



received 07/31/2016  
Complaint 200439757

# GC/MS Semivolatiles

## Case Narrative

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**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. 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 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 ( $r^2$ )  $\geq 0.99$ .
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 with the exception of benzoic acid which was high. This compound was not detected in the associated sample.
7. All method blank criteria were met.
8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria with the following exceptions:

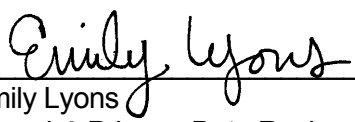


Spiked Compound	QC Sample	Direction
Benzoic Acid	LCS & LCSD	RPD
3,3'-dichlorobenzidine	LCS & LCSD	RPD

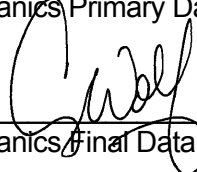
Since the recoveries for these compounds in the laboratory control sample and laboratory control sample duplicate were within control limits, with only the RPD exceeding acceptance criteria, quantitations of target compounds were not compromised. No further action was taken.

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. All surrogate recoveries were within acceptance criteria.
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

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**OrderNum:** 1607366

**Client Name:** COGCC

**Client Project Name:** Complaint 200439757

**Client Project Number:**

**Client PO Number:** CT 2016-141

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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**

PROJECT NAME <b>Complaint 200439757</b>	TURNAROUND TIME <b>14 days</b>	SAMPLER <b>PAC</b>	PAGE <b>1</b>	of <b>1</b>	DISPOSAL <b>BY LAB</b>	or RETURN												
PROJECT NO.	SITE ID	EDD FORMAT	PARAMETER/METHOD REQUEST FOR ANALYSIS															
COMPANY NAME <b>Cda. C. H. Gray Long Comm</b>	PURCHASE ORDER																	
SEND REPORT TO <b>Peter Gintautas</b>	BILL TO COMPANY																	
ADDRESS <b>1120 Lincoln St # 801</b>	INVOICE ATTN TO																	
CITY / STATE / ZIP <b>Denver CO 80203</b>	ADDRESS																	
PHONE <b>719 679-1326</b>	CITY / STATE / ZIP																	
FAX	PHONE																	
E-MAIL <b>peter.gintautas@state.co.us</b>	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 <sub>2</sub> SO <sub>4</sub>		X	X	X	X				X			
②	754980 Platteville Lot	W	07/20/06	08:30	3	raw H <sub>2</sub> SO <sub>4</sub>		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 <sub>2</sub> SO <sub>4</sub>								X				
④	754914 Sup	W	07/20	09:21	2	—		X	X	X	X							
↓	754914 Sup	W	07/20	09:21	1	H <sub>2</sub> SO <sub>4</sub>								X				
↓	754914 Sup	W	07/20	09:21	1	—						X						

RELINQUISHED BY	SIGNATURE	PRINTED NAME	DATE	TIME
RECEIVED BY	<i>P. Gintautas</i>	Peter Gintautas	July 20/06	14:35
RELINQUISHED BY	<i>Rebecca Morala</i>	Rebecca Morala	7/20/06	14:35
RECEIVED BY				1425
RELINQUISHED BY				
RECEIVED BY				

Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

Form 2029

REPORT LEVEL / QC REQUIRED

Summary (Standard QC)	LEVEL II (Standard QC)	LEVEL III (Std QC + forms)	LEVEL IV (Std QC + forms + raw)
X			

5 of 39 dissolved metals = filter + preserve at lab web-equalizing tap. 6 mg 754914 was carbon dioxide at 1000 2007-06-11 Be 2007-06-11

PRESERVATION KEY 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other



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>DROP 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 <sup>right</sup> layer of oil off top of sample water.  
 6.) 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 SW8270D

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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20299

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
110-86-1	PYRIDINE	1	10	10	3.9	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	10	10	3	U	
62-53-3	ANILINE	1	10	10	3.1	U	
108-95-2	PHENOL	1	10	10	3	U	
111-44-4	BIS(2-CHLOROETHYL)ETHER	1	10	10	3	U	
95-57-8	2-CHLOROPHENOL	1	10	10	3	U	
541-73-1	1,3-DICHLOROBENZENE	1	10	10	3	U	
106-46-7	1,4-DICHLOROBENZENE	1	10	10	3	U	
95-50-1	1,2-DICHLOROBENZENE	1	10	10	3	U	
100-51-6	BENZYL ALCOHOL	1	10	10	3	U	
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	1	10	10	3	U	
95-48-7	2-METHYLPHENOL	1	10	10	3	U	
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	1	10	10	3	U	
108-39-4	3+4-METHYLPHENOL	1	10	10	3	U	
67-72-1	HEXACHLOROETHANE	1	10	10	3	U	
98-95-3	NITROBENZENE	1	10	10	3	U	
78-59-1	ISOPHORONE	1	10	10	3	U	
88-75-5	2-NITROPHENOL	1	10	10	3	U	
105-67-9	2,4-DIMETHYLPHENOL	1	10	10	3	U	
111-91-1	BIS(2-CHLOROETHOXY)METHANE	1	10	10	3	U	
120-83-2	2,4-DICHLOROPHENOL	1	10	10	3	U	
65-85-0	BENZOIC ACID	1	50	50	19	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	10	10	3	U	
91-20-3	NAPHTHALENE	1	10	10	3	U	
106-47-8	4-CHLOROANILINE	1	10	10	5.4	U	
87-68-3	HEXACHLOROBUTADIENE	1	10	10	3	U	
59-50-7	4-CHLORO-3-METHYLPHENOL	1	10	10	3	U	
91-57-6	2-METHYLNAPHTHALENE	1	10	10	3	U	

Data Package ID: SV1607366-1

# GC/MS Semi-volatiles

Method SW8270D

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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20299

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
90-12-0	1-METHYLNAPHTHALENE	1	10	10	3	U	
77-47-4	HEXACHLOROCYCLOPENTADIENE	1	10	10	5.1	U	
88-06-2	2,4,6-TRICHLOROPHENOL	1	10	10	3	U	
95-95-4	2,4,5-TRICHLOROPHENOL	1	10	10	3	U	
91-58-7	2-CHLORONAPHTHALENE	1	10	10	3	U	
88-74-4	2-NITROANILINE	1	20	20	3	U	
131-11-3	DIMETHYL PHTHALATE	1	10	10	3	U	
606-20-2	2,6-DINITROTOLUENE	1	10	10	3	U	
208-96-8	ACENAPHTHYLENE	1	10	10	3	U	
99-09-2	3-NITROANILINE	1	20	20	4	U	
83-32-9	ACENAPHTHENE	1	10	10	3	U	
51-28-5	2,4-DINITROPHENOL	1	20	20	3	U	
100-02-7	4-NITROPHENOL	1	20	20	3.6	U	
132-64-9	DIBENZOFURAN	1	10	10	3	U	
121-14-2	2,4-DINITROTOLUENE	1	10	10	3	U	
84-66-2	DIETHYL PHTHALATE	1	10	10	3	U	
86-73-7	FLUORENE	1	10	10	3	U	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	1	10	10	3	U	
100-01-6	4-NITROANILINE	1	20	20	3.2	U	
103-33-3	AZOBENZENE	1	10	10	3	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	20	20	3.6	U	
86-30-6	N-NITROSODIPHENYLAMINE	1	10	10	3	U	
101-55-3	4-BROMOPHENYL PHENYL ETHER	1	10	10	3	U	
118-74-1	HEXACHLOROBENZENE	1	10	10	3	U	
58-90-2	2,3,4,6-TETRACHLOROPHENOL	1	10	10	3.8	U	
87-86-5	PENTACHLOROPHENOL	1	20	20	4.2	U	
85-01-8	PHENANTHRENE	1	10	10	3	U	
120-12-7	ANTHRACENE	1	10	10	3	U	

Data Package ID: SV1607366-1



# GC/MS Semi-volatiles

Method SW8270D

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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20299

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
86-74-8	CARBAZOLE	1	10	10	3	U	
84-74-2	DI-N-BUTYL PHTHALATE	1	10	10	3	U	
206-44-0	FLUORANTHENE	1	10	10	3	U	
129-00-0	PYRENE	1	10	10	3	U	
85-68-7	BUTYL BENZYL PHTHALATE	1	10	10	3	U	
56-55-3	BENZO(A)ANTHRACENE	1	10	10	3	U	
91-94-1	3,3'-DICHLOROBENZIDINE	1	10	10	6.3	U	
218-01-9	CHRYSENE	1	10	10	3	U	
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1	10	10	3	U	
117-84-0	DI-N-OCTYL PHTHALATE	1	10	10	3	U	
205-99-2	BENZO(B)FLUORANTHENE	1	10	10	3	U	
207-08-9	BENZO(K)FLUORANTHENE	1	10	10	3	U	
50-32-8	BENZO(A)PYRENE	1	10	10	3	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	10	10	3	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	10	10	3	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	10	10	3	U	

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

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LIMS Version: 6.820

# GC/MS Semi-volatiles

Method SW8270D

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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20299

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
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## Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	61.6		75	82	42 - 117
321-60-8	2-FLUOROBIPHENYL	42.7		50	85	55 - 108
367-12-4	2-FLUOROPHENOL	58		75	77	46 - 105
4165-60-0	NITROBENZENE-D5	42.4		50	85	53 - 111
4165-62-2	PHENOL-D5	60.8		75	81	50 - 109
1718-51-0	TERPHENYL-D14	46.3		50	93	34 - 139

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

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LIMS Version: 6.820

# GC/MS Semi-volatiles

Method SW8270

## Tentatively Identified Compounds

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Field ID:	
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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: As Received

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Clean DF: 1

File Name: P20299

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: SV1607366-1

# GC/MS Semi-volatiles

Method SW8270D

## 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

QC Batch ID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: As Received

File Name: P20306

Analyst: Tyler Knaebel

Sample Aliquot: 1070 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
110-86-1	PYRIDINE	1	9.3	9.3	3.6	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	9.3	9.3	2.8	U	
62-53-3	ANILINE	1	9.3	9.3	2.9	U	
108-95-2	PHENOL	1	9.3	9.3	2.8	U	
111-44-4	BIS(2-CHLOROETHYL)ETHER	1	9.3	9.3	2.8	U	
95-57-8	2-CHLOROPHENOL	1	9.3	9.3	2.8	U	
541-73-1	1,3-DICHLOROBENZENE	1	9.3	9.3	2.8	U	
106-46-7	1,4-DICHLOROBENZENE	1	9.3	9.3	2.8	U	
95-50-1	1,2-DICHLOROBENZENE	1	9.3	9.3	2.8	U	
100-51-6	BENZYL ALCOHOL	1	9.3	9.3	2.8	U	
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	1	9.3	9.3	2.8	U	
95-48-7	2-METHYLPHENOL	1	9.3	9.3	2.8	U	
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	1	9.3	9.3	2.8	U	
108-39-4	3+4-METHYLPHENOL	1	9.3	9.3	2.8	U	
67-72-1	HEXACHLOROETHANE	1	9.3	9.3	2.8	U	
98-95-3	NITROBENZENE	1	9.3	9.3	2.8	U	
78-59-1	ISOPHORONE	1	9.3	9.3	2.8	U	
88-75-5	2-NITROPHENOL	1	9.3	9.3	2.8	U	
105-67-9	2,4-DIMETHYLPHENOL	1	9.3	9.3	2.8	U	
111-91-1	BIS(2-CHLOROETHOXY)METHANE	1	9.3	9.3	2.8	U	
120-83-2	2,4-DICHLOROPHENOL	1	9.3	9.3	2.8	U	
65-85-0	BENZOIC ACID	1	47	47	18	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	9.3	9.3	2.8	U	
91-20-3	NAPHTHALENE	1	9.3	9.3	2.8	U	
106-47-8	4-CHLOROANILINE	1	9.3	9.3	5	U	
87-68-3	HEXACHLOROBUTADIENE	1	9.3	9.3	2.8	U	

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

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# GC/MS Semi-volatiles

Method SW8270D

## 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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: As Received

File Name: P20306

Analyst: Tyler Knaebel

Sample Aliquot: 1070 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
59-50-7	4-CHLORO-3-METHYLPHENOL	1	9.3	9.3	2.8	U	
91-57-6	2-METHYLNAPHTHALENE	1	9.3	9.3	2.8	U	
90-12-0	1-METHYLNAPHTHALENE	1	9.3	9.3	2.8	U	
77-47-4	HEXACHLOROCYCLOPENTADIENE	1	9.3	9.3	4.8	U	
88-06-2	2,4,6-TRICHLOROPHENOL	1	9.3	9.3	2.8	U	
95-95-4	2,4,5-TRICHLOROPHENOL	1	9.3	9.3	2.8	U	
91-58-7	2-CHLORONAPHTHALENE	1	9.3	9.3	2.8	U	
88-74-4	2-NITROANILINE	1	19	19	2.8	U	
131-11-3	DIMETHYL PHTHALATE	1	9.3	9.3	2.8	U	
606-20-2	2,6-DINITROTOLUENE	1	9.3	9.3	2.8	U	
208-96-8	ACENAPHTHYLENE	1	9.3	9.3	2.8	U	
99-09-2	3-NITROANILINE	1	19	19	3.7	U	
83-32-9	ACENAPHTHENE	1	9.3	9.3	2.8	U	
51-28-5	2,4-DINITROPHENOL	1	19	19	2.8	U	
100-02-7	4-NITROPHENOL	1	19	19	3.4	U	
132-64-9	DIBENZOFURAN	1	9.3	9.3	2.8	U	
121-14-2	2,4-DINITROTOLUENE	1	9.3	9.3	2.8	U	
84-66-2	DIETHYL PHTHALATE	1	9.3	9.3	2.8	U	
86-73-7	FLUORENE	1	9.3	9.3	2.8	U	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	1	9.3	9.3	2.8	U	
100-01-6	4-NITROANILINE	1	19	19	3	U	
103-33-3	AZOBENZENE	1	9.3	9.3	2.8	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	19	19	3.4	U	
86-30-6	N-NITROSODIPHENYLAMINE	1	9.3	9.3	2.8	U	
101-55-3	4-BROMOPHENYL PHENYL ETHER	1	9.3	9.3	2.8	U	
118-74-1	HEXACHLOROBENZENE	1	9.3	9.3	2.8	U	

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

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# GC/MS Semi-volatiles

Method SW8270D

## 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

QC Batch ID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: As Received

File Name: P20306

Analyst: Tyler Knaebel

Sample Aliquot: 1070 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
58-90-2	2,3,4,6-TETRACHLOROPHENOL	1	9.3	9.3	3.6	U	
87-86-5	PENTACHLOROPHENOL	1	19	19	3.9	U	
85-01-8	PHENANTHRENE	1	9.3	9.3	2.8	U	
120-12-7	ANTHRACENE	1	9.3	9.3	2.8	U	
86-74-8	CARBAZOLE	1	9.3	9.3	2.8	U	
84-74-2	DI-N-BUTYL PHTHALATE	1	9.3	9.3	2.8	U	
206-44-0	FLUORANTHENE	1	9.3	9.3	2.8	U	
129-00-0	PYRENE	1	9.3	9.3	2.8	U	
85-68-7	BUTYL BENZYL PHTHALATE	1	9.3	9.3	2.8	U	
56-55-3	BENZO(A)ANTHRACENE	1	9.3	9.3	2.8	U	
91-94-1	3,3'-DICHLOROBENZIDINE	1	9.3	9.3	5.9	U	
218-01-9	CHRYSENE	1	9.3	9.3	2.8	U	
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1	9.3	9.3	2.8	U	
117-84-0	DI-N-OCTYL PHTHALATE	1	9.3	9.3	2.8	U	
205-99-2	BENZO(B)FLUORANTHENE	1	9.3	9.3	2.8	U	
207-08-9	BENZO(K)FLUORANTHENE	1	9.3	9.3	2.8	U	
50-32-8	BENZO(A)PYRENE	1	9.3	9.3	2.8	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	9.3	9.3	2.8	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	9.3	9.3	2.8	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	9.3	9.3	2.8	U	

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

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# GC/MS Semi-volatiles

Method SW8270D

## 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: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: As Received

File Name: P20306

Analyst: Tyler Knaebel

Sample Aliquot: 1070 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
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## Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	64		70.1	91	42 - 117
321-60-8	2-FLUOROBIPHENYL	40.7		46.7	87	55 - 108
367-12-4	2-FLUOROPHENOL	53.4		70.1	76	46 - 105
4165-60-0	NITROBENZENE-D5	39.7		46.7	85	53 - 111
4165-62-2	PHENOL-D5	57		70.1	81	50 - 109
1718-51-0	TERPHENYL-D14	44.7		46.7	96	34 - 139

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

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# GC/MS Semi-volatiles

Method SW8270

## Tentatively Identified Compounds

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 Batch: EX160721-2

QCBatchID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: As Received

Sample Aliquot: 1070 ml

Final Volume: 1 ml

Clean DF: 1

File Name: P20306

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
131-18-0	11.90	1,2-BENZANEDICARBOXYLIC ACID...	1	3.7	UG/L	J

Data Package ID: SV1607366-1



# GC/MS Semi-volatiles

## Method SW8270D

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/21/2016

Date Analyzed: 07/25/2016

Prep Method: SW3520C

Prep Batch: EX160721-2

QCBatchID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20300

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
110-86-1	PYRIDINE	60	38.3	10		64	30 - 100%
62-75-9	N-NITROSODIMETHYLAMINE	60	48.2	10		80	50 - 108%
62-53-3	ANILINE	60	52.1	10		87	38 - 116%
108-95-2	PHENOL	60	50.4	10		84	60 - 102%
111-44-4	BIS(2-CHLOROETHYL)ETHER	60	50.9	10		85	61 - 100%
95-57-8	2-CHLOROPHENOL	60	48	10		80	60 - 100%
541-73-1	1,3-DICHLOROBENZENE	60	42.3	10		70	53 - 100%
106-46-7	1,4-DICHLOROBENZENE	60	44.3	10		74	55 - 100%
95-50-1	1,2-DICHLOROBENZENE	60	44.5	10		74	50 - 100%
100-51-6	BENZYL ALCOHOL	60	52.4	10		87	66 - 105%
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	60	49.8	10		83	47 - 110%
95-48-7	2-METHYLPHENOL	60	50.8	10		85	57 - 100%
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	60	55.2	10		92	62 - 113%
108-39-4	3+4-METHYLPHENOL	60	52.4	10		87	49 - 105%
67-72-1	HEXACHLOROETHANE	60	42.2	10		70	52 - 100%
98-95-3	NITROBENZENE	60	50.1	10		83	41 - 108%
78-59-1	ISOPHORONE	60	52.1	10		87	58 - 102%
88-75-5	2-NITROPHENOL	60	49.9	10		83	72 - 110%
105-67-9	2,4-DIMETHYLPHENOL	60	49.3	10		82	54 - 100%
111-91-1	BIS(2-CHLOROETHOXY)METHANE	60	53	10		88	59 - 100%
120-83-2	2,4-DICHLOROPHENOL	60	48.3	10		80	61 - 100%
65-85-0	BENZOIC ACID	100	54.7	50		55	0 - 100%
120-82-1	1,2,4-TRICHLOROBENZENE	60	43.2	10		72	51 - 100%
91-20-3	NAPHTHALENE	60	48.7	10		81	60 - 100%
106-47-8	4-CHLOROANILINE	60	50.1	10		83	37 - 119%
87-68-3	HEXACHLOROBUTADIENE	60	39.3	10		65	44 - 100%

Data Package ID: SV1607366-1

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# GC/MS Semi-volatiles

## Method SW8270D

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/21/2016

Date Analyzed: 07/25/2016

Prep Method: SW3520C

Prep Batch: EX160721-2

QCBatchID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20300

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
59-50-7	4-CHLORO-3-METHYLPHENOL	60	55.9	10		93	61 - 105%
91-57-6	2-METHYLNAPHTHALENE	60	47	10		78	62 - 100%
90-12-0	1-METHYLNAPHTHALENE	60	48.7	10		81	61 - 100%
77-47-4	HEXACHLOROCYCLOPENTADIENE	60	13.5	10		23	5 - 100%
88-06-2	2,4,6-TRICHLOROPHENOL	60	51.6	10		86	61 - 110%
95-95-4	2,4,5-TRICHLOROPHENOL	60	52.3	10		87	59 - 122%
91-58-7	2-CHLORONAPHTHALENE	60	50.8	10		85	60 - 100%
88-74-4	2-NITROANILINE	60	60.8	20		101	76 - 121%
131-11-3	DIMETHYL PHTHALATE	60	56.4	10		94	70 - 110%
606-20-2	2,6-DINITROTOLUENE	60	56.4	10		94	71 - 113%
208-96-8	ACENAPHTHYLENE	60	54.1	10		90	67 - 108%
99-09-2	3-NITROANILINE	60	57	20		95	76 - 105%
83-32-9	ACENAPHTHENE	60	55	10		92	60 - 108%
51-28-5	2,4-DINITROPHENOL	60	52.9	20		88	67 - 113%
100-02-7	4-NITROPHENOL	60	60.6	20		101	26 - 132%
132-64-9	DIBENZOFURAN	60	54	10		90	67 - 107%
121-14-2	2,4-DINITROTOLUENE	60	59.4	10		99	46 - 114%
84-66-2	DIETHYL PHTHALATE	60	56.8	10		95	70 - 112%
86-73-7	FLUORENE	60	55.2	10		92	64 - 116%
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	60	53.8	10		90	71 - 111%
100-01-6	4-NITROANILINE	60	60	20		100	77 - 115%
103-33-3	AZOENZENE	60	60.9	10		101	71 - 110%
534-52-1	4,6-DINITRO-2-METHYLPHENOL	60	56.3	20		94	66 - 122%
86-30-6	N-NITROSODIPHENYLAMINE	60	47.8	10		80	51 - 100%
101-55-3	4-BROMOPHENYL PHENYL ETHER	60	54.4	10		91	67 - 108%
118-74-1	HEXACHLOROENZENE	60	52.9	10		88	48 - 115%
58-90-2	2,3,4,6-TETRACHLOROPHENOL	100	94	10		94	69 - 117%

Data Package ID: SV1607366-1

# GC/MS Semi-volatiles

## Method SW8270D

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/21/2016

Date Analyzed: 07/25/2016

Prep Method: SW3520C

Prep Batch: EX160721-2

QCBatchID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20300

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
87-86-5	PENTACHLOROPHENOL	60	48.7	20		81	32 - 108%
85-01-8	PHENANTHRENE	60	57.3	10		95	64 - 113%
120-12-7	ANTHRACENE	60	57	10		95	72 - 108%
86-74-8	CARBAZOLE	60	57	10		95	65 - 119%
84-74-2	DI-N-BUTYL PHTHALATE	60	58.7	10		98	64 - 118%
206-44-0	FLUORANTHENE	60	56.1	10		94	63 - 122%
129-00-0	PYRENE	60	56.2	10		94	60 - 113%
85-68-7	BUTYL BENZYL PHTHALATE	60	61.3	10		102	64 - 121%
56-55-3	BENZO(A)ANTHRACENE	60	57.8	10		96	69 - 107%
91-94-1	3,3'-DICHLOROBENZIDINE	60	39.7	10		66	1 - 136%
218-01-9	CHRYSENE	60	60.4	10		101	68 - 114%
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	60	62.3	10		104	65 - 119%
117-84-0	DI-N-OCTYL PHTHALATE	60	62	10		103	62 - 119%
205-99-2	BENZO(B)FLUORANTHENE	60	54.5	10		91	67 - 111%
207-08-9	BENZO(K)FLUORANTHENE	60	57.6	10		96	65 - 118%
50-32-8	BENZO(A)PYRENE	60	50.7	10		85	62 - 104%
193-39-5	INDENO(1,2,3-CD)PYRENE	60	54	10		90	54 - 124%
53-70-3	DIBENZO(A,H)ANTHRACENE	60	55.7	10		93	57 - 126%
191-24-2	BENZO(G,H,I)PERYLENE	60	54.4	10		91	52 - 124%

Data Package ID: SV1607366-1

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# GC/MS Semi-volatiles

## Method SW8270D

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/21/2016

Date Analyzed: 07/25/2016

Prep Method: SW3520C

Prep Batch: EX160721-2

QCBatchID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20301

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
110-86-1	PYRIDINE	60	43.8	10		73	20	13
62-75-9	N-NITROSODIMETHYLAMINE	60	53.2	10		89	20	10
62-53-3	ANILINE	60	54.2	10		90	20	4
108-95-2	PHENOL	60	53.2	10		89	20	5
111-44-4	BIS(2-CHLOROETHYL)ETHER	60	54	10		90	20	6
95-57-8	2-CHLOROPHENOL	60	52	10		87	20	8
541-73-1	1,3-DICHLOROBENZENE	60	46.6	10		78	20	10
106-46-7	1,4-DICHLOROBENZENE	60	48	10		80	20	8
95-50-1	1,2-DICHLOROBENZENE	60	48.3	10		81	20	8
100-51-6	BENZYL ALCOHOL	60	55.1	10		92	20	5
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	60	51.8	10		86	20	4
95-48-7	2-METHYLPHENOL	60	54.2	10		90	20	6
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	60	56.2	10		94	20	2
108-39-4	3+4-METHYLPHENOL	60	53.4	10		89	20	2
67-72-1	HEXACHLOROETHANE	60	45.3	10		76	20	7
98-95-3	NITROBENZENE	60	54.3	10		91	20	8
78-59-1	ISOPHORONE	60	55.7	10		93	20	7
88-75-5	2-NITROPHENOL	60	55.2	10		92	20	10
105-67-9	2,4-DIMETHYLPHENOL	60	52.2	10		87	20	6
111-91-1	BIS(2-CHLOROETHOXY)METHANE	60	55.7	10		93	20	5
120-83-2	2,4-DICHLOROPHENOL	60	52.9	10		88	20	9
65-85-0	BENZOIC ACID	100	69.6	50	+	70	20	24
120-82-1	1,2,4-TRICHLOROBENZENE	60	47.2	10		79	20	9
91-20-3	NAPHTHALENE	60	52.4	10		87	20	7
106-47-8	4-CHLOROANILINE	60	52.4	10		87	20	4
87-68-3	HEXACHLOROBUTADIENE	60	45	10		75	20	14
59-50-7	4-CHLORO-3-METHYLPHENOL	60	58	10		97	20	4

Data Package ID: SV1607366-1

# GC/MS Semi-volatiles

## Method SW8270D

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/21/2016

Date Analyzed: 07/25/2016

Prep Method: SW3520C

Prep Batch: EX160721-2

QCBatchID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20301

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
91-57-6	2-METHYLNAPHTHALENE	60	50.4	10		84	20	7
90-12-0	1-METHYLNAPHTHALENE	60	52	10		87	20	7
77-47-4	HEXACHLOROCYCLOPENTADIENE	60	15.3	10		25	20	12
88-06-2	2,4,6-TRICHLOROPHENOL	60	56.6	10		94	20	9
95-95-4	2,4,5-TRICHLOROPHENOL	60	56.1	10		93	20	7
91-58-7	2-CHLORONAPHTHALENE	60	54.4	10		91	20	7
88-74-4	2-NITROANILINE	60	63.2	20		105	20	4
131-11-3	DIMETHYL PHTHALATE	60	58.8	10		98	20	4
606-20-2	2,6-DINITROTOLUENE	60	58.7	10		98	20	4
208-96-8	ACENAPHTHYLENE	60	57.2	10		95	20	6
99-09-2	3-NITROANILINE	60	58.8	20		98	20	3
83-32-9	ACENAPHTHENE	60	58.1	10		97	20	5
51-28-5	2,4-DINITROPHENOL	60	63.2	20		105	20	18
100-02-7	4-NITROPHENOL	60	62.1	20		104	20	3
132-64-9	DIBENZOFURAN	60	56.8	10		95	20	5
121-14-2	2,4-DINITROTOLUENE	60	61.5	10		102	20	3
84-66-2	DIETHYL PHTHALATE	60	58.5	10		98	20	3
86-73-7	FLUORENE	60	56.9	10		95	20	3
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	60	56.1	10		94	20	4
100-01-6	4-NITROANILINE	60	60.9	20		101	20	1
103-33-3	AZOBENZENE	60	63.3	10		106	20	4
534-52-1	4,6-DINITRO-2-METHYLPHENOL	60	62.5	20		104	20	10
86-30-6	N-NITROSODIPHENYLAMINE	60	50.2	10		84	20	5
101-55-3	4-BROMOPHENYL PHENYL ETHER	60	56.5	10		94	20	4
118-74-1	HEXACHLOROBEZENE	60	56	10		93	20	6
58-90-2	2,3,4,6-TETRACHLOROPHENOL	100	97.8	10		98	20	4
87-86-5	PENTACHLOROPHENOL	60	50.9	20		85	20	4

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

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LIMS Version: 6.820

# GC/MS Semi-volatiles

## Method SW8270D

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

Lab ID: EX160721-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/21/2016

Date Analyzed: 07/25/2016

Prep Method: SW3520C

Prep Batch: EX160721-2

QC Batch ID: EX160721-2-2

Run ID: SV160725-2

Cleanup: NONE

Basis: N/A

File Name: P20301

Sample Aliquot: 1000 ml

Final Volume: 1 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
85-01-8	PHENANTHRENE	60	58.6	10		98	20	2
120-12-7	ANTHRACENE	60	57.9	10		97	20	2
86-74-8	CARBAZOLE	60	58	10		97	20	2
84-74-2	DI-N-BUTYL PHTHALATE	60	60.4	10		101	20	3
206-44-0	FLUORANTHENE	60	58.2	10		97	20	4
129-00-0	PYRENE	60	57.3	10		95	20	2
85-68-7	BUTYL BENZYL PHTHALATE	60	62.3	10		104	20	2
56-55-3	BENZO(A)ANTHRACENE	60	58.8	10		98	20	2
91-94-1	3,3'-DICHLOROBENZIDINE	60	24.4	10	+	41	20	48
218-01-9	CHRYSENE	60	61.1	10		102	20	1
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	60	62.7	10		104	20	1
117-84-0	DI-N-OCTYL PHTHALATE	60	62.8	10		105	20	1
205-99-2	BENZO(B)FLUORANTHENE	60	58.2	10		97	20	7
207-08-9	BENZO(K)FLUORANTHENE	60	56.4	10		94	20	2
50-32-8	BENZO(A)PYRENE	60	51.6	10		86	20	2
193-39-5	INDENO(1,2,3-CD)PYRENE	60	55.7	10		93	20	3
53-70-3	DIBENZO(A,H)ANTHRACENE	60	56.8	10		95	20	2
191-24-2	BENZO(G,H,I)PERYLENE	60	55.7	10		93	20	2

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

LIMS Version: 6.820

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# GC/MS Semi-volatiles

Method SW8270D

## Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1607366

Client Name: COGCC

ClientProject ID: Complaint 200439757

### Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	75	91		98		42 - 117
321-60-8	2-FLUOROBIPHENYL	50	87		93		55 - 108
367-12-4	2-FLUOROPHENOL	75	74		81		46 - 105
4165-60-0	NITROBENZENE-D5	50	86		93		53 - 111
4165-62-2	PHENOL-D5	75	83		89		50 - 109
1718-51-0	TERPHENYL-D14	50	98		99		34 - 139

Data Package ID: SV1607366-1

Date Printed: Thursday, July 28, 2016

ALS -- Fort Collins

LIMS Version: 6.820

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Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20297.D  
 Acq On : 25 Jul 2016 10:36  
 Operator : tk SOP506 Rev.20  
 Sample : SV160725-2CCV  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 13:04:12 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.720	152	291973	40.00	ng/ul	0.00
25) Naphthalene-d8	6.944	136	1238490	40.00	ng/ul	0.00
42) Acenaphthene-d10	8.493	164	521235	40.00	ng/ul	0.00
70) Phenanthrene-d10	9.766	188	858564	40.00	ng/ul	0.00
80) Chrysene-d12	12.017	240	631527	40.00	ng/ul	0.00
91) Perylene-d12	13.389	264	661434	40.00	ng/ul	0.00

## System Monitoring Compounds

5) 2-Fluorophenol	4.308	112	516779	43.48	ng/ul	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery =	57.97%		
6) 2-Chlorophenol-d4	5.494	132	476904	42.25	ng/ul	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery =	56.33%		
7) Phenol-d5	5.317	99	650815	43.70	ng/ul	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery =	58.27%		
15) 1,2-Dichlorobenzene-d4	5.882	152	274735	41.32	ng/ul	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery =	82.64%		
26) Nitrobenzene-d5	6.257	82	422924	42.71	ng/ul	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery =	85.42%		
46) 2-Fluorobiphenyl	7.881	172	706963	40.77	ng/ul	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery =	81.54%		
71) 2,4,6-Tribromophenol	9.167	330	93619	39.92	ng/ul	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery =	53.23%		
83) p-Terphenyl-d14	11.076	244	586721	42.12	ng/ul	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery =	84.24%		

## Target Compounds

						Qvalue
2) 1,4-Dioxane	2.414	88	216304	37.89	ng/ul	99
3) n-Nitrosodimethylamine	2.724	74	378958	43.54	ng/ul	96
4) Pyridine	2.796	79	614892	42.49	ng/ul	100
8) Phenol	5.332	94	647864	43.75	ng/ul	99
9) Aniline	5.379	93	765775	42.96	ng/ul	99
10) Bis(2-chloroethyl)ether	5.422	93	452329	42.68	ng/ul	98
12) 2-Chlorophenol	5.512	128	463387	42.25	ng/ul	98
13) 1,3-Dichlorobenzene	5.671	146	479405	39.81	ng/ul	98
14) 1,4-Dichlorobenzene	5.739	146	465986	41.29	ng/ul	99
16) Benzyl Alcohol	5.838	108	322839	43.35	ng/ul	99
17) 1,2-Dichlorobenzene	5.897	146	428722	40.71	ng/ul	99
18) 2-Methylphenol	5.944	107	361940	43.17	ng/ul	98
19) Bis(2-Chloroisopropyl)...	5.969	45	810414	42.84	ng/ul	98
20) 3+4-Methylphenol	6.093	108	469434	42.43	ng/ul	99
21) n-Nitroso-di-n-propyla...	6.090	70	310464	44.37	ng/ul	98
23) Hexachloroethane	6.233	117	176636	41.63	ng/ul	97
27) Nitrobenzene	6.276	123	229705	41.37	ng/ul	95
28) Isophorone	6.493	82	866098	41.53	ng/ul	100
30) 2-Nitrophenol	6.580	139	246639	40.64	ng/ul	99
31) 2,4-Dimethylphenol	6.596	107	401546	40.95	ng/ul	99
32) Bis(2-chloroethoxy)met...	6.673	93	498782	40.94	ng/ul#	97
33) Benzoic acid	6.661	105	228868	49.76	ng/ul	96
34) 2,4-Dichlorophenol	6.804	162	321380	38.99	ng/ul	99
35) 1,2,4-Trichlorobenzene	6.885	180	308828	38.24	ng/ul	99
36) Naphthalene	6.962	128	1234224	40.60	ng/ul	100
37) 4-Chloroaniline	6.993	127	539914	40.59	ng/ul	98
38) Hexachlorobutadiene	7.065	225	115642	35.64	ng/ul	98
39) 4-Chloro-3-methylphenol	7.409	107	366425	41.22	ng/ul	100
40) 2-Methylnaphthalene	7.577	142	919253	40.30	ng/ul	98

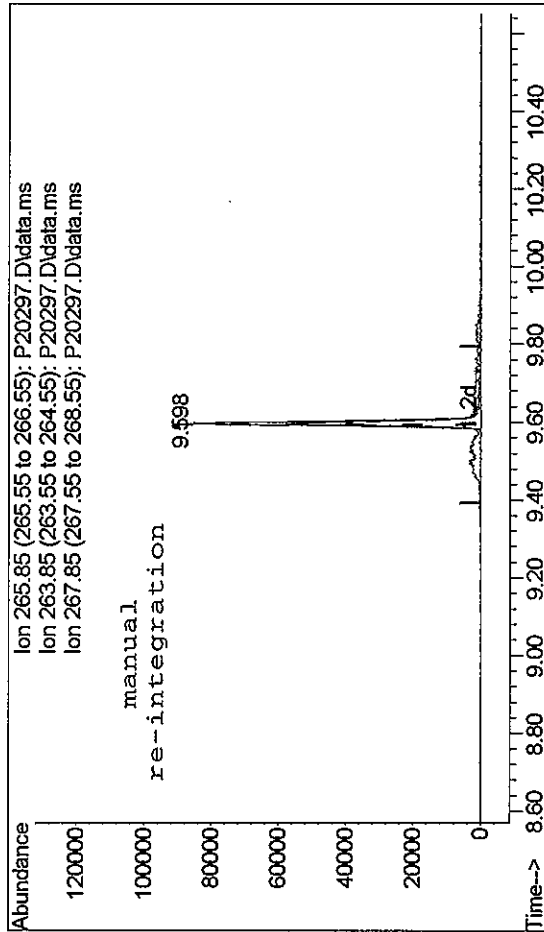
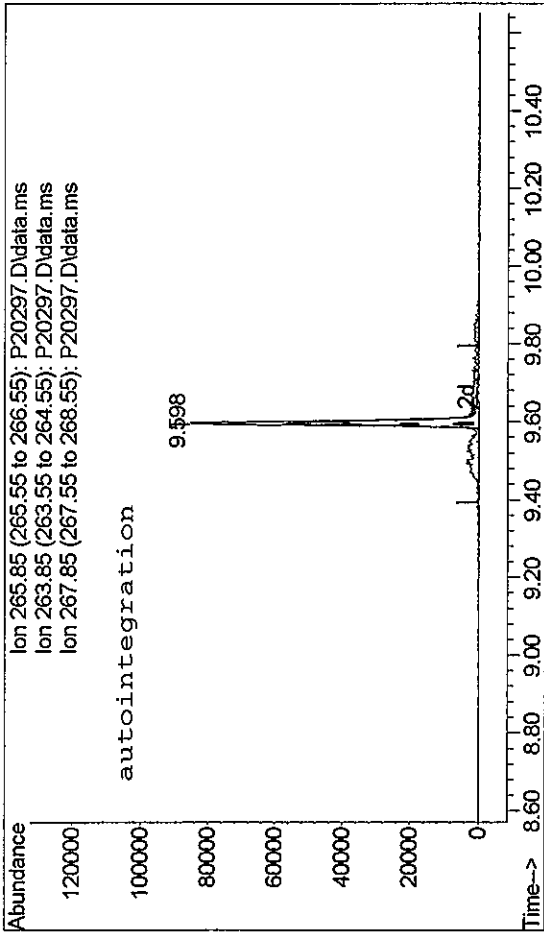


Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20297.D  
 Acq On : 25 Jul 2016 10:36  
 Operator : tk SOP506 Rev.20  
 Sample : SV160725-2CCV  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 13:04:12 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1-Methylnaphthalene	7.667	142	806322	39.65	ng/ul	100
43) Hexachlorocyclopentadiene	7.717	237	103664	36.07	ng/ul	100
44) 2,4,6-Trichlorophenol	7.816	196	181244	40.64	ng/ul	98
45) 2,4,5-Trichlorophenol	7.853	196	179002	38.96	ng/ul	98
47) 2-Chloronaphthalene	8.008	162	681345	40.31	ng/ul	99
48) 2-Nitroaniline	8.080	65	223545	44.72	ng/ul	99
49) 1,4-Dinitrobenzene	8.182	168	115482	42.24	ng/ul	89
50) Dimethylphthalate	8.207	163	709122	41.34	ng/ul	100
51) 1,3-Dinitrobenzene	8.251	168	124247	40.88	ng/ul	99
52) 2,6-Dinitrotoluene	8.272	165	169678	40.99	ng/ul	99
53) 1,2-Dinitrobenzene	8.331	168	82243	38.97	ng/ul	99
54) Acenaphthylene	8.375	152	1142731	41.56	ng/ul	99
55) 3-Nitroaniline	8.431	138	255393	42.11	ng/ul	99
56) Acenaphthene	8.521	154	683303	41.32	ng/ul	99
57) 2,4-Dinitrophenol	8.518	184	50727	40.30	ng/ul#	92
58) 4-Nitrophenol	8.552	109	61943	41.78	ng/ul	95
59) 2,4-Dinitrotoluene	8.623	165	220852	41.56	ng/ul	100
60) Dibenzofuran	8.667	168	907103	40.64	ng/ul	99
61) 2,3,5,6-Tetrachlorophenol	8.729	232	125612	38.21	ng/ul	98
62) 2,3,4,6-Tetrachlorophenol	8.763	232	124994	39.71	ng/ul	98
63) Diethylphthalate	8.800	149	708149	40.97	ng/ul	98
64) 4-Chlorophenyl phenyl ...	8.931	204	280847	38.70	ng/ul	95
65) Fluorene	8.959	166	740248	40.95	ng/ul	100
66) 4-Nitroaniline	8.952	138	241183	42.86	ng/ul	97
67) 4,6-Dinitro-2-methylph...	8.977	198	86291	37.87	ng/ul	98
68) n-Nitrosodiphenylamine	9.027	169	638682	40.68	ng/ul#	100
69) Azobenzene	9.070	77	784399	43.54	ng/ul	99
72) 4-Bromophenyl phenyl e...	9.350	248	158219	39.24	ng/ul	98
73) Hexachlorobenzene	9.443	284	180281	40.37	ng/ul	95
74) Pentachlorophenol	9.598	266	76489m	32.07	ng/ul	
75) Phenanthrene	9.788	178	1012282	41.83	ng/ul	100
76) Anthracene	9.828	178	1024041	42.07	ng/ul	99
77) Carbazole	9.949	167	1075213	42.81	ng/ul	100
78) Di-n-butylphthalate	10.169	149	1334743	44.23	ng/ul	100
79) Fluoranthene	10.800	202	951440	40.57	ng/ul	99
81) Benzidine	10.868	184	731286	43.05	ng/ul	99
82) Pyrene	10.998	202	972690	41.50	ng/ul	99
84) Butylbenzylphthalate	11.445	149	579866	44.33	ng/ul	100
85) Bis(2-ethylhexyl) adipate	11.461	129	544438	46.86	ng/ul	99
86) Bis(2-ethylhexyl)phtha...	11.893	149	769946	43.37	ng/ul	98
87) 3,3'-Dichlorobenzidine	11.945	252	324577	41.36	ng/ul	99
88) Benzo[a]anthracene	12.004	228	790643	41.65	ng/ul	98
89) Chrysene	12.039	228	711990	40.95	ng/ul	100
90) Di-n-octylphthalate	12.430	149	1312330	45.19	ng/ul	98
92) Benzo[b]fluoranthene	12.979	252	756445	39.83	ng/ul	98
93) Benzo[k]fluoranthene	13.004	252	746788	42.35	ng/ul	99
94) Benzo[a]pyrene	13.330	252	737917	39.77	ng/ul	99
95) Indeno(1,2,3-c,d)pyrene	14.740	276	822005	41.35	ng/ul	100
96) Dibenzo[a,h]anthracene	14.724	278	712731	41.66	ng/ul	98
97) Benzo[g,h,i]perylene	15.150	276	736849	39.95	ng/ul	98

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



TIC: P20297.D\data.ms

(74) Pentachlorophenol (TMC)  
9.598min (+0.002) 29.78ng/ul  
response 71016

lon	Exp%	Act%
265.85	100	100
263.85	61.10	64.02
267.85	65.20	62.77
0.00	0.00	0.00

Reason for manual re-integration?

- ☐ missed peak assignment
- ☐ peak saturation (detector shutdown)
- ☐ over-integrated peak's area
- ☒ under-integrated peak's area
- ☐ other ( )

initials:        date:       /      /      

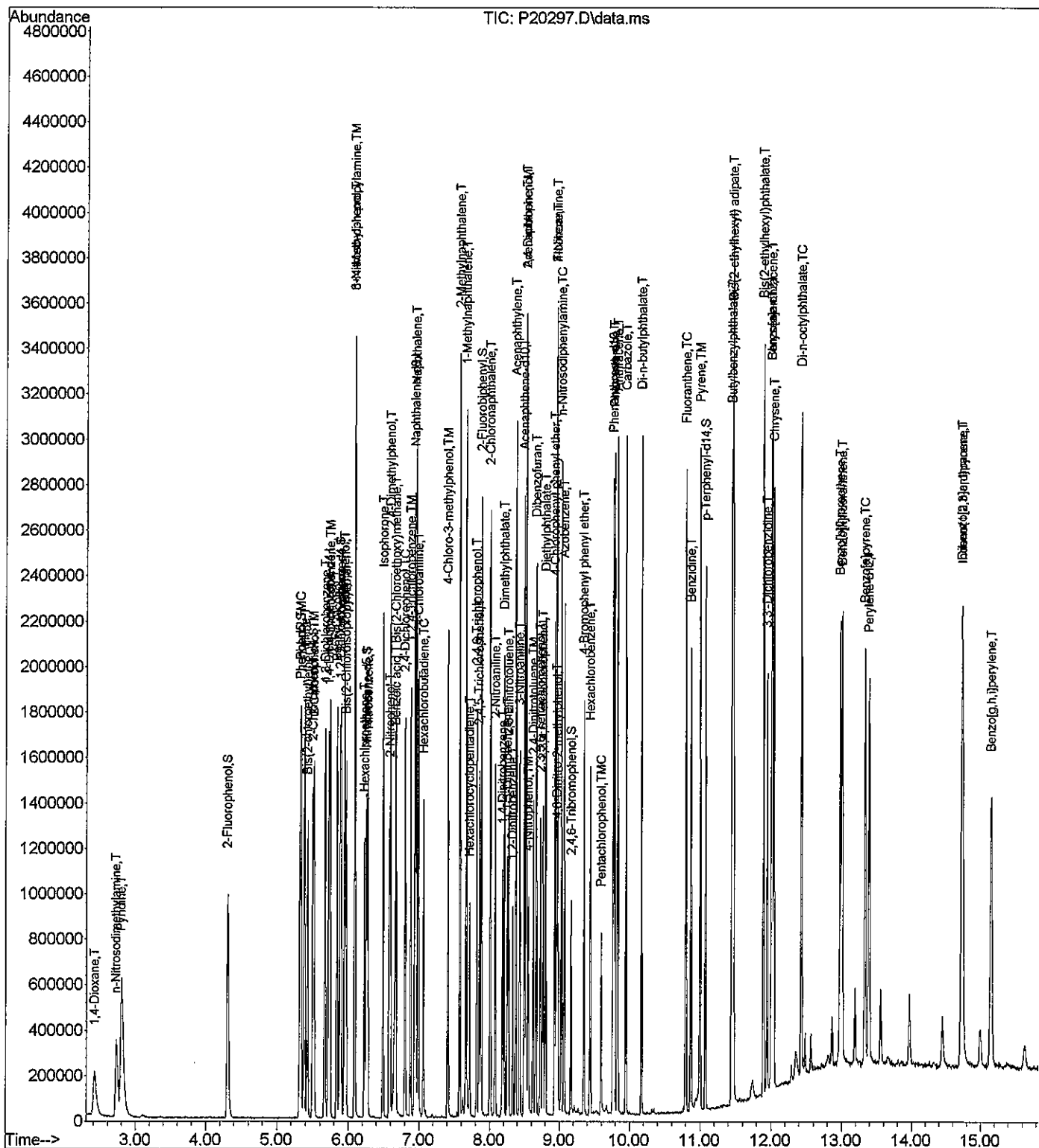
TIC: P20297.D\data.ms

(74) Pentachlorophenol (TMC)  
9.598min (+0.002) 32.07ng/ul m  
response 76489

lon	Exp%	Act%
265.85	100	100
263.85	61.10	59.44
267.85	65.20	58.28
0.00	0.00	0.00

Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20297.D  
Acq On : 25 Jul 2016 10:36  
Operator : tk SOP506 Rev.20  
Sample : SV160725-2CCV  
Misc :  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 13:04:12 2016  
Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :  
QLast Update : Thu Jul 21 11:43:23 2016  
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20299.D  
 Acq On : 25 Jul 2016 12:50  
 Operator : tk SOP506 Rev.20  
 Sample : EX160721-2MB  
 Misc : EX160721-2 WATER  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 13:06:51 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.722	152	239108	40.00	ng/ul	0.00
25) Naphthalene-d8	6.942	136	1032777	40.00	ng/ul	0.00
42) Acenaphthene-d10	8.494	164	433489	40.00	ng/ul	0.00
70) Phenanthrene-d10	9.767	188	684728	40.00	ng/ul	0.00
80) Chrysene-d12	12.031	240	528235	40.00	ng/ul	0.01
91) Perylene-d12	13.415	264	509519	40.00	ng/ul	0.03

## System Monitoring Compounds

5) 2-Fluorophenol	4.306	112	564868	58.04	ng/ul	0.00
Spiked Amount	75.000	Range 46 - 105	Recovery	=	77.39%	
6) 2-Chlorophenol-d4	5.495	132	561212	60.71	ng/ul	0.00
Spiked Amount	75.000	Range 33 - 110	Recovery	=	80.95%	
7) Phenol-d5	5.318	99	741441	60.79	ng/ul	0.00
Spiked Amount	75.000	Range 50 - 109	Recovery	=	81.05%	
15) 1,2-Dichlorobenzene-d4	5.883	152	221712	40.72	ng/ul	0.00
Spiked Amount	50.000	Range 16 - 110	Recovery	=	81.44%	
26) Nitrobenzene-d5	6.256	82	349735	42.35	ng/ul	0.00
Spiked Amount	50.000	Range 53 - 111	Recovery	=	84.70%	
46) 2-Fluorobiphenyl	7.883	172	615372	42.67	ng/ul	0.00
Spiked Amount	50.000	Range 55 - 108	Recovery	=	85.34%	
71) 2,4,6-Tribromophenol	9.165	330	115234	61.60	ng/ul	0.00
Spiked Amount	75.000	Range 42 - 117	Recovery	=	82.13%	
83) p-Terphenyl-d14	11.081	244	539023	46.26	ng/ul	0.00
Spiked Amount	50.000	Range 34 - 139	Recovery	=	92.52%	

## Target Compounds

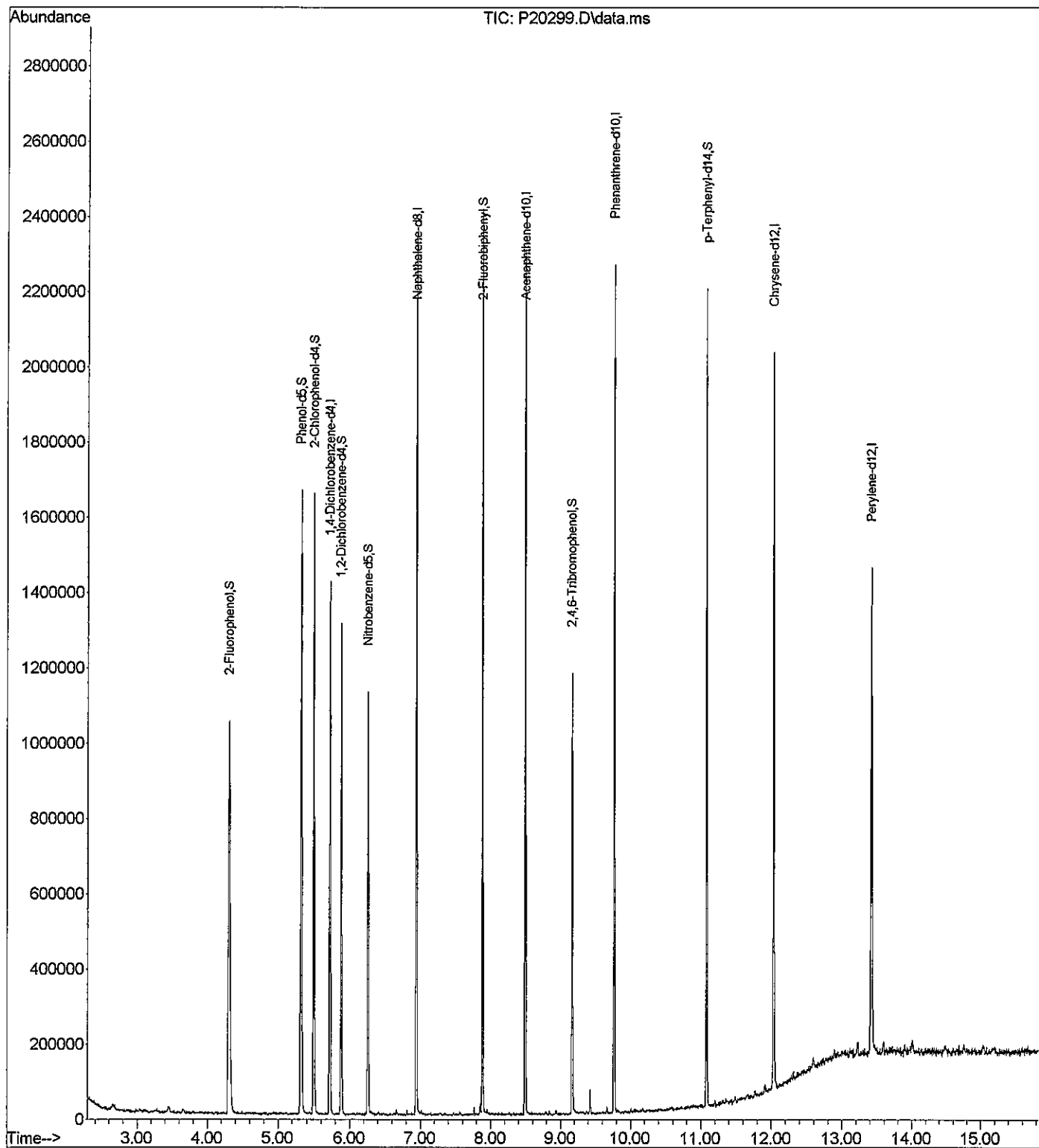
Qvalue

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

*m 7/25/16*

Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20299.D  
Acq On : 25 Jul 2016 12:50  
Operator : tk SOP506 Rev.20  
Sample : EX160721-2MB  
Misc : EX160721-2 WATER  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 13:06:51 2016  
Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :  
QLast Update : Thu Jul 21 11:43:23 2016  
Response via : Initial Calibration



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20299.D  
Acq On : 25 Jul 2016 12:50  
Operator : tk SOP506 Rev.20  
Sample : EX160721-2MB  
Misc : EX160721-2 WATER  
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :

TIC Library : C:\Database\NIST05.L  
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected

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070616.M Tue Jul 26 10:23:25 2016

Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20300.D  
 Acq On : 25 Jul 2016 13:13  
 Operator : tk SOP506 Rev.20  
 Sample : EX160721-2LCS  
 Misc : EX160721-2 WATER  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 13:36:15 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.721	152	231814	40.00	ng/ul	0.00
25) Naphthalene-d8	6.941	136	981912	40.00	ng/ul	0.00
42) Acenaphthene-d10	8.493	164	409529	40.00	ng/ul	0.00
70) Phenanthrene-d10	9.763	188	695913	40.00	ng/ul	0.00
80) Chrysene-d12	12.020	240	505050	40.00	ng/ul	0.00
91) Perylene-d12	13.396	264	547770	40.00	ng/ul	0.00

## System Monitoring Compounds

5) 2-Fluorophenol	4.308	112	525869	55.73	ng/ul	0.00
Spiked Amount	75.000	Range	46 - 105	Recovery	=	74.31%
6) 2-Chlorophenol-d4	5.497	132	527275	58.83	ng/ul	0.00
Spiked Amount	75.000	Range	33 - 110	Recovery	=	78.44%
7) Phenol-d5	5.317	99	738296	62.43	ng/ul	0.00
Spiked Amount	75.000	Range	50 - 109	Recovery	=	83.24%
15) 1,2-Dichlorobenzene-d4	5.882	152	195761	37.08	ng/ul	0.00
Spiked Amount	50.000	Range	16 - 110	Recovery	=	74.16%
26) Nitrobenzene-d5	6.258	82	338946	43.17	ng/ul	0.00
Spiked Amount	50.000	Range	53 - 111	Recovery	=	86.34%
46) 2-Fluorobiphenyl	7.882	172	590239	43.32	ng/ul	0.00
Spiked Amount	50.000	Range	55 - 108	Recovery	=	86.64%
71) 2,4,6-Tribromophenol	9.167	330	129304	68.02	ng/ul	0.00
Spiked Amount	75.000	Range	42 - 117	Recovery	=	90.69%
83) p-Terphenyl-d14	11.076	244	544611	48.88	ng/ul	0.00
Spiked Amount	50.000	Range	34 - 139	Recovery	=	97.76%

## Target Compounds

						Qvalue
3) n-Nitrosodimethylamine	2.728	74	333088	48.20	ng/ul	99
4) Pyridine	2.799	79	440177	38.31	ng/ul	99
8) Phenol	5.332	94	593041	50.44	ng/ul	100
9) Aniline	5.379	93	737300	52.10	ng/ul	98
10) Bis(2-chloroethyl) ether	5.423	93	428153	50.88	ng/ul	97
12) 2-Chlorophenol	5.513	128	418183	48.02	ng/ul	100
13) 1,3-Dichlorobenzene	5.668	146	404349	42.29	ng/ul	100
14) 1,4-Dichlorobenzene	5.739	146	397336	44.34	ng/ul	99
16) Benzyl Alcohol	5.839	108	310115	52.45	ng/ul	99
17) 1,2-Dichlorobenzene	5.898	146	372456	44.54	ng/ul	100
18) 2-Methylphenol	5.944	107	338515	50.85	ng/ul	99
19) Bis(2-Chloroisopropyl)...	5.969	45	747509	49.77	ng/ul	99
20) 3+4-Methylphenol	6.090	108	459873	52.35	ng/ul	99
21) n-Nitroso-di-n-propyla...	6.090	70	306511	55.18	ng/ul	98
23) Hexachloroethane	6.233	117	142023	42.16	ng/ul	97
27) Nitrobenzene	6.276	123	220392	50.06	ng/ul	95
28) Isophorone	6.494	82	860646	52.05	ng/ul	99
30) 2-Nitrophenol	6.581	139	240205	49.93	ng/ul	96
31) 2,4-Dimethylphenol	6.596	107	383292	49.30	ng/ul	98
32) Bis(2-Chloroethoxy)met...	6.674	93	512414	53.04	ng/ul#	97
33) Benzoic acid	6.661	105	206480	54.70	ng/ul	97
34) 2,4-Dichlorophenol	6.801	162	315518	48.28	ng/ul	98
35) 1,2,4-Trichlorobenzene	6.885	180	276690	43.21	ng/ul	99
36) Naphthalene	6.962	128	1173188	48.68	ng/ul	99
37) 4-Chloroaniline	6.994	127	528032	50.07	ng/ul	98
38) Hexachlorobutadiene	7.065	225	101063	39.29	ng/ul	98
39) 4-Chloro-3-methylphenol	7.406	107	393930	55.90	ng/ul	98
40) 2-Methylnaphthalene	7.577	142	850444	47.03	ng/ul	99
41) 1-Methylnaphthalene	7.667	142	784780	48.68	ng/ul	100

Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20300.D  
 Acq On : 25 Jul 2016 13:13  
 Operator : tk SOP506 Rev.20  
 Sample : EX160721-2LCS  
 Misc : EX160721-2 WATER  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 13:36:15 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

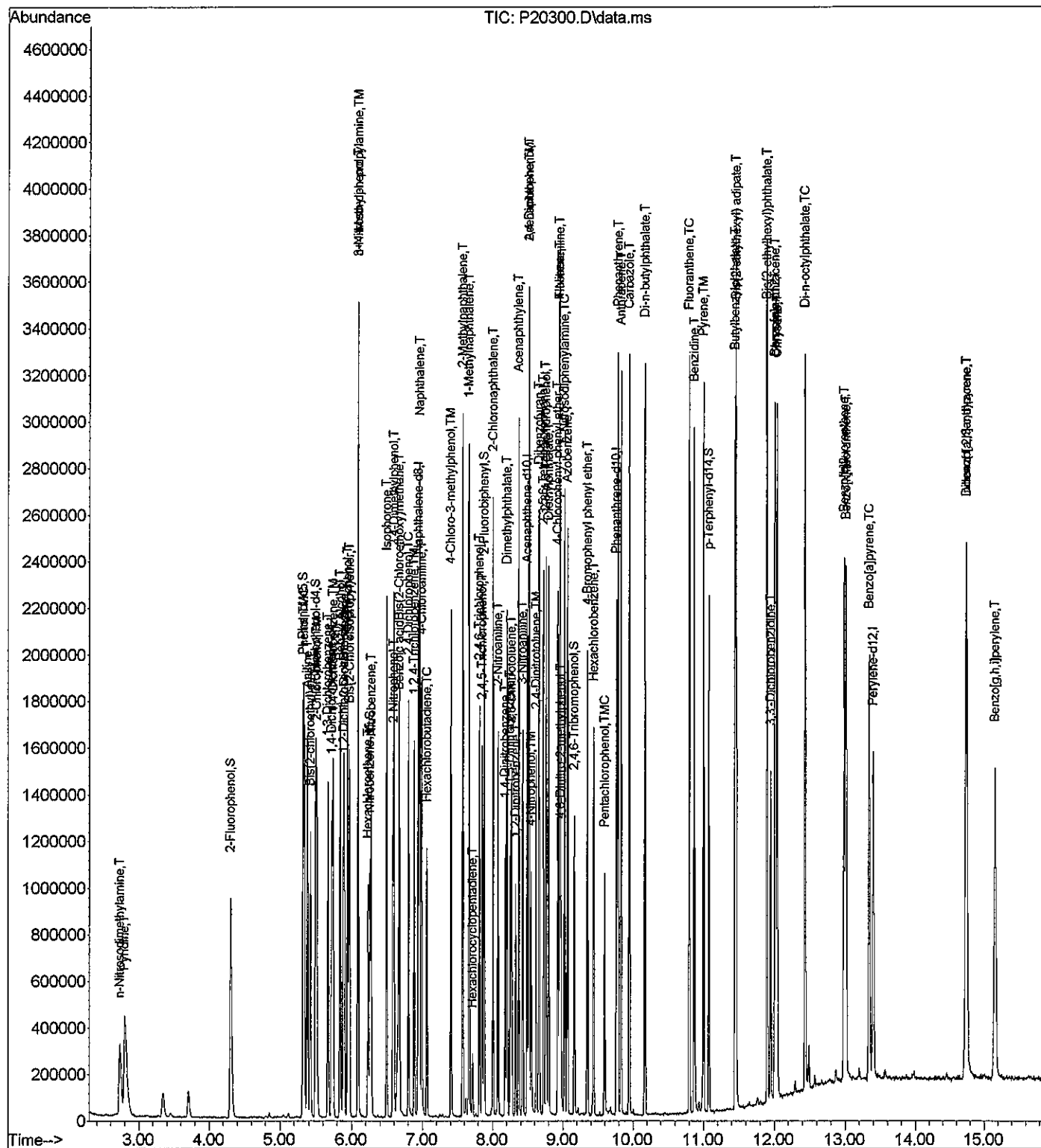
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Hexachlorocyclopentadiene	7.717	237	30572	13.54	ng/ul	95
44) 2,4,6-Trichlorophenol	7.816	196	180925	51.63	ng/ul	98
45) 2,4,5-Trichlorophenol	7.854	196	188818	52.30	ng/ul	97
47) 2-Chloronaphthalene	8.009	162	675209	50.84	ng/ul	99
48) 2-Nitroaniline	8.080	65	238806	60.80	ng/ul	97
49) 1,4-Dinitrobenzene	8.183	168	123954	57.71	ng/ul	91
50) Dimethylphthalate	8.207	163	759755	56.37	ng/ul	99
51) 1,3-Dinitrobenzene	8.251	168	134232	56.21	ng/ul	97
52) 2,6-Dinitrotoluene	8.273	165	183340	56.37	ng/ul	99
53) 1,2-Dinitrobenzene	8.332	168	93144	56.17	ng/ul	94
54) Acenaphthylene	8.375	152	1167924	54.07	ng/ul	100
55) 3-Nitroaniline	8.428	138	271633	57.01	ng/ul	99
56) Acenaphthene	8.521	154	714230	54.97	ng/ul	99
57) 2,4-Dinitrophenol	8.515	184	60617	52.88	ng/ul	98
58) 4-Nitrophenol	8.552	109	70571	60.58	ng/ul	94
59) 2,4-Dinitrotoluene	8.624	165	247872	59.37	ng/ul	99
60) Dibenzofuran	8.667	168	946484	53.97	ng/ul	99
61) 2,3,5,6-Tetrachlorophenol	8.726	232	231622	89.68	ng/ul	98
62) 2,3,4,6-Tetrachlorophenol	8.766	232	232386	93.96	ng/ul	95
63) Diethylphthalate	8.801	149	770760	56.75	ng/ul	98
64) 4-Chlorophenyl phenyl ...	8.931	204	306523	53.77	ng/ul	94
65) Fluorene	8.959	166	784517	55.24	ng/ul	99
66) 4-Nitroaniline	8.956	138	265067	59.96	ng/ul	97
67) 4,6-Dinitro-2-methylph...	8.977	198	100819	56.32	ng/ul	97
68) n-Nitrosodiphenylamine	9.027	169	589948	47.82	ng/ul#	100
69) Azobenzene	9.068	77	861955	60.90	ng/ul	99
72) 4-Bromophenyl phenyl e...	9.350	248	177965	54.45	ng/ul	98
73) Hexachlorobenzene	9.443	284	191496	52.90	ng/ul	97
74) Pentachlorophenol	9.595	266	94111	48.69	ng/ul	99
75) Phenanthrene	9.785	178	1123053	57.26	ng/ul	100
76) Anthracene	9.831	178	1124716	57.01	ng/ul	100
77) Carbazole	9.946	167	1161233	57.05	ng/ul	100
78) Di-n-butylphthalate	10.170	149	1435709	58.70	ng/ul	99
79) Fluoranthene	10.800	202	1066826	56.12	ng/ul	99
81) Benzidine	10.868	184	996706	73.37	ng/ul	99
82) Pyrene	10.999	202	1052939	56.18	ng/ul	99
84) Butylbenzylphthalate	11.446	149	641007	61.28	ng/ul	100
85) Bis(2-ethylhexyl) adipate	11.461	129	598279	64.38	ng/ul	98
86) Bis(2-ethylhexyl)phtha...	11.899	149	884562	62.31	ng/ul	99
87) 3,3'-Dichlorobenzidine	11.949	252	249467	39.75	ng/ul	99
88) Benzo[a]anthracene	12.008	228	876842	57.76	ng/ul	99
89) Chrysene	12.042	228	840367	60.44	ng/ul	99
90) Di-n-octylphthalate	12.436	149	1440288	62.01	ng/ul	98
92) Benzo[b]fluoranthene	12.986	252	856698	54.47	ng/ul	99
93) Benzo[k]fluoranthene	13.014	252	840999	57.58	ng/ul	99
94) Benzo[a]pyrene	13.340	252	779542	50.73	ng/ul	97
95) Indeno(1,2,3-c,d)pyrene	14.743	276	888944	54.00	ng/ul	99
96) Dibenzo[a,h]anthracene	14.737	278	788817	55.68	ng/ul	96
97) Benzo[g,h,i]perylene	15.159	276	830612	54.38	ng/ul	96

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



Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20300.D  
Acq On : 25 Jul 2016 13:13  
Operator : tk SOP506 Rev.20  
Sample : EX160721-2LCS  
Misc : EX160721-2 WATER  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 13:36:15 2016  
Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :  
QLast Update : Thu Jul 21 11:43:23 2016  
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20301.D  
 Acq On : 25 Jul 2016 13:36  
 Operator : tk SOP506 Rev.20  
 Sample : EX160721-2LCSD  
 Misc : EX160721-2 WATER  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 13:55:03 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.723	152	235151	40.00	ng/ul	0.00
25) Naphthalene-d8	6.940	136	974345	40.00	ng/ul	0.00
42) Acenaphthene-d10	8.493	164	410281	40.00	ng/ul	0.00
70) Phenanthrene-d10	9.766	188	703302	40.00	ng/ul	0.00
80) Chrysene-d12	12.017	240	515568	40.00	ng/ul	0.00
91) Perylene-d12	13.389	264	561575	40.00	ng/ul	0.00

## System Monitoring Compounds

5) 2-Fluorophenol	4.308	112	583576	60.97	ng/ul	0.00
Spiked Amount	75.000	Range	46 - 105	Recovery	=	81.29%
6) 2-Chlorophenol-d4	5.494	132	568789	62.57	ng/ul	0.00
Spiked Amount	75.000	Range	33 - 110	Recovery	=	83.43%
7) Phenol-d5	5.317	99	797974	66.52	ng/ul	0.00
Spiked Amount	75.000	Range	50 - 109	Recovery	=	88.69%
15) 1,2-Dichlorobenzene-d4	5.882	152	221662	41.39	ng/ul	0.00
Spiked Amount	50.000	Range	16 - 110	Recovery	=	82.78%
26) Nitrobenzene-d5	6.257	82	362599	46.54	ng/ul	0.00
Spiked Amount	50.000	Range	53 - 111	Recovery	=	93.08%
46) 2-Fluorobiphenyl	7.881	172	632086	46.31	ng/ul	0.00
Spiked Amount	50.000	Range	55 - 108	Recovery	=	92.62%
71) 2,4,6-Tribromophenol	9.167	330	140769	73.27	ng/ul	0.00
Spiked Amount	75.000	Range	42 - 117	Recovery	=	97.69%
83) p-Terphenyl-d14	11.076	244	563736	49.57	ng/ul	0.00
Spiked Amount	50.000	Range	34 - 139	Recovery	=	99.14%

## Target Compounds

						Qvalue
3) n-Nitrosodimethylamine	2.724	74	372955	53.20	ng/ul	96
4) Pyridine	2.796	79	510085	43.77	ng/ul	98
8) Phenol	5.332	94	634784	53.23	ng/ul	100
9) Aniline	5.379	93	778682	54.24	ng/ul	97
10) Bis(2-chloroethyl) ether	5.422	93	460983	54.00	ng/ul	96
12) 2-Chlorophenol	5.512	128	459571	52.02	ng/ul	99
13) 1,3-Dichlorobenzene	5.671	146	451771	46.58	ng/ul	99
14) 1,4-Dichlorobenzene	5.739	146	436305	48.00	ng/ul	99
16) Benzyl Alcohol	5.838	108	330214	55.05	ng/ul	99
17) 1,2-Dichlorobenzene	5.897	146	409790	48.31	ng/ul	100
18) 2-Methylphenol	5.944	107	366168	54.22	ng/ul	98
19) Bis(2-Chloroisopropyl)...	5.969	45	789917	51.84	ng/ul	98
20) 3+4-Methylphenol	6.090	108	475595	53.37	ng/ul	99
21) n-Nitroso-di-n-propyla...	6.090	70	316899	56.24	ng/ul	97
23) Hexachloroethane	6.229	117	154857	45.32	ng/ul	94
27) Nitrobenzene	6.276	123	237367	54.34	ng/ul	95
28) Isophorone	6.493	82	914349	55.73	ng/ul	99
30) 2-Nitrophenol	6.580	139	263514	55.20	ng/ul	96
31) 2,4-Dimethylphenol	6.596	107	402455	52.17	ng/ul	99
32) Bis(2-Chloroethoxy)met...	6.673	93	533948	55.70	ng/ul#	96
33) Benzoic acid	6.664	105	283214	69.63	ng/ul	96
34) 2,4-Dichlorophenol	6.801	162	342774	52.85	ng/ul	99
35) 1,2,4-Trichlorobenzene	6.885	180	299744	47.18	ng/ul	100
36) Naphthalene	6.962	128	1252270	52.36	ng/ul	100
37) 4-Chloroaniline	6.990	127	548020	52.37	ng/ul	98
38) Hexachlorobutadiene	7.065	225	114904	45.02	ng/ul	95
39) 4-Chloro-3-methylphenol	7.409	107	405871	58.04	ng/ul	99
40) 2-Methylnaphthalene	7.577	142	905100	50.44	ng/ul	100
41) 1-Methylnaphthalene	7.667	142	831364	51.97	ng/ul	100

Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20301.D  
 Acq On : 25 Jul 2016 13:36  
 Operator : tk SOP506 Rev.20  
 Sample : EX160721-2LCSD  
 Misc : EX160721-2 WATER  
 ALS Vial : 6 Sample Multiplier: 1

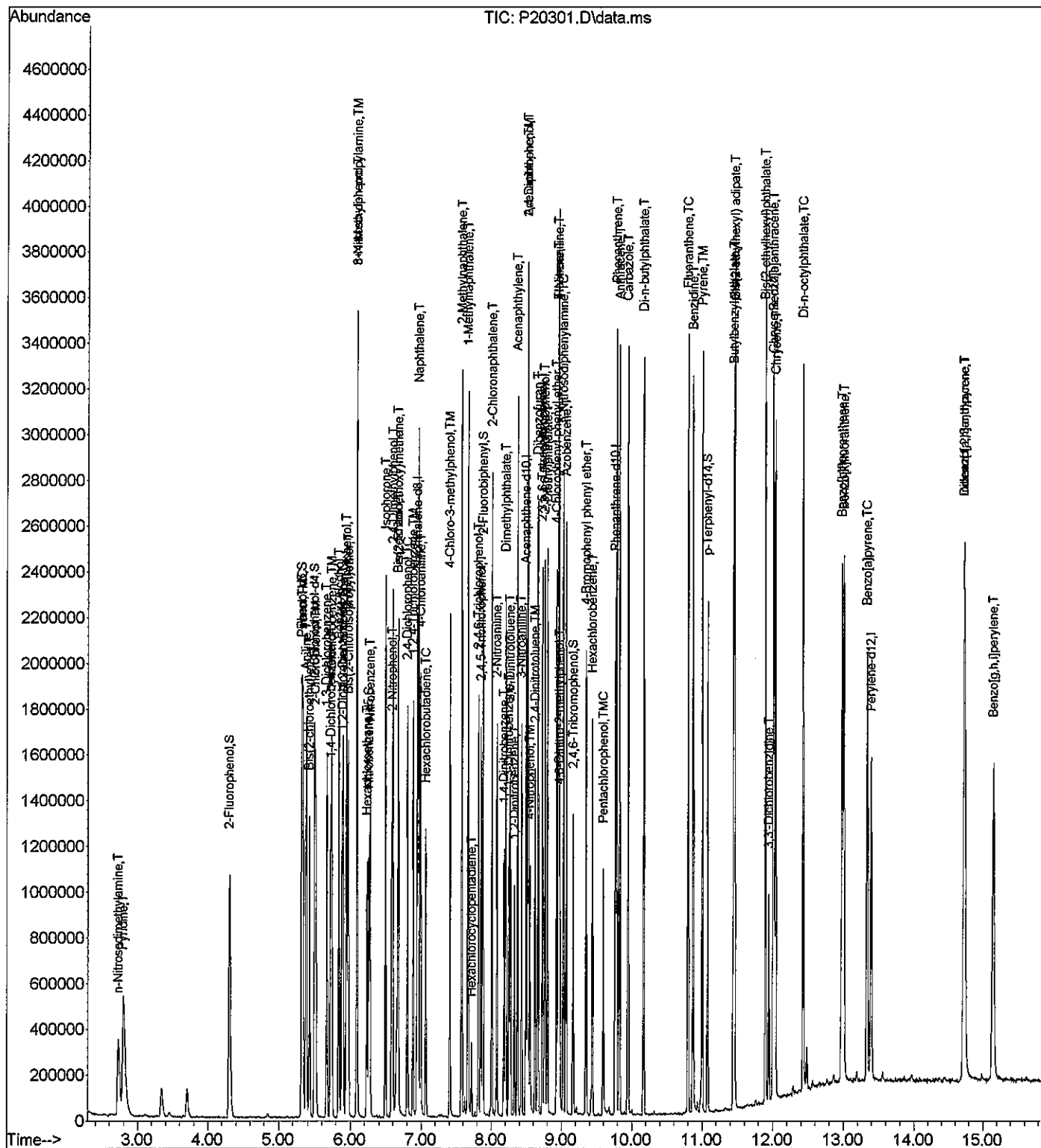
Quant Time: Jul 25 13:55:03 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Hexachlorocyclopentadiene	7.717	237	34544	15.27	ng/ul	95
44) 2,4,6-Trichlorophenol	7.816	196	198804	56.63	ng/ul	96
45) 2,4,5-Trichlorophenol	7.853	196	202824	56.08	ng/ul	97
47) 2-Chloronaphthalene	8.008	162	723530	54.38	ng/ul	98
48) 2-Nitroaniline	8.080	65	248572	63.17	ng/ul	97
49) 1,4-Dinitrobenzene	8.182	168	130416	60.61	ng/ul	87
50) Dimethylphthalate	8.207	163	794133	58.81	ng/ul	99
51) 1,3-Dinitrobenzene	8.251	168	143011	59.78	ng/ul	96
52) 2,6-Dinitrotoluene	8.272	165	191164	58.66	ng/ul	97
53) 1,2-Dinitrobenzene	8.328	168	97763	58.85	ng/ul	89
54) Acenaphthylene	8.375	152	1237096	57.16	ng/ul	99
55) 3-Nitroaniline	8.428	138	280670	58.80	ng/ul	100
56) Acenaphthene	8.521	154	755649	58.05	ng/ul	99
57) 2,4-Dinitrophenol	8.518	184	78471	63.20	ng/ul	97
58) 4-Nitrophenol	8.549	109	72518	62.14	ng/ul	91
59) 2,4-Dinitrotoluene	8.623	165	257167	61.48	ng/ul	99
60) Dibenzofuran	8.667	168	997577	56.78	ng/ul	98
61) 2,3,5,6-Tetrachlorophenol	8.726	232	244510	94.49	ng/ul	97
62) 2,3,4,6-Tetrachlorophenol	8.766	232	242247	97.77	ng/ul	97
63) Diethylphthalate	8.800	149	796502	58.54	ng/ul	98
64) 4-Chlorophenyl phenyl ...	8.931	204	320661	56.14	ng/ul	93
65) Fluorene	8.962	166	808860	56.85	ng/ul	99
66) 4-Nitroaniline	8.955	138	269532	60.86	ng/ul	97
67) 4,6-Dinitro-2-methylph...	8.977	198	112111	62.51	ng/ul	97
68) n-Nitrosodiphenylamine	9.027	169	620013	50.17	ng/ul#	100
69) Azobenzene	9.067	77	897881	63.32	ng/ul	98
72) 4-Bromophenyl phenyl e...	9.350	248	186737	56.53	ng/ul	97
73) Hexachlorobenzene	9.440	284	205013	56.04	ng/ul	94
74) Pentachlorophenol	9.595	266	99349	50.86	ng/ul	96
75) Phenanthrene	9.784	178	1161266	58.58	ng/ul	99
76) Anthracene	9.828	178	1154817	57.92	ng/ul	100
77) Carbazole	9.946	167	1194058	58.04	ng/ul	100
78) Di-n-butylphthalate	10.169	149	1492599	60.38	ng/ul	99
79) Fluoranthene	10.797	202	1118301	58.21	ng/ul	98
81) Benzidine	10.871	184	1083518	78.13	ng/ul	99
82) Pyrene	10.998	202	1095440	57.26	ng/ul	98
84) Butylbenzylphthalate	11.445	149	665686	62.34	ng/ul	99
85) Bis(2-ethylhexyl) adipate	11.461	129	601775	63.44	ng/ul	99
86) Bis(2-ethylhexyl)phtha...	11.896	149	908389	62.68	ng/ul	98
87) 3,3'-Dichlorobenzidine	11.942	252	156100	24.36	ng/ul	99
88) Benzo[a]anthracene	12.004	228	910610	58.76	ng/ul	99
89) Chrysene	12.038	228	866705	61.06	ng/ul	100
90) Di-n-octylphthalate	12.427	149	1489507	62.82	ng/ul	97
92) Benzo[b]fluoranthene	12.979	252	938786	58.22	ng/ul	97
93) Benzo[k]fluoranthene	13.004	252	845033	56.44	ng/ul	99
94) Benzo[a]pyrene	13.330	252	813154	51.62	ng/ul	96
95) Indeno(1,2,3-c,d)pyrene	14.733	276	939530	55.67	ng/ul	97
96) Dibenzo[a,h]anthracene	14.727	278	825625	56.84	ng/ul	94
97) Benzo[g,h,i]perylene	15.153	276	872717	55.73	ng/ul	95

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

Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20301.D  
Acq On : 25 Jul 2016 13:36  
Operator : tk SOP506 Rev.20  
Sample : EX160721-2LCSD  
Misc : EX160721-2 WATER  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 13:55:03 2016  
Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :  
QLast Update : Thu Jul 21 11:43:23 2016  
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\072516\  
 Data File : P20306.D  
 Acq On : 25 Jul 2016 15:30  
 Operator : tk SOP506 Rev.20  
 Sample : 1607366-3  
 Misc : EX160721-2 WATER  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 25 15:46:34 2016  
 Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
 Quant Title :  
 QLast Update : Thu Jul 21 11:43:23 2016  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.720	152	248206	40.00	ng/ul	0.00
25) Naphthalene-d8	6.940	136	1070261	40.00	ng/ul	0.00
42) Acenaphthene-d10	8.490	164	451235	40.00	ng/ul	0.00
70) Phenanthrene-d10	9.763	188	729097	40.00	ng/ul	0.00
80) Chrysene-d12	12.017	240	577040	40.00	ng/ul	0.00
91) Perylene-d12	13.392	264	553693	40.00	ng/ul	0.00

## System Monitoring Compounds

5) 2-Fluorophenol	4.305	112	576997	57.11	ng/ul	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery =	76.15%		
6) 2-Chlorophenol-d4	5.494	132	599923	62.52	ng/ul	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery =	83.36%		
7) Phenol-d5	5.317	99	771563	60.94	ng/ul	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery =	81.25%		
15) 1,2-Dichlorobenzene-d4	5.882	152	227991	40.33	ng/ul	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery =	80.66%		
26) Nitrobenzene-d5	6.254	82	363106	42.43	ng/ul	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery =	84.86%		
46) 2-Fluorobiphenyl	7.881	172	653250	43.52	ng/ul	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery =	87.04%		
71) 2,4,6-Tribromophenol	9.164	330	136467	68.52	ng/ul	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery =	91.36%		
83) p-Terphenyl-d14	11.073	244	609050	47.85	ng/ul	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery =	95.70%		

## Target Compounds

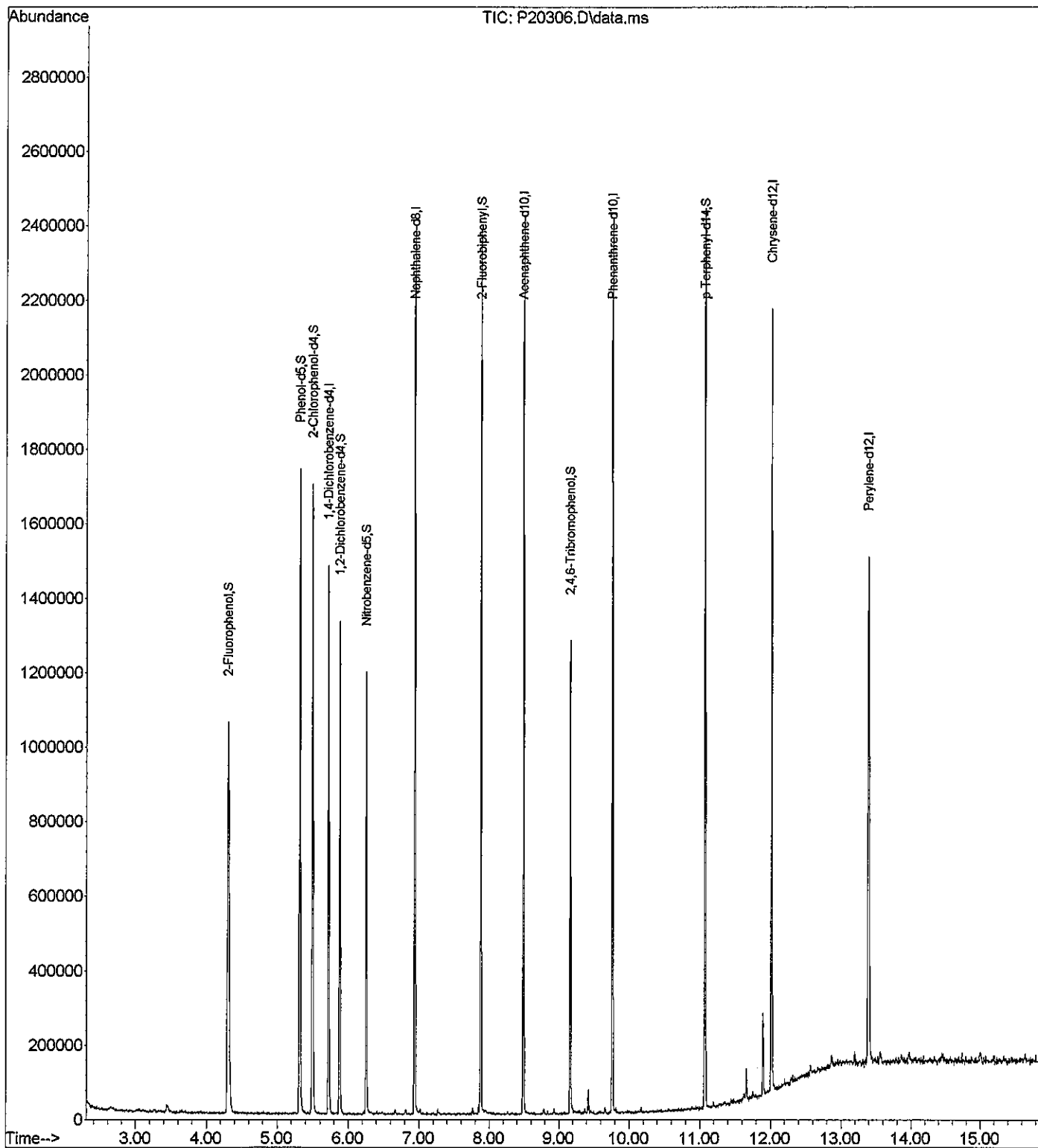
Qvalue

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

*an 7/26/16*

Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20306.D  
Acq On : 25 Jul 2016 15:30  
Operator : tk SOP506 Rev.20  
Sample : 1607366-3  
Misc : EX160721-2 WATER  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 25 15:46:34 2016  
Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :  
QLast Update : Thu Jul 21 11:43:23 2016  
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\072516\  
Data File : P20306.D  
Acq On : 25 Jul 2016 15:30  
Operator : tk SOP506 Rev.20  
Sample : 1607366-3  
Misc : EX160721-2 WATER  
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\070616.M  
Quant Title :

TIC Library : C:\Database\NIST05.L  
TIC Integration Parameters: lscint.p

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Peak Number 1 1,2-Benzenedicarboxylic aci... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.896	4.01 ng/ul	182647	Chrysene-d12	12.017

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2-Benzenedicarboxylic acid, mo...	278	C16H22O4	004376-20-9	86
2	Phthalic acid, decyl neopentyl e...	376	C23H36O4	1000315-30-3	59
3	Phthalic acid, 2-ethylhexyl tetr...	474	C30H50O4	1000309-00-4	53
4	Phthalic acid, dodecyl 2-ethylhe...	446	C28H46O4	1000309-05-0	53
5	Phthalic acid, 2-ethylhexyl trid...	460	C29H48O4	1000308-99-0	53

