ALS Environmental

received 09/27/2013
Project 2130

GC/MS Semivolatiles

SIMPAH

Case Narrative

Colorado Oil & Gas Conservation Commission

TBAL

Work Order Number: 1308545

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/30/13.

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

3. The extract was analyzed using GC/MS with a DB-5MS capillary column according to the current revision of SOP 506 based on SW-846 Method 8270D. The sample was analyzed using selective ion monitoring (SIM), in order to achieve lower reporting limits. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and a limited number of major ions from the mass spectrum of the sample versus the daily calibration standard.

4. All initial calibration criteria were met. If average response factors were used in the initial calibration, %RSD was ≤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 method blank criteria were met.

7. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.

8. A matrix spike and matrix spike duplicate were not performed due to insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.

9. The sample was extracted and analyzed within the established holding times.

10. All surrogate recoveries were within acceptance criteria.

11. All internal standard recoveries were within acceptance criteria.

12. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939. Whenever manual integrations are performed, before and after chromatograms of the peak that was manually integrated are included in the report along with the reason why the re-integration was necessary.

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 — 9/25/13
Emily Lyons, Date
Organics Primary Data Reviewer

Mindy Norton — 9.25.13
Organics Final Data Reviewer, Date

ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

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.**

Chain of Custody

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: TBAL
Client Project Number:
Client PO Number: PHA 14-22

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
704681 Dolores WW	1308545-1		WATER	29-Aug-13	9:01
Trip Blank	1308545-2		WATER	29-Aug-13	6:00
705737 Dolores MW	1308545-3		WATER	29-Aug-13	10:20
704681 Dolores WW 20	1308545-4		WATER	29-Aug-13	8:44
704681 Dolores WW 5	1308545-5		WATER	29-Aug-13	8:26

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 #	1308545
PAGE	1 of 1
DISPOSAL	(By Lab) or Return to Client

PROJECT NAME	TBAL	SAMPLER	PAE
PROJECT No.		SITE ID	
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	Colo. Oil + Gas Cons Com	BILL TO COMPANY	
SEND REPORT TO	Peter Gintautas	INVOICE ATTN TO	
ADDRESS	PO Box 108	ADDRESS	
CITY / STATE / ZIP	Trinidad CO 81082	CITY / STATE / ZIP	
PHONE	719-846-3091	PHONE	
FAX		FAX	
E-MAIL	peter.gintautas@state.co.us	E-MAIL	

DATE: 29 A 2013
TURNAROUND: 7E dy

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	8260 + TICs	TVPH	8270 + 1,4-Dioxane + TICs	8270 SIM PAH	200.7 metals dissolved	200.8 metals dissolved	SAR calc	Anion Cation Balance	Alk (tot, HCO3, CO3)	pH	Conductance	Anions	TDS	TOC
1	704681 Dolores MW	W	29Ag13	09:01	6	1		X	X												
	"	↓	↓	↓	6	8				X		X	X	X	X	X	X	X	X	X	
	"	↓	↓	↓	1	3															X
2	Trip Blk	W	29Ag13	06:00	2	1		X													
3	705737 Dolores MW	W	29Ag13	10:20	6	1		X	X												
	" "	"	"		3	8	X			X	X										
		↓			6	8					X	X	X	X	X	X	X	X	X	X	
		↓			1	3															X
4	704681 Dolores MW 20	W	29Ag13	08:44	3	1		X													
5	704681 Dolores MW 5	W	29Ag13	08:26	3	1		X													

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

For metals or anions, please detail analytes below.

Comments: Anions = Br, Cl, F, NO2, NO3, SO4
Filter and preserve metals on reagent = dissolved
metals list as in other TBAL

QC PACKAGE (check below)	
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
X	LEVEL IV (Std QC + forms + raw data) 60 only

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	29Ag13	16:40
RECEIVED BY	[signature]	Jacob Reddy	8/30/13	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1308545

Project Manager: ARW Initials: JLR Date: 8/30/13

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	2							
Temperature (°C):	2°C	4°C							
No. of custody seals on cooler:	2	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	11	11							
Background µR/hr reading:	10								

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: 8/30/13

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

1308545

PETER GINTAUTAS
719-846-3091
COLORADO OIL & GAS CONSERVATIO
213 CORUNDUM RD
TRINIDAD CO 81082

41 LBS

2 OF 2

DWT: 26,16,15

SHIP TO:
AMY WOLF
970-490-1511
ALS LABORATORY GROUP
225 COMMERCE DRIVE
FORT COLLINS CO 80524-2762

CO 805 0-01

UPS NEXT DAY AIR

TRACKING #: 1Z 014 8WR 01 9830 5716

1

BILLING: P/P

Reference#1: Special Project TBAL

UIS 15.6.12. WNTE90 36.0A 01/2013

TM

Analytical Results

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: EX130903-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03-Sep-13
Date Analyzed: 17-Sep-13

Prep Batch: EX130903-3
QCBatchID: EX130903-3-1
Run ID: SV130917-4
Cleanup: NONE
Basis: N/A
File Name: S01177

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	MDL	Result Qualifier	EPA Qualifier
91-20-3	NAPHTHALENE	1	0.1	0.1	0.03	U	
91-57-6	2-METHYLNAPHTHALENE	1	0.1	0.1	0.03	U	
90-12-0	1-METHYLNAPHTHALENE	1	0.1	0.1	0.03	U	
208-96-8	ACENAPHTHYLENE	1	0.1	0.1	0.03	U	
83-32-9	ACENAPHTHENE	1	0.1	0.1	0.03	U	
86-73-7	FLUORENE	1	0.1	0.1	0.03	U	
85-01-8	PHENANTHRENE	1	0.1	0.1	0.03	U	
120-12-7	ANTHRACENE	1	0.1	0.1	0.03	U	
206-44-0	FLUORANTHENE	1	0.1	0.1	0.03	U	
129-00-0	PYRENE	1	0.1	0.1	0.03	U	
56-55-3	BENZO(A)ANTHRACENE	1	0.1	0.1	0.03	U	
218-01-9	CHRYSENE	1	0.1	0.1	0.03	U	
205-99-2	BENZO(B)FLUORANTHENE	1	0.1	0.1	0.03	U	
207-08-9	BENZO(K)FLUORANTHENE	1	0.1	0.1	0.03	U	
50-32-8	BENZO(A)PYRENE	1	0.1	0.1	0.03	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	0.1	0.1	0.03	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	0.1	0.1	0.03	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	0.1	0.1	0.03	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
321-60-8	2-FLUOROBIPHENYL	1.51		2	76	21 - 106
4165-60-0	NITROBENZENE-D5	1.75		2	88	34 - 111
1718-51-0	TERPHENYL-D14	1.47		2	74	33 - 111

Data Package ID: *SV1308545-2*

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 705737 Dolores MW
Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 03-Sep-13
Date Analyzed: 17-Sep-13
Prep Method: SW3520BN Rev C

Prep Batch: EX130903-3
QCBatchID: EX130903-3-1
Run ID: SV130917-4
Cleanup: NONE
Basis: As Received
File Name: S01180

Analyst: Joe Kostelnik
Sample Aliquot: 1060 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
91-20-3	NAPHTHALENE	1	0.094	0.094	0.028	U	
91-57-6	2-METHYLNAPHTHALENE	1	0.094	0.094	0.028	U	
90-12-0	1-METHYLNAPHTHALENE	1	0.094	0.094	0.028	U	
208-96-8	ACENAPHTHYLENE	1	0.094	0.094	0.028	U	
83-32-9	ACENAPHTHENE	1	0.094	0.094	0.028	U	
86-73-7	FLUORENE	1	0.094	0.094	0.028	U	
85-01-8	PHENANTHRENE	1	0.094	0.094	0.028	U	
120-12-7	ANTHRACENE	1	0.094	0.094	0.028	U	
206-44-0	FLUORANTHENE	1	0.094	0.094	0.028	U	
129-00-0	PYRENE	1	0.094	0.094	0.028	U	
56-55-3	BENZO(A)ANTHRACENE	1	0.094	0.094	0.028	U	
218-01-9	CHRYSENE	1	0.094	0.094	0.028	U	
205-99-2	BENZO(B)FLUORANTHENE	1	0.094	0.094	0.028	U	
207-08-9	BENZO(K)FLUORANTHENE	1	0.094	0.094	0.028	U	
50-32-8	BENZO(A)PYRENE	1	0.094	0.094	0.028	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	0.094	0.094	0.028	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	0.094	0.094	0.028	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	0.094	0.094	0.028	U	

Data Package ID: *SV1308545-2*

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Field ID: 705737 Dolores MW
Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 03-Sep-13
Date Analyzed: 17-Sep-13
Prep Method: SW3520BN Rev C

Prep Batch: EX130903-3
QCBatchID: EX130903-3-1
Run ID: SV130917-4
Cleanup: NONE
Basis: As Received
File Name: S01180

Analyst: Joe Kostelnik
Sample Aliquot: 1060 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
321-60-8	2-FLUOROBIPHENYL	1.37		1.89	73	21 - 106
4165-60-0	NITROBENZENE-D5	1.62		1.89	86	34 - 111
1718-51-0	TERPHENYL-D14	1.54		1.89	82	33 - 111

Data Package ID: *SV1308545-2*

Supporting QA/QC Data

Surrogate Summary for GC/MS Semi-volatiles

Method SW8270SIMPAHD

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

PrepBatchID: EX130903-3

QC Batch ID: EX130903-3-1

Date Extracted: 9/3/2013

Surrogate Compound	Control Limits Lower	Upper
2,4,6-Tribromophenol		
2-Fluorobiphenyl	21	106
2-Fluorophenol		
Nitrobenzene-d5	34	111
Phenol-d5		
Terphenyl-d14	33	111

Lab ID	Client Sample ID	Date Collected	Date Received	246TB % Recovery	2FBP % Recovery	2FP % Recovery	ND5 % Recovery	PD5 % Recovery	TD14 % Recovery
EX130903-3MB	XXXXXXX	NA	XXXXXXX		76		88		74
EX130903-3LCS	XXXXXXX	NA	XXXXXXX		77		87		83
EX130903-3LCSD	XXXXXXX	NA	XXXXXXX		76		87		79
1308545-3	705737 Dolores MW	8/29/2013	8/30/2013		73		86		82

Data Package ID: *SV1308545-2*

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: EX130903-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/03/2013
Date Analyzed: 09/17/2013
Prep Method: SW3520BNC

Prep Batch: EX130903-3
QCBatchID: EX130903-3-1
Run ID: SV130917-4
Cleanup: NONE
Basis: N/A
File Name: S01178

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
91-20-3	NAPHTHALENE	2	1.55	0.1		78	39 - 102%
91-57-6	2-METHYLNAPHTHALENE	2	1.61	0.1		81	46 - 104%
208-96-8	ACENAPHTHYLENE	2	1.82	0.1		91	50 - 107%
83-32-9	ACENAPHTHENE	2	1.59	0.1		80	47 - 108%
86-73-7	FLUORENE	2	1.69	0.1		85	50 - 112%
85-01-8	PHENANTHRENE	2	1.64	0.1		82	51 - 117%
120-12-7	ANTHRACENE	2	1.91	0.1		96	54 - 112%
206-44-0	FLUORANTHENE	2	1.92	0.1		96	54 - 116%
129-00-0	PYRENE	2	1.61	0.1		81	49 - 128%
56-55-3	BENZO(A)ANTHRACENE	2	1.6	0.1		80	56 - 109%
218-01-9	CHRYSENE	2	1.9	0.1		95	55 - 109%
205-99-2	BENZO(B)FLUORANTHENE	2	1.56	0.1		78	46 - 118%
207-08-9	BENZO(K)FLUORANTHENE	2	1.64	0.1		82	45 - 124%
50-32-8	BENZO(A)PYRENE	2	1.58	0.1		79	53 - 110%
193-39-5	INDENO(1,2,3-CD)PYRENE	2	1.97	0.1		99	43 - 125%
53-70-3	DIBENZO(A,H)ANTHRACENE	2	1.9	0.1		95	42 - 127%
191-24-2	BENZO(G,H,I)PERYLENE	2	1.86	0.1		93	38 - 123%

Data Package ID: *SV1308545-2*

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Lab ID: EX130903-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/03/2013
Date Analyzed: 09/17/2013
Prep Method: SW3520BNC

Prep Batch: EX130903-3
QCBatchID: EX130903-3-1
Run ID: SV130917-4
Cleanup: NONE
Basis: N/A
File Name: S01179

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
91-20-3	NAPHTHALENE	2	1.57	0.1		79	20	1
91-57-6	2-METHYLNAPHTHALENE	2	1.61	0.1		80	20	0
208-96-8	ACENAPHTHYLENE	2	1.81	0.1		90	20	1
83-32-9	ACENAPHTHENE	2	1.6	0.1		80	20	0
86-73-7	FLUORENE	2	1.67	0.1		84	20	1
85-01-8	PHENANTHRENE	2	1.59	0.1		79	20	4
120-12-7	ANTHRACENE	2	1.85	0.1		92	20	3
206-44-0	FLUORANTHENE	2	1.81	0.1		91	20	6
129-00-0	PYRENE	2	1.58	0.1		79	20	2
56-55-3	BENZO(A)ANTHRACENE	2	1.52	0.1		76	20	5
218-01-9	CHRYSENE	2	1.84	0.1		92	20	3
205-99-2	BENZO(B)FLUORANTHENE	2	1.48	0.1		74	20	5
207-08-9	BENZO(K)FLUORANTHENE	2	1.47	0.1		74	20	11
50-32-8	BENZO(A)PYRENE	2	1.53	0.1		76	20	4
193-39-5	INDENO(1,2,3-CD)PYRENE	2	1.8	0.1		90	20	9
53-70-3	DIBENZO(A,H)ANTHRACENE	2	1.72	0.1		86	20	10
191-24-2	BENZO(G,H,I)PERYLENE	2	1.73	0.1		87	20	7

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
321-60-8	2-FLUOROBIPHENYL	2	77		76		21 - 106
4165-60-0	NITROBENZENE-D5	2	87		87		34 - 111
1718-51-0	TERPHENYL-D14	2	83		79		33 - 111

Data Package ID: *SV1308545-2*

Prep Batch ID: EX130903-3

Start Date: 09/03/13
Start Time: 15:10
Prep Analyst: Brendon Howard

End Date: 09/04/13
End Time: 7:50

Concentration Method: CKIS
Extract Method: SW3520BNC
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: bch
Date Created: 09/03/13
Time Created: 15:43
Validated By: bch
Date Validated: 09/04/13
Time Validated: 17:34

Comments:

QC Batch ID: EX130903-3-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
EX130903-3	MB	XXXXXX	WATER	XXXXXX	1000	1	NONE	1	1308545
EX130903-3	LCS	XXXXXX	WATER	XXXXXX	1000	1	NONE	1	1308545
EX130903-3	LCSD	XXXXXX	WATER	XXXXXX	1000	1	NONE	1	1308545
1308545-3	SMP	705737 Dolores MW	WATER	8/29/2013	1060	1	NONE	1	1308545

In generating this benchsheet, prep analyst states that all aspects of sample preparation as set forth in the appropriate SOP's (including Kuderna-Danish temperatures, proper flow settings on the N-evap, and final volumes) were properly adhered to (unless otherwise noted herein).

QC Types

CAR	Carrier reference sample		DUP	Laboratory Duplicate
LCS	Laboratory Control Sample		LCSD	Laboratory Control Sample Duplicat
MB	Method Blank		MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate		REP	Sample replicate
RVS	Reporting Level Verification Standar		SMP	Field Sample
SYS	Sample Yield Spike			

5B

Semi-Volatile Organic GC/MS Tuning And Mass Calibration--Decafluorotriphenylphosphine (DFTPP)

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

DFTPP Injection Date: 9/17/2013
DFTPP Injection Time: 11:37
Instrument ID: HPSV4

Reported on: Wednesday, September 25, 2013

FileID: S01168

m/e	Ion Abundance Criteria SW8270SIMPAHD	% Relative Abundance
51	30.0 - 60.0 percent of mass 198	40.9
68	Less than 2.0 percent of mass 69	0.1
69	Mass 69 relative abundance of mass 198	54.5
70	Less than 2.0 percent of mass 69	0.5
127	40.0 - 60.0 percent of mass 198	49.5
197	Less than 1.0 percent of mass 198	0
198	Base peak, 100 percent of relative abundance	100
199	5.0 - 9.0 percent of mass 198	6.7
275	10.0 - 30.0 percent of mass 198	28.3
365	Greater than 1.00 percent of mass 198	3.4
441	Present, but less than mass 443 (percent of 443)	87.2
442	Greater than 40.0 percent of mass 198	87.4
443	17.0 - 23.0 percent of mass 442	18.8

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS/MSD, BLANKS, AND STANDARDS:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	QC BatchID
XXXXXXX	ICALSVSTD0500CSTD	S01169	9/17/2013	11:48	SV130917-4
XXXXXXX	ICALSVSTD0050CSTD	S01170	9/17/2013	12:06	SV130917-4
XXXXXXX	ICALSVSTD0100CSTD	S01171	9/17/2013	12:25	SV130917-4
XXXXXXX	ICALSVSTD0200CSTD	S01172	9/17/2013	12:43	SV130917-4
XXXXXXX	ICALSVSTD1000CSTD	S01173	9/17/2013	13:02	SV130917-4
XXXXXXX	ICALSVSTD2000CSTD	S01174	9/17/2013	13:20	SV130917-4
XXXXXXX	ICALSVSTD5000CSTD	S01175	9/17/2013	13:39	SV130917-4
XXXXXXX	ICVSVSTD2000ICV	S01176	9/17/2013	14:18	SV130917-4
XXXXXXX	EX130903-3MB	S01177	9/17/2013	14:36	EX130903-3-1
XXXXXXX	EX130903-3LCS	S01178	9/17/2013	14:55	EX130903-3-1
XXXXXXX	EX130903-3LCSD	S01179	9/17/2013	15:13	EX130903-3-1
705737 Dolores MW	1308545-3	S01180	9/17/2013	15:32	EX130903-3-1
XXXXXXX	EX130917-4MB	S01181	9/17/2013	15:50	EX130917-4-1

Data Package ID: *SV1308545-2*

FORM 6

HPSV4

091713SIM4.M

	S01175.D 5000	S01174.D 2000	S01173.D 1000	S01169.D 500	S01172.D 200	S01171.D 100	S01170.D 50	Average	%RSD	Curve type	Corr (r2)	quad term	linear term	const term
Naphthalene-d8														
Nitrobenzene-d5	0.289	0.262	0.239	0.256	0.208	0.209	0.220	0.240	12.663	Avg RF	na			
Naphthalene	0.821	0.809	0.803	0.855	0.795	0.805	0.806	0.813	2.423	Avg RF	na			
2-Methylnaphthalene	0.591	0.574	0.563	0.580	0.527	0.535	0.520	0.556	5.052	Avg RF	na			
1-Methylnaphthalene	0.540	0.529	0.524	0.551	0.508	0.522	0.507	0.526	3.028	Avg RF	na			
Acenaphthene-d10														
2-Fluorobiphenyl	1.124	1.119	1.125	1.243	1.107	1.130	1.237	1.155	5.061	Avg RF	na			
Acenaphthylene	1.288	1.156	1.053	1.043	0.850	0.834	0.833	1.008	17.649	Avg RF	na			
Acenaphthene	0.828	0.810	0.807	0.848	0.769	0.790	0.800	0.808	3.175	Avg RF	na			
Fluorene	0.941	0.915	0.893	0.911	0.828	0.837	0.827	0.879	5.385	Avg RF	na			
Phenanthrene-d10														
Hexachlorobenzene	0.185	0.174	0.170	0.181	0.158	0.160	0.173	0.172	5.729	Avg RF	na			
Phenanthrene	0.821	0.801	0.797	0.847	0.779	0.813	0.851	0.815	3.232	Avg RF	na			
Anthracene	0.765	0.693	0.655	0.652	0.536	0.531	0.516	0.621	15.327	Avg RF	na			
Fluoranthene	0.912	0.849	0.817	0.846	0.712	0.714	0.713	0.795	10.241	Avg RF	na			
Chrysene-d12														
Pyrene	0.844	0.846	1.002	0.880	1.283	1.317	1.346	1.074	21.655	quadradic	.9988	-.0178	.6538	.0136
p-Terphenyl-d14	0.710	0.721	0.873	0.802	1.131	1.168		0.901	22.423	quadradic	.9986	-.0187	.7178	.018
Benzo[a]anthracene	0.776	0.737	0.832	0.770	0.813	0.861	0.989	0.825	10.070	Avg RF	na			
Chrysene	0.748	0.736	0.618	0.769	0.692	0.718	0.719	0.714	6.663	Avg RF	na			
Perylene-d12														
Benzo[b]fluoranthene	1.196	1.355	1.397	1.517	1.125	1.255	1.282	1.304	10.064	Avg RF	na			
Benzo[k]fluoranthene	1.057	1.161	1.205	1.336	1.344	1.247	1.093	1.206	9.253	Avg RF	na			
Benzo[a]pyrene	1.002	1.088	1.000	1.022	0.800	0.866	0.680	0.923	15.767	Avg RF	na			
Indeno(1,2,3-c,d)pyrene	0.853	0.974	1.005	0.930	0.892	0.900	0.700	0.893	11.126	Avg RF	na			
Dibenzo[a,h]anthracene	0.786	0.878	0.859	0.771	0.771	0.769	0.644	0.783	9.708	Avg RF	na			
Benzo[g,h,i]perylene	0.898	0.907	0.878	0.750	0.730	0.778	0.609	0.793	13.709	Avg RF	na			
								AVERAGE=	9.982					

9-20-17

FORM 7
Continuing Calibration Verification Report

HPSV4 FORM7 ICV

METHOD: 091713SIM4.M

RUN DATE: 9/17/2013 14:18

		Compound	AvgRF	CCRF	Expt Conc	Found Conc	% Dev or % Drift	Area % Difference	R.T. Dev (min)	Curve Fit Type
1)	ISTD	Naphthalene-d8	1.000	1.000					0.00	Ave RF
3)		Naphthalene	0.813	0.819			0.7	389	-0.01	Ave RF
4)		2-Methylnaphthalene	0.556	0.539			-3.0	377	0.00	Ave RF
5)		1-Methylnaphthalene	0.526	0.536			1.9	395	-0.01	Ave RF
6)	ISTD	Acenaphthene-d10		1.000					-0.01	Ave RF
8)		Acenaphthylene	1.008	1.213			20.3	456	-0.01	Ave RF
9)		Acenaphthene	0.808	0.803			-0.5	372	-0.01	Ave RF
10)		Fluorene	0.879	0.880			0.2	379	-0.01	Ave RF
11)	ISTD	Phenanthrene-d10		1.000					0.00	Ave RF
12)		Hexachlorobenzene	0.172	0.195			13.8	415	-0.01	Ave RF
13)		Phenanthrene	0.815	0.782			-4.1	354	-0.01	Ave RF
14)		Anthracene	0.621	0.721			16.1	424	0.00	Ave RF
15)		Fluoranthene	0.795	0.830			4.4	376	-0.01	Ave RF
16)	ISTD	Chrysene-d12		1.000					0.00	Ave RF
17)		Pyrene	2000.000	n/a	2000	1886.25	-5.7	374	0.00	quadratic
19)		Benzo[a]anthracene	0.825	0.760			-8.0	394	0.00	Ave RF
20)		Chrysene	0.714	0.725			1.5	377	0.00	Ave RF
21)	ISTD	Perylene-d12		1.000					0.00	Ave RF
22)		Benzo[b]fluoranthene	1.304	0.980			-24.9	454	-0.01	Ave RF
23)		Benzo[k]fluoranthene	1.206	0.939			-22.1	495	0.00	Ave RF
24)		Benzo[a]pyrene	0.923	0.781			-15.3	538	-0.01	Ave RF
25)		Indeno(1,2,3-c,d]pyrene	0.893	0.749			-16.2	566	-0.01	Ave RF
26)		Dibenzo[a,h]anthracene	0.783	0.622			-20.5	567	-0.01	Ave RF
27)		Benzo[g,h,i]perylene	0.793	0.640			-19.3	600	-0.01	Ave RF

Average of absolute value : 10.4

9-20-13

8B

Semi-Volatile Internal Standard Area Summary

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Date Analyzed: 9/17/2013
Time Analyzed: 11:48
Reported on: Wednesday, September 25, 2013

Instrument ID: HPSV4
Lab File ID: S01169

	IS1		IS2		IS3		IS4		IS5		IS6	
	Area	RT	Area	RT	Area	RT	Area	RT	Area	RT	Area	RT
12 Hour STD			1210360	4.95	692729	6.47	1025890	7.76	1027650	10.07	448417	11.68
Upper Limit			2420720	5.45	1385458	6.97	2051780	8.26	2055300	10.6	896834	12.2
Lower Limit			605180	4.45	346365	5.97	512945	7.26	513825	9.57	224209	11.2
Lab Sample ID												
EX130903-3MB			1176320	4.95	672445	6.47	999849	7.76	1031600	10.07	542596	11.68
EX130903-3LCS			1138120	4.95	672577	6.47	1060740	7.76	1130550	10.07	754023	11.68
EX130903-3LCSD			1177290	4.94	693683	6.47	1088480	7.76	1130180	10.07	769181	11.68
1308545-3			1192500	4.94	695372	6.47	1061500	7.76	1070830	10.07	636754	11.67

Shaded values exceed established area count limits.

LIMS Version: 6.670

Upper Limit = + 100 percent of internal standard area.

Lower Limit = - 50 percent of internal standard area.

Supporting Raw Data

GCMS Semivolatile Instrument Run Log
ALS Laboratory Group

Sequence Name: C:\msdchem\1\sequence\091713.S
Comment: GC/MS Semivolatiles SOP no. 506 rev:16
Data Path: C:\MSDCHEM\1\DATA\091713\
Operator:JK HPSV4 sn #: CV11451177 Analysis Date: September 17, 2013 7/16
IS Amount and ID 40 µg/mL ST130502-1
Logbook Number: 4177

Line	Type	Vial	DataFile	Method	Sample Name	Dil.	RA?	Comment
1	DFTPP	1	S01168	DFTPP	DFTPP	1	No	ST130607-1 11:37
2	Sample	2	S01169	091713SIM4	ICALSVSTD0500			ST130912-6
3	Sample	3	S01170	091713SIM4	ICALSVSTD0050			ST130912-7
4	Sample	4	S01171	091713SIM4	ICALSVSTD0100			ST130912-8
5	Sample	5	S01172	091713SIM4	ICALSVSTD0200			ST130912-9
6	Sample	6	S01173	091713SIM4	ICALSVSTD1000			ST130912-10
7	Sample	7	S01174	091713SIM4	ICALSVSTD2000			ST130912-11
8	Sample	8	S01175	091713SIM4	ICALSVSTD5000			ST130912-12
9	Sample	9	S01176	091713SIM4	ICVSVSTD2000			ST130912-13
10	Sample	10	S01177	091713SIM4	EX130903-3MB			
11	Sample	11	S01178	091713SIM4	EX130903-3LCS			
12	Sample	12	S01179	091713SIM4	EX130903-3LCSD			
13	Sample	13	S01180	091713SIM4	1308545-3			
14	Sample	14	S01181	091713SIM4	EX130917-4MB			
15	Sample	15	S01182	091713SIM4	1309125-8			
16	Sample	16	S01183	091713SIM4	1309125-5			
17	Sample	17	S01184	091713SIM4	1309125-10			
18	Sample	18	S01185	091713SIM4	1309125-6			
19	Sample	19	S01186	091713SIM4	1309125-7			
20	Sample	20	S01187	091713SIM4	1309125-3			
21	Sample	21	S01188	091713SIM4	1309125-2			
22	Sample	22	S01189	091713SIM4	1309125-1			
23	Sample	23	S01190	091713SIM4	1309125-9			FS5↑ needs 2x ALs S01207, S01208 15:56
24	Sample	24	S01191	091713SIM4	1309125-4			
25	Sample	25	S01192	091713SIM4	INSTRUMENT BLANK			OK

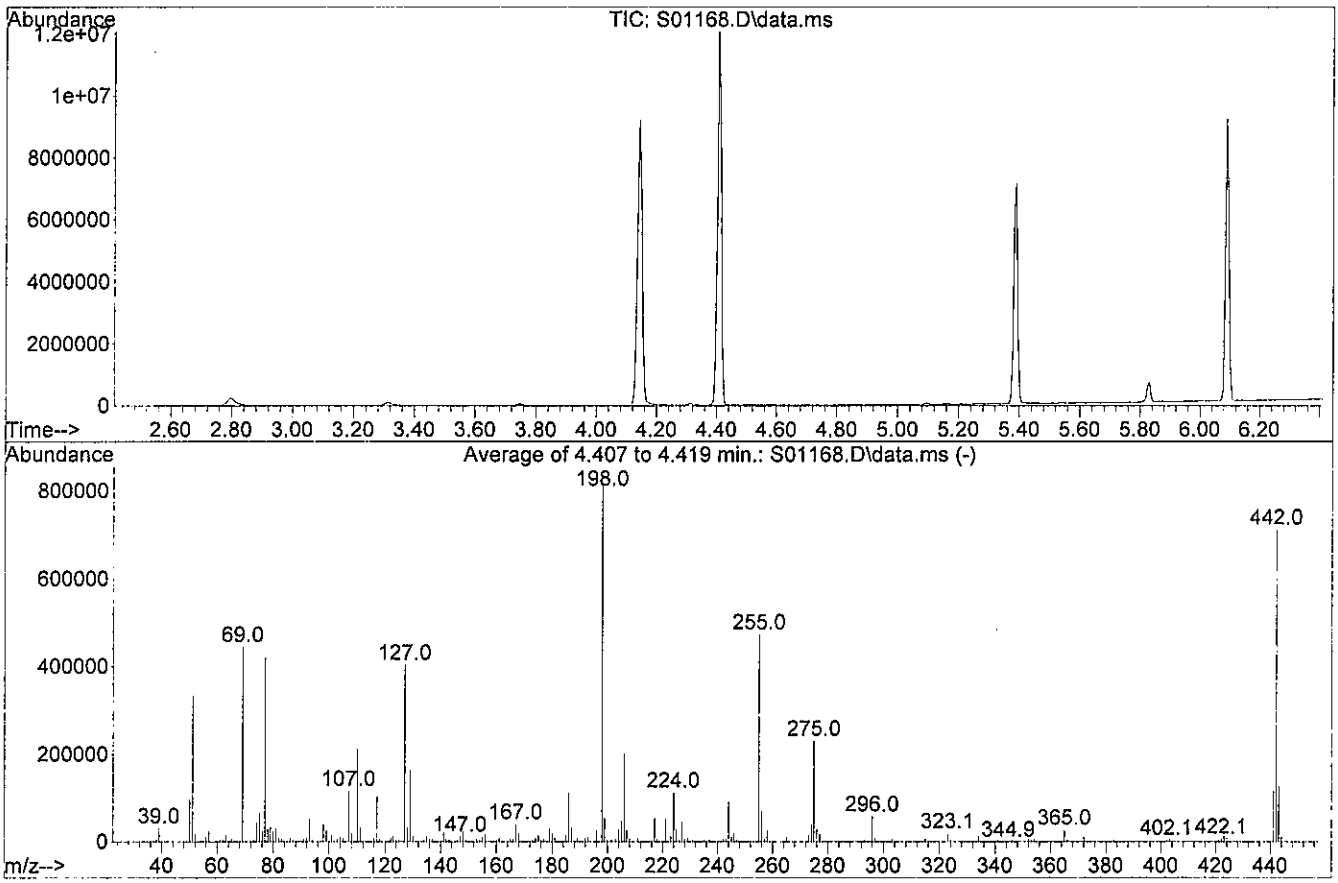
1309125 are re-analysis of 1308005, which was extracted a regular 8270 Samples ran MS SIM PAH... No surrogates to be reported ... JK

Calibration Raw Data

Data Path : C:\MSDCHEM\1\DATA\091713\
Data File : S01168.D
Acq On : 17 Sep 2013 11:37 am
Operator : JK HPSV4 sn #: CV11451177
Sample : DFTPP
Misc : ST130605-1
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Thu Sep 12 16:18:47 2013



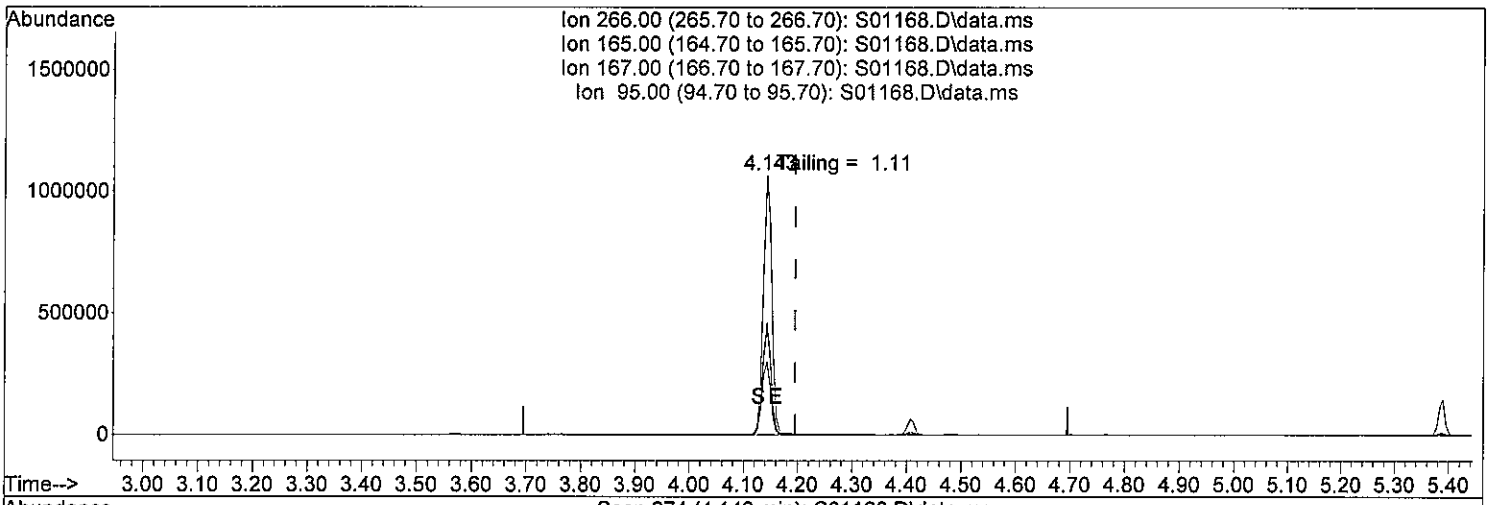
AutoFind: Scans 318, 319, 320; Background Corrected with Scan 311

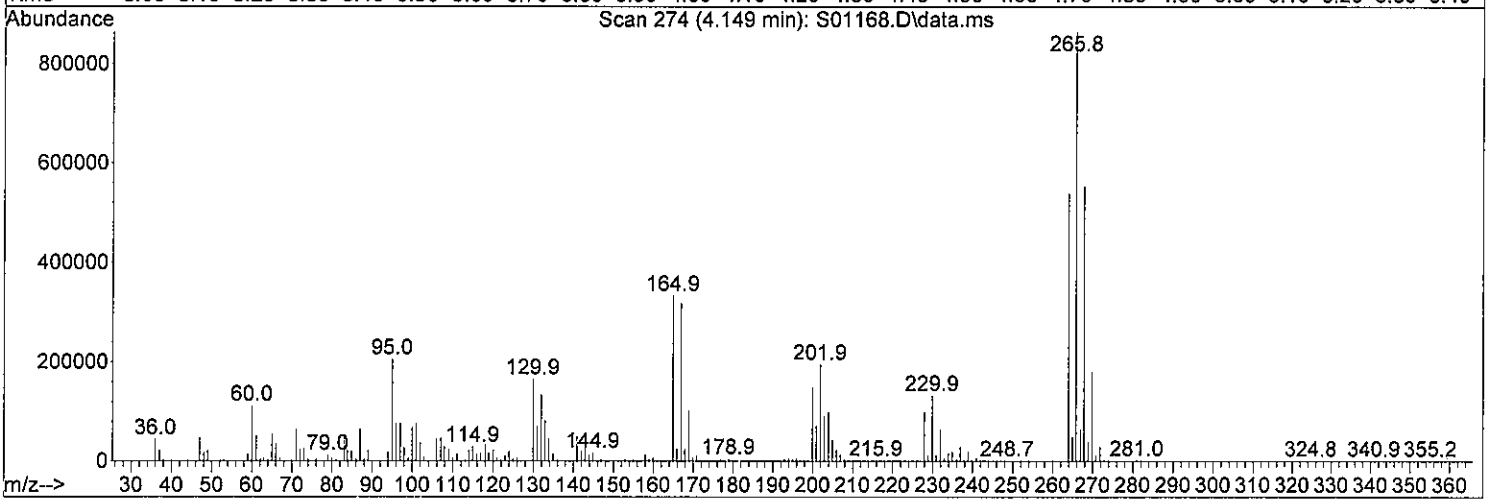
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	40.9	333246	PASS
68	69	0.00	2	0.1	484	PASS
69	198	0.00	100	54.5	444109	PASS
70	69	0.00	2	0.5	2156	PASS
127	198	30	60	49.5	403405	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	814933	PASS
199	198	5	9	6.7	54289	PASS
275	198	10	30	28.3	230605	PASS
365	198	1	100	3.4	27450	PASS
441	443	0.01	100	87.2	116648	PASS
442	198	39	100	87.4	712043	PASS
443	442	17	23	18.8	133733	PASS

JK 9-20-13

Data Path : C:\msdchem\1\data\091713\
Data File : S01168.D
Acq On : 17 Sep 2013 11:37 am
Operator : JK HPSV4 sn #: CV11451177
Sample : DFTPP
Misc : ST130605-1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 11:59:48 2013
Quant Method : C:\msdchem\1\methods\DFTPP.M
Quant Title :
QLast Update : Thu Sep 12 16:18:47 2013
Response via : Continuing Cal File: C:\msdchem\1\data\091213\S01139.D





TIC: S01168.D\data.ms

(1) Pentachlorophenol (t)

4.146min (-0.050) 50.40 ng/ul

response 11616990

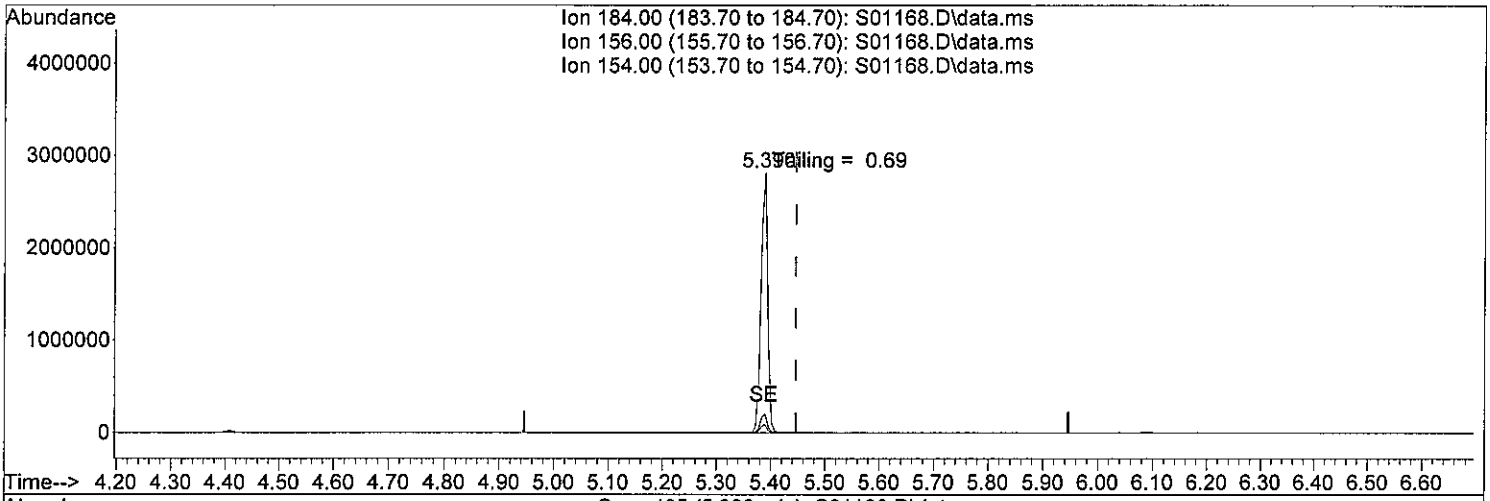
Ion	Exp%	Act%
266.00	100.00	100.00
165.00	0.00	42.97#
167.00	0.00	40.80#
95.00	0.00	28.95#

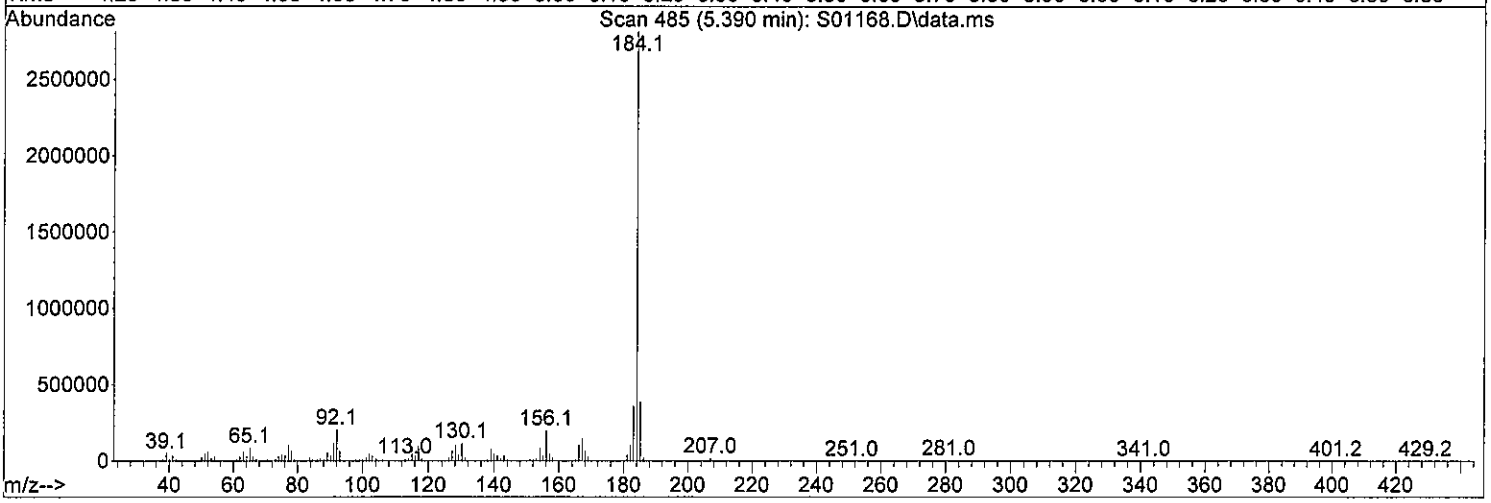
JA
9-20-13

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01168.D
Acq On : 17 Sep 2013 11:37 am
Operator : JK HPSV4 sn #: CV11451177
Sample : DFTPP
Misc : ST130605-1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 11:59:48 2013
Quant Method : C:\msdchem\1\methods\DFTPP.M
Quant Title :
QLast Update : Thu Sep 12 16:18:47 2013
Response via : Continuing Cal File: C:\msdchem\1\data\091213\S01139.D





TIC: S01168.D\data.ms

(3) Benzidine (t)

5.390min (-0.056) 81.95 ng/ul

response 24029628

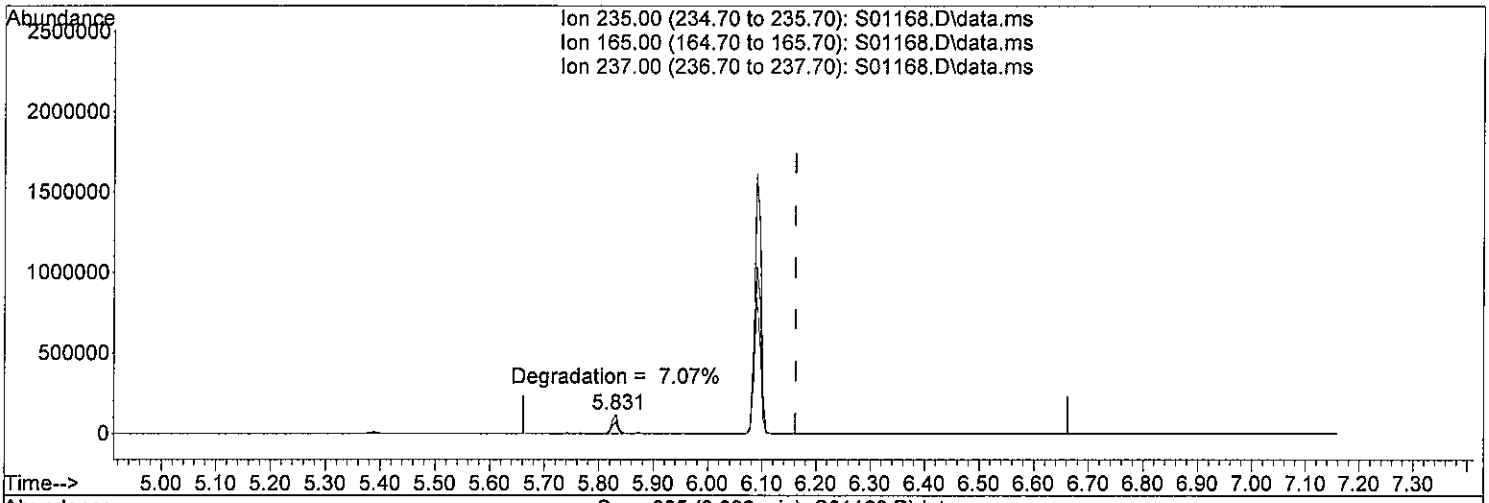
Ion	Exp%	Act%
184.00	100.00	100.00
156.00	0.00	7.27#
154.00	0.00	3.09#
0.00	0.00	0.00

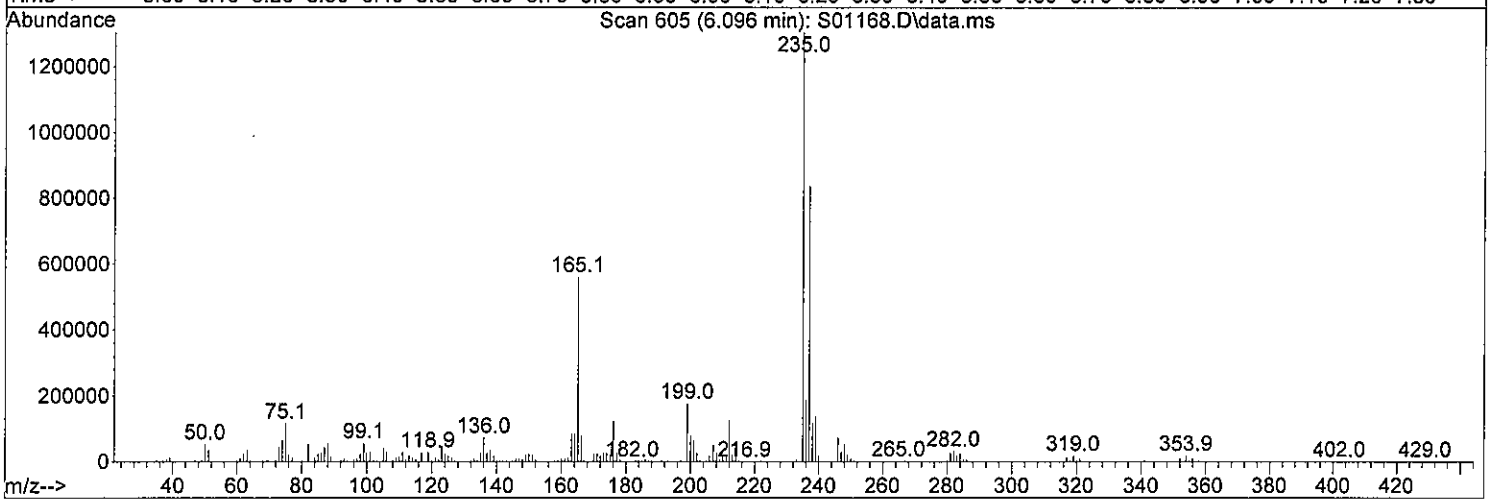
JH 5-20-13

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01168.D
Acq On : 17 Sep 2013 11:37 am
Operator : JK HPSV4 sn #: CV11451177
Sample : DFTPP
Misc : ST130605-1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 17 11:59:48 2013
Quant Method : C:\msdchem\1\methods\DFTPP.M
Quant Title :
QLast Update : Thu Sep 12 16:18:47 2013
Response via : Continuing Cal File: C:\msdchem\1\data\091213\S01139.D





TIC: S01168.D\data.ms

(4) DDT (t)

6.094min (-0.068) 58.55 ng/ul

response 13295681

Ion	Exp%	Act%
235.00	100.00	100.00
165.00	0.00	49.45#
237.00	0.00	63.98#
0.00	0.00	0.00

JA
9-20-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01169.D
Acq On : 17 Sep 2013 11:48 am
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0500
Misc : ST130912-6 500 PPB
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 17 12:05:20 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:04:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.945	136	1210359	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	692729	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1025889	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.070	240	1027649	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.678	264	448417	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.300	82	38728	500.00	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	25.00%#		
7) 2-Fluorobiphenyl	5.849	172	107592	500.00	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	25.00%		
18) p-Terphenyl-d14	9.088	244	102977	500.00	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	25.00%#		
Target Compounds						Qvalue
3) Naphthalene	4.962	128	129299	500.00	ng/ml	100
4) 2-Methylnaphthalene	5.554	142	87817	500.00	ng/ml	100
5) 1-Methylnaphthalene	5.642	142	83297	500.00	ng/ml	100
8) Acenaphthylene	6.347	152	90356	500.00	ng/ml#	100
9) Acenaphthene	6.492	154	73443m	485.24	ng/ml	
10) Fluorene	6.938	166	78905	500.00	ng/ml	100
12) Hexachlorobenzene	7.426	284	23164	500.00	ng/ml	100
13) Phenanthrene	7.776	178	108613	500.00	ng/ml	100
14) Anthracene	7.822	178	83645	500.00	ng/ml	100
15) Fluoranthene	8.811	202	108496	500.00	ng/ml#	100
17) Pyrene	9.022	202	113036	500.00	ng/ml#	100
19) Benzo[a]anthracene	10.058	228	98953	500.00	ng/ml	100
20) Chrysene	10.093	228	98740	500.00	ng/ml	100
22) Benzo[b]fluoranthene	11.182	252	85039	500.00	ng/ml	100
23) Benzo[k]fluoranthene	11.217	252	74862	500.00	ng/ml	100
24) Benzo[a]pyrene	11.605	252	57301	500.00	ng/ml	100
25) Indeno(1,2,3-c,d)pyrene	13.292	276	52134	500.00	ng/ml	100
26) Dibenzo[a,h]anthracene	13.287	278	43241	500.00	ng/ml	100
27) Benzo[g,h,i]perylene	13.801	276	42055	500.00	ng/ml	100

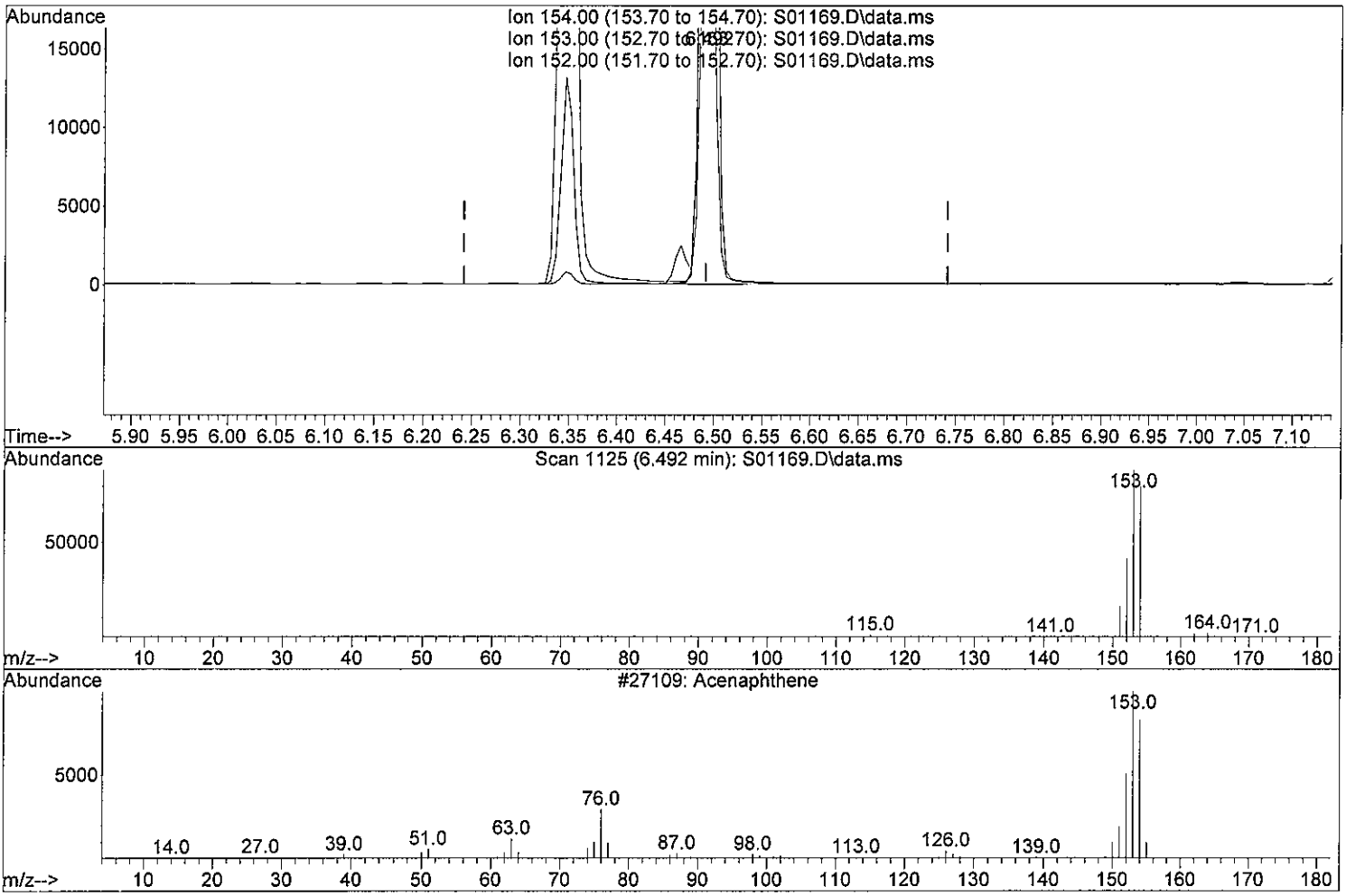
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-2017

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01169.D
Acq On : 17 Sep 2013 11:48 am
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0500
Misc : ST130912-6 500 PPB
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 17 12:04:45 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:04:38 2013
Response via : Initial Calibration



TIC: S01169.D\data.ms

(9) Acenaphthene (tm)

6.492min (0.000) 500.00 ng/ml

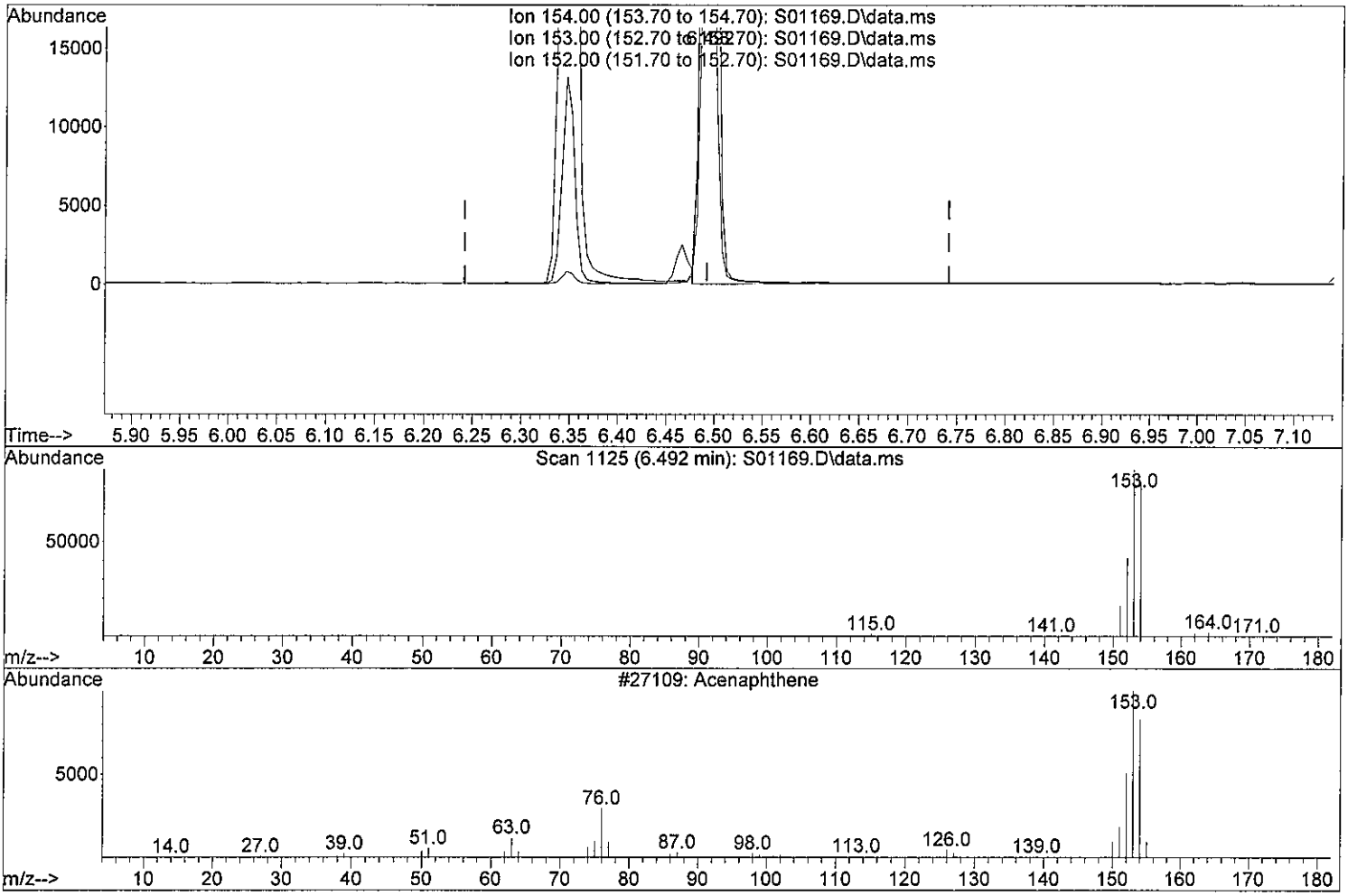
response 75677

Ion	Exp%	Act%
154.00	100.00	100.00
153.00	104.20	104.17
152.00	48.30	48.28
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01169.D
Acq On : 17 Sep 2013 11:48 am
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0500
Misc : ST130912-6 500 PPB
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 17 12:04:45 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:04:38 2013
Response via : Initial Calibration



TIC: S01169.D\data.ms

(9) Acenaphthene (tm)

6.492min (0.000) 485.24 ng/ml m

response 73443

Ion	Exp%	Act%
154.00	100.00	100.00
153.00	104.20	107.34
152.00	48.30	49.75
0.00	0.00	0.00

MANUAL RE-INTEGRATION

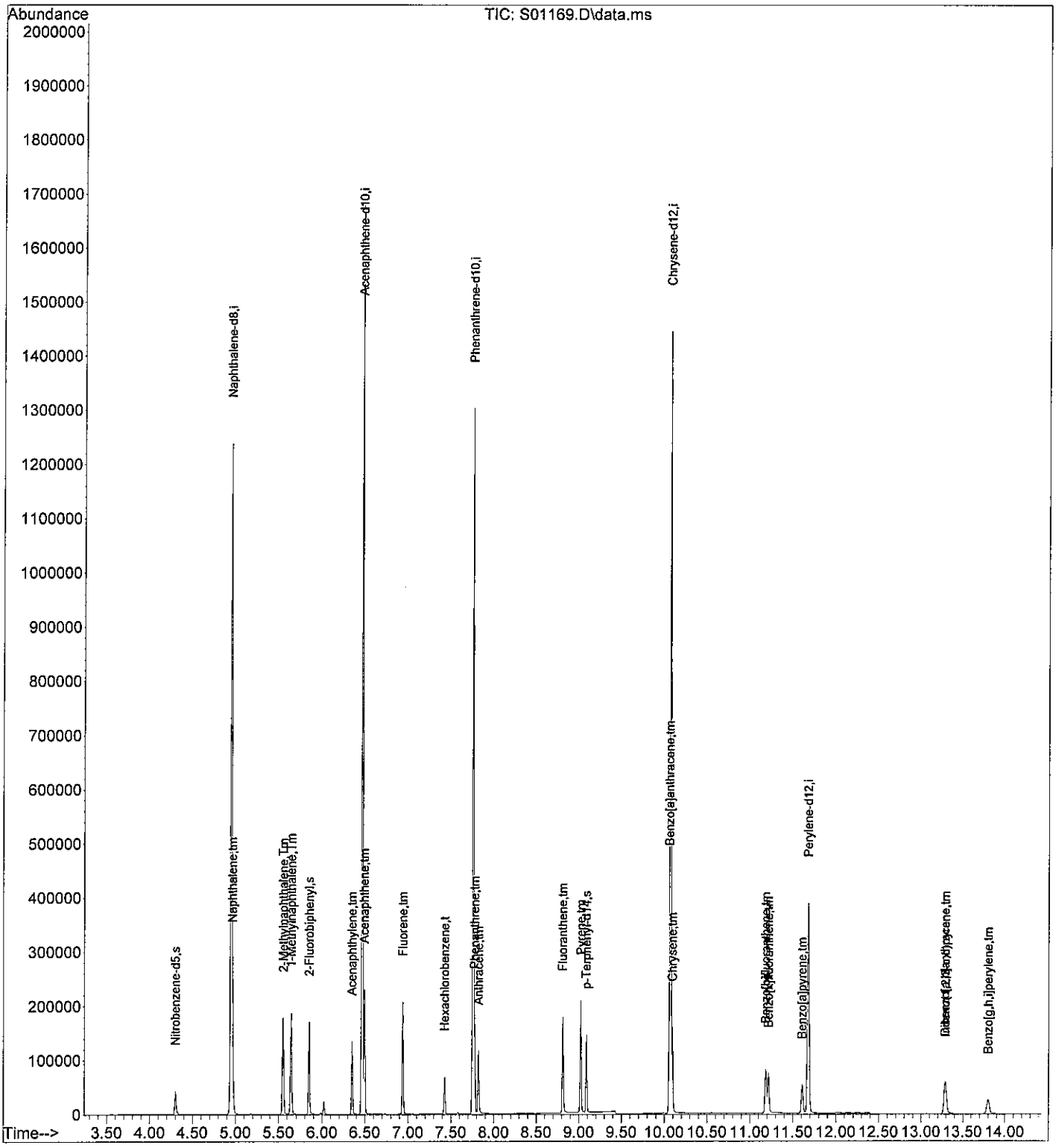
- ☐ missed peak assignment
- ☐ assigned incorrect name to peak
- ☑ over-integrated peak's area
- ☐ under-integrated peak's area
- ☐ other _____

initials JC *date* 9-20-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01169.D
Acq On : 17 Sep 2013 11:48 am
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0500
Misc : ST130912-6 500 PPB
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 17 12:05:20 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:04:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01170.D
Acq On : 17 Sep 2013 12:06 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0050
Misc : ST130912-7
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 12:36:50 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:35:32 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.945	136	1163832	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	634766	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	912942	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.066	240	517338	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	335670	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.299	82	3200	46.22	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	2.31%#		
7) 2-Fluorobiphenyl	5.849	172	9817	49.89	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	2.49%#		
18) p-Terphenyl-d14	9.088	244	8338	61.66	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	3.08%#		
Target Compounds						Qvalue
3) Naphthalene	4.965	128	11725	48.53	ng/ml	99
4) 2-Methylnaphthalene	5.554	142	7563	47.25	ng/ml	97
5) 1-Methylnaphthalene	5.642	142	7374	47.93	ng/ml	97
8) Acenaphthylene	6.347	152	6608	44.39	ng/ml#	98
9) Acenaphthene	6.492	154	6351	48.55	ng/ml	99
10) Fluorene	6.938	166	6565	47.59	ng/ml	92
12) Hexachlorobenzene	7.426	284	1971	48.88	ng/ml	99
13) Phenanthrene	7.776	178	9707m	62.40	ng/ml	
14) Anthracene	7.822	178	5890	44.17	ng/ml	99
15) Fluoranthene	8.811	202	8134	45.72	ng/ml#	94
17) Pyrene	9.022	202	8706	60.47	ng/ml#	93
19) Benzo[a]anthracene	10.054	228	6394	56.21	ng/ml	97
20) Chrysene	10.092	228	4649	48.33	ng/ml	98
22) Benzo[b]fluoranthene	11.178	252	5379	45.80	ng/ml#	87
23) Benzo[k]fluoranthene	11.209	252	4585m	48.93	ng/ml	
24) Benzo[a]pyrene	11.601	252	2852	39.94	ng/ml#	92
25) Indeno(1,2,3-c,d)pyrene	13.292	276	2938	42.95	ng/ml#	95
26) Dibenzo[a,h]anthracene	13.280	278	2701	45.49	ng/ml	96
27) Benzo[g,h,i]perylene	13.796	276	2557	44.82	ng/ml	98

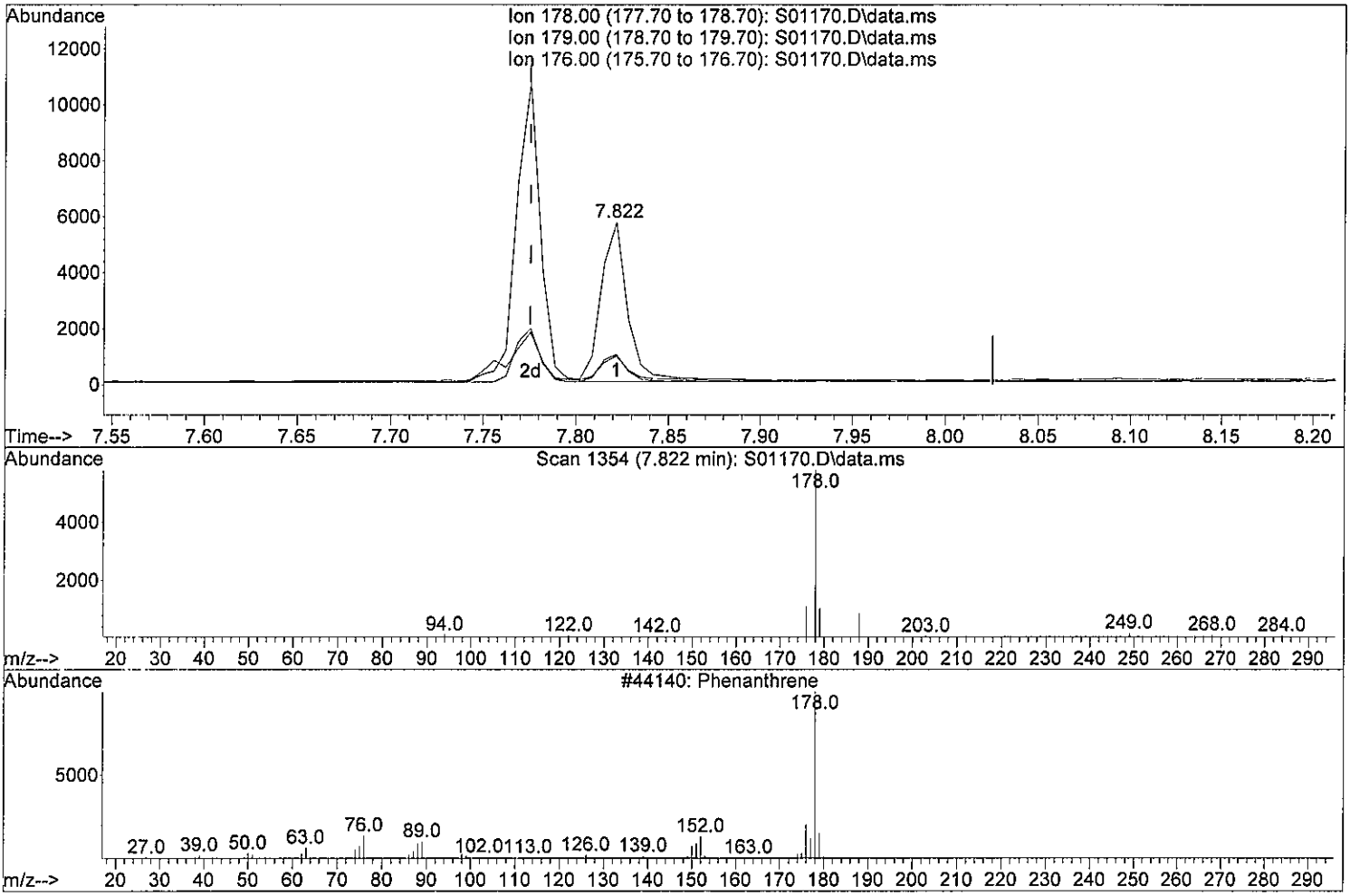
(#) = qualifier out of range (m) = manual integration (+) = signals summed

JK 9-20-13

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01170.D
Acq On : 17 Sep 2013 12:06 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0050
Misc : ST130912-7
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 12:35:40 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:35:32 2013
Response via : Initial Calibration



TIC: S01170.D\data.ms

(13) Phenanthrene (tm)

7.822min (+ 0.046) 37.86 ng/ml

response 5890

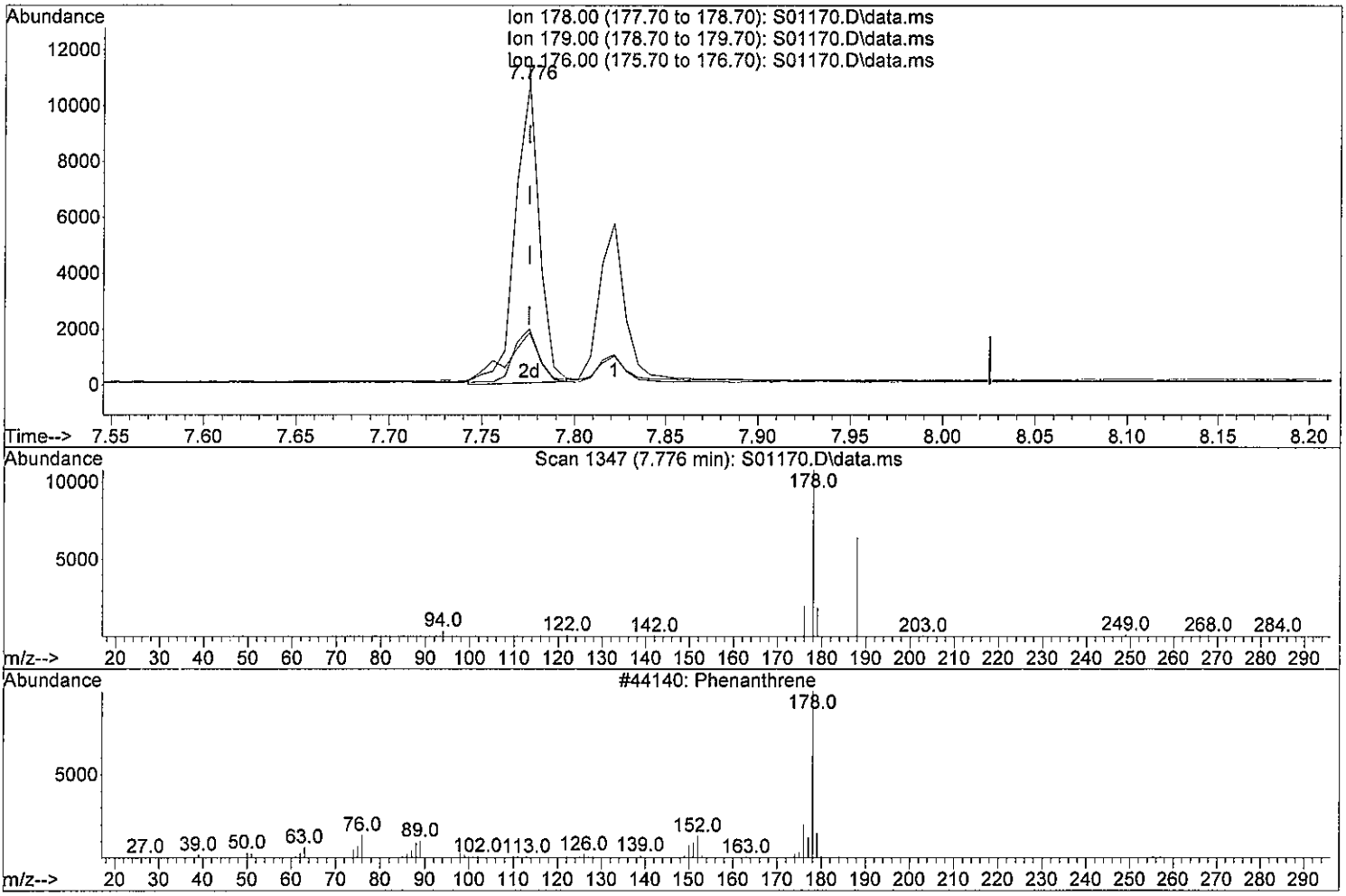
Ion	Exp%	Act%
178.00	100.00	100.00
179.00	15.90	17.52
176.00	18.20	17.79
0.00	0.00	0.00

3c6r

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01170.D
Acq On : 17 Sep 2013 12:06 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0050
Misc : ST130912-7
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 12:35:40 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:35:32 2013
Response via : Initial Calibration



TIC: S01170.D\data.ms

(13) Phenanthrene (tm)

7.776min (-0.000) 62.40 ng/ml m

response 9707

Ion	Exp%	Act%
178.00	100.00	100.00
179.00	15.90	10.63#
176.00	18.20	10.80#
0.00	0.00	0.00

MANUAL RE-INTEGRATION

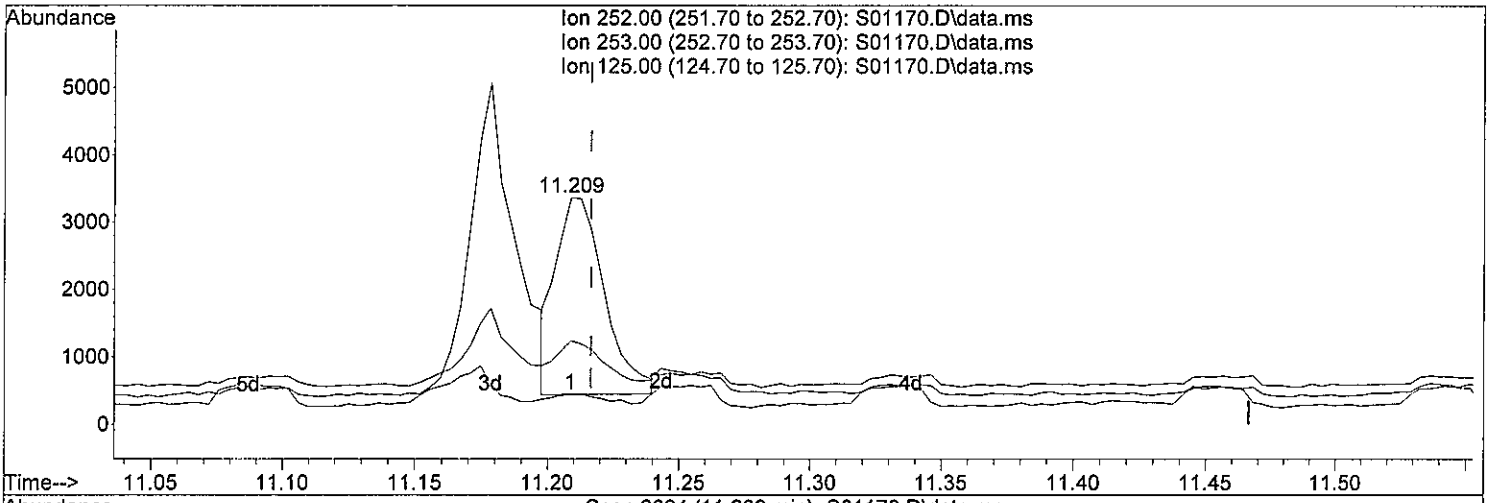
- [x] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other _____

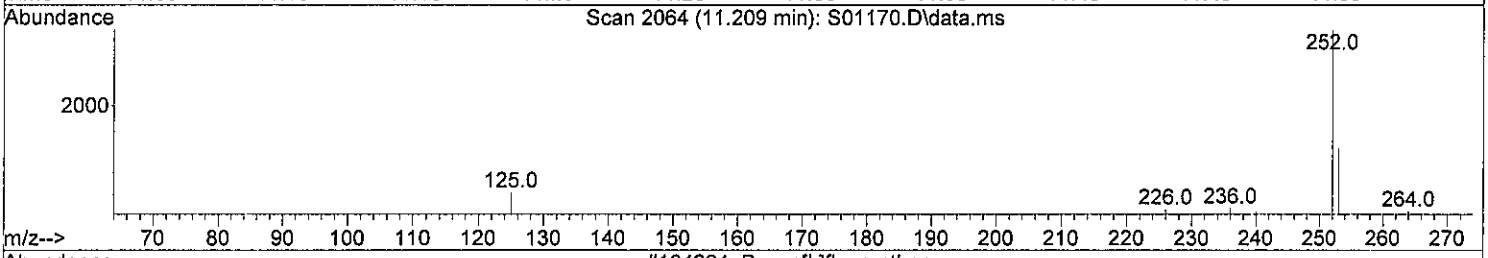
initials JL *date* 9-18-13

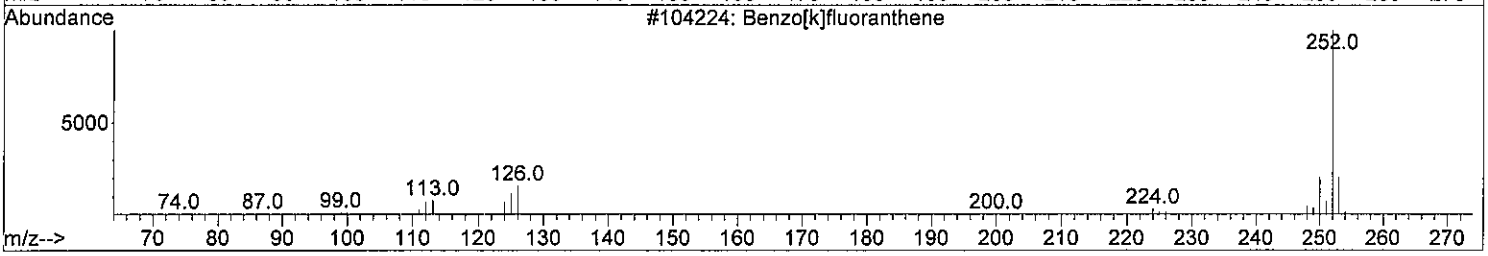
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01170.D
Acq On : 17 Sep 2013 12:06 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0050
Misc : ST130912-7
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 12:35:40 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:35:32 2013
Response via : Initial Calibration







TIC: S01170.D\data.ms

(23) Benzo[k]fluoranthene (tm)

11.209min (-0.008) 40.20 ng/ml

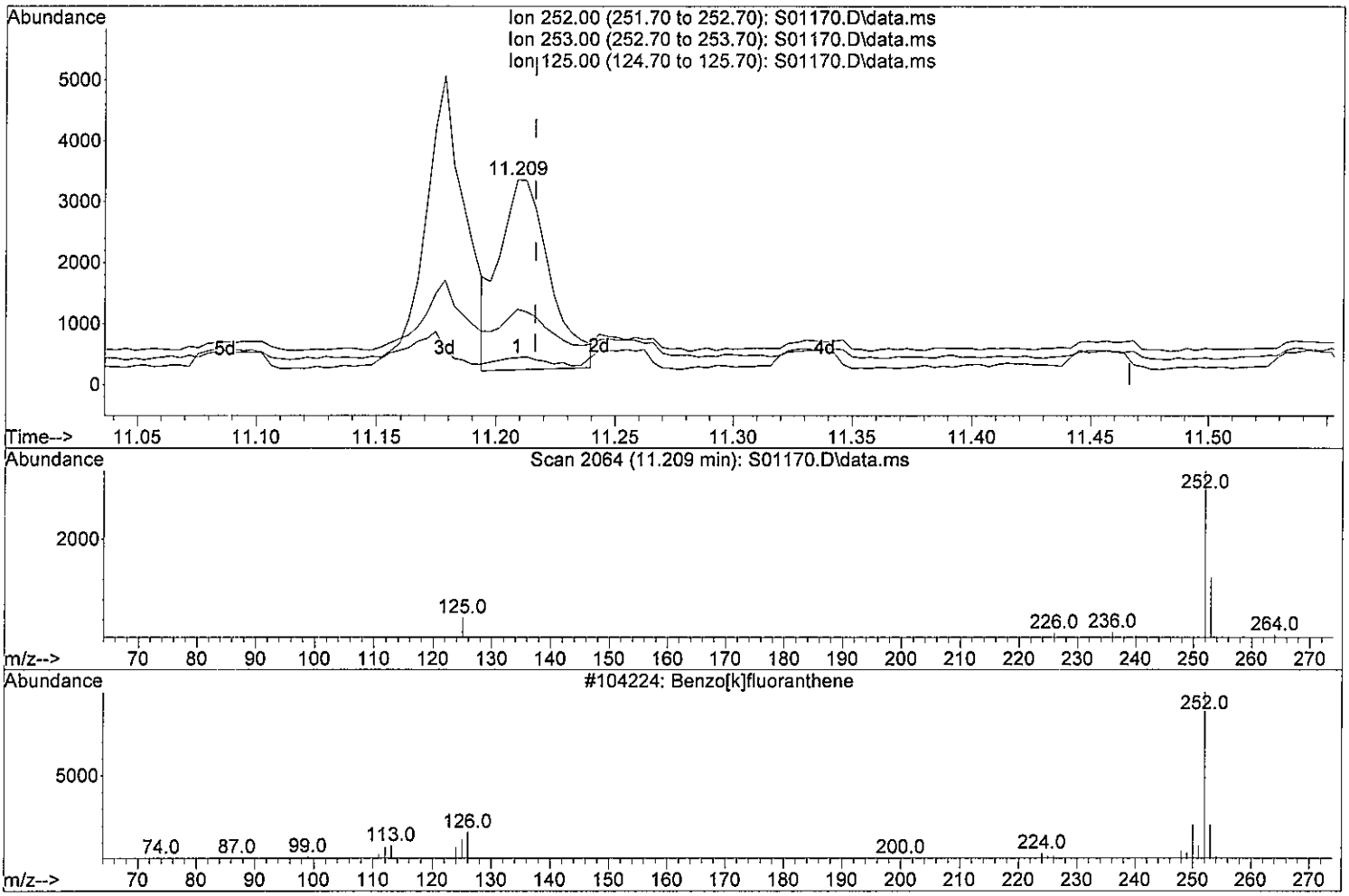
response 3767

Ion	Exp%	Act%
252.00	100.00	100.00
253.00	21.50	22.59
125.00	5.70	5.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01170.D
Acq On : 17 Sep 2013 12:06 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0050
Misc : ST130912-7
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 12:35:40 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:35:32 2013
Response via : Initial Calibration



TIC: S01170.D\data.ms

(23) Benzo[k]fluoranthene (tm)

11.209min (-0.008) 48.93 ng/ml m

response 4585

Ion	Exp%	Act%
252.00	100.00	100.00
253.00	21.50	18.56
125.00	5.70	4.91
0.00	0.00	0.00

MANUAL RE-INTEGRATION

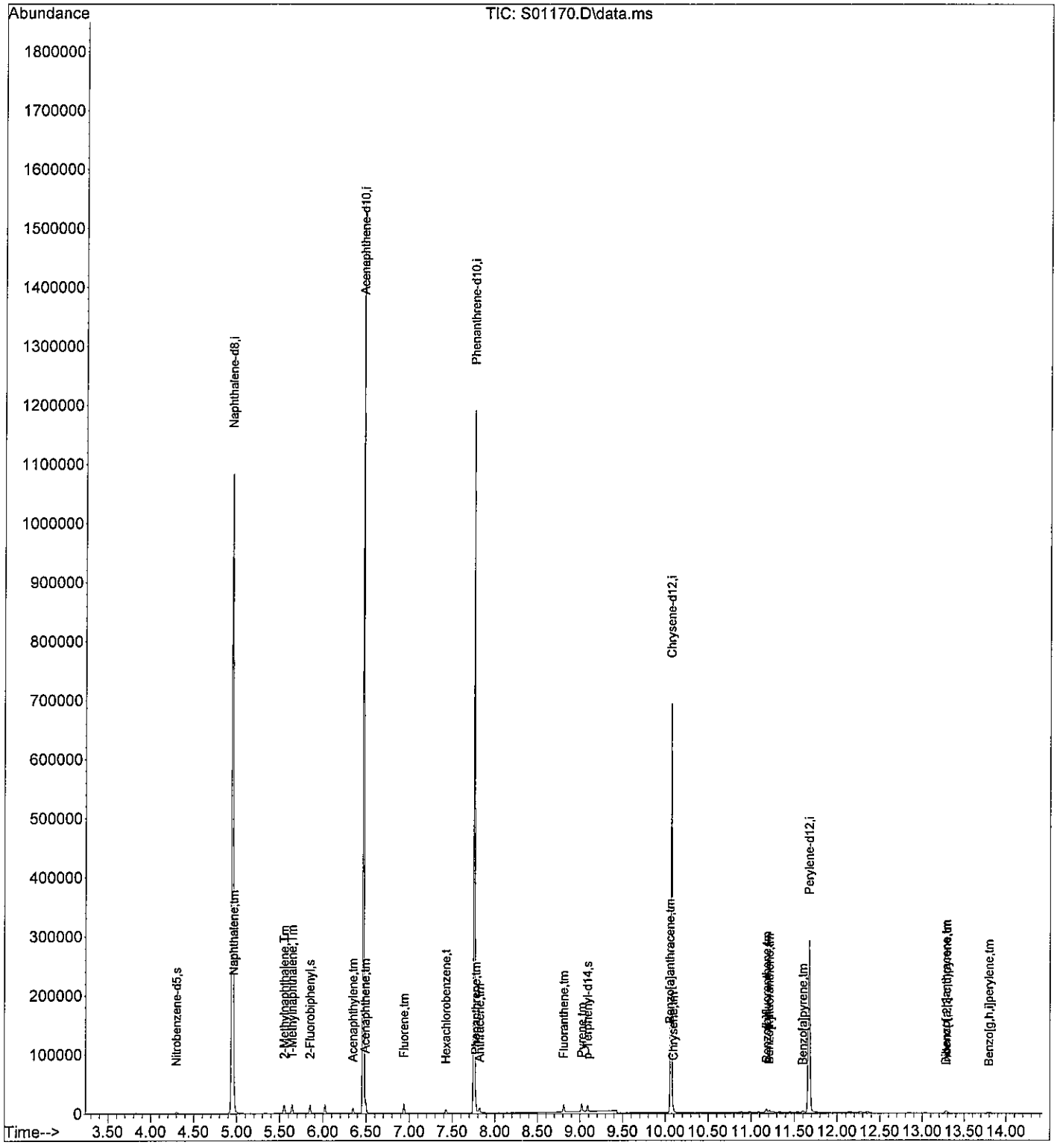
- ☐ missed peak assignment
- ☐ assigned incorrect name to peak
- ☐ over-integrated peak's area
- ☑ under-integrated peak's area
- ☐ other _____

initials JK *date* 5-20-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01170.D
Acq On : 17 Sep 2013 12:06 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0050
Misc : ST130912-7
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 17 12:36:50 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:35:32 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01171.D
Acq On : 17 Sep 2013 12:25 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0100
Misc : ST130912-8
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 17 12:41:59 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:41:43 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1216189	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	713555	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1094971	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.066	240	631918	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	427275	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.300	82	6344	91.43	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	4.57%#		
7) 2-Fluorobiphenyl	5.849	172	20166	93.94	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	4.70%#		
18) p-Terphenyl-d14	9.088	244	18451	107.51	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	5.38%#		
Target Compounds						Qvalue
3) Naphthalene	4.962	128	24473	97.94	ng/ml	99
4) 2-Methylnaphthalene	5.549	142	16258	98.11	ng/ml	100
5) 1-Methylnaphthalene	5.642	142	15865	99.12	ng/ml	98
8) Acenaphthylene	6.347	152	14872	92.29	ng/ml#	100
9) Acenaphthene	6.492	154	14098	97.21	ng/ml	100
10) Fluorene	6.938	166	14930	97.49	ng/ml	99
12) Hexachlorobenzene	7.426	284	4384	93.56	ng/ml	99
13) Phenanthrene	7.776	178	22253	97.14	ng/ml	97
14) Anthracene	7.822	178	14544	93.78	ng/ml	98
15) Fluoranthene	8.811	202	19555	94.28	ng/ml#	97
17) Pyrene	9.022	202	20807	111.51	ng/ml#	98
19) Benzo[a]anthracene	10.055	228	13604	98.59	ng/ml	100
20) Chrysene	10.089	228	11340	97.64	ng/ml	99
22) Benzo[b]fluoranthene	11.179	252	13406	92.87	ng/ml#	96
23) Benzo[k]fluoranthene	11.213	252	13319	101.78	ng/ml#	95
24) Benzo[a]pyrene	11.602	252	9247	101.14	ng/ml	98
25) Indeno(1,2,3-c,d)pyrene	13.287	276	9611	106.69	ng/ml	98
26) Dibenzo[a,h]anthracene	13.283	278	8218	105.65	ng/ml	95
27) Benzo[g,h,i]perylene	13.789	276	8310	109.18	ng/ml	98

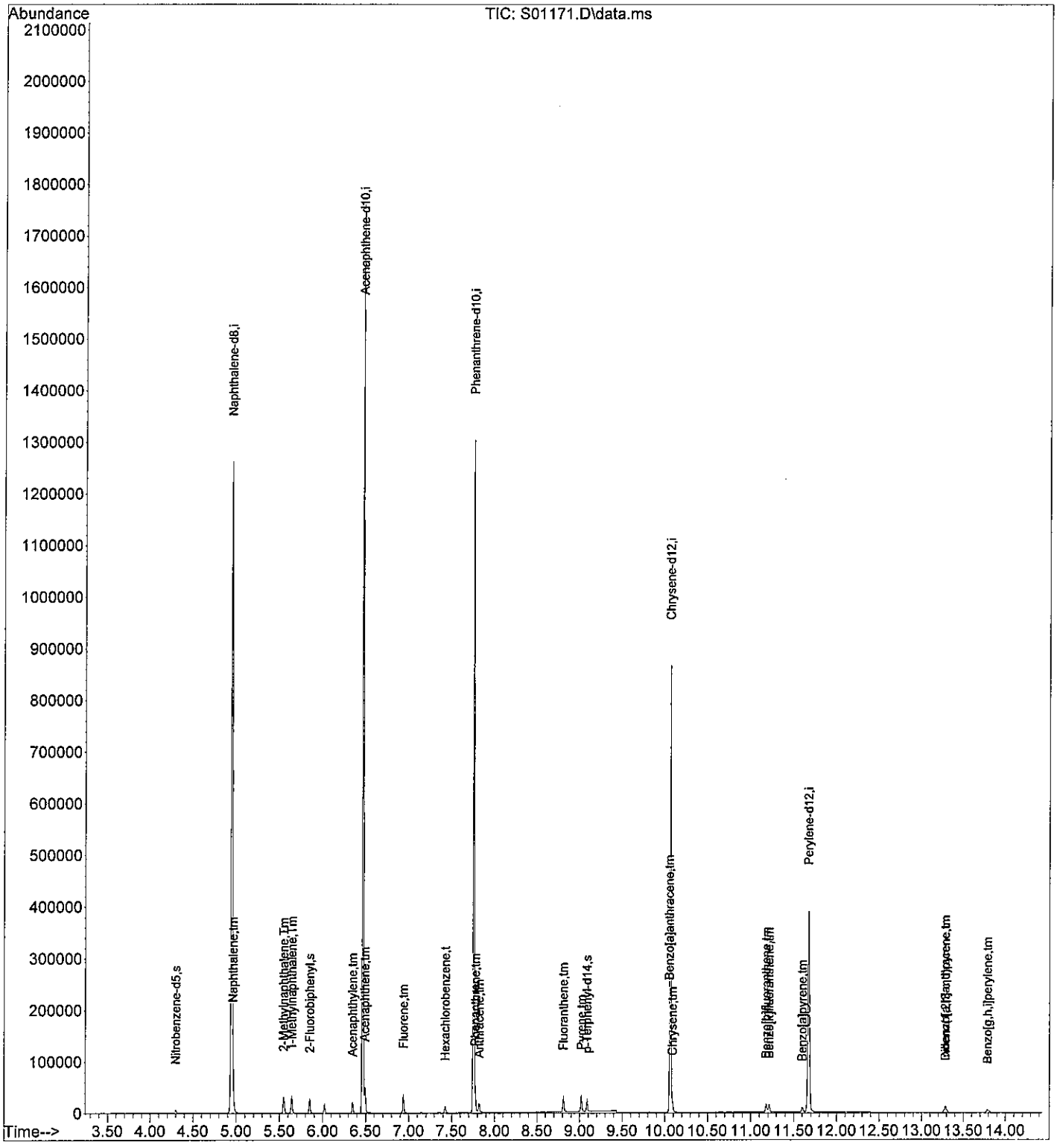
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-12-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01171.D
Acq On : 17 Sep 2013 12:25 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0100
Misc : ST130912-8
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 17 12:41:59 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:41:43 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01172.D
Acq On : 17 Sep 2013 12:43 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0200
Misc : ST130912-9
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 17 12:58:58 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:58:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1188359	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	692277	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1057919	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.066	240	619359	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	415122	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.297	82	12352	186.34	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery = 9.32%#			
7) 2-Fluorobiphenyl	5.849	172	38330	187.78	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery = 9.39%#			
18) p-Terphenyl-d14	9.088	244	35030	206.13	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery = 10.31%#			
Target Compounds						Qvalue
3) Naphthalene	4.962	128	47247	195.09	ng/ml	98
4) 2-Methylnaphthalene	5.554	142	31339	195.12	ng/ml	100
5) 1-Methylnaphthalene	5.642	142	30194	194.75	ng/ml	100
8) Acenaphthylene	6.347	152	29409	190.95	ng/ml#	100
9) Acenaphthene	6.492	154	26611	191.74	ng/ml	99
10) Fluorene	6.938	166	28646	194.55	ng/ml	100
12) Hexachlorobenzene	7.426	284	8370	188.45	ng/ml	99
13) Phenanthrene	7.776	178	41211	189.47	ng/ml	98
14) Anthracene	7.822	178	28333	191.70	ng/ml	98
15) Fluoranthene	8.811	202	37687	190.91	ng/ml#	98
17) Pyrene	9.022	202	39731	212.66	ng/ml#	99
19) Benzo[a]anthracene	10.055	228	25184	189.48	ng/ml	99
20) Chrysene	10.089	228	21424	191.03	ng/ml	99
22) Benzo[b]fluoranthene	11.175	252	23346	173.75	ng/ml#	96
23) Benzo[k]fluoranthene	11.213	252	27902	214.25	ng/ml#	99
24) Benzo[a]pyrene	11.601	252	16601	190.01	ng/ml	96
25) Indeno(1,2,3-c,d)pyrene	13.295	276	18507	208.47	ng/ml#	91
26) Dibenzo[a,h]anthracene	13.278	278	16012	208.78	ng/ml	100
27) Benzo[g,h,i]perylene	13.796	276	15161	203.74	ng/ml	99

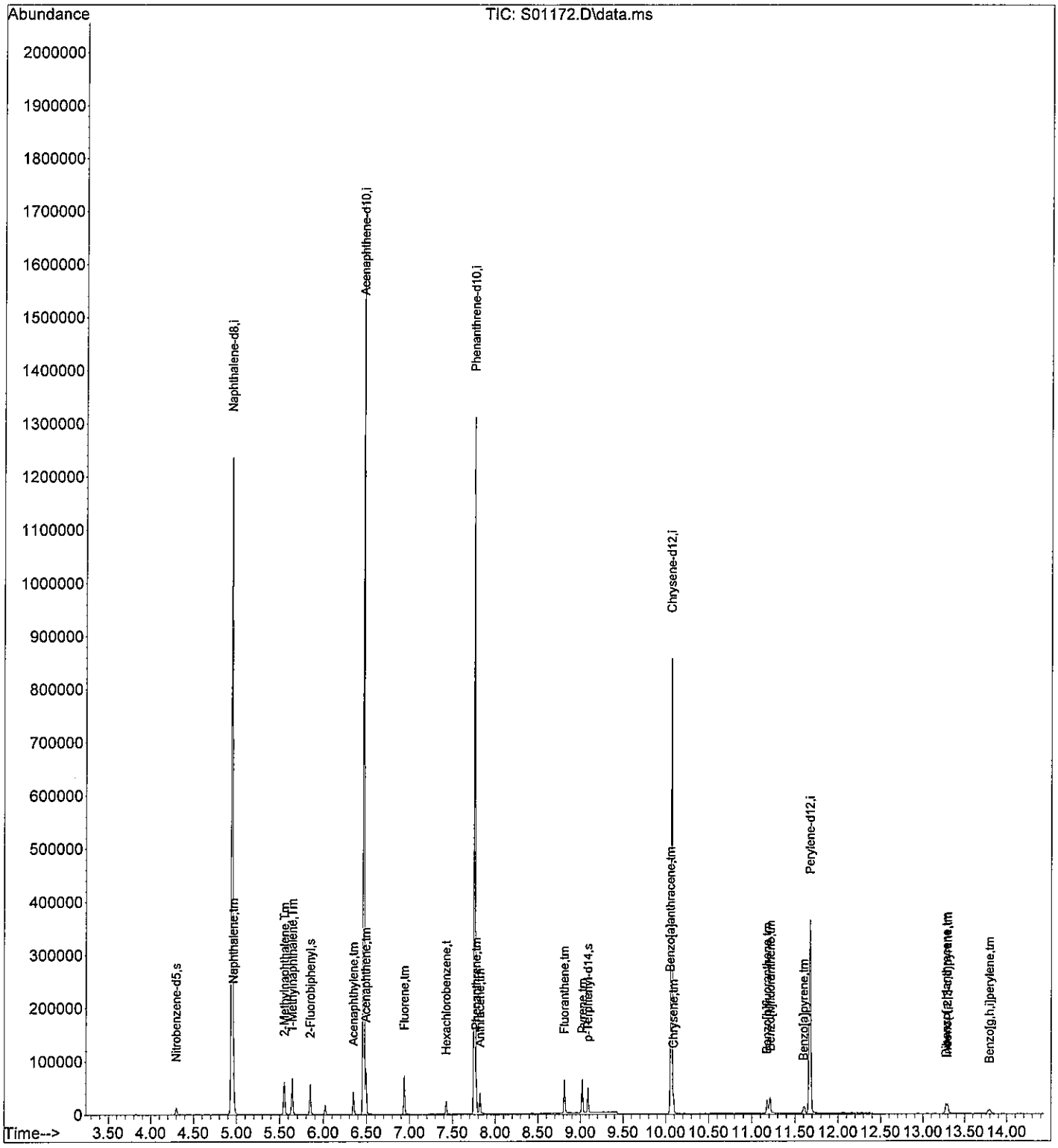
(#) = qualifier out of range (m) = manual integration (+) = signals summed

JH 9-20-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01172.D
Acq On : 17 Sep 2013 12:43 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD0200
Misc : ST130912-9
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 17 12:58:58 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 12:58:49 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01173.D
Acq On : 17 Sep 2013 1:02 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD1000
Misc : ST130912-10
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 17 13:30:34 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:29:47 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1197890	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	696285	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1072784	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.066	240	904438	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	505750	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.299	82	71454	1054.75	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	52.74%		
7) 2-Fluorobiphenyl	5.849	172	195797	962.63	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	48.13%		
18) p-Terphenyl-d14	9.088	244	197373	829.28	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	41.46%		
Target Compounds						Qvalue
3) Naphthalene	4.962	128	240626	988.52	ng/ml	98
4) 2-Methylnaphthalene	5.548	142	168739	1033.51	ng/ml	99
5) 1-Methylnaphthalene	5.642	142	157013	1003.75	ng/ml	100
8) Acenaphthylene	6.347	152	183241	1141.17	ng/ml#	100
9) Acenaphthene	6.492	154	140493	1005.16	ng/ml	99
10) Fluorene	6.938	166	155530	1039.75	ng/ml	99
12) Hexachlorobenzene	7.426	284	45687	1011.47	ng/ml	100
13) Phenanthrene	7.776	178	213629	974.69	ng/ml	99
14) Anthracene	7.822	178	175581	1132.65	ng/ml	100
15) Fluoranthene	8.811	202	219094	1074.16	ng/ml#	99
17) Pyrene	9.022	202	226595	859.71	ng/ml#	100
19) Benzo[a]anthracene	10.054	228	188101	975.19	ng/ml	100
20) Chrysene	10.089	228	139714	878.93	ng/ml	100
22) Benzo[b]fluoranthene	11.178	252	176633	1062.21	ng/ml	100
23) Benzo[k]fluoranthene	11.213	252	152381	968.07	ng/ml	99
24) Benzo[a]pyrene	11.605	252	126449m	1141.42	ng/ml	
25) Indeno(1,2,3-c,d)pyrene	13.292	276	127082	1135.24	ng/ml	99
26) Dibenzo[a,h]anthracene	13.282	278	108590	1125.68	ng/ml	99
27) Benzo[g,h,i]perylene	13.798	276	111024	1171.99	ng/ml	99

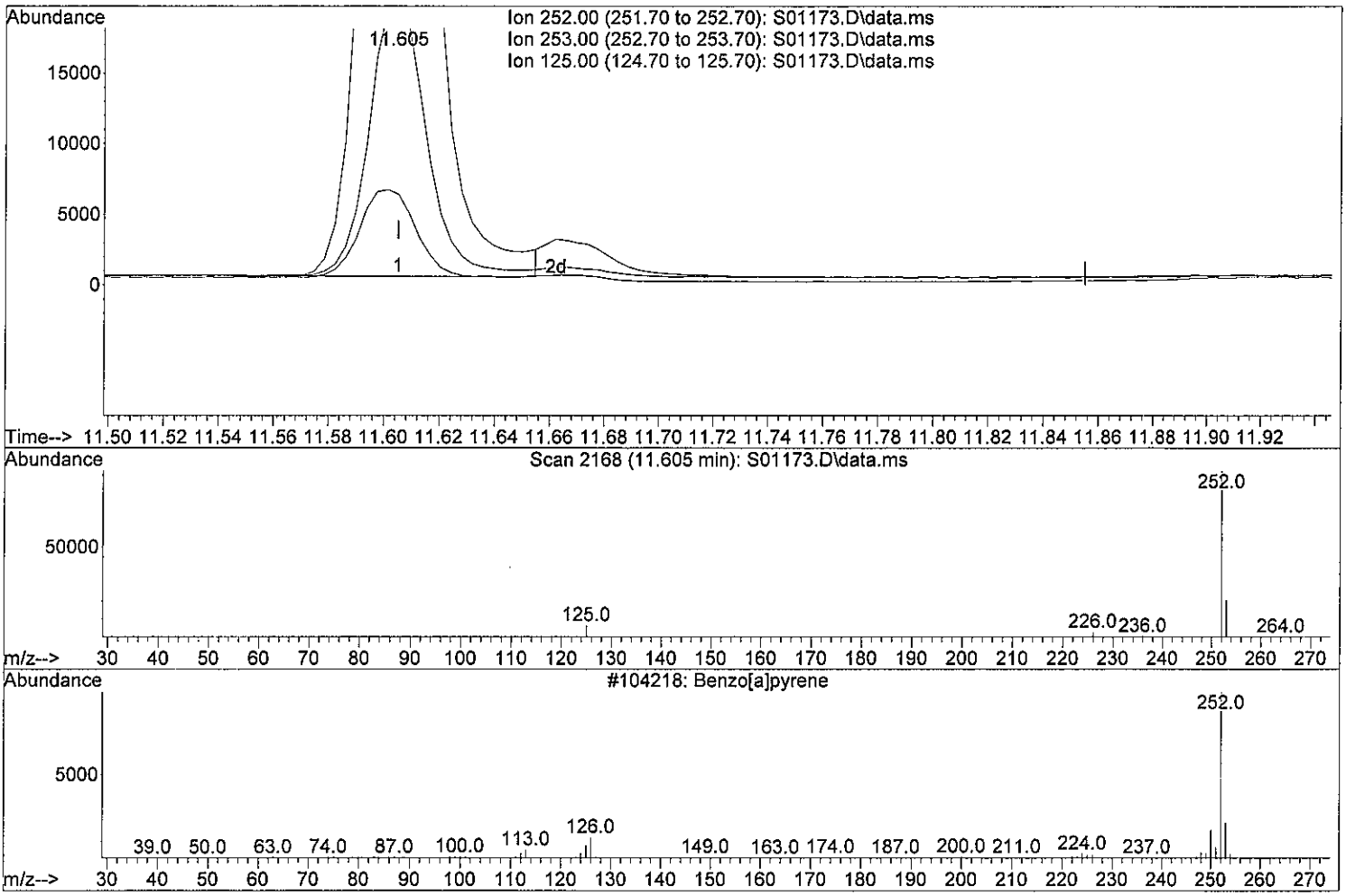
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SK 9-20-13

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01173.D
Acq On : 17 Sep 2013 1:02 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD1000
Misc : ST130912-10
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 17 13:29:54 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:29:47 2013
Response via : Initial Calibration



TIC: S01173.D\data.ms

(24) Benzo[a]pyrene (tm)

11.605min (-0.000) 1156.65 ng/ml

response 128136

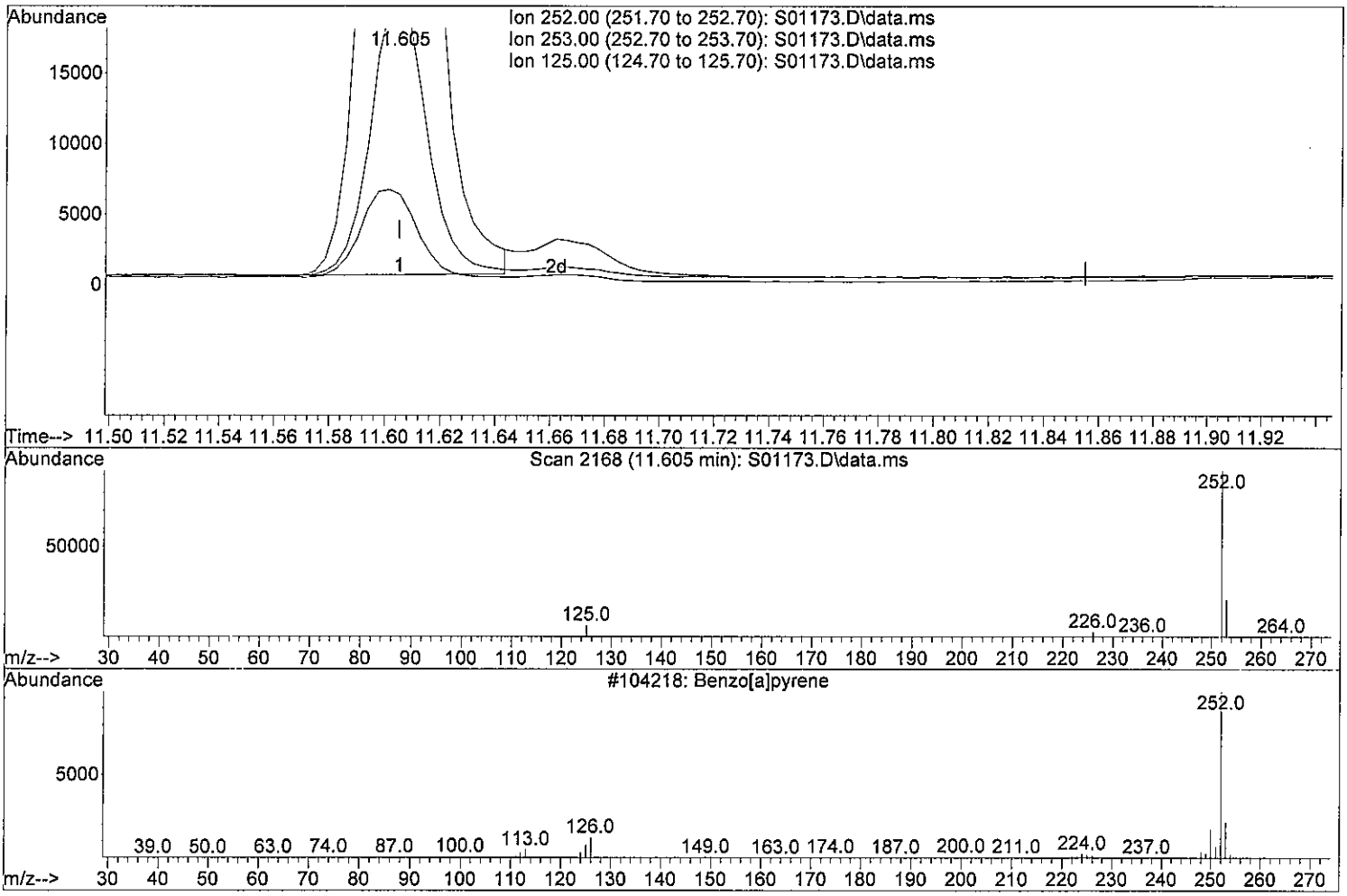
Ion	Exp%	Act%
252.00	100.00	100.00
253.00	22.40	21.76
125.00	10.30	7.16#
0.00	0.00	0.00

3 of 6

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01173.D
Acq On : 17 Sep 2013 1:02 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD1000
Misc : ST130912-10
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 17 13:29:54 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:29:47 2013
Response via : Initial Calibration



TIC: S01173.D\data.ms

(24) Benzo[a]pyrene (tm)

11.605min (-0.000) 1141.42 ng/ml m

response 126449

Ion	Exp%	Act%
252.00	100.00	100.00
253.00	22.40	22.05
125.00	10.30	7.25#
0.00	0.00	0.00

MANUAL RE-INTEGRATION

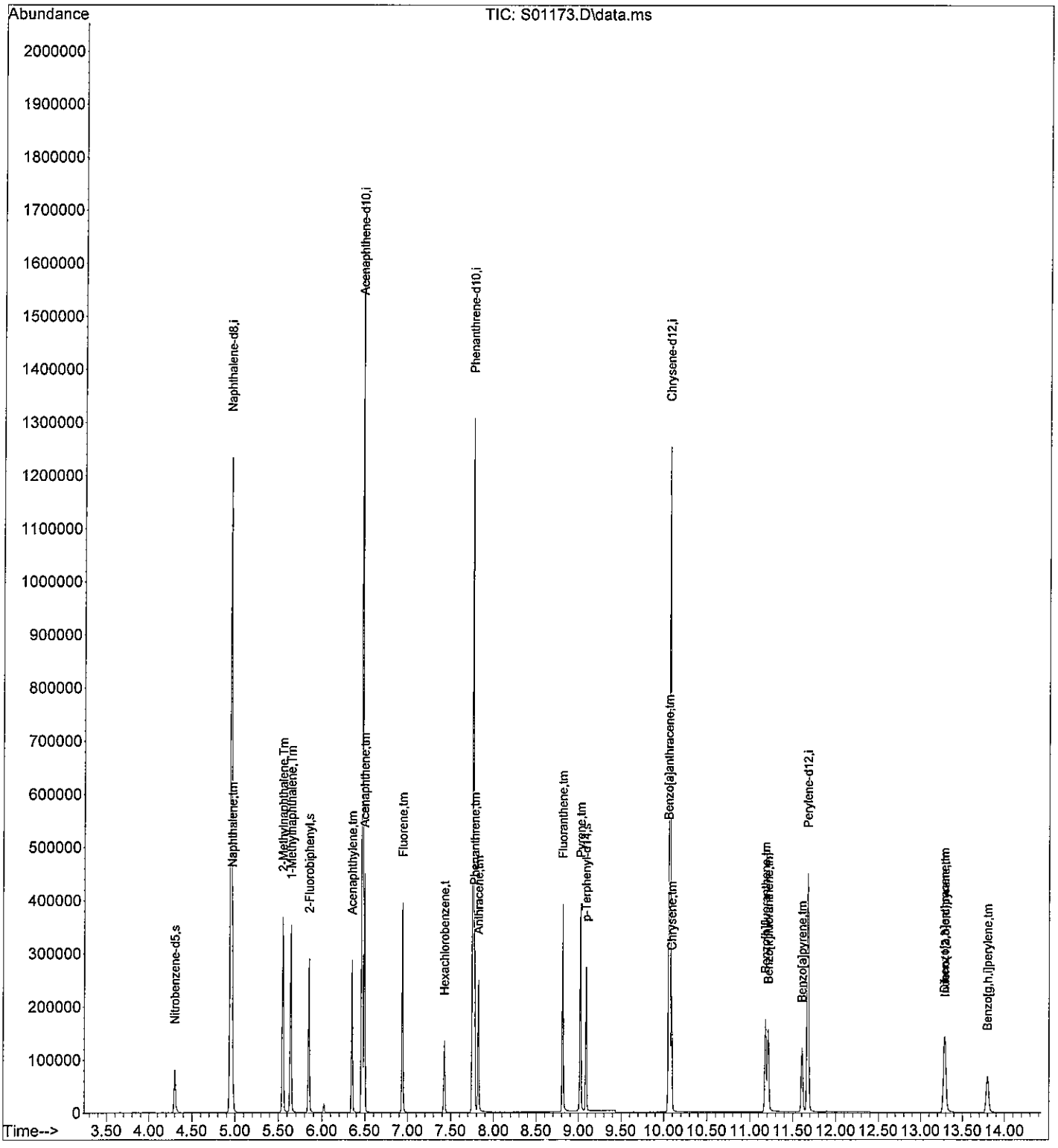
- ☐ missed peak assignment
- ☐ assigned incorrect name to peak
- ☒ over-integrated peak's area
- ☐ under-integrated peak's area
- ☐ other _____

initials YC *date* 5-20-15

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01173.D
Acq On : 17 Sep 2013 1:02 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD1000
Misc : ST130912-10
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 17 13:30:34 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:29:47 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01174.D
Acq On : 17 Sep 2013 1:20 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD2000
Misc : ST130912-11
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 17 13:36:41 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:36:35 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1236215	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	723878	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1116713	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.066	240	1153840	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	636232	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.300	82	161865	2255.98	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery = 112.80%#			
7) 2-Fluorobiphenyl	5.849	172	404986	1928.83	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery = 96.44%			
18) p-Terphenyl-d14	9.088	244	415861	1535.48	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery = 76.77%			
Target Compounds						Qvalue
3) Naphthalene	4.962	128	500158	1992.50	ng/ml	98
4) 2-Methylnaphthalene	5.549	142	354596	2086.37	ng/ml	100
5) 1-Methylnaphthalene	5.642	142	326914	2020.88	ng/ml	100
8) Acenaphthylene	6.347	152	418556	2405.58	ng/ml#	100
9) Acenaphthene	6.492	154	293290	2015.29	ng/ml	99
10) Fluorene	6.938	166	331065	2106.25	ng/ml	99
12) Hexachlorobenzene	7.426	284	97078	2053.61	ng/ml	99
13) Phenanthrene	7.776	178	447009	1965.93	ng/ml	99
14) Anthracene	7.822	178	387032	2321.39	ng/ml	100
15) Fluoranthene	8.811	202	473848	2189.48	ng/ml#	100
17) Pyrene	9.022	202	488261	1521.54	ng/ml#	100
19) Benzo[a]anthracene	10.055	228	425274	1768.27	ng/ml	99
20) Chrysene	10.093	228	424717	2078.00	ng/ml	99
22) Benzo[b]fluoranthene	11.182	252	430971	2049.90	ng/ml#	99
23) Benzo[k]fluoranthene	11.213	252	369449	1886.86	ng/ml	99
24) Benzo[a]pyrene	11.605	252	346083	2393.00	ng/ml#	97
25) Indeno(1,2,3-c,d)pyrene	13.292	276	309845	2164.12	ng/ml	98
26) Dibenzo[a,h]anthracene	13.285	278	279318	2245.23	ng/ml	99
27) Benzo[g,h,i]perylene	13.799	276	288384	2338.09	ng/ml	98

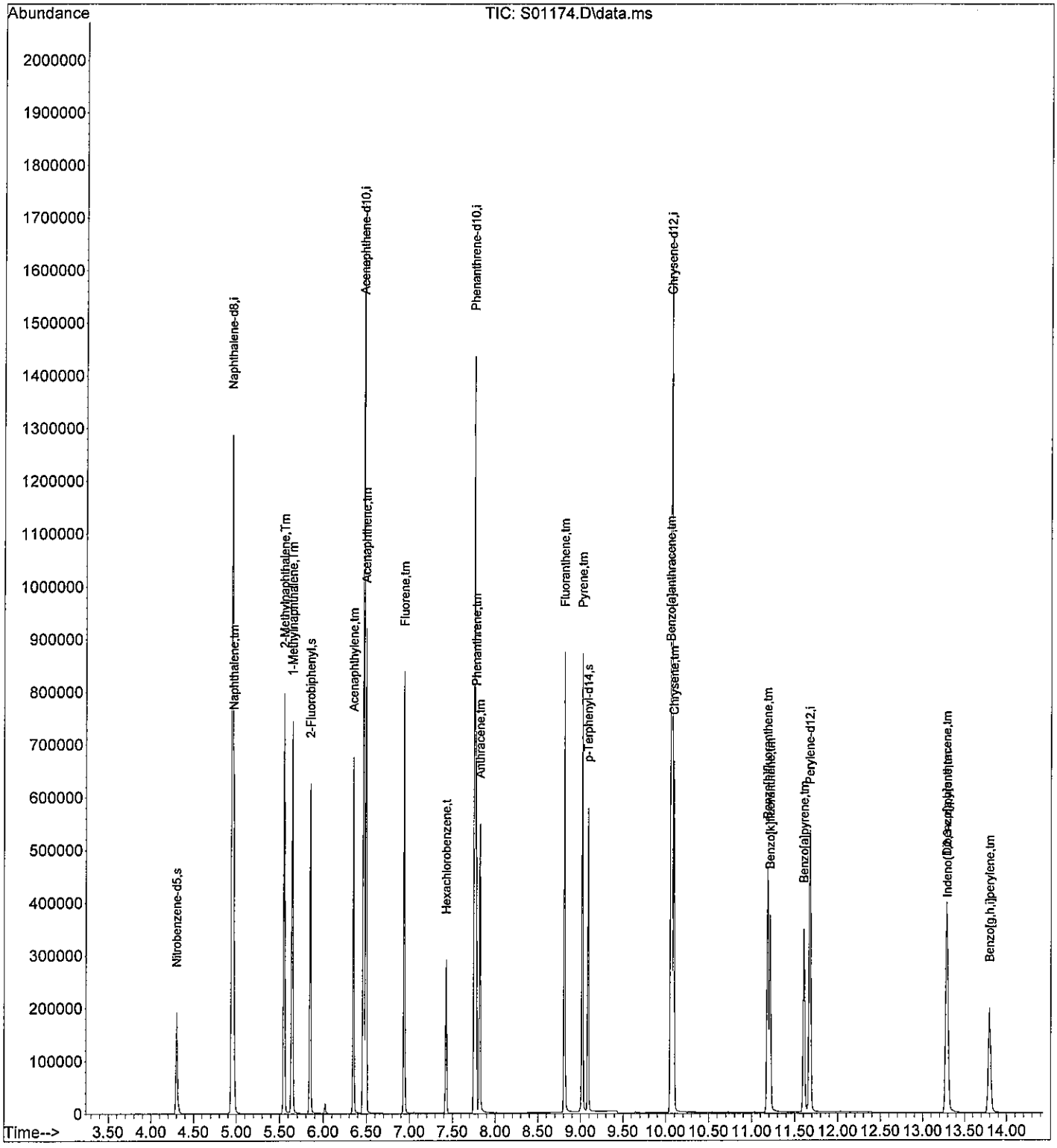
(#) = qualifier out of range (m) = manual integration (+) = signals summed

DU 9-20-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01174.D
Acq On : 17 Sep 2013 1:20 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD2000
Misc : ST130912-11
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 17 13:36:41 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:36:35 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01175.D
Acq On : 17 Sep 2013 1:39 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD5000
Misc : ST130912-12
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 17 13:57:13 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:56:41 2013
Response via : Initial Calibration

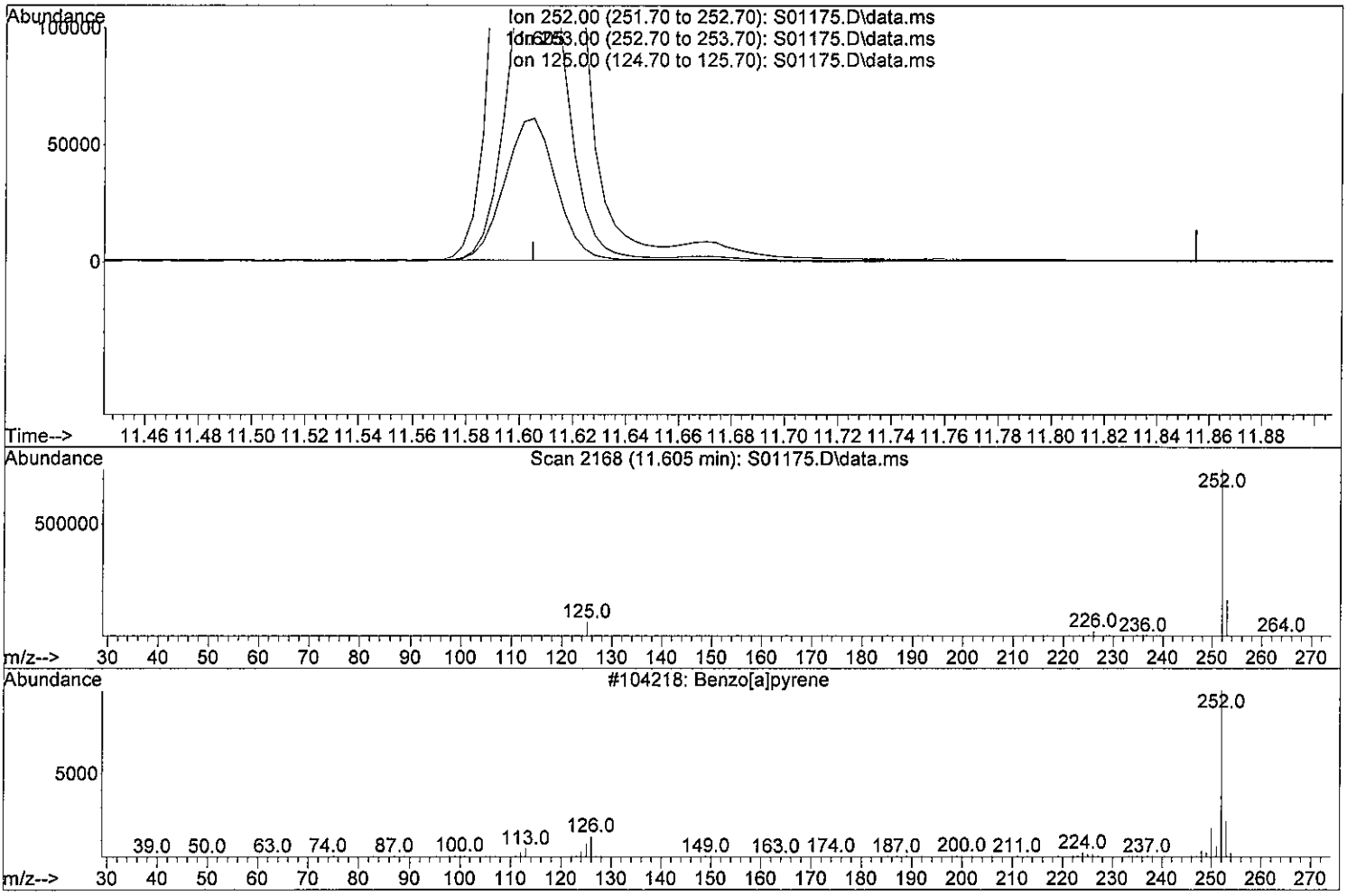
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1197062	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	703392	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1062953	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.070	240	1182475	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	804201	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.300	82	432488	6014.43	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery = 300.72%#			
7) 2-Fluorobiphenyl	5.849	172	987859	4863.88	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery = 243.19%#			
18) p-Terphenyl-d14	9.088	244	1049019	3939.77	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery = 196.99%#			
Target Compounds						Qvalue
3) Naphthalene	4.962	128	1228392	5045.93	ng/ml	98
4) 2-Methylnaphthalene	5.548	142	883598	5312.94	ng/ml	99
5) 1-Methylnaphthalene	5.642	142	808483	5137.58	ng/ml	100
8) Acenaphthylene	6.347	152	1132627	6389.01	ng/ml#	100
9) Acenaphthene	6.492	154	728449	5129.02	ng/ml	99
10) Fluorene	6.938	166	827360	5353.23	ng/ml	99
12) Hexachlorobenzene	7.426	284	245848	5392.31	ng/ml	99
13) Phenanthrene	7.776	178	1090883	5034.52	ng/ml	99
14) Anthracene	7.822	178	1016450	6157.75	ng/ml	100
15) Fluoranthene	8.811	202	1211846	5737.99	ng/ml#	99
17) Pyrene	9.022	202	1247013	3927.45	ng/ml#	100
19) Benzo[a]anthracene	10.058	228	1146362	4697.93	ng/ml	99
20) Chrysene	10.093	228	1105907	5237.92	ng/ml	99
22) Benzo[b]fluoranthene	11.186	252	1202386	4586.91	ng/ml	99
23) Benzo[k]fluoranthene	11.217	252	1062137	4380.23	ng/ml#	98
24) Benzo[a]pyrene	11.605	252	1007651m	5413.96	ng/ml	
25) Indeno(1,2,3-c,d)pyrene	13.290	276	857822	4775.55	ng/ml	97
26) Dibenzo[a,h]anthracene	13.287	278	790002	5020.46	ng/ml	98
27) Benzo[g,h,i]perylene	13.803	276	903139	5664.56	ng/ml#	97

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01175.D
Acq On : 17 Sep 2013 1:39 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD5000
Misc : ST130912-12
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 17 13:56:47 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:56:41 2013
Response via : Initial Calibration



TIC: S01175.D\data.ms

(24) Benzo[a]pyrene (tm)

11.605min (+ 0.000) 5534.57 ng/ml

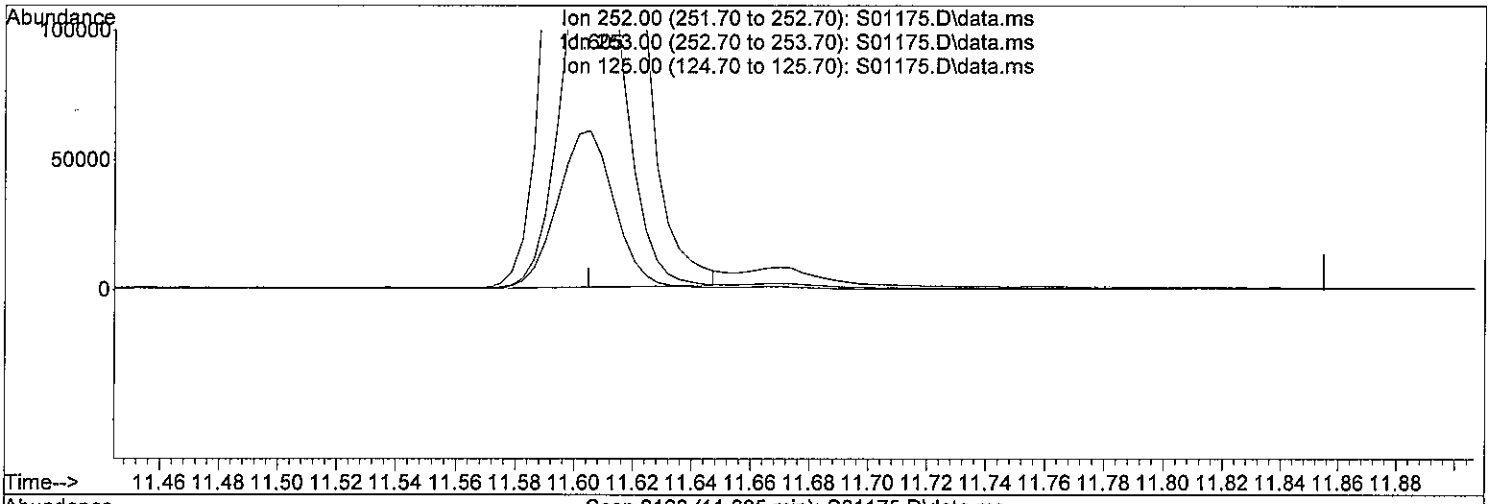
response 1030099

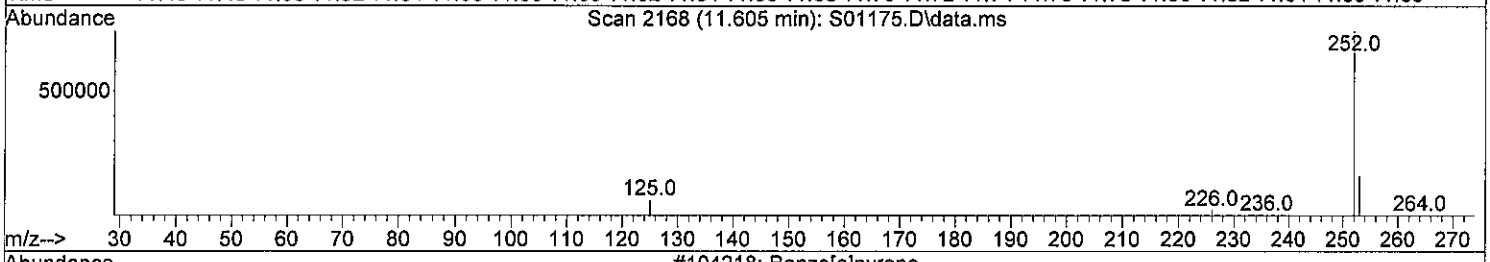
Ion	Exp%	Act%
252.00	100.00	100.00
253.00	22.40	21.39
125.00	10.30	7.98#
0.00	0.00	0.00

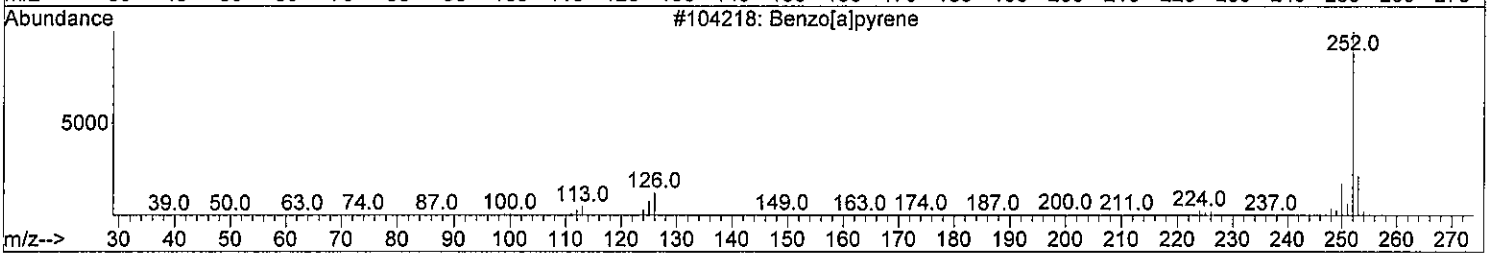
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01175.D
Acq On : 17 Sep 2013 1:39 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD5000
Misc : ST130912-12
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 17 13:56:47 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:56:41 2013
Response via : Initial Calibration







TIC: S01175.D\data.ms

(24) Benzo[a]pyrene (tm)

11.605min (+ 0.000) 5413.96 ng/ml m

response 1007651

Ion	Exp%	Act%
252.00	100.00	100.00
253.00	22.40	21.87
125.00	10.30	8.15#
0.00	0.00	0.00

MANUAL RE-INTEGRATION

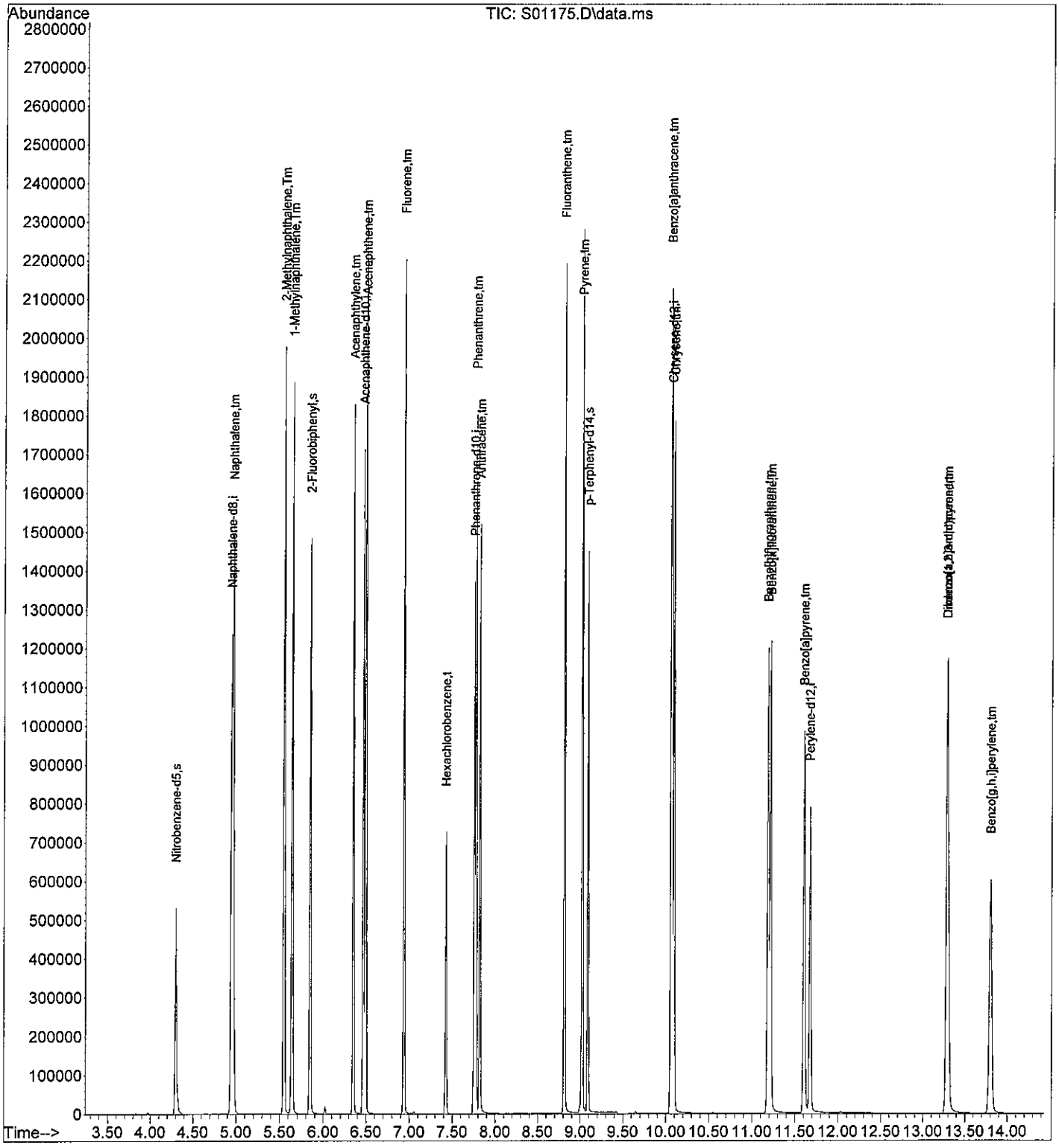
- ☐ missed peak assignment
- ☐ assigned incorrect name to peak
- ☑ over-integrated peak's area
- ☐ under-integrated peak's area
- ☐ other _____

initials JL *date* 9-20-17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01175.D
Acq On : 17 Sep 2013 1:39 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICALSVSTD5000
Misc : ST130912-12
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 17 13:57:13 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:56:41 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01176.D
Acq On : 17 Sep 2013 2:18 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICVSVSTD2000
Misc : ST130912-13
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 17 14:33:46 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:59:23 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.948	136	1226965	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.472	164	680218	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	984503	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.074	240	1025446	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.682	264	788794	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	0.000	82	0d	0.00	ng/ml	
Spiked Amount 2000.000	Range 34 - 111		Recovery =	0.00%#		
7) 2-Fluorobiphenyl	0.000	172	0d	0.00	ng/ml	
Spiked Amount 2000.000	Range 21 - 106		Recovery =	0.00%#		
18) p-Terphenyl-d14	0.000	244	0d	0.00	ng/ml	
Spiked Amount 2000.000	Range 33 - 111		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Naphthalene	4.967	128	502697	2014.63	ng/ml#	37
4) 2-Methylnaphthalene	5.554	142	330672	1939.82	ng/ml	100
5) 1-Methylnaphthalene	5.647	142	328682	2037.74	ng/ml	99
8) Acenaphthylene	6.352	152	412393	2405.51	ng/ml#	100
9) Acenaphthene	6.497	154	273243	1989.45	ng/ml	98
10) Fluorene	6.943	166	299433	2003.41	ng/ml	100
12) Hexachlorobenzene	7.433	284	96100	2275.77	ng/ml	99
13) Phenanthrene	7.782	178	384724	1917.02	ng/ml	99
14) Anthracene	7.822	178	354914	2321.43	ng/ml	100
15) Fluoranthene	8.818	202	408436	2088.01	ng/ml#	100
17) Pyrene	9.022	202	422999	1886.25	ng/ml#	100
19) Benzo[a]anthracene	10.062	228	389538	1840.83	ng/ml	100
20) Chrysene	10.097	228	371854	2030.92	ng/ml	100
22) Benzo[b]fluoranthene	11.190	252	386436	1502.98	ng/ml	99
23) Benzo[k]fluoranthene	11.221	252	370447	1557.55	ng/ml#	98
24) Benzo[a]pyrene	11.613	252	308031m	1693.17	ng/ml	
25) Indeno(1,2,3-c,d)pyrene	13.304	276	295274	1675.92	ng/ml#	97
26) Dibenzo[a,h]anthracene	13.295	278	245320	1589.46	ng/ml	98
27) Benzo[g,h,i]perylene	13.808	276	252444	1614.28	ng/ml#	97

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

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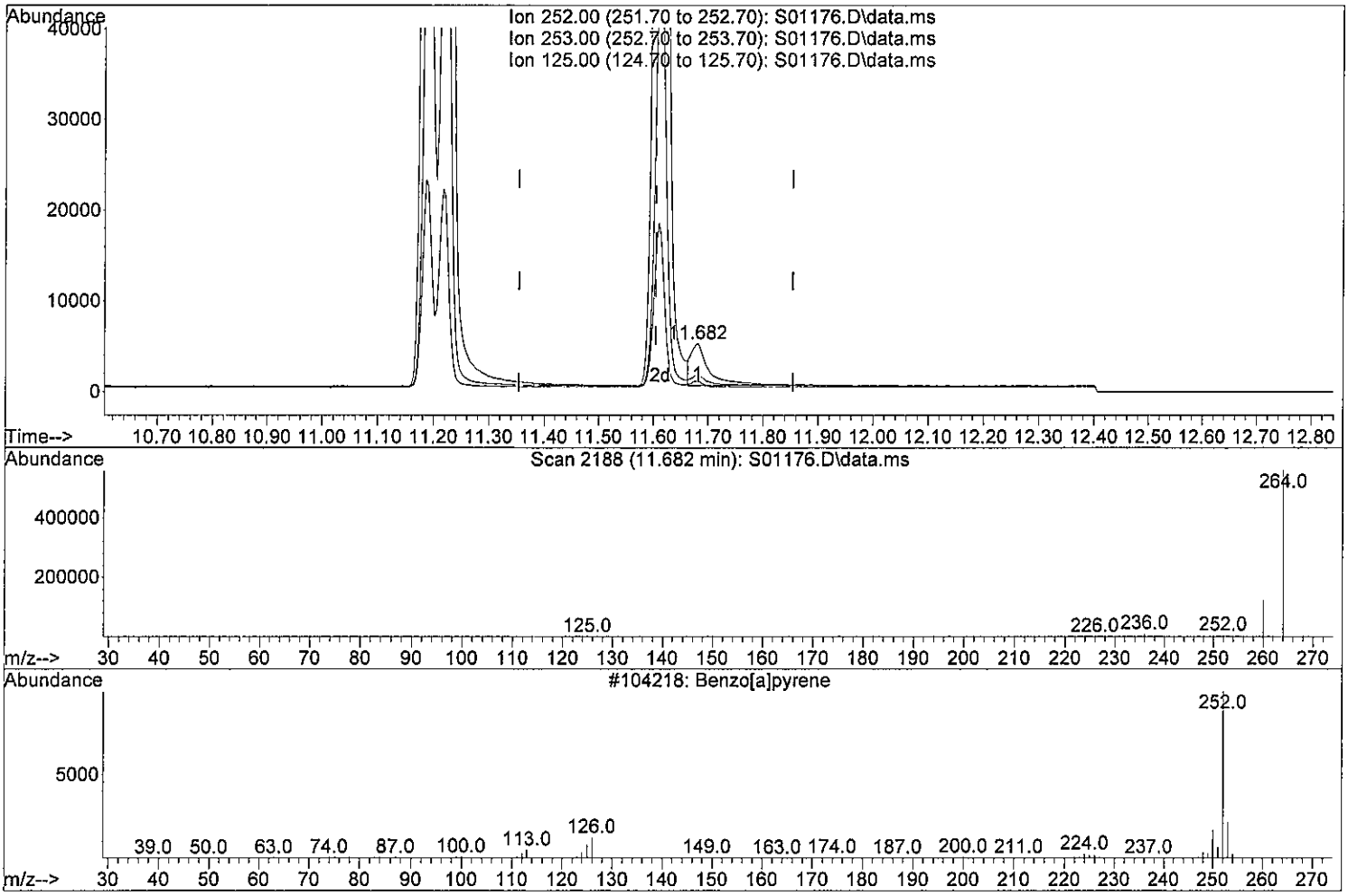
9-20-13

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01176.D
Acq On : 17 Sep 2013 2:18 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICVSVSTD2000
Misc : ST130912-13
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 17 14:32:56 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:59:23 2013
Response via : Initial Calibration



TIC: S01176.D\data.ms

(24) Benzo[a]pyrene (tm)

11.682min (+ 0.077) 58.67 ng/ml

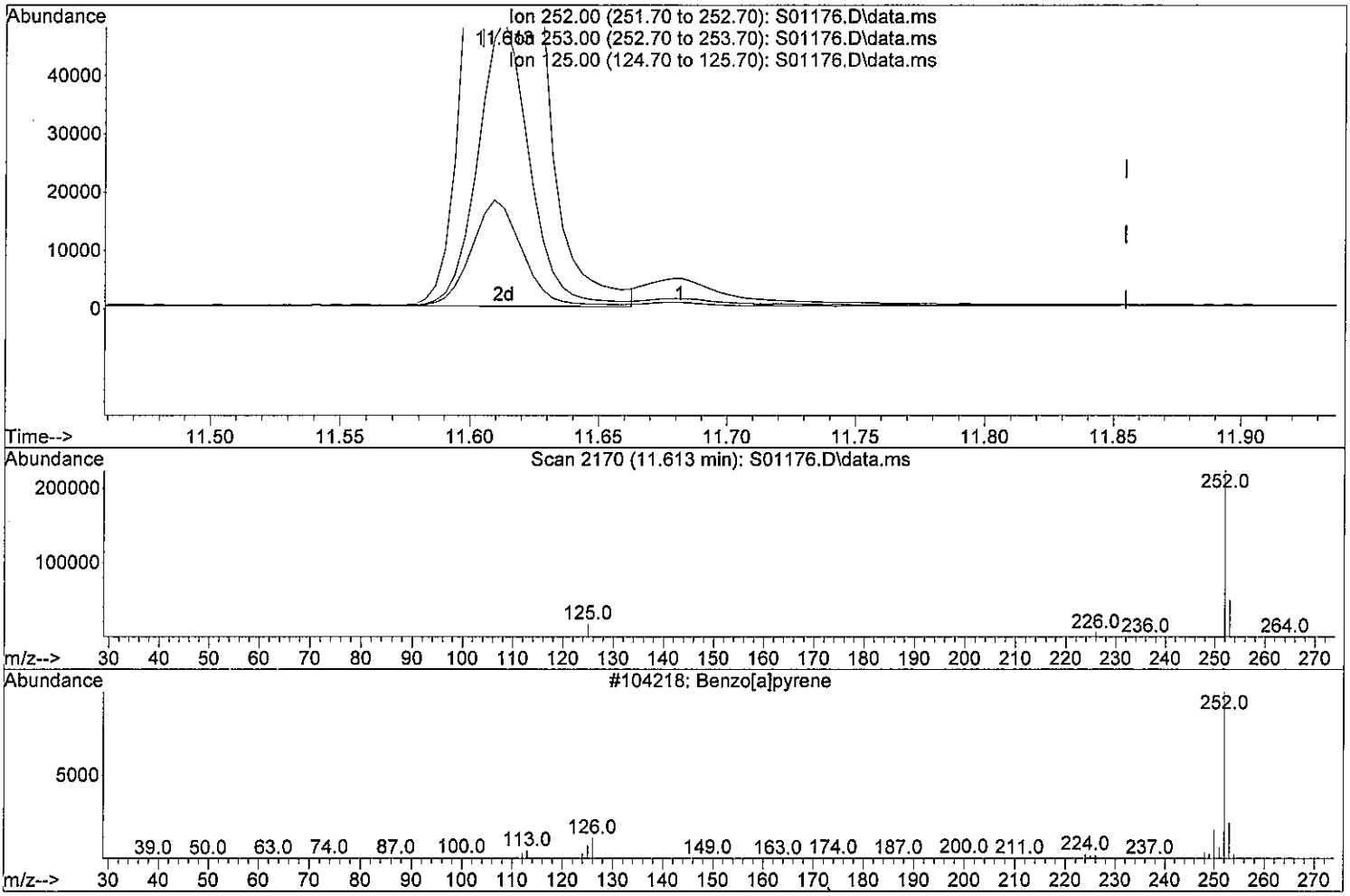
response 10673

Ion	Exp%	Act%
252.00	100.00	100.00
253.00	22.40	21.12
125.00	10.30	8.87
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\091713\
Data File : S01176.D
Acq On : 17 Sep 2013 2:18 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICVSVSTD2000
Misc : ST130912-13
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 17 14:32:56 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:59:23 2013
Response via : Initial Calibration



TIC: S01176.D\data.ms

(24) Benzo[a]pyrene (tm)

11.613min (+ 0.008) 1693.17 ng/ml m

response 308031

Ion	Exp%	Act%
252.00	100.00	100.00
253.00	22.40	0.73#
125.00	10.30	0.31#
0.00	0.00	0.00

MANUAL RE-INTEGRATION

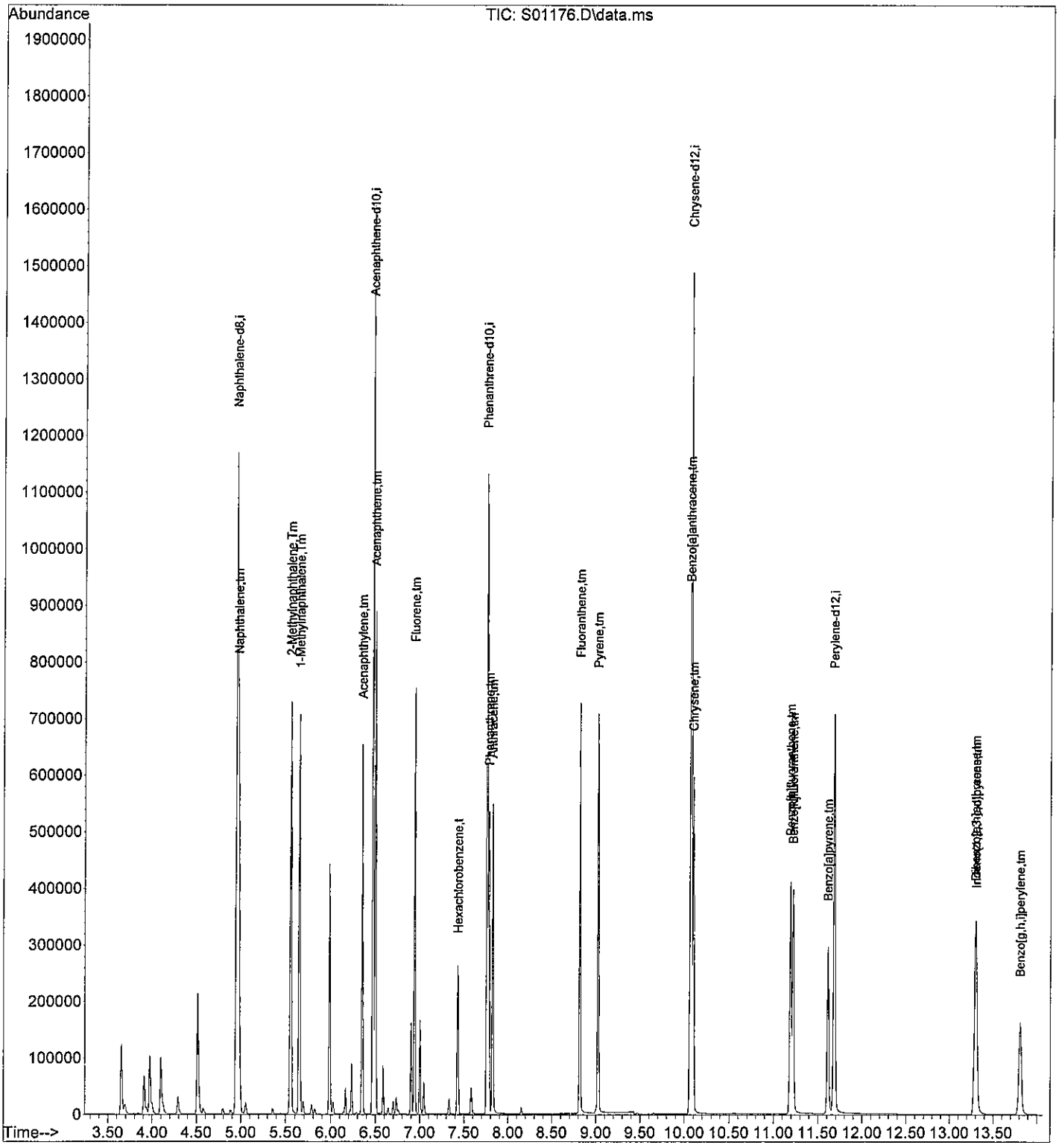
- ☑ missed peak assignment
- ☐ assigned incorrect name to peak
- ☐ over-integrated peak's area
- ☐ under-integrated peak's area
- ☐ other _____

initials JK *date* 3-20-17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01176.D
Acq On : 17 Sep 2013 2:18 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : ICVSVSTD2000
Misc : ST130912-13
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 17 14:33:46 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Tue Sep 17 13:59:23 2013
Response via : Initial Calibration



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01177.D
Acq On : 17 Sep 2013 2:36 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : EX130903-3MB
Misc : WATER EX130903-3
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 23 16:26:24 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration

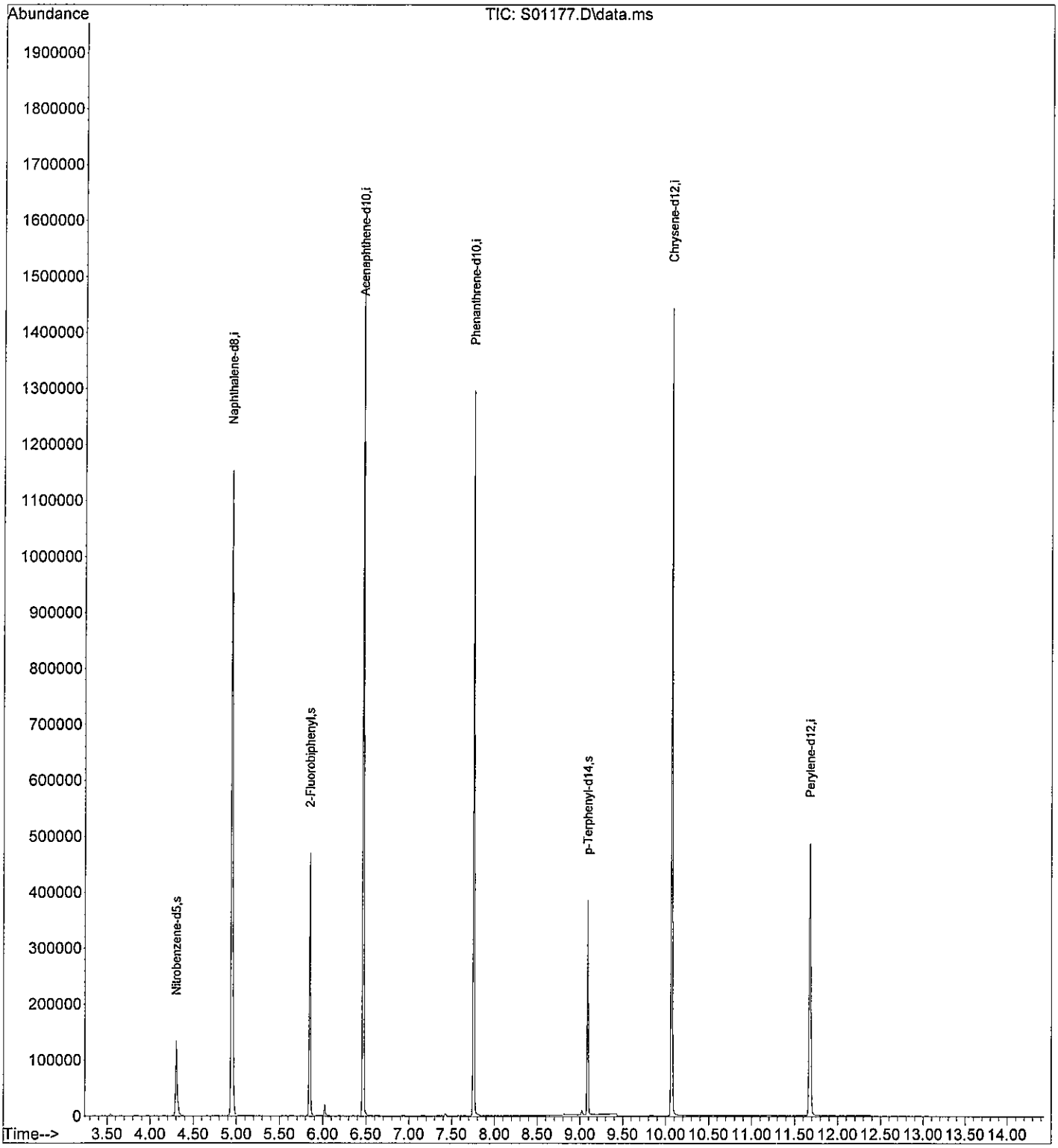
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.945	136	1176323	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	672445	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	999849	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.070	240	1031600	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.678	264	542596	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.300	82	123862	1752.87	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	87.64%		
7) 2-Fluorobiphenyl	5.849	172	293452	1511.35	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	75.57%		
18) p-Terphenyl-d14	9.088	244	288689	1473.30	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	73.67%		
Target Compounds						Qvalue
17) Pyrene	9.022	202	4932	Below Cal	#	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01177.D
Acq On : 17 Sep 2013 2:36 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : EX130903-3MB
Misc : WATER EX130903-3
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 23 16:26:24 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01180.D
Acq On : 17 Sep 2013 3:32 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : 1308545-3
Misc : WATER EX130903-3
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 23 16:30:32 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1192500	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	695372	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1061496	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.069	240	1070831	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.674	264	636754	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.299	82	122740	1713.42	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	85.67%		
7) 2-Fluorobiphenyl	5.849	172	292445	1456.51	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	72.83%		
18) p-Terphenyl-d14	9.088	244	329496	1631.72	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	81.59%		
Target Compounds						Qvalue
17) Pyrene	9.022	202	1416	Below Cal	#	92

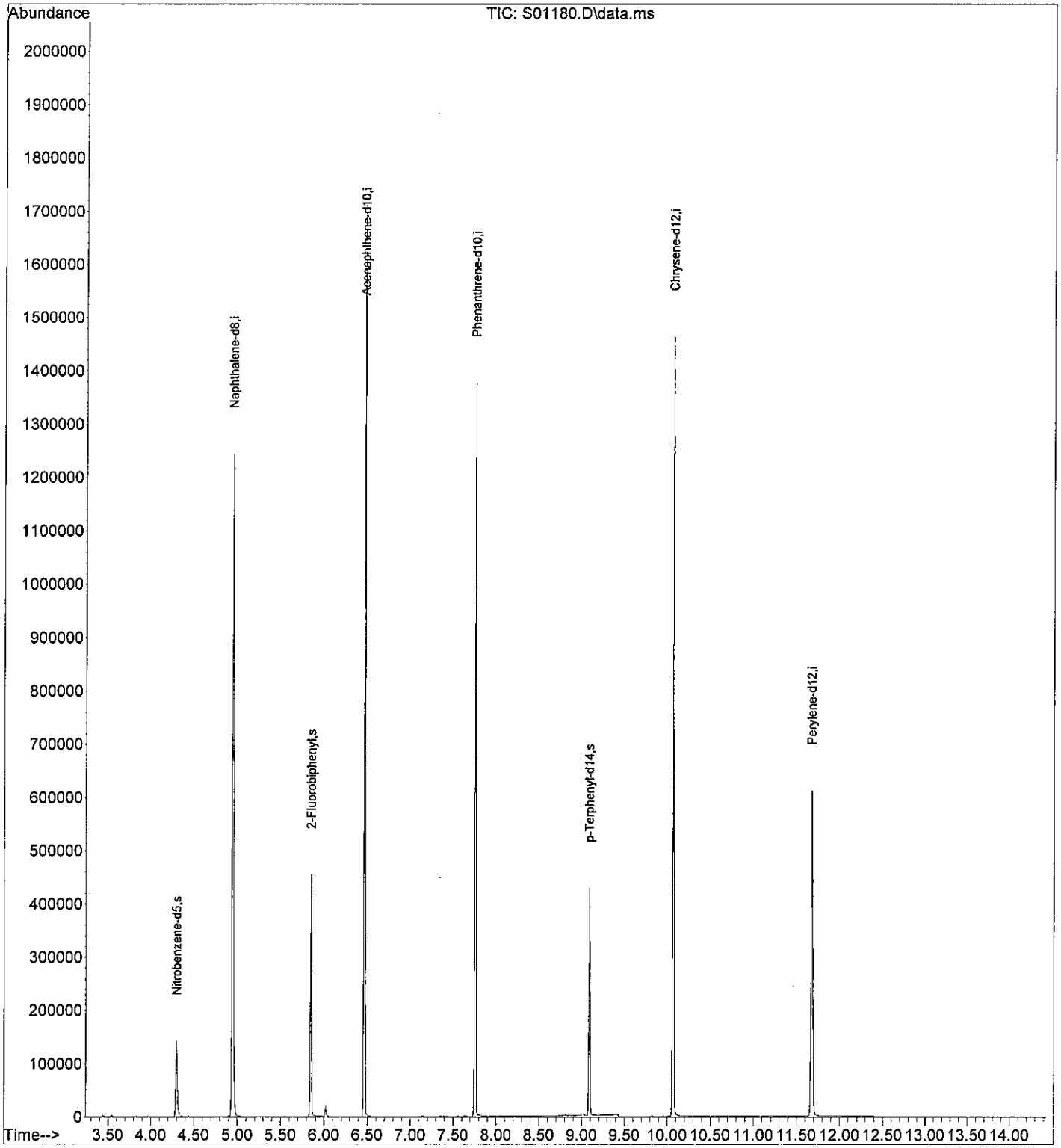
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9-23-13

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01180.D
Acq On : 17 Sep 2013 3:32 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : 1308545-3
Misc : WATER EX130903-3
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 23 16:30:32 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration



Raw Data Quality Control Samples

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01178.D
Acq On : 17 Sep 2013 2:55 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : EX130903-3LCS
Misc : WATER EX130903-3
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 23 16:27:49 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.945	136	1138115	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	672577	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1060735	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.070	240	1130548	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.678	264	754023	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.299	82	119380	1746.15	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	87.31%		
7) 2-Fluorobiphenyl	5.849	172	298949	1539.36	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	76.97%		
18) p-Terphenyl-d14	9.088	244	352241	1653.73	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	82.69%		
Target Compounds						Qvalue
3) Naphthalene	4.962	128	359313	1552.41	ng/ml	98
4) 2-Methylnaphthalene	5.548	142	255300	1614.59	ng/ml	99
5) 1-Methylnaphthalene	5.642	142	246818	1649.66	ng/ml	99
8) Acenaphthylene	6.347	152	308285	1818.67	ng/ml#	100
9) Acenaphthene	6.492	154	216172	1591.81	ng/ml	99
10) Fluorene	6.938	166	250148	1692.67	ng/ml	99
13) Phenanthrene	7.776	178	355233	1642.86	ng/ml	99
14) Anthracene	7.822	178	314947	1911.97	ng/ml	99
15) Fluoranthene	8.811	202	404909	1921.22	ng/ml#	99
17) Pyrene	9.022	202	402073	1614.95	ng/ml#	100
19) Benzo[a]anthracene	10.058	228	373545	1601.15	ng/ml	99
20) Chrysene	10.092	228	383955	1902.06	ng/ml	99
22) Benzo[b]fluoranthene	11.186	252	383670	1561.04	ng/ml	99
23) Benzo[k]fluoranthene	11.217	252	372238	1637.26	ng/ml#	98
24) Benzo[a]pyrene	11.609	252	275535	1584.38	ng/ml#	97
25) Indeno(1,2,3-c,d)pyrene	13.297	276	332191	1972.39	ng/ml	97
26) Dibenzo[a,h]anthracene	13.287	278	279765	1896.22	ng/ml	98
27) Benzo[g,h,i]perylene	13.806	276	278187	1860.92	ng/ml#	97

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

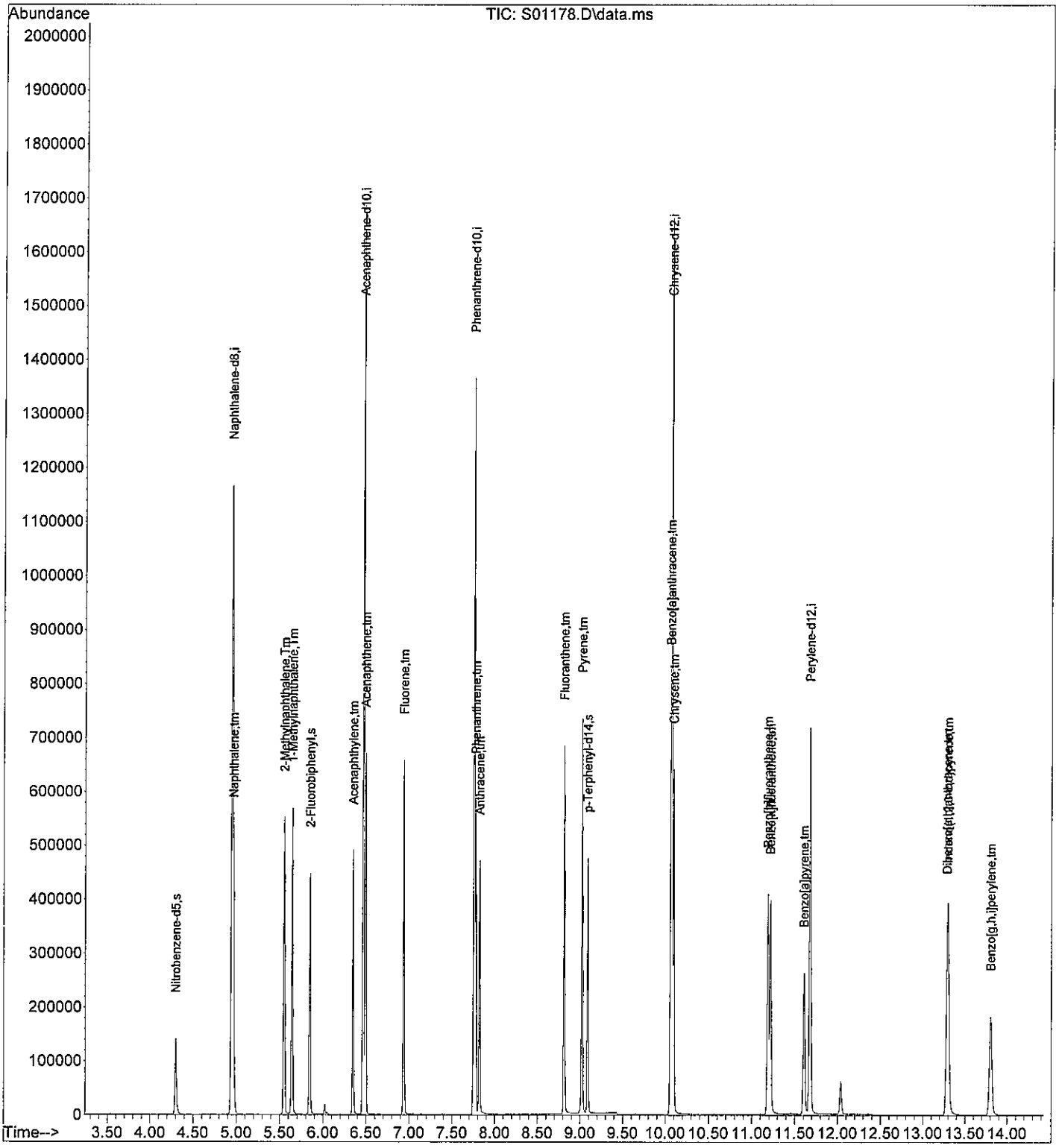
DLC

94
9-23-13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01178.D
Acq On : 17 Sep 2013 2:55 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : EX130903-3LCS
Misc : WATER EX130903-3
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 23 16:27:49 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01179.D
Acq On : 17 Sep 2013 3:13 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : EX130903-3LCSD
Misc : WATER EX130903-3
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 23 16:28:46 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration

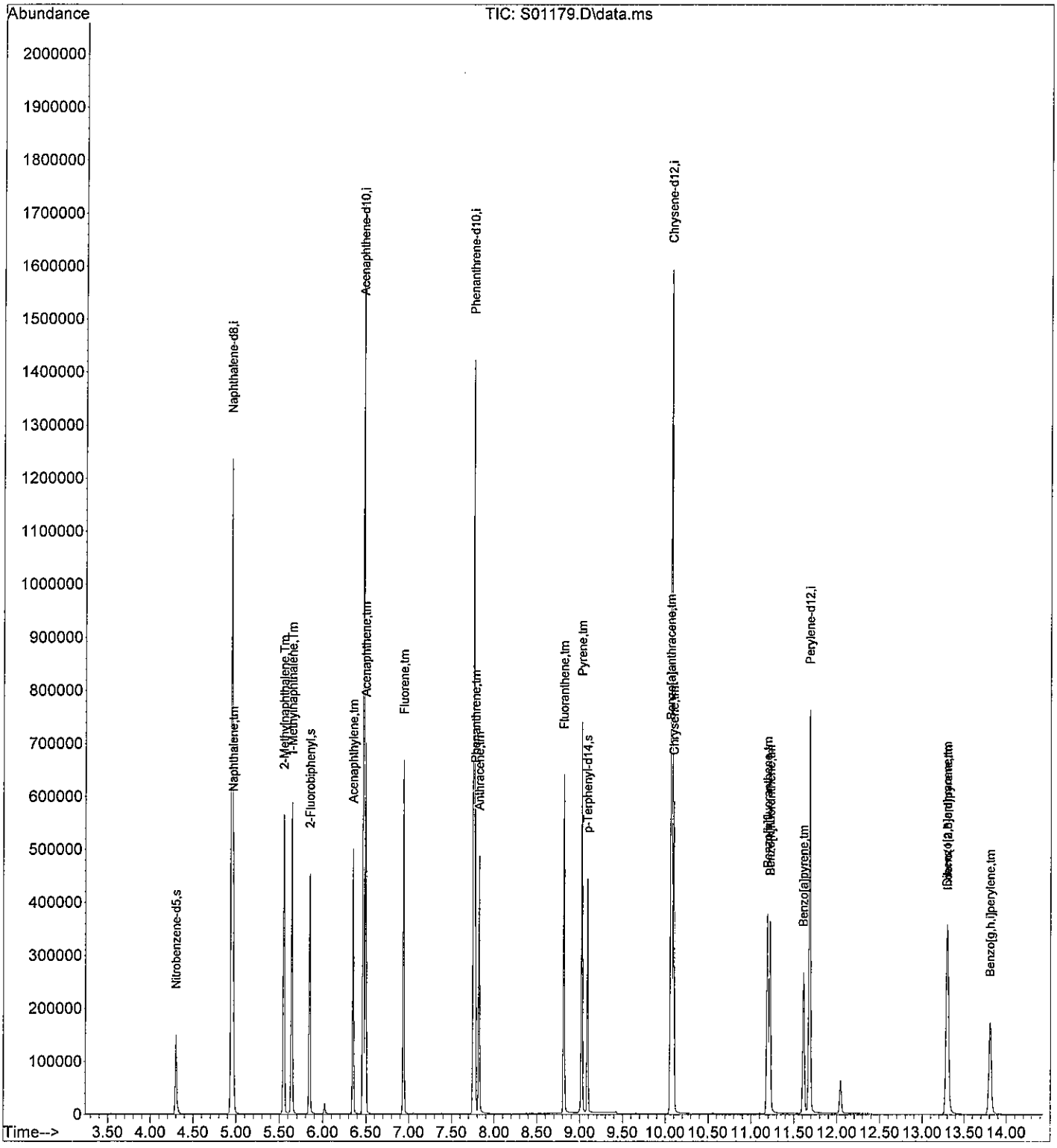
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.943	136	1177285	4000.00	ng/ml	# 0.00
6) Acenaphthene-d10	6.466	164	693683	4000.00	ng/ml	# 0.00
11) Phenanthrene-d10	7.756	188	1088478	4000.00	ng/ml	# 0.00
16) Chrysene-d12	10.074	240	1130178	4000.00	ng/ml	# 0.00
21) Perylene-d12	11.682	264	769181	4000.00	ng/ml	# 0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.300	82	123682	1748.89	ng/ml	0.00
Spiked Amount 2000.000	Range 34 - 111		Recovery =	87.44%		
7) 2-Fluorobiphenyl	5.849	172	302689	1511.20	ng/ml	0.00
Spiked Amount 2000.000	Range 21 - 106		Recovery =	75.56%		
18) p-Terphenyl-d14	9.088	244	338717	1586.20	ng/ml	0.00
Spiked Amount 2000.000	Range 33 - 111		Recovery =	79.31%		
Target Compounds						Qvalue
3) Naphthalene	4.962	128	375902	1570.05	ng/ml	98
4) 2-Methylnaphthalene	5.549	142	263182	1609.06	ng/ml	100
5) 1-Methylnaphthalene	5.642	142	255666	1651.94	ng/ml	100
8) Acenaphthylene	6.347	152	316026	1807.61	ng/ml#	100
9) Acenaphthene	6.492	154	223781	1597.70	ng/ml	99
10) Fluorene	6.938	166	255256	1674.69	ng/ml	99
13) Phenanthrene	7.776	178	351796	1585.50	ng/ml	99
14) Anthracene	7.822	178	312552	1849.07	ng/ml	99
15) Fluoranthene	8.811	202	392334	1814.10	ng/ml#	99
17) Pyrene	9.022	202	394827	1584.96	ng/ml#	100
19) Benzo[a]anthracene	10.058	228	355232	1523.15	ng/ml	99
20) Chrysene	10.096	228	371569	1841.30	ng/ml	99
22) Benzo[b]fluoranthene	11.190	252	370475	1477.65	ng/ml	99
23) Benzo[k]fluoranthene	11.220	252	341770	1473.62	ng/ml#	98
24) Benzo[a]pyrene	11.609	252	270935	1527.23	ng/ml#	97
25) Indeno(1,2,3-c,d)pyrene	13.302	276	309461	1801.22	ng/ml#	97
26) Dibenzo[a,h]anthracene	13.292	278	258912	1720.30	ng/ml	98
27) Benzo[g,h,i]perylene	13.808	276	264180	1732.40	ng/ml#	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\091713\
Data File : S01179.D
Acq On : 17 Sep 2013 3:13 pm
Operator : JK HPSV4 sn #: CV11451177
Sample : EX130903-3LCSD
Misc : WATER EX130903-3
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 23 16:28:46 2013
Quant Method : C:\msdchem\1\methods\091713SIM4.M
Quant Title :
QLast Update : Mon Sep 23 16:25:34 2013
Response via : Initial Calibration



Miscellaneous

436120

ALS Laboratory Group

SEMIVOLATILES EXTRACTION / CLEANUP WORKSHEET

SIM PAH

WO #s 1308545 Matrix AQ Batch ID EX130903-3 Sur Code ST130817-3 MSpike Code ST130506-2 Balance ID N/A Extr SOP/Rev 617/14 Extr Code: 8270D

EXTRACTION METHOD		Steam Bath: 60 °C Proper N-Evap Station flow settings used? (Y)		CLEANUP CODE:	
(3520C) CLE	(3510)SEP	Extraction Start:	LOTS:	(3650B)Florisil Silica Gel	Reviewed By JTB
(3550)SONC	(3540)SOX	Date/Time: 9/3/13 15:10	$MeCL_2$ DI823 H_2SO_4 N/A	(3640A GPC (see other forms)	Date: 9-4-13
(3580A) Waste Dilution		Extraction Stop:	Hexane: N/A NaOH 31990	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: 9/4/13 0750	Acetone: ↓ Na_2SO_4 VLIIA	Date/Time ↓	
(form 609r16.doc)		Initials JTB	Florisil ↓ Silica Gel N/A	Initials ↓	

Sample No.	Amount (g/mL)	Initial pH	pH (≤2)	pH (11-13)	Surrogate (mL)	Matrix Spike (mL)	Sur / Matrix Spike Witnessed	Date KD (Initial)	Cleanup Date	Date KD (Final)	Final Volume (mL)	Date Vialed	Comments
WMB	1000	5	N/A	12.8	1.0mL	N/A	JTB / JTB	9/4/13	N/A	N/A	1.0mL	9/9/13	not enough sample provided
1308545-3	1040	7	↓	12.8	↓	↓	↓ ↓	↓	↓	↓	↓	↓	to perform MS/MSD.
WLCS	1000	5	↓	12.8	↓	1.0mL	↓ ↓	↓	↓	↓	↓	↓	
WLCSD	1000	5	↓	12.8	↓	↓	↓ ↓	↓	↓	↓	↓	↓	

JTB 9/4/13