99.9873	104.5875
3	19:53:55	100.5339	104.3110
x		100.3397	104.3577
σ		0.3057	0.2104
%RSD		0.3047	0.2016

CCV1 7/25/2011 7:56:02 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:02	97.0%	24.9811	25.9538	25.3871	25.6478	97.4%	98.2%	25.0097
2	19:56:19	98.0%	24.9097	25.5188	25.4736	25.2765	98.5%	99.7%	25.4247
3	19:56:37	98.2%	25.3698	24.8088	24.6192	24.9617	99.7%	101.5%	24.9522
x		97.7%	25.0869	25.4271	25.1600	25.2953	98.5%	99.8%	25.1289
σ		0.6%	0.2476	0.5780	0.4703	0.3434	1.2%	1.7%	0.2578
%RSD		0.7	0.9871	2.2731	1.8694	1.3577	1.2	1.7	1.0260

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:56:02	25.0456	24.9841
2	19:56:19	25.3132	25.3080
3	19:56:37	24.9474	25.1083
x		25.1020	25.1335
σ		0.1893	0.1634
%RSD		0.7542	0.6500

ICB1 7/25/2011 7:58:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:52	96.7%	0.0267	0.1452	0.0579	0.1823	97.4%	97.1%	0.0062
2	19:59:09	94.6%	-0.0384	0.1062	0.2146	-0.1174	95.4%	96.0%	0.0098
3	19:59:26	100.3%	-0.0207	-0.0354	-0.1495	-0.1854	101.2%	102.4%	0.0108
x		97.2%	-0.0108	0.0720	0.0410	-0.0401	98.0%	98.5%	0.0089
σ		2.9%	0.0337	0.0950	0.1826	0.1956	3.0%	3.5%	0.0024
%RSD		3.0	310.5099	131.9958	445.4244	487.2992	3.0	3.5	27.4426

Run	Time	137Ba	138Ba
		ppb	ppb
1	19:58:52	0.0012	0.0028
2	19:59:09	0.0048	0.0063
3	19:59:26	0.0161	0.0166
x		0.0073	0.0086
σ		0.0078	0.0072
%RSD		105.7930	83.9788

CCB1 7/25/2011 8:01:24 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:01:24	96.5%	0.0030	0.0218	0.3092	0.0024	97.9%	98.1%	-0.0008
2	20:01:41	97.9%	-0.0120	0.0645	-0.1944	0.0019	99.0%	99.8%	0.0011
3	20:01:58	97.8%	0.0255	0.0743	-0.0342	0.1319	99.0%	100.2%	0.0045
x		97.4%	0.0055	0.0536	0.0268	0.0454	98.6%	99.4%	0.0016
σ		0.8%	0.0189	0.0279	0.2573	0.0749	0.6%	1.1%	0.0027
%RSD		0.8	345.3118	52.1393	958.5967	164.8773	0.6	1.1	166.5632

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:01:24	0.0011	0.0016
2	20:01:41	0.0067	0.0040
3	20:01:58	0.0071	0.0065
x		0.0050	0.0041
σ		0.0033	0.0025
%RSD		67.2597	60.5126

LLICVS 7/25/2011 8:03:59 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:03:59	97.8%	0.8915	2.2567	2.1029	1.6968	98.7%	99.0%	0.1091
2	20:04:16	97.6%	1.0030	2.0525	2.0579	1.9848	99.0%	99.5%	0.1132
3	20:04:33	101.5%	0.8952	1.9795	1.7485	1.7279	103.3%	104.8%	0.1028
x		99.0%	0.9299	2.0962	1.9698	1.8032	100.3%	101.1%	0.1084
σ		2.2%	0.0634	0.1437	0.1929	0.1581	2.6%	3.2%	0.0053
%RSD		2.2	6.8143	6.8544	9.7949	8.7672	2.6	3.2	4.8678

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:03:59	0.0922	0.0964
2	20:04:16	0.0978	0.0997
3	20:04:33	0.0887	0.0884
x		0.0929	0.0948
σ		0.0046	0.0058
%RSD		4.9647	6.1276

ICSA 7/25/2011 8:06:33 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:33	81.4%	0.0678	2.6181	-0.0538	1.0635	79.2%	82.8%	0.1095
2	20:06:50	81.9%	0.1049	2.3636	0.0064	1.1228	79.9%	84.5%	0.0921
3	20:07:07	83.5%	0.0493	2.4830	0.3068	0.9823	80.6%	85.5%	0.1162
x		82.3%	0.0740	2.4882	0.0865	1.0562	79.9%	84.3%	0.1059
σ		1.1%	0.0283	0.1273	0.1932	0.0705	0.7%	1.3%	0.0124
%RSD		1.3	38.2677	5.1164	223.4657	6.6764	0.9	1.6	11.7411

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:06:33	0.1166	0.1180
2	20:06:50	0.1375	0.1228
3	20:07:07	0.1266	0.1185
x		0.1269	0.1198
σ		0.0105	0.0026
%RSD		8.2479	2.1961

ICSAB 7/25/2011 8:09:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:09	84.8%	23.5408	26.5246	24.0616	24.7128	81.3%	84.9%	0.1185
2	20:09:26	84.8%	23.5502	26.6444	24.3181	24.9215	81.8%	85.6%	0.1081
3	20:09:43	85.6%	23.6833	26.6194	24.8697	24.7376	82.2%	86.6%	0.1254
x		85.0%	23.5914	26.5961	24.4165	24.7907	81.8%	85.7%	0.1174
σ		0.5%	0.0797	0.0632	0.4129	0.1140	0.4%	0.9%	0.0087
%RSD		0.6	0.3378	0.2375	1.6913	0.4599	0.5	1.0	7.4039

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:09:09	0.1216	0.1200
2	20:09:26	0.1335	0.1257
3	20:09:43	0.1113	0.1210
x		0.1221	0.1222
σ		0.0111	0.0030
%RSD		9.1077	2.4847

K1106152-MB 1/5 7/25/2011 8:11:44 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:11:44	94.8%	0.0705	0.0674	-0.0553	0.2797	94.2%	94.9%	0.0043
2	20:12:00	94.9%	0.1097	-0.0012	-0.1027	0.3356	94.5%	95.6%	0.0007
3	20:12:17	95.9%	-0.0109	0.1495	-0.1868	0.0235	96.0%	97.1%	0.0041
x		95.2%	0.0564	0.0719	-0.1149	0.2129	94.9%	95.9%	0.0030
σ		0.6%	0.0615	0.0755	0.0666	0.1664	1.0%	1.1%	0.0020
%RSD		0.6	109.0543	104.9782	57.9352	78.1391	1.0	1.2	66.4349

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:11:44	0.0041	0.0022
2	20:12:00	0.0060	0.0037
3	20:12:17	0.0082	0.0032
x		0.0061	0.0030
σ		0.0021	0.0008
%RSD		33.6538	25.0129

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User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:14:16	97.4%	31.4714	32.5214	32.4444	31.6754	96.0%	97.0%	384.3275
2	20:14:32	98.7%	31.7658	32.6121	32.8171	31.7772	98.4%	99.0%	386.4839
3	20:14:49	98.8%	31.7295	32.0995	32.0367	32.2489	98.1%	100.2%	386.0672
x		98.3%	31.6556	32.4110	32.4327	31.9005	97.5%	98.7%	385.6262
σ		0.8%	0.1605	0.2735	0.3903	0.3060	1.3%	1.6%	1.1438
%RSD		0.8	0.5072	0.8439	1.2035	0.9592	1.3	1.6	0.2966

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:14:16	389.2819	399.4309
2	20:14:32	390.6857	398.7584
3	20:14:49	390.4196	396.5722
x		390.1291	398.2538
σ		0.7456	1.4946
%RSD		0.1911	0.3753

DORM 1/5 7/25/2011 8:17:00 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:00	92.2%	12.4278	6.9888	6.3983	7.4829	89.4%	91.8%	9.2627
2	20:17:16	92.5%	12.4614	6.9190	6.2835	7.1830	90.5%	93.5%	9.3537
3	20:17:33	92.3%	12.6429	7.2214	6.4155	8.0865	90.8%	93.7%	9.4918
x		92.3%	12.5107	7.0431	6.3658	7.5841	90.2%	93.0%	9.3694
σ		0.2%	0.1157	0.1583	0.0717	0.4602	0.8%	1.0%	0.1154
%RSD		0.2	0.9250	2.2481	1.1268	6.0679	0.8	1.1	1.2311

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:17:00	9.4446	9.3860
2	20:17:16	9.5969	9.4310
3	20:17:33	9.5239	9.4339
x		9.5218	9.4170
σ		0.0762	0.0269
%RSD		0.8001	0.2854

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User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:19:38	90.6%	38.2332	11.1557	10.5149	11.6591	89.5%	92.4%	3.4312
2	20:19:55	90.6%	38.2690	11.5411	10.5302	11.6344	90.0%	93.2%	3.4661
3	20:20:12	89.9%	38.3356	10.9716	10.4744	11.1890	90.9%	94.9%	3.4493
x		90.4%	38.2793	11.2228	10.5065	11.4942	90.1%	93.5%	3.4488
σ		0.4%	0.0519	0.2906	0.0288	0.2645	0.7%	1.3%	0.0174
%RSD		0.5	0.1357	2.5897	0.2741	2.3016	0.8	1.3	0.5055

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:19:38	3.4050	3.3623
2	20:19:55	3.4302	3.4008
3	20:20:12	3.3755	3.3985
x		3.4036	3.3872
σ		0.0274	0.0216
%RSD		0.8043	0.6380

K1106152-009 1/5 7/25/2011 8:22:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:22:14	88.5%	10.3315	7.6477	7.1709	8.9740	88.8%	92.1%	50.6858
2	20:22:31	89.0%	10.3636	7.6755	7.4402	8.8644	89.9%	93.5%	51.2620
3	20:22:48	90.4%	9.9222	8.1156	6.7847	8.7775	90.8%	95.8%	49.0315
x		89.3%	10.2058	7.8129	7.1319	8.8720	89.8%	93.8%	50.3264
σ		0.9%	0.2461	0.2625	0.3295	0.0985	1.0%	1.9%	1.1579
%RSD		1.1	2.4110	3.3595	4.6199	1.1099	1.1	2.0	2.3008

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:22:14	50.9750	51.5372
2	20:22:31	51.0843	52.0591
3	20:22:48	49.2548	49.9271
x		50.4381	51.1744
σ		1.0262	1.1113
%RSD		2.0345	2.1717

K1106152-015 1/5 7/25/2011 8:24:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:24:55	88.6%	18.4827	8.7899	7.8941	10.4379	88.5%	91.9%	22.2248
2	20:25:12	88.4%	18.2008	8.8723	8.3066	10.3363	89.1%	93.4%	22.2225
3	20:25:29	89.9%	18.6007	8.6387	8.1558	10.7388	90.0%	94.7%	22.4456
x		89.0%	18.4280	8.7669	8.1188	10.5043	89.2%	93.3%	22.2976
σ		0.8%	0.2055	0.1185	0.2087	0.2093	0.7%	1.4%	0.1282
%RSD		0.9	1.1149	1.3518	2.5708	1.9924	0.8	1.5	0.5748

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:24:55	22.2943	22.2822
2	20:25:12	22.4404	22.3510
3	20:25:29	22.3668	22.2781
x		22.3672	22.3038
σ		0.0731	0.0409
%RSD		0.3268	0.1836

K1106152-025 1/5 7/25/2011 8:27:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:36	87.2%	34.3973	10.9555	10.6992	12.3307	87.4%	91.9%	10.3502
2	20:27:53	87.9%	34.5593	11.6510	10.9314	12.2852	89.1%	93.2%	10.5133
3	20:28:10	91.2%	34.0105	11.1559	10.5216	12.3866	90.9%	96.1%	10.4430
x		88.8%	34.3224	11.2541	10.7174	12.3342	89.1%	93.7%	10.4355
σ		2.1%	0.2820	0.3580	0.2055	0.0508	1.8%	2.1%	0.0818
%RSD		2.4	0.8216	3.1812	1.9175	0.4120	2.0	2.3	0.7837

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:27:36	10.4181	10.2433
2	20:27:53	10.3702	10.4904
3	20:28:10	10.3004	10.2256
x		10.3629	10.3198
σ		0.0592	0.1481
%RSD		0.5714	1.4347

CCV2 7/25/2011 8:30:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:14	92.7%	25.2461	24.5765	24.5949	26.1126	94.2%	96.1%	25.0647
2	20:30:32	92.6%	24.7233	25.1948	25.0779	24.9978	94.2%	97.1%	25.1032
3	20:30:48	93.6%	24.7587	24.6564	24.3541	25.1058	94.9%	97.6%	25.0295
x		93.0%	24.9094	24.8092	24.6756	25.4054	94.4%	97.0%	25.0658
σ		0.5%	0.2921	0.3363	0.3686	0.6148	0.4%	0.8%	0.0369
%RSD		0.6	1.1728	1.3555	1.4936	2.4201	0.4	0.8	0.1472

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:30:14	24.9866	25.0973
2	20:30:32	24.9385	25.1608
3	20:30:48	25.3110	25.2951
x		25.0787	25.1844
σ		0.2026	0.1010
%RSD		0.8079	0.4012

CCB2 7/25/2011 8:32:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:32:58	91.6%	0.0954	0.0188	-0.1648	0.2896	91.6%	93.3%	0.0037
2	20:33:15	92.7%	0.0718	0.0848	-0.3457	0.2425	92.5%	94.4%	0.0043
3	20:33:32	92.8%	0.0931	0.0647	-0.2672	0.3002	92.7%	95.4%	0.0099
x		92.4%	0.0868	0.0561	-0.2592	0.2774	92.3%	94.4%	0.0060
σ		0.7%	0.0130	0.0338	0.0907	0.0307	0.6%	1.1%	0.0034
%RSD		0.7	14.9948	60.3268	34.9896	11.0799	0.6	1.1	56.6580

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:32:58	0.0034	0.0027
2	20:33:15	0.0049	0.0073
3	20:33:32	0.0120	0.0122
x		0.0068	0.0074
σ		0.0046	0.0047
%RSD		67.4063	64.1009

K1106152-025D 1/5 7/25/2011 8:35:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:35:31	87.3%	34.3755	11.0086	10.3655	12.4777	86.5%	90.6%	10.3519
2	20:35:48	86.1%	35.3760	11.5325	11.4532	12.1977	86.2%	90.3%	10.7928
3	20:36:04	87.2%	34.9379	11.7899	11.1546	12.3071	86.3%	92.2%	10.7030
x		86.9%	34.8965	11.4436	10.9911	12.3275	86.3%	91.0%	10.6159
σ		0.7%	0.5015	0.3981	0.5619	0.1411	0.2%	1.0%	0.2330
%RSD		0.8	1.4371	3.4791	5.1127	1.1450	0.2	1.1	2.1948

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:35:31	10.4449	10.3740
2	20:35:48	10.7723	10.8009
3	20:36:04	10.7101	10.6165
x		10.6425	10.5971
σ		0.1739	0.2141
%RSD		1.6336	2.0201

K1106152-025L 1/5 7/25/2011 8:38:09 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:38:09	89.2%	6.9076	2.5026	1.8856	2.6061	89.9%	93.5%	1.9546
2	20:38:26	92.2%	6.7477	2.4176	1.4925	2.9008	92.0%	96.8%	1.9563
3	20:38:43	91.4%	6.7413	2.5126	1.7836	2.7418	92.7%	97.0%	1.8996
x		90.9%	6.7989	2.4776	1.7206	2.7496	91.5%	95.8%	1.9368
σ		1.5%	0.0942	0.0522	0.2040	0.1475	1.4%	2.0%	0.0322
%RSD		1.7	1.3859	2.1067	11.8565	5.3654	1.6	2.1	1.6636

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:38:09	1.9429	1.9252
2	20:38:26	1.8772	1.8926
3	20:38:43	1.9406	1.8837
x		1.9202	1.9005
σ		0.0373	0.0218
%RSD		1.9433	1.1495

K1106152-025A 1/5 7/25/2011 8:40:48 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:40:48	85.8%	84.3328	60.1753	59.7787	60.5201	85.7%	90.6%	58.7233
2	20:41:05	87.2%	83.2527	61.5064	60.2662	61.0484	86.8%	92.6%	59.2410
3	20:41:22	87.5%	83.8190	58.7445	58.8060	62.6952	87.5%	93.9%	58.8108
x		86.8%	83.8015	60.1421	59.6170	61.4212	86.7%	92.4%	58.9250
σ		0.9%	0.5403	1.3813	0.7434	1.1345	0.9%	1.7%	0.2771
%RSD		1.0	0.6447	2.2967	1.2470	1.8470	1.1	1.8	0.4703

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:40:48	58.7089	60.0755
2	20:41:05	58.7846	60.2840
3	20:41:22	58.5977	59.9680
x		58.6970	60.1091
σ		0.0940	0.1607
%RSD		0.1602	0.2673

K1106152-025S 1/5 7/25/2011 8:43:31 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:43:31	85.7%	67.0829	43.5343	43.6521	46.3245	86.0%	90.5%	388.9626
2	20:43:48	85.2%	68.0453	44.1922	44.1283	46.8821	85.6%	90.9%	402.3458
3	20:44:04	87.6%	65.1100	41.4758	42.0788	44.0860	88.7%	94.3%	379.7889
x		86.2%	66.7461	43.0674	43.2864	45.7642	86.8%	91.9%	390.3658
σ		1.3%	1.4964	1.4171	1.0726	1.4799	1.7%	2.1%	11.3437
%RSD		1.5	2.2419	3.2904	2.4779	3.2337	1.9	2.3	2.9059

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:43:31	393.9724	406.1686
2	20:43:48	407.8022	414.9542
3	20:44:04	386.6041	393.2854
x		396.1262	404.8028
σ		10.7619	10.8988
%RSD		2.7168	2.6924

K1106154-009 1/5 7/25/2011 8:46:16 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:16	88.1%	6.3656	4.6838	3.6338	8.0406	87.5%	93.2%	220.0446
2	20:46:32	87.7%	6.3832	5.1776	3.6022	7.7614	88.2%	94.1%	227.4309
3	20:46:49	87.9%	6.6882	4.8163	4.0134	8.2153	88.6%	94.6%	230.3609
x		87.9%	6.4790	4.8926	3.7498	8.0058	88.1%	94.0%	225.9455
σ		0.2%	0.1814	0.2556	0.2289	0.2289	0.5%	0.7%	5.3161
%RSD		0.2	2.8002	5.2240	6.1033	2.8595	0.6	0.8	2.3528

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:46:16	222.0766	231.0681
2	20:46:32	228.5365	235.2880
3	20:46:49	232.0782	238.5573
x		227.5638	234.9711
σ		5.0713	3.7546
%RSD		2.2285	1.5979

K1106154-015 1/5 7/25/2011 8:48:58 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:48:58	86.6%	14.8148	8.1878	6.5586	12.5508	86.2%	91.3%	142.9237
2	20:49:15	87.5%	14.6857	7.2952	6.9641	11.9548	87.1%	93.0%	143.1859
3	20:49:32	88.1%	14.9542	7.1336	6.8182	12.6714	88.3%	94.2%	142.6085
x		87.4%	14.8183	7.5389	6.7803	12.3923	87.2%	92.8%	142.9060
σ		0.8%	0.1343	0.5678	0.2054	0.3837	1.1%	1.5%	0.2891
%RSD		0.9	0.9061	7.5316	3.0297	3.0960	1.2	1.6	0.2023

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:48:58	143.2520	150.5614
2	20:49:15	143.0995	152.3008
3	20:49:32	143.2500	151.6626
x		143.2005	151.5083
σ		0.0875	0.8799
%RSD		0.0611	0.5808

K1106154-025 1/5 7/25/2011 8:51:40 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:40	87.2%	24.7874	7.4422	6.8240	10.5757	87.8%	91.6%	42.1623
2	20:51:57	88.2%	24.6294	7.1942	7.0690	10.4849	88.5%	93.6%	41.7352
3	20:52:13	88.7%	24.4095	7.7216	6.8160	10.6212	89.0%	94.4%	41.7118
x		88.1%	24.6088	7.4527	6.9030	10.5606	88.4%	93.2%	41.8698
σ		0.8%	0.1898	0.2638	0.1438	0.0694	0.6%	1.5%	0.2536
%RSD		0.9	0.7713	3.5400	2.0834	0.6568	0.7	1.6	0.6057

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:51:40	42.2824	42.4014
2	20:51:57	41.7811	42.0794
3	20:52:13	41.6806	42.2795
x		41.9147	42.2534
σ		0.3224	0.1625
%RSD		0.7691	0.3847

K1106154-025D 1/5 7/25/2011 8:54:20 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:54:20	87.7%	24.7814	7.3761	6.5299	9.9749	86.6%	90.4%	33.1784
2	20:54:37	87.5%	24.4345	7.4456	6.6336	10.0091	87.6%	92.1%	33.3948
3	20:54:54	88.3%	24.8430	7.0569	6.7480	9.8763	88.1%	93.1%	33.4492
x		87.9%	24.6863	7.2929	6.6372	9.9535	87.4%	91.9%	33.3408
σ		0.4%	0.2202	0.2073	0.1091	0.0689	0.8%	1.4%	0.1432
%RSD		0.5	0.8920	2.8422	1.6435	0.6927	0.9	1.5	0.4296

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:54:20	33.2600	33.4782
2	20:54:37	33.4963	33.5536
3	20:54:54	33.2498	33.5332
x		33.3354	33.5217
σ		0.1395	0.0390
%RSD		0.4184	0.1164

K1106154-025S 1/5 7/25/2011 8:57:01 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:01	86.9%	56.0943	40.5881	39.2579	42.8717	85.8%	90.2%	431.3307
2	20:57:18	88.2%	55.8655	39.8129	38.7404	41.8497	87.6%	92.4%	429.2607
3	20:57:34	89.2%	55.0017	40.3869	38.2641	41.5949	88.2%	93.4%	432.0546
x		88.1%	55.6539	40.2626	38.7542	42.1054	87.2%	92.0%	430.8820
σ		1.1%	0.5762	0.4022	0.4970	0.6757	1.2%	1.6%	1.4500
%RSD		1.3	1.0354	0.9990	1.2826	1.6048	1.4	1.7	0.3365

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:57:01	437.0015	450.0845
2	20:57:18	435.0139	445.2183
3	20:57:34	438.1749	445.9379
x		436.7301	447.0802
σ		1.5978	2.6265
%RSD		0.3659	0.5875

K1106157-009 1/5 7/25/2011 8:59:46 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:59:46	88.2%	1.4718	1.5245	1.2788	3.5385	85.7%	90.9%	1357.4406
2	21:00:02	89.3%	1.3086	1.6741	0.7563	3.2905	87.8%	93.6%	1284.0608
3	21:00:19	90.8%	1.4290	1.5854	0.8854	3.5262	88.2%	95.0%	1281.3477
x		89.4%	1.4032	1.5947	0.9735	3.4517	87.2%	93.2%	1307.6164
σ		1.3%	0.0846	0.0752	0.2722	0.1397	1.4%	2.1%	43.1703
%RSD		1.4	6.0306	4.7180	27.9588	4.0483	1.6	2.2	3.3015

Run	Time	137Ba	138Ba
		ppb	ppb
1	20:59:46	1318.4990	1363.5993
2	21:00:02	1296.2479	1347.4511
3	21:00:19	1293.2552	1340.3673
x		1302.6674	1350.4726
σ		13.7920	11.9071
%RSD		1.0588	0.8817

CCV3 7/25/2011 9:02:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:34	99.3%	26.0952	25.7427	26.3060	26.3259	100.3%	100.8%	25.8832
2	21:02:51	100.6%	24.6036	24.4687	25.3435	24.9107	102.2%	105.3%	24.5144
3	21:03:08	99.9%	25.3586	25.8593	26.1686	25.5309	100.7%	103.2%	26.3595
x		99.9%	25.3525	25.3569	25.9394	25.5892	101.1%	103.1%	25.5857
σ		0.6%	0.7458	0.7714	0.5206	0.7094	1.0%	2.2%	0.9578
%RSD		0.6	2.9419	3.0421	2.0071	2.7722	1.0	2.2	3.7437

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:02:34	25.9585	26.0338
2	21:02:51	24.6930	24.6966
3	21:03:08	26.2432	26.4351
x		25.6316	25.7218
σ		0.8252	0.9103
%RSD		3.2193	3.5389

CCB3 7/25/2011 9:05:19 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:05:19	97.3%	0.0853	0.1332	-0.2541	0.3393	97.8%	98.8%	0.0270
2	21:05:36	98.1%	0.0277	0.1395	-0.1471	0.1453	98.5%	101.1%	0.0529
3	21:05:53	98.0%	0.1608	0.1208	0.4181	0.6026	98.9%	101.7%	0.1286
x		97.8%	0.0913	0.1312	0.0056	0.3624	98.4%	100.5%	0.0695
σ		0.4%	0.0667	0.0095	0.3612	0.2295	0.6%	1.5%	0.0527
%RSD		0.4	73.1087	7.2570	6422.5664	63.3339	0.6	1.5	75.8819

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:05:19	0.0206	0.0259
2	21:05:36	0.0663	0.0552
3	21:05:53	0.1329	0.1360
x		0.0733	0.0723
σ		0.0565	0.0570
%RSD		77.0626	78.8342

LLCCV2 7/25/2011 9:10:34 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:10:34	93.4%	1.1143	1.9255	1.7509	2.2746	94.1%	96.2%	0.1062
2	21:10:50	94.6%	1.0644	2.1541	2.0767	2.3126	96.5%	99.1%	0.0920
3	21:11:07	95.5%	1.0479	2.0639	1.8878	2.1170	97.3%	100.4%	0.1322
x		94.5%	1.0755	2.0478	1.9051	2.2347	96.0%	98.6%	0.1102
σ		1.1%	0.0346	0.1151	0.1636	0.1037	1.7%	2.2%	0.0204
%RSD		1.1	3.2134	5.6220	8.5885	4.6424	1.7	2.2	18.5227

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:10:34	0.1227	0.1088
2	21:10:50	0.1051	0.1021
3	21:11:07	0.1150	0.1105
x		0.1143	0.1071
σ		0.0088	0.0045
%RSD		7.7172	4.1941

K1106157-015 1/5 7/25/2011 9:13:07 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:13:07	89.6%	2.2201	1.7641	1.4004	3.2459	87.2%	92.4%	807.4174
2	21:13:24	92.3%	2.1262	1.9564	1.7890	3.4091	89.7%	94.9%	808.1947
3	21:13:41	92.5%	2.1263	1.9807	1.5157	3.4649	90.1%	95.6%	813.3167
x		91.5%	2.1575	1.9004	1.5684	3.3733	89.0%	94.3%	809.6429
σ		1.6%	0.0542	0.1187	0.1996	0.1138	1.6%	1.7%	3.2052
%RSD		1.7	2.5112	6.2440	12.7264	3.3731	1.8	1.8	0.3959

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:13:07	823.7413	824.3102
2	21:13:24	826.8480	815.7736
3	21:13:41	832.0509	818.5209
x		827.5467	819.5349
σ		4.1986	4.3577
%RSD		0.5074	0.5317

K1106157-025 1/5 7/25/2011 9:15:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:55	91.6%	5.3167	2.3393	1.8677	3.5353	88.7%	94.0%	309.9191
2	21:16:12	94.1%	5.5312	2.0221	1.7204	4.4611	91.3%	96.7%	306.6572
3	21:16:28	93.0%	5.6174	2.4121	1.9053	4.3282	89.6%	95.5%	319.3831
x		92.9%	5.4884	2.2579	1.8311	4.1082	89.9%	95.4%	311.9865
σ		1.3%	0.1549	0.2073	0.0977	0.5006	1.3%	1.3%	6.6100
%RSD		1.4	2.8220	9.1834	5.3380	12.1850	1.4	1.4	2.1187

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:15:55	310.6326	322.0835
2	21:16:12	308.3458	317.5740
3	21:16:28	321.3966	328.2275
x		313.4583	322.6284
σ		6.9692	5.3476
%RSD		2.2233	1.6575

K1106157-025D 1/5 7/25/2011 9:18:38 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:18:38	94.1%	5.6573	2.0806	1.9168	4.3093	91.3%	96.6%	301.3823
2	21:18:55	90.6%	6.0108	2.5836	2.4865	4.3714	87.5%	93.2%	331.5772
3	21:19:11	94.5%	5.6393	2.5328	1.8501	4.5944	91.6%	98.0%	307.6577
x		93.1%	5.7692	2.3990	2.0845	4.4251	90.1%	95.9%	313.5391
σ		2.1%	0.2095	0.2769	0.3498	0.1499	2.3%	2.5%	15.9335
%RSD		2.3	3.6308	11.5421	16.7796	3.3883	2.5	2.6	5.0818

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:18:38	302.5674	312.8714
2	21:18:55	332.5413	340.8849
3	21:19:11	309.0595	315.6721
x		314.7227	323.1428
σ		15.7691	15.4288
%RSD		5.0105	4.7746

K1106157-025S 1/5 7/25/2011 9:21:29 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:29	92.8%	37.5694	32.5887	32.7783	34.3832	90.8%	95.6%	696.8755
2	21:21:45	95.1%	36.6446	31.8673	32.2730	32.4727	92.1%	98.0%	689.8174
3	21:22:02	95.8%	35.1222	31.2963	31.0028	31.5040	94.3%	101.1%	663.9563
x		94.6%	36.4454	31.9174	32.0181	32.7866	92.4%	98.3%	683.5497
σ		1.6%	1.2357	0.6477	0.9148	1.4650	1.8%	2.8%	17.3315
%RSD		1.7	3.3905	2.0292	2.8572	4.4684	1.9	2.8	2.5355

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:21:29	709.9814	714.4389
2	21:21:45	703.8134	699.7073
3	21:22:02	678.9257	670.2445
x		697.5735	694.7969
σ		16.4413	22.5027
%RSD		2.3569	3.2387

K1106166-009 1/5 7/25/2011 9:24:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:24:14	92.9%	2.9319	3.4044	3.8420	3.9167	93.3%	98.0%	16.7376
2	21:24:31	95.2%	3.0173	3.3845	3.2131	4.3946	95.4%	100.1%	16.7794
3	21:24:48	95.3%	3.0292	3.1023	3.6341	4.0695	95.4%	100.5%	17.0312
x		94.5%	2.9928	3.2971	3.5631	4.1270	94.7%	99.6%	16.8494
σ		1.3%	0.0531	0.1690	0.3204	0.2441	1.2%	1.3%	0.1588
%RSD		1.4	1.7738	5.1247	8.9928	5.9143	1.3	1.3	0.9426

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:24:14	16.7664	16.7352
2	21:24:31	16.6634	16.6956
3	21:24:48	17.1033	17.0079
x		16.8444	16.8129
σ		0.2301	0.1700
%RSD		1.3662	1.0113

K1106166-015 1/5 7/25/2011 9:26:55 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:26:55	91.2%	11.6124	5.0716	6.1674	6.9615	91.5%	95.3%	15.0883
2	21:27:11	91.5%	11.2510	5.8003	5.9720	6.5818	91.7%	96.0%	15.1009
3	21:27:28	92.7%	11.1771	6.1405	5.8606	6.2016	92.8%	97.5%	15.0069
x		91.8%	11.3468	5.6708	6.0000	6.5817	92.0%	96.3%	15.0654
σ		0.8%	0.2330	0.5461	0.1553	0.3799	0.7%	1.1%	0.0511
%RSD		0.9	2.0532	9.6300	2.5891	5.7728	0.8	1.2	0.3389

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:26:55	15.0029	14.9202
2	21:27:11	15.1176	15.1516
3	21:27:28	15.0791	15.0856
x		15.0665	15.0525
σ		0.0584	0.1192
%RSD		0.3876	0.7919

K1106166-025 1/5 7/25/2011 9:29:36 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:29:36	91.9%	19.1674	5.4782	5.7291	5.3273	92.5%	97.0%	5.0513
2	21:29:53	92.6%	19.6432	5.9219	5.6128	6.0356	93.9%	98.9%	5.2258
3	21:30:10	94.4%	19.2668	5.6700	5.4693	5.8252	95.6%	100.3%	5.1603
x		93.0%	19.3592	5.6901	5.6037	5.7294	94.0%	98.7%	5.1458
σ		1.3%	0.2510	0.2226	0.1301	0.3637	1.6%	1.7%	0.0882
%RSD		1.4	1.2965	3.9115	2.3221	6.3487	1.7	1.7	1.7135

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:29:36	5.2313	5.1618
2	21:29:53	5.1736	5.1607
3	21:30:10	5.1305	5.1319
x		5.1784	5.1514
σ		0.0506	0.0170
%RSD		0.9767	0.3295

K1106166-025D 1/5 7/25/2011 9:32:14 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:14	89.6%	20.4177	5.6060	5.9482	6.6587	90.3%	94.3%	6.0379
2	21:32:31	90.4%	19.9310	6.2074	5.6264	6.1599	91.4%	96.0%	5.8924
3	21:32:48	91.1%	20.0633	6.0540	5.7035	6.3630	91.9%	96.3%	6.0668
x		90.4%	20.1374	5.9558	5.7593	6.3939	91.2%	95.5%	5.9990
σ		0.8%	0.2517	0.3125	0.1680	0.2508	0.8%	1.1%	0.0935
%RSD		0.8	1.2497	5.2473	2.9172	3.9227	0.9	1.1	1.5579

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:32:14	5.9735	5.9023
2	21:32:31	5.9866	5.9322
3	21:32:48	5.9645	6.0021
x		5.9748	5.9455
σ		0.0111	0.0513
%RSD		0.1857	0.8620

K1106166-025S 7/25/2011 9:34:52 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:34:52	89.4%	51.4241	37.6464	38.5443	38.3850	89.4%	93.5%	392.7703
2	21:35:09	89.2%	51.4776	37.9628	38.1375	37.4839	89.7%	94.9%	397.2461
3	21:35:26	90.8%	51.1801	37.3385	37.7249	37.5549	90.4%	95.4%	398.0944
x		89.8%	51.3606	37.6492	38.1356	37.8079	89.8%	94.6%	396.0369
σ		0.9%	0.1586	0.3121	0.4097	0.5010	0.5%	1.0%	2.8606
%RSD		1.0	0.3088	0.8291	1.0743	1.3251	0.6	1.1	0.7223

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:34:52	397.2021	410.7206
2	21:35:09	400.9366	409.4920
3	21:35:26	402.4704	409.8121
x		400.2031	410.0082
σ		2.7097	0.6374
%RSD		0.6771	0.1555

CCV4 7/25/2011 9:37:43 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:37:43	93.9%	25.1223	26.1076	25.5784	25.9579	93.7%	95.8%	25.6710
2	21:38:00	94.5%	24.9964	26.2088	26.0547	25.6281	94.2%	97.5%	25.6382
3	21:38:17	94.3%	25.1208	25.3340	25.5726	25.2380	95.7%	98.2%	25.9747
x		94.2%	25.0798	25.8835	25.7353	25.6080	94.5%	97.2%	25.7613
σ		0.3%	0.0723	0.4785	0.2767	0.3604	1.0%	1.2%	0.1855
%RSD		0.3	0.2882	1.8488	1.0750	1.4072	1.1	1.3	0.7201

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:37:43	25.4896	25.5904
2	21:38:00	25.5911	25.6174
3	21:38:17	25.5738	25.6901
x		25.5515	25.6326
σ		0.0543	0.0516
%RSD		0.2124	0.2012

CCB4 7/25/2011 9:40:23 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:23	92.9%	0.0534	0.1835	0.0181	0.2566	92.6%	94.9%	0.0248
2	21:40:40	93.3%	0.1007	0.0530	-0.0004	0.3060	92.7%	95.8%	0.0337
3	21:40:57	93.4%	0.0634	0.1021	0.4380	0.1544	93.2%	96.6%	0.0883
x		93.2%	0.0725	0.1129	0.1519	0.2390	92.9%	95.8%	0.0489
σ		0.3%	0.0249	0.0659	0.2479	0.0773	0.3%	0.9%	0.0344
%RSD		0.3	34.3771	58.3876	163.2419	32.3398	0.3	0.9	70.2335

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:40:23	0.0205	0.0223
2	21:40:40	0.0381	0.0372
3	21:40:57	0.0930	0.0847
x		0.0505	0.0481
σ		0.0378	0.0326
%RSD		74.8994	67.7308

LLCCV3 7/25/2011 9:42:56 PM

User Pre-dilution: 1.000

Run	Time	71Ga	75As	77Se	78Se	82Se	103Rh	115In	135Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:42:56	89.3%	1.0501	2.3666	2.3491	2.2304	88.2%	90.7%	0.1366
2	21:43:13	94.0%	1.0502	2.2090	2.0116	2.3953	93.8%	96.3%	0.1074
3	21:43:29	94.7%	0.8581	2.0850	1.9592	1.6204	94.3%	97.1%	0.1252
x		92.6%	0.9861	2.2202	2.1066	2.0820	92.1%	94.7%	0.1231
σ		2.9%	0.1109	0.1411	0.2116	0.4082	3.4%	3.5%	0.0147
%RSD		3.2	11.2431	6.3566	10.0467	19.6038	3.7	3.7	11.9494

Run	Time	137Ba	138Ba
		ppb	ppb
1	21:42:56	0.1278	0.1134
2	21:43:13	0.1020	0.1093
3	21:43:29	0.1028	0.1159
x		0.1108	0.1128
σ		0.0147	0.0033
%RSD		13.2450	2.9326

Lipids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	URS Corporation	**Service Request:**	K1106166
Project:	East White Lake/Meat	**Date Collected:**	5/23-6/20/2011
Sample Matrix:	Animal tissue	**Date Received:**	5/24-6/21/2011

Lipids, Total

Prep Method:	EPA 3541	Units:	PERCENT
Analysis Method:	NOAA	Basis:	AS RECEIVED
Test Notes:			

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
EWL-DES-C-Meat	K1106166-009	0.05	7/18/2011	7/20/2011	0.40	
EWL-HOU-C-Meat	K1106166-015	0.05	7/18/2011	7/20/2011	0.40	
EWL-BIL-C-Meat	K1106166-025	0.05	7/18/2011	7/20/2011	0.40	
Method Blank	K1106166-MB	0.05	7/18/2011	7/20/2011	0.05	U

Approved By: Elissa Erickson Date: 7-29-11

1A/092099p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: East White Lake/Meat
Sample Matrix: Animal tissue

Service Request: K1106166
Date Collected: NA
Date Received: NA
Date Extracted: 7/18/2011
Date Analyzed: 7/20/2011

Triplicate Summary
Lipids, Total

Sample Name: Batch QC
Lab Code: K1106154-25 TRP
Test Notes:

Units: PERCENT
Basis: AS RECEIVED

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
Lipids, Total	EPA 3541	NOAA	0.050	2.6	2.7	2.7	2.7	3	

Approved By: Elissa Erickson Date: 7-29-11

% Lipid - Electronic Benchsheet

wo #	wet wt	dish	dish/lip	% lip	mb corr	% lipids (rounded)	mrl
K1106166-009	10.10	1.304	1.312	0.396040	0.0000	0.40	0.05
K1106166-015	10.04	1.311	1.319	0.398406	0.0000	0.40	0.05
K1106166-025	10.07	1.317	1.325	0.397219	0.0000	0.40	0.05
K1106166-MB	10.10	1.294	1.294	0.000000	0.0000	0.00	0.05
K1106154-25 DUP	10.05	1.315	1.370	2.736318	0.0000	2.7	0.05
K1106154-25 TRP	10.03	1.316	1.370	2.691924	0.0000	2.7	0.05

Reviewed By: Elissa Erickson Date: 7-29-11

Lipids Raw Benchsheet

Lab ID	Client ID	Sample Weight (g)	Wt. Dish (g)	Wt. Dish + Lipid (g)
K1106152-009	EWL-DES Hepatopancreas Composite	3.05	1.294	1.333
K1106152-015	EWL-HOU-C Hepatopancreas Composite	3.04	1.318	1.374
K1106152-025	EWL-BIL Hepatopancreas Composite	3.05	1.305	1.349
K1106154-009	EWL-DES-C-Soft Tissue	10.07	1.301	1.314
K1106154-015	EWL-HOU-C-Soft Tissue	10.10	1.304	1.317
K1106154-025	EWL-BIL-C-Soft Tissue	10.04	1.314	1.366
K1106157-009	EWL-DES Exoskeleton Composite	10.05	1.314	1.317
K1106157-015	EWL-HOU Exoskeleton Composite	10.01	1.316	1.318
K1106157-025	EWL-BIL Exoskeleton Composite	10.03	1.311	1.314
K1106166-009	EWL-DES-C-Meat	10.10	1.304	1.312
K1106166-015	EWL-HOU-C-Meat	10.04	1.311	1.319
K1106166-025	EWL-BIL-C-Meat	10.07	1.317	1.325
K1106154-MB	Method Blank	EE 7-29-11 10.05	1.294	1.294
K1106154-025 DUP	Sample Duplicate	10.03	1.315	1.370
K1106154-025 TRP	Sample Triplicate	10.10 03	1.316	1.370

Extraction Start Time/Date:	7-18-11	**Extraction Method:**	3541
Extraction Stop Time/Date:	7-18-11	**DCM Lot #:**	DD930, DE200
Extracted By:	D. Wood	**Sulfate Lot #:**	BK1022

Intermediate Volume of Extracts:	10 mL	**Aliquot used for % Lipids:**	2 mL

Date Analyzed:	7-20-11	**Balance ID:**	K-Balance-40
Analyzed By:	S. Manzella		

Prep Run #: 137914

Reviewed By: Elissa Erickson Date: 7-29-11

Chain of Custody

Columbia Analytical Services

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www.caslab.com

CHAIN of CUSTODY

Page 1 of 1

Client: David Lingle

Project: EWL-Tissue Study

Project Manager: John Rodgers

Telephone No.: /

Fax No.:

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

K1105581

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic SW6020	Inorganic As EPA 1632A	Total Ba SW6020	Total Mercury EPA 1631	Methylmercury EPA 1630	TPH Texas 1005/1006								Turn Around Time (working days)
EWL-DES						X (Crabs)			6-20-11		X	X	X	X	X	X								

MARKS: 162

Sample Received Intact: Yes No

Temperature received: Ice No ice

	Date	Time		
Relinq. by sampler (Sign & Print Name) Patrick M. Ritchie	6-20-11	1500	Received by (Sign & Print Name)	
Relinquished by	Date	Time	Received by	
Relinquished by	Date	Time	Received by	
Relinquished by	Date	Time	Received by laboratory CAS	Date 6/21/11 Time 0845

Lab Work No.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC LH

Client / Project: IRS Service Request K11 5581

Received: 6/21/11 Opened: 6/21/11 By: AJ Unloaded: 6/21/11 By: AJ

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.5		298			

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

Notes, Discrepancies, & Resolutions: Rec'd 12 vials

Columbia Analytical Services™

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CHAIN of CUSTODY

Page 1 of 1

Client: EWL Project - D. Lingle

Project: EWL - Tissue Study

Project Manager: John Rodgers

Telephone No.

Fax No.

Method of Shipment: Fed Ex

Special Detection Limit/Reporting

K1105244

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	Total Arsenic - SW6020	Inorganic Arsenic - EPA1632A	Total Barium - SW6020	Total Mercury - EPA 1631	Methyl mercury - EPA 1630	TPH - Texas 1005/1006									Turn Around Time (working days)
EWL-BIL		1				X			6.9.11	1200	X	X	X	X	X	X									

MARKS

Sample Received Intact: Yes No

Temperature received: Ice No ice

	Date	Time		
Relinq. by sampler (Sign & Print Name) Randy Graves	6.9.11	1730	Received by (Sign & Print Name)	
Relinquished by	Date	Time	Received by	
Relinquished by	Date	Time	Received by	
Relinquished by	Date	Time	Received by laboratory CAS	Date 6/10/11 Time 0930

Lab Work No.

164

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC Lynda

lient / Project: URS Service Request K11 5244

eceived: 6/10/11 Opened: 6/10/11 By: AJ Unloaded: 6/10/11 By: AJ

Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*

Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*

Were custody seals on coolers? NA Y N If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
4.0		299		7965 3874 7438	

Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other*_____

Were custody papers properly filled out (ink, signed, etc.)?	NA	Y	N
Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*	NA	Y	N
). Were all sample labels complete (i.e analysis, preservation, etc.)?	NA	Y	N
1. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.*	NA	Y	N
2. Were appropriate bottles/containers and volumes received for the tests indicated?	NA	Y	N
3. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below*	NA	Y	N
4. Were VOA vials received without headspace? *Indicate in the table below.*	NA	Y	N
5. Was C12/Res negative?	NA	Y	N

Sample ID on Bottle	Sample ID on COC	Identified by:

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

'otes, Discrepancies, & Resolutions: Rec'd 12 vials.

*Page 1 of*____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

SR# K1104604

PAGE _____ OF _____

Project Name: EWL Tissue Study **Project Number:** _____

Project Manager: John Rodgers **Company:** _____

Company/Address: _____ **Phone:** _____

City, State, Zip: _____ **FAX:** _____

Sampler's Signature: David Lingle

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Total Arsenic SW 6020	Inorganic Arsenic EPA 1632A	Total Barium SW 6020	Total Mercury EPA 1631	Methylmercury EPA 1630	Lipid Content	TPH	REMARKS
EWL-HOU-C	5/23/2011	6:15pm		Tissue	1	x	x	x	x	x	x	x	

166

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_____ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: _____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

_____ V. EDD

Comments/Special Instructions:

Dissect eight (8) blue crabs into Meat, Hepatopancreas, Other Soft Tissue, and Exoskeleton.

EWL-HOU-C-MEAT

EWL-HOU-C-HEPATOPANCREAS

EWL-HOU-C-OTHER SOFT TISSUE

EWL-HOU-C-EXOSKELETON

TPH analysis to be conducted by Pace - Green Bay.

RELINQUISHED BY:

Signature: David Lingle

Printed Name: David Lingle

Firm: URS Corporation

Date/Time: 05/23/11; 6:15 pm

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: SHOPKINS

Firm: CAS

Date/Time: 5/24/11 0830

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC M11

Client / Project: URS Service Request K11 4604

Received: 5/24/11 Opened: 5/24/11 By: SX Unloaded: 5/24/11 By: SX

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

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.4		281		7971 2767 7864	

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

Sample ID on Bottle	Sample ID on COC	Identified by:

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

*Notes, Discrepancies, & Resolutions:*_____

Page 1 of ____