ALS Environmental

received 08/31/2015
Spill/release 442969
Document 2315431

GC/MS Semivolatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

Box Elder Creek

Work Order Number: 1508348

1. This report consists of 2 water samples. The samples were received cool and intact by ALS on 08/21/15.

2. These samples were prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water samples were extracted using continuous liquid-liquid extractors, according to SW-846 Method 3520C, utilizing the current revision of SOP 617.

3. The extracts were 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 ≤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 ≤30%.

6. All compounds in the daily (continuing) calibration verifications were within 20%D with the exceptions of indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene which were high. These compounds were not detected in the associated samples.

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
Several Compounds	LCS & LCSD	Low

Because of the large number of target analytes reported by this method, the lab allows for sporadic exceedances. No further action was taken.

9. A matrix spike and matrix spike duplicate were not performed. A laboratory control sample and laboratory control sample duplicate were performed instead.

10. The samples were 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 — 8/31/15
Organics Primary Data Reviewer — Date

8/31/15
Organics Final Data Reviewer — 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 Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1508348
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: Box Elder Creek
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Box Elder Down	1508348-1		WATER	20-Aug-15	11:48
Box Elder Up	1508348-2		WATER	20-Aug-15	14:05
Trip Blank	1508348-3		WATER	20-Aug-15	7:00

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER #	1508348	**PAGE**	1 of 1	**DISPOSAL**	By Lab (circled) or Return to Client

PROJECT NAME	Box Elder Creek	**SAMPLER**	Gintautas
PROJECT No.		**SITE ID**	
		EDD FORMAT	CCCC
		PURCHASE ORDER	
COMPANY NAME	Colorado Oil Gas Cons. Com	**BILL TO COMPANY**	
SEND REPORT TO	Peter Gintautas	**INVOICE ATTN TO**	
ADDRESS		**ADDRESS**	
CITY / STATE / ZIP		**CITY / STATE / ZIP**	
PHONE		**PHONE**	
FAX		**FAX**	
E-MAIL	peter.gintautas@state.co.us	**E-MAIL**	

DATE 21 Aug 2015 **TURNAROUND**

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	E376C / GRC	TCC	8270-SIM PAH	DRC	Metals-Dissolved	TPH (Total HCl)	pH	TDS	Anions	Specific Conductance	Cation-Anion Balance	SAR Calc
1	Box Elder Down	W	20Aug15	11:48	6	HCl	X	X											
↓	Box Elder Down	W	20Aug15	11:48	5	8				X	X	X	X	X	X	X	X	X	X
↓	Box Elder Down	W	20Aug15	11:48	1	3			X										
2	Box Elder Up	W	20Aug15	14:05	3	HCl		X											
↓	Box Elder Up	W	20Aug15	14:05	5	8				X	X	X	X	X	X	X	X	X	X
↓	Box Elder Up	W	20Aug15	14:05	1	3			X										
3	Trip Blank	W	20Aug15	07:00	3	1		X											
	Need GRC 3 day if possible																		
	rest 14 days																		

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

For metals or anions, please detail analytes below.

Comments: Filter + preserve metals on receipt = dissolved
200.7 - CCCC-11, Be-200.7-CCCC
200.8 - CCCC-16, Ag-200.8, Th-200.8
Anions = Br, Cl, F, NO2, NO3, SO4

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	[signature]	Peter Gintautas	21Aug15	08:25
RECEIVED BY	[signature]	Zach D. Gallimore	8/21/15	8:25
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

[signature]

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1508348

Project Manager: AW Initials: CDT Date: 8-21-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	NONE	(YES)	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	(DROP OFF)	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	(YES)	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	(YES)	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	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	(NO)
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 (#4)	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	1.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	NA							
Background µR/hr reading:	NA							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? **YES / NO / (NA)** (If no, see Form 008.)

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

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

Project Manager Signature / Date: 8/21/15

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Lab ID: EX150826-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5527

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	3.7	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	10	10	3	U	
62-53-3	ANILINE	1	10	10	3	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	20	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	3	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: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Lab ID: EX150826-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5527

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	4.5	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	3	U	
83-32-9	ACENAPHTHENE	1	10	10	3	U	
51-28-5	2,4-DINITROPHENOL	1	20	20	6.2	U	
100-02-7	4-NITROPHENOL	1	20	20	3.1	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	U	
103-33-3	AZOBENZENE	1	10	10	3	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	20	20	4.5	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	U	
87-86-5	PENTACHLOROPHENOL	1	20	20	5.3	U	
85-01-8	PHENANTHRENE	1	10	10	3	U	
120-12-7	ANTHRACENE	1	10	10	3	U	

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Lab ID: EX150826-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5527

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	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: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Lab ID: EX150826-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5527

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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	50.3		75	67	42 - 117
321-60-8	2-FLUOROBIPHENYL	38.5		50	77	55 - 108
367-12-4	2-FLUOROPHENOL	54.5		75	73	46 - 105
4165-60-0	NITROBENZENE-D5	38.8		50	78	53 - 111
4165-62-2	PHENOL-D5	58.4		75	78	50 - 109
1718-51-0	TERPHENYL-D14	44.2		50	88	34 - 139

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID:

Lab ID: EX150826-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Clean DF: 1
File Name: R5527

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
	3.16	OXYGENATED HYDOCARBON	1	4.5	UG/L	J

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Down
Lab ID: 1508348-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5530

Analyst: Tyler Knaebel
Sample Aliquot: 995 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	10	10	3.7	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	10	10	3	U	
62-53-3	ANILINE	1	10	10	3	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	20	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	3	U	
87-68-3	HEXACHLOROBUTADIENE	1	10	10	3	U	

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Down
Lab ID: 1508348-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5530

Analyst: Tyler Knaebel
Sample Aliquot: 995 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	10	10	3	U	
91-57-6	2-METHYLNAPHTHALENE	1	10	10	3	U	
90-12-0	1-METHYLNAPHTHALENE	1	10	10	3	U	
77-47-4	HEXACHLOROCYCLOPENTADIENE	1	10	10	4.5	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	3	U	
83-32-9	ACENAPHTHENE	1	10	10	3	U	
51-28-5	2,4-DINITROPHENOL	1	20	20	6.2	U	
100-02-7	4-NITROPHENOL	1	20	20	3.1	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	U	
103-33-3	AZOBENZENE	1	10	10	3	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	20	20	4.5	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	

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Down
Lab ID: 1508348-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5530

Analyst: Tyler Knaebel
Sample Aliquot: 995 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	10	10	3	U	
87-86-5	PENTACHLOROPHENOL	1	20	20	5.3	U	
85-01-8	PHENANTHRENE	1	10	10	3	U	
120-12-7	ANTHRACENE	1	10	10	3	U	
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	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: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Down
Lab ID: 1508348-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5530

Analyst: Tyler Knaebel
Sample Aliquot: 995 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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	50.8		75.4	67	42 - 117
321-60-8	2-FLUOROBIPHENYL	38.3		50.3	76	55 - 108
367-12-4	2-FLUOROPHENOL	54.9		75.4	73	46 - 105
4165-60-0	NITROBENZENE-D5	37.7		50.3	75	53 - 111
4165-62-2	PHENOL-D5	56.3		75.4	75	50 - 109
1718-51-0	TERPHENYL-D14	38.4		50.3	76	34 - 139

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Down
Lab ID: 1508348-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 995 ml
Final Volume: 1 ml
Clean DF: 1
File Name: R5530

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
	3.07	UNSATURATED HYDROCARBON	1	8.3	UG/L	J
	3.17	OXYGENATED HYDOCARBON	1	4.8	UG/L	JB
	3.40	UNSATURATED HYDROCARBON	1	6.7	UG/L	J

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Up
Lab ID: 1508348-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5531

Analyst: Tyler Knaebel
Sample Aliquot: 1025 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	9.8	9.8	3.6	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	9.8	9.8	2.9	U	
62-53-3	ANILINE	1	9.8	9.8	2.9	U	
108-95-2	PHENOL	1	9.8	9.8	2.9	U	
111-44-4	BIS(2-CHLOROETHYL)ETHER	1	9.8	9.8	2.9	U	
95-57-8	2-CHLOROPHENOL	1	9.8	9.8	2.9	U	
541-73-1	1,3-DICHLOROBENZENE	1	9.8	9.8	2.9	U	
106-46-7	1,4-DICHLOROBENZENE	1	9.8	9.8	2.9	U	
95-50-1	1,2-DICHLOROBENZENE	1	9.8	9.8	2.9	U	
100-51-6	BENZYL ALCOHOL	1	9.8	9.8	2.9	U	
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	1	9.8	9.8	2.9	U	
95-48-7	2-METHYLPHENOL	1	9.8	9.8	2.9	U	
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	1	9.8	9.8	2.9	U	
108-39-4	3+4-METHYLPHENOL	1	9.8	9.8	2.9	U	
67-72-1	HEXACHLOROETHANE	1	9.8	9.8	2.9	U	
98-95-3	NITROBENZENE	1	9.8	9.8	2.9	U	
78-59-1	ISOPHORONE	1	9.8	9.8	2.9	U	
88-75-5	2-NITROPHENOL	1	9.8	9.8	2.9	U	
105-67-9	2,4-DIMETHYLPHENOL	1	9.8	9.8	2.9	U	
111-91-1	BIS(2-CHLOROETHOXY)METHANE	1	9.8	9.8	2.9	U	
120-83-2	2,4-DICHLOROPHENOL	1	9.8	9.8	2.9	U	
65-85-0	BENZOIC ACID	1	49	49	20	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	9.8	9.8	2.9	U	
91-20-3	NAPHTHALENE	1	9.8	9.8	2.9	U	
106-47-8	4-CHLOROANILINE	1	9.8	9.8	2.9	U	
87-68-3	HEXACHLOROBUTADIENE	1	9.8	9.8	2.9	U	

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Up
Lab ID: 1508348-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5531

Analyst: Tyler Knaebel
Sample Aliquot: 1025 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	9.8	9.8	2.9	U	
91-57-6	2-METHYLNAPHTHALENE	1	9.8	9.8	2.9	U	
90-12-0	1-METHYLNAPHTHALENE	1	9.8	9.8	2.9	U	
77-47-4	HEXACHLOROCYCLOPENTADIENE	1	9.8	9.8	4.4	U	
88-06-2	2,4,6-TRICHLOROPHENOL	1	9.8	9.8	2.9	U	
95-95-4	2,4,5-TRICHLOROPHENOL	1	9.8	9.8	2.9	U	
91-58-7	2-CHLORONAPHTHALENE	1	9.8	9.8	2.9	U	
88-74-4	2-NITROANILINE	1	20	20	2.9	U	
131-11-3	DIMETHYL PHTHALATE	1	9.8	9.8	2.9	U	
606-20-2	2,6-DINITROTOLUENE	1	9.8	9.8	2.9	U	
208-96-8	ACENAPHTHYLENE	1	9.8	9.8	2.9	U	
99-09-2	3-NITROANILINE	1	20	20	2.9	U	
83-32-9	ACENAPHTHENE	1	9.8	9.8	2.9	U	
51-28-5	2,4-DINITROPHENOL	1	20	20	6	U	
100-02-7	4-NITROPHENOL	1	20	20	3	U	
132-64-9	DIBENZOFURAN	1	9.8	9.8	2.9	U	
121-14-2	2,4-DINITROTOLUENE	1	9.8	9.8	2.9	U	
84-66-2	DIETHYL PHTHALATE	1	9.8	9.8	2.9	U	
86-73-7	FLUORENE	1	9.8	9.8	2.9	U	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	1	9.8	9.8	2.9	U	
100-01-6	4-NITROANILINE	1	20	20	2.9	U	
103-33-3	AZOBENZENE	1	9.8	9.8	2.9	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	20	20	4.4	U	
86-30-6	N-NITROSODIPHENYLAMINE	1	9.8	9.8	2.9	U	
101-55-3	4-BROMOPHENYL PHENYL ETHER	1	9.8	9.8	2.9	U	
118-74-1	HEXACHLOROBENZENE	1	9.8	9.8	2.9	U	

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Up
Lab ID: 1508348-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5531

Analyst: Tyler Knaebel
Sample Aliquot: 1025 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	9.8	9.8	2.9	U	
87-86-5	PENTACHLOROPHENOL	1	20	20	5.2	U	
85-01-8	PHENANTHRENE	1	9.8	9.8	2.9	U	
120-12-7	ANTHRACENE	1	9.8	9.8	2.9	U	
86-74-8	CARBAZOLE	1	9.8	9.8	2.9	U	
84-74-2	DI-N-BUTYL PHTHALATE	1	9.8	9.8	2.9	U	
206-44-0	FLUORANTHENE	1	9.8	9.8	2.9	U	
129-00-0	PYRENE	1	9.8	9.8	2.9	U	
85-68-7	BUTYL BENZYL PHTHALATE	1	9.8	9.8	2.9	U	
56-55-3	BENZO(A)ANTHRACENE	1	9.8	9.8	2.9	U	
91-94-1	3,3'-DICHLOROBENZIDINE	1	9.8	9.8	2.9	U	
218-01-9	CHRYSENE	1	9.8	9.8	2.9	U	
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1	9.8	9.8	2.9	U	
117-84-0	DI-N-OCTYL PHTHALATE	1	9.8	9.8	2.9	U	
205-99-2	BENZO(B)FLUORANTHENE	1	9.8	9.8	2.9	U	
207-08-9	BENZO(K)FLUORANTHENE	1	9.8	9.8	2.9	U	
50-32-8	BENZO(A)PYRENE	1	9.8	9.8	2.9	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	9.8	9.8	2.9	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	9.8	9.8	2.9	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	9.8	9.8	2.9	U	

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Up
Lab ID: 1508348-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15
Prep Method: SW3520 Rev C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received
File Name: R5531

Analyst: Tyler Knaebel
Sample Aliquot: 1025 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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	48.2		73.2	66	42 - 117
321-60-8	2-FLUOROBIPHENYL	39.4		48.8	81	55 - 108
367-12-4	2-FLUOROPHENOL	55.4		73.2	76	46 - 105
4165-60-0	NITROBENZENE-D5	38.4		48.8	79	53 - 111
4165-62-2	PHENOL-D5	56.2		73.2	77	50 - 109
1718-51-0	TERPHENYL-D14	38.3		48.8	78	34 - 139

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Field ID: Box Elder Up
Lab ID: 1508348-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Aug-15
Date Extracted: 26-Aug-15
Date Analyzed: 28-Aug-15

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 1025 ml
Final Volume: 1 ml
Clean DF: 1
File Name: R5531

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
	3.07	UNSATURATED HYDROCARBON	1	9.9	UG/L	J
	3.17	OXYGENATED HYDROCARBON	1	5	UG/L	JB
	3.40	UNSATURATED HYDROCARBON	1	8.5	UG/L	J

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Lab ID: EX150826-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/26/2015
Date Analyzed: 08/28/2015
Prep Method: SW3520C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5528

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	29 - 100%
62-75-9	N-NITROSODIMETHYLAMINE	60	45.9	10		76	57 - 119%
62-53-3	ANILINE	60	52	10		87	38 - 116%
108-95-2	PHENOL	60	46.9	10		78	60 - 102%
111-44-4	BIS(2-CHLOROETHYL)ETHER	60	44.2	10		74	62 - 103%
95-57-8	2-CHLOROPHENOL	60	44.9	10		75	64 - 100%
541-73-1	1,3-DICHLOROBENZENE	60	40.2	10		67	49 - 100%
106-46-7	1,4-DICHLOROBENZENE	60	41.8	10		70	54 - 100%
95-50-1	1,2-DICHLOROBENZENE	60	39.3	10		66	54 - 100%
100-51-6	BENZYL ALCOHOL	60	46.2	10		77	66 - 105%
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	60	47.2	10		79	60 - 107%
95-48-7	2-METHYLPHENOL	60	46.1	10		77	63 - 103%
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	60	48.1	10		80	62 - 113%
108-39-4	3+4-METHYLPHENOL	60	46.9	10		78	54 - 106%
67-72-1	HEXACHLOROETHANE	60	39.9	10		66	47 - 100%
98-95-3	NITROBENZENE	60	42.7	10		71	36 - 107%
78-59-1	ISOPHORONE	60	46.6	10		78	58 - 102%
88-75-5	2-NITROPHENOL	60	43.8	10		73	72 - 110%
105-67-9	2,4-DIMETHYLPHENOL	60	43.8	10		73	57 - 101%
111-91-1	BIS(2-CHLOROETHOXY)METHANE	60	44.9	10		75	59 - 100%
120-83-2	2,4-DICHLOROPHENOL	60	43.3	10		72	61 - 100%
65-85-0	BENZOIC ACID	100	31	50	J*	31	34 - 100%
120-82-1	1,2,4-TRICHLOROBENZENE	60	39.8	10		66	47 - 100%
91-20-3	NAPHTHALENE	60	43.4	10		72	58 - 100%
106-47-8	4-CHLOROANILINE	60	43.7	10		73	37 - 119%
87-68-3	HEXACHLOROBUTADIENE	60	36.9	10		62	43 - 100%

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1508348

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Box Elder Creek

Lab ID: EX150826-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/26/2015
Date Analyzed: 08/28/2015
Prep Method: SW3520C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5528

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	46.4	10		77	61 - 105%
91-57-6	2-METHYLNAPHTHALENE	60	42.1	10		70	57 - 100%
90-12-0	1-METHYLNAPHTHALENE	60	42	10		70	58 - 101%
77-47-4	HEXACHLOROCYCLOPENTADIENE	60	14.7	10		25	8 - 100%
88-06-2	2,4,6-TRICHLOROPHENOL	60	46.3	10		77	61 - 110%
95-95-4	2,4,5-TRICHLOROPHENOL	60	46	10		77	59 - 122%
91-58-7	2-CHLORONAPHTHALENE	60	43.8	10		73	67 - 101%
88-74-4	2-NITROANILINE	60	45	20	*	75	76 - 121%
131-11-3	DIMETHYL PHTHALATE	60	45.6	10		76	70 - 110%
606-20-2	2,6-DINITROTOLUENE	60	45.3	10		75	71 - 113%
208-96-8	ACENAPHTHYLENE	60	49.5	10		83	67 - 108%
99-09-2	3-NITROANILINE	60	44	20	*	73	76 - 105%
83-32-9	ACENAPHTHENE	60	45.5	10		76	60 - 108%
51-28-5	2,4-DINITROPHENOL	60	42.8	20		71	67 - 113%
100-02-7	4-NITROPHENOL	60	39.3	20		66	24 - 128%
132-64-9	DIBENZOFURAN	60	44.8	10		75	67 - 107%
121-14-2	2,4-DINITROTOLUENE	60	44.4	10		74	46 - 114%
84-66-2	DIETHYL PHTHALATE	60	45.3	10		76	70 - 112%
86-73-7	FLUORENE	60	45	10		75	64 - 116%
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	60	43.4	10		72	71 - 111%
100-01-6	4-NITROANILINE	60	42.3	20	*	71	77 - 115%
103-33-3	AZOBENZENE	60	46.3	10		77	71 - 110%
534-52-1	4,6-DINITRO-2-METHYLPHENOL	60	48.6	20		81	66 - 122%
86-30-6	N-NITROSODIPHENYLAMINE	60	42.3	10		70	57 - 102%
101-55-3	4-BROMOPHENYL PHENYL ETHER	60	47.7	10		79	67 - 108%
118-74-1	HEXACHLOROBENZENE	60	47.3	10		79	48 - 115%
58-90-2	2,3,4,6-TETRACHLOROPHENOL	100	75.2	10		75	69 - 117%

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1508348
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Box Elder Creek

Lab ID: EX150826-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/26/2015
Date Analyzed: 08/28/2015
Prep Method: SW3520C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5528

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	45.8	20		76	40 - 114%
85-01-8	PHENANTHRENE	60	46.3	10		77	64 - 113%
120-12-7	ANTHRACENE	60	46.7	10		78	72 - 108%
86-74-8	CARBAZOLE	60	44.4	10		74	65 - 119%
84-74-2	DI-N-BUTYL PHTHALATE	60	45.1	10		75	64 - 118%
206-44-0	FLUORANTHENE	60	43.1	10		72	63 - 122%
129-00-0	PYRENE	60	51.3	10		86	60 - 113%
85-68-7	BUTYL BENZYL PHTHALATE	60	50.1	10		83	64 - 121%
56-55-3	BENZO(A)ANTHRACENE	60	47	10		78	69 - 107%
91-94-1	3,3'-DICHLOROBENZIDINE	60	35.5	10		59	1 - 136%
218-01-9	CHRYSENE	60	47.6	10		79	68 - 114%
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	60	50	10		83	65 - 119%
117-84-0	DI-N-OCTYL PHTHALATE	60	49.6	10		83	62 - 119%
205-99-2	BENZO(B)FLUORANTHENE	60	50.2	10		84	67 - 111%
207-08-9	BENZO(K)FLUORANTHENE	60	54.6	10		91	65 - 118%
50-32-8	BENZO(A)PYRENE	60	48	10		80	62 - 104%
193-39-5	INDENO(1,2,3-CD)PYRENE	60	54.1	10		90	54 - 124%
53-70-3	DIBENZO(A,H)ANTHRACENE	60	55.6	10		93	57 - 126%
191-24-2	BENZO(G,H,I)PERYLENE	60	55.2	10		92	52 - 124%

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1508348
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Box Elder Creek

Lab ID: EX150826-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/26/2015
Date Analyzed: 08/28/2015
Prep Method: SW3520C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5529

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	32.7	10		54	20	16
62-75-9	N-NITROSODIMETHYLAMINE	60	43.2	10		72	20	6
62-53-3	ANILINE	60	49	10		82	20	6
108-95-2	PHENOL	60	43.4	10		72	20	8
111-44-4	BIS(2-CHLOROETHYL)ETHER	60	42.7	10		71	20	3
95-57-8	2-CHLOROPHENOL	60	43.4	10		72	20	3
541-73-1	1,3-DICHLOROBENZENE	60	39.7	10		66	20	1
106-46-7	1,4-DICHLOROBENZENE	60	40.5	10		67	20	3
95-50-1	1,2-DICHLOROBENZENE	60	38	10		63	20	3
100-51-6	BENZYL ALCOHOL	60	44.3	10		74	20	4
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	60	43.9	10		73	20	7
95-48-7	2-METHYLPHENOL	60	43.4	10		72	20	6
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	60	45.2	10		75	20	6
108-39-4	3+4-METHYLPHENOL	60	44.6	10		74	20	5
67-72-1	HEXACHLOROETHANE	60	39.2	10		65	20	2
98-95-3	NITROBENZENE	60	41.4	10		69	20	3
78-59-1	ISOPHORONE	60	44.9	10		75	20	4
88-75-5	2-NITROPHENOL	60	42.2	10	*	70	20	4
105-67-9	2,4-DIMETHYLPHENOL	60	40.8	10		68	20	7
111-91-1	BIS(2-CHLOROETHOXY)METHANE	60	42.6	10		71	20	5
120-83-2	2,4-DICHLOROPHENOL	60	42.5	10		71	20	2
65-85-0	BENZOIC ACID	100	50	50	U*	0	20	
120-82-1	1,2,4-TRICHLOROBENZENE	60	38.6	10		64	20	3
91-20-3	NAPHTHALENE	60	41.7	10		70	20	4
106-47-8	4-CHLOROANILINE	60	43.3	10		72	20	1
87-68-3	HEXACHLOROBUTADIENE	60	36.5	10		61	20	1
59-50-7	4-CHLORO-3-METHYLPHENOL	60	43.2	10		72	20	7

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1508348
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Box Elder Creek

Lab ID: EX150826-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/26/2015
Date Analyzed: 08/28/2015
Prep Method: SW3520C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5529

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	40.1	10		67	20	5
90-12-0	1-METHYLNAPHTHALENE	60	40.3	10		67	20	4
77-47-4	HEXACHLOROCYCLOPENTADIENE	60	15.2	10		25	20	3
88-06-2	2,4,6-TRICHLOROPHENOL	60	45.8	10		76	20	1
95-95-4	2,4,5-TRICHLOROPHENOL	60	45.3	10		75	20	2
91-58-7	2-CHLORONAPHTHALENE	60	43.6	10		73	20	0
88-74-4	2-NITROANILINE	60	42.7	20	*	71	20	5
131-11-3	DIMETHYL PHTHALATE	60	44.2	10		74	20	3
606-20-2	2,6-DINITROTOLUENE	60	44.4	10		74	20	2
208-96-8	ACENAPHTHYLENE	60	48.5	10		81	20	2
99-09-2	3-NITROANILINE	60	39.6	20	*	66	20	11
83-32-9	ACENAPHTHENE	60	44.3	10		74	20	3
51-28-5	2,4-DINITROPHENOL	60	37.8	20	*	63	20	12
100-02-7	4-NITROPHENOL	60	32.4	20		54	20	19
132-64-9	DIBENZOFURAN	60	43.2	10		72	20	4
121-14-2	2,4-DINITROTOLUENE	60	41.6	10		69	20	6
84-66-2	DIETHYL PHTHALATE	60	42.2	10		70	20	7
86-73-7	FLUORENE	60	43	10		72	20	4
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	60	42.4	10		71	20	2
100-01-6	4-NITROANILINE	60	36.5	20	*	61	20	15
103-33-3	AZOBENZENE	60	43	10		72	20	7
534-52-1	4,6-DINITRO-2-METHYLPHENOL	60	45.5	20		76	20	6
86-30-6	N-NITROSODIPHENYLAMINE	60	42.9	10		71	20	1
101-55-3	4-BROMOPHENYL PHENYL ETHER	60	47.5	10		79	20	1
118-74-1	HEXACHLOROBENZENE	60	47.6	10		79	20	1
58-90-2	2,3,4,6-TETRACHLOROPHENOL	100	69.7	10		70	20	8
87-86-5	PENTACHLOROPHENOL	60	40.6	20		68	20	12

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1508348
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Box Elder Creek

Lab ID: EX150826-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/26/2015
Date Analyzed: 08/28/2015
Prep Method: SW3520C

Prep Batch: EX150826-1
QCBatchID: EX150826-1-2
Run ID: SV150828-3
Cleanup: NONE
Basis: N/A
File Name: R5529

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	44.5	10		74	20	4
120-12-7	ANTHRACENE	60	44.2	10		74	20	5
86-74-8	CARBAZOLE	60	40.7	10		68	20	9
84-74-2	DI-N-BUTYL PHTHALATE	60	41.3	10		69	20	9
206-44-0	FLUORANTHENE	60	38.8	10		65	20	10
129-00-0	PYRENE	60	51.6	10		86	20	1
85-68-7	BUTYL BENZYL PHTHALATE	60	48	10		80	20	4
56-55-3	BENZO(A)ANTHRACENE	60	45.3	10		75	20	4
91-94-1	3,3'-DICHLOROBENZIDINE	60	43	10		72	20	19
218-01-9	CHRYSENE	60	45.2	10		75	20	5
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	60	46.7	10		78	20	7
117-84-0	DI-N-OCTYL PHTHALATE	60	47.2	10		79	20	5
205-99-2	BENZO(B)FLUORANTHENE	60	49.9	10		83	20	1
207-08-9	BENZO(K)FLUORANTHENE	60	45.1	10		75	20	19
50-32-8	BENZO(A)PYRENE	60	44.6	10		74	20	7
193-39-5	INDENO(1,2,3-CD)PYRENE	60	57.5	10		96	20	6
53-70-3	DIBENZO(A,H)ANTHRACENE	60	59.7	10		100	20	7
191-24-2	BENZO(G,H,I)PERYLENE	60	59.3	10		99	20	7

Data Package ID: *SV1508348-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1508348
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Box Elder Creek

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	78		71		42 - 117
321-60-8	2-FLUOROBIPHENYL	50	79		78		55 - 108
367-12-4	2-FLUOROPHENOL	75	74		73		46 - 105
4165-60-0	NITROBENZENE-D5	50	78		74		53 - 111
4165-62-2	PHENOL-D5	75	79		75		50 - 109
1718-51-0	TERPHENYL-D14	50	89		86		34 - 139

Data Package ID: *SV1508348-1*

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5526.D Vial: 4
Acq On : 28 Aug 2015 12:37 Operator: twk SOP 506 Re
Sample : 8270 80ppm CCV Inst : HPSV-3
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:35 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 08:23:58 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	384613	40.00	ng/uL	0.00
25) Naphthalene-d8	6.42	136	1607669	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.96	164	618703	40.00	ng/uL	0.02
69) Phenanthrene-d10	9.24	188	777281	40.00	ng/uL	0.02
80) Chrysene-d12	11.50	240	402382	40.00	ng/uL	0.03
91) Perylene-d12	12.86	264	341674	40.00	ng/uL	0.04
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	1248400	82.48	ng/uL	-0.01
Spiked Amount 75.000	Range 46 - 105		Recovery = 109.97%#			
6) 2-Chlorophenol-d4	5.04	132	1232333	79.97	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 106.63%			
8) Phenol-d5	4.88	99	1523958	79.87	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 106.49%			
15) 1,2-Dichlorobenzene-d4	5.39	152	687686	77.43	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 154.86%#			
26) Nitrobenzene-d5	5.76	82	1321171	79.59	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 159.18%#			
46) 2-Fluorobiphenyl	7.35	172	1874506	81.18	ng/uL	0.02
Spiked Amount 50.000	Range 55 - 108		Recovery = 162.36%#			
68) 2,4,6-Tribromophenol	8.64	330	245850	77.64	ng/uL	0.02
Spiked Amount 75.000	Range 42 - 117		Recovery = 103.52%			
83) p-Terphenyl-d14	10.56	244	907450	83.50	ng/uL	0.03
Spiked Amount 50.000	Range 34 - 139		Recovery = 167.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.16	88	551978	81.84	ng/uL	100
3) Pyridine	2.54	79	1531457	82.53	ng/uL	97
4) n-Nitrosodimethylamine	2.50	74	880987	81.47	ng/uL	93
7) Aniline	4.92	93	1862076	82.07	ng/uL	95
9) Phenol	4.89	94	1627715m	81.22	ng/uL	
11) Bis(2-chloroethyl)ether	4.97	93	1399086	81.88	ng/uL	95
12) 2-Chlorophenol	5.05	128	1281612	80.43	ng/uL	99
13) 1,3-Dichlorobenzene	5.19	146	1302195	79.20	ng/uL	99
14) 1,4-Dichlorobenzene	5.26	146	1325476	79.27	ng/ul	99
16) 1,2-Dichlorobenzene	5.41	146	1238460	79.07	ng/uL	99
17) Benzyl Alcohol	5.36	108	885151	81.08	ng/uL	97
18) Bis(2-chloroisopropyl)ethe	5.48	45	2058583	90.17	ng/uL	97
19) 2-Methylphenol	5.46	107	1123068	80.66	ng/uL	99
20) n-Nitroso-di-n-propylamine	5.60	70	1002210	82.27	ng/uL	99
21) 3+4-Methylphenol	5.61	108	1240295	79.22	ng/uL	99
23) Hexachloroethane	5.72	117	551913	81.59	ng/uL	100

(#) = qualifier out of range (m) = manual integration

tw 8/28/15

Data File : E:\HPCHEM\1\DATA\082815\R5526.D
Acq On : 28 Aug 2015 12:37
Sample : 8270 80ppm CCV
Misc :
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:35 2015

Vial: 4
Operator: twk SOP 506 Re
Inst : HPSV-3
Multiplr: 1.00
Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 08:23:58 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	Nitrobenzene	5.78	123	625455	76.47	ng/uL	99
28)	Isophorone	5.99	82	2300844	79.25	ng/uL	99
30)	2-Nitrophenol	6.07	139	648686	78.38	ng/uL#	84
31)	2,4-Dimethylphenol	6.09	107	1268580	78.90	ng/uL	99
32)	Bis(2-chloroethoxy)methane	6.16	93	1468172	78.99	ng/uL	97
33)	2,4-Dichlorophenol	6.29	162	851339	77.00	ng/uL	97
34)	Benzoic acid	6.21	105	657615	74.43	ng/uL	96
35)	1,2,4-Trichlorobenzene	6.36	180	887837	77.89	ng/uL	100
36)	Naphthalene	6.44	128	3732033	81.03	ng/uL	100
37)	4-Chloroaniline	6.47	127	1346883	75.79	ng/uL	98
38)	Hexachlorobutadiene	6.54	225	440994	76.45	ng/uL	100
39)	4-Chloro-3-methylphenol	6.89	107	1015147	78.38	ng/uL	99
40)	2-Methylnaphthalene	7.05	142	2209273	76.89	ng/uL	100
41)	1-Methylnaphthalene	7.14	142	2028366	78.13	ng/uL	98
43)	Hexachlorocyclopentadiene	7.18	237	275462	74.97	ng/uL	98
44)	2,4,6-Trichlorophenol	7.29	196	452786	82.50	ng/uL	99
45)	2,4,5-Trichlorophenol	7.33	196	473832	82.84	ng/uL	98
47)	2-Chloronaphthalene	7.48	162	1749942	81.57	ng/uL	99
48)	2-Nitroaniline	7.55	65	574199	82.49	ng/uL	95
49)	1,4-Dinitrobenzene	7.66	168	238796	79.41	ng/uL	93
50)	Dimethylphthalate	7.69	163	1812299	78.68	ng/uL	100
51)	1,3-Dinitrobenzene	7.73	168	266579	78.36	ng/uL	88
52)	2,6-Dinitrotoluene	7.75	165	419945	77.63	ng/uL#	84
53)	1,2-Dinitrobenzene	7.81	168	184131	76.04	ng/uL	93
54)	Acenaphthylene	7.84	152	2588962	80.35	ng/uL	100
55)	3-Nitroaniline	7.91	138	433960	73.24	ng/uL	98
56)	Acenaphthene	7.99	154	1786482	81.04	ng/uL	99
57)	2,4-Dinitrophenol	7.99	184	147494	70.40	ng/uL	50
58)	4-Nitrophenol	8.04	109	170339	69.47	ng/uL	97
59)	Dibenzofuran	8.14	168	2227859	78.76	ng/uL	98
60)	2,4-Dinitrotoluene	8.10	165	492169	76.34	ng/uL	98
61)	2,3,5,6-Tetrachlorophenol	8.20	232	332035	79.15	ng/uL	99
62)	2,3,4,6-Tetrachlorophenol	8.24	232	340404	80.07	ng/uL	97
63)	Diethylphthalate	8.28	149	1734013	76.80	ng/uL	98
64)	Fluorene	8.43	166	1743749	77.22	ng/uL	100
65)	4-Chlorophenyl phenyl ethe	8.40	204	730046	76.18	ng/uL	97
66)	4-Nitroaniline	8.44	138	348949	68.04	ng/uL	97
67)	Azobenzene	8.54	77	2203550	81.57	ng/uL	99
70)	4,6-Dinitro-2-methylphenol	8.46	198	214408	78.99	ng/uL	96
71)	n-Nitrosodiphenylamine	8.50	169	1381736	85.53	ng/uL	99
72)	4-Bromophenyl phenyl ether	8.82	248	403100	85.00	ng/uL	98

(#) = qualifier out of range (m) = manual integration

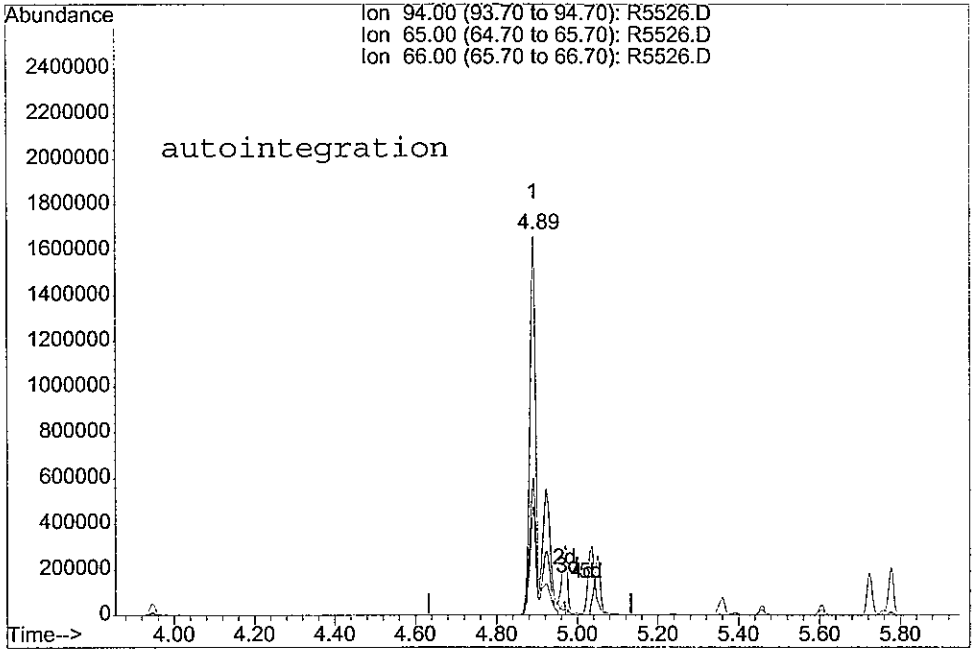
Data File : E:\HPCHEM\1\DATA\082815\R5526.D
Acq On : 28 Aug 2015 12:37
Sample : 8270 80ppm CCV
Misc :
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:35 2015

Vial: 4
Operator: twk SOP 506 Re
Inst : HPSV-3
Multiplr: 1.00
Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 08:23:58 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	Hexachlorobenzene	8.91	284	473193	83.74	ng/uL	99
74)	Pentachlorophenol	9.07	266	193513	76.90	ng/uL	98
75)	Phenanthrene	9.26	178	1993195	79.67	ng/uL	100
76)	Anthracene	9.30	178	1963671	80.84	ng/uL	100
77)	Carbazole	9.42	167	1628045	75.47	ng/uL	100
78)	Di-n-butylphthalate	9.65	149	2366764	73.05	ng/uL	99
79)	Fluoranthene	10.27	202	1505350	68.78	ng/uL	99
81)	Benzidine	10.35	184	615546	83.26	ng/uL	99
82)	Pyrene	10.47	202	1523585	87.66	ng/uL	99
84)	Butylbenzylphthalate	10.94	149	718573	82.72	ng/uL	99
85)	Bis(2-ethylhexyl) adipate	10.96	129	688406	80.96	ng/uL	96
86)	Benzo[a]anthracene	11.49	228	1001922	81.22	ng/uL	99
87)	3,3'-Dichlorobenzidine	11.44	252	324158	82.17	ng/uL	98
88)	Chrysene	11.53	228	930934	79.46	ng/uL	99
89)	Bis(2-ethylhexyl)phthalate	11.40	149	942391	82.28	ng/uL	99
90)	Di-n-octylphthalate	11.94	149	1384693	86.13	ng/uL	97
92)	Benzo[b]fluoranthene	12.46	252	899026	79.72	ng/uL	98
93)	Benzo[k]fluoranthene	12.49	252	818175	78.90	ng/uL	99
94)	Benzo[a]pyrene	12.81	252	785305	81.43	ng/uL	99
95)	Indeno(1,2,3-c,d)pyrene	14.18	276	770524	98.61	ng/uL	98
96)	Dibenzo[a,h]anthracene	14.17	278	630318	98.43	ng/uL	99
97)	Benzo[g,h,i]perylene	14.57	276	656455	100.96	ng/uL	98

(#) = qualifier out of range (m) = manual integration



TIC: R5526.D

(9) Phenol (TMC)
4.89min 91.94ng/uL
response 1842627

Ion	Exp%	Act%
94.00	100	100
65.00	28.00	26.06
66.00	39.50	35.10
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

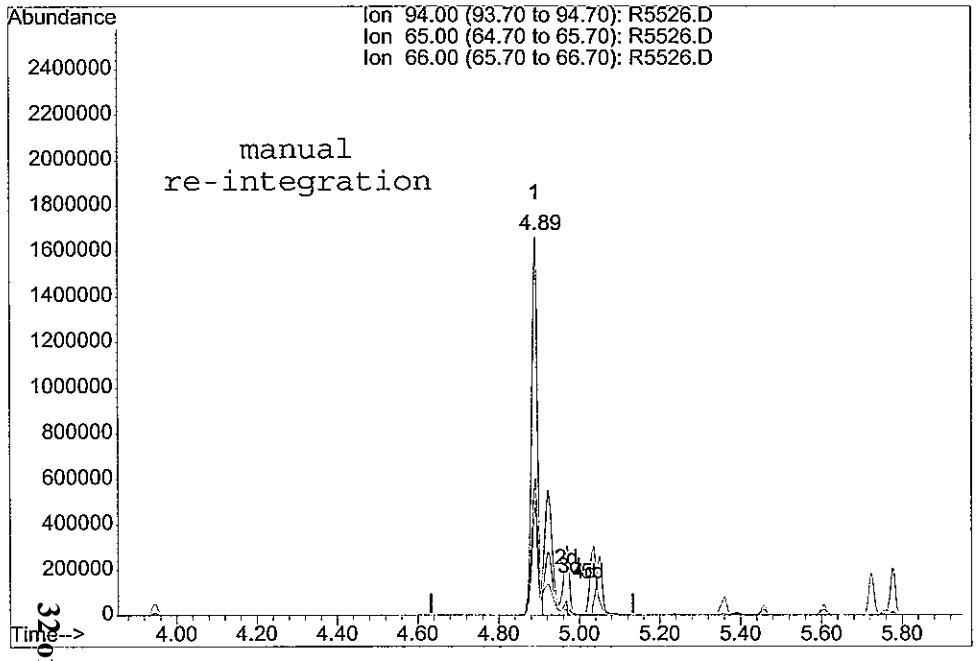
[] peak saturation (detector shutdown)

[X] over-integrated peak's area

[] under-integrated peak's area

[] other (_____)

initials: TM date: 8/28/15



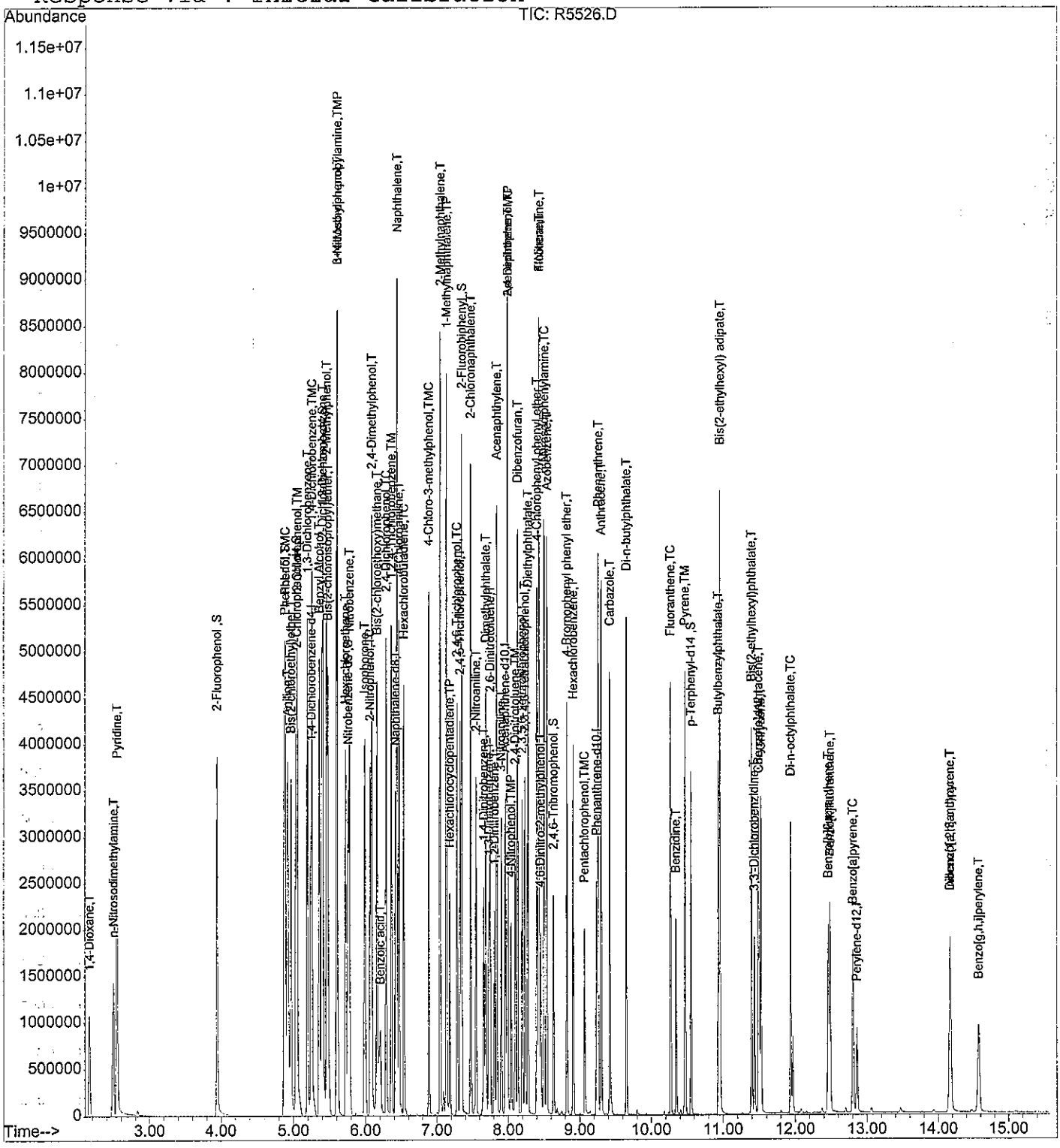
TIC: R5526.D

(9) Phenol (TMC)
4.89min 81.22ng/uL m
response 1627715

Ion	Exp%	Act%
94.00	100	100
65.00	28.00	29.50
66.00	39.50	39.74
0.00	0.00	0.00

Data File : E:\HPCHEM\1\DATA\082815\R5526.D Vial: 4
Acq On : 28 Aug 2015 12:37 Operator: twk SOP 506
Sample : 8270 80ppm CCV Inst : HPSV-3
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:35 2015 Quant Results File: 082115S3.RES

Method : C:\HPCHEM\1\METHODS\08215S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 08:23:58 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5528.D Vial: 6
Acq On : 28 Aug 2015 13:30 Operator: twk SOP 506 Re
Sample : EX150826-1LCS Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:37 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	369638	40.00	ng/uL	0.00
25) Naphthalene-d8	6.42	136	1593426	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.96	164	639754	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.23	188	849579	40.00	ng/uL	0.00
80) Chrysene-d12	11.50	240	465254	40.00	ng/uL	0.00
91) Perylene-d12	12.85	264	310785	40.00	ng/uL	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	806952	55.47	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 73.96%			
6) 2-Chlorophenol-d4	5.03	132	859644	58.04	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 77.39%			
8) Phenol-d5	4.87	99	1088079	59.34	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 79.12%			
15) 1,2-Dichlorobenzene-d4	5.39	152	321568	37.67	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 75.34%			
26) Nitrobenzene-d5	5.75	82	640652	38.94	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 77.88%			
46) 2-Fluorobiphenyl	7.35	172	942156	39.46	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 78.92%			
68) 2,4,6-Tribromophenol	8.63	330	192615	58.82	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 78.43%			
83) p-Terphenyl-d14	10.55	244	560605	44.61	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 89.22%			
Target Compounds						Qvalue
3) Pyridine	2.55	79	683727	38.34	ng/uL	99
4) n-Nitrosodimethylamine	2.50	74	476863	45.88	ng/uL	97
7) Aniline	4.92	93	1134760	52.04	ng/uL	97
9) Phenol	4.88	94	904265	46.95	ng/uL	99
11) Bis(2-chloroethyl)ether	4.96	93	725221	44.16	ng/uL	99
12) 2-Chlorophenol	5.05	128	687152	44.87	ng/uL	98
13) 1,3-Dichlorobenzene	5.19	146	635060	40.19	ng/uL	99
14) 1,4-Dichlorobenzene	5.25	146	672525	41.85	ng/ul	99
16) 1,2-Dichlorobenzene	5.40	146	592209	39.34	ng/uL	100
17) Benzyl Alcohol	5.35	108	484204	46.15	ng/uL	97
18) Bis(2-chloroisopropyl)ethe	5.47	45	1035170	47.18	ng/uL	98
19) 2-Methylphenol	5.45	107	616536	46.07	ng/uL	99
20) n-Nitroso-di-n-propylamine	5.59	70	562782	48.07	ng/uL	100
21) 3+4-Methylphenol	5.60	108	705717	46.90	ng/uL	100
23) Hexachloroethane	5.72	117	259118	39.86	ng/uL	99
27) Nitrobenzene	5.77	123	346099	42.69	ng/uL	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5528.D Vial: 6
Acq On : 28 Aug 2015 13:30 Operator: twk SOP 506 Re
Sample : EX150826-1LCS Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:37 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28)	Isophorone	5.98	82	1341434	46.61	ng/uL	99
30)	2-Nitrophenol	6.06	139	359541	43.83	ng/uL	99
31)	2,4-Dimethylphenol	6.08	107	698175	43.81	ng/uL	99
32)	Bis(2-chloroethoxy)methane	6.16	93	827130	44.90	ng/uL	100
33)	2,4-Dichlorophenol	6.29	162	474900	43.34	ng/uL	99
35)	1,2,4-Trichlorobenzene	6.36	180	449270	39.77	ng/uL	99
36)	Naphthalene	6.44	128	1983444	43.45	ng/uL	99
37)	4-Chloroaniline	6.47	127	770406	43.74	ng/uL	99
38)	Hexachlorobutadiene	6.54	225	211164	36.94	ng/uL	100
39)	4-Chloro-3-methylphenol	6.89	107	595439	46.38	ng/uL	99
40)	2-Methylnaphthalene	7.05	142	1198380	42.08	ng/uL	99
41)	1-Methylnaphthalene	7.14	142	1080004	41.97	ng/uL	100
43)	Hexachlorocyclopentadiene	7.18	237	38916	14.74	ng/uL	96
44)	2,4,6-Trichlorophenol	7.29	196	262548	46.26	ng/uL	100
45)	2,4,5-Trichlorophenol	7.33	196	272094	46.00	ng/uL	98
47)	2-Chloronaphthalene	7.47	162	971760	43.81	ng/uL	100
48)	2-Nitroaniline	7.55	65	323700	44.98	ng/uL	99
49)	1,4-Dinitrobenzene	7.66	168	144131	46.35	ng/uL	98
50)	Dimethylphthalate	7.68	163	1085826	45.59	ng/uL	100
51)	1,3-Dinitrobenzene	7.73	168	161414	45.88	ng/uL	91
52)	2,6-Dinitrotoluene	7.75	165	253221	45.27	ng/uL	87
53)	1,2-Dinitrobenzene	7.81	168	108135	43.19	ng/uL	97
54)	Acenaphthylene	7.84	152	1649567	49.51	ng/uL	99
55)	3-Nitroaniline	7.90	138	269800	44.03	ng/uL	97
56)	Acenaphthene	7.99	154	1037741	45.53	ng/uL	100
57)	2,4-Dinitrophenol	7.99	184	71623	42.84	ng/uL	58
58)	4-Nitrophenol	8.04	109	99741	39.34	ng/uL	99
59)	Dibenzofuran	8.13	168	1310385	44.80	ng/uL	100
60)	2,4-Dinitrotoluene	8.10	165	295787	44.37	ng/uL	99
61)	2,3,5,6-Tetrachlorophenol	8.20	232	323324	74.54	ng/uL	99
62)	2,3,4,6-Tetrachlorophenol	8.23	232	330545	75.19	ng/uL	99
63)	Diethylphthalate	8.28	149	1058402	45.33	ng/uL	100
64)	Fluorene	8.43	166	1050229	44.98	ng/uL	100
65)	4-Chlorophenyl phenyl ethe	8.40	204	429962	43.39	ng/uL	98
66)	4-Nitroaniline	8.43	138	224371	42.31	ng/uL	98
67)	Azobenzene	8.54	77	1293016	46.29	ng/uL	99
70)	4,6-Dinitro-2-methylphenol	8.45	198	126947	48.58	ng/uL	99
71)	n-Nitrosodiphenylamine	8.50	169	746447	42.27	ng/uL	99
72)	4-Bromophenyl phenyl ether	8.82	248	247261	47.70	ng/uL	100
73)	Hexachlorobenzene	8.91	284	292181	47.31	ng/uL	99
74)	Pentachlorophenol	9.07	266	98331	45.85	ng/uL	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5528.D Vial: 6
Acq On : 28 Aug 2015 13:30 Operator: twk SOP 506 Re
Sample : EX150826-1LCS Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:37 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

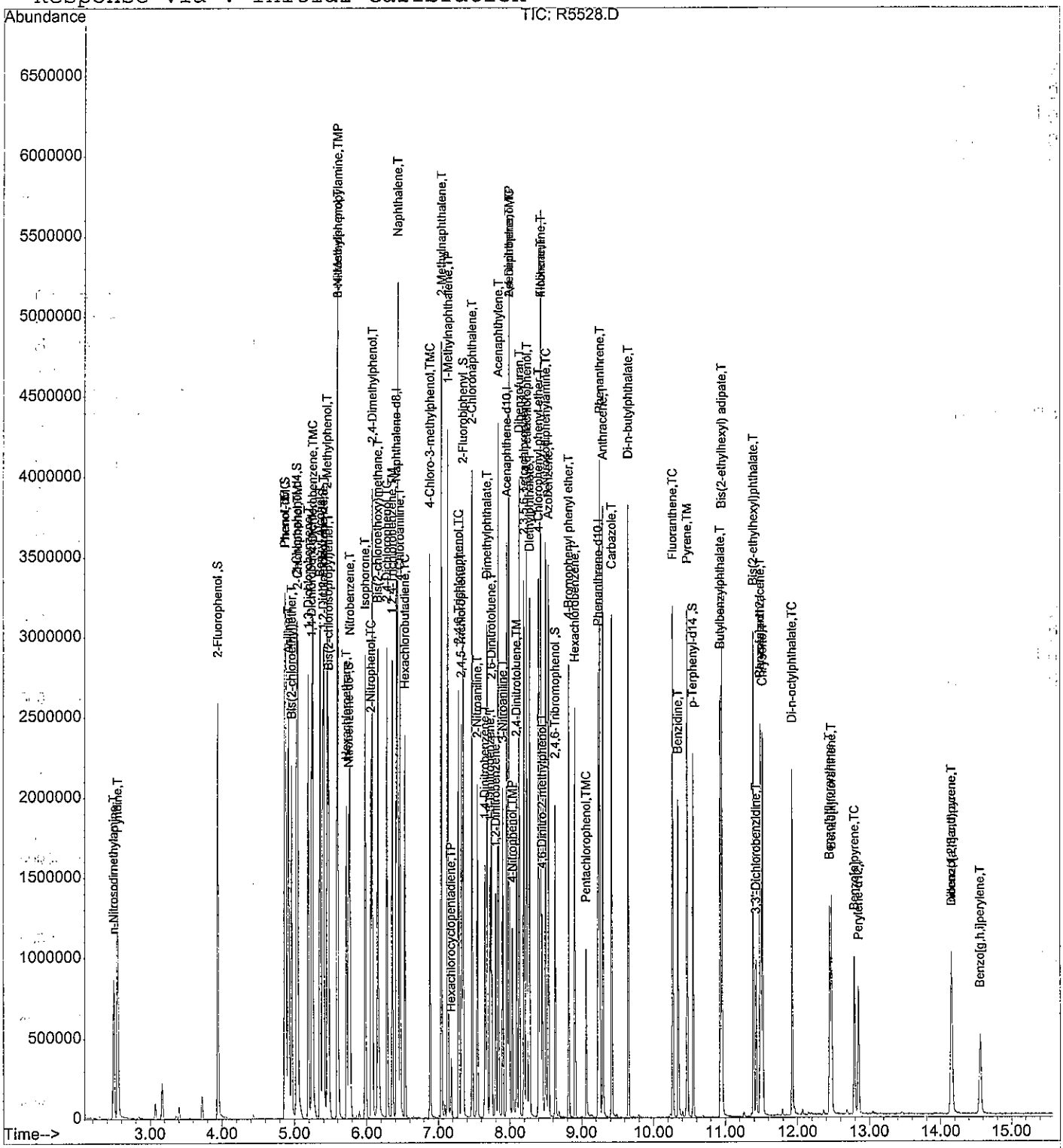
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75) Phenanthrene	9.26	178	1266059	46.30	ng/uL	99
76) Anthracene	9.30	178	1238899	46.66	ng/uL	100
77) Carbazole	9.42	167	1046415	44.38	ng/uL	100
78) Di-n-butylphthalate	9.65	149	1596833	45.09	ng/uL	100
79) Fluoranthene	10.27	202	1029795	43.05	ng/uL	99
81) Benzidine	10.35	184	600868	70.29	ng/uL	99
82) Pyrene	10.47	202	1031496	51.33	ng/uL	100
84) Butylbenzylphthalate	10.93	149	503090	50.09	ng/uL	99
85) Bis(2-ethylhexyl) adipate	10.96	129	505905	51.46	ng/uL	100
86) Benzo[a]anthracene	11.48	228	670032	46.97	ng/uL	99
87) 3,3'-Dichlorobenzidine	11.43	252	161829	35.48	ng/uL	97
88) Chrysene	11.52	228	644595	47.58	ng/uL	99
89) Bis(2-ethylhexyl)phthalate	11.39	149	662079	49.99	ng/uL	99
90) Di-n-octylphthalate	11.93	149	921857	49.59	ng/uL	100
92) Benzo[b]fluoranthene	12.45	252	515217	50.23	ng/uL	98
93) Benzo[k]fluoranthene	12.47	252	514950	54.59	ng/uL	99
94) Benzo[a]pyrene	12.79	252	421153	48.01	ng/uL	100
95) Indeno(1,2,3-c,d)pyrene	14.16	276	384273	54.06	ng/uL	99
96) Dibenzo[a,h]anthracene	14.15	278	324155	55.65	ng/uL	95
97) Benzo[g,h,i]perylene	14.56	276	326722	55.24	ng/uL	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : E:\HPCHEM\1\DATA\082815\R5528.D Vial: 6
Acq On : 28 Aug 2015 13:30 Operator: twk SOP 506
Sample : EX150826-1LCS Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:37 2015 Quant Results File: 082115S3.RES

Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5529.D Vial: 7
Acq On : 28 Aug 2015 13:52 Operator: twk SOP 506 Re
Sample : EX150826-1LCSD Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:39 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	365754	40.00	ng/uL	0.00
25) Naphthalene-d8	6.42	136	1538344	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.96	164	596597	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.23	188	736960	40.00	ng/uL	0.00
80) Chrysene-d12	11.49	240	359347	40.00	ng/uL	-0.01
91) Perylene-d12	12.84	264	275919	40.00	ng/uL	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	787852	54.74	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 72.99%			
6) 2-Chlorophenol-d4	5.03	132	810159	55.28	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 73.71%			
8) Phenol-d5	4.87	99	1014115	55.89	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 74.52%			
15) 1,2-Dichlorobenzene-d4	5.39	152	305496	36.17	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 72.34%			
26) Nitrobenzene-d5	5.75	82	588387	37.04	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 74.08%			
46) 2-Fluorobiphenyl	7.35	172	869621	39.06	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 78.12%			
68) 2,4,6-Tribromophenol	8.63	330	163223	53.45	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 71.27%			
83) p-Terphenyl-d14	10.55	244	416564	42.92	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 85.84%			
Target Compounds						Qvalue
3) Pyridine	2.54	79	576796	32.68	ng/uL	99
4) n-Nitrosodimethylamine	2.49	74	444391	43.21	ng/uL	97
7) Aniline	4.92	93	1056294	48.96	ng/uL	98
9) Phenol	4.88	94	827052	43.40	ng/uL	99
11) Bis(2-chloroethyl)ether	4.96	93	694154	42.72	ng/uL	100
12) 2-Chlorophenol	5.04	128	657429	43.38	ng/uL	100
13) 1,3-Dichlorobenzene	5.19	146	620209	39.66	ng/uL	99
14) 1,4-Dichlorobenzene	5.25	146	643709	40.48	ng/ul	99
16) 1,2-Dichlorobenzene	5.40	146	566088	38.00	ng/uL	99
17) Benzyl Alcohol	5.35	108	459901	44.30	ng/uL	95
18) Bis(2-chloroisopropyl)ethe	5.47	45	953805	43.93	ng/uL	97
19) 2-Methylphenol	5.45	107	574638	43.40	ng/uL	99
20) n-Nitroso-di-n-propylamine	5.60	70	523992	45.23	ng/uL	99
21) 3+4-Methylphenol	5.60	108	663450	44.56	ng/uL	99
23) Hexachloroethane	5.72	117	251954	39.17	ng/uL	99
27) Nitrobenzene	5.77	123	324206	41.42	ng/uL	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5529.D Vial: 7
Acq On : 28 Aug 2015 13:52 Operator: twk SOP 506 Re
Sample : EX150826-1LCSD Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:39 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	365754	40.00	ng/uL	0.00
25) Naphthalene-d8	6.42	136	1538344	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.96	164	596597	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.23	188	736960	40.00	ng/uL	0.00
80) Chrysene-d12	11.49	240	359347	40.00	ng/uL	-0.01
91) Perylene-d12	12.84	264	275919	40.00	ng/uL	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	787852	54.74	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 72.99%			
6) 2-Chlorophenol-d4	5.03	132	810159	55.28	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 73.71%			
8) Phenol-d5	4.87	99	1014115	55.89	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 74.52%			
15) 1,2-Dichlorobenzene-d4	5.39	152	305496	36.17	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 72.34%			
26) Nitrobenzene-d5	5.75	82	588387	37.04	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 74.08%			
46) 2-Fluorobiphenyl	7.35	172	869621	39.06	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 78.12%			
68) 2,4,6-Tribromophenol	8.63	330	163223	53.45	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 71.27%			
83) p-Terphenyl-d14	10.55	244	416564	42.92	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 85.84%			
Target Compounds						Qvalue
3) Pyridine	2.54	79	576796	32.68	ng/uL	99
4) n-Nitrosodimethylamine	2.49	74	444391	43.21	ng/uL	97
7) Aniline	4.92	93	1056294	48.96	ng/uL	98
9) Phenol	4.88	94	827052	43.40	ng/uL	99
11) Bis(2-chloroethyl)ether	4.96	93	694154	42.72	ng/uL	100
12) 2-Chlorophenol	5.04	128	657429	43.38	ng/uL	100
13) 1,3-Dichlorobenzene	5.19	146	620209	39.66	ng/uL	99
14) 1,4-Dichlorobenzene	5.25	146	643709	40.48	ng/ul	99
16) 1,2-Dichlorobenzene	5.40	146	566088	38.00	ng/uL	99
17) Benzyl Alcohol	5.35	108	459901	44.30	ng/uL	95
18) Bis(2-chloroisopropyl)ethe	5.47	45	953805	43.93	ng/uL	97
19) 2-Methylphenol	5.45	107	574638	43.40	ng/uL	99
20) n-Nitroso-di-n-propylamine	5.60	70	523992	45.23	ng/uL	99
21) 3+4-Methylphenol	5.60	108	663450	44.56	ng/uL	99
23) Hexachloroethane	5.72	117	251954	39.17	ng/uL	99
27) Nitrobenzene	5.77	123	324206	41.42	ng/uL	97

(#) = qualifier out of range (m) = manual integration

tw 8/30/15

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5529.D Vial: 7
Acq On : 28 Aug 2015 13:52 Operator: twk SOP 506 Re
Sample : EX150826-1LCSD Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:39 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28)	Isophorone	5.98	82	1248737	44.95	ng/uL	99
30)	2-Nitrophenol	6.06	139	334336	42.22	ng/uL	87
31)	2,4-Dimethylphenol	6.08	107	628073	40.83	ng/uL	98
32)	Bis(2-chloroethoxy)methane	6.16	93	757556	42.60	ng/uL	99
33)	2,4-Dichlorophenol	6.29	162	449216	42.46	ng/uL	99
34)	Benzoic acid	6.16	105	94141	19.01	ng/uL	91
35)	1,2,4-Trichlorobenzene	6.36	180	420640	38.57	ng/uL	99
36)	Naphthalene	6.44	128	1838610	41.72	ng/uL	99
37)	4-Chloroaniline	6.47	127	736245	43.29	ng/uL	99
38)	Hexachlorobutadiene	6.53	225	201667	36.54	ng/uL	100
39)	4-Chloro-3-methylphenol	6.89	107	535095	43.18	ng/uL	98
40)	2-Methylnaphthalene	7.05	142	1103551	40.14	ng/uL	100
41)	1-Methylnaphthalene	7.13	142	1001132	40.30	ng/uL	99
43)	Hexachlorocyclopentadiene	7.18	237	37965	15.19	ng/uL	96
44)	2,4,6-Trichlorophenol	7.28	196	242615	45.85	ng/uL	99
45)	2,4,5-Trichlorophenol	7.32	196	249835	45.30	ng/uL	98
47)	2-Chloronaphthalene	7.47	162	902852	43.64	ng/uL	100
48)	2-Nitroaniline	7.55	65	286372	42.67	ng/uL	99
49)	1,4-Dinitrobenzene	7.66	168	125683	43.35	ng/uL	98
50)	Dimethylphthalate	7.68	163	982397	44.23	ng/uL	99
51)	1,3-Dinitrobenzene	7.73	168	140724	42.90	ng/uL	89
52)	2,6-Dinitrotoluene	7.75	165	231357	44.35	ng/uL#	83
53)	1,2-Dinitrobenzene	7.80	168	98874	42.34	ng/uL	99
54)	Acenaphthylene	7.84	152	1507780	48.53	ng/uL	100
55)	3-Nitroaniline	7.90	138	226393	39.62	ng/uL	97
56)	Acenaphthene	7.99	154	940606	44.25	ng/uL	99
57)	2,4-Dinitrophenol	7.99	184	55477	37.84	ng/uL#	15
58)	4-Nitrophenol	8.04	109	76656	32.42	ng/uL	94
59)	Dibenzofuran	8.13	168	1179633	43.25	ng/uL	100
60)	2,4-Dinitrotoluene	8.10	165	258734	41.62	ng/uL	99
61)	2,3,5,6-Tetrachlorophenol	8.20	232	277887	68.70	ng/uL	99
62)	2,3,4,6-Tetrachlorophenol	8.23	232	285688	69.69	ng/uL	98
63)	Diethylphthalate	8.27	149	918925	42.21	ng/uL	99
64)	Fluorene	8.43	166	937321	43.05	ng/uL	100
65)	4-Chlorophenyl phenyl ethe	8.40	204	391428	42.36	ng/uL	99
66)	4-Nitroaniline	8.43	138	180561	36.51	ng/uL	96
67)	Azobenzene	8.54	77	1119800	42.99	ng/uL	99
70)	4,6-Dinitro-2-methylphenol	8.45	198	101645	45.54	ng/uL	99
71)	n-Nitrosodiphenylamine	8.50	169	656586	42.87	ng/uL	99
72)	4-Bromophenyl phenyl ether	8.82	248	213374	47.45	ng/uL	100
73)	Hexachlorobenzene	8.91	284	255251	47.64	ng/uL	99

(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\082815\R5529.D Vial: 7
Acq On : 28 Aug 2015 13:52 Operator: twk SOP 506 Re
Sample : EX150826-1LCSD Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:39 2015 Quant Results File: 082115S3.RES

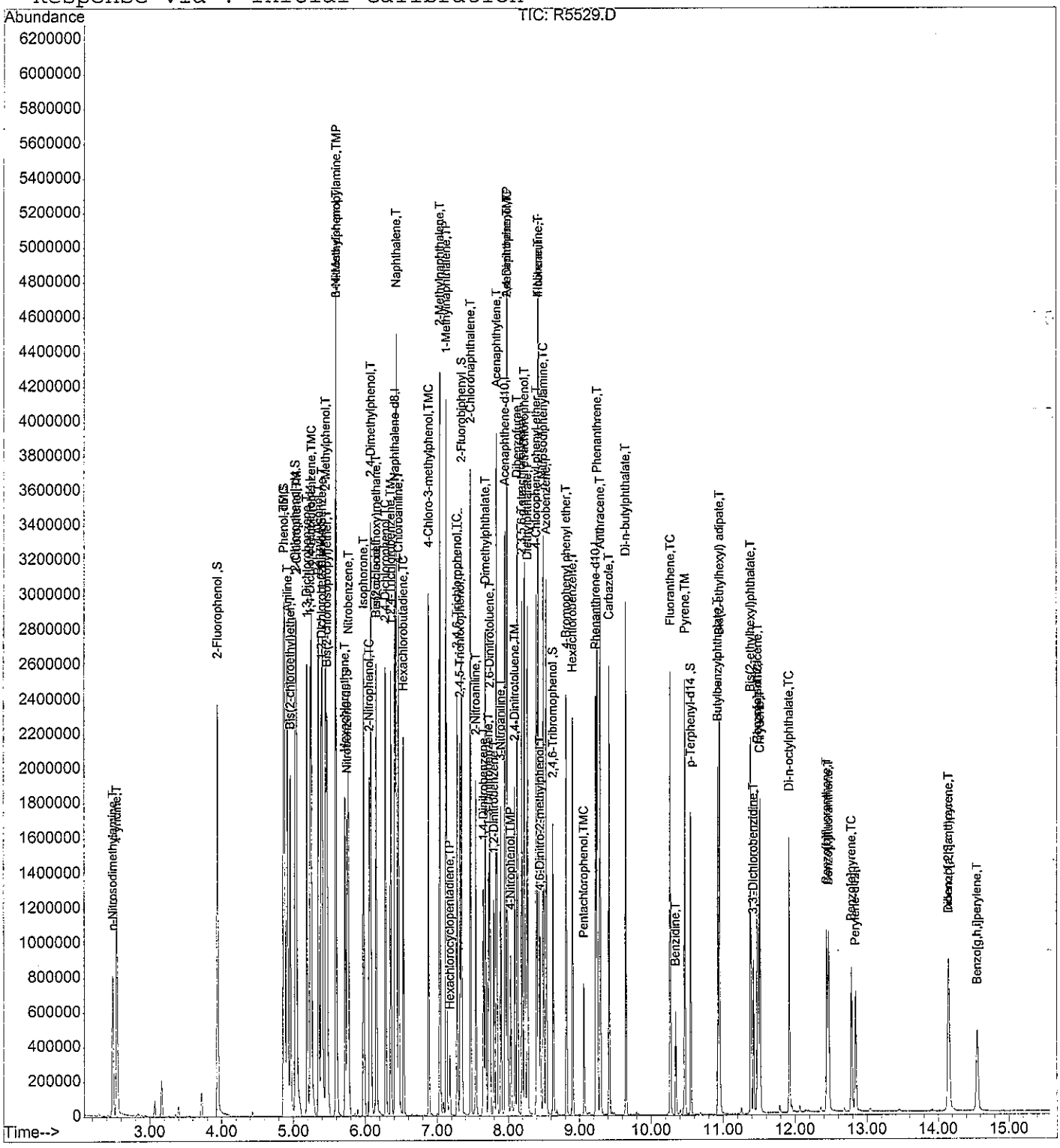
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74) Pentachlorophenol	9.07	266	71582	40.60	ng/uL	98
75) Phenanthrene	9.25	178	1055311	44.49	ng/uL	100
76) Anthracene	9.30	178	1018680	44.23	ng/uL	99
77) Carbazole	9.42	167	832011	40.68	ng/uL	100
78) Di-n-butylphthalate	9.65	149	1267127	41.25	ng/uL	100
79) Fluoranthene	10.27	202	804321	38.76	ng/uL	100
81) Benzidine	10.34	184	187663	28.42	ng/uL	99
82) Pyrene	10.47	202	800867	51.60	ng/uL	99
84) Butylbenzylphthalate	10.93	149	372709	48.04	ng/uL	98
85) Bis(2-ethylhexyl) adipate	10.95	129	365410	48.12	ng/uL	99
86) Benzo[a]anthracene	11.48	228	498795	45.28	ng/uL	99
87) 3,3'-Dichlorobenzidine	11.43	252	151541	43.02	ng/uL	99
88) Chrysene	11.52	228	473222	45.23	ng/uL	100
89) Bis(2-ethylhexyl)phthalate	11.39	149	477392	46.67	ng/uL	99
90) Di-n-octylphthalate	11.92	149	678057	47.23	ng/uL	99
92) Benzo[b]fluoranthene	12.44	252	454529	49.91	ng/uL	99
93) Benzo[k]fluoranthene	12.47	252	377738	45.11	ng/uL	98
94) Benzo[a]pyrene	12.79	252	347246	44.58	ng/uL	99
95) Indeno(1,2,3-c,d)pyrene	14.15	276	362901	57.51	ng/uL	98
96) Dibenzo[a,h]anthracene	14.15	278	308897	59.73	ng/uL	96
97) Benzo[g,h,i]perylene	14.55	276	311248	59.27	ng/uL	99

(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\082815\R5529.D Vial: 7
Acq On : 28 Aug 2015 13:52 Operator: twk SOP 506
Sample : EX150826-1LCSD Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:39 2015 Quant Results File: 082115S3.RES

Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 29 11:50:51 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5527.D Vial: 5
Acq On : 28 Aug 2015 13:07 Operator: twk SOP 506 Re
Sample : EX150826-1MB Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:36 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	371681	40.00	ng/uL	0.00
25) Naphthalene-d8	6.42	136	1577160	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.96	164	632132	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.23	188	845248	40.00	ng/uL	0.00
80) Chrysene-d12	11.50	240	456045	40.00	ng/uL	0.00
91) Perylene-d12	12.87	264	342286	40.00	ng/uL	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	796873	54.48	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 72.64%			
6) 2-Chlorophenol-d4	5.03	132	858299	57.63	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 76.84%			
8) Phenol-d5	4.86	99	1076456	58.38	ng/uL	-0.01
Spiked Amount 75.000	Range 50 - 109		Recovery = 77.84%			
15) 1,2-Dichlorobenzene-d4	5.39	152	314097	36.60	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 73.20%			
26) Nitrobenzene-d5	5.75	82	632201	38.82	ng/uL	-0.01
Spiked Amount 50.000	Range 53 - 111		Recovery = 77.64%			
46) 2-Fluorobiphenyl	7.35	172	907687	38.47	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 76.94%			
68) 2,4,6-Tribromophenol	8.63	330	162845	50.33	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 67.11%			
83) p-Terphenyl-d14	10.56	244	544559	44.21	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 88.42%			

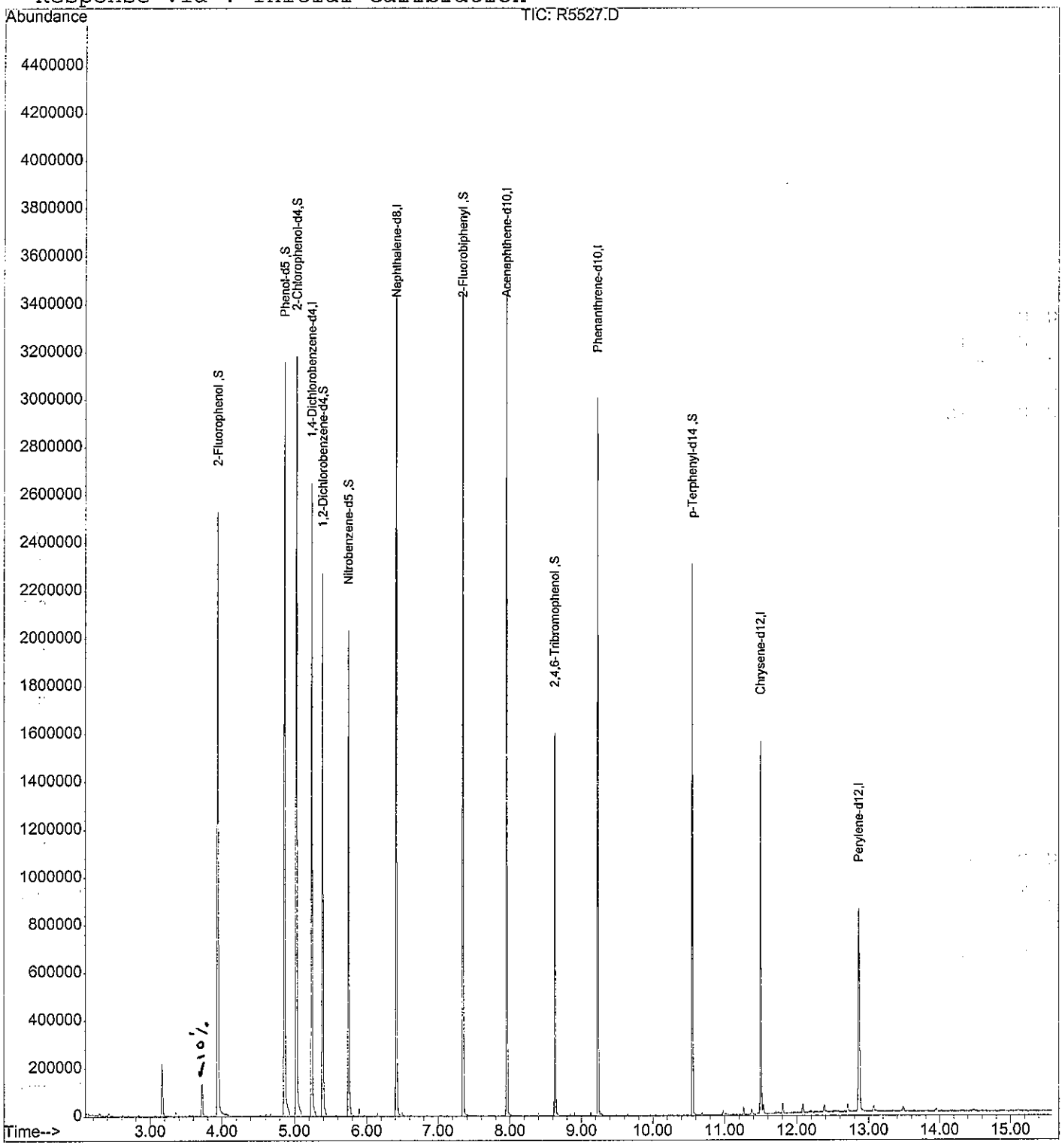
Target Compounds Qvalue

8/28/15

(#) = qualifier out of range (m) = manual integration
R5527.D 082115S3.M Fri Aug 28 17:36:58 2015 Page 1

Data File : E:\HPCHEM\1\DATA\082815\R5527.D Vial: 5
Acq On : 28 Aug 2015 13:07 Operator: twk SOP 506
Sample : EX150826-1MB Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:36 2015 Quant Results File: 082115S3.RES

Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5527.D
Acq On : 28 Aug 2015 13:07
Sample : EX150826-1MB
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 5
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

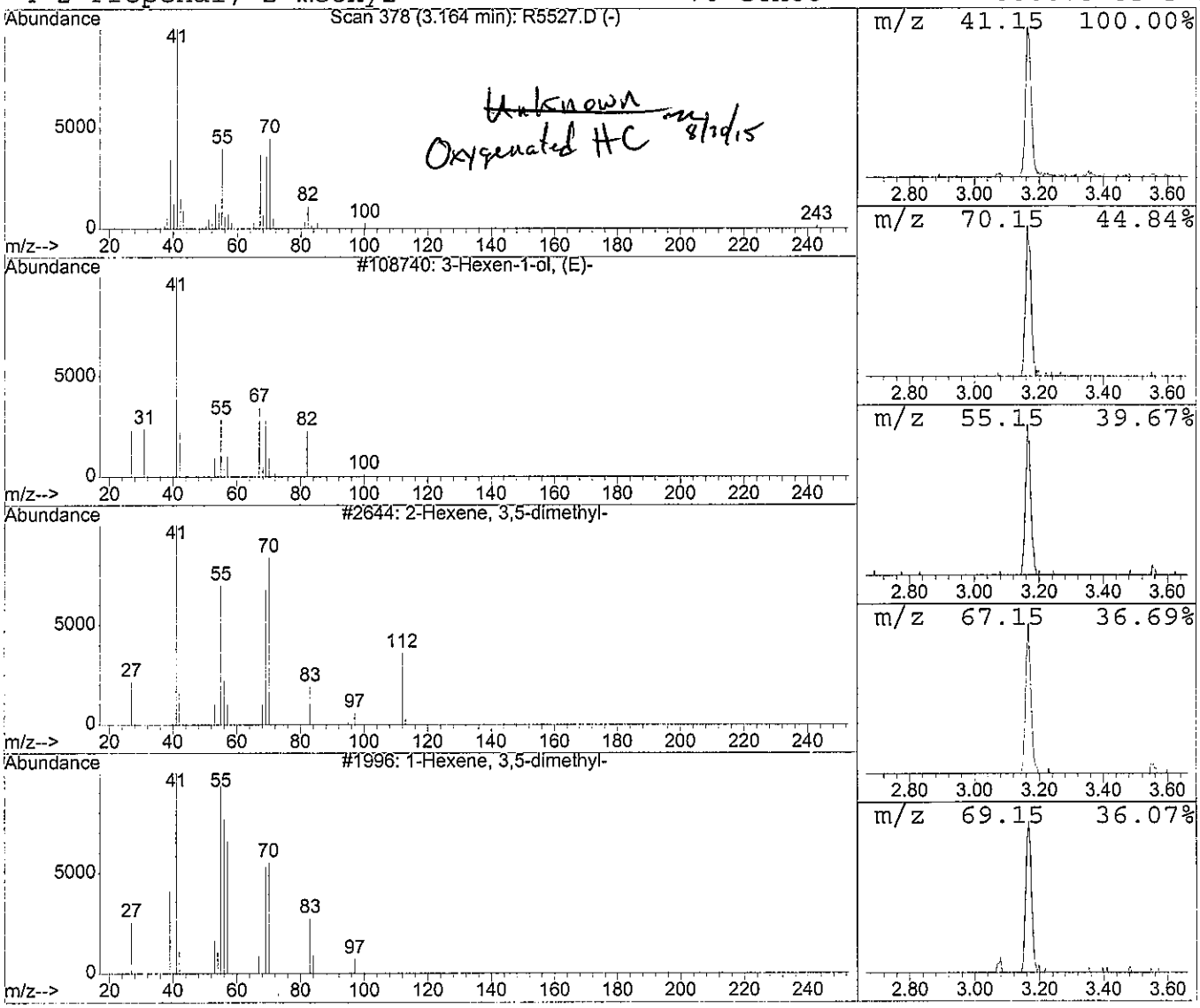
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

****

Peak Number 1 3-Hexen-1-ol, (E)- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.16	4.54 ng/uL	280327	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexen-1-ol, (E)-	100	C6H12O	000928-97-2	43
2	2-Hexene, 3,5-dimethyl-	112	C8H16	003404-79-3	42
3	1-Hexene, 3,5-dimethyl-	112	C8H16	007423-69-0	40
4	2-Propenal, 2-methyl-	70	C4H6O	000078-85-3	38



Quantitation Report (Not Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5530.D Vial: 8
Acq On : 28 Aug 2015 14:15 Operator: twk SOP 506 Re
Sample : 1508348-1 Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:40 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	370250	40.00	ng/uL	0.00
25) Naphthalene-d8	6.41	136	1561661	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.96	164	615833	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.23	188	775283	40.00	ng/uL	0.00
80) Chrysene-d12	11.49	240	402148	40.00	ng/uL	0.00
91) Perylene-d12	12.85	264	270329	40.00	ng/uL	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	796606	54.67	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 72.89%			
6) 2-Chlorophenol-d4	5.03	132	821723	55.39	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 73.85%			
8) Phenol-d5	4.87	99	1029825	56.07	ng/uL	-0.01
Spiked Amount 75.000	Range 50 - 109		Recovery = 74.76%			
15) 1,2-Dichlorobenzene-d4	5.39	152	322593	37.73	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 75.46%			
26) Nitrobenzene-d5	5.75	82	605011	37.52	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 75.04%			
46) 2-Fluorobiphenyl	7.35	172	875954	38.11	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 76.22%			
68) 2,4,6-Tribromophenol	8.63	330	159339	50.55	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 67.40%			
83) p-Terphenyl-d14	10.55	244	414854	38.19	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 76.38%			

Target Compounds Qvalue

Tm 9/28/15

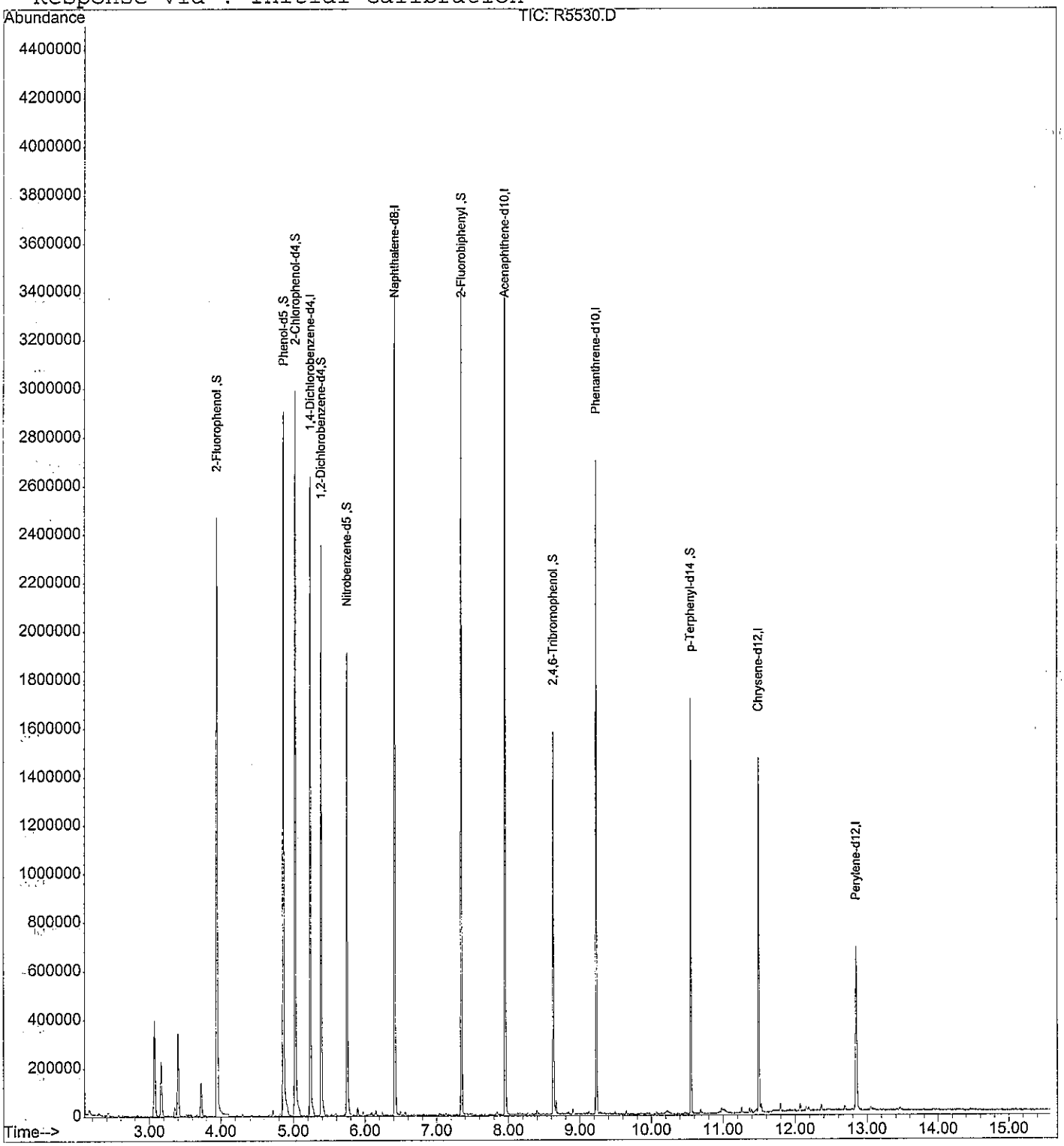
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : E:\HPCHEM\1\DATA\082815\R5530.D
Acq On : 28 Aug 2015 14:15
Sample : 1508348-1
Misc : EX150826-1 WATER
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:40 2015

Vial: 8
Operator: twk SOP 506
Inst : HPSV-3
Multiplr: 1.00
Quant Results File: 082115S3.RES

Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5530.D
Acq On : 28 Aug 2015 14:15
Sample : 1508348-1
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 8
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

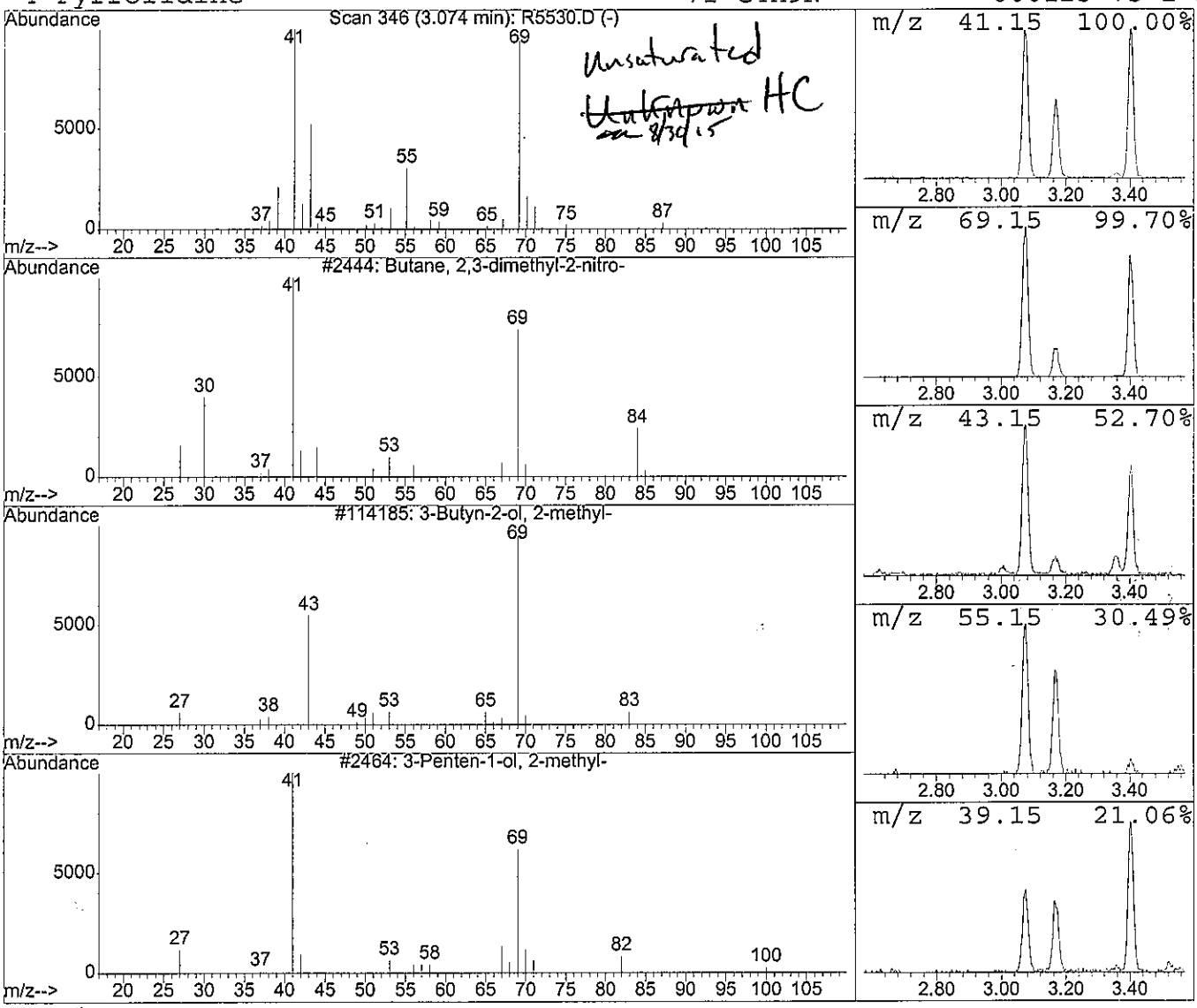
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

****

Peak Number 1 Butane, 2,3-dimethyl-2-nitro- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.07	8.31 ng/uL	502710	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,3-dimethyl-2-nitro-	131	C6H13NO2	034075-28-0	39
2	3-Butyn-2-ol, 2-methyl-	84	C5H8O	000115-19-5	38
3	3-Penten-1-ol, 2-methyl-	100	C6H12O	062238-37-3	17
4	Pyrrolidine	71	C4H9N	000123-75-1	11



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5530.D
Acq On : 28 Aug 2015 14:15
Sample : 1508348-1
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 8
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

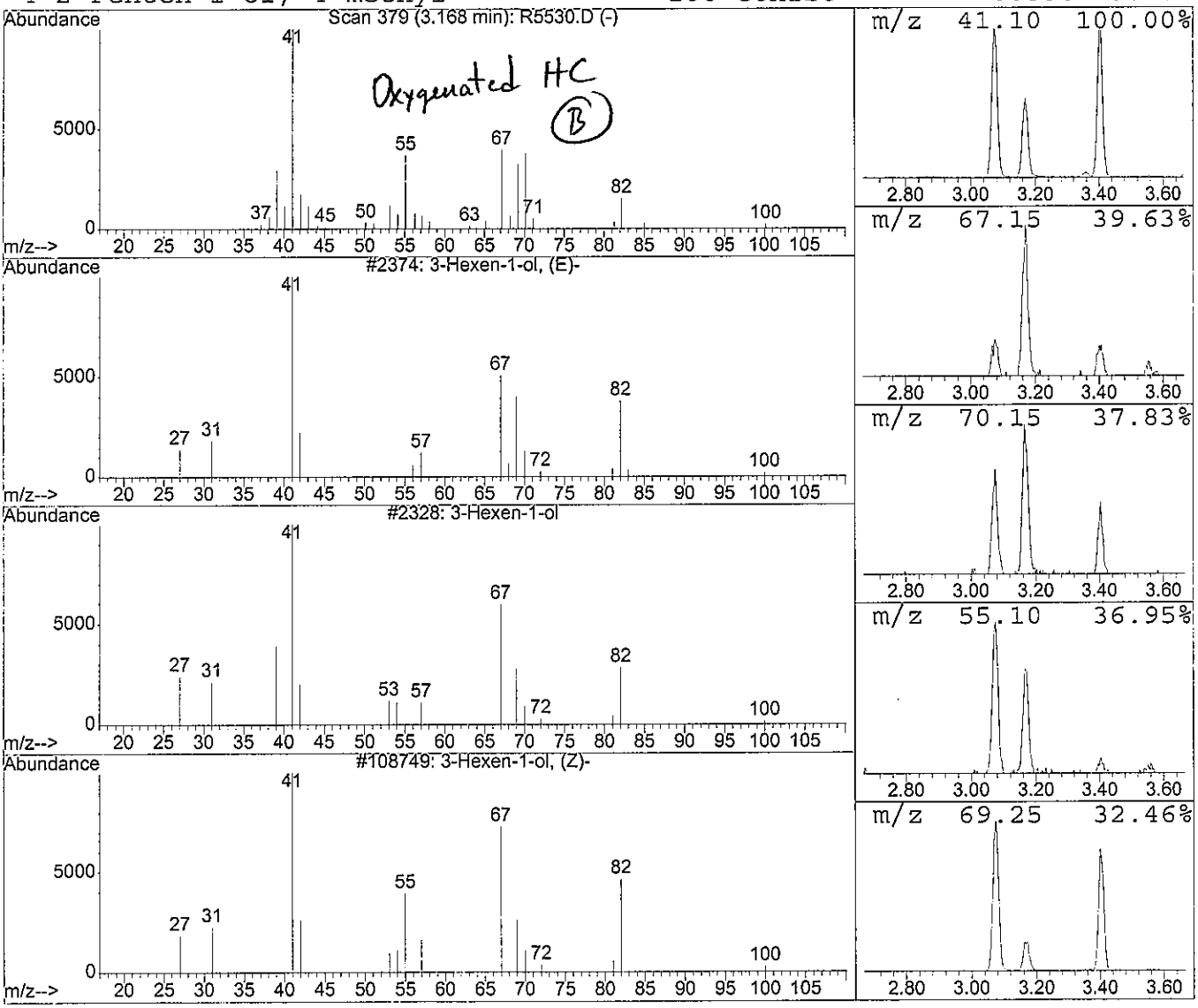
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

****

Peak Number 2 3-Hexen-1-ol, (E)- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.17	4.82 ng/uL	291606	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexen-1-ol, (E)-	100	C6H12O	000928-97-2	58
2	3-Hexen-1-ol	100	C6H12O	000544-12-7	53
3	3-Hexen-1-ol, (Z)-	100	C6H12O	000928-96-1	42
4	2-Penten-1-ol, 4-methyl-	100	C6H12O	005362-55-0	38



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5530.D
Acq On : 28 Aug 2015 14:15
Sample : 1508348-1
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 8
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

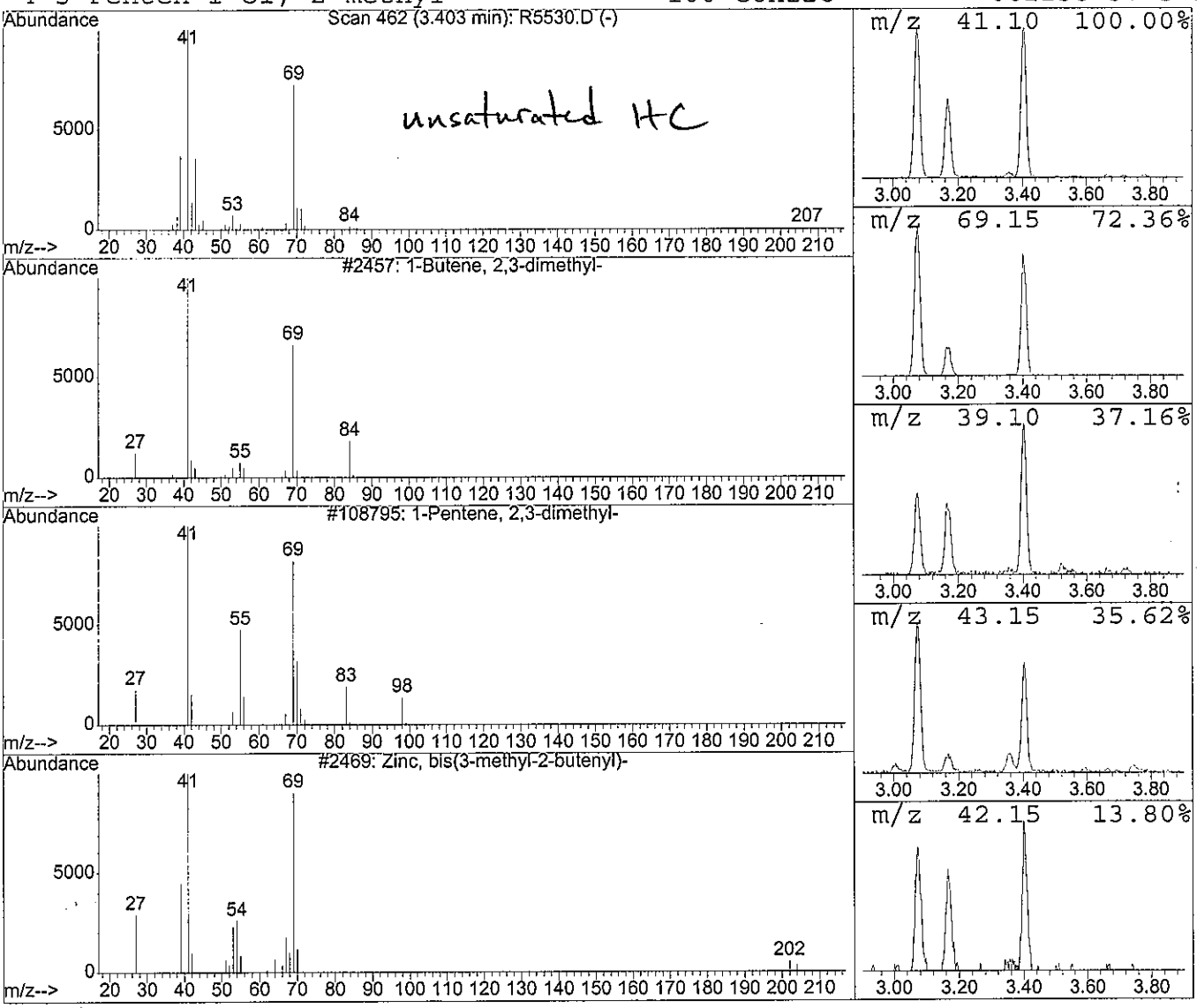
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

****

Peak Number 3 1-Butene, 2,3-dimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.40	6.68 ng/uL	403735	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Butene, 2,3-dimethyl-	84	C6H12	000563-78-0	53
2	1-Pentene, 2,3-dimethyl-	98	C7H14	003404-72-6	50
3	Zinc, bis(3-methyl-2-butenyl)-	202	C10H18Zn	066094-28-8	40
4	3-Penten-1-ol, 2-methyl-	100	C6H12O	062238-37-3	39



Quantitation Report (Not Reviewed)

Data File : E:\HPCHEM\1\DATA\082815\R5531.D Vial: 9
Acq On : 28 Aug 2015 14:38 Operator: twk SOP 506 Re
Sample : 1508348-2 Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:40 2015 Quant Results File: 082115S3.RES

Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration
DataAcq Meth : 082115S3

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.24	152	374695	40.00	ng/uL	0.00
25) Naphthalene-d8	6.42	136	1551329	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.95	164	606137	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.23	188	709611	40.00	ng/uL	0.00
80) Chrysene-d12	11.50	240	362355	40.00	ng/uL	0.00
91) Perylene-d12	12.86	264	281734	40.00	ng/uL	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.94	112	837110	56.77	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 75.69%			
6) 2-Chlorophenol-d4	5.03	132	869627	57.92	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 77.23%			
8) Phenol-d5	4.86	99	1070639	57.60	ng/uL	-0.01
Spiked Amount 75.000	Range 50 - 109		Recovery = 76.80%			
15) 1,2-Dichlorobenzene-d4	5.39	152	331051	38.26	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 76.52%			
26) Nitrobenzene-d5	5.75	82	630009	39.33	ng/uL	-0.01
Spiked Amount 50.000	Range 53 - 111		Recovery = 78.66%			
46) 2-Fluorobiphenyl	7.35	172	913769	40.39	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 80.78%			
68) 2,4,6-Tribromophenol	8.63	330	153316	49.42	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 65.89%			
83) p-Terphenyl-d14	10.55	244	383719	39.21	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 78.42%			

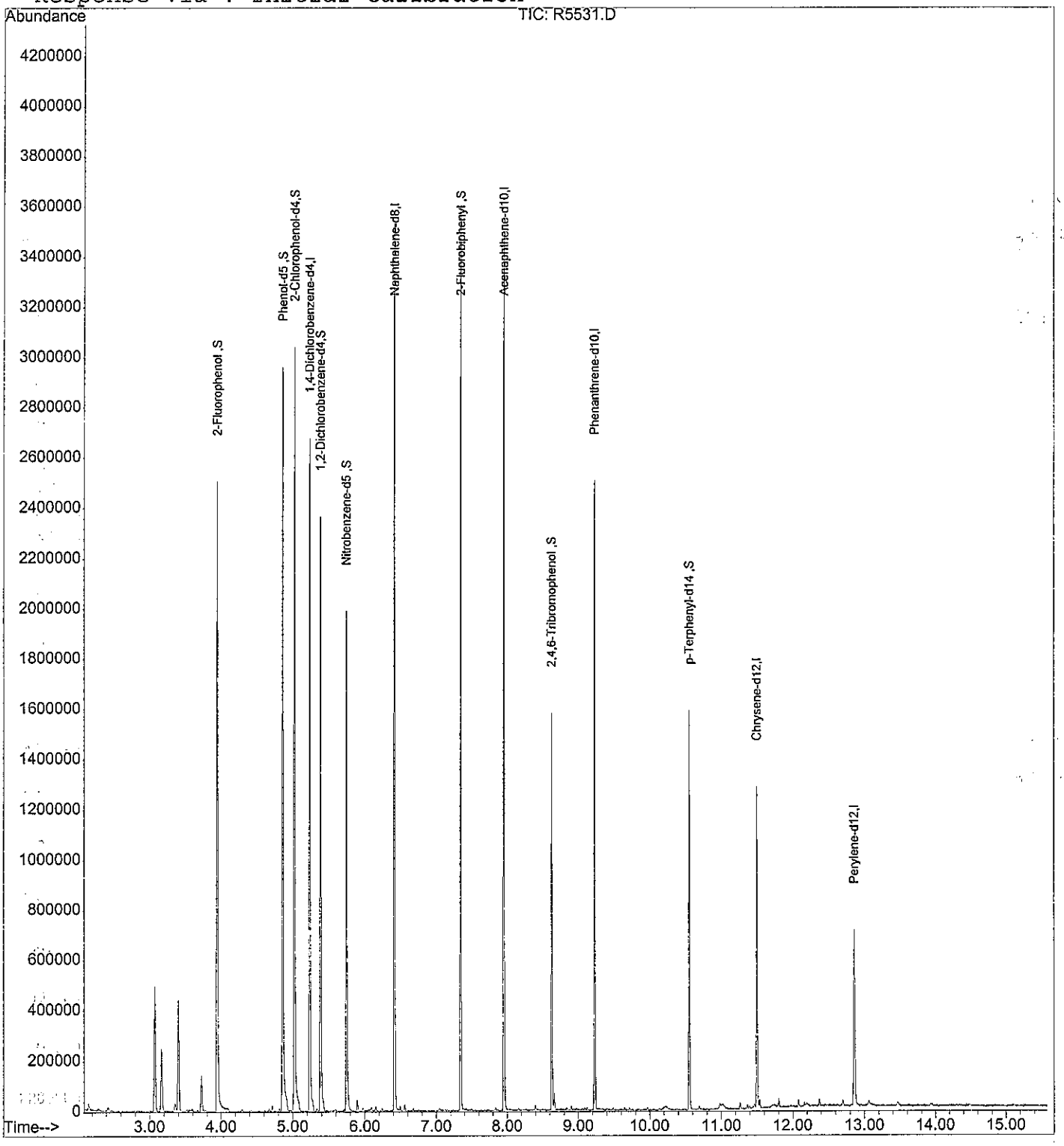
Target Compounds Qvalue

8/29/15

(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\082815\R5531.D Vial: 9
Acq On : 28 Aug 2015 14:38 Operator: twk SOP 506
Sample : 1508348-2 Inst : HPSV-3
Misc : EX150826-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Aug 28 17:40 2015 Quant Results File: 082115S3.RES

Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 28 17:36:38 2015
Response via : Initial Calibration



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5531.D
Acq On : 28 Aug 2015 14:38
Sample : 1508348-2
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 9
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

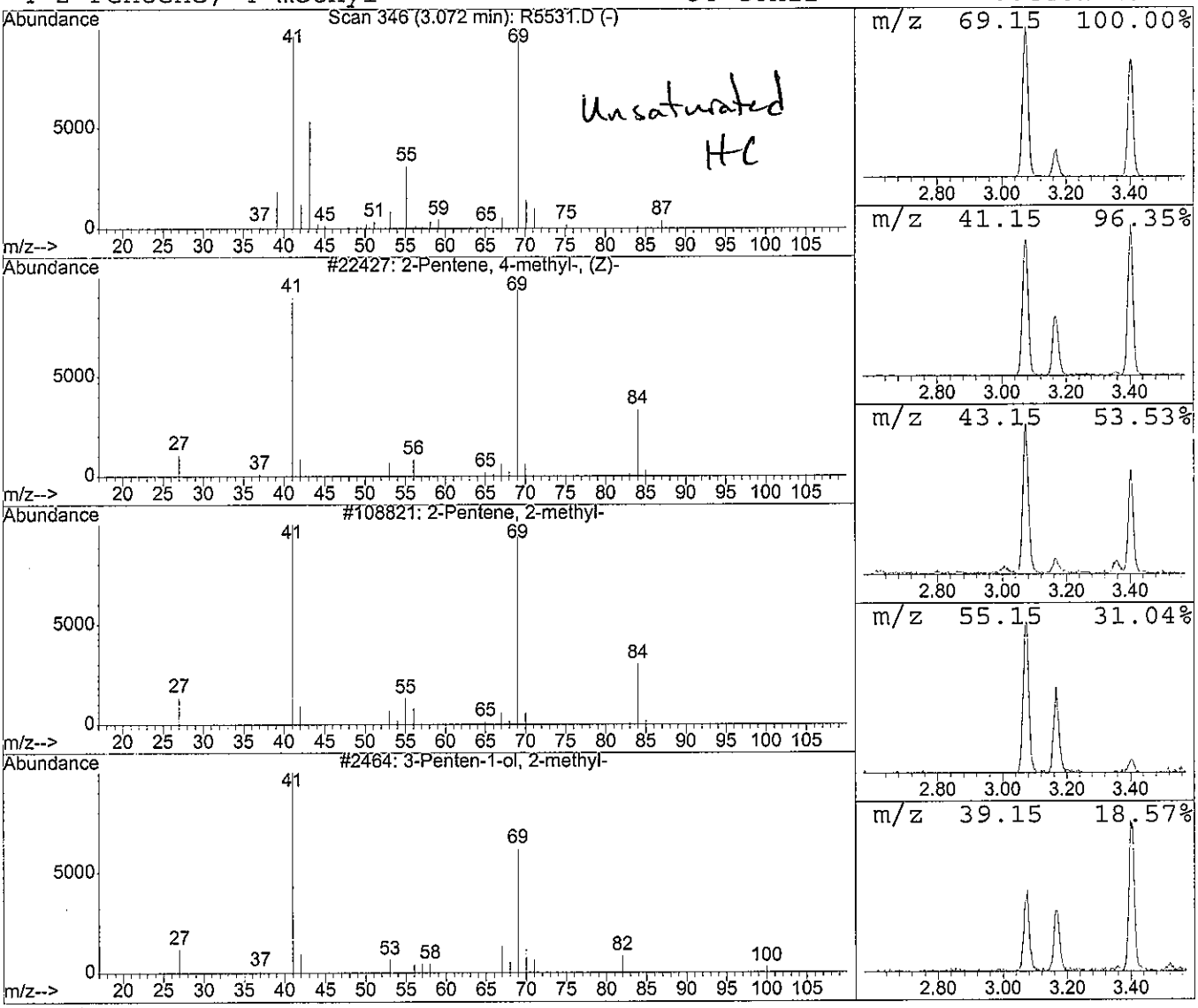
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

****

Peak Number 1 2-Pentene, 4-methyl-, (Z)- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.07	9.89 ng/uL	615766	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentene, 4-methyl-, (Z)-	84	C6H12	000691-38-3	64
2	2-Pentene, 2-methyl-	84	C6H12	000625-27-4	64
3	3-Penten-1-ol, 2-methyl-	100	C6H12O	062238-37-3	56
4	2-Pentene, 4-methyl-	84	C6H12	004461-48-7	45



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5531.D
Acq On : 28 Aug 2015 14:38
Sample : 1508348-2
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 9
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

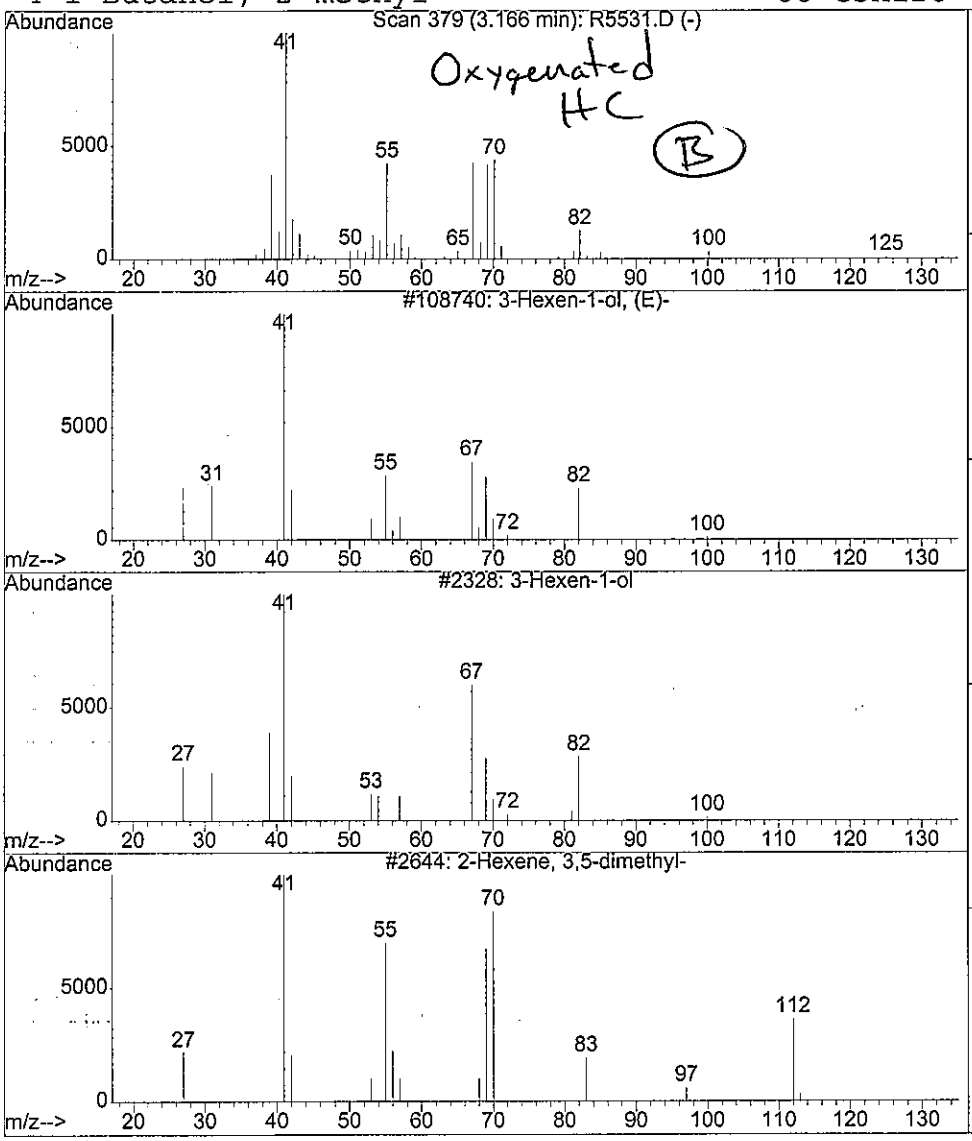
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

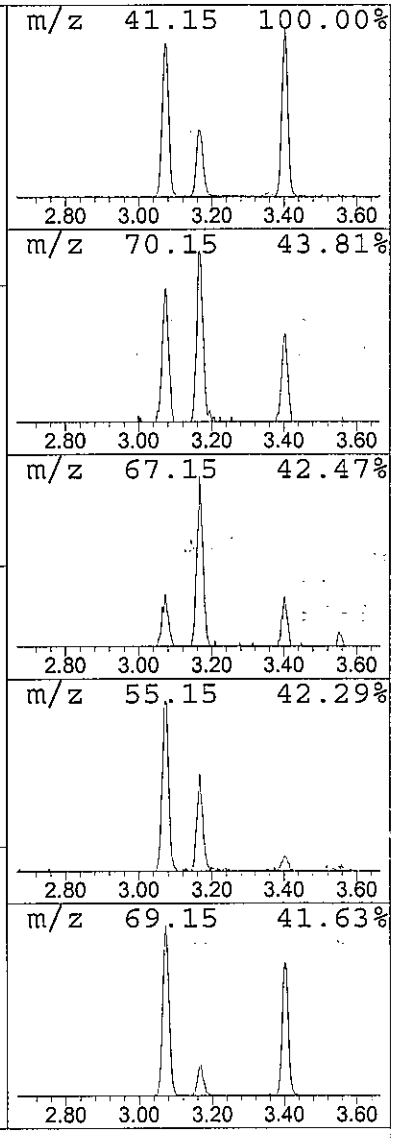
****

Peak Number 2 3-Hexen-1-ol, (E)- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.17	4.95 ng/uL	308468	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexen-1-ol, (E)-	100	C6H12O	000928-97-2	53
2	3-Hexen-1-ol	100	C6H12O	000544-12-7	50
3	2-Hexene, 3,5-dimethyl-	112	C8H16	003404-79-3	40
4	1-Butanol, 2-methyl-	88	C5H12O	000137-32-6	37





Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\082815\R5531.D
Acq On : 28 Aug 2015 14:38
Sample : 1508348-2
Misc : EX150826-1 WATER
MS Integration Params: RTEINT.P

Vial: 9
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

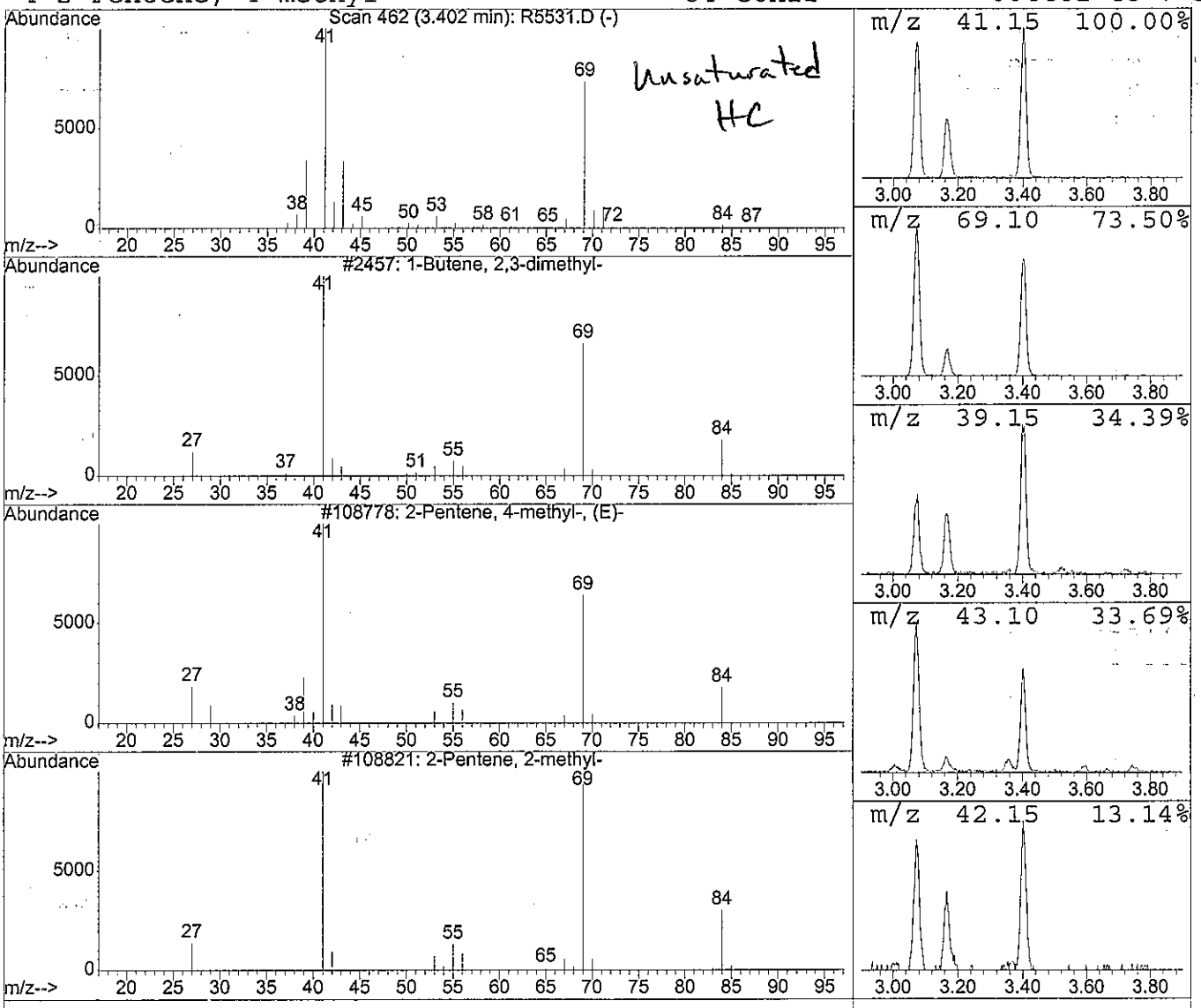
Quant Method : C:\HPCHEM\1\METHODS\082115S3.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\nist98.l

****

Peak Number 3 1-Butene, 2,3-dimethyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.40	8.51 ng/uL	529846	1,4-Dichlorobenzene-d4	5.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Butene, 2,3-dimethyl-	84	C6H12	000563-78-0	72
2	2-Pentene, 4-methyl-, (E)-	84	C6H12	000674-76-0	72
3	2-Pentene, 2-methyl-	84	C6H12	000625-27-4	72
4	2-Pentene, 4-methyl-	84	C6H12	004461-48-7	50



ALS Laboratory Group

SEMIVOLATILES EXTRACTION / CLEANUP WORKSHEET

full

WO #s 1508348, 371 Matrix AQ Batch ID EX150826-1 Sur Code ST150825-1 MSpike Code ST150105-3 Balance ID N/A Extr SOP/Rev 6/17/14 Extr Code: 8270D

EXTRACTION METHOD	Steam Bath: 92 °C Proper N-Evap Station flow settings used? (Y)		CLEANUP CODE:	
(3520C) CLE (3510)SEP	Extraction Start:	LOTS:	(3650B)Florisil Silica Gel	Reviewed By JLO
(3550_)SONC (3540)SOX	Date/Time: 8/26/15 15:15	$MeCL_2$ DM936 H_2SO_4 107911	(3640A)GPC (see other forms)	Date: 8-28-15
(3580A) Waste Dilution	Extraction Stop:	Hexane: N/A NaOH 76480	Cleanup SOP/Rev N/A	Each page is copied as completed and included with the workorder/run documentation; reviewed subsequently
(3546(Microwave extraction	Date/Time: 8/28/15 07:40	Acetone: ↓ Na_2SO_4 N/A	Date/Time ↓	
(form 609r16.doc)	Initials TSA	Florisil ↓ Silica Gel N/A	Initials ↓	

SAMPLE								EXTRACT / CLEANUP					
Sample No.	Amount (g/mL)	Initial pH	pH (≤2)	pH (11-13)	Surrogate (mL)	Matrix Spike (mL)	Sur / Matrix Spike Witnessed	Date KD (Initial) JLO 8-28-15	Cleanup Date	Date KD (Final)	Final Volume (mL)	Date Vialed	Comments
WMB	1000	5	1.3	12.8	1.0mL	N/A	TSA/JLO	8-27-15	N/A	N/A	1.0mL	8-28-15	
1508348-1	995	7	1.3	12.8	↓	↓	↓	↓	↓	↓	↓	↓	
↓ -2	1025	7	1.3	12.8									
1508371-14	985	7	1.3	12.8									
↓ -15	990	7	1.3	12.8									
↓ -16	995	7	1.3	12.8		↓							
WLCS	1000	5	1.3	12.8		1.0mL							
WLCSD	1000	5	1.3	12.8	↓	↓	↓	↓	↓	↓	↓	↓	
									JLO	8-28-15			