



received 07/31/2016
Complaint 200439757

GC/MS Semivolatiles

SIMPAH

Case Narrative

COGCC

Complaint 200439757


Work Order Number: 1607366

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 07/20/16.
2. The sample was prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water sample was extracted using continuous liquid-liquid extractors, according to SW-846 Method 3520C, utilizing the current revision of SOP 617.
3. The extract was analyzed using GC/MS with a DB-5MS capillary column according to the current revision of SOP 506 based on SW-846 Method 8270D. The samples were analyzed using selective ion monitoring (SIM), in order to achieve lower reporting limits. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and a limited number of major ions from the mass spectrum of the sample versus the daily calibration standard.
4. All initial calibration criteria were met. If average response factors were used in the initial calibration, %RSD was $\leq 20\%$. If linear or higher order regression calibrations were used in the initial calibration, the coefficient of determination (r^2) ≥ 0.99 .
5. All initial calibration standards are verified by comparing a second source standard initial calibration verification (ICV) against the calibration curve. All target compounds in the second source verification had a %D $\leq 30\%$.
6. All compounds in the daily (continuing) calibration verifications were within 20%D.
7. All method blank criteria were met.



8. A laboratory control spike and laboratory control spike duplicate were not reported with this data package. See SW8270 report for LCS/LCSD results.
9. A matrix spike and matrix spike duplicate were not performed because of insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.
10. The sample was extracted and analyzed within the established holding times.
11. Surrogate recoveries were not calculated for the sample in this data package. See SW8270 report for surrogate recoveries.
12. All internal standard recoveries were within acceptance criteria.
13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

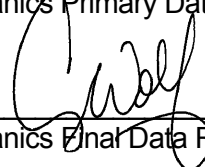
The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Emily Lyons
Organics Primary Data Reviewer

7/29/16

Date



Organics Final Data Reviewer

7/30/16

Date

ALS
Data Qualifier Flags
Organics

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is equal to or outside the control criteria used.
- +:** This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1607366

Client Name: COGCC

Client Project Name: Complaint 200439757

Client Project Number:

Client PO Number: CT 2016-141

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
754977 Platteville Lat.	1607366-1		WATER	20-Jul-16	8:08
754980 Platteville Lat.	1607366-2		WATER	20-Jul-16	8:30
753452 WW	1607366-3		WATER	20-Jul-16	9:45
754914 Sump	1607366-4		WATER	20-Jul-16	9:21



ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.
Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER #	1607366
PAGE	1 of 1
DISPOSAL	BY LAB or RETURN

PROJECT NAME	Complaint 200439757
PROJECT NO.	
COMPANY NAME	Cda. C. H. Gray Long Comm
SEND REPORT TO	Peter Gintautas
ADDRESS	1120 Lincoln St # 801
CITY / STATE / ZIP	Denver CO 80203
PHONE	719 679-1326
FAX	
E-MAIL	peter.gintautas@state.co.us

TURNAROUND TIME	SITE ID	SAMPLER	PARAMETER/METHOD REQUEST FOR ANALYSIS
14 days		PAC	
EDD FORMAT			
PURCHASE ORDER			
BILL TO COMPANY			
INVOICE ATTN TO			
ADDRESS			
CITY / STATE / ZIP			
PHONE			
FAX			
E-MAIL			

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
①	754977 Platteville Lot.	W	07/20/06	08:08	3	raw H ₂ SO ₄		X	X	X	X				X			
②	754980 Platteville Lot	W	07/20/06	08:30	3	raw H ₂ SO ₄		X	X	X	X				X			
③	753452 WW	W	07/20/06	09:45	3	HL						X						
↓	753452 WW	W	07/20/06	09:45	2	—						X						
↓	753452 WW	W	07/20/06	09:45	3	—		X	X	X	X							
↓	753452 WW	W	07/20/06	09:45	1	H ₂ SO ₄								X				
④	754914 Sup	W	07/20	09:21	2	—		X	X	X	X							
↓	754914 Sup	W	07/20	09:21	1	H ₂ SO ₄									X			
↓	754914 Sup	W	07/20	09:21	1	—						X						

Time Zone (Circle):	EST	CST	MST	PST	Matrix:	O = oil	S = soil	NS = non-soil solid	W = water	L = liquid	E = extract	F = filter
REPORT LEVEL / QC REQUIRED	Summary (Standard QC)	LEVEL II (Standard QC)	LEVEL III (Std QC + forms)	LEVEL IV (Std QC + forms + raw)								
5 of 14	dissolved metals = filter + preserve at lab with 2006-08-16 Tap. 6 Mg											
	754914 was sent in H ₂ SO ₄ at lab											
	2007-08-11 Be 2007-08-11											
PRESERVATION KEY	1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO ₄ 7-4°C 8-Other											

RELINQUISHED BY	SIGNATURE	PRINTED NAME	DATE	TIME
RECEIVED BY	P. Gintautas	Peter Gintautas	July 20/06	14:35
RELINQUISHED BY		Rebecca Morala	7/20/06	14:35
RECEIVED BY				14:25
RELINQUISHED BY				
RECEIVED BY				



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1607366

Project Manager: ARW

Initials: SDM Date: 7-20-11

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<u>NO</u>
2. Are custody seals on shipping containers intact?	<u>NONE</u>	YES	NO
3. Are Custody seals on sample containers intact?	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<u>YES</u>	NO
5. Are the COC and bottle labels complete and legible?		<u>YES</u>	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	<u>NO</u>
7. Were airbills / shipping documents present and/or removable?	<u>PROP OFF</u>	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<u>YES</u>	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	<u>YES</u>	NO
10. Is there sufficient sample for the requested analyses?		<u>YES</u>	NO
11. Were all samples placed in the proper containers for the requested analyses?		<u>YES</u>	NO
12. Are all samples within holding times for the requested analyses?		<u>YES</u>	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<u>YES</u>	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	N/A	YES	<u>NO</u>
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<u>NO</u>
16. Were the samples shipped on ice?		<u>YES</u>	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 <u>#4</u>	RAD ONLY	YES	<u>NO</u>
Cooler #: <u>1</u> <u>2</u>			
Temperature (°C): <u>5.0</u> <u>7.2</u>			
No. of custody seals on cooler: <u>2</u> <u>2</u>			
External µR/hr reading: <u>N/A</u> <u>N/A</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO <u>NA</u> (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

* Cooler 2 out of temp. Samples received same day as receipt.
 * Sample 4 bottles 1 through 4 have a ^{right} layer of oil off top of sample water.
 b.) Sample 3 is missing the 200mL amber for TOC analysis. For Sample 3 the bottle for wet chem → The COC says 3 sample bottles only 1 received for the sample.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: _____

GC/MS Semi-volatiles

Method SW8270SIMD

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 21-Jul-16

Date Analyzed: 25-Jul-16

Prep Batch: EX160721-2

QCBatchID: EX160721-2-3

Run ID: SV160725-4

Cleanup: NONE

Basis: N/A

File Name: S04502

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
91-20-3	NAPHTHALENE	1	0.1	0.1	0.1	U	
91-57-6	2-METHYLNAPHTHALENE	1	0.1	0.1	0.1	U	
90-12-0	1-METHYLNAPHTHALENE	1	0.1	0.1	0.1	U	
208-96-8	ACENAPHTHYLENE	1	0.1	0.1	0.1	U	
83-32-9	ACENAPHTHENE	1	0.1	0.1	0.1	U	
86-73-7	FLUORENE	1	0.1	0.1	0.1	U	
85-01-8	PHENANTHRENE	1	0.1	0.1	0.1	U	
120-12-7	ANTHRACENE	1	0.1	0.1	0.1	U	
206-44-0	FLUORANTHENE	1	0.1	0.1	0.1	U	
129-00-0	PYRENE	1	0.1	0.1	0.1	U	
56-55-3	BENZO(A)ANTHRACENE	1	0.1	0.1	0.1	U	
218-01-9	CHRYSENE	1	0.1	0.1	0.1	U	
205-99-2	BENZO(B)FLUORANTHENE	1	0.1	0.1	0.1	U	
207-08-9	BENZO(K)FLUORANTHENE	1	0.1	0.1	0.1	U	
50-32-8	BENZO(A)PYRENE	1	0.1	0.1	0.1	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	0.1	0.1	0.1	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	0.1	0.1	0.1	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	0.1	0.1	0.1	U	

Data Package ID: SV1607366-2

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

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LIMS Version: 6.820

GC/MS Semi-volatiles

Method SW8270SIMD

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Field ID: 753452 WW

Lab ID: 1607366-3

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 20-Jul-16

Date Extracted: 21-Jul-16

Date Analyzed: 25-Jul-16

Prep Method: SW3520 Rev C

Prep Batch: EX160721-2

QCBatchID: EX160721-2-3

Run ID: SV160725-4

Cleanup: NONE

Basis: As Received

File Name: S04503

Analyst: Tyler Knaebel

Sample Aliquot: 1070 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

Analysis ReqCode: SIM PAH from S

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
91-20-3	NAPHTHALENE	1	0.093	0.093	0.093	U	
91-57-6	2-METHYLNAPHTHALENE	1	0.093	0.093	0.093	U	
90-12-0	1-METHYLNAPHTHALENE	1	0.093	0.093	0.093	U	
208-96-8	ACENAPHTHYLENE	1	0.093	0.093	0.093	U	
83-32-9	ACENAPHTHENE	1	0.093	0.093	0.093	U	
86-73-7	FLUORENE	1	0.093	0.093	0.093	U	
85-01-8	PHENANTHRENE	1	0.093	0.093	0.093	U	
120-12-7	ANTHRACENE	1	0.093	0.093	0.093	U	
206-44-0	FLUORANTHENE	1	0.093	0.093	0.093	U	
129-00-0	PYRENE	1	0.093	0.093	0.093	U	
56-55-3	BENZO(A)ANTHRACENE	1	0.093	0.093	0.093	U	
218-01-9	CHRYSENE	1	0.093	0.093	0.093	U	
205-99-2	BENZO(B)FLUORANTHENE	1	0.093	0.093	0.093	U	
207-08-9	BENZO(K)FLUORANTHENE	1	0.093	0.093	0.093	U	
50-32-8	BENZO(A)PYRENE	1	0.093	0.093	0.093	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	0.093	0.093	0.093	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	0.093	0.093	0.093	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	0.093	0.093	0.093	U	

Data Package ID: SV1607366-2

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

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LIMS Version: 6.820

Data Path : C:\msdchem\1\data\2016\072516A\
 Data File : S04501.D
 Acq On : 25 Jul 2016 14:10
 Operator : TK HPSV4 sn #: CV11451177
 Sample : SV160725-4CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 14:31:36 2016
 Quant Method : C:\msdchem\1\methods\070816S.M
 Quant Title : SW8270D Full Scan Analysis
 QLast Update : Mon Jul 25 14:31:28 2016
 Response via : Initial Calibration

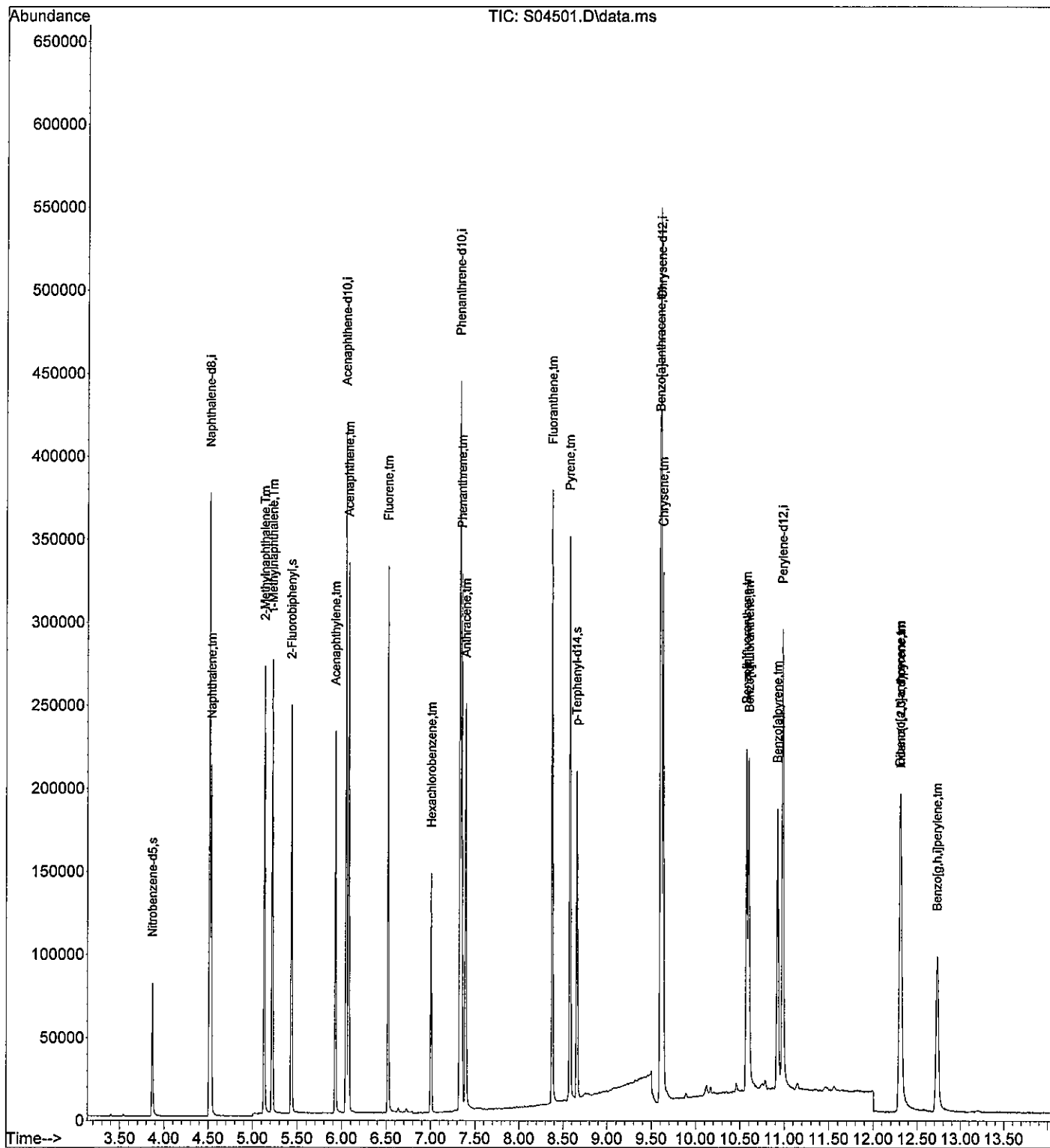
Compound	R.T.	QIon	Response	Conc	Units	Dev (Min)
Internal Standards						
1) Naphthalene-d8	4.515	136	257900	2000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.047	164	156259	2000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.331	188	336936	2000.00	ng/ml	# 0.00
16) Chrysene-d12	9.610	240	341384	2000.00	ng/ml	# 0.00
21) Perylene-d12	10.981	264	282676	2000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.869	82	53295	1323.62	ng/ml	0.00
Spiked Amount 2000.000	Range 34	- 111	Recovery	=	66.18%	
7) 2-Fluorobiphenyl	5.435	172	132520	1010.84	ng/ml	0.00
Spiked Amount 2000.000	Range 21	- 106	Recovery	=	50.54%	
18) p-Terphenyl-d14	8.656	244	162070	1143.96	ng/ml	0.00
Spiked Amount 2000.000	Range 33	- 111	Recovery	=	57.20%	
Target Compounds						
						Qvalue
3) Naphthalene	4.534	128	137687	1016.64	ng/ml	100
4) 2-Methylnaphthalene	5.134	142	101777	1072.68	ng/ml	98
5) 1-Methylnaphthalene	5.222	142	90237	1048.43	ng/ml	99
8) Acenaphthylene	5.927	152	139953	1112.60	ng/ml#	100
9) Acenaphthene	6.078	154	96657	999.31	ng/ml	99
10) Fluorene	6.518	166	117711	1023.42	ng/ml	100
12) Hexachlorobenzene	7.008	284	41960	903.17	ng/ml	98
13) Phenanthrene	7.351	178	194896	964.55	ng/ml	100
14) Anthracene	7.397	178	178932	1148.99	ng/ml	99
15) Fluoranthene	8.379	202	210693	1099.46	ng/ml#	99
17) Pyrene	8.577	202	211132	1054.22	ng/ml#	99
19) Benzo[a]anthracene	9.598	228	190520	1161.59	ng/ml	99
20) Chrysene	9.633	228	202581	1018.96	ng/ml	97
22) Benzo[b]fluoranthene	10.574	252	171992	875.56	ng/ml	100
23) Benzo[k]fluoranthene	10.600	252	197266	1013.53	ng/ml	98
24) Benzo[a]pyrene	10.924	252	168145	1015.55	ng/ml#	98
25) Indeno(1,2,3-c,d)pyrene	12.314	276	169962	937.04	ng/ml	99
26) Dibenzo[a,h]anthracene	12.304	278	140524	934.86	ng/ml	99
27) Benzo[g,h,i]perylene	12.728	276	145050	918.77	ng/ml	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

an 7/26/16

```
Data Path   : C:\msdchem\1\data\2016\072516A\
Data File  : S04501.D
Acq On     : 25 Jul 2016   14:10
Operator   : TK   HPSV4   sn #: CV11451177
Sample     : SV160725-4CCV
Misc       :
ALS Vial   : 2      Sample Multiplier: 1
```

Quant Time: Jul 25 14:31:36 2016
Quant Method : C:\msdchem\1\methods\070816S.M
Quant Title : SW8270D Full Scan Analysis
QLast Update : Mon Jul 25 14:31:28 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\2016\072516A\
Data File : S04502.D
Acq On : 25 Jul 2016 14:32
Operator : TK HPSV4 sn #: CV11451177
Sample : EX160721-2MB
Misc : EX160721-2 water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 14:47:44 2016
Quant Method : C:\msdchem\1\methods\070816S.M
Quant Title : SW8270D Full Scan Analysis
QLast Update : Mon Jul 25 14:31:28 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.515	136	231617	2000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.046	164	136389	2000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.329	188	285516	2000.00	ng/ml	# 0.00
16) Chrysene-d12	9.608	240	281696	2000.00	ng/ml	# 0.00
21) Perylene-d12	10.980	264	225024	2000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.874	82	61	1.69	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery	=	0.08%#	
7) 2-Fluorobiphenyl	5.486	172	51	0.45	ng/ml	0.05
Spiked Amount 2000.000	Range 21 - 106		Recovery	=	0.02%#	
18) p-Terphenyl-d14	8.661	244	354	3.03	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery	=	0.15%#	

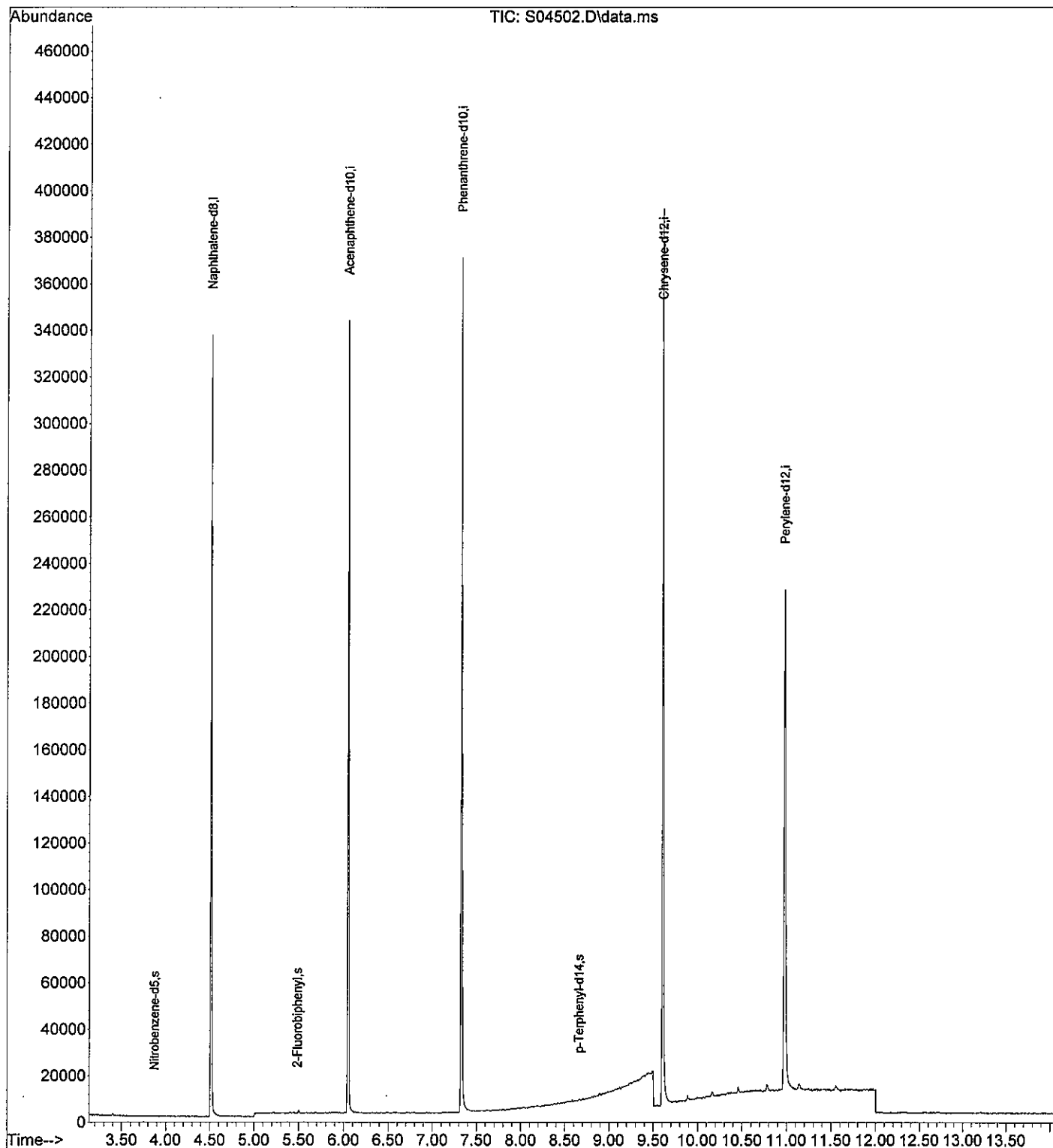
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Tue 7/26/16

Data Path : C:\msdchem\1\data\2016\072516A\
Data File : S04502.D
Acq On : 25 Jul 2016 14:32
Operator : TK HPSV4 sn #: CV11451177
Sample : EX160721-2MB
Misc : EX160721-2 water
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 14:47:44 2016
Quant Method : C:\msdchem\1\methods\070816S.M
Quant Title : SW8270D Full Scan Analysis
QLast Update : Mon Jul 25 14:31:28 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\2016\072516A\
 Data File : S04503.D
 Acq On : 25 Jul 2016 14:49
 Operator : TK HPSV4 sn #: CV11451177
 Sample : 1607366-3
 Misc : EX160721-2 water
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 15:05:07 2016
 Quant Method : C:\msdchem\1\methods\070816S.M
 Quant Title : SW8270D Full Scan Analysis
 QLast Update : Mon Jul 25 14:31:28 2016
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.513	136	227318	2000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.041	164	135383	2000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.325	188	278691	2000.00	ng/ml	# 0.00
16) Chrysene-d12	9.591	240	274519	2000.00	ng/ml	#-0.02
21) Perylene-d12	10.959	264	208713	2000.00	ng/ml	#-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.865	82	1892376	53321.43	ng/ml	0.00
Spiked Amount 2000.000	Range	34 - 111	Recovery	= 2666.07%#		
7) 2-Fluorobiphenyl	5.435	172	4327187	38096.61	ng/ml	0.00
Spiked Amount 2000.000	Range	21 - 106	Recovery	= 1904.83%#		
18) p-Terphenyl-d14	8.650	244	6374347	55951.92	ng/ml	0.00
Spiked Amount 2000.000	Range	33 - 111	Recovery	= 2797.60%#		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

an 7/26/16

Data Path : C:\msdchem\1\data\2016\072516A\
Data File : S04503.D
Acq On : 25 Jul 2016 14:49
Operator : TK HPSV4 sn #: CV11451177
Sample : 1607366-3
Misc : EX160721-2 water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 15:05:07 2016
Quant Method : C:\msdchem\1\methods\070816S.M
Quant Title : SW8270D Full Scan Analysis
QLast Update : Mon Jul 25 14:31:28 2016
Response via : Initial Calibration

